HIGHWAY WORK PROPOSAL

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

Proposal Number: 012

COUNTY	STATE PROJECT	FEDERAL	PROJECT DESCRIPTION	HIGHWAY
Milwaukee	1228-22-70	WISC 2023278	Ih 43 North South Freeway; Brown Street To Capitol Drive	IH 043
Milwaukee	1228-22-80	N/A	Ih 43 North South Freeway; Center St Bridge B40-208	LOC STR
Milwaukee	1228-22-81	N/A	Ih 43 North South Freeway; Center B40-208, Locust B40-207	LOC STR
Milwaukee	1228-22-87	N/A	Ih 43 North South Freeway; Wright St Bridge B40-0209	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: $1,000,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Date: March 14, 2023 Time (Local Time): 11:00 am	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time October 01, 2024	
Assigned Disadvantaged Business Enterprise Goal 10%	This contract is exempt from federal oversight.

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

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

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

(Bidder Signature)

(Print or Type Bidder Name)

(Bidder Title)

For Department Use Only

Type of Work:
Milling, Grade, Storm Sewer, Water Main, Base, Concrete Pavement, Asphalt Pavement, Curb & Gutter, Concrete Barrier, Sidewalk, Beam Guard, Signing, Lighting, Signals, FTMS, Pavement Marking, Structures B-40-72, 74, 78, 158, 204 - 211, 215, R-40-22, S-40-463, 464, 3064 - 3076, 3078 - 3083, 3104, 3105.

Notice of Award Dated	Date Guaranty Returned

PLEASE ATTACH
PROPOSAL GUARANTY HERE

PROPOSAL REQUIREMENTS AND CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

BID PREPARATION

Preparing the Proposal Schedule of Items

A. General

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

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

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

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

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

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

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

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

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

(6) Contractors are responsible for checking on the issuance of addenda and for obtaining the addenda. Notice of issuance of addenda is posted on the department's web site at:

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

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

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

B. Submitting Electronic Bids

B.1 On the Internet

(1) Do the following before submitting the bid:

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

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

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

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

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

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

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

Use Expedite™ software to prepare and print the schedule of items. Provide a valid amount for all price fields. Follow instructions and review the help screens provided on the Bid Express™ web site to assure that the schedule of items is prepared properly.

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

Bidder Name
BN00
Proposals: 1, 12, 14, & 22

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

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

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

1. The check code printed on the bottom of the printout of the Expedite™ generated schedule of items is not the same on each page.
2. The check code printed on the printout of the Expedite™ generated schedule of items is not the same as the check code for that proposal provided on the diskette or CD ROM.
3. The diskette or CD ROM is not submitted at the time and place the department designates.

B Waiver of Electronic Submittal

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

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

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

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

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

PROPOSAL BID BOND

Wisconsin Department of Transportation

DT1303 1/2006

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

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

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

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

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

PRINCIPAL

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

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

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

(Signature of Attorney-in-Fact)

NOTARY FOR PRINCIPAL

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

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

CERTIFICATE OF ANNUAL BID BOND

Wisconsin Department of Transportation

DT1305 8/2003

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

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

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

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

(Signature of Authorized Contractor Representative) (Date)

Effective with March 2010 Letting

LIST OF SUBCONTRACTORS

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

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

Name of Subcontractor	Class of Work	Estimated Value

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

Instructions for Certification

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

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

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

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

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

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

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

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

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 1228-22-70, IH 43 North South Freeway, Brown Street to Capitol Drive; Project 1228-22-80, IH 43 North South Freeway, Center St Bridge B40-208; Project 1228-22-81, IH 43 North South Freeway, Center B40-208, Locust B40-207; Project 1228-22-87, IH 43 North South Freeway, Wright St Bridge B40-0209; all projects located on IH 43 in Milwaukee County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2023 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 (20220628)

2. Scope of Work.

The work under this contract shall consist of removals, concrete base patching, milling, excavation common, base aggregate dense, select crushed material, HMA pavement, concrete curb and gutter, concrete barrier, high friction surface treatment, storm sewer, concrete sidewalk, bridge deck replacements, bridge concrete overlays, sign structures, guard rail, pavement marking, permanent signing, FTMS, lighting, traffic signals, fencing, traffic control, restoration and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

Structures:

Bridges

B-40-072	B-40-204	B-40-208	B-40-215
B-40-074	B-40-205	B-40-209	
B-40-078	B-40-206	B-40-210	
B-40-158	B-40-207	B-40-211	

Sign Structures:

S-40-463	S-40-3068	S-40-3074	S-40-3080
S-40-464	S-40-3069	S-40-3075	S-40-3081
S-40-3064	S-40-3070	S-40-3076	S-40-3082
S-40-3065	S-40-3071	S-40-3077	S-40-3083
S-40-3066	S-40-3072	S-40-3078	S-40-3104
S-40-3067	S-40-3073	S-40-3079	S-40-3105

Retaining Walls:

R-40-22

3. ASP 1.1 Information Session.

Prospective bidders are invited to attend a non-mandatory pre-bid meeting at 1:00 PM on Tuesday, February 21, 2023, virtually via Teams or conference call to discuss Additional Special Provision 1.1 (ASP 1.1) for Transportation Alliance for New Solutions (TrANS) Program On-the-job Voluntary Incentive Program Pilot.

No meeting minutes will be prepared. Issues discovered at the meeting will be handled by addendum.

Microsoft Teams meeting

Join on your computer, mobile app or room device

Click here to join the meeting

Meeting ID: 252 600 954 270
Passcode: mQJomQ

Download Teams | Join on the web

Or call in (audio only)

+1 608-571-2209,,199760503# United States, Madison

Phone Conference ID: 199 760 503#

Find a local number | Reset PIN

Learn More | Meeting options

4. 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.

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

Be advised that there may be multiple mobilizations and/or remobilizations to complete construction operations, for example such items as; traffic control, concrete base patching, milling, paving, signing, temporary and permanent pavement marking, finishing items and other incidental items. No additional payment will be made, by the department, for additional mobilizations.

Enhanced Final Liquidated Damages

The department will assess $5,000 in daily liquidated damages. These liquidated damages reflect the cost of engineering, supervision, and a portion of road user costs.

Interim Completions and Liquidated Damages

1. Locust Street: August 31, 2023

Open Locust Street to traffic by August 31, 2023.

If the contractor fails to open Locust Street to traffic by August 31, 2023, the department will assess the contractor $1,500 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 12:01 AM on September 1, 2023. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

2. High Friction Surface Treatment: August 30, 2024

Complete high friction surface treatment by August 30, 2024.

If the contractor fails to complete high friction surface treatment by August 30, 2024, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 12:01 AM on August 31, 2024. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

3. IH 43; Stage I Re-Open North Ave Ramp

Once the IH 43 North Avenue Ramp is closed to traffic for Stage 1 construction, complete all work necessary to open the IH 43 SB on-ramp from North Avenue to traffic within 14 calendar days.

If the contractor fails to complete the work to re-open the North Ave ramp within the 14 calendar days of the closure date, the department will assess the contractor $4,000 in interim liquidated damages for each calendar day that the roadway remains closed and the work is incomplete beyond 12:01 AM on the 15th calendar day after the closure begins. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM, on the 15th day, the roadway is not open.

4. IH 43; Stage II Work: November 15, 2023

Open all three lanes of I-43 to traffic by November 15, 2023.

If the contractor fails to open all three lanes of I-43 to traffic by November 15, 2023 (not including overnight closures), the department will assess the contractor $40,000 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 12:01 AM on November 16, 2023. An entire calendar day will be charged for any period of time within a calendar day that the lane remains closed beyond 12:01 AM.

5. IH 43; Stage IV Re-Open Ramps

Once the following ramps are closed to traffic for Stage IV construction, complete all work necessary to reopen to traffic within 14 calendar days for each ramp:

- 5. IH 43 SB off-ramp to 8th Street/North Avenue ($1,000)
- 6. IH 43 NB on-ramp from 7th Street/North Avenue ($1,500)
- 7. IH 43 SB on-ramp from 8th Street/Locust Street ($2,000)
- 8. IH 43 SB off-ramp to 8th Street/Locust Street ($1,000)
- 9. IH 43 NB on-ramp from 7th Street/Locust Street ($1,500)
- 10. IH 43 NB off-ramp to 7th Street/Locust Street ($3,000)
- 11. IH 43 SB on-ramp from 8th Street/Keefe Avenue ($1,000)
- 12. IH 43 NB off-ramp to Keefe Avenue ($2,500)
- 13. IH 43 NB on-ramp from 7th Street/Atkinson Avenue ($1,000)
- 14. IH 43 SB on-ramp from 9th Street ($1,000)
- 15. IH 43 SB on-ramp from STH 57/Green Bay Avenue ($1,000)

If the contractor fails to complete the work to re-open the above-listed ramps within the 14 calendar days of the closure date (for each ramp separately), the department will assess the contractor the amount shown in parenthesis above in interim liquidated damages for each calendar day that the roadway remains closed, and the work is incomplete beyond 12:01 AM on the 15th calendar day after the closure begins. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

6. IH 43; Stage V Work: August 15, 2024

Open all three lanes of I-43 to traffic by August 15, 2024.

If the contractor fails to open all three lanes of I-43 to traffic by August 15, 2024 (not including overnight closures), the department will assess the contractor $40,000 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 12:01 AM on August 16, 2023. An entire calendar day will be charged for any period of time within a calendar day that the lane remains closed beyond 12:01 AM.

7. Brown Street

Once work begins on Brown Street, complete all work necessary to open Brown Street to traffic within 45 calendar days.

If the contractor fails to complete the work to re-open Brown Street within the 45 calendar days of the closure date, the department will assess the contractor $1,000 in interim liquidated damages for each calendar day that the roadway remains closed, and the work is incomplete beyond 12:01 AM on the 46th calendar day after the closure begins. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

8. Wright Street

Once work begins on Wright Street, complete all work necessary to open Wright Street to traffic within 45 calendar days.

If the contractor fails to complete the work to re-open Wright Street within the 45 calendar days of the closure date, the department will assess the contractor $1,000 in interim liquidated damages for each calendar day that the roadway remains closed, and the work is incomplete beyond 12:01 AM on the 46th calendar day after the closure begins. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

9. Burleigh Street

Once work begins on Burleigh Street, complete all work necessary to open Burleigh Street to traffic within 75 calendar days.

If the contractor fails to complete the work to re-open Burleigh Street within the 75 calendar days of the closure date, the department will assess the contractor $1,000 in interim liquidated damages for each calendar day that the roadway remains closed, and the work is incomplete beyond 12:01 AM on the 76th calendar day after the closure begins. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

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

Migratory Birds

Swallow or other migratory bird nests have been observed on or under the existing structure(s). All active nests (when eggs or young are present) of migratory birds are protected under the federal Migratory Bird Treaty Act. The nesting season for swallows and other birds is from April 15 to August 31.

The following structures have known nesting; however, deterrent is not needed because (1) construction activities that may affect the underside or interior of structure(s) will not occur during the migratory bird nesting season noted above, or (2) it has been determined that anticipated construction activities on the structure will not disturb active nests:

- Station 872+29 (B-40-206)

Complete the deck demolition of bridge Structure B-40-206 (Station 872+29) prior to April 15, 2024.

As a last resort, apply for a depredation permit from the US Fish and Wildlife Service for work that may disturb or destroy active nests. The need for a permit may be avoided by removing the existing bridge structure prior to nest occupation by birds or clearing nests from all structures before the nests become active in early spring.

Northern Long-eared Bat *(Myotis septentrionalis)*

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

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

Direct temporary lighting, if used, away from wooded areas during the bat active season: April 1 to October 31, both dates inclusive.

To avoid adverse impacts upon the NLEBs, no tree clearing is allowed between April 1 and October 31, both dates inclusive. If the required tree clearing is not completed by March 31, the department will suspend all tree clearing and associated work directly impacted by clearing.

The department has contracted with others to cut all trees as necessary for Stage 1 of construction. Clear any downed trees and grub the stumps and any remaining vegetation within the identified grubbing limits. Remaining trees required to be cut shall be done by the contractor between November 1, 2023 and March 31, 2024.

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

Submit a schedule and description of clearing operations with the ECIP 14 days prior to any clearing operations. The department will determine, based on schedule and scope of work, what additional erosion control measures shall be implemented prior to the start of clearing operations, and list those additional measures in the approval letter for the ECIP.

Pavement Markings

Temporary pavement markings shall be applied prior to opening the completed lanes to traffic. Prior to winter shutdown, place markings similar to the Stage IV configuration, placing a marking at the crown point (same as existing conditions), making the inside and middle lane 11-foot wide and the outside lane 13-foot wide.

The final epoxy pavement markings shall be placed within five days after the application of high friction surface treatment.

Winter Maintenance

Milwaukee County will perform snow removal operations for freeway and ramp lanes that are open to traffic. City of Milwaukee will perform snow removal operations for local streets that are open to traffic. Provide for snow removal in those areas closed to traffic as required to facilitate safe construction operations and as required to eliminate snow melt run-off from crossing active roadways. Provide Milwaukee County Highway Maintenance and Milwaukee County Sheriff's Department with a 24-hour emergency contact number for when maintenance is required.

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FTMS Fiber Optic Conduit and Cable System

The new FTMS fiber optic conduit and cabling system between EXCV831 and EXCV925 must be completed; the new WisDOT fiber optic cable installed, spliced, and the network operating on the new cable; and MWFN and WIN complete their respective work in the WisDOT conduit system before beginning any other work that may jeopardize the existing fiber optic conduit and cable system.

Schedule of Operations

Traffic shifts shown in a given stage may occur at different times during that stage depending on the controlling elements for a given traffic movement. The department anticipates that the schedule for each stage shall be as follows:

IH 43 and Ramps

2023 Construction:

Stage I Construction:

- Build new FTMS fiber optic conduit and cabling system between EXCV831 and EXCV925.
- Allow access to MWFN and WIN for installation of their cables within the new FTMS fiber optic conduit and cabling system described above.
- Construct new permanent FTMS vehicle detector stations DP896, DP906, and DP925 including associated conduit and cabling to new or existing cabinet, calibration, and making operational within the existing WisDOT FTMS network.

- Construct new temporary FTMS vehicle detector stations TMPSP815, TMPDP850, and TMPDP870 including calibration, and making operational within the existing WisDOT FTMS network.
- Improve outside shoulder (securing inlet covers, joint repair, 2-inch mill and overlay, and removal of rumble strips) along IH 43 for shifted traffic.
- Clear and grub outside as needed for temporary lighting.
- Install temporary lighting.
- Remove any outside light poles in conflict with temporary lighting.
- Install fixed message signs (FMS) to replace Type I signs.
- Modify the IH 43 SB curve warning system.
- Begin outside lane base patching along IH 43.
- Complete ramp widening (curb and gutter, storm sewer, HMA pavement and lighting) and mill and overlay on the IH 43 SB on-ramp from North Avenue.
- Remove downed trees and grub trees that were cleared prior to this project as part of contract 1228-22-82.

Stage II Construction:

- Limits of work from Station 798+50 (project start) to Station 918+00
- Complete removals in median, including lighting and type I signs.
- Reconstruct median along IH 43, including storm sewer, lighting, sign structure and DMS bases.
- Place median barrier along IH 43.
- Begin inside lane base patching along IH 43 SB.
- Begin middle lane base patching along IH 43 NB.

Stage III Construction:

- Limits of work from Station 798+50 (project start) to Station 918+00.
- Complete inside lane base patching along IH 43.
- Continue middle lane base patching along IH 43.
- Complete median lighting and type I sign structures.

Overwinter Stage:

- Place temporary pavement markings similar to Stage IV layout (refer to the plans).
- Place temporary barrier along gaps between the existing and proposed barrier after the crossover from project 1228-22-71 is removed.
- Continue clearing and grubbing as needed over the winter.

2024 Construction:

Provide a start date in writing at least 14 days prior to any recommencement of work through the winter of 2023/2024. Upon approval the engineer will issue the notice to proceed within 10 days of the approved start date.

Stage IV Construction:

- Excavate outside shoulder of IH 43.
- Reconstruct outside shoulder along IH 43, including storm sewer, and sign structure bases.
    - The following storm sewer crossings will be completed as part of this stage:
        - Station 869+00, 15-Inch storm sewer installation across NB lanes
        - Station 925+50, 42-Inch storm sewer installation across NB lanes
        - Station 926+25, 18-Inch storm sewer installation across NB lanes
- Install curb and gutter and concrete barrier on the outside shoulder along IH 43.
- Install guardrail on the outside shoulder along IH 43.
- Install fencing on the outside of IH 43 and along ramps.
- Complete mill and overlay and install lighting on the following ramps:
    - IH 43 NB off-ramp to Halyard Street
- Complete widening (storm sewer, curb and gutter, lighting, and HMA pavement) and mill and overlay on the following ramps:
    - Stage IV-A
        - IH 43 SB on-ramp from 8th Street/Locust Street (install guardrail)
            - Complete widening (storm sewer, curb and gutter, and HMA pavement) along the SB inside lane of 8th Street.
        - IH 43 NB off-ramp to 7th Street/Locust Street
        - IH 43 SB off-ramp to 8th Street/Locust Street
        - IH 43 NB on-ramp from 7th Street/Locust Street (install guardrail)
        - IH 43 NB on-ramp from 7th Street/Atkinson Avenue
    - Stage IV-B
        - Stage IV-B.1
            - IH 43 SB off-ramp to 8th Street/North Avenue
            - IH 43 SB on-ramp from 8th Street/Keefe Avenue
        - Stage IV-B.2
            - IH 43 NB off-ramp to Keefe Avenue (install concrete barrier)
            - IH 43 SB off-ramp to 8th Street/Atkinson Avenue
        - Stage IV-B.3
            - IH 43 NB off-ramp to STH 190/Capitol Drive (install concrete barrier)
            - IH 43 SB on-ramp from 9th Street
        - Stage IV-B.4
            - IH 43 NB on-ramp from 7th Street/North Avenue (install guardrail)
- Install lighting outside the outside shoulder of IH 43.
- Continue middle lane base patching along IH 43.

Stage V Construction:

- Limits of work from Station 918+00 to Station 935+85 (project end)
- Complete removals in median, including lighting and type I signs.
- Reconstruct median along IH 43, including storm sewer, lighting, sign structure and DMS bases.
- Place median barrier along IH 43.
- Continue middle lane base patching along IH 43.

Stage VI Construction:

- Complete outside and middle lane base patching along IH 43.
- Mill and overlay the middle lane and outside lane along IH 43.
    - Pave to final surface prior to opening to traffic.
- Place high friction surface treatment on the middle lane, outside lane, and 3 feet into the outside shoulder along IH 43 from Station 798+53 to Station 824+19 and from Station 879+03 to Station 934+50.
- Place high friction surface treatment to Station 924+39 “CA” on the IH 43 NB off-ramp to STH 190/Capitol Drive.

Stage VII Construction:

- Mill and overlay the inside lane along IH 43.
    - Pave to final surface prior to opening to traffic.
- Place high friction surface treatment on the inside lane and 3 feet into the inside shoulder along IH 43 from Station 798+53 to Station 824+19 and from Station 879+03 to Station 934+50.
- Place final pavement markings.

Brown Street (B-40-215)

Stage I Construction:

- Complete eastbound side concrete overlay.
- Construct eastbound concrete pavement approach slabs.
- Complete eastbound mill and overlay.
- Construct eastbound curb and gutter.
- Construct eastbound concrete sidewalk.
- Construct eastbound fencing.

Stage II Construction:

- Complete westbound concrete overlay.
- Construct westbound concrete pavement approach slabs.
- Complete westbound mill and overlay.
- Construct westbound curb and gutter.
- Construct westbound concrete sidewalk.
- Construct westbound fencing.
- Place final pavement markings.

Wright Street (B-40-209)

Stage I Construction:

- Complete eastbound concrete overlay.
- Construct eastbound concrete pavement approach slabs.
- Remove eastbound pavement and construct concrete pavement.
- Construct eastbound curb and gutter.
- Construct eastbound concrete sidewalk.
- Construct eastbound fencing.

Stage II Construction:

- Complete westbound concrete overlay.
- Construct westbound concrete pavement approach slabs.
- Remove westbound pavement and construct concrete pavement.
- Construct westbound curb and gutter.
- Construct westbound concrete sidewalk.
- Construct westbound fencing.
- Place final pavement markings.

Locust Street (B-40-207)

Stage I Construction:

- Complete eastbound side deck replacement.
- Construct storm sewer.
- Construct eastbound concrete pavement approach slabs.
- Remove eastbound pavement and construct concrete pavement.
- Construct curb and gutter on the eastbound half of Locust Street.
- Construct concrete sidewalk on the eastbound half of Locust Street.
- Construct curb ramps on the south half of the 7th Street and 8th Street intersections.
- Construct eastbound fencing.
- Remove raised median at the 7th Street intersection (south side).
- Reconstruct the northbound right turn lane at the 7th Street intersection (south side), including removals, storm sewer, curb and gutter, and restoration.
- Install temporary traffic signals at the 8th Street and 7th Street intersections.
- Begin permanent traffic signal installation at the 8th Street and 7th Street intersections.

Stage II Construction:

Begin work after the Spring Semester ends.

Complete work prior to the start of the Fall Semester.

- Complete westbound side deck replacement.
- Construct storm sewer.
- Construct westbound concrete pavement approach slabs.
- Remove westbound pavement and construct concrete pavement.
- Construct curb and gutter on the westbound half of Locust Street.
- Construct concrete sidewalk on the westbound half of Locust Street.
- Construct curb ramps on the north half of the 7th Street and 8th Street intersections.
- Construct westbound fencing.
- Complete traffic signal installation at the 8th Street and 7th Street intersections.
- Place final pavement markings.

Burleigh Street (B-40-206)

- Complete deck replacement
- Remove traffic signals at the 8th Street and 7th Street intersections.
- Install traffic signals at the 8th Street and 7th Street intersections.
- Construct storm sewer.
- Construct concrete pavement approach slabs.
- Remove pavement and construct concrete pavement.
- Construct curb and gutter.
- Construct concrete sidewalk along Burleigh Street and curb ramps at the 7th Street and 8th Street intersections.
- Place final pavement markings.

Bridge Painting

- Paint the following bridge girders:
    - Brown Street (B-40-215)
    - Wright Street (B-40-209)
    - Center Street (B-40-208)
    - Locust Street (B-40-207)
    - Burleigh Street (B-40-206)

Contractor Coordination

Attend weekly scheduling meetings to discuss the near-term schedule activities, address any long-term schedule issues and discuss any relevant technical issues. Develop a rolling three-week schedule identifying the previous week worked and a two week “look ahead”. Provide sufficient detail to include actual and planned activities and all the subcontractors for offsite and construction activities, addressing all activities including ramp and lane closure schedules to be performed and identifying issues requiring engineering action or input.

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

Freeway and Ramp Work Restrictions

Definitions
The following definitions apply to this contract for work restrictions:

System Ramps: Freeway to freeway ramps

Service Ramps: Freeway to/from local road ramps

IH 43:

Weekday Peak Hours

5:30 AM – 9:30 PM Monday, Tuesday, Wednesday, Thursday

5:30 AM – 11:00 PM Friday

Weekend Peak Hours

8:00 AM – 11:00 PM Saturday

8:00 AM – 9:30 PM Sunday

Nighttime Hours

9:30 PM – 5:30 AM Sunday PM to Monday AM, Monday PM to Tuesday AM, Tuesday PM to Wednesday AM, Wednesday PM to Thursday AM, Thursday PM to Friday AM

11:00 PM – 8:00 AM Friday PM to Saturday AM, Saturday PM to Sunday AM

Full Freeway Closure Hours

11:00 PM – 4:30 AM Sunday PM to Monday AM, Monday PM to Tuesday AM, Tuesday PM to Wednesday AM, Wednesday PM to Thursday AM, Thursday PM to Friday AM

11:00 PM – 6:00 AM Friday PM to Saturday AM, Saturday PM to Sunday AM

Service Ramps Closure Hours

9:00 PM – 6:00 AM Sunday PM to Monday AM, Monday PM to Tuesday AM, Tuesday PM to Wednesday AM, Wednesday PM to Thursday AM, Thursday PM to Friday AM

10:30 PM – 8:30 AM Friday PM to Saturday AM, Saturday PM to Sunday AM

Freeway and Ramp Closure Restrictions

Do not close freeway lanes or shoulders (including service ramps) and ensure that the freeway is entirely clear for traffic during Weekday Peak Hours and Weekend Peak Hours, except as shown in the traffic control plans. Provide a minimum of one lane in each direction of the freeway that is entirely clear for traffic during Nighttime Hours except as allowed during full closure. Close service ramps only during Service Ramp Closure Hours, unless otherwise specified in the plan, or unless otherwise approved by the engineer for safety or operational reasons associated with other adjacent lane or freeway closures.

Follow standard details and traffic control details for closures. If plan details are not provided in the traffic control plan, furnish plans for review by the engineer so that approval, or disapproval, is obtained at least three business days prior to any closure.

Local Street Work Restrictions

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

Keep sidewalks open unless otherwise shown on the plans, or to facilitate the removal of structures and erection of girders or as approved by the engineer. Maintain pedestrian access to adjacent properties, businesses, schools, and at bus stops or provide where necessary, as directed by the engineer. Protect pedestrians from falling debris at all times when sidewalks are open.

Rolling Closure

Short term freeway mainline rolling closures may be allowed for a maximum of 15 minutes for the removal and erection of sign structures, equipment moves across the road, or other required work as determined by the engineer. The department will allow short term rolling closures only between 2:00 AM and 4:00 AM, and they may only be performed by freeway law enforcement.

Obtain approval from the engineer before coordinating these closures with freeway law enforcement. Coordinate 14 calendar days before closure. Present the scheduled time for the short term rolling closure at the weekly traffic meeting a minimum of one week before the closure.

sef-108-031 (20170406)

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, ramp, and roadway restrictions to the engineer as part of the progress schedule.

Coordinate lane, ramp, and roadway closures with any concurrent operations on adjacent roadways within 3 miles of the project. If other projects are in the vicinity of this project, coordinate lane closures to run concurrent with lane closures on adjacent projects when possible. When lane closures on adjacent projects extend into the limits of this project, Lane Rental Fee Assessments will only occur if the closure facilitates work under this contract.

B Lane Rental Fee Assessment

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

- Nighttime lane closure extending into weekday peak hours: 3 lanes to 2 lanes- $8,000 per lane, per direction of travel, per hour broken into 15-minute increments.
- Nighttime lane closure extending into weekday peak hours: 2 lanes to 1 lane- $15,000 per lane, per direction of travel, per hour broken into 15-minute increments.
- Nighttime lane closure extending into weekend peak hours- $6,000 per lane, per direction of travel, per hour broken into 15-minute increments.
- Service Ramp- $1,000 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, roadway, or ramp 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-108-070 (20161130)

6. Traffic.

Supplement standard spec 643.3.1 with the following:

IH 43 is an OSOW route. All fixed message and width restricted signs must be in place prior to the beginning of the width restricted stage to inform multi trip permit holders to utilize alternate routes. See Wisconsin Lane Closure System Advance Notification article to address lane restrictions in LCS.

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

Yield to all through traffic at all locations. Equip all vehicles or equipment operating in the live traffic lanes with a hazard identification beam (flashing yellow signal light) that is visible from 360 degrees. Operate the flashing yellow beam only when merging or exiting live traffic lanes or when parked or operating on shoulders, except when parked behind barrier wall. Do not park personal vehicles within the access control limits of the freeway. Do not cross live traffic lanes of IH 43 with equipment or vehicles.

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

Provide minimum 24-hour advance notification to the engineer for any LCS cancellations (not related to weather).

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

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

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

SER-643-001 (20211227)

General

Keep the freeways, all system ramps and all service ramps open to traffic at all times for the duration of this project except as noted below. The schedule of operations shall conform to the requirements contained herein, unless modifications are approved in writing by the engineer.

Construction traffic is not allowed to travel in a counter-directional direction anywhere in the construction zone. This includes all traffic control operations.

Pedestrian Access

Maintain sidewalk at all times except under direction of the engineer. Provide a temporary surface for pedestrian access at all times in areas of sidewalk construction. Construct the temporary surface to meet Americans with Disabilities Act Accessibility Guidelines (ADAAG) requirements consisting of temporary asphaltic surface, any grade of concrete, skid resistant steel plating, or alternative material as approved by the engineer. Gravel or base course material is not acceptable. Maintain sidewalk access to all businesses and residences at all times.

Maintain pedestrian movements crossing the construction zone at all intersections at all times, unless otherwise directed by the engineer. Construct pedestrian crossings of intersections to meet the requirements of the ADAAG consisting of temporary asphaltic surface, any grade of concrete, skid resistant steel plating, or alternative material as approved by the engineer. Gravel or base course material is not acceptable. At all times, ADAAG accessible pedestrian walkways shall be maintained free from mud, sand, construction debris, and construction equipment. Closures of sidewalk must be approved by the engineer and conform to signing shown on the traffic control plan. At locations where crosswalks exist

on both sides of the intersection, closure of one of the two crosswalks is permitted as long as all other crossings are completely open

Portable Changeable Message Signs (PCMS)

Obtain acceptance from the engineer regarding the wording of all messages on portable changeable message signs prior to placing the message. PCMS shall be in place with the appropriate message five days in advance of freeway closures or system ramp closures and 3 days in advance of service ramp closures.

Ramp Closures

All entrance and exit ramps shall be posted seven calendar days in advance of their closure with dates and time of closure. Do not close consecutive entrance ramps or consecutive exit ramps unless it is shown in the traffic control plans or approved by the engineer.

The following consecutive ramp closures are noted on the plans: the IH 43 on-ramps from Locust Street and the IH 43 on-ramps from Keefe Avenue/Atkinson Avenue during Stage II and Stage III and the IH 43 NB on-ramp from STH 145/Fond Du Lac Avenue and the IH 43 NB on-ramp from 7th Street/North Avenue during Stage IV-B.

Bridge Closures

The only bridge closures that will be allowed to overlap are Burleigh Street with Brown Street as there are four bridges crossing IH 43 between them.

Schedule of Operations – Traffic Control

Staging is as follows:

IH 43 and Ramps

2023 Construction:

Stage I:

The following movements are closed:

- Outside shoulder closure of IH 43 (both directions).
- Nighttime outside lane closures of IH 43 (both directions).
- Nighttime rolling closures and full freeway closures of IH 43 (both directions) as needed for installation of temporary lighting.
- Nighttime full closure of the following sideroads as needed for the installation of temporary lighting
    - Brown Street
    - North Avenue/Halyard Street intersection
    - Wright Street
    - Center Street
    - Locust Street
    - Burleigh Street
    - Keefe Avenue
    - Atkinson Avenue
- Nighttime short-term closures as needed of the following ramps:
    - IH 43 NB off-ramp to Halyard Street
    - IH 43 SB off-ramp to 8th Street/North Avenue
    - IH 43 NB on-ramp from 7th Street/North Avenue

- IH 43 SB on-ramp from 8th Street/Locust Street
- IH 43 NB off-ramp to 7th Street/Locust Street
- IH 43 SB off-ramp to 8th Street/Locust Street
- IH 43 NB on-ramp from 7th Street/Locust Street
- IH 43 SB on-ramp from 8th Street/Keefe Avenue
- IH 43 NB off-ramp to Keefe Avenue
- IH 43 SB on-ramp from 9th Street
- IH 43 SB off-ramp to 8th Street/Atkinson Avenue
- IH 43 NB on-ramp from 7th Street/Atkinson Avenue
- IH 43 NB off-ramp to STH 190/Capitol Drive
- IH 43 SB on-ramp from STH 57/Green Bay Avenue
- IH 43 NB off-ramp to STH 57Green Bay Avenue

- Long term ramp closure for the IH 43 SB on-ramp from North Avenue. Close ramp for a maximum of 14 days.

Stage II:

The following movements are closed:

- Shift traffic onto the outside shoulder of IH 43 (both directions), shoulders closed.
- Long term left lane closure on IH 43 SB from STH 57 to North Avenue.
- Long term left lane closure on IH 43 NB from Atkinson Avenue to STH 57.
- Nighttime inside lane closures of IH 43 NB.
- Nighttime full closures of IH 43 (both directions) for sign structure removals.
- Long term closures of the following ramps:
  - IH 43 NB on-ramp from STH 145/Fond Du Lac Avenue
  - IH 43 SB on-ramp from 8th Street/Locust Street
    - Open ramp when full freeway closure is required for Locust Street work. Refer to Locust Street staging.
  - IH 43 NB on-ramp from 7th Street/Locust Street
    - Open ramp when full freeway closure is required for Locust Street work. Refer to Locust Street staging.
  - IH 43 NB on-ramp from 7th Street/Atkinson Avenue
  - IH 43 SB on-ramp from 8th Street/Keefe Avenue

Stage III:

The following movements are closed:

- Shift traffic onto the outside shoulder of IH 43 (both directions), shoulders closed, maintained from Stage II.
- Long term left lane closure on IH 43 (both directions) from Atkinson Avenue to STH 57.
- Nighttime inside lane closures of IH 43 (both directions).

- Long term closures of the following ramps:
    - IH 43 NB on-ramp from STH 145/Fond Du Lac Avenue.
    - IH 43 SB on-ramp from 8th Street/Locust Street.
        - Open ramp when full freeway closure is required for Locust Street work. Refer to Locust Street staging.
    - IH 43 NB on-ramp from 7th Street/Locust Street.
        - Open ramp when full freeway closure is required for Locust Street work. Refer to Locust Street staging.
    - IH 43 NB on-ramp from 7th Street/Atkinson Avenue.

Overwinter Stage:

- Traffic maintained, all lanes and ramps open similar to pre-construction layout.

<u>2024 Construction</u>:

Stage IV:

The following movements are closed:

- Shift traffic onto the inside shoulder of IH 43 (both directions), shoulders closed.
- Nighttime outside lane closures of IH 43 (both directions).
- Nighttime rolling closures and full freeway closures of IH 43 (both directions) for sign structure installation.
- Nighttime rolling closures and full freeway closures of IH 43 (NB) for storm sewer pipe removal and new storm sewer installation at the following locations:
    - Station 869+00, 15-Inch storm sewer installation across NB lanes.
    - Station 925+50, 42-Inch storm sewer installation across NB lanes.
    - Station 926+25, 18-Inch storm sewer installation across NB lanes.
- Nighttime short-term closures of the following ramps:
    - IH 43 NB off-ramp to Halyard Street.
- Long term closures of the following ramps. Close ramps for a maximum of 14 days each.
    - IH 43 NB on-ramp from STH 145/Fond Du Lac Avenue.
    - Stage IV-A
        - IH 43 SB on-ramp from 8th Street/Locust Street.
            - Southbound inside lane closure of 8th Street.
            - Coordinate closure with Burleigh Street staging. Do not close ramp when full freeway closure is required for Burleigh Street work.
        - IH 43 NB off-ramp to 7th Street/Locust Street.
            - Coordinate closure with Burleigh Street staging. Do not close ramp when full freeway closure is required for Burleigh Street work.
        - IH 43 SB off-ramp to 8th Street/Locust Street.
        - IH 43 NB on-ramp from 7th Street/Locust Street.
            - Construct this ramp before the IH 43 NB on-ramp from 7th Street/Atkinson Avenue.
            - Do not close this ramp at the same time as the IH 43 NB on-ramp from 7th Street/Atkinson Avenue.

        - IH 43 NB on-ramp from 7th Street/Atkinson Avenue.
            - Construct this ramp after the IH 43 NB on-ramp from 7th Street/Locust Street.
            - Do not close this ramp at the same time as the IH 43 NB on-ramp from 7th Street/Locust Street.
        - IH 43 SB on-ramp from STH 57/Green Bay Avenue
    - Stage IV-B
        - Stage IV-B.1
            - IH 43 SB off-ramp to 8th Street/North Avenue.
            - IH 43 SB on-ramp from 8th Street/Keefe Avenue.
        - Stage IV-B.2
            - IH 43 NB off-ramp to Keefe Avenue
            - IH 43 SB off-ramp to 8th Street/Atkinson Avenue
        - Stage IV-B.3
            - IH 43 NB off-ramp to STH 190/Capitol Drive
            - IH 43 SB on-ramp from 9th Street
        - Stage IV-B.4
            - IH 43 NB on-ramp from 7th Street/North Avenue

Stage V:

The following movements are closed:

- Shift traffic onto the outside shoulder of IH 43 (both directions), shoulders closed.
- Nighttime inside lane closures of IH 43 (both directions).
- Nighttime rolling closures and full freeway closures of IH 43 (NB) for storm sewer pipe removal and new storm sewer installation at the following locations:
    - Station 925+50, 42-Inch storm sewer installation across NB lanes
    - Station 926+25, 18-Inch storm sewer installation across NB lanes
- Long term closures of the following ramps. Close ramps for a maximum of 14 days each.
    - IH 43 SB on-ramp from 9th Street.
    - IH 43 NB on-ramp from 7th Street/Atkinson Avenue.

Stage VI:

The following movements are closed:

- Shift traffic onto the inside shoulder of IH 43 (both directions) maintained from Stage IV, shoulders closed.
- Nighttime outside lane closures of IH 43 (both directions).
- Nighttime short-term closures of the following ramps:
    - IH 43 NB off-ramp to Halyard Street
    - IH 43 SB off-ramp to 8th Street/North Avenue
    - IH 43 NB on-ramp from 7th Street/North Avenue
    - IH 43 SB on-ramp from 8th Street/Locust Street
    - IH 43 NB off-ramp to 7th Street/Locust Street

- IH 43 SB off-ramp to 8th Street/Locust Street
- IH 43 NB on-ramp from 7th Street/Locust Street
- IH 43 SB on-ramp from 8th Street/Keefe Avenue
- IH 43 NB off-ramp to Keefe Avenue
- IH 43 SB on-ramp from 9th Street
- IH 43 SB off-ramp to 8th Street/Atkinson Avenue
- IH 43 NB on-ramp from 7th Street/Atkinson Avenue
- IH 43 NB off-ramp to Green Bay Avenue
- IH 43 NB off-ramp to STH 190/Capitol Drive

Stage VII:

The following movements are closed:

- Inside shoulder closure of IH 43 (both directions).
- Nighttime inside lane closures of IH 43 (both directions).

Brown Street (B-40-215)

The following movements are closed:

Brown Street closed to through traffic from 11th Street to 8th Street during Stage I and Stage II. Full closure limited to a maximum of 45 days.

Stage I:

- Eastbound sidewalk closed to pedestrians. Pedestrians must use the westbound sidewalk.

Stage II:

- Westbound sidewalk closed to pedestrians. Pedestrians must use the eastbound sidewalk.

Wright Street (B-40-209)

The following movements are closed:

Wright Street closed to traffic from 8th Street to 7th Street. Full closure limited to a maximum of 45 days.

Stage I:

- Eastbound sidewalk closed to pedestrians. Pedestrians must use the westbound sidewalk.

Stage II:

- Westbound sidewalk closed to pedestrians. Pedestrians must use the eastbound sidewalk.

Locust Street (B-40-207)

Stage I:

The following movements are closed:

- Eastbound Locust Street closed to traffic from 8th Street to 7th Street.
- Westbound traffic is reduced to one lane between 9th Street and 7th Street.
- Nighttime closure of IH 43 (both directions) for deck removal and deck stripping. Full freeway closures limited to a maximum of 5 each.

- Southbound 8th Street at Locust Street will have one right turn only lane and one through lane open to traffic.
- Northbound 7th Street at Locust Street will have a dedicated left turn lane and a shared through/right turn lane open to traffic.

Stage II:

The following movements are closed:

- Eastbound Locust Street closed to traffic from 8th Street to 7th Street.
- Westbound Locust Street closed with traffic shifted to the eastbound side via a crossover. Traffic is reduced to one lane between 9th Street and 7th Street.
- Nighttime closure of IH 43 (both directions) for deck removal and deck stripping. Full freeway closures limited to a maximum of 5 each.
- Southbound 8th Street at Locust Street will have a shared through/right turn lane and one through lane only open to traffic.
- Northbound 7th Street at Locust Street will have a dedicated left turn lane, a through lane, and a right turn lane open to traffic.

Burleigh Street (B-40-206)

The following movements are closed:

- Burleigh Street closed to traffic from 8th Street to 7th Street. Closure limited to a maximum of 75 days.
- Nighttime closure of IH 43 (both directions) for deck removal and deck stripping. Full freeway closures limited to a maximum of 10 each.
- Sidewalk along Burleigh Street from 8th Street to 7th Street will be closed to pedestrians. Pedestrians to follow detour.

Bridge Painting

- Nighttime lane closures along IH 43 (both directions).
- Outside lane or shoulder closures as needed for material and equipment storage along the following:
    - Brown Street
    - Wright Street
    - Center Street
    - Locust Street
    - Burleigh Street

Detours

Provide signed detour routes, as shown in the plans that are fully free of construction during all system ramp closures. Install required traffic control and detour signs as shown in the plans at least 14 calendar days prior to beginning stage construction; remove the detour after completion of the project. Cover advance-warning signs and detour signs until work begins.

<u>IH 43 NB Off-Ramp to STH 190/Capitol Drive Closure Detour</u>:

NB traffic on IH 43 will continue on IH 43 to the STH 57/Green Bay Avenue Exit, turn left onto STH 57/Green Bay Avenue south to STH 190/Capitol Drive.

IH 43 NB Off-Ramp to STH 57/Green Bay Avenue Closure Detour:

NB traffic on IH 43 will exit at Keefe Ave, turn right onto Keefe Avenue and go east to Dr. Martin Luther King Jr Drive, turn left and head north to STH 57/Green Bay Avenue.

IH 43 SB On-Ramp from STH 57/Green Bay Avenue Closure Detour:

WB traffic on STH 190/Capitol Drive will exit at Port Washington Road, turn left onto Port Washington Road, turn right onto Keefe Avenue, and the turn left onto 8th Street and take the IH 43 SB on ramp to the freeway.

IH 43 NB On-Ramp from STH 175/Fond Du Lac Avenue Closure Detour:

NB traffic on 6th Street and WB traffic on STH 175/Fond Du Lac Avenue will head north on 6th Street; veer left onto Halyard Street/7th Street and enter the freeway via the IH 43 NB on-ramp at North Avenue.

Pedestrian Detours

Burleigh Street Sidewalk Closure Detour:

Pedestrians will use Locust Street via 7th Street and 8th Street.

Wisconsin Lane Closure System Advance Notification

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

TABLE 108-1 CLOSURE TYPE AND REQUIRED MINIMUM ADVANCE NOTIFICATION

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

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

7. Holiday and Special Event Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying IH 43 traffic, and entirely clear the traveled way and shoulders of such portions of the highway of equipment, barricades, signs, lights, and any other material that might impede the free flow of traffic during the following holiday and special event periods:

- From noon Friday, May 26, 2023 to 6:00 AM Tuesday, May 30, 2023 for Memorial Day;
- From noon Friday, June 30, 2023 to 6:00 AM Wednesday, July 5, 2023 for Independence Day;
- From noon Friday, September 1, 2023 to 6:00 AM Tuesday, September 5, 2023 for Labor Day;
- From noon Wednesday, November 22, 2023 to 6:00 AM Monday, November 27, 2023 for Thanksgiving Day;
- From noon Friday, May 31, 2024 to 6:00 AM Tuesday, June 4, 2024 for Memorial Day;
- From noon Wednesday, July 3, 2024 to 6:00 AM Monday, July 8, 2024 for Independence Day;
- From noon Friday, August 30, 2024 to 6:00 AM Tuesday, September 3, 2024 for Labor Day.

Holiday work restrictions do not apply to roadways or ramps already closed long term during construction as shown on the plans. New long-term closures of ramps and roadways must be coordinated with the holiday work restrictions.

Special event work restrictions do not apply to roadways or ramps already closed long term during construction as shown on the plans. New long-term closures of ramps and roadways must be coordinated with the special event work restrictions.

Freeway Special Event Restrictions

During Summerfest, scheduled for June 22 – June 24, 2023; June 29 – July 1, 2023; July 6 – July 8, 2023; June 20 – June 22, 2024 (assumed); June 27 – June 29, 2024 (assumed); and July 4 – July 6, 2024 (assumed), keep open the following roadways until one hour after the event closes each night:

- Two open lanes on northbound IH 43
- One open lane on southbound IH 43
- Service ramps (those that are not already closed long-term per the staging plans)

During Wisconsin State Fair, scheduled for August 3 - 13, 2023 and August 1 - 11, 2024, keep open the following roadways until one hour after the event closes each night:

- Two open lanes on northbound IH 43
- One open lane on southbound IH 43
- Service ramps (those that are not already closed long-term per the staging plans)

During the Harley-Davidson 120th Anniversary Homecoming, scheduled for July 13, 2023 - July 16, 2023, keep open the following roadways until one hour after the event closes each night:

- Two open lanes on northbound IH 43
- One open lane on southbound IH 43
- Service ramps (those that are not already closed long-term per the staging plans)

On days with a Milwaukee Brewer home game at American Family Field (former Miller Park), maintain two open lanes on northbound IH 43 until four hours after the event begins. IH 43 restrictions during other special events at American Family Field (former Miller Park) will be determined on an as needed basis as determined by the engineer.

On days with a Milwaukee Bucks home game at Fiserv Forum, maintain all inbound travel lanes on IH 43, to Fiserv Forum starting at two hours before the game. Maintain all outbound lanes on IH 43 from Fiserv Forum until three hours after the start of the game. Restrictions during other special events at Fiserv Forum will be determined on an as needed basis as determined by the engineer.

On days with a Green Bay Packers "Gold Package" games at Lambeau Field, no additional lane closures will be allowed from that shown in the plans, 4 hours prior to 4 hours after the game. Restriction during other special events at Lambeau Field will be determined on an as needed basis as determined by the engineer.

Special event work restrictions do not apply to roadways or ramps already closed long term during construction as shown on the plans. New long-term closures of ramps and roadways must be coordinated with the special event work restrictions.

These restrictions also apply to hauling of materials and equipment.

stp-107-005 (20210113)

8. Utilities.

Project 1228-22-70

This contract comes under the provisions of Wisconsin Administrative Code Chapter Trans 220.

Additional information regarding recently relocated utility facilities may be available on permits issued to the utility companies. Permits for IH 43 can be viewed at the Region Office during normal working hours. Contact WisDOT SE Freeways Utility Coordinator, Rabi Bista at (414) 750-7224 for further information.

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.

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 this site. Provide this notice 14 to 16 calendar days in advance of when the prior work will be completed, and the site will be available to the utility owner or as noted below. Follow up with a confirmation notice to the engineer and the utility owner not less than three working days before the site will be ready for the utility owner to begin its work.

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

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.

All utility timelines are based on an anticipated start of construction of the project on May 1, 2023.

Known utilities in the project area are as follows:

AT&T Wisconsin has the following existing facilities within the project limits:

- 4 transite conduits suspended to the underside of the bridge deck on North Avenue - no conflicts anticipated.
- 5 transite and (5) PVC-D conduits suspended to the underside of the bridge deck on Wright Street - no conflicts anticipated - caution during sandblasting operations.
- 8 transite conduits suspended to the underside of the bridge deck on Center Street - no conflicts anticipated - caution during sandblasting operations.
- 4 transite conduits suspended to the underside of the bridge deck on Locust Street.
    - Prior to deck removal (10 working days required for permits), transite duct to be abated and removed by Balestreri Environmental and install temporary support and protection system for the cables to remain in place during construction.

      Note: Cables consist of (1)1800 pr copper, (1) 300 Pr, copper, (1) air pipe, (3) 1-1/4” innerducts with fiber cables inside.
    - During decking (7 working days minimum), coordination for the inserts to be installed to provide proper hanger assembly attachments from below.
    - Any abatement required at abutment walls (1-3 days per side) – drawings to be provided by AT&T for spacing and locations. (1-2 working days to insert).
    - During deck stripping and prior to painting AT&T contractor to remove temporary protection and support system and install hanger system into inserts in item 2 and conduit to match at abutment walls (3-4 nights).
    - Manhole frame and cover adjustments during paving (1 day per location).
        - Station 22+66, 41’ left
        - Station 25+39, 41’ left

- 4 Transite conduits suspended to the underside of the bridge deck on Burleigh Street.
    - Prior to deck removal (10 working days required for permits), transite duct to be abated and removed by Balestreri Environmental and install temporary support and protection system for the cables to remain in place during construction.

      Note: Cables consist of (1)1800 pr copper, (1) 300 Pr, copper, (1) air pipe, (3) 1-1/4" innerducts with fiber cables inside.
    - During decking (7 working days minimum), coordination for the inserts to be installed to provide proper hanger assembly attachments from below.
    - Any abatement required at abutment walls (1-3 days per side) – drawings to be provided by AT&T for spacing and locations. (1-2 working days to insert).
    - During deck stripping and prior to painting AT&T contractor to remove temporary protection and support system and install hanger system into inserts in item 2 and conduit to match at abutment walls (3-4 nights).

City of Milwaukee – Milwaukee Water Works has existing water manholes and valve boxes within the project limits that will need to be adjusted after paving:

- 2 water manholes and 2 water valve boxes to be adjusted to final grade at Station 809+18, 61' right. Perform this work according to the requirements of "Adjusting Water Valve Boxes" and "Adjusting Water Manholes."
- 2 water manholes and 2 water valve boxes to be adjusted to final grade at Station 865+80, 61' right. Perform this work according to the requirements of "Adjusting Water Valve Boxes" and "Adjusting Water Manholes."
- 2 water manholes and 2 water valve boxes to be adjusted to final grade at Station 926+50, 61' right. Perform this work according to the requirements of "Adjusting Water Valve Boxes" and "Adjusting Water Manholes."

Extreme caution should be taken to not disturb the feeder water main. The feeder water mains are at approximately Stations 809+25, 832+15, 851+50, 865+80 and 926+45 respectfully.

A minimum of 4'-0" of undisturbed earth shall be maintained from the excavation limits of the proposed light poles, to the O.D. of the existing feeder main (20" or larger). Extreme caution should be taken to not disturb the feeder water main.

Midwest Fiber Networks LLC has existing communications facilities within the project limits. No conflicts anticipated.

Spectrum has existing communications facilities that are located on We Energies poles. No conflicts anticipated.

Verizon Business has existing communications facilities within the project limits. No conflicts anticipated. Station:887+00 in median in City of Milwaukee right-of-way between SB onramp and N 8th St. Vault is not in conflict but locate vault before construction activities begin.

We Energies – Electric has the existing electric facilities within the project limits. We Energies has no relocations and/or adjustments for this project. Any facilities not explicitly identified as being relocated and/or adjusted have been deemed to be not in conflict and will remain in place as is. We Energies has determined that the project is constructible with these facilities left within the work-zone. No conflicts anticipated.

We Energies electric has facilities within the construction limits. It is imperative that the highway contractor contact We Energies if removing any electrical underground cables, to verify that they have been discontinued and carry no electrical current. The contractor must not assume that unmarked facilities have been discontinued. At no time is it acceptable to push, pull, cut or drill an unmarked facility

without explicit consent from We Energies. Contractor must call the We Energies 24-hour Dispatch lines to arrange for this verification. We Energies Electric Dispatch, 1 (800) 662-4797.

We Energies – Gas/Petroleum has the following existing facilities within the project limits:

We Energies gas to be discontinued at the following locations; 14.5' east and 32' north of the SE corner of N 8th St & W Burleigh St to 37.5' east and 32" north of the SE corner of N 8th St & W Burleigh St to 42.5' east and 24.5' north of the SE corner of N 8th St & W Burleigh St to 358' east and 25' north of the SE corner of N 8th St and W Burleigh St. Work to be complete by 9/15/2022.

We Energies gas to be discontinued at the following locations; 56' west and 77' north of the SE corner of N 9th St and W Locust St to 10' east and 77' north of the SW corner of N 6th St & W Locust St / 33' west and 3.5' south of the NW corner of N 8th St & W Locust to 33' west and 3.5' north of the SW corner of N 8th St & W Locust St / 45' west and 130' north of the SE corner of N 9th St and W Locust St to 43' west and 20' north of the NE corner of N 9th St and W Hadley St. Work to be complete by 9/15/2022.

We Energies gas to be installed at the following locations; 22' east 25.5' north of the NW corner of N 6th St & W Locust St to 1' west 25.5' north of the NW corner of N 6th St & W Locust St to 1' west 1 south of N 6th St & W Locust St to 142' west 1' south of the NW corner of N 6th St & W Locust St / 26.5' west 1' south of the NW corner of N 8th St & W Locust St to 95' west 1' south of the NW corner of N 8th St to W Locust St to 96' west 1' north of the SW corner of N 8th St & W Locust / 27' east 1' north of the SW corner of N 8th St and W Locust St to 0' east/west 1' north of the SE corner of N 9th St and W Locust St to 7' west 6.5' south of the SE corner of N 9th St and W Locust St to 7' west 5' south of the NE corner of N 9th St and W Hadley St to bored under IH 43 (see profile) to 19' east 6' south of the NW corner of N 6th St and W Hadley St / 45' west and 130' north of the SE corner of N 9th St and W Locust St to 64' west and 130' north of the SE corner of N 9th St and W Locust St to 64' west and 0' north of the SE corner of N 9th St and W Locust St to 58' west and 6' south of the SE corner of N 9th St and W Locust St to 58' west and 49' south of the SE corner of N 9th St and W Locust St / 58' west and 30' south of the SE corner of N 9th St and W Locust St to 7' west and 30' south of the SE corner of N 9th St and W Locust St / 43' west and 20' north of the NE corner of N 9th St and W Hadley to 60' west and 20' north of the NE corner of N 9th St and W Hadley to 60' west and 30' north of the NE corner of N 9th St and W Hadley to 7' west and 30' north of the NE corner of N 9th St and W Hadley. Work to be complete by 9/15/2022.

Any facilities not explicitly identified as being relocated and/or adjusted have been deemed to be not in conflict and will remain in place as is. We Energies has determined that the project is constructible with these facilities left within the work-zone.

Contact 1 (800) 261-5325 for gas emergencies, to identify if gas facilities are live, and gas valve box adjustments.

We Energies gas has facilities within the construction limits. It is imperative that the highway contractor contact We Energies if removing any gas facilities, to verify that they have been discontinued and carry no natural gas. The contractor must not assume that unmarked facilities have been discontinued. At no time is it acceptable to push, pull, cut or drill an unmarked facility without explicit consent from We Energies. Contractor must call the We Energies 24-hour Dispatch lines to arrange for this verification. We Energies Gas Dispatch, 1 (800) 261-5325.

WIN Technology – Communication Line has existing fiber in the exiting FTMS conduit along IH 43. Construct, reconstruct, relocate, remove, discontinue, and leave in place portions of communication facilities as shown in the plans and bid items.

Projects 1228-22-80, 1228-22-81 & 1228-22-87

All coordination was done under Project 1228-22-70.

9. Other Contracts.

Coordinate work according to standard spec 105.5.

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

The following projects may be under construction concurrently with the work under this contract. Coordinate activities, detours, work zone traffic control, roadway and lane closures, and other work items as required with other contracts.

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

Project 1228-22-71

IH 43 North South Freeway

Capitol Dr – 2100 feet N of Hampton Ave

WisDOT Design contact: Dave Pittman, (262) 548-6439

WisDOT Construction contact: Steve Kuhl, (414) 531-6932

Project 2455-07-70

C Milwaukee E/W Locust Street

N 7th Street to N Holton Street

WisDOT Design contact: Greg Hafeman, (262) 548-8677

10. Hauling Restrictions.

Replace standard spec 107.2 with the following:

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

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

(3) At all times, conduct operations in a manner that will cause a minimum of disruption to traffic on existing roadways.

sef-107-015 (20170310)

11. 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 Steve Kuhl at (414) 531-6932. Post the permit in a conspicuous place at the construction site.

stp-107-056 (20180628)

12. Erosion Control.

Add the following to standard spec 107.20 as paragraphs nine through fifteen:

(9) Erosion control best management practices (BMP's) the plans show are at suggested locations. The actual locations shall be determined by the contractor's ECIP and by the engineer. Include each dewatering (mechanical pumping) operation in the ECIP submittal. The ECIP shall supplement information the plans show and not reproduce it. The ECIP shall identify how to implement the project's erosion control plan. ECIP shall 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 top soil to minimize the exposure to possible erosion.

(10) Provide the ECIP 14 days before the pre-construction conference. Provide 1 copy of the ECIP to the department and 1 copy of the ECIP to the WDNR Liaison (Kristina Betzold, (414) 507-4946, Kristina.Betzold@Wisconsin.gov). Do not implement the ECIP until department approval and perform all work conforming to the approved ECIP.

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

(12) Stockpile excess materials or spoils on upland areas away from wetlands, floodplains, and waterways. Install perimeter silt fence protection around stockpiles within a timeframe acceptable to the engineer. If stockpiled materials will be left for more than 14 days, install temporary seed and mulch or other temporary erosion control measures the engineer orders.

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

(14) Do not allow 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. Before each dewatering operation, submit to the department a separate ECIP amendment describing in words and pictorial format an appropriate BMP for sediment removal, conforming 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.

(15) Dewatering is incidental.

sef-107-010 (20180104)

The project ECIP should detail how erosion control devices shown in the plan set will be implemented for the worksite. Additional devices may be needed on sequence of operations and field conditions. A ‘staged’ ECIP may be required for this project, as new areas are disturbed. Each new ‘stage’ of the ECIP needs to be submitted to the project staff and WDNR liaison for review as an amendment to the ECIP with a standard 14-day review period. Work should not commence in new areas until the project staff and WDNR has reviewed and concurred with the corresponding ECIP amendment.

All disturbed areas should be adequately protected and restored as soon as feasible. Any disturbed area that will not be ‘re-worked’ for 14 days or more should be temporary seeded and mulched to prevent offsite erosion. The project team identify ‘sensitive’ areas in the field that require additional temporary stabilization to protect resources from being contaminated by sediment laden water discharging from the work site. Any ‘release’ of sediment-laden water from the work site that enters a wetland or waterway should be reported to the WDNR liaison within 24 hours.

If dewatering is required for any reason, the water must be pumped into a properly selected and sized dewatering basin before the clean/filtered water is allowed to enter any waterway or wetland. The basin must remove suspended solids and contaminants to the maximum extent practicable. A properly designed and constructed dewatering basin must take into consideration maximum pumping volume (gpm or cfs) and the sedimentation rate for soils to be encountered. Do not house any dewatering technique in a wetland or floodplain.

The contractor should restrict the removal of vegetative cover and exposure of bare ground to the minimum amounts necessary to complete construction. Restoration of disturbed soils should take place as soon as conditions permit. If sufficient vegetative cover will not be achieved because of late season construction, the site must be properly winterized. A plan for ‘over-wintering’ the project or a specific project area should be compiled and submitted to the project staff and WDNR for review in an amendment to the ECIP.

All temporary stockpiles must be in an upland location and protected with erosion control measures (e.g., silt fence, rock filter-bag berm, etc.). Proposed stockpile locations should be included in the ECIP. Do not stockpile fill or other construction materials in or adjacent to wetlands, waterways or floodplain.

The DOT Select Site process must be adhered to for clean fill or any other material that leaves the work site. The project staff and the WDNR liaison will review all proposed select sites and a site visit may be required. Filling of wetlands, waterways or floodplain is not allowed under the select site process, unless the site owner has proof of required local/state/federal permits. No new impermeable surfaces can be left at a select site (including gravel roads or pads) unless the site owner attains required permits. Contaminated materials leaving the site need to adhere to the Hazardous Material Management Plan.

Construction materials and debris, including fuels, oil, and other liquid substances, will not be stored in the construction area in a manner that would allow them to enter a wetland or waterbody as a result of spillage, natural runoff, or flooding. If a spill of any potential pollutant should occur, it is the responsibility of the permittee to remove such material, to minimize any contamination resulting from this spill, and to immediately notify the State Duty Officer at 1 (800) 943-0003.

Construction of structure over navigable waterways shall be completed as quickly as possible in order to minimize disruption. Construction shall minimize the removal of shoreline vegetation below the ordinary high-water mark (OHWM), unless otherwise directed by the WDNR Transportation Liaison. Construction equipment should not operate on the bed of the stream or below the OHWM, except for that which is necessary for the placement of the structures. The contractor must provide a means of separating the live flow channel of the waterway from the disturbed areas (cofferdam, turbidity barrier, etc.). Any plan for diverging the flow of navigable waterway (listed under the Fish Spawning provision) needs to be submitted, reviewed, and approved by project staff and the WDNR liaison.

When performing concrete or asphalt sawcutting operations, they slurry shall be squeegeed ff to the shoulder gravel or shoveled into the gravel behind curbs and not allowed into storm sewers, ditches, waterways, or wetlands.

13. Maintaining Drainage.

Maintain drainage at and through worksite during construction conforming to standard spec 107.22, 204, 205 and 520.

Use existing storm sewers, existing culvert pipes, existing drainage channels, temporary culvert pipes, or temporary drainage channels to maintain existing surface and pipe drainage. Pumps may be required to drain the surface, pipe, and structure discharges during construction. Costs for furnishing, operating, and maintaining the pumps is considered incidental to the project.

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

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

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

If dewatering operations require pumping of water containing sediments (sand, silt, and clay particles), the discharge will not be allowed to leave the work site or discharge to a storm water conveyance system without sediment removal treatment. Refer to article Erosion Control in these special provisions for additional requirements.

sef-107-016 (20170310)

14. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

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

stp-107-001 (20060512)

15. Notice to Contractor – Contamination Beyond Construction Limits.

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

1. Station 844+70 to 845+60 from 85 feet LT of centerline to 135 feet LT of centerline.
2. Station 897+98 to 898+08 from 103 feet RT of centerline to 113 feet RT of centerline.
3. Station 898+90 to 899+30 from 95 feet RT of centerline to 145 feet RT of centerline.

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

The Hazardous Materials Report is available by contacting:

Andrew Malsom
WisDOT SE Region
141 NW Barstow St.
Waukesha, WI 53187
(262) 548-6705

stp-107-100 (20050901)

16. Notice to Contractor, Asbestos Containing Materials on Structure.

John Roelke, License Number All-119523, inspected Structures B-40-204, B-40-208, B-40-209, B-40-210, B-40-211, and B-40-215 for asbestos on April 13 – 14, 2015. Regulated Asbestos Containing Material (RACM) was found in the following locations and quantities:

- B-40-0204: the caulk in the parapet expansion joints tested positive for asbestos greater than 1% and is therefore regulated ACM, and the transite pipes under the bridge contain regulated ACM.
- B-40-0208: the transit pipes under the bridge contain regulated ACM.
- B-40-0209 and B-40-0210: the gaskets located under the railing attachment plates tested positive for asbestos greater than 1% and is therefore regulated ACM, and the transite pipes under the bridge contain regulated ACM.
- B-40-0211 and B-40-0215: the gaskets located under the railing attachment plates tested positive for asbestos greater than 1% and is therefore regulated ACM.

A copy of the inspection report is available from: Amanda Johansen, (262) 521-4465. Locations of asbestos containing material are noted on the plan set. Do not disturb any asbestos containing material. Should asbestos containing material be disturbed, stop work immediately, notify the engineer, and the engineer will notify the department's Bureau of Technical Services at (608) 266-1476 for an emergency response as specified in standard spec 107.24. Keep material wet until it is abated.

stp-107-120 (20120615)

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

John Roelke, License Number All-119523, inspected Structure B-40-158 and B-40-205 for asbestos on April 13 – 14, 2015. No regulated Asbestos Containing Material (RACM) was found on these structures. A copy of the inspection report is included with the bid package or available from Amanda Johansen, (262) 521-4465, amanda.johansen@dot.wi.gov.

According to NR447 and DHS159, ensure that DNR or DHS receives a completed Notification of Demolition and/or Renovation (DNR Form 4500-113 (R 03/20), or subsequent revision) via U.S. mail, hand-delivery, or using the online notification system at least 10 working days before beginning any construction or demolition. Pay all associated fees. Provide a copy of the completed 4500-113 form to Andrew Malsom, (262) 548-6705, Andrew.malsom@dot.wi.gov and via e-mail to dothazmatunit@dot.wi.gov or via U.S. mail to DOT BTS-ESS attn: Hazardous Materials Specialist, 5 Sout

h S.513.12, PO Box 7965, Madison, WI 53707-7965. In addition, comply with all local or municipal asbestos requirements.

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

- Site Name: Structure B-40-158, Vienna Street Pedestrian overpass over I-43
- Site Address: At IH 43
- Ownership Information: WisDOT SE Region, 141 NW Barstow Street, Waukesha, WI 53187
- Contact: Steven Kuhl
- Phone: (414) 531-6932
- Age: 61 years old. This structure was constructed in 1962.
- Area: 3198 SF of deck

- Site Name: Structure B-40-205, Ring Street Pedestrian Bridge over I-43
- Site Address: At IH 43
- Ownership Information: WisDOT SE Region, 141 NW Barstow Street, Waukesha, WI 531871.1
- Contact: Steven Kuhl
- Phone: (414) 531-6932
- Age: 60 years old. This structure was constructed in 1963.
- Area: 2121 SF of deck

Insert the following paragraph in Section 6.g.:

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

stp-107-125 (20220628)

18. Notice to Contractor – Milwaukee County Transit System.

The Milwaukee County Transit System (MCTS) operates the following bus routes within the construction limits: 80 (HF) 6th Street, 34 Hopkins – Congress, 66 Burleigh Street, and 40U Holt – College UBUS. Invite MCTS to all coordination meetings between the contractor, the department, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations.

Notify MCTS at least ten business days prior to beginning work. If necessary, MCTS will remove their existing bus stop signs and shelters before work begins and re-install or replace bus stop signs and shelters before new pavement opens to vehicular traffic. The contractor shall provide temporary bus stops with ADA compliant pedestrian accommodations, to be paid under separate bid item. Temporary bus stops must be connected to the sidewalk network when one is available. MCTS will provide temporary bus stop signs.

The MCTS contacts are:

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

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

SER-107-004 (20220103)

19. Notice to Contractor – Airport Operating Restrictions.

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

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

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

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

sef-107-020 (20171004)

20. Traffic Meetings and Traffic Control Scheduling.

Every Wednesday by 9:00 AM, submit a detailed proposed 2-week look-ahead traffic closure schedule to the engineer. Type the detailed proposed 2-week look-ahead closure schedule into an excel spreadsheet provided by the engineer. Enter information such as closure dates, duration, work causing the closure and detours to be used. Also enter information such as ongoing long-term closures, emergency contacts and general 2-month look-ahead closure information into the excel spreadsheet.

Meet with the engineer between 10:00 - 11:30 AM on Wednesdays at the project field office to discuss and answer questions on the proposed schedule. Edit, delete and add closures to the detailed proposed 2-week look-ahead schedule, as directed by the engineer, so that proposed closures meet specification requirements. Other edits, deletions or additions unrelated to meeting specification requirements may also be agreed upon with the engineer during the 10:00 AM meeting.

Obtain approval from the engineer for any mid-week changes to the closure schedule. Revise the 2-week look-ahead as required and obtain engineer approval.

sef-643-040 (20150319)

21. Material Stockpile and Equipment Storage.

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

SER-107-011 (20181019)

22. Available Documents.

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

- Design Study Report
- Pavement Type Selection Report
- Environmental Document
- As-Built Drawings
- Preconstruction survey
- Traffic Management Plan

These documents are available from Amanda Johansen at 141 NW Barstow Street, Waukesha, WI 53187 (262) 521-4465.

Reproduction costs will be applied to all copies requested.

sef-102-005 (20170310)

23. Contract Award and Execution.

Add the following to standard spec 103 as subsections 103.9 and 103.10:

103.9 (Vacant)

103.10 Mobilization Workshops

103.10.1 Workshop Schedule

(1) After contract award, attend the following workshops. Each workshop is described within this special provision and will include the following topics:

1. Project Kickoff and Initial Work Plan
2. Cost Reduction Incentives
3. Utility Coordination
4. Submittals
5. CPM Scheduling
6. Leadership Partnering
7. (Vacant)
8. (Vacant)
9. Work Force Opportunities
10. Incident Crisis Communications Plan
11. Notice to Proceed

(2) The workshop dates will be scheduled after contract award.

(3) If necessary, the engineer may modify the workshop schedule to ensure attendance by the necessary department and contractor personnel; however, all workshops will be completed before issuing the Notice to Proceed.

103.10.2.2 Cost Reduction Incentives

(1) The Cost Reduction workshop will identify value enhancing opportunities and consider modifications to the plans and specifications that will reduce either the total cost, time of construction, or traffic congestion. These modifications shall not impair the essential functions or characteristics of the project. These include:

Service life
Economy of operation
Ease of maintenance
Benefits to the traveling public
Desired appearance
Design and safety standards

(2) Submit recommendations resulting from the workshop for approval by the engineer as cost reduction incentive proposals in conformance with standard spec 104.10 "Cost Reduction Incentive".

(3) The department and the contractor may be able to complete the CRI Concept process, as specified in 104.10.2, during the CRI workshop.

(4) Submit CRIs after the CRI workshop that were not introduced at the CRI workshop.

103.10.2.3 Utility Coordination

(1) The Utility Coordination Workshop will define the scope and schedule of utility relocation work and the corresponding roles and responsibilities of the project team.

1. At a minimum, the following key personnel will attend the Utility Coordination Meeting.
    1.1. Department's Utility Coordinator.
    1.2. Contractor's Utility Coordinator.
    1.3. Designer Team's Utility Coordinator.
    1.4. Key Utility Company Representative(s)

2. At a minimum, the Utility Coordination Meeting will include a review of the following:
    2.1. Summary of all required utility relocations on the project.
    2.2. Special provisions addressing utility work.
    2.3. Sharing of contact information.
    2.4. Scheduling of work for utility relocation including critical milestones and staging for the work.

103.10.2.4 Submittals

(1) The Submittal Workshop will identify the key required submittals for the project, categorize submittals into functional areas, and develop a schedule for submittals and submittal reviews. The Workshop participants will at a minimum:

1. Review the project special provisions.
2. Categorize submittals into functional areas including:
    2.1 MSE Retaining Walls
    2.2 Temporary Shoring
    2.3 Falsework and Formwork
    2.4 Girder Shop Drawings
    2.5 Steel Transportation, Delivery and Erection
    2.6 Structure Demolition Plans
    2.7 Pile Hammers and High Capacity Piling
    2.8 Concrete/ Asphalt
    2.9 Materials
    2.10 ITS / Lighting
    2.11 Traffic Signals
    2.12 Sanitary Sewer and Water
    2.13 Permits
3. Develop a schedule for submittals.

103.10.2.5 CPM Schedule

See specification Baseline CPM Progress Schedule.

103.10.2.6 Leadership Partnering

(1) The department will implement mandatory monthly leadership partnering meetings. Unless the department and contractor agree otherwise, the contractor, project design engineers, and department field personal shall meet monthly from project start until the contractor accepts the tentative final estimate. The contractor and department field personal may mutually agree to invite other attendees.

This meeting is intended to facilitate a cooperative team environment that defines roles and responsibilities, determines common goals and objectives, and provides a platform to build trust and accountability. Meeting topics may include:

- Issue and risk management
- Dispute resolution procedures
- Safety
- Public outreach
- Traffic management
- Cost reducing incentives
- Claim resolution
- Scheduling issues
- Quality control

All costs are incidental to the contract work.

sef-108-040 (20171004)

103.10.2.7 (Vacant)

103.10.2.8 (Vacant)

103.10.2.9 Work Force Opportunities

After contract award, attend the Work Force Opportunities workshop. The workshop will take place on the same day and in the same location as the pre-construction meeting.

103.10.2.10 Incident Crisis Communications Plan

(1) The Incident Crisis Communications Plan workshop will include a "dry run" of the Crisis Communication Plan to coordinate the response to an incident within the work zone or on the freeway by the contractor, Police, Fire, EMS and other responders. Ensure that representatives of subcontractors also participate in this meeting if requested by the engineer

103.10.2.11 Notice to Proceed

(1) After all workshops are completed, the Notice to Proceed will be issued.

sef-103-005 (20180104)

24. Contractor Notification.

Replace standard spec 104.2.2.2(2) with the following:

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

Replace standard spec 104.3.2 and 104.3.3 with the following:

104.3.2 (Vacant)

104.3.3 Contractor Initial Written Notice

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

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

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

sef-104-005 (20141211)

25. Contractor Document Submittals.

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

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

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

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

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

sef-105-010 (20150619)

26. Dust Control Implementation Plan.

A Description

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

B (Vacant)

C Construction

C.1 General

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

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

C.2 DCIP Contents

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

Include all of the following:

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

C.3 Updating the DCIP

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

C.4 Dust Control Deficiencies

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

D Measurement

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

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

623.0200	Dust Control Surface Treatment
624.0100	Water
SPV.0075.0001	Pavement Cleanup Project 1228-22-70

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

E Payment

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

sef-107-005 (20170323)

27. Project Site Air Quality.

Because fine particulate matter levels for Milwaukee, Racine and Kenosha Counties are typically close to $PM_{2.5}$ limits and the project is in a non-attainment area for the federal 8-hour ozone standard, contributions from construction activities can have a major impact well beyond the project limits. Take practical measures to mitigate the impact of operating construction equipment on the air quality in and around the project site.

Voluntarily establishing the staging zones for trucks waiting to load and unload is encouraged by the department. Locate staging zones where idling of diesel-powered equipment will have minimal impact on abutting properties and the general public. The department will make signs available to help identify these zones. Have truckers queue up in these zones whenever it is practical. The department further encourages drivers to shut down diesel trucks as soon as it appears likely that they will be queued up for more than ten minutes. Notify employees and sub-contractors about fueling and engine idling.

Portable Concrete Crusher Plants

Portable concrete crusher plants may need a NR 440 Concrete Crusher Plant Air Permit for air emissions. Please contact Wisconsin Department of Natural Resources to request additional information and permit application materials. Complete permit applications may take 3 months to process.

sef-999-039 (20160929)

28. Subletting the Contract.

Replace standard spec 108.1.1 (3) with the following:

If proposing to have a party other than a subcontractor perform work, notify the engineer and submit details of this arrangement in writing. The engineer will determine if that arrangement constitutes subcontracting. Submit copies of all other agreements between any parties regarding the performance of work under the contract with the Request to Sublet.

sef-108-035 (20171004)

29. Salvaged Sand Barrels.

Replace standard spec 614.3.9(3) with the following:

The contractor may not use the salvaged materials for temporary installations under the contract.

Add the following to standard spec 614.3.9:

(4) Place the empty sand barrels in a location that is accessible for the Milwaukee County Department of Public Works to pick up. Contact Kevin Peiffer at (414) 750-1408, kevin.peiffer@dot.wi.gov to schedule a pickup.

Supplement standard spec 614.5(12) with the following:

Payment for salvaged sand barrels is for each empty barrel and cover removed, including removing and disposing of the sand. Dispose of the sand off the project and at contractor expense. Barrels and covers that are damaged will not be paid and will be disposed of at contractor expense.

SER-614-002 (20170712)

30. Removing Old Culverts and Bridges.

Add the following to standard spec 203.3.1:

203.3.1.1 Structure Removal Site Safety Plan

(1) Prepare a Structure Removal Site Safety Plan covering all structure removal work included in the contract. Maintain posted copies of the Structure Removal Site Safety Plan at the site in the project field office. Provide two copies of the Structure Removal Site Safety Plan to the engineer at least four weeks before beginning removal work.

203.3.1.2 Structure Removal Plans

(1) Prepare a structure specific removal plan for each of the following existing structures indicating the methods and sequence of demolition:

Existing Structure	Structure Type	Feature On	Feature Under
B-40-206	4-Span Continuous Steel Deck Girder	Burleigh Street	IH 43
B-40-207	4-Span Continuous Steel Deck Girder	Locust Street	IH 43

This table does not include all the structure removals included in the contract. It is a list of existing structure removals included in the contract for which a structure specific detailed removal plan is required to be submitted.

Examine the existing structure plans and visit the site before preparing and submitting the structure removal plan(s). The contractor is responsible for the methods and sequence of demolition, including effects on the overall stability of each structure being removed. At a minimum, each removal plan shall include:

1. The name of the professional engineer, registered in the state of Wisconsin who will be on site and monitoring the removal of existing structures as required in this specification.
2. The name of the contractor's on-site-employee designated in responsible charge of all removal operations.
3. The removal method and sequence of removal for each individual structure, including the staging of bridge removals.
4. Analysis of the stability of the structure based on the methods and sequence of demolition proposed, to ensure that the structure is demolished in a safe and controlled manner. The analysis computations shall be prepared, signed and sealed by a professional engineer registered in the State of Wisconsin.

5. Design and details of temporary supports, shoring or temporary bracing, if required to stabilize portions of partially remaining structures during the removal sequence or support partially remaining structures after staged removals. Include design computations and detail drawings for all temporary supports, shoring and bracing that indicate the exact placement of the temporary supports, shoring or bracing; verification of design loads; attachment details; and methods for the safe transfer of loads from existing structural elements to be removed to the temporary supports, shoring, or bracing. Temporary support, shoring, or bracing design computations and drawings details are to be prepared, signed and sealed by a professional engineer registered in the State of Wisconsin.
6. Design and details of temporary support foundations. Include in the foundation design the evaluation of expected foundation settlement and the effect that this will have on the structure being supported. Temporary support foundation design computations and drawing details are to be prepared, signed and sealed by a professional engineer registered in the State of Wisconsin.
7. Equipment type and locations of equipment on the structure(s) or adjacent roadways during the removal operations
8. Locations and type of work to be performed directly adjacent to traffic.
9. Details and locations of protective covers and other measures to ensure that people, property and improvements will not be endangered or damaged as a result of the removal operations. Include methods for protecting any pavement surfaces including shoulders, concrete barriers, and other highway features.
10. Methods of removal, hauling and disposal, including haul routes and disposal destination.
11. A schedule of anticipated roadway and lane closures to accommodate removal operations. Include the timing of individual lane or temporary roadway closures and the nature of removal operations that will be performed during the lane or roadway closures.
12. Acknowledgement that the contractor and removal design engineer responsible for preparing the removal plan have visited the site and reviewed the existing structure plans in preparing the removal plan.

Structure Pre-Removal Meetings

After submission of the Structure Removal Site Safety Plan and required Structure Removal Plan(s), schedule and conduct structure pre-removal meetings at a time agreed to by the engineer. Hold structure pre-removal meetings at least three working days before beginning structure removal activities. If the engineer agrees before, multiple structure removals can be combined and discussed at one structure pre-removal meeting. Otherwise, schedule and conduct a separate structure pre-removal meeting for each structure to be removed.

Supplement standard spec 203.3.2.1 with the following:

Perform structure removals conforming to the submitted Structure Removal Site Safety Plan and applicable Structure Removal Plan(s).

Supplement standard spec 203.5.1(2) with the following:

Payment includes preparation and submittal of a Structure Removal Site Safety Plan; preparation and submittal of Structure Removal Plan(s) and performing all structure removal work conforming to the submitted plans.

31. Pavement Breaking Equipment.

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

SER-204-001 (20161123)

32. Removing Manholes and Removing Inlets.

Add the following to standard spec 204.3.2.2.1(10):

Salvage and deliver existing castings and grates to the Milwaukee County Department of Public Works at 10320 W. Watertown Plank Road, Milwaukee, WI 53226. Contact Kevin Peiffer at (414) 750-1408, kevin.peiffer@dot.wi.gov to schedule a delivery date. This work is incidental to the removal item.

33. Removing Concrete Barrier.

Add the following to standard spec 204.3.2.2.1 as paragraph fourteen:

(14) Under the Removing Concrete Barrier bid item, remove barrier and footing, unless specified in the plans, at the locations the plans show. Removal includes all required sawing conforming to standard spec 690.

Add the following to standard spec 204.5.1(2) as paragraph two:

(2) Payment for Removing Concrete Barrier is full compensation for all required sawing and removal of existing barrier and footing, and sludge removal.

sef-204-025 (20180104)

34. Removing and Installing Guardrail and Energy Absorbing Terminals.

This special provision describes maintaining the work site during removing and installing guardrail, type 2 terminals, thrie beam, and energy absorbing terminals conforming to standard spec 204 and 614 and as follows.

Perform removal and installation at each location in one continuous operation. Removal and installation of guardrail, type 2 terminals, thrie beam, and energy absorbing terminal shall be completed within 72 hours.

Appropriate traffic control measures must be in place during the removal and installation as approved by the engineer.

Blunt guardrail ends shall not be left unprotected at any time.

SER-614-003 (20180109)

35. Removing or Abandoning Miscellaneous Structures.

Replace standard spec 204.5.1(3) with the following:

When backfilling with Backfill Granular as specified in this special provision article or as directed by the engineer, the item Backfill Granular is considered incidental to the appropriate bid item.

At locations where Backfill Granular is not specified, contractor may choose to use either Backfill or Backfill Granular, and no separate payments will be made for using Backfill Granular.

Supplement standard spec 204.3.2.2 with the following:

Backfill existing storm sewer or existing storm sewer structure locations shown for removal or abandonment outside the new traveled way with native backfill immediately after completing the sewer work. Backfill according to standard spec 209 within the traveled way.

All backfill, including native material, provided for removal or abandonment of existing storm sewer structures and pipes is considered incidental to the appropriate bid item.

36. Storm Sewer.

Supplement standard spec 204.5.1 with the following:

QMP sampling, testing and documentation if applicable is incidental to removing storm sewer bid item and no separate payment will be made.

Supplement standard spec 608.3.1 with the following:

(1) Incorporate excavated material in the work to the extent practicable. Use materials with suitable engineering properties for embankment.

(2) Dispose of surplus or unsuitable material as specified in standard spec 205.3.12.

Replace standard spec 608.5(2) with the following:

Payment for the Storm Sewer Pipe bid items is full compensation for providing all materials, including all special Y's, mitered sections, elbows and connections required; for all submittals; for excavating and wasting excess material, except rock excavation; mastic joint sealer; for supporting utilities in storm sewer trench; for laying pipe; for sealing joints and making connections to new features, bedding material; for backfilling and granular backfill material; for QMP sampling, testing and documentation; for cleaning out; and absent the pertinent contract bid items, for restoring the work site.

37. QMP Subgrade.

A Description

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

IH 43 Outside Shoulders

IH 43 Inside Median Shoulders

IH 43 On and Off Ramps

Local Roads (Brown Street, Wright Street, Locust Street, and Burleigh Street)

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

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

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

B Materials

B.1 Quality Control Plan

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

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

- An organizational chart with names, telephone numbers, current certifications or titles, and roles and responsibilities of QC personnel.
- The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication process that will be used, and action time frames.
- An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
- Location of the QC laboratory, retained sample storage, and control charts and other documentation.
- A summary of the locations and calculated quantities to be tested under this provision.
- An explanation regarding the basis of acceptance for material that cannot be tested by nuclear methods due to a high percentage of oversized particles.

B.2 Personnel

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

B.3 Laboratory

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

Materials Laboratory
3502 Kinsman Boulevard
Madison, Wisconsin 53704-2583
Telephone: (608) 246-7938
https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/tools/appr-prod/qual-labs.aspx

B.4 Equipment

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

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

http://www.atwoodsystems.com/.

Ensure that the gauge manufacturer or an approved calibration service calibrates the gauge within 12 months before using it on the project. Retain a copy of the calibration certificate with the gauge. Nuclear density gauge calibration verification is required daily when earthwork construction operations require testing under this special provision article. This calibration verification shall be performed using the departments "Validator" apparatus which is located at the field office. Establish a standard gauge reading for the "Validator" using the methods established in CMM 815.12. The source emitter depth for calibration verification, in the direct transmission mode, will be determined by the engineer. This procedure will establish the "Validator" apparatus, as the contractor's project reference site.

Conform to ASTM D 2950 and CMM 8.15 for density testing and gauge monitoring methods. Perform nuclear gauge measurements using gamma radiation in the backscatter or direct transmission position. Perform each test for 1 minute of nuclear gauge count time.

B.5 Soil Source Study

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

Perform characterization tests on each of the soil types selected for the soil source study. The tests for roadway include AASHTO T 89, AASHTO T 90, AASHTO T 27 or AASHTO T88 (without hydrometer), and AASHTO T 11. Classify each soil type selected according to the AASHTO soil classification system based on the characterization tests. Do not begin grading operations until the engineer accepts the soil source study.

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

Split each Proctor sample and identify so as to provide comparison with the department's test results. Unless the engineer directs otherwise, retain the QC split samples for 14 calendar days and promptly deliver the department's split samples to the field office.

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

B.6 Quality Control Documentation

B.6.1 Control Charts

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

- -Embankment portions of the project, except within 200 feet of bridge abutments.
- -Embankment within 200 feet of bridge abutments.
- -Subgrade cut portions of the project.
- -Embankment in pipe culvert, sewer and waterline trenches.
- -Structure and granular backfill placed at bridge abutments.
- -Embankments of the project where embankments are 20 feet or higher regardless of location to be known as special compaction area.

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

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

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

B.6.2 Records

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

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

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

B.7 Contractor Testing

B.7.1 General

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

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

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

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

B.7.2 Field Density and Field Moisture

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

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

B.7.3 Testing Frequency

B.7.3.1 Subgrade Embankment portions of the project, except within 200 Feet of bridge abutments

Perform the required tests at the following frequencies:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One per 2,000 cubic yards of fill per lift or one test per grading area per day whichever yields the most tests.

B.7.3.2 Subgrade Embankment Within 200 Feet of Bridge Abutments

Perform the required tests at the following frequencies:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One per 1,000 cubic yards of fill per lift or one test per grading area per day whichever yields the most tests.

B.7.3.3 Subgrade Cut

Perform the required tests at the following frequencies:

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

B.7.3.4 Subgrade Embankment in Pipe Culvert, Sewer and Waterline Trenches

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

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One test per 100 CY of backfill placed per lift or one test per day whichever yields the most tests.

B.7.3.5 Structure and Granular Backfill at Bridge Abutments

Perform the required tests at the following minimum frequencies:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One test per 2 feet of vertical backfill height per abutment.

B.7.3.6 Embankments of the project 20 feet or higher regardless of location to be known as special compaction area

Perform the required tests at the following minimum frequencies but exclude MSE wall backfill:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One per 2,000 cubic yards of fill per lift or one test per grading area per day whichever yields the most tests.

B.7.4 Control Limits

B.7.4.1 Field Density

B.7.4.1.1 General Conditions

The lower control limit for field density measurements in the upper zone is a minimum of 95.0 percent of the maximum dry density as determined by AASHTO T 99 or T 272for the 4-point running average and a minimum of 94.0 percent of the maximum dry density for any individual test.

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

B.7.4.1.2 Embankments of the project 20 feet or higher regardless of zone to be known as special compaction area excluding MSE wall backfill

The lower control limit for field density measurements in the special compaction area is a minimum of 98.0 percent of the maximum dry density as determined by AASHTO T 99 or T 272 for the 4-point running average and a minimum of 95.0 percent of the maximum dry density for any individual test.

B.7.4.2 Field Moisture Content

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

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

B.7.5 Corrective Action

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

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

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

B.8 Department Testing

B.8.1 General

The department will conduct verification testing to validate the quality of the product and independent assurance testing to evaluate the sampling and testing. The department will provide the contractor with a listing of names and telephone numbers of all verification and independent assurance personnel for the project.

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

B.8.2 Verification Testing

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

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

The department will perform verification testing as follows:

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

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

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

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

B.8.3 Independent Assurance Testing

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

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

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

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

B.9 Dispute Resolution

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

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

in error will pay service charges incurred for testing by an independent laboratory. The department may use third party tests to evaluate the quality of questionable materials and determine the appropriate payment. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

B.10 Acceptance

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

C (Vacant)

D (Vacant)

E Payment

Costs for all sampling, testing, and documentation required under this special provision are incidental to the work. If the contractor does not perform the work required under this special provision, the department may reduce the contractor's pay. The department will administer pay reduction under the Non-performance of QMP administrative item.

sef-207-005 (20171004)

38. Crash Cushions Permanent Low Maintenance.

Complete work according to standard spec 614.

Replace standard spec 614.2.7 with the following:

Use Model SCI 100GM Crash Attenuator from Smart Cushion Innovations (SCI) Products for permanent crash cushions.

39. Abatement of Asbestos Containing Material B-40-206, Item 203.0211.S.0001; Abatement of Asbestos Containing Material B-40-207, Item 203.0211.S.0002.

A Description

This special provision describes abating asbestos containing material on structures.

B (Vacant)

C Construction

John Roelke, License Number All-119523, inspected Structures B-40-206 and B-40-207 for asbestos on April 13 – 14, 2015. Regulated Asbestos Containing Material (RACM) was found on these structures in the following locations and quantities:

- B-40-0206: the transit pipes under the bridge contain regulated ACM.
- B-40-0207: the gaskets located under the railing attachment plates tested positive for asbestos greater than 1% and is therefore regulated ACM, and the transite pipes under the bridge contain regulated ACM.

The RACM on this structure must be abated by a licensed abatement contractor. A copy of the inspection report is included in the bid package or available from Amanda Johansen, (262) 521-4465, amanda.johansen@dot.wi.gov. According to NR447 and DHS159, ensure that DNR or DHS receives a completed Notification of Demolition and/or Renovation (DNR Form 4500-113 (R 3/20), or subsequent revision) via U.S. mail, hand-delivery, or using the online notification system at least 10 working days before beginning any construction or demolition. Pay all associated fees. Provide a copy of the completed 4500-113 form and the abatement report to Andrew Malsom, (262) 548-6705, andrew.malsom@dot.wi.gov and via email to dothazmatunit@dot.wi.gov or via US mail to DOT BTS-ESS attn: Hazardous Materials Specialist, 5 South S.513.12, PO Box 7965, Madison, WI 53707-7965. In addition, comply with all local or municipal asbestos requirements.

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

- Site Name: Structure B-40-206, Burleigh Street over I-43
- Site Address: 0.6M E JCT STH 57
- Ownership Information: WisDOT SE Region, 141 NW Barstow Street, Waukesha, WI 53187
- Contact: Steven Kuhl
- Phone: (414) 531-6932
- Age: 60 years. This structure was constructed in 1963.
- Area: 16376 SF of deck

- Site Name: Structure B-40-207, Locust Street over I-43
- Site Address: 0.6M E JCT STH 57
- Ownership Information: WisDOT SE Region, 141 NW Barstow Street, Waukesha, WI 53187
- Contact: Steven Kuhl
- Phone: (414) 531-6932
- Age: 59 years. This structure was constructed in 1964.
- Area: 19572 SF of deck

Insert the following paragraph in Section 6.g.:

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

D Measurement

The department will measure Abatement of Asbestos Containing Material (Structure #) 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
203.0211.S.0001	Abatement of Asbestos Containing Material B-40-206	EACH
203.0211.S.0002	Abatement of Asbestos Containing Material B-40-207	EACH

Payment is full compensation for submitting necessary forms; removing all asbestos; and for properly disposing of all waste materials.

stp-203-005 (20220628)

40. Abandoning Sewer, Item 204.0291.S.

A Description

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

B Materials

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

C Construction

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

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
204.0291.S	Abandoning Sewer	CY

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

stp-204-050 (20210708)

41. Removing Advance Flasher Assemblies Type 1, Item 204.9001.S.

A Description

This special provision describes removing advance flasher assemblies from the locations the plans show. Rewire and disconnect wiring in the control cabinet as necessary and properly dispose of materials conforming to standard spec 204.3.1.3.

B Materials

Dispose of all materials resulting from removing the Advance Flasher Assemblies including but not limited to poles, break-a-way bases, signal assemblies, bulbs, and wire off the job site.

C Construction

Do not remove existing advance flasher assemblies until proper disconnects and wiring changes in the controller cabinet have been made.

Where an existing advance flasher assembly is mounted to a light pole, remove all signal hardware including wire, conduit, signal assemblies and mounts. Where existing conduit has been installed under concrete sidewalk or roadway, do not remove buried conduit unless directed otherwise by the engineer or unless it is not possible to install new wire through the existing conduit.

D Measurement

The department will measure Removing Advance Flasher Assemblies (Type) by the unit, 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
204.9001.S	Removing Advance Flasher Assemblies, Type 1	EACH

Payment is full compensation for removing advanced flasher assemblies; for rewiring, as necessary; for disconnecting wiring as necessary in the controller cabinet; and for properly disposing of all materials.

Removal of concrete bases and signs associated with this item will be measured and paid for separately.

stp-204-060 (20170615)

42. Removing Bulkhead, Item 204.9060.S.0050.

A Description

This special provision describes removing existing bulkhead as shown in the plans, conforming to standard spec 204.

B (Vacant)

C Construction

Carefully remove the bulkhead without damaging the pipe. Replace portion of damaged pipe with similar size and material.

D Measurement

The department will measure Removing Bulkhead by each bulkhead removed, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.0050	Removing Bulkhead	EACH

Payment is full compensation for furnishing all materials; removing bulkhead, replacing damaged pipe material including concrete collar around the pipe; and excavating and backfilling where necessary.

43. Removing Distribution Center, Item 204.9060.S.0101.

A Description

This special provision describes removing an existing highway lighting distribution center and electrical service pedestal as shown on the plans, according to the pertinent provisions of standard spec 204, and as hereinafter provided.

B (Vacant)

C Construction

Remove the lighting distribution center and the electrical service pedestal and dispose off the project site.

The department will issue the demolition request to WE-Energies. Coordinate with the utility for disconnection of services. The department will pay any fees charged by the utility.

Removal of the concrete base will be paid under a separate bid item.

D Measurement

The department will measure Removing Distribution Center by each individual unit; acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.0101	Removing Distribution Center	EACH

Payment is full compensation for removal of the distribution center, electrical service pedestal, and for utility coordination for the services.

44. Removing Lighting Units, Item 204.9060.S.0102.

A Description

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

B Materials

All removed material shall become the property of the contractor and be disposed off the project site.

C Construction

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

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

D Measurement

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

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.0102	Removing Lighting Units	EACH

The department will pay separately for the detachment and disposal of light fixtures.

45. Removing Luminaire, Item 204.9060.S.0103.

A Description

This special provision describes removing existing luminaire from existing light pole as shown on plans according to the pertinent provisions of standard spec 204, as shown on the plans, and hereinafter provided.

B (Vacant)

C Construction

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

Remove attached conduits, wires, and associated hardware and appurtenances at locations shown in the plan and as directed by the engineer. Removed materials shall become the property of the contractor and shall be disposed off the project site according to pertinent requirements of standard spec 203.3.4.

All embedded conduits, junction boxes and hardware are not included in this bid item.

D Measurement

The department will measure Removing Luminaire by each unit removed and disposed of off the project site including associated materials, acceptably 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.0103	Removing Luminaire	EACH

Payment is full compensation for removing and disposing of attached conduits, hardware; and for cleanup and waste disposal.

The department will pay separately for the detachment and disposal of light fixtures.

46. Removing Underdeck Lighting, Item 204.9060.S.0104.

A Description

This special provision describes removing underdeck lighting according to the pertinent provisions of standard spec 204, as shown on the plans, and hereinafter provided.

B (Vacant)

C Construction

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

Remove attached conduits, wires, attached junction boxes, and associated hardware and appurtenances at locations shown in the plan and as directed by the engineer. Removed materials shall become the property of the contractor and shall be disposed off the project site according to pertinent requirements of standard spec 203.3.4.

All embedded conduits, junction boxes and hardware are not included in this bid item.

D Measurement

The department will measure Removing Underdeck Lighting by each unit removed and disposed of off the project site including associated materials, acceptably 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.0104	Removing Underdeck Lighting	EACH

Payment is full compensation for removing and disposing attached conduits, attached junction boxes, and hardware.

The department will pay separately for the detachment and disposal of light fixtures.

47. Removing Controller Cabinet, Item 204.9060.S.0201.

A Description

This special provision describes removing an existing controller cabinet.

B (Vacant)

C Construction

Remove controller cabinets at the locations shown on the plans, or as directed by the engineer. Salvage and store the cabinets and all contents for pick up by the department.

Do not remove the existing ITS control cabinets, or any other associated equipment until necessary, or as directed by the engineer. Carefully remove the existing cabinets from the concrete bases, together with all components in such a manner as to safeguard all parts and wiring from damage or loss. Salvage and store the cabinet and contents for pick up by the department.

Prior to removing the existing ITS control cabinets, remove all cables being terminated in the cabinet. Cut existing cables flush with cabinet base and cap existing conduits. Dispose of the cables properly away from the project area.

D Measurement

The department will measure Removing Controller Cabinet by the unit, acceptably removed, salvaged, and stored.

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.0201	Removing Controller Cabinet	EACH

Payment is full compensation for removal and storage of the controller cabinet; disconnecting all associated wires and cables; and for capping existing conduits.

48. Removing Controller Cabinet Base, Item 204.9060.S.0202.

A Description

This special provision describes removing an existing controller cabinet concrete base.

B Materials

Existing controller cabinet base, including concrete masonry, ground rods, masonry anchors, and restoration materials such as topsoil, seeding, mulch, and fertilizer according to the pertinent provisions of standard spec 201, 625, 627, 629, 630, 636, and 640.

C Construction

Remove and dispose of the concrete foundation and all other pertinent materials and restore the disturbed area by placing 4-inches of topsoil, and fertilize, seed, and mulch all disturbed areas according to the pertinent requirements of the standard specifications.

D Measurement

The department will measure Removing Controller Cabinet Base by the unit, removed from the ground, removed from the project site, and the disturbed area restored according to the contract.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.0202	Removing Controller Cabinet Base	EACH

Payment is full compensation for removing and disposing of a concrete controller cabinet base, including masonry anchors, ground rods, and concrete masonry, for topsoil, fertilizer, seed and mulch.

49. Removing Speed Warning System DMS, Item 204.9060.S.0203.

A Description

This special provision describes removing an existing electronic overhead freeway message sign from an existing overhead sign structure, controller, and cables, removing the sign and and disposing of it properly off the project area.

B Materials

Existing sign, control cables, and power wires.

Existing sign assembly consists of electronic message sign, and hardware for mounting sign on sign structure.

C Construction

Turn power off to the sign at the power cabinet shown on the plans prior to beginning any other removal work.

Disconnect power wires and control cable to the sign.

Support the existing DMS with a crane prior to removing any mounting hardware.

Crane the existing DMS off of the structure and onto an appropriate vehicle to transport the DMS.

D Measurement

The department will measure Removing Speed Warning System DMS by the unit, acceptably removed and stored for parts removal.

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.0203	Removing Speed Warning System DMS	EACH

Payment is full compensation for removing the DMS, sign controller and cables, including any necessary wiring disconnections; any necessary restoration; for disposing of the sign and remaining components.

50. Removing Ramp Control Signal Assembly Sidemount, Item 204.9060.S.0204.

A Description

This special provision describes removing an existing sidemount ramp control signal assembly.

B Materials

Materials included in side-mount ramp control signal assemblies are:

1. Traffic signal standards.
2. Pedestal bases for traffic signal use.
3. Vehicular traffic signal heads.
4. Signal mounting brackets.
5. Sign mounting brackets.
6. Enforcement signal displays.

C Construction

Remove sidemount ramp control signal assemblies at the locations shown in the plans, or as directed by the engineer. Salvage the signal assemblies for the department to pick up or dispose of them properly as directed by the engineer.

All work shall be according to the applicable requirements of standard spec 655, 656, 657, and 658, the Wisconsin Electrical Code, these special provisions, and the details shown in the plans.

Salvage and store all removed materials for pickup by the department. Coordinate with the engineer on a schedule to have the removed items picked up. Maintain all materials in a condition suitable for reutilization. Replace all items damaged during construction operations.

Electrical work under this item shall be completed by a journeyman electrician or be completed under the supervision of a journeyman electrician. Legal status or standing as a journeyman electrician shall be certified or otherwise documented to the engineer before any electrical work may begin.

D Measurement

The department will measure Removing Ramp Control Signal Assembly Sidemount by the unit, acceptably removed, salvaged, and stored.

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.0204	Removing Ramp Control Signal Assembly Sidemount	EACH

Payment is full compensation for removal and storage of the ramp control signal assembly; disconnecting all wiring connections; removing all conduit connections; for any necessary restoration, including backfill, topsoil, and seeding.

51. Removing Communication Vault, Item 204.9060.S.0205.

A Description

This special provision describes removing an existing communication vault.

B Materials

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

C Construction

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

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

D Measurement

The department will measure removing communication vault by the unit, removed from the ground, removed from the project site, and the disturbed area restored according to the contract.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.0205	Removing Communication Vault	EACH

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

52. Removing Temporary Vehicle Detector Assembly, Item 204.9060.S.0206.

A Description

This special provision describes removing temporary vehicle detector assemblies from their respective locations in the project area, salvaging the individual components for pick up by the department, and disposing of unwanted components as appropriate.

B Materials

Materials will include materials to be salvaged for the department and materials to revert to the contractor be disposed of as determined by the contractor.

Materials to be salvaged for the department include the following:

- One or more Electronic Integrated Systems, Inc. (EIS) Remote Traffic Microwave Sensor (RTMS).
- Cellular modem and antenna.
- Solar power systems consisting of solar power panels, batteries, solar power controllers, and solar power cabinets to house the batteries and controller.
- Mounting hardware for solar power system and RTMS detector.

Materials to revert to the contractor or be disposed of include the following:

- Wood pole
- Cable between solar power system output and RTMS.

C Construction

As directed by the engineer, remove the temporary vehicle detector assemblies from their respective locations in the project. Be careful not to damage any of the components to be salvaged for the department.

Salvage the materials described above for pick up by the department.

Dispose non-reusable materials appropriately away from the project site.

Restore the site to match the existing surrounding area using standard restoration items as described in the standard specifications.

D Measurement

The department will measure Removing Temporary Vehicle Detector Assembly as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.0206	Removing Temporary Vehicle Detector Assembly	EACH

Payment is full compensation for removing the assembly; for salvaging appropriate materials; disposal of other materials off site; and for restoration of the site.

53. Removing Traffic Signals N. 8TH St. & W. Locust St., Item 204.9060.S.0301; Removing Traffic Signals N. 7TH St. & W. Locust St., Item 204.9060.S.0302; Removing Traffic Signals N. 8TH St. & W. Burleigh St., Item 204.9060.S.0303; Removing Traffic Signals N. 7TH St. & W. Burleigh St., Item 204.9060.S.0304.

A Description

This special provision describes removing traffic signals at the intersection of N. 8TH St. & W. Locust St., N. 7TH St. & W. Locust St., N. 8TH St. & W. Burleigh St and N. 7TH St. & W. Burleigh St. conforming to standard spec 204 and as hereinafter provided. Specific removal items are noted in the plans.

B (Vacant)

C Construction

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

Notify the City of Milwaukee at least five working days prior to the removal of the traffic signals. Complete the removal work as soon as possible following shut down of this equipment.

Remove all standards and poles per plan from their concrete footings and disassemble out of traffic. Remove the transformer bases from each pole. Remove the cabinet, signal heads, emergency vehicle preemption heads (evp), mast arms, luminaires, wiring/cabling, and traffic signal mounting devices from each signal standard, arm or pole. Dispose of all equipment and cable off the right-of-way.

Lamps, ballasts, LEDs, and switches to be removed and disposed of under item 659.5000.S.

D Measurement

The department will measure Removing Traffic Signals in Each unit of work for each intersection, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.0301	Removing Traffic Signals N. 8TH St. & W. Locust St.	EACH
204.9060.S.0302	Removing Traffic Signals N. 7TH St. & W. Locust St.	EACH
204.9060.S.0303	Removing Traffic Signals N. 8TH St. & W. Burleigh St.	EACH
204.9060.S.0304	Removing Traffic Signals N. 7TH St. & W. Burleigh St.	EACH

Payment is full compensation for removing, disassembling traffic signals, disposing of material and incidentals necessary to complete the contract work.

The department will pay separately for the detachment and disposal of light fixtures.

stp-204-025 (20150630)

54. Removing Aerial Cable, Item 204.9090.S.0105

A Description

The work under this item consists of removing existing overhead service lines as shown on the plans, including all associated guy wires, anchors, and electrical wire; and removing materials from the site.

B (Vacant)

C Construction

Contractor shall properly dispose of materials off site.

D Measurement

The department will measure Remove Aerial Cable by linear foot pole to pole, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9090.S.0105	Removing Aerial Cable	LF

SER-204.10 (20170405)

55. Removing R-40-22, Item 204.9090.S.0400.

A Description

This special provision describes partially removing R-40-22 as shown in the plans, conforming to standard spec 204.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Removing R-40-22 in linear feet, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9090.S	Removing R-40-22	LF

stp-204-025 (20150630)

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

A Description

A.1 General

This special provision describes excavating, loading, hauling, and disposing of petroleum contaminated soil at a DNR approved bioremediation facility. The closest DNR approved bioremediation facilities are:

Waste Management Orchard Ridge Landfill
W124 N9355 Boundary Rd.
Menomonee Falls, WI 53051
(866) 909-4458

Green for Life Emerald Park Landfill
W124 S10629 S. 124th St.
Muskego, WI 53150
(414) 529-1360

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

A.2 Notice to the Contractor – Contaminated Soil Locations

The department 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 844+70 to 845+15, from 85 feet to 135 feet left of reference line, from approximately 12 to 18 feet below grade. The estimated volume of contaminated soil to be excavated at this location is 0 CY (approximately 0 tons using a conversion factor of 1.7 tons per cubic yard). Groundwater at this location may be contaminated with petroleum.

2. Station 845+15 to 845+60, from 85 feet to 135 feet left of reference line, from approximately 1 to 20+ feet below grade. The estimated volume of contaminated soil to be excavated at this location is 195 CY (approximately 332 tons using a conversion factor of 1.7 tons per cubic yard). Groundwater at this location is contaminated with petroleum and metals.
3. Station 845+15 to 845+60, from 45 feet to 85 feet left of reference line, from approximately 1 to 6 feet below grade. The estimated volume of contaminated soil to be excavated at this location is 292 CY (approximately 496 tons using a conversion factor of 1.7 tons per cubic yard). Groundwater at this location is contaminated with metals.
4. Station 898+90 to 899+30, from 95 feet to 145 feet right of reference line, from approximately 1 to 8 feet below grade. The estimated volume of contaminated soil to be excavated at this location is 0 CY (approximately 0 tons using a conversion factor of 1.7 tons per cubic yard).

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

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

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

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

Name: Andrew Malsom
Address: 141 NW Barstow Street, PO Box 798, Waukesha, WI 53187-0798
Phone: (262) 548-6705
Fax: (262) 548-6891
E-mail: andrew.malsom@dot.wi.gov

A.3 Coordination

Coordinate work under this contract with the environment consultant:

Consultant: TRC Environmental Corporation
Address: 6737 W. Washington Ave., Suite 2100, West Allis, WI 53214
Contact: Bryan Bergmann
Phone: (262) 901-2126 office, (262) 227-9210 cell
Fax: (262) 879-1220
E-mail: bbergmann@trccompanies.com

The role of the environmental consultant will be limited to:

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

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

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

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

A.4 Health and Safety Requirements

Add the following to standard spec 107.1:

During excavation activities, expect to encounter soil contaminated with 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 (Vacant)

C Construction

Add the following to standard spec 205.3:

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

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

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

If dewatering is required in an area of known contamination, water generated from dewatering activities may contain contaminants and require testing, special handling, temporary storage, and disposal. Contaminated groundwater may be discharged to the sanitary sewer with prior approval from the City of Milwaukee and the Milwaukee Metropolitan Sewerage District.

Contractor shall ensure continuous dewatering and excavation safety at all times. Provide, install, operate, maintain adequate pumping equipment, disassemble, and remove pumping equipment.

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

Limit excavation in the locations described in A.2 to minimize the handling of groundwater. Notify the engineer of any dewatering activities and obtain any permits necessary to discharge or dispose of contaminated water. Provide copies of such Permit(s) 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.

D Measurement

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

E Payment

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

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

Payment is full compensation for excavating, segregating, loading, hauling, and treatment via bioremediation of contaminated soil; obtaining solid waste collection and transportation service operating licenses; assisting in the collection soil samples for field evaluation; and dewatering of soils before transport, if necessary.

stp-205-003 (20150630)

57. Select Crushed Material.

Replace standard spec 312.2(6) with the following:

The department will assess Select Crushed Material acceptability based primarily on the engineer's visual inspection. The department may require the contractor to sample, test, and report gradation or the fracture results to show conformance of the material. One test per source, production process, or change of production process may be required.

Replace standard spec 312.5(2) with the following:

Payment for Select Crushed Material is full compensation for providing and compacting Select Crushed Material and all work necessary to provide gradation or fracture test results.

SER-321-001 (20160831)

58. QMP HMA Pavement Nuclear Density.

A Description

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

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

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

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

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

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

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

http://www.atwoodsystems.com/

B Materials

B.1 Personnel

(1) Nuclear gauge owners and personnel using nuclear gauges shall comply with WisDOT requirements according to 460.3.3 and CMM 8-15.

B.2 Testing

(1) Conform to ASTM D2950 and CMM 8.15 for density testing and gauge monitoring methods. Conform to CMM 8-15.10.4 for test duration and gauge placement.

B.3 Equipment

B.3.1 General

(1) Furnish nuclear gauges according to CMM 8-15.2.

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

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

B.3.2 Comparison of Nuclear Gauges

B.3.2.1 Comparison of QC and QV Nuclear Gauges

(1) Compare QC and QV nuclear gauges according to CMM 8-15.7.

B.3.2.2 Comparison Monitoring

(1) Conduct reference site monitoring for both QC and QV gauges according to CMM 8-15.

B.4 Quality Control Testing and Documentation

B.4.1 Lot and Sublot Requirements

B.4.1.1 Mainline Traffic Lanes, Shoulders, and Appurtenances

(1) Divide the pavement into lots and sublots for nuclear density testing according to CMM 8-15.10.2.

(2) Determine required number of tests according to CMM 8-15.10.2.1.

(3) Determine random testing locations according to CMM 8-15.10.3.

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

(1) Divide the pavement into lots and sublots for nuclear density testing according to CMM 8-15.10.2.

(2) Determine required number of tests according to CMM 8-15.10.2.2.

(3) Determine random testing locations according to CMM 8-15.10.3.

B.4.2 Pavement Density Determination

B.4.2.1 Mainline Traffic Lanes and Appurtenances

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

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

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

B.4.2.2 Mainline Shoulders

B.4.2.2.1 Width Greater Than 5 Feet

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

B.4.2.2.2 Width of 5 Feet or Less

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

(2) If a sublot test result is more than 3.0 percent below the target density, the engineer may require the unacceptable material to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine the limits of the unacceptable material according to B.4.3.

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

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

B.4.2.4 Documentation

(1) Document QC density test data as specified in CMM 8.15. Provide the engineer with the data for each lot within 24 hours of completing the QC testing for the lot.

B.4.3 Corrective Action

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

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

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

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

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

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

B.5 Department Testing

B.5.1 Verification Testing

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

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

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

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

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

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

B.5.2 Independent Assurance Testing

(1) Independent assurance is unbiased testing the department performs to evaluate the department's verification and the contractor's QC sampling and testing including personnel qualifications, procedures, and equipment. The department will perform the independent assurance review according to the department's independent assurance program.

B.6 Dispute Resolution

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

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

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

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

B.7 Acceptance

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

C (Vacant)

D (Vacant)

E Payment

E.1 QMP Testing

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

E.2 Disincentive for HMA Pavement Density

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

E.3 Incentive for HMA Pavement Density

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

stp-460-020 (20181119)

59. HMA Pavement 4 SMA 58-28 V, Item 460.8624
HMA Pavement Test Strip Volumetrics, Item 460.0115.S
HMA Pavement Test Strip Density, Item 460.0120.S.

A Description

Conform to standard spec 450 and 460 except as modified in this special provision.

B (Vacant)

C Construction

Add the following to standard spec 450.3.1.3 to require transfer vehicle for SMA:

(2) Use a Material Transfer Vehicle when constructing SMA pavement.

Add the following to standard spec 450.3.1.5 to prohibit rubber-tire roller on SMA:

(3) Do not use a rubber-tired roller for compaction of SMA pavement.

Add the following to standard spec 460.3.3.2 to require and define approval criteria for SMA test strips:

(5) Construct a test strip according to CMM 8-15.13 to correlate nuclear gauges to pavement cores, confirm SMA in-place density using cores and determine mixture air voids. Submit the test strip start time and date to the department in writing at least 5 calendar days in advance of construction of the test strip. The department will assess the contractor $2,000 for each instance according to Section E of this special provision if paving does not begin within 2 hours of the submitted start time, delaying the test strip. Alterations to the start time and date must be submitted to the department in writing a minimum of 24 hours prior to the start time. The contractor will not be liable for changes in start time related to adverse weather days as defined by standard spec 101.3 or equipment breakdown verified by the department.

Construct the test strip at the beginning of work for each SMA mixture, for each layer and for each thickness. All SMA test strip material produced shall meet the requirements in Tables 460-1 and 460-2 and conform to the JMF limits presented herein except as follows:

ITEM	JMF Limits
Asphaltic content in percent [1]	- 0.5
VMA in percent[2]	- 1.0
Air Voids in percent	According to the SMA Test Strip Approval Criteria Below

[1] Asphalt content more than -0.5% below the JMF will be referee tested by BTS using automated extraction according to WisDOT Modified ASTM D8159.

[2] VMA limits based on minimum requirement for mix design nominal maximum aggregate size in table 460-1 as modified herein.

The test strip shall remain in place and become part of the completed pavement when acceptably produced, acceptably compacted, and meets finish and smoothness requirements. CMM 8-15 describes the SMA density and volumetric testing tolerances required for the test strip.

(6) The test strip is to be treated as a single/separate lot and will have densities and pay adjustments calculated accordingly. The department will test one of the two split samples for volumetrics to determine test strip approval. If the QV air void sample is outside of the limits for 100% pay (i.e. $3.2 \leq Va \leq 5.8$), dispute resolution according to CMM 8-36 will determine material conformance and payment for the test strip. If QV and QC test results exceed testing tolerances (0.015 for Gmm or Gmb), both retained split samples will be tested by BTS. In this case, additional investigation shall be conducted to identify the source of the difference between QV and QC data and BTS referee test data will be used to determine material conformance and pay.

Pay adjustments made as part of dispute resolution on test strip material will be limited to the test strip and will not extend to material placed during main production nor will pay adjustments made on main production extend into the test strip. The department will notify the contractor within 24 hours of the start of test strip construction regarding approval to proceed with paving beyond the test strip. The department will evaluate mixture air voids, test strip density, and nuclear gauge to core correlation in determining test strip approval and material conformance according to the following:

SMA Test Strip Approval Criteria

Approval / Material Conformance [1]	QV Air Voids	Average Density of All Cores [2]	Outcome of Test Strip for Contractor
Approved / Material Conforming	$3.2 \leq Va \leq 5.8$	≥ 93.0 %	Proceed with production
Test Strip Approved / Material Nonconforming	$2.8 \leq Va \leq 3.2$ or $5.8 < Va \leq 6.2$	≥ 91.0 %	Propose solution and proceed with production. Payment for material will be based on BTS referee tests.
Test Strip Not Approved / Material Nonconforming	$2.5 \leq Va < 2.8$ or $6.2 < Va \leq 6.5$	< 91.0 %	Stop production, submit cause and solution, make additional 500-ton test strip. Payment for material will be based on BTS referee tests.
Test Strip and Material are Unacceptable [3]	$Va < 2.5$ or $Va > 6.5$	< 90.0 %	Stop production, submit cause and solution, make additional 500-ton test strip, and complete new core to nuclear density gauge correlation.

[1] The overall result of each test strip will coincide with the more restrictive result from air voids or density.

[2] Individual nuclear density test results more than 3.0% below the minimum density requirement must be addressed according to CMM 8-15.11.

[3] Unacceptable material will be removed and replaced at no additional cost to the department. Alternatively, the engineer may allow the material to remain in place with a 50 percent payment factor. Material allowed to remain in place requires another test strip prior to additional paving.

(7) An acceptable core to nuclear density gauge correlation must be completed by both the contractor and department according to CMM 8-15 as part of the test strip.

(8) A maximum of two test strips will be allowed to remain in place per layer per contract. If the contractor changes the mix design for a given mix type during a contract, no additional compensation will be paid by the department for the required additional test strip and the department will assess the contractor $2,000 for each additional test strip according to Section E of this special provision.

D Measurement

Add the following to standard spec 460.4:

(2) The department will measure HMA Pavement Test Strip Volumetrics and HMA Pavement Test Strip Density as each unit of work, acceptably completed, as described in CMM 8-15. Material quantities will be determined according to standard spec 450.4.

E Payment

Replace standard spec 460.5.1 with the following:

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

ITEM NUMBER	DESCRIPTION	UNIT
460.8624	HMA Pavement 4 SMA 58-28 V	TON
460.0115.S	HMA Pavement Test Strip Volumetrics	EACH
460.0120.S	HMA Pavement Test Strip Density	EACH

Payment for SMA is full compensation for providing SMA mixture designs; for preparing foundation; for volumetric and density testing and aggregate source testing; for asphalt binder from recycled sources; for asphalt binder modification or processes; and addition of fibers, fines, or filler.

Payment for HMA Pavement Test Strip Volumetrics is full compensation for volumetric sampling, splitting, and testing; and for proper labeling, handling; and retention of split samples.

Payment for HMA Pavement Test Strip Density is full compensation for collecting and measuring of pavement cores, acceptably filling core holes, providing of nuclear gauges and operator(s), and all other work associated with completion of a core-to-gauge correlation, as directed by the engineer.

The department will pay separately for a material transfer vehicle.

Acceptable HMA mixture placed on the project as part of a volumetric or density test strip will be compensated by the appropriate HMA Pavement bid item with any applicable pay adjustments. If a test strip is delayed as defined in standard spec 460.3.3.2(5) as modified herein, the department will assess the contractor $2,000 for each instance, under the HMA Delayed Test Strip administrative item. If an additional test strip is required because the initial test strip is not approved by the department, or the mix design is changed by the contractor, the department will assess the contractor $2,000 for each additional test strip (i.e., $2,000 for each individual volumetrics or density test strip) under the HMA Additional Test Strip administrative item.

stp-460-030 (20191121)

60. Material Transfer Vehicle Item 460.9000.S.

A Description

This special provision describes providing a Material Transfer Vehicle (MTV) and an operator for use during HMA upper layer paving operations of the travel lanes as shown in the plan or as directed by the engineer.

B Materials

Furnish a self-propelled MTV with the ability to remix, maintain constant temperature, and continually feed the paver hopper. MTV storage capacity shall be adequate to provide continuous forward movement of the paver. Coordinate paver speed to match the delivery of material and capacity of the MTV to minimize stopping of the paver.

C Construction

Ensure that an operator stays with the MTV at all times during moving operations. Keep the paver's hopper full at all times to avoid segregation of coarse aggregates. Placement of HMA upper layer pavement in the travel lanes will not be allowed without the MTV. Tie ins of intersections, shoulders paved separately, and other non-travel lane areas will not require the use of the MTV.

D Measurement

The department will measure Material Transfer Vehicle once for the contract, acceptably completed, regardless the number of vehicles in use.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
460.9000.S	Material Transfer Vehicle	EACH

Payment is full compensation for furnishing all material transfer vehicles and operators.

stp-460-900 (20220628)

61. Backfill Slurry.

This special provision describes furnishing and placing backfill slurry for, but not limited to, removing and abandoning utility pipes and structures, installation of storm sewer, sanitary sewer and water pipes and structures, and exposing existing utility items as shown on the plans.

Use fine aggregate according to standard spec 501.2.5.3, number 1 and number 2 coarse aggregates conforming to standard spec 501.2.5.4, and water conforming to standard spec 501.2.4 in the backfill slurry mix. Provide a combined aggregate gradation for the backfill slurry mix conforming to standard spec 715.2.2. Weigh aggregates at a batch plant suitable for batching concrete masonry. Mix and deliver to the project site using a truck mixer. Add enough water to enable the mixture to flow readily. Submit a mix design for the engineers review prior to placement. Backfill Slurry is considered a class III concrete mix and the department will accept the mix by certification and will follow the QMP process per standard spec 716. Mix acceptance and testing in the field is not required.

Prior to placement of backfill slurry provide for positive drainage of the area to be backfilled. Discharge from the truck in a manner to prevent segregation. Consolidation or compaction effort will not be required. Twelve hours shall elapse before paving over the backfill.

Material placed within the roadway foundation as defined in standard spec 101.3 is subject to the quality control for the zone that the material is located in and shall conform to QMP Subgrade article listed elsewhere in this special provision document. Non-conforming slurry will be replaced at no additional cost to the department.

Include backfill slurry used for, but not limited to, removing and abandoning utility pipes and structures, installation of storm sewer, sanitary sewer and water pipes and structures, and exposing existing utility items under appropriate bid items. No separate payment will be made for providing positive drainage of the area to be backfilled; for providing mix design; for furnishing, mixing, transporting and placing backfill slurry, and for QMP certification.

62. Cold Patch, Item 495.1000.S.

A Description

This special provision describes furnishing cold patch and filling potholes and other voids in existing pavement surfaces as the engineer directs.

B Materials

Furnish a mixture of course aggregate, natural sand, and MC-250 bituminous material designed to have a workability range of 15-100º F without heating. Ensure that the mixture:

- Adheres to wet surfaces.
- Resists damage from water, salt, and deicing products.
- Requires no mixing or special handling before use.
- Supports traffic immediately after placement and compaction.

Conform to the following gradation:

SIEVE SIZE	PERCENT PASSING (by weight)
1/2-inch (12.5 mm)	100
3/8-inch (9.5 mm)	90 - 100
No. 4 (4.75 mm)	90 max
No. 8 (2.38 mm)	20 - 65
No. 200 (0.074 mm)	2 - 10
Bitumen	4.8 - 5.4

The department will accept cold patch based primarily on the engineer's visual inspection. The department may also test for gradation.

C Construction

Stockpile cold patch on site on a smooth, firm, well-drained area cleared of vegetation and foreign material. Cover the stockpile and ensure that it is easily accessible. Replenish the stockpile throughout the project duration but limit the size at any given time to 10 tons on site unless the engineer approves otherwise. Dispose of unused material at project completion unless the engineer directs otherwise.

Place cold patch by hand. Remove ponded water and loose debris before placement. Compact flush with a tamper, roller, or vehicle tire after placement.

Refill patched areas as necessary to maintain a flush pavement surface until project completion.

D Measurement

The department will measure Cold Patch by the ton, acceptably stockpiled on site.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
495.1000.S	Cold Patch	TON

Payment for Cold Patch is full compensation for providing and maintaining patches; for furnishing and replenishing stockpiled material on-site; and for disposing of excess material at project completion.

stp-495-010 (20160607)

63. Ice Hot Weather Concreting, Item 501.1000.S.

Conform to standard spec 501.3.8.2 except the department will pay for ice at the contract unit price under the Ice Hot Weather Concreting bid item. This special provision only applies to work done under the following contract bid items:

Concrete Masonry Bridges	Concrete Masonry Retaining Walls
Concrete Masonry Bridges HES	Concrete Masonry Retaining Walls HES
Concrete Masonry Culverts	Concrete Masonry Endwalls
Concrete Masonry Culverts HES	Concrete Masonry Overlay Decks
Concrete Barrier Single-Faced 32-Inch	Concrete Barrier (type)
Concrete Barrier Double-Faced 32-Inch	Concrete Barrier Fixed Object Protection (type)
Concrete Barrier Transition Section 32-Inch	Concrete Barrier Transition (type)

Replace standard spec 501.4 and 501.5 with the following:

501.4 Measurement

(1) The department will measure Ice Hot Weather Concreting by the pound acceptably completed, measured only if the conditions prescribed in standard spec 501.3.8.2 are met.

501.5 Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
501.1000.S	Ice Hot Weather Concreting	LB

(2) Payment for Ice Hot Weather Concreting is full compensation for ice used to cool concrete placed in hot weather as specified in standard spec 501.3.8.2.

(3) The department will not pay directly for the concrete specified under this section. Concrete is incidental to the various bid items using it. Payment under those bid items includes providing all materials, including aggregates and associated aggregate source testing, cement, fly ash, slag, and admixtures; and for preparing, transporting, storing, protecting and curing concrete.

(4) If required to remove and replace any concrete damaged by lack of proper protection. Perform this work at no expense to the department.

stp-501-010 (20210708)

64. Concrete Maturity Testing.

This special provision requires using concrete maturity testing to determine strength for project control of concrete pavement, falsework removal, and structural concrete under the designated standard specs as follows:

Duration of the curing period 415.3.12
Duration of the cold weather protection period 415.3.13
Opening to service 415.3.15
Removing falsework 502.3.4.2
Duration of the required curing period 502.3.8
Duration of the cold weather protection period 502.3.9
Opening to service 502.3.10.1

The requirement for determining strength by the concrete maturity testing method supersedes all provisions for strength determination by other methods or provisions based on equivalent days within those designated subsections. The concrete maturity testing requirement also applies to all other provisions referencing strength determination under these designated subsections.

B Materials

Provide a maturity testing system that uses data-encrypted sensor devices permanently embedded in the field-placed concrete. Data-encrypted sensors have a chip that records both temperature and time information that can be downloaded to a reading device not permanently attached to those sensors.

Provide the department with a maturity reading device for each maturity testing system used on the project. Devices provided for the department use will become department property under the contract.

C Construction

Perform concrete maturity testing conforming to standard spec 502.3.10.1.3.3. Develop a strength/maturity relationship for each concrete mix design used under the contract. Base that relationship on strength results of cylinders from pavement, appurtenant construction, ancillary concrete, or structural masonry units incorporated into the work and using those same mixes.

D (Vacant)

E Payment

No additional payment will be made by the department for maturity testing.

sef-502-005 (20170310)

65. Removing Bearings, B-40-206, Item 506.7050.S.0001; Removing Bearings, B-40-207, Item 506.7050.S.0002; Removing Bearings, B-40-209, Item 506.7050.S.0003.

A Description

This special provision describes raising the girders and removing the existing bearings, as the plans show.

B (Vacant)

C Construction

Raise the structure's girders and remove the existing bearings as the plans show

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

D Measurement

The department will measure Removing Bearings, B-40-206 and Removing Bearings, B-40-209 by the unit for each bearing removed, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
506.7050.S.0001	Removing Bearings, B-40-206	EACH
506.7050.S.0002	Removing Bearings, B-40-207	EACH
506.7050.S.0003	Removing Bearings, B-40-209	EACH

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

Cost of furnishing and installing the bearings will be paid for under separate bid items.

stp-506-035 (20130615)

66. Removing Asphaltic Concrete Deck Overlay B-40-209, Item 509.9010.S.0001; Removing Asphaltic Concrete Deck Overlay B-40-215, Item 509.9010.S.0002.

A Description

This special provision describes removing asphalt bridge deck overlays with or without a waterproofing membrane by milling the entire bridge deck as the plans show.

Conform to standard spec 204 as modified in this special provision.

B (Vacant)

C Construction

C.1 Milling

Use a self-propelled milling machine that is specially designed and constructed for milling bridge decks. It shall mill without tearing or gouging the concrete masonry underlying the existing overlay. The machine shall consist of a cutting drum with carbide or diamond tip teeth. Space the teeth on the drum to mill a surface finish that is acceptable to the engineer.

Shroud the machine to prevent discharge of any loosened material into adjacent work areas or live traffic lanes. Equip the machine with electronic devices that provide accurate depth, grade and slope control, and an acceptable dust control system.

Perform milling in a manner that precludes damage to the bridge floor and results in a uniform textured finish that:

1. Is free of sharp protrusions;
2. Removes a minimum of 1/4 inch of the original concrete deck or slab, or to a depth the plans show;
3. Has uniform transverse grooves that measure up to 1/4 inch vertically and transversely; and
4. If applicable, is acceptable to the manufacturer of the sheet waterproof membrane.

Windrowing or storing of the removed milled asphaltic concrete on the bridge is only permitted in connection with the continuous removal and pick-up operation. During nonworking hours, clear the bridge of all materials and equipment.

D Measurement

The department will measure Removing Asphaltic Concrete Deck Overlay (structure) by the square yard, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
509.9010.S.0001	Removing Asphaltic Concrete Deck Overlay B-40-209	SY
509.9010.S.0002	Removing Asphaltic Concrete Deck Overlay B-40-215	SY

Payment is full compensation for removing the asphaltic concrete with or without a waterproofing membrane; removing the underlying concrete as the spec or plans show; and for properly disposing of all materials.

stp-509-010 (20210113)

67. Structure Repainting General.

A General

A.1 Inspection

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

A.2 Date Painted

At the completion of all painting work, stencil in black paint or contrasting color paint the date of painting the bridge. The numbers shall be 3 inches (75 mm) in height and shall show the month and year in which the painting was completed: e.g., 11-95 (November 1995). On each bridge painted, stencil the date at two locations. On truss bridges, stencil the date on the cover plates of end posts near and above the top of the railings at the oncoming traffic end. On steel girder bridges, stencil the date on the inside of the outside stringers at the abutments. The date on grade separation bridges shall be readable when going under the structure or at some equally visible surface near the ends of the bridge, as designated by the engineer.

A.3 Graffiti Removal

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

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

B (Vacant)

C Construction

C.1 Repainting Methods

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

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

Completely clean and remove spent abrasive and other waste materials resulting from the contractor's operation from bridge deck surfaces, gutter lines, drains, curbs, bridge seats, pier caps, slope paving, roadway below, and all structural members and assemblies.

C.2 Inspection

Add the following to standard spec 105.9:

Furnish, erect and move scaffolding and other equipment to allow the inspector to closely observe all affected surfaces. The scaffolding, with appropriate safety devices, shall meet the approval of the engineer.

stp-517-005 (20150630)

68. Preparation and Coating of Top Flanges B-40-206, Item 517.0901.S.0001; Preparation and Coating of Top Flanges B-40-207, Item 517.0901.S.0002.

A Description

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

B (Vacant)

C Construction

For top flanges and edges that have no paint on them and according to the department's Pre-Qualified Paint Systems for Structure Overcoating Cleaning and Priming, clean the top surface and edges of the top flanges and paint them with one coat of an approved zinc rich primer. Paint for Solvent Cleaning for Overcoat-minimum Cleaning (SP-1) is not allowed.

For top flanges and edges that have paint on them and according to the department's Pre-Qualified Paint Systems for Structure Overcoating Cleaning and Priming, clean all areas of rust and loose paint on the top surface and edges of the top flanges. Wash the top surface and edges of the top flanges and paint them with one coat of an approved zinc-rich primer according to paint manufacture's recommendations. If flash rusting occurs before the application of the primer, stop painting application, remove the flash rusting and paint cleaned surface. Paint for Solvent Cleaning for Overcoat-minimum Cleaning (SP-1) is not allowed.

Where plans call for the cleaning of other painted structural steel including hanger assemblies, bearings, field splices, and connections, clean areas of loose paint and rust according to the department's Pre-Qualified Paint Systems for Structure Overcoating Cleaning and Priming, or and according to paint manufacture's cleaning recommendations. Sound paint need not be removed with the exception of an area 12 inch on either side of hanger assembly centerlines. Clean this area to base metal according to the paint manufacture's cleaning recommendations and paint them one coat of an approved zinc-rich primer according to paint manufacture's recommendations. Paint for Solvent Cleaning for Overcoat-minimum Cleaning (SP-1) is not allowed.

For areas of exposed steel members that are to be imbedded in new concrete and according to the department's Pre-Qualified Paint Systems for Structure Overcoating Cleaning and Priming, thoroughly clean the surface area of exposed steel members that are to be imbedded in the new concrete and solvent wash and paint one coat of an approved zinc rich primer according to paint manufacture's recommendations to these areas. Paint for Solvent Cleaning for Overcoat-minimum Cleaning (SP-1) is not allowed.

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

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

D Measurement

The department will measure Preparation and Coating of Top Flanges (Structure #) as a single unit for each structure, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.0901.S.0001	Preparation and Coating of Top Flanges B-40-206	EACH
517.0901.S.0002	Preparation and Coating of Top Flanges B-40-207	EACH

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

stp-517-010 (20210708)

69. Structure Repainting Recycled Abrasive B-40-206, Item 517.1801.S.0001; Structure Repainting Recycled Abrasive B-40-209, Item 517.1801.S.0002; Structure Repainting Recycled Abrasive B-40-208, Item 517.1801.S.0003; Structure Repainting Recycled Abrasive B-40-207, Item 517.1801.S.0004; Structure Repainting Recycled Abrasive B-40-215, Item 517.1801.S.0005.

A Description

This special provision describes surface preparation and painting of the metal surfaces according to the manufacturer's recommendations as modified in this special provision.

A.1 Areas to be Cleaned and Painted

All structural metal surfaces of:

1. Structure B-40-206 16,966 SF.
2. Structure B-40-207 19,572 SF.
3. Structure B-40-208 16,040 SF.
4. Structure B-40-209 15,279 SF.
5. Structure B-40-215 17,304 SF.

Areas are approximate and given for informational purposes only.

B Materials

B.1 Coating System

Furnish a complete coating system from the department's approved list for "Structure Repainting Recycle Abrasive Structure". The color for the finish coating material shall match the color number the plans show according to Federal Standard Number 595. Supply the engineer with the product data sheets for approval before any coating is applied. The product data sheets shall indicate the mixing and thinning directions, the recommended spray nozzles and pressures, and the minimum drying time between coats.

The color of the primer must be such that a definite contrast between it and the color of the blasted steel is readily apparent. There shall be a color contrast between all subsequent coats for the paint system selected. Submit color samples of the primer and all coats to the engineer for approval before any application of paint.

C Construction

C.1 Surface Preparation

Before abrasive blasting, grind the accessible edges on the bottom flange of the main girders to a radius of 1/16" (+1/16") or a 1/16" (+1/16") chamfer. Ensure all edges are smooth. Solvent clean all surfaces to be coated according to SSPC-SP1.

All metal surfaces must be blast cleaned according to SSPC-SP10 and verified before painting.

Upon completion of surface preparation, test representative surfaces which shall include locations in each span, both on edge and interior girders, for the presence of residual chloride. Perform Surface Contamination Tests (SCAT) according to the manufacturer's recommendations. The tests must be witnessed by the engineer. If chlorides are detected at levels greater than 1.6x10-6 oz/in2 (7ug/cm2), continue to clean the affected areas until results are below the specified limit. Submit anticipated testing frequencies and chloride remediation methods to the engineer for review and approval.

Apply the prime coat the same day that the metal surfaces receive the No. 10 blast or re-blast before application. Cleaned surfaces shall be of the specified condition immediately before paint application. If rust bloom occurs before applying the primer, stop the painting operation in the area of the rust bloom and re-blast and clean the area to SSPC SP-10 before applying the primer.

The steel grit and any associated equipment brought to the site and used for blast cleaning shall be clean. Remove immediately dirty grit or equipment brought to the site at no expense to the department. Furnish an abrasive that has a gradation such that it will produce a uniform surface profile between 1 to 3 mils on the steel surface, as measured according to ISO 8503-5.

The abrasive blasting and recovery system shall be a completely integrated self-contained system for abrasive blasting and recovery. It shall be an open blast and recovery system that will allow no emissions from the recovery operation. The recovery equipment shall be such that the amount of contaminants in the clean recycled steel grit shall be less than 1 percent by weight as per SSPC AB-2.

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

Remove all spent material and paint residue from steel surfaces with a good commercial grade vacuum cleaner equipped with a brush-type cleaning tool, and test cleanliness according to ASTM D4285. The airline used for surface preparation shall have an in-line water trap and the air shall be free of oil and water as it leaves the airline.

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

C.2 Coating Application

Apply paint according to the manufacturer’s recommendations in a neat workmanlike manner. Paint application shall normally be by airless spray or inaccessible areas by brush, roller or other methods approved by the engineer.

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

Mix the paint or coatings according to the manufacturer’s directions to a smooth lump-free consistency. Keep paint thoroughly mixed during the painting application.

After the inspector approves the entire cleaned surface to be coated, apply a prime coat uniformly to the entire surface. Either before or after applying the prime coat, brush or spray a stripe coat of primer on all flange edges, plate edges, bolt heads, nuts, and washers. Apply succeeding coats as the product data sheet shows.

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

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

The resultant paint film shall be smooth and uniform, without skips or areas of excessive paint according to SSPC PA1.

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

During surface preparation and coating application the ambient and steel temperature shall be between 39 degrees F and 100 degrees F. The steel temperature shall be at least 5 degrees F above the dew point temperature. (This requires the steel to be dry and free of any condensation or ice regardless of the actual temperature of the steel.) The relative humidity shall not exceed 85%. The manufacturer’s ambient condition requirements must be followed if they are more stringent.

Paint thickness shall be within the requirements for a three coat paint system listed in the department’s approved list for Structure Repainting Recycle Abrasive Structure and the paint system being used.

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

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

C.3 Quality Control

C.3.1 Quality Control Plan

Submit a Quality Control Plan to the Engineer for review and acceptance14 days prior to the preconstruction conference.

The quality control plan shall include the following:

Contractor/Personnel Qualifications. Steel bridge painting contractors shall be SSPC-QP1 and SSPC-QP2 accredited, or currently enrolled in the SSPC-QP7, Painting Contractor Introductory Program, Category 2. Provide Contractor qualifications and the names and qualifications/experience/training/certifications of the personnel managing and implementing the Quality Control program and conducting the quality control tests.

Quality Control (QC) Program. The QC Program shall identify the following; the instrumentation that will be used, a schedule of required measurements and observations, procedures for correcting unacceptable work, and procedures for improving surface preparation and painting quality as a result of quality control findings. The program shall incorporate at a minimum, a report of daily QC Inspections.

Inspection Access Plan. The inspection access plan for use by Contractor QC personnel for ongoing inspections and by the Engineer during Quality Assurance (QA) observations.

Surface Preparation/Painting Plan. The surface preparation/painting plan shall include the methods of surface preparation and type of equipment to be utilized for washing, hand/power tool cleaning, removal of rust, mill scale, paint or foreign matter, abrasive blast or water jetting, and remediation of chloride. If detergents, additives, or inhibitors are incorporated into the water, the Contractor shall include the names of the materials and Safety Data Sheets (SDS). The Contractor shall identify the solvents proposed for solvent cleaning together with SDS.

The plan shall also include the methods of coating application and equipment to be utilized.

Identify inspection hold points. At minimum include the following hold points:

Completion of Surface Preparation

Surface conditions prior to application of each coat

Post Coating Application

Development of punch list.

Final Inspection

Abrasives. Abrasives to be used for abrasive blast cleaning, including SDS. For expendable abrasives, the Contractor shall provide certification from the abrasive supplier that the abrasive meets the requirements of SSPC-AB1. For steel grit abrasives, the certification shall indicate that the abrasive meets the requirements of SSPC-AB3.

Protective Coverings. Plan for containing or controlling paint debris (droplets, spills, overspray, etc.), including any tarpaulins or protective coverings proposed for use. For submittal requirements involving the containment used to remove lead paint, the Contractor shall refer to Special Provision article for Negative Pressure Containment and Collection of Waste Materials, Item 517.4501.S.

C.3.2 Contractor Qualifications

The personnel managing the Contractor’s QC Program shall possess a minimum classification of Society of Protective Coatings (SSPC) BCI certified, National Association of Corrosion Engineers (NACE) Coating Inspector Level 2 - Certified and shall provide evidence of successful inspection of 3 bridge projects of similar or greater complexity and scope that have been completed in the last 2 years. Copies of the certification and experience shall be provided. References for experience shall be provided and shall include the name, address, and telephone number of a contact person employed by the bridge owner.

The personnel performing the QC tests shall be trained in coatings inspection and the use of the testing instruments. Documentation of training shall be provided. The contractor shall not replace the QC personnel assigned to the project without advance notice to the engineer, and acceptance of the replacement(s), by the engineer.

C.3.3 Quality Control (QC) Inspections.

The contractor shall perform first line, in process QC inspections. The contractor shall implement the submitted and accepted QC Program to ensure that the work accomplished complies with these specifications. The designated Quality Control inspector shall be onsite full time during any operations that affect the quality of the coating system (e.g., surface preparation and chloride remediation, coating mixing and application, and evaluations between coats and upon project completion). Completed daily inspection reports shall be turned into the engineer before work resumes the following day. The engineer or designated representative will sign the report. The signature is an acknowledgment that the report has been received but should not be construed as an agreement that any of the information documented therein is accurate.

Contractor QC inspections and daily inspection reporting shall include, but not be limited to the following:

1. Suitability of protective coverings and the means employed to control project debris and paint spills, overspray, etc.
2. Ambient conditions (temperature, substrate surface temperature, relative humidity, dewpoint, wind).
3. Surface preparation (solvent cleaning, pressure washing including chalk tests, hand/power tool or abrasive blast cleaning, etc.).
4. Chloride remediation.
5. Coating application (specified materials, mixing, thinning, and wet/dry film thickness).
6. Recoat times and cleanliness between coats.
7. Coating continuity and coverage (freedom from runs, sags, overspray, dryspray, pinholes, shadow-through, skips, misses, etc.).

The QC personnel shall not perform hands on surface preparation or painting activities. Painters shall perform wet film thickness measurements, with QC personnel conducting random spot checks of the wet film.

The contractor shall supply all necessary equipment with current calibration certifications to perform the QC inspections. Equipment shall include the following at a minimum:

1. Sling psychrometer or digital psychrometer for the measurement of dew point and relative humidity, together with all necessary weather bureau tables or psychrometric charts. In the event of a conflict between readings with the sling psychrometer and the digital psychrometer, the readings with the sling psychrometer shall prevail.
2. Surface temperature thermometer
3. SSPC Visual Standards VIS 1, Guide and Reference Photographs for Steel Surfaces Prepared by Dry Abrasive Blast Cleaning; SSPC-VIS 3, Visual Standard for Power and Hand-Tool Cleaned Steel; SSPC-VIS 4, Guide and Reference Photographs for Steel Prepared by Water Jetting, and/or SSPC-VIS 5, Guide and Reference Photographs for Steel Prepared by Wet Abrasive Blast Cleaning, as applicable.
4. Test equipment for determining abrasive cleanliness (oil content and water-soluble contaminants) according to SSPC abrasive specifications AB1, AB2, and AB3.
5. Commercially available putty knife of a minimum thickness of 40 mils (1mm) and a width between 1 and 3 in. (25 and 75 mm). Note that the putty knife is only required for projects in which the existing coating is being feathered and tested with a dull putty knife.
6. Testex Press-O-Film Replica Tape and Micrometer compliant with Method C of ASTM D4417, Standard Test Methods for Field Measurement of Surface Profile of Blast Cleaned Steel, or digital profile depth micrometer compliant with ASTM D4417, Method B. In the event of a conflict between measurements with the two instruments on abrasive blast cleaned steel, the results with the Testex Tape shall prevail. Note that for measuring the profile of steel power tool cleaned to SSPC-SP15, Commercial Grade Power Tool Cleaning, the digital profile depth micrometer shall be used.
7. Bresle Cell Kits or CHLOR*TEST kits for chloride determinations, or equivalent.
8. Wet Film Thickness Gage.
9. Blotter paper for compressed air cleanliness checks.

10. Type 2 Electronic Dry Film Thickness Gage per SSPC - PA2, Procedure for Determining Conformance to Dry Coating Thickness Requirements.
11. Standards for verifying the accuracy of the dry film thickness gage.
12. Light meter for measuring light intensity during paint removal, painting, and inspection activities.
13. All applicable ASTM and SSPC Standards used for the work.

The accuracy of the instruments shall be verified by the Contractor's personnel according to the equipment manufacturer's recommendations and the Contractor's QC Program. All inspection equipment shall be made available to the Engineer for QA observations on an as needed basis.

C.3.4 Hold Point Notification.

Unless other arrangements are made at the project site, provide the Engineer with a minimum 4-hour notification before a Hold Point inspection will be reached. If the 4-hour notification is provided and the Work is ready for inspection at that time, the Engineer will conduct the necessary observations. If the Work is not ready at the appointed time, unless other arrangements are made, an additional 4-hour notification is required. Permission to proceed beyond a Hold Point without a QA inspection will be granted solely at the discretion of the Engineer, and only on a case-by-case basis.

C.3.5 Quality Assurance (QA) Observations.

The Engineer will conduct QA observations of any or all phases of the work. The presence or activity of Engineer observations in no way relieves the Contractor of the responsibility to provide all necessary daily QC inspections of his/her own and to comply with all requirements of this Specification.

The Engineer has the right to reject any work that was performed without adequate provision for QA observations.

D Measurement

The department will measure Structure Repainting Recycled Abrasive (Structure #) as a single unit for each structure, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1801.S.0001	Structure Repainting Recycled Abrasive B-40-206	EACH
517.1801.S.0002	Structure Repainting Recycled Abrasive B-40-209	EACH
517.1801.S.0003	Structure Repainting Recycled Abrasive B-40-208	EACH
517.1801.S.0004	Structure Repainting Recycled Abrasive B-40-207	EACH
517.1801.S.0005	Structure Repainting Recycled Abrasive B-40-215	EACH

Payment is full compensation for preparing and cleaning the designated surfaces; furnishing and applying the paint; and for providing the listed equipment.

70. Negative Pressure Containment and Collection of Waste Materials, B-40-206, Item 517.4501.S.0001; Negative Pressure Containment and Collection of Waste Materials, B-40-209, Item 517.4501.S.0002; Negative Pressure Containment and Collection of Waste Materials, B-40-208, Item 517.4501.S.0003; Negative Pressure Containment and Collection of Waste Materials, B-40-207, Item 517.4501.S.0004; Negative Pressure Containment and Collection of Waste Materials, B-40-215, Item 517.4501.S.0005.

A Description

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

B (Vacant)

C Construction

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

Construct the enclosure of flexible materials such as tarpaulins or of rigid materials such as plywood, or of a combination of flexible and rigid materials and meet SSPC Guide 6 requirements with Level 1 emissions. Systems manufactured and provided by Eagle Industries, Detroit Tarps, or equal, are preferred. The tarpaulins shall be a non-permeable material, either as part of the tarp system or have a separate non-permeable lining. Maintain all materials free of tears, cuts or holes. The vertical sides of the enclosure shall extend from the bottom of the deck down to the level of the covered work platform or covered barge where used for structures over water and shall be fastened securely to those levels to prevent the wind from lifting them. Bulkheads are required between beams to enclose the blasting area as approved by the engineer. Where bulkheads are required, construct them of plywood and properly seal them. To prevent spent materials and paint over spray from escaping the enclosed area, overlap and fasten together all seams. Place groundcovers under all equipment before operations or as approved by the engineer.

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

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

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

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

After all debris has been removed and all painting has been approved in the containment area is complete, remove containment according to SSPC Guide 6.

As a safety factor for structures over water, provide for scum control. Provide a plan for corrective measures to mitigate scum forming and list the procedures, labor and equipment needed to assure compliance. Effectively contain the scum that forms on the water and does not sink in place from moving upstream or downstream by the use of floating boom devices.

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

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

In a separate operation, recover the recyclable abrasive for future application, and collect the paint and/or corrosion particles for disposal.

D Measurement

The department will measure Negative Pressure Containment and Collection of Waste Materials (Structure #) as a single unit for each structure, acceptably completed

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.4501.S.0001	Negative Pressure Containment and Collection of Waste Materials B-40-206	EACH
517.4501.S.0002	Negative Pressure Containment and Collection of Waste Materials B-40-209	EACH
517.4501.S.0003	Negative Pressure Containment and Collection of Waste Materials B-40-208	EACH
517.4501.S.0004	Negative Pressure Containment and Collection of Waste Materials B-40-207	EACH
517.4501.S.0005	Negative Pressure Containment and Collection of Waste Materials B-40-215	EACH

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

stp-517-065 (20210708)

71. Labeling and Disposal of Waste Material.

The EPA ID number for Structure B-40-206 is EPA ID WIR000108985.
The EPA ID number for Structure B-40-207 is EPA ID WIR000108993.
The EPA ID number for Structure B-40-208 is EPA ID WIR000109009.
The EPA ID number for Structure B-40-209 is EPA ID WIR000109017.
The EPA ID number for Structure B-40-215 is EPA ID WIR000180778.

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

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

Contact the waste management contractor a minimum of 10 working days in advance to request container drop-off or pickup. Provide the waste management contractor with the project ID, structure number, EPA ID, and the agreed-upon location for container staging. Contact information for the waste management contractor is located on the WisDOT Internet site at:

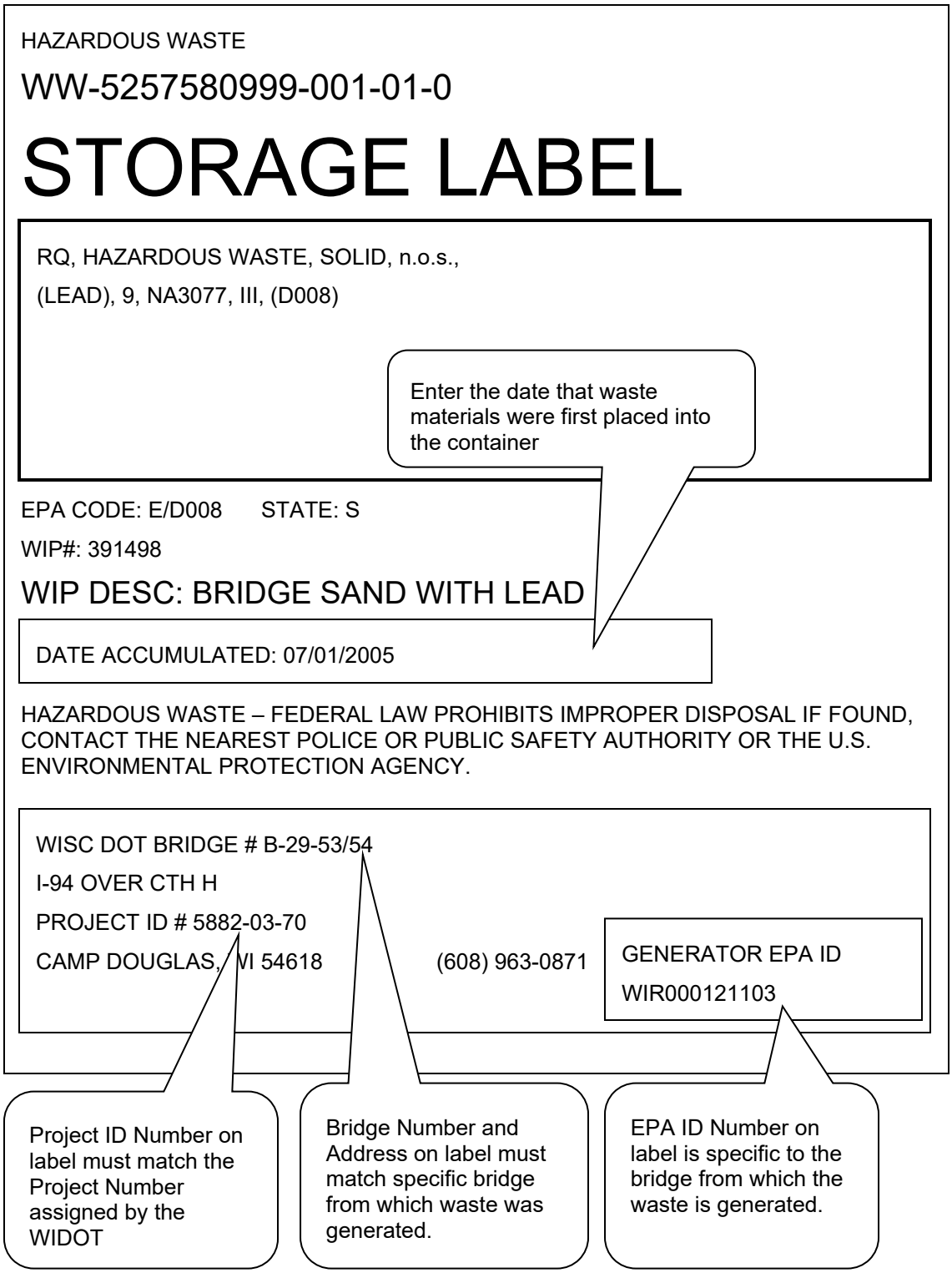
https://wisconsindot.gov/Documents/doing-bus/eng-consultants/cnslt-rsrces/environment/hazwaste-contacts.pdf

Report all reportable spills and discharges according to the contingency plan.

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

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

stp-517-055 (20190618)



72. Portable Decontamination Facility, Item 517.6001.S.

A Description

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

B Materials

Supply and operate all equipment according to OSHA.

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

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

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

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

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

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

C Construction

Properly contain, store, and dispose of the wastewater.

D Measurement

The department will measure Portable Decontamination Facility by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.6001.S	Portable Decontamination Facility	EACH

Payment is full compensation for furnishing and maintaining a portable decontamination facility.

stp-517-060 (20140630)

73. Surface Drain Pipe Corrugated Metal Slotted, 15-Inch, Item 521.2005.S.0001.

A Description

This special provision describes furnishing and installing slotted corrugated metal pipe surface drain as the plans show.

Conform to standard spec 521 as modified in this special provision.

B Materials

Furnish backfill material that is grade A concrete conforming to standard spec 501 as modified in standard spec 716.

Provide QMP for class III ancillary concrete as specified in standard spec 716.

High Early Strength (HES) concrete conforming to standard spec 710.4(5) is allowed. Use HES if required by the plans, or if directed by the engineer.

C Construction

Before backfilling, plug the upper end of the slotted drain as the plans show or as approved by the engineer.

Before backfill operations adjacent to the slotted area of the slotted corrugated metal pipe surface drain pipe, install timber blocks in the slots according to the plan details. Remove any material entering the pipe at no expense to the department.

Keep the timber blocks in place until final cleanup operations are completed; at which time, remove the timber blocks.

Exercise care to avoid damage to the slotted corrugated metal pipe surface drain pipe. If any section of pipe is damaged or is unsatisfactory as determined by the engineer, replace the drain pipe at no expense to the department.

D Measurement

The department will measure Surface Drain Pipe Corrugated Metal Slotted, (Size)-Inch, completed according to the contract and accepted, in place by the linear foot.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
521.2005.S.0001	Surface Drain Pipe Corrugated Metal Slotted, 15-Inch	LF

Payment is full compensation for furnishing all materials; hauling and placing the pipe, including bands; making connections to existing inlets; furnishing concrete, end plug or cap; and for cleaning out and restoring site of work.

stp-521-005 (20220628)

74. Adjusting Storm Sewer Structures Sewer.

Add the following text to standard spec 611.3.1:

Remove covers and frames prior to milling. Cover openings with a Cover Plates Temporary of sufficient thickness to carry traffic and at a depth to accommodate the milling operations. Backfill excavated areas with an asphalt surface mix to an elevation that will match the adjacent pavement. Cover Plates Temporary will be paid as a separate contract bid item.

Add the following text to standard spec 611.3.7:

The replacement of Grade A concrete when adjusting manhole covers in areas of bituminous resurfacing shall be to the top of the existing concrete base as shown on the detail for adjusting manhole covers. Use construction methods that conform to the requirements set forth in standard spec 611.3.3.

Add the following text to standard spec 611.5:

Removal and replacement of concrete pavement to accomplish the work shall be incidental to the cost of work. Removal and replacement of concrete curb and gutter will be paid for under items Removing Curb and Gutter and Concrete Curb and Gutter, 24-inch.

75. Catch Basins, Manholes, and Inlets.

Provide Ductile Iron covers (lids) for Inlet Covers type V conforming to ASTM A536 Grade 80-55-06. If ductile iron frames are not available, provide cast iron frames conforming to AASHTO M105 Class 30.

Supplement standard spec 611.3.1 with the following:

Precast reinforced concrete sections shall be constructed in horizontal courses. The units shall be laid in mortar or sealed with preformed flexible joint sealant or mastic joint sealer. When mastic joint sealer is used, the material shall completely fill the joint after the units have been brought together.

Handling holes may utilize an integral preformed metal insert. If the handling hole is open to both the internal and external wall of the structure, plug the handling hole with either a precast concrete plug mortared in place or with a combination of brick, mortar and/or mastic. The plug shall not project beyond the inside surface after installation. When integral preformed metal lifting inserts are used, their sockets shall be filled with mastic or mortar.

Provide and install manhole steps meeting the requirements of Section 3.5.4 (g) of the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition.

Inlet and outlet pipes shall extend through walls a sufficient distance to allow for connections on the outside and the collar concrete or mortar carefully placed around them to prevent leakage around their outlet surfaces. Unless otherwise shown, the inside ends shall be flush with the inside walls.

Provide and install either a pre-formed integral or poured-in place bench at the structure invert unless Plans identify a sump below the lowest pipe invert. The surface of the bench shall be free of loose material and smooth trowel finished to avoid surface projections impeding flow. Form the bench at the lowest pipe invert. Bench sides shall rise a minimum of half the diameter of the lowest pipe.

Use a mortar for final adjustment of manhole cover. Provide a butyl rubber gasket or butyl rubber rope for joints of precast reinforced concrete manhole sections. Butyl Rubber gasket joint used for manholes conforms to 8.41.6 of the Standard Specifications for Sewer and Water Construction in Wisconsin, latest Edition.

Submit shop drawings for all drainage structures. For structures where WisDOT standard detail drawings are not available, provide shop drawings prepared, verified and stamped by a professional engineer currently registered in the State of Wisconsin. Submit one electronic copy of shop drawings in portable document format for engineer's review two weeks before fabrication. Show clearly on shop drawings information for all pipe connections to the structure. The contractor is responsible for all errors of detailing and fabrication. The omission from the shop drawings of any pipe connection shall not relieve contractor of the responsibility of providing such materials, even though the shop drawings may have been reviewed and accepted by the engineer.

Fasten existing and proposed storm sewer structure covers subject to traffic loading according to Fastening Sewer Access Covers spec.

Supplement standard spec 611.3.2 with the following:

Conform to storm sewer concrete collar detail for storm sewer pipes to structure connections as the plans show.

Supplement standard spec 611.3.7 with the following:

Construct height adjustments of 4-inches or more with concrete grade rings. Never use grade rings less than 2-inches thick. *HDPE or rubber rings are not permitted.*

Replace standard spec 611.5.2 (1) with the following:

Payment for Catch Basins, Manholes, and Inlets bid items is full compensation for providing all submittals; materials, including all masonry, for mortar adjustments and monolithic concrete shimming; adjusting rings; conduit and sewer connections, steps, and other fittings; for providing and installing butyl rubber joints; for furnishing backfill, backfilling; all excavating, disposing of surplus material, and for cleaning out and restoring the work site; except that the department will pay for covers, including frames, grates and lids separately.

76. Sign Supports Concrete Masonry.

Add the following to standard spec 636.3.2:

(3) Drill or excavate and maintain a stable open excavation for subsequent installation of drilled footings for sign structure foundations as the plans show. The subsurface conditions vary across the project site and are not necessarily the same at each sign structure foundation in the project. Anticipate the possibility of encountering randomly interlaced seams of loose, permeable sand or gravel of substantial thickness situated within glacial clays and till deposits; saturated soils; ground water; isolated cobbles or boulders; and nested cobbles and boulders at any sign structure foundation when selecting equipment and methods for drilling or otherwise excavating. Partial or full depth temporary casing may be required to maintain the stability of the excavation before placement of reinforcement and filling the excavation with concrete.

(4) It is strongly advised to obtain and review the Geotechnical Exploration and Foundation Evaluation Reports for the sign structures and as well as nearby structures to the sign structure foundation being constructed.

Add the following to standard spec 636.3.3:

(8) For drilled foundations, no more than 3 inches of standing water is allowed in the bottom of the drilled excavation within a timeframe acceptable to the engineer before placing concrete masonry in the excavation.

Replace standard spec 531.3.3 with the following:

(1) Payment for Sign Supports Concrete Masonry is full compensation for providing, transporting, placing and curing the concrete; for providing and removing casing if applicable; for providing required ground rods; for all required excavating; for placing post stubs or anchor bolts, and for providing and placing electrical conduit if required; for pumping of ground water seepage if applicable; for cleaning-up, repairing damage, and for disposing of excavation and surplus materials.

sef-636-005 (20170310)

77. Sign Type I and II.

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

Supplement standard spec 637.2.4 with the following:

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

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

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

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

Replace standard spec 637.3.3.2(2) with the following:

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

Supplement standard spec 637.3.3.3(3) with the following:

Furnish and install new aluminum vertical sign support beams on each sign and new U-bolts to attach each beam to the top and bottom cord of the sign bridge truss for Type I or Type II Signs and Type I signs on overhead sign supports incidental to sign.

Add the following to standard spec 641.2:

Submit shop drawings for sign bridges and overhead sign supports to SE Region Traffic Operations Engineer, Tom Heydel and Bureau of Structures Design.

SER-637-001 (20170621)

78. Sign Bridge Identification Plaques.

Supplement standard spec 641.5 with the following:

(5) Payment for Sign Bridge and Overhead Sign Support bid items is full compensation for providing and installing sign bridge identification plaques and mounting hardware as shown on the standard detail drawing in the plans for each existing and new sign bridge or overhead sign support.

SER-641-001 (20160902)

79. Traffic Control.

Supplement standard spec 643.3.1 with the following:

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

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

Do not permit construction or personnel equipment or vehicles to directly cross the live traffic lanes of IH 43. Yield to all through traffic at all locations. Equip all vehicles or equipment operating in the live traffic lanes with a hazard identification beam (flashing yellow signal light) that is visible from 360 degrees. Operate the flashing yellow beam only when merging or exiting live traffic lanes or when parked or operating on shoulders, except when parked behind barrier wall. Do not park personal vehicles within the access control limits of the freeway. Do not cross live traffic lanes of IH 43 with equipment or vehicles.

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

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

Ensure that Flagging operations conform to standard spec 104.6.1. (4) and chapter 6E of the WMUTCD.

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

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

SER-643-001 (20170808)

80. Work Zone Ingress – Egress.

Any initial set-up and/or changes to the Work Zone Ingress – Egress construction detail in the plan or location(s) should be submitted a minimum of 10 working days before use and are subject to approval by the engineer and the Southeast Region Work Zone Engineer.

ser-643-005 (20180131)

81. Covering Signs.

Replace standard spec 643.2.3.3(2) with the following:

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

Add the following to standard spec 643.3.4.1 as paragraph four:

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

sef-643-005 (20180104)

82. Nighttime Work Lighting-Stationary.

A Description

This special provision describes furnishing portable lighting as necessary to complete nighttime work. Nighttime operations consist of work specifically scheduled to occur after sunset and before sunrise.

B (Vacant)

C Construction

C.1 General

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

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

1. Layout, including location of portable lighting – lateral placement, height, and spacing. Clearly show on the layout the location of all lights necessary for every aspect of work to be done at night.
2. Specifications, brochures, and technical data of all lighting equipment to be used.
3. The details on how the luminaires will be attached.
4. Electrical power source information.
5. Details on the louvers, shields, or methods to be employed to reduce glare.
6. Lighting calculations. Provide illumination with average to minimum uniformity ratio of 5:1 or less throughout the work area.
7. Detail information on any other auxiliary equipment.

C.2 Portable Lighting

Provide portable lighting that is sturdy and free standing and does not require any guy wires, braces, or any other attachments. Furnish portable lighting capable of being moved as necessary to keep up with the construction project. Position the portable lighting and trailers to minimize the risk of being impacted by traffic on the roadway or by construction traffic or equipment. Provide lightning protection for the portable lighting. Portable lighting shall withstand up to 60 mph wind velocity.

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

C.3 Light Level and Uniformity

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

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

C.4 Glare Control

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

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

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

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

C.5 Continuous Operation

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

D (Vacant)

E Payment

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

stp-643-010 (20100709)

83. Temporary Pavement Marking.

Add the following to standard spec 649.3:

(1) On pavements not scheduled for removal under this project, remove markings using air blasting, water blasting, or a combination of thereof. Do not use grinding on these pavements.

84. General Requirements for Electrical Work.

General

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

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

Add the following to standard spec 651.2:

Wisconsin Department of Transportation

Materials indicated to be returned to the department shall be hauled to one of the following two locations:

1. State Electrical Shop at 935 South 60th street, West Allis, as directed by Mr. Pat Stoetzel, telephone (414) 750-5306

Arrange pickups and deliveries 3 days in advance and during regular business hours (Monday – Thursday 7:00 AM to 3:45 PM).

Add the following to standard spec 651.3.1:

Any circuit that the contractor does not personally tag out at the disconnect shall be considered live and will be subject to being activated by another person with no notice to the contractor. Make tagouts with manufactured tags and endorse them with the date and the name of the contractor. Clear tagouts at the end of the workday. The department does not employ a load dispatcher and has no intent to do so. Each electrical worker is responsible for their own protection from automatic switching and from switching by others.

The plans show required disconnections of existing lighting circuits, most in the form of abandoning existing underground conductors in place. The contractor may need to mobilize several times per each existing lighting distribution center. The contractor is expected to build these costs into the various paid items for removals and installations.

Add the following to standard spec 651.5:

Work to disconnect and connect conductors will be incidental to the paid measurement of footage.

There will be no measurement for payment for abandoning conductors or removing conductors for scrap.

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

Add the following to standard spec 652.3.1.4:

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

Add the following to standard spec 653.3(1):

This provision modifies the standard detail drawing for pull boxes and thereby both the standard items and SPV pay item for pull boxes. Lighting pull box covers shall read “LIGHTING”.

Add the following to standard spec 655.3.1:

Wet location splices are not anticipated on this project and not shown in the plans. In the event that the engineer allows wet location splices, make pull box splices with engineer approved epoxy kit for the freeway lighting and should be incidental to the installation of pull box.

At each pull point or access point, indicate the line side bundle with a lap of blue tape. Mark conductors in poles and in pull boxes or other terminations with a 6-Inch long blue tape wrap to identify the set of conductors emanating from distribution center (feeder).

Add the following to standard spec 655.3.7(4):

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

Add the following to standard spec 657.2:

Non-breakaway poles (mounted on structures, concrete bases or behind noise wall barriers without transformer base), as well as at stems of sign bridges containing electrical wires are to be double nutted and install galvanized rat screen enclosing the bottom of pole area, extra nuts and screen incidental.

Add the following to standard spec 657.3.1and 657.3.5:

Corrosion protection measures described in standard spec 657.3.1 and 657.3.5 are invoked for breakaway transformer bases and aluminum light poles. Avoid contact of dissimilar metals in erecting the pole on its foundation and/or breakaway device. Resolve any concern of trapped moisture or potential corrosion cell to the satisfaction of the engineer.

Manufacturer’s Warranty for LED luminaires: The manufacturer shall warrant to the department that each complete luminaire (consisting of the housing, optical assembly, LED drivers, surge protection and wiring) will be free from defects in material and workmanship for10 years from the date that the luminaire are put into service. Install luminaires within one year of manufacture.

If any luminaires fail to meet the above warranty, the department shall provide the manufacturer with a written notice of any defect within 30 days after discovery of the defect. The manufacturer shall provide all materials, luminaires, replacement component parts, labor and all incidentals necessary to restore the luminaire to a fully operational, installed condition.

Submittal Requirements for LED luminaires: Considering the rapid advancement in LED technology, the overall project construction and duration of construction, within 10 calendar days after contract execution, the contractor is responsible to coordinate the lead time for LED luminaires purchase and installation schedule with the engineer and the department’s Lighting Engineer, Eric Perea, at eric.perea@dot.wi.gov or at (414) 750-0935 for freeway lighting system prior to order LED luminaires. The LED luminaires purchasing may be done during later stage of construction as directed by the department which shall not delay the construction.

Add the following to standard spec 659.3:

Provide and install / replace Plaques Light Pole on all poles located in the median at a mounting height of 6-inch above the highest adjacent safety barrier or obstruction.

Add the following to standard spec 659.3.1:

Contractor responsible to provide adequate temporary roadway lighting during all the construction stages not shown on the temporary lighting plans, but which are necessitated by field conditions or by any construction phasing changes. Installation of temporary lighting not shown on temporary lighting plans will be paid according to appropriate pay items included in this contract. Contractor responsible to submit a redline markup plans for any additional temporary lighting to the engineer for approval prior to installation.

85. Electrical Conduit.

Replace standard spec 652.5(2) with the following:

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

Replace standard spec 652.5(5) with the following:

(5)Payment for Conduit Loop Detector is full compensation for providing all materials, including conduit, compacted backfill, surface sealer if required, pull wire if required, condulets, conduit fittings, and for making necessary connections into existing pull box, manhole, junction box or communication vault.

86. Install Conduit Into Existing Item, Item 652.0700.S.

A Description

This special provision describes installing proposed conduit into an existing manhole, pull box, junction box, communication vault, or other structure.

B Materials

Use conduit, as provided and paid for under other items in this contract. Furnish backfill material, topsoil, fertilizer, seed, and mulch conforming to the standard spec.

C Construction

Expose the outside of the existing structure without disturbing existing conduits or cabling. Drill the appropriate sized hole for entering conduits at a location within the structure without disturbing the existing cabling and without hindering the installation of new cabling within the installed conduit. Fill void area between the drilled hole and conduit with an engineer-approved filling material to protect against conduit movement and entry of fill material into the structure. Tamp backfill into place.

D Measurement

The department will measure Install Conduit Into Existing System by the unit, acceptably installed. Up to five conduits entering a structure per entry point into the existing structure will be considered a single unit. Conduits in excess of five, or conduits entering at significantly different entry points into the existing pull box, manhole, or junction box will constitute multiple units of payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
652.0700.S	Install Conduit Into Existing Item	EACH

Payment is full compensation for excavating, drilling holes; furnishing and installing all materials, including bricks, coarse aggregate, sand, bedding, and backfill; for excavating and backfilling; and for furnishing and placing topsoil, fertilizer, seed, and mulch in disturbed areas; for properly disposing of surplus materials; and for making inspections.

stp-652-070 (20100709)

87. Electrical Service Meter Breaker Pedestal, N. 8TH St. & W. Locust St., Item 656.0201.0301; Electrical Service Meter Breaker Pedestal, N. 7TH St. & W. Locust St., Item 656.0201.0302; Electrical Service Meter Breaker Pedestal, N. 8TH St. & W. Burleigh St., Item 656.0201.0303; Electrical Service Meter Breaker Pedestal, N. 7TH St. & W. Burleigh St., Item 656.0201.0304.

Append standard spec 656.3.4(4) with the following:

(4) The contractor will be responsible for electrical service installation or relocation requests. The City of Milwaukee will be responsible for any charges from We Energies.

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

Install the cabinet base and meter breaker pedestal first, so the electrical utility company can install the service lateral. Finish grade the service trench, replace topsoil that is lost or contaminated with other materials.

Append standard spec 656.5(3) with the following:

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

88. Traffic Signals, General.

Work under this item shall consist of furnishing and installing all materials for traffic signals and interconnect at the following intersections in the City of Milwaukee, WI, according to the plans and the standard specifications and these special provisions.

- N. 8th St. and W. Locust St.
- N. 7th St. and W. Locust St.
- N. 8th St. and W. Burleigh St.
- N. 7th St. and W. Burleigh St.

The contractor shall furnish all materials, which include but are not limited to, the traffic signal controller, the traffic signal cabinet, and traffic signal control equipment as listed in the plans (such as, pedestal bases, transformer bases, traffic signal standards, poles, monotube signal poles and arms, traffic signal faces, backplates, pedestrian signal faces, pedestrian push buttons, traffic signal mounting hardware, video detection system, emergency vehicle preemption system, concrete foundations, etc.).

For information related to communications, signals engineering and materials approvals, contact Mr. Joseph Blakeman at joseph.blakeman@milwaukee.gov or (414) 286-8070. For information related to signals construction coordination, contact the shop manager Mr. Rudy Gutierrez at rgutie@milwauee.gov or at (414) 286-5941 office and (414) 708-5148 cell.

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

The contractor shall obtain the necessary electrical permits from the City of Milwaukee Building Department prior to beginning the work. The contractor is responsible for all application fees and for any fines, penalties, damage done to property, etc., billed by the City of Milwaukee.

The contractor is responsible for requesting the electrical service installation or relocation from the power company and the city shall pay the installation costs.

The contractor shall stake the proposed locations of traffic signal items 10 days prior to starting work so that the locations of the proposed facilities can be approved by the City of Milwaukee. Any field changes regarding the location of the signal poles, pull boxes, etc. shall be approved by the City of Milwaukee.

The contractor shall request a signal inspection of the completed signal installation. This request shall be made to the city at least three working days prior to the time of the requested inspection.

Note that failure to comply with the state standards and specifications may result in the cost of the corrections to be made at the contractor's expense.

89. Signal Mounting Hardware, N. 8TH St. & W. Locust St., Item 658.5070.0301; Signal Mounting Hardware, N. 7TH St. & W. Locust St., Item 658.5070.0302; Signal Mounting Hardware, N. 8TH St. & W. Burleigh St., Item 658.5070.0303; Signal Mounting Hardware, N. 7TH St. & W. Burleigh St., Item 658.5070.0304.

Replace standard spec 658.2 (7) with the following:

(7) For signal mounting hardware: furnish weather tight mounting hardware. Protect mounting hardware from the elements before installation. Use corrosion resistant poly bracket shims. Provide side of pole brackets which extend 24-inches from the pole for the signal heads identified on the plans.

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

A Description

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

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

B Materials

B.1 Disposal by Contractor

Items removed under this contract will be considered the property of the department for waste generator identification. The contractor is responsible for coordinating with the department's hazardous waste vendor for disposal:

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

C Construction

C.1 Removal

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

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

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

C.2 Packaging of Hazardous Materials

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

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

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

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

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

Pack ballasts and mercury containing switches in appropriate containers.

C.3 Disposal by Contractor

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

D Measurement

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

E Payment

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

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

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

stp-659-500 (20220628)

91. Temporary Traffic Signal for Intersections N. 8TH St. & W. Locust St., Item 661.0201.0301; Temporary Traffic Signal for Intersections N. 7TH St. & W. Locust St., Item 661.0201.0302.

Modify standard spec 661.2.1 with the following:

The City of Milwaukee will furnish control cabinet, signal controller, and NEMA monitor.

The City of Milwaukee will provide the temporary electrical service for temporary traffic signals.

Replace standard spec 661.3.1(2) with the following:

(2) Request a signal inspection of the completed temporary traffic signal installation. Make this request to the engineer at least 5 working days prior to the time of the requested inspection. The City of Milwaukee electrical personnel will perform the inspection.

Replace standard spec 661.5(2) with the following:

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

1. Furnishing and installing replacement equipment.
2. The cost of delivery and pick-up of the cabinet assemblies.

Payment is full compensation for drilling holes; furnishing and installing all materials, including bricks, and coarse aggregate; for excavation, bedding, and backfilling, including any sand or other required materials; furnishing and placing topsoil, fertilizer, seed, and mulch in disturbed areas; for properly disposing of surplus materials; for making inspections; for cleaning up and properly disposing of waste.

92. Intelligent Transportation Systems (ITS) – Control of Materials.

Standard spec 106.2 – Supply Source and Quality

Add the following to standard spec 106.2:

The department will furnish a portion of equipment to be installed by the contractor. This department-furnished equipment includes the following:

Department-Furnished Items
Microwave Vehicle Detectors
72-Count Fiber Optic Cable
6-Count Fiber Optic Cable
Fiber Optic Termination Panels
Fiber Optic Splice Enclosures
CCTV Cameras
CCTV Camera Poles
Microwave Vehicle Detectors
Ethernet Switches
Pole-Mounted Cabinets
Solar Power Systems
Dynamic Message Sign

Pick-up small department-furnished equipment, such as communications devices, cameras, and controllers, from the department's Statewide Traffic Operations Center (STOC), 433 W. St. Paul Ave., Milwaukee, WI 53203 at a mutually agreed upon time during normal state office hours. Contact the department's STOC at (414) 227-2166 to coordinate pick-up of equipment.

Large department-furnished equipment, such as camera poles will be delivered by the supplier to a contractor-controlled site within Milwaukee County. Delivery will not necessarily be in a "just in time" manner. Store the equipment until field installation. Provide location details and a contact for delivery coordination upon receiving the contract's Notice to Proceed.

Transportation of the equipment between the electric shop and the field or interim locations are the responsibility of the contractor.

Standard spec 106.3 – Approval of Materials

Add the following to standard spec 106.3:

Design/Shop Drawings

Prior to the purchase and/or fabrication of any of the components listed herein, and for any non-catalog item shown on the Material and Equipment List specified above, and no more than 30 days after notice to proceed, submit five copies of design drawings and shop drawings, as required, to the department for review. The items and the drawings that represent them shall meet the requirements of the standard specifications.

Design drawing submissions shall consist of signed and certified designs, design drawings, calculations, and material specifications for required items.

Shop drawings will be required for, but not limited to the following:

1. Mounting assemblies for the vehicle speed and classification sensors, including their attachment to the structure.
2. Mounting LED warning signs to the sign structure.
3. Mounting detail for dynamic message signs.
4. Any contractor-designed structure or foundation.

The department will complete its review of the material within 30 days from the date of receipt of the submission, unless otherwise specified. The department will advise the contractor, in writing, as to the acceptability of the material submitted. The department may determine that if no exceptions were taken for the item, it is approved, and no further action is required by the contractor; or the item may be partially or totally rejected, in which case modify and/or amend the submittal as required by the department and resubmit the item within 14 days. At this time, the review and approval cycle described above will begin again.

stp-670-005 (20150630)

93. Intelligent Transportation Systems - General Requirements.

A Description

A.1 General

This contract includes furnishing and installing elements for an Intelligent Transportation System (ITS) in or along the existing roadway as shown on the plans.

Unusual aspects of this project include:

1. The project includes working on cables and equipment that are carrying data between roadside equipment and the department's Statewide Traffic Operations Center (STOC). Interruption of this service is not expected to perform this work. If an interruption is determined necessary, it must be done on a weekend, and must be done in a way that minimizes communication outages for the existing equipment. Notify the department's STOC at least 48 hours in advance of the planned interruption.
2. The department will furnish some of the equipment to be installed. Make a reasonable effort to discover defects in that equipment before installing it.

A.2 Surge Protection

Equip every ungrounded conductor wire entering or leaving any equipment cabinet with a surge protector. For purposes of this section, multiple cabinets on a single pole or foundation are considered a single cabinet.

B Materials

B.1 General

Only furnish equipment and component parts for this work that are new and have high quality workmanship. All controls, indicators, and connectors shall be clearly and permanently labeled in a manner approved by the engineer. All equipment of each type shall be identical.

All electrical equipment shall conform to the standards and requirements of the Wisconsin Electrical Code, the National Electrical Manufacturers Association (NEMA), National Electric Safety Council (NESC), Underwriter's Laboratory Inc. (UL) or the Electronic Industries Association (EIA), when applicable. All materials and workmanship shall conform to the requirements of the National Electrical Code (NEC), Rural Electrification Administration (REA), Standards of the American Society for Testing and Materials (ASTM), American Association of State Highway and Transportation Officials (AASHTO), requirements of the plans these special provisions, the standard specifications, and to any other codes, standards, or ordinances that may apply. All system wiring, conduit, grounding hardware and circuit breakers shall be in conformance with the National Electrical Code. Whenever reference is made to any of the standards mentioned, the reference shall be considered to mean the code, ordinance, or standard that is in effect at the time of the bid advertisement.

B.2 Outdoor Equipment

All conductive connectors, pins (except pins connected by soldering), and socket contacts shall be gold plated. Acrylic conformal coating shall protect each circuit board side that has conductive traces. Except for integrated circuits containing custom firmware, all components shall be soldered to the printed circuit board.

To prevent galvanic corrosion, all connections between dissimilar metals shall incorporate a means of keeping moisture out of the connection. Where the connection need not conduct electricity, interpose a non-absorbing, inert material or washer between the dissimilar metals. Use nonconductive liners and washers to insulate fasteners from dissimilar metals. Where the connection must conduct electricity, use a conductive sealant between the dissimilar metals. Alternatively, use an insulating gasket and a bond wire connecting the two metal parts.

B.3 Custom Equipment

Equipment that is not part of the manufacturer's standard product line, or that is made or modified specifically for this project, shall conform to the following requirements:

Where practical, electronics shall be modular plug-in assemblies to facilitate maintenance. Such assemblies shall be keyed to prevent incorrect insertion of modules into sockets.

All components shall be available from multiple manufacturers as part of the manufacturers' standard product lines. All must be clearly labeled with the value, part number, tolerance, or other information sufficient to enable a technician to order an exact replacement part.

Lamps used for indicator purposes shall be light-emitting diodes.

The printed circuit boards shall be composed of "two-ounce" copper on 1/16 inch thick fiberglass epoxy or equivalent type construction. Holes that carry electrical connections from one side of the boards to the other shall be completely plated through. Multilayer printed circuit boards shall not be used. The name or reference number used for the board in the drawings and maintenance manuals supplied to the department shall be permanently affixed to each board.

All components shall be mounted so that the identifying markings are visible without moving or removing any part, if practical.

B.4 Environmental Conditions

Equipment shall continue to operate as specified under the following ranges of environmental conditions, except as noted in the specifications for individual pieces of equipment.

1. **Vibration and Shock:** Vehicle speed and classification sensors and any other equipment mounted atop poles or on structures shall not be impaired by the continuous vibration caused by winds (up to 90 mph with a 30 percent gust factor) and traffic.
2. **Duty Cycle:** Continuous
3. **Electromagnetic Radiation:** The equipment shall not be impaired by ambient electrical or magnetic fields, such as those caused by power lines, transformers, and motors. The equipment shall not radiate signals that adversely affect other equipment.
4. **Electrical Power:**
    4.1. **Operating power:** The equipment shall operate on 120-volts, 60-Hz, single-phase unless otherwise specified. It shall conform to its specified performance requirements when the input voltage varies from 89 to 135 volts and the frequency varies +3 Hz.
    4.2. **High frequency interference:** The equipment operation shall be unaffected by power supply voltage spikes of up to 150 volts in amplitude and 10 microseconds duration.
    4.3. **Line voltage transients:** The equipment operation shall be unaffected by voltage transients of plus or minus 20 percent of nominal line voltage for a maximum duration of 50 milliseconds. Equipment in the field shall meet the power service transient requirements of NEMA Standard TS-2 when connected to the surge protectors in the cabinets.
5. **Temperature and Humidity:**
    5.1. **Field equipment:** Equipment in the field shall meet the temperature and humidity requirements of NEMA Standard TS-2. Liquid crystal displays shall be undamaged by temperatures as high as 165 degrees F, and shall produce a usable display at temperatures up to 120 degrees F.
    5.2. **Equipment in Controlled Environments:** shall operate normally at any combination of temperatures between 50 degrees F and 100 degrees F, and humidity's between 5 percent and 90 percent, non-condensing, and with a temperature gradient of 9 degrees F per hour.

B.5 Patch Cables and Wiring

All cables and wiring between devices installed in a single cabinet, or in separate cabinets sharing a single concrete base, will be considered incidental to the installation of the devices and no separate payment will be made for them. It is anticipated that this will include fiber optic patch cables between termination panels and Ethernet switches, 10 / 100 MBPS Ethernet cables, RS-232 cables between individual devices and terminal servers, and power cables between individual devices and power sources within the cabinets.

B.6 Surge Protection

Low-voltage signal pairs, including twisted pair communication cable entering each cabinet shall be protected by two-stage, plug-in surge protectors and shall be installed on both ends of camera control cables. The protectors shall meet or exceed the following minimum requirements:

1. The protectors shall suppress a peak surge current of up to 10k amps.
2. The protectors shall have a response time less than one nanosecond.
3. The protector shall clamp the voltage between the two wires at a voltage that is no more than twice the peak signal voltage and clamp the voltage between each wire and ground at 50 volts.
4. The first stage of protection shall be a three-element gas discharge tube, and the second stage shall consist of silicon clamping devices.
5. The protector shall also contain a resettable fuse (PTC) to protect against excessive current.
6. There shall be no more than two pairs per protector.
7. It shall be possible to replace the protector without using tools.

Cables carrying power to curve signs shall be protected at the cabinet by grounded metal oxide varistors of appropriate voltages. The varistors must be at least 0.8 inch in diameter.

C Construction

C.1 Thread Protection

Provide rust, corrosion, and anti-seize protection at all thread assemblies of metallic parts by coating (non-spray) the mating surfaces with an approved compound. Failure to use an approved compound will result in no payment for the items to which coating was to have been applied.

C.2 Cable Installation

When installing new cables into conduits containing existing cables, remove the existing cables and reinstall the existing cables simultaneously with the new cables. Take every precaution necessary to protect the existing cables. In the event of avoidable damage to the existing cables, replace all damaged cables, in-kind, at no additional expense to the department. When cables are pulled into conduit, use a cable pulling lubricant approved by the cable manufacturer. Submit documentation supporting manufacturer approval of the lubricant to the engineer.

C.3 Wiring

Every conductor, except a conductor contained entirely within a single piece of equipment, must terminate either in a connector or on a terminal block. Provide and install the connectors and terminal blocks where needed, without separate payment. Use approved splice kits instead of connectors and terminal blocks for underground power cable splices.

Permanently label and key connectors to preclude improper connection. Obtain prior engineer approval for labeling methods before use.

Terminal blocks must be affixed to panels that permanently identify the block and what wire connects to each terminal. This may be accomplished by silk screening or by installing a laminated printed card under the terminal block, with the labels on portions of the card that extend beyond the block. Installation of terminal blocks by drilling holes in the exterior wall of the cabinet is not acceptable.

Use barriers to protect personnel from accidental contact with all dangerous voltages.

Do not install conductors carrying AC power in the same wiring harness as conductors carrying control or communication signals.

Arrange wiring, including fiber optic pigtails, so that any removable assembly can be removed without disturbing wiring that is not associated with the assembly being removed.

Communication and control cables may not be spliced underground, except where indicated on the plans.

Cables in the Statewide Traffic Operations Center or in communication hubs, which are not contained within a single cabinet, shall have at least 10 feet of slack.

C.4 System Operations

If the contractor’s operations unexpectedly interrupt Intelligent Transportation Systems (ITS) service, notify the engineer immediately and restore service within 24 hours. Repair all damaged facilities to the condition existing before the interruption. If service is not restored within 24 hours, the department may restore service to any operating device and deduct restoration costs from payments due the contractor.

C.5 Surge Protection

Arrange the equipment and cabinet wiring to minimize the distance between each conductor’s point of entry and its protector. Locate the protector as far as possible from electronic equipment. Ensure that all wiring between the surge protectors and the point of entry is free from sharp bends.

D Measurement

No separate measurement will be made for the work described in this article.

E Payment

No separate payment will be made for the work described in this article. All work described in this article shall be included under the ITS items in the contract.

stp-670-010 (20100709)

94. Install ITS Field Cabinet, Item 673.1200.S.

A Description

This special provision describes installing a department-furnished type 170, size 334 field cabinet.

B Materials

The department will furnish the type 170, size 334 field cabinet. Provide all necessary miscellaneous mounting hardware and internal power cables. With the field cabinet, the department will furnish cabinet bolts to anchor the cabinet to the concrete base.

C Construction

Install the field cabinet on a new or existing concrete base paid separately. Make all power connections to the cabinet, isolating the neutral bus from the cabinet and equipment ground.

Effectively ground all cable grounding shields and any spare or unused conductors in the field cabinet to the equipment grounding terminal strip.

D Measurement

The department will measure Install ITS Field Cabinet by the unit, installed 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
673.1200.S	Install ITS Field Cabinet	EACH

Payment is full compensation for installing the state-furnished field cabinet; making all connections; and grounding as necessary.

stp-673-005 (20220107)

95. Install Pole Mounted Cabinet, Item 673.1225.S.

A Description

This special provision describes installing department furnished aluminum enclosures on poles for intelligent transportation systems equipment.

B Materials

Use stainless steel bolts, nuts, and washers unless otherwise specified.

All conductors, terminals, and parts that could be hazardous to maintenance personnel shall be protected with suitable insulating material.

The cabinet will be equipped with service panels. Two panels shall be provided and mounted on the cabinet sidewalls. The left side panel shall be designated as "Input/Communications," and the right side panel shall be designated as the "Service Panel."

The service panel will be equipped with a four-outlet handi-box. Wire the handi-box to the series portion of the filtering surge protector.

Use metallic conduit, fittings, and adapters required from the underground conduit transition point to the cabinet as part of this item. A typical installation requires on 2-inch conduit. Use metallic conduit conforming to standard spec 652.

C Construction

Fasten the field cabinet securely onto a pole. Provide bolted stainless steel connections with lock washers, locking nuts, or other engineer-approved means to prevent the connection nuts from backing off. Isolate dissimilar materials from one another using stainless steel fittings. Make all power connections to the cabinet as specified in standard spec 656.

Drill and tap the cabinet, as necessary, to mount the terminal blocks and other attachments to the service panel, to provide an entrance on the back of the cabinet for cable from the pole mounted intelligent transportation systems equipment, and to mount the service panel to the cabinet as shown in the details. Remove all sharp edges or burrs, or both, caused by the cutting or drilling process. Seal all openings to prevent water from entering the cabinet. Mount the surge protector to the service panel.

Install metallic conduit on the exterior of the pole (for entrance to the cabinet from the ground) as the plans show, and according to the applicable requirements of standard spec 652.

D Measurement

The department will measure Install Pole Mounted Cabinet as each individual assembly, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
673.1225.S	Install Pole Mounted Cabinet	EACH

Payment is full compensation for installing the pole mounted cabinet; for making all connections and conduit/wire entrances; and for all testing.

stp-673-010 (20220107)

96. Removing 50-Foot Camera Pole, Item 677.9051.S.

A Description

This special provision describes removing existing camera poles.

B (Vacant)

C Construction

Disconnect all cables, wiring and equipment that are mounted on or in the poles, and remove the pole from the concrete footing. The department will pick up any antennae, cameras, or other equipment mounted on the pole; contact maintenance staff at (414) 227-2166 at the department's Statewide Traffic Operations Center, when the material is ready to be picked up. Properly dispose of the pole, conduit, cabling, and wiring away from the project site.

D Measurement

The department will measure Removing (Height) Camera Pole by the unit, acceptably removed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
677.9051.S	Removing 50-Foot Camera Pole	EACH

Payment is full compensation for removing and disposing of the existing camera pole; disconnecting any necessary wiring; removing the equipment mounted on the poles; disposing of cabling and wiring; and transportation.

stp-677-901 (20100630)

97. Install Overhead Freeway DMS Full Matrix, Item 678.0100.S.

A Description

This special provision describes installing a state-furnished, or an existing salvaged, dynamic message sign on a new sign structure.

B Materials

The department will provide the sign, or it will be salvaged, controller, and the control cable.

Use an AWG #6 copper wire or equivalent bonding straps to bond the sign and cabinet to the structure. Use an AWG #6 solid, bare copper wire to bond the sign structure to ground rods.

1. For the three wires carrying 120/240 VAC power from the cabinet to the sign, use single conductor, stranded copper, 120/240 VAC, XLP insulated, USE rated wire. Size the wire to carry the maximum amperage permitted by the main breakers in the sign.

Provide a 100-amp 120/240-VAC load center in the controller cabinet, along with breakers recommended by the sign manufacturer.

C Construction

Install the load center so that the main breakers control all power to the sign and cabinet. Provide at least three branch circuits, one for the sign, one for the controller and communication equipment, and one for all cabinet accessories, such as fan, light, and heater. Only protect the branch serving the controller and communication equipment with the second stage of the surge protector. Connect the power and control cables according to the manufacturer's recommendations. Run the cables in rigid metallic conduit or flexible metallic conduit, or combination of these, within the sign structure.

Bond the bottom of the sign structure to one or more ground rods. Use exothermic welding at each end of the ground wire, unless the steel structure has a suitable grounding lug. Use a device that measures resistance to ground using the three-point fall-of-potential method to ensure that the resistance from the sign's ground bar to ground does not exceed 4 ohms. Add more ground rods if necessary to achieve this requirement.

D Measurement

The department will measure Install Overhead Freeway DMS Full Matrix by each sign, acceptably installed and tested.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
678.0100.S	Install Overhead Freeway DMS Full Matrix	EACH

Payment is full compensation for installing and testing the sign and controller; providing cables, conduits, and fittings; for testing the sign; and for transporting materials.

stp-678-010 (20100630)

98. HMA Pavement Percent Within Limits (PWL) QMP, Core Pilot Project; Incentive Density PWL HMA Pavement, Item SPV.0055.0001; Incentive Air Voids HMA Pavement SPV.0055.0002.

A Description

This special provision describes percent within limits (PWL) pay determination, providing and maintaining a contractor Quality Control (QC) Program, department Quality Verification (QV) Program, required sampling and testing, dispute resolution, corrective action, pavement density, and payment for HMA pavements. Pay is determined by statistical analysis performed on contractor and department test results conducted according to the Quality Management Program (QMP) as specified in standard spec 460, except as modified below.

B Materials

Conform to the requirements of standard specs 450, 455, and 460 except where superseded by this special provision. The department will allow only one mix design for each HMA mixture type per layer required for the contract, unless approved by the engineer. The use of more than one mix design for each

HMA pavement layer will require the contractor to construct a new test strip in accordance with HMA Pavement Percent Within Limits (PWL) QMP Test Strip Volumetrics and HMA Pavement Percent Within Limits (PWL) QMP Test Strip Density articles at no additional cost to the department.

Replace standard spec 460.2.8.2.1.3.1 Contracts with 5000 Tons of Mixture or Greater with the following:

460.2.8.2.1.3.1 Contracts under Percent within Limits

(1) Furnish and maintain a laboratory at the plant site fully equipped for performing contractor QC testing. Have the laboratory on-site and operational before beginning mixture production.

(2) Obtain random samples and perform tests according to this special provision and further defined in Appendix A: *Test Methods & Sampling for HMA PWL QMP Projects*. Obtain HMA mixture samples from trucks at the plant. For the sublot in which a QV sample is collected, discard the QC sample and test a split of the QV sample.

(3) Perform sampling from the truck box and three-part splitting of HMA samples according to CMM 836. Sample size must be adequate to run the appropriate required tests in addition to one set of duplicate tests that may be required for dispute resolution (i.e., retained). This requires sample sizes which yield three splits for all random sampling per sublot. All QC samples shall provide the following: QC, QV, and Retained. The contractor shall take possession and test the QC portions. The department will observe the splitting and take possession of the samples intended for QV testing (i.e., QV portion from each sample) and the Retained portions. Additional sampling details are found in Appendix A. Label samples according to CMM 836. Additional handling instructions for retained samples are found in CMM 836.

(4) Use the test methods identified below to perform the following tests at a frequency greater than or equal to that indicated:

- Blended aggregate gradations in accordance with AASHTO T 30
- Asphalt content (AC) in percent

  Determine AC using one of the following methods:

  - AC by ignition oven according to AASHTO T 308 as modified in CMM 836.6.3.6. If the department is using an ignition oven to determine AC, conform to CMM 836.6.3.7. If the department is not using an ignition oven to determine AC, IOCFs must still be reverified for any of the reasons listed in CMM 836.6.3.7.2 Table 836-2 and conform to CMM 836.6.3.7.3.
  - AC by chemical extraction according to AASHTO T 164 Method A or B.
  - AC by automated extraction according to ASTM D8159 as modified in CMM 836.6.3.1.
- Bulk specific gravity (Gmb) of the compacted mixture according to AASHTO T 166 as modified in CMM 836.6.5.
- Maximum specific gravity (Gmm) according to AASHTO T 209 as modified in CMM 836.6.6.
- Air voids (V_a) by calculation according to AASHTO T 269.
- Voids in Mineral Aggregate (VMA) by calculation according to AASHTO R35.

(5) Lot size shall consist of 3750 tons with sublots of 750 tons. Test each design mixture at a frequency of 1 test per 750 tons of mixture type produced and placed as part of the contract. Add a random sample for any fraction of 750 tons at the end of production for a specific mixture design. Partial lots with less than three sublot tests will be included into the previous lot for data analysis and pay adjustment. Volumetric lots will include all tonnage of mixture type under specified bid item unless otherwise specified in the plan.

(6) Conduct field tensile strength ratio tests according to AASHTO T283, without freeze-thaw conditioning cycles, on each qualifying mixture in accordance with CMM 836.6.14. Test each full 50,000-ton production increment, or fraction of an increment, after the first 5,000 tons of production. Perform required increment testing in the first week of production of that increment. If field tensile strength ratio values are below the spec limit, notify the engineer. The engineer and contractor will jointly determine a corrective action.

Delete standard spec 460.2.8.2.1.5 and 460.2.8.2.1.6.

Replace standard spec 460.2.8.2.1.7 Corrective Action with the following:

460.2.8.2.1.7 Corrective Action

(1) Material must conform to the following action and acceptance limits based on individual QC and QV test results (tolerances relative to the JMF used on the PWL Test Strip):

ITEM	ACTION LIMITS	ACCEPTANCE LIMITS
Percent passing given sieve:		
37.5-mm	+/- 8.0	
25.0-mm	+/- 8.0	
19.0-mm	+/- 7.5	
12.5-mm	+/- 7.5	
9.5-mm	+/- 7.5	
2.36-mm	+/- 7.0	
75-µm	+/- 3.0	
AC in percent	-0.3	-0.5
Va		- 1.5 & +2.0
VMA in percent[1]	- 0.5	-1.0

[1] VMA limits based on minimum requirement for mix design nominal maximum aggregate size in table 460-1.

(2) QV samples will be tested for Gmm, Gmb, and AC. Air voids and VMA will then be calculated using these test results.

(3) Notify the engineer if any individual test result falls outside the action limits, investigate the cause and take corrective action to return to within action limits. If two consecutive test results fall outside the action limits, stop production. Production may not resume until approved by the engineer. Additional QV samples may be collected upon resuming production, at the discretion of the engineer.

(4) For any additional non-random tests outside the random number testing conducted for volumetrics, the data collected will not be entered into PWL calculations. Additional QV tests must meet acceptance limits or be subject to production stop. If the department's non-random test does not conform to the acceptance limits, the retained sample will be tested by the BTS lab. If the BTS results also do not meet the acceptance limits, the material will be considered unacceptable as described in (5) below.

(5) Remove and replace unacceptable material at no additional expense to the department. Unacceptable material is defined as any individual QC or QV tests results outside the acceptance limits or a PWL value < 50. For AC in percent, unacceptable material is defined as any individual QV test result outside of the acceptance limit. The engineer may allow such material to remain in place with a price reduction. The department will pay for such HMA Pavement allowed to remain in place at 50 percent of the contract unit price.

Replace standard spec 460.2.8.3.1.2 Personnel Requirements with the following:

460.2.8.3.1.2 Personnel Requirements

(1) The department will provide at least one HTCP-certified Transportation Materials Sampling (TMS) Technician, to observe QV sampling of HMA mixtures.

(2) Under departmental observation, a contractor TMS technician shall collect and split samples.

(3) A department HTCP-certified Hot Mix Asphalt, Technician I, Production Tester (HMA-IPT) technician will ensure that all sampling is performed correctly and conduct testing, analyze test results, and report resulting data.

(4) The department will make an organizational chart available to the contractor before mixture production begins. The organizational chart will include names, telephone numbers, and current certifications of all QV testing personnel. The department will update the chart with appropriate changes, as they become effective.

Replace standard spec 460.2.8.3.1.4 Department Verification Testing Requirements with the following:

460.2.8.3.1.4 Department Verification Testing Requirements

(1) HTCP-certified department personnel will obtain QV random samples by directly supervising HTCP-certified contractor personnel sampling from trucks at the plant. Sample size must be adequate to run the appropriate required tests in addition to one set of duplicate tests that may be required for dispute resolution (i.e., retained). This requires sample sizes which yield three splits for all random sampling per sublot. All QV samples shall furnish the following: QC, QV, and Retained. The department will observe the splitting and take possession of the samples intended for QV testing (i.e., QV portion from each sample) and the Retained portions. The department will take possession of retained samples accumulated to date each day QV samples are collected. The department will retain samples until surpassing the analysis window of up to 5 lots, as defined in 460.2.8.3.1.7(2) of this special provision. Additional sampling details are found in Appendix A.

(2) The department will verify product quality using the test methods specified here in 460.2.8.3.1.4(3). The department will identify test methods before construction starts and use only those methods during production of that material unless the engineer and contractor mutually agree otherwise.

(3) The department will perform all testing conforming to the following standards:

- Bulk specific gravity (Gmb) of the compacted mixture according to AASHTO T 166 as modified in CMM 836.6.5.
- Maximum specific gravity (Gmm) according to AASHTO T 209 as modified in CMM 836.6.6.
- Air voids (Va) by calculation according to AASHTO T 269.
- Voids in Mineral Aggregate (VMA) by calculation according to AASHTO R 35.
- Asphalt Content (AC) in percent determined by ignition oven method according to AASHTO T 308 as modified in CMM 836.6.3.6 and conforming to CMM 836.6.3.7, chemical extraction according to AASHTO T 164 Method A or B, or automated extraction according to ASTM D8159 as modified in CMM 836.6.3.1.

(4) The department will randomly test each design mixture at the minimum frequency of one test for each lot.

Delete standard spec 460.2.8.3.1.6.

Replace standard spec 460.2.8.3.1.7 Dispute Resolution with the following:

460.2.8.3.1.7 Data Analysis for Volumetrics

(1) Analysis of test data for pay determination will be contingent upon QC and QV test results. Statistical analysis will be conducted on Gmm and Gmb test results for calculation of Va. If either Gmm or Gmb analysis results in non-comparable data as described in 460.2.8.3.1.7(2), subsequent testing will be performed for both parameters as detailed in the following paragraph.

(2) The engineer, upon completion of the first 3 lots, will compare the variances (F-test) and the means (t-test) of the QV test results with the QC test results. Additional comparisons incorporating the first 3 lots of data will be performed following completion of the 4^{th} and 5^{th} lots (i.e., lots 1-3, 1-4, and 1-5). A rolling window of 5 lots will be used to conduct F & t comparison for the remainder of the contract (i.e., lots 2-6, then lots 3-7, etc.), reporting comparison results for each individual lot. Analysis will use a set alpha value of 0.025. If the F- and t-tests report comparable data, the QC and QV data sets are determined to be statistically similar and QC data will be used to calculate the Va used in PWL and pay adjustment calculations. If the F- and t-tests result in non-comparable data, proceed to the *dispute resolution* steps found below. Note: if both QC and QV Va PWL result in a pay adjustment of 102% or greater, dispute resolution testing will not be conducted. Dispute resolution via further investigation is as follows:

[1] The Retained portion of the split from the lot in the analysis window with a QV test result furthest from the QV mean (not necessarily the sublot identifying that variances or means do not compare) will be referee tested for Gmm, Gmb, and Asphalt Content by the bureau's AASHTO accredited laboratory and certified personnel. All previous lots within the analysis window are subject to referee testing and regional lab testing as deemed necessary. Referee test results will replace the QV data of the sublot(s).

[2] Statistical analysis will be conducted with referee test results replacing QV results.

i. If the F- and t-tests indicate variances and means compare, no further testing is required for the lot and QC data will be used for PWL and pay factor/adjustment calculations.
ii. If the F- and t-tests indicate non-comparable variances or means, the Retained portion of the random QC sample will be tested for Gmm, Gmb, and Asphalt Content by the department's regional lab for the remaining 4 sublots of the lot which the F- and t-tests indicate non-comparable datasets. The department's regional lab and the referee test results will be used for PWL and pay factor/adjustment calculations. Upon the second instance of non-comparable variance or means and for every instance thereafter, the department will assess a pay reduction for the additional testing of the remaining 4 sublots at $2,000/lot under the HMA Regional Lab Testing administrative item.

[3] The contractor may choose to dispute the regional test results on a lot basis within 7 days after receiving the results from the region. In this event, the retained portion of each sublot will be referee tested by the department's AASHTO accredited laboratory and certified personnel. The referee Gmm and Gmb test results will supersede the regional lab results for the disputed lot.

i. If referee testing results in an increased calculated pay factor, the department will pay for the cost of the additional referee testing.
ii. If referee testing of a disputed lot results in an equal or lower calculated pay factor, the department will assess a pay reduction for the additional referee testing at $2,000/lot under the Referee Testing administrative item.

(3) The department will notify the contractor of the referee test results within 3 working days after receipt of the samples by the department's AASHTO accredited laboratory. The intent is to provide referee test results within 7 calendar days from completion of the lot.

(4) The department will determine mixture conformance and acceptability by analyzing referee test results, reviewing mixture data, and inspecting the completed pavement according to the standard spec, this special provision, and accompanying Appendix A.

(5) Unacceptable material (i.e., resulting in a PWL value less than 50 or individual QC or QV test results not meeting the Acceptance Requirements of 460.2.8.2.1.7 as modified herein) will be referee tested by the bureau's AASHTO accredited laboratory and certified personnel and those test results used for analysis. Such material may be subject to remove and replace, at the discretion of the engineer. If the engineer allows the material to remain in place, it will be paid at 50% of the HMA Pavement contract unit price. Replacement or pay adjustment will be conducted on a sublot basis. If an entire PWL sublot is removed and replaced, the test results of the newly placed material will replace the original data for the sublot. Any remove and replace shall be performed at no additional cost to the department. Testing of replaced material must include a minimum of one QV result. [Note: If the removed and replaced material does not result in replacement of original QV data, an additional QV test will be conducted and under such circumstances will be entered into the HMA PWL Production spreadsheet for data analysis and pay determination.] The quantity of material paid at 50% the contract unit price will be deducted from PWL pay adjustments, along with accompanying data of this material.

Delete standard spec 460.2.8.3.1.8 Corrective Action.

C Construction

Replace standard spec 460.3.3.2 Pavement Density Determination with the following:

460.3.3.2 Pavement Density Determination by Cores

(1) For mainline pavement, PWL density determination will be by cores. Full-width passing lanes, turn lanes, or auxiliary lanes must be 1500 lane feet or greater to be eligible for PWL density determination. Shoulder and appurtenance density will be conducted by the department using a nuclear density gauge according to CMM 815, and average lot (daily) densities must conform to standard spec Table 460-3 or else be subject to disincentives according to 460.5.2.2(5) herein. No density incentive will be applied to shoulders or appurtenances. Offsets will not be applied to nuclear density gauge readings for shoulders or appurtenances. Unacceptable shoulder material will be handled according to standard spec 460.3.3.1 and CMM 815.11.

(2) Sublots are typically 1500 lane feet (excluding shoulder, even if paved integrally) and placed within a single layer for each location and target maximum density category indicated in table 460-3. A partial quantity less than 750 lane feet will be included with the previous sublot.

(3) A typical lot consists of 5 sublots. Partial lots with less than three sublots will be included in the previous lot for data analysis/acceptance and pay, by the engineer. If density lots/sublots are determined prior to construction of the test strip, any random locations within the test strip shall be omitted.

(4) Do not re-roll compacted mixtures with deficient density test results. Do not operate continuously below the specified minimum density. Stop production, identify the source of the problem, and make corrections to produce work meeting the specification requirements.

460.3.3.2.2 Density Determination by Cores

(1) Core the pavement at one random location, determined by the engineer, per sublot. Each core location will represent the entire length and width of the sublot.

(2) Under the direct observation of the engineer, cut 100 or 150 mm (4 or 6 inch) diameter cores. Cores will be cut by the next day, except if the next day is not a working day, then they shall be cut within 48 hours after placement. Prepare cores and determine density according to AASHTO T166 as modified in CMM 836.6.5. Dry cores after testing. Fill core holes according to Appendix A and obtain engineer approval before opening to traffic. The department will maintain custody of cores throughout the entire sampling and testing process. The department will label cores, transport cores to testing facilities, witness testing, store dried cores, and provide subsequent verification testing.

(3) If a core is damaged at the time of coring, immediately take a replacement core 1 ft ahead of the existing testing location in the direction of traffic at the same offset as the damaged core. If a core is damaged during transport, record it as damaged and notify the engineer immediately.

Replace standard spec 460.3.3.3 Waiving Density Testing with Acceptance of Density Data with the following:

460.3.3.3 Data Analysis for Density

(1) As random density locations are paved, the core data will be recorded in the HMA PWL Production Spreadsheet for analysis in chronological order. Each lot will contain core density data from a single HMA mixture type placed over a specific underlying material. Upon the completion of each lot the core data will be used for PWL and pay adjustment calculations.

(2) The department reserves the right to verify the density of any core and the department's result may be used for PWL and pay adjustment calculations, at the discretion of the engineer.

(3) The department will determine mixture density conformance and acceptability by analyzing test results, reviewing mixture data, and inspecting the completed pavement according to standard spec, this special provision, and accompanying Appendix A.

(4) Core data for each lot will be used by the department for PWL and pay adjustment calculation.

(5) Density resulting in a PWL value less than 50 or not meeting the requirements of 460.3.3.1 (any individual density test result falling more than 3.0 percent below the minimum required target maximum density as specified in standard spec Table 460-3) is unacceptable and may be subject to remove and replace at no additional cost to the department, at the discretion of the engineer.

i. Replacement may be conducted on a sublot basis. If an entire PWL sublot is removed and replaced, the test results of the newly placed material will replace the original data for the sublot.
ii. Testing of replaced material must include a minimum of one QV result. [Note: If the removed and replaced material does not result in replacement of original QV data, an additional QV test must be conducted and under such circumstances will be entered into the data analysis and pay determination.]
iii. If the engineer allows such material to remain in place, it will be paid for at 50% of the HMA Pavement contract unit price. The extent of unacceptable material will be addressed as specified in CMM 815.11. The quantity of material paid at 50% the contract unit price will be deducted from PWL pay adjustments, along with accompanying data of this material.
iv. Unacceptable material identified by core density will be removed and replaced or paid at 50% of the contract unit price on a sublot basis.

D Measurement

The department will measure the HMA Pavement bid items acceptably completed by the ton as specified in standard spec 450.4 and as follows in standard spec 460.5 as modified in this special provision.

E Payment

Replace standard spec 460.5.2 HMA Pavement with the following:

460.5.2 HMA Pavement

460.5.2.1 General

(1) Payment for HMA Pavement Type LT, MT, and HT mixes is full compensation for providing HMA mixture designs; for preparing foundation; for furnishing, preparing, hauling, mixing, placing, and compacting mixture; for HMA PWL QMP testing and aggregate source testing; for warm mix asphalt additives or processes; for stabilizer, hydrated lime and liquid antistripping agent, if required; and for all materials including asphaltic materials.

(2) If provided for in the plan quantities, the department will pay for a leveling layer, placed to correct irregularities in an existing paved surface before overlaying, under the pertinent paving bid item. Absent a plan quantity, the department will pay for a leveling layer as extra work.

460.5.2.2 Calculation of Pay Adjustment for HMA Pavement using PWL

(1) Pay adjustments will be calculated using 65 dollars per ton of HMA pavement. The HMA PWL Production Spreadsheet, including data, will be made available to the contractor by the department as soon as practicable upon completion of each lot. The department will pay for measured quantities of mix based on this price multiplied by the following pay adjustment calculated in accordance with the HMA PWL Production Spreadsheet:

PAY FACTOR FOR HMA PAVEMENT AIR VOIDS & DENSITY

PERCENT WITHIN LIMITS (PWL)	*PAYMENT FACTOR, PF (percent of $65/ton)*
≥ 90 to 100	PF = ((PWL – 90) * 0.4) + 100
≥ 50 to < 90	(PWL * 0.5) + 55
<50	50%[1]

where PF is calculated per air voids and density, denoted $PF_{air\ voids}$ & $PF_{density}$.

[1] Any material resulting in PWL value less than 50 shall be removed and replaced unless the engineer allows such material to remain in place. In the event the material remains in place, it will be paid at 50% of the contract unit price of HMA pavement.

(2) For air voids, PWL values will be calculated using lower and upper specification limits of 2.0 and 4.3 percent, respectively. Lower specification limits for density shall be in accordance with standard spec Table 460-3.

(3) Pay adjustment will be determined on a lot basis and will be computed as shown in the following equation.

Pay Adjustment = (PF-100)/100 x (WP) x (tonnage) x ($65/ton)*

*Note: If Pay Factor = 50, the contract unit price will be used in lieu of $65/ton and the weighted percentage (WP) will equal 1.0.

The following weighted percentage (WP) values will be used for the corresponding parameter:

Parameter	WP
Air Voids	0.5
Density	0.5

(4) Individual Pay Factors for each air voids ($PF_{air\ voids}$) and density ($PF_{density}$) will be determined. $PF_{air\ voids}$ will be multiplied by the total tonnage placed (i.e., from truck tickets), and $PF_{density}$ will be multiplied by the calculated tonnage used to pave the mainline only (i.e., traffic lanes excluding shoulder) as determined in accordance with Appendix A.

(5) Pay adjustment for shoulders and appurtenances accepted by department testing will be determined on a lot basis. If the lot density is less than the specified minimum in table 460-3, the department will reduce pay based on the contract unit price for the HMA pavement bid item for that lot as follows:

DISINCENTIVE PAY REDUCTION FOR HMA PAVEMENT DENSITY

PERCENT LOT DENSITY BELOW SPECIFIED MINIMUM	PAYMENT FACTOR (percent of contract price)
From 0.5 to 1.0 inclusive	98
From 1.1 to 1.5 inclusive	95
From 1.6 to 2.0 inclusive	91
From 2.1 to 2.5 inclusive	85
From 2.6 to 3.0 inclusive	70
More than 3.0[1]	___

[1] Remove and replace the lot with a mixture at the specified density. When acceptably replaced, the department will pay for the replaced work at the contract unit price. Alternatively, the engineer may allow the nonconforming material to remain in place with a 50 percent payment factor.

(6) The department will pay incentive for air voids and density under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0055.0001	Incentive Density PWL HMA Pavement	DOL
SPV.0055.0002	Incentive Air Voids HMA Pavement	DOL

The department will administer disincentives under the Disincentive Density HMA Pavement and the Disincentive Air Voids HMA Pavement administrative items.

The department will administer a disincentive under the Disincentive HMA Binder Content administrative item for each individual QV test result indicating asphalt binder content below the Action Limit in 460.2.8.2.1.7 presented herein. The department will adjust pay per sublot of mix at 65 dollars per ton of HMA pavement multiplied by the following pay adjustment calculated according to the HMA PWL Production Spreadsheet:

AC Binder Relative to JMF	Pay Adjustment / Sublot
-0.4% to -0.5%	75%[1]
More than -0.5%	50%[1] [2]

[1] Any material resulting in an asphalt binder content more than 0.3% below the JMF AC content will be referee tested by the department's AASHTO accredited laboratory and HTCP certified personnel using automated extraction according to automated extraction according to ASTM D8159 as modified in CMM 836.6.3.1.

[2] Any material resulting in an asphalt binder content more than 0.5% below the JMF AC content shall be removed and replaced unless the engineer allows such material to remain in place. In the event the material remains in place, it will be paid at 50% of the contract unit price of HMA pavement.

Note: PWL value determination is further detailed in the *PWL Production Spreadsheet Instructions located in the Project Info and Instructions tab* of the HMA PWL Production spreadsheet.

99. Appendix A, Core Pilot Project.

Test Methods & Sampling for HMA PWL QMP Projects.

The following procedures are included with the HMA Pavement Percent Within Limits (PWL) Quality Management Program (QMP) special provision:

- WisDOT Procedure for Nuclear Gauge/Core Correlation – Test Strip
- WisDOT Test Method for HMA PWL QMP Density Measurements for Main Production
- Sampling for WisDOT HMA PWL QMP
- Calculation of PWL Mainline Tonnage Example

WisDOT Procedure for Nuclear Gauge/Core Correlation – Test Strip

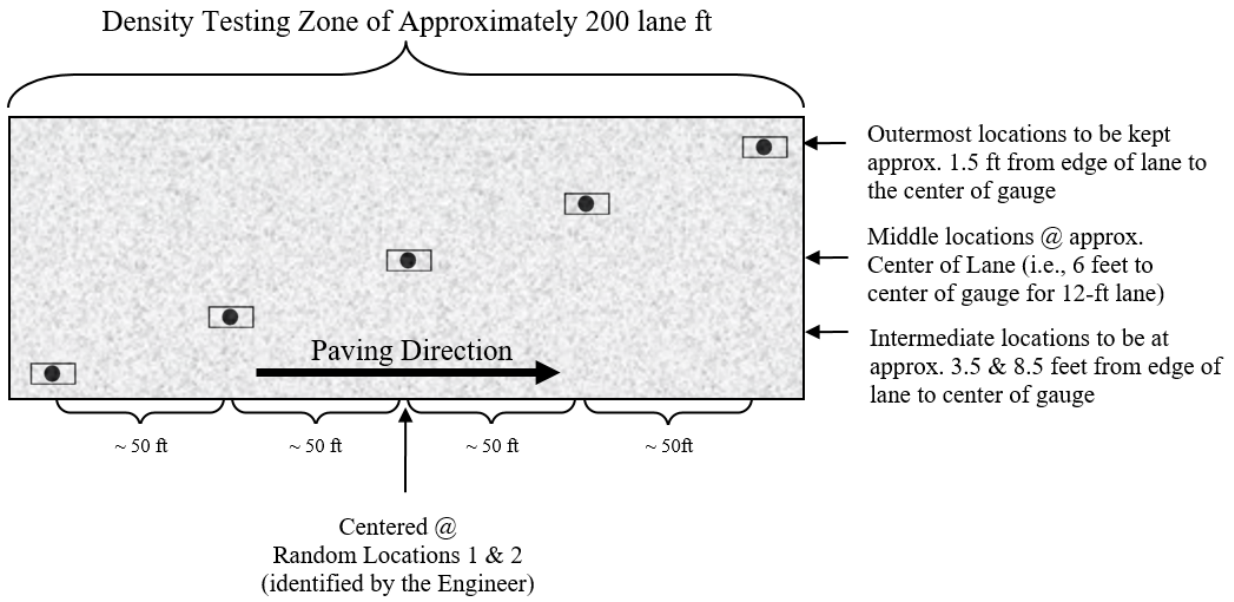


Figure 1: Nuclear/Core Correlation Location Layout

The engineer will identify two zones in which gauge/core correlation is to be performed. These two zones will be randomly selected within each *half* of the test strip length. (Note: Density zones shall not overlap and must have a minimum of 100 feet between the two zones; therefore, random numbers may be shifted (evenly) in order to meet these criteria.) Each zone shall consist of five locations across the mat as identified in Figure 1. The following shall be determined at each of the five locations within both zones:

- two one-minute nuclear density gauge readings for QC team*
- two one-minute nuclear density gauge readings for QV team*
- pavement core sample

*If the two readings exceed 1.0 pcf of one another, a third reading is conducted in the same orientation as the first reading. In this event, all three readings are averaged, the individual test reading of the three which falls farthest from the average value is discarded, and the average of the remaining two values is used to represent the location for the gauge.

The zones are supposed to be undisclosed to the contractor/roller operators. The engineer will not lay out density/core test sites until rolling is completed and the cold/finish roller is beyond the entirety of the zone. Sites are staggered across the 12-foot travel lane, and do not include shoulders. The outermost locations should be 1.5-feet from the center of the gauge to the edge of lane. [NOTE: This staggered layout is only applicable to the test strip. All mainline density locations after test strip should have a longitudinal- as well as transverse-random number to determine location as detailed in the *WisDOT Test Method for HMA PWL QMP Density Measurements for Main Production* section of this document.]

Individual locations are represented by the symbol as seen in Figure 1 above. The symbol is two-part, comprised of the nuclear test locations and the location for coring the pavement, as distinguished here:

The nuclear site is the same for QC and QV readings for the test strip, i.e., the QC and QV teams are to take nuclear density gauge readings in the same footprint. Each of the QC and QV teams are to take a minimum of two one-minute readings per nuclear site, with the gauge rotated 180 degrees between readings, as seen here:

(a) (b)

Figure 2: Nuclear gauge orientation for (a) 1st one-minute reading and (b) 2nd one-minute reading

Photos should be taken of each of the 10 core/gauge locations of the test strip. This should include gauge readings (pcf) and a labelled core within the gauge footprint. If a third reading is needed, all three readings should be recorded and documented. Only raw readings in pcf should be written on the pavement during the test strip, with a corresponding gauge ID/SN (generalized as QC-1 through QV-2 in the following Figure) in the following format:

Figure 3: Layout of raw gauge readings as recorded on pavement

Each core will then be taken from the center of the gauge footprint and will be used to correlate each gauge with laboratory-measured bulk specific gravities of the pavement cores. One core in good condition must be obtained from each of the 10 locations. If a core is damaged at the time of extracting from the pavement, a replacement core should be taken immediately adjacent to the damaged core, i.e., from the same footprint. If a core is damaged during transport, it should be recorded as damaged and excluded from the correlation. Coring after traffic is on the pavement should be avoided. The contractor is responsible for coring of the pavement. Coring and filling of core holes must be approved by the engineer. The QV team is responsible for the labeling and safe transport of the cores from the field to the QC laboratory. Core density testing will be conducted by the contractor and witnessed by department personnel. The contractor is responsible for drying the cores following testing. The department will take possession of cores following initial testing and is responsible for any verification testing.

Each core 100 or 150 mm (4 or 6 inches) in diameter will be taken at locations as identified in Figure 1. Each random core will be full thickness of the layer being placed. The contractor is responsible for thoroughly drying cores obtained from the mat in accordance with AASHTO R79 as modified by CMM 836.6.10 prior to using specimens for in-place density determination in accordance with AASHTO T 166 as modified by CMM 836.6.5.

Cores must be taken before the pavement is open to traffic. Cores are cut under Department/project staff observation. Relabel each core immediately after extruding or ensure that labels applied to pavement prior to cutting remain legible. The layer interface should also be marked immediately following extrusion. Cores should be cut at this interface, using a wet saw, to allow for density measurement of only the most recently placed layer. Cores should be protected from excessive temperatures such as direct sunlight. Also, there should be department custody (both in transport and storage) for the cores until they are tested, whether that be immediately after the test strip or subsequent day if agreed upon between Department and Contractor. Use of concrete cylinder molds works well to transport cores. Cores should be placed upside down (flat surface to bottom of cylinder mold) in the molds, one core per mold, cylinder molds stored upright, and ideally transported in a cooler. Avoid any stacking of pavement cores.

Fill all core holes with non-shrink rapid-hardening grout, mortar, or concrete, or with HMA. When using grout, mortar, or concrete, remove all water from the core holes prior to filling. Mix the mortar or concrete in a separate container prior to placement in the hole. If HMA is used, fill all core holes with hot-mix matching the same day's production mix type at same day compaction temperature +/- 20 F. The core holes shall be dry and coated with tack before filling, filled with a top layer no thicker than 2.25 inches, lower layers not to exceed 4 inches, and compacted with a Marshall hammer or similar tamping device using approximately 50 blows per layer. The finished surface shall be flush with the pavement surface. Any deviation in the surface of the filled core holes greater than 1/4 inch at the time of final inspection will require removal of the fill material to the depth of the layer thickness and replacement.

WisDOT Test Method for HMA PWL QMP Density Determination for Main Production

For mainline density determination beyond the test strip, typical sublot lengths are 1500 lane feet and lots typically consist of 5 sublots. Partial lots with less than three sublots remaining at the end of the project will be included in the previous lot, by the engineer. The PWL Density measurements do not include the shoulder and other appurtenances. Such areas are tested by the department and are not eligible for density incentive but are subject to disincentive according to 460.5.2.2(5) of the HMA PWL QMP STSP.

Determination by Cores

For mainline density determination by cores, collect one core per sublot. Each core is tested for density according to AASHTO T166 as modified in CMM 836.6.5. Each core location is determined by the engineer using random numbers and represents the entire length and width of the sublot. The contractor is responsible for all work related to coring, testing of the cores, and filling of the core holes according to the guidance provided in the *WisDOT Procedure for Nuclear Gauge/Core Correlation – Test Strip* portion of this document. The engineer must always maintain custody of the cores during collection, transportation and testing. Figure 5 shows an example coring layout for a 12-foot-wide lane.

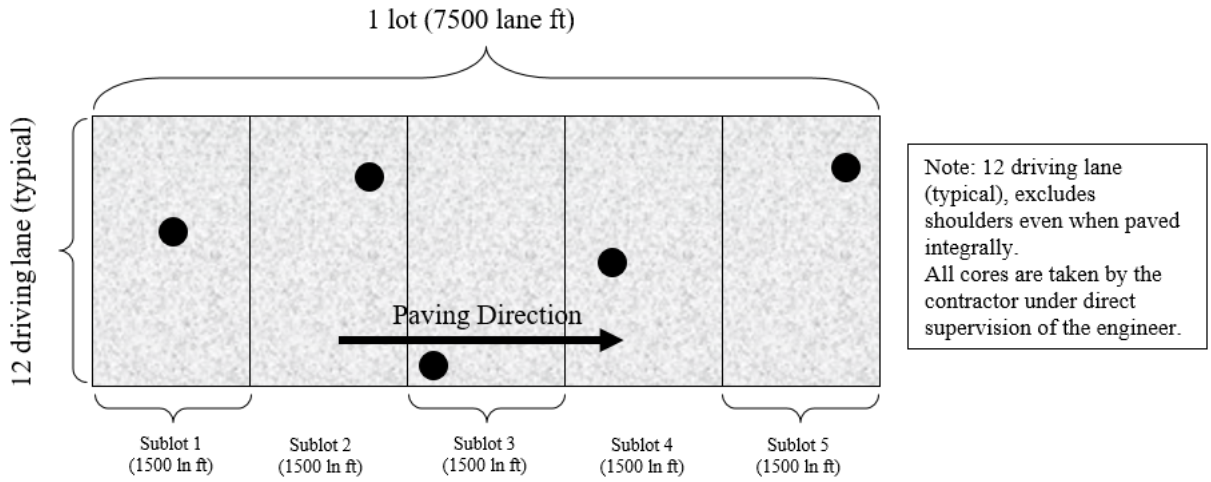


Figure 5: Example core density locations for traffic lanes

Sampling for WisDOT HMA PWL QMP Production

Sampling of HMA mix for QC, QV and Retained samples shall conform to CMM 836 except as modified here.

Delete CMM 836.4 Sampling Hot Mix Asphalt and replace with the following to update sublot tonnages:

Sampling Hot Mix Asphalt

At the beginning of the contract, the contractor determines the anticipated tonnage to be produced. The frequency of sampling is 1 per 750 tons (sublot) for QC and Retained Samples and 1 per 3750 tons (lot or 5 sublots) for QV as defined by the HMA PWL QMP article. A test sample is obtained randomly from each sublot. Each random sample shall be collected at the plant according to CMM 836.4.1 and 836.4.2. The

contractor must submit the random numbers for all mix sampling to the department before production begins.

Example 1

Expected production for a contract is 12,400 tons. The number of required samples is determined based on this expected production (per HMA PWL QMP SPV) and is determined by the random sample calculation.

Sample 1 – from 50 to 750 tons
Sample 2 – from 751 to 1500 tons
Sample 3 – from 1501 to 2250 tons
Sample 4 – from 2251 to 3000 tons
Sample X – ……
Sample 16 – from 11,251 to 12,000 tons
Sample 17 – from 12,001 to 12,400 tons

The approximate location of each sample within the prescribed sublots is determined by selecting random numbers using ASTM Method D-3665 or by using a calculator or computerized spreadsheet that has a random number generator. The random numbers selected are used in determining when a sample is to be taken and will be multiplied by the sublot tonnage. This number will then be added to the final tonnage of the previous sublot to yield the approximate cumulative tonnage of when each sample is to be taken.

To allow for plant start-up variability, the procedure calls for the first random sample to be taken at 50 tons or greater per production day (not intended to be taken in the first two truckloads). Random samples calculated for 0-50 ton should be taken in the next truck (51-75 ton).

This procedure is to be used for any number of samples per contract.

If the production is less than the final randomly generated sample tonnage, then the random sample is to be collected from the remaining portion of that sublot of production. If the randomly generated sample is calculated to be within the first 0-50 tons of the subsequent day of production, it should be taken in the next truck. Add a random sample for any fraction of 750 tons at the end of the contract. Lot size will consist of 3750 tons with sublots of 750 tons. Partial lots with less than three sublot tests will be included into the previous lot, by the engineer.

It's intended that the plant operator is not advised ahead of time when samples are to be taken.

If belt samples are used during troubleshooting, the blended aggregate will be obtained when the mixture production tonnage reaches approximately the sample tonnage. For plants with storage silos, this could be up to 60 minutes in advance of the mixture sample that's taken when the required tonnage is shipped from the plant.

QC, QV and retained samples shall be collected for all test strip and production mixture testing using a three-part splitting procedure according to CMM 836.5.2.

Calculation of PWL Mainline Tonnage Example

A mill and overlay project in being constructed with a 12-foot traffic lane and an integrally paved 3-foot shoulder. The layer thickness is 2 inches for the full width of paving. Calculate the tonnage in each sublot eligible for density incentive or disincentive.

Solution:

$$\frac{1500\ ft\ \times\ 12\ ft}{9\ sf/sy}\ \times\ \frac{2\ in\ \times 112\ lb/sy/in}{2000\ lb/ton}\ = 224\ tons$$

100. HMA Pavement Longitudinal Joint Density, Core Pilot Project; Incentive Density HMA Pavement Longitudinal Joints, Item SPV.0055.0003.

A Description

This special provision incorporates longitudinal joint density requirements into the contract and describes the data collection, acceptance, and procedure used for determination of pay adjustments for HMA pavement longitudinal joint density. Pay adjustments will be made on a linear foot basis, as applicable per pavement layer and paving lane. Applicable longitudinal joints are defined as those between any two or more traffic lanes including full-width passing lanes, turn lanes, or auxiliary lanes more than 1500 lane feet, and those lanes must also include the 460.2005 Incentive Density PWL HMA Pavement bid item. This excludes any joint with one side defined as a shoulder and ramp lanes of any length. If echelon paving is required in the contract, the longitudinal joint density specification shall not apply for those joints. Longitudinal joints placed during a test strip will be tested for information only to help ensure the roller pattern will provide adequate longitudinal joint density during production. Longitudinal joint density test results collected during a test strip are not eligible for pay adjustment.

Pay is determined according to standard spec 460, HMA Pavement Percent Within Limits QMP special provisions, and as modified within.

B Materials

Compact all applicable HMA longitudinal joints to the appropriate density based on the layer, confinement, and mixture type shown in Table B-1.

TABLE B-1 MINIMUM REQUIRED LONGITUDINAL JOINT DENSITY

Layer	Percent of Target Maximum Density			
	Unconfined		Confined	
	LT and MT	HT	LT and MT	HT
Lower (on crushed/recycled base)	88	89	89.5	90.5
Lower (on Concrete/HMA)	90[1]	90[1]	91.5[1]	91.5[1]
Upper	90	90	91.5	91.5

[1] Minimum reduced by 1.0 percent for a 1.25-inch-thick No. 5 mix lower layer constructed on a paved or milled surface.

C Construction

Add the following to standard spec 460.3.3.2:

(5) Establish companion density locations at each applicable joint. Each companion location shares longitudinal stationing with a QV density location within each sublot and is located transversely with the center of the core 6-inches from the final joint edge of the paving area. Sublot and lot numbering remains the same as mainline densities, however, in addition to conventional naming, joint identification must clearly indicate “M” for inside/median side of lane or “O” for outside shoulder side of lane, as well as “U” for an unconfined joint or “C” for a confined joint (e.g., XXXXX-MC or XXXXX-OU).

(6) Each joint will be measured, reported, and accepted under methods, testing times, and procedures consistent with the program employed for mainline density, i.e., PWL.

(7) For single density test results greater than 3.0% below specified minimums per Table B-1 herein, perform the following:

a) Testing at 50-foot increments both ahead and behind the unacceptable site

b) Continued 50-foot incremental testing until test values indicate higher than or equal to -3.0 percent from target joint density.

c) Materials within the incremental testing indicating lower than -3.0 percent from target joint density are defined as unacceptable and will be handled with remedial action as defined in the payment section of this document.

d) The remaining sublot average (exclusive of unacceptable material) will be determined by the first forward and backward 50-foot incremental tests that reach the criteria of higher than or equal to -3.0 percent from target joint density.

Note: If the 50-foot testing extends into a previously accepted sublot, remedial action is required up to and inclusive of such material; however, the results of remedial action must not be used to recalculate the previously accepted sublot density. When this occurs, the lane feet of any unacceptable material will be deducted from the sublot in which it is located, and the previously accepted sublot density will be used to calculate pay for the remainder of the sublot.

(8) Joint density measurements will be kept separate from all other density measurements and entered as an individual data set into Atwood Systems.

(9) Placement and removal of excess material outside of the final joint edge, to increase joint density at the longitudinal joint testing location, will be done at the contractor's discretion and cost. This excess material and related labor will be considered waste and will not be paid for by the department. Joints with excess material placed outside of the final joint edge to increase joint density or where a notched wedge is used will be considered unconfined joints.

(10) When not required by the contract, echelon paving may be performed at the contractor's discretion to increase longitudinal joint density and still remain eligible to earn incentive. The additional costs incurred related to echelon paving will not be paid for by the department. If lanes are paved in echelon, the contractor may choose to use a longitudinal vertical joint or notched wedge longitudinal joint as described in SDD 13c19 HMA Longitudinal Joints. Lanes paved in echelon shall be considered confined on both sides of the joint regardless of the selected joint design. The joint between echelon paved lanes shall be placed at the centerline or along lane lines.

(11) When performing inlay paving below the elevation of the adjacent lane, the longitudinal joint along the adjacent lane to be paved shall be considered unconfined.

D Measurement

(1) The department will measure each side of applicable longitudinal joints, as defined in Section A of this special provision, by the linear foot of pavement acceptably placed. Measurement will be conducted independently for the inside or median side and for the outside or shoulder side of paving lanes with two applicable longitudinal joints. Each paving layer will be measured independently at the time the mat is placed.

E Payment

Add the following as 460.5.2.4 Pay Adjustment for HMA Pavement Longitudinal Joint Density:

(1) The department will administer longitudinal joint density adjustments under the Incentive Density HMA Pavement Longitudinal Joints and Disincentive Density HMA Pavement Longitudinal Joints items. The department will adjust pay based on density relative to the specified targets in Section B of this special provision, and linear foot of the HMA Pavement bid item for that sublot as follows:

PAY ADJUSTMENT FOR HMA PAVEMENT LONGITUDINAL JOINT DENSITY

PERCENT SUBLOT DENSITY ABOVE/BELOW SPECIFIED MINIMUM	PAY ADJUSTMENT PER LINEAR FOOT
Equal to or greater than +1.0 confined, +2.0 unconfined	$0.40
From 0.0 to +0.9 confined, 0.0 to +1.9 unconfined	$0
From -0.1 to -1.0	$(0.20)
From -1.1 to -2.0	$(0.40)
From -2.1 to -3.0	$(0.80)
More than -3.0	*REMEDIAL ACTION* [1]

[1] Remedial action must be approved by the engineer and agreed upon at the time of the pre-pave meeting and may include partial sublots as determined and defined in 460.3.3.2(7) of this document. If unacceptable material is removed and replaced per guidance by the engineer, the removal and replacement will be for the full lane width of the side of which the joint was constructed with unacceptable material.

(2) The department will not assess joint density disincentives for pavement placed in cold weather because of a department-caused delay as specified in standard spec 450.5.2(3).

(3) The department will not pay incentive on the longitudinal joint density if the traffic lane is in disincentive A disincentive may be applied for each mainline lane and all joint densities if both qualify for a pay reduction.

(4) Inlay paving operations will limit payment for additional material to 2 inches wider than the final paving lane width at the centerline.

The department will pay incentive for longitudinal joint density under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0055.0003	Incentive Density HMA Pavement Longitudinal Joints	DOL

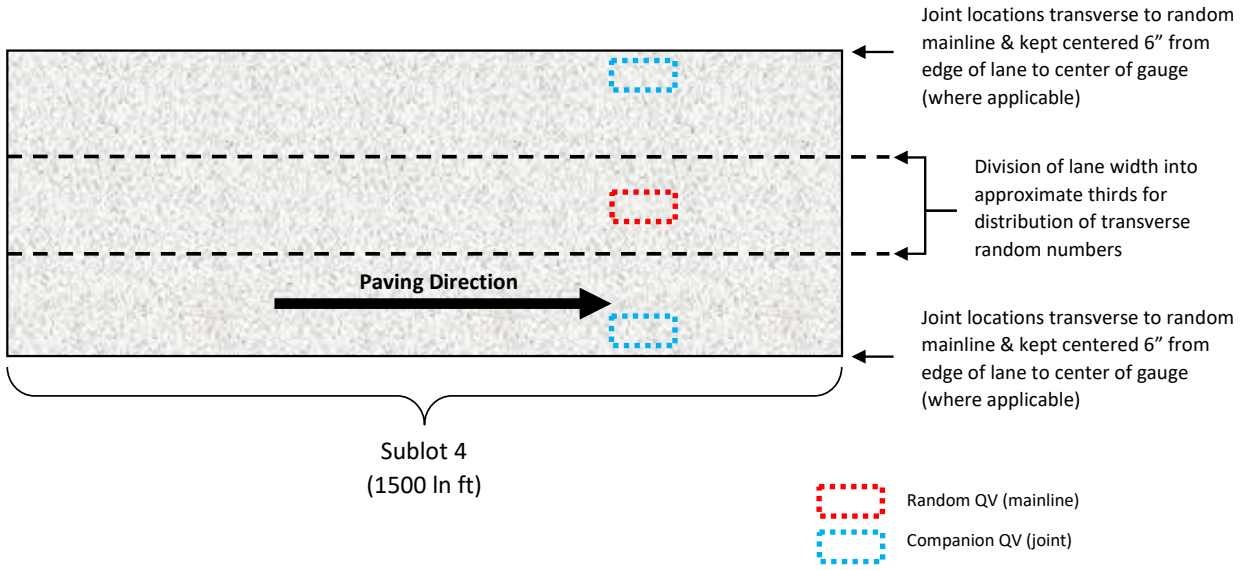
The department will administer disincentives under the Disincentive Density HMA Pavement Longitudinal Joints administrative item.

Appendix

WisDOT Longitudinal Joint – Core Density Layout

Each QV density location must have a companion density location at any applicable joint. This companion location must share longitudinal stationing with each QV density location and be located transversely with the center of the core 6-inches from the edge of the paving area.

For HMA Pavement Percent Within Limits QMP projects, this appears as follows:



Further Explanation of *PAY ADJUSTMENT FOR HMA PAVEMENT LONGITUDINAL JOINT DENSITY* Table

	Confined				
	Lower Layer (On Base)		Upper Layer		
	LT/MT	HT	LT/MT	HT	Pay Adjust
Mainline Target (SS 460-3)	91.0	92.0	93.0	93.0	-
Confined Target (mainline - 1.5)	89.5	90.5	91.5	91.5	-
Equal to or greater than +1.0	≥ 90.5	≥ 91.5	≥ 92.5	≥ 92.5	$0.40
From 0.0 to +0.9	90.4 - 89.5	91.4 - 90.5	92.4 - 91.5	92.4 - 91.5	$0
From -0.1 to -1.0	89.4 - 88.5	90.4 - 89.5	91.4 - 90.5	91.4 - 90.5	($0.20)
From -1.1 to -2.0	88.4 - 87.5	89.4 - 88.5	90.4 - 89.5	90.4 - 89.5	($0.40)
From -2.1 to -3.0	87.4 - 86.5	88.4 - 87.5	89.4 - 88.5	89.4 - 88.5	($0.80)
More than -3.0	< 86.5	< 87.5	< 88.5	< 88.5	REMEDIAL ACTION

	Unconfined				
	Lower Layer (On Base)		Upper Layer		
	LT/MT	HT	LT/MT	HT	Pay Adjust
Mainline Target (SS 460-3)	91.0	92.0	93.0	93.0	-
Unconfined Target (Mainline -3.0)	88.0	89.0	90.0	90.0	-
Equal to or greater than +2.0	≥ 90.0	≥ 91.0	≥ 92.0	≥ 92.0	$0.40
From 0.0 to +1.9	89.9 - 88.0	90.9 - 89.0	91.9 - 90.0	91.9 - 90.0	$0
From -0.1 to -1.0	87.9 - 87.0	88.9 - 88.0	89.9 - 89.0	89.9 - 89.0	($0.20)
From -1.1 to -2.0	86.9 - 86.0	87.9 - 87.0	88.9 - 88.0	88.9 - 88.0	($0.40)
From -2.1 to -3.0	85.9 - 85.0	86.9 - 86.0	87.9 - 87.0	87.9 - 87.0	($0.80)
More than -3.0	< 85.0	< 86.0	< 87.0	< 87.0	REMEDIAL ACTION

101. Baseline CPM Progress Schedule, Item SPV.0060.0001; Monthly CPM Progress Schedule Updates, Item SPV.0060.0002.

Replace standard spec 108.4 with the following:

108.4 Critical Path Method Progress Schedule

108.4.1 Definitions

(1) The department defines terms used in standard spec 108.4 as follows:

Activity An administrative or construction task performed during the course of the project with a defined duration and scheduled (or actual) start and finish dates.

Critical Path The longest continuous chain of activities through the CPM schedule that establishes the minimum overall project duration.

Construction Activity Construction activities are discrete work activities performed by the contractor, subcontractors, utilities, or third parties within the project limits.

CPM Progress Schedule A Critical Path Method (CPM) Progress Schedule is a network of logically related activities. The CPM schedule calculates when activities can be performed and establishes the critical or longest continuous path or paths of activities through the project.

Float Float, as used in this special provision, is the total float of an activity; i.e., it is the amount of time between the date when an activity can start (the early start), and the date when an activity must start (the late start). In cases where the total float of an activity has a different value when calculated based on the finish dates, the lower (more critical) value will govern.

Forecast Completion Date The completion date predicted by the latest accepted CPM Update, which may be earlier or later than the contract completion date, depending on progress.

Fragnet A group of logically-related activities, typically inserted into an existing CPM schedule to model a portion of the project, such as the work associated with a change order.

Initial Work Plan The initial work plan is a time-scaled CPM schedule showing detailed activities for the first 90 calendar days of work and summary level activities for the remainder of the project.

Intermediate Milestone Date A contractually required date for the completion of a portion of the work, so that a subsequent portion of the work or stage of traffic phasing may proceed.

Master Program Schedule The department's schedule for the overall 94 N-S Freeway Program, including intermediate milestone dates and contract completion dates, and containing codes for use as a template for the development of the contractor's schedule.

Master Project Schedule	The department's schedule for the contract work, developed during design, and provided to the contractor for informational purposes only.
Work Breakdown Structure (WBS)	A framework for organizing the activities that make up a project by breaking the project into successively greater detail by level. A WBS organizes the project work. It does not address the sequencing and scheduling of project activities.

108.4.2 Department's Master Schedules

108.4.2.1 Master Project Schedule

(1) If requested by a bidder or by the contractor, the department will supply its Master Project Schedule for the contract work, developed during design. The Master Project Schedule is not a direction on how to perform the work. The Master Project Schedule reflects one possible approach to the work, consistent with the phasing requirements.

108.4.2.2 Master Program Schedule

(1) Within five business days after award, the department will provide its current Master Program Schedule, containing intermediate milestone constraints, standard activity codes, and a standard WBS for the contractor to use to develop its schedule.

108.4.2.3 Use of Department's Master Schedules

(1) The department's Master Schedules provide information to assist the contractor in preparing its schedule. The Master Schedules are not contract documents. The logic contained in the Master Schedules is not intended to alter or supplement contract requirements for the phasing of the work, but to reflect those requirements.

108.4.3 Contractor's Scheduling Responsibilities

(1) Prepare and submit a CPM progress schedule that accurately reflects the plan for the performance of the work, based on the physical requirements of the Work, and Traffic Phasing requirements. The CPM schedule is the contractor's committed plan to complete all work within the completion deadlines. Full responsibility is assumed for the prosecution of the work as shown. The CPM schedule is not part of the contract. Schedule the Work in the manner required to achieve the completion date and intermediate milestone dates specified in the Prosecution and Progress Special Provision. The contractor will schedule and attend a CPM Initial Workshop. If necessary, the engineer may modify the workshop schedule to ensure attendance by the necessary department and contractor personnel; however, the CPM Initial Workshop must be completed prior to issuing the Notice to Proceed. The CPM Initial workshop will include:

1. Department presentation of the use of CPM scheduling on the project and presentation of the department’s master schedule
2. Contractor presentation of the conceptual work plan for the project.
3. Department and contractor discussion of the level of detail dn features in the CPM Intial Work Plan and the Baseline CPM Progress Schedule.

(2) Use the department-provided Master Program Schedule as a template to develop the CPM Initial Work Plan and the Baseline CPM Progress Schedule. Use the Master Program Schedule's ID coding structure to categorize activities by Contract, Stage, Location, and Responsibility to ensure compatibility with the Master Program Schedule and with schedules prepared by other contractors. Add additional activity codes as necessary, but do not delete the coding structure provided.

(3) To ensure compatibility with the Master Program Schedule, use the latest version of Primavera P6 Project Management, by Oracle Corporation, Redwood Shores, CA, to prepare the Initial Work Plan, Baseline CPM Progress Schedule, and Monthly CPM Updates.

(4) Designate a Project Scheduler who will be responsible for scheduling the Work and submit a professional resume describing a minimum of three years of scheduling experience on urban, interstate-highway reconstruction work of similar size and complexity, including recent experience with P6.Obtain approval of the submitted resume before scheduling the work.

108.4.4 Submittals

108.4.4.1 Initial Work Plan

(1) Within ten business days after the CPM Initial Workshop, submit an Initial Work Plan as follows:

1. Develop the Initial Work Plan using the Master Program Schedule as a template. Identify the contemplated start and completion dates for each activity.
2. Provide a detailed plan of activities to be performed within the first 90 calendar days of the contract. Provide construction activities with durations not greater than 28 calendar days (20 business days) unless the engineer accepts requested exceptions.
3. Provide activities as necessary to depict administrative work, including submittals, reviews, and procurements that will occur within the first 90 calendar days of the contract. Show additional activities that require department review or approval. Activities other than construction activities may have durations greater than 28 calendar days (20 business days). Allow 21 calendar days (15 business days) for department review of submittals.
4. Provide summary activities for the balance of the project. Summary activities may have durations greater than 28 calendar days (20 business days).
5. Submit three copies of the Initial Work Plan in a compressed (XER) format on three separate CDs.
6. The engineer will accept the contractor's Initial Work Plan or provide comments within five business days after receipt of the Initial Work Plan. Address comments and resubmit the Initial Work Plan as necessary. Do not begin work until the engineer accepts the Initial Work Plan. The department will use the initial work plan to monitor the progress of the work until the Baseline CPM Progress Schedule is accepted.
7. Submit an updated version of the Initial Work Plan monthly until the engineer accepts the Baseline CPM Progress Schedule. With each update, include actual start dates, completion percentages, and remaining durations for activities started but not completed. Include actual finish dates for completed activities.
8. Ensure the Initial Work Plan shows completing the work within the interim completion dates and specified completion date.
9. Include activities that describe essential features of the work and activities that might potentially delay contract completion. Identify activities that are controlling items of work.

108.4.4.2 Baseline CPM Progress Schedule

(1) Within 15 business days after the CPM Scheduling Workshop, submit a Baseline CPM Progress Schedule and written narrative. The department will use the schedule to monitor the progress of the work.

1. Develop the Baseline CPM using the Master Program Schedule as a template. The Baseline CPM is the contractor's committed plan to complete the Work within the time frames required to achieve the contract completion date and intermediate milestone dates.
    1.1. Provide a detailed plan of activities to be performed during the entire contract duration, including all administrative and construction activities required to complete the work as described in the contract documents. Provide construction activities with durations not greater than 28 calendar days (20 business days), unless the engineer accepts requested exceptions.
    1.2. Provide activities as necessary to depict administrative work, including submittals, reviews, procurements, inspections, and all else necessary to complete the work as described in the contract documents. Activities other than construction activities may have durations greater than 28 calendar days (20 business days). Allow 21 calendar days (15 business days) for department review of submittals.
    1.3. Submit a temporary drainage plan showing the interface between various stages of a project as well as the interface with adjacent projects.
    1.4. Include activities that describe essential features of the work and activities that might potentially delay contract completion. Identify activities that are controlling items of work.
    1.5. Show completing the work within interim completion dates and the specified completion date.
    1.6. Provide summary activities for the balance of the project. Summary activities may have durations greater than 28 calendar days (20 business days).
    1.7. Provide activities as necessary to depict third party work related to the contract.
    1.8. Make allowance for specified work restrictions, non-working days, time constraints, calendars, and weather; and reflect involvement and reviews by the department, and coordination with adjacent contractors, utility owners, and other third parties.
    1.9. With the exception of the Project Start Milestone and Project Completion Milestone, all activities must have predecessors and successors. The start of an activity shall have a Start-to-Start or Finish-to-Start relationship with preceding activities. The completion of an activity shall have a Finish-to-Start or Finish-to-Finish relationship with succeeding activities. Do not use Start-to-Finish relationships. Do not use Finish-to-Start relationships with a lag unless the engineer accepts requested exceptions.

1.10. Schedule all intermediate milestones in the proper sequence and input as either a "Start-no-Earlier-Than" or "Finish-no-Later-Than" date. Provide predecessors and successors for each intermediate milestone as necessary to model each Stage of the Work. Unless the engineer accepts a requested exception, the schedule should encompass all the time in the contract period between the starting date and the specified completion date.

1.11. Using the bid quantities and unit prices, develop an anticipated cash-flow curve for the project, based on the Baseline CPM.

2. Provide three hard copies of a hand-drawn or electronically drafted logic diagram depicting the CPM network. Organize the logic diagram by grouping related activities, based on the activity codes in the CPM.

3. Provide a written narrative with the baseline CPM explaining the planned sequence of work, as-planned critical path, critical activities for achieving intermediate milestone dates, traffic phasing, and planned labor and equipment resources. Use the narrative to further explain:

3.1. The basis for activity durations in terms of production rates for each major type of work (number of shifts per day and number of hours per shift), and equipment usage and limitations.

3.2. Use of constraints.

3.3. Use of calendars.

3.4. Estimated number of adverse weather days on a monthly-basis.

3.5. Scheduling of permit and environmental constraints, and coordination of the schedule with other contractors, utilities, and public entities.

(1) Submit three copies of the Baseline CPM in a compressed (XER) format on three separate CDs.

(2) Within ten business days of receiving the Baseline CPM, the engineer will provide comments and schedule a meeting for the contractor to present its Baseline CPM and answer questions raised in the engineer's review.

(3) At the meeting scheduled by the engineer, provide a presentation of the Baseline CPM. In the presentation, include a discussion of the staging and sequencing of the work, understanding of traffic phasing, and application of labor and equipment resources to the Work. Address comments raised in the engineer's review.

(4) Within five business days after the meeting, the engineer will accept the contractor's Baseline CPM schedule or provide comments. Address the engineer's comments and resubmit a revised Baseline CPM within ten business days after the engineer's request. If the engineer requests justification for activity durations, provide information that may include estimated labor, equipment, unit quantities, and production rates used to determine the activity duration.

(5) The department will only make progress payments for the value of materials, as specified in 109.6.3.2, until the contractor has submitted the Baseline CPM Schedule. The department will retain 10 percent of each estimate until the department accepts the Baseline CPM Schedule.

(6) The engineer will accept the Baseline CPM based solely on whether the schedule is complete as specified in this section. The engineer's acceptance of the schedule does not modify the contract or validate the schedule.

(7) The department will not consider requests for contract time extensions as specified in 108.10 or additional compensation for delay specified in 109.4.7 until the department accepts the Baseline CPM schedule.

108.4.4.3 Monthly CPM Updates

(1) Submit CPM Updates on a monthly basis after acceptance of the Baseline CPM as follows:

1. Include actual start dates, completion percentages, and remaining durations for activities started but not completed, and actual finish dates for completed activities, through the final acceptance of the project.

2. Include additional activities as necessary to depict additions to the contract by changes and logic revisions as necessary to reflect changes in the contractor's plan for prosecuting the work.

3. Include a narrative report that includes a brief description of monthly progress, changes to the critical path from the previous update, sources of delay, potential problems, work planned for the next 30 calendar days, and changes to the CPM schedule. Changes to the logic of the CPM schedule include the addition or deletion of activities and changes to activity descriptions, original durations, relationships, constraints, calendars, or previously recorded actual dates. Justify changes to the CPM schedule in the narrative by describing associated changes in the planned methods or manner of performing the work or changes in the work itself.

4. Submit three copies of each CPM Update in a compressed (XER) format electronically, as agreed to with the department.

5. If additions or changes were made to the CPM schedule since the previous update, submit an updated hard copy of the revised logic diagram.

(2) Within five business days of receiving each CPM Update, the engineer will provide comments and schedule a meeting as necessary to address comments raised in the engineer's review. Address the engineer's comments and resubmit a revised CPM Update within five business days after the engineer's request.

108.4.4.4 Three-Week Look-Ahead Schedules

(1) Submit Three-Week Look-Ahead Schedules on a weekly basis after the notice to proceed (NTP). The schedule can be hand drawn or generated by computer. With each Three-Week Look-Ahead include:

1. Activities underway and as-built dates for the past week.
2. Actual as-built dates for completed activities through final acceptance of the project.
3. Planned work for the upcoming two-week period.
4. The activities underway and critical RFIs and submittals, based on the CPM schedule.
5. Details on other activities not individually represented in the CPM schedule.

(2) On a weekly basis, the department and the contractor shall agree on the as-built dates depicted in the Three-Week Look-Ahead schedule or document all disagreements. Use the as-built dates from the Three-Week Look-Ahead schedules for the month when updating the CPM schedule.

108.4.4.5 Weekly Production Data

(1) Provide estimated and actual weekly production rates for items of work on a weekly basis as follows:

1. Data on the following items by area or station:
    - 1.1. Retaining Walls
        - 1.1.1. Leveling Pads - LF
        - 1.1.2. Set Panels - SF
        - 1.1.3. Parapets - LF
        - 1.1.4. Wall Face - Bay
        - 1.1.5. Tie Backs – Each
        - 1.1.6. Anchor Slabs – LF
        - 1.1.7. Drilling - Each
        - 1.1.8. Coping – LF
        - 1.1.9. Footing - LF
    - 1.2. Bridge Construction
        - 1.2.1. Footings—Each
        - 1.2.2. Columns—Each
        - 1.2.3. Abutments—Each
        - 1.2.4. Pier Caps—Each
        - 1.2.5. Girder Spans – Each
        - 1.2.6. Decked Spans – Each
        - 1.2.7. Poured Spans – Each
    - 1.3. Roadway Excavation—CY per week
    - 1.4. Roadway Structural Section
        - 1.4.1. Grading/Subgrade Preparation—SY
        - 1.4.2. Base Material Placement—Ton
        - 1.4.3. Base Material Subgrade Preparation—SY
        - 1.4.4. Asphalt Pavement—Ton
        - 1.4.5. Concrete Pavement – SY
    - 1.5. Tunnels
        - 1.5.1. Drilled Shafts – Each
        - 1.5.2. Beam Seat/Cap - LF
        - 1.5.3. Girders - Each
        - 1.5.4. Deck – Percent

1.6. Noise Walls
    1.6.1. Drill/Set Ground Mounted Posts - Each
    1.6.2. Install Ground Mounted Panels - Each
    1.6.3. Anchor/Set Structure Mounted Posts - Each
    1.6.4. Install Structure Mounted Panels - Each
2. The actual daily production for the past week and the anticipated weekly production for the next week.

(2) Submit the data in an electronic spreadsheet format at the same time the Three-Week Look-Ahead is submitted. On a weekly basis, the department and the contractor shall agree on the production data or document all disagreements.

108.4.5 Progress Review Meetings

108.4.5.1 Weekly Progress Review Meetings

(1) After completing the weekly submittal of the Three-Week Look-Ahead and production data, attend a weekly meeting to review the submittals with the department. At the meeting, address comments as necessary, and document agreement or disagreement with the department.

108.4.5.2 Monthly Update Review Meetings

(1) After submitting the monthly update and receiving the engineer's comments, attend a job-site meeting, as scheduled by the engineer, to review the progress of the schedule. At that meeting, address comments as necessary, and document agreement or disagreement with the department. The monthly meeting will be coordinated to take place on the same day and immediately before or after a weekly meeting, whenever possible.

108.4.6 CPM Progress Schedule Revisions

(1) Revision by the contractor if necessary due to changes in the Work or project conditions and authorized by the engineer, a CPM Progress Schedule Revision may be submitted, although the next Monthly CPM Update is not yet due. Prepare the CPM Revision in the same format as required for Monthly CPM Updates, including justification for changes to the schedule. The process for comment and acceptance of a CPM Revision will be the same as for Monthly CPM Updates. If the CPM Revision is accepted, prepare the next monthly update based on the revised CPM. If the CPM Revision is rejected, prepare the next monthly update based on the previous month's update.

(2) Engineer's Right to Request Revisions—The engineer will monitor the progress of the work and may request revisions to the CPM schedule. Revise the schedule as requested by the engineer and submit a CPM Progress Schedule Revision within ten business days of the request. The process for comment and acceptance of a CPM Revision will be the same as for Monthly CPM Updates. The engineer may request that the contractor revise the CPM schedule for one or more of the following reasons:

1. The forecast completion date is scheduled to occur more than 14 calendar days after the contract completion date.
2. An intermediate milestone is scheduled to occur more than 14 calendar days after the date required by the contract.
3. The engineer determines that the progress of the work differs significantly from the current schedule.
4. A contract change order requires the addition, deletion, or revision of activities that causes a change in the contractor's work sequence or the method and manner of performing the work.

108.4.7 Documentation Required for Time Extension Requests

(1) To request a time extension to an intermediate milestone date or the contract completion date associated with changes to the work, provide a narrative detailing the work added or deleted and the other activities affected, based on the latest accepted CPM Update. For added work, submit a proposed fragnet of activities to be added or revised in the CPM schedule, indicating how the fragnet is to be tied to the CPM schedule.

(2) To request a time extension to an intermediate milestone date or the contract completion date associated with delays to the work, provide a narrative detailing the affected activities and the cause of the delay, based on the latest accepted CPM Update. Requests for time extensions due to delays should meet the following criteria:

1. For requests to extend the contract completion date, include a description of how the delay affected the project's critical path, based on the latest accepted CPM Update.
2. For requests to extend an intermediate milestone date, include a description of how the delay affected the controlling (longest) path to the milestone, based on the latest accepted CPM Update.

3. The department and the contractor agree that the float is not for the exclusive use or financial benefit of either party. Either party has the full use of the float on a first come basis until it is depleted.

108.4.8 Payment for CPM Progress Schedule

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0001	Baseline CPM Progress Schedule	EACH
SPV.0060.0002	Monthly CPM Progress Schedule Updates	EACH

(2) The department will only make progress payments for the value of materials, as specified in 109.6.3.2.1, until the Baseline CPM schedule has been submitted. The department will retain ten percent of each estimate until the department accepts the Baseline CPM schedule.

(3) The department will only make progress payments for the value of materials, as specified in 109.6.3.2.1, until the Monthly CPM schedule updates have been submitted. The department will retain ten percent of each estimate until the department accepts the Monthly CPM schedule update.

(4) Payment is full compensation for all work required under these bid items. The department will pay the contract unit price for the Baseline CPM schedule after the department accepts the schedule. Then, the department will pay the contract unit price for each Monthly CPM Update acceptably completed.

sef-108-005 (20180404)

102. Field Facilities Office Space, Item SPV.0060.0003.

A Description

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

B Materials

Provide Field Facilities Office Space conforming to standard spec 642.2.1 except delete paragraphs (1), (7), and (9).

Replace standard spec 642.2.1(4) with the following:

Provide and maintain suitable interior sanitary facilities conforming to State and local health requirements, in clean and good working condition, and stock with sanitary supplies for the duration of the contract. Furnish office space in an existing office building or existing building converted to office space with a minimum of 1200 square feet. The facility shall have no fee parking with a minimum parking for 15 cars. The space shall include a meeting room with a minimum of 350 square feet. The exterior door(s) shall have locks in good working order and keys provided for all field staff. The office space shall be located within 2 miles of the construction project. The office space needs to be provided to the engineer for three (3) months past the contract completion date.

Equip the office as specified in standard spec 642.2.2.1 except delete paragraph (1) and (4) and add the following:

1. Five suitable office desks with drawers and locks.
2. Five ergonomically correct office chairs in working condition with at a minimum: Five-legged base with casters, seat adjustable from 15 to 22 inches from the floor with a seamless waterfall, rounded, front edge, and high backrest with no arms or adjustable arms.
3. Four 6-foot folding tables.
4. One 10-foot folding table.
5. Five 2-drawer file cabinets.
6. Three 4-shelf bookcases.
7. Twenty folding chairs.

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

C Construction

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

D Measurement

The department will measure the Field Facilities Office Space as each office, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060. 0003	Field Facilities Office Space	EACH

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

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

SER-642-002 (20160808)

103. Fastening Sewer Access Covers, Item SPV.0060.0004.

A Description

This special provision describes sealing, maintaining, and removing sealant for sewer access covers.

B Materials

Furnish preformed butyl rubber based sealant conforming to ASTM C990 Section 6.2. Size the preformed joint sealant to fill the joint to 50% of its annular volume when assembled.

C Construction

Open the sewer access cover, inspect the frame and grate, and remove material that will interfere with the sealant application from the cover and casting. Apply sealant in a continuous ring around the frame without stretching. Knead the ends together with no overlap.

Monitor performance during the project and maintain as needed. Remove sealant after traffic is shifted into its final configuration.

D Measurement

The department will measure Fastening Sewer Access Covers as each individual cover, acceptably 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.0060.0004	Fastening Sewer Access Covers	EACH

Payment is full compensation for providing and maintaining sealed covers; and removing sealant.

sef-611-015 (20180104)

104. Mobilizations Emergency Pavement Repair, Item SPV.0060.0009.

A Description

This special provision describes furnishing and mobilizing personnel, equipment, traffic control, and materials to the project site to repair the existing pavement for emergencies as the engineer directs. An emergency is a sudden occurrence of a serious and urgent nature, beyond normal maintenance of the existing pavement.

B (Vacant)

C Construction

Mobilize with sufficient personnel, equipment, traffic control, materials, and incidentals on the jobsite within 4 hours of the engineer's written order to repair the existing pavement on an emergency basis.

D Measurement

The department will measure Mobilizations Emergency Pavement Repair as each individual mobilization, acceptably completed. The department will not include delivering and installing pavement repair or maintenance materials provided for in specific contract bid items. All traffic control items used for each Mobilization will be considered incidental to the Mobilization.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0009	Mobilizations Emergency Pavement Repair	EACH

Payment is full compensation for the staged moving of personnel, moving equipment, setting up and removing traffic control, traffic control materials, and moving materials. The department will pay separately for delivery and installation of pavement repair materials under the other bid items in this contract. The department will not pay separately for traffic control items and materials even though they may be included in other bid items in this contract and will consider them incidental to each Mobilization.

sef-999-025 (20170310)

105. Survey Project 1228-22-70, Item SPV.0060.0010.

A Description

This special provision describes modifying standard specs 105.6 and 650 to define the requirements for construction staking for this contract. Conform to sections 105.6 and 650 and as follows.

The department will not perform any construction staking for this contract. Obtain engineer's approval before performing all survey required to lay out and construct the work under this contract.

Replace standard spec 650.1 with the following:

This section describes the contractor-performed construction staking required under individual contract bid items to establish the horizontal and vertical position for all aspects of construction including:

- storm sewer
- subgrade
- base
- curb and gutter
- curb ramps
- drainage structures
- structure layout
- bridges
- pavement
- pavement markings (temporary and permanent)
- barriers (temporary and permanent)
- overhead signs
- freeway and local street lighting
- electrical installations
- supplemental control
- slope stakes
- traffic signals
- ITS
- FTMS

- utilities
- conduit
- traffic control items
- fencing

B (Vacant)

C Construction

Add the following to standard spec 650.3.1 (5):

Confirm with engineer before using global positioning methods to establish the following:

1. Structure layout horizontal or vertical locations.
2. Concrete pavement vertical locations.
3. Curb, gutter, and curb & gutter vertical locations.
4. Concrete barrier vertical locations.
5. Storm Sewer layout horizontal or vertical locations, including structure centers, offsets, access openings, rim and invert elevations.

Replace standard spec 650.3.1(6) with the following:

(6) Maintain neat, orderly, and complete survey notes, drawings, and computations used in establishing the lines and grades. This includes:

- Raw data files
- Digital stakeout reports
- Control check reports
- Supplemental control files (along with method used to establish coordinates and elevation)
- Calibration report

Make the survey notes and computations available to the engineer within 24 hours as the work progresses unless a longer period is approved by the engineer.

Replace standard spec 650.3.3.1 with the following:

Under the Survey Project bid item, global positioning system (GPS) machine guidance for conventional subgrade staking on all or part of the work may be substituted. The engineer may require reverting to conventional subgrade staking methods for all or part of the work at any point during construction if the GPS machine guidance is producing unacceptable results.

Replace standard spec 650.3.3.3.4.1 with the following:

The department will provide the contractor staking packet as described in the Construction and Materials Manual (CMM) 7.10. At any time after the contract is awarded, the available survey and design information may be requested. The department will provide that information within 5 business days of receiving the contractor's request. The department incurs no additional liability beyond that specified in standard spec 105.6 or standard spec 650 by having provided this additional information.

Add the following to standard spec 650.3.3.3.6.2 as paragraph four:

Record all subgrade elevation checks and submit a hard copy to the engineer within 24 hours or as requested by the engineer.

D Measurement

Replace standard spec 650.4 with the following:

(1) The department will measure Survey Project 1228-22-70 by each project, acceptably completed.

E Payment

Replace standard spec 650.5 with the following:

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0010	Survey Project 1228-22-70	EACH

Payment is full compensation for performing all survey work required to lay out and construct all work under this contract and for adjusting stakes to ensure compatibility with existing field conditions. The department will not make final payment for this item until the contractor submits all survey notes and computations used to establish the required lines and grades to the engineer within 24 hours of completing this work. Re-staking due to construction disturbance and knock-outs will be performed at no additional cost to the department.

sef-650-005 (20181219)

106. Utility Line Opening (ULO), Item SPV.0060.0011.

A Description

This work consists of excavating to uncover utilities for the purpose of determining elevation and potential conflicts as shown on 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.

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 will be called for. In these cases, a single utility line opening will be considered full payment to locate multiple utilities. Provide utility line openings with a trench up to 10 feet long as measured at the trench bottom, and of any depth required to locate the intended utility.

Notify the utility engineers or their agents of this work a minimum of 3 working days prior to the work so they may be present when the work is completed. Do not perform utility line openings without the approval of the engineer.

D Measurement

The department will measure Utility Line Opening (ULO) as each individual ULO, acceptably 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.0060.0011	Utility Line Opening (ULO)	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 removal necessary to facilitate utility line openings will be considered part of or paid for under Utility Line Openings. Replacement pavement, concrete curb, gutter, and sidewalk items will be considered separate from Utility Line Openings and will be measured and paid for separately.

107. Emergency Response to Traffic Involving Concrete Barrier Temporary, Item SPV.0060.0012.

A Description

This special provision describes providing prompt response to an emergency repair request for damaged and/or dislodged temporary concrete barrier installed under this project that is damaged or displaced due to a vehicular collision during the time this contract is in effect.

B (Vacant)

C Construction

The contractor shall provide staff, equipment, and materials to the incident site within one hour of receiving a repair request from the responding agency. The contractor shall consult with the department's representative on potential repair or replacement options to restore the temporary concrete barrier to

proper working condition. Staff and equipment deployed shall be capable of completing the needed repairs as quickly as possible once repair work is started. Repair work shall be completed off the traveled way to the maximum extent allowable. The contractor shall provide a time log of when the repair request was received and when staff arrived at the incident site. This information shall be submitted to the engineer, for verification, within 24 hours of the repair completion.

Contact information for the contractor's responsible party (the person or persons in charge of coordinating and completing repair efforts) shall be submitted to the engineer at the pre-construction meeting. This person(s) shall be available 24/7 during the duration of this contract. The contact information for the department's representative will be supplied to the contractor at the pre-construction meeting.

If the contractor fails to be on-site of an incident with appropriate staff and equipment within one hour of receiving a repair request, the department will assess the contractor $500 in liquidated damages for each 15-minute interval that the contractor is not present following the allotted one-hour response time. Increments of 15 minutes or less will be assessed as a 15-minute increment. The engineer, or designated representative, will be the sole authority in determining assessable 15-minute increments. Liquidated damages will be assessed under the administrative item Failing to Open Road to Traffic.

For contractor owned temporary barrier, repair work shall be completed according to standard spec 603 and 643, and as directed by the engineer. For temporary barrier left in place from a previous project, repair work is covered under article Maintain and Remove Concrete Barrier Temporary Precast of these special provisions.

Additional traffic control measures may be required depending on the severity and duration of the incident. The contractor shall provide any needed traffic control measures as directed by the department's representative.

D Measurement

The department will measure Emergency Response to Traffic Incident Involving Concrete Barrier Temporary as each individual response, acceptably 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.0060.0012	Emergency Response to Traffic Incident Involving Concrete Barrier Temporary	EACH

Payment is full compensation for providing a prompt staff response to an emergency repair request for a damaged and/or dislodged temporary concrete barrier located within the project limits.

The cost of providing the appropriate level of on-call staff for 24/7 incident response shall be included in the Mobilization bid item for this project.

The department will pay for any additional traffic control measures, if required, under the respective traffic control bid items in the contract.

108. Emergency Response to Traffic Involving Crash Cushion, Item SPV.0060.0013.

A Description

This special provision describes providing prompt response to an emergency repair request involving a damaged crash cushion installed under this project that is displaced or damaged due to a vehicular collision during the time this contract is in effect.

B (Vacant)

C Construction

The contractor shall provide appropriate staff to the incident site within one hour of receiving a repair request from the responding agency. Staff deployed shall be capable of immediately assessing the severity of the damage to the device and consult with the department's representative on potential repair or replacement options and the projected timeline to restore the roadside device to its proper working condition. The contractor shall provide a time log of when the repair request was received and when staff arrived at the incident site. This information shall be submitted to the engineer, for verification, within 24 hours of the repair completion.

Contact information for the contractor's responsible party (the person or persons in charge of coordinating repair efforts) shall be submitted to the engineer at the pre-construction meeting. This person(s) shall be available 24/7 during the duration of this contract. The contact information for the department's representative will be supplied to the contractor at the pre-construction meeting.

If the contractor fails to be on-site of an incident with appropriate staff within one hour of receiving a repair request, the department will assess the contractor $500 in liquidated damages for each 15-minute interval that the contractor is not present following the allotted one-hour response time. Increments of 15 minutes or less will be assessed as a 15-minute increment. The engineer, or designated representative, will be the sole authority in determining assessable 15-minute increments. Liquidated damages will be assessed under the administrative item Failing to Open Road to Traffic.

Repair work shall be completed according to standard spec 614, and as directed by the engineer. Once repair work has been started, work shall continue until completion. Repair work shall be completed off the traveled way to the maximum extent allowable.

Additional traffic control measures may be required depending on the severity and duration of the incident. The contractor shall provide any needed traffic control measures as directed by the department's representative.

D Measurement

The department will measure Emergency Response to Traffic Incident Involving Crash Cushion as each individual response, acceptably 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.0060.0013	Emergency Response to Traffic Incident Involving Crash Cushion	EACH

Payment is full compensation for furnishing and installing items as mentioned above; for all excavation and backfill.

109. Concrete Barrier Transition Type V51 to S56, Item SPV.0060.0014; Concrete Barrier Transition Fixed Object Protection Type S42 to S42C, Item SPV.0060.0015.

A Description

This special provision describes constructing Concrete Barrier Transition (Type) according to standard spec 603, details shown in the plans, and as hereinafter.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Concrete Barrier Transition (Type) by each individual unit, acceptably placed according to the contract.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV. 0060.0014	Concrete Barrier Transition Type V51 to S56	EACH
SPV. 0060.0015	Concrete Barrier Transition Fixed Object Protection Type S42 to S42C	EACH

Payment is full compensation conforming to standard spec 603.5.

110. Traffic Control Close-Open Freeway Entrance Ramp, Item SPV.0060.0016.

A Description

This special provision describes closing and re-opening a freeway entrance ramp and associated auxiliary lane.

B (Vacant)

C Construction

Install or reposition traffic control devices required for closing a freeway entrance ramp and adjacent auxiliary lanes. Remove or return traffic control devices to their previous configuration when the closure is no longer required.

D Measurement

The department will measure Traffic Control Close-Open Freeway Entrance Ramp by each individual ramp closure, acceptably 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. 0060.0016	Traffic Control Close-Open Freeway Entrance Ramp	EACH

Payment is full compensation for daily surveillance; preparing and submitting the daily surveillance report with hourly metered tickets; mobilization; sweeping; and disposing of materials. Traffic Control devices will be paid separately.

sef-643-001 (20180627)

111. Traffic Control Full Freeway Closure, Item SPV.0060.0017.

A Description

This special provision describes closing and re-opening a freeway or expressway.

B (Vacant)

C Construction

Install or reposition traffic control devices required for a full freeway closure. Remove or return traffic control devices to their previous configuration when the full closure is no longer required.

D Measurement

The department will measure Traffic Control Full Freeway Closure by each individual freeway closure that is set up and later removed in each traffic direction, acceptably 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. 0060.0017	Traffic Control Full Freeway Closure	EACH

Payment is full compensation for closing and re-opening the freeway. Traffic Control devices will be paid separately.

sef-643-003 (20180627)

112. Migratory Bird Nest Inspections (B-40-207), Item SPV.0060.0018.

A Description

This special provision describes the inspection of structure B-40-207 for active nests.

Conform to restrictions provided in Migratory Birds subsection under Prosecution and Progress.

Inspect bridge structure B-40-207 (Station 859+00) every 48 hours for 3 weeks leading up to the deck replacement work. If any nests are established at the start of this inspection period, leave the nests undisturbed until the nests are vacated. If any new nests start to be constructed during this inspection period and no eggs have been laid yet, remove the nests. Any new nests which have eggs which have been laid must be left undisturbed until the nests are vacated. Nests for swallows are typically vacated in approximately 3 weeks.

As a last resort, apply for a depredation permit from the US Fish and Wildlife Service for work that may disturb or destroy active nests. The need for a permit may be avoided by removing the existing bridge structure prior to nest occupation by birds or clearing nests from all structures before the nests become active in early spring.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Migratory Bird Nest Inspections (B-40-207) by each individual 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.0060.0018	Migratory Bird Nest Inspections (B-40-207)	EACH

Payment is full compensation for nest inspection and removal.

113. Pipe Connection to Existing Structure, Item SPV.0060.0050.

A Description

This special provision describes connecting new storm sewer pipe to existing structure.

B Materials

Conform to standard spec 608.2 and 611.2

C Construction

Conform to standard spec 608.3 and 611.3

D Measurement

The department will measure Pipe Connection to Existing Structure by each pipe connected, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0050	Pipe Connection to Existing Structure	EACH

Payment is full compensation for performing all work; excavation, backfilling, furnishing, masonry and fittings; disposing of surplus material, coring holes in existing structure to connect new pipe; and installing all materials, couplings, concrete collars, and pipe.

114. Adjusting Water Valve Boxes, Item SPV.0060.0080; Adjusting Water Manholes, Item SPV.0060.0081.

A Description

This special provision describes adjusting, protecting, and maintaining accessibility, for the duration of the paving project, to all City of Milwaukee water service boxes, water valve boxes, and water manhole frames and lids located within the project limits.

B Materials

All material for the adjustment of these facilities shall meet City of Milwaukee specifications and will be provided by the City of Milwaukee by contacting Andray DeCordova, Milwaukee Water Works, at (414) 708-3209 (or Tim Garczynski, Milwaukee Water Works at (414) 286-6301).

If there is contractor damage, the materials must still be provided by the City of Milwaukee, however, in this case, the contractor will be charged for all materials. Materials furnished by the City of Milwaukee and not used on the project shall be delivered back to DPW Field Headquarters – Infrastructure, Operations, Water Works at 3850 N. 35th St.

C Construction

The contractor, or authorized project representative, shall contact Milwaukee Water Works prior to the start of construction. The city will locate, mark, inspect and repair all water service boxes, water valve boxes, and water manhole frames and lids within the limits of the project prior to commencement of work on the project.

All water service boxes, water valve boxes, and water manhole frames and lids within the project limits shall be adjusted to proposed elevations by the contractor using materials meeting city specifications.

Throughout the duration of the project, the contractor must ensure that all water service boxes, water valve boxes, and water manholes are adequately located and identified by blue paint, and that at all times, all water appurtenances remain accessible for operation by city forces. Exercise caution working adjacent to water facilities to avoid damage and ensure accessibility.

Upon completion of the contract, the city will inspect all water facilities to ensure the water boxes and manholes are clean, properly aligned, and accessible. The contractor shall be responsible to make identified repairs and adjustments, and if any repairs or adjustments are made by the city, the cost will be charged to the contractor.

D Measurement

The department will measure Adjusting Water Boxes and Adjusting Water Manholes as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0080	Adjusting Water Valve Boxes	EACH
SPV.0060.0081	Adjusting Water Manholes	EACH

Payment is full compensation for all excavation, backfilling, disposal of surplus materials, water box or water manhole adjustments, water box or water manhole clean-out, and restoration of the work site.

115. Maintenance of Lighting System (1228-22-70), Item SPV.0060.0101.

A Description

This special provision describes maintaining existing and proposed lighting system beginning on the date that the contractor's activities, including electrical, begin at the job site. Properly operate and maintain all existing and proposed lighting systems which are part of, or which may be affected by, the work until final acceptance or as otherwise determined by the engineer.

Before performing any excavation, removal, or installation work, including electrical, for the project, initiate a request for maintenance transfer and preconstruction inspection, as specified in this special provision. Conduct the transfer and inspection in the engineer's presence and a representative of the party or parties responsible for maintenance of any lighting systems which may be affected by the work. Request the maintenance preconstruction inspection at least seven calendar days before the desired inspection date.

Existing lighting systems, when shown on the plans, are intended only to indicate the general equipment installation of the systems involved, possibly not exactly representing the field conditions. A site visit will confirm the exact condition of the electrical equipment and systems to be maintained.

Issues found during contractor assessment can be discussed and addressed by contacting the SE Region Lighting Engineer (Eric Perea) before transferring maintenance responsibility to the contractor.

Maintenance of the lighting system includes lighting control cabinet(s): HL-40-GA, HL-40-CB, AND HL-40-KF.

The following lighting control cabinet(s) will be used long enough to allow the installation of temporary lighting: HL-40-GA, HL-40-CB, AND HL-40-KF.

B (Vacant)

C Construction

C.1 Existing Lighting Systems

Existing lighting systems are defined as any lighting system or part of a lighting system in service before this contract. The contract drawings indicate the general extent of any existing lighting. Understand the effort required for compliance with these specifications; Clear and replace any knockdowns or damage caused to the existing lighting system, regardless of who causes the damage. Maintain existing lighting system as follows:

Partial Maintenance: Only maintain the affected circuits if the number of circuits affected by the contract is equal to or less than 40% of the total number of circuits in a given controller and the controller is not part of the contract work unless otherwise indicated. Obtain engineer approval to isolate the affected circuits by in-line waterproof fuse holders as specified elsewhere

Full Maintenance: Maintain the entire controller and all associated circuits if the number of circuits affected by the contract is greater than 40% of the total number of circuits in a given controller, or if the controller is modified in any way under the contract work.

C.2 Proposed Lighting Systems

Proposed lighting systems are any temporary or final lighting systems or part of a lighting system to be constructed under this contract.

Maintain all items installed under this contract, including all equipment failures or malfunctions as well as equipment damage by the motoring public, contractor operations, or other sources.

C.3 Maintenance Operations

Maintain lighting units (including sign lighting), cable runs, and lighting controls. If a pole is knocked down or sign light damage is caused by normal vehicular traffic, promptly clear the lighting unit and circuit discontinuity, and restore the system to service. Reinstall the lighting unit (if salvageable), or install a new one.

Provide weekly night-time patrol of the lighting system, with patrol reports filed on standard forms as designated by the engineer. Send a copy to the region lighting coordinator.

Correct the deficiencies within a time frame acceptable to the engineer. Remaining deficiencies may require corrective action on specific lighting system equipment as described in the chart or based on material availability.

Incident or Problem	Service Response Time	Service Restoration Time	Permanent Repair Time
Control cabinet out	12 hours	24 hours	7 Calendar days
Hanging mast arm	**Emergency** - As Soon As Possible	na	7 Calendar days
Motorist caused damage or leaning light pole 10 degrees or more	**Emergency** - As Soon As Possible	7 Calendar days	14 Calendar days
Circuit out – Needs to reset breaker	12 hours	12 hours	na
Circuit out – Cable trouble	12 hours	7 Calendar days	21 Calendar days
Outage of 3 or more successive lights	12 hours	7 Calendar days	na
Outage of 75% of lights on one tower	12 hours	7 Calendar days	na
Outage of light nearest RR crossing approach, Islands and gores	12 hours	7 Calendar days	na
Outage (single or multiple non successive lights) found on night outage survey	n/a	n/a	7 Calendar days

C.4 Lighting

1. **Serve Response Time:** The amount of time from the initial contractor notification to the patrolman physically arriving.
2. **Service Restoration Time**: The amount of time from the initial contractor notification to a fully operational system again. (In cases of motorist-caused damage, the undamaged portions of the system are operational.)
3. **Permanent Repair Time**: The amount of time from initial contractor notification until permanent repairs are made unless the contractor was required to make temporary repairs to meet the service restoration requirement. Temporary repairs that do not meet the service restoration requirements require engineer's approval.

C.5 Operation of Lighting

Maintain operational lighting every night, from dusk until dawn. Do not operate duplicate lighting systems (such as temporary lighting and proposed new lighting) simultaneously. Do not keep lighting systems in operation during long daytime periods. Ensure that the lighting system is fully operational and approved by the engineer before submitting a pay request.

D Measurement

The department will measure Maintenance of Lighting System (1228-22-70) as a single 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.0060.0101	Maintenance of Lighting System (1228-22-70)	EACH

Payment is full compensation for Maintenance of Lighting Systems, both existing and proposed, weekly night-time patrol of the lighting system, mobilization, and filed patrol reports.

The contractor will be reimbursed for replaced equipment, materials only, if the invoice paid for the individual piece of equipment is greater than $500.

Non-compliance with designated response, restoration, and permanent repair times will result in liquidated damages of $500 per day per occurrence. In addition, the department reserves the right to assign any work not completed within this timeframe to the State Electrical Engineering and Electronics Unit. Reimburse all costs associated to repair this uncompleted work within one month after the incident or additional liquidated damages of $500 per month per occurrence will be assessed. Unpaid bills will be deducted from the cost of

the contract. Repeated non-response or a negligent maintenance shall result in the State's Electrical Engineering and Electronics Unit being directed to correct all deficiencies and the resulting costs deducted from all monies owed the contractor.

Not understanding the effort required for compliance with these specifications will not be justification for extra payment or reduced responsibilities. No payment will be considered for damage or repairs due to contractor operations.

Not ensuring that the lighting system is fully operational and approved by the engineer before submitting a pay request will be grounds for denying the pay request.

116. Lighting System Integrator (1228-22-70), Item SPV.0060.0102.

A Description

This special provision describes coordinating lighting with various parties; record keeping, and documentation. Where the department is responsible for freeway lighting operation, maintenance, or utility locates on existing systems or systems overlapping project boundaries, the contractor's freeway lighting integrator will serve as the contractor's liaison to the department's electrical operations unit.

B Personnel Qualifications

Assign personnel experienced in underground utility construction and department lighting specifications and practices.

C Construction

At any one time during the project, assign one individual person as the freeway lighting integrator.

The freeway lighting integrator shall:

1. Familiarize himself with the location and nature of existing lighting circuits. This familiarity shall include the extent of any lighting system that overlaps project limits.
2. Maintain a file of applicable permits or licenses issued to the contractor and convey copies to the engineer.
3. Keep at all times a contact list of affected lighting personnel.
4. Maintain a record of tagouts and the clearance of tagouts.
5. Interface with department electrical personnel to determine how contract limits might affect maintenance or operation of existing systems.
6. Maintain ongoing contact with the department's Diggers' Hotline Coordinator to ensure that each of the two persons knows that all requested utility locates are marked in the field by the appropriate party. The intent here is to assure coordination. This special provision does not transfer additional utility locating responsibilities to the contractor, beyond those responsibilities already assigned to him by other provisions of the contract.
7. Inform the department of any lighting outages, including outside the project limits where a lighting system crosses the project boundary.
8. Maintain in any format real-time records of existing, removed, and new lighting facilities. Include utility service extensions. Additional required records will include temporary connections and their ultimate removal.
9. Maintain records of tests, including: "meg" tests, amperage draw per circuit leg, voltage reading at the disconnect, and voltage reading at the furthest pole per circuit leg. Convey these records at time of acceptance or partial acceptance.
10. At the time of acceptance or partial acceptance, convey as-built drawings in both the following formats: plan redlines and .dgn electronic. Include utility service extensions.
11. Secure copies of operator's manuals, tear sheets, etc. as may be provided by manufacturers of some lighting materials and convey a minimum of three sets to the department.
12. Work with the engineer to notify department electrical personnel of acceptance or partial acceptance.

13. Perform related duties as may be needed to ensure continuity of freeway lighting during construction, and orderly transfer upon completion.
14. Contractor must use GPS to provide coordinates of each light pole and control cabinet. The data must be entered into a Microsoft Excel 2007 spreadsheet along with other required fields as specified by WisDOT.

D Measurement

The department will measure Lighting System Integrator (1228-22-70) as a single 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.0060.0102	Lighting System Integrator (1228-22-70)	EACH

Payment will be full compensation for personnel costs, coordination, record-keeping, and documentation.

117. Lighting System Survey (1228-22-70), Item SPV.0060.0103.

A Description

This special provision describes performing a lighting system survey as-built for IH 43 (Bender Rd. to Brown Deer Interchange) Mainline, Ramps, and Local Street, as shown on the plans, and hereinafter provided.

B Vacant

C Construction

Locate and survey all the lighting units, pull boxes, and control cabinets to sub-meter accuracy. Maintain neat, orderly, and complete survey notes. Perform the survey in NAD 83, Wisconsin County Coordinate System (WCCS), and Milwaukee Coordinates. Deliver data in a comma delimited text file with metadata including datum, county, and date the survey was performed. Data for each point shall have a point number, northing, easting, and point description including pole, pull box, or cabinet number.

D Measurement

The department will measure Lighting System Survey (1228-22-70) as each individual project, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0103	Lighting System Survey (1228-22-70)	EACH

Payment will be full compensation for locating and surveying all the lighting units, pull boxes, and control cabinets and for delivery of the comma delimited data file and all survey notes.

118. Wood Pole Lighting 60-Foot, Item SPV.0060.0104.

A Description

The work under these items include furnishing and installing 60-foot wood pole, arm(s) and floodlight(s), junction box, grounding system, and lightning protection system, as shown on the plans, according to standard spec 651 and 659, and as hereinafter provided.

B Materials

Furnish wood poles, Class 4 or larger with a 60-foot minimum overall length. The poles shall be western red cedar according to ANSI standards 05.1. Pressure treatment shall be 5% pentachlorophenol with a minimum of 8 pounds per cubic foot net retention of the oil-borne preservative. Shave all poles the entire length.

Luminaire arm and luminaire for wood pole lighting units and temporary wood pole lighting units are per standard spec 657.2.4 and 659.2, respectively.

Floodlight mounting bracket arms for wood pole lighting units will be as shown on plan details. The floodlights are provided under separate bid items SPV.0060.1007.

C Construction

Perform work according to the pertinent provisions of standard spec 611.3.1.1 and as shown on the plans. Install #4 AWG equipment grounding wire exothermically bonded to a 5/8 inch by 8 foot copper clad grounding electrode. Install cable guard, NEMA 3R junction box near mounting arm, and NEMA 4X junction box at 3 feet above grade for fuses and splice on wood pole units. Install air terminal with #2 AWG grounding wire exothermically bonded to a 5/8-inch by 8-foot copper clad grounding electrode for lightning protection. Install #2 AWG bare copper exothermically bonding between grounding electrodes. Install conduit and wiring between junction boxes, wire racks, and required hardware as necessary and as shown on lighting plans and detail drawings.

Install luminaire arm for wood pole lighting units as shown on the plans and details and as per applicable portion of standard spec 657.3 and 659.3.

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0103	Wood Pole Lighting 60-Foot	EACH

Payment is full compensation for furnishing and installing items as mentioned above; and for all excavation and backfill.

119. Wood Pole 60-Foot, Item SPV.0060.0105.

A Description

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

B Materials

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

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

C Construction

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

D Measurement

The department will measure Wood Poles 60-Foot as a unit for each pole, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0105	Wood Pole 60-Foot	EACH

Payment is full compensation for furnishing and installing a wood pole; and all excavation and backfill.

120. Removing Poles Wood 60-Foot And Floodlights, Item SPV.0060.0106.

A Description

Remove 60-foot wood pole lighting units and attached conduit and wiring as shown on the plans and according to standard spec 204, remove mast arm or bracket arm, luminaire, air terminal, and junction box, backfill openings or holes to the elevation of the surrounding ground, and landscape all disturbed areas from these removals. Separate payment will be made for lamp disposal.

B (Vacant)

C Construction

Dispose of all materials except lamps off site. Lamps to be disposed by contractor under a separate bid item, Lamp, Ballast, LED, Switch Disposal by Contractor, Item 659.5000.S.

The department will allow, at the contractor's discretion, to reuse removed wood pole lighting units at new location, if possible. The bid price is to reflect the salvage value of the removed wood pole lighting unit. The department will allow, at the contractor's discretion, to reuse removed temporary wood pole lighting units at new location, if possible.

D Measurement

The department will measure Removing Poles Wood 60-Foot And Floodlights by each pole, 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.0060.0106	Removing Poles Wood 60-Foot And Floodlights	EACH

Payment is full compensation for removing wood pole lighting units; all excavation and backfill; and removal and disposal of material.

The department will pay separately for detachment and disposal of lamps.

121. Removing Poles Wood 60-Foot, Item SPV.0060.0107.

A Description

Remove 60-foot wood poles as shown on the plans.

B (Vacant)

C Construction

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

D Measurement

The department will measure Removing Poles Wood 60-Foot as a unit for each pole, acceptably removed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0107	Removing Poles Wood 60-Foot	EACH

Payment is full compensation for removing wood pole; all excavation and backfill; and removal and disposal of material.

122. Luminaires Floodlight 400W HPS, Item SPV.0060.0108.

A Description

The work under this item consists of furnishing and installing 400 Watt HPS floodlight luminaires, with photoelectric control, in a 480 Volt configuration and according to standard spec 659.

B Materials

Appropriate Floodlight Models include or approved equal:

GE Turnpike, General Elec. Product Number: RPF-S40S240V-M2GL-N3-GRK.

GE Turnpike, General Elec. Product Number: RPF-S40S480V-M2GL-N3-GRK.

Holophane Predator, Holophane Product Number: PF-400HP-240V-BN1KR

Holophane Predator, Holophane Product Number: PF-400HP-480V-BN1KR

Lithonia Lighting, Lithonia Product Number: 170S 400S HPN 240V TS PER

Lithonia Lighting, Lithonia Product Number: 170S 400S HPN 480V TS PER

Units shall have a 6x6 or 7x7 light distribution. Units shall have a photoelectric cell for control of the fixture operation.

C Construction

Install the luminaire on the light poles at locations specified in lighting plan according to standard spec 659.2.1, and 659.3.1, and wired and fused according to standard spec 659.3.2 and plan details. Luminaires shall be orientated (0 deg = North) as shown and at an angle of 45-degrees from the vertical. Units shall be suitable for mounting on the poles provided under bid item Poles Type A With Bullhorn Bracket.

D Measurement

The department will measure Luminaires Floodlight 400W HPS by each individual luminaire, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0108	Luminaires Floodlight 400W HPS	EACH

Payment is full compensation for all the work and materials required under this bid item.

123. Removing Electrical Service Meter Breaker Pedestal Lighting, Item SPV.0060.0109.

A Description

This special provision describes removing an existing electrical service meter breaker pedestal, supports and any additional electrical equipment associated with the service including disconnect switches and overall enclosure, disconnecting all connected power wires, and disposing of the equipment appropriately.

B (**Vacant).**

C Construction

Coordinate for removal of the existing electrical service meter breaker pedestal with WE Energies.

Disconnect all connected power wires, remove the pedestal, include existing electrical service meter breaker, supports, and disconnect switches if present and dispose of all materials properly away from the project area.

D Measurement

The department will measure Removing Electrical Service Meter Breaker Pedestal Lighting by the unit, acceptably removed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0109	Removing Electrical Service Meter Breaker Pedestal Lighting	EACH

Payment is full compensation for coordination with WE Energies; for disconnection of wires; and for removal of the pedestal and any additional material of the service.

124. Remove and Salvage Street Lighting Unit; Item SPV.0060.0110.

A Description

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

Specific removal items are noted in the plans.

B (Vacant)

C Construction

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

Notify the City of Milwaukee, Mr. Neal Karweik at (414) 286-5943 office, or (414) 708-4245 cell, at least five working days prior to the removal of the city lighting equipment. Complete the removal work as soon as possible following shut down of this equipment. Inspect salvaged equipment for damage or defects.

The city assumes that all equipment is in good condition and in working order prior to the contractor's removal operation. Prior to removal, inspect and provide a list of any damaged or nonworking lighting equipment to the engineer and city. Any equipment not identified as damaged or not working, prior to removal, shall be replaced by the contractor at no cost to the department.

Remove all standards and poles per plan, and remove transformer bases, cabling/wiring, arms, luminaires, and mounting devices. Dispose of non-salvaged materials off the project site and off the right-of-way. Deliver the salvaged city light poles, luminaire arms, and luminaires to the City of Milwaukee Shop Yard at 1540 West Canal Street. All the material must be dropped off all at one time during the Shop Yard hours from 8:00 AM to 2:00 PM Monday through Friday. The contractor must be out of the shop yard by 2:00 PM.

For luminaires not returning to the city to be disposed by the contractor under a separate bid item, Lamp, Ballast, LED, Switch Disposal by Contractor, Item 659.5000.S.

Contact Mr. Neal Karweik at least four working days prior to delivery to make arrangements.

D Measurement

The department will measure Remove and Salvage Lighting Assembly 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.0060.0110	Remove and Salvage Lighting Assembly	EACH

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

125. Remove Existing Wood Pole; Item SPV.0060.0111.

A Description

Remove the existing wood pole as shown on the plans.

B (Vacant)

C Construction

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

D Measurement

The department will measure Removing Existing Wood Pole as a unit for each pole removed, acceptably 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.0060.0111	Remove Existing Wood Pole	EACH

Payment is full compensation for removing wood pole; all excavation and backfill; and removal and disposal of material.

126. Pull Box 13-Inch x 24-Inch x 24-Inch; Item SPV.0060.0112.

A Description

This special provision describes providing and installing Pull Boxes which are a fiberglass/polymer concrete at the locations shown on the plans according to current Wisconsin Department of Transportation Standard Specification Section 653.

B Materials

Pull Box (Fiberglass/polymer concrete) of rectangular composite enclosure with Tier 15 Rating (15,000 lb. Design Load) and (22,500 lb. Test Load), and nominal 13” wide x 24” long and 24” total depth, flared wall. Cover shall be Tier 15 Rating (15,000 lb. Design Load) and (22,500 lb. Test Load), bolted cover with logo “Street Lighting” and use Penta bolts to secure cover. The pull box listed and labeled by (UL) or other Nationally Recognized Testing Laboratory.

C Construction

Conform to standard spec 673.3 and City of Milwaukee standards. The pull box installation covers the excavation, 12-inches of crushed stone, end bell connectors for conduit connection, backfilling and for disposing of surplus material. Rigid nonmetallic PVC bell end connectors are to be use when connecting conduit to the pull box.

D Measurement

The department will measure Pull Box 13-Inch x 24-Inch x 24-Inch as each individual pull box, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0112	Pull Box 13-Inch x 24-Inch x 24-Inch	EACH

Payment is full compensation for providing and installing the pull box (fiberglass/polymer concrete), transporting, coordination and all materials and incidentals necessary to complete the work, such as end bells, crushed aggregate, excavation, backfilling, and for disposing of surplus material.

127. Pull Box 17-Inch x 30-Inch x 24-Inch; Item SPV.0060.0113.

A Description

This special provision describes providing and installing Pull Boxes which are a fiberglass/polymer concrete at the locations shown on the plans according to standard spec 653.

B Materials

Pull Box (Fiberglass/polymer concrete) of rectangular composite enclosure with Tier 15 Rating (15,000 lb. Design Load) and (22,500 lb. Test Load), and nominal 17” wide x 30” long and 24” total depth, flared wall. Cover shall be Tier 15 Rating (15,000 lb. Design Load) and (22,500 lb. Test Load), bolted cover with logo “Street Lighting” and use Penta bolts to secure cover. The pull box listed and labeled by (UL) or other Nationally Recognized Testing Laboratory.

C Construction

Conform to current Wisconsin Department of Transportation Standard Specification Section 673.3 and City of Milwaukee standards. The pull box installation covers the excavation, 12-inches of crushed stone, end bell connectors for conduit connection, backfilling and for disposing of surplus material. Rigid nonmetallic PVC bell end connectors are to be use when connecting conduit to the pull box.

D Measurement

The department will measure Pull Box 17-Inch x 30-Inch x 24-Inch as each individual pull box, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0113	Pull Box 17-Inch x 30-Inch x 24-Inch	EACH

Payment is full compensation for providing and installing the pull box, transporting, coordination and all materials and incidentals necessary to complete the work, such as end bells, crushed aggregate, excavation, backfilling, and for disposing of surplus material.

128. Installing Luminaire Arms Steel 15-FT; Item SPV.0060.0114.

A Description

This special provision describes installing state-furnished materials conforming to standard spec 657, details shown in the plans, and as modified in this special provision.

B Materials

The department will furnish the monotube poles, monotube arms and luminaire arms.

Provide all other needed materials in conformance with standard spec 651.2, 652.2, 653.2, 654.2, 655.2, 656.2, 657.2, 658.2 and 659.2.

C Construction

Perform work according to standard spec 651.3, 652.3, 653.3, 654.3, 655.3, 656.3, 657.3, 658.3 and 659.3, except as specified below.

D Measurement

The department will measure Installing Luminaire Arms Steel 15-Ft 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.0060.0114	Installing Luminaire Arms Steel 15-Ft	EACH

Payment is full compensation for installing all materials, including all associated hardware, fittings, mounting devices, and attachments necessary to completely install the pole and arms.

129. Pole Type 30-AL-BD; Item SPV.0060.0115.

A Description

The minimum requirements for a 30’-0” bolt down aluminum street lighting pole assembly. All parts not specifically mentioned, which are necessary, or which are regularly furnished in order to provide this pole, shall be furnished, and shall conform in strength, quality of material and workmanship to that usually provided by the engineering practice indicated in this specification. All work shall be according to standard spec 651.

The aluminum street lighting pole assembly to be furnished under this specification is to be round and tapered. The pole assembly shall be complete with shaft, pole cap, hardware, and base coating. All screws and fasteners shall be stainless steel or other approved materials.

The bolt down 30’-0” aluminum street lighting pole assembly shall be according to this specification and City of Milwaukee (DPW-Infrastructure Services Division) Drawing #B-14-14.

Minor deviations on the rest of the pole assembly that will not affect the strength, appearance, vertical and horizontal stability of the pole will be permitted, but all such deviations shall be approved by the City of Milwaukee Street Lighting Engineering.

The work under this item is for furnishing and installation of the following material as shown in plans and according to the following.

B Materials

B.1 Pole

The 30’-0” aluminum pole shaft shall be tapered from the top of the pole to the mounting plate. Dimensions from the pole top to the bracket mounting plate and from the base plate to the top of the pole, as shown on the drawing, shall be rigidly adhered to.

The base plate shall be cast from either type 319 or 356T6 aluminum. The four elongated mounting holes shall be on 90-degree centers on an 11” bolt circle. The mounting slots shall be sized for 1-inch mounting bolts. The base shall be welded to the shaft so the arms bisect the angle between mounting holes at 45 degrees.

The poles shall be built as a double bracket unit and supplied with one cover plate per pole.

The pole cap is to be cast aluminum and be secured to the pole by three equally spaced ¼”-20 hex head stainless steel screws.

B.1.1 Hand Hole and Grounding

The hand hole shall be 4" x 6" nominal. A ¼”-20 NC taped hole and bolt shall be provided in the shaft opposite the hand hole for grounding purposes. The hand hole cover shall be secured to the pole using ¼"-20 NC by ¾" long 18-8 stainless steel button head Torx T27H tamper proof screws. The hand hole is to be 90 degrees from the arms. The center line of the hand hole shall be 14 inches above the mounting plate.

B.1.2 Loading and Stability

The 30’-0” assembly furnished under this specification shall support a 50-pound fixture of an EPA of 3 on each arm when equipped with a pair of 6' upsweep arms. All pole designs shall meet the latest revision of the AASHTO specifications for these poles as defined in their STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS. The manufacturer shall submit engineering calculations for lighting poles to show that maximum stress and deflections do not exceed specified performance requirements under full design loading, as well as other certified reports and data which indicate that the poles meet all load requirements, within 30 days of the bid award. Engineering calculations shall be prepared and sealed by an engineer licensed in the State of Wisconsin.

The entire horizontal and vertical “wind sail” area of the pole assembly subject to wind load including arm and luminaire shall be designed to withstand the AASHTO standard specifications, from above, for wind load requirements for a 90 MPH wind load with gust factor computed per section 3.8.5.and height and exposure factors from table 3-5.

All Welding shall be according to the latest applicable A.S.M.E. Standards.

The manufacturer warrants that the pole supplied will be of merchantable quality will conform to applicable specifications, drawings, designs, samples, or descriptions, will be free from defects in materials and workmanship and will be fit for the particular purpose intended.

A plaque with the pole number as shown on the plans shall be affixed onto the pole shaft using high intensity reflective 2" silver numerals on black background.

B.2. Riser Cable

Pole is to be wired as shown on the plans. A separate riser cable will be required to be installed inside of pole for each lighting fixture on the pole. The riser cable(s) shall be 35 feet in length and cut from copper 2#12 UF with ground cable. One wire shall be black, the other shall be white, and the ground to be green. All splicing is to be done inside the metal housing. The ground wires shall be spliced inside the metal housing and grounded to the housing and each fixture. The cable shall conform to NEC Article 340. The riser cable shall be continuous without splices. The electrical system in use utilizes a full system ground. The neutral is not to be grounded at any point.

C Construction

Install the bolt down pole as specified in the plan and details. After razing the pole use normal pole shaft raking techniques to ensure the centerline of shaft appears vertical to the horizon.

D Measurement

The department will measure this item Pole Type 30-AL-BD 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.0060.0115	Pole Type 30-AL-BD	EACH

Payment is full compensation for the pole, riser cable(s), and all connections.

130. Water Tight Splice & Connections; Item SPV.0060.0116.

A Description

This section describes materials, general requirements, personnel qualifications, construction methods, and testing requirements used to perform electrical connections/splices required.

All work shall be according to standard spec 651.

B Materials

Furnish materials conforming to the WSEC, consisting of chapter comm. 16 of the WEC combined with the NEC.

All materials furnished under this contract for street lighting installation are subject to approval by the City of Milwaukee street lighting engineer. A prototype maybe requested for submittal by the engineer with a cable sample installed and spliced for approval prior to field installation.

The contractor shall furnish a complete list of materials to be furnished and used for street lighting. Such list shall include names and addresses of manufactures, together with catalog numbers, certificates of compliance, specifications, and other product information requests by the engineer. The list shall be submitted within 10 calendar days of execution of contract. No material shall be incorporated into the lighting system prior to the written approval of the engineer. Approval does not change the intent of the specifications. The contractor shall not substitute or make changes in material without resubmitting for approval.

Use either the Polaris Edge (ISPB2) or Morris Product submersible insulated connector or else an equal connector that is 3, 4, or 6 Port Pre-Insulated, that is designed for use in below grade boxes, direct burial, and submersible. The Conductors Range from #2/0 - #14 Rated for 600 Volts Dual Rated for CU. or AL.

Use an In-Line Fuse Holder assembly that needs to be 600 Volt Rated, and up to 30 Amps, 1-Pole Breakaway, with copper set screw terminals for LOAD and LINE, and Wire Size Range #12 to #8 AWG.

Provide a Fast Acting 5 Amp – 250 Volt fuses, from the recommended fuse list from the In-Line Fuse holder manufacturer.

Waterproof and Tear Resistant cable tags/labels that need to be attached for identifying the circuit. A tag/label per street lighting conductor, and or cable for each branch circuit leg.

C Construction

C.1 General Requirements

Work under items related to the street lighting system shall conform to the National Electrical Code (NEC), 2020 Edition, or the latest edition adopted by the State of Wisconsin, Wisconsin Department of Commerce Chapter Comm 16 (Electrical) State of Wisconsin electrical code, City of Milwaukee code, and these special provisions and good electrical practices. The contractor shall not take advantage of lack of details in plans or these specifications where to do so would conflict with the applicable code and standards.

C.2 Personnel Qualifications

An electrician holding all appropriate licenses (including City of Milwaukee Licenses) shall supervise all work done referring to the street lighting system. **All splices shall be made by an electrician.** For the purposes of this contract, an electrician is a person who served a 4 year apprenticeship and passed state exams.

C.3 Splices

The contractor shall perform water tight splicing in a pull box with materials listed or equal on Street Lighting Standard Details 142. Conductor runs shall be continuous between pole locations, and no splicing of conductors outside the pull box will be allowed. The watertight splices shall reside in the pull box and above the wiring coils called for in Street Lighting Standard Details 142. The 2#12UF with ground cable (per luminaire) shall be brought to the pole hand hole where it will be spliced with the riser cable to the light fixture. An in-line watertight fuse holder needs to be installed in-line with the hot conductor that leads to the luminaire and should be accessible in pole at the hand hole. Oxide inhibitor (OX4) or equivalent shall be applied on all splices points.

Contractor is to bundle circuit conductors together and identify circuit at every split point.

Hand hole splices if needed should be completed using a multi-tap connector. The connector should be rated for 600 volts, conductor range #1/0 through #14 AL-CU, have a insulating cover rated at 105 degrees Celsius, and meet or exceed ANSI 119.4 Class A specifications for reliability.

C.4 In Service Distribution Systems

The contractor shall not make splices to any underground connections or to any existing distribution system. As indicated on plans, underground splices and connections to existing underground circuitry will be completed by city electricians.

C.5 Testing

After the city makes preliminary acceptance of the street lighting system, it shall be monitored by the City of Milwaukee, Street Lighting Electrical Services during a 60 calendar day operational “burn in”. Final acceptance of the lighting system will be based on its meeting standard operational criteria as stated in these specifications. The contractor shall be responsible for all necessary repairs and adjustments to the lighting system to meet standard operational criteria.

D Measurement

The department will measure this item Water Tight Splice and Connections by the each splice, acceptably completed. This covers the multi-port submersible insulated connectors in the pull box, in-line fuse holder assemblies in the pole at the hand hole, and the waterproof and tear resistant cable tags/labels in the 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.0060.0116	Water Tight Splice & Connections	EACH

Payment is full compensation for furnishing labor, equipment, coordination and all materials such as the multi-port submersible insulated connectors, in-line fuse holder assemblies, waterproof and tear resistant cable tags/labels.

131. Luminaire Arm Single Member 8-Ft. (Special), Item SPV.0060.0117.

A Description

The work under this item is for furnishing and installation of the following material as shown in plans and according to the following. All work shall be according to standard spec 651.

B Materials

Fabricated for the City of Milwaukee per City Spec. see plan set for detail drawing sheet 5 of 5.

Bracket Arm Base Coat – Hot Dip Galvanized to ASTM A123

Bracket arm is 2” schedule 80 (2.375” O.D. tubing (0.218” wall)

A501, A513, A618 ASTM Designation, 36 Min. yield (KSI)

Length of arm shaft = 8’-5.19” and curved to City Spec’s.

Mounting plate is Simplex plate, A36 ASTM Designation, 36 Min. yield (KSI)

C Construction

The bracket shall be attached to the pole with two (2) ½” x 13 NC x 1 ½” long

stainless steel hex bolts with two (2) 1 ¼” O.D. stainless steel flat washers, two (2) ½” stainless steel split lock washers. Anti-seize needs to be applied to the threads of the bolts before assembly.

Apply a thin layer of dielectric grease to the back of the mounting plate of the bracket arm and to the mounting hardware to repel moisture and protects connections against corrosion.

D Measurement

The department will measure this item Luminaire Arm Single Member 8-Ft (Special) 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.0060.0117	Luminaire Arm Single Member 8-Ft. (Special)	EACH

Payment is full compensation for the bracket arm, and all connections.

132. Installing City-Furnished Luminaire Utility LED; Item SPV.0060.0118.

A Description

The work under this item is for installing possibly four different wattages of LED utility luminaires with different light distribution as indicated in plans. All work shall be according to standard spec 651.

B Materials

Descriptions of Installing City-furnished Luminaire Utility LED:

Luminaire LED Utility 2 - with Type 2, 3, and 5 light distribution

Luminaire LED Utility 3 - with and 3 light distribution

Signify - 3LED3

RFM-135W40LED3K-G2-R3M-UNV-DMG-[API-263]-FAWS10-PH9-RCD7-[SP2-007]-GY3

Factory set FAWS at position 10, with 3LED3 label visible at 30' away.

The contractor shall be responsible to contact Street Lighting Shop Yard Contact Person Shop four working days before with the exact number of materials needed. The advance notice will allow the shop to gather the requested items for the contractor to pick up and sign for taking possession of the materials.

The contractor shall be responsible for the materials that they take possession of and for the returning any unused materials back to the shop in good condition. If any materials come back damaged or broken the contractor will be responsible for replacing the broken or damaged item.

Street Lighting Shop Yard Contact Person:

Neal Karweik – (414) 286-5943 office, (414) 708-4245 cell

All the materials must be picked up all at one time.

The Street Lighting Shop Yard hours for picking up materials is from 8:00 AM to 2:00 PM Monday through Friday.

Contractor must be out of the shop yard no later than 2:00 PM.

C Construction

The luminaire shall be attached to the luminaire arm using the supplied

hardware. Perform all splices and connections required for the operation of luminaire.

Use Anti-Seize Lubricant on all the bolt threads

D Measurement

The department will measure Installing City-Furnished Luminaire Utility LED 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.0060.00118	Installing City-Furnished Luminaire Utility LED	EACH

Payment is full compensation for installing City Furnished luminaires LED Utility Types 0, 1, 2, and 3; for making all connections; and for all testing.

133. 5’ Diameter “Doghouse” Manhole Type CUC, Item SPV.0060.0150.

A Description

The work under this item consists of a 5’-0” diameter precast concrete “doghouse” manhole for the City of Milwaukee Underground Conduit Section at locations shown in the plans, in accordance with standard spec 301, 611 and 501, and as hereinafter provided. This work includes providing and placing PVC pipe and associated fittings, cement encasement, and other appurtenances to extend existing conduit as required to provide a complete and fully functional communications manhole unit.

B Materials

B.1 Manhole

Furnish and install a 5’ diameter precast concrete “doghouse” manhole. Concrete and steel reinforcement shall conform to ASTM specification: C478 (latest edition), except that the two cages of circumferential reinforcement in all vertical walls shall consist of lines of #6 steel wire spaced 3” horizontally and lines of #10 steel wire spaced 8” vertically both located in the center of the wall, and #6 hoop rebar centered in the wall 3” above the window knock-outs.

Two lifting inserts for 1-1/2” diameter lifting eyes shall be cast in the wall of the base and all other riser sections except the top cap section.

Up to four 7/8” diameter galvanized steel 1-11/16” pulling-in eyes shall be cast in the wall of the base section directly across from each duct entrance.

Four 5/8” diameter plastic threaded cable rack bolt inserts shall be cast in the wall of the riser section.

A continuous circumferential Butyl Rubber gasket shall be supplied, to be laid on the wall joint of the base and riser section when manhole is being assembled at job site.

The number of pulling-in eyes and/or cable rack bolt inserts may vary. Additionally, the size, location, shape and number of duct entrances and/or knock-out area may vary. Unit price of manhole shall not vary for number of openings, pulling-in eyes and/or rack bolt inserts.

Field verify window depth and locations prior to ordering manhole.

The city will supply a frame and lid for the manhole. Contractor shall contact Mr. Ricardo Lopez, Inventory Clerk at (414) 286-6123 prior to obtaining the frame and lid from the DPW Headquarters at 3850 N. 35th St. Contractor must have the “Casting Requisition Form” which shall be supplied by the city.

B.2 Conduit

Furnish and install DB_60 polyvinyl chloride (PVC) conduit. Conduit will be accepted on the basis of a Manufacturer’s Certificate of Compliance and WISDOT field inspection upon delivery to a project.

Manufacturers of PVC Conduit DB-60 shall request evaluation and approval of their products by filing with the Department’s Research Supervisor, Bureau of Highway Construction, a certificate setting forth the name or brand of pipe to be furnished, the specified type, category, grade and PVC plastic cell classifications. The certificate shall have attached a certified test report from an approved independent testing laboratory showing specific results of tests performed on each diameter conduit to be furnished conforming to all requirements of these specifications. The conduit tested shall be randomly selected for test by the independent testing laboratory as being representative of that manufacturer’s conduit. The manufacturer of the conduit shall also submit with the certification, a guarantee that all conduit furnished be of the same quality and composition and conform to the specification requirements as tested by the independent laboratory, as long as the manufacturer continues to furnish materials for WISDOT projects.

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

B. 3 Concrete

The type of concrete mix to be used to encase the ducts will be:

Type I Cement 280 lbs

Fly Ash 100 lbs

Sharp Torpedo Sand 3100 lbs

Water 35 gals

Chryso Air 260 or approved equal 2.0 ozs

Chryso Plast 209 or approved equal 7.0 ozs

Air 5%

Mix the materials to provide an approximate 3 inch slump

B.4 Slurry Backfill

Aggregate slurry backfill consists of No. 1 concrete aggregate Class ‘C’ concrete mix with the cement deleted.

Fly Ash (Class C) 75 lbs.

Concrete Sand (Damp) 1830 lbs.

No. 1 Concrete Aggregate 1830 lbs.

Mix with water to inundate the aggregate sufficiently to provide an approximate 3 inch slump. Deposit the mix directly from a concrete transit mix truck.

For any questions on materials, contact Ms. Karen Rogney at (414) 286-3243.

C Construction

C.1 Manhole

Install the bottom section of the manhole while avoiding damage to the live active cables. The excavation may need to be widened to slide the bottom under the existing cables. After the bottom section of the manhole has been set, the existing cables need to be placed within the window openings, splice cases and/or coils placed back into the manhole.

Exercise extreme care in the handling of working cables within the excavation. When cables need to be moved, particularly lead sheathed cables, move cables slowly and gradually. Avoid sharp kinks that may damage the inner core of the cables and the sheath.

Complete the “doghouse” manhole installation without any damage or service disruption to the existing cables.

Install 5’ Diameter “Doghouse” Manholes Type CUC Installed over Conduit in accordance with standard spec 611.3.

Install the top of the roof deck at a standard depth of 18” below finished grade where possible. A minimum depth of 12” from finished grade to the top of the roof deck must be maintained.

C.2 Placing Duct

All ducts shall be inspected before placing to see that the bores are clean and free from mud, sand, etc. Only ducts with a smooth bore, free from burrs, rough projections etc. shall be used. Where burrs or other rough areas likely to damage cable are found in the duct, they shall be smoothed off by rasping or scraping.

All existing ducts shall be extended into the new manhole structure unless otherwise noted on the plan. Split PVC duct should be used on ducts containing cables. The split duct shall be installed per manufactures recommendations using tape and reinforced with plastic straps to produce a rigid, stable unit.

All ducts shall terminate on the inside wall of the manhole. Install a standard end bell fitting flush with the wall on all duct access points.

Where trace wires are present, reconnect and extend trace with #10 copper wire extended two feet past the inside wall of the manhole.

C.3 Concreting

Begin concreting after conduit has been laid and the trench and duct have been inspected. The minimum concrete encasement of the ducts is 3 inches on the top, 2 inches on the sides, and 3 inches on the bottom. After placing, the concrete shall be puddled with a splicing bar or similar tool so that complete duct encasement is accomplished. Wood braces used to keep the conduit from floating shall be removed before the concrete sets completely and the resultant encasement voids filled with concrete.

Allow the concrete encasement to set for a minimum of 6 hours before backfilling is commenced.

C.4 Slurry Backfill

Commence backfilling immediately after the duct has been inspected, approved, and has set to withstand the load.

An aggregate slurry as specified shall be used to backfill all concrete encased conduit. The trench shall be slurry backfilled to the proposed or existing subgrade. The mix shall be deposited in the trench directly from a concrete transit mix truck.

D Measurement

The department will measure 5’ Diameter “Doghouse” Manholes Type CUC by each individual manhole, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0150	5’ Diameter “Doghouse” Manholes Type CUC	EACH

Payment is full compensation for all excavation work and disposal of material; for adjusting manhole frame to final grade, for furnishing and installing all materials, including precast manhole, conduit, conduit fittings, end bells, bricks, and coarse aggregate, bedding, concrete forms, concrete placement, appurtenances, and backfilling.

134. Removing CUC Manhole, Item SPV.0060.0151.

A Description

The work under this item describes removing various manholes for the City of Milwaukee Underground Conduit department at locations shown in the plans, according to standard spec 204. Removal means removal of the existing structure and any necessary conduit alterations required.

B (Vacant)

C Construction

C.1 General Requirements

All work to be performed by a Licensed Electrical Contractor.

Complete all operations necessary to remove the existing structure and that might endanger the new construction before constructing new work.

Manholes designated for removal and subsequent reconstruction will ordinarily contain working cables which must be maintained during the course of this phase of work. Protective measures against damage must be observed when handling and working around these cables.

C.2 Frame and Cover Removal

Remove the frame and cover on all manholes designated for removal. If the castings are to be salvaged as directed in the plans, exercise caution with frames embedded in concrete so unnecessary damage to the frame does not occur during the process of breaking concrete. Remove all mortar and concrete from the frame. Store salvaged castings at location approved of by the engineer.

C.3 Protection of Cables

Extreme care must be exercised in the handling of working cables in manholes or exposed conduit package areas while removal work is going on. Cables may carry high voltage that may be life threatening.

No cable removed from its racks and spanning the manhole opening is to be permitted to sag appreciably from its own weight across such opening. Provide temporary supports for all cables.

When cables need to be moved, particularly lead sheathed cables, move cables slowly and bend gradually. Avoid sharp kinks that may damage inner core of cables and the sheath.

Cables must be left as stationary as is practicable after the cables have been temporarily located. Exercise care if further shifting is required while construction work progresses and if needed, re-support.

Guard against damage to the exposed cables by falling objects such as tools, equipment and debris. Avoid stepping on cables. Do not use cables to support any objects during the course of the construction work.

Promptly notify Mr. Brian Pawlak at (414) 286-5970 work / (414) 708-2118 cell, of any visible cable defects discovered at the time the cable is exposed. Report any signs of abrasion, sheath rupture, kinking in the cable or evidence of sheath cracks.

The contractor will be held liable for all damage due to carelessness and to neglect and is responsible for protecting and safeguarding cables. All damage will be repaired at the contractor’s expense.

C.4 Removing Existing Structure

After removal of the castings and protecting and supporting the cables, carefully remove the manhole roof, walls, floor and all hardware. No portion of the existing structure is to remain. The increase in the size of the excavation will be determined by the size of the manhole to be reconstructed as indicated in the detail plans. Remove all waste material accumulated by the removal of the existing structure from the work site. No part of this waste material can be used as backfill material.

C.5 Conduit Alterations

Break back by hand sections of cement encased conduit to facilitate excavation for the new proposed structure. Hand chip concrete away for the existing pipes. Carefully remove pipes from around the cables. Hand chip enough concrete away from the pipes to allow for the coupling of split ducts on to the ends of the pipes. Protect exposed pipe ends and existing cables from damage.

D Measurement

The department will measure Removing CUC Manhole by each individual manhole, acceptably removed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0151.	Removing CUC Manhole	EACH

Payment is full compensation for breaking down and removing structure; conduit alterations; for providing cable protection; for hauling and disposing of materials.

135. Underdeck Utility Structure B-40-206, Item SPV.0060.0152.

A Description

This section describes furnishing and installing a duct package of four, 4-inch diameter, Fiberglass Reinforced Epoxy (FRE) conduits, the conduit support system including all deck inserts and hangars, and the abutment penetrations to the underside of the deck of Structure B-40-206 as shown on the plans.

B Materials

Use material conforming to the class of material named and as specified. Conduit shall be non-metallic, filament-wound epoxy, suitable for direct burial, concrete encasement, and suspended from bridge members without regard to outdoor ambient light. The product shall contain carbon black to provide ultraviolet protection.

The conduit shall have an interference joint system consisting of an integral bell and spigot with interlocking male and female threads. Epoxy adhesive shall be applied on joints per manufacturer's specifications prior to use.

Product shall be listed by Underwriters Laboratories and conform to the National Electrical Code.

The ID dimension shall be full, actual trade size.

All adaptors, couplings, expansion joints and suspended hangers shall be FRE fittings corresponding to and manufactured for use with FRE conduit as specified on the plans. The suspended hanger assemblies shall include stainless steel threaded concrete inserts as specified on the plans.

Epoxy coated reinforcement tie bar shall conform to standard spec 505.

C Construction

Construct according to the pertinent provisions of standard spec 502 and 652. The four-duct package to be installed on B-40-206 consists of four 4-inch ducts, one high by four wide. Install the conduit 5 feet beyond the back of the bridge abutment walls.

Install a fiberglass to PVC adaptor on the end of each duct and temporarily cap.

Coupling of the duct sections shall be accomplished and secured by first applying epoxy adhesive then mating a spigot end into an integral bell end with a blow to the open end of the duct section. Submit shop drawings for all deck inserts, hangers, braced hangers, expansion couplings and hanger spacing to Ms. Karen Rogney at (414) 286-3243 of the City of Milwaukee for review 60 business days in advance of the bridge deck placement. Install all FRE duct and components according to the manufacturer's instructions.

D Measurement

The department will measure Underdeck Utility Structure B-40-206 by each, acceptably 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.0060.0152.	Underdeck Utility Structure B-40-206	EACH

Payment is full compensation for furnishing the inserts, hangers, braced hangers, expansion couplings, hanger spacing, conduit, conduit bodies, conduit fittings, conduit spacers, end caps and trace wire; for excavating, bedding, encasement and backfilling including any concrete, stone, aggregate slurry, bracing, or other related materials; for disposing of surplus materials; and for making inspections, and for installing the conduit.

136. Underdeck Utility Structure B-40-207, Item SPV.0060.0153.

A Description

This section describes furnishing and installing a duct package of eight, 4-inch diameter, Fiberglass Reinforced Epoxy (FRE) conduits, the conduit support system including all deck inserts and hangars, and the abutment penetrations to the underside of the deck of Structure B-40-206 as shown on the plans.

B Materials

Use material conforming to the class of material named and as specified. Conduit shall be non-metallic, filament-wound epoxy, suitable for direct burial, concrete encasement, and suspended from bridge members without regard to outdoor ambient light. The product shall contain carbon black to provide ultraviolet protection. The conduit shall have an interference joint system consisting of an integral bell and spigot with interlocking male and female threads. Epoxy adhesive shall be applied on joints per manufacturer's specifications prior to use.

Product shall be listed by Underwriters Laboratories and conform to the National Electrical Code.

The ID dimension shall be full, actual trade size.

All adaptors, couplings, expansion joints and suspended hangers shall be FRE fittings corresponding to and manufactured for use with FRE conduit as specified on the plans. The suspended hanger assemblies shall include stainless steel threaded concrete inserts as specified on the plans.

Epoxy coated reinforcement tie bar shall conform to standard spec 505.

C Construction

Construct according to the pertinent provisions of standard spec 502 and 652. The four-duct package to be installed on B-40-207 consists of eight 4-inch ducts, two high by four wide. Install the conduit 5 feet beyond the back of the bridge abutment walls.

Install a fiberglass to PVC adaptor on the end of each duct and temporarily cap.

Coupling of the duct sections shall be accomplished and secured by first applying epoxy adhesive then mating a spigot end into an integral bell end with a blow to the open end of the duct section. Submit shop drawings for all deck inserts, hangers, braced hangers, expansion couplings and hanger spacing to Karen Rogney at (414) 286-3243 of the City of Milwaukee for review 60 business days in advance of the bridge deck placement. Install all FRE duct and components according to the manufacturer's instructions.

D Measurement

The department will measure Underdeck Utility Structure B-40-207 by each, acceptably 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.0060.0153.	Underdeck Utility Structure B-40-207	EACH

Payment is full compensation for furnishing the inserts, hangers, braced hangers, expansion couplings, hanger spacing, conduit, conduit bodies, conduit fittings, conduit spacers, end caps and trace wire; for excavating, bedding, encasement and backfilling including any concrete, stone, aggregate slurry, bracing, or other related materials; for disposing of surplus materials; and for making inspections, and for installing the conduit.

137. Suspended Galvanized Steel Conduit Package Cleaning, Coating and Painting; Item SPV.0060.0160.

A Description

This section describes furnishing paint materials and applying paint to suspended corroded galvanized conduits and miscellaneous metal parts of other steel structures. This work also includes preparing these surfaces for cleaning, coating, painting, protecting and drying the paint coatings, protecting traffic and property in the vicinity of the structure, protecting of portions of the structure against disfigurement by paint or paint materials, and providing the field cleaning and painting of suspended galvanized conduits system.

B Materials

B.1 Coating and Paint

Coatings of the suspended galvanized conduits, hangers, and hanger rods must conform to the requirements specified for galvanized steel coating per WISDOT's 517.2.4.2 APL (Approved Product Lists) for Structure Painting Systems:

Acrolon 218HS Polyurethane B65-650; Sherman Williams

Paints of the suspended galvanized conduits, hangers, and hanger rods must conform to the following requirements:

A-100 Exterior Acrylic Latex Satin Guild Grey (SW9561); Sherman Williams

Furnish factory mixed paint or field mix conforming to the manufacturer's directions and as the contract directs. Ready-mixed paints must not settle or cake in the container but should break up readily with a paddle to a smooth, uniform paint of good brushing consistency that dries without streaking, wrinkling, running, or sagging if painted on smooth and vertical surfaces. Prime and undercoats must dry to a dull gloss, and finish coats to a full gloss. If required, colors and hiding powers must equal those of samples the department furnished. Any proportions specified in formulae are by weight, unless indicated otherwise in the requirements for specific paint.

Generally, paint must arrive packaged in strong, tight, standard commercial, 5 US standard-gallon capacity metal containers, except for the fractional parts of units. Package the fractional parts in one US standard-gallon capacity metal containers. If mechanical means for mixing and stirring are provided at the job site or painting facility, then the contractor may furnish the paint in 30 gallon or other suitable size metal containers. Mark each container with the name and address of the manufacturer, the type of paint contained, and the date of manufacture. Use tight-fitting covers on the containers and arrange them so that the inspector may attach wire-lead seals. Except as specified above for mixing paint mechanically, mix paint on the job in containers with not be more than 15 gallons capacity.

Paint sampling and inspection normally takes place at the point of manufacture; the department may sample the paint at the fabricating shop or in the field. The engineer will obtain samples of paints purchased directly by the state either for approval at their point of manufacture or at their destination as indicated at either at the time contracts are awarded or in the invitation for bids.

If inspecting paints at the point of manufacture, the manufacturer must furnish, if requested, any formulae required to determine the ingredients before making the paints. The manufacturer must allow the inspector to check the makeup and sampling of paint batches. The manufacturer also must furnish, if requested, any formulae required to determine specification conformance.

It is the contractor or manufacturer's responsibility to ensure paint mixing occurs in a container that allows sampling of the paint it contains. Take field samples only from paint that is on the job. Take samples in fabricating shops from containers of paint proposed for the specific bid item of work. Perform tests according to applicable standard methods of ASTM or AASHTO. The engineer may waive sampling and testing requirements for quantities of 5 gallon or less of paint of any single formulation required for each project, provided the paint purchased is from stock that demonstrated a satisfactory service record.

For any questions on materials, contact Mr. Hazem Ramadan at (414) 286-3242.

C Construction

C.1 Weather Conditions

Per WISDOT's special provision 517.3.1.2 for weather conditions for painting, do not apply paint if the air is misty or if conditions are otherwise unsatisfactory for the work. Do not apply paint on damp or frosted surfaces. If coating or painting material under cover in damp or cold weather, it must remain under cover until dry or until weather conditions allow its open exposure. Do not perform coating or painting if the metal is hot enough to cause the coating to blister and produce a porous paint film. Do not expose coated surfaces to temperatures below 35 F until after dry enough for recoating or applying the top coat. Do not apply zinc-rich coatings if the temperature of either the air or the steel is below 40 F. Do not apply epoxy and urethane coatings if the temperature of either the air or the steel is below 50 F. Do not apply the epoxy coating system if the relative humidity is greater than 90 percent, or unless the steel temperature is at least 5 F higher than the dew point temperature.

C.2 Surface Cleaning

Clean the galvanized conduits, hangers, hanger rods, and metal surfaces attached to the suspended conduit before painting these surfaces because of bolting, removing rust, mill scale, dirt, oil, or grease

and other foreign substances. If the engineer allows, blast clean galvanized steel conduit, including hangers and hanger rods and/or use metal brushes, scrapers, chisels, hammers, power tools, or other effective means to remove rust, scale, and dirt. Do not use tools that excessively scar the metal. Remove oil and grease by solvent cleaning according to SSPC-SP 1 in standard spec 517.3.1.3 for surface cleaning. Remove dust, fins, tears, slivers, burred or sharp edges, or other loose material present on any steel member of the suspended steel conduit package that appears during blasting or hand cleaning. Remove abrasive and paint residue from any steel surfaces of the suspended galvanized steel package with a commercial grade vacuum cleaner equipped with a brush-type cleaning tool, or by double blowing. If using the double blowing method, vacuum the top surfaces of structural steel, including longitudinal stiffeners and hangers after completing the double blowing operations. Ensure that the steel is dust free when applying primer. Apply the primer within 8 hours after blast cleaning.

C.3 Coating and Painting

After completing erection of scaffolding and removing of adhering rust, scale, dirt, grease, or other foreign material on the suspended galvanized steel conduit package and hanger, if traffic produces visible dust, control the dust, at no expense to the department, as necessary on each side of the site and take necessary precautions to keep dust and dirt off freshly painted surfaces or those awaiting paint. If the precautions taken to protect the work required are inadequate, or the atmospheric conditions cause paint drift to become a problem, the engineer may require that the contractor discontinue spraying until taking adequate precautions or until favorable atmospheric conditions exist.

After the inspector approves the entire cleaned surface to be coated, apply the Acrolon 218HS Polyurethane B65-650 Sherman Williams galvanized steel prime coating uniformly, per manufacturer’s installation procedures and per standard spec 517 to the entire surface of all conduits, hangers and hanger rods.

Either before or after applying the prime coat, brush or spray a stripe coat of primer on all plate edges, bolt heads, nuts, and washers. Apply succeeding coats as the product data sheet shows.

If applying the first coat produces runs, bubbles, or sags, apply the coating in two, wet, even coats using a 50 percent overlap with minimum dry or overspray. If excessive coating thickness produces mud cracking, remove the coating back to soundly bonded coating and recoat the area to the appropriate thickness. In areas lacking in primer thickness, clean the areas with power washing equipment to remove dirt; then brush the areas with a non-rusting tool, vacuum and recoat after that.

After the inspector approves the prime coating of the entire suspended galvanized steel conduit package and hangers, perform painting in a neat and skillful manner. Apply A-100 Exterior Acrylic Latex Satin Guild Grey Sherman Williams paint per manufacturer’s installations procedures. Apply the paint coating smoothly and uniformly so no excess paint collects at any point. Provide a finished surface free of streaks, pitting, wrinkling, or other irregularities as much as possible. Use power spraying equipment that applies the coatings in a fine, even spray without adding any thinner. If applying paint with spray equipment, immediately brush it smooth, if necessary, to provide uniform coverage and to eliminate wrinkling, blistering, and air holes. In cool weather, the contractor may warm the paint to reduce the viscosity. Heat the paint by placing the paint containers in water or on steam radiators. Thin the paint, if necessary for proper application during cool weather, according to the manufacturer's recommendations.

Contact the City of Milwaukee for inspection and acceptance of the work.

D Measurement

The department will measure Suspended Galvanized Steel Conduit Package Cleaning, Coating and Painting by each location, acceptably completed. The measured quantity includes the paint and coating each acceptably applied on the suspended galvanized conduit package per plans.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0160	Suspended Galvanized Steel Conduit Package Cleaning, Coating and Painting	EACH

Payment is full compensation for furnishing the cleaning, prime coating and painting of the suspended conduit package, hangers, hanger rods and/or other related materials; for disposing of surplus materials; and for making inspections for cleaning, prime coating and painting of the suspended conduit package, hangers, and hanger rods.

138. Suspended Galvanized Steel Conduit Repair; Item SPV.0060.0161.

A Description

This special provision describes repairing corroded broken sections of suspended galvanized steel ducts, as shown on the plans and as hereinafter described.

B Materials

B.1 Split Conduit

Furnish and install one of the following Split Conduit duct options according to manufacturer's installation procedures:

Split Conduit	I.D. Inches	O.D. Inches	Part Number
Prime Conduit Inc.'s Schedule 40 4-inch Split Conduit	3.901"	4.500"	49014SD-010
Inner Duct Inc.'s Schedule 40 4-inch Split Duct	4.026"	4.500"	P4F
Conduit Repair System Inc.'s Schedule 40 4-inch Split Conduit	3.746"	4.500"	P4F

Split Conduit will be accepted on the basis of a Manufacturer's Certificate of Compliance and WISDOT field inspection upon delivery to a project.

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

B.2 Weather Resistant Sealant

Furnish and install one of the following Weather Resistant sealant options according to manufacturer's installation procedures:

Weather Resistant Sealant	Item Number
LOCITITE'S TITE FOAM Big Gap Foam Sealant	2378565
LOCTITE's TITE FOAM Gaps and Cracks foam	1988753
Sealant AERVOE's Rubberized Leak Repair Foam Sealant	11801

Sealant will be accepted on the basis of a Manufacturer's Certificate of Compliance and WISDOT field inspection upon delivery to a project.

Sealants shall conform to the requirements of bonding the galvanized steel ducts with the split Conduit as there will be minimum of 0.14-inches to 0.5-inches difference in size between the galvanized steel ducts and the split conduits per the WISDOT engineer's choice of Split Conduit.

For any questions on materials, contact Mr. Hazem Ramadan at (414) 286-3242.

C Construction

C.1 Placing Split PVC

After Surface Cleaning, Blasting, and Painting the existing galvanized steel conduits; Install the Split Conduit over each visible broken portions of galvanized steel conduits suspended from the bridge at each location marked on the plans based on the manufacturer's installation specifications. Split Conduit should be installed in a manner acceptable to the engineer.

C.2 Placing Weather Resistant Sealant

Install Weather Resistant Sealant at each end of the Split Conduit filling the gaps between it and the existing galvanized steel conduits based on the manufacturer's installation specifications. Ensure to place plenty of Weather Resistant Sealant to prevent the Split Conduit from motion. Installation of Weather Resistant Sealant should be installed in a manner acceptable to the engineer.

Contact the City of Milwaukee for inspection and acceptance of the work.

D Measurement

The department will measure Split Conduit and Weather Resistant Sealant installed in every conduit run, furnished and installed at the locations on the plans by the each, acceptably installed. The measured quantity include the linear feet split Conduit installed plus the weight of weather resistant sealant 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.0060.0161	Suspended Galvanized Steel Conduit Repair	EACH

Payment is full compensation for furnishing the Split PVC, Weather Resistant Sealant and other related materials; for disposing of surplus materials; for making inspections, for installing the Split Conduit and Weather Resistant Sealant.

139. Pull Ropes Anchored to Manholes; Item SPV.0060.0162.

A Description

This special provision describes furnishing and installing pull ropes anchored to manholes, as hereinafter described.

B Materials

B.1 Pull Rope

Pull rope specifications will be:

- Flat construction (7/16” to 5/8” wide)
- 100% woven aramid fiber (may include tracer wire)
- 1500 lbs. Minimum pull strength prelubricated
- sequential footage markings for location

B.2 Anchor

Furnish and install one of the following Ground Concrete Anchors options: Zoro’s Tools Inc’s Concrete Anchor:

- 7,000 lbs. Minimum Tensile Strength
- Galvanized steel material
- Item Number: G8748442

3M Protecta PRO Concrete D-ring Anchor:

- 7,000 lbs. Minimum Tensile Strength
- Galvanized steel material
- Item Number: AJ20A

Anchors will be accepted on the basis of a Manufacturer’s Certificate of Compliance, OSHA Designation: 1910 and ANSI Z359, and WISDOT field inspection upon delivery to a project.

For any questions on materials, contact Mr. Hazem Ramadan at (414) 286-3242.

C Construction

C.1 Placing Pull Rope

Install a pull rope in each run of conduit of the 8 conduits suspended from the bridge. The rope shall be 4 feet longer than the run of conduit and shall be doubled back at least 2 feet at each raceway access point.

C.2 Placing Anchors

Furnish and install two ground concrete anchors to the wall per manhole according to manufacturer's installation procedures. Tie pull ropes together at each anchoring point in a manner that does not obstruct future cable installations and manhole use.

Contact the City of Milwaukee for inspection and acceptance of the work.

D Measurement

The department will measure pull ropes installed and tie to the anchor in every conduit run furnished and installed at the locations on the plans by the each, 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.0060.0162	Pull Ropes Anchored to Manholes	EACH

Payment is full compensation for furnishing the pull ropes and anchoring system or other related materials; for disposing of surplus materials; and for making inspections, and for installing the pull ropes and anchors.

140. Speed Warning Sign System; Item SPV.0060.0205.

A Description

This special provision describes furnishing and installing a system to trigger speed warning signs based on user defined speed thresholds for each of a minimum of nine classifications over three lanes of interstate traffic. The warning signs themselves will be furnished separately and installation of the signs will be paid for separately.

B Materials

Furnish all materials necessary to provide a fully functioning warning system meeting the requirements described this article. Include, at a minimum, the following materials:

- Vehicle Speed and Classification Sensors

  Furnish three overhead sensors purpose built to classify vehicles and detect their respective individual speeds. Sensors must consist of the following detection technologies merged into a single output:

  - K-Band (24.05 to 24.25 GHz) Doppler Radar,
  - 40 KHz Ultrasonic Frequency at 10 to 30 pulses per second,
  - Passive Infrared (PIR) Spectral Response of 6.5 µm to 14 µm

  Overhead sensors must be previously documented to function within +/- 3% accuracy for vehicle volume, +/- 3% for speeds above 60 mph, and within 2 mph for speeds below 60 mph.

  Overhead sensors must differentiate a minimum of seven classifications including car, car with trailer, motorcycle, delivery-style van, truck, truck with trailer, semi-trailer, and bus.

  Overhead sensors must operate over RS-485 at 9600 baud to the associated system controller.

  Overhead sensors must operate at a maximum of 15VDC and consume a maximum of 200mA.

  Overhead sensors must be contained in a sealed enclosure meeting IP 64 standards and must operate between -40°F and +155°F at 95% RH.

- Vehicle Speed and Classification System Controller

  Furnish a controller, and any necessary peripheral devices, to communicate with the overhead sensors and to generate and transmit a contact closure when the user defined speed threshold has been exceeded for each of the respective vehicle classifications.

  The controller must operate between -20°F to 155°F at 95% RH.

  The controller must include any peripheral, or peripherals, to properly communicate with, and control, the sensors as well as to provide contact closure activation at each respective sign. This

would include any necessary serial interfaces, USB interfaces, and contact closure over ethernet interfaces.

The controller must include a screen and user interface device, such as a keyboard, to set up, configure, monitor, and diagnose problems with the system.

The controller must put out a contact closure per sensor over each lane to activate warning respective warning signs through an ethernet connect.

The controller will be connected to an ethernet switch (procured and installed separately) in a cabinet adjacent to the overhead sign bridge on which the sensors are mounted. That ethernet switch will be connected to another ethernet switch (procured and installed separately) via single mode fiber optic cable. The warning signs will be activated through contact closures delivered through the ethernet switch.

- Sensor Cables

  Furnish cables to power and communicate between the system controller and power supplies and the sensors on the overhead sign bridge. Any daisy-chain connections of the sensor cables that may be necessary must be made in the associated cabinet adjacent to the structure the sensors are mounted on.

  Cables must be weatherized and all connections designed and manufactured for use exposed to weather conditions.

- Furnish mounting brackets for mounting the sensors to the vertical hangers. Mounting brackets must be from the same manufacturer as the sensors.

- Furnish mounting brackets for fastening the vertical hangers to the concrete face of the bridge as shown on the plans. These mounting brackets must be purpose built to vertically mount pipes to horizontal elements. Furnish a neoprene or rubber backing to isolate the mounting bracket from the concrete face.

- Furnish a 1-1/2” aluminum pipe to mount vertically to the mounting brackets on the concrete face. This pipe must be sized appropriately to mount the sensor so that the sensor is mounted 18’-3” above the roadway. No materials may be below 18’-3” above the roadway.

- All materials furnished under this item must come with a minimum of a one-year warranty beginning on the installation date and transferrable to the department.

- Furnish a fail-safe locking cable to fasten the sensor directly to the horizontal member of the fence on the bridge to support the sensor in the event of a failure of other mounting hardware. Furnish a second fail-safe locking cable to fasten the vertical hanger pipe directly to the horizontal member of the fence to support the entire assembly in the event of a failure of the hardware between the hanger and the bridge.

- Furnish clamps to fasten the sensor cable to the concrete face of the bridge.

C Construction

Coordinate installation of the overhead sensors with traffic control and with the installation of the overhead sign bridge to determine whether to install the sensors and all mounting hardware before or after installing the overhead sign bridge over the roadway. Based on this coordination, choose whether to install the sensors before or after sign bridge installation.

Install the controller, and associated peripheral devices, in the controller cabinet as shown on the plans.

Configure the classifications and respective speed thresholds per a scheme provided by the department.

Install the sensors and mounting hardware to the vertical supports to provide a mounting height of 18’-3” above the roadway. No material may be lower than 18’-3” above the roadway.

Install the sensor cable following the manufacturer’s installation guidelines. The sensors must be connected in a chain with the connections from one sensor to the next being made in the control cabinet. This means that the cable must doubled back from cabinet to sensor, sensor to cabinet, and back in sequence until all sensors are connected to the controller in the cabinet.

Clamp the cable to the overhead sign bridge chord to support the cable. Use caution to not damage the cable while clamping it.

D Measurement

The department will measure Speed Warning Sign System by the 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.0060.0205	Speed Warning Sign System	EACH

Payment is full compensation for furnishing, installing, and testing the entire system, including sensors, controller, cabling, mounting hardware, and mounting brackets; for installing the controller, the sensors, and the cable; and for setting up and configuring the system.

141. Install Speed Warning System DMS; Item SPV.0060.0206.

A Description

This special provision describes installing a state-furnished, front access Dynamic Message Sign (DMS) associated with the Speed and Classification Warning System paid for separately in this project.

B Materials

The department will provide the sign, controller, network communications control cable, vertical mounting I-beams, and hardware for mounting sign to the vertical I-beams.

Furnish a copper communications cable meeting the requirements of standard spec 655 to transmit a contact closure from the adjacent components as part of the Speed and Classification Warning System described and paid for separately. The contact closure will be used to activate the speed warning sign message.

Furnish power wires and a ground wire meeting the following requirements.

Use an AWG #6 copper wire or equivalent bonding straps to bond the sign and cabinet to the structure. Use an AWG #6 solid, bare copper wire to bond the sign structure to the ground rod(s).

For the three wires carrying 120 VAC power from the cabinet to the sign, use single conductor, stranded copper, 120 VAC, XLP insulated, USE rated wire. Size the wire to carry the maximum amperage permitted by the main breakers in the sign.

Provide a 100-amp 120/240-VAC load center in the controller cabinet, along with a breaker recommended by the sign manufacturer for each sign.

C Construction

Install the breakers to control all power to each sign and the cabinet. Protect the branch serving the controller and communication equipment with the second stage of the surge protector. Connect the power and control cables according to the manufacturer’s recommendations. Run the cables in rigid metallic conduit or flexible metallic conduit, or combination of these, within the sign structure.

Bond the bottom of the sign structure to one or more ground rods. Use exothermic welding at each end of the ground wire, unless the steel structure has a suitable grounding lug. Use a device that measures resistance to ground using the three-point fall-of-potential method to ensure that the resistance from the sign’s ground bar to ground does not exceed 4 ohms. Add more ground rods if necessary to achieve this requirement.

D Measurement

The department will measure Install Speed Warning System DMS by each sign, acceptably installed and tested.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0206	Install Speed Warning System DMS	Each

Payment is full compensation for installing and testing the sign and controller; providing cables, conduits, and fittings; for testing the sign; and for transporting materials.

142. Salvaging Overhead Freeway DMS; Item SPV.0060.0207.

A Description

This special provision describes removing an existing full-matrix overhead freeway dynamic message sign, controller, and cables, and storing them until reinstalled.

B Materials

Existing DMS, controller, control cables, power wires, vertical I-Beam supports, and mounting hardware.

Salvage the following existing materials:

- Full-Matrix Overhead Dynamic Message Sign in a walk-in enclosure;
- Dynamic Message Sign controller
- Multi-mode fiber optic control cable;
- Power distribution wires between the control cabinet and the DMS; and,
- 100-Amp 120/240-VAC load center with breakers in the controller cabinet.

Salvaged dynamic message sign will be a Daktronics Vanguard Overhead-Mounted Freeway Dynamic Message Sign (DMS). The DMS is 24-feet 9-1/16-inches long by 7-feet 10-1/8-inches tall by 3-feet 1-1/8-inches deep and weighs approximately 3400 pounds, not including the vertical I-Beam supports.

Dispose of the following existing materials:

- Hardware used for mounting the vertical I-Beams to the overhead sign bridge
- Vertical I-Beams bolted to back of Overhead DMS
- Hardware connecting the vertical I-Beams to back of the Overhead DMS

C Construction

Before beginning any removal work inspect the existing DMS with the engineer and make careful notes on structural connections and wiring connections as well as any deficiencies or damage to the existing DMS or structure. Take pictures as appropriate and maintain them until the DMS has been completely reinstalled and made operational and provide the pictures to the engineer when requested.

Carefully disconnect the power distribution wires and multi-mode fiber optic control cable between the controller cabinet and the DMS. Remove the wires and control cable and store for later reinstallation.

Removal of the controller cabinet is paid for under a separate pay item in the contract.

Carefully remove the dynamic message sign and controller for storage. Prior to removing the sign and controller, the contractor may request that it be inspected to determine condition. Once removal has started, the contractor shall be responsible for any damage to the sign or controller. It will be the choice of the contractor on how best to remove the sign from the overhead structure. Replace or repair any damaged components at no additional expense to the department.

Store the dynamic message sign and controller in a secure and safe location until the sign is reinstalled with the project.

D Measurement

The department will measure Salvaging Overhead Freeway DMS by the unit, acceptably removed and stored until reinstalled.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0207	Salvaging Overhead Freeway DMS	EACH

Payment is full compensation for removing the DMS, sign controller and cables, including any necessary wiring disconnections; for storing the sign; any necessary site restoration.

143. Temporary Poles Wood 40-Foot; Item SPV.0060.0210.

A Description

This special provision describes furnishing and installing a Class 4, 40-Foot wood pole for use during the duration of the contract.

B Materials

Furnish wood poles that are Class 4 or larger with a 40-Foot minimum overall length. The poles shall be western red cedar according to ANSI standards 05.1. Pressure treatment shall be 5% pentachlorophenol with a minimum of 8 pounds per cubic foot net retention of the oil-borne preservative. Poles shall be shaved the entire length.

C Construction

Place the wood pole in the ground as shown in the plans or as directed by the engineer and mount detectors and solar power assemblies as shown in the plans and as directed and paid for under other pay items in this contract.

D Measurement

The department will measure Temporary Poles Wood 40-Foot as each individual pole, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0210	Temporary Poles Wood 40-Foot	EACH

Payment is full compensation for furnishing and installing the wood post for the duration of the project and all excavating and backfilling.

144. Temporary Vehicle Detector Assembly; Item SPV.0060.0211.

A Description

This special provision describes assembling a temporary vehicle detector assembly and installing, calibrating, and integrating the assembly into the existing system. Assembly will be done on a 40-foot wood pole provided under other pay items in the contract. Inclusion of a second solar power and detector system will be paid for by additional quantities of this pay item.

B Materials

Materials will include state-furnished materials and contractor furnished materials.

State-furnished materials include the following:

- Two Electronic Integrated Systems, Inc. (EIS) Remote Traffic Microwave Sensors (RTMS).
- One cellular modem and antenna.
- One solar power system consisting of 2-85W panels, 2-120 Amp-Hour batteries, a solar power controller, and one solar power cabinet to house the batteries and controller.

Contractor furnished materials include the following:

- Outdoor rated Power cable between solar power system output and state-furnished RTMS.
- Mounting hardware for solar power system and RTMS detector.

C Construction

RTMS Detector Installation:

Install the RTMS detector as required in standard spec 675 and connect the detector to the furnished cellular modem. Coordinate integration of the detector and modem assembly into the existing communications and FTMS system.

Solar Power System Installation:

Install the solar panels facing south on the pole with the devices to be powered. If a compass is used, a correction must be made for the difference between magnetic north and true north. Install the solar panels at a tilt angle of approximately 60 degrees. The tilt angle shall be considered the angle from horizontal to the front, or face of the solar panel.

Mount the cabinet to the pole by the two cast aluminum mounting brackets which are already attached to the back of the cabinet. The brackets shall be attached to the pole using stainless steel bands or U-bolts.

Install the cabling, ensuring that cables enter the cabinet only through the bottom, and that strain relief fittings are used to seal cable entrance points. Connect the panel to the charge controller, connecting the white wire to the positive (+) terminal and the black wire to the negative terminal (-).

D Measurement

The department will measure Temporary Vehicle Detector Assembly as each individual unit consisting of one detector and one solar power assembly, acceptably installed and integrated into the existing FTMS system.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0211	Temporary Vehicle Detector Assembly	EACH

Payment is full compensation for providing the contractor furnished materials, assembling the state-furnished and contractor furnished materials, installing the assembly, calibrating the detector, connecting the detector to the modem, integrating it into the existing FTMS system, and making the assembly functional.

145. Ground Rod; Item SPV.0060.0213.

A Description

This special provision describes installing a ground rod and ground wire.

B Materials

Ground rod shall be copper clad steel with cladding 13 mils thick. The minimum diameter is 5/8-inch and the minimum length is 8 feet. Ground wire shall be AWG # 6 bare, solid copper.

C Construction

Use exothermic welding to connect the ground wire to the rod. Install the rod vertically, or as close to vertical as conditions permit. Select locations with moist soil, if available. Place the rod at least 6 feet from all other ground rods.

D Measurement

The department will measure Ground Rod by the unit, acceptably installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0213	Ground Rod	EACH

Payment is full compensation for installation of the ground rod and ground wire; and welding and connections at both ends of the ground wire.

146. Relocating Temporary Vehicle Detector Assembly; Item SPV.0060.0214.

A Description

This special provision describes relocating an already installed temporary vehicle detector assembly, including removing it from the existing location and installing, calibrating, and integrating the assembly into the existing system at the new location.

B Materials

Materials include materials previously furnished by the department and materials previously furnished by the contractor previously installed through other pay items in the contract.

These materials include the following:

- One or more Electronic Integrated Systems, Inc. (EIS) Remote Traffic Microwave Sensors (RTMS) and wireless modem.
- One or more solar power system consisting of 2-85W panels, 2-120 Amp-Hour batteries, a solar power controller, and one solar power cabinet to house the batteries and controller.
- One 40-foot type 4 or larger wood pole.
- Outdoor rated Power cable between solar power system output and state-furnished RTMS.
- Mounting hardware for solar power system and RTMS detector.

C Construction

C.1 Removal

As directed by the engineer, remove the temporary vehicle detector assemblies from their respective locations in the project. Be careful not to damage any of the components that make up the system.

Restore the site to match the existing surrounding area using standard restoration items as described in the standard specifications.

C.2 RTMS Detector Installation

Install the wood pole according to industry standards for supplied pole length.

Install the RTMS detector as required in standard spec 675. Integrate the wireless modem.

C.3 Solar Power System Installation

Install the solar panels facing south on the pole with the devices to be powered. If a compass is used, a correction must be made for the difference between magnetic north and true north. Install the solar panels at a tilt angle of approximately 60 degrees. The tilt angle shall be considered the angle from horizontal to the front, or face of the solar panel.

Mount the cabinet to the pole by the two cast aluminum mounting brackets which are already attached to the back of the cabinet. The brackets shall be attached to the pole using stainless steel bands or U-bolts.

Install the cabling, ensuring that cables enter the cabinet only through the bottom, and that strain relief fittings are used to seal cable entrance points. Connect the panel to the charge controller, connecting the white wire to the positive (+) terminal and the black wire to the negative terminal (-).

D Measurement

The department will measure Relocating Temporary Vehicle Detector Assembly as by each unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0214	Relocating Temporary Vehicle Detector Assembly	EACH

Payment is full compensation for removing the assembly, installing the assembly, calibrating the detector, integrating the detector into the communications system, making the assembly functional, and for all restoration work needed at the original or new location.

147. Refocus Vehicle Detector Assembly; Item SPV.0060.0215.

A Description

This special provision describes refocusing an existing microwave detector, or detectors, on a pole or other structure, for operation with a new lane configuration.

B Materials

Materials include Electronic Integrated Systems, Inc. (EIS) Remote Traffic Microwave Sensors (RTMS) and the respective poles they have been mounted on.

C Construction

Coordinate all planned down-time of vehicle detector assemblies with the STOC at (414) 227-2166. Notify the STOC an amount of time ahead of planned down-time equal to the planned down-time. Examples would be that a 4-hour temporary down-time of the system would require notification 4-hours ahead of time while an 8-hour planned down-time would require 8-hours of advance notification.

Refocus and recalibrate the detector each time the adjacent traffic pattern is changed due to a change in traffic control or construction staging.

Verify to the satisfaction of the engineer that the existing detector assembly is working properly. Inspect the vehicle detector assembly for damage.

D Measurement

The department will measure Refocus Vehicle Detector Assembly by the unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0215	Refocus Vehicle Detector Assembly	EACH

Payment is full compensation for making the detector fully operational with a new lane configuration.

148. Install Ethernet Radio; Item SPV.0060.0216.

A Description

This special provision describes installing a state-furnished, or salvaged, 5.8 GHz Ethernet bridge access point or subscriber unit at a new or existing cabinet or new or existing pole.

B Materials

Materials will include state-furnished materials and contractor furnished materials.

State-furnished or salvaged, materials include the following:

1. One 5.8 GHz Ethernet bridge with integral antenna.
2. One 5.8 GHz Ethernet bridge power converter.
3. One 5.8 GHz Ethernet bridge mounting bracket.

Contractor-furnished materials include the following:

1. Mounting hardware.
2. Outdoor rated Category 6 communications cable.
3. Inline network cable surge suppressor.

C Construction

Bond the surge suppressor to the cabinet grounding system.

Install the 5.8 GHz Ethernet Bridge in a point-to-point or point-to-multipoint configuration as shown on the plans and as directed by the engineer.

Use the manufacturer’s set-up software to configure the Ethernet radio for its intended use. Use the signal strength indicator on the radio to find the optimum position. Also perform a frequency analysis to determine the optimal hop pattern of the radios and test the continuity of the link by polling the radios

using the software provided. The position of the radio and the hop pattern shall be adjusted until the polls show at least 200 consecutive polling intervals have been successfully transmitted and received. Demonstrate to the engineer that the hop pattern selected corresponds to the optimal noise free frequencies identified in the frequency analysis. Deliver three copies of the final test results for signal strength, frequency analysis, and test polling.

D Measurement

The department will measure Install Ethernet Radio as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0216	Install Ethernet Radio	EACH

Payment is full compensation for installing, setting up, configuring, and testing the 5.8 GHz Ethernet bridge radio, surge suppressor, cables, and connections; and required transportation.

149. Signal Assembly Advance Flasher Type 2; Item SPV.0060.0219.

A Description

This special provision describes providing and installing advance flasher traffic signal assemblies for use with ramp meters on new or existing poles. This includes the traffic signal heads, traffic signal mounting brackets, sign mounting brackets, and wiring within the assembly.

B Materials

Provide two single-section 12-inch yellow face traffic signal heads meet the requirements of standard spec 658.

Provide traffic signal mounting hardware that meets the requirements of standard spec 658.

Provide sign mounting brackets that meet the requirements of standard spec 637.2.4.

Provide wiring within the assembly and from the signal heads to the pedestal base that meets the requirements of standard spec 655.2.2.

C Construction

Perform work conforming to standard spec 637, 657, and 658 and the WSEC, and as the plans show.

Ensure that the positioning, mounting height, and lateral placement of signal heads are according to the MUTCD. The contractor may be required to revisit locations to re-adjust the signal heads once the engineer observes the metering operation of the ramp.

For traffic signal cable that extends from the signal base to the terminal strips in the signal heads, provide the number of conductors as the plans show. Match the color of the conductor to the lens color.

Install conductors in continuous lengths without splices from terminal to terminal. Splice only at hand holes at the bases of the standards or poles. Do not splice in underground pull boxes or conduit.

Group and identify sets of conductors in signal cables, 3 each per signal phase, whether insulated with red, yellow, green, or other colors, at each pertinent termination. Use conductors colored to match lens colors first. The engineer shall approve the method of identification. Furnish 2 as-built cable layout drawings with labeling to the engineer upon completion of the work. Place one of those copies in the cabinet.

Connect the white 14 AWG wires to a 10 AWG current carrying neutral. Make the connection with a wire-nut. Extend the 10 AWG wire from the current carrying neutral grounding strip in the ramp meter processor assembly cabinet, being installed from base to base to the far end of each signal conduit run.

Furnish the 10 AWG USE XLP current carrying grounded conductor in white colored insulation.

Furnish the 10 AWG USE XLP equipment-grounding wire in green colored insulation.

Furnish equipment and appliances necessary to test the complete installation of the ramp meter control signal assembly, including electrical conductors.

D Measurement

The department will measure Signal Assembly Advance Flasher Type 2 as each individual assembly, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2019	Signal Assembly Advance Flasher Type 2	EACH

Payment is full compensation for providing and installing signal heads, signal mounting brackets, cabling within the assembly, and the sign support system; for providing electrical connections and grounding; and for testing.

150. Signal Assembly Ramp Control Sidemount; Item SPV.0060.0224.

A Description

This special provision describes providing and installing sidemount traffic signal assemblies for use with ramp meters, including the pedestal base, traffic signal standard, traffic signal heads, traffic signal mounting brackets, sign mounting brackets, and wiring within the assembly.

B Materials

Provide pedestal bases that meet the requirements of standard spec 657.2.6.

Provide traffic signal standards that meet the requirements of standard spec 657.2.5.

Provide one three-section 12-inch face traffic signal head and one two-section 12-inch face traffic signal head that meet the requirements of standard spec 658.

Provide traffic signal mounting hardware that meets the requirements of standard spec 658.

Provide sign mounting brackets that meet the requirements of standard spec 637.2.4.

Provide wiring within the assembly and from the signal heads to the pedestal base that meets the requirements of standard spec 655.2.2.

C Construction

Perform work conforming to standard spec 637, 657, and 658 and the WSEC, and as the plans show.

Ensure that the positioning, mounting height, and lateral placement of signal heads are according to the MUTCD. The contractor may be required to revisit locations to re-adjust the signal heads once the engineer observes the metering operation of the ramp.

For traffic signal cable that extends from the signal base to the terminal strips in the signal heads, provide the number of conductors as the plans show. Match the color of the conductor to the lens color.

Install conductors in continuous lengths without splices from terminal to terminal. Splice only at hand holes at the bases of the standards or poles. Do not splice in underground pull boxes or conduit.

Group and identify sets of conductors in signal cables, 3 each per signal phase, whether insulated with red, yellow, green, or other colors, at each pertinent termination. Use conductors colored to match lens colors first. The engineer shall approve the method of identification. Furnish 2 as-built cable layout drawings with labeling to the engineer upon completion of the work. Place one of those copies in the cabinet.

Connect the white 14 AWG wires to a 10 AWG current carrying neutral. Make the connection with a wire-nut. Extend the 10 AWG wire from the current carrying neutral grounding strip in the ramp meter processor assembly cabinet, being installed from base to base to the far end of each signal conduit run.

Furnish the 10 AWG USE XLP current carrying grounded conductor in white colored insulation.

Furnish the 10 AWG USE XLP equipment-grounding wire in green colored insulation.

Furnish equipment and appliances necessary to test the complete installation of the ramp meter control signal assembly, including electrical conductors.

D Measurement

The department will measure Signal Assembly Ramp Control Sidemount as each individual assembly, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0224	Signal Assembly Ramp Control Sidemount	EACH

Payment is full compensation for providing and installing traffic signal standards, pedestal bases, signal heads, signal mounting brackets, cabling within the assembly, and the sign support system; for providing electrical connections and grounding; and for testing.

151. Fiberglass/Polymer Concrete Pull Box 17-Inch x 30-Inch x 24-Inch; Item SPV.0060.0301.

A Description

This special provision describes furnishing and installing Fiberglass/Polymer Concrete Pull Box at the locations shown on the plans according to standard spec 653.

B Materials

Furnish fiberglass/polymer concrete pull box of rectangular composite enclosure with Tier 15 Rating (15,000 lb Design Load) and (22,500 lb Test Load), and nominal 17” wide x 30” long and 24” total depth, flared wall style *#CHB173024 as by Highline Products* or *#B12173024A as by Hubbell Power Systems* or approved equal. Cover shall be Tier 15 Rating (15,000 lb Design Load) and (22,500 lb Test Load), bolted cover with logo “

Street Lighting” *#CHC1730HL1 as by Highline Products* or *#C12173002A41 as by Hubbell Power Systems* or approved equal and use penta bolts to secure cover. The pull box shall be listed and labeled by (UL) or other Nationally Recognized Testing Laboratory.

C Construction

Conform to standard spec. 673.3 and City of Milwaukee standards. The pull box shall be installed on 12-inches of crushed stone, set flush with grade and backfilled.

D Measurement

The department will measure Fiberglass/Polymer Concrete Pull Box 17-Inch x 30-Inch x 24-Inch as each individual pull box, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0301	Fiberglass/Polymer Concrete Pull Box 17-Inch x 30-Inch x 24-Inch	EACH

Payment is full compensation for furnishing and installing all materials, including pull box, end bells, crushed aggregate, excavation, backfilling, and for disposing of surplus material.

152. Install Precast Control Cabinet Base, Item SPV.0060.0302.

A Description

This special provision describes the installation of precast control cabinet bases furnished by the City of Milwaukee, for traffic signal control cabinets as shown on the plans.

B Materials

The 36”x21.25”x20” pre-cast concrete foundation for traffic signal cabinets P1 and P2 will be furnished by the City of Milwaukee. The contractor shall contact Mr. Rudy Gutierrez, Electrical Services Manager (414) 286-5941 office, (414) 708-5148 mobile; or the Electrical Services Dispatcher at (414) 286-3687 to coordinate pickup of the concrete foundation at the City of Milwaukee Electrical Services headquarters located at 1540 West Canal Street Milwaukee, WI 53233.

C Construction

Install concrete traffic cabinet bases according to the plans. Plan changes must be approved by a City of Milwaukee Electric Services Manager or Traffic Engineer. The primary contacts are Mr. Rudy Gutierrez, Electrical Services Manager (414) 286-5941 office, (414) 708-5148 mobile; or Mr. Joseph Blakeman, Traffic Control Engineer, (414) 286-8070.

D Measurement

The department will measure Install City Precast Controller Base 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.0060.0302	Install Precast Control Cabinet Base	EACH

Payment is full compensation for installing city furnished controller base, for excavation, backfilling and disposal of surplus material.

153. ATC Controller and Cabinet Installed, Item SPV.0060.0303.

A Description

Furnish and install an ATC Traffic Signal Controller and NEMA TS2 Type 1 Traffic Signal Control Cabinet.

B Materials

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

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

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

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

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

C Construction

Conform all work to the Wisconsin State Electrical Code (WSEC). Conform all work to standard spec 651, as supplemented or modified in this specification.

C.1 Definitions

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

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

Owner – City of Milwaukee

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

C.2 Terminal Facility

Fully wire the terminal facility with 16 load switch sockets: 8 phases of vehicular, 4 phases of pedestrian, and 4 phases of overlap operation; 8 flash transfer relay sockets; 1 flasher socket; and 2 terminal facility Bus Interface Unit (BIU) rack slots. The use of printed circuit boards is not acceptable on the terminal facility, except printed circuit boards are acceptable for the BIU interface with the load bay. Position the 16 load switch sockets in two horizontal rows of 8 sockets each. Support the load switches and flasher by a bracket or shelf extending at least 3 inches from the terminal facility.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

C.3 Vehicle Detection Interface Panel

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

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

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

C.4 Conductors and Cabling

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

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

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

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

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

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

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

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

C.5 Cabinet Switches

The above switches shall function as follows:

Off: Signals Dark

Signal: Signals On and operating as follows:

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

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

Position	Function
Up	Detector Disabled
Center	Detector Enabled
Down	Detector Called

C.6 Bus Bar

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

C.7 Circuit Breakers

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

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

- One 15-amp auxiliary breaker. This breaker shall supply power to the fan and heater.
- One 10-amp breaker. This breaker shall supply power for control equipment: controller, MMU, and cabinet power supply.
- One 20-amp circuit breaker for future use.

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

C.8 Radio Interference Suppressor

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

C.9 Bus Relay

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

C.10 Surge Protector

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

C.11 Power receptacles

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

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

C.12 Suppressors and RC Network

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

C.13 Auxiliary Devices

C.13.1 Load Switches

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

C.13.2 Flashers

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

C.13.3 Flash Transfer Relays

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

C.13.4 Inductive Loop Detector Units

Provide 8 inductive loop detector units conforming to the requirements of section 6.5 of the NEMA TS2 Standard for 2-channel, rack mount detector units, type C.

C.13.5 Cabinet Power Supply

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

C.14 Bus Interface Units (BIU)

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

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

C.15 Malfunction Management Unit (MMU)

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

The MMU shall be capable of the following:

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

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

C.16 Documentation

C.16.1 Cabinet Intersection Wiring Diagrams

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

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

C.16.2 Manuals

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

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

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

C.17 Cabinet Delivery

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

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

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

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

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

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

C.18 Acceptance Testing

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

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

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

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

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

C.19 Certification

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

C.20 Warranty

The warranty shall start upon delivery of the cabinet and all supplied equipment to the owner designated location. Provide a warranty and guarantee statement which stipulates that the cabinet and all supplied equipment, including add-on accessory items, to be, individually and as a cabinet system, free from defects in materials and workmanship for a period of at least one year from the date of final cabinet acceptance in the field, or in the case of a cabinet that is to be delivered to the owner for use by the owner, from the date of delivery of an accepted cabinet to the owner. All warranty beyond the one year construction bond needs to be from the manufacturer or vendor. Final cabinet acceptance in the field is after a successful 30-day conditional acceptance period is completed. Delivery of a cabinet for testing does not constitute acceptance of the cabinet. Turn over to the City of Milwaukee warranties and guarantees that are offered by the manufacturer as a customary trade practice. Name the City of Milwaukee as the obligee on all manufacturers' warranties and guarantees. Shipping costs, both to the factory or an Authorized Repair Depot, and return, shall be paid by the vendor.

The warranty shall provide for full repair or replacement, as determined by the owner, of the failed item or cabinet system, including removal and making the item or system fully operational in the cabinet, at no cost to the owner. Vendor warranty service response times after notification by the owner:

- 4 hours to have qualified service personnel on site at the intersection.
- 12 hours to have the signal safely operational, including all phases and enough detection to run the intersection phasing (minimum 8 detectors).
- 48 hours on business days to restore the signal to full original operations.

If a malfunction in the controller unit, MMU, module, or any auxiliary equipment occurs during the warranty period, the vendor shall, within 24 hours after notification (excluding Saturday and Sunday), furnish and make fully operational in the cabinet, an identical, programmed, controller unit, MMU, module, or auxiliary equipment, for use while the warranted unit is being repaired or replaced. The isolation of any malfunction during the warranty period shall be the responsibility of the vendor.

The City of Milwaukee reserves the right to make repairs to malfunctioning cabinets and equipment that are under warranty, up to and including complete replacement of the cabinet, when in the owner's determination the safety of the traveling public is best served. Such repair work will not in any way void or limit the vendor's warranty and guarantee specified above. The owner will notify the vendor in writing of the repair.

The vendor shall within five business days after notification replace, at the electrical shop, all cabinets, equipment, and supplies used by the owner in making repairs, with new parts meeting the requirements of this specification.

If any cabinet has three or more equipment or cabinet system failures, resulting from poor workmanship, within the first six months of operation after owner acceptance, an entirely new cabinet exactly matching the existing cabinet shall be furnished and made fully operational by the vendor at no additional cost to the owner. Any traffic control, including but not limited to signing, channelizing devices, temporary signals, police control, and flaggers, that becomes necessary as determined by the owner in order to safely replace the cabinet is the full responsibility of the vendor. The original cabinet becomes the property of the vendor.

Provide, at no additional cost, firmware/software maintenance, problem resolution phone technical support, problem resolution technical support in the supplier's facility, firmware/software patches, and firmware/software upgrades for a minimum of three years. The lead for technical support and primary owner contact for support shall be a qualified person employed by the vendor's local office who is personally familiar with the owner's software and signal operations. Help desks and manufacturer's representatives may be utilized by the lead technical support person as resources but are not acceptable for lead technical support.

Maintain an inventory of the firmware/software version on each controller provided. Notify the City of Milwaukee's electrical shop supervisor or lead electrician in writing when a firmware/software patch or upgrade is available. The owner will direct the vendor when to load the patch or upgrade for each controller. Load the patch or upgrade and provide a usable copy of the patch or upgrade to the owner. Alternatively, when requested by the owner, provide the patch or upgrade to the owner for installation by the owner.

D Measurement

The department will measure ATC Controller and Cabinet Installed 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.0060.0303	ATC Controller and Cabinet Installed	EACH

Payment is full compensation for furnishing and installing the traffic signal controller and control cabinet; for furnishing and installing all other items necessary (such as, wire nuts, splice kits and/or connectors, tape, insulating varnish, ground lug fasteners, etc.) to make the proposed system complete from the source of supply to the most remote unit and for clean-up and waste disposal.

154. Vehicular Video Detection System-2 Cameras, Item SPV.0060.0304.

A Description

This specification describes furnishing and installing a system that detects vehicles on a roadway using only video images of vehicle traffic. This item includes all materials and labor necessary to install a completely functional vehicle detection system as shown in the plans, including but not limited to cameras, processors, video monitor, mounting hardware, and power cable.

B Materials

This specification sets forth the requirements for a system that detects vehicles on a roadway and provides detection outputs to a traffic signal controller. The materials shall also include all brackets, risers, mounting hardware, cable, terminations, interface panels, and all other incidentals for the installation of the equipment. This equipment shall meet the NEMA environmental, power and surge ratings as set forth in NEMA TS2 specifications.

The video detection system shall include two video detectors with a high-definition camera of at least 720p resolution with a 10x optical zoom with real time iris and shutter speed control by the integrated processor. The faceplate shall be glass with a hydrophilic coating on the exterior and with an indium tin oxide heater applied to the inner surface.

All communications to the video sensor shall be broadband-over-power via three conductor cable. No coaxial cable shall be used.

The video detection system shall include an interface panel that manages communication between sensors, remote access to the sensors, and the cabinet itself. The interface panel shall provide connection points for four video sensors. Each sensor connection shall have a power switch and a resettable fuse. All communications to the detection system shall be to a single IP address.

All incidental mountings required for pole or mast arm mounted units to install the detector are included in this item.

C Construction

The video detection system shall be installed by supplier factory-certified installers and as recommended by the supplier and documented in installation materials provided by the supplier.

In the event, at installation or turn on date, a noticeable obstruction is present in line with the detection zone(s), the contractor shall be obligated to advise the engineer before setting the zone.

All cables associated with the video detection system shall be routed to the controller. Each lead shall be appropriately marked as to which street or avenue it is associated. Provide 6 feet of cable slack.

The video detection system, as shown in the traffic signal plans, shall be complete, in place, tested, and in full operation.

D Measurement

The department will measure Vehicular Video Detection System-2 Cameras 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.0060.0304	Vehicular Video Detection System-2 Cameras	EACH

Payment is full compensation for furnishing and installing video detection system and cable; making necessary connections; and testing video detection.

155. EVP 1 Channel 1 Direction Infrared Detector, Item SPV.0060.0305.

A Description

Furnish and install an Emergency Vehicle Preemption (EVP) 1 Channel 1 Direction Infrared Detector.

B Materials

Furnish a 1 Channel 1 Direction Infrared Detector.

C Construction

Install detector as shown in the plans and according to manufacturer’s recommendations.

D Measurement

The department will measure EVP 1 Channel 1 Direction Infrared Detector by each individual unit, acceptably completed.

E Basis of Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0305	EVP 1 Channel 1 Direction Infrared Detector	EACH

Payment is full compensation for furnishing and installing the EVP detector.

156. EVP Confirmation Light, Item SPV.0060.0306.

A Description

Furnish and install an Emergency Vehicle Preemption (EVP) Confirmation Light Assembly.

B Materials

Furnish a typical confirmation light assembly and LED flood light.

C Construction

Install confirmation lights as described in the plans.

D Measurement

The department will measure EVP Confirmation Light 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.0060.0306	EVP Confirmation Light	EACH

Payment is full compensation for furnishing and installing the EVP confirmation light assembly.

157. EVP Phase Selector Card 4 Channel, Item SPV.0060.0307.

A Description

Furnish and install an Emergency Vehicle Preemption (EVP) Phase Selector Card 4 Channel.

B Materials

Furnish a 4-channel phase selector card. The selector card shall be capable of functioning with a GPS radio unit as well as infrared system detectors simultaneously.

C Construction

Install phase selector card into the appropriate slot in the controller cabinet and make all necessary wiring connections to EVP detectors.

D Measurement

The department will measure EVP Phase Selector Card 4 Channel 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.0060.0307	EVP Phase Selector Card 4 Channel	EACH

Payment is full compensation for furnishing and installing the phase selector card; making necessary connections.

158. Fiber Optic Patch Panel, 8-Count, ST, Item SPV.0060.0308.

A Description

Furnish and install an 8-count fiber optic patch panel according to the following standards.

B Materials

Furnish a combination Fiber Optic Patch Panel and cable system meeting the following requirements:

- 8 single mode fiber optic strands
- Factory terminated or ST connectors on panel end
- Bare, unterminated fiber strands on non-panel end
- Loose tube cable
- Cable length as indicated specified in the plan
- Patch panel must be designed and tested for 1,000 re-matings with less than 0.20 dB change
- Patch panel housing material must be ABS plastic

C Construction

Construction shall be according to standard spec 678.

Have a certified fiber optic technician perform work for fiber optic terminations, splicing and testing. Have a certified fiber optic technician supervise all fiber optic cable installation. Test the panel and demonstrate that all equipment is operational to the inspector. Ensure termination does not exceed attenuation limits specified in standard spec 678.3.4.

D Measurement

The department will measure Fiber Optic Patch Panel, 8-Count, ST 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.0060.0308	Fiber Optic Patch Panel, 8-Count, ST	EACH

Payment is full compensation for materials and installation necessary to complete the work.

159. Ethernet Switch, Item SPV.0060.0309.

A Description

Furnish and install an Ethernet switch according to the following standards.

B Materials

Furnish an Ethernet Switch with a compatible power supply.

Environmental: This equipment shall meet the NEMA environmental, power and surge ratings as set forth in NEMA TS2 specifications.

Mounting: This equipment must be DIN Rail mountable.

Interfaces: This equipment must support a minimum of 12 Ethernet interfaces, with a minimum of three being shared or dedicated SFP interfaces for pluggable optical connections and support for PoE+ on four or more interfaces.

Management: This equipment must be a managed switch with the ability to support 802.1Q VLAN Tagging, 802.1D Spanning Tree Protocol, and 802.1p Quality of Service. Multicast, broadcast, and flooding storm control should be features.

LEDs: This equipment must have a power input status LED, a ring status LED, and LEDs showing the port link and speed status per port.

Memory: This equipment must have a minimum of 128MB of DRAM, and a minimum of 16MB of flash memory.

C Construction

Construction shall be according to standard spec 678.

Install Ethernet switch into field cabinet. Connect switch to the devices as directed by the engineer. Contact Joseph Blakeman at (414) 286-8070 for more information.

D Measurement

The department will measure Ethernet Switch this item by each 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.0060.0309	Ethernet Switch	EACH

Payment is full compensation for materials and installation necessary to complete the work.

160. Pedestrian Countdown Signal Face 12-Inch, Item SPV.0060.0310.

A Description

Furnish and install Pedestrian Countdown Signal Face 12-Inch according to the following standards.

B Materials

Furnish a 12-Inch Light Emitting Diode (LED) Pedestrian Countdown Module that meets ITE PTCSI-STD Part 2 from March 2004 or current Institute of Transportation Engineer (ITE) standards. The countdown digits shall be displayed with an LED color/type of Portland Orange. The unit shall be able to operate when exposed to temperatures between -40 to 165 degrees Fahrenheit. The operating voltage shall be between 80 to 135VAC, and the wattage drawn shall be 7W.

C Construction

Install Pedestrian Countdown Signal Face 12-Inch according to current City of Milwaukee Standards. Contact Joseph Blakeman at (414) 286-8070 for a copy of the city standards.

D Measurement

The department will measure Pedestrian Countdown Signal Face 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.0060.0310	Pedestrian Countdown Signal Face 12-Inch	EACH

Payment is full compensation for materials and installation necessary to complete the work.

161. Cellular Modem, Item SPV.0060.0311.

A Description

Furnish, install and test a Cellular Modem according to the following standards.

B Materials

Furnish a MultiConnect eCell MTE-LAT2 wireless cellular modem or pre-approved equal.

Furnish cables and connectors required to connect the Cellular Modem components as follows:

- Furnish outdoor rated cables between wireless antennas and other devices.
- Furnish cables between cellular modems and other devices. Furnish a 19-inch rack mountable shelf.

C Construction

Construction shall be according to standard spec 678.

Meet with the engineer and field system integrator to discuss specific requirements of the cellular modem and converter before installation. Make electrical and communication network connections to the cellular modem. Mount the cellular modem in a 19-inch rack using a rack or shelf.

Program and configure the cellular modem according to the manufacturer's instructions. Connect to devices as the plans show. Contact Joseph Blakeman at (414) 286-8070 for more information.

Activate the cellular modem and converter for 30 consecutive days. During this period, ensure that the cellular modem operates as specified. If a failure occurs, the engineer will suspend the test until the failure is corrected. Resume testing until 30 days of successful operation is achieved.

D Measurement

The department will measure Cellular Modem 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.0060.0311	Cellular Modem	EACH

Payment is full compensation for furnishing approved cellular modem; installing the modem; for cables and connectors including rack mountable shelf; for connecting the devices; for programming and configuration; and for testing.

162. Wireless Antenna, Item SPV.0060.0312.

A Description

Furnish, install and test a Wireless Antenna according to the following standards.

B Materials

The Wireless Antenna shall meet or exceed the following specifications:

- Operate at all common 3G and 4G LTE bands (698-960 MHz, 1710-2170 MHz, 2300-2700 MHz, and 2900-3500 MHz).
- Shall meet or exceed IP 67 protection.
- Support two LTE Cellular.
- Shall have isolation of 20dB+.
- Shall have its own ground-plane and be able to radiate on any mounting environment (metal, plastic, or other) without affecting performance.
- Dimensions not to exceed 4" high X 6" wide by 6" deep.
- Operating temperature range of -40C to +85C.
- Must function with dual diversity capable cellular data devices in this contract.

C Construction

Construction shall be according to standard spec 678.

Meet with the engineer and field system integrator to discuss specific requirements of the wireless antenna before installation. Make electrical and communication network connections to the wireless.

Program and configure the wireless antenna according to the manufacturer's instructions. Connect to devices as the plans show. Contact Joseph Blakeman at (414) 286-8070 for more information.

D Measurement

The department will measure Wireless Antenna 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.0060.0312	Wireless Antenna	EACH

Payment is full compensation for furnishing approved wireless antenna; installing the antenna; for cables and connectors; for connecting the devices; for programming and configuration; and for testing.

163. SFP, Item SPV.0060.0313.

A Description

Furnish, install and test SFPs according to the following standards. All SFPs must be fully compatible with the Ethernet Switches procured under this contract. While preferred, the SFP optics do not need to be the same manufacturer as the industrial Ethernet switches.

B Materials

SFPs shall meet or exceed the following specifications

- General: DOM capable
- Physical/Electrical: Standards SFP specifications
- Environmental: IND: -34 to 74°C (-29 to 165°F)

C Construction

Meet with the engineer and field system integrator to discuss specific requirements of the SFPs before installation. Make communication network connections to the SFPs. Connect to devices as the plans show. Contact Joseph Blakeman at (414) 286-8070 for more information.

D Measurement

The department will measure SFP by each individual unit, acceptably completed.

E Basis of Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0313	SFP	EACH

Payment is full compensation for furnishing approved SFP; installing the SFP; for connecting the devices; for programming and configuration; and for testing.

164. Fiber Optic Splice Enclosure, Item SPV.0060.0314.

A Description

Furnish, install and test Fiber Optic Splice Enclosure according to the following standards.

B Materials

Materials shall be according to standard spec 678 and as described in these specifications. The Fiber Optic Splice Enclosure shall be designed for use under the most severe conditions such as moisture, vibration, impact, cable stress and flex temperature extremes as demonstrated by successfully passing the factory test procedures and minimum specifications listed below:

(1) Physical Requirements: The enclosure must handle up to four cables in a butt configuration. A butt adapter may be used to increase capacity to six cables.

The enclosure shall prevent the intrusion of water without the use of encapsulates.

The enclosure shall be capable of accommodating splice organizer trays that accept mechanical, fusion, or multi-fiber array splices. The splice enclosure shall have provisions for storing fiber splices in an orderly manner, mountings for splice organizer assemblies, and space for excess or

unspliced fiber. Splice organizers shall be re-enterable. Splice cases shall hold a sufficient number of splice trays to hold up to 96 splices.

The splice case shall be UL rated.

Enclosure re-entry and subsequent reassemble shall not require specialized tools or equipment. Further, these operations shall not require the use of additional parts.

The splice enclosure shall have provisions for controlling the fiber bend radius to a minimum of 38 mm.

(2) Factory Testing:

Compression Test: The enclosure shall not deform more than 10% in its largest cross-sectional dimension when subjected to a uniformly distributed load of 1335 N at a temperature of -18ºC and 38ºC. The test shall be performed after stabilizing at the required temperature for a minimum of two hours. It shall consist of placing an assembled enclosure between two flat paralleled surfaces, with the longest enclosure dimension parallel to the surfaces. The weight shall be placed on the upper surface for a minimum of 15 minutes. The measurement shall then be taken with weight in place.

Impact Test: The assembled enclosure shall withstand an impact of 28 N-M at temperatures of -18 ºC and 38 ºC. The test shall be performed after stabilizing the enclosure at the required temperature for a minimum of 2 hours. The test fixture shall consist of 9 kg cylindrical steel impacting head with a 5 cm spherical radius at the point where it contacts the enclosure. It shall be dropped from a height of 30 cm. The enclosure shall not exhibit any cracks or fractures to the housing that would preclude it from passing the water immersion test. There shall be no permanent deformation to the original diameter or characteristic vertical dimension by more than 5%.

Cable Gripping and Sealing Testing: The cable gripping and sealing hardware shall not cause an increase in fiber attenuation in excess of 0.10 dB/fiber @ 1550 nm when attached to the cables and the enclosure assembly. The test shall consist of measurements from six fibers, one from each buffer tube or channel, or randomly selected in the case of a single fiber bundle. The measurements shall be taken from the test fibers, before and after assembly to determine the effects of the cable gripping and sealing hardware on the optical transmission of the fibers.

Vibration Test: The splice organizers shall securely hold the fiber splices and store the excess fiber. The fiber splice organizers and splice retaining hardware shall be tested per EIA Standard FOP-II, Test Condition I. The individual fibers shall not show an increase in attenuation in excess of 0.10 dB/fiber.

Water Immersion Test: The enclosure shall prevent a 3-meter (10 foot) waterhead from intruding into the splice compartment for a period of 7 days. Testing of splice enclosure is to be accomplished by placing the enclosure into a pressure vessel and filling the vessel with tap water to cover the enclosure. Apply continuous pressure to the vessel to maintain a hydrostatic head equivalent to 3 meters on the enclosure and cable. This process shall be continued for 30 days. Remove the enclosure and open to check for the presence of water. Any intrusion of water in the compartment containing the splices constitutes a failure.

Certification: It is the responsibility of the contractor to ensure all the above tests have been performed by either the manufacturer, or an independent testing laboratory, and the appropriate documentation has been submitted to the department. Manufacturer certification is necessary for the model of enclosure supplied. It is not necessary to subject each supplied enclosure to the actual tests described herein.

C Construction

Construction shall be according to standard spec 678.

D Measurement

The department will measure Fiber Optic Splice Enclosure 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.0060.0314	Fiber Optic Splice Enclosure	EACH

Payment is full compensation for furnishing approved Fiber Optic Splice Enclosure; installing the enclosure; and for testing.

165. Embedded Galvanic Anodes, Item SPV.0060.0400.

A Description

This special provision describes furnishing and installing embedded galvanic anodes in concrete.

B Materials

Furnish pre-manufactured galvanic anodes designed for cathodic protection when embedded in concrete and tied to steel reinforcing. The core of the anode shall consist of a minimum of 1.3 ounces of electrolytic zinc in compliance with ASTM B418 Type II, cast around a pair of steel tie wires and encased in a cementitious shell with a minimum pH of 14. The anodes shall have one side that is less than 1-1/2 inches in height.

Submit the product information to the engineer for approval. Supply a certification of compliance to the engineer a minimum of two weeks before starting work. Deliver, store, and handle all materials according to the manufacturer's instructions.

C Construction

C.1 Concrete Repair

Repair the concrete and prepare the exposed reinforcing steel conforming to standard spec 509.

C.2 Galvanic Anode Installation

C.2.1 Install embedded galvanic anodes conforming to the manufacturer's recommendations.

C.2.2 Attach galvanic anodes to existing reinforcement along the perimeter of the repair at spacing as specified on the plans. Space anodes no further than 24 inches apart.

C.2.3 Provide 3/4-inch clearance between anodes and substrate.

C.2.4 Secure the galvanic anodes as close as possible to the patch edge using the anode tie wires. Tighten the tie wires to allow no free movement.

If the anode is to be tied onto a single bar, or if less than 1-1/2 inch of concrete cover is expected, place anode beneath the uncoated bar and secure to reinforcing steel.

If 1-1/2 inch concrete cover will exist over the anode, the anode may be placed at the intersection between two bars and secured to each bar.

C.3 Electrical Continuity

Confirm electrical connection between anode tie wire and uncoated reinforcing steel with a multi-meter. The maximum DC resistance shall be 1 Ohm. Confirm electrical continuity of the exposed uncoated reinforcing steel within the repair area. Steel reinforcement shall be considered continuous when the DC resistance is 1 Ohm or less. If necessary, establish the electrical continuity with uncoated steel tie wire.

C.4 Inspection

Obtain engineer's verification of proper installation of the galvanic anodes prior to placement of the concrete.

D Measurement

The department will measure Embedded Galvanic Anodes as each individual anode, acceptably installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0400	Embedded Galvanic Anodes	EACH

Payment is full compensation for furnishing and for properly installing anodes.

Concrete repair work, and concrete for that work, will be paid for separately.

166. Heat Straightening of Damaged Girders, Item SPV.0060.0401.

A Description

This special provision describes heat straightening portions of bent or damaged girders which are left in place, back to their original shape. Straighten the girders back into their original position and shape within the tolerances listed below or as necessary to mate the existing and new work.

B (Vacant)

C Construction

C.1 Contractor Qualifications

The contractor's personnel performing the heat straightening shall have at least 5 years of experience in conducting heat-straightening repairs to primary structural members of in-service damaged steel structures. During the immediately preceding three-year period, the personnel shall have conducted at least three successful heat-straightening projects.

A minimum of 15 working days prior to the pre-construction meeting, submit to the engineer for approval a report documenting the experience of the personnel and the projects worked on including the date, location, bridge owner, number and type of members straightened, and duration of each project, along with contact names, current phone numbers and e-mail addresses.

C.2 Existing Paint Removal

Remove existing paint according to SSPC-SP15 Commercial Grade Power Tool Cleaning or equal. Remove all existing paint, mill scale, and rust within the heat affected zone except that up to 33% staining from rust and mill scale is permitted to remain. Remove paint as necessary to perform inspections and straightening work and to the engineer's satisfaction. Feather the edges of remaining old paint so that the repainted surface has a reasonably smooth appearance.

C.3 Grinding Flange Edges

Round all damaged/impacted exposed corners of main members as necessary to achieve a 1/16-inch radius or equivalent flat surface at a 45 degree angle. Grind edges at all locations of planned work to prevent edge cracking during the straightening work and to the engineer's satisfaction

C.4 Damage Inspection

Visually inspect all areas of damage, suspected damage, yield lines and zones of plastic bending. Also inspect all secondary members and connections between main and secondary members that potentially distributed forces causing damage. Perform this work with inspected surfaces being within approximately 24 inches from the inspector. Use access equipment, illumination, and nondestructive testing as necessary to identify, measure and document the location and details of buckling; crimps; misalignment; twists; tears; burrs; damaged edges; punched holes; pull out of secondary members; cracks or other physical distress. Remove existing paint and test using magnetic particle testing all areas of detected and suspected hairline cracking according to the procedures and techniques for dry powder magnetic particle examination using the yoke method, ASTM E709, Practices for Magnetic Particle Examination.

C.5 Straightening Work Plan

Use field data from the damage inspection to develop a straightening work plan. The work plan should include documentation of the contractor's means and methods including jacking or bracing plans; surface preparation methods; calculation and control of allowable jacking and pulling forces; heating methods and shapes; heating equipment; and temperature indicating devices. Submit the work plan to the engineer a minimum of 5 days prior to beginning heat straightening.

C.6 Straightening Damaged Members

Perform straightening using methods which will not permanently damage the metal's material properties. Heat members using controlled jacking, pulling or restraining forces; specified heating patterns; and controlled temperatures that result in controlled shrinkage to straighten the member. Do not heat members then use large jacks or pullers which mechanically hot work the material. Mechanical hot working permanently damages the metal's material properties. Prior to straightening a damaged compression member, install adequate bracing to support loads and prevent buckling.

C.7 Restraints or Preloads

Apply jacking, pulling or restraining forces to the damaged member in the direction that tends to straighten the member. Position jacks, pullers, or restraining forces such that heat straightening shrinkage will relieve the force during the cooling cycle. Do not allow jacks, pullers or restraining forces to subject any part of the structure to unit stresses that exceed 50 percent of the material's nominal yield (Fy) at ambient temperature. Provide pressure gages or load cells to control jacks, pullers or restraining forces. Secure jacks, pullers or retraining forces so they do not dislodge during cooling. Apply jacks, pullers or restraining forces prior to heating. Do not apply additional jacking, pulling or restraining forces after beginning the application of heat. Do not apply the next cycle of jacking, pulling or restraining forces until the steel has cooled below 250 ºF.

C.8 Application of Heat

Heat opposite faces of a plate or rolled shape concurrently when the material thickness equals or exceeds 1-1/4 inch. When heating thick plates, it may be necessary to interrupt heating for periods of less than one minute to allow the heat to soak into the flange and avoid surface over-heating. Perform heating using single and multi-orifice (rosebud) heating torches sized according to the following table. Manipulate the torches to avoid overheating. Heat using propane, natural gas, or acetylene unless other methods are accepted by the engineer.

Limits on Torch Tip Size		
Steel Thickness	**Orifice type**	**Orifice Size**
less than 1/4inch (6mm)	Single	3
3/8 inches (9.5mm)	Single	4
1/2 inch (13mm)	Single	5
5/8 inch (16mm)	Single	7
3/4 inch(19mm)	Single	8
1 inch (25mm)	Single or Rosebud	8 single, 3 rosebud
1 1/4 inch (32mm)	Single or Rosebud: on both sides*	8 single, 3 rosebud
2 inch (51mm)	Single or Rosebud: on both sides*	8 single, 4 rosebud
3 inch (76mm) or greater	Rosebud: on both* sides	5

* - Heat applied concurrently to both sides

C.9 Shape of Heating Patterns

Perform heating using four basic heating patterns: Strip, Line, Spot or "V".

C.10 Temperature Control

Control heat so the internal temperature of the steel does not exceed 1200 ºF. The internal temperature of the steel is the surface temperature approximately five seconds after passage of the torch. Control the application of heating so it is confined inside the limits of the four basic heating patterns. Bring the steel within the pattern to the desired temperature as rapidly as possible without overheating.

Control the application of heat by checking the internal temperature of the steel by frequent use of appropriate temperature range indicating crayons or an infrared, non-contact thermometer. The department will require investigative testing for damage to the metal's material properties for any procedure which causes the internal temperature of the steel to exceed the specified maximum heating temperature. Provide the inspector with access to infrared thermometers or heat-indicating crayons as

necessary to document and verify compliance with the temperature restrictions as stated in these specifications.

Do not accelerate cooling with water, water mist or other cooling accelerants. After the steel surface temperature is less than 600 ºF (315 ºC) cooling may be accelerated with dry compressed air. After completing a planned set of heat patterns along the member, do not apply additional heat until the entire member has cooled below 250 ºF and the straightening movement has been verified.

C.11 Tolerances

Do not measure dimensional tolerances for final acceptance until all heating and welding operations are completed and the member has cooled to 160 ºF or less.

Girder straightness: The difference between the original as-built position and the final repair position when measured from a string line stretched along the member shall conform to the minimum tolerances as stated in the table below:

Tolerances for Heat Straightening Repair

Member Type	Minimum Tolerance[1,2]	
	English (in)	SI (mm)
Beams, Truss members, or Columns overall at impact point	1/2-in over 20 ft	13 mm over 6 meters
Local Web Deviations	d/100 but not less than 1/4-in	d/100 but not less than 6 mm
Local Flange Deviations	b/100 but not less than 1/4-in	b/100 but not less than 6 mm

[1]Units of member depth, d, and flange width, b, are inches and millimeters, respectively, for English and SI units

[2]Tolerances for curved or cambered members should account for the original shape of the member.

C.12 Final Inspection

Perform a final arms-length inspection of all surfaces that were repaired or heated. Perform the inspection after the work is complete and cooled to 160 ºF or less. Perform non- destructive testing at locations of detected or suspected hairline cracking as part of this inspection. Test these areas using magnetic particle testing. Immediately notify the engineer of any cracking found.

D Measurement

The department will measure Heat Straightening of Damaged Girders by each bridge, encompassing all damaged components, acceptably 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.0060.0401	Heat Straightening of Damaged Girders	EACH

Payment is full compensation for heat straightening portions of bent or damaged girders and diaphragm members to the original tolerances as specified; inspecting all suspected areas of cracking by visual and non-destructive testing (NDT); and providing temperature-indicating devices to the inspector.

167. Pavement Cleanup Project 1228-22-70, Item SPV.0075.0001.

A Description

This special provision describes cleanup of dust and debris from pavements within and adjacent to the job site. Pavement Cleanup includes surveillance and reporting of all active haul routes.

B Materials

B.1 Pavement Cleanup

Furnish a vacuum-type street sweeper equipped with a power broom, water spray system, and a vacuum collection system.

Use vacuum equipment with a self-contained particulate collector capable of preventing discharge from the collection bin into the atmosphere.

Use a vacuum-type sweeper as the primary sweeper, except as specified in this special provision or approved by the engineer.

C Construction

C.1 Surveillance

Provide daily surveillance of active haul routes to identify if material is being tracked from the jobsite. Document the condition of the roads and all sweeping recommendations in a daily report. Submit reports to the engineer daily, including hourly metered tickets for that day's sweeping activities.

C.2 Pavement Cleanup

Keep all pavements, sidewalks, driveways, curb lanes and gutters within the project boundaries, free of dust and debris generated from all activity under the contract. Keep all pavements, sidewalks, driveways, curb lanes, and gutters adjacent to the project free of dust and debris that are caused by land disturbing, dust generating activities, as defined in the contractor's Dust Control Implementation Plan (DCIP). Provide routine sweeping of all pavements, sidewalks, driveways, curb lanes and gutters on local-street active haul routes as defined in the DCIP or as directed by the engineer. Include the following roadways for routine sweeping:

- Brown Street
- Wright Street
- Locust Street
- Burleigh Street
- And all other roadways approved by the department

In addition to routine sweeping, conduct sweepings as the engineer directs or approves, to eliminate dust problems that might arise during off-work hours or emergencies. Provide the engineer with a contact person available at all times to respond to requests for emergency sweeping. Coordinate with engineer to determine deadlines for responding to emergency sweeping requests and cleaning up spillage and material tracked to/from the project.

Skid steers with mechanical power brooms may only be used on sidewalks and driveways whose pavements will not support the weight of a street sweeper, unless otherwise approved by the engineer. Do not dry sweep. Ensure all broomed equipment used for sweeping has a functioning water bar.

D Measurement

The department will measure Pavement Cleanup (Project 1228-22-70) by the hour, acceptably completed.

Tickets shall include:

- Date
- Company
- Operator name
- Equipment make/model
- Routes swept
- Total hours.

Total hours shall be to the nearest 0.25 hour that work under this item was performed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV. 0075.0001	Pavement Cleanup Project 1228-22-70	HR

Payment is full compensation for daily surveillance; preparing and submitting the daily surveillance report with hourly metered tickets; mobilization; sweeping; and disposing of materials.

sef-104-006 (20170323)

168. Marking Contrast Epoxy 4-inch, Item SPV.0090.0001.

A Description

This special provision describes applying contrast epoxy marking conforming to standard spec 646, as the plans show, and as follows.

B Materials

Furnish epoxy pavement marking materials conforming of standard spec 646.2.

C Construction

Apply two 1 ½-inch wide black epoxy lines with a 4-inch separation between the two black lines for the first pass, followed by a 4-inch wide white epoxy line second pass, for a total width of 7 inches. Apply epoxy pavement marking conforming to standard spec 646.3.

D Measurement

The department will measure Marking Contrast Epoxy 4-Inch Special by the linear foot, acceptably completed, measured once as the length of the centerline of the completed installation.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.0001	Marking Contrast Epoxy 4-Inch	LF

Payment is full compensation for providing replacement marking.

SER-646-001 (20180214)

169. Marking Contrast Epoxy 8-inch, Item SPV.0090.0002.

A Description

This special provision describes applying contrast epoxy marking conforming to standard spec 646, as the plans show, and as follows.

B Materials

Furnish epoxy pavement marking materials conforming of standard spec 646.2.

C Construction

Apply two 1 ½-inch wide black epoxy lines with a 8-inch separation between the two black lines for the first pass, followed by an 8-inch wide white epoxy line second pass, for a total width of 7 inches. Apply epoxy pavement marking conforming to standard spec 646.3.

D Measurement

The department will measure Marking Contrast Epoxy 8-Inch Special by the linear foot, acceptably completed, measured once as the length of the centerline of the completed installation.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.0002	Marking Contrast Epoxy 8-Inch	LF

Payment is full compensation for providing replacement marking.

SER-646-002 (20180214)

170. Cable Aerial Aluminum 6 AWG Quadruplex, Item SPV.0090.0101; Cable Aerial Aluminum 4 AWG Quadruplex, Item SPV.0090.0102.

A Description

Furnish, install, and connect temporary overhead cable complete with all splicing, identifications, terminations and guy wires at wood poles. Remove the overhead cable after the temporary lighting is approved for removal.

B Materials

Overhead cable shall be aluminum conductors according to ASTM B 230 and shall be Class B stranded according to ASTM B 231, and shall conform to the values listed in the table below:

Phase Conductor				Messenger Wire	
Size AWG	**Stranding**	**Avg. Insulation Thickness**		**Min. Size AWG**	**Stranding**
		mm	mils		
6	7	1.1	45	6	6/1
4	7	1.1	45	4	6/1

The aerial cable shall be an assembly of insulated aluminum conductors and a steel messenger wire according to ANSI/ICEA S-76-474. The cable assembly may have the messenger wire intertwined with the insulated cables or lashed to the insulated cables by a factory wrap. The cable shall be assembled according to ANSI/ICEA S-76-474.

All cable shall be rated 600-V. The cable shall be rated 105º C dry and 90º C wet and shall be suitable for installation in wet and dry locations, and resistant to oils and chemicals, and UV rated. Clearly print on the cable the UL listing mark, cable voltage, insulation type and ratings, as well as the cable size, in a color contrasting with the insulation color. When specified, identify each cable installed with its complete circuit number at each termination, splice, junction box or other location where the wire is accessible.

Color code all electric cables installed. Color code neutral wires white. Single phase three wire runs of cable shall be color-coded one black, one red, and one white. Where applicable, color code insulated ground wires green. Color striping of cables will not be acceptable in lieu of the specified color-coding means.

Make the luminaire connections to the aerial cable with listed parallel tap insulation piercing connectors. The connector shall be rated for 600-V and be listed under UL Standard 486B.

C Construction

Overhead cable as shown on temporary lighting plans will not be needed for final lighting. Remove temporary overhead cable. Removal of temporary overhead cable will be incidental to this pay item and it will become property of the contractor. The bid price shall reflect the salvage value of the temporary overhead cable.

Upon written request of the contractor, the engineer may permit to reuse removed temporary overhead cable of ampacity equivalent to the specified cable and of a type and condition approved by the engineer, if possible.

Install guy wires as necessary per WisDOT standard details for Span Wire Temporary Traffic Signal.

Conform to standard spec 655.3.5(9) for ground resistance testing.

D Measurement

The department will measure Cable Aerial Aluminum 6 AWG Quadruplex and Cable Aerial Aluminum 4 AWG Quadruplex by the linear foot in place and will be taken as the length of the messenger wire. Measurement will be made in a straight line between changes in direction and to the centers of light standards and control cabinets. Sag of the aerial cable or vertical cable will not be measured for payment. The rewiring to facilitate relocation of the cable due to staging or other construction requirements will not be measured for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.0101	Cable Aerial Aluminum 6 AWG Quadruplex	LF
SPV.0090.0102	Cable Aerial Aluminum 4 AWG Quadruplex	LF

Payment is full compensation for providing electrical wire; for making all connections; for providing all connectors, including wire nuts, fuses, fuse holders, splices, tape, and insulators; for providing messenger wire, and guy wires; and for removing temporary overhead cable.

171. Electrical Cable in Duct Type 4#8/1#8 XLPE, Item SPV.0090.0111; Electrical Cable in Duct Type 4#6/1#8 XLPE, Item SPV.0090.0112; Electrical Cable in Duct Type 4#4/1#8 XLPE, Item SPV.0090.0113.

A Description

This special provision describes furnishing and installing service cable according to current City of Milwaukee Electrical methods and National Electrical Code standards. The service cable shall consist of five cross-linked polyethylene covered, stranded, copper conductors. All work shall be according to standard spec 651.

B Materials

Unless otherwise specified, the cable to be furnished shall comply with the manufacture and test requirements of the Insulated Cable Engineers Association (ICEA) Specification No. S-61-402, NEMA WC5, latest revision.

B.1 Conductors

The conductors shall be of soft round annealed uncoated stranded copper conductor per ASTM B-3, ASTM B-8, and UL Standard UL-44. Conductors No. 8 A.W.G. or larger shall be stranded. Conductors smaller than No. 8 A.W.G. shall be solid unless otherwise specified. Stranding must meet the requirements of ASTM B8, Class B.

B.2 Insulation

B.2.1 600V

The insulation for cable rated 600V shall be cross XLPE thermosetting chemically crosslinked polyethylene insulation according to industry standard ICEA Pub. No. S-95-658/Nema WC-70 (2009), latest revision, and shall be a nominal 45 mils. thickness. Insulation shall meet the ANSI/ASTM D2220-74 (latest revision) accelerated water absorption requirements and -30°C (-22°F) cold bend test with a separator applied between the stranded conductor and insulation to facilitate cable stripping. The outside diameter of the insulating covering must be circular and extruded concentrically over the conductor.

B.2.2 Nominal Thickness

The nominal insulation thickness around each individual conductor shall be not less than 90% of the thickness specified in the schedule.

B.2.3 Color Code

The insulation compound which covers each conductor making up a cable shall be color coded in conformance with the N.E.M.A. Color Code Standard, unless otherwise specified; however, printed color designations as in I.3.2 or I.3.3. will not be acceptable under this specification (see schedule). Individual cable will be black, white, red, gray and green.

B.3 Marking

Identification for each conductor must be provided by colors according to I.M.S.A. Standards. The outer insulation must be marked with the following information at a minimum: conductor size (AWG), 600V, XLPE, USE-2, manufacturer's name, date of manufacture. All markings must be a minimum of 1/8-inch in height. Marking shall be at approximately 2 foot intervals. A sequential footage marking must be located on the opposite side of the jacket. All marking must be perfectly legible with permanent white ink.

B.4 Round Cable

This cable shall consist of stranded, uncoated, conductors each concentrically encased with a cross linked polyethylene USE-2 rubber insulation.

B.4.1 Inspection and Tests

Each length of the individual insulated conductor and completed cable shall comply with all requirements of I.C.E.A. Standards S-61-402. Sampling and Test Methods shall be according to Part 6. A certified report of the tests made on the cable to show compliance with this specification may be required prior to shipment. If requested, a sample of the cable covered by the report shall also be submitted.

POWER, CABLE SCHEDULE FOR SPECIFICATION

	4#4/1#8		4#6/1#8		4#8/1#8	
Size of Conductor	#4	#8	#6	#8	#8	#8
Number of Conductors	4	1	4	1	4	1
Number of Wires in Conductor	7	7	7	7	7	7
Type of Insulation	4 Cross-Linked Polyethylene (XLPE)	1 Cross-Linked Polyethylene (XLPE)	4 Cross-Linked Polyethylene (XLPE)	1 Cross-Linked Polyethylene (XLPE)	4 Cross-Linked Polyethylene (XLPE)	1 Cross-Linked Polyethylene (XLPE)
Insulation Thickness	60 mils	60 mils	60 mils	60 mils	60 mils	60 mils
Insulation Voltage Rating	600 volt	600 volt	600 volt	600 volt	600 volt	600 volt
Insulation Color Code	1-black (hot) 1-white (neutral) 1-red (hot) 1-gray (neutral)	1-green (ground)	1-black (hot) 1-white (neutral) 1-red (hot) 1-gray (neutral)	1-green (ground)	1-black (hot) 1-white (neutral) 1-red (hot) 1-gray (neutral)	1-green (ground)
Non-Hydroscopic Fill	None		None		None	
Moisture Resisting Sheath						
Jacket Thickness	None		None		None	

All conductors shall be uncoated annealed soft copper.

C Construction

The cable shall be installed in HDPE, PVC, and Liquidtight Flexible Non-Metallic conduit when indicated on plans. Any turf damage during installation of cable shall be restored (grass, asphalt or concrete) by the contractor. All splices in luminaires, pull boxes, and transformer bases / hand holes, must be completed by the contractor unless otherwise designated on plans. Do not splice directly in underground or conduit. Do not leave wire or cable ends uncovered or submerged in water. If the engineer observes this condition, the engineer may reject the entire length of cable or wire. Make all electrical connections and splices in the luminaire, pole or transformer base with approved pressure or compression type fittings. Cover tape with a liberal coating of an electrical varnish or sealant providing flexible protection from oil, moisture, and corrosion. Obtain the engineer's approval of this electrical coating before using. Extend wire for termination 15 inches beyond the pole hand hole. Make all electrical splices in the pull box with pre-approved insulated direct burial and submersible multi-port splice and tap connectors with wire range 2/0 - #14 AWG.

For all cables entering each pull box/vault, provide an extra loop, approximately 3 feet in length, to remain in each pull box/vault. This loop of cable is in addition to the amount needed to reach from the entrance conduit raceway end to the opening in the exiting conduit raceway.

When there is more than one circuit, bundle the circuit conductors with nylon cable ties or engineer approved electrical tape at access points.

At each pull box, identify the line side of each circuit with an attached tag using a fade-resistant waterproof black marker pen and provide the following Info:

Circuit ID: (***Cir.WD-E***)

Line Side coming from unit street light unit is on: (***Street Name***)

Side of street light unit is on: (***N,S,E,or W***)

Number of street lighting units from nearest crossing street: (***1,2,3,4,5***)

Direction from the nearest crossing street: (***N,S,E,or W***)

Name of the nearest crossing street: (***Street Name***)

Example of Tag Info:

Cir.WD-E,

Line Side from: ***W. Canal St. / N. / 1 / W. /of Potawatomi Cir.***

Install conductors in continuous lengths without splices from termination to termination. The contractor may only splice at pull boxes that connect to light poles by using pre-approved insulated direct burial and submersible multi-port splice and tap connectors with wire range 2/0 - #14 AWG. At locations where no pull box or transformer bases exist, splice at the hand-holes in poles.

D Measurement

The department will measure Electrical Cable In Duct Type 4#8/1#8 XLP, and 4#4/1#8 XLP 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.0090.0111	Electrical Cable In Duct Type 4#8/1#8 XLPE	LF
SPV.0090.0112	Electrical Cable In Duct Type 4#6/1#8 XLPE	LF
SPV.0090.0113	Electrical Cable In Duct Type 4#4/1#8 XLPE	LF

Payment is full compensation for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work. Also included is the labor, equipment and materials for removal of construction debris and site restoration.

172. 8-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60, Item SPV.0090.0150; 4-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60, Item SPV.0090.0151; 2-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60, Item SPV.0090.0152.

A Description

This special provision describes furnishing and installing cement encased multiple duct conduit packages below grade as shown on the plans and as hereinafter described.

B Materials

B.1 Conduit

Furnish and install DB-60 polyvinyl chloride (PVC) conduit. Conduit will be accepted on the basis of a Manufacturer's Certificate of Compliance and WISDOT field inspection upon delivery to a project.

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

B.2 Conduit Spacers

Furnish and install nonmetallic interlocking base spacers and intermediate spacers that provide a 1-1/2" vertical and 1-1/2" horizontal separation between PVC pipes. The base spacers shall provide a 3" vertical separation from the trench bed to the bottom of the PVC pipes.

B.2 Conduit Bed

Furnish and install a minimum 2" conduit bed of stone chips or crushed stone screenings conforming to the following:

3/8 Inch Crushed Stone Chips

Sieve Sizes	% Passing by Weight
½"	100
/8"	90-100
No. 8	0-15
No. 30	0-3

Sieve Sizes	% Passing by Weight
½"	100
No. 4	75-100
No. 100	10-25

B.4 Concrete

The type of concrete mix to be used to encase the ducts will be:

Type I Cement	280 lbs
Fly Ash	100 lbs
Sharp Torpedo Sand	3100 lbs
Water	35 gals
Chryso Air 260 or approved equal	2.0 ozs
Chryso Plast 209 or approved equal	7.0 ozs
Air	5%

Mix the materials to provide an approximate 3 inch slump

B.5 Slurry Backfill

Aggregate slurry backfill consists of No. 1 concrete aggregate Class 'C' concrete mix with the cement deleted.

Fly Ash (Class C)	75 lbs.
Concrete Sand (Damp)	1830 lbs.
No. 1 Concrete Aggregate	1830 lbs.

Mix the materials with water to inundate the aggregate sufficiently to provide an approximate 3 inch slump. Deposit the mix in the trench directly from a concrete transit mix truck.

B.6 Pull Rope

Pull rope specifications will be:

1. Flat construction (7/16" to 5/8" wide)
2. 100% woven aramid fiber (may include tracer wire)
3. 1500 lbs. Minimum pull strength prelubricated
4. Sequential footage markings for location

For any questions on materials, contact Karen Rogney at (414) 286-3243.

C Construction

C.1 Excavation

The excavation shall have the minimum or maximum dimensions shown on the plans and as follows:

Number of Ducts Wide	Minimum (Inches)	Maximum (Inches)
1	8 1/2	11
2	14 5/8	17 1/8
3	20 3/4	23 1/4.
4	26 7/8	29 3/8
5	33	35 1/2
6	39 1/8	41 5/8
7	45 1/4	47 3/4
8	51 3/8	53 7/8

These minimum and maximum trench widths apply to standard 4-inch PVC electrical duct only. When required, the excavation may be widened for the handling and placing of materials.

Sheath and brace open-cut trenches as required by code and as necessary to maintain safety. The cost of furnishing, placing and removing of sheathing and bracing shall be included in the unit bid for the work.

The dimensions of the excavation will be governed by the number, configuration and the grade (cover) to which the conduit is to be installed as shown on the plan. The walls of the excavation shall be clean and true.

Prior to excavating trenches, expose the existing manhole and conduit lines. The object of this is to permit adjustments in line and grade to avoid special construction methods. Protect the exposed manhole and conduit from damage.

Lay the conduit at a depth so that sufficient protection from damage is provided. Allowable covers shall be as follows:

The standard cover for mainline conduit is 39 inches and the minimum cover acceptable is 28 inches.

Maintain the standard cover wherever possible and any deviation less than the minimum cover requires the approval of the engineer.

Grade the trench to have a minimum pitch of 3 inches per 100 feet. When an obstruction is encountered in the trench and it is necessary to excavate a deeper trench than would otherwise be required, in order to obtain drainage, refer the matter to the engineer to determine whether the extra excavation should be made.

In grading a trench for mainline conduit, there are three general practices for direction of pitch.

(a) When grading a trench in a street with a level grade, the high point of the trench bottom should ordinarily be centered between manholes and pitched downward equally toward each manhole.

(b) Where the street slopes in one direction, locate the high point of the trench bottom approximately 30 feet from the end wall of the higher manhole and grade toward both manholes.

(c) Where a steep grade is encountered, grade the trench at the minimum pitch from the end wall of the higher manhole to a point 20 feet plus or minus toward the lower manhole. From this point, follow the street grade at the standard cover to a point 20 feet plus or minimum away from the end wall of the lower manhole. From this point, the remainder of the section shall be laid at the normal pitch.

After the rough excavation is completed, prepare the bottom of the trench to receive the conduit. Bring the duct bed to the final grade by grading uniformly from the high point to the low or drainage points. Use stone chips or crushed stone screenings to grade the trench. The duct bed shall be a minimum of 2” in depth.

C.2 Placing of Duct

Proceed with placing the ducts as soon as the duct bed has been completed. Inspect all ducts before placing to see that the bores are clean and free from mud, sand, etc. Use only ducts with a smooth bore, free from burrs, rough projections etc. Smooth off burrs or other rough areas likely to damage cable are found in the duct by rasping or scraping.

Place the duct on base spacers with the ends staggered so no two couplings are adjacent. This may be accomplished by the use of the short lengths in stock or cutting back full length sections to the desired lengths. If cut pieces are used, place the cut end at the manhole. Locate the base spacers within 2 feet of the end of each duct and one base spacer located in the middle of the duct.

Use full length pieces for the balance of the conduit line.

Formations of two ducts or more in height are to be carried forward in full formation, that is, as each tier of 20 foot lengths is laid, the next higher tier of ducts shall then be placed on the intermediate spacers.

Place these intermediate spacers on top of the base spacers located within 2 feet from each duct end and one in the middle of each duct. Place the intermediate spacers and ducts for the remaining tiers. Glue each length into the adjoining coupling. A twist and push on the duct being placed will suffice for a watertight joint. Exercise caution in the driving operation, so that neither the coupling nor the duct will be split or damaged in any way. After the full formation has been completed, place wood trench and duct bracing on the ducts to prevent shifting or floating while the concrete envelope is being placed and during driving operation.

This procedure shall be followed with succeeding lengths, providing spacers at the proper intervals, until sufficient trench footage of completed formation has been placed and is ready to receive concrete encasement.

The terminating point for mainline conduit will be the inside manhole wall. Install a standard end bell fitting flush with the wall on all duct access points.

Install a #10 copper tracer wire along and above the centerline of the duct for encasement in the concrete. The wire shall be 4 feet longer than the run of conduit and be at least 2 feet long at each access point.

Install a pull rope in each run of conduit, as laid. The rope shall be 4 feet longer than the run of conduit and shall be doubled back at least 2 feet at each raceway access point. Anchor the pull rope at each access point in a manner acceptable to the engineer.

C.3 Concreting

Begin concreting after sufficient conduit has been laid and the trench and duct have been inspected. The minimum concrete encasement of the ducts is 3 inches on the top, 2 inches on the sides, and 3 inches on the bottom. After placing, puddle the concrete with a splicing bar or similar tool so that complete duct encasement is accomplished. Remove wood braces used to keep the conduit from floating before the concrete sets completely and the resultant encasement voids filled with concrete.

Allow the concrete encasement to set for a minimum of 6 hours before backfilling is commenced.

C.4 Slurry Backfill

Slurry Backfill. Commence backfilling of the conduit immediately after the duct has been inspected, approved and has set to withstand the load.

An aggregate slurry as specified shall be used to backfill the concrete encased conduit. The trench shall be backfilled to the proposed or existing subgrade. The mix shall be deposited in the trench directly from a concrete transit mix truck.

C.5 Acceptance of Work

Contact the City of Milwaukee for inspection and acceptance of work.

D Measurement

The department will measure (No.)-Duct Conduit Cement Encased, 4-Inch Rigid Non-Metallic Conduit DB-60 by the linear foot, acceptably completed, based on the distance along the centerline of duct between ends of conduit. City of Milwaukee shall have final acceptance 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.0090.0150	8-Duct Conduit Cement Encased 4-Inch Rigid Nonmetallic Conduit DB-60	LF
SPV.0090.0151	4-Duct Conduit Cement Encased 4-Inch Rigid Nonmetallic Conduit DB-60	LF
SPV.0090.0151	2-Duct Conduit Cement Encased 4-Inch Rigid Nonmetallic Conduit DB-60	LF

Payment is full compensation for furnishing the conduit, conduit bodies, conduit fittings, conduit spacers, end caps and trace wire; for excavating, bedding, encasement and backfilling including any concrete, stone, aggregate slurry, bracing, or other related materials; for disposing of surplus materials; and for making inspections, and for installing the conduit.

173. Outdoor Rated Network Cable, Item SPV.0090.0201.

A Description

This special provision describes furnishing and installing outdoor rated network cable in new conduit, as paid for with other items in this contract, or existing conduit, as shown on the plans or as directed by the engineer.

B Materials

Furnish outdoor rated Category 5e, or better, UTP cable with water-blocking flooded core and UV-resistant polyethylene jacket. Cable shall consist of 4-pairs of 24 AWG solid copper conductors and shall meet the requirements of ANSI/TIA/EIA 5 68A Category 5e, CENELEC EN50173, ICEA S-90-661, and ISO/IEC 11801.

Furnish an RJ45 connector for each end of the cable.

C Construction

Install the cable following the manufacturer’s installation guidelines.

Install the RJ45 connectors (if not done prior to installation) according to manufacturer’s installation guidelines.

Use a purpose built “Pass-Fail” network cable tester to test the network cable installation for Category 5, Class E compliance. Repair any connections or cable as needed for the test to register a “Pass”.

Connect the cable to the devices on each end as shown on the plans or as directed by the engineer.

D Measurement

The department will measure Outdoor Rated Network Cable by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.0201	Outdoor Rated Network Cable	LF

Payment is full compensation for furnishing, installing, and testing the outdoor rated network cable; and for connecting the cable to the devices at each end of the cable.

174. Fencing Repair, Item SPV.0090.0400.

A Description

This special provision describes providing repairs to the existing bridge mounted fencing. Repairs include sealing of fence post bases, replacement of broken rails, and replacement of missing mesh ties as shown on the plans, as described in this special provision, and according to standard spec 616.

B Materials

Furnish galvanized steel fence mesh ties and rails according to standard spec 616.2.3.

Furnish joint sealer according to standard spec 502.2.9.

C Construction

Identify locations where fence mesh tie wires are missing or no longer connecting the mesh to the posts and rails. Provide and install new fence mesh ties to fully secure the existing fence mesh to the posts and rails. The engineer shall verify locations requiring new ties as well as verify installation of the new ties.

Replace the broken horizontal rail and clamps where they are corroded and damaged at each expansion joint location. Replace the rail and clamps in-kind with the existing system. Provide proposed rail replacement details to the engineer for review and approval.

Clean the area surrounding the fence post bases embedded in the concrete parapets to remove all loose debris and rust from the area. Clean to provide a suitable surface for caulking. After cleaning, seal the perimeter around the fence post bases, as shown on the plans.

D Measurement

The department will measure Fencing Repair 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.0090.0400	Fencing Repair	LF

Payment is full compensation the fence repairs, including wire tie replacement, fence rail replacement, and rail post sealing.

175. Wall Modular Block Mechanically Stabilized Earth, Item SPV.0165.0001.

A Description

This special provision describes designing, furnishing materials and erecting a permanent earth retention system according 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 Modular Block 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. See the approved products list titled "Proprietary Retaining Wall System Vendors." 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 department also maintains a separate list of plants pre-approved by the department to provide wall facing units. See the approved products list titled "Precast Concrete and Block Fabricators." The identity 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 according 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.

To be eligible to provide wall facing units for this project, a block manufacturing plant must be pre-approved by the Bureau of Technical Services and added to that list prior to the bid closing date. Information and assistance with the pre-approval process can be obtained by contacting the Bureau of Technical Services at the following email address: DOTProductSubmittal@wisconsin.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 conforms to 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 ½ inch x 11 inch sheets, and shall contain the project identification number, name or designation of the wall, date of preparation, initials of designer and checker, and page number at the top of the page. All plans, 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 according to Table 11.5.7-1 in AASHTO LRFD.

Design and construct the walls according to the lines, grades, heights and dimensions shown on the plans, as herein specified, and as directed by the engineer.

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 according to 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 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 according to AASHTO LRFD 11.10.6. The internal stability shall include soil reinforcement pullout, soil reinforcement rupture, and wall facing-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 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 according to AASHTO LRFD 11.10.2.3.

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 6.0 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 two times the block width (front face to back face) or 32 inches, whichever is less. The first (bottom) layer of reinforcement shall be placed no further than 12 inches above the top of the leveling pad or the height of the block, but at least one block height above the leveling pad. The last (top) layer of soil reinforcement shall be no further than 21 inches below the top of the uppermost block.

All soil reinforcement required for the reinforced soil zone shall be connected to the wall facing.

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 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 according to 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 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 1¾ 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.

All block materials shall be furnished palleted and banded, with every pallet marked for quantity, lot number, lot size, manufacturing plant, and manufacturing date(s). Materials furnished loose or unmarked will be rejected. Rejected materials shall be removed from the project at no cost to the department.

B.3.1.1 Material Testing

Perform or procure quality control testing of project materials according to the following requirements:

Test	Method	Requirement	
		Dry-cast	Wet-cast
Compressive Strength (psi)	ASTM C140 or ASTM C39 [4]	5000 min.	4000 min.
Air Content (%)	AASHTO T152 [4]	N/A	6.0 +/-1.5
Water Absorption (%)	ASTM C140 [3]	6 max.	N/A
Freeze-Thaw Loss (%) 40 cycles, 5 of 5 samples 50 cycles, 4 of 5 samples	ASTM C1262[1][2][3]	 1.0 max. 1.5 max.	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] An independent testing laboratory shall control and conduct all sampling and testing under ASTM C140/Water Absorption and ASTM C1262. Prior to sampling, the manufacturer 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.

[4] The manufacturer may perform their own quality control testing under ASTM C140/Compressive Strength, ASTM C39, and AASHTO T152, if qualified for this work under the requirements for plant certification.

The contractor and fabricator shall coordinate with the independent testing agent (if used) 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 furnished.

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, lot size, and date(s) of fabrication.

Quality control testing of project materials shall be completed not more than 18 months prior to delivery. Lot size shall not exceed the maximum testing frequencies, which shall not exceed 5000 blocks for dry-cast blocks and the lesser of 150 CY or 1 day's production for wet-cast blocks. 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 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.3.2 Leveling Pad

Provide an unreinforced cast-in-place concrete leveling pad. Use Grade A 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 concrete leveling pad shall be as wide as the proposed blocks plus 6-inches, with 6-inches of the leveling pad extending beyond the front face of the blocks. 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.

Wall Backfill, Type A, shall comply with the requirements for Coarse Aggregate No. 1 as given in standard spec 501.2.5.4.4. All backfill placed within a zone from the 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.

Wall Backfill, Type B, shall be placed in a zone extending horizontally from 1 foot behind the back face of the wall to 1 foot beyond the end of the reinforcement and extending vertically from the 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 Type A and Type B shall meet the following requirements.

Test	Method	Value
pH	AASHTO T-289	4.5-9.0
Sulfate content [1]	AASHTO T-290	200 ppm max.
Chloride content [1]	AASHTO T-291	100 ppm max.
Electrical Resistivity [1]	AASHTO T-288	3000 ohm-cm min.
Organic Content [1]	AASHTO T-267	1.0% max.
Angle of Internal Friction	AASHTO T-236[2]	30 degrees min. (At 95.0% of maximum density and optimum moisture, per AASHTO T99, or as modified by C.2)

[1] Requirement does not apply to walls with non-metallic reinforcement and non-metallic connectors.

[2] 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

B.3.4.1 Geogrids

Geogrid supplied as reinforcing members shall be manufactured from long chain polymers limited to polypropylene, high-density polyethylene, polyaramid, and polyester. Geogrids shall form a uniform rectangular grid of bonded, formed, or fused polymer tensile strands crossing with a nominal right angle orientation. The minimum grid aperture shall be 0.5 inch. The geogrid shall maintain dimension stability during handling, placing, and installation. The geogrid shall be insect, rodent, mildew, and rot resistant. The geogrid shall be furnished in a protective wrapping that shall prevent exposure to ultraviolet radiation and damage from shipping or handling. The geogrid shall be kept dry until installed. Each roll shall be clearly marked to identify the material contained.

The wall supplier shall provide the nominal long-term design strength (T_{al}) and nominal long-term connection strength, Talc as discussed below.

Nominal Long-Term Design Strength (T_{al})

The wall supplier shall supply the nominal long-term design strength (T_{al}) used in the design for each reinforcement layer and shall be determined by dividing the Ultimate Tensile Strength (T_{ult}) by the factors RF_{ID}, RF_{CR}, RF_D.

Hence,

$$T_{al} = \frac{T_{ult}}{RF_{ID} x RF_{CR} x RF_D}$$

where:

T_{ult}	=	Ultimate tensile strength of the reinforcement determined from wide width tensile tests (ASTM D6637) for geogrids based on the minimum average roll value (MARV) for the product.
RF_{ID}	=	Strength reduction factor to account for installation damage to the reinforcement. In no case shall RF_{ID} be less than 1.1.
RF_{CR}	=	Strength reduction factor to prevent long-term creep rupture of the reinforcement. In no case shall RF_{CR} be less than 1.2.
RF_D	=	Strength reduction factor to prevent rupture of the reinforcement due to chemical and biological degradation. In no case shall RF_D be less than 1.1.

Values for RF_{ID}, RF_{CR}, and RF_D shall be determined from product specific test results. Guidelines for determining RF_{ID}, RF_{CR}, and RF_D from product specific data are provided in FHWA Publication No. FHWA-NHI-10-024 and FHWA–NHI-10-025 "Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes".

Nominal Long-term Connection Strength T_{ac}

The nominal long term connection strength, T_{ac}, shall be based on laboratory geogrid connection tests between wall facing and geogrids. T_{ac} shall be as given below

$$T_{ac} = \frac{T_{ult} * CR_{cr}}{RF_D}$$

where:

T_{ac} = Nominal long-term reinforcement facing connection strength per unit reinforcement width at a specified confining pressure.

T_{ult} = Ultimate tensile strength of the reinforcement for geogrids defined as the minimum average roll value (MARV) for the product.

CR_{cr} = Long term connection strength reduction factor to account for reduced ultimate strength resulting from connection.

RF_D = Strength reduction factor to prevent rupture of the reinforcement due to chemical and biological degradation.

T_{ac} shall be developed from the tests conducted by an independent laboratory on the same facing blocks and geogrids as proposed for the wall and shall cover a range of overburden pressures comparable to those anticipated in the proposed wall. The connection strength reduction factor CR_{cr} shall be determined according to long-term connection test as described in Appendix B of FHWA Publication No. FHWA-NHI 10-025 “Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes”. CR_{cr} may also be obtained from the short term connection test meeting the requirements of NCMA test method SRWU-1 in Simac et al 1993 or ASTM D4884.

The contractor shall provide a manufacturer’s certificate that the Tult (MARV) of the supplied geogrid has been determined according to ASTM D4595 or ASTM D6637 as appropriate. Contractor shall also provide block to block and block to reinforcement connection test reports prepared and certified by an independent laboratory. Also provide calculations according to AASHTO LRFD, and using the results of laboratory tests, that the block-geogrid connections shall be capable of resisting 100% of the maximum tension load in the soil reinforcements at any level within the wall, for the design life of the wall system.

B.3.4.2 Galvanized Metal Reinforcement

In lieu of polymeric geogrid earth reinforcement, galvanized metal reinforcement may be used. Design and materials shall be according to AASHTO LRFD 11.10.6.4.2. The design life of steel soil reinforcements shall also comply with AASHTO LRFD. 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 according 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. 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, 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 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.

Compact all backfill Type B as specified in standard spec 207.3.6. Compact the backfill Type B 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 modular blocks. Do not use sheepsfoot or padfoot rollers within the reinforced soil zone.

A minimum of 6 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 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 according to the manufacturer’s directions.

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 the 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.

C.3.3 Soil Reinforcement

C.3.3.1 Geogrid Layers

Place soil reinforcement at the positions and to the lengths as indicated on the accepted shop drawings. Take care that backfill placement over the positioned soil reinforcement elements does not cause damage or misalignment of these elements. Correct any such damage or misalignment as directed by the engineer. Do not operate wheeled or tracked equipment directly on the soil reinforcement. A minimum cover of 6 inches is required before such operation is allowed.

Place and anchor geogrid material between wall unit layers in the same manner as used to determine the Geogrid Block-to-Connection Strength. Place the grid material so that the machine direction of the grid is perpendicular to the wall face. Each grid layer shall be continuous throughout the lengths indicated on the plans. Join grid strips with straps, rings, hooks or other mechanical devices to prevent movement during backfilling operations. Prior to placing backfill on the grid, pull the grid taunt and hold in position with pins, stakes or other methods approved by the engineer.

C.3.3.2 Steel Layers

Place the steel reinforcement full width in one piece as shown on the plans. No splicing will be allowed. Maintain elements in position during backfilling.

C.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:

https://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 E178 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 Modular Block 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.0165.0001	Wall Modular Block Mechanically Stabilized Earth	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 parapets, traffic barriers, railings, and other items above the wall cap or coping.

176. Removing Loose Concrete Overhead, Item SPV.0165.0400.

A Description

This special provision describes removing vertical, horizontal, and overhead concrete that is visually delaminated or deteriorated on structures as shown on the plans or as directed by the engineer and applying a migrating corrosion inhibitor to existing and new areas of exposed steel reinforcing and spalled concrete. This work shall be according to the pertinent parts of standard spec 517 and the details as shown in the plans.

B Materials

Furnish a migrating corrosion inhibitor for vertical, horizontal and overhead applications that is according to the pertinent requirements of standard spec 517, and with the following typical physical properties:

- Color appearance: clear yellow viscous liquid,
- pH: 9.0 - 9.7 (neat),
- Density: 8.6 – 8.8 lb./gal. (1.03 – 1.05 kg/liter),
- Viscosity (or flow) similar to syrup and higher than water.
- Odor: slight ammonia smell.
- Non-volatile content: 20 – 27%.

Migrating corrosion inhibitor provided in this section shall conform to the requirements for each type and class of concrete required, with the following typical physical properties and requirements:

- Organic liquid.
- Water-based.
- Non-flammable.
- Non-vapor barrier.
- Non-toxic, oral LD 50 2000 g/kg maximum, or lower.
- Protects both anodic and cathodic areas.
- Does not contain calcium nitrate.
- Non-polluting after flushing or dilution.
- Non-harmful to plant life after flushing or dilution.
- Approved for potable water applications by NSF Standard 61.
- Certified for potable water applications by Underwriters laboratories.
- Not carcinogenic under occupational Safety and Health Agency, NTP, or IARC.
- Seven-year minimum usage experience as a migrating corrosion inhibitor.
- Confirmed effective by ASTM G – 109.
- Proven effective as reported by the Strategic Highway Research Program funded by the United States of America, Department of Transportation (DOT), federal government and state DOT's.

C Construction

C.1 Preparation

Remove all deteriorated concrete that is in danger of falling off the structure onto persons, traffic, or areas below the bridge, and as directed by the engineer. Use of power hammers is not allowed. Take necessary precautions while removing deteriorated concrete to preserve all existing reinforcing steel. Saw cutting of edges is not needed. Concrete and adjacent surfaces should be dry, clean, and free of all dirt, oil, grease, efflorescence, sealers, coatings, curing compounds, membranes, rubber tire marks, and asphalt. Clean

surface by stream cleaning, water blasting, sandblasting, or shot blasting. Use an air compressor with water and oil trap to ensure the cleaning method does not apply materials intended for removal. Use brush, broom, sweeper, or air compressor on surfaces as final cleaning before application. Use brush, broom, sweeper, or air compressor to chase cracks as final cleaning before application. Implement necessary procedures to prevent debris from falling into the water.

C.1 Preparation

Use the corrosion inhibitor for vertical and overhead surface applications. Apply the solution by spray (conventional airless or hand pressure spray equipment), roller, squeegee, or paintbrush. Follow manufacturer's application rate, but at a minimum apply a rate of 150 square feet per gallon (3.7 square meters per liter). Minimal dry time is required and is usually minutes after treatment. Do not apply if the ambient temperature near the applied concrete surface is expected to fall below 32° F within 12 hours of application or if precipitation is expected within 8 hours after application.

D Measurement

The department will measure Removing Loose Concrete Overhead 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.0165.0400	Removing Loose Concrete Overhead	SF

Payment is full compensation for concrete removal and disposal, cleaning preparation, furnishing, and for applying the product.

177. Fiber Wrap Reinforcing Non-Structural, Item SPV.0165.0401.

A Description

This special provision describes providing non-structural protection using externally bonded, high-strength, fiber reinforced polymer (FRP) composite/epoxy resin systems field-applied per the details shown on the plans.

B Materials

Furnish a glass or carbon composite fabric that is a continuous unidirectional filament woven fabric with a primary fiber of electrical (E) glass or carbon, respectively.

Use a two-component, solvent-free with 0% Volatile Organic Compound (VOC) epoxy that is supplied by the manufacturer. Polyester resin shall not be allowed as a substitute for epoxy resin. Deliver epoxy materials in factory sealed containers with the manufacturer's labels intact and legible with verification of the date of manufacture and shelf life.

The protective top coating shall be concrete gray in color and match the color of the adjacent unwrapped concrete. Protective top coating shall be vapor permeable and UV resistant.

The use of more than one FRP system in an application is not permitted. All components, including primer, putty, filler, protective coating, and other materials, shall be compatible with the FRP system.

Store products in a protected area at a temperature between 40°F and 100°F with no moisture contact, no UV exposure, protected from dirt, chemicals, and physical damage, and according to the manufacture's requirements. Do not use components exceeding their shelf lives.

Provide the following to the engineer:

- The manufacturer's data sheet indicating physical, mechanical and chemical characteristics of all materials used in the FRP system including the primer, putty, resin, saturant, fibers, and top coating.
- The manufacturer's Material Safety Data Sheets (MSDS) for all materials used.
- The manufacturer's instructions for installation and repair, including information on lap details if required.
- The manufacturer's storage and handling requirements of all materials.

Supplied composite fabric and epoxy resin products must have a minimum of ten installations. Furnish proof of successful installations including date of construction and owner references. Furnish certified test reports including 1000 hour tests for 140°F, water, and salt water.

C Construction

C.1 Certified Applicators

Installers shall have a minimum of three years of experience performing similar FRP composite strengthening, and be trained and certified by the manufacturer of the supplied FRP composite/epoxy resin system being used. Submit a list of completed surface bonded FRP composite strengthening projects completed with the manufacturer's FRP composite system in the past three years. The list shall include a minimum of ten projects with the proposed FRP system, the dates when work was performed, general description of work, quantity of work and owner references. Provide written verification from the FRP composite manufacturer that the applicator has received the required training and is a certified installer by the FRP manufacturer.

C.2 Surface Preparation

Remove spalled and loose concrete.

Grind uneven surfaces or protrusions until smooth. Any corners or edges shall be rounded over to a minimum radius of 1/2-inch. This requirement also applies to beveled edges which must be ground smooth to eliminate sharp spots.

Per standard spec 509, treat any areas of active corrosion of the reinforcement and patch the concrete surface so as to restore it to its original dimensions. When patching the concrete substrate, remove defective concrete down to sound concrete; the extents of the area to be removed and patched shall be 1/2-inch beyond the boundary of the distress on all sides. If there is a loss of bond between the reinforcing steel and the concrete, remove the surrounding concrete to a depth equal to the greater of 3/4-inch or the maximum aggregate size plus 1/4-inch. If surface repair is performed, allow patches to cure a minimum of 10 days before FRP application or until the surface moisture is less than 4%. This work to be paid for under separate bid items per the plans.

Epoxy inject cracks in the concrete larger than 0.25 mm in width at least 24 hours prior to FRP installation. Seal cracks smaller than 0.25 mm in width in aggressive environments at the direction of the engineer. This work to be paid for under a separate bid item per the plans.

Preserve and utilize the required existing reinforcing steel, and blast clean, realign, and retie as the engineer directs. If additional reinforcement is required, use grade 60 steel conforming to AASHTO M31 and standard spec 505.2. Repair damage to existing, epoxy-coated reinforcement conforming to 509.3.1.

The concrete surface shall be clean, and free of any material that could interfere with bonding, such as dirt, grease, wax, etc. The surface must also be free of moisture with a maximum moisture content of 4%. Immediately prior to bonding, all contact surfaces shall receive a final cleaning by hand or oil-free compressed air to remove any residual dust, powder residue or laitance.

C.3 Installation

A minimum of two layers are required.

Place FRP only under the following conditions or per manufacturer's recommendation:

- Ambient temperature and the temperature of the epoxy resin components shall be between 55°F and 90°F during the entire application process.
- Relative humidity less than 85%.
- Surface temperature more than 5°F above the dew point.
- Moisture level of all contact surfaces, included patched areas, less than 4% unless the resin has been specifically formulated for wet applications.

Unless directed otherwise by the engineer, install the FRP after all dead loads have been applied to the bridge. Do not install FRP while the component being repaired is subjected to live loads.

Apply, per manufacturer's instructions, a system-compatible putty as required to fill uneven surfaces or recesses. Depending on the manufacturer, this putty may be applied before or after the primer.

Apply the primer coat uniformly to the substrate using a roller or trowel. Primed and puttied surface shall be protected from all contaminants (i.e., dust, moisture, etc.) prior to the application of the fiber wrap.

Mix the components of the epoxy resin with a mechanical mixer and apply the epoxy resin uniformly to the fiber at a rate that ensures complete saturation of the fabric. Apply saturating resin uniformly to the prepared substrate. Begin resin application within one hour after the batch has been mixed. Use all resin within the pot life as specified by the manufacturer.

Apply the fabric per manufacturer's recommendation. Handle fiber wraps in a manner to maintain fiber straightness and prevent fiber damage. Any kinks, folds, or severe waviness will not be accepted. Use rollers or hand pressure to remove any air trapped between the fabric and the concrete, or between fabric plies. Rolling must be parallel to the direction of the fibers to avoid fiber misalignment or damage. Do not use metal serrated rollers because they can damage the FRP fabric.

Stagger the joints between layers so that a continuous sheet in one layer will span the joints of the sheets in the layer below. If multiple layers cannot all be placed in one day, defer to the manufacturer to determine the extent of the cure and surface preparation required for the previously placed layers required before proceeding. If required, laps shall be per manufacturer's instructions, with a minimum edge lap of 6 inches and a minimum end lap of 12 inches. Laps should be staggered between layers.

Cover the final layer of fabric with a coat of epoxy that produces a uniform finished surface per manufacturer's instructions.

Cure per manufacturer's instructions. The FRP system shall be protected from weather, large temperature variations, moisture, sand, dust, and other foreign particles during curing. Do not allow the system to be subjected to live loads until it is completely cured. Defer to manufacturer's instructions regarding the degree of cure which must be achieved before additional dead loads can be applied to the wrapped member.

An additional protective coating is required to protect the fibers from the elements, specifically UV radiation, and to give the final aesthetic effect. Install protective coating per manufacturer's instructions after the field inspection described in section C.4.2 has been conducted. To prepare the FRP surface to receive the coating, clean and roughen the exterior surfaces of the composite wrap using a light abrasive after the final epoxy coat is completely polymerized. The abrasive shall be of the appropriate hardness to roughen the surface without damaging the fibers. Remove all dust, dirt, and other bond inhibiting materials and dry all cleaned and roughened surfaces.

C.4 Testing and Acceptance

C.4.1 Records and Sampling

The contractor shall record the following information for each installation:

- Date, time, and specific location of installation.
- Surface preparation methods.
- Widths and lengths of cracks not injected with epoxy.
- Material information including product used, fiber and resin lot/batch numbers, mixture ratios, mixing times, etc.
- Ambient temperature, relative humidity, and general weather observations at the beginning and end of each installation.
- Concrete surface temperature, concrete moisture content, and surface cleanliness.
- Number of FRP layers used and fiber orientation of each layer.
- Square footage of fabric and volume of epoxy used each day.

C.4.2 Field Testing

In the presence of the engineer, the contractor will conduct a visual and acoustic sounding inspection to test for defects such as voids, delaminations, external cracks, chips, cuts, loose fibers, external abrasions, blemishes, foreign inclusions, depressible raised areas, or fabric wrinkles. Conduct this inspection after the FRP is cured but before the protective coating is applied.

In the presences of the engineer, the contractor will conduct a visual inspection of the protective coating for damage including but not limited to cracking, crazing, blisters, peeling, or external abrasions. Conduct this inspection after placement and cure of the protective coating.

If any defects are found, they must be repaired as detailed in C.4.3, or removed and replaced.

C.4.3 Required Remediation

Inject or back fill any small voids or bubbles (1-1/2” diameter or less) with epoxy. If five or more such voids are found in an area smaller than 10 square feet, submit a proposed remediation procedure subject to the acceptance of the engineer.

Voids or delaminated areas greater than 3” in diameter or an equivalent rectangular area shall be reported to the engineer. Proposed remediation procedure(s) for addressing these areas are subject to the acceptance of the engineer.

D Measurement

The department will measure Fiber Wrap Reinforcing Non-Structural 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.0165.0401	Fiber Wrap Reinforcing Non-Structural	SF

Payment is full compensation for preparing required submittals, cleaning the surfaces of elements to be confined, furnishing, transporting, handling, and installing the fabric, finish coat of epoxy, the final protective coating system, field testing, and required remediation. No extra measurement or payment will be made for overlap areas.

Repairing damage to existing reinforcement is incidental to this item.

178. Resin Binder High Friction Surface Treatment Modified, Item SPV.0180.0001.

A Description

This special provision describes providing a high friction surface treatment (HFST) composed of aggregate in a resin binder on HMA or concrete pavements as the plans show and as follows.

B Materials

B.1 Resin Binder

Supply a two-part thermosetting resin binder which is compatible with the pavement type, bonds to the pavement surface, holds the aggregate firmly in place in a broad range of climates including below-freezing temperatures, and meets the requirements specified in Table 1. Supply a primer if recommended by the resin binder manufacturer.

Table 1. Resin Binder Properties

Property	Requirements	Test Method*
Viscosity	7 – 30 poises	ASTM D2556 1-pint specimen
Gel Time	10-minute minimum	ASTM C881 60g mass
Ultimate Tensile Strength	2,000 – 5,000 psi @ 7 days	ASTM D638 Type 1 specimen
Elongation at Break	30% - 70% @ 7 days	ASTM D638 Type 1 specimen
Compressive Strength	≥ 1000 psi @ 3 hrs and ≥ 5000 psi @ 24 hours	ASTM D695**
Water Absorption	≤ 1.0 % @ 24-hr	ASTM D570 24-hr immersion
Shore D Hardness	60 – 80 @ 7 days	ASTM D2240*** Type 1 precision, Type D method
Cure Rate	≤ 3 hours (Dry Through Time)	ASTM D1640 50-55 wet mil thickness***
Adhesive Strength	250 psi @ 24 hours or 100% substrate failure	ASTM C1583***

* Prepare samples per manufacturer's recommendation; cure all specimens at 73 ± 2° F and at 50 ± 2° F; and test all specimens at 73 ± 2° F.

** 2" x 2" cubes made of 2.75 parts of 20-30 mesh sand to 1 part mixed resin binder; use plastic inserts in oversized molds to produce 2" cubes.

*** Conduct testing on applicable pavement type.

B.2 Aggregate

Furnish calcined bauxite aggregate that is fractured or angular in shape; resistant to polishing and crushing; clean and free of surface moisture; free from silt, clay, asphalt, or other organic materials; compatible with the resin binder; and meet the properties and gradation requirements in Tables 2 and 3. Check with resin binder manufacturer for any compatibility requirements or concerns.

Table 2. Aggregate Properties

Property	Requirements	Test Methods
Moisture Content	≤ 0.2%	AASHTO T 255
Fine Aggregate Angularity	≥ 45%	AASHTO T 304, Method A
Micro-Deval	≤ 15% loss	ASTM D7428
LA Wear	≤ 10% loss @ 100 revolutions and ≤ 25% loss @ 500 revolutions	AASHTO T 96
Freeze-Thaw Soundness	≤ 9% loss @ 50, 16, or 25 cycles using Procedure A, B, or C, respectively	AASHTO T 103

Table 3. Aggregate Gradation (AASHTO T27)

Sieve Size	% Passing by Weight
No. 4	100
No. 6	95
No. 16	0-5
No. 30	0-1

B.3 Approval of High Friction Surface Treatment

A minimum of 20 working days before applying HFST, submit product data sheets and specifications from the manufacturer, and a certified test report from an independent laboratory verifying that the resin binder and the calcined bauxite aggregate meet all the requirements specified in Tables 1, 2 and 3. Documents must be dated within three years.

If resin binder has not been previously used in Wisconsin, also submit a list of at least five reference projects where the resin binder has been used for similar applications and in locations that have similar climatic conditions as Wisconsin. Supply a description of the projects along with contact information of the facility owner.

If the engineer requests, provide samples of the resin binder and aggregate for department testing before applying HFST.

C Construction

C.1 General

The contractor will provide documentation showing HFST application experience from at least three previous projects completed for WisDOT or other agencies.

Conduct a meeting with the resin binder manufacturer representatives before applying HFST to establish procedures for maintaining optimum working conditions and coordination of the work. Submit recommended application procedures, including quality control practices, to the engineer for approval. Ensure that a resin binder manufacturer representative is on site to provide technical assistance and quality assurance during surface preparation and for application of HFST.

Ensure that the resin binder components maintain their original properties during storage and handling. Store all aggregate in a dry environment and protect from contaminants on the job site.

C.2 Pavement Surface Preparation

C.2.1. Pavement Surface Repair

Remove visibly unsound or disintegrated areas of the pavement surface as the plans show or the engineer directs. Clean and dry all cracks too large to be filled with surface treatment. Fill cracks with a mixture of resin binder and aggregate before applying the surface treatment. Follow manufacturer's recommendations for curing before applying the surface treatment.

Check with resin binder manufacturer to ensure that products used for pavement repairs or patches are compatible with the resin HFST. Ensure that any new concrete or repairs are fully cured before placing the HFST.

C.2.2 Surface Preparation

Cover and protect utilities, drainage structures, expansion joints on bridge decks, and other structures within or adjacent to the application location to prevent materials from adhering to or entering those structures.

Remove pavement markings that are within the treatment area. Cover existing pavement markings adjacent to the application if they are to remain in place.

After all pavement repairs or patches have completely cured, and no more than 24 hours before HFST application, prepare a concrete pavement surface by shot blasting to roughen the surface texture. Ensure the pavement surface has no grease, oil, curing compound, loosely bonded mortar, pavement marking, or other foreign matter resting on the pavement surface.

Completely remove any grease, oil, pavement marking, or other foreign matter resting on an HMA pavement surface that could prevent proper bonding of the resin binder by shot blasting. Shot blast entire HMA pavement surfaces that are less than 30 days old prior to cleaning and installing HFST.

Sufficiently clean HMA and concrete pavement surfaces by vacuum-sweeping and blowing, with oil-free compressed air, just before applying HFST. Compressors must be equipped with functioning oil/water separators. Cleaning must be done the same day that HFST will be applied. Ensure the surface is clean, completely dry, and free of all dust, oil, debris and other material that might interfere with the bond between the resin binder and the existing pavement surface.

If the engineer requires additional verification of adequate surface preparation of the pavement, test the bond strength according to ASTM C1583. The surface is acceptable if the tensile bond strength is greater than or equal to 250 psi, or failure is in the substrate. Repeat shot blasting, cleaning, and testing, if needed, until passing test results are obtained or the surface is acceptable to the engineer.

Keep vehicles and unnecessary equipment off the cleaned surface; only allow HFST application equipment on the clean surface. Apply HFST as soon as possible after pavement surface preparations are completed.

Abide by the established quality control practices and adhere to any additional manufacturer

recommendations for surface preparation. Request that the engineer inspect and approve the pavement surface immediately prior to placing the HFST.

C.3 Application of the HFST

Do not apply the HFST if any of the following exists:

- Pavement surface is wet, damp, or has received rainfall in the previous 24 hours.
- Pavement surface is not sufficiently clean.
- Ambient air or pavement surface temperature is below 50^{o} F or below the manufacturer's recommendations
- If the anticipated weather conditions would prevent adequate curing of the HFST.
- Rain is predicted before HFST completion or proper cure is achieved.
- Pavement preparation is inadequate or didn't pass pull-off test.

Close treatment areas to traffic until HFST is completely cured and pavement surface has been vacuum-swept.

Construct HFST to the full width of the existing pavement surface, or as the plans show or engineer directs. Extend the HFST application 2'-3' into the shoulders if application site is on a curve, Apply as a single layer 1/8 inch to 1/4 inch thick.

Apply a primer to the pavement surface if recommended by the resin binder manufacturer, and according to their application recommendations. Abide by the established quality control practices and adhere to any additional manufacturer recommendations for HFST application.

Blend and mix the resin binder components at the manufacturer's specified ratio using equipment capable of providing the desired results.

Apply the resin binder uniformly over the pavement surface manually or with automated equipment at a uniform thickness of 50-65 mils (25-32 ft2/gal). Use enough resin to cover the pavement surface and sufficiently embed half the thickness of the aggregate; do not apply so much that it covers the aggregate and creates a slick surface. Adjust application rate, as needed, based on the pavement surface type, profile, and condition.

If using automated equipment, ensure that the equipment features positive displacement, volumetric metering, and is capable of storing, mixing, heating, monitoring, and distributing the binder components at the proper mix ratio. Adjust the pressure and the speed of the equipment to achieve the proper application thickness. If applying the binder by hand, use a serrated edged squeegee to spread the resin binder and provide uniform coverage at the proper thickness.

Do not contaminate the wet binder or allow the binder material to separate or cure, and impair bonding of the aggregate.

Immediately after applying the resin binder, distribute a sufficient quantity of dry calcined bauxite aggregate to completely cover the resin binder by hand broadcasting or by using a standard chip spreader or equivalent machine. Ensure aggregate is placed within five minutes of the resin binder placement, before it begins to cure. When broadcasting, sprinkle or drop the aggregate onto the resin binder vertically. Do not distribute aggregate in a way that will cause it to roll in the resin binder before coming to a rest; do not push the aggregate into position with a broom or any other hand tool. If using a chip spreader, the machine shall follow closely behind the crew or equipment applying the resin binder. Immediately cover any visible wet or bare spots, or areas with excessive binder, with additional calcined bauxite aggregate before the resin binder begins to set.

Allow the HFST to properly cure, adhering to manufacturer recommendations for minimum cure times at applicable temperatures.

After the HFST is fully cured, remove excess loose surface aggregate by sweeping, blowing, or vacuuming. Do not tear or otherwise damage the surface. Excess calcined bauxite aggregate that is recovered by a vacuum sweeper can be reused if clean, uncontaminated and dry. Remove and replace damaged areas or areas with excess or insufficient aggregate coverage. Clean expansion joints, utilities, and drainage structures of all debris before opening to traffic.

Additionally, within 3 to 7 days after opening to traffic, vacuum sweep the pavement surface to remove loosened aggregate from the high friction surface area, the shoulders, and any other areas within and immediately adjacent to the HFST site.

D Measurement

The department will measure Resin Binder High Friction Surface Treatment by the square yard, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.0001	Resin Binder High Friction Surface Treatment Modified	SY

Payment is full compensation for testing materials; for preparing the pavement surface; filling all cracks; for providing the HFST; for cleanup; and for vacuum sweeping and disposing of excess material after the completion and again 3 to 7 days after completion.

The department will pay for concrete or HMA pavement repairs and traffic control separately under other contract bid items.

SER-400-001 (20170424)

179. Removing Concrete Rumble Strips, Item SPV.0180.0002.

A Description

This special provision describes removing existing rumble strips located in existing concrete shoulder along IH 43, as the plans show, and conforming to the appropriate provisions of standard spec 204, and as modified in this special provision. Fill the milled area with asphaltic surface temporary.

B Materials

Furnish temporary asphaltic surface conforming to the appropriate provisions of this contract and standard spec 465.

C Construction

Mill the existing rumble strips to a 0.75-inch minimum depth below the lowest corrugation. Clean the milled area before placement of tack coat. Fill the milled area with asphaltic surface temporary to provide a smooth driving surface as directed by the engineer.

D Measurement

The department will measure Removing Concrete Rumble Strips by the square yard of existing rumble strip, before removal by milling, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.0002	Removing Concrete Rumble Strips	SY

Payment is full compensation for milling existing rumble strips; cleaning and tacking; furnishing, placing and compacting asphaltic surface temporary; and for disposal of all materials.

sef-204-010 (20171004)

180. Mythacrylate Flood Seal, Item SPV.0180.0400.

A Description

This special provision describes surface preparation of bridge deck, furnishing and applying a protective methacrylate sealer and broadcast sand, and any incidentals necessary to complete the project as specified or as shown in plans or as authorized by the Engineer.

B Materials

The bridge deck sealer shall consist of a methacrylate sealant, sand to prefill cracks, and broadcast sand.

B.1 Methacrylate Sealant

The following methacrylate sealants are acceptable for use provided that the requirements of this specifications are met:

Product	Manufacturer
MasterSeal 630 (formerly Degadeck Crack Sealer Plus)	BASF
T-78	Transpo Industries
KBP 204 P SEAL	Kwik Bond Polymers

or an approved equal.

B.2 Fine Grade Sand

Provide fine grade abrasive sand (20/40 abrasive) for prefilling large cracks unable to be prefilled with sealant alone.

Submit sand material data to the Engineer for review and address all written comments. Submit storage and use plan to the Engineer documenting procedures for maintaining dry sand and within gradation requirements above.

B.3 Broadcast Sand

Provide a commercial quality dry blast sand with an average absorption of no more than 1%. 95% of the sand shall pass the No. 8 sieve and at least 95% shall be retained on the No. 20 sieve.

C Construction

C.1 General

C.1.1 Pre-Installation Conference

Conduct a pre-installation conference with the manufacturer's representative prior to construction to establish procedures for maintaining optimum working conditions and coordination of work. Furnish the engineer with a copy of the recommended procedures and the manufacturer’s instructions.

C.1.2 Contractor Personnel Requirements

Experienced personnel are required to be actively present during the seal application.

A technical representative from the sealer manufacturer must be present during first application. The need for manufacturer’s representative may be waived if the contractor provides evidence and reference contacts for work involving at least five bridges treated with the same products and within the last two years. Contractor experience record in no way relieves the contractor from applying in accordance with this specification and as recommended by the manufacturer.

C.1.3 Material Storage and Safety Plan

Store resin materials in their original containers in a dry area. Store and handle materials according to the manufacturer’s recommendations. Store all aggregates in a dry environment and protect aggregates from contaminants on the job site.

Safety Plan: Prior to arrival of the product on the job site, provide a product shipping, storage, and use safety plan to detail how the product will be delivered and stored on site in a manner that will not allow the constituent components to come in contact with each other in the event of a spill or container leakage. This plan must also include a description of the safety training workers applying the product have received regarding the product’s use, and list any and all safety precautions which must be taken during application of the product.

C.2 Surface Preparation

Prepare the entire deck (or portion of the deck to be overlaid in one placement when staged construction is being employed) to ensure the concrete surface is dry, thoroughly clean, and free from dust or other loose material.

Remove substances such as dirt, oil, asphalt, rubber, curing compound, paint, carbonation, grease, slurry, membranes, rust, weak surface mortar, laitance, and other foreign or potentially detrimental materials by abrasive blasting. Thoroughly blast clean with hand-held equipment any areas inaccessible by the shotblasting equipment. Determine an acceptable abrasive blasting or shotblasting machine operation (size of shot, flow of shot, forward speed, and/or number of passes) that removes substances without damaging the underling substrate. Concrete removals shall not exceed 1/16 inch in depth.

Do not remove or damage striping or traffic markings in sound condition.

Do not perform surface preparation more than 24 hours prior to the application of the methacrylate sealer. The prepared surface shall not be exposed to vehicular or pedestrian traffic other than that required for sealer placement and approved by the engineer. If the prepared surface is reopened to traffic prior to sealer placement, the surface shall be re-inspected for any contaminates and subsequently remove contaminates by use of abrasive blasting or shotblasting at no additional cost to the department.

The engineer may consider alternate surface preparation methods per the methacrylate sealer manufacturer’s recommendations. The engineer must approve the final surface preparation and deck cleanliness prior to the contractor placing the methacrylate sealer. Prior to methacrylate sealer placement, cure concrete for a minimum of 21 days.

Just prior to methacrylate sealer placement, clean all dust, debris, and concrete fines from the deck surface including vertical faces of curbs and barrier walls up to a height of 2-in above the surface with compressed air. Use a direct 125 psi air blast, from a compressor unit with a minimum pressure of 365 ft3 / min., over the entire surface to remove all dust and debris paying special attention to carefully clean all deck cracks. Use a suitable oil trap between the air supply and nozzle. Use ASTM D4285 "Standard Test Method for Indicating Oil or Water in Compressed Air" to ensure the compressed air is

oil and moisture free. The air stream must be free of oil and moisture. Any grease, oil, or other foreign matter that rests on or has absorbed into the concrete shall be removed completely.

Perform a visual inspection of the surface that is to receive the methacrylate sealer. Locate and mark all cracks greater than 0.024 inch. Unless directed otherwise on the plans, prefill all cracks greater than 0.024 inch with the same methacrylate sealer or a pre-promoted version of the sealer prior to the methacrylate sealer. Where sealant soaks-in/withdraws from top of crack, place fine grade abrasive sand (20/40 abrasive) in crack and reapply methacrylate sealant to seal to top of crack. When sealant has not retreated after gel time, the crack is considered prefilled. Do not fill crack with sand beyond top of concrete surface.

Protect drains, expansion joints, access hatches, or other appurtenances on the deck from damage by cleaning and blasting operations and from material adhering and entering. Tape or form all construction joints to provide a clean straight edge.

Provide shielding as necessary to prevent dust or debris from striking vehicular traffic.

Air dry a wet deck for a minimum of 48 hours before applying the sealer. Dry time may be reduced to 24 hours if an approved ASTM D4263 moisture test reveals the concrete is dry. Do not apply sealer materials during wet weather conditions or if adverse weather conditions are anticipated within 12 hours of the completion of sealer application. Do not mix or apply any of these products at temperatures lower or higher than those specified in their product literature. Apply the sealant at the coolest time of the day within these limitations. Application by spray methods will not be permitted during windy conditions, if the engineer predicts unsatisfactory results.

The engineer shall approve the prepared surface prior to applying the methacrylate sealer.

C.3 Application of the Sealer

Apply the sealer conforming to the manufacturer’s instructions.

Apply an approved methacrylate to bridge deck or on surfaces as directed by the engineer. At least 30 calendar days before the start of the work, provide the engineer with the sealer manufacturer's written instructions for application and use.

Do not thin or alter the methacrylate sealer unless specifically required in the manufacturer's instructions.

Mix the sealer before and during its use as recommended by the manufacturer. Distribute the sealant as a flood coat in a gravity-fed process by broom, roller, or with a spray bar near the surface so the spray pattern and coverage rates are reasonably uniform to the satisfaction of the engineer. Apply the sealant at a minimum rate of 90 square feet/gallon.

Protect all expansion joints and prevent the crack sealant from contacting the strip seal glands. Protect all striping and traffic markings from marring, sealant application and reduction in reflective properties. Replace any striping and traffic markings that are marred by sealant.

Prior to completion of gel time of the flood seal and before broadcasting sand, broom uncured sealant in the direction of tining or deck grooves to promote maintenance of the deck texture for traction.

Broadcast sand to refusal into uncured resin to create traction and absorb sealant that is not penetrating into cracks. Broadcast approved sand into the wet, uncured resin no sooner than 10 minutes after applying resin but within gel time of product, unless directed otherwise by the manufacturer. Apply approved sand at a minimum rate of 250 lbs. per 1000 square feet.

Allow the sealant to dry according to the manufacturer's instructions. Do not allow vehicular traffic onto the treated areas until the sealer has dried and the treated surfaces provide safe skid resistance and traction. Remove non-adhered sand from bridge deck and joints by power sweeping the deck and vacuuming the joints. Traffic or equipment will be allowed on the sealed deck after the engineer has determined:

1. The treated deck surface is tack-free and non-oily;
2. The sand cover adheres and resists brushing by hand;
3. Excess sand and absorbent material has been removed; and
4. No sealant material will be tracked beyond limits of treatment by traffic.

D Measurement

The department will measure Methacrylate Flood Seal bid item in area by the square yard, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.0400	Methacrylate Flood Seal	SY

Payment is full compensation for furnishing and applying the sealer to the bridge decks, as described above, including surface preparation, and all incidentals thereto. Cleanup of excess sand in joints and on bridge deck will not be paid for separately. Restoration of damaged or marred striping will be considered incidental to application requirements of Methacrylate Flood Seal.

181. HMA Longitudinal Joint Repair, Item SPV.0195.0002.

A Description

This special provision describes providing longitudinal joint repairs in HMA pavements. Conform to standard spec 204, 315, 455, and 460, and as follows.

B Materials

Furnish asphaltic mixture as specified for type 3 HT 58-28 H under standard spec 460.2.

Provide tack coat conforming to standard spec 455.2.5.

C Construction

C.1 General

Remove an area two feet wide and at least to the full depth of asphaltic pavement; the engineer will determine the repair length. Remove damaged concrete pavement discovered below the asphalt during this removal, and replace with asphalt mixture.

Clean the existing exposed concrete pavement surface before placing tack coat.

Apply asphaltic materials the same day the joint is removed to prevent the entrance of water. Do not apply if weather or surface conditions are unfavorable or before impending rains.

Conform to standard spec 315.3.1 for placement of the HMA pavement.

Dispose of removed pavement and other waste materials outside of the project limits unless the engineer allows otherwise.

C.2 Maintenance

Maintain repaired joints during the contract. Remove and replace additional tack coat and HMA pavement if the engineer directs.

D Measurement

The department will measure HMA Longitudinal Joint Repair 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.0195.0002	HMA Longitudinal Joint Repair	TON

Payment is full compensation for providing the joint repair including removing the existing asphaltic surface and damaged concrete; for tack coat and asphaltic pavement mixture; and for maintaining the repair during the contract.

sef-455-005 (20180104)

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.

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 __18__ *(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).

<u>NOTE</u>: *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 1.1 (ASP 1.1) FOR TRANSPORTATION ALLIANCE FOR NEW SOLUTIONS (TrANS) PROGRAM ON-THE-JOB VOLUNTARY INCENTIVE PROGRAM PILOT

I. AUTHORITY

In February 2022, FHWA announced that Section 25019(a) of the Bipartisan Infrastructure Law (BIL) Local Hiring Preference for Construction Jobs authorizes state and local agencies to implement a local or other geographical or economic hiring preference for labor on construction projects funded with funds under Title 23 or 49 USC. Due to Section 25019(a), state and local agencies should look to this provision for local or other geographical or economic hiring preferences that may be utilized under a project labor agreement. Since FHWA approval on an experimental basis of such hiring preferences authorized by BIL is no longer required, FHWA is announcing it is transitioning the Enhancing Workforce Development Opportunities (EHWDO) contracting initiative to hiring preferences authorized by BIL through a Federal Register Notice published on February 11, 2022.

FHWA's policy is to require full use of all available training and skill improvement opportunities to assure increased participation of women and minorities in all phases of the highway construction industry. The FHWA On-The-Job (OJT) program requires State Transportation Agencies (STA) to establish apprenticeships and training programs targeted to move women and minorities into journey-level positions to ensure that a competent workforce is available to meet the highway construction hiring needs, and to address the historical underrepresentation of members of these groups in highway construction skilled crafts.

II. DESCRIPTION

Training Wisconsin Department of Transportation is committed to the compliant administration of skill-improvement programs whose primary objective is to provide opportunities for unskilled workers, particularly minorities, women, and disadvantaged persons, to acquire training in the skilled construction trades.

TrANS is an employment program established in 1995 in Southeastern Wisconsin. TrANS has expanded to include programming locations to serve contractors in Southeast (Milwaukee and surrounding counties), Southcentral (Dane County and surrounding counties including Rock County), and most Northeastern Wisconsin counties and surrounding far northern areas of the state. TrANS is an industry driven plan of services to recruit, orient, and prepare community jobseekers for construction jobs and careers made available through highway construction contracts statewide. On May 18, 2021, the TrANS program was certified as a pre-apprenticeship program by the Wisconsin Apprenticeship Council and the Department of Workforce Development/Bureau of Apprenticeship Standards. This certification allows the TrANS program to assist trainees in developing new skills and preparing for registered apprenticeship opportunities.

WisDOT has developed modifications to the TrANS OJT program to include provisions for a Voluntary Incentive Program (VIP) pilot for select projects. These OJT program changes were submitted for review and approval by the FHWA Wisconsin Division.

Building on WisDOT's existing contractor-centered OJT program which provides training reimbursements for new placements, rehires, or promotions to apprentice of TrANS program graduates, the OJT VIP Pilot procedures provide for recognizing contractors who voluntarily elect to employ more OJT employees that qualify for the City of Milwaukee Residents Preference Program (RPP) to improve the workforce development and employment opportunities for their residents.

ASP 1.1 is intended to offer and apply reimbursement incentives to contractors who voluntarily elect to hire City of Milwaukee residents that meet the RPP criteria. To qualify for the RPP, interested individuals must be a City of Milwaukee resident and meet one of the following criteria.

- Has not worked in preceding 15 days and/or,
- Worked less than 1,200 hours in the preceding months and/or,
- Meet certain federal poverty guidelines

Incentives for the hire of qualified City of Milwaukee residents will be made as follows:

1. Reimbursement is allowed on projects that contain Federal funds
2. $5.00 per hour; approved graduate of a TrANS Certified Pre-Apprenticeship Program at initial hire, or seasonally rehired.

   Duration: To the employing contractor, capped at 2,000 reported hours in the Civil Rights Compliance System (CRCS)
3. $10.00 per hour; approved graduate of a TrANS Certified Pre-Apprenticeship Program + advancement into a bona fide registered apprenticeship.

   Duration: To the employing contractor, for the length of time the TrANS graduate is an apprentice.

It is the contractor's responsibility to note on their certified payrolls if their employee is a City of Milwaukee eligible RPP TrANS graduate or a TrANS registered apprentice. The Compliance Specialist/Analyst utilizes the information on the certified payrolls to track the hours accumulated by City of Milwaukee eligible RPP TrANS graduate or TrANS apprentices on WisDOT federally funded contracts. Payment under ASP 1.1 is made based on the hours recorded on the certified payrolls.

TrANS is nondiscriminatory by regulation and is a tool for optimal use by contractors to address the underutilization of women, minorities, and disadvantaged individuals as laborers and apprentices in the industry's skilled trades.

III. TRAINING

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; however, the prime contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall ensure that this training special provision is made applicable to such subcontract.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journey worker 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.

IV. 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 (STA) to establish apprenticeships and training programs targeted to move women, minorities, and disadvantaged individuals into journey-level positions to ensure that a competent workforce is available to meet highway construction hiring needs, and to address the historical underrepresentation of members of these groups in highway construction skilled crafts.

Wisconsin Department of Transportation (WisDOT) **OJT Voluntary Incentive Program Pilot (VIP) Report**	Date
Period Covered From: To:	
Number of Projects	
Number of Hours Worked by All OJT Employees	
Number of Contractors Participated in VIP	
Number of OJT Employees That Meet City of Milwaukee Residents Preference Program (RPP) Retained as Permanent Employees by the Contractor After Completion of the OJT Program	
Number of OJT Employees That Meet City of Milwaukee Residents Preference Program (RPP) That Remain in the Heavy Construction Skilled Trades with Any Employer After Completion of the OJT Program	
Number of OJT Employees That Become Registered Apprentices of a Bona Fid Apprenticeship Program and Remain with The Employer as a Journey Worker	
REMARKS	

RESPONSIBLE OFFICER	Send to: Or Via Email:
TITLE	
SIGNATURE	

ADDITIONAL SPECIAL PROVISION 3

DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM IMPLEMENTATION

Authority

Wisconsin Department of Transportation (WisDOT) is a recipient of funds from the US Department of Transportation's Federal Highway Administration. The DBE program is a federal program applicable on all contracts administered by WisDOT that include federal-aid highway funds. The authority for the DBE program is the Transportation Bill as approved by Congress periodically. DBE program guidance and requirements are outlined in the Code of Federal Regulations at 49 CFR Part 26. This contract is subject to DBE provisions because it is financed with federal-aid-highway funds. Additionally, this contract is subject to the *State of Wisconsin Standard Specifications for Highway and Structure Construction* and all applicable contract documents.

Requirements

Pursuant to the federal DBE program regulation at 49 CFR Part 26, a contractor's failure to comply with any provision of the DBE program regulatory provisions will be considered a material breach of contract. This is nonnegotiable.

If a contractor fails to carry out the DBE program requirements and/or the Required Contract Provisions for Federal Aid Contracts (FHWA 1273) referenced in this document, sanctions will be assessed depending upon the facts, reasoning, severity, and remedial efforts of the contractor that may include: termination of contract, withholding payment, assessment of monetary sanctions, and/or suspension/debarment proceedings that could result in the disqualification of the contractor from bidding for a designated period of time.

(1) The Commitment to Subcontract to DBE (Form DT1506 or digital submittal), Attachments A, and Good Faith Effort Documentation (Form DT1202) will be submitted as described in Section 2.
(2) Any change to DBE Commitments thereafter must follow modification of DBE subcontracting commitment as described in Section 9.
(3) The Department requires this list of DBE subcontractors from all bidders at time of bid to ensure the lowest possible cost to taxpayers and fairness to other bidders and subcontractors. Bid shopping is prohibited.
(4) The contractor must utilize the specific DBE firms listed in the approved DBE Commitment to perform the work and/or supply the materials for which the DBE firm is listed unless the contractor obtains written consent in advance from WisDOT. The contractor will not be entitled to payment for any work or materials on the approved DBE Commitment that is not performed or supplied by the listed DBE without WisDOT's written consent.

Description

The Wisconsin Department of Transportation is committed to the compliant administration of the DBE Program. The DBE provisions work in tandem with FHWA 1273 and WisDOT's *Standard Specifications for Highway and Structure Construction* and *Construction and Materials Manual*. The WisDOT Secretary is signatory to assurances of department-wide compliance.

The Department assigns the contract DBE goal as a percentage of work items that could be performed by certified DBE firms on the contract. The assigned DBE goal is expressed on the bid proposal as a percentage applicable to the total contract bid amount.

(1) WisDOT identifies the assigned DBE goal in its contract advertisements and posts the contract DBE goal on the cover of the bidding proposal. The contractor can meet the assigned contract DBE goal by subcontracting work to a DBE firm or by procuring services or materials from a DBE firm.

(2) Under the contract, the prime contractor should inform, advise, and develop participating DBE firms to be more knowledgeable contractors who are prepared to successfully complete their contractual agreement through the proactive provision of assistance in the following areas:

- Produce accurate and complete quotes
- Understand highway plans applicable to their work
- Understand specifications and contract requirements applicable to their work
- Understand contracting reporting requirements

(3) The Department encourages contractors to assist DBE subcontractors more formally by participating in WisDOT's Business Development program as a mentor, coach, or resource. For comprehensive information on the Disadvantaged Business Enterprise Program, visit the Department's Civil Rights and Compliance Section website at: http://wisconsindot.gov/Pages/doing-bus/civil-rights/dbe/default.aspx

1. Definitions

Interpret these terms, used throughout this additional special provision, as follows:

a. **Assigned DBE Contract Goal:** The percentage shown on the cover of the Highway Work Proposal that represents the feasible level of DBE participation for each contract. The goal is calculated using the Engineer's Estimate and DBE Interest Report. Goal assignment includes review of FHWA funds, analyzes bid items for subcontract opportunity and compatibility with DBE certified firm work codes. Additional factors considered include proximity, proportion, and regulations.

b. **Bid Shopping:** In construction law, bid shopping is the practice of divulging a subcontractor's bid to another prospective contractor(s) before or after the award of a contract to secure a lower bid.

c. **DBE:** Disadvantaged Business Enterprise – A for-profit small business concern where socially and economically disadvantaged individuals own at least a 51% interest and control management and daily business operations.

d. **DBE Commitment:** The DBE Commitment is identified in the Commitment to Subcontract to DBE (Form DT1506) and is expressed as the amount of DBE participation the prime contractor has secured. The DT1506, a contract document completed by the bidder, is required to be considered a responsive bidder on an FHWA-funded contract that has an assigned DBE goal. The prime contractor will have the option to submit the DT1506 digitally, as an entry with the bid in Bid Express, or as an attachment to the bid.

e. **DBE Utilization:** The actual participation of a DBE subcontractor on a project. WisDOT verifies DBE utilization through review of the DBE Commitment, payments to subcontractors, and contract documentation. The Prime Contractor receives DBE credit for payments made to the DBE firms performing the work listed on the approved DBE Commitment, and those submitted after approved commitment with Attachment A.

f. **Good Faith Effort:** Legal term describing a diligent and honest effort taken by a reasonable person under the same set of facts or circumstances. For DBE subcontracting, the bidder must show that it took all necessary and reasonable steps to achieve the assigned DBE goal by the scope, intensity, and appropriateness of effort that could reasonably be expected for a contractor to obtain sufficient DBE participation.

g. **Manufacturer:** A firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract.

h. **Reasonable Price:** Contractors are expected to assess reasonable price by analyzing the contract scope for DBE subcontract feasibility and comparing common line items in DBE and non-DBE subcontract quotes for the same work. Per federal regulation, reasonable price is not necessarily the lowest price.

i. **Supplier:** A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles, or equipment required under the contract are bought, kept in stock, and regularly sold or leased to the public.

j. **Tied quote:** Subcontractor quote that groups multiple bid/line items at a bundled/package price with a notation that the items within the quote will not be separated.

2. WisDOT DBE Program Compliance

a. Documentation Submittal

- The Commitment to Subcontract to DBE (Form DT1506 or digital submittal) must be submitted at the time of bid (Tuesday) by all prime contractors.
- Attachments A OR quotes from all DBEs included in the Commitment must be submitted at bid (Tuesday) **OR**
- Within one-hour following bid submittal by ALL prime contractors via eSubmit (Tuesday).
- If only DBE quotes were submitted, all remaining signed Attachments A must be submitted within 24-hours of bid closing via eSubmit (Wednesday).
- If the assigned DBE contract goal is not met, Documentation of Good Faith Effort (Form DT1202) and supporting documentation must be submitted within 24-hours of bid closing (Wednesday) via eSubmit. Instructions for eSubmit.

**Bidders have the option of submitting the DBE Commitment at the time of bid via direct entry through Bid Express OR with attachment of Form DT1506 (Commitment to Subcontract to DBE). The DBE Commitment entered with bid is the digital form of the DT1506. Separate submission of Form DT1506 is not required if the DBE Commitment is entered in Bid Express. Form DT1202, if applicable, is no longer required to be submitted at time of bid; submit DT1202 within the 24-hour supplemental time frame following bid closing.

The DBE Office will not certify Good Faith Effort and the Bureau of Project Development will consider the bid nonresponsive if the contractor fails to furnish the DBE Commitment (digitally entered into the bid OR Form DT1506 as an attachment), Attachments A, and Form DT1202 if applicable, as required. See sample forms in the Appendix.

b. Verification of DBE Commitment

The documentation related to DBE subcontract commitment submitted prior to contract award is evaluated as follows:

(1) DBE Goal Met

If the bidder indicates that the contract DBE goal is met, the Department will evaluate the DBE Commitment submitted with bid OR Form DT1506, and Attachments A to verify the actual DBE percentage calculation. If the DBE Commitment is verified, the contract is eligible for award with respect to the DBE Commitment.

(2) DBE Goal Not Met

a) If the bidder indicates a bid percentage on the DBE Commitment that does not meet the assigned DBE contract goal, the bidder must request alternative evaluation of good faith effort through submission of Form DT1202 (Documentation of Good Faith Effort) within 24-hours of bid including narrative description. Supplementary documentation of good faith effort that supports the DT1202 submission is also due within 24-hours of bid submission and prior to bid posting. The Department will review the bidder's DBE Commitment and evaluate the bidder's good faith efforts submission.

b) Following evaluation of the bidder's Good Faith Effort documentation the bidder will be notified that the Department intends to:

1. *Approve* the request (adequate documentation of GFE has been submitted) - no conditions placed on the contract with respect to the DBE Commitment;
2. *Deny* the request (inadequate documentation of GFE has been submitted) - the contract is viewed as non-responsive per Wisconsin Standard Specifications for Highway and Structure Construction and will not be executed.

c) If the Department denies the bidder's request, the contract is ineligible for award. The Department will provide a written explanation for denying the request to the bidder. The bidder may appeal the Department's denial (see Section 4).

Supplemental good faith effort documentation must be submitted through eSubmit.

3. Department's Criteria for Good Faith Effort Documentation

The Federal-aid Construction Contract Provision, referenced as FHWA-1273, explicitly states that the prime contractor shall be responsible for all work performed on the contract by piecework, station work, or subcontract.

The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of the contract including assurances of equal employment opportunity laws, DBE regulations, and affirmative action. Compliance encompasses responsible and responsive action, documentation, and good faith effort.

Contractually, all contractors, subcontractors, and service providers on the contract are bound by FHWA 1273 and DBE program provisions. **Prime contractors should encourage subcontractors to utilize DBE firms whenever possible to contribute to the assigned DBE contract goal.**

Bidders are required to document good faith effort. Per 49 CFR Part 26.53, good faith effort is demonstrated in one of two ways. The bidder:

(1) Documents that it has obtained enough DBE participation to meet the goal; OR

(2) Documents that it made adequate good faith efforts to meet the goal, even though it did not succeed

Appendix A of 49 CFR Part 26 provides guidance concerning good faith efforts. WisDOT evaluates good faith effort on a contract basis just as each contract award is evaluated individually.

The efforts employed by the bidder should be those that WisDOT can reasonably expect a bidder to take to actively and aggressively obtain DBE participation sufficient to meet the DBE contract goal. The Department will only approve demonstration of good faith effort if the bidder documents the quality, quantity, and intensity of the variety of activities undertaken that are commensurate with expected efforts to meet the stated goal.

The Department, in conjunction with industry stakeholders, has developed the following guidance for contractor good faith effort activity. The guidance and the attached appendices provide a framework for the actions required by all parties in the processing and evaluation of bidder's total efforts to achieve the project specific DBE goal prior to the bid letting date.

a. Solicitation Guidance for Prime Contractors:

(1) Document all efforts and decisions made toward achieving the DBE goal on the contract. The bidder should use WisDOT-approved DBE outreach tools, including the UCP DBE Directory and the Bid Express Small Business Network to foster DBE participation on all applicable contracts.

(2) As needed, request assistance with DBE outreach and follow-up by contacting the Department's DBE Support Services Office by phone or email request at least 14 days prior to the bid letting date. Phone numbers are (414) 438-4584 and/or (608) 267-3849; Fax: (414) 438-5392; E-mail: DBE_Alert@dot.wi.gov

(3) Participate in and document a substantive conversation with at least one DBE firm per Let, to discuss questions, concerns, and any other contract related matters that may be applicable to the DBE firm. Guidelines for this conversation are provided in Appendix A of ASP-3.

(4) Request quotes by identifying potential items to subcontract and solicit. In their initial contacts, contractors are strongly encouraged to include a single page, detailed list of items for which they are accepting quotes, by project, within a letting. *See attached sample entitled "Sample Contractor Solicitation Letter" in* Appendix B. Prime contractors should also indicate a willingness to accept quotes in areas they are planning to perform themselves, as required by federal rules. In some cases, it might be appropriate to use DBE firms to do work in a prime contractor's area of specialization.

i. Solicit quotes from certified DBE firms who match possible items to subcontract using all reasonable and available means. Additionally, forward copies of solicitations highlighting the work areas for which quotes are being sought to DBE_Alert@dot.wi.gov

ii. Acceptable outreach tools include SBN (Small Business Network, see Appendix C): https://www.bidx.com/wi/main, postal mail, email, fax, and phone.

a. Contractors must ask DBE firms for a response in their solicitations. See *Sample Contractor Solicitation Letter,* Appendix B. This letter may be included as an attachment to the sub-quote request.

b. Solicit quotes at least 10 calendar days prior to the letting date to allow DBE firms sufficient time to respond. Prime contractors should contact DBE firms early, asking if they need help organizing their quote, assistance confirming equipment needs, or other assistance supporting their submission of a competitive quote for their services.

c. A follow up solicitation should take place within 5 calendar days of the letting date. Email and/or SBN are the preferred method for the solicitation.

iii. Upon request, provide interested DBE firms with adequate information about plans, specifications, and the requirements of the contract by letter, information session, email, phone call, and/or referral.

iv. When potential exists, the contractor should advise interested DBE firms on how to obtain bonding, line of credit, or insurance if requested.

v. Document DBE firm's interest in quoting by taking appropriate steps to follow up initial solicitation with:

a. Email to all prospective DBE firms in relevant work areas

b. Phone call log to DBE firms who express interest via written response or call

c. Fax/letter confirmation

d. Signed copy of record of subcontractor outreach effort

b. Guidance for Evaluating DBE quotes

(1) Quote evaluation practices required to evaluate DBE quotes:

i. Reasonable Price**:** Contractors are expected to assess reasonable price by analyzing the contract scope for DBE subcontract feasibility and comparing common line items in DBE and non-DBE subcontract quotes for the same work. Per federal regulation, reasonable price is not necessarily the lowest price. See 49 CFR Part 26, Appendix A. IV.D(2).

(2) Documentation submitted by the prime of the following evaluation is required to evaluate DBE quotes by contractors:

i. Evaluation of DBE firm's ability to perform "possible items to subcontract" using legitimate reasons, including but not limited to, ***a discussion*** between the prime and DBE firm regarding its capabilities prior to the bid letting. If lack of capacity is the reason for not utilizing the DBE firm's quote, the prime is required to contact the DBE by phone and email regarding their ability to perform the work indicated in the UCP directory listed as their work area by NAICS code. Only the work area indicated by the NAICS code(s) listed in the UCP directory can be counted toward DBE credit. Documentation of the conversation is required.

a In striving to meet an assigned DBE contract goal, contractors are expected to use DBE quotes that are responsive and reasonable. This includes DBE quotes that are not the low quote.

b Additional evaluation - Evaluation of DBE quotes with tied bid items. Typically, this type of quoting represents a cost saving but is not clearly stated as a discount. Tied quotes are usually presented as an 'all or none' quote. When non-DBE subcontractors submit tied bid items in their quotes, the DBE firm's quote may not appear competitive. In such a case, the following steps are taken in comparing the relevant quotes. These are qualitative examples:

i Compare bid items common to both quotes, noting the reasonableness in the price comparison.

ii Review quotes from other firms for the bid items not quoted by the DBE firm to see if combining both can provide the same competitive advantage that the tied bid items offered.

See Appendix D – *Good Faith Effort Evaluation Measures* and Appendix E - *Good Faith Effort Best Practices.*

c. Requesting Good Faith Effort Evaluation At the time of bid- if the DBE goal is not met in full, the prime contractor must indicate they will file form DT1202- Documentation of Good Faith Effort within 24-hours of bid submission. Supplementary documentation of good faith effort that supports the DT1202 submission is also due within 24-hours of bid submission and prior to bid posting. Supporting documentation for the DT1202 is to include the following:

(1) Solicitation Documentation: The names, addresses, email addresses, and telephone numbers of DBE firms contacted along with the dates of both initial and follow-up contact; electronic copies of all written solicitations to DBE firms. A printed copy of SBN solicitation is acceptable.

(2) Selected Work Items Documentation: Identify economically feasible work units to be performed by DBEs to include activities such as: list of work items to be performed; breaking up of large work items into smaller tasks or quantities; flexible time frames for performance and delivery schedules.

(3) Documentation of Project Information provided to interested DBEs: A description of information provided to the DBE firms regarding the plans, specifications, and estimated quantities for portions of the work to be performed by that DBE firm.

(4) Documentation of Negotiation with Interested DBEs: Provide sufficient evidence to demonstrate that good faith negotiations took place. Merely sending out solicitations requesting bids from DBEs does not constitute sufficient good faith efforts.

(5) Documentation of Sound Reasoning for Rejecting DBEs and copies of each quote received from a DBE firm and, if rejected, copies of quotes from non-DBEs for same items.

(6) Documentation of Assistance to Interested DBEs- Bonding, Credit, Insurance, Equipment, Supplies/Materials

(7) Documentation of outreach to Minority, Women, and Community Organizations and other DBE Business Development Support: Contact organizations and agencies for assistance in contacting, recruiting, and providing support to DBE subcontractors, suppliers, manufacturers, and truckers at least 14 days before bid opening. Participate in or host activities such as networking events, mentor-protégé programs, small business development workshops, and others consistent with DBE support.

If the Good Faith Effort documentation is deemed adequate, the request will be approved and the DBE office will promptly notify the Prime Contractor and Bureau of Project Development.

If the DBE Office denies the request, the Prime Contractor will receive written correspondence outlining the reasons. The Department encourages the Prime Contractor to communicate with DBE staff to clarify any questions related to meeting goals and/or contractor demonstration of good faith efforts.

If the contract is awarded, the Prime Contractor must obtain written consent from the DBE Office to change or replace any DBE firm listed on the approved DBE Commitment. No contractor, prime or subsequent tier, shall be paid for completing work assigned to a DBE subcontractor on an approved DBE Commitment unless WisDOT has granted permission for the reduction, replacement, or termination of the assigned DBE in writing. If a prime contractor or a subcontractor on any tier uses its own forces to perform work assigned to a DBE on an approved DBE Commitment, **they will not be paid for the work**. Any changes to DBE Commitment after the approval of the DBE Commitment must be reviewed and approved by the DBE Office prior to the change (see Section 9).

Additional resources for demonstrating and tracking good faith effort can be found on the “Contracting with a DBE” webpage in the ASP-3 and Good Faith Effort Guidance section.

4. Bidder's Documentation of Good Faith Effort Evaluation Request Appeal Process

A bidder can appeal the Department's decision to deny the bidder's demonstration of Good Faith Effort through Administrative Reconsideration. The bidder must provide a written justification refuting the specific reasons for denial as stated in the Department's denial notice. The bidder may meet in person with the Department if so requested. Failure to appeal within 5 business days after receiving the Department's written notice denying the request constitutes a forfeiture of the bidder's right of appeal. Receipt of appeal is confirmed by email date stamp or certified mail signed by WisDOT staff. A contract will not be executed without documentation that the DBE provisions have been fulfilled.

The Department will appoint a representative who did not participate in the original good faith effort determination, to assess the bidder's appeal. The Department will issue a written decision within 5 business days after the bidder presents all written and oral information. In that written decision, the Department will explain the basis for finding that the bidder did or did not demonstrate an adequate good faith effort to meet the contract DBE goal. The Department's decision is final.

5. Determining DBE Eligibility

Directory of DBE firms

a. The only resource for DBE firms certified in the State of Wisconsin is the Wisconsin Unified Certification Program (UCP) DBE Directory. WisDOT maintains a current list of certified DBE firms at: http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/dbe-ucp-directory.xlsx

b. The DBE Program office is available to assist with contracting DBE firms:(608) 267-3849.

c. DBE firms are certified based on various factors including the federal standards from the Small Business Administration that assigns a North American Industrial Classification (NAICS) Codes. DBE firms are only eligible for credit when performing work in their assigned NAICS code(s). If a DBE subcontractor performs work that is not with its assigned NAICS code, the prime contractor should contact the DBE Office to inquire about compatibility with the Business Development Program.

6. Counting DBE Participation

Assessing DBE Work

The Department will only count the DBE usage towards the contract DBE goal if the DBE firm is certified as a DBE by one of the UCP agencies. The Department only counts the value of the work a DBE actually performs towards the DBE goal. The Department assesses the DBE work as follows:

a. The Department counts work performed by the DBE firm's own resources. The Department includes the cost of materials and supplies the DBE firm obtains for the work. The Department also includes the cost of equipment the DBE firm leases for the work. The Department will not include the cost of materials, supplies, or equipment the DBE firm purchases or leases from the prime contractor or its affiliate, with the exception of non-project specific leases the DBE has in place before the work is advertised.

b. The Department counts fees and commissions the DBE subcontractor charges for providing bona fide professional, technical, consultant, or managerial services. The Department also counts fees and commissions the DBE charges for providing bonds or insurance. The Department will only count costs the program engineer deems reasonable based on experience or prevailing market rates.

c. If a DBE firm subcontracts work, the Department counts the value of the work subcontracted to a DBE subcontractor.

d. The contractor will maintain records and may be required to furnish periodic reports documenting its performance under this item.

e. It is the Prime Contractor's responsibility to determine whether the work that is committed and/or contracted to a DBE firm can be counted for DBE credit by referencing the work type and NAICS code listed for the DBE firm on the Wisconsin UCP DBE Directory.

f. It is the Prime Contractor's responsibility to assess the DBE firm's ability to perform the work for which it is committing/contracting the DBE to do. Note that the Department encourages the Prime Contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts.

g. The Prime Contractor will inform the DBE office via email of all DBE subcontractors added to the project following execution of the contract. The Prime Contractor may omit submission of another form DT1506, but must submit signed Attachment A forms for additional DBE firms.

h. See Section 7 for DBE credit evaluation for Trucking and Section 8 for DBE credit evaluation for Manufacturers, Suppliers, and Brokers

Naming conventions: When emailing files, please use the following language to identify your submission- "Project #, Proposal #, Let date, Business Name, Attachment A" Email: DBE_Alert@dot.wi.gov

*Note: A sublet request is required for DBE work, regardless of subcontract tier, and also for reporting materials or supplies furnished by a DBE.

- Sublet Requests via form DT1925 or WS1925 are required for 1st Tier DBEs
- For all 2nd Tier and below notification of DBE sublet is indicated by the contractor entering them in CRCS

7. Credit Evaluation for Trucking

All bidders are expected to adhere to the Department's current trucking policy posted on the HCCI website at: http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/trucking-utilization-policy.pdf

The prime contractor is responsible for ensuring that all subcontractors including trucking firms, receive Form FHWA 1273: https://www.fhwa.dot.gov/programadmin/contracts/1273/1273.pdf

See Section 8 for Broker credit.

8. Credit Evaluation for Manufacturers, Suppliers, Brokers

The Department will calculate the amount of DBE credit awarded to a prime using a DBE firm for the provisions of materials and supplies on a contract-by-contract basis. The Department will count the material and supplies that a DBE firm provides under the contract for DBE credit based on whether the DBE firm is a manufacturer, supplier, or broker. Generally, DBE credit is determined through evaluation of the DBE owner's role, responsibility, and contribution to the transaction. Maximum DBE credit is awarded when the DBE firm manufactures materials or supplies. DBE credit decreases when the DBE firm solely supplies materials, and minimal credit is allotted when the DBE firm's role is administrative or transactional. It is the bidder's responsibility to confirm that the DBE firm is considered a supplier or a manufacturer before listing them on Commitment to Subcontract to DBE form DT1506 or DBE Commitment submitted with the bid.

a. Manufacturers

(1) A manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications.

(2) If the materials or supplies are obtained from a DBE manufacturer, **100%** percent of the cost of the materials or supplies counts toward DBE goals.

b. Regular Dealers of Material and/or Supplies

(1) A regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications

and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.

(2) If the materials or supplies are purchased from a DBE regular dealer, count **60%** percent of the cost of the materials or supplies toward DBE goals.

(3) At a minimum, a regular dealer must meet the following criteria to be counted for DBE credit:

i. The DBE firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question.

ii. The DBE firm must both own and operate distribution equipment for the product--bulk items such as petroleum products, steel, cement, gravel, stone, or asphalt. If some of the distribution equipment is leased, the lease agreement must accompany the DBE Commitment form for evaluation of the dealer's control before the DBE office approves the DBE credit.

(4) When DBE suppliers are contracted, additional documentation must accompany the DBE Commitment and Attachment A forms. An invoice or bill-of-sale that includes names of the bidder and the DBE supplier, along with documentation of the calculations used as the basis for the purchase agreement, subcontract, or invoice. WisDOT recognizes that the amount on the Attachment A form may be more or less than the amount on the invoice per b.(1) above.

i. The bidder should respond to the following questions and include with submission of form DT1506 or the DBE Commitment entered with bid:

a. What is the product or material?

b. Is this item in the prime's inventory or was the item purchased when contract was awarded?

c. Which contract line items were referenced to develop this quote?

d. What is the amount of material or product used on the project?

(5) Supplies purchased in **bulk** from DBE firms at the beginning of the season may be credited to current contracts if submitted with appropriate documentation to the DBE office.

i. To ensure that the appropriate credit is assigned, follow the procedure below:

a. When DBE suppliers are contracted for bulk supply or commodity purchases, an invoice or bill-of-sale that includes names of the contractor and the DBE supplier should be submitted to the DBE Office via eSubmit (preferred during letting) or the DBE_Alert email box. The supply/commodity credit may be applied during the federal fiscal year (October- September) in which the purchase was made.

b. When the contractor intends to apply the credit to a particular project, submit a copy of the original invoice, documentation of the calculations for supplies/commodities to be used on the project, and an Attachment A. Indicate on the Attachment A:

c. This supply/commodity is in the prime's inventory or pre-paid in case of commodities

d. The full value of the original invoice submitted to the DBE Office, above in (1)

e. The amount of material or product used on this project

f. Fuel estimate listed on Attachment A will be recorded as a deduction from the full fuel purchase amount shown on the invoice

ii. DBE Office Process (Applies only to bulk purchases)

a. Supply/Commodity commitment is received

b. Engineer verifies amount listed on invoice and enters the full amount into spreadsheet

c. The amount of credit applied for each project is updated on the spreadsheet until the bulk purchase is exhausted

d. Engineer informs contractor when full amount of bulk purchase has been applied

c. Brokers, Transaction Expediters, Packagers, Manufacturers' Representatives

(1) No portion of the cost of the materials, supplies, services themselves will count for DBE credit. However, WisDOT will evaluate the fees or commissions charged when a prime purchases materials, supplies, or services from a DBE certified firm which is neither a manufacturer nor a regular dealer, namely: brokers, packagers, manufacturers' representatives, or other persons who arrange or expedite transactions.

(2) Brokerage fees are calculated as **10%** of the purchase amount.

(3) WisDOT may count the amount of fees or commissions charged for assistance in the procurement of the materials and supplies, fees, or transportation charges for the delivery of materials or supplies required on a job site.

(4) Evaluation of DBE credit includes review of the contract need for the item/service, the sub-contract or invoice for the item/service, and a comparison of the fees customarily allowed for similar services to determine whether they are reasonable.

9. DBE Commitment Modification Policy (Formerly "DBE Replacement Policy")

a. Issuing a Contract Change Order

Any changes or modifications to the contract once executed are considered contract modifications and as such require a change order. In addition, the DBE office must provide consent for reduction, termination, or replacement of subcontractors approved on the DBE Commitment *in advance* of the modification for the prime contractor to receive payment for work or supplies. Additions to the DBE Commitment do not require advance notification of the DBE office. (see below e. DBE Utilization beyond the approved DBE Commitment)

b. Contractor Considerations

(1) A prime contractor cannot modify the DBE Commitment through reduction in participation, termination, or replacement of a DBE subcontractor listed on the approved DBE Commitment without prior written consent from the DBE Office. This includes, but is not limited to, instances in which a prime contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm.

(2) If a prime contractor reduces participation, replaces, or terminates a DBE subcontractor who has been approved for DBE credit toward its contract, the prime is required to provide documentation supporting its inability to fulfill the contractual commitment made to the Department regarding the DBE utilization.

(3) The Prime Contractor is required to demonstrate efforts to find another DBE subcontractor to perform at least the same amount of work under the contract as the DBE subcontractor that was terminated, to the extent needed to meet the assigned DBE contract goal. When additional opportunity is available by contract modifications, the Prime Contractor must utilize DBE subcontractors that were committed to equal work items, in the original contract.

(4) In circumstances when a DBE subcontractor fails to complete its work on the contract for any reason, or is terminated from a contract, the Prime Contractor must undertake efforts to maintain its commitment to the assigned DBE goal.

(5) The DBE subcontractor should communicate with the Prime Contractor regarding its schedule and capacity in the context of the contract. If the DBE firm anticipates that it cannot fulfill its subcontract, they will advise the Prime Contractor and suggest a DBE subcontractor that may replace their services and provide written consent to be released from its subcontract.

i. Before the Prime Contractor can request modification to the approved DBE Commitment, the Prime Contractor must:

a. Make every effort to fulfill the DBE Commitment by working with the listed DBE subcontractor to ensure that the firm is fully knowledgeable of the Prime Contractor's expectations for successful performance on the contract. Document these efforts in writing.

b. If those efforts fail, provide written notice to the DBE subcontractor of the Prime Contractor's intent to request to modify the Commitment through reduction in participation, termination, and/or replacement of the subcontractor including the reason(s) for pursuing this action.

c. Copy the DBE Office on all correspondence related to changing a DBE subcontractor who has been approved for DBE credit on a contract, including preparation and coordination efforts.

d. Clearly state the amount of time the DBE firm has to remedy and/or respond to the notice of intent to replace/terminate. The DBE must be allowed five days from the date notice was received as indicated by email time stamp or signed certified mail, to respond, in writing. EXCEPTION: The Prime Contractor must provide a verifiable reason for a response period shorter than five days. For example, a WisDOT project engineer or project manager confirms that WisDOT has eliminated an item the DBE subcontractor was contracted for.

e. The DBE subcontractor must acknowledge the contract modification with written response to the Prime Contractor and the DBE Office. If objecting to the subcontract modification, the DBE subcontractor must outline the basis for objection to the proposed modification, providing sound reasoning for WisDOT to reject the prime's request.

c. Request to Modify DBE Subcontracting Commitment

The written request referenced above may be delivered by email or fax. The request must contain the following:

(1) Project ID number

(2) WisDOT Contract Project Engineer's name and contact information

(3) DBE subcontractor name and work type and/or NAICS code

(4) Contract's progress schedule

(5) Reason(s) for requesting that the DBE subcontractor be replaced or terminated

(6) Attach/include all communication with the DBE subcontractor to deploy/address/resolve work completion

Naming conventions: When emailing files, please use the following language to identify your submission- "Project #, Proposal #, Let date, Business Name, MODIFICATION" Email: DBE_Alert@dot.wi.gov + Project Engineer

WisDOT will review the request and any supporting documentation submitted to evaluate if the circumstance and the reasons constitute good cause for replacing or terminating the approved DBE subcontractor.

Good Causes to Replace a DBE subcontractor according to the federal DBE program guidelines {49 CFR part 26.53}

- The listed DBE subcontractor fails or refuses to execute a written contract
- The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor
- The listed DBE subcontractor fails or refuses to meet the prime contractor's reasonable, nondiscriminatory bond requirements
- The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness
- The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215, and 1,200 or applicable state law
- The prime has determined that the listed DBE subcontractor is not a responsible contractor
- The listed DBE subcontractor voluntarily withdraws from the project and provides written notice of its withdrawal
- The listed DBE subcontractor is ineligible to receive DBE credit for the type of work required

- A DBE firm owner dies or becomes disabled with the result that the listed DBE subcontractor is unable to complete its work on the contract.

d. Evaluation and Response to the Request

WisDOT's timely response to the Prime Contractor's request for modification of the approved DBE Commitment will be provided to the prime and the WisDOT project engineer via email.

If WisDOT determines that the Prime Contractor's basis for reduction in participation, replacement, or termination of the DBE subcontractor is not consistent with the good cause guidelines, the DBE office will provide a response via email within 48-hours of receipt of request from the Prime Contractor as indicated by email time stamp. The communication will include: the requirement to utilize the committed DBE, actions to support the completion of the contractual commitment, a list of available WisDOT support services, and administrative remedies, including withholding payment to the prime, that may be invoked for failure to comply with federal DBE guidelines for DBE replacement.

The WisDOT contact for all actions related to modification of the approved DBE Commitment is the DBE Program Engineer who can be reached at DBE_Alert@dot.wi.gov or (414) 335-0413.

e. DBE Utilization beyond the approved DBE Commitment

When the prime or a subcontractor increases the scope of work for an approved DBE subcontractor or adds a DBE subcontractor who was not on the approved form DT1506 or DBE Commitment submitted with bid at any time after contract execution, this is referred to as voluntary DBE contract goal achievement. The contractor must follow these steps to ensure that the participation is accurately credited toward the DBE goal:

(1) Forward a complete, signed Attachment A form to the DBE Office. A complete Attachment A includes DBE subcontractor contact information, signatures, subcontract value, and description of the work areas to be performed by the DBE. The DBE Office will verify the DBE participation and revise the DBE Commitment based on the email/discussion and the new Attachment A.

(2) When adding to an existing DBE Commitment, submit a new Attachment A to the DBE Alert mailbox

(3) OR Submit a final Attachment A to DBE Alert during the Finals Process when Compliance receives notice of "Substantially Complete"

Naming conventions: When emailing files, please use the following language to identify your submission- "Project #, Proposal #, Let date, Business Name, New Attachment A" Email: DBE_Alert@dot.wi.gov

Special note on trucking

- DBE truckers added to the sublets in CRCS *will* be approved without DBE credit (You will see a "N" in CRCS instead of "Y")
- Prime Contractors may enter a "place holder" e.g. $1000.00, for DBE Trucking in CRCS if the full amount of trucking is unknown for sublet purposes only
- The hiring contractor may obtain the Attachment A with DBE signature included but the **Prime Contractor** must sign the Attachment A before submitting
- DBE truckers need to be added to the DBE commitment once. If the DBE trucker is on the initial commitment (DT1506/E1506) there is no requirement to submit another Attachment A for that trucker for that contract.

10. Commercially Useful Function

a. Commercially Useful Function (CUF) is evaluated after the contract has been executed, while the DBE certified firm is performing contracted work items.

b. The Department uses Form DT1011, DBE Commercially Useful Function Review and Certification to evaluate if the DBE is performing a commercially useful function. WisDOT counts expenditures of a DBE toward the DBE goal only if the DBE is performing a commercially useful function on that contract.

c. A DBE firm is performing a commercially useful function if the following conditions are met:

(1) For contract work, the DBE is responsible for executing a distinct portion of the work and is carrying out its responsibilities by actually performing, managing, and supervising that work.

(2) For materials and supplies, the DBE is responsible for negotiating price, determining quality and quantity, ordering, and paying for those materials and supplies.

d. Offsite Hauling – when DBE truck will haul between a pit and plant or location other than the construction site associated with the commitment

(1) Indicate Offsite Hauling on Attachment A

(2) Discuss offsite hauling at weekly progress meetings with Project Engineer (PE)

(3) PE conducts spot checks of pits/plants to verify DBE truck is hauling and/or verifying hauling log

(4) Prime should be prepared to submit haul tickets, plant/pit tickets, timecards, and other pertinent documentation if requested by PE or DBE Office

11. Credit Evaluation for DBE Primes

WisDOT calculates DBE credit based on the amount and type of work performed by DBE certified firms for work submitted with required documentation. If the prime contractor is a DBE certified firm, the Department will only count the work that the DBE prime performs with its own forces for DBE neutral credit. The Department will also calculate DBE credit for work performed by any other DBE certified subcontractor, DBE certified supplier, and DBE certified manufacturer on the contract in each firm's approved NAICS code/work areas that are submitted with required documentation. Crediting for manufacturers and suppliers is calculated consistent with Section 8 of this document and 49 CFR Part 26.

12. Joint Venture

A joint venture is an association of a DBE firm and one or more other firms to carry out a single, for-profit business enterprise, for which the parties combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work of the contract and whose share in the capital contribution, control, management, risks, and profits of the joint venture are commensurate with its ownership interest. If a DBE performs as a participant in a joint venture, the Department will only credit the portion of the total dollar value of the contract equal to the portion of the work that the DBE performs with its own forces.

13. Mentor-Protégé

a. If a DBE performs as a participant in a mentor-protégé agreement, the Department will credit the portion of the work performed by the DBE protégé firm.

b. DBE credit is evaluated and confirmed by the DBE Office for any contracts on which the mentor-protégé team identifies itself to the DBE Office as a current participant of the Mentor-Protégé Program.

(1) DBE credit may only be awarded to a non-DBE mentor firm for using its own protégé firm for less than one half of its goal on any contract; and

(2) Not award DBE credit to a non-DBE mentor firm for using its own protégé firm for more than every other contract performed by the protégé firm.

c. A DBE protégé firm may be eligible for conditional NAICS code extension for training with the mentor. Request permission from the DBE Office- Certification area.

d. Refer to WisDOT's Mentor-Protégé guidelines for guidance on the number of contracts and amount of DBE credit allowed on WisDOT projects.

14. Use of Joint Checks

The use of joint checks is allowable if it is a commonly recognized business practice in the material industry. A joint check is defined as a two-party check between a DBE subcontractor, a prime contractor, and the regular dealer or materials supplier who is neither the prime nor an affiliate of the prime. Typically, the prime contractor issues one check as payor to the DBE subcontractor and to the supplier jointly (to guarantee payment to the supplier) as payment for the material/supplies used by the DBE firm in cases where the DBE subcontractor and materials have been approved for DBE credit. The DBE subcontractor gains the opportunity to establish a direct contracting relationship with the supplier to potentially facilitate a business rapport that results in a line of credit or increased partnering opportunities.

The cost of material and supplies purchased by the DBE firm is part of the value of work performed by the DBE to be counted toward the goal. To receive credit, the DBE firm must be responsible for negotiating price, determining quality and quantity, ordering the materials, and installing (where applicable) and "paying for the material itself." See 49 CFR 26.55(c)(1).

The approval to use joint checks constitutes a commitment to provide further information to WisDOT, upon request by staff. WisDOT will allow the use of joint checks when the following conditions are met:

a. The Prime Contractor must request permission to use joint checks from the DBE Office by submitting the Application to Use Joint Checks.

(1) Request should be made when the DBE Commitment or the Request to Sublet is submitted; the request will not be considered if submitted after the DBE Subcontractor starts its work.

(2) Approval/Permission must be granted prior to the issuance of any joint checks.

(3) The payment schedule for the supplier must be presented to the DBE office before the first check is issued.

(4) The joint check for supplies must be strictly for the cost of approved supplies.

b. The DBE subcontractor is responsible for furnishing and/or installing the material/work item and is not an ‘extra participant’ in the transaction. The DBE firm’s role in the transaction cannot be limited solely to signing the check(s) to release payment to the material supplier. At a minimum, the DBE subcontractor’s tasks should include the following:

(1) The DBE subcontractor (not the prime/payor) negotiates the quantities, price, and delivery of materials.

(2) The DBE subcontractor consents to sign/release the check to the supplier by signing the Application to Use Joint Checks after establishing the conditions and documentation of payment within the subcontract terms or in a separate written document.

c. The Prime contractor/payor acts solely as a guarantor.

(1) The Prime Contractor agrees to furnish the check used for the payment of materials/supplies under the contract.

(2) The prime contractor/payor cannot require the subcontractor to use a specific supplier or the prime contractor’s negotiated unit price.

15. Payment

Costs for conforming to this Additional Special Provision (ASP) and any associated DBE requirements are incidental to the contract.

Appendix A
Substantive Conversation Guidelines

The substantive conversation is critical to all bidders' demonstration of good faith effort to meet the DBE goal prior to bid opening. Relationship building between primes and subcontractors is crucial to DBE goal attainment. Responsible bidders seek to build rapport with potential DBE subcontractors to understand capacity, areas of expertise, and assess contracting feasibility. Bidders who compete for WisDOT contracts are specialty contractors responding to a growing and changing contract environment. Just as these specialists are responsible for care of the roads, they are likewise responsible for contributing to the health of the industry. The substantive conversation drives collaboration that will build industry health and capacity. The following is intended to provide guidance for such discussions but is not an exhaustive list. Contractors are encouraged to incorporate their existing strategies for cultivating business relationships as well.

<u>Prior to Bid Opening- this discussion should happen as early as possible (WisDOT advertisements are released weeks prior to each Let)</u>

1. Determine DBE subcontractor's interest in quoting
2. If response indicates inexperience with quoting- offer support/assistance to the DBE in understanding the industry including fundamentals a subcontractor needs to know, required reading and/or resources.
3. Assess their interest and experience in the road construction industry by asking questions such as:

- Have you competed for other WisDOT contracts? Ratio of competed/to wins
- Have you performed on any transportation industry contracts (locally or with other states)?
- What the largest contract you've completed?
- Have you worked in the industry: apprentice, journeyman, safety, inspection etc.?
- Does this project fit into your schedule? Are you working on any contracts now?
- Have you reviewed a copy of the plans? Are you comfortable performing within the scope and quantity considerations of this contract?
- What region do you work in? Home base?
- Which line items are you considering?
- Have you read/are you familiar with WisDOT Standard Specifications? Construction Material Manual?
- Do you understand where your work fits in the project schedule, project phases?

<u>Following Bid Opening- this discussion can happen at any time</u>

1. After reviewing their quote, note the following in your discussion:

- Does the quote look complete? Irregular?
- Are there errors in the quote? Are items very high or very low?
- In general, does the quote look competitive?

2. Questions and Advice for the bidder to share with the potential DBE subcontractor:

- What line items would typically be in a competitive quote for a subcontractor of their specialty?
- How many employees and what is their role/experience/expertise in your firm?
- Do you have resources for labor (union member, family-based, community-resourced) and capital (banking relationship, bond agent, CPA)?
- Where have you worked: cities, states, government, commercial, residential/private sector, etc. Explain similarities or differences.
- Refer them to reliable, trusted, industry resources that can educate or connect them to relevant resources, education/certification resources, more appropriate contract opportunities.
- Discussion about prime contract and subcontract liability, critical path items, contract quantities, schedule risks, and potential profit/loss (for upcoming known projects or in general).
- Discussion of bonding, insurance, and overall business risk considerations.

Appendix B

Sample Contractor Solicitation Letter Page 1

(This sample is provided as a guide, not a formatting requirement)

DBE Solicitation - [Month] [Day], [Year] WisDOT Bid Letting

Attention all DBEs. [Prime Contractor] is actively seeking your quote for the [Month][Day], [Year] Bid Letting. [Prime Contractor] is considering bidding on the projects listed on page 2 as a prime contractor. Please see page 2 for instructions and the sub-contractable opportunities for each proposal.

Does [Prime Contractor] accept quotes in areas we might self-perform? Yes, we do! We support this federal rule and (if needed) we consider areas we might self-perform an opportunity to provide in the field assistance and training if we award your quote.

Where can DBEs find the plans, specifications & addenda? Please visit [Prime Contractor's] plan room [LINK] or on WisDOT's Highway Construction Contract Information HCCI website: Wisconsin Department of Transportation Highway Construction Contract Information (wisconsindot.gov). This same website can be checked for the contract status.

What should your quote include? All the costs required to complete the items you propose to perform including labor, equipment, material, and related bonding or insurance. The quote should also note items that you are DBE certified to perform, tied items, and any special terms. Please use page 2 as your cover sheet for your quote.

Do you have a question regarding bonding, credit, insurance, equipment, or supplies/materials? We welcome all DBE questions! Please call [Prime Contractor] and ask to speak with [Contact]. [Prime Contractor] can provide basic information as well as a referral to a trusted industry partner for insurance and bonding needs.

When are quotes due?

[Month] [Day], [Year] at [Time]. We accept quotes via SBN, email, or fax. Please make every effort to have your quotes in by this time or earlier. Quality check your quote so it includes the correct letting date, project ID, proposal number, unit price and extension.

Who can DBEs contact for questions, information, clarification or for a quote evaluation? [Project Manager Name] [Phone] [Email]. If you are quoting [Prime Contractor] for the first time, we encourage you to come meet with us in person to discuss the project. Our office hours are 7:30 a.m. – 5:00 p.m. On bid day, we are in the office by 6:30 a.m.

Why partner with [Prime Contractor]?

DBE partnership is a core part of [Prime Contractor's] mission. Including DBEs at the beginning of each project is essential in the success of each project. We consider DBEs to be important industry partners who bring dedication and knowledge at various stages during construction. We are proud to be an industry leader with our DBE partnership. Your success as a DBE is our success.

Sample Contractor Solicitation Letter Page 2

(This sample is provided as a guide, not a formatting requirement)

REQUEST FOR QUOTE

[Prime Contractor]
Letting Date: [Month] [Day], [Year]
Project IDs: 1234-56-00 (Proposal #1) & 1234-01-78 (Proposal #6)

Please check all that apply:
____Yes, we will be quoting the projects & items listed below
____ No, we are not interested in quoting on the letting or its items referenced below
____ Please take our name off your monthly DBE contact list
____ We have questions about quoting this letting. Please have someone contact me at this number:

Prime Contractor Contact:_____ DBE:_____
Phone:_____ Fax:_____
Email:_____

Please circle the proposals and items you will be quoting below and contact us with any questions

Proposal **County**	**1** **Dane County**	**6** **Crawford County**
Clearing & Grubbing	**X**	**X**
Dump Truck Hauling	**X**	**X**
Curb/Gutter/Sidewalk	**X**	
Erosion Control Items		**X**
Excavation	**X**	**X**
Pavement Marking		**X**
Traffic Control	**X**	
Sawing	**X**	**X**
QMP, Base		**X**
Pipe Underdrain	**X**	
Landscape		**X**
Beam Guard	**X**	
Electrical	**X**	
Signs/Posts/Markers		**X**
Survey/Staking		**X**

Again, please make every effort to have your quotes into our office by time deadline prior to the letting date.

Sample Contractor Solicitation Email - Simplified

(This sample is provided as a guide, not a formatting requirement)

ATTENTION DBEs

- **[Prime Contractor] specializes in municipal projects in the XX Region(s)**
- **We have successfully competed for *and* completed XX WisDOT projects over the past XX years**
- **Consider [Prime Contractor] your partner on WisDOT Projects**

[Prime Contractor] is seeking *your* subcontractor quote for the XX/XX/20XX WisDOT bid letting on the below projects:

Project	Proposal	County	Region
1234-56-00	**2**	**Dane**	**SW**
1234-01-78	**6**	**Crawford**	**SW**

- Please review the attachments **[attach Solicitation Letter]** and respond with your intent to quote (or not) along with the work items you are interested in performing and respond via fax or email by ***date***. The quote should note items that you are DBE certified to perform, tied items, and any special terms. Please include labor, equipment, material, and related bonding or insurance.

- If you have any questions regarding bonding, credit, insurance, equipment and/or materials/supplies, please feel free to call [Prime Contractor] and ask for [Contact]. **(Include if your company is willing to answer these types of DBE questions)**

- Plans and Specifications can be found: **WisDOT HCCI Website: List webpage where plans are located**

- If you do choose to quote, please make every effort to have your quote into our office by ***time and date.*** Make sure the correct letting date, project number, unit price and extension are included in your quote.

- Should you have questions regarding the mentioned project, please call our office at (414) 555-5555 and we will direct you to the correct estimator/project manager.
  Our office hours are 7:30 a.m. - 5:00 p.m.

Thank you – we look forward to working with your company on this project!

Prime Contractor
Project Manager
Direct: 414-555-5555
Cell: 414-555-5556

Sample Contractor Solicitation Email to non-DBE WisDOT Subcontractors - Simplified

(This sample is provided as a guide, not a formatting requirement)

ATTENTION WisDOT SUBCONTRACTORS

[Prime Contractor] is considering bidding on the below projects for the XX/XX/20XX WisDOT Bid Letting:

Project	Proposal	County	Region	DBE Goal
1234-56-00	2	Dodge	SW	6.00%
1234-01-78	11	Adams	NC	3.00%
1234-00-99	20	Buffalo	NW	5.00%
1234-00-98	33	Portage	NC	6.00%

The above projects have DBE goals and [Prime Contractor] is committed to DBE inclusion with every project. As such, we are requesting:

- All WisDOT Subcontractors to **solicit and utilize** DBEs in your quotes.
- DBE participation can be achieved through purchasing materials from DBE suppliers, using DBE subcontractors and/or DBE trucking firms or any combination of these.
- If there is an opportunity to untie an item in your quote so a DBE can be utilized, please look for those opportunities as well.
- Your quote will be evaluated based on the amount of DBE participation your company is able to provide when compared to other quotes for the same work.

If you do choose to quote, please make every effort to have your quote into our office by **time and date.** Please submit all quotes to [Email]. Make sure the correct letting date, project number, unit price and extension are included in your quote.

Should you have questions regarding the mentioned project, the Project Manager contact is: [Name] [Phone Number] [Email]

Thank you for utilizing DBEs who are trusted industry partners with WisDOT projects.

Prime Contractor
Project Manager
Direct: 414-555-5555
Cell: 414-555-5556

Appendix C
Small Business Network (SBN) Overview

The Small Business Network is a part of the Bid Express® service that was created to ensure that prime bidders have a centralized online location to find subs - including small and disadvantaged business enterprises (DBEs). It is available for prime bidders to use as part of their Basic Service subscription. Within the Small Business Network, **Prime Contractors** can:

1. Easily select proposals, work types and items:
    a. After adding applicable work types, select items that you wish to quote. Enter the sub-quote quantities and add comments, if desired. Adding or removing items and work types can be done quickly. If needed, you can save the sub-quote for later completion.
2. Create sub-quotes for the subcontracting community:
    a. Create sub-quotes with ease using the intuitive sub-quote creator. In seven short steps, you can rapidly create a custom sub-quote directed to all subcontractors that bid on the applicable work types. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
    b. Create a sub-quote to send to subcontractors or suppliers that lists the items in a proposal that you want quoted
    c. Create an unlimited number of sub-quotes for items you want quoted, and optionally mark them as a DBE preferred request.
    d. Add attachments to sub-quotes.
3. View sub-quote requests & responses:
    a. After logging into the Bid Express service, you can quickly review all of your sub-quote requests and all unsolicited sub-quote requests from subcontractors. To simplify the Small Business Network home screen, sub-quote requests can be hidden with one click if they are not applicable.
    b. View or receive unsolicited sub-quotes that subcontractors have posted, complete with terms, conditions and pricing.
4. View Record of Subcontractor Outreach Effort:
    a. For each sub-quote produced, a *Record of Subcontractor Outreach Effort* is generated that shows the response statistics for a particular sub-quote. If accepted by the letting agency, this report may serve as proof of a “Good Faith” effort in reaching out to the DBE community.
    b. Easily locate pre-qualified and certified small and disadvantaged businesses.
    c. Advertise to small and disadvantaged businesses more efficiently and cost effectively.
    d. Document your interactions with subs/DBEs by producing an Outreach Report (may be accepted as proof of DBE outreach at the discretion of each agency).

The Small Business Network help small businesses learn more about opportunities, compete more effectively, network with other contractors and subcontractors, and win more jobs. The DBE will provide free SBN accounts to DBEs when requested. Use DBE_Alert@dot.wi.gov to request an account. **DBE firms can:**

1. View and reply to sub-quote requests from primes:
    a. After logging into the Bid Express service, you can quickly review all incoming sub-quote requests and all unsolicited sub-quotes created by your company. Receive notifications by selected work type. To simplify on the Small Business Network home screen, sub-quote requests can be filtered by work types relevant to your interests or hidden with one click if they are not applicable.
2. Select items when responding to sub-quote requests from primes:
    a. You have the freedom to choose and price any number of items when responding to a sub-quote request. Quantities can be modified, and per-item comments are also available.
    b. View requests for sub-quotes for work that primes have posted for projects they are bidding, add your pricing, terms, and conditions, and submit completed sub-quotes to the requesting primes. c. Add attachments to a sub-quote.
3. Create and send unsolicited sub-quotes to specific contractors:
    a. Create unsolicited sub-quotes with ease using the intuitive sub-quote creator. In eight short steps, you can rapidly create a custom sub-quote directed at any number of specific vendors of your choosing. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
4. Easily select and price items for unsolicited sub-quotes:
    a. After adding applicable work types, select items that you wish to quote. The extended price calculates automatically, cutting out costly calculation errors. Comments can be provided on a per-item basis as well.
    b. Create an unsolicited sub-quote that lists the items from a proposal that you want to quote, include pricing, terms and conditions, and send it to selected prime/plan holder.
    c. Add attachments to a sub-quote.
    d. Add unsolicited work items to sub-quotes that you are responding to.
5. Easy Access to Valuable Information
    a. Receive a confirmation that your sub-quote was opened by a prime.
    b. View Bid Tab Analysis data from past bids, including the high, average and low prices of items.
    c. View important notices and publications from DOT targeted to small and disadvantaged businesses.
6. Accessing Small Business Network for WisDOT contracting opportunities
    a. If you are a contractor not yet subscribing to the Bid Express service, go to **www.bidx.com** and select “Order Bid Express.” The Small Business Network is a part of the Bid Express Basic Service.

Appendix D

Good Faith Effort Evaluation Measures *by categories referenced in DBE regulations*

Bidders must demonstrate that they took all necessary and reasonable steps to achieve the assigned DBE contract goal. For each contract, all bidders must submit documentation indicating the goal has been met or if falling short of meeting the assigned goal, must request a DBE Goal Waiver and document all efforts employed to secure DBE subcontractor participation on Form DT1202.

DBE staff analyze the bidder's documented good faith efforts to determine if action taken was sufficient to meet the goal. Sufficiency is measured contract-by-contract. WisDOT evaluates active and aggressive efforts, quality, quantity, scope, intensity, and appropriateness of the bidder's efforts as a scale of the principles of Good Faith outlined in 49 CFR Part 26, Appendix A. Additional emphasis is placed on the bidder's demonstration of timely submission of documentation and communication with DBE subcontractors, and business development initiatives undertaken to support DBE firm growth.

The following is a sample of good faith effort activities that are rated according to the accompanying rubric. Contractors are encouraged to identify additional activities that align with their business type(s).

- Personal, tailored solicitation to firms that specialize in work types planned or desired for subcontracting
- Follow up to initial solicitation via email or phone
- Substantive conversation including topics such as contract liability, critical path work items, schedule risks, and potential profit/loss
- SBN utilization including posting quotes
- Review and response to DBE quotes including provision of information about plans, specifications,and requirements as applicable
- Documentation requesting subcontractors support DBE goal by solicitation and inclusion of DBE subcontractor quotes
- Responsive and timely submission of organized documentation
- Analysis of number of DBE firms who do work types that you typically subcontract
- Analysis of number of DBE firms who reside in geographical areas where prime seeks work
- Analysis of firms who express interest in bidding/quoting including the number of firms who declined your solicitation
- Reference check of DBE subcontractor work or training (documentation of questions and response required)
- Number of different efforts undertaken to meet the assigned DBE goal as documented in accompanying Form DT1202
- Submission of all DBE quotes received matched with a variety of work to be performed by DBEs
- Number and names of DBE firms provided written advice, or referral to industry-specific business development resources
- Overall pattern of DBE utilization on all WisDOT contracts which may include contracting with municipalities
- Documentation of resources expended to meet assigned DBE goal (#of hours, staff titles, average pay rate, actions taken)
- Analysis of subcontractable work items to be completed by prime beyond prime contractor's 30%
- Risk analysis of work items that are typically in tied quotes that could be unbundled
- List of contract work items in smallest economically feasible units, identifying schedule impact
- Submission of a Gap Analysis identifying DBE skillset and/or industry needs
- Staff training in EEO and Civil Rights laws as documented in training logs
- Written Capacity Assessment completed with DBE firm documenting its ability to perform the work quoted
- DBE engagement efforts beyond simple solicitation that include a substantive discussion, initiated as early in the acquisition process as possible (*points added for each day prior to letting*)
- Outreach and marketing efforts with minority, women, and veteran-focused organizations at least 10 days prior to bid opening
- Active involvement in WisDOT's Business Development Program, TrANS training, facilitated networking efforts, workshops
- Customized teaching/training efforts for future opportunities with DBE subcontractor, contract specific and/or annually
- Introduction and reference provided for DBE subcontractor to a prime who has not previously contracted with the DBE firm
- Prime utilization of a DBE subcontractor the prime has not contracted with previously
- Written referral/recommendation to bond/insurance agents, manufacturer, supplier
- Documented efforts fostering DBE participation through administrative and/or technical assistance
- Evidence of negotiation with the DBE firm about current and future Let opportunities
- Recommendation of local and state services that support small business and access to opportunity: DOA, SBA, WEDC, WPI, etc.
- Advice on bonding, lines of credit, or insurance as required to complete the items quoted and contract requirements

GFE Evaluation Rubric – Phase 1 – Initial Review

DT1202	Examples	Rating	OBOEC Feedback
Solicitation Documentation	Identify all reasonable and available activities performed to solicit the interest of all certified DBEs who have capacity and ability to perform work on the project. *Such as: Updated solicitation letter and email, timely solicitation, and follow-up, and/or utilized various methods to communicate solicitation (ex: letter, email, publication, posting and/or website)*		
Selected Work Items Documentation	All work items are broken out into economically feasible units to facilitate DBE participation. *Such as: Selected work items are specific to each proposal and clearly identified in all solicitation(s)*		
Documentation of Project Information provided to Interested DBEs	Provide interested DBEs with adequate information about the plans, specifications, and any other contractual requirements in a timely manner to assist DBEs in response to solicitation. *Such as: Project information is clearly identified in all solicitation(s)*		
Documentation of Negotiation with Interested DBEs	Provide sufficient evidence demonstrating that good faith negotiations took place during the bid letting. *Such as: Documented attempts with DBEs or on behalf of DBEs to increase DBE participation*		
Documentation of Sound Reason for Rejecting DBEs	Provide sufficient evidence demonstrating that DBEs are rejected for sound reasons. *Such as: Detailed and thoughtful analysis that considers both the percentage and dollar difference when rejecting a DBE including past performance, relevant business experience and stability, safety record, business ethic and integrity, technical capacity, and other tangible factors.*		
Documentation of Assistance to Interested DBEs- bonding, credit, insurance, equipment, supplies/materials	Documented assistance in both solicitation(s) and outreach to DBEs.		
Documentation of Outreach to Minority, Women, and Community organizations and other DBE Business Development Support	Effectively use the services of minority, women, and community organizations as well as contractors' groups, local, state, and federal business assistance offices and organization that provide assistance in recruiting and supporting DBEs, as well participation in activities that support DBE business development. *Such as: Variety of activities that translate into meaningful DBE participation*		
Documentation of other GFE activities	*Such as: Used DT1202 Excel Workbook, Diversity & Inclusion company policy, Mentor-Protégé participant, awarded neutral DBE after bid submission, included company GFE overview/strategy information and/or company website highlights DBE opportunities and participation*		
Overall Demonstration of GFE			

GFE EVALUATION RATING LEGEND – PHASE 1 – Initial Review

Documentation provided by bidder is evaluated and rated on the rubric. Bidders should include activities characterized by the following types of effort:

ACTIVE & AGGRESSIVE: Demonstrated through engaged and assertive activity
QUALITY: Demonstrated through essential character of conscientious and serious activity
QUANTITY: Demonstrated through a measurable number of activities
SCOPE & INTENSITY: Demonstrated through a rigorous approach to an appropriate and purposeful range of activities
TIMING: Demonstrated through engagement efforts beyond simple solicitation, initiated early in the process

GFE EVALUATION – PHASE 2 – Team Review

GFE Team completes:

- Review of activities included on the rubric
- Review of the intent to award and sound reasoning submitted by Prime
- Bid analysis to confirm if any bid submitted met the DBE goal
- Review average of other bidders DBE goal achievement
- Team review of combined efforts documented in Phase 1 and 2 constitute final GFE determination

Rating Scale:

- **GFE Approval:**
  Bona Fide = 6 or more categories color coded green.
  Genuine effort characterized by sincere and earnest activities – "Solicitation" and "Sound Reasoning" must be green

- **GFE Approval:**
  Sufficient = 5 or more categories color coded green or yellow
  Adequate effort documented with a variety of quality activities – "Solicitation" and "Sound Reasoning" must be green or yellow

- **GFE Denial:**
  Pro Forma efforts = 4 or less categories color coded green or yellow. Perfunctory effort characterized by routine or superficial activities

Green = Exceeds expectations
Yellow = Meets expectations
Red = Areas in need of attention and/or absence of documentation **See OBOEC Rubric Analysis_Feedback**

Excerpt from Appendix A to 49 CFR Part 26:
V. In determining whether a bidder has made good faith efforts, it is essential to scrutinize its documented efforts. At a minimum, you must review the performance of other bidders in meeting the contract goal. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may reasonably raise the question of whether, with additional efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts. As provided in §26.53(b)(2)((vi), you must also require the contractor to submit copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract to review whether DBE prices were substantially higher; and contact the DBEs listed

GFE RUBRIC ANALYSIS	
OBOEC DECISION	APPROVAL OR DENIAL
Prime Contractor	
Proposal	
Project	
Bid Letting	
DBE Goal Amount	
DBE Goal Amount Achieved	
Bid Analysis	
Goal %	Achieved %
Apparent Low Bidder	%
Bidder B	
Bidder C	
Average of OTHER Bidders (Not including Apparent Low Bidder)	
DBE Quotes Received	
DBE Quotes Awarded	
DBE Quote(s) Rejected	**Rejected Quote Analysis**
DBE Quote(s) Awarded	**Awarded DBE Amount**

Appendix E
Good Faith Effort Best Practices

This list is not a set of requirements; it is a list of potential strategies

Primes

- Prime contractor open houses inviting DBE firms to see the bid "war room" or providing technical assistance.
- Participate in speed networking and mosaic exercises as arranged by DBE office.
- Host information sessions not directly associated with a bid letting.
- Participate in a formal mentor protégé or joint venture with a DBE firm.
- Participate in WisDOT advisory committees i.e. TRANSAC, or Mega Project committee meetings.
- Facilitate a small group DBE 'training session' clarifying how your firm prepares for bid letting, evaluates subcontractors, preferred qualifications, and communication methods.
- Encourage subcontractors to solicit and highlight DBE participation in their quotes to you.
- Quality of communication, not quantity creates the best results. Contractors should be thorough in communicating with DBE firms before the bid and provide any assistance requested to assure best possible bid.

DBE

- DBE firms should contact primes as soon as possible with questions regarding their quotes or bid; seven days prior is optimal.
- Continually check for contract addendums on the HCCI website through the Thursday prior to letting to stay abreast of changes.
- Review the status of contracts on the HCCI website reviewing the 'apparent low bidder' list and bid tabs at a minimum.
- Prepare a portfolio or list of related projects and prime and supplier references; be sure to note transportation related projects of similar size and scope, firm expertise and staffing.
- Participate in DBE office assessment programs.
- Participate on advisory and mega-project committees.
- Sign up to receive the DBE Contracting Update.
- Consider membership in relevant industry or contractor organizations.
- Active participation is a must. Quote as many projects as you can reasonably work on; quoting the primes and bidding as a prime with the Department are the only ways to get work.

Appendix F
Good Faith Effort Evaluation Guidance
Appendix A of 49 CFR Part 26

I. When, as a recipient, you establish a contract goal on a DOT-assisted contract for procuring construction, equipment, services, or any other purpose, a bidder must, in order to be responsible and/or responsive, make sufficient good faith efforts to meet the goal. The bidder can meet this requirement in either of two ways. First, the bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose. Second, even if it doesn't meet the goal, the bidder can document adequate good faith efforts. This means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.

II. In any situation in which you have established a contract goal, Part 26 requires you to use the good faith efforts mechanism of this part. As a recipient, you have the responsibility to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for you to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made, based on the regulations and the guidance in this Appendix.

The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements. We emphasize, however, that your determination concerning the sufficiency of the firm's good faith efforts is a judgment call. Determinations should not be made using quantitative formulas.

III. The Department also strongly cautions you against requiring that a bidder meet a contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a contract, even though the bidder makes an adequate good faith efforts showing. This rule specifically prohibits you from ignoring bona fide good faith efforts.

IV. The following is a list of types of actions which you should consider as part of the bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. (1) Conducing market research to identify small business contractors and suppliers and soliciting through all reasonable and available means the interest of all certified DBEs that have the capability to perform the work of the contract. This may include attendance at pre-bid and business matchmaking meetings and events, advertising and/or written notices, posting of Notices of Sources Sought and/or Requests for Proposals, written notices or emails to all DBEs listed in the State's directory of transportation firms that specialize in the areas of work desired (as noted in the DBE directory) and which are located in the area or surrounding areas of the project.

(2) The bidder should solicit this interest as early in the acquisition process as practicable to allow the DBEs to respond to the solicitation and submit a timely offer for the subcontract. The bidder should determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units (for example, smaller tasks or quantities) to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces. This may include, where possible, establishing flexible timeframes for performance and delivery schedules in a manner that encourages and facilitates DBE participation.

C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation with their offer for the subcontract.

D. (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional Agreements could not be reached for DBEs to perform the work.

(2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

E. (1) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union status) are not legitimate causes for the rejection or non-solicitation of bids in the contractor's efforts to meet the project goal. Another practice considered an insufficient good faith effort is the rejection of the DBE because its quotation for the work was not the lowest received. However, nothing in this paragraph shall be construed to require the bidder or prime contractor to accept unreasonable quotes in order to satisfy contract goals.

(2) A prime contractor's inability to find a replacement DBE at the original price is not alone sufficient to support a finding that good faith efforts have been made to replace the original DBE. The fact that the contractor has the ability and/or desire to perform the contract work with its own forces does not relieve the contractor of the obligation to make good faith efforts to find a replacement DBE, and it is not a sound basis for rejecting a prospective replacement DBE's reasonable quote.

F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.

G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, State, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

V. In determining whether a bidder has made good faith efforts, it is essential to scrutinize its documented efforts. At a minimum, you must review the performance of other bidders in meeting the contract goal. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may reasonably raise the question of whether, with additional efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts. As provided in §26.53(b)(2)((vi), you must also require the contractor to submit copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract to review whether DBE prices were substantially higher; and contact the DBEs listed on a contractor's solicitation to inquire as to whether they were contacted by the prime. Pro forma mailings to DBEs requesting bids are not alone sufficient to satisfy good faith efforts under the rule.

VI. A promise to use DBEs after contract award is not considered to be responsive to the contract solicitation or to constitute good faith efforts.

[79 FR 59600, Oct. 2, 2014]

Appendix G

(SAMPLE) Forms DT1506 and DT1202

Official Form DT1506 can be found here: https://wisconsindot.gov/Documents/formdocs/dt1506.pdf

COMMITMENT TO SUBCONTRACT TO DBE

Clear

Wisconsin Department of Transportation

DT1506 12/2021 s.84.06(2) Wis. Stats. ☐ Non-Traditional Project

Project ID: _____

Proposal # _____

Prime Contractor: _____

County: _____

Letting Date: _____

Total $ Value of Prime Contract: $ _____

DBE Contract Goal: _____ %

DBE Goal Achieved: 0.00 %

This contract requires that a specified percentage of the work be subcontracted to a disadvantaged business enterprise and that this information be submitted as described in ASP-3. The submittal of this form with the bid proposal constitutes your DBE commitment. Include Attachment A for DBEs included on commitment.

This form must be completed and returned for this proposal. See page 2 for instructions.

1. DBE Firm	2. Work or Items to be subcontracted	3. Supplier Y/N	4. Trucking Only	5. DBE Full Subcontract $	6. DBE Amount for Credit $
			O# L#		
			O# L#		
			O# L#		
			O# L#		
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			O# L#		
			O# L#		
			O# L#		
				$ 0.00	$ 0.00

Government Use Only Approved Amounts		
A =	$	%
V =	$	%
Total =	$	%

Signature:

Date:

Good faith effort approved: Yes ☐ No ☐

Prime Representative Signature & Date

DBE Office Signature & Date Approved

COMMITMENT TO SUBCONTRACT TO DBE
ATTACHMENT A

CONFIRMATION OF PARTICIPATION

Project I.D.:	Proposal Number:
Letting Date:	

Name of DBE Firm Participating in this Contract:	
Name of the Prime/Subcontractor who hired the DBE Firm: *(list all names of tiers if more than one)*	
Type of Work or Type of Material Supplied:	
Total Subcontract Value:	Total DBE Credit Value:

FOR PRIME CONTRACTORS ONLY: I certify that I made arrangements with the participating DBE firm to perform the type of work listed or supply the material indicated above for the subcontract value listed above.	Prime Contractor Representative's Signature
	Prime Contractor Representative's Name (Print Name)
	Prime Contractor (Print Company Name)
	Date

FOR PARTICIPATING DBE FIRMS ONLY: I certify that I made arrangements with the Prime Contractor or the Hiring Contractor to perform the type of work or supply the material indicated above for the subcontract value listed above.	Participating DBE Firm Representative's Signature	Date
	Participating DBE Firm Representative's Name (Print Name)	
FOR DBE TRUCKING FIRMS ONLY: I certify that I will utilize, for DBE credit, only trucks listed on my WisDOT approved Schedule of Owned/Leased Vehicles for DBE Credit form and I will be utilizing the number of trucks as listed below.	Participating DBE Firm (Print Company Name)	
	DBE Firm's Address:	

# Owned Trucks	# Leased Trucks	# DBE-Owned Leased Trucks	# Non-DBE-Owned Leased Trucks

☐ Off site Hauling

Official Form DT1506 can be found here: https://wisconsindot.gov/Documents/formdocs/dt1506.pdf

DOCUMENTATION OF GOOD FAITH EFFORT

Wisconsin Department of Transportation
DT1202 3/2020

Project ID	Proposal No.	Letting
Prime Contractor		County
Person Submitting Document		Telephone Number
Address		Email Address

All bidders must undertake necessary and reasonable steps to achieve the assigned DBE contract goal per federal regulatory guidance at 49 CFR Part 26. Bidders use this form to document all efforts employed to meet the assigned goal as a record of contractor good faith efforts (GFE). Refer to ASP3 or 49 CFR Part 26 for guidance on actions that demonstrate good faith effort.

It is critical to list all efforts, attach documentation, and follow the instructions to complete this submission. Documentation of good faith effort includes copies of each DBE and non-DBE subcontractor quote submitted to the bidder for the same line items. Utilize the sample documentation logs to document and organize efforts.

Submit good faith effort documentation per ASP-3 guidelines.

Instructions: Provide a narrative description of all activities pursued to demonstrate good faith efforts, any corresponding documentation, and applicable explanation on separate pages. Include the following items, organized in the order listed below.

1. **Solicitation Documentation:**
   - a. **Purpose:** To identify all reasonable and available activities the bidder performed to solicit the interest of all certified DBEs who have the capacity and ability to perform work on the project. All solicitation efforts should begin as early as possible to ensure DBEs have ample time to respond and ask questions.
   - b. **Action:** Identify and list all activities engaged in to solicit DBEs using all reasonable and available means such as written notice and follow-up communications; substantive conversations; pre-bid meetings; networking events; market research; advertising.
2. **Selected Work Items Documentation:**
   - a. **Purpose:** To ensure that all work items are broken out into economically feasible units to facilitate DBE participation. This must occur even when you prefer to perform the work yourself.
   - b. **Action:** Identify economically feasible work units to be performed by DBEs to include activities such as: list of work items to be performed; breaking up of large work items into smaller tasks or quantities; flexible time frames for performance and delivery schedules.
3. **Documentation of Project Information provided to Interested DBEs:**
   - a. **Purpose:** To provide interested DBEs with adequate information about the plans, specifications, and any other contractual requirements in a timely manner to assist DBEs in response to solicitation.
   - b. **Action:** Provide DBEs access to plans, specifications, and other contract requirements. Early solicitation allows ample opportunity to provide project information, links to Let advertisements, and substantive engagement with DBEs.

4. **Documentation of Negotiation with Interested DBEs:**
   a. **Purpose:** To ensure that negotiations with interested DBEs were made in good faith providing evidence as to why agreements could not be reached for DBEs to perform work.

   b. **Action:** Provide sufficient evidence to demonstrate that good faith negotiations took place. Merely sending out solicitations requesting bids from DBEs does not constitute sufficient good faith efforts. A bidder using good business judgment considers a number of factors in negotiating with all subcontractors, and the firm's price and capabilities in addition to contract goals are taken into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for failing to meet the DBE goal as long as costs are reasonable. (see 49 CFR Part 26 Appendix A)

5. **Documentation of Sound Reason for Rejecting DBEs:**
   a. **Purpose:** To ensure that bidders avoid rejecting DBEs as unqualified without sound reasons. Reasons for rejection must be based on thorough investigation of DBE capabilities.

   b. **Action:** Provide sufficient evidence to demonstrate that DBE was rejected for sound reasons such as past performance, relevant business experience and stability, safety record, business ethic and integrity, technical capacity, other tangible factors.

6. **Documentation of Assistance to Interested DBEs - Bonding, Credit, Insurance, Equipment, Supplies/Materials:**
   a. **Purpose:** To assist interested DBEs in obtaining bonds, lines of credit, insurance, equipment, supplies, materials, and other assistance or services.

   b. **Action:** Assist interested DBEs in obtaining bonding, lines of credit or insurance, and provide technical assistance or information related to plans, specifications, and project requirements. Assist DBEs in obtaining equipment, supplies, materials or other services related to meeting project requirements (excluding supplies or equipment the DBE purchases from the prime).

7. **Documentation of outreach to Minority, Women, and Community Organizations and other DBE Business Development Support:**
   a. **Purpose:** To effectively use the services of minority, women, and community organizations as well as contractors' groups, local, state, and federal business assistance offices and organization that provide assistance in recruiting and supporting DBEs, as well as participation in activities that support DBE business development.

   b. **Action:** Contact organizations and agencies for assistance in contacting, recruiting, and providing support to DBE subcontractors, suppliers, manufacturers, and truckers at least 14 days before bid opening. Participate in or host activities such as networking events, mentor-protégé programs, small business development workshops, and others consistent with DBE support.

Return to:
Wisconsin Department of Transportation
DBE Program Office
PO Box 7965
Madison, WI 53707-7965
DBE_Alert@dot.wi.gov

I certify that I have utilized comprehensive good faith efforts to solicit and utilize DBE firms to meet the DBE participation requirements of this contract proposal, as demonstrated by my responses and as specified in Additional Special Provision 3 (ASP-3).

I certify that the information given in the Documentation of Good Faith Efforts is true and correct to the best of my knowledge and belief.

I further understand that any willful falsification, fraudulent statement, or misrepresentation will result in appropriate sanctions, which may involve debarment and/or prosecution under applicable state (Trans 504) and Federal laws.

(Bidder/Authorized Representative Signature)

(Print Name)

(Title)

Good Faith Effort -- Sample Documentation Logs

The sample logs below are provided as guides rather than exhaustive list. See ASP3, Appendix A for additional examples of demonstrable good faith efforts. Attach documentation for each activity listed.

Acceptable forms of documentation include copies of solicitations sent to DBEs, notes from substantive conversations and negotiations with DBEs, copies of advertisements placed, email communications, all quotes received from DBEs and from all subcontractors who were considered alongside DBE quotes, proof of attendance at applicable networking events; flyers for events or workshops for DBEs offered by the prime, and other physical records of good faith efforts activities.

SOLICITATION LOG

Date	Activity	Name of DBE Solicited	Follow-up
4/1/2020	Sent May Let solicitation	Winterland Electric	Spoke with Mark Winterland on 4/15/20 to ask if he would quote

SELECTED WORK ITEMS SOLICITED LOG

Work Type	DBE Firm	Contact Person	Date	Contact Mode
Pavement Marking	ABC Marking	Leslie Lynch	4/1/2020	Email; phone
	#1 Marking Co.	Mark Smart	4/1/2020	Email; left VM
Electrical	Winterland Electric	Tabitha Tinker	4/3/2020	Email, left VM
	Superstar Wiring	Jose Huascar	4/3/2020	Email; phone

INFORMATION PROVIDED LOG

Request Date	DBE Firm	Information Requested & Provided	Response Date
4/1/2020	Winterland Electric	Requested info on electrical requirements; provided plan and link to specs	4/3/2020
4/21/2020	Absolute Construction	Wanted to know how and when supplies are paid for by WisDOT; referred to spec that covers stockpiling	4/21/2020

NEGOTIATIONS LOG

Date	DBE Firm	Contact Name	Work Type	Quotes Rec'd?	Considered for project?	If not selected, why?
4/12/2020	ABC Landscape	John Dean	Erosion Control	Yes	No	Cannot perform all items
4/17/2020	Wild Ferns	Sandy Lynn	Erosion Control	Yes	Yes	
4/20/2020	#1 Marking	Mark Smart	Electrical	Yes	Yes	

ASSISTANCE LOG

Date	DBE Firm	Contact Person	Assistance Provided
4/1/2020	ABC Sawing	Jackie Swiggle	Informed DBE on how to obtain bonding
4/17/2020	Supreme Construction	Winston Walters	Provided contact for wholesale supply purchase

OUTREACH & BUSINESS DEVELOPMENT LOG

Date	Agency/Organization Contacted	Contact Person	Assistance Requested
4/1/2020	Women in Construction	LaTonya Klein	Contact information for woman-owned suppliers
4/28/2020	WBIC	Sam Smith	Asked for information to provide to DBE regarding financing programs through WBIC

Official Form DT1202 can be found here: https://wisconsindot.gov/pages/global-footer/formdocs/default.aspx

ADDITIONAL SPECIAL PROVISION 4

This special provision does not limit the right of the department, prime contractor, or subcontractors at any tier to withhold payment for work not acceptably completed or work subject to an unresolved contract dispute.

Payment to First-Tier Subcontractors

Within 10 calendar days of receiving a progress payment for work completed by a subcontractor, pay the subcontractor for that work. The prime contractor may withhold payment to a subcontractor if, within 10 calendar days of receipt of that progress payment, the prime contractor provides written notification to the subcontractor and the department documenting "just cause" for withholding payment.

The prime contractor is not allowed to withhold retainage from payments due subcontractors.

Payment to Lower-Tier Subcontractors

Ensure that subcontracting agreements at all tiers provide prompt payment rights to lower-tier subcontractors that parallel those granted first-tier subcontractors in this provision.

Acceptance and Final Payment

Within 30 calendar days of receiving the semi-final estimate from the department, submit written certification that subcontractors at all tiers are paid in full for acceptably completed work.

ADDITIONAL SPECIAL PROVISIONS 5
FUEL COST ADJUSTMENT

A Description

Fuel Cost Adjustments will be applied to partial and final payments for work items categorized in Section B as a payment to the contractor or a credit to the department. ASP-5 shall not apply to any force account work.

B Categories of Work Items

The following items and Fuel Usage Factors shall be used to determine Fuel Cost Adjustments:

(1) Earthwork.		Unit	Gal. Fuel Per Unit
205.0100	Excavation Common	CY	0.23
205.0200	Excavation Rock	CY	0.39
205.0400	Excavation Marsh	CY	0.29
208.0100	Borrow	CY	0.23
208.1100	Select Borrow	CY	0.23
209.1100	Backfill Granular Grade 1	CY	0.23
209.1500	Backfill Granular Grade 1	Ton	0.115
209.2100	Backfill Granular Grade 2	CY	0.23
209.2500	Backfill Granular Grade 2	Ton	0.115
350.0102	Subbase	CY	0.28
350.0104	Subbase	Ton	0.14
350.0115	Subbase 6-Inch	SY	0.05
350.0120	Subbase 7-Inch	SY	0.05
350.0125	Subbase 8-Inch	SY	0.06
350.0130	Subbase 9-Inch	SY	0.07
350.0135	Subbase 10-Inch	SY	0.08
350.0140	Subbase 11-Inch	SY	0.09
350.0145	Subbase 12-Inch	SY	0.09

C Fuel Index

A Current Fuel Index (CFI) in dollars per gallon will be established by the Department of Transportation for each month. The CFI will be the price of No. 2 fuel oil, as reported in U.S. Oil Week, using the first issue dated that month. The CFI will be the average of prices quoted for Green Bay, Madison, Milwaukee and Minneapolis.

The base Fuel Index (BFI) for this contract is $3.20 per gallon.

D Computing the Fuel Cost Adjustment

The engineer will compute the ratio CFI/BFI each month. If the ratio falls between 0.85 and 1.15, inclusive, no fuel adjustment will be made for that month. If the ratio is less than 0.85 a credit to the department will be computed. If the ratio is greater than 1.15 additional payment to the contractor will be computed. Credit or additional payment will be computed as follows:

(1) The engineer will estimate the quantity of work done in that month under each of the contract items categorized in Section B.

(2) The engineer will compute the gallons of fuel used in that month for each of the contract items categorized in Section B by applying the unit fuel usage factors shown in Section B.

(3) The engineer will summarize the total gallons (Q) of fuel used in that month for the items categorized in Section B.

(4) The engineer will determine the Fuel Cost Adjustment credit or payment from the following formula:

$$FA = \left(\frac{CFI}{BFI} - 1\right) x\ Q\ x\ BFI$$

(plus is payment to contractor; minus is credit to the department)

Where	FA	=	Fuel Cost Adjustment (plus or minus)
	CFI	=	Current Fuel Index
	BFI	=	Base Fuel Index
	Q	=	Monthly total gallons of fuel

E Payment

A Fuel Cost Adjustment credit to the department will be deducted as a dollar amount each month from any sums due to the contractor. A Fuel Cost Adjustment payment to the contractor will be made as a dollar amount each month.

Upon completion of the work under the contract, any difference between the estimated quantities and the final quantities will be determined. An average CFI, calculated by averaging the CFI for all months that fuel cost adjustment was applied, will be applied to the quantity differences. The average CFI shall be applied in accordance with the procedure set forth in Section D.

Additional Special Provision 6
ASP 6 - Modifications to the standard specifications

Make the following revisions to the standard specifications:

416.2.4 Concrete Pavement Repair and Replacement

Replace the entire text with the following effective with the November 2022 letting:

(1) Except as specified in 416.3.6 for inlaid rumble strips, use grade C concrete as specified in 501.

(2) The engineer will allow the contractor to open to construction and public traffic when the concrete reaches 2000 psi.

416.2.5 Special High Early Strength Concrete Pavement Repair and Replacement

416.2.5.1 Composition and Proportioning of Concrete

Replace paragraph one with the following effective with the November 2022 letting:

(1) For the concrete mixture, use a minimum of 846 pounds of cementitious material per cubic yard of concrete. The engineer will allow the contractor to open to construction and public traffic when the concrete reaches 2000 psi. The contractor may add one or a combination of admixtures to the ingredients or to the mixture in order to obtain the required minimum strength and required air content. Do not retemper the concrete mixture.

455.2.4.3 Emulsified Asphalts

Replace paragraph one with the following effective with the November 2022 letting:

(1) Furnish material conforming, before dilution, to the following:

Anionic emulsified asphalts[1] ..... AASHTO M140
Cationic emulsified asphalts[1] ..... AASHTO M208
Polymer-modified cationic emulsified asphalts ..... AASHTO M316

[1] Non-tracking emulsified asphalts shall conform to TABLE 455-1 for the type and grade specified.

TABLE 455-1 Requirements for Non-Tracking Emulsified Asphalt

PRODUCT	ANTT	CNTT
Saybolt Viscosity at 77°F (25°C), (AASHTO T 59), SFS	15-100	15-100
Paddle Viscosity at 77°F (25°C), (AASHTO T 382), cPs[1]	30-200	30-200
Storage Stability Test, 24 hr, (AASHTO T 59), %	1 max	1 max
Residue by Distillation, 500 ± 10 °F (260 ± 5 °C), or Residue by Evaporation, 325 ± 5 °F (163 ± 3 °C), (AASHTO T 59), %	50 min	50 min
Sieve Test, No. 20 (850 µm), (AASHTO T 59), %	0.3	0.3
Penetration at 77°F (25°C), 100 g, 5 sec, (AASHTO T 49), dmm	10-40	10-40
Ash Content, (AASHTO T 111), %	1 max	1 max
Solubility in Trichlorethylene Test, (AASHTO T 44)[2]	97.5% min	97.5% min

[1] Paddle Viscosity (AASHTO T 382) may be run in lieu of Saybolt Viscosity (AASHTO T 59).

[2] The solubility in Trichlorethylene test (AASHTO T 44) may be run in lieu of Ash Content (AASHTO T 111).

455.2.5 Tack Coat

Replace paragraph one with the following effective with the November 2022 letting:

(1) Under the Tack Coat bid item, furnish type SS-1h, CSS-1h, QS-1h, CQS-1h, ANTT, CNTT, or modified emulsified asphalt with an “h” suffix, unless the contract specifies otherwise.

710.5.7 Corrective Action

710.5.7.1 Optimized Aggregate Gradations

Replace paragraph one with the following effective with the November 2022 letting:

(1) If the contractor's 4-point running average or a department test result of the volumetric percent retained exceeds the tarantula curve limits by less than or equal to 1.0 percent on a single sieve size, notify the other party immediately and do one of the following:

- Perform corrective action documented in the QC plan or as the engineer approves. Continue with the following:
  1. Document and provide corrective action results to the engineer as soon as they are available.
  2. Department will conduct two tests within the next business day after corrective action is complete.

     If blended aggregate gradations are within the tarantula curve limits by the second department test:

     - Continue with concrete production.
     - Include a break in the 4-point running average.
     - For Class I Pavements: The department will discontinue reduced frequency testing and will test at a frequency of 1 test per placement day. Once 5 consecutive samples are passing at the 1 test per placement day frequency, the reduced frequency testing will be reapplied.

  - If blended aggregate gradations are not within the tarantula curve limits by the second department test and the contract requires an optimized aggregate gradation mix under 501.2.7.4.2.1(2), stop concrete production and submit a new optimized aggregate gradation mix design.
  - If blended aggregate gradations are not within the tarantula curve limits by the second department test and the contract does not require an optimized aggregate gradation mix under 501.2.7.4.2.1(2), stop concrete production and submit either a new optimized aggregate gradation mix design or a combined aggregate gradation mix design.
- Submit a new optimized aggregate gradation mix design and perform the following:
  1. Restart control charts for the new mix design.
  2. Amend contractor Quality Control Plan

715.5 Payment

Replace the entire text with the following effective with the November 2022 letting:

715.5.1 General

(1) The department will pay incentive for concrete 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 department will adjust pay for each lot using PWL of the 28-day sublot average strengths for that lot. The department will measure PWL relative to strength lower specification limits as follows:

- Compressive strength of 3700 psi for pavements.
- Flexural strength of 650 psi for pavements.
- Compressive strength of 4000 psi for structures and barrier.

(5) The department will not pay a strength incentive for concrete that is nonconforming in another specified property, for ancillary concrete accepted based on tests of class I concrete, or for high early strength concrete unless placed in pavement gaps as allowed under 715.3.1.2.2.

(6) Submit test results to the department electronically using MRS software. The department will verify contractor data before determining pay adjustments.

(7) All coring and testing costs under 715.3.2.2 including filling core holes and providing traffic control during coring are incidental to the contract.

715.5.2 Pavements

715.5.2.1 Compressive

(1) The department will adjust pay for each lot using equation “QMP 3.01” as follows:

Percent within Limits (PWL)	Pay Adjustment (dollars per square yard)
>= 95 to 100	(0.1 x PWL) – 9.5
>= 85 to < 95	0
>= 30 to < 85	(1.5/55 x PWL) – 127.5/55
< 30	-1.50

(2) The department will not pay incentive if the lot standard deviation is greater than 400 psi compressive.

(3) For lots with a full battery of QC tests at less than 4 locations, there is no incentive, but the department will assess a disincentive based on the individual sublot average strengths. The department will reduce pay for sublots with an average strength below 3700 psi compressive by $1.50 per square yard.

(4) For integral shoulder pavement and pavement gaps accepted using tests from the adjacent travel lane, the department will adjust pay using strength results of the travel lane for integrally placed concrete shoulders and pavement gaps regardless of mix design and placement method, included in a lane-foot lot.

715.5.2.2 Flexural

(1) The department will adjust pay for each lot using equation “QMP 6.02” as follows:

Percent within Limits (PWL)	Pay Adjustment (dollars per square yard)
>= 95 to 100	(0.2 x PWL) – 19
>= 85 to < 95	0
>= 50 to < 85	(2.0/35 x PWL) – 170/35
< 50	-2.00

(2) The department will not pay incentive if the lot standard deviation is greater than 60 psi flexural.

(3) For lots with a full battery of QC tests at less than 4 locations, there is no incentive, but the department will assess a disincentive based on the individual sublot average strengths. The department will reduce pay for sublots with an average strength below 650 psi flexural by $2.00 per square yard.

(4) For integral shoulder pavement and pavement gaps accepted using tests from the adjacent travel lane, the department will adjust pay using strength results of the travel lane for integrally placed concrete shoulders and pavement gaps regardless of mix design and placement method, included in a lane-foot lot.

715.5.3 Structures and Cast-in-Place Barrier

(1) The department will adjust pay for each lot using equation “QMP 2.01” as follows:

Percent within Limits (PWL)	Pay Adjustment (dollars per square yard)
>= 99 to 100	10
>= 90 to < 99	0
>= 50 to < 90	(7/8 x PWL) – 78.75
< 50	-35

(2) The department will not pay incentive if the lot standard deviation is greater than 350 psi.

(3) For lots with less than 4 sublots, there is no incentive, but the department will assess a disincentive based on the individual sublot average strengths. The department will reduce pay for sublots with an average strength below 4000 psi by $35 per cubic yard.

ADDITIONAL SPECIAL PROVISION 7

A. Reporting 1st Tier and DBE Payments During Construction

1. Comply with reporting requirements specified in the department's Civil Rights Compliance, Contractor's User Manual, Sublets and Payments.
2. Report payments to all DBE firms within 10 calendar days of receipt of a progress payment by the department or a contractor for work performed, materials furnished, or materials stockpiled by a DBE firm. Report the payment as specified in A(1) for all work satisfactorily performed and for all materials furnished or stockpiled.
3. Report payments to all first tier subcontractor relationships within 10 calendar days of receipt of a progress payment by the department for work performed. Report the payment as specified in A(1) for all work satisfactorily performed.
4. All tiers shall report payments as necessary to comply with the DBE payment requirement as specified in A(2).
5. DBE firms must enter all payments to DBE and non-DBE firms regardless of tier.
6. Require all first tier relationships, DBE firms and all other tier relationships necessary to comply with the DBE payment requirement in receipt of a progress payment by contractor to acknowledge receipt of payment as specified in A(1), (2), (3) and (4).
7. All agreements made by a contractor shall include the provisions in A(1), (2), (3), (4), (5), and (6), and shall be binding on all first tier subcontractor relationships, all contractors and subcontractors utilizing DBE firms on the project, and all payments from DBE firms.

B. Costs for conforming to this special provision are incidental to the contract.

NOTE: CRCS Prime Contractor payment is currently not automated and will need to be manually loaded into the Civil Rights Compliance System. Copies of prime contractor payments received (check or ACH) will have to be forwarded to paul.ndon@dot.wi.gov within 5 days of payment receipt to be logged manually.

***Additionally, for information on Subcontractor Sublet assignments, Subcontractor Payments and Payment Tracking, please refer to the CRCS Payment and Sublets manual at:

https://wisconsindot.gov/Documents/doing-bus/civil-rights/labornwage/crcs-payments-sublets-manual.pdf

ADDITIONAL SPECIAL PROVISION 9

Electronic Certified Payroll or Labor Data Submittal

(1) Use the department's Civil Rights Compliance System (CRCS) 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. Non-segregated 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. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
XI. Certification Regarding Use of Contract Funds for Lobbying
XII. Use of United States-Flag Vessels:

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, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (*see* 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

> "It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:
(1) Withholding monthly progress payments;
(2) Assessing sanctions;
(3) Liquidated damages; and/or
(4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than $10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. 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, 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 Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(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 (29 CFR 5.5)

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 (29 CFR 5.5)

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. 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 29 CFR 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), 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 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 18 U.S.C. 1001 and 31 U.S.C. 231.

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 (29 CFR 5.5)

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. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to 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 as provided in 29 CFR 5.5.

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 as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility (29 CFR 5.5)

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

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include 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. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1 of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. 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 currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1 of this section. 29 CFR 5.5.

* $27 as of January 23, 2019 (See 84 FR 213-01, 218) as may be adjusted annually by the Department of Labor; pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990).

3. Withholding for unpaid wages and liquidated damages. 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. 29 CFR 5.5.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs 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. 29 CFR 5.5.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance

with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of $150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.326.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.326.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant

who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/). 2 CFR 180.300, 180.320, and 180.325.

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

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

3. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is

submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

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

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

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:

(a) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(b) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(c) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier

subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)
This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

NON-DISCRIMINATION PROVISIONS

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. Compliance with Regulations: The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. Non-discrimination: The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. Information and Reports: The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the Federal Highway Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance: In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

a. Withholding payments to the contractor under the contract until the contractor complies; and/or
b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. Incorporation of Provisions: The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Offeror's or Bidder's attention is called to the "Employment Practices" and "Equal Opportunity Clause" set forth in the Required Contract Provisions, FHWA 1273.
2. The goals and timetables for minority and female participation expressed in percentage terms for the contractor's aggregate work force in each trade, on all construction work in the covered area, are as follows:

Goals for Minority Participation for Each Trade:

County	%	County	%	County	%
Adams	1.7	Iowa	1.7	Polk	2.2
Ashland	1.2	Iron	1.2	Portage	0.6
Barron	0.6	Jackson	0.6	Price	0.6
Bayfield	1.2	Jefferson	7.0	Racine	8.4
Brown	1.3	Juneau	0.6	Richland	1.7
Buffalo	0.6	Kenosha	3.0	Rock	3.1
Burnett	2.2	Kewaunee	1.0	Rusk	0.6
Calumet	0.9	La Crosse	0.9	St. Croix	2.9
Chippewa	0.5	Lafayette	0.5	Sauk	1.7
Clark	0.6	Langlade	0.6	Sawyer	0.6
Columbia	1.7	Lincoln	0.6	Shawano	1.0
Crawford	0.5	Manitowoc	1.0	Sheboygan	7.0
Dane	2.2	Marathon	0.6	Taylor	0.6
Dodge	7.0	Marinette	1.0	Trempealeau	0.6
Door	1.0	Marquette	1.7	Vernon	0.6
Douglas	1.0	Menominee	1.0	Vilas	0.6
Dunn	0.6	Milwaukee	8.0	Walworth	7.0
Eau Claire	0.5	Monroe	0.6	Washburn	0.6
Florence	1.0	Oconto	1.0	Washington	8.0
Fond du Lac	1.0	Oneida	0.6	Waukesha	8.0
Forest	1.0	Outagamie	0.9	Waupaca	1.0
Grant	0.5	Ozaukee	8.0	Waushara	1.0
Green	1.7	Pepin	0.6	Winnebago	0.9
Green Lake	1.0	Pierce	2.2	Wood	0.6

Goals for female participation for each trade: 6.9%

These goals are applicable to all the contractor's construction work, (whether or not it is federal or federally assisted), performed in the covered area. If the contractor performs construction work in the geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The contractor's compliance with the Executive Order and the Regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order and the Regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

   As referred to in this section, the Director means:

   Director
   Office of Federal Contract Compliance Programs
   Ruess Federal Plaza
   310 W. Wisconsin Ave., Suite 1115
   Milwaukee, WI 53202

   The "Employer Identification Number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

4. As used in this notice, and in the contract resulting from solicitation, the "covered area" is the county(ies) in Wisconsin to which this proposal applies.

ADDITIONAL FEDERAL-AID PROVISIONS

NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., Eastern Time. Anyone with knowledge of possible bid rigging, bidding collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

BUY AMERICA PROVISION

Buy America (as documented in M-22-11 from the Office of Management and Budget: https://www.whitehouse.gov/wp-content/uploads/2022/04/M-22-11.pdf) shall be domestic products and permanently incorporated in this project as classified in the following three categories, and as noted in the Construction and Materials Manual (CMM):

1. Iron and Steel

   All iron and steel manufacturing and coating processes (from 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 the iron and steel manufacturing and coating processes Buy America requirement is the minimal use of foreign materials if the total cost of such material permanently incorporated in the product does not exceed one-tenth of one percent (1/10 of 1%) of the total contract cost or $2,500.00, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the subject products as they are delivered to the project.

2. Manufactured Product

   All manufactured products (as defined in CMM 228.5) are covered under a previous waiver from 1983, and are currently exempt from Buy America.

3. Construction Material

   All construction materials (as defined in OMB M-22-11 and as referenced in CMM 228.5) must comply with Buy America. No exemptions (0.0%) are allowed.

The contractor shall take actions and provide documentation conforming to CMM 228.5 to ensure compliance with this Buy America provision.

https://wisconsindot.gov/rdwy/cmm/cm-02-28.pdf

Upon completion of the project, certify to the engineer, in writing using department form DT4567 that all iron and steel, manufactured products, and construction materials conform to this Buy America provision.

Form DT4567 is available at: https://wisconsindot.gov/Documents/formdocs/dt4567.docx

Attach a list of iron or steel exemptions and their associated costs to the certification form.

CARGO PREFERENCE ACT REQUIREMENT

All Federal-aid projects shall comply with 46 CFR 381.7 (a) – (b) as follows:

(a) *Agreement Clauses.* "Use of United States-flag vessels:"

(1) Pursuant to Pub. L. 664 (43 U.S.C. 1241(b)) at least 50 percent of any equipment, materials or commodities procured, contracted for or otherwise obtained with funds granted, guaranteed, loaned, or advanced by the U.S. Government under this agreement, and which may be transported by ocean vessel, shall be transported on privately owned United States-flag commercial vessels, if available.

(2) Within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (a)(1) of this section shall be furnished to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590."

(b) *Contractor and Subcontractor Clauses.* "Use of United States-flag vessels: The contractor agrees—"

(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION AND SYSTEM DEVELOPMENT

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS FOR PROJECTS WITH FEDERAL AID

I. PREVAILING WAGE RATES

The attached U.S. Department of Labor (Davis-Bacon Minimum Wage Rates) furnishes the minimum prevailing wage rates pursuant to the Davis-Bacon and Related Acts. The wage rates shown are the minimum rates required by the contract to be paid during its life, however this is not a representation that labor can be obtained at these rates. Itis the responsibility of bidders to inform themselves as to the local labor conditions and prospective changes or adjustments of wage rates. No increase in the contract price will be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

II. COVERAGE OF TRUCK DRIVERS

Truck drivers are covered by Davis-Bacon Minimum Wage Rates in the following circumstances:

- Drivers of a contractor or subcontractor for time spent working on the site of the work.
- Drivers of a contractor or subcontractor for time spent loading and/or unloading materials and supplies on the site of the work, if such time is not de minimis. https://www.dol.gov/whd/FOH/FOH_Ch15.pdf
- Truck drivers transporting materials or supplies between a facility that is deemed part of the site of the work and the actual construction site.
- Truck drivers transporting portions of the building or work between a site established specifically for the performance of the contract where a significant portion of such building or work is constructed and the physical place where the building or work called for in the contract will remain.

Truck drivers are not covered by Davis-Bacon Minimum Wage Rates in the following circumstances:

- Material delivery truck drivers while off the site of the work.
- Drivers of a contractor or subcontractor traveling between a Davis-Bacon job and a commercial supply facility while they are off the site of the work."
- Truck drivers whose time spent on the site of the work is de minimis, such as only a few minutes at a time merely to pick up or drop off materials or supplies.

Details are available online at:

https://www.dol.gov/whd/recovery/pwrb/Tab9.pdf

https://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/trckng.aspx

III. POSTINGS AT THE SITE OF THE WORK

In addition to the required postings furnished by the department, the contractor shall post the following in at least one conspicuous and accessible place at the site of work:

a. A copy of the contractor's Equal Employment Opportunity Policy.

All required documents shall be posted by the first day of work and be accurate and complete. Postings must be readable, in an area where they will be noticed, and maintained until the last day of work.

IV. RESOURCES

Required information regarding compliance with federal provisions is found in the following resources:

- FHWA-1273 included in this contract
- U.S. Department of Labor Prevailing Wage Resource Book
- U.S. Department of Labor Field Operations Handbook
- U.S. Code of Federal Regulations
- Any applicable law, Act, or Executive Order enacted by the federal government at the time of the letting of this contract

"General Decision Number: WI20230010 01/20/2023

Superseded General Decision Number: WI20220010

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 $16.20 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 2023.
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 $12.15 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 2023.

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 http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/06/2023

1 01/13/2023
2 01/20/2023

BRWI0001-002 06/01/2022

CRAWFORD, JACKSON, JUNEAU, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 37.96	25.13

BRWI0002-002 06/01/2022

ASHLAND, BAYFIELD, DOUGLAS, AND IRON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 45.87	23.91

BRWI0002-005 06/01/2022

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	$ 38.81	23.94

BRWI0003-002 06/01/2021

BROWN, DOOR, FLORENCE, KEWAUNEE, MARINETTE, AND OCONTO COUNTIES

	Rates	Fringes
BRICKLAYER	$ 37.03	24.95

BRWI0004-002 06/01/2022

KENOSHA, RACINE, AND WALWORTH COUNTIES

	Rates	Fringes
BRICKLAYER	$ 42.53	26.01

BRWI0006-002 06/01/2022

ADAMS, CLARK, FOREST, LANGLADE, LINCOLN, MARATHON, MENOMINEE, ONEIDA, PORTAGE, PRICE, TAYLOR, VILAS AND WOOD COUNTIES

	Rates	Fringes
BRICKLAYER	$ 38.26	24.83

BRWI0007-002 06/01/2022

GREEN, LAFAYETTE, AND ROCK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 39.26	25.52

BRWI0008-002 06/01/2022

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
BRICKLAYER	$ 44.08	24.42

BRWI0011-002 06/01/2022

CALUMET, FOND DU LAC, MANITOWOC, AND SHEBOYGAN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 38.00	25.09

BRWI0019-002 06/01/2022

BARRON, BUFFALO, BURNETT, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, ST. CROIX, SAWYER AND WASHBURN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 37.36	25.73

BRWI0034-002 06/01/2022

COLUMBIA AND SAUK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 39.56	25.22

CARP0068-011 05/02/2022

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	$ 41.19	27.05

CARP0264-003 06/01/2016

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WAUKESHA, AND WASHINGTON COUNTIES

	Rates	Fringes
CARPENTER	$ 35.78	22.11

CARP0310-002 06/05/2022

Ashland, Bayfield, Forest, Iron, Langlade, Lincoln, Marathon, Oneida, Shawano, Taylor and Vilas

	Rates	Fringes
CARPENTER	$ 36.80	26.12
Piledriver	$ 37.37	25.96

CARP0314-001 06/05/2022

Columbia, Dane, Dodge, Grant, Green, Iowa, Jefferson, Lafayette, Richland, Rock, Sauk and Walworth

	Rates	Fringes
CARPENTER	$ 36.80	26.12
Piledriver	$ 37.37	25.96

CARP0361-004 05/01/2018

BAYFIELD (West of Hwy 63) AND DOUGLAS COUNTIES

	Rates	Fringes
CARPENTER	$ 36.15	20.43

CARP0731-002 06/05/2022

Calumet (Eastern portion of the County), Fond Du Lac, Manitowoc and Sheboygan

	Rates	Fringes
CARPENTER	$ 36.80	26.12
Piledriver	$ 37.37	25.96

CARP0804-001 06/05/2022

Adams, Juneau, Portage and Wood

	Rates	Fringes
CARPENTER	$ 36.80	26.12
Piledriver	$ 37.37	25.96

CARP0955-002 06/01/2022

Calumet (western portion of County), Fond Du Lac, Green Lake, Marquette, Outagamie and Winnebago

	Rates	Fringes
CARPENTER	$ 36.80	26.12
PILEDRIVER	$ 37.37	25.96

CARP1056-002 06/05/2022

	Rates	Fringes
MILLWRIGHT	$ 38.00	26.78

CARP1074-002 06/01/2022

Barron, Burnett, Chippewa, Clark, Dunn, Eau Claire, Pepin, Pierce, Polk, Rusk, Sawyer, St. Croix and Washburn

	Rates	Fringes
CARPENTER	$ 36.80	26.12
PILEDRIVER	$ 37.37	25.96

CARP1143-002 06/01/2022

Crawford, Jackson, La Crosse, Monroe, Trempealeau and Vernon

	Rates	Fringes
CARPENTER	$ 36.80	26.12
PILEDRIVER	$ 37.37	25.96

CARP1146-002 06/01/2022

Brown, Door, Florence, Kewaunee, Marinette, Menominee and Shawano

	Rates	Fringes
CARPENTER	$ 36.80	26.12
PILEDRIVER	$ 37.37	25.96

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 12/25/2022

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:	$ 39.25	22.34

* ELEC0014-007 05/29/2022

REMAINING COUNTIES

	Rates	Fringes
Teledata System Installer		
Installer/Technician	$ 29.63	3%+16.18

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 06/01/2021

KENOSHA COUNTY

	Rates	Fringes
Electricians:	$ 43.16	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 05/30/2021

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:	$ 36.22	26%+11.24

ELEC0430-002 06/01/2022

RACINE COUNTY (Except Burlington Township)

	Rates	Fringes
Electricians:	$ 45.02	24.35

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* ELEC0494-005 06/01/2022

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Electricians:	$ 46.38	25.86

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 06/01/2022

	Rates	Fringes
Power Equipment Operator		
Group 1	$ 43.27	25.95
Group 2	$ 42.77	25.95
Group 3	$ 42.27	25.95
Group 4	$ 42.01	25.95
Group 5	$ 41.72	25.95
Group 6	$ 35.82	25.95

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 06/13/2022

BROWN, CALUMET, DOOR, FOND DU LAC, KEWAUNEE, MANITOWOC, MARINETTE, OCONTO, OUTAGAMI, SHAWANO, SHEBOYGAN, AND WINNEBAGO COUNTIES:

	Rates	Fringes

IRONWORKER.....$ 41.00 28.95

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 06/05/2022

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	$ 39.00	28.58

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 05/01/2022

BARRON, BUFFALO, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, JACKSON, PEPIN, PIERCE, POLK, RUSK, ST CROIX, TAYLOR, AND TREMPEALEAU COUNTIES

	Rates	Fringes
IRONWORKER	$ 41.00	33.11

IRON0512-021 05/01/2022

ASHLAND, BAYFIELD, BURNETT, DOUGLAS, IRON, LINCOLN, ONEIDA, PRICE, SAWYER, VILAS AND WASHBURN COUNTIES

	Rates	Fringes
IRONWORKER	$ 36.94	33.11

LABO0113-002 06/01/2022

MILWAUKEE AND WAUKESHA COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 32.65	23.09
Group 2	$ 32.80	23.09
Group 3	$ 33.00	23.09
Group 4	$ 33.15	23.09
Group 5	$ 33.30	23.09
Group 6	$ 29.14	23.09

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 06/01/2022

OZAUKEE AND WASHINGTON COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 31.90	23.09
Group 2	$ 32.00	23.09
Group 3	$ 32.05	23.09
Group 4	$ 32.25	23.09
Group 5	$ 32.10	23.09
Group 6	$ 28.99	23.09

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 06/01/2022

KENOSHA AND RACINE COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 31.71	23.09
Group 2	$ 31.86	23.09
Group 3	$ 32.06	23.09
Group 4	$ 32.03	23.09
Group 5	$ 32.36	23.09
Group 6	$ 28.85	23.09

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 06/01/2022

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	$ 36.42	18.68
Group 2	$ 36.52	18.68
Group 3	$ 36.57	18.68
Group 4	$ 36.77	18.68
Group 5	$ 36.62	18.68
Group 6	$ 33.05	18.68

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 06/01/2022

DANE COUNTY

	Rates	Fringes
LABORER		
Group 1	$ 36.70	18.68
Group 2	$ 36.80	18.68
Group 3	$ 36.85	18.68
Group 4	$ 37.05	18.68
Group 5	$ 36.90	18.68
Group 6	$ 33.05	18.68

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 05/01/2022

ASHLAND, BAYFIELD, BURNETT, AND DOUGLAS COUNTIES

	Rates	Fringes
Painters:		
New:		
Brush, Roller	$ 33.99	22.70
Spray, Sandblast, Steel	$ 34.59	22.70
Repaint:		
Brush, Roller	$ 33.09	22.70
Spray, Sandblast, Steel	$ 32.49	22.70

PAIN0108-002 06/01/2022

RACINE COUNTY

	Rates	Fringes
Painters:		
Brush, Roller	$ 39.60	21.79
Spray & Sandblast	$ 40.60	21.79

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 06/01/2022

JEFFERSON, MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Painters:		
Bridge	$ 38.15	24.80
Brush	$ 37.40	24.80
Spray & Sandblast	$ 38.15	24.80

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 06/01/2022

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	$ 34.68	18.94

PAIN0934-001 06/01/2022

KENOSHA AND WALWORTH COUNTIES

	Rates	Fringes
Painters:		
Brush	$ 36.70	24.69
Spray	$ 37.70	24.69
Structural Steel	$ 36.85	24.69

PAIN1011-002 06/06/2021

FLORENCE COUNTY

	Rates	Fringes
Painters:	$ 26.71	14.38

PLAS0599-010 06/01/2021

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		
Area 1	$ 42.06	20.87
Area 2 (BAC)	$ 37.73	23.80
Area 3	$ 38.74	22.46
Area 4	$ 38.59	22.66
Area 5	$ 38.16	22.98
Area 6	$ 34.94	26.36

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"

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: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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	236.000 STA	_____.____	_____.____
0004	201.0205 Grubbing	238.000 STA	_____.____	_____.____
0006	203.0211.S Abatement of Asbestos Containing Material (structure) 0001. B-40-206	1.000 EACH	_____.____	_____.____
0008	203.0211.S Abatement of Asbestos Containing Material (structure) 0002. B-40-207	1.000 EACH	_____.____	_____.____
0010	203.0220 Removing Structure (structure) 0001. B-40-206	1.000 EACH	_____.____	_____.____
0012	203.0220 Removing Structure (structure) 0002. B-40-207	1.000 EACH	_____.____	_____.____
0014	204.0100 Removing Concrete Pavement	73,283.000 SY	_____.____	_____.____
0016	204.0115 Removing Asphaltic Surface Butt Joints	5,962.000 SY	_____.____	_____.____
0018	204.0120 Removing Asphaltic Surface Milling	153,962.000 SY	_____.____	_____.____
0020	204.0150 Removing Curb & Gutter	2,017.000 LF	_____.____	_____.____
0022	204.0155 Removing Concrete Sidewalk	983.000 SY	_____.____	_____.____
0024	204.0157 Removing Concrete Barrier	31,131.000 LF	_____.____	_____.____
0026	204.0165 Removing Guardrail	1,409.000 LF	_____.____	_____.____
0028	204.0170 Removing Fence	26,686.000 LF	_____.____	_____.____
0030	204.0175 Removing Concrete Slope Paving	1,075.000 SY	_____.____	_____.____
0032	204.0195 Removing Concrete Bases	118.000 EACH	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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	204.0205 Removing Utility Poles	15.000 EACH	_____.____	_____.____
0036	204.0210 Removing Manholes	31.000 EACH	_____.____	_____.____
0038	204.0220 Removing Inlets	320.000 EACH	_____.____	_____.____
0040	204.0245 Removing Storm Sewer (size) 0001. 12-Inch	3,592.000 LF	_____.____	_____.____
0042	204.0245 Removing Storm Sewer (size) 0002. 15-Inch	2,126.000 LF	_____.____	_____.____
0044	204.0245 Removing Storm Sewer (size) 0003. 18-Inch	483.000 LF	_____.____	_____.____
0046	204.0245 Removing Storm Sewer (size) 0004. 21-Inch	577.000 LF	_____.____	_____.____
0048	204.0245 Removing Storm Sewer (size) 0005. 24-Inch	1,004.000 LF	_____.____	_____.____
0050	204.0245 Removing Storm Sewer (size) 0006. 30-Inch	948.000 LF	_____.____	_____.____
0052	204.0245 Removing Storm Sewer (size) 0007. 36-Inch	627.000 LF	_____.____	_____.____
0054	204.0245 Removing Storm Sewer (size) 0008. 42-Inch	534.000 LF	_____.____	_____.____
0056	204.0245 Removing Storm Sewer (size) 0009. 48-Inch	49.000 LF	_____.____	_____.____
0058	204.0245 Removing Storm Sewer (size) 0010. 54-Inch	131.000 LF	_____.____	_____.____
0060	204.0245 Removing Storm Sewer (size) 0011. 60-Inch	82.000 LF	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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	204.0245 Removing Storm Sewer (size) 0012. 66-Inch	11.000 LF	_____._____	_____._____
0064	204.0246 Removing Ancillary Structure (structure) 0001. S-40-224	1.000 EACH	_____._____	_____._____
0066	204.0246 Removing Ancillary Structure (structure) 0002. S-40-225	1.000 EACH	_____._____	_____._____
0068	204.0246 Removing Ancillary Structure (structure) 0003. S-40-226	1.000 EACH	_____._____	_____._____
0070	204.0246 Removing Ancillary Structure (structure) 0004. S-40-227	1.000 EACH	_____._____	_____._____
0072	204.0246 Removing Ancillary Structure (structure) 0005. S-40-251	1.000 EACH	_____._____	_____._____
0074	204.0246 Removing Ancillary Structure (structure) 0006. S-40-705	1.000 EACH	_____._____	_____._____
0076	204.0246 Removing Ancillary Structure (structure) 0007. S-40-809	1.000 EACH	_____._____	_____._____
0078	204.0246 Removing Ancillary Structure (structure) 0008. S-40-3082	100.000 EACH	_____._____	_____._____
0080	204.0280 Sealing Pipes	3.000 EACH	_____._____	_____._____
0082	204.0291.S Abandoning Sewer	201.000 CY	_____._____	_____._____
0084	204.9001.S Removing Advance Flasher Assemblies Type 1	1.000 EACH	_____._____	_____._____
0086	204.9060.S Removing (item description) 0050. Bulkhead	3.000 EACH	_____._____	_____._____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
0088	204.9060.S Removing (item description) 0101. Distribution Center	4.000 EACH	_____.____	_____.____
0090	204.9060.S Removing (item description) 0102. Lighting Units	83.000 EACH	_____.____	_____.____
0092	204.9060.S Removing (item description) 0103. Luminaire	27.000 EACH	_____.____	_____.____
0094	204.9060.S Removing (item description) 0104. Underdeck Lighting	33.000 EACH	_____.____	_____.____
0096	204.9060.S Removing (item description) 0201. Controller Cabinet	1.000 EACH	_____.____	_____.____
0098	204.9060.S Removing (item description) 0202. Controller Cabinet Base	1.000 EACH	_____.____	_____.____
0100	204.9060.S Removing (item description) 0203. Speed Warning System DMS	3.000 EACH	_____.____	_____.____
0102	204.9060.S Removing (item description) 0204. Ramp Control Signal Assembly Sidemount	7.000 EACH	_____.____	_____.____
0104	204.9060.S Removing (item description) 0205. Communication Vault	9.000 EACH	_____.____	_____.____
0106	204.9060.S Removing (item description) 0206. Temporary Vehicle Detector Assembly	3.000 EACH	_____.____	_____.____
0108	204.9060.S Removing (item description) 0301. Traffic Signals Locust St & 8th St	1.000 EACH	_____.____	_____.____
0110	204.9060.S Removing (item description) 0302. Traffic Signals Locust St & 7th St	1.000 EACH	_____.____	_____.____
0112	204.9060.S Removing (item description) 0303. Traffic Signals Burleigh St & 8th St	1.000 EACH	_____.____	_____.____

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0114	204.9060.S Removing (item description) 0304. Traffic Signals Burleigh St & 7th St	1.000 EACH	_____.____	_____.____
0116	204.9090.S Removing (item description) 0105. Aerial Cable	176.000 LF	_____.____	_____.____
0118	204.9090.S Removing (item description) 0400. R-40-22	40.000 LF	_____.____	_____.____
0120	205.0100 Excavation Common	178,690.000 CY	_____.____	_____.____
0122	205.0501.S Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	624.000 TON	_____.____	_____.____
0124	206.1001 Excavation for Structures Bridges (structure) 0001. B-40-074	1.000 EACH	_____.____	_____.____
0126	206.1001 Excavation for Structures Bridges (structure) 0002. B-40-078	1.000 EACH	_____.____	_____.____
0128	206.1001 Excavation for Structures Bridges (structure) 0003. B-40-158	1.000 EACH	_____.____	_____.____
0130	206.1001 Excavation for Structures Bridges (structure) 0004. B-40-206	1.000 EACH	_____.____	_____.____
0132	206.1001 Excavation for Structures Bridges (structure) 0005. B-40-209	1.000 EACH	_____.____	_____.____
0134	206.1001 Excavation for Structures Bridges (structure) 0006. B-40-210	1.000 EACH	_____.____	_____.____
0136	206.1001 Excavation for Structures Bridges (structure) 0007. B-40-072	1.000 EACH	_____.____	_____.____
0138	206.1001 Excavation for Structures Bridges (structure) 0008. B-40-207	1.000 EACH	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0140	206.1001 Excavation for Structures Bridges (structure) 0009. B-40-208	1.000 EACH	_____.____	_____.____
0142	206.1001 Excavation for Structures Bridges (structure) 0010. B-40-204	1.000 EACH	_____.____	_____.____
0144	206.1001 Excavation for Structures Bridges (structure) 0011. B-40-205	1.000 EACH	_____.____	_____.____
0146	206.1001 Excavation for Structures Bridges (structure) 0012. B-40-211	1.000 EACH	_____.____	_____.____
0148	206.3001 Excavation for Structures Retaining Walls (structure) 0001. R-40-22	1.000 EACH	_____.____	_____.____
0150	210.1500 Backfill Structure Type A	532.000 TON	_____.____	_____.____
0152	213.0100 Finishing Roadway (project) 0001. 1228-22-70	1.000 EACH	_____.____	_____.____
0154	305.0120 Base Aggregate Dense 1 1/4-Inch	93,313.000 TON	_____.____	_____.____
0156	310.0110 Base Aggregate Open-Graded	15,639.000 TON	_____.____	_____.____
0158	312.0110 Select Crushed Material	109,163.000 TON	_____.____	_____.____
0160	390.0403 Base Patching Concrete Shes	11,032.000 SY	_____.____	_____.____
0162	415.0090 Concrete Pavement 9-Inch	2,773.000 SY	_____.____	_____.____
0164	415.0410 Concrete Pavement Approach Slab	795.000 SY	_____.____	_____.____
0166	416.0610 Drilled Tie Bars	5,977.000 EACH	_____.____	_____.____
0168	416.0620 Drilled Dowel Bars	7,712.000 EACH	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0170	455.0605 Tack Coat	32,222.000 GAL	_____.____	_____.____
0172	460.0115.S HMA Pavement Test Strips Volumetrics	1.000 EACH	_____.____	_____.____
0174	460.0120.S HMA Pavement Test Strips Density	1.000 EACH	_____.____	_____.____
0176	460.2000 Incentive Density HMA Pavement	15,360.000 DOL	1.00000	15,360.00
0178	460.7423 HMA Pavement 3 HT 58-28 H	67,331.000 TON	_____.____	_____.____
0180	460.7425 HMA Pavement 5 HT 58-28 H	1,740.000 TON	_____.____	_____.____
0182	460.8624 HMA Pavement 4 SMA 58-28 V	23,986.000 TON	_____.____	_____.____
0184	460.9000.S Material Transfer Vehicle 0001. 1228-22-70	1.000 EACH	_____.____	_____.____
0186	465.0125 Asphaltic Surface Temporary	4,073.000 TON	_____.____	_____.____
0188	495.1000.S Cold patch	30.000 TON	_____.____	_____.____
0190	501.1000.S Ice Hot Weather Concreting	78,235.000 LB	_____.____	_____.____
0192	502.0100 Concrete Masonry Bridges	2,841.000 CY	_____.____	_____.____
0194	502.3101 Expansion Device	597.000 LF	_____.____	_____.____
0196	502.3200 Protective Surface Treatment	7,122.000 SY	_____.____	_____.____
0198	502.3205 Pigmented Surface Sealer Reseal	439.000 SY	_____.____	_____.____
0200	502.3210 Pigmented Surface Sealer	3,731.000 SY	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0202	502.3215 Protective Surface Treatment Reseal	1,137.000 SY	_____.____	_____.____
0204	502.4106 Adhesive Anchors 3/4-inch	24.000 EACH	_____.____	_____.____
0206	502.4110 Adhesive Anchors 1 1/4-inch	36.000 EACH	_____.____	_____.____
0208	502.4112 Adhesive Anchors 1 1/2-inch	32.000 EACH	_____.____	_____.____
0210	502.4205 Adhesive Anchors No. 5 Bar	1,048.000 EACH	_____.____	_____.____
0212	502.4206 Adhesive Anchors No. 6 Bar	3,847.000 EACH	_____.____	_____.____
0214	504.0500 Concrete Masonry Retaining Walls	13.400 CY	_____.____	_____.____
0216	505.0400 Bar Steel Reinforcement HS Structures	4,370.000 LB	_____.____	_____.____
0218	505.0600 Bar Steel Reinforcement HS Coated Structures	521,760.000 LB	_____.____	_____.____
0220	506.0605 Structural Steel HS	5.000 LB	_____.____	_____.____
0222	506.6000 Bearing Assemblies Expansion (structure) 0001. B-40-206	18.000 EACH	_____.____	_____.____
0224	506.6000 Bearing Assemblies Expansion (structure) 0002. B-40-209	8.000 EACH	_____.____	_____.____
0226	506.6000 Bearing Assemblies Expansion (structure) 0003. B-40-207	24.000 EACH	_____.____	_____.____
0228	506.6000 Bearing Assemblies Expansion (structure) 0004. B-40-215	14.000 EACH	_____.____	_____.____
0230	506.7050.S Removing Bearings (structure) 0001. B-40-206	18.000 EACH	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0232	506.7050.S Removing Bearings (structure) 0002. B-40-209	8.000 EACH	_____.____	_____.____
0234	506.7050.S Removing Bearings (structure) 0003. B-40-207	24.000 EACH	_____.____	_____.____
0236	506.7050.S Removing Bearings (structure) 0004. B-40-215	14.000 EACH	_____.____	_____.____
0238	509.0301 Preparation Decks Type 1	489.000 SY	_____.____	_____.____
0240	509.0302 Preparation Decks Type 2	196.000 SY	_____.____	_____.____
0242	509.0500 Cleaning Decks	2,573.000 SY	_____.____	_____.____
0244	509.1000 Joint Repair	105.000 SY	_____.____	_____.____
0246	509.1200 Curb Repair	200.000 LF	_____.____	_____.____
0248	509.1500 Concrete Surface Repair	4,333.000 SF	_____.____	_____.____
0250	509.2000 Full-Depth Deck Repair	10.000 SY	_____.____	_____.____
0252	509.2500 Concrete Masonry Overlay Decks	245.000 CY	_____.____	_____.____
0254	509.9010.S Removing Asphaltic Concrete Deck Overlay (structure) 0001. B-40-209	1,138.000 SY	_____.____	_____.____
0256	509.9010.S Removing Asphaltic Concrete Deck Overlay (structure) 0002. B-40-215	1,475.000 SY	_____.____	_____.____
0258	511.1200 Temporary Shoring (structure) 0001. R-40-22	215.000 SF	_____.____	_____.____
0260	516.0500 Rubberized Membrane Waterproofing	59.000 SY	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0262	517.0901.S Preparation and Coating of Top Flanges (structure) 0001. B-40-206	1.000 EACH	_____.____	_____.____
0264	517.0901.S Preparation and Coating of Top Flanges (structure) 0002. B-40-207	1.000 EACH	_____.____	_____.____
0266	517.1801.S Structure Repainting Recycled Abrasive (structure) 0001. B-40-206	1.000 EACH	_____.____	_____.____
0268	517.1801.S Structure Repainting Recycled Abrasive (structure) 0002. B-40-209	1.000 EACH	_____.____	_____.____
0270	517.1801.S Structure Repainting Recycled Abrasive (structure) 0003. B-40-208	1.000 EACH	_____.____	_____.____
0272	517.1801.S Structure Repainting Recycled Abrasive (structure) 0004. B-40-207	1.000 EACH	_____.____	_____.____
0274	517.1801.S Structure Repainting Recycled Abrasive (structure) 0005. B-40-215	1.000 EACH	_____.____	_____.____
0276	517.4501.S Negative Pressure Containment and Collection of Waste Materials (structure) 0001. B-40-206	1.000 EACH	_____.____	_____.____
0278	517.4501.S Negative Pressure Containment and Collection of Waste Materials (structure) 0002. B-40-209	1.000 EACH	_____.____	_____.____
0280	517.4501.S Negative Pressure Containment and Collection of Waste Materials (structure) 0003. B-40-208	1.000 EACH	_____.____	_____.____
0282	517.4501.S Negative Pressure Containment and Collection of Waste Materials (structure) 0004. B-40-207	1.000 EACH	_____.____	_____.____
0284	517.4501.S Negative Pressure Containment and Collection of Waste Materials (structure) 0005. B-40-215	1.000 EACH	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0286	517.6001.S Portable Decontamination Facility	5.000 EACH	_____.____	_____.____
0288	520.8000 Concrete Collars for Pipe	287.000 EACH	_____.____	_____.____
0290	521.2005.S Surface Drain Pipe Corrugated Metal Slotted (inch) 0001. 15-Inch	140.000 LF	_____.____	_____.____
0292	531.1100 Concrete Masonry Ancillary Structures Type NS	380.400 CY	_____.____	_____.____
0294	531.1140 Steel Reinforcement HS Ancillary Structures Type NS	38,534.000 LB	_____.____	_____.____
0296	531.1160 Steel Reinforcement HS Coated Ancillary Structures Type NS	18,920.000 LB	_____.____	_____.____
0298	531.2024 Drilling Shaft 24-Inch	106.000 LF	_____.____	_____.____
0300	531.2036 Drilling Shaft 36-Inch	933.000 LF	_____.____	_____.____
0302	531.2042 Drilling Shaft 42-Inch	92.000 LF	_____.____	_____.____
0304	531.4050 Foundation Camera Pole 50-FT	2.000 EACH	_____.____	_____.____
0306	531.6010 Foundation Two-Shaft Type FC-I (structure) 0001. S-40-3067	1.000 EACH	_____.____	_____.____
0308	531.6010 Foundation Two-Shaft Type FC-I (structure) 0002. S-40-3068	1.000 EACH	_____.____	_____.____
0310	531.6010 Foundation Two-Shaft Type FC-I (structure) 0003. S-40-3071	1.000 EACH	_____.____	_____.____
0312	531.6010 Foundation Two-Shaft Type FC-I (structure) 0004. S-40-3072	1.000 EACH	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0314	531.6010 Foundation Two-Shaft Type FC-I (structure) 0005. S-40-3073	1.000 EACH	_____.____	_____.____
0316	531.6010 Foundation Two-Shaft Type FC-I (structure) 0006. S-40-3076	1.000 EACH	_____.____	_____.____
0318	531.6010 Foundation Two-Shaft Type FC-I (structure) 0007. S-40-3081	1.000 EACH	_____.____	_____.____
0320	531.6010 Foundation Two-Shaft Type FC-I (structure) 0008. S-40-3083	1.000 EACH	_____.____	_____.____
0322	531.6010 Foundation Two-Shaft Type FC-I (structure) 0009. S-40-3104	1.000 EACH	_____.____	_____.____
0324	531.6020 Foundation Two-Shaft Type FC-II (structure) 0001. S-40-3075	1.000 EACH	_____.____	_____.____
0326	531.6020 Foundation Two-Shaft Type FC-II (structure) 0002. S-40-3078	1.000 EACH	_____.____	_____.____
0328	531.6020 Foundation Two-Shaft Type FC-II (structure) 0003. S-40-3080	1.000 EACH	_____.____	_____.____
0330	531.6020 Foundation Two-Shaft Type FC-II (structure) 0004. S-40-3105	1.000 EACH	_____.____	_____.____
0332	531.8990 Anchor Assemblies Poles on Structures	8.000 EACH	_____.____	_____.____
0334	532.5020 Butterfly 2-Chord NS (structure) 0001. S-40-3065	1.000 EACH	_____.____	_____.____
0336	532.5020 Butterfly 2-Chord NS (structure) 0002. S-40-3066	1.000 EACH	_____.____	_____.____
0338	532.5020 Butterfly 2-Chord NS (structure) 0003. S-40-3069	1.000 EACH	_____.____	_____.____

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0340	532.5020 Butterfly 2-Chord NS (structure) 0004. S-40-3070	1.000 EACH	_____._____	_____._____
0342	532.5020 Butterfly 2-Chord NS (structure) 0005. S-40-3074	1.000 EACH	_____._____	_____._____
0344	532.5020 Butterfly 2-Chord NS (structure) 0006. S-40-3077	1.000 EACH	_____._____	_____._____
0346	532.5020 Butterfly 2-Chord NS (structure) 0007. S-40-3082	1.000 EACH	_____._____	_____._____
0348	532.6010 Truss Cantilever 4-Chord Type I (structure) 0001. S-40-3067	1.000 EACH	_____._____	_____._____
0350	532.6010 Truss Cantilever 4-Chord Type I (structure) 0002. S-40-3068	1.000 EACH	_____._____	_____._____
0352	532.6010 Truss Cantilever 4-Chord Type I (structure) 0003. S-40-3071	1.000 EACH	_____._____	_____._____
0354	532.6010 Truss Cantilever 4-Chord Type I (structure) 0004. S-40-3072	1.000 EACH	_____._____	_____._____
0356	532.6010 Truss Cantilever 4-Chord Type I (structure) 0005. S-40-3073	1.000 EACH	_____._____	_____._____
0358	532.6010 Truss Cantilever 4-Chord Type I (structure) 0006. S-40-3076	1.000 EACH	_____._____	_____._____
0360	532.6010 Truss Cantilever 4-Chord Type I (structure) 0007. S-40-3081	1.000 EACH	_____._____	_____._____
0362	532.6010 Truss Cantilever 4-Chord Type I (structure) 0008. S-40-3083	1.000 EACH	_____._____	_____._____
0364	532.6010 Truss Cantilever 4-Chord Type I (structure) 0009. S-40-3104	1.000 EACH	_____._____	_____._____

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0366	532.6020 Truss Cantilever 4-Chord Type II (structure) 0003. S-40-3075	1.000 EACH	_____.____	_____.____
0368	532.6020 Truss Cantilever 4-Chord Type II (structure) 0004. S-40-3078	1.000 EACH	_____.____	_____.____
0370	532.6020 Truss Cantilever 4-Chord Type II (structure) 0006. S-40-3080	1.000 EACH	_____.____	_____.____
0372	532.6020 Truss Cantilever 4-Chord Type II (structure) 0007. S-40-3105	1.000 EACH	_____.____	_____.____
0374	532.6120 Truss Full Span 4-Chord Type II (structure) 0001. S-40-463	1.000 EACH	_____.____	_____.____
0376	532.6120 Truss Full Span 4-Chord Type II (structure) 0002. S-40-464	1.000 EACH	_____.____	_____.____
0378	532.6120 Truss Full Span 4-Chord Type II (structure) 0003. S-40-3079	1.000 EACH	_____.____	_____.____
0380	532.6130 Truss Full Span 4-Chord Type III (structure) 0001. S-40-3064	1.000 EACH	_____.____	_____.____
0382	601.0409 Concrete Curb & Gutter 30-Inch Type A	2,096.000 LF	_____.____	_____.____
0384	601.0411 Concrete Curb & Gutter 30-Inch Type D	494.000 LF	_____.____	_____.____
0386	601.0553 Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	22,923.000 LF	_____.____	_____.____
0388	601.0588 Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	631.000 LF	_____.____	_____.____
0390	601.0600 Concrete Curb Pedestrian	263.000 LF	_____.____	_____.____
0392	602.0410 Concrete Sidewalk 5-Inch	11,569.000 SF	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0394	602.0505 Curb Ramp Detectable Warning Field Yellow	274.000 SF	_____.____	_____.____
0396	602.0605 Curb Ramp Detectable Warning Field Radial Yellow	61.000 SF	_____.____	_____.____
0398	603.0105 Concrete Barrier Single-Faced 32-Inch	167.000 LF	_____.____	_____.____
0400	603.1132 Concrete Barrier Type S32	238.000 LF	_____.____	_____.____
0402	603.1142 Concrete Barrier Type S42	6,988.000 LF	_____.____	_____.____
0404	603.1232 Concrete Barrier Type S32A	2,224.000 LF	_____.____	_____.____
0406	603.1242 Concrete Barrier Type S42A	7,810.000 LF	_____.____	_____.____
0408	603.1442 Concrete Barrier Type S42C	104.000 LF	_____.____	_____.____
0410	603.1456 Concrete Barrier Type S56C	693.000 LF	_____.____	_____.____
0412	603.2142 Concrete Barrier Fixed Object Protection Type S42	2.000 LF	_____.____	_____.____
0414	603.3513 Concrete Barrier Transition Type S32 to S36	5.000 EACH	_____.____	_____.____
0416	603.3535 Concrete Barrier Transition Type S36 to S42	9.000 EACH	_____.____	_____.____
0418	603.3559 Concrete Barrier Transition Type S42 to S56	19.000 EACH	_____.____	_____.____
0420	603.3611 Concrete Barrier Transition Type V32 to S32	10.000 EACH	_____.____	_____.____
0422	603.3655 Concrete Barrier Transition Type V42 to S42	30.000 EACH	_____.____	_____.____

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0424	603.3699 Concrete Barrier Transition Type V56 to S56	11.000 EACH	_____.____	_____.____
0426	603.8000 Concrete Barrier Temporary Precast Delivered	54,899.000 LF	_____.____	_____.____
0428	603.8125 Concrete Barrier Temporary Precast Installed	55,234.000 LF	_____.____	_____.____
0430	603.8500 Anchoring Concrete Barrier Temporary Precast	1,181.000 LF	_____.____	_____.____
0432	603.8505 Anchoring Concrete Barrier Temporary Precast on Bridge Decks	357.000 LF	_____.____	_____.____
0434	604.0400 Slope Paving Concrete	1,075.000 SY	_____.____	_____.____
0436	608.0312 Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	3,204.000 LF	_____.____	_____.____
0438	608.0315 Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	4,219.000 LF	_____.____	_____.____
0440	608.0318 Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	576.000 LF	_____.____	_____.____
0442	608.0321 Storm Sewer Pipe Reinforced Concrete Class III 21-Inch	26.000 LF	_____.____	_____.____
0444	608.0324 Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	2,187.000 LF	_____.____	_____.____
0446	608.0330 Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	316.000 LF	_____.____	_____.____
0448	608.0336 Storm Sewer Pipe Reinforced Concrete Class III 36-Inch	1,290.000 LF	_____.____	_____.____

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0450	608.0342 Storm Sewer Pipe Reinforced Concrete Class III 42-Inch	1,368.000 LF	_____.____	_____.____
0452	608.0348 Storm Sewer Pipe Reinforced Concrete Class III 48-Inch	49.000 LF	_____.____	_____.____
0454	608.0354 Storm Sewer Pipe Reinforced Concrete Class III 54-Inch	137.000 LF	_____.____	_____.____
0456	608.0360 Storm Sewer Pipe Reinforced Concrete Class III 60-Inch	82.000 LF	_____.____	_____.____
0458	608.0366 Storm Sewer Pipe Reinforced Concrete Class III 66-Inch	11.000 LF	_____.____	_____.____
0460	608.0412 Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	584.000 LF	_____.____	_____.____
0462	608.0415 Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	1,326.000 LF	_____.____	_____.____
0464	608.0418 Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	589.000 LF	_____.____	_____.____
0466	608.0424 Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	121.000 LF	_____.____	_____.____
0468	608.0436 Storm Sewer Pipe Reinforced Concrete Class IV 36-Inch	408.000 LF	_____.____	_____.____
0470	608.0442 Storm Sewer Pipe Reinforced Concrete Class IV 42-Inch	68.000 LF	_____.____	_____.____
0472	611.0535 Manhole Covers Type J-Special	103.000 EACH	_____.____	_____.____
0474	611.0606 Inlet Covers Type B	12.000 EACH	_____.____	_____.____
0476	611.0627 Inlet Covers Type HM	117.000 EACH	_____.____	_____.____

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Federal ID(s): WISC 2023278, N/A, N/A, N/A

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0478	611.0654 Inlet Covers Type V	206.000 EACH	_____.____	_____.____
0480	611.0660 Inlet Covers Type WM	13.000 EACH	_____.____	_____.____
0482	611.2004 Manholes 4-FT Diameter	9.000 EACH	_____.____	_____.____
0484	611.2005 Manholes 5-FT Diameter	48.000 EACH	_____.____	_____.____
0486	611.2006 Manholes 6-FT Diameter	48.000 EACH	_____.____	_____.____
0488	611.2007 Manholes 7-FT Diameter	6.000 EACH	_____.____	_____.____
0490	611.2008 Manholes 8-FT Diameter	13.000 EACH	_____.____	_____.____
0492	611.2009 Manholes 9-FT Diameter	1.000 EACH	_____.____	_____.____
0494	611.3004 Inlets 4-FT Diameter	315.000 EACH	_____.____	_____.____
0496	611.3220 Inlets 2x2-FT	10.000 EACH	_____.____	_____.____
0498	611.8110 Adjusting Manhole Covers	6.000 EACH	_____.____	_____.____
0500	611.8115 Adjusting Inlet Covers	13.000 EACH	_____.____	_____.____
0502	612.0106 Pipe Underdrain 6-Inch	12,749.000 LF	_____.____	_____.____
0504	612.0406 Pipe Underdrain Wrapped 6-Inch	460.000 LF	_____.____	_____.____
0506	614.0150 Anchor Assemblies for Steel Plate Beam Guard	4.000 EACH	_____.____	_____.____
0508	614.0905 Crash Cushions Temporary	21.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0510	614.0935 Salvaged Sand Barrels	11.000 EACH	_____.____	_____.____
0512	614.2300 MGS Guardrail 3	827.000 LF	_____.____	_____.____
0514	614.2500 MGS Thrie Beam Transition	630.000 LF	_____.____	_____.____
0516	614.2610 MGS Guardrail Terminal EAT	18.000 EACH	_____.____	_____.____
0518	614.2620 MGS Guardrail Terminal Type 2	1.000 EACH	_____.____	_____.____
0520	616.0204 Fence Chain Link 4-FT	199.000 LF	_____.____	_____.____
0522	616.0206 Fence Chain Link 6-FT	26,936.000 LF	_____.____	_____.____
0524	616.0208 Fence Chain Link 8-FT	460.000 LF	_____.____	_____.____
0526	616.0329 Gates Chain Link (width) 0001. 12-FT	16.000 EACH	_____.____	_____.____
0528	618.0100 Maintenance And Repair of Haul Roads (project) 0001. 1228-22-70	1.000 EACH	_____.____	_____.____
0530	619.1000 Mobilization	1.000 EACH	_____.____	_____.____
0532	623.0200 Dust Control Surface Treatment	197,427.000 SY	_____.____	_____.____
0534	624.0100 Water	506.000 MGAL	_____.____	_____.____
0536	625.0100 Topsoil	110,955.000 SY	_____.____	_____.____
0538	627.0200 Mulching	88,764.000 SY	_____.____	_____.____
0540	628.1905 Mobilizations Erosion Control	2.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0542	628.1910 Mobilizations Emergency Erosion Control	2.000 EACH	_____.____	_____.____
0544	628.2023 Erosion Mat Class II Type B	110,955.000 SY	_____.____	_____.____
0546	628.7005 Inlet Protection Type A	68.000 EACH	_____.____	_____.____
0548	628.7020 Inlet Protection Type D	898.000 EACH	_____.____	_____.____
0550	629.0210 Fertilizer Type B	101.000 CWT	_____.____	_____.____
0552	630.0120 Seeding Mixture No. 20	2,422.000 LB	_____.____	_____.____
0554	630.0500 Seed Water	2,493.000 MGAL	_____.____	_____.____
0556	631.0300 Sod Water	46.000 MGAL	_____.____	_____.____
0558	631.1000 Sod Lawn	1,820.000 SY	_____.____	_____.____
0560	634.0618 Posts Wood 4x6-Inch X 18-FT	72.000 EACH	_____.____	_____.____
0562	634.0622 Posts Wood 4x6-Inch X 22-FT	114.000 EACH	_____.____	_____.____
0564	634.0814 Posts Tubular Steel 2x2-Inch X 14-FT	31.000 EACH	_____.____	_____.____
0566	634.0885 Posts Tubular Steel 2x2-Inch X 8.5-FT	12.000 EACH	_____.____	_____.____
0568	635.0200 Sign Supports Structural Steel HS	17,700.000 LB	_____.____	_____.____
0570	637.1220 Signs Type I Reflective SH	5,684.500 SF	_____.____	_____.____
0572	637.1230 Signs Type I Reflective F	761.000 SF	_____.____	_____.____
0574	637.2210 Signs Type II Reflective H	2,545.105 SF	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0576	637.2230 Signs Type II Reflective F	1,120.000 SF	_____.____	_____.____
0578	638.2101 Moving Signs Type I	4.000 EACH	_____.____	_____.____
0580	638.2102 Moving Signs Type II	3.000 EACH	_____.____	_____.____
0582	638.2601 Removing Signs Type I	31.000 EACH	_____.____	_____.____
0584	638.2602 Removing Signs Type II	260.000 EACH	_____.____	_____.____
0586	638.3000 Removing Small Sign Supports	160.000 EACH	_____.____	_____.____
0588	638.3100 Removing Structural Steel Sign Supports	36.000 EACH	_____.____	_____.____
0590	643.0300 Traffic Control Drums	395,175.000 DAY	_____.____	_____.____
0592	643.0420 Traffic Control Barricades Type III	36,611.000 DAY	_____.____	_____.____
0594	643.0500 Traffic Control Flexible Tubular Marker Posts	900.000 EACH	_____.____	_____.____
0596	643.0600 Traffic Control Flexible Tubular Marker Bases	900.000 EACH	_____.____	_____.____
0598	643.0705 Traffic Control Warning Lights Type A	72,473.000 DAY	_____.____	_____.____
0600	643.0715 Traffic Control Warning Lights Type C	71,131.000 DAY	_____.____	_____.____
0602	643.0800 Traffic Control Arrow Boards	3,375.000 DAY	_____.____	_____.____
0604	643.0900 Traffic Control Signs	117,305.000 DAY	_____.____	_____.____
0606	643.0910 Traffic Control Covering Signs Type I	19.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0608	643.0920 Traffic Control Covering Signs Type II	123.000 EACH	_____.____	_____.____
0610	643.1000 Traffic Control Signs Fixed Message	1,549.000 SF	_____.____	_____.____
0612	643.1050 Traffic Control Signs PCMS	929.000 DAY	_____.____	_____.____
0614	643.3105 Temporary Marking Line Paint 4-Inch	357,563.000 LF	_____.____	_____.____
0616	643.3120 Temporary Marking Line Epoxy 4-Inch	68,843.000 LF	_____.____	_____.____
0618	643.3150 Temporary Marking Line Removable Tape 4-Inch	25,749.000 LF	_____.____	_____.____
0620	643.3205 Temporary Marking Line Paint 8-Inch	59,555.000 LF	_____.____	_____.____
0622	643.3220 Temporary Marking Line Epoxy 8-Inch	15,870.000 LF	_____.____	_____.____
0624	643.3250 Temporary Marking Line Removable Tape 8-Inch	1,513.000 LF	_____.____	_____.____
0626	643.3505 Temporary Marking Arrow Paint	17.000 EACH	_____.____	_____.____
0628	643.3760 Temporary Marking Raised Pavement Marker Type I	474.000 EACH	_____.____	_____.____
0630	643.3805 Temporary Marking Stop Line Paint 18-Inch	173.000 LF	_____.____	_____.____
0632	643.4100 Traffic Control Interim Lane Closure	610.000 EACH	_____.____	_____.____
0634	643.5000 Traffic Control	1.000 EACH	_____.____	_____.____
0636	644.1430 Temporary Pedestrian Surface Plate	120.000 SF	_____.____	_____.____
0638	644.1601 Temporary Pedestrian Curb Ramp	165.000 DAY	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0640	644.1605 Temporary Pedestrian Detectable Warning Field	60.000 SF	_____.____	_____.____
0642	644.1810 Temporary Pedestrian Barricade	2,357.000 LF	_____.____	_____.____
0644	645.0111 Geotextile Type DF Schedule A	7,083.000 SY	_____.____	_____.____
0646	646.1020 Marking Line Epoxy 4-Inch	7,126.000 LF	_____.____	_____.____
0648	646.1040 Marking Line Grooved Wet Ref Epoxy 4-Inch	38,453.000 LF	_____.____	_____.____
0650	646.1555 Marking Line Grooved Contrast Permanent Tape 4-Inch	5,825.000 LF	_____.____	_____.____
0652	646.3020 Marking Line Epoxy 8-Inch	5,018.000 LF	_____.____	_____.____
0654	646.3555 Marking Line Grooved Contrast Permanent Tape 8-Inch	9,042.000 LF	_____.____	_____.____
0656	646.5020 Marking Arrow Epoxy	57.000 EACH	_____.____	_____.____
0658	646.5120 Marking Word Epoxy	6.000 EACH	_____.____	_____.____
0660	646.5220 Marking Symbol Epoxy	17.000 EACH	_____.____	_____.____
0662	646.6120 Marking Stop Line Epoxy 18-Inch	722.000 LF	_____.____	_____.____
0664	646.7120 Marking Diagonal Epoxy 12-Inch	6,356.000 LF	_____.____	_____.____
0666	646.7220 Marking Chevron Epoxy 24-Inch	1,368.000 LF	_____.____	_____.____
0668	646.7420 Marking Crosswalk Epoxy Transverse Line 6-Inch	1,372.000 LF	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0670	646.8120 Marking Curb Epoxy	60.000 LF	_____.____	_____.____
0672	646.8220 Marking Island Nose Epoxy	6.000 EACH	_____.____	_____.____
0674	646.9000 Marking Removal Line 4-Inch	52,056.000 LF	_____.____	_____.____
0676	646.9100 Marking Removal Line 8-Inch	13,985.000 LF	_____.____	_____.____
0678	646.9200 Marking Removal Line Wide	3,567.000 LF	_____.____	_____.____
0680	646.9300 Marking Removal Special Marking	8.000 EACH	_____.____	_____.____
0682	652.0125 Conduit Rigid Metallic 2-Inch	229.000 LF	_____.____	_____.____
0684	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	36,083.000 LF	_____.____	_____.____
0686	652.0230 Conduit Rigid Nonmetallic Schedule 40 2 1/2-Inch	110.000 LF	_____.____	_____.____
0688	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	4,943.000 LF	_____.____	_____.____
0690	652.0605 Conduit Special 2-Inch	280.000 LF	_____.____	_____.____
0692	652.0615 Conduit Special 3-Inch	4,188.000 LF	_____.____	_____.____
0694	652.0700.S Install Conduit into Existing Item	20.000 EACH	_____.____	_____.____
0696	652.0800 Conduit Loop Detector	375.000 LF	_____.____	_____.____
0698	653.0135 Pull Boxes Steel 24x36-Inch	9.000 EACH	_____.____	_____.____
0700	653.0140 Pull Boxes Steel 24x42-Inch	69.000 EACH	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0702	653.0222 Junction Boxes 18x12x6-Inch	23.000 EACH	_____.____	_____.____
0704	653.0905 Removing Pull Boxes	120.000 EACH	_____.____	_____.____
0706	654.0101 Concrete Bases Type 1	8.000 EACH	_____.____	_____.____
0708	654.0102 Concrete Bases Type 2	3.000 EACH	_____.____	_____.____
0710	654.0105 Concrete Bases Type 5	44.000 EACH	_____.____	_____.____
0712	654.0106 Concrete Bases Type 6	8.000 EACH	_____.____	_____.____
0714	654.0110 Concrete Bases Type 10	5.000 EACH	_____.____	_____.____
0716	654.0115 Concrete Bases Type F	47.000 EACH	_____.____	_____.____
0718	654.0120 Concrete Bases Type 10-Special	8.000 EACH	_____.____	_____.____
0720	654.0230 Concrete Control Cabinet Bases Type L30	4.000 EACH	_____.____	_____.____
0722	654.1239 Concrete Control Cabinet Bases ITS	1.000 EACH	_____.____	_____.____
0724	655.0230 Cable Traffic Signal 5-14 AWG	3,160.000 LF	_____.____	_____.____
0726	655.0240 Cable Traffic Signal 7-14 AWG	1,154.000 LF	_____.____	_____.____
0728	655.0250 Cable Traffic Signal 9-14 AWG	603.000 LF	_____.____	_____.____
0730	655.0260 Cable Traffic Signal 12-14 AWG	904.000 LF	_____.____	_____.____
0732	655.0270 Cable Traffic Signal 15-14 AWG	1,207.000 LF	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0734	655.0280 Cable Traffic Signal 19-14 AWG	996.000 LF	_____.____	_____.____
0736	655.0305 Cable Type UF 2-12 AWG Grounded	4,695.000 LF	_____.____	_____.____
0738	655.0515 Electrical Wire Traffic Signals 10 AWG	20,762.000 LF	_____.____	_____.____
0740	655.0610 Electrical Wire Lighting 12 AWG	27,210.000 LF	_____.____	_____.____
0742	655.0615 Electrical Wire Lighting 10 AWG	2,200.000 LF	_____.____	_____.____
0744	655.0620 Electrical Wire Lighting 8 AWG	91,106.000 LF	_____.____	_____.____
0746	655.0625 Electrical Wire Lighting 6 AWG	73,414.000 LF	_____.____	_____.____
0748	655.0630 Electrical Wire Lighting 4 AWG	566.000 LF	_____.____	_____.____
0750	655.0640 Electrical Wire Lighting 1 AWG	72.000 LF	_____.____	_____.____
0752	655.0700 Loop Detector Lead In Cable	2,475.000 LF	_____.____	_____.____
0754	655.0800 Loop Detector Wire	1,050.000 LF	_____.____	_____.____
0756	655.0900 Traffic Signal EVP Detector Cable	2,398.000 LF	_____.____	_____.____
0758	656.0201 Electrical Service Meter Breaker Pedestal (location) 0201. MB827	1.000 EACH	_____.____	_____.____
0760	656.0201 Electrical Service Meter Breaker Pedestal (location) 0301. Locust St & 8th St	1.000 EACH	_____.____	_____.____
0762	656.0201 Electrical Service Meter Breaker Pedestal (location) 0302. Locust St & 7th St	1.000 EACH	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0764	656.0201 Electrical Service Meter Breaker Pedestal (location) 0303. Burleigh St & 8th St	1.000 EACH	_____.____	_____.____
0766	656.0201 Electrical Service Meter Breaker Pedestal (location) 0304. Burleigh St & 7th St	1.000 EACH	_____.____	_____.____
0768	656.0401 Electrical Service Main Lugs Only Meter Pedestal (location) 0101. HL-40-GA	1.000 EACH	_____.____	_____.____
0770	656.0401 Electrical Service Main Lugs Only Meter Pedestal (location) 0102. HL-40-CB	1.000 EACH	_____.____	_____.____
0772	656.0401 Electrical Service Main Lugs Only Meter Pedestal (location) 0103. HL-40-KF	1.000 EACH	_____.____	_____.____
0774	656.0401 Electrical Service Main Lugs Only Meter Pedestal (location) 0104. LCC-WR	1.000 EACH	_____.____	_____.____
0776	656.0501 Electrical Service Breaker Disconnect Box (location) 0201. S-40-463	1.000 EACH	_____.____	_____.____
0778	657.0100 Pedestal Bases	3.000 EACH	_____.____	_____.____
0780	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	60.000 EACH	_____.____	_____.____
0782	657.0322 Poles Type 5-Aluminum	35.000 EACH	_____.____	_____.____
0784	657.0327 Poles Type 6-Aluminum	8.000 EACH	_____.____	_____.____
0786	657.0347 Poles Type 9-Special	1.000 EACH	_____.____	_____.____
0788	657.0350 Poles Type 10	4.000 EACH	_____.____	_____.____
0790	657.0352 Poles Type 10-Special	7.000 EACH	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0792	657.0381 Poles Type F	48.000 EACH	_____.____	_____.____
0794	657.0420 Traffic Signal Standards Aluminum 13-FT	2.000 EACH	_____.____	_____.____
0796	657.0425 Traffic Signal Standards Aluminum 15-FT	1.000 EACH	_____.____	_____.____
0798	657.0515 Monotube Arms 15-FT	1.000 EACH	_____.____	_____.____
0800	657.0530 Monotube Arms 30-FT	4.000 EACH	_____.____	_____.____
0802	657.0535 Monotube Arms 35-FT	5.000 EACH	_____.____	_____.____
0804	657.0540 Monotube Arms 40-FT	2.000 EACH	_____.____	_____.____
0806	657.0545 Monotube Arms 45-FT	1.000 EACH	_____.____	_____.____
0808	657.0610 Luminaire Arms Single Member 4 1/2-Inch Clamp 6-FT	35.000 EACH	_____.____	_____.____
0810	657.0620 Luminaire Arms Single Member 6-Inch Clamp 4-FT	94.000 EACH	_____.____	_____.____
0812	658.0173 Traffic Signal Face 3S 12-Inch	40.000 EACH	_____.____	_____.____
0814	658.0174 Traffic Signal Face 4S 12-Inch	8.000 EACH	_____.____	_____.____
0816	658.0412 Pedestrian Signal Face 12-Inch	24.000 EACH	_____.____	_____.____
0818	658.5070 Signal Mounting Hardware (location) 0301. Locust St & 8th St	1.000 EACH	_____.____	_____.____
0820	658.5070 Signal Mounting Hardware (location) 0302. Locust St & 7th St	1.000 EACH	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0822	658.5070 Signal Mounting Hardware (location) 0303. Burleigh St & 8th St	1.000 EACH	_____.____	_____.____
0824	658.5070 Signal Mounting Hardware (location) 0304. Burleigh St & 7th St	1.000 EACH	_____.____	_____.____
0826	659.0601 Underdeck Lighting (structure) 0101. N. Halyard St.	1.000 EACH	_____.____	_____.____
0828	659.0601 Underdeck Lighting (structure) 0102. W. North Ave.	1.000 EACH	_____.____	_____.____
0830	659.0601 Underdeck Lighting (structure) 0103. W. Wright St.	1.000 EACH	_____.____	_____.____
0832	659.0601 Underdeck Lighting (structure) 0104. W. Center St.	1.000 EACH	_____.____	_____.____
0834	659.0601 Underdeck Lighting (structure) 0105. W. Locust St.	1.000 EACH	_____.____	_____.____
0836	659.0601 Underdeck Lighting (structure) 0106. W. Burleigh St.	1.000 EACH	_____.____	_____.____
0838	659.0601 Underdeck Lighting (structure) 0107. W. Keefe Ave.	1.000 EACH	_____.____	_____.____
0840	659.0601 Underdeck Lighting (structure) 0108. W. Atkinson Ave.	1.000 EACH	_____.____	_____.____
0842	659.0601 Underdeck Lighting (structure) 0109. N Martin Luther King Jr Dr	1.000 EACH	_____.____	_____.____
0844	659.0601 Underdeck Lighting (structure) 0110. W Capitol Dr	1.000 EACH	_____.____	_____.____
0846	659.1120 Luminaires Utility LED B	60.000 EACH	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0848	659.1130 Luminaires Utility LED D	98.000 EACH	_____.____	_____.____
0850	659.1210 Luminaires Underdeck LED B	32.000 EACH	_____.____	_____.____
0852	659.2230 Lighting Control Cabinets 240/480 30-Inch	4.000 EACH	_____.____	_____.____
0854	659.5000.S Lamp, Ballast, LED, Switch Disposal by Contractor	267.000 EACH	_____.____	_____.____
0856	661.0201 Temporary Traffic Signals for Intersections (location) 0301. Locust St & 8th St	1.000 EACH	_____.____	_____.____
0858	661.0201 Temporary Traffic Signals for Intersections (location) 0302. Locust St & 7th St	1.000 EACH	_____.____	_____.____
0860	670.0101 Field System Integrator	2.000 EACH	_____.____	_____.____
0862	670.0201 ITS Documentation	2.000 EACH	_____.____	_____.____
0864	671.0142 Conduit HDPE 4-Duct 2-Inch	7,380.000 LF	_____.____	_____.____
0866	671.0222 Conduit HDPE Directional Bore 2-Duct 2-Inch	445.000 LF	_____.____	_____.____
0868	671.0242 Conduit HDPE Directional Bore 4-Duct 2-Inch	2,470.000 LF	_____.____	_____.____
0870	673.0105 Communication Vault Type 1	11.000 EACH	_____.____	_____.____
0872	673.0200 Tracer Wire Marker Posts	11.000 EACH	_____.____	_____.____
0874	673.1200.S Install ITS Field Cabinet	1.000 EACH	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
0876	673.1225.S Install Pole Mounted Cabinet	2.000 EACH	_____.____	_____.____
0878	674.0200 Cable Microwave Detector	7,655.000 LF	_____.____	_____.____
0880	674.0300 Remove Cable	17,865.000 LF	_____.____	_____.____
0882	675.0100 Install Controller Ramp Meter Processor Assembly	1.000 EACH	_____.____	_____.____
0884	675.0300 Install Mounted Controller Microwave Detector Assembly	30.000 EACH	_____.____	_____.____
0886	677.0150 Install Camera Pole 50-FT	2.000 EACH	_____.____	_____.____
0888	677.0200 Install Camera Assembly	2.000 EACH	_____.____	_____.____
0890	677.9051.S Removing 50-FT Camera Pole	1.000 EACH	_____.____	_____.____
0892	678.0006 Install Fiber Optic Cable Outdoor Plant 6-CT	6,945.000 LF	_____.____	_____.____
0894	678.0072 Install Fiber Optic Cable Outdoor Plant 72-CT	9,540.000 LF	_____.____	_____.____
0896	678.0100.S Install Overhead Freeway DMS Full Matrix	1.000 EACH	_____.____	_____.____
0898	678.0200 Fiber Optic Splice Enclosure	11.000 EACH	_____.____	_____.____
0900	678.0300 Fiber Optic Splice	404.000 EACH	_____.____	_____.____
0902	678.0400 Fiber Optic Termination	48.000 EACH	_____.____	_____.____
0904	678.0501 Communication System Testing	2.000 EACH	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
0906	678.0600 Install Ethernet Switches	5.000 EACH	_____._____	_____._____
0908	690.0150 Sawing Asphalt	3,899.000 LF	_____._____	_____._____
0910	690.0250 Sawing Concrete	51,457.000 LF	_____._____	_____._____
0912	715.0603 Incentive Strength Concrete Barrier	9,110.000 DOL	1.00000	9,110.00
0914	715.0720 Incentive Compressive Strength Concrete Pavement	1,070.000 DOL	1.00000	1,070.00
0916	740.0440 Incentive IRI Ride	30,900.000 DOL	1.00000	30,900.00
0918	ASP.1.1PA On-the-Job Training Pre-Apprentice at $5.00/HR	1,500.000 HRS	5.00000	7,500.00
0920	ASP.1.1PAA On-the-Job Training Pre-Apprentice with Advancement at $10.00/HR	5,000.000 HRS	10.00000	50,000.00
0922	ASP.1T0A On-the-Job Training Apprentice at $5.00/HR	6,300.000 HRS	5.00000	31,500.00
0924	ASP.1T0G On-the-Job Training Graduate at $5.00/HR	14,400.000 HRS	5.00000	72,000.00
0926	SPV.0055 Special 0001. Core Pilot Project; Incentive Density PWL HMA Pavement	15,310.000 DOL	1.00000	15,310.00
0928	SPV.0055 Special 0002. Core Pilot Project; Incentive Air Voids HMA Pavement	71,410.000 DOL	1.00000	71,410.00
0930	SPV.0055 Special 0003. Core Pilot Project; Incentive Density HMA Pavement Longitudinal Joints	6,800.000 DOL	1.00000	6,800.00
0932	SPV.0060 Special 0001. Baseline CPM Progress Schedule	1.000 EACH	_____._____	_____._____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
0934	SPV.0060 Special 0002. Monthly CPM Progress Schedule Updates	36.000 EACH	_____.____	_____.____
0936	SPV.0060 Special 0003. Field Facilities Office Space	1.000 EACH	_____.____	_____.____
0938	SPV.0060 Special 0004. Fastening Sewer Access Covers	160.000 EACH	_____.____	_____.____
0940	SPV.0060 Special 0009. Mobilizations Emergency Pavement Repair	10.000 EACH	_____.____	_____.____
0942	SPV.0060 Special 0010. Survey Project 1228-22-70	1.000 EACH	_____.____	_____.____
0944	SPV.0060 Special 0011. Utility Line Opening (ULO)	20.000 EACH	_____.____	_____.____
0946	SPV.0060 Special 0012. Emergency Response to Traffic Incident Involving Conc Barrier Temporary	40.000 EACH	_____.____	_____.____
0948	SPV.0060 Special 0013. Emergency Response to Traffic Incident Involving Crash Cushions	10.000 EACH	_____.____	_____.____
0950	SPV.0060 Special 0014. Concrete Barrier Transition Type V51 to S56	1.000 EACH	_____.____	_____.____
0952	SPV.0060 Special 0015. Concrete Barrier Fixed Object Protection Type S42 to S42C	1.000 EACH	_____.____	_____.____
0954	SPV.0060 Special 0016. Traffic Control Close-Open Freeway Entrance Ramp	60.000 EACH	_____.____	_____.____
0956	SPV.0060 Special 0017. Traffic Control Full Freeway Closure	50.000 EACH	_____.____	_____.____
0958	SPV.0060 Special 0018. Migratory Bird Nest Inspection B-40-207	1.000 EACH	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
0960	SPV.0060 Special 0050. Pipe Connection to Existing Structure	11.000 EACH	_____.____	_____.____
0962	SPV.0060 Special 0080. Adjusting Water Valve Boxes	6.000 EACH	_____.____	_____.____
0964	SPV.0060 Special 0081. Adjusting Water Manholes	6.000 EACH	_____.____	_____.____
0966	SPV.0060 Special 0101. Maintenance of Lighting System (1228-22-70)	1.000 EACH	_____.____	_____.____
0968	SPV.0060 Special 0102. Lighting System Integrator (1228-22-70)	1.000 EACH	_____.____	_____.____
0970	SPV.0060 Special 0103. Lighting System Survey (1228-22-70)	1.000 EACH	_____.____	_____.____
0972	SPV.0060 Special 0104. Wood Pole Lighting 60-Foot	68.000 EACH	_____.____	_____.____
0974	SPV.0060 Special 0105. Wood Pole 60-Foot	9.000 EACH	_____.____	_____.____
0976	SPV.0060 Special 0106. Removing Poles Wood 60-Foot And Floodlights	68.000 EACH	_____.____	_____.____
0978	SPV.0060 Special 0107. Removing Poles Wood 60-Foot	9.000 EACH	_____.____	_____.____
0980	SPV.0060 Special 0108. Luminaires Floodlight 400W HPS	75.000 EACH	_____.____	_____.____
0982	SPV.0060 Special 0109. Removing Electrical Service Meter Breaker Pedestal Lighting	4.000 EACH	_____.____	_____.____
0984	SPV.0060 Special 0110. Remove and Salvage Street Lighting Unit	23.000 EACH	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
0986	SPV.0060 Special 0111. Remove Existing Wood Pole	1.000 EACH	_____.____	_____.____
0988	SPV.0060 Special 0112. Pull Box 13-Inch x 24-Inch x 24-Inch	13.000 EACH	_____.____	_____.____
0990	SPV.0060 Special 0113. Pull Box 17-Inch x 30-Inch x 24-Inch	2.000 EACH	_____.____	_____.____
0992	SPV.0060 Special 0114. Installing Luminaire Arms Steel 15-FT	9.000 EACH	_____.____	_____.____
0994	SPV.0060 Special 0115. Pole Type 30-AL-BD	19.000 EACH	_____.____	_____.____
0996	SPV.0060 Special 0116. Water Tight Splice & Connections	34.000 EACH	_____.____	_____.____
0998	SPV.0060 Special 0117. Luminaire Arm Single Member 8-Ft. (Special)	24.000 EACH	_____.____	_____.____
1000	SPV.0060 Special 0118. Installing City-Furnished Luminaire Utility LED	33.000 EACH	_____.____	_____.____
1002	SPV.0060 Special 0150. 5’ Diameter “Doghouse” Manhole Type CUC	4.000 EACH	_____.____	_____.____
1004	SPV.0060 Special 0151. Removing CUC Manhole	4.000 EACH	_____.____	_____.____
1006	SPV.0060 Special 0152. Underdeck Utility Structure B-40-206	1.000 EACH	_____.____	_____.____
1008	SPV.0060 Special 0153. Underdeck Utility Structure B-40-207	1.000 EACH	_____.____	_____.____
1010	SPV.0060 Special 0160. Suspended Galvanized Steel Conduit Package Cleaning, Coating and Painting	1.000 EACH	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
1012	SPV.0060 Special 0161. Suspended Galvanized Steel Conduit Repair	3.000 EACH	_____.____	_____.____
1014	SPV.0060 Special 0162. Pull Ropes Anchored to Manholes	2.000 EACH	_____.____	_____.____
1016	SPV.0060 Special 0205. Speed Warning Sign System	1.000 EACH	_____.____	_____.____
1018	SPV.0060 Special 0206. Install Speed Warning System DMS	3.000 EACH	_____.____	_____.____
1020	SPV.0060 Special 0207. Salvaging Overhead Freeway DMS	1.000 EACH	_____.____	_____.____
1022	SPV.0060 Special 0210. Temporary Poles Wood 40-FT	3.000 EACH	_____.____	_____.____
1024	SPV.0060 Special 0211. Temporary Vehicle Detector Assembly	3.000 EACH	_____.____	_____.____
1026	SPV.0060 Special 0213. Ground Rod	18.000 EACH	_____.____	_____.____
1028	SPV.0060 Special 0214. Relocating Temporary Vehicle Detector Assembly	6.000 EACH	_____.____	_____.____
1030	SPV.0060 Special 0215. Refocus Vehicle Detector Assembly	35.000 EACH	_____.____	_____.____
1032	SPV.0060 Special 0216. Install Ethernet Radio	3.000 EACH	_____.____	_____.____
1034	SPV.0060 Special 0219. Signal Assembly Advance Flasher Type 2	1.000 EACH	_____.____	_____.____
1036	SPV.0060 Special 0224. Signal Assembly Ramp Control Sidemount	7.000 EACH	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
1038	SPV.0060 Special 0301. Fiberglass/Polymer Concrete Pull Box 17-Inch X 30-Inch X 24-Inch	34.000 EACH	_____.____	_____.____
1040	SPV.0060 Special 0302. Install Precast Control Cabinet Base	4.000 EACH	_____.____	_____.____
1042	SPV.0060 Special 0303. ATC Controller and Cabinet Installed	4.000 EACH	_____.____	_____.____
1044	SPV.0060 Special 0304. Vehicular Video Detection System - 2 Cameras	2.000 EACH	_____.____	_____.____
1046	SPV.0060 Special 0305. EVP 1 Channel 1 Direction Infrared Detector	12.000 EACH	_____.____	_____.____
1048	SPV.0060 Special 0306. EVP Confirmation Light	12.000 EACH	_____.____	_____.____
1050	SPV.0060 Special 0307. EVP Phase Selector Card 4 Channel	4.000 EACH	_____.____	_____.____
1052	SPV.0060 Special 0308. Fiber Optic Patch Panel 8-Count St	2.000 EACH	_____.____	_____.____
1054	SPV.0060 Special 0309. Ethernet Switch	4.000 EACH	_____.____	_____.____
1056	SPV.0060 Special 0310. Pedestrian Countdown Signal Face 12-inch	24.000 EACH	_____.____	_____.____
1058	SPV.0060 Special 0311. Cellular Modem	2.000 EACH	_____.____	_____.____
1060	SPV.0060 Special 0312. Wireless Antenna	2.000 EACH	_____.____	_____.____
1062	SPV.0060 Special 0313. SFP	16.000 EACH	_____.____	_____.____
1064	SPV.0060 Special 0314. Fiber Optic Splice Enclosure	1.000 EACH	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
1066	SPV.0060 Special 0400. Embedded Galvanic Anodes	2,803.000 EACH	_____.____	_____.____
1068	SPV.0060 Special 0401. Heat Straightening of Damaged Girders	5.000 EACH	_____.____	_____.____
1070	SPV.0075 Special 0001. Pavement Cleanup Project	1,500.000 HRS	_____.____	_____.____
1072	SPV.0090 Special 0001. Marking Contrast Epoxy 4-Inch	39,747.000 LF	_____.____	_____.____
1074	SPV.0090 Special 0002. Marking Contrast Epoxy 8-Inch	9,052.000 LF	_____.____	_____.____
1076	SPV.0090 Special 0101. Cable Aerial Aluminum 6 AWG Quadruplex	8,984.000 LF	_____.____	_____.____
1078	SPV.0090 Special 0102. Cable Aerial Aluminum 4 AWG Quadruplex	2,987.000 LF	_____.____	_____.____
1080	SPV.0090 Special 0111. Electrical Cable in Duct Type 4#8/1#8 XLPE	2,539.000 LF	_____.____	_____.____
1082	SPV.0090 Special 0112. Electrical Cable in Duct Type 4#6/1#8 XLPE	1,680.000 LF	_____.____	_____.____
1084	SPV.0090 Special 0113. Electrical Cable in Duct Type 4#4/1#8 XLPE	612.000 LF	_____.____	_____.____
1086	SPV.0090 Special 0150. 8-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60	109.000 LF	_____.____	_____.____
1088	SPV.0090 Special 0151. 4-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60	82.000 LF	_____.____	_____.____
1090	SPV.0090 Special 0152. 2-Duct Conduit Cement Encased 4-Inch Rigid Nonmetallic Conduit DB-60	383.000 LF	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
1092	SPV.0090 Special 0201. Outdoor Rated Network Cable	420.000 LF	_____.____	_____.____
1094	SPV.0090 Special 0400. Fencing Repair	50.000 LF	_____.____	_____.____
1096	SPV.0165 Special 0001. Wall Modular Block Mechanically Stabilized Earth	1,445.000 SF	_____.____	_____.____
1098	SPV.0165 Special 0400. Removing Loose Concrete Overhead	104.000 SF	_____.____	_____.____
1100	SPV.0165 Special 0401. Fiber Wrap Reinforcing Non-structural	1,019.000 SF	_____.____	_____.____
1102	SPV.0180 Special 0001. Resin Binder High Friction Surface Treatment Modified	88,265.000 SY	_____.____	_____.____
1104	SPV.0180 Special 0002. Removing Concrete Rumble Strips	160.000 SY	_____.____	_____.____
1106	SPV.0180 Special 0400. Methacrylate Flood Seal	1,382.000 SY	_____.____	_____.____
1108	SPV.0195 Special 0002. HMA Longitudinal Joint Repair	2,280.000 TON	_____.____	_____.____

Section: 0001 Total: _____.____

Total Bid: _____.____

PLEASE ATTACH ADDENDA HERE

Wisconsin Department of Transportation

Division of Transportation Systems Development
Bureau of Project Development
4822 Madison Yards Way, 4th Floor South
Madison, WI 53705

Telephone: (608) 266-1631
Facsimile (FAX): (608) 266-8459

March 7, 2023

NOTICE TO ALL CONTRACTORS:

Proposal #12:

1228-22-70, WISC 2023278
IH 43 North South Freeway
Brown Street to Capitol Drive
IH 43
Milwaukee County

1228-22-80
IH 43 North South Freeway
Center St Bridge B-40-208
Local Street
Milwaukee County

1228-22-81
IH 43 North South Freeway
Center B-40-208, Locust B-40-207
Local Street
Milwaukee County

1228-22-87
IH 43 North South
Wright St Bridge B-40-209
Local Street
Milwaukee County

Letting of March 14, 2023

This is Addendum No. 01, which provides for the following:

Special Provisions:

Revised Special Provisions	
Article No.	Description
4	Prosecution and Progress
6	Traffic
7	Holiday and Special Event Work Restrictions
9	Other Contracts

Added Special Provisions	
Article No.	Description
182	Removing Ancillary Structure S-40-228
183	Removing Temporary Precast Trench Drain, Item 204.9090.S.0001
184	Portable Automated Real-Time Traffic Queue Warning System, Item 643.1200.S.
185	Concrete Barrier Transition Type V32 to S32A, Item SPV.0060.0019; Concrete Barrier Transition Type V42 to S42A, Item SPV.0060.0020; Concrete Barrier Transition Type S56 to S32A, Item SPV.0060.0021; Concrete Barrier Transition Type S56 to S42A, Item SPV.0060.0022; Concrete Barrier Transition Type V56 to S32A, Item SPV.0060.0023; Concrete Barrier Transition Type V56 to S42A, Item SPV.0060.0024; Concrete Barrier Transition Type S32A to S42A, Item SPV.0060.0025;

	Concrete Barrier Transition Type V51 to S56 Special, Item SPV.0060.0026; Concrete Barrier Transition Type V56 to V42 Special, Item SPV.0060.0027; Concrete Barrier Transition Type V42 to S56A, Item SPV.0060.0028; Concrete Barrier Transition Type V56 to V56 Special I, Item SPV.0060.0029; Concrete Barrier Transition Type V56 to V56 Special II, Item SPV.0060.0030; Concrete Barrier Transition Type V32 to S42A, Item SPV.0060.0031.
186	Concrete Barrier (Type) Light Pole Base, Items SPV.0060.0032-0034
187	Moving State Furnished Signs, Item SPV.0060.0035
188	Install State Furnished Signs, Item SPV.0060.0036
189	Cleaning Drainage Structures, Item SPV.0060.0037
190	Ultrasonic Impact Treatment Procedure, Item SPV.0060.0402

Deleted Special Provisions	
Article No.	Description
109	Concrete Barrier Transition Type V51 to S56, Item SPV.0060.0014; Concrete Barrier Transition Fixed Object Protection Type S42 to S42C, Item SPV.0060.0015.

Schedule of Items:

Revised Bid Item Quantities					
Bid Item	Item Description	Unit	Proposal Total Prior to Addendum	Proposal Quantity Change (-)	Proposal Total After Addendum
204.0157	Removing Concrete Barrier	LF	31,131	138	31,269
204.0220	Removing Inlets	EACH	320	6	326
204.0245.0002	Removing Storm Sewer 15-Inch	LF	2,126	71	2,197
205.0501.S	Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	TON	624	204	828
305.0120	Base Aggregate Dense 1 ¼-Inch	TON	93,313	2,697	96,010
520.8000	Concrete Collars for Pipe	EACH	287	9	296
603.0105	Concrete Barrier Single-Faced 32-Inch	LF	167	102	269
603.1132	Concrete Barrier Type S32	LF	238	247	485
603.1142	Concrete Barrier Type S42	LF	6,988	-5,325	1,663
603.1232	Concrete Barrier Type S32A	LF	2,224	-693	1,531
603.1242	Concrete Barrier Type S42A	LF	7,810	-999	6,811
603.1442	Concrete Barrier Type S42C	LF	104	407	511
603.1456	Concrete Barrier Type S56C	LF	693	-15	678
603.2142	Concrete Barrier Fixed Object Protection Type S42	LF	2	622	624
603.3611	Concrete Barrier Transition Type V32 to S32	EACH	10	-9	1
603.3655	Concrete Barrier Transition Type V42 to S42	EACH	30	-16	14
603.8000	Concrete Barrier Temporary Precast Delivered	LF	54,899	2170	57,069
603.8125	Concrete Barrier Temporary Precast Installed	LF	55,234	2185	57,419
603.8500	Anchoring Concrete Barrier Temporary Precast	LF	1,181	380	1,561
608.0315	SSPRC Class III 15-Inch	LF	4,219	76	4,295
611.0535	Manhole Covers Type J-Special	EACH	103	1	104
611.0654	Inlet Covers Type V	EACH	206	5	211
611.2005	Manholes 5-Ft Diameter	EACH	48	1	49

611.3004	Inlets 4-Ft Diameter	EACH	315	6	321
614.0905	Crash Cushions Temporary	EACH	21	4	25
634.0622	Posts Wood 4x6-Inch x 22-Ft	EACH	114	12	126
634.0885	Posts Tubular Steel 2x2x8.5 Ft	EACH	12	7	19
637.2210	Signs Type II Reflective H	SF	2,545.105	-146.250	2,398.855
637.2230	Signs Type II Reflective F	SF	1,120.000	-4.500	1,115.500
638.2102	Moving Signs Type II	EACH	3	7	10
638.2602	Removing Signs Type II	EACH	260	-5	255
638.3000	Removing Small Sign Supports	EACH	160	-2	158
643.0300	Traffic Control Drums	DAY	395,175	22,673	417,848
643.0420	Traffic Control Barricades Type III	DAY	36,611	1,505	38,116
643.0705	Traffic Control Warning Lights Type A	DAY	72,473	3,010	75,483
643.0715	Traffic Control Warning Lights Type C	DAY	71,131	1,230	72,361
643.0800	Traffic Control Arrow Boards	DAY	3,375	128	3,503
643.0900	Traffic Control Signs	DAY	117,305	5,423	122,728
643.0910	Traffic Control Covering Signs Type I	EACH	19	5	24
643.0920	Traffic Control Covering Signs Type II	EACH	123	47	170
643.1000	Traffic Control Signs Fixed Message	SF	1,549	-6	1,543
643.1050	Traffic Control Signs PCMS	DAY	929	70	999
643.3105	Temporary Marking Line Paint 4-Inch	LF	357,563	-732	356,831
643.3120	Temporary Marking Line Epoxy 4-Inch	LF	68,843	80,147	148,990
643.3150	Temporary Marking Line Removable Tape 4-Inch	LF	25,749	732	26,481
643.3205	Temporary Marking Line Paint 8-Inch	LF	59,555	-219	59,336
643.3220	Temporary Marking Line Epoxy 8-Inch	LF	15,870	9,253	25,123
643.3250	Temporary Marking Line Removable Tape 8-Inch	LF	1,513	219	1,732
643.3505	Temporary Marking Arrow Paint	EACH	17	-2	15
643.3760	Temporary Marking Raised Pavement Marker Type 1	EACH	474	61	535
643.3805	Temporary Marking Stop Line Paint 18-Inch	LF	173	-151	22
646.9000	Marking Removal Line 4-Inch	LF	52,056	165,347	217,403
646.9100	Marking Removal Line 8-Inch	LF	13,985	14,797	28,782
646.9300	Marking Removal Special Marking	EACH	8	2	10
ASP.1.1PA	On-the-Job Training Pre-Apprentice at $5.00/HR	HRS	1,500	3,500	5,000
ASP.1.1PAA	On-the-Job Training Pre-Apprentice with Advancement at $10.00/HR	HRS	5,000	-3,500	1,500

Added Bid Item Quantities

Bid Item	Item Description	Unit	Proposal Total Prior to Addendum	Quantity Added	Proposal Total After Addendum
204.9060.S.0001	Removing Temporary Precast Trench Drain	LF	0	478	478
603.0405	Concrete Barrier Transition Section 32-Inch	LF	0	34	34
603.1332	Concrete Barrier Type S32B	LF	0	26	26
603.1342	Concrete Barrier Type S42B	LF	0	114	114
603.3311	Concrete Barrier Transition Type NJ32DF to S32	EACH	0	1	1
643.1200.S	Portable Automated Real-Time Traffic Queue Warning System	DAY	0	330	330
643.3550	Temporary Marking Arrow Removable Tape	EACH	0	2	2
643.3850	Temporary Marking Stop Line Removable Tape	LF	0	22	22
657.0536	Monotube Arms 35-FT-Special	EACH	0	5	5
657.0541	Monotube Arms 40-FT-Special	EACH	0	2	2

657.0546	Monotube Arms 45-FT-Special	EACH	0	1	1
SPV.0060	0019. Concrete Barrier Transition Type V32 to S32A	EACH	0	5	5
SPV.0060	0020. Concrete Barrier Transition Type V42 to S42A	EACH	0	13	13
SPV.0060	0021. Concrete Barrier Transition Type S56 to S32A	EACH	0	1	1
SPV.0060	0022. Concrete Barrier Transition Type S56 to S42A	EACH	0	4	4
SPV.0060	0023. Concrete Barrier Transition Type V56 to S32A	EACH	0	2	2
SPV.0060	0024. Concrete Barrier Transition Type V56 to S42A	EACH	0	9	9
SPV.0060	0025. Concrete Barrier Transition Type S32A to S42A	EACH	0	15	15
SPV.0060	0026. Concrete Barrier Transition Type V51 to S56 Special	EACH	0	1	1
SPV.0060	0027. Concrete Barrier Transition Type V56 to V42 Special	EACH	0	1	1
SPV.0060	0028. Concrete Barrier Transition Type V42 to S56A	EACH	0	1	1
SPV.0060	0029. Concrete Barrier Transition Type V56 to V56 Special I	EACH	0	1	1
SPV.0060	0030. Concrete Barrier Transition Type V56 to V56 Special II	EACH	0	1	1
SPV.0060	0031. Concrete Barrier Transition Type V32 to S42A	EACH	0	1	1
SPV.0060	0032. Concrete Barrier Type S42A Light Pole Base	EACH	0	45	45
SPV.0060	0033. Concrete Barrier Type V42 Light Pole Base	EACH	0	1	1
SPV.0060	0034. Concrete Barrier Type V42 Special Light Pole Base	EACH	0	1	1
SPV.0060	0035. Moving State Furnished Signs	EACH	0	2	2
SPV.0060	0036. Install State Furnished Signs	EACH	0	2	2
SPV.0060	0037. Cleaning Drainage Structures	EACH	0	40	40
SPV.0060	0402. Ultrasonic Impact Treatment Procedure	EACH	0	336	336

Deleted Bid Item Quantities					
Bid Item	Item Description	Unit	Proposal Total Prior to Addendum	Proposal Quantity Change (-)	Proposal Total After Addendum
603.3513	Concrete Barrier Transition Type S32 to S36	EACH	5	-5	0
603.3535	Concrete Barrier Transition Type S36 to S42	EACH	9	-9	0
603.3559	Concrete Barrier Transition Type S42 to S56	EACH	19	-19	0
603.3699	Concrete Barrier Transition Type V56 to S56	EACH	11	-11	0
603.8505	Anchoring Concrete Barrier Temporary Precast on Bridge Decks	LF	357	-357	0
654.0115	Concrete Bases Type F	EACH	47	-47	0
657.0535	Monotube Arms 35-FT	EACH	5	-5	0
657.0540	Monotube Arms 40-FT	EACH	2	-2	0
657.0545	Monotube Arms 45-FT	EACH	1	-1	0
SPV.0060	0014. Concrete Barrier Transition Type V51 to S56	EACH	1	-1	0

SPV.0060	0015. Concrete Barrier Fixed Object Protection Type S42 to Concrete Barrier Type S42C	EACH	1	-1	0

Plan Sheets:

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
2	Removed note 15, “Finishing Roadway shall include cleanout of existing drainage structures as directed by the engineer.”
40	Updated table and title to include vertical concrete barrier.
41	Updated detail for concrete barrier S42A only, removed references to S32A barrier.
42	Updated light pole location stations for some light pole moves.
59	Updated removal of existing concrete barrier along Ramp KC2.
74	Removals coordinated with URT Project 1228-22-71 to the north.
75-85	Concrete barrier transitions replaced with non-standard concrete barrier transitions in median areas with S32A and S42A concrete barrier at light poles, sign bases and integral barrier.
257	Added note for temporarily moving mile markers.
265-266	Signs coordinated with URT Project 1228-22-71 to the north.
279	Added note for temporarily moving mile markers.
287-288	Signs coordinated with URT Project 1228-22-71 to the north.
336-337	Moved light pole 8 ft south (from STA 831+75 to STA 831+67).
338-339	Moved light pole 3 ft south (from STA 844+79 to STA 844+76).
340-341	Moved light pole 4 in south (from STA 860+18 to STA 860+17).
348-349	Moved light pole 7.7 ft south (from STA 910+63 to STA 910+55) and another light pole 3.1 ft north (from STA 912+42 to STA 912+45).
350-351	Moved light pole 2.7 ft south (from STA 921+34 to STA 921+31).
440-441	Moving Geico sign that was installed as part of the URT project.
444	Added temp barrier to shield temp light pole hazard.
446	Moving Geico sign that was installed as part of the URT project.
448-451	Added temp barrier to shield temp light pole hazard and match URT project staging.
453	Added Traffic Queue Warning System (QWS).
454-455	Replaced lane shifting sign.
457	Added WO4-3R signs and lane shifting signs.
458	Added temp barrier to shield temp light pole hazard.
460	Added fixed message signs.
461	Added sensor for Traffic Queue Warning System (QWS).
462	Added R3-33R sign & temp barrier to shield temp light pole hazard.
464-465	Staging coordinated with URT Project 1228-22-71 to the north.
467	Added Traffic Queue Warning System (QWS).
468-469	Replaced lane shifting sign.
471	Added WO4-3R signs and lane shifting signs.
475	Added Traffic Queue Warning System (QWS).
476	Added R3-33R sign.
483	Lengthened shifting taper to 75 ft.
485	Added Traffic Queue Warning System (QWS).
489	Added Traffic Queue Warning System (QWS).
491	Added Traffic Queue Warning System (QWS).
495-496	Added Traffic Queue Warning System (QWS).
499	Lengthened shifting taper to 75 ft.
503	Added Traffic Queue Warning System (QWS).
506-507	Added Traffic Queue Warning System (QWS).
509	Added nighttime full freeway closure for storm work under “traffic.”

510	Added Traffic Queue Warning System (QWS).
513	Added sensor for Traffic Queue Warning System (QWS).
517-518	Added Traffic Queue Warning System (QWS).
557	Moved temp barrier wall to match structure plans. Barrier is no longer pinned.
560-561	Moved temp barrier wall to match structure plans.
568	Moved temp barrier wall to match structure plans.
571-572	Moved temp barrier wall to match structure plans. Temp pavement marking on new pavement and bridge to be removable tape.
578	Revised note to specify full freeway closure (IH 43 NB & SB) for deck removal & full freeway closure (NB only) for deck stripping. IH 43 SB will be staged during deck stripping.
593	Revised note to remove reference to deck stripping.
658	Revised the Removing Concrete Barrier quantity for Ramp KC2.
664	Moved “Removing Inlets” to a separate sheet.
674	Moved rows over to added sheet.
676	Revised the Base Aggregate Dense 1 ¼-Inch total quantity to include Stage 5 and the contaminated soil quantity (CY quantity accidently referenced).
687	Revised the Concrete Barrier quantities
701-706	Revised the following MQ tables: Concrete Barrier Temporary, Temporary Pavement Marking Items, Fixed Message Signs, and Traffic Control. Added FST signs and Cleaning Drainage Structures.
715	Storm sewer staging coordinated with URT Project 1228-22-71 to the north.
724	Storm sewer staging coordinated with URT Project 1228-22-71 to the north.
727	Storm sewer staging coordinated with URT Project 1228-22-71 to the north.
729-752	Revised quantities after coordination with project 1228-22-71.
764-766	Added an SPV item for the light pole bases (will be a roadway item)
792	Miscellaneous Quantities (Monotube Arms item revisions)
799	Miscellaneous Quantities (Monotube Arms item revisions)
806	Miscellaneous Quantities (Monotube Arms item revisions)
812	Miscellaneous Quantities (Monotube Arms item revisions)
901-914	SDD Concrete Barrier Temporary Precast, 12’-6”
1182-1183	Revised List of Drawings and Quantities to include Ultrasonic Impact Treatment Procedure.
1185	Added note to legend about cleaning existing reinforcement bars.
1198	Added Ultrasonic Impact Treatment (UIT) Locations detail.
1208	Revised Quantities to include Ultrasonic Impact Treatment Procedure and General Notes.
1219	Added Ultrasonic Impact Treatment (UIT) detail.

Added Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of why sheet was added)
41A-41B	Added concrete light pole base details for V42.
42A-42Z	Added details for the non-standard concrete barrier transitions.
223A	Storm sewer staging coordinated with URT Project 1228-22-71 to the north.
256A	Storm sewer staging coordinated with URT Project 1228-22-71 to the north.
452A	Added Traffic Queue Warning System (QWS).
466A	Added Traffic Queue Warning System (QWS).
479A-479L	Added an over winter stage.
588A-588B	Added full freeway closure detours for traffic control setup between stages, NB & SB.
664A	Storm sewer staging coordinated with URT Project 1228-22-71 to the north.
674A	Storm sewer staging coordinated with URT Project 1228-22-71 to the north.
687A	Revised Concrete Barrier table to two sheets. One for concrete barrier and light pole bases and the other for concrete barrier transitions.
738A-738B	Couple sheets added to the signing removal quantities.
999A	SDD Traffic Control, Two Lane Closure on Freeway or Expressway

999B	SDD Traffic Control, Two Lane Closure on Freeway or Expressway, Short Term (Less than 24 hours)

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

1228-22-70/80/81/87

March 7, 2023

Special Provisions

4. Prosecution and Progress.

Replace the sixth under subsection titled **Stage I Construction** *under section titled* **2023 Construction** *with the following:*

- Clearing for temporary lighting was completed as a separate contract by others. Remove all downed wood piles and complete all grubbing operations prior to the installation of temporary lighting and FTMS work.

Add the following under section titled **Local Street Work Restrictions***:*

Definitions
The following definitions apply to this contract for local street closure restrictions:

Peak Hours
6:00 AM – 9:00 AM
2:00 PM – 9:00 PM

Off-Peak Hours
9:00 AM – 2:00 PM
9:00 PM – 6:00 AM

6. Traffic.

Add the following to the end of the section titled **Detours***:*

When IH 43 NB on-ramp from North Avenue is closed, NB traffic on 6th Street and WB traffic on STH 175/Fond Du Lac Avenue will head north on 6th Street; veer left onto Halyard Street/7th Street, continue north on 7th Street and enter the freeway via the IH 43 NB on-ramp at Locust Street.

IH 43 NB Full Closure Detour:

IH 43 Stage V: NB traffic on IH 43 will exit the freeway via the off-ramp to STH 190/Capitol Drive, continue east on STH 190/Capitol Drive, turn left on Port Washington Road, then turn left on Fiebrantz Avenue, continue west until entering the freeway.

Locust Street: NB traffic on IH 43 will exit the freeway via the off-ramp to Locust Street, continue north on 7th Street and enter the freeway via the IH 43 NB on-ramp at Locust Street.

Burleigh Street: NB traffic on IH 43 will exit the freeway via the off-ramp to Locust Street, continue north on 7th Street, veer left on Access Road/7th Street and enter the freeway via the IH 43 NB on-ramp at Atkinson Avenue.

2023 Staging Setup: NB traffic on IH 43 will exit the freeway via the off-ramp to STH 145/Fond Du Lac Avenue, travel northwest on STH 145/Fond Du Lac Avenue, then travel north on STH 57/20th Street, veer right along Teutonia Avenue, then travel east on Silver Spring Drive and enter the freeway via the NB on-ramp from Silver Spring Drive.

IH 43 SB Full Closure Detour:

Locust Street: SB traffic on IH 43 will exit the freeway via the off-ramp to Locust Street, continue south on 8th Street and enter the freeway via the IH 43 SB on-ramp at Locust Street.

Burleigh Street: SB traffic on IH 43 will exit the freeway via the off-ramp to STH 57/Green Bay Avenue, continue southeast on STH 57/Green Bay Avenue/Doctor M.L.K. Jr Drive, turn right on Locust Street, continue west on Locust Street, and enter the freeway via the IH 43 SB on-ramp at Locust Street.

2023 Staging Setup: SB traffic on IH 43 will exit the freeway via the off-ramp to Silver Spring Drive, continue west on Silver Spring Drive, then travel south on Teutonia Avenue, veer right along STH 57/20th Street, then travel southeast on STH 145/Fond Du Lac Avenue and enter the freeway via the SB on-ramp from STH 145/Fond Du Lac Avenue.

Add the following to the section titled **Pedestrian Detours***:*

STH 190/Capitol Drive Sidewalk Closure Detour:

Pedestrians using the sidewalk on the south side of STH 190/Capitol Drive will cross the street at Doctor M.L.K. Jr Drive or 7th Street and use the sidewalk on the north side.

7. Holiday and Special Event Work Restrictions.

Freeway Special Event Restrictions

Insert the following before the second to last paragraph:

During the Republican National Convention (RNC), no lane, ramp, or full closures will be allowed between noon Friday, July 12, 2024 to 6:00 pm Friday, July 19, 2024 in both directions.

Do not perform work; haul equipment; or haul materials, on, along, or across any portion of IH 43, including ramps. Any exceptions to this work restriction must be approved by the engineer in writing.

Roadway and traffic control maintenance required by the contractor shall be performed as needed during this work restriction. Coordinate with the project engineer for approval in advance of performing necessary roadway or traffic control maintenance work.

9. Other Contracts.

Add the following to the end of the section:

Project 2674-02-70
C Milwaukee W Walnut Street
N 20th Street to N 12th Street
WisDOT Design contact: Greg Hafeman; (262) 548-8677

109. DELETED

182. Removing Ancillary Structure S-40-228.

Replace standard spec 204.3.2.4(1) with the following:

Existing ancillary structure S-40-228 has been removed under project 1228-22-71. Remove the existing concrete foundation and drilled shafts. Dispose of structure components off-site.

183. Removing Temporary Precast Trench Drain, Item 204.9090.S.0001.

A Description

This special provision describes removing Temporary Precast Trench Drain in accordance to the pertinent

provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Removing Temporary Precast Trench Drain in lineal feet, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9090.S.0001	Removing Temporary Precast Trench Drain	LF

stp-204-025 (20150630)

184. Portable Automated Real-Time Traffic Queue Warning System, Item 643.1200.S.

A Description

This special provision describes providing, repositioning, operating, maintaining, monitoring, calibrating, testing and removing a portable automated real-time traffic queue warning system (QWS) capable of measuring vehicular speeds at downstream sections of a roadway, and displaying the speed information on portable changeable message signs (PCMS) at upstream locations.

B Materials

Provide QWS components and software that is National Transportation Communications for ITS Protocol (NTCIP) compliant.

B.1 Portable Changeable Message Signs (PCMS)

Provide PCMS conforming to standard spec 643. Ensure each PCMS is integrated with a modem, and other equipment (e.g., automated system manager) mounted on it, and acts as a single “device” for communicating with similarly integrated “devices” and displaying real-time traffic condition information.

B.2 Portable Traffic Sensors (PTS)

Provide PTS that are nonintrusive and capable of capturing vehicle speed in mph. Integrate each sensor with a modem to communicate with the automated system manager (ASM).

B.3 Automated System Manager (ASM)

Provide an ASM that assesses current traffic data captured by the system PTS and communicates appropriate messages to the motorists through PCMS based on predetermined speed thresholds and messages.

B.4 System Communications

Ensure QWS communications meet the following requirements:

1. Perform required configuration of the QWS’s communication system automatically during system initialization.
2. Communication between the server and any individual PCMS or PTS are independent through the full range of deployed locations, and do not rely upon communications with any other PCMS or PTS.
3. Incorporate an error detection/correction mechanism into the QWS communication system to ensure the integrity of all traffic condition data and motorist information messages.

B.5 System Acceptance

Submit vendor verification to the engineer and Bureau of Traffic Operations (DOTBTOworkzone@dot.wi.gov) 14 calendar days before the pre-construction meeting that the system will adequately perform the functions specified in this special provision. Adequate verification includes past successful performance of the system, literature and references from successful use of the system by other agencies, and/or demonstration of the system.

Provide contact information for a designated representative responsible for monitoring the performance of the system and for making modifications to the operational settings as the engineer directs.

Provide all testing and calibration equipment.

C Construction

C.1 General

Install and reposition Portable Automated Real-Time Queue Warning System per plan or as the engineer directs. Provide plan to the engineer and Bureau of Traffic Operations (DOTBTOworkzone@dot.wi.gov) 14 calendar days before the pre-construction meeting.

PTS may be mounted on PCMS, arrow board or other trailer devices.

Install PTS at the following locations:

1. Place first PTS within the lane closure taper.
2. Place second PTS 5,700 feet upstream of the lane closure taper.
3. Place third PTS 2 miles upstream of the lane closure taper, if applicable.
4. Place any additional sensors even distances (in miles) upstream of the third PTS or as directed by the Engineer.

Install the PCMS at the following locations, delineated by 5 drums:

1. Place first PCMS (PCMS #2) 5,700 feet upstream of the lane closure taper.
2. Place second PCMS 2 miles upstream of the lane closure taper.
3. Place third PCMS 3 miles upstream of the lane closure taper.
4. Place any additional PCMS even distances (in miles) upstream of the third PCMS or as directed by the Engineer.

Number the devices in chronological order so they are visible from the shoulder with 6-inch white high reflective sheeting.

Provide technical personnel for all system calibration, operation, maintenance, and timely on-call support services.

Promptly correct the system within 24 hours of becoming aware of a deficiency in the operation or individual part of the system. A minimum of three days before deployment, place the QWS and demonstrate to the department that the QWS is operational.

Maintain the QWS for the duration of the project. Ensure the system operates continuously (24 hours, 7 days a week) in the automated mode throughout the duration of the project.

Remove the system upon project completion.

C.2 Reports

Provide an electronic copy of a weekly summary report of all data via email to the engineer. Ensure the report includes, at a minimum, the average speed per sensor, time in congestive state per sensor and number of triggers per day.

C.3 Meetings

Attend mandatory in-person pre-construction meetings with the department. Attend additional meetings as deemed necessary by the department. These meetings may be held in person or via teleconference, as scheduled by the department.

C.4 Programming

C.4.1 General

Program the QWS to ensure that the following general operations are performed:

1. Provide a password protected login to the ASM, website and all other databases.
2. Automatic setting of the PCMS message sequences to reflect current traffic flow status updated every 60 seconds for a congestion message. Ensure to remove a congestion message when 180 seconds of average traffic speeds above the current level are observed, or utilize a customized frequency as determined by the engineer.
3. The PCMS activate based on pre-determined speed thresholds.
    - PCMS #2 shall activate based on traffic speeds at the PTS within the lane closure tape.
    - All other PCMS in the QWS shall activate based on traffic speeds at the next downstream PTS, typically 1 mile downstream or based on traffic speeds at the two next downstream PTS.
3. Provide real-time data from the ASM to a website with a full color mapping feature and refresh every 60 seconds. Make data on website available to the department staff at all times for the duration of the work zone activity. Ensure website includes:
    - Vehicle speeds
    - PCMS messaging
    - Device locations
4. Archive all traffic data and PCMS messages in a Microsoft Excel format with date and time stamps.
5. Configure the website to quantify system failures which includes communication disruption between any devices in the system configuration, PCMS malfunctioning, PTS malfunction, loss of power, low battery, etc.
6. Automatically generate and send an email alert any time a user specified queue is detected by the system.
7. Provide default and advisory messages automatically based on traffic conditions.
8. Ensure the system autonomously restarts in case of any power failure.
9. Provide the department access to manually override PCMS messages for a user-specified duration, after which automatic operation will resume display of messages appropriate to the prevailing traffic conditions. Document all override messages.

C.4.2 System Operation Strategy

Arrange for the vendor/manufacturer to coordinate system operation, detection, trends/thresholds, and messaging parameters with the engineer.

The sequences below are a minimum requirement and can be adjusted by the engineer at their discretion.

Free Flow:

If the current speed on a roadway section is at or above 40 mph, the upstream PCMS shall display nothing except for lighting the four corners (flashing caution mode) to show that it is on.

Slow Traffic:

If the current speed on any downstream section of the roadway is between the 39 mph and 20 mph (for example, 35 mph), the following two phase messages will be displayed on the upstream PCMS as shown below:

EVENT	FRAME 1	FRAME 2
Speeds 20 mph to 39 mph	SLOW TRAFFIC AHEAD	PREPARE TO STOP

Stopped Traffic:

If the current speed on a roadway section of the roadway drops below 20 mph, the following two phase messages will be displayed on the upstream PCMS as shown below:

EVENT	FRAME 1	FRAME 2
Speeds 0 mph to 19 mph	TRAFFIC STOPPED AHEAD	EXPECT DELAYS

C.5 Calibration and Testing

At the beginning of the project perform a successful field test and calibration at the QWS location to verify the system is detecting accurate vehicle speeds, and accurately relaying the information to the ASM and the PCMS.

Send email of successful calibration and testing to the engineer.

D Measurement

The department will measure Portable Automated Real-Time Traffic Queue Warning System by the day, acceptably completed, measured as each complete system per roadway.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
643.1200.S	Portable Automated Real-Time Traffic Queue Warning System	DAY

Payment is full compensation for providing, repositioning, operating, maintaining, monitoring, calibrating, testing, and removing the complete system consisting of PCMS, PTS, ASM, and system communications.

Failure to correct a deficiency to the PCMS, PTS, or ASM within 24 hours after notification from the engineer or the department will result in a one-day deduction of the measured quantity for each day in which the deficiency is not corrected.

Failure to correct the website within 24 hours after notification from the engineer will result in a 10% reduction of the day quantity for each day the website is down.

The engineer will have sole discretion to assess the deductions for an improperly working QWS.

stp-643-045 (20200629)

185. Concrete Barrier Transition Type V32 to S32A, Item SPV.0060.0019; Concrete Barrier Transition Type V42 to S42A, Item SPV.0060.0020; Concrete Barrier Transition Type S56 to S32A, Item SPV.0060.0021; Concrete Barrier Transition Type S56 to S42A, Item SPV.0060.0022; Concrete Barrier Transition Type V56 to S32A, Item SPV.0060.0023; Concrete Barrier Transition Type V56 to S42A, Item SPV.0060.0024; Concrete Barrier Transition Type S32A to S42A, Item SPV.0060.0025; Concrete Barrier Transition Type V51 to S56 Special, Item SPV.0060.0026; Concrete Barrier Transition Type V56 to V42 Special, Item SPV.0060.0027; Concrete Barrier Transition Type V42 to S56A, Item SPV.0060.0028; Concrete Barrier Transition Type V56 to V56 Special I, Item SPV.0060.0029; Concrete Barrier Transition Type V56 to V56 Special II, Item SPV.0060.0030; Concrete Barrier Transition Type V32 to S42A, Item SPV.0060.0031.

A Description

This special provision describes constructing Concrete Barrier Transition (Type) according to standard spec 603, details shown in the plans, and as hereinafter.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Concrete Barrier Transition (Type) by each individual unit, acceptably placed according to the contract.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0019	Concrete Barrier Transition Type V32 to S32A	EACH
SPV.0060.0020	Concrete Barrier Transition Type V42 to S42A	EACH
SPV.0060.0021	Concrete Barrier Transition Type S56 to S32A	EACH
SPV.0060.0022	Concrete Barrier Transition Type S56 to S42A	EACH
SPV.0060.0023	Concrete Barrier Transition Type V56 to S32A	EACH
SPV.0060.0024	Concrete Barrier Transition Type V56 to S42A	EACH
SPV.0060.0025	Concrete Barrier Transition Type S32A to S42A	EACH
SPV.0060.0026	Concrete Barrier Transition Type V51 to S56 Special	EACH
SPV.0060.0027	Concrete Barrier Transition Type V56 to V42 Special	EACH
SPV.0060.0028	Concrete Barrier Transition Type V42 to S56A	EACH
SPV.0060.0029	Concrete Barrier Transition Type V56 to V56 Special I	EACH
SPV.0060.0030	Concrete Barrier Transition Type V56 to V56 Special II	EACH
SPV.0060.0031	Concrete Barrier Transition Type V32 to S42A	EACH

186. Concrete Barrier Type S42A Light Pole Base, Item SPV.0060.0032; Concrete Barrier Type V42 Light Pole Base, Item SPV.0060.0033; Concrete Barrier Type V42 Special Light Pole Base, Item SPV.0060.0034;

A Description

This special provision describes furnishing and installing concrete barrier light pole bases as shown on the plans and as hereinafter provided.

B Materials

B.1 Concrete Barrier

Furnish materials according to standard spec 603.2.

B.2 Concrete Bases

Furnish materials according to standard spec 654.2.1, Concrete Bases.

B.3 Junction Boxes

Furnish 18 X 12 X 6 – inch 316 stainless steel junction boxes with a recessed cover. Junction box shall meet NEMA 4 standards for protection against windblown dust and rain and splashing water. Furnish standard covers with stainless steel hex-head mounting bolts with each box assembly. Boxes shall have a neoprene gasket with provision for allowing drainage out of the box.

Junction boxes shall be furnished with factory installed mounting buttons as required to attach grounding lugs and mechanical connectors as shown on the plans. Provide engineer- approved protection that totally and permanently seals connections with a silicone or rubberized caulk. One junction box per base is required.

B.4 Electrical Wiring Connectors

Furnish rubber insulated submersible secondary connectors rated for copper conductors (minimum 12 AWG) as required for splicing in each location. Secondary connectors shall include silicone grease and CO-OX oxide inhibitor and meet the performance requirements of ANSI C119.1 and C119.4.

B.5 Conduit, Fittings and Expansion/Deflection Couplings

Furnish rigid non-metallic schedule 40 PVC conduit and fittings as shown on the plans conforming to the pertinent provisions of standard spec 652.

Furnish UL listed expansion/deflection coupling joints as shown on the plans. Expansion/deflection coupling joints shall be rated for use with rigid metallic conduit and provide a watertight and corrosion resistant connection which allows for movement in all directions. Couplings shall maintain a constant inner diameter and provide a smooth insulated wireway for protection of the conductors. Couplings shall include an integral bonding jumper. Two couplings per base are required.

B.6 Anchor Bolt Assemblies

Furnish anchors of the size and spacing as given on the plans, and that conform to ASTM A449 or AASHTO M 314 GR 55. The upper 8 inches of the bolts, nuts, and washers shall be hot-dipped galvanized according to ASTM A153, Class C. Provide enlarged threads on nuts for proper fit after galvanizing.

B.7 Expansion Material

Furnish 3/4-inch expansion material according to standard spec 415.2.3, Expansion Joint Filler. Use elastic type joint filler to seal the surface of the expansion joint.

C Construction

Perform work according to the pertinent requirements of standard spec 603.3 and 654.3, the plans, standard detail drawings, and as hereinafter provided.

Install junction boxes as shown in the plans and as the manufacturer directs.

Install expansion/deflection couplings as the manufacturer directs. Coordinate the connection of the conduit into the receiving roadway barrier prior to pouring the concrete base.

All secondary connectors and miscellaneous wiring, fusing and grounding connections shall be installed according to standard spec 659.3.2 and as the manufacturer directs.

Provide two nuts and two washers per anchor bolt, and install per light standard manufacturer's recommendations.

D Measurement

The department will measure Concrete Barrier (Type) Light Pole Base by each unit, 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.0060.0032	Concrete Barrier Type S42A Light Pole Base	EACH
SPV.0060.0033	Concrete Barrier Type V42 Light Pole Base	EACH
SPV.0060.0034	Concrete Barrier Type V42 Special Light Pole Base	EACH

Payment for the Concrete Barrier (Type) Light Pole Base bid items is full compensation for furnishing and installing all materials including conduit, couplings, bushings, caps or plugs or both, anchor rods, nuts, washers, expansion material, grounding electrodes, exothermic welds, copper equipment grounding conductors, bar steel reinforcement, junction boxes, and concrete; for excavating, backfilling, and disposing of surplus materials; and for furnishing and installing the anchor bolt assemblies.

187. Moving State Furnished Signs, Item SPV.0060.0035.

A Description

Work under this special provision shall comply with standard spec 638 as described for Moving and Erecting State-Owned Signs, except as otherwise defined for this item.

B (Vacant)

C Construction

Move and erect State-owned signs as described in standard spec 638.3.7. Exact locations for sign installation shall be determined in the field with the Engineer. At the completion of the project, remove the signs and return them to the WisDOT Sign Shop. Contact Randy Hoyt 10 days in advance to arrange for delivery.

D Measurement

The department will measure Moving State Furnished Signs by each individual sign location, acceptably moved, installed, maintained and removed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0035	Moving State Furnished Signs	EACH

Payment is full compensation for the work required under this item: removing the sign in the field, moving the sign to its new location, installing and maintaining the sign, removing the sign, returning the sign to the WisDOT Sign Shop, and restoring the site. Payment does not include compensation for furnishing new wood posts, which are paid for under the pertinent contract bid item.

188. Install State Furnished Signs, Item SPV.0060.0036.

A Description

Work under this special provision shall comply with standard spec 638 as described for Erecting State-Owned Signs, except as otherwise defined for this item.

Contact Chris Hager 10 days in advance to coordinate pickup or delivery of the Department Furnished Freeway Service Team (FST) signs.

B (Vacant)

C Construction

Erect State-owned signs as described in standard spec 638.3.7 as shown on the plans. Exact locations for sign installation shall be determined in the field with the Engineer. At the completion of the project, remove the signs and return them to the WisDOT Sign Shop. Contact Randy Hoyt 10 days in advance to arrange for delivery.

D Measurement

The department will measure Install State Furnished Signs by each individual sign location, acceptably installed, maintained and removed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0036	Install State Furnished Signs	EACH

Payment is full compensation for the work required under this item: picking up the sign, installing and maintaining the sign, removing the sign, returning the sign to the WisDOT Sign Shop, and restoring the site. Payment does not include compensation for furnishing new wood posts, which are paid for under the pertinent contract bid item.

189. Cleaning Drainage Structures, Item SPV.0060.0037.

A Description

This special provision describes cleaning drainage structures as directed by the engineer.

B (Vacant)

C Construction

Completely remove all solids removed from the clogged sewers from the sewer system and haul them off the project for disposal. Silts resulting from any flushing or jetting operation must be prevented from escaping into sewers or waterways. Inspect the drainage structure for repair work and reinstall cover.

D Measurement

The department will measure Cleaning Drainage Structures by each unit of completed and accepted 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.0060.0037	Cleaning Drainage Structures	EACH

Payment is full compensation for furnishing all materials to clean out drainage including silt and solid retention for removing and devices; for removing and properly disposing materials; paying all associated fees for permits, licenses or disposal of materials.

190. Ultrasonic Impact Treatment Procedure, Item SPV.0060.0402.

A Description

Ultrasonic Impact Treatment (UIT) Procedure is used to introduce compressive residual stresses in the existing weld at the ends of the cover plates. This procedure improves the fatigue life of the weld.

B (Vacant)

C Construction

UIT shall be accomplished in accordance to the equipment manufacturer's recommendations, except as specifically described in the contract documents.

Provide UIT equipment with a frequency of either 27 kHz or 36 kHz and a power rating of at least 800 Watts.

All areas of the bridge that will be tested and treated shall be prepared by a blast cleaning and /or hand tooled clean.

The contractor shall supply access and electrical power to accomplish the work.

The use of UIT shall be limited to base metal with a specified minimum yield strength of 100 ksi (690 MPa) or less.

Prior to UIT, the weld toe to receive UIT shall be visually inspected and magnetic particle tested for conformance to the quality standards specified in the contract documents. The instrument shall be calibrated against the maximum flaw size allowed. All discontinuities greater that 1/32" (0.79 mm) shall be satisfactorily repaired prior to initiating the work. All discontinuities that shall be repaired shall be documented in a written report. Contact Kristin Revello at the Bureau of Structures at (608) 266-5090 to determine the appropriate repair.

UIT shall be done along the toe of the weld in a manner that will cause the center of the resultant treatment groove to be at the weld toe, with equal treatment and smooth transition to the adjacent weld and base metal.

UIT shall be performed so as to result in a uniform groove with a distinct and uniform bright metallic surface, as verified by visual inspection by a Certified Weld Inspector immediately after completion. When viewed under a 10x magnifying glass, the groove shall be free from any visible indications of the untreated base metal or weld metal. If such untreated indications exist within the treated area, such area shall be retreated to obtain a uniform, bright metallic surface across the entire surface of the UIT groove.

Other weld or base metal treatments after UIT, including grinding, weld toe remelting (GTAW dressing or plasma arc dressing, hammer peening, shot peening, or heat treatment of the treated UIT, shall not be allowed.

Treatment is necessary only at the weld toe. The weld toe is defined as the interface of the weld metal and base metal attached to the cover plate. Due to the finite size of the UIT needles and the recommended treatment procedure, some base metal adjacent to the weld toe will get treated.

The following procedure shall be used, unless otherwise recommended by the UIT equipment manufacturer:

1. Position the UIT tool tip at the weld toe in a manner that both the weld metal and base metal are equally treated. This will normally be achieved by holding the tool needles in contact with and centered about the weld toe and gently rocking the tool back and forth normal to the longitudinal weld axis up to 10 degrees from the mean position. The inclination of the tool will depend on the condition of the as-welded toe, and in most cases, the tool axis should lie between 40 and 80 degrees with respect to the base metal surface in the plane of the cross section to satisfy this requirement.
2. Sufficient force must be applied to keep the hand held tool in position and to prevent jumping or unsteady movement when the vibrating needles come in contact with the weld toe. The self-weight of the tool is sufficient for this purpose and it is not necessary for the operator to exert undue force to achieve the required treatment.
3. The treatment shall progress at a travel speed of 1.0 to 5.0 ft/min (0.3 to 1.5 m/min) in multiple short passes. At least five passes shall be made to ensure completeness of the treatment. In addition, the tool axis must be maintained at 90 degrees with the direction of travel.
4. The diameter of the indenters influences the resulting appearance of the treated surface. In general, the smaller the diameter, the greater is the likelihood of eliminating the original weld toe. Thus, the treatment at the weld toe shall be carried out using 0.12 in. (3 mm) diameter pins. Pin holders accommodating four pins at various inclinations are generally used, except at narrow re-entrant corners, where a special pin holder having only one 0.2 in. (5 mm) diameter pin must be used.
5. The treatment shall result in a uniform groove appearance without a trace of the original weld toe and shall be free from indentation marks produced by individual needle to toe impact. All sharp transitions, undercuts, and reentrant corners along the weld toe shall be removed. The groove shall have a bright metallic surface and ideally have a notch radius of 0.12 in. (3 mm) or greater. Dimensional limits have been recommended by the manufacturer on the width and depth of the groove cross section, which are essentially related to the groove radius. Since it is difficult to make any accurate measurement of the treated toe, a visual determination of the depth of indentation below the plate surface of 0.010 to 0.020 in. (0.25 to 0.5 mm) is recommended as a guide, but not as a requirement of sufficient treatment.
6. The extent of treatment and general uniformity of appearance must be checked visually with the aid of a 10X magnifying glass.

If there are any intersecting welds between the weld for an existing shear lug angle iron, on the top flange, and the cover plate weld, within the area of the UIT work, the shear lug shall be removed and the intersection weld shall be ground smooth in accordance to the engineer’s instructions.

As part of this work, a written document shall be included describing the inspection, testing, location of the discontinuities and UIT work. The document shall include all irregularities found, the equipment used, the locations of each test, and the testing procedure.

D Measurement
The department will measure the Ultrasonic Impact Treatment Procedure as each individual unit, acceptably completed.

Each individual unit shall be comprised of the treatment to all the welds on one end of one cover plate as shown in the plan details.

Any required repairs to weld discontinuities shall be brought to the attention of the Bureau of Structures as mentioned in Section C. Any required repairs for weld discontinuities will be paid for separately.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0402	Ultrasonic Impact Treatment Procedure	EACH

Payment for the Ultrasonic Impact Treatment Procedure bid item is full compensation for the visual inspection and magnetic particle testing of the welds, removal of shear lugs with intersecting welds, preparation for any of the work, equipment, materials, labor, access, protection of the work area and clean up.

Schedule of Items
Attached, dated March 7, 2023, are the revised Schedule of Items Pages 1 – 41.

Plan Sheets
The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:

Revised: 2, 40-42, 59, 74-85, 257, 265-266, 279, 287-288, 336-341, 348-351, 440-441, 444, 446, 448-451, 453, 454-455, 457-458, 460-462, 464-465, 467-469, 471, 475-476, 483, 485, 489, 491, 495-496, 499, 503, 506-507, 509-510, 513, 517-518, 557, 560-561, 568, 571-572, 578, 593, 658, 664, 674, 676, 687, 701-706, 715, 724, 727, 729-752, 764-766, 792, 799, 806, 812, 901 – 914, 1182-1183, 1185, 1198, 1208, and 1219.

Added: 41A-41B, 42A-42Z, 223A, 256A, 452A, 466A, 479A-479L, 588A-588B, 664A, 674A, 687A, 738A-738B, 999A, and 999B

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END OF ADDENDUM

GENERAL NOTES

1. THE LOCATIONS OF EXISTING OR PROPOSED UTILITIES, AS NOTED ON THE PLANS, ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

2. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPERATELY BY THE CONTRACTOR.

3. NO SHRUBS OR TREES ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

4. ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE BACKFILLED WITH SUITABLE MATERIAL, OR AS DIRECTED BY THE ENGINEER. ALL BACKFILL, INCLUDING NATIVE MATERIAL, IS CONSIDERED INCIDENTAL TO THE APPROPRIATE BID ITEM.

5. DIMENSIONS GIVEN FOR EXISTING FEATURES SHALL BE CONSIDERED AS APPROXIMATE AND SHALL BE MEASURED IN THE FIELD FOR MATCHING PURPOSES.

6. CURB AND GUTTER RADII, GRADES AND OFFSETS ARE TO THE FLANGE UNLESS NOTED OTHERWISE.

7. TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL SHALL NOT BE PERMITED IN WETLANDS.

8. ALL DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCLUDING ROAD BED, ARE TO BE TOPSOILED OR SALVAGED TOPSOILED, FERTILIZED, AND SEEDED, SODDED, MULCHED OR INSTALLED EROSION-MAT AS DIRECTED BY THE ENGINEER.

9. EROSION CONTROL BMP'S ARE SHOWN AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER.

10. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

11. EROSION CONTROL FEATURES ARE TO BE PLACED IN SEQUENCE WITH CONSTRUCTION STAGING AND MAINTAINED THROUGH EACH STAGE OR AS DETERMINED BY THE ENGINEER.

12. WHEN TEMPORARY PAVEMENT MARKING REMOVABLE TAPE IS REQUIRED, IT SHALL BE CUT THROUGH ITS FULL WIDTH AND THICKNESS AT 25-FOOT INTERVALS TO CONTROL RAVELING.

13. MISCELLANEOUS REMOVAL ITEMS REQUIRING RESTORATION OF CONCRETE OR ASPHALT DRIVEWAYS, SIDEWALKS, OR SIDE STREETS SHALL BE REMOVED TO AN EXISTING JOINT OR SAWED AS DETERMINED BY THE ENGINEER.

14. A SAWED JOINT IS REQUIRED WHERE NEW HMA SURFACE MEETS EXISTING ASPHALTIC CONCRETE SURFACE.

16. REMOVING ASPHALTIC SURFACE MILLING INCLUDES MILLING EXISTING CONCRETE PATCHES TO THE DEPTHS SHOWN ON THE PLANS.

17. REMOVAL OF ANY EXISTING RAISED PAVEMENT MARKERS IN THE EXISTING PAVEMENT IS INCIDENTAL TO THE REMOVING ASPHALTIC PAVEMENT MILLING ITEM.

STANDARD ABBREVIATIONS

AEW	APRON END WALL
AGG	AGGREGATE
ASPH	ASPHALTIC
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTRUCTION LINE
CMCP	CULVERT PIPE CORRUGATED METAL
CONC	CONCRETE
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
EB	EASTBOUND
FE	FIELD ENTRANCE
FL	FLOW LINE
HFST	HIGH FRICTION SURFACE TREATMENT
HMA	HOT MIX ASPHALT
INV	INVERT
L	LENGTH OF CURVE
LP	LOW POINT
LT	LEFT
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PGL	PROFILE GRADE LINE
PLE	PERMANENT LIMITED EASEMENT
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN REQUIRED
RO	RUN OFF LENGTH
RRSP	RAILROAD SPIKE
RT	RIGHT
SALV	SALVAGED
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TLE	TEMPORARY LIMITED EASEMENT
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT
WB	WESTBOUND

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLAN
PLAN DETAILS
CURB RAMP DETAILS
PAVING GRADE
FTMS PLANS
CONTOUR MAP
EROSION CONTROL
STORM SEWER PLAN
SIGNING PLAN
LIGHTING PLAN
CUC PLAN
TRAFFIC SIGNAL PLAN
PAVEMENT MARKING PLAN
TRAFFIC CONTROL/STAGING
DETOUR PLAN
FENCING PLAN
ALIGNMENT PLAN

HMA PAVING

IH 43 – OVERLAY	THICKNESS	ASPHALT MIX	GRADATION
UPPER LAYER	1 ¾ – INCH	4 SMA 58-28 V	12.5 mm
LOWER LAYER	2 ¼ – INCH	3 HT 58-28 H	19.0 mm
IH 43 MEDIAN RECONSTRUCTION PERPETUAL PAVEMENT	**THICKNESS**	**ASPHALT MIX**	**GRADATION**
UPPER LAYER	2 – INCH	4 SMA 58-28 V	12.5 mm
LOWER-UPPER LAYER	4 – INCH	3 HT 58-28 H	19.0 mm
LOWER-MIDDLE LAYER	3 ½ – INCH	3 HT 58-28 H	19.0 mm
LOWER-LOWER LAYER	3 ½ – INCH	3 HT 58-28 H	19.0 mm
IH 43 MEDIAN & SHOULDER RECONSTRUCTION IH 43 ON/OFF RAMPS SHOULDER WIDENING	**THICKNESS**	**ASPHALT MIX**	**GRADATION**
UPPER LAYER	2 – INCH	4 SMA 58-28 V	12.5 mm
LOWER-UPPER LAYER	4 – INCH	3 HT 58-28 H	19.0 mm
LOWER-MIDDLE LAYER	2 ½ – INCH	3 HT 58-28 H	19.0 mm
LOWER-LOWER LAYER	2 ½ – INCH	3 HT 58-28 H	19.0 mm
IH 43 ON/OFF RAMPS OVERLAY (9-INCH EXISTING HMA)	**THICKNESS**	**ASPHALT MIX**	**GRADATION**
UPPER LAYER	1 ¾ – INCH	4 SMA 58-28 V	12.5 mm
LOWER LAYER	2 ¼ – INCH	3 HT 58-28 H	19.0 mm
IH 43 ON/OFF RAMPS OVERLAY (3-INCH EXISTING HMA)	**THICKNESS**	**ASPHALT MIX**	**GRADATION**
UPPER LAYER	1 ½ – INCH	5 HT 58-28 H	9.50 mm
LOWER LAYER	1 ½ – INCH	5 HT 58-28 H	9.50 mm

Addendum No. 01
ID 1228-22-70
Revised Sheet 2
March 7, 2023

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

GENERAL NOTES

1. CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS
2. MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.
3. CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 2-INCHES, PRIOR TO INSTALLING END BELL.
4. ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE PLUGGED IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN PLUGGED.
5. BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.
6. A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR ALL BASES .
7. THE GROUNDING ELECTRODE CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1-INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4-FOOT COIL OF WIRE IN THE JUNCTION BOXES. THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS AND NEATLY COILED AND THE COIL TIED TOGETHER.
8. ANCHOR BOLTS SHALL BE THREADED 5-INCHES IN LENGTH ON THE END OF THE BOLT UNLESS OTHERWISE NOTED. ANCHOR BOLTS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2 OF THE STANDARD SPECIFICATIONS CONFORMING TO ASTM F1554 (GRADE 105).
9. WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR BOLTS.
10. VERIFY COMPATIBILITY OF ANCHOR BOLT SIZE AND PATTERN PRIOR TO FORMING THE CONCRETE BASE.
11. ANCHOR BOLTS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL PER SECTION 5.17.5.3 AASHTO 2013 6TH EDITION STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS.
12. GALVANIZED STEEL MESH WITH ¾" STAINLESS STEEL BANDING USED FOR RODENT SCREEN REQUIRED FOR ALL POLES. MESH AND BANDING SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM.
13. WELDING OF THE ANCHOR BOLTS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.
14. BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION). BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
15. THE DIMENSIONS OF THE CONCRETE BASES WILL VARY FROM WHAT IS SHOWN ON THIS DETAIL DEPENDING ON THE VERTICAL AND HORIZONTAL SEPARATION BETWEEN THE NORTHBOUND AND SOUTHBOUND TRAVEL LANES. THIS DETAIL PROVIDES TYPICAL DIMENSIONS FOR THE MAJORITY OF BASES. REINFORCEMENT WILL VARY IN TRANSITION SECTIONS. MAKE FIELD ADJUSTMENTS AS REQUIRED.
16. ADDITIONAL QUANTITIES AND STAKING REQUIRED IN TRANSITION SECTIONS SHALL BE CONSIDERED INCIDENTAL TO THE CONCRETE BASE MEDIAN BARRIER BID ITEM.
17. THE CONCRETE SURFACE SHALL MATCH THE PROPOSED MEDIAN BARRIER WALL FINISH.
18. ALL STEEL CONDUIT SHALL BE GROUNDED. FURNISH AND INSTALL GROUNDING BUSHING WITH LAY-IN TYPE GROUND LUG AND COPPER GROUNDING JUMPER.

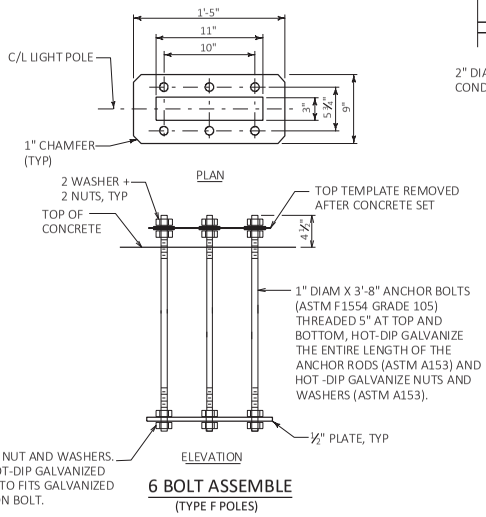
FOUNDATION DATA

MINIMUM ASSUMED ALLOWABLE SOIL BEARING PRESSURE = 3000 PSF

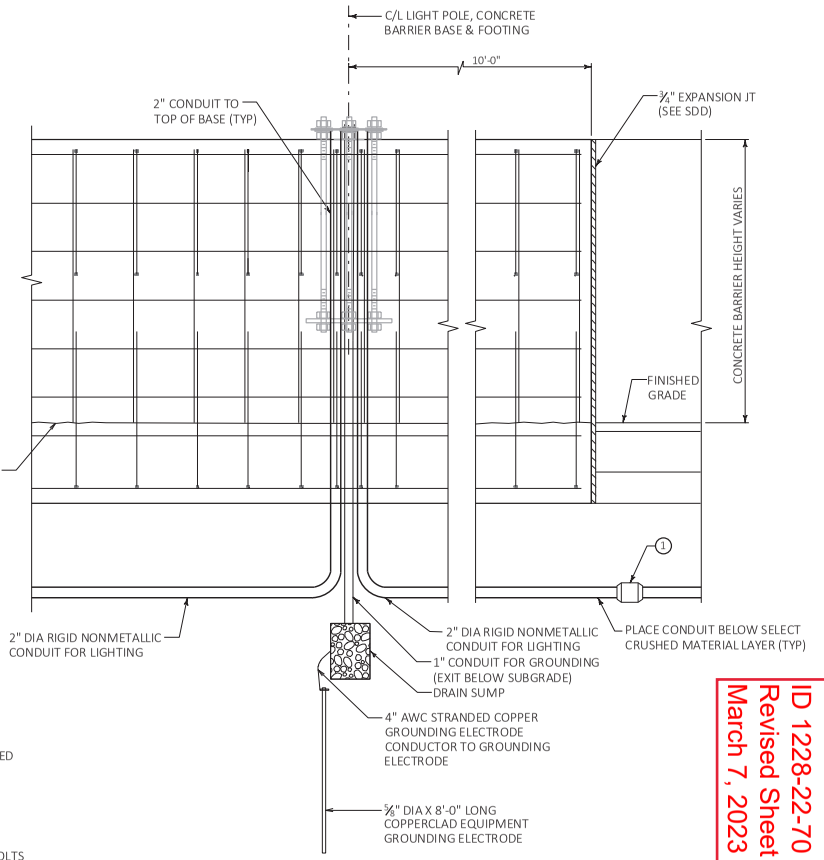
CONCRETE BASES TYPE F STATION

STATION	Δ (in)
803+90	-9 1/4
806+07	-5 1/6
808+66	-2 2/7
811+26	5 1/2
813+84	1/4
816+44	5/7
818+32	2 2/3
820+61	3 5/6
822+58	2 3/4
825+14	5/6
827+51	5/7
829+77	2 2/3
831+67	-1/8
834+59	1/8
837+02	1/8
839+61	1/8
842+21	1 1/5
844+76	5/7
848+05	- 1/4
849+81	1
852+50	3/5
855+21	1/4
857+65	1

STATION	Δ (in)
860+18	- 1/2
862+57	1 5/9
865+05	1 2/3
867+65	1/2
870+28	- 1/3
874+23	1/4
876+88	- 3/5
879+54	1/2
882+03	- 1/2
884+67	-1
887+30	-5 1/6
889+97	-14 2/7
892+64	-2 2/7
895+22	-21 1/8
898+73	7 5/9
902+80	3/5
905+50	1/4
908+25	1/4
910+55	-1/2
912+45	-4
914+87	-10 4/5
917+19	-6 1/4
921+34	1/8
924+02	1/4



6 BOLT ASSEMBLE
(TYPE F POLES)



PARTIAL ELEVATION

FOR REINFORCING CALLOUTS & SPACING, SEE PLAN VIEW & SECTION CUTS

Addendum No. 01
ID 1228-22-70
Revised Sheet 40
March 7, 2023

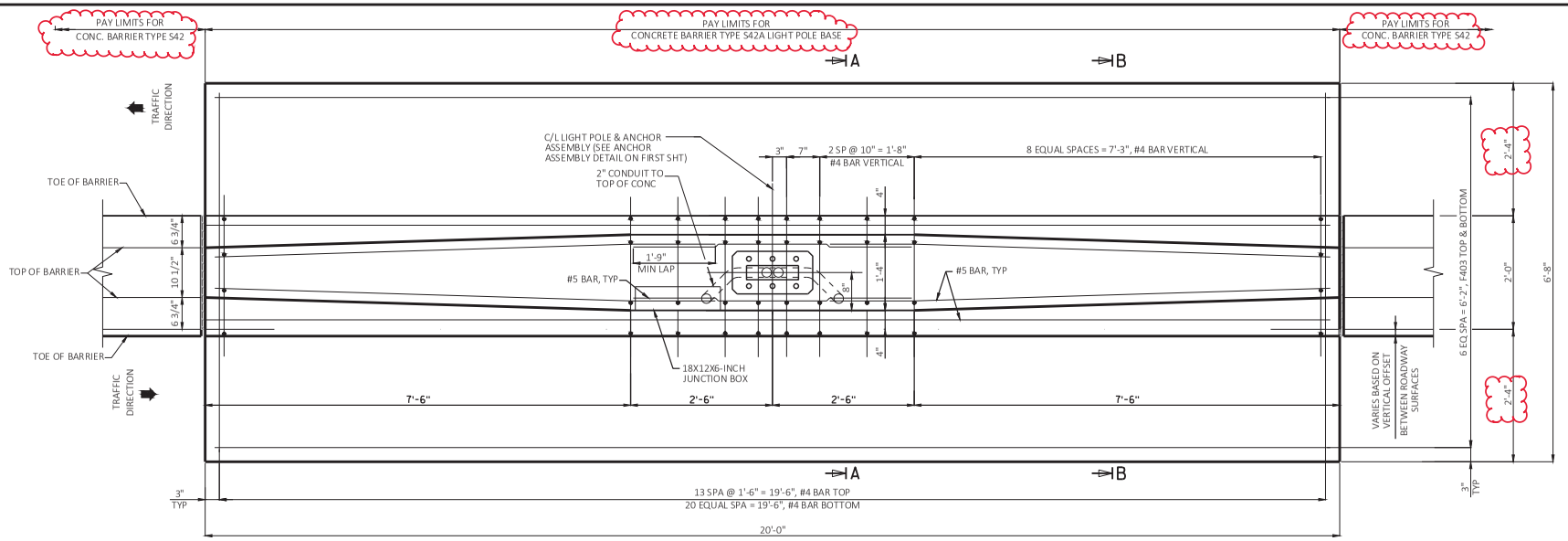
LEGEND

① NONMETALLIC EXPANSION FITTING 2". WRAP FITTING AND CONDUIT 9" ON BOTH SIDES OF EXPANSION JOINT. TWO WRAPS OF 1/2" SPONGE RUBBER WRAP, AASHTO M153, TYPE I OR EQUIVALENT. SECURE WITH PLASTIC TIE WRAPS. SET FITTING AT MIDPOINT OF ITS TRAVEL. FITTINGS AND WRAPS ARE INCIDENTAL TO CONDUIT. TWO EXPANSION FITTING PER BASE REQUIRED.

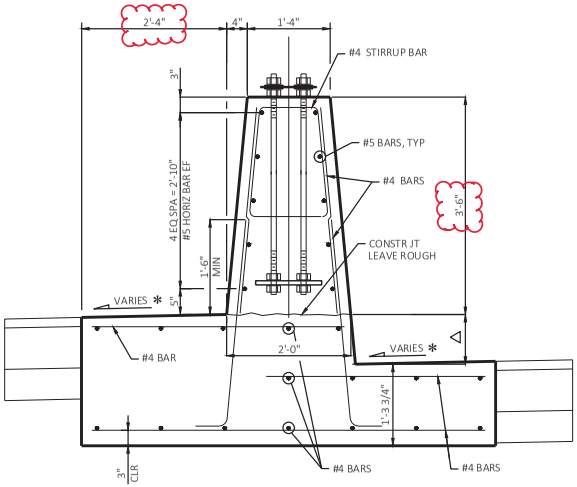
△ VERTICAL OFFSET BETWEEN ROADWAY SURFACES, SEE LIGHT POLE BASE SECTION CUTS FOR LOCATION. IF OFFSET IS NEGATIVE, SECTION CUTS SHOULD BE MIRRORED TO GET CORRECT ORIENTATION OF ROADWAY SURFACES.

ANCHOR ASSEMBLY LIGHT POLE STRUCTURES

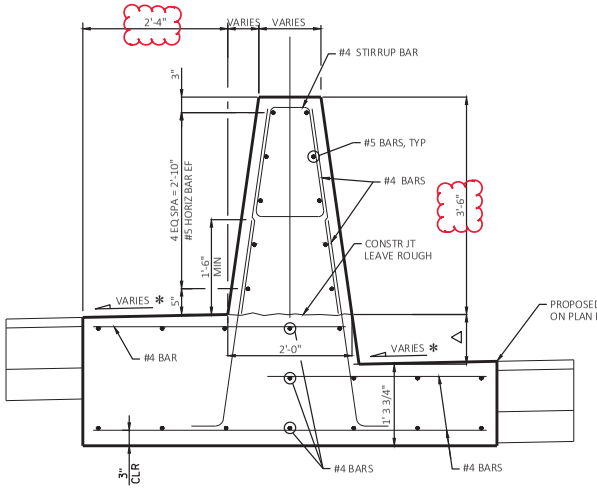
CONCRETE BASE TYPE F FOR CONCRETE BARRIER TYPE S42A, V42 & V42 SPECIAL ①



CONCRETE BASE PLAN



SECTION A-A



SECTION B-B

LEGEND

△ VERTICAL OFFSET BETWEEN ROADWAY SURFACES, SEE LIGHT BASE STATION TABLE ON THE FIRST SHEET

✻ MATCH ROADWAY SUPERELEVATION

Addendum No. 01
ID 1228-22-70
Revised Sheet 41
March 7, 2023

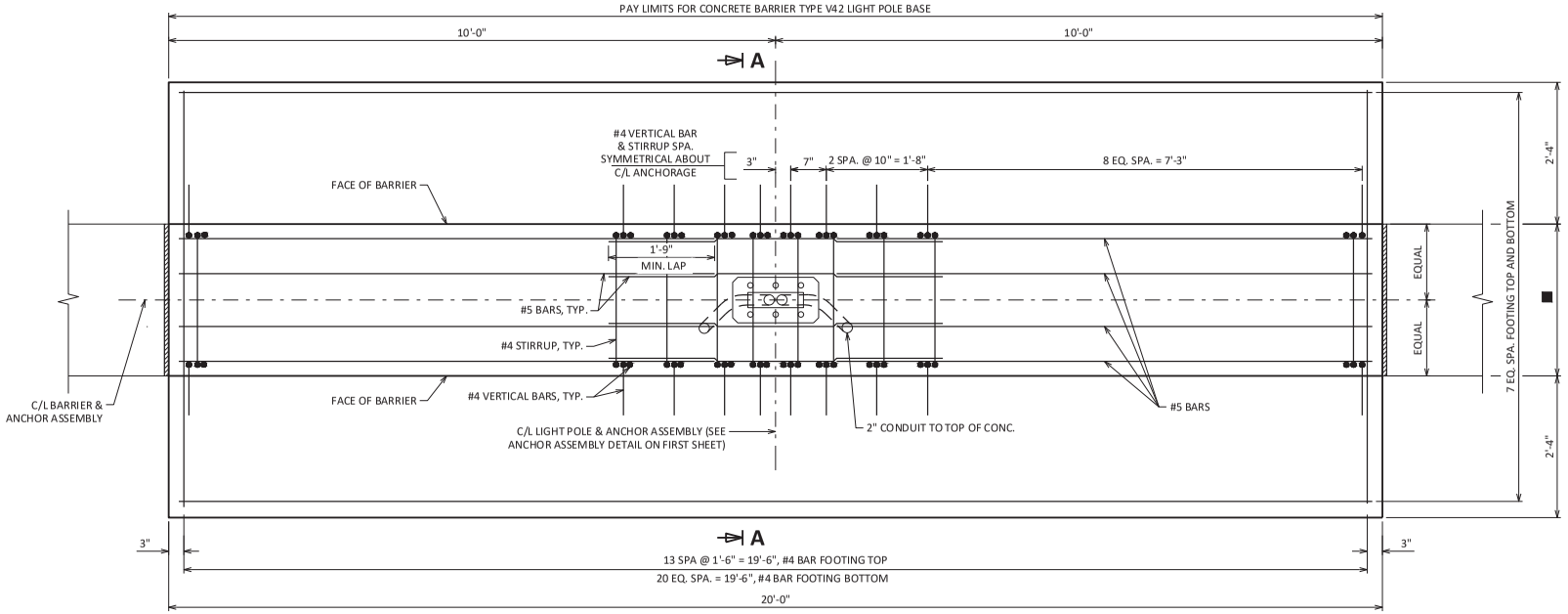
CONCRETE BARRIER TYPE S42A LIGHT POLE BASE

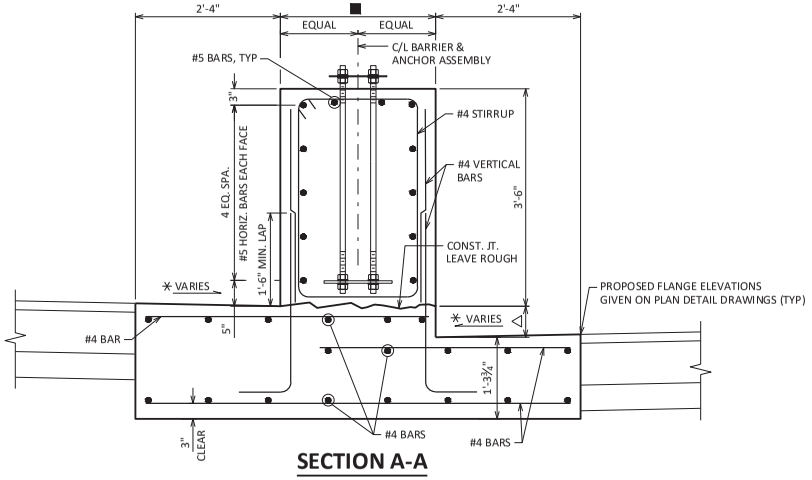
PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 41	E

FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\122822 70\SHEETSPLAN\021007_CD.DWG
LAYOUT NAME - 01

PLOT DATE : 2/11/2023 4:27 PM PLOT BY : JOHANSEN, AMANDA A PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 42





SECTION A-A

LEGEND

△ VERTICAL OFFSET BETWEEN ROADWAY SURFACE, SEE LIGHT BASE STATION TABLE ON THE FIRST SHEET

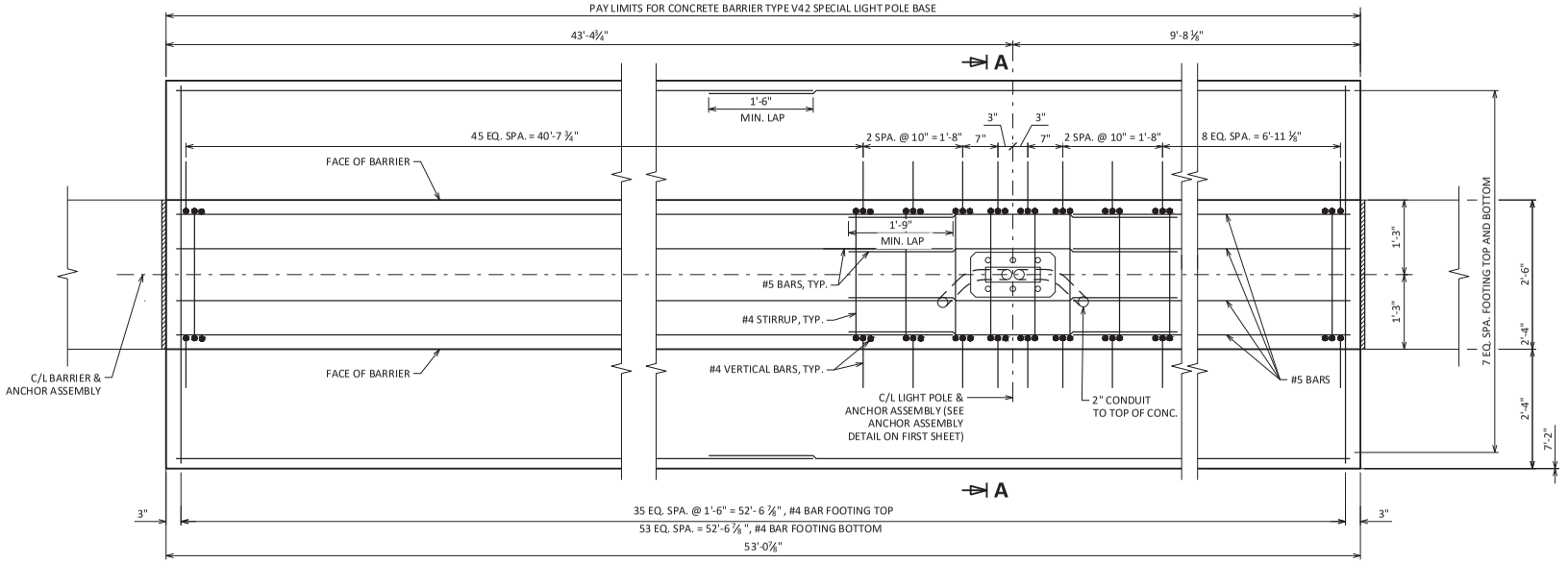
✳ MATCH ROADWAY SLOPE

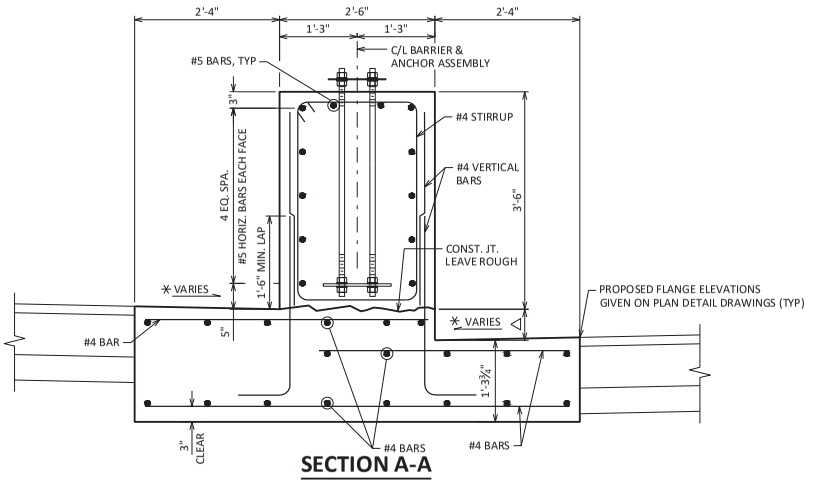
■ MATCH WIDTH OF ADJACENT VERTICAL FACE MEDIAN BARRIER (2'-6", 3'-0", 3'-6") SEE PLAN DETAILS SHEET

Addendum No. 01
ID 1228-22-70
Added Sheet 41A
March 7, 2023

CONCRETE BARRIER TYPE V42 LIGHT POLE BASE

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 41A	E





SECTION A-A

LEGEND

△ VERTICAL OFFSET BETWEEN ROADWAY SURFACE, SEE LIGHT BASE STATION TABLE ON THE FIRST SHEET

✳ MATCH ROADWAY SLOPE

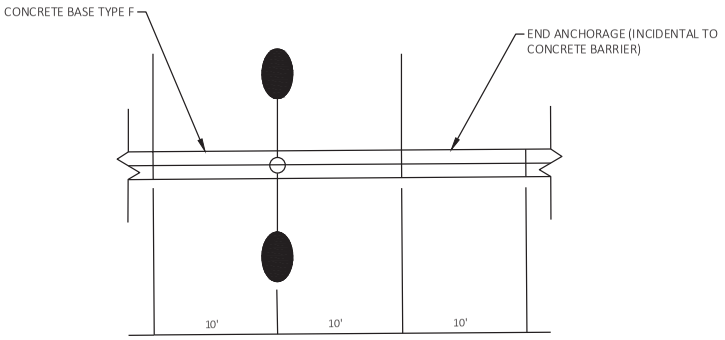
CONCRETE BARRIER TYPE V42 SPECIAL LIGHT POLE BASE

Addendum No. 01
ID 1228-22-70
Added Sheet 41B
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 41B	E

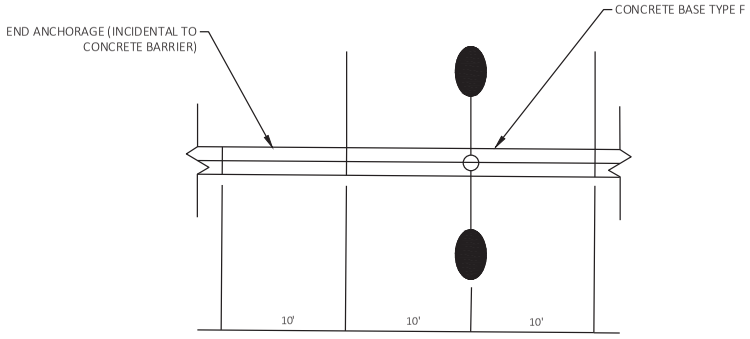
FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\VERTICAL FACE LIGHT BASE.DWG PLOT DATE : ---- PLOT BY : ROZMENOSKI, WYATT PLOT NAME :

WISDOT/CADDS SHEET 42



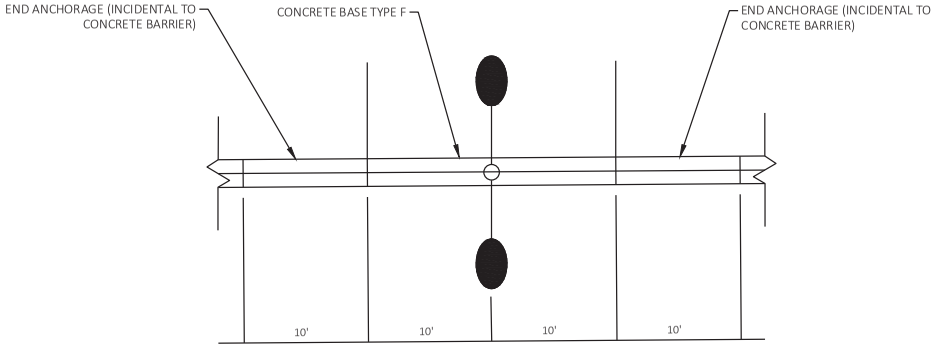
CONCRETE BASE TYPE F LIGHT POLE

STA 803+90, 0.0', STA 882+03, 0.0'



CONCRETE BASE TYPE F LIGHT POLE

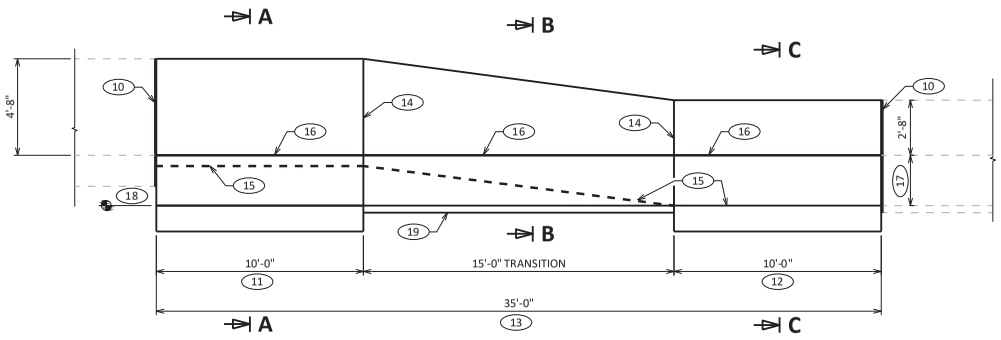
STA 914+87, 0.0'



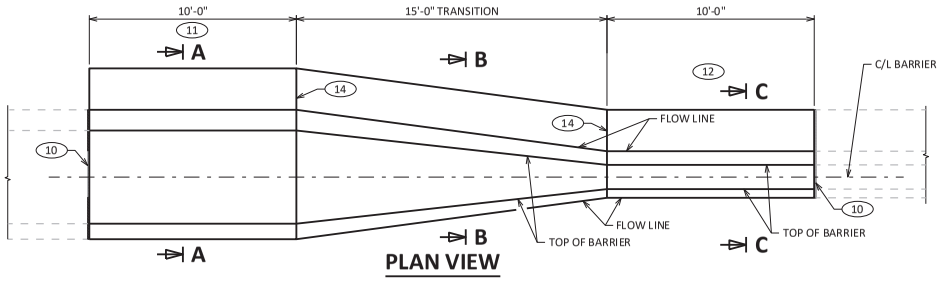
CONCRETE BASE TYPE F LIGHT POLE

STA 803+90, 0.0'
STA 806+07, 0.0'
STA 808+66, 0.0'
STA 811+26, 0.0'
STA 813+84, 0.0'
STA 816+44, 4.3' RT
STA 818+32, 1.8' RT
STA 820+61, 0.0'
STA 822+58, 0.0'
STA 825+14, 0.0'
STA 827+51, 0.0' 1
STA 829+77, 0.0'
STA 831+61, 0.0' 1
STA 834+59, 0.0'
STA 837+02, 0.0'
STA 839+61, 0.0'
STA 842+21, 0.0'
STA 844+76, 0.0' 1
STA 848+05, 0.0' LT
STA 849+81, 0.0'
STA 852+50, 0.0'
STA 855+21, 0.0'
STA 857+65, 0.0'
STA 860+18, 0.0' RT
STA 862+57, 0.0'
STA 865+05, 0.0'
STA 867+65, 0.0'
STA 870+28, 0.0'
STA 874+23, 0.0'
STA 876+88, 0.0'
STA 879+54, 0.0'
STA 882+03, 0.0'
STA 884+67, 0.0'
STA 887+30, 0.0'
STA 889+97, 0.0'
STA 892+64, 0.0'
STA 895+22, 0.0'
STA 898+73, 1.4' RT
STA 902+80, 0.0' LT
STA 905+50, 0.0' RT
STA 908+25, 0.0'
STA 910+55, 0.0'
STA 912+45, 0.0' 1
STA 914+87, 0.0'
STA 917+31, 0.0'
STA 921+34, 0.0' LT
STA 924+02, 0.0'

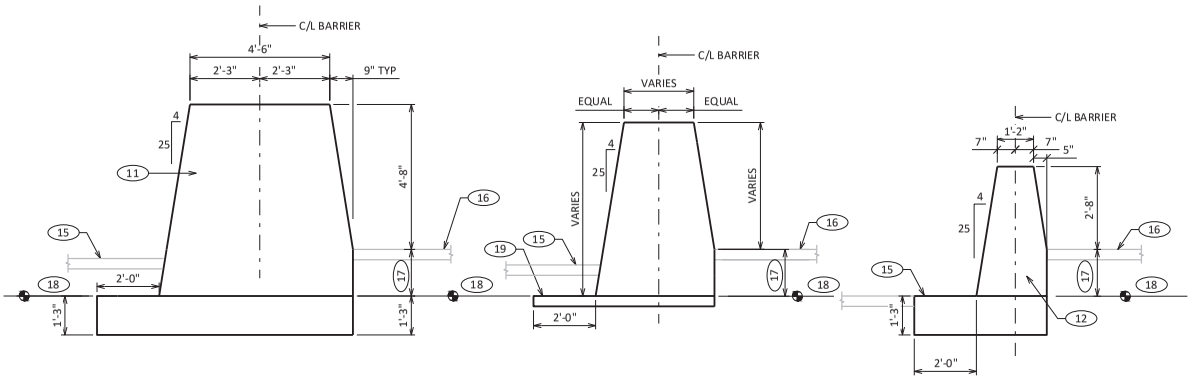
Addendum No. 01
ID 1228-22-70
Revised Sheet 42
March 7, 2023



ELEVATION VIEW



PLAN VIEW



SECTION A-A SECTION B-B SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD 603.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED EDGES UNLESS OTHERWISE NOTED.

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(11) END ANCHOR S56

(12) END ANCHOR S32A

(13) PAY LIMIT FOR CONCRETE BARRIER TRANSITION TYPE S56 TO S32A

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(15) LOW SIDE SHOULDER

(16) HIGH SIDE SHOULDER

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX). SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(19) CONCRETE BARRIER PAD MAY BE PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED ½ DEPTH. CONCRETE BARRIER PAD AND SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER TRANSITION BID ITEM. CONCRETE BARRIER PAD MINIMUM DEPTH IS 6", OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER. SEE "CONCRETE BARRIER SINGLE SLOPE (CBSS) SDD FOR SAWCUT DETAIL & DETAIL FOR ACCOMMODATING DRAINAGE STRUCTURE. SEE "CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES" SDD FOR TYING BARRIER PAD/FOUNDATION TO ADJACENT CONCRETE.

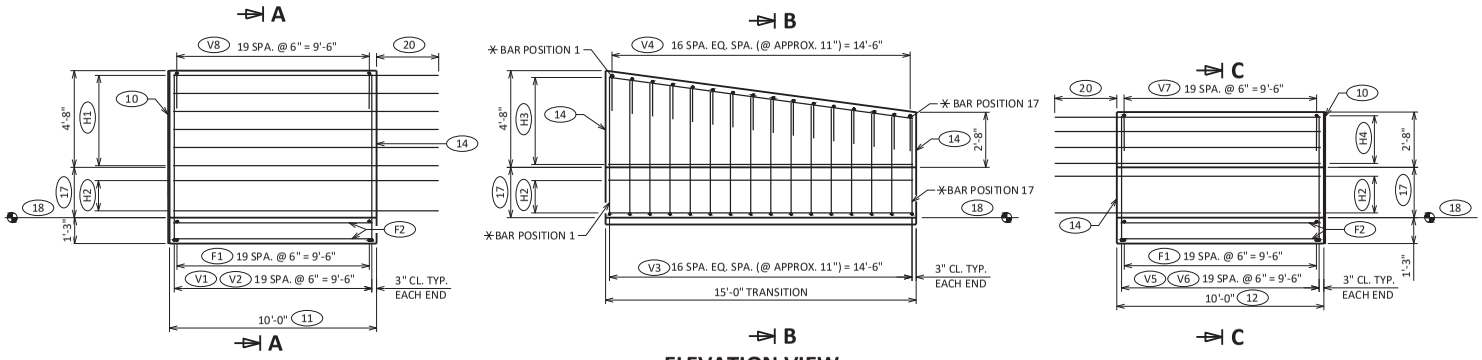
◪ DETAILS SHOWN FOR S56 TO S32A DIFFERENTIAL SHOULDER HEIGHT TRANSITION. DETAILS SIMILAR FOR S32 TO S56A DIFFERENTIAL SHOULDER HEIGHT TRANSITION.

Addendum No. 01
ID 1228-22-70
Added Sheet 42A
March 7, 2023

◪ CONCRETE BARRIER TRANSITION TYPE S56 TO S32A (SHEET 1 OF 2)

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42A	E

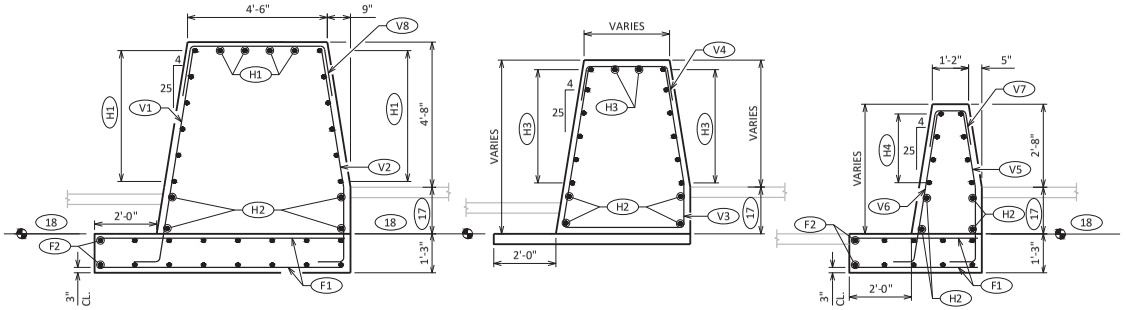
FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_TRANSITION_S56_TO_S32A.DWG
LAYOUT NAME - S56 TO S32A SHT 1
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00



ELEVATION VIEW

TABLE "B"

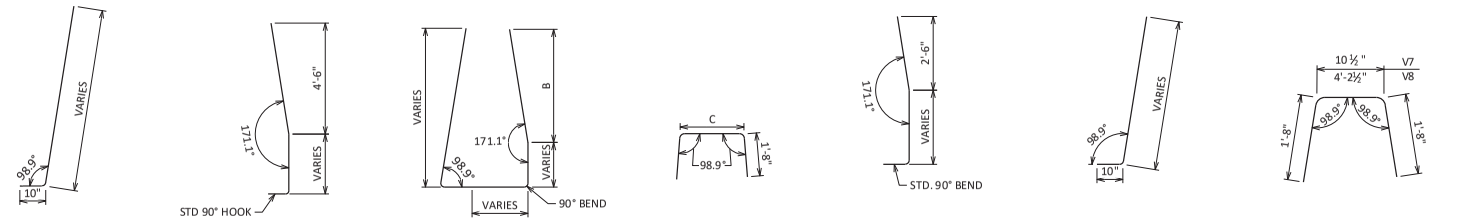
✳BAR POSITION	DIMENSION B	DIMENSION C
1	4'-5 5/8"	4'-1 3/8"
2	4'-4 1/8"	3'-10 7/8"
3	4'-2 3/4"	3'-8 1/2"
4	4'-1 1/4"	3'-6 1/8"
5	3'-11 7/8"	3'-3 5/8"
6	3'-10 3/8"	3'-1 1/4"
7	3'-8 7/8"	2'-10 7/8"
8	3'-7 1/2"	2'-8 3/8"
9	3'-6"	2'-6"
10	3'-4 5/8"	2'-3 5/8"
11	3'-3 1/8"	2'-1 1/8"
12	3'-1 5/8"	1'-10 3/4"
13	3'-0 1/4"	1'-8 3/8"
14	2'-10 3/4"	1'-5 7/8"
15	2'-9 3/8"	1'-3 1/2"
16	2'-7 7/8"	1'-1 1/8"
17	2'-6 3/8"	0'-10 5/8"



SECTION A-A

SECTION B-B

SECTION C-C



V1 BEND DETAIL

V2 BEND DETAIL

V3 BEND DETAIL

V4 BEND DETAIL

V5 BEND DETAIL

V6 BEND DETAIL

V7 & V8 BEND DETAIL

GENERAL NOTES

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2-INCH CLEAR UNLESS SHOWN OR NOTED OTHERWISE.

MAXIMUM DIFFERENTIAL SHOULDER HEIGHT, MEASURED AT FLOWLINE OF BARRIER, IS 3'-0".

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(11) END ANCHOR S56

(12) END ANCHOR S32A

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX.) SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(20) 3'-6" MIN. LAP OF LONGITUDINAL REINFORCEMENT

(H1) HORIZONTAL NO. 5 BARS. SIXTEEN (16) BARS REQ'D.

(H2) HORIZONTAL NO. 6 BARS EQUALLY SPACED. SEE TABLE "A" FOR REQ'D. REBAR.

(H3) HORIZONTAL NO. 5 BARS. FOURTEEN (14) BARS REQ'D. SLOPE BARS FOR EQUAL SPACING AS SHOWN.

(H4) HORIZONTAL NO. 5 BARS. EIGHT (8) BARS REQ'D

(V1) VERTICAL NO. 5 BARS(SEE BAR BEND DETAIL)

(V2) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V3) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL & TABLE B)

(V4) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL & TABLE B) 1'-6" MIN LAP WITH V3 BARS

(V5) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V6) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V7) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V5 & V6 BARS

(V8) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V1 & V2 BARS

(F1) FOOTING TRANSVERSE NO. 6 BARS

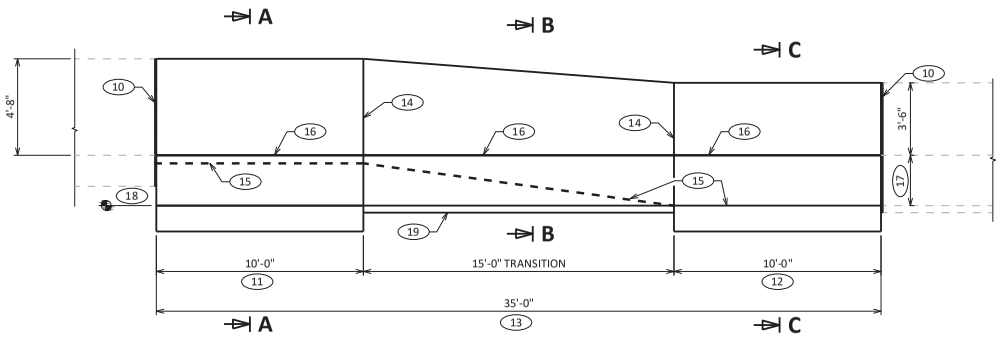
(F2) FOOTING LONGITUDINAL NO. 5 BARS

TABLE "A" (17)

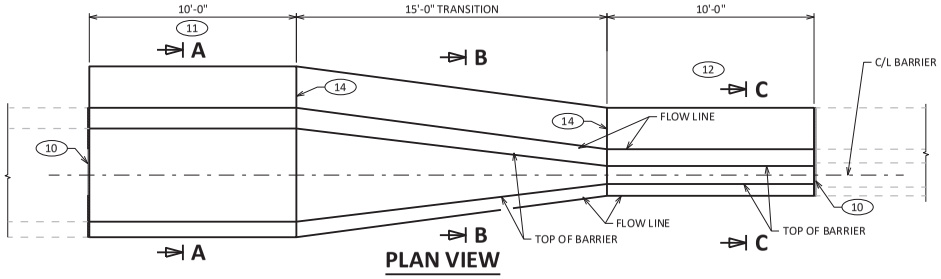
HEIGHT BETWEEN ROADWAYS	QUANTITY OF (H2) NO. 6 BARS
0" TO 3"	0
>3" TO 8"	2
>8" TO 12"	4
>12" TO 36"	8

Addendum No. 01
ID 1228-22-70
Added Sheet 42B
March 7, 2023

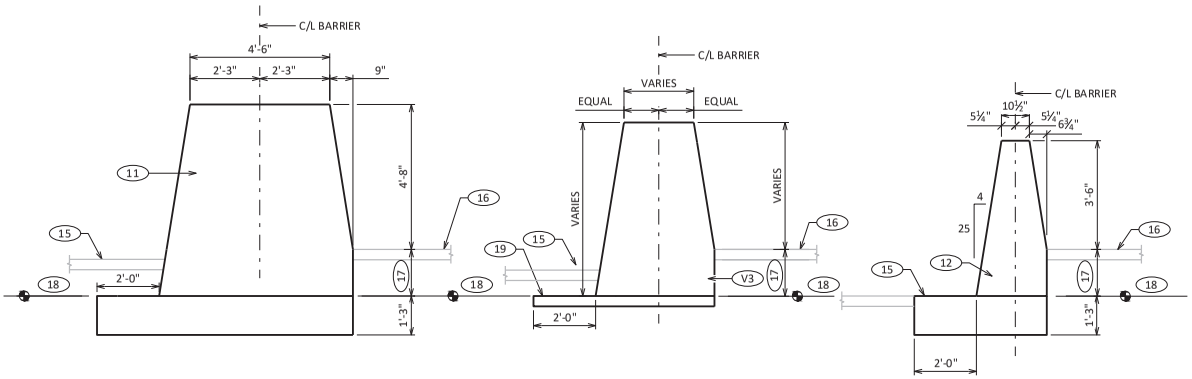
CONCRETE BARRIER TRANSITION TYPE S56 TO S32A (SHEET 2 OF 2)



ELEVATION VIEW



PLAN VIEW



SECTION A-A SECTION B-B SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD 603.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED EDGES UNLESS OTHERWISE NOTED.

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(11) END ANCHOR S56

(12) END ANCHOR S42A

(13) PAY LIMIT FOR CONCRETE BARRIER TRANSITION TYPE S56 TO S42A

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(15) LOW SIDE SHOULDER

(16) HIGH SIDE SHOULDER

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX). SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(19) CONCRETE BARRIER PAD MAY BE PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED ½ DEPTH. CONCRETE BARRIER PAD AND SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER TRANSITION BID ITEM. CONCRETE BARRIER PAD MINIMUM DEPTH IS 6", OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER. SEE "CONCRETE BARRIER SINGLE SLOPE (CBSS) SDD FOR SAWCUT DETAIL & DETAIL FOR ACCOMMODATING DRAINAGE STRUCTURE. SEE "CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES" SDD FOR TYING BARRIER PAD/FOUNDATION TO ADJACENT CONCRETE.

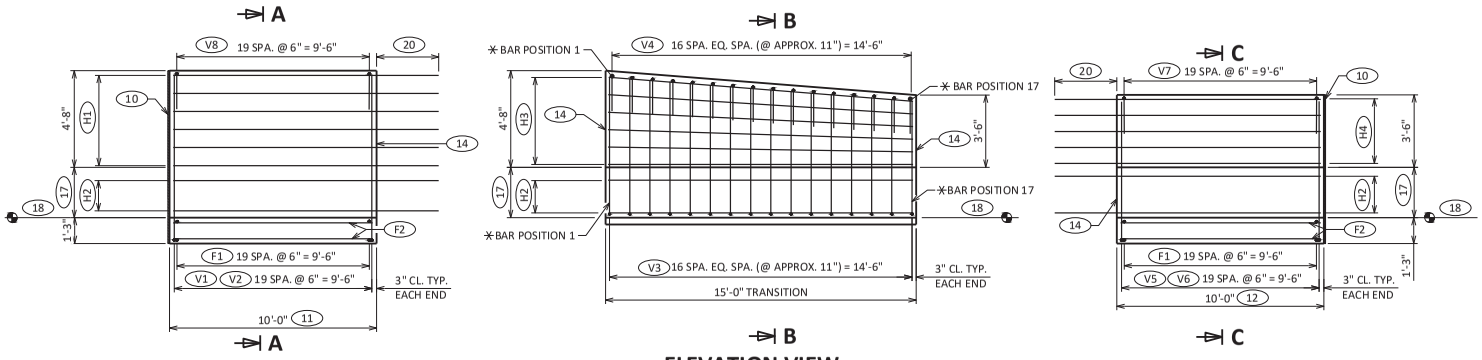
◪ DETAILS SHOWN FOR S56 TO S42A DIFFERENTIAL SHOULDER HEIGHT TRANSITION. DETAILS SIMILAR FOR S42 TO S56A DIFFERENTIAL SHOULDER HEIGHT TRANSITION.

Addendum No. 01
ID 1228-22-70
Added Sheet 42C
March 7, 2023

◪ CONCRETE BARRIER TRANSITION TYPE S56 TO S42A (SHEET 1 OF 2)

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42C	E

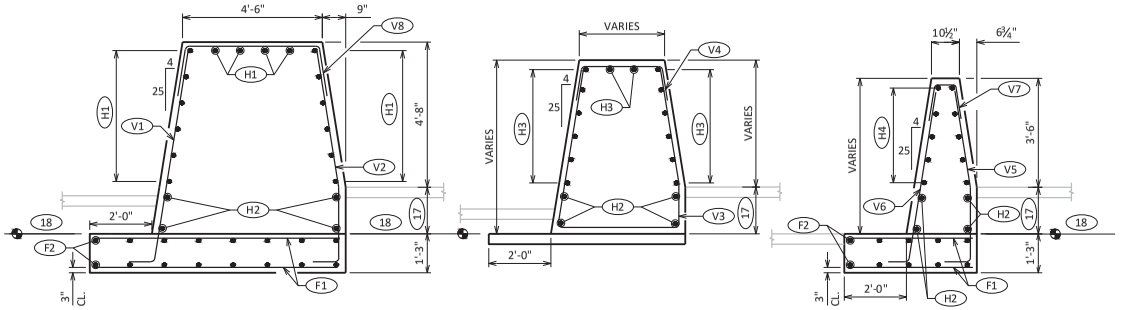
FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_TRANSITION_S56_TO_S42A.DWG
LAYOUT NAME - S56 TO S42A SHT 1
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00
WISDOT/CADDS SHEET 42



ELEVATION VIEW

TABLE "B"

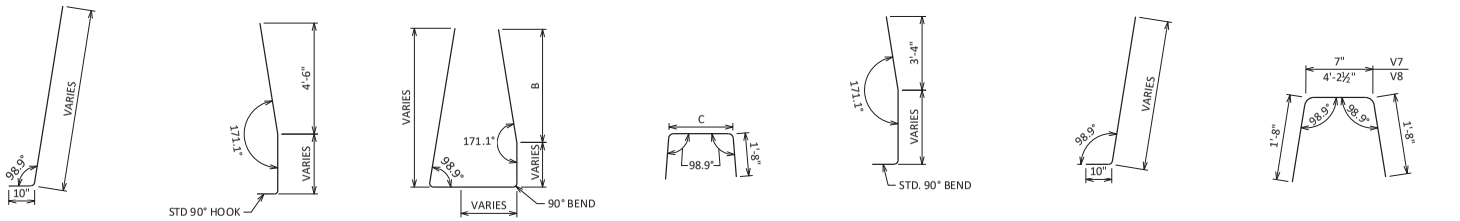
BAR POSITION	DIMENSION B	DIMENSION C
1	4'-5 3/4"	4'-1 1/4"
2	4'-4 7/8"	3'-10 5/8"
3	4'-4 1/8"	3'-8"
4	4'-3 1/4"	3'-5 3/8"
5	4'-2 3/8"	3'-2 3/4"
6	4'-1 1/2"	3'-0 1/8"
7	4'-0 3/4"	2'-9 1/2"
8	3'-11 7/8"	2'-6 7/8"
9	3'-11"	2'-4 1/4"
10	3'-10 1/8"	2'-1 5/8"
11	3'-9 3/8"	1'-11"
12	3'-8 1/2"	1'-8 3/8"
13	3'-7 5/8"	1'-5 3/4"
14	3'-6 3/4"	1'-3 1/8"
15	3'-6"	1'-0 1/2"
16	3'-5 1/8"	0'-9 7/8"
17	3'-4 1/4"	0'-7 1/4"



SECTION A-A

SECTION B-B

SECTION C-C



V1 BEND DETAIL

V2 BEND DETAIL

V3 BEND DETAIL

V4 BEND DETAIL

V5 BEND DETAIL

V6 BEND DETAIL

V7 & V8 BEND DETAIL

GENERAL NOTES

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2-INCH CLEAR UNLESS SHOWN OR NOTED OTHERWISE.

MAXIMUM DIFFERENTIAL SHOULDER HEIGHT, MEASURED AT FLOWLINE OF BARRIER, IS 3'-0".

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(11) END ANCHOR S56

(12) END ANCHOR S42A

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX.) SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(20) 3'-6" MIN. LAP OF LONGITUDINAL REINFORCEMENT

(H1) HORIZONTAL NO. 5 BARS. SIXTEEN (16) BARS REQ'D.

(H2) HORIZONTAL NO. 6 BARS EQUALLY SPACED. SEE TABLE "A" FOR REQ'D. REBAR.

(H3) HORIZONTAL NO. 5 BARS. FOURTEEN (14) BARS REQ'D. SLOPE BARS FOR EQUAL SPACING AS SHOWN.

(H4) HORIZONTAL NO. 5 BARS. TEN (10) BARS REQ'D

(V1) VERTICAL NO. 5 BARS(SEE BAR BEND DETAIL)

(V2) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V3) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL & TABLE B)

(V4) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL & TABLE B) 1'-6" MIN LAP WITH V3 BARS

(V5) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V6) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V7) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V5 & V6 BARS

(V8) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V1 & V2 BARS

(F1) FOOTING TRANSVERSE NO. 6 BARS

(F2) FOOTING LONGITUDINAL NO. 5 BARS

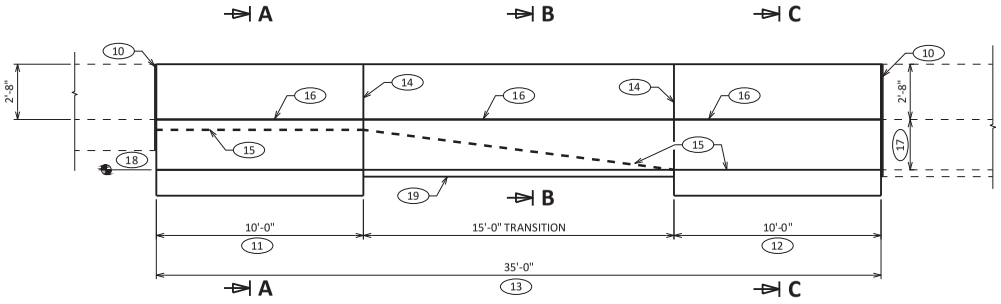
TABLE "A" (17)

HEIGHT BETWEEN ROADWAYS	(H2) QUANTITY OF NO. 6 BARS
0" TO 3"	0
>3" TO 8"	2
>8" TO 12"	4
>12" TO 36"	8

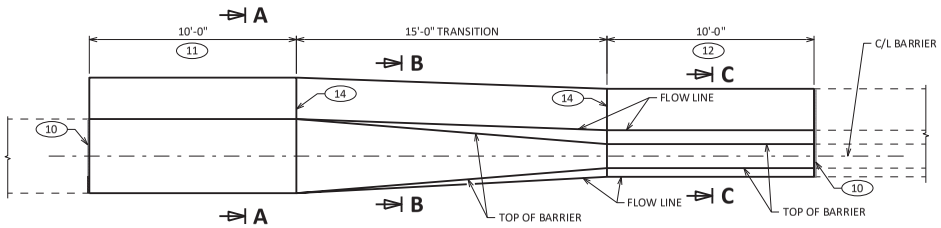
Addendum No. 01
ID 1228-22-70
Added Sheet 42D
March 7, 2023

CONCRETE BARRIER TRANSITION TYPE S56 TO S42A (SHEET 2 OF 2)

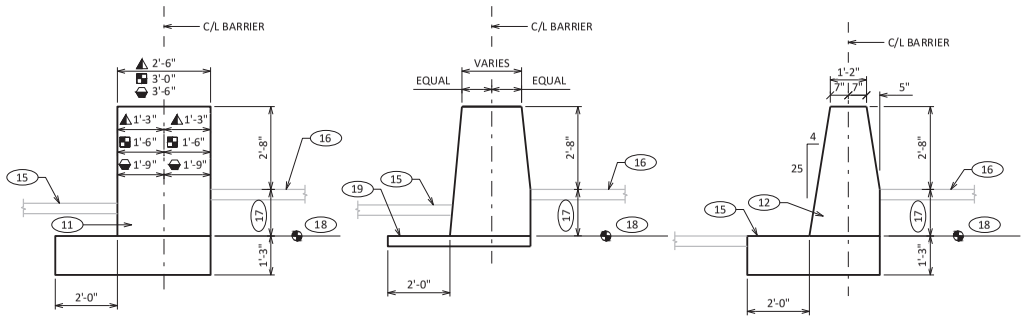
PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42D	E



ELEVATION VIEW



PLAN VIEW



SECTION A-A

SEE PLAN DETAILS SHEET FOR LOCATIONS OF 2'-6", 3'-0" & 3'-6" BARRIER

SECTION B-B

SECTION C-C

CONCRETE BARRIER TRANSITION TYPE V32 TO S32A (SHEET 1 OF 2)

GENERAL NOTES

CONSTRUCT PER STANDARD 603.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED EDGES UNLESS OTHERWISE NOTED.

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(11) END ANCHOR V32

(12) END ANCHOR S32A

(13) PAY LIMIT FOR CONCRETE BARRIER TRANSITION TYPE V32 TO S32A

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(15) LOW SIDE SHOULDER

(16) HIGH SIDE SHOULDER

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX). SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(19) CONCRETE BARRIER PAD MAY BE PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED ⅓ DEPTH. CONCRETE BARRIER PAD AND SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER TRANSITION BID ITEM. CONCRETE BARRIER PAD MINIMUM DEPTH IS 6", OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER. SEE "CONCRETE BARRIER SINGLE SLOPE (CBSS) SDD FOR SAWCUT DETAIL & DETAIL FOR ACCOMMODATING DRAINAGE STRUCTURE. SEE "CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES" SDD FOR TYING BARRIER PAD/FOUNDATION TO ADJACENT CONCRETE.

▲ DIMENSION IS APPLICABLE TO 2'-6" WIDE V32 BARRIER

▪ DIMENSION IS APPLICABLE TO 3'-0" WIDE V32 BARRIER

◒ DIMENSION IS APPLICABLE TO 3'-6" WIDE V32 BARRIER

◪ DETAILS SHOWN FOR V32 TO S32A DIFFERENTIAL SHOULDER HEIGHT TRANSITION. DETAILS SIMILAR FOR S32 TO V32 DIFFERENTIAL SHOULDER HEIGHT TRANSITION.

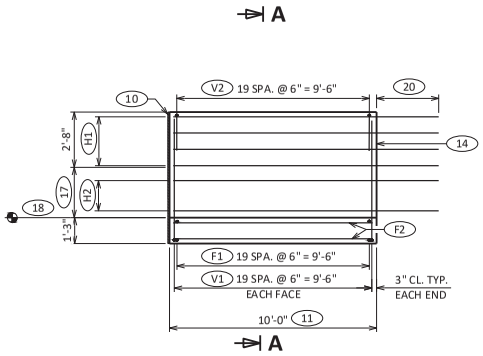
Addendum No. 01
ID 1228-22-70
Added Sheet 42E
March 7, 2023

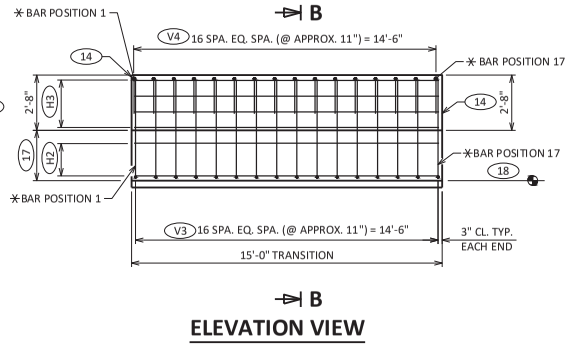
PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42E	E

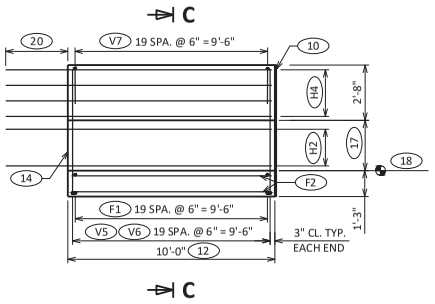
FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_TRANSITION_V32_TO_S32A.DWG
LAYOUT NAME - V32 TO S32A SHT 1
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00

Addendum No. 01
ID 1228-22-70
Added Sheet 42F
March 7, 2023

2



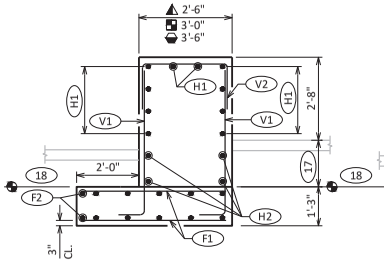




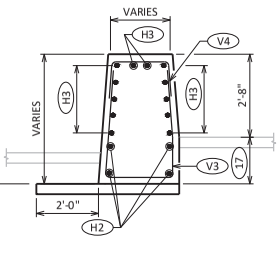
ELEVATION VIEW

TABLE "B"

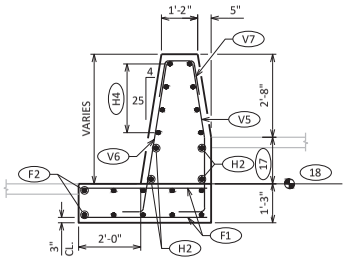
✳BAR POSITION	DIMENSION A ▲	A ■	A ◒	C ▲	C ■	C ◒	ANGLE E	F	G
1	2'-2"	2'-8"	3'-2"	2'-1 3/4"	2'-7 5/8"	3'-1 1/2"	89.8°	179.8°	90.2°
2	2'-2"	2'-8"	3'-2"	2'-0 3/4"	2'-6 3/8"	2'-11 7/8"	89.3°	179.3°	90.7°
3	2'-2"	2'-8"	3'-2"	1'-11 7/8"	2'-5"	2'-10 1/8"	88.8°	178.8°	91.2°
4	2'-2"	2'-8"	3'-2"	1'-10 7/8"	2'-3 5/8"	2'-8 1/2"	88.2°	178.2°	91.8°
5	2'-2"	2'-8"	3'-2"	1'-9 7/8"	2'-2 3/8"	2'-6 3/4"	87.7°	177.7°	92.3°
6	2'-2"	2'-8"	3'-2"	1'-8 7/8"	2'-1"	2'-5 1/8"	87.1°	177.1°	92.9°
7	2'-2"	2'-8"	3'-2"	1'-8"	1'-11 5/8"	2'-3 3/8"	86.6°	176.6°	93.4°
8	2'-2"	2'-8"	3'-2"	1'-7"	1'-10 3/8"	2'-1 3/4"	86.1°	176.1°	93.9°
9	2'-2"	2'-8"	3'-2"	1'-6"	1'-9"	2'-0"	85.5°	175.5°	94.5°
10	2'-2"	2'-8"	3'-2"	1'-5"	1'-7 5/8"	1'-10 3/8"	85.0°	175.0°	95.0°
11	2'-2"	2'-8"	3'-2"	1'-4 1/8"	1'-6 3/8"	1'-8 5/8"	84.5°	174.5°	95.5°
12	2'-2"	2'-8"	3'-2"	1'-3 1/8"	1'-5"	1'-7"	83.9°	173.9°	96.1°
13	2'-2"	2'-8"	3'-2"	1'-2 1/8"	1'-3 3/4"	1'-5 1/4"	83.4°	173.4°	96.6°
14	2'-2"	2'-8"	3'-2"	1'-1 1/8"	1'-2 3/8"	1'-3 1/2"	82.9°	172.9°	97.1°
15	2'-2"	2'-8"	3'-2"	1'-0 1/4"	1'-1"	1'-1 7/8"	82.3°	172.3°	97.7°
16	2'-2"	2'-8"	3'-2"	0'-11 1/4"	0'-11 3/4"	1'-0 1/8"	81.8°	171.8°	98.2°
17	2'-2"	2'-8"	3'-2"	0'-10 1/4"	0'-10 3/8"	0'-10 1/2"	81.3°	171.3°	98.7°



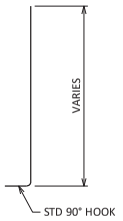
SECTION A-A



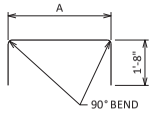
SECTION B-B



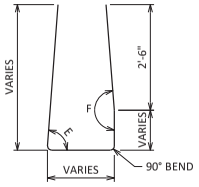
SECTION C-C



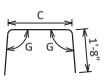
V1 BEND DETAIL



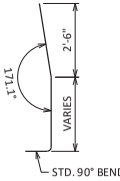
V2 BEND DETAIL



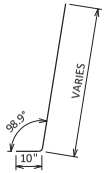
V3 BEND DETAIL



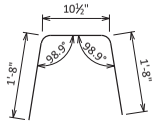
V4 BEND DETAIL



V5 BEND DETAIL



V6 BEND DETAIL



V7 BEND DETAIL

GENERAL NOTES

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2-INCH CLEAR UNLESS SHOWN OR NOTED OTHERWISE.

MAXIMUM DIFFERENTIAL SHOULDER HEIGHT, MEASURED AT FLOWLINE OF BARRIER, IS 3'-0".

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(11) END ANCHOR V32

(12) END ANCHOR S32A

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX.) SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(20) 3'-6" MIN. LAP OF LONGITUDINAL REINFORCEMENT

(H1) HORIZONTAL NO. 5 BARS. TEN (10) BARS REQ'D.

(H2) HORIZONTAL NO. 6 BARS EQUALLY SPACED. SEE TABLE "A" FOR REQ'D. REBAR.

(H3) HORIZONTAL NO. 5 BARS. TWELVE (12) BARS REQ'D. SLOPE BARS FOR EQUAL SPACING AS SHOWN.

(H4) HORIZONTAL NO. 5 BARS. EIGHT (8) BARS REQ'D

(V1) VERTICAL NO. 5 BARS, EACH FACE (SEE BAR BEND DETAIL)

(V2) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V1 BARS

(V3) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL & TABLE B)

(V4) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL & TABLE B) 1'-6" MIN LAP WITH V3 BARS

(V5) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V6) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V7) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V5 & V6 BARS

(F1) FOOTING TRANSVERSE NO. 6 BARS

(F2) FOOTING LONGITUDINAL NO. 5 BARS

▲ DIMENSION IS APPLICABLE TO 2'-6" WIDE V32 BARRIER

■ DIMENSION IS APPLICABLE TO 3'-0" WIDE V32 BARRIER

◒ DIMENSION IS APPLICABLE TO 3'-6" WIDE V32 BARRIER

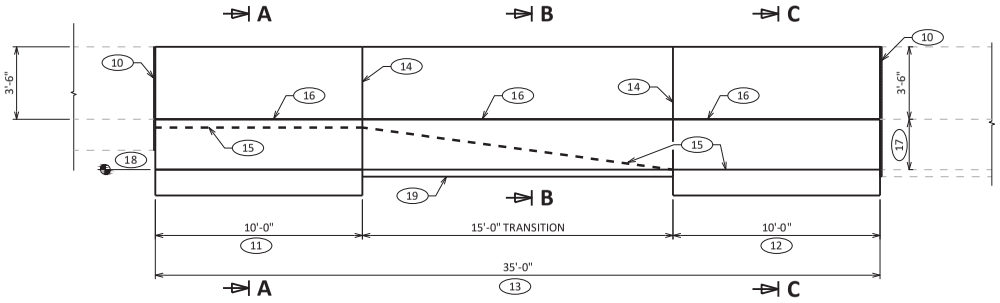
TABLE "A" (17)

HEIGHT BETWEEN ROADWAYS	(H2) QUANTITY OF NO. 6 BARS
0" TO 3"	0
>3" TO 8"	2
>8" TO 12"	4
>12" TO 36"	8

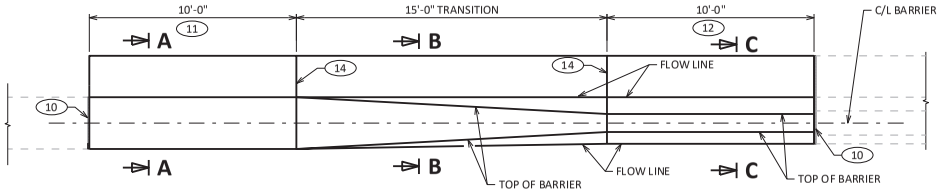
CONCRETE BARRIER TRANSITION TYPE V32 TO S32A (SHEET 2 OF 2)

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42F	E

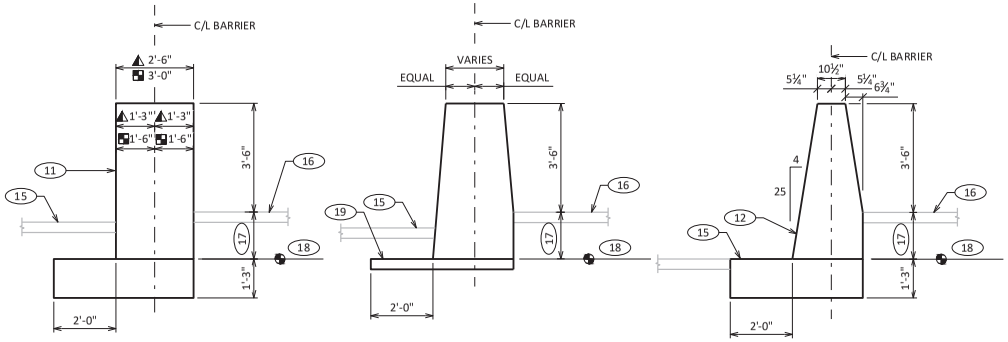
FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_TRANSITION_V32_TO_S32A.DWG
LAYOUT NAME - V32 TO S32A SHT 2
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00
WISDOT/CADDS SHEET 42



ELEVATION VIEW



PLAN VIEW



SECTION A-A

SEE PLAN DETAILS SHEET FOR LOCATIONS OF 2'-6" & 3'-0" BARRIER WIDTHS

SECTION B-B

SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD 603.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED EDGES UNLESS OTHERWISE NOTED.

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(11) END ANCHOR V42

(12) END ANCHOR S42A

(13) PAY LIMIT FOR CONCRETE BARRIER TRANSITION TYPE V42 TO S42A

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(15) LOW SIDE SHOULDER

(16) HIGH SIDE SHOULDER

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX). SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(19) CONCRETE BARRIER PAD MAY BE PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED ⅓ DEPTH. CONCRETE BARRIER PAD AND SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER TRANSITION BID ITEM. CONCRETE BARRIER PAD MINIMUM DEPTH IS 6", OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER. SEE "CONCRETE BARRIER SINGLE SLOPE (CBSS) SDD FOR SAWCUT DETAIL & DETAIL FOR ACCOMMODATING DRAINAGE STRUCTURE. SEE "CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES" SDD FOR TYING BARRIER PAD/FOUNDATION TO ADJACENT CONCRETE.

▲ DIMENSION IS APPLICABLE TO 2'-6" WIDE V42 BARRIER

▪ DIMENSION IS APPLICABLE TO 3'-0" WIDE V42 BARRIER

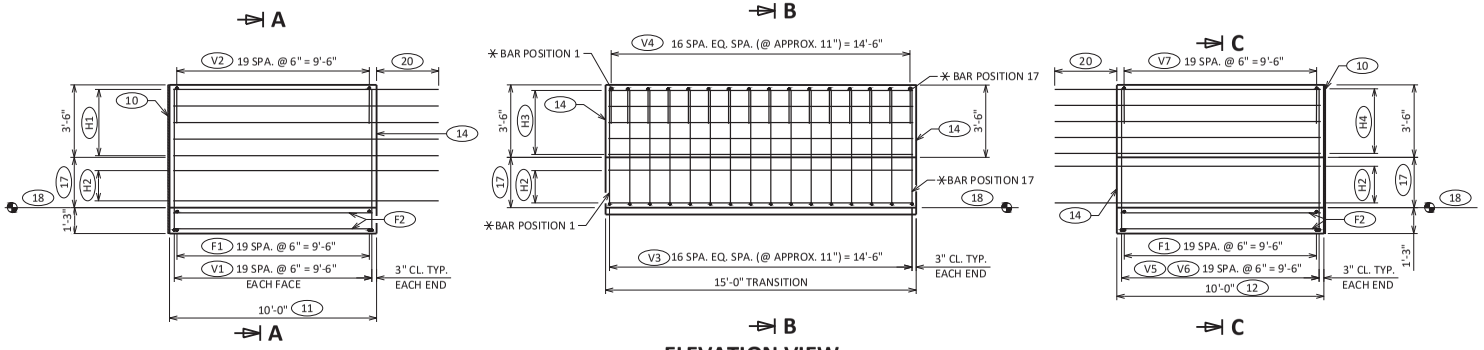
◪ DETAILS SHOWN FOR V42 TO S42A DIFFERENTIAL SHOULDER HEIGHT TRANSITION. DETAILS SIMILAR FOR S42 TO V42 DIFFERENTIAL SHOULDER HEIGHT TRANSITION.

Addendum No. 01
ID 1228-22-70
Added Sheet 42G
March 7, 2023

◪ CONCRETE BARRIER TRANSITION TYPE V42 TO S42A (SHEET 1 OF 2)

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42G	E

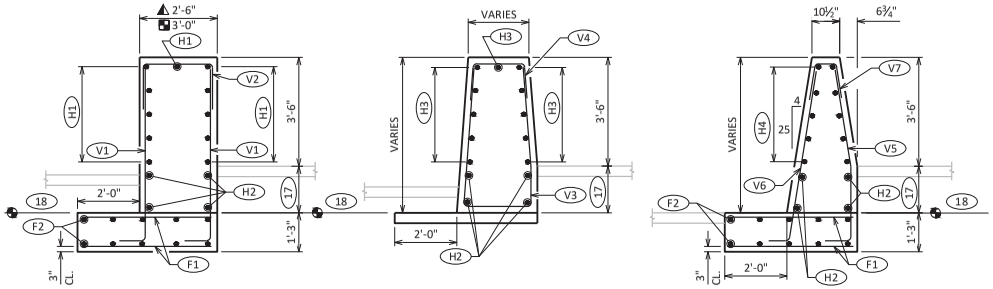
FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_TRANSITION_V42_TO_S42A.DWG
LAYOUT NAME - V42 TO S42A SHT 1
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00

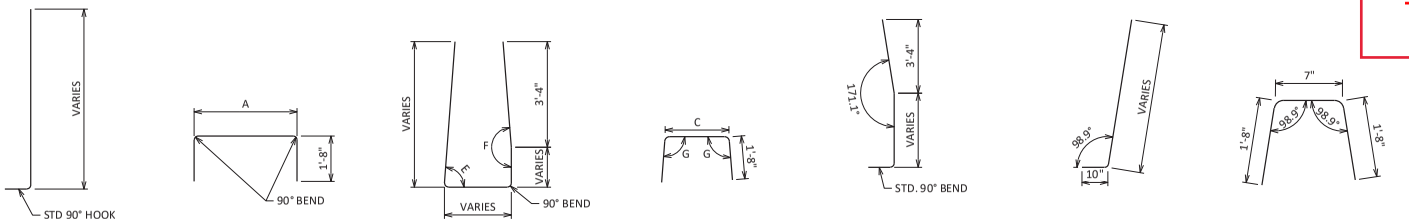


ELEVATION VIEW

TABLE "B"

✳ BAR POSITION	DIMENSION A ◭	DIMENSION A ◪	DIMENSION C ◭	DIMENSION C ◪	ANGLE E	ANGLE F	ANGLE G
1	2'-2"	2'-8"	2'-1 3/4"	2'-7 5/8"	89.8°	179.8°	90.2°
2	2'-2"	2'-8"	2'-0 1/2"	2'-6"	89.3°	179.3°	90.7°
3	2'-2"	2'-8"	1'-11 3/8"	2'-4 1/2"	88.7°	178.7°	91.3°
4	2'-2"	2'-8"	1'-10 1/8"	2'-3"	88.2°	178.2°	91.8°
5	2'-2"	2'-8"	1'-9"	2'-1 3/8"	87.6°	177.6°	92.4°
6	2'-2"	2'-8"	1'-7 3/4"	1'-11 7/8"	87.1°	177.1°	92.9°
7	2'-2"	2'-8"	1'-6 5/8"	1'-10 3/8"	86.5°	176.5°	93.5°
8	2'-2"	2'-8"	1'-5 1/2"	1'-8 3/4"	85.9°	175.9°	94.0°
9	2'-2"	2'-8"	1'-4 1/4"	1'-7 1/4"	85.4°	175.4°	94.6°
10	2'-2"	2'-8"	1'-3 1/8"	1'-5 3/4"	84.9°	174.9°	95.1°
11	2'-2"	2'-8"	1'-1 7/8"	1'-4 1/8"	84.3°	174.3°	95.7°
12	2'-2"	2'-8"	1'-0 3/4"	1'-2 5/8"	83.8°	173.8°	96.2°
13	2'-2"	2'-8"	0'-11 1/2"	1'-1 1/8"	83.2°	173.2°	96.8°
14	2'-2"	2'-8"	0'-10 3/8"	0'-11 5/8"	82.7°	172.7°	97.3°
15	2'-2"	2'-8"	0'-9 1/4"	0'-10"	82.1°	172.1°	97.9°
16	2'-2"	2'-8"	0'-8"	0'-8 1/2"	81.6°	171.6°	98.4°
17	2'-2"	2'-8"	0'-7"	0'-7"	81.0°	171.1°	99.0°





GENERAL NOTES

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2-INCH CLEAR UNLESS SHOWN OR NOTED OTHERWISE.

MAXIMUM DIFFERENTIAL SHOULDER HEIGHT, MEASURED AT FLOWLINE OF BARRIER, IS 3'-0".

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(11) END ANCHOR V42

(12) END ANCHOR S42A

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX.) SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(20) 3'-6" MIN. LAP OF LONGITUDINAL REINFORCEMENT

(H1) HORIZONTAL NO. 5 BARS. ELEVEN (11) BARS REQ'D.

(H2) HORIZONTAL NO. 6 BARS EQUALLY SPACED. SEE TABLE "A" FOR REQ'D. REBAR.

(H3) HORIZONTAL NO. 5 BARS. ELEVEN (11) BARS REQ'D. SLOPE BARS FOR EQUAL SPACING AS SHOWN.

(H4) HORIZONTAL NO. 5 BARS. TEN (10) BARS REQ'D

(V1) VERTICAL NO. 5 BARS, EACH FACE (SEE BAR BEND DETAIL)

(V2) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V1 BARS

(V3) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL & TABLE B)

(V4) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL & TABLE B) 1'-6" MIN LAP WITH V3 BARS

(V5) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V6) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V7) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V5 & V6 BARS

(F1) FOOTING TRANSVERSE NO. 6 BARS

(F2) FOOTING LONGITUDINAL NO. 5 BARS

◭ DIMENSION IS APPLICABLE TO 2'-6" WIDE V42 BARRIER

◪ DIMENSION IS APPLICABLE TO 3'-0" WIDE V42 BARRIER

Addendum No. 01
ID 1228-22-70
Added Sheet 42H
March 7, 2023

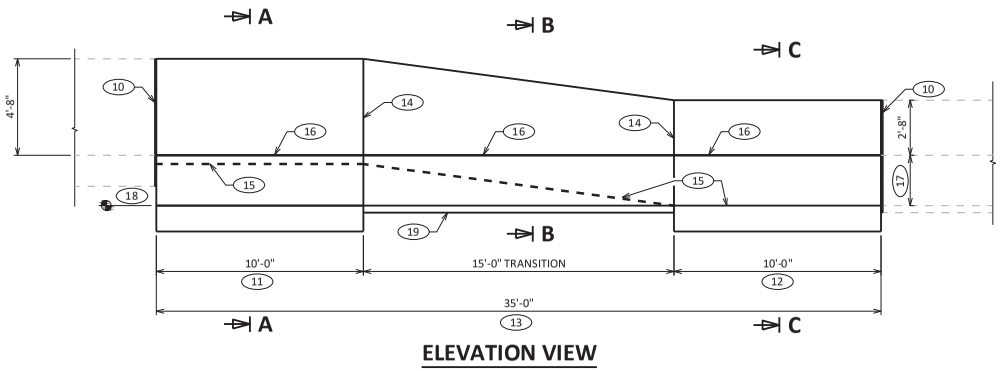
TABLE "A" (17)

HEIGHT BETWEEN ROADWAYS	QUANTITY OF (H2) NO. 6 BARS
0" TO 3"	0
>3" TO 8"	2
>8" TO 12"	4
>12" TO 36"	8

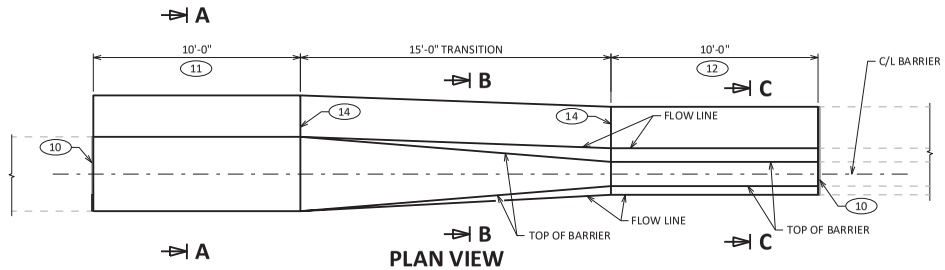
CONCRETE BARRIER TRANSITION TYPE V42 TO S42A (SHEET 2 OF 2)

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42H	E

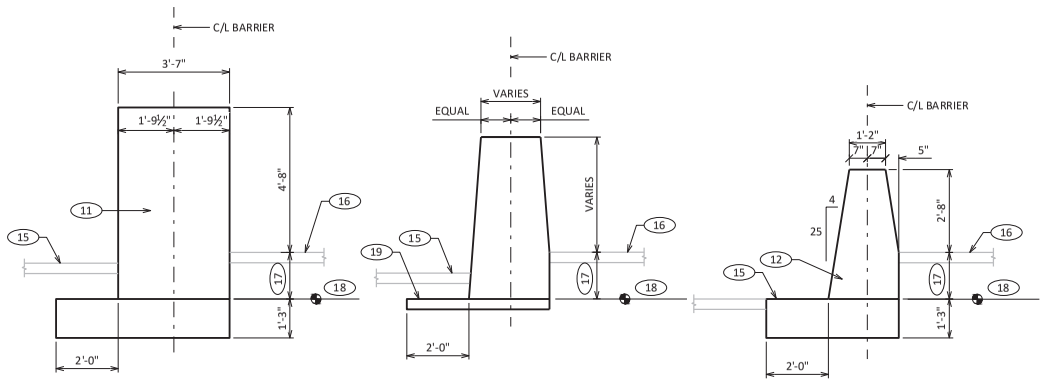
FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_TRANSITION_V42_TO_S42A.DWG
LAYOUT NAME - V42 TO S42A SHT 2
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00
WISDOT/CADDS SHEET 42



ELEVATION VIEW



PLAN VIEW



SECTION A-A SECTION B-B SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD 603.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED EDGES UNLESS OTHERWISE NOTED.

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(11) END ANCHOR V56

(12) END ANCHOR S32A

(13) PAY LIMIT FOR CONCRETE BARRIER TRANSITION TYPE V56 TO S32A

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(15) LOW SIDE SHOULDER

(16) HIGH SIDE SHOULDER

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX). SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(19) CONCRETE BARRIER PAD MAY BE PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED ½ DEPTH. CONCRETE BARRIER PAD AND SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER TRANSITION BID ITEM. CONCRETE BARRIER PAD MINIMUM DEPTH IS 6", OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER. SEE "CONCRETE BARRIER SINGLE SLOPE (CBSS) SDD FOR SAWCUT DETAIL & DETAIL FOR ACCOMMODATING DRAINAGE STRUCTURE. SEE "CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES" SDD FOR TYING BARRIER PAD/FOUNDATION TO ADJACENT CONCRETE.

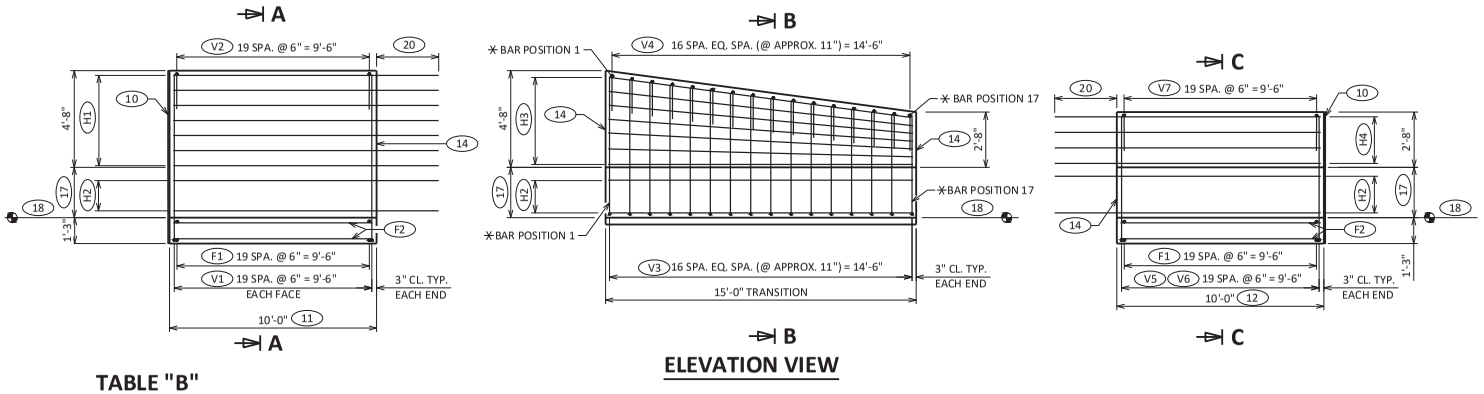
◪ DETAILS SHOWN FOR V56 TO S32A DIFFERENTIAL SHOULDER HEIGHT TRANSITION. DETAILS SIMILAR FOR S32 TO V56 DIFFERENTIAL SHOULDER HEIGHT TRANSITION.

Addendum No. 01
ID 1228-22-70
Added Sheet 42I
March 7, 2023

◪ CONCRETE BARRIER TRANSITION TYPE V56 TO S32A (SHEET 1 OF 2)

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42I	E

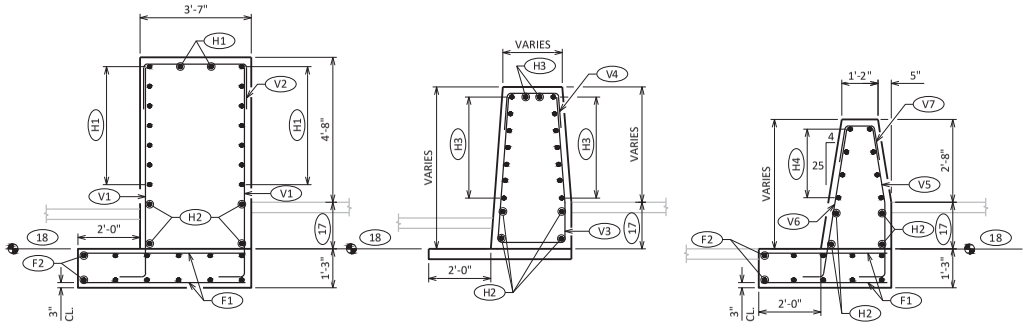
FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_TRANSITION_V56_TO_S32A.DWG
LAYOUT NAME - V56 TO S32A SHT 1
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00
WISDOT/CADDS SHEET 42



ELEVATION VIEW

TABLE "B"

BAR POSITION	DIMENSION B	DIMENSION C	ANGLE E	ANGLE F	ANGLE G
1	4'-5 5/8"	3'-3 1/2"	89.9°	179.9°	90.1°
2	4'-4 1/8"	3'-0 3/4"	89.6°	179.6°	90.4°
3	4'-2 3/4"	2'-11"	89.3°	179.3°	90.7°
4	4'-1 1/4"	2'-9 1/4"	88.9°	178.9°	91.1°
5	3'-11 7/8"	2'-7 1/2"	88.5°	178.5°	91.5°
6	3'-10 3/8"	2'-5 3/4"	88.1°	178.1°	91.9°
7	3'-8 7/8"	2'-4"	87.7°	177.7°	92.3°
8	3'-7 1/2"	2'-2 1/4"	87.2°	177.2°	92.8°
9	3'-6"	2'-0 1/2"	86.7°	176.7°	93.3°
10	3'-4 5/8"	1'-10 3/4"	86.2°	176.2°	93.8°
11	3'-3 1/8"	1'-9"	85.7°	175.7°	94.3°
12	3'-1 5/8"	1'-7 1/4"	85.1°	175.1°	94.9°
13	3'-0 1/4"	1'-5 1/2"	84.4°	174.4°	95.6°
14	2'-10 3/4"	1'-3 3/4"	83.8°	173.8°	96.2°
15	2'-9 3/8"	1'-2"	83.0°	173.0°	97.0°
16	2'-7 7/8"	1'-0 1/4"	82.2°	172.2°	97.8°
17	2'-6 3/8"	0'-10 1/2"	81.4°	171.4°	98.6°



Addendum No. 01
ID 1228-22-70
Added Sheet 42J
March 7, 2023

GENERAL NOTES

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2-INCH CLEAR UNLESS SHOWN OR NOTED OTHERWISE.

MAXIMUM DIFFERENTIAL SHOULDER HEIGHT, MEASURED AT FLOWLINE OF BARRIER, IS 3'-0".

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(11) END ANCHOR V56

(12) END ANCHOR S32A

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX.). SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(20) 3'-6" MIN. LAP OF LONGITUDINAL REINFORCEMENT

(H1) HORIZONTAL NO. 5 BARS. SIXTEEN (16) BARS REQ'D.

(H2) HORIZONTAL NO. 6 BARS EQUALLY SPACED. SEE TABLE "A" FOR REQ'D. REBAR.

(H3) HORIZONTAL NO. 5 BARS. SIXTEEN (16) BARS REQ'D. SLOPE BARS FOR EQUAL SPACING AS SHOWN.

(H4) HORIZONTAL NO. 5 BARS. EIGHT (8) BARS REQ'D

(V1) VERTICAL NO. 5 BARS, EACH FACE (SEE BAR BEND DETAIL)

(V2) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V1 BARS

(V3) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL & TABLE B)

(V4) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL & TABLE B) 1'-6" MIN LAP WITH V3 BARS

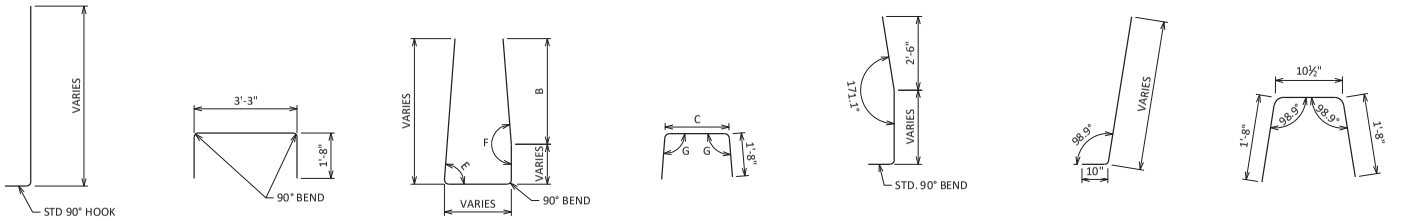
(V5) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V6) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V7) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V5 & V6 BARS

(F1) FOOTING TRANSVERSE NO. 6 BARS

(F2) FOOTING LONGITUDINAL NO. 5 BARS



V1 BEND DETAIL | V2 BEND DETAIL | V3 BEND DETAIL | V4 BEND DETAIL | V5 BEND DETAIL | V6 BEND DETAIL | V7 BEND DETAIL

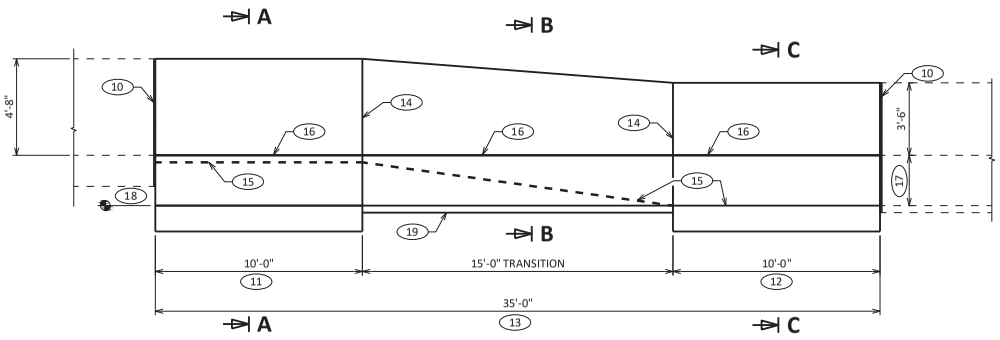
TABLE "A" (17)

HEIGHT BETWEEN ROADWAYS	(H2) QUANTITY OF NO. 6 BARS
0" TO 3"	0
>3" TO 8"	2
>8" TO 12"	4
>12" TO 36"	8

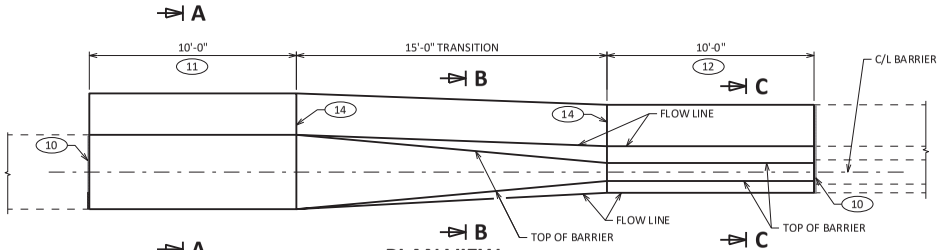
CONCRETE BARRIER TRANSITION TYPE V56 TO S32A (SHEET 2 OF 2)

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42J	E

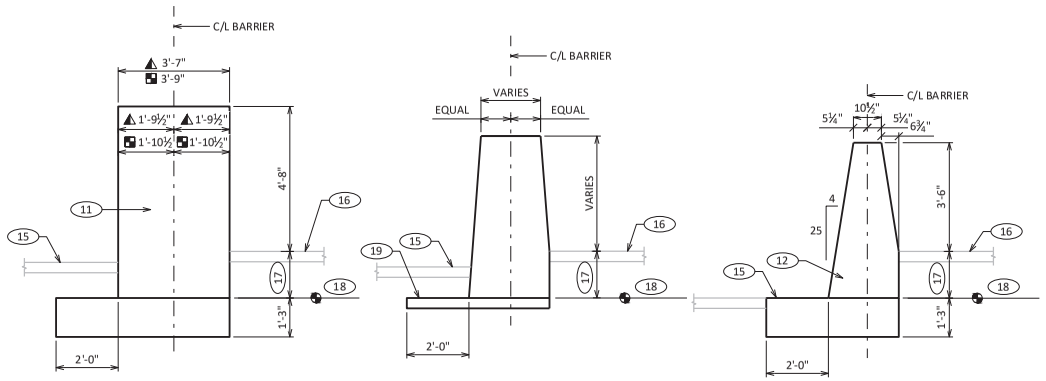
FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_TRANSITION_V56_TO_S32A.DWG
LAYOUT NAME - V56 TO S32A SHT 2
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00
WISDOT/CADDS SHEET 42



ELEVATION VIEW



PLAN VIEW



SECTION A-A

SEE PLAN DETAIL SHEET FOR LOCATIONS OF 3'-7" & 3'-9" BARRIER WIDTHS

SECTION B-B

SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD 603.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED EDGES UNLESS OTHERWISE NOTED.

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(11) END ANCHOR V56

(12) END ANCHOR S42A

(13) PAY LIMIT FOR CONCRETE BARRIER TRANSITION TYPE V56 TO S42A

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(15) LOW SIDE SHOULDER

(16) HIGH SIDE SHOULDER

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX). SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(19) CONCRETE BARRIER PAD MAY BE PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED ½ DEPTH. CONCRETE BARRIER PAD AND SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER TRANSITION BID ITEM. CONCRETE BARRIER PAD MINIMUM DEPTH IS 6", OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER. SEE "CONCRETE BARRIER SINGLE SLOPE (CBSS) SDD FOR SAWCUT DETAIL & DETAIL FOR ACCOMMODATING DRAINAGE STRUCTURE. SEE "CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES" SDD FOR TYING BARRIER PAD/FOUNDATION TO ADJACENT CONCRETE.

▲ DIMENSION IS APPLICABLE TO 3'-7" WIDE V56 BARRIER

▪ DIMENSION IS APPLICABLE TO 3'-9" WIDE V56 BARRIER

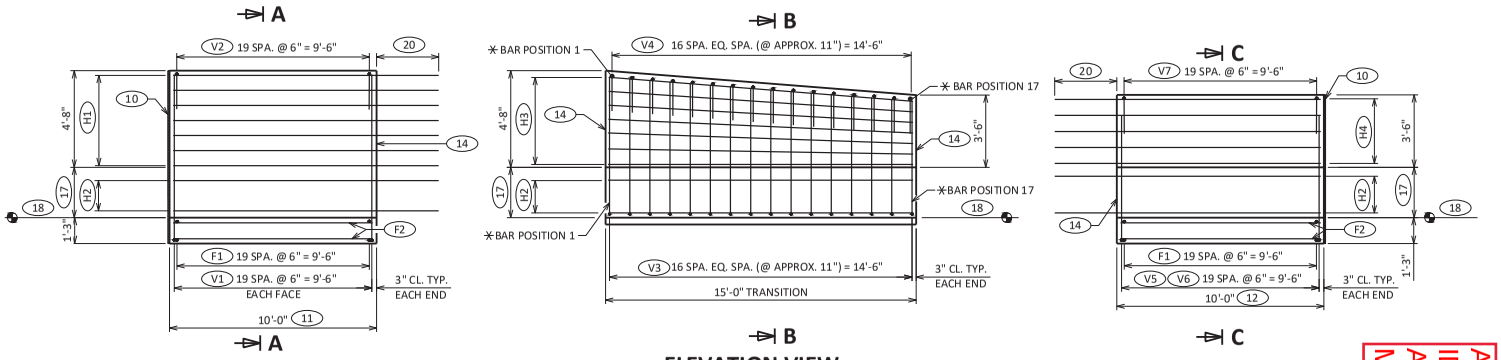
◪ DETAILS SHOWN FOR V56 TO S42A DIFFERENTIAL SHOULDER HEIGHT TRANSITION. DETAILS SIMILAR FOR S42 TO V56 DIFFERENTIAL SHOULDER HEIGHT TRANSITION.

Addendum No. 01
ID 1228-22-70
Added Sheet 42K
March 7, 2023

◪ CONCRETE BARRIER TRANSITION TYPE V56 TO S42A (SHEET 1 OF 2)

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42K	E

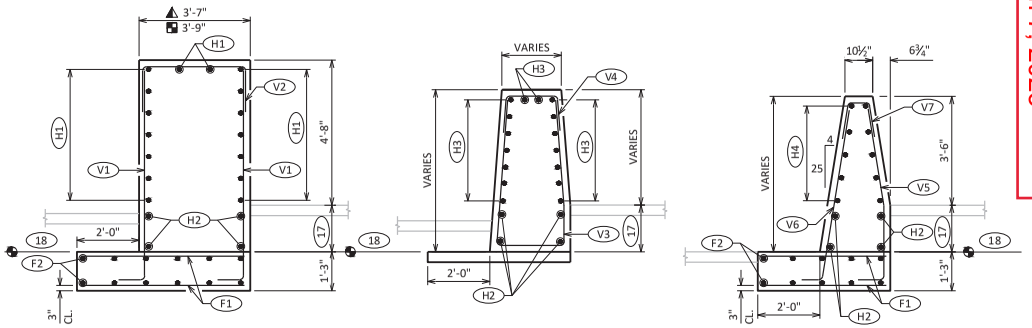
FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_TRANSITION_V56_TO_S42A.DWG
LAYOUT NAME - V56 TO S42A SHT 1
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00
WISDOT/CADDS SHEET 42



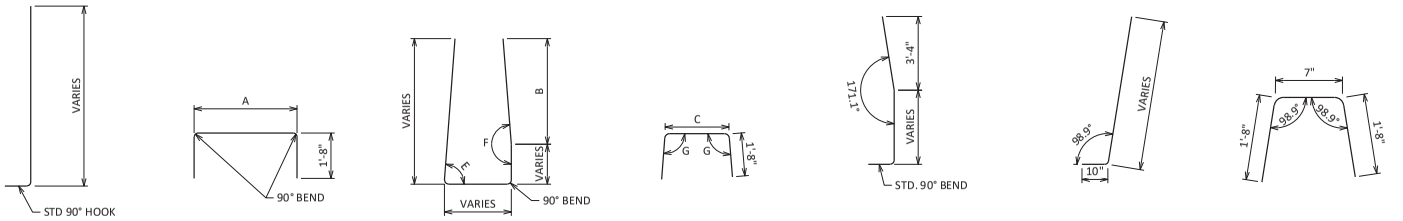
ELEVATION VIEW

TABLE "B"

BAR POSITION	DIMENSION A ▲	DIMENSION A ■	B	C ▲	C ■	ANGLES E	F	G
1	3'-3"	3'-5"	4'-5 3/4"	3'-2 1/2"	3'-4 1/2"	89.9°	179.9°	90.1°
2	3'-3"	3'-5"	4'-4 7/8"	3'-0 1/2"	3'-2 3/8"	89.4°	179.4°	90.6°
3	3'-3"	3'-5"	4'-4 1/8"	2'-10 1/2"	3'-0 1/4"	89.0°	179.0°	91.0°
4	3'-3"	3'-5"	4'-3 1/4"	2'-8 5/8"	2'-10 1/4"	88.6°	178.6°	91.4°
5	3'-3"	3'-5"	4'-2 3/8"	2'-6 5/8"	2'-8 1/8"	88.1°	178.1°	91.9°
6	3'-3"	3'-5"	4'-1 1/2"	2'-4 5/8"	2'-6"	87.6°	177.6°	92.4°
7	3'-3"	3'-5"	4'-0 3/4"	2'-2 3/4"	2'-3 7/8"	87.1°	177.1°	92.9°
8	3'-3"	3'-5"	3'-11 7/8"	2'-0 3/4"	2'-1 7/8"	86.6°	176.6°	93.4°
9	3'-3"	3'-5"	3'-11"	1'-10 3/4"	1'-11 3/4"	86.1°	176.1°	93.9°
10	3'-3"	3'-5"	3'-10 1/8"	1'-8 3/4"	1'-9 5/8"	85.5°	175.5°	94.5°
11	3'-3"	3'-5"	3'-9 3/8"	1'-6 7/8"	1'-7 5/8"	84.9°	174.9°	95.1°
12	3'-3"	3'-5"	3'-8 1/2"	1'-4 7/8"	1'-5 1/2"	84.4°	174.4°	95.6°
13	3'-3"	3'-5"	3'-7 5/8"	1'-2 7/8"	1'-3 3/8"	83.7°	173.7°	96.3°
14	3'-3"	3'-5"	3'-6 3/4"	1'-1"	1'-1 3/8"	83.1°	173.1°	96.9°
15	3'-3"	3'-5"	3'-6"	0'-11"	0'-11 1/4"	82.5°	172.5°	97.5°
16	3'-3"	3'-5"	3'-5 1/8"	0'-9"	0'-9 1/8"	81.8°	171.8°	98.2°
17	3'-3"	3'-5"	3'-4 1/4"	0'-7"	0'-7 1/8"	81.1°	171.1°	98.9°



SECTION A-A | SECTION B-B | SECTION C-C



V1 BEND DETAIL | V2 BEND DETAIL | V3 BEND DETAIL | V4 BEND DETAIL | V5 BEND DETAIL | V6 BEND DETAIL | V7 BEND DETAIL

GENERAL NOTES

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2-INCH CLEAR UNLESS SHOWN OR NOTED OTHERWISE.

MAXIMUM DIFFERENTIAL SHOULDER HEIGHT, MEASURED AT FLOWLINE OF BARRIER, IS 3'-0".

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(11) END ANCHOR V56

(12) END ANCHOR S42A

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX.) SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(20) 3'-6" MIN. LAP OF LONGITUDINAL REINFORCEMENT

(H1) HORIZONTAL NO. 5 BARS. SIXTEEN (16) BARS REQ'D.

(H2) HORIZONTAL NO. 6 BARS EQUALLY SPACED. SEE TABLE "A" FOR REQ'D. REBAR.

(H3) HORIZONTAL NO. 5 BARS. SIXTEEN (16) BARS REQ'D. SLOPE BARS FOR EQUAL SPACING AS SHOWN.

(H4) HORIZONTAL NO. 5 BARS. TEN (10) BARS REQ'D

(V1) VERTICAL NO. 5 BARS, EACH FACE (SEE BAR BEND DETAIL)

(V2) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V1 BARS

(V3) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL & TABLE B)

(V4) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL & TABLE B) 1'-6" MIN LAP WITH V3 BARS

(V5) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V6) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V7) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V5 & V6 BARS

(F1) FOOTING TRANSVERSE NO. 6 BARS

(F2) FOOTING LONGITUDINAL NO. 5 BARS

▲ DIMENSION IS APPLICABLE TO 3'-7" WIDE V56 BARRIER

■ DIMENSION IS APPLICABLE TO 3'-9" WIDE V56 BARRIER

Addendum No. 01
ID 1228-22-70
Added Sheet 42L
March 7, 2023

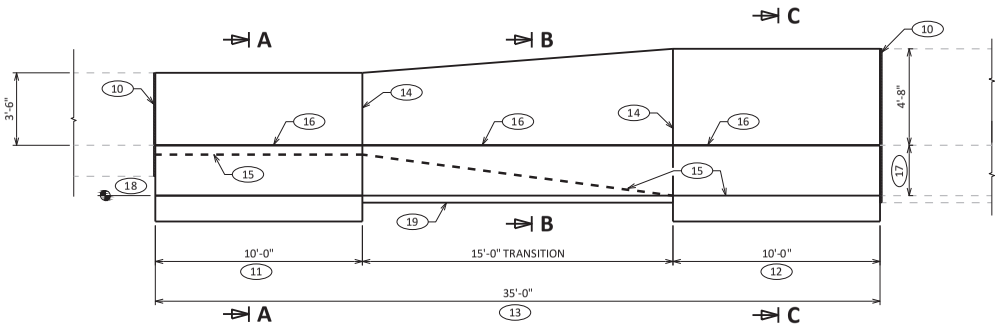
TABLE "A" (17)

HEIGHT BETWEEN ROADWAYS	QUANTITY OF NO. 6 BARS
0" TO 3"	0
>3" TO 8"	2
>8" TO 12"	4
>12" TO 36"	8

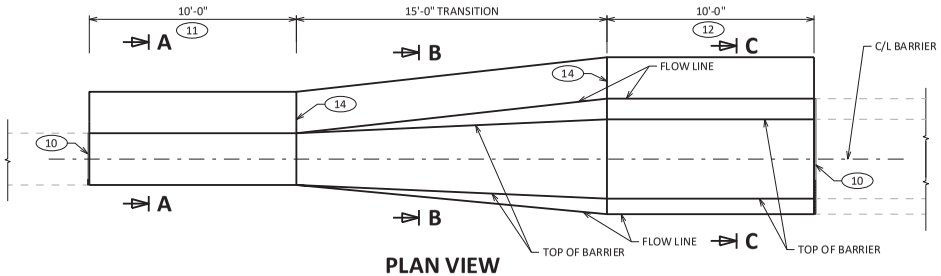
CONCRETE BARRIER TRANSITION TYPE V56 TO S42A (SHEET 2 OF 2)

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42L	E

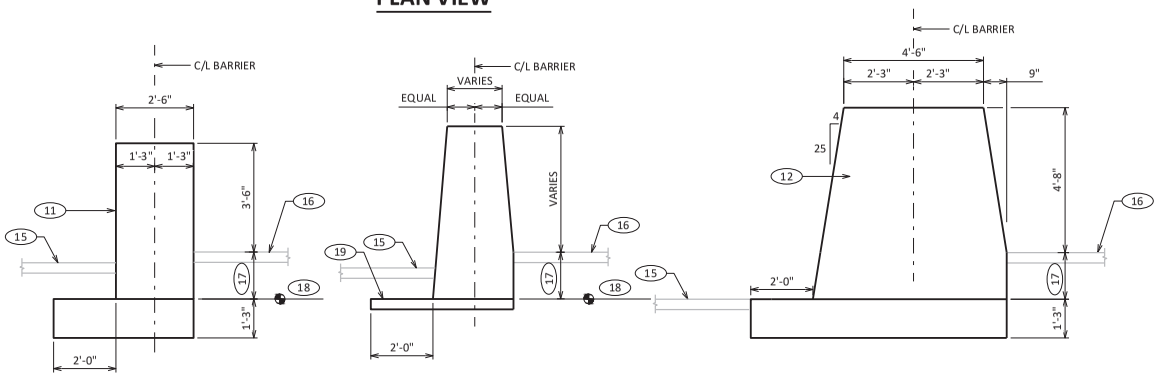
FILE NAME: X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_TRANSITION_V56_TO_S42A.DWG
LAYOUT NAME - V56 TO S42A SHT 2
PLOT DATE: ----
PLOT BY: ROZMENOSKI, WYATT
PLOT NAME:
PLOT SCALE: 6.00
WISDOT/CADDS SHEET 42



ELEVATION VIEW



PLAN VIEW



SECTION A-A SECTION B-B SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD 603.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED EDGES UNLESS OTHERWISE NOTED.

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(11) END ANCHOR V42

(12) END ANCHOR S56A

(13) PAY LIMIT FOR CONCRETE BARRIER TRANSITION TYPE V42 TO S56A

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(15) LOW SIDE SHOULDER

(16) HIGH SIDE SHOULDER

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX). SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(19) CONCRETE BARRIER PAD MAY BE PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED ½ DEPTH. CONCRETE BARRIER PAD AND SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER TRANSITION BID ITEM. CONCRETE BARRIER PAD MINIMUM DEPTH IS 6", OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER. SEE "CONCRETE BARRIER SINGLE SLOPE (CBSS) SDD FOR SAWCUT DETAIL & DETAIL FOR ACCOMMODATING DRAINAGE STRUCTURE. SEE "CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES" SDD FOR TYING BARRIER PAD/FOUNDATION TO ADJACENT CONCRETE.

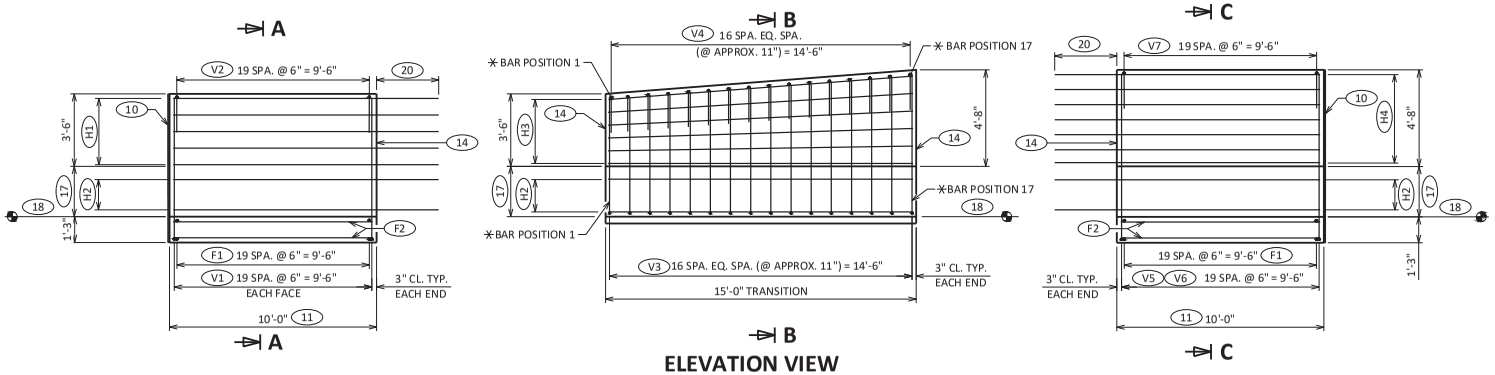
◪ DETAILS SHOWN FOR V42 TO S56A DIFFERENTIAL SHOULDER HEIGHT TRANSITION. DETAILS SIMILAR FOR S56 TO V42 DIFFERENTIAL SHOULDER HEIGHT TRANSITION.

Addendum No. 01
ID 1228-22-70
Added Sheet 42M
March 7, 2023

◪ CONCRETE BARRIER TRANSITION TYPE V42 TO S56A (SHEET 1 OF 2)

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42M	E

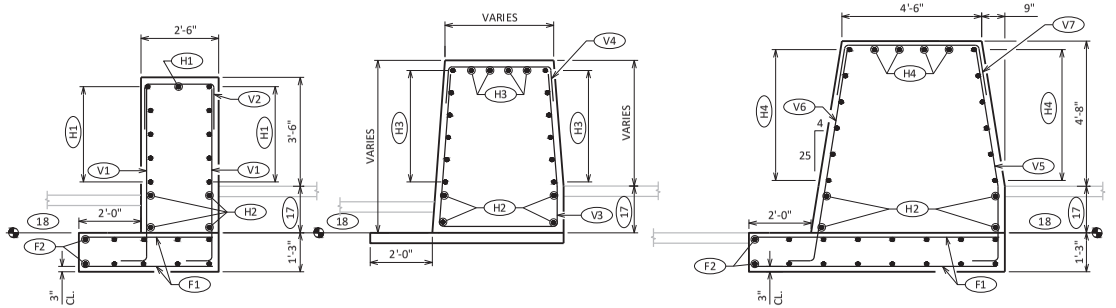
FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_TRANSITION_V42_TO_S56A.DWG
LAYOUT NAME - V42 TO S56A SHT 1
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00

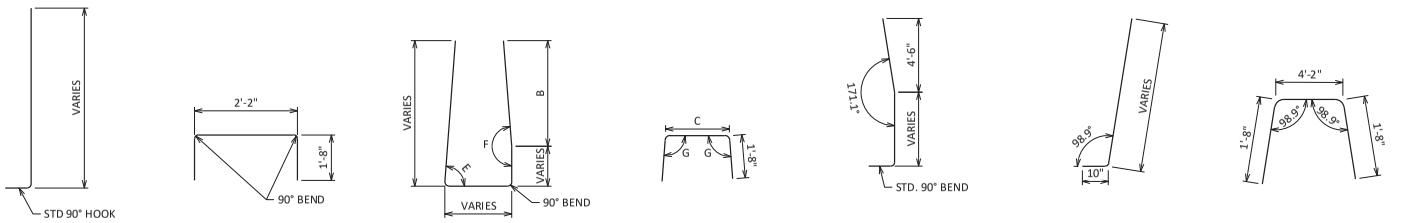


ELEVATION VIEW

TABLE "B"

BAR POSITION	DIMENSION		ANGLE		
	B	C	E	F	G
1	3'-4 1/4"	2'-2 3/8"	89.8°	179.8°	90.2°
2	3'-5 1/8"	2'-3 7/8"	89.1°	179.1°	90.9°
3	3'-6"	2'-5 3/8"	88.4°	178.4°	91.6°
4	3'-6 3/4"	2'-6 3/4"	87.9°	177.7°	92.3°
5	3'-7 5/8"	2'-8 1/4"	87.1°	177.1°	92.9°
6	3'-8 1/2"	2'-9 5/8"	86.5°	176.5°	93.5°
7	3'-9 3/8"	2'-11 1/8"	86.2°	176.2°	93.8°
8	3'-10 1/8"	3'-0 5/8"	85.3°	175.3°	94.7°
9	3'-11"	3'-2"	84.8°	174.8°	95.2°
10	3'-11 7/8"	3'-3 1/2"	84.2°	174.2°	95.8°
11	4'-0 3/4"	3'-4 7/8"	83.7°	173.7°	96.3°
12	4'-1 1/2"	3'-6 3/8"	83.2°	173.2°	96.8°
13	4'-2 3/8"	3'-7 3/4"	82.7°	172.7°	97.3°
14	4'-3 1/4"	3'-9 1/4"	82.3°	172.3°	97.7°
15	4'-4 1/8"	3'-10 3/4"	81.8°	171.8°	98.2°
16	4'-4 7/8"	4'-0 1/8"	81.4°	171.4°	98.6°
17	4'-5 3/4"	4'-1 5/8"	81.0°	171.1°	98.9°





GENERAL NOTES

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2-INCH CLEAR UNLESS SHOWN OR NOTED OTHERWISE.

MAXIMUM DIFFERENTIAL SHOULDER HEIGHT, MEASURED AT FLOWLINE OF BARRIER, IS 3'-0".

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(11) END ANCHOR V42

(12) END ANCHOR S56A

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX.) SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(20) 3'-6" MIN. LAP OF LONGITUDINAL REINFORCEMENT

(H1) HORIZONTAL NO. 5 BARS. ELEVEN (11) BARS REQ'D.

(H2) HORIZONTAL NO. 6 BARS EQUALLY SPACED. SEE TABLE "A" FOR REQ'D. REBAR.

(H3) HORIZONTAL NO. 5 BARS. SIXTEEN (16) BARS REQ'D. SLOPE BARS FOR EQUAL SPACING AS SHOWN.

(H4) HORIZONTAL NO. 5 BARS. SIXTEEN (16) BARS REQ'D

(V1) VERTICAL NO. 5 BARS, EACH FACE (SEE BAR BEND DETAIL)

(V2) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V1 BARS

(V3) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL & TABLE B)

(V4) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL & TABLE B) 1'-6" MIN LAP WITH V3 BARS

(V5) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V6) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V7) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V5 & V6 BARS

(F1) FOOTING TRANSVERSE NO. 6 BARS

(F2) FOOTING LONGITUDINAL NO. 5 BARS

TABLE "A" (17)

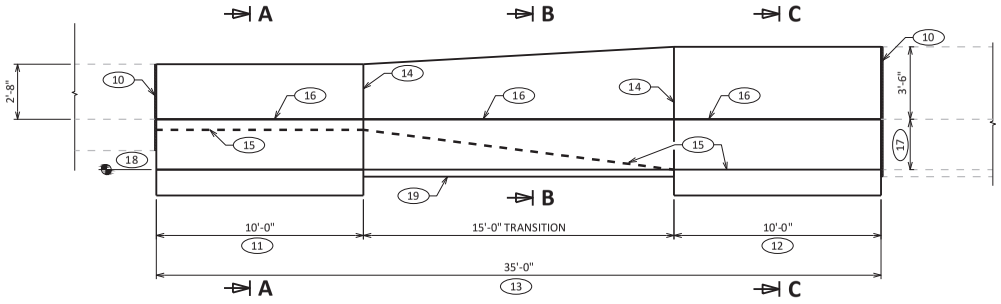
HEIGHT BETWEEN ROADWAYS	QUANTITY OF (H2) NO. 6 BARS
0" TO 3"	0
>3" TO 8"	2
>8" TO 12"	4
>12" TO 36"	8

Addendum No. 01
ID 1228-22-70
Added Sheet 42N
March 7, 2023

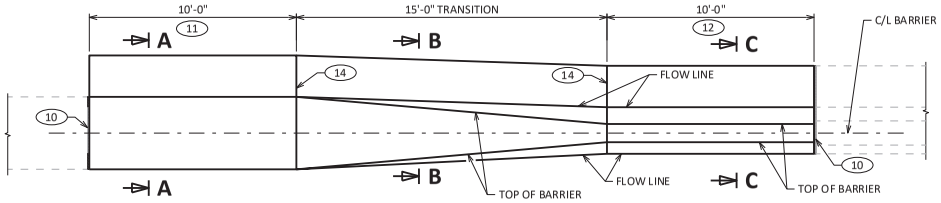
CONCRETE BARRIER TRANSITION TYPE V42 TO S56A (SHEET 2 OF 2)

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42N	E

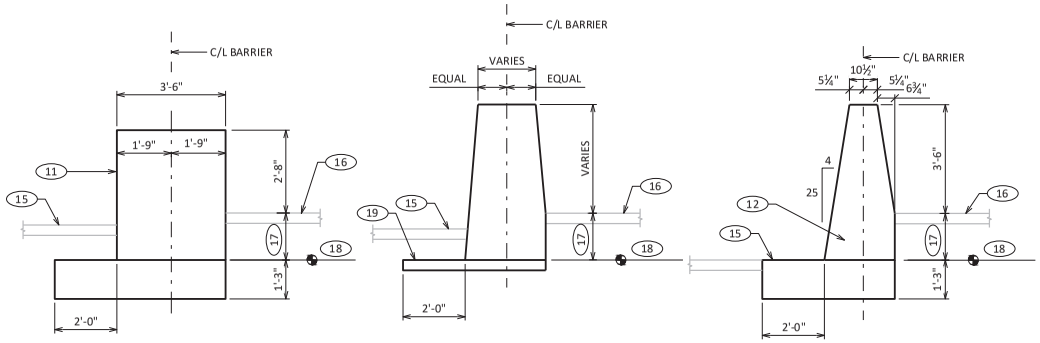
FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_TRANSITION_V42_TO_S56A.DWG
LAYOUT NAME - V42 TO S56A SHT 2
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00
WISDOT/CADDS SHEET 42



ELEVATION VIEW



PLAN VIEW



SECTION A-A SECTION B-B SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD 603.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED EDGES UNLESS OTHERWISE NOTED.

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(11) END ANCHOR V32

(12) END ANCHOR S42A

(13) PAY LIMIT FOR CONCRETE BARRIER TRANSITION TYPE V32 TO S42A

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(15) LOW SIDE SHOULDER

(16) HIGH SIDE SHOULDER

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX). SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(19) CONCRETE BARRIER PAD MAY BE PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED ½ DEPTH. CONCRETE BARRIER PAD AND SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER TRANSITION BID ITEM. CONCRETE BARRIER PAD MINIMUM DEPTH IS 6", OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER. SEE "CONCRETE BARRIER SINGLE SLOPE (CBSS) SDD FOR SAWCUT DETAIL & DETAIL FOR ACCOMMODATING DRAINAGE STRUCTURE. SEE "CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES" SDD FOR TYING BARRIER PAD/FOUNDATION TO ADJACENT CONCRETE.

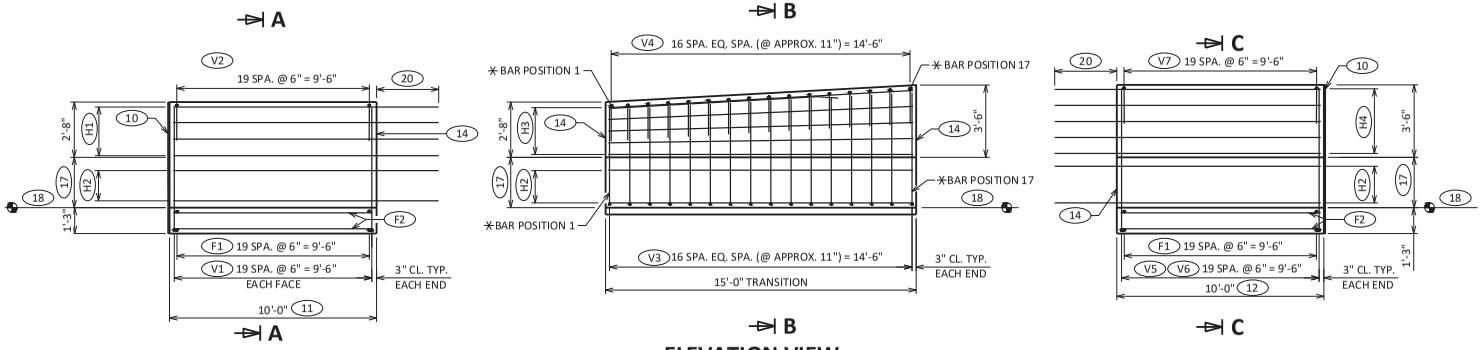
◪ DETAILS SHOWN FOR V32 TO S42A DIFFERENTIAL SHOULDER HEIGHT TRANSITION. DETAILS SIMILAR FOR S42 TO V32 DIFFERENTIAL SHOULDER HEIGHT TRANSITION.

Addendum No. 01
ID 1228-22-70
Added Sheet 420
March 7, 2023

◪ CONCRETE BARRIER TRANSITION TYPE V32 TO S42A (SHEET 1 OF 2)

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 420	E

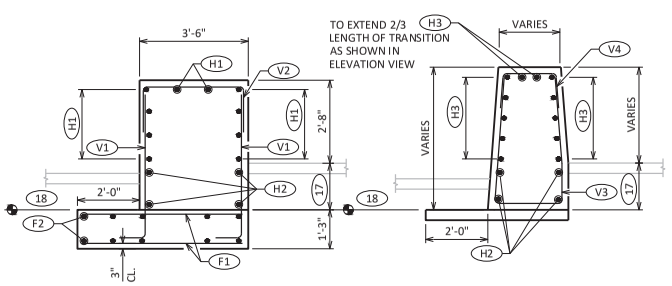
FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_TRANSITION_V32_TO_S42A.DWG
LAYOUT NAME - V32 TO S42A SHT 1
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00
WISDOT/CADDS SHEET 42



ELEVATION VIEW

TABLE "B"

BAR POSITION	DIMENSION B	DIMENSION C	ANGLE E	ANGLE F	ANGLE G
1	2'-6 1/8"	3'-1 1/2"	89.8°	179.8°	90.2°
2	2'-6 3/4"	2'-11 5/8"	89.3°	179.3°	90.7°
3	2'-7 3/8"	2'-9 5/8"	88.7°	178.7°	91.3°
4	2'-8"	2'-7 3/4"	88.2°	178.2°	91.8°
5	2'-8 5/8"	2'-5 7/8"	87.6°	177.6°	92.4°
6	2'-9 1/4"	2'-4"	87.1°	177.1°	92.9°
7	2'-9 3/4"	2'-2 1/8"	86.5°	176.5°	93.5°
8	2'-10 3/8"	2'-0 1/8"	85.9°	175.9°	94.0°
9	2'-11"	1'-10 1/4"	85.4°	175.4°	94.6°
10	2'-11 5/8"	1'-8 3/8"	84.9°	174.9°	95.1°
11	3'-0 1/4"	1'-6 1/2"	84.3°	174.3°	95.7°
12	3'-0 7/8"	1'-4 1/2"	83.8°	173.8°	96.2°
13	3'-1 3/8"	1'-2 5/8"	83.2°	173.2°	96.8°
14	3'-2"	1'-0 3/4"	82.7°	172.7°	97.3°
15	3'-2 5/8"	0'-10 7/8"	82.1°	172.1°	97.9°
16	3'-3 1/4"	0'-9"	81.6°	171.6°	98.4°
17	3'-3 7/8"	0'-7"	81.0°	171.1°	99.0°



SECTION A-A

SECTION B-B

SECTION C-C

GENERAL NOTES

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2-INCH CLEAR UNLESS SHOWN OR NOTED OTHERWISE.

MAXIMUM DIFFERENTIAL SHOULDER HEIGHT, MEASURED AT FLOWLINE OF BARRIER, IS 3'-0".

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(11) END ANCHOR V32

(12) END ANCHOR S42A

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX.) SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(20) 3'-6" MIN. LAP OF LONGITUDINAL REINFORCEMENT

(H1) HORIZONTAL NO. 5 BARS. TEN (10) BARS REQ'D.

(H2) HORIZONTAL NO. 6 BARS EQUALLY SPACED. SEE TABLE "A" FOR REQ'D. REBAR.

(H3) HORIZONTAL NO. 5 BARS. TWELVE (12) BARS REQ'D. SLOPE BARS FOR EQUAL SPACING AS SHOWN.

(H4) HORIZONTAL NO. 5 BARS. TEN (10) BARS REQ'D

(V1) VERTICAL NO. 5 BARS, EACH FACE (SEE BAR BEND DETAIL)

(V2) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V1 BARS

(V3) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL & TABLE B)

(V4) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL & TABLE B) 1'-6" MIN LAP WITH V3 BARS

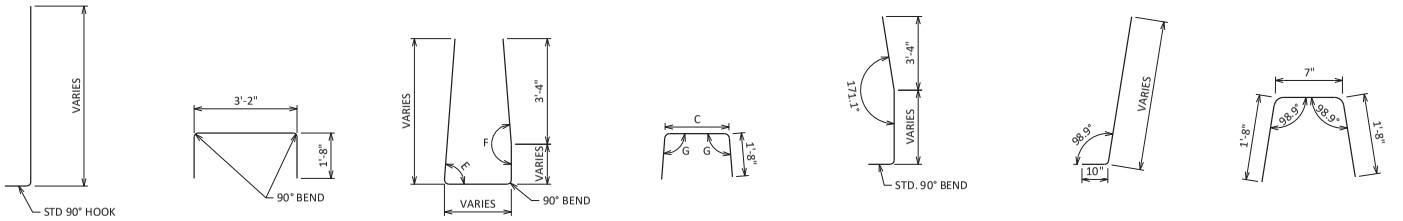
(V5) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V6) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V7) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V5 & V6 BARS

(F1) FOOTING TRANSVERSE NO. 6 BARS

(F2) FOOTING LONGITUDINAL NO. 5 BARS



V1 BEND DETAIL

V2 BEND DETAIL

V3 BEND DETAIL

V4 BEND DETAIL

V5 BEND DETAIL

V6 BEND DETAIL

V7 BEND DETAIL

TABLE "A" (17)

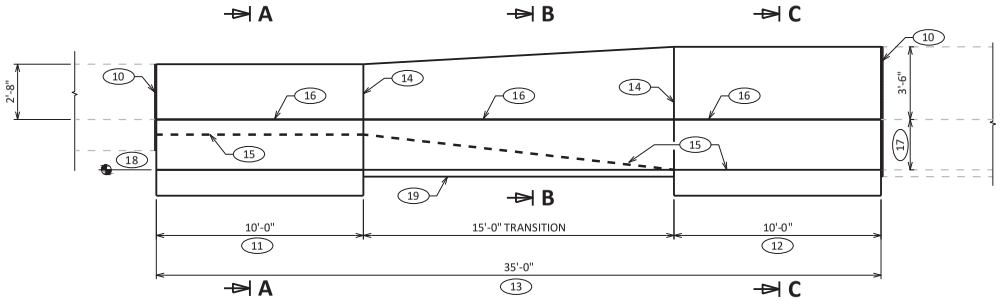
HEIGHT BETWEEN ROADWAYS	QUANTITY OF (H2) NO. 6 BARS
0" TO 3"	0
>3" TO 8"	2
>8" TO 12"	4
>12" TO 36"	8

Addendum No. 01
ID 1228-22-70
Added Sheet 42P
March 7, 2023

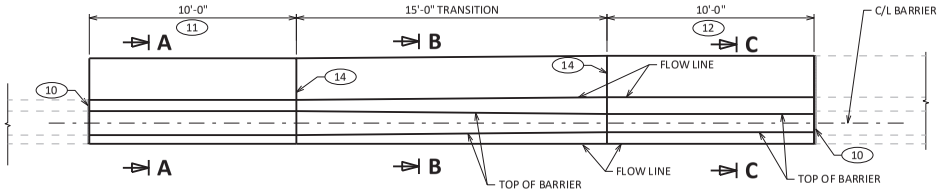
CONCRETE BARRIER TRANSITION TYPE V32 TO S42A (SHEET 2 OF 2)

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42P	E

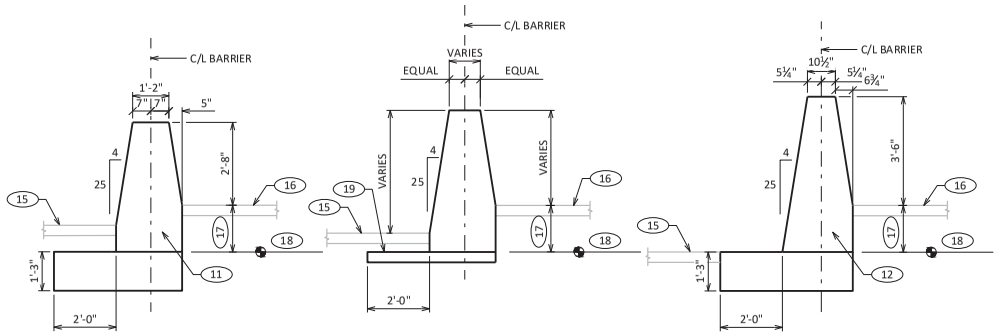
FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_TRANSITION_V32_TO_S42A.DWG
LAYOUT NAME - V32 TO S42A SHT 2
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00



ELEVATION VIEW



PLAN VIEW



SECTION A-A SECTION B-B SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD 603.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED EDGES UNLESS OTHERWISE NOTED.

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(11) END ANCHOR S32A

(12) END ANCHOR S42A

(13) PAY LIMIT FOR CONCRETE BARRIER TRANSITION TYPE S32A TO S42A

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(15) LOW SIDE SHOULDER

(16) HIGH SIDE SHOULDER

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (1½" MIN. TO 3'-0" MAX). SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(19) CONCRETE BARRIER PAD MAY BE PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED ½ DEPTH. CONCRETE BARRIER PAD AND SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER TRANSITION BID ITEM. CONCRETE BARRIER PAD MINIMUM DEPTH IS 6", OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER. SEE "CONCRETE BARRIER SINGLE SLOPE (CBSS) SDD FOR SAWCUT DETAIL & DETAIL FOR ACCOMMODATING DRAINAGE STRUCTURE. SEE "CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES" SDD FOR TYING BARRIER PAD/FOUNDATION TO ADJACENT CONCRETE.

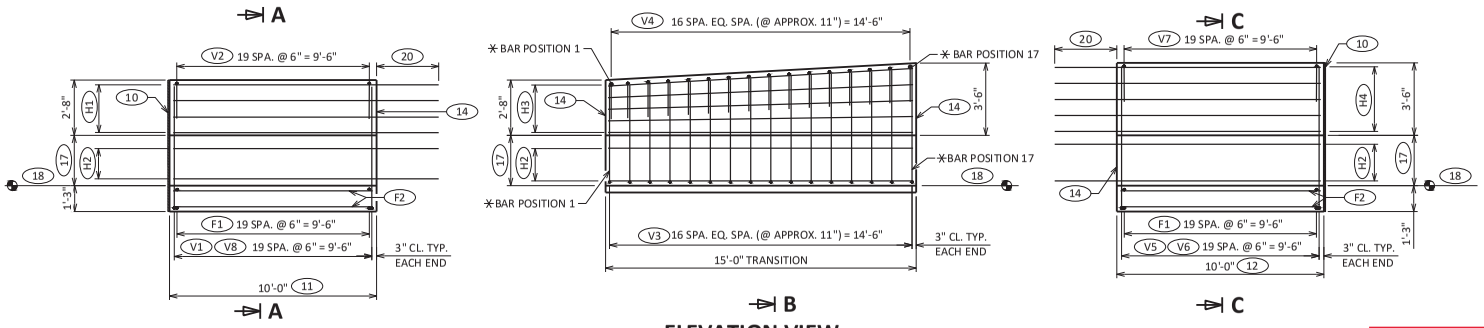
◪ DETAILS SHOWN FOR S32A TO S42A DIFFERENTIAL SHOULDER HEIGHT TRANSITION. DETAILS SIMILAR FOR S42A TO S32A DIFFERENTIAL SHOULDER HEIGHT TRANSITION.

Addendum No. 01
ID 1228-22-70
Added Sheet 42Q
March 7, 2023

◪ CONCRETE BARRIER TRANSITION TYPE S32A TO S42A (SHEET 1 OF 2)

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42Q	E

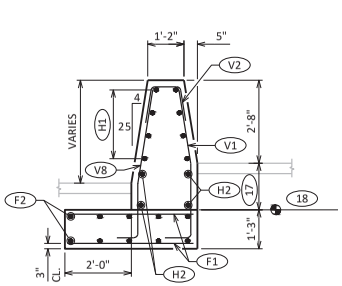
FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_TRANSITION_S32A_TO_S42A.DWG
LAYOUT NAME - S32A TO S42A SHT 1
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00
WISDOT/CADDS SHEET 42



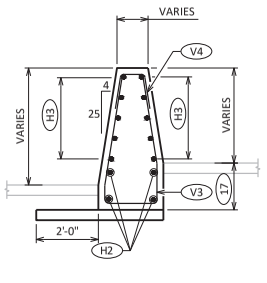
ELEVATION VIEW

TABLE "B"

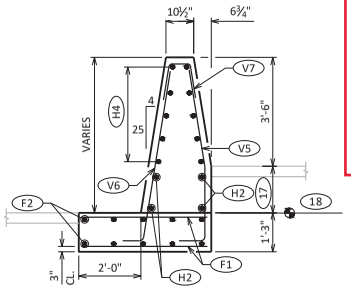
BAR POSITION	DIMENSION B	DIMENSION C
1	2'-6 1/8"	0'-10"
2	2'-6 3/4"	0'-9 3/4"
3	2'-7 3/8"	0'-9 1/2"
4	2'-8"	0'-9 3/8"
5	2'-8 5/8"	0'-9 1/8"
6	2'-9 1/4"	0'-8 7/8"
7	2'-9 3/4"	0'-8 5/8"
8	2'-10 3/8"	0'-8 1/2"
9	2'-11"	0'-8 1/4"
10	2'-11 5/8"	0'-8"
11	3'-0 1/4"	0'-7 7/8"
12	3'-0 7/8"	0'-7 5/8"
13	3'-1 3/8"	0'-7 3/8"
14	3'-2"	0'-7 1/4"
15	3'-2 5/8"	0'-7"
16	3'-3 1/4"	0'-6 3/4"
17	3'-3 7/8"	0'-6 5/8"



SECTION A-A



SECTION B-B



SECTION C-C

Addendum No. 01
ID 1228-22-70
Added Sheet 42R
March 7, 2023

GENERAL NOTES

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2-INCH CLEAR UNLESS SHOWN OR NOTED OTHERWISE.

MAXIMUM DIFFERENTIAL SHOULDER HEIGHT, MEASURED AT FLOWLINE OF BARRIER, IS 3'-0".

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(11) END ANCHOR S32A

(12) END ANCHOR S42A

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (1½" MIN. TO 3'-0" MAX.) SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(20) 3'-6" MIN. LAP OF LONGITUDINAL REINFORCEMENT

(H1) HORIZONTAL NO. 5 BARS. EIGHT (8) BARS REQ'D.

(H2) HORIZONTAL NO. 6 BARS EQUALLY SPACED. SEE TABLE "A" FOR REQ'D. REBAR.

(H3) HORIZONTAL NO. 5 BARS. TEN (10) BARS REQ'D. SLOPE BARS FOR EQUAL SPACING AS SHOWN.

(H4) HORIZONTAL NO. 5 BARS. TEN (10) BARS REQ'D

(V1) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V2) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V1 BARS

(V3) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL)

(V4) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL & TABLE B) 1'-6" MIN LAP WITH V3 BARS

(V5) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

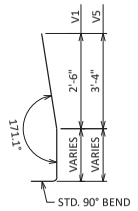
(V6) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V7) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V5 & V6 BARS

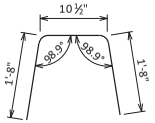
(V8) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(F1) FOOTING TRANSVERSE NO. 6 BARS

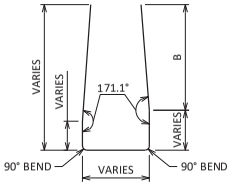
(F2) FOOTING LONGITUDINAL NO. 5 BARS



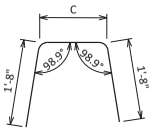
V1 & V5 BEND DETAIL



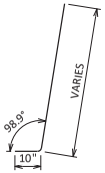
V2 BEND DETAIL



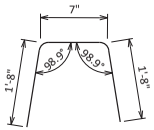
V3 BEND DETAIL



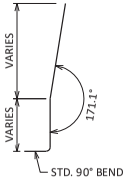
V4 BEND DETAIL



V6 BEND DETAIL



V7 BEND DETAIL



V8 BEND DETAIL

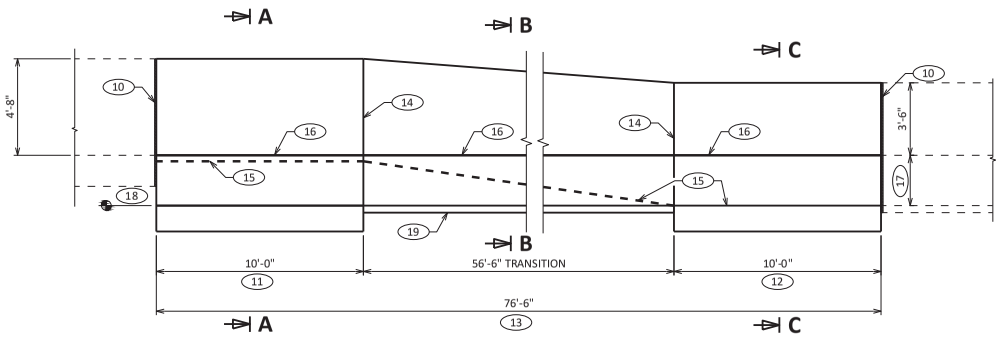
TABLE "A" (17)

HEIGHT BETWEEN ROADWAYS	(H2) QUANTITY OF NO. 6 BARS
0" TO 3"	0
>3" TO 8"	2
>8" TO 12"	4
>12" TO 36"	8

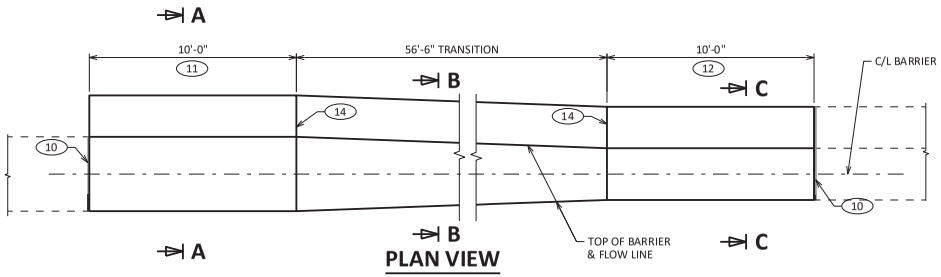
CONCRETE BARRIER TRANSITION TYPE S32A TO S42A (SHEET 2 OF 2)

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42R	E

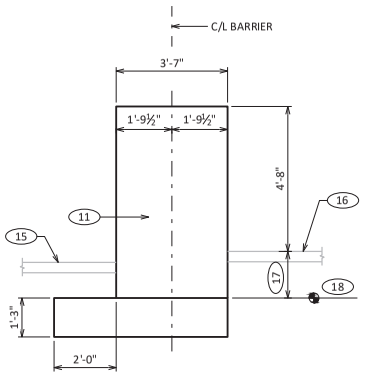
FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_TRANSITION_S32A_TO_S42A.DWG
LAYOUT NAME - S32A TO S42A SHT 2
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00
WISDOT/CADDS SHEET 42



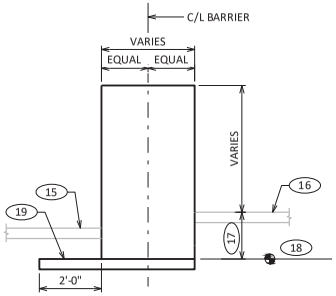
ELEVATION VIEW



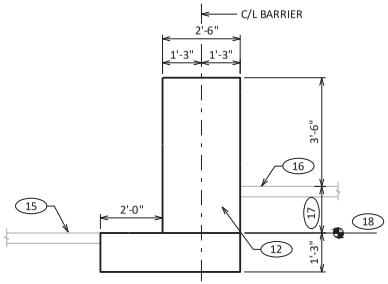
PLAN VIEW



SECTION A-A



SECTION B-B



SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD 603.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED EDGES UNLESS OTHERWISE NOTED.

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(11) END ANCHOR V56

(12) END ANCHOR V42

(13) PAY LIMIT FOR CONCRETE BARRIER TRANSITION TYPE V56 TO V42 SPECIAL

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(15) LOW SIDE SHOULDER

(16) HIGH SIDE SHOULDER

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX). SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(19) CONCRETE BARRIER PAD MAY BE PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED ⅓ DEPTH. CONCRETE BARRIER PAD AND SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER TRANSITION BID ITEM. CONCRETE BARRIER PAD MINIMUM DEPTH IS 6", OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER. SEE "CONCRETE BARRIER SINGLE SLOPE (CBSS) SDD FOR SAWCUT DETAIL & DETAIL FOR ACCOMMODATING DRAINAGE STRUCTURE. SEE "CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES" SDD FOR TYING BARRIER PAD/FOUNDATION TO ADJACENT CONCRETE.

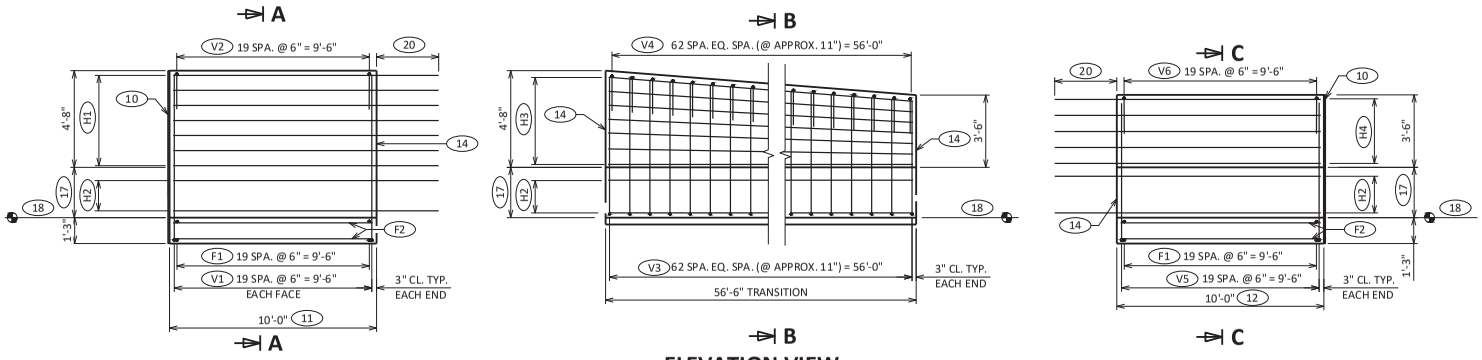
◪ DETAILS SHOWN FOR V56 (AT 3'-7" WIDTH) TO V42 (AT 2'-6" WIDTH) DIFFERENTIAL SHOULDER HEIGHT TRANSITION. DETAILS SIMILAR FOR V42 (AT 2'-6" WIDTH) TO V56 (AT 3'-7" WIDTH) DIFFERENTIAL SHOULDER HEIGHT TRANSITION.

Addendum No. 01
ID 1228-22-70
Added Sheet 42S
March 7, 2023

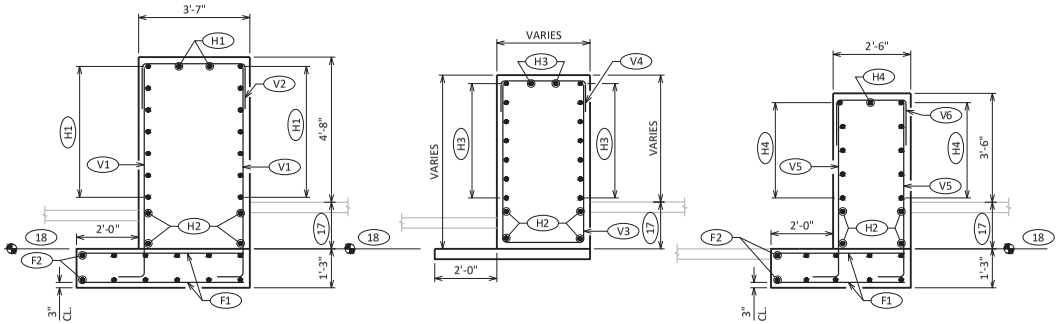
◪ CONCRETE BARRIER TRANSITION TYPE V56 TO V42 SPECIAL (SHEET 1 OF 2)

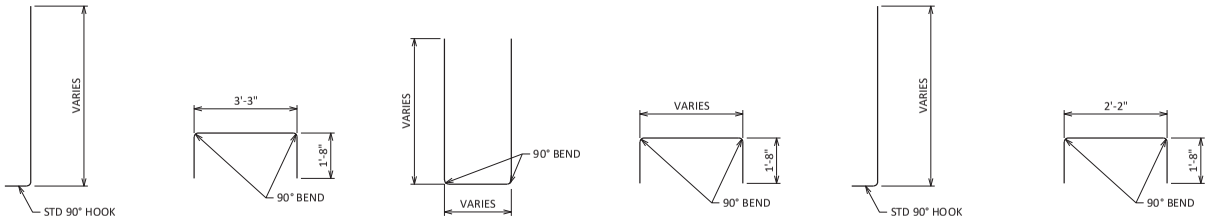
PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42S	E

FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_SPECIAL_TRANSITION_V56_TO_V42.DWG
LAYOUT NAME - V56 TO V42 SHT 1
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00



ELEVATION VIEW





GENERAL NOTES

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2-INCH CLEAR UNLESS SHOWN OR NOTED OTHERWISE.

MAXIMUM DIFFERENTIAL SHOULDER HEIGHT, MEASURED AT FLOWLINE OF BARRIER, IS 3'-0".

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(11) END ANCHOR V56

(12) END ANCHOR V42

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX.) SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(20) 3'-6" MIN. LAP OF LONGITUDINAL REINFORCEMENT

(H1) HORIZONTAL NO. 5 BARS. SIXTEEN (16) BARS REQ'D.

(H2) HORIZONTAL NO. 6 BARS EQUALLY SPACED. SEE TABLE "A" FOR REQ'D. REBAR. 3'-6" MIN. LAP

(H3) HORIZONTAL NO. 5 BARS. SIXTEEN (16) BARS REQ'D. SLOPE BARS FOR EQUAL SPACING AS SHOWN. 3'-6" MIN. LAP

(H4) HORIZONTAL NO. 5 BARS. ELEVEN (11) BARS REQ'D.

(V1) VERTICAL NO. 5 BARS, EACH FACE (SEE BAR BEND DETAIL)

(V2) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V1 BARS

(V3) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL)

(V4) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V3 BARS

(V5) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V6) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V5 BARS

(F1) FOOTING TRANSVERSE NO. 6 BARS

(F2) FOOTING LONGITUDINAL NO. 5 BARS

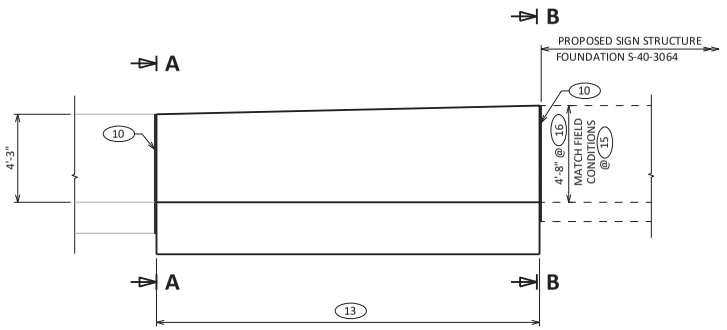
Addendum No. 01
ID 1228-22-70
Added Sheet 42T
March 7, 2023

TABLE "A" (17)

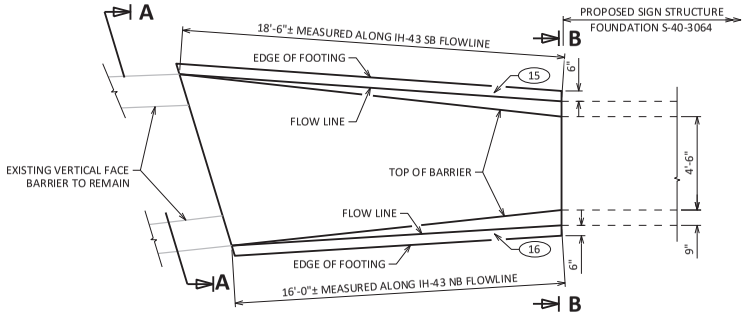
HEIGHT BETWEEN ROADWAYS	(H2) QUANTITY OF NO. 6 BARS
0" TO 3"	0
>3" TO 8"	2
>8" TO 12"	4
>12" TO 36"	8

CONCRETE BARRIER TRANSITION TYPE V56 TO V42 SPECIAL (SHEET 2 OF 2)

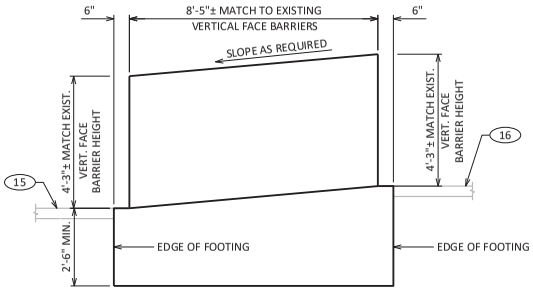
PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42T	E



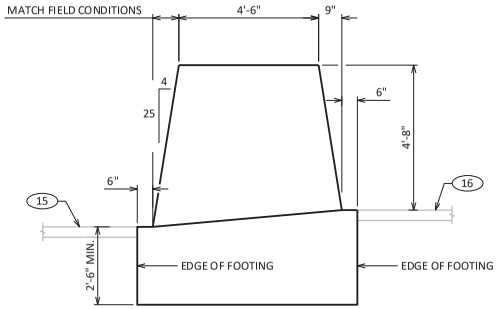
ELEVATION VIEW



PLAN VIEW



SECTION A-A



SECTION B-B

GENERAL NOTES

CONSTRUCT PER STANDARD 603.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED EDGES UNLESS OTHERWISE NOTED.

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(13) PAY LIMIT FOR CONCRETE BARRIER TRANSITION TYPE V51 TO S56 SPECIAL

(15) LOW SIDE SHOULDER

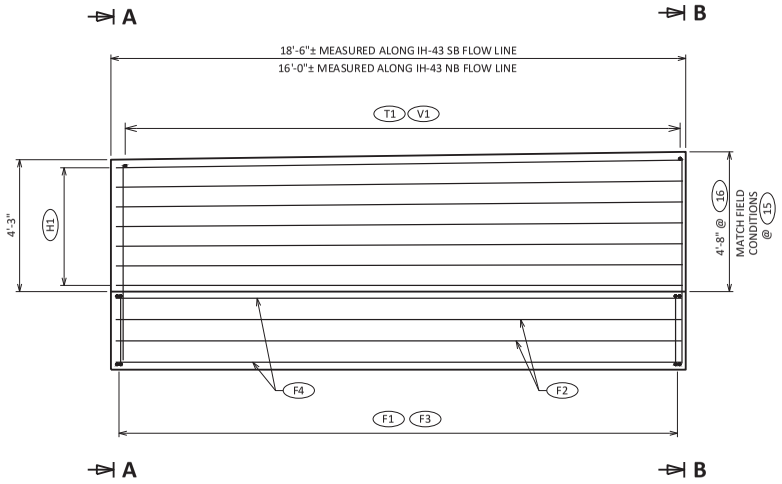
(16) HIGH SIDE SHOULDER

CONCRETE BARRIER TRANSITION TYPE V51 TO S56 SPECIAL (SHEET 1 OF 2)

Addendum No. 01
ID 1228-22-70
Added Sheet 42U
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42U	E

FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_SPECIAL_TRANSITION_V51_TO_S56.DWG
LAYOUT NAME - V51 TO S56 SHT 1
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00
WISDOT/CADDS SHEET 42

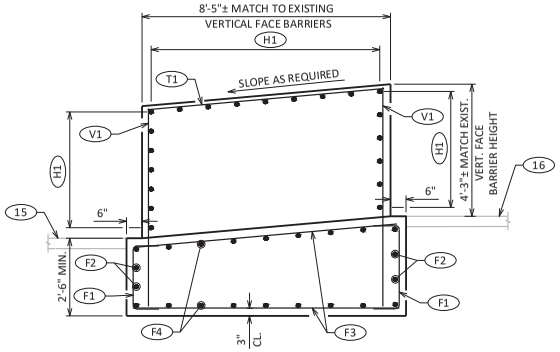


ELEVATION VIEW

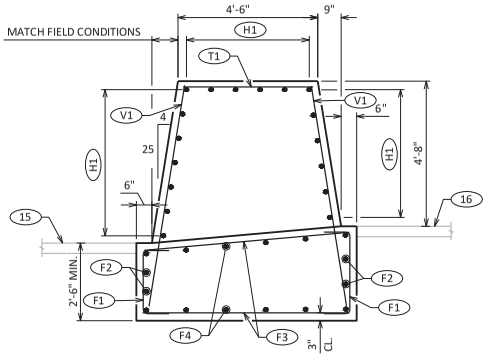
GENERAL NOTES

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2-INCH CLEAR UNLESS SHOWN OR NOTED OTHERWISE.

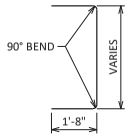
- (H1) HORIZONTAL NO. 5 BARS SPACED AT 1'-0" MAX.
- (T1) TRANSVERSE NO. 5 BARS SPACED AT 1'-0" MAX.
- (V1) VERTICAL NO. 5 BARS, EACH FACE, SPACED AT 1'-0" MAX.
- (F1) FOOTING VERTICAL EDGE NO. 5 BARS. SEE BAR BEND DIAGRAM.
- (F2) FOOTING LONGITUDINAL EDGE NO. 5 BARS.
- (F3) FOOTING TRANSVERSE NO. 5 BARS.
- (F4) FOOTING LONGITUDINAL NO. 5 BARS.



SECTION A-A



SECTION B-B



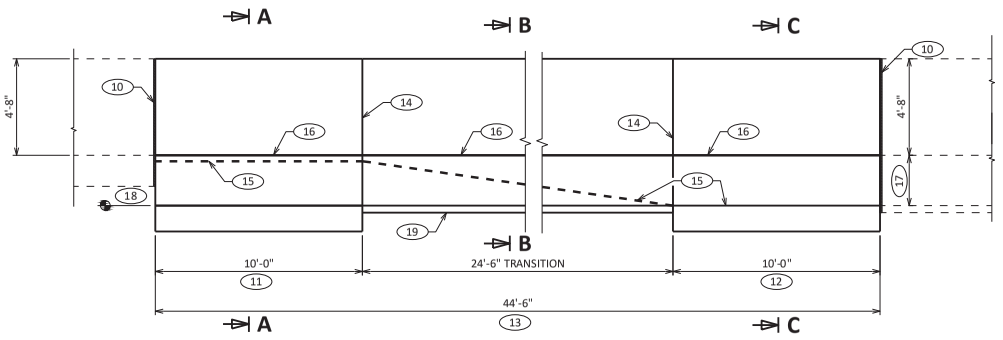
F1 BEND DETAIL

Addendum No. 01
ID 1228-22-70
Added Sheet 42V
March 7, 2023

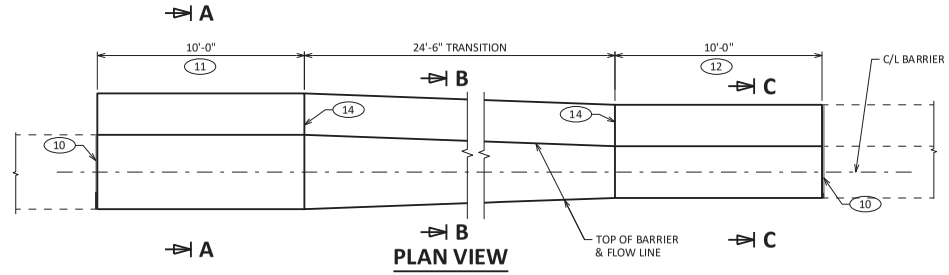
CONCRETE BARRIER TRANSITION TYPE V51 TO S56 SPECIAL (SHEET 2 OF 2)

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42V	E

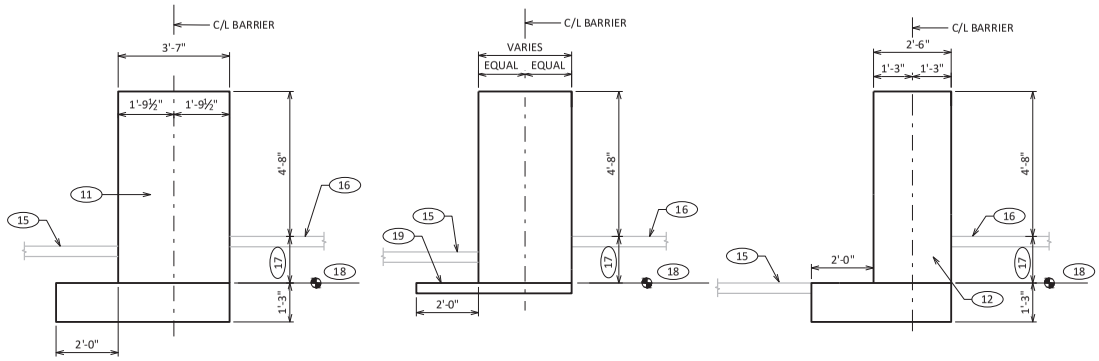
FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_SPECIAL_TRANSITION_V51_TO_S56.DWG
LAYOUT NAME - V51 TO S56 SHT 2
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00



ELEVATION VIEW



PLAN VIEW



SECTION A-A SECTION B-B SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD 603.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED EDGES UNLESS OTHERWISE NOTED.

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(11) END ANCHOR V56

(12) END ANCHOR V56

(13) PAY LIMIT FOR CONCRETE BARRIER TRANSITION TYPE V56 TO V56 SPECIAL I

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(15) LOW SIDE SHOULDER

(16) HIGH SIDE SHOULDER

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX). SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(19) CONCRETE BARRIER PAD MAY BE PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED ½ DEPTH. CONCRETE BARRIER PAD AND SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER TRANSITION BID ITEM. CONCRETE BARRIER PAD MINIMUM DEPTH IS 6", OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER. SEE "CONCRETE BARRIER SINGLE SLOPE (CBSS) SDD FOR SAWCUT DETAIL & DETAIL FOR ACCOMMODATING DRAINAGE STRUCTURE. SEE "CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES" SDD FOR TYING BARRIER PAD/FOUNDATION TO ADJACENT CONCRETE.

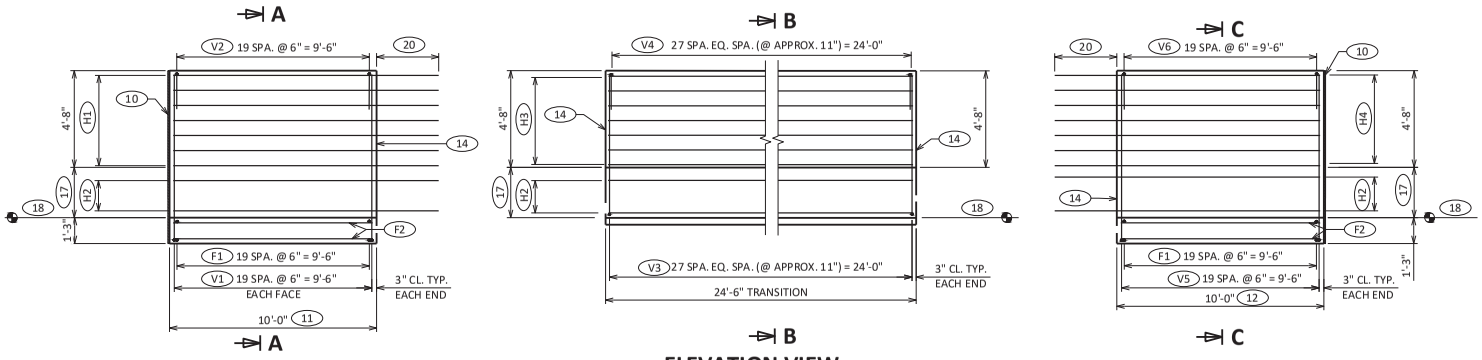
◥ DETAILS SHOWN FOR V56 (AT 3'-7" WIDTH) TO V56 (AT 2'-6" WIDTH) DIFFERENTIAL SHOULDER HEIGHT TRANSITION. DETAILS SIMILAR FOR V56 (AT 2'-6" WIDTH) TO V56 (AT 3'-7" WIDTH) DIFFERENTIAL SHOULDER HEIGHT TRANSITION.

Addendum No. 01
ID 1228-22-70
Added Sheet 42W
March 7, 2023

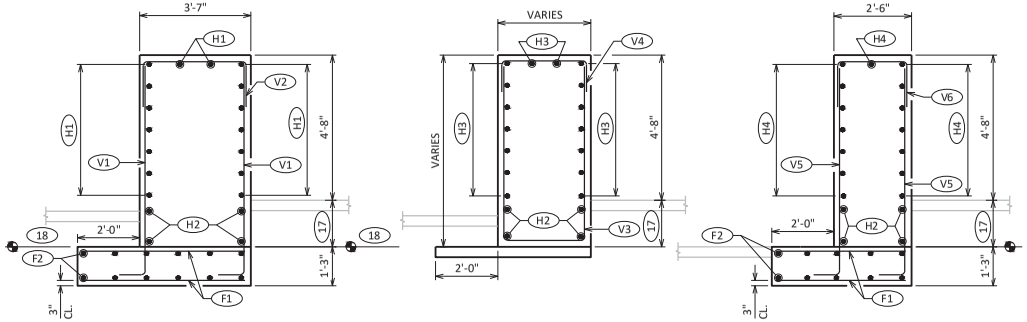
◥ CONCRETE BARRIER TRANSITION TYPE V56 TO V56 SPECIAL I (SHEET 1 OF 2)

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42W	E

FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_SPEC_TRANSITION_V56_TO_V56-44.5-FT.DWG
LAYOUT NAME - V56 SHT 1
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00
WISDOT/CADDS SHEET 42



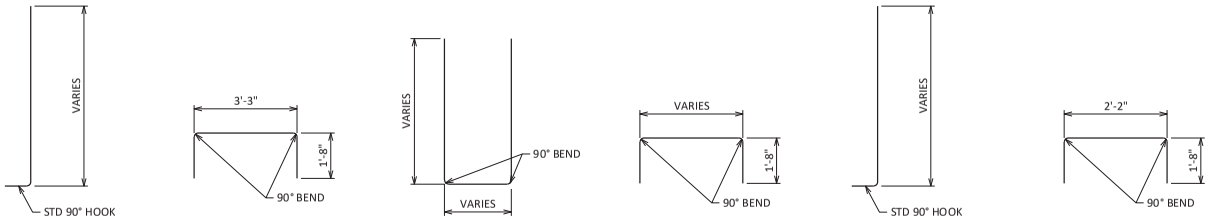
ELEVATION VIEW



SECTION A-A

SECTION B-B

SECTION C-C



V1 BEND DETAIL

V2 BEND DETAIL

V3 BEND DETAIL

V4 BEND DETAIL

V5 BEND DETAIL

V6 BEND DETAIL

GENERAL NOTES

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2-INCH CLEAR UNLESS SHOWN OR NOTED OTHERWISE.

MAXIMUM DIFFERENTIAL SHOULDER HEIGHT, MEASURED AT FLOWLINE OF BARRIER, IS 3'-0".

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(11) END ANCHOR V56

(12) END ANCHOR V42

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX.) SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(20) 3'-6" MIN. LAP OF LONGITUDINAL REINFORCEMENT

(H1) HORIZONTAL NO. 5 BARS. SIXTEEN (16) BARS REQ'D.

(H2) HORIZONTAL NO. 6 BARS EQUALLY SPACED. SEE TABLE "A" FOR REQ'D. REBAR. 3'-6" MIN. LAP

(H3) HORIZONTAL NO. 5 BARS. SIXTEEN (16) BARS REQ'D. SLOPE BARS FOR EQUAL SPACING AS SHOWN. 3'-6" MIN. LAP

(H4) HORIZONTAL NO. 5 BARS. FIFTEEN (15) BARS REQ'D.

(V1) VERTICAL NO. 5 BARS, EACH FACE (SEE BAR BEND DETAIL)

(V2) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V1 BARS

(V3) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL)

(V4) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V3 BARS

(V5) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V6) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V5 BARS

(F1) FOOTING TRANSVERSE NO. 6 BARS

(F2) FOOTING LONGITUDINAL NO. 5 BARS

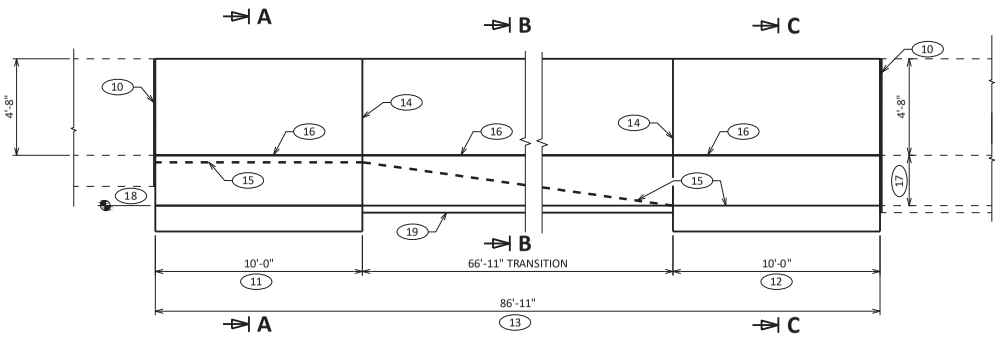
Addendum No. 01
ID 1228-22-70
Added Sheet 42X
March 7, 2023

TABLE "A" (17)

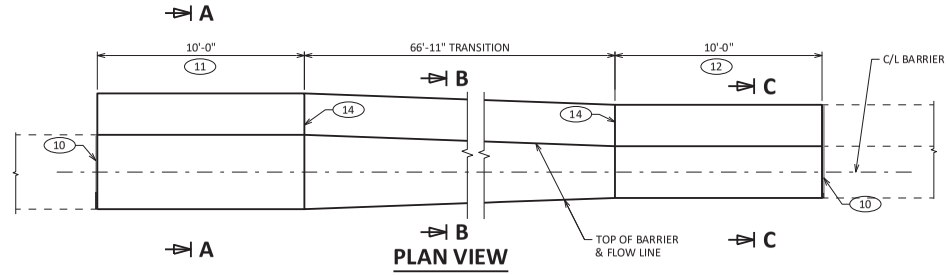
HEIGHT BETWEEN ROADWAYS	(H2) QUANTITY OF NO. 6 BARS
0" TO 3"	0
>3" TO 8"	2
>8" TO 12"	4
>12" TO 36"	8

CONCRETE BARRIER TRANSITION TYPE V56 TO V56 SPECIAL I (SHEET 2 OF 2)

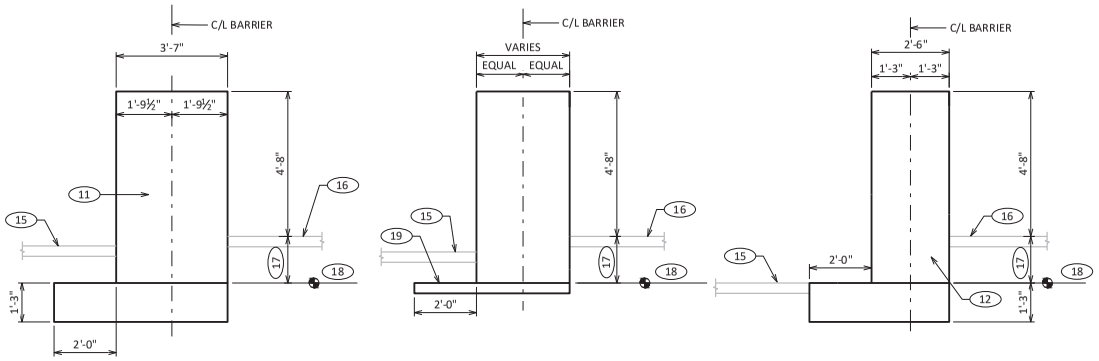
PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42X	E



ELEVATION VIEW



PLAN VIEW



SECTION A-A SECTION B-B SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD 603.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED EDGES UNLESS OTHERWISE NOTED.

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(11) END ANCHOR V56

(12) END ANCHOR V56

(13) PAY LIMIT FOR CONCRETE BARRIER TRANSITION TYPE V56 TO V56 SPECIAL II

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD

(15) LOW SIDE SHOULDER

(16) HIGH SIDE SHOULDER

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX). SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(19) CONCRETE BARRIER PAD MAY BE PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED ½ DEPTH. CONCRETE BARRIER PAD AND SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER TRANSITION BID ITEM. CONCRETE BARRIER PAD MINIMUM DEPTH IS 6", OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER. SEE "CONCRETE BARRIER SINGLE SLOPE (CBSS) SDD FOR SAWCUT DETAIL & DETAIL FOR ACCOMMODATING DRAINAGE STRUCTURE. SEE "CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES" SDD FOR TYING BARRIER PAD/FOUNDATION TO ADJACENT CONCRETE.

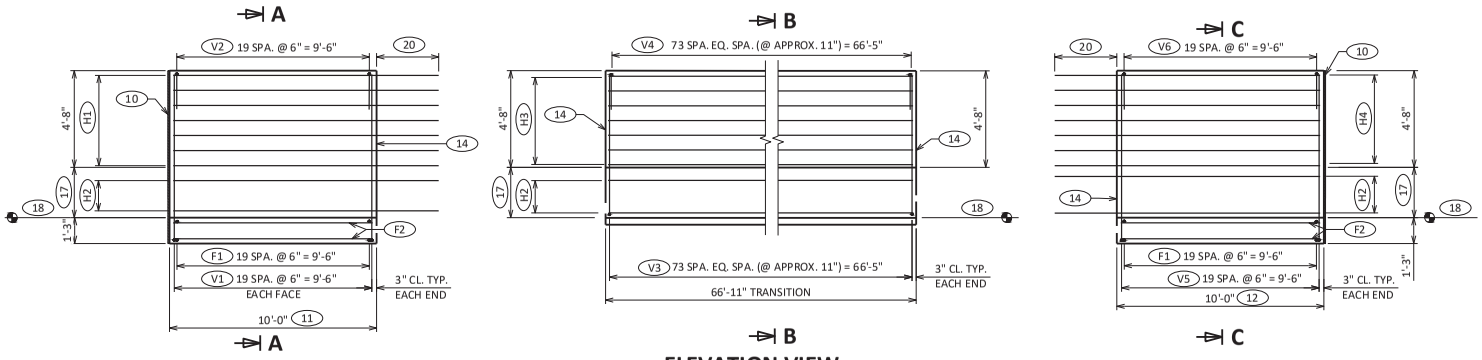
◥ DETAILS SHOWN FOR V56 (AT 3'-7" WIDTH) TO V56 (AT 2'-6" WIDTH) DIFFERENTIAL SHOULDER HEIGHT TRANSITION. DETAILS SIMILAR FOR V56 (AT 2'-6" WIDTH) TO V56 (AT 3'-7" WIDTH) DIFFERENTIAL SHOULDER HEIGHT TRANSITION.

Addendum No. 01
ID 1228-22-70
Added Sheet 42Y
March 7, 2023

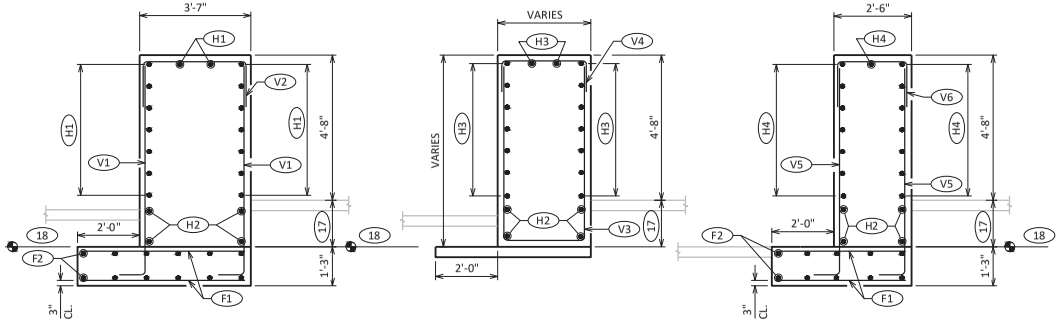
◥ CONCRETE BARRIER TRANSITION TYPE V56 TO V56 SPECIAL II (SHEET 1 OF 2)

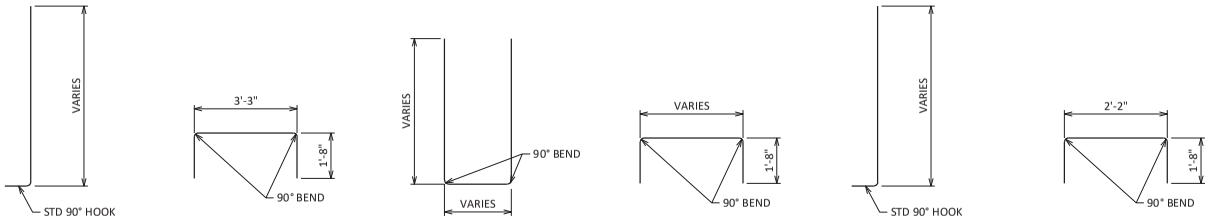
PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42Y	E

FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_SPEC_TRANSITION_V56_TO_V56-86.9-FT.DWG
LAYOUT NAME - V56 SHT 1
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00
WISDOT/CADDS SHEET 42



ELEVATION VIEW





GENERAL NOTES

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2-INCH CLEAR UNLESS SHOWN OR NOTED OTHERWISE.

MAXIMUM DIFFERENTIAL SHOULDER HEIGHT, MEASURED AT FLOWLINE OF BARRIER, IS 3'-0".

(10) SEE EXPANSION JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(11) END ANCHOR V56

(12) END ANCHOR V56

(14) SEE COLD JOINT DETAIL ON "CONCRETE BARRIER SINGLE SLOPE (CBSS)" SDD.

(17) DIFFERENTIAL SHOULDER HEIGHT VARIES PER TRANSITION LOCATION (3'-0" MAX.) SEE SHOULDER ELEVATIONS.

(18) CONSTANT ELEVATION PER TRANSITION LOCATION

(20) 3'-6" MIN. LAP OF LONGITUDINAL REINFORCEMENT

(H1) HORIZONTAL NO. 5 BARS. SIXTEEN (16) BARS REQ'D.

(H2) HORIZONTAL NO. 6 BARS EQUALLY SPACED. SEE TABLE "A" FOR REQ'D. REBAR. 3'-6" MIN. LAP

(H3) HORIZONTAL NO. 5 BARS. SIXTEEN (16) BARS REQ'D. SLOPE BARS FOR EQUAL SPACING AS SHOWN. 3'-6" MIN. LAP

(H4) HORIZONTAL NO. 5 BARS. FIFTEEN (15) BARS REQ'D.

(V1) VERTICAL NO. 5 BARS, EACH FACE (SEE BAR BEND DETAIL)

(V2) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V1 BARS

(V3) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL)

(V4) VERTICAL NO. 4 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V3 BARS

(V5) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL)

(V6) VERTICAL NO. 5 BARS (SEE BAR BEND DETAIL) 1'-6" MIN LAP WITH V5 BARS

(F1) FOOTING TRANSVERSE NO. 6 BARS

(F2) FOOTING LONGITUDINAL NO. 5 BARS

Addendum No. 01
ID 1228-22-70
Added Sheet 42Z
March 7, 2023

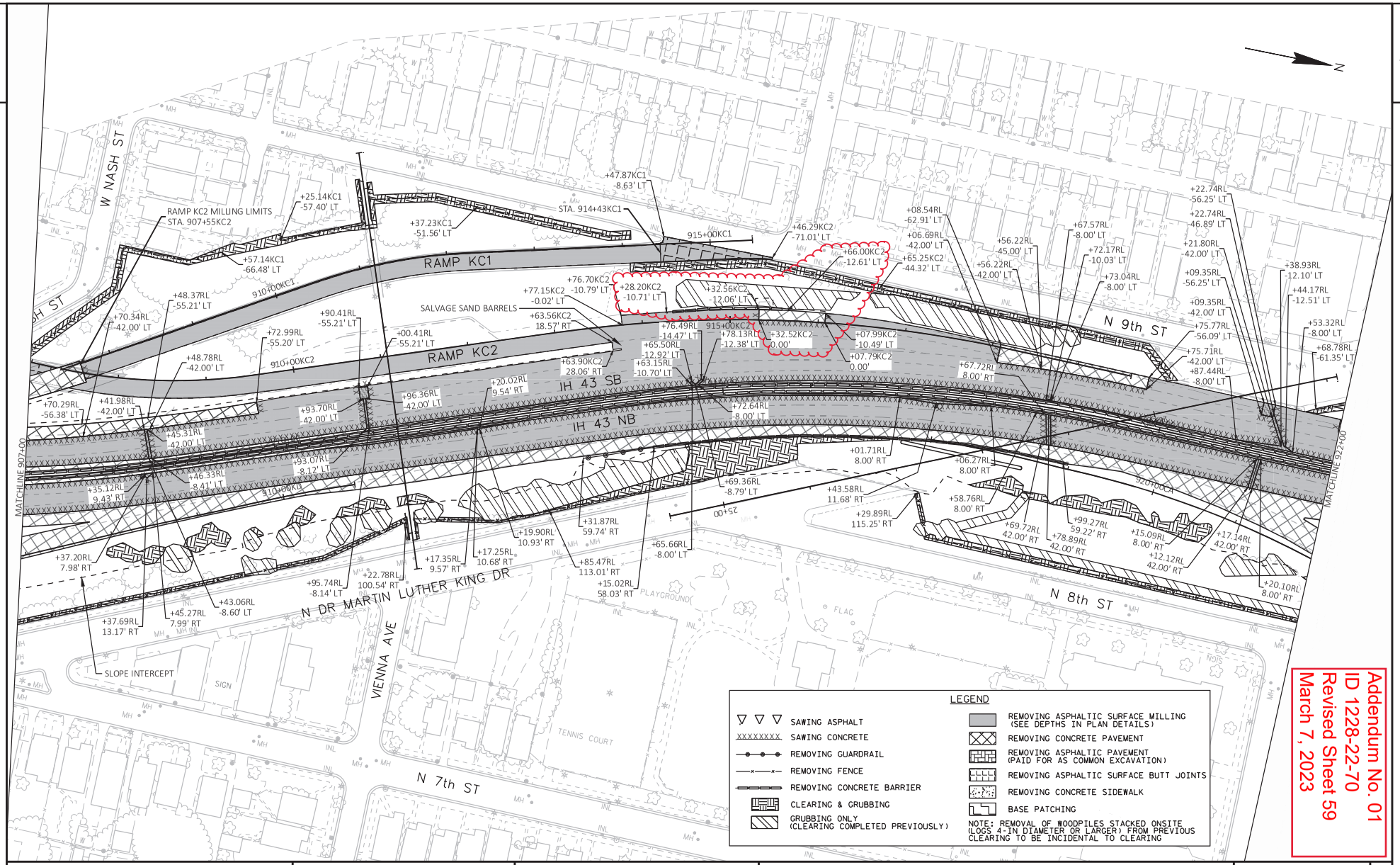
TABLE "A" (17)

HEIGHT BETWEEN ROADWAYS	(H2) QUANTITY OF NO. 6 BARS
0" TO 3"	0
>3" TO 8"	2
>8" TO 12"	4
>12" TO 36"	8

CONCRETE BARRIER TRANSITION TYPE V56 TO V56 SPECIAL II (SHEET 2 OF 2)

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 42Z	E

FILE NAME : X:\ML\2022\20220243\DESIGN\TRANSPORTATION\SHEETSPLAN\ROADWAY_BARRIER_SPEC_TRANSITION_V56_TO_V56-86.9-FT.DWG
LAYOUT NAME - V56 SHT 2
PLOT DATE : ----
PLOT BY : ROZMENOSKI, WYATT
PLOT NAME :
PLOT SCALE : 6.00
WISDOT/CADDS SHEET 42

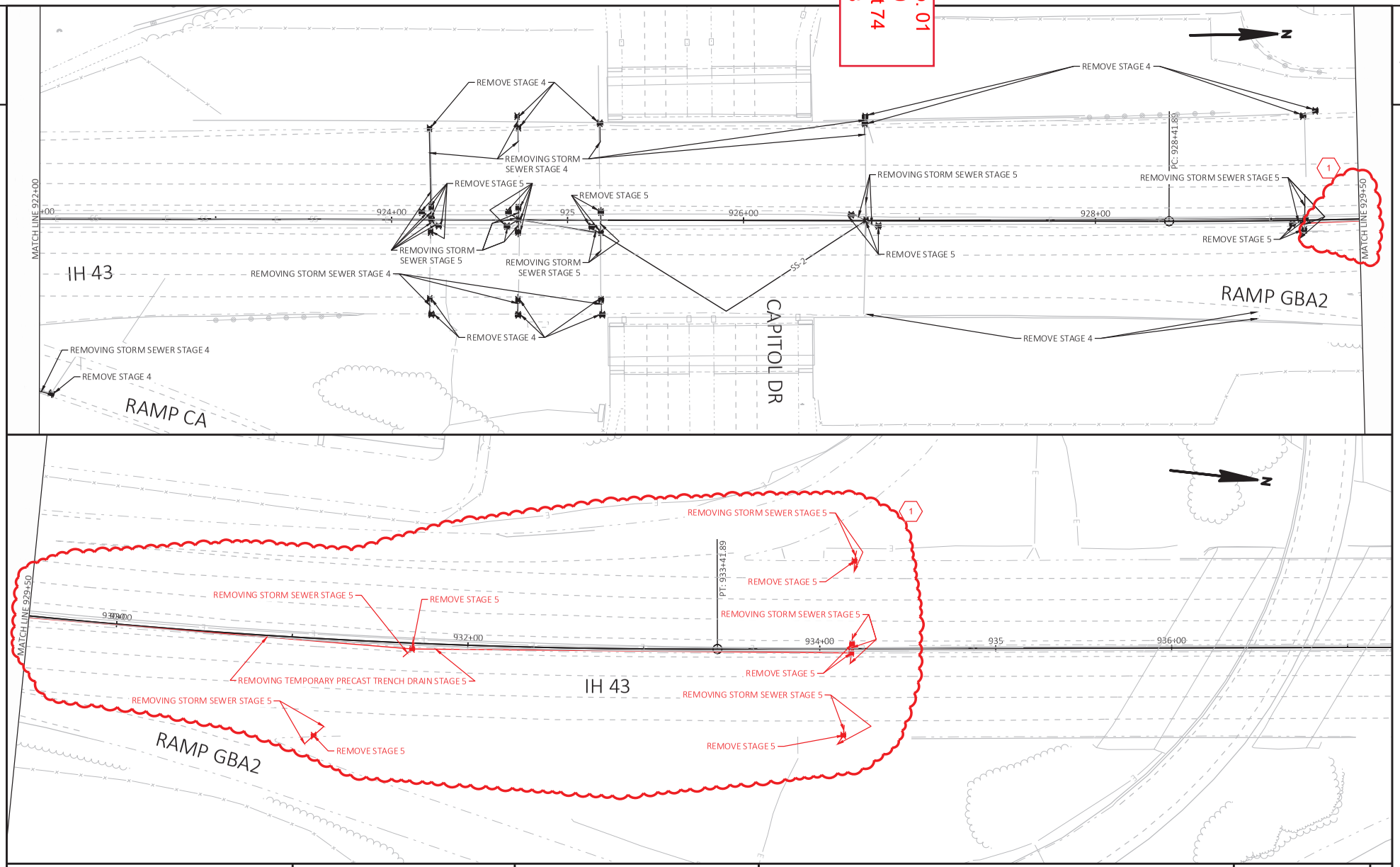


Addendum No. 01
ID 1228-22-70
Revised Sheet 59
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	REMOVALS	SHEET 59	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\021101_RM_AD1.DWG
LAYOUT NAME - 021108-rm
PLOT DATE : 2/15/2023 2:00 PM
PLOT BY : JOHANSEN, AMANDA A
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

Addendum No. 01
ID 1228-22-70
Revised Sheet 74
March 7, 2023



PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	REMOVALS	SHEET 74	E

FILE NAME : S:\DOT\DOT_SE\190224_I43_N-S_FREEWAY_NORTH-HAMPTON\DESIGN\1228270\SHEETSPLAN\021102_RM.DWG
LAYOUT NAME - 021118-rm
PLOT DATE : 3/1/2023 2:15 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:50 FT

LEGEND

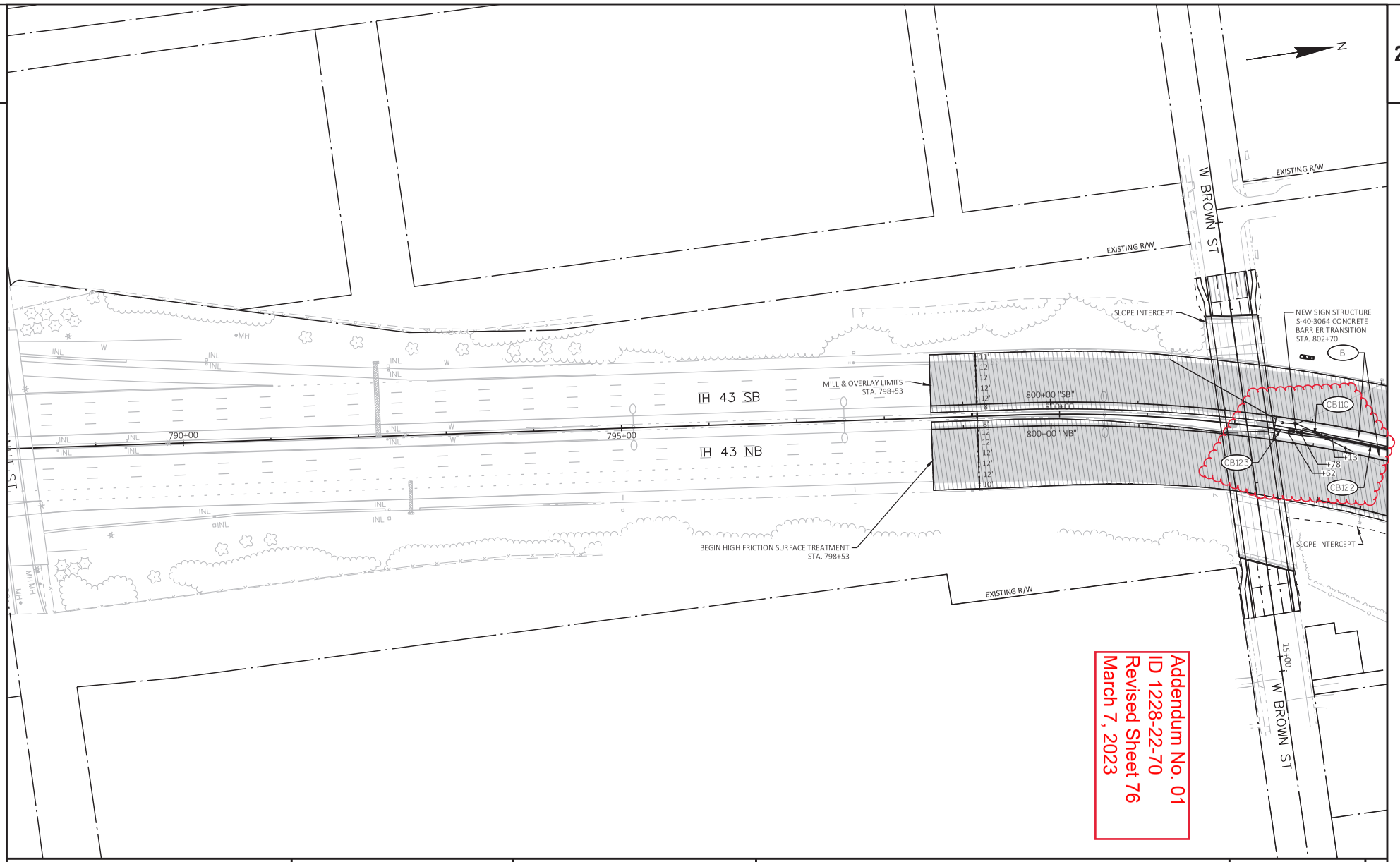
- SLOPE INTERCEPT
- EXPANSION JOINT REPLACEMENT
- RIGHT OF WAY
- RIGHT OF WAY FENCE

- CB01 CONCRETE BARRIER TYPE S32
- CB02 CONCRETE BARRIER TYPE S42
- CB03 CONCRETE BARRIER SINGLE FACED 32-INCH (NJ32SF)
- CB04 CONCRETE BARRIER TYPE S32B
- CB05 CONCRETE BARRIER TYPE S42B
- CB09 CONCRETE BARRIER TYPE S42C
- CB10 CONCRETE BARRIER TYPE S56C
- CB48 END ANCHORAGE (INCIDENTAL TO SINGLE SLOPE CONCRETE BARRIER)
- CB104 CONCRETE BARRIER TRANSITION TYPE S32A TO S42A
- CB105 CONCRETE BARRIER TRANSITION TYPE V32 TO S32
- CB106 CONCRETE BARRIER TRANSITION TYPE V42 TO S42
- CB107 CONCRETE BARRIER TRANSITION TYPE V32 TO S32A
- CB108 CONCRETE BARRIER TRANSITION TYPE V42 TO S42A
- CB109 CONCRETE BARRIER TRANSITION TYPE S56 TO S32A
- CB110 CONCRETE BARRIER TRANSITION TYPE S56 TO S42A
- CB111 CONCRETE BARRIER TRANSITION TYPE V56 TO S32A
- CB112 CONCRETE BARRIER TRANSITION TYPE V56 TO S42A
- CB113 CONCRETE BARRIER TYPE S42A LIGHT POLE BASE
- CB114 CONCRETE BARRIER TRANSITION TYPE NJ32DF TO S32
- CB115 CONCRETE BARRIER TRANSITION SECTION 32-INCH
- CB116 CONCRETE BARRIER TYPE V42 LIGHT POLE BASE
- CB117 CONCRETE BARRIER TYPE V42 SPECIAL LIGHT POLE BASE
- CB120 CONCRETE BARRIER FIXED OBJECT PROTECTION TYPE S42
- CB121 CONCRETE BARRIER TYPE S32A
- CB122 CONCRETE BARRIER TYPE S42A
- CB123 CONCRETE BARRIER TRANSITION TYPE V51 TO S56 SPECIAL
- CB124 CONCRETE BARRIER TRANSITION TYPE V56 TO V42 SPECIAL
- CB125 CONCRETE BARRIER TRANSITION TYPE V42 TO S56A
- CB126 CONCRETE BARRIER TRANSITION TYPE V56 TO V56 SPECIAL I
- CB127 CONCRETE BARRIER TRANSITION TYPE V56 TO V56 SPECIAL II
- CB128 CONCRETE BARRIER TRANSITION TYPE V32 TO S42A

- BG15 MGS GUARDRAIL 3
- BG16 MGS THRIE BEAM TRANSITION
- BG17 MGS GUARDRAIL TERMINAL EAT
- BG18 MGS GUARDRAIL TERMINAL TYPE 2
- BG23 CRASH CUSHION PERMANENT LOW MAINTENANCE TL3
- CG20 CONCRETE CURB AND GUTTER 30-INCH TYPE A
- CG21 CONCRETE CURB AND GUTTER 30-INCH TYPE D
- CG22 CONCRETE CURB PEDESTRIAN
- CG36 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D
- CGDW CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D - DRIVEWAY
- CG58 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
- CM07 CONCRETE SIDEWALK 5-INCH

- HIGH FRICTION SURFACE TREATMENT
- CONCRETE DECK OVERLAY
- DECK REPLACEMENT
- CONCRETE PAVEMENT APPROACH SLAB
- CURB RAMP DETECTIBLE WARNING FIELD YELLOW
- HMA PAVEMENT 4 SMA 58-28 V, 1 3/4-INCH OVER HMA PAVEMENT 3 HT 58-28 H, 2 1/4-INCH
- B HMA PAVEMENT 4 SMA 58-28 V, 2-INCH OVER HMA PAVEMENT 3 HT 58-28 H, 4-INCH OVER HMA PAVEMENT 3 HT 58-28 H, 3 1/2-INCH OVER HMA PAVEMENT 3 HT 58-28 H, 3 1/2-INCH
- C HMA PAVEMENT 4 SMA 58-28 V, 2-INCH OVER HMA PAVEMENT 3 HT 58-28 H, 4-INCH OVER HMA PAVEMENT 3 HT 58-28 H, 2 1/2-INCH OVER HMA PAVEMENT 3 HT 58-28 H, 2 1/2-INCH
- D CONCRETE PAVEMENT 9-INCH
- HMA PAVEMENT 5 HT 58-28 H, 1 1/2-INCH OVER HMA PAVEMENT 5 HT 58-28 H, 1 1/2-INCH

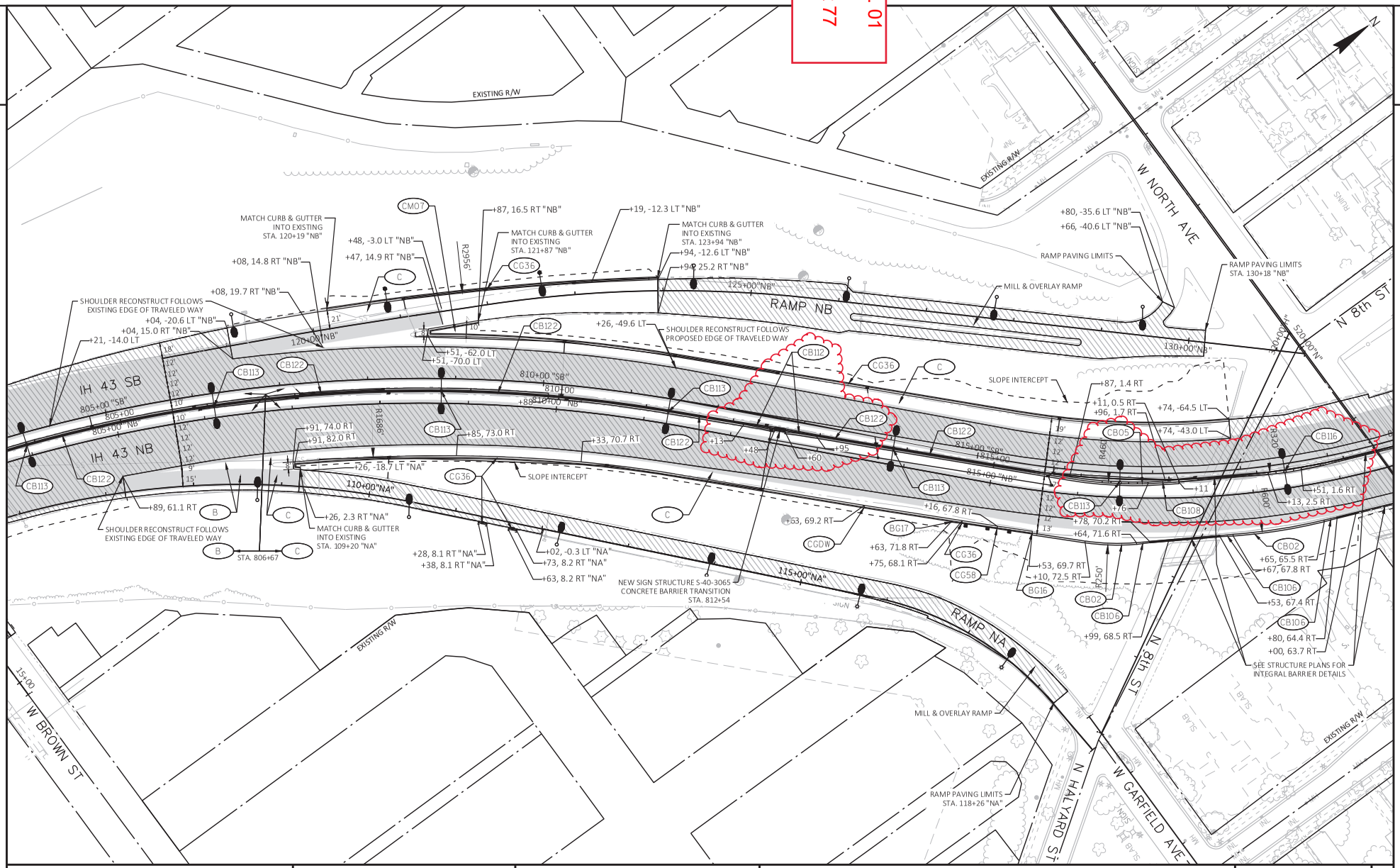
Addendum No. 01
ID 1228-22-70
Revised Sheet 75
March 7, 2023



PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 76	E

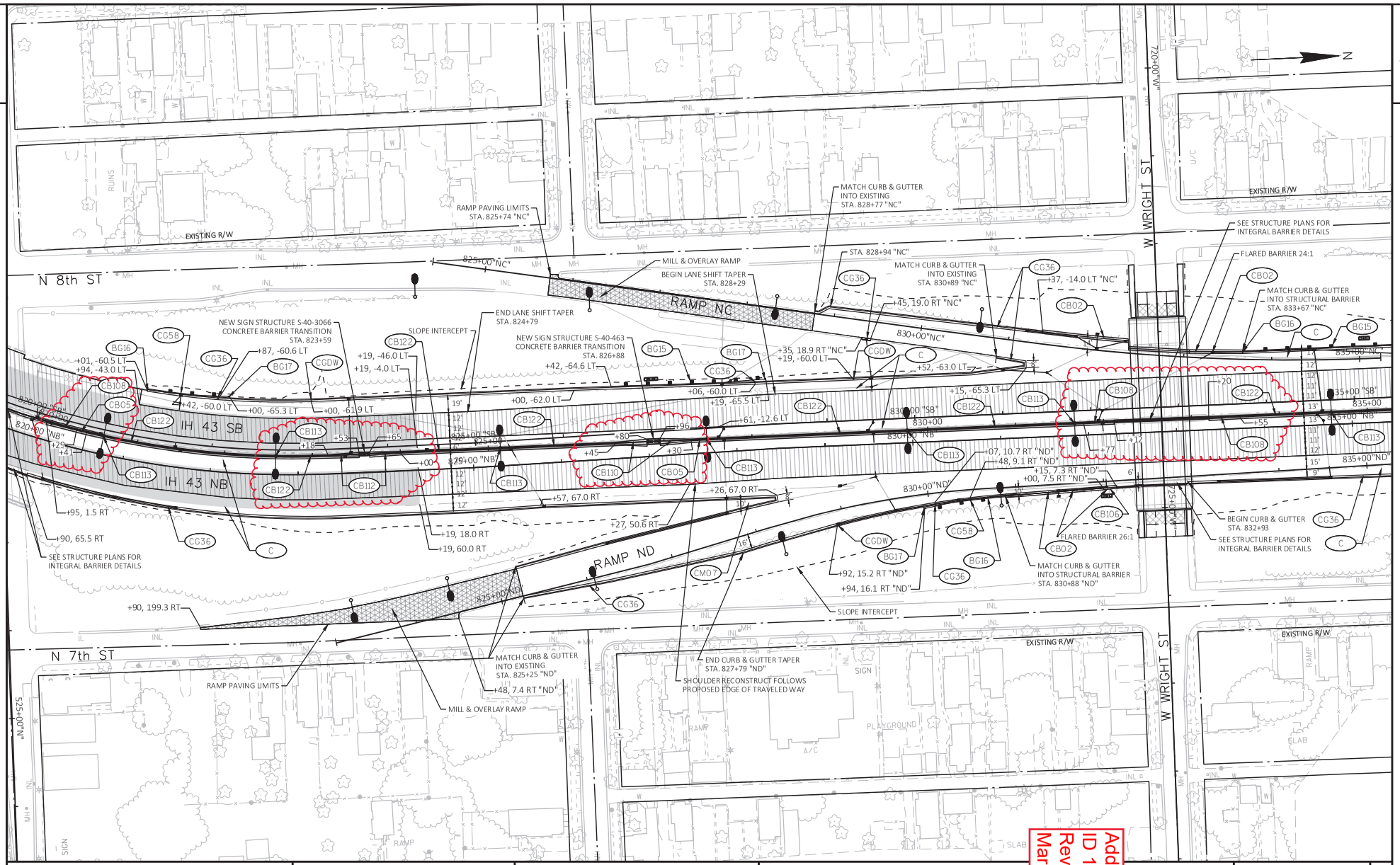
FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\122822 70\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021201_pd
PLOT DATE : 2/7/2023 10:26 AM
PLOT BY : JOHANSEN, AMANDA A
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

Addendum No. 01
ID 1228-22-70
Revised Sheet 77
March 7, 2023



PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 77	E

FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\1228270\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021202_pd
PLOT DATE : 2/14/2023 8:28 AM
PLOT BY : JOHANSEN, AMANDA A
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

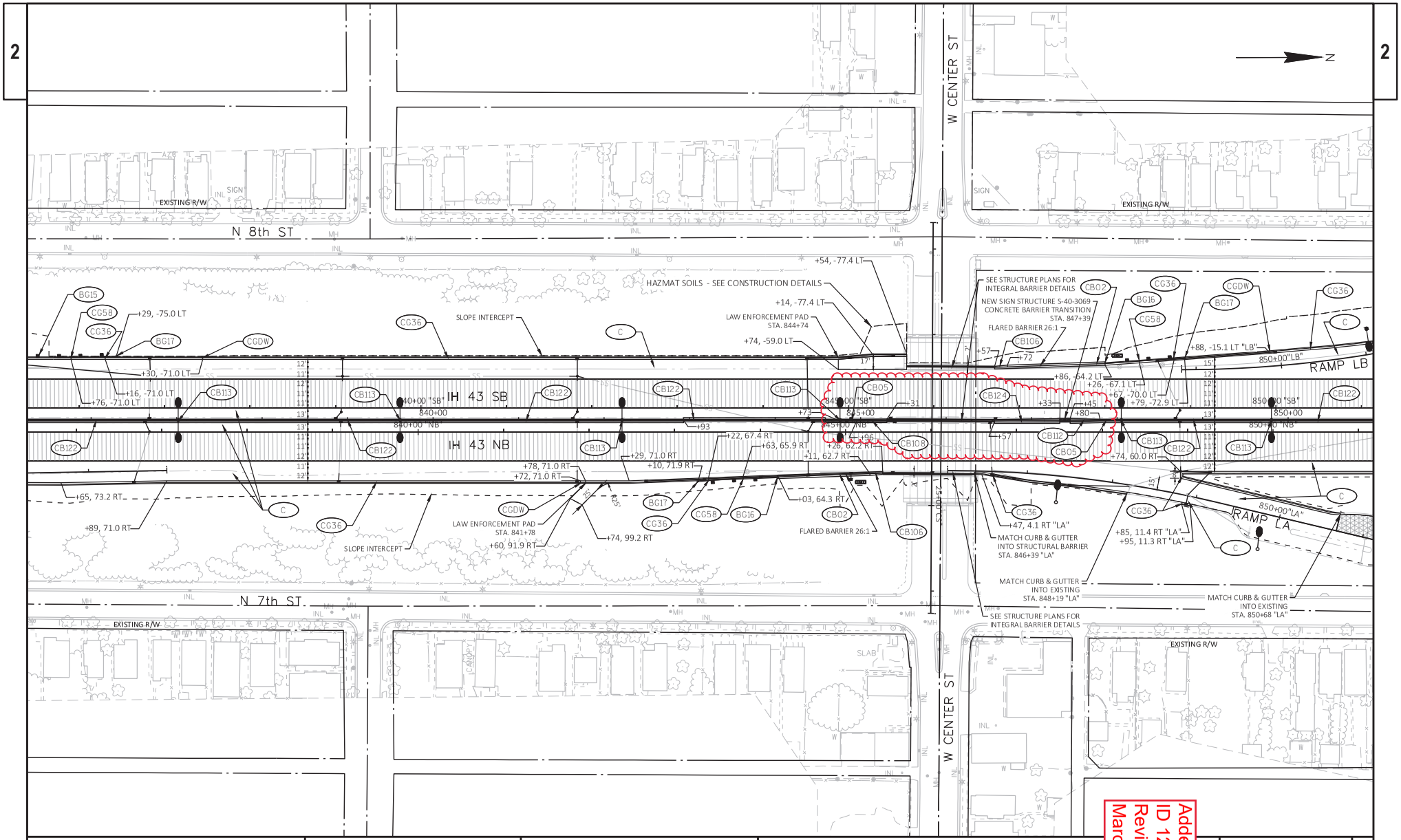


PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 78	E

FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\122822 70\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021203_pd
PLOT DATE : 2/14/2023 8:45 AM
PLOT BY : JOHANSEN, AMANDA A
PLOT NAME :
SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

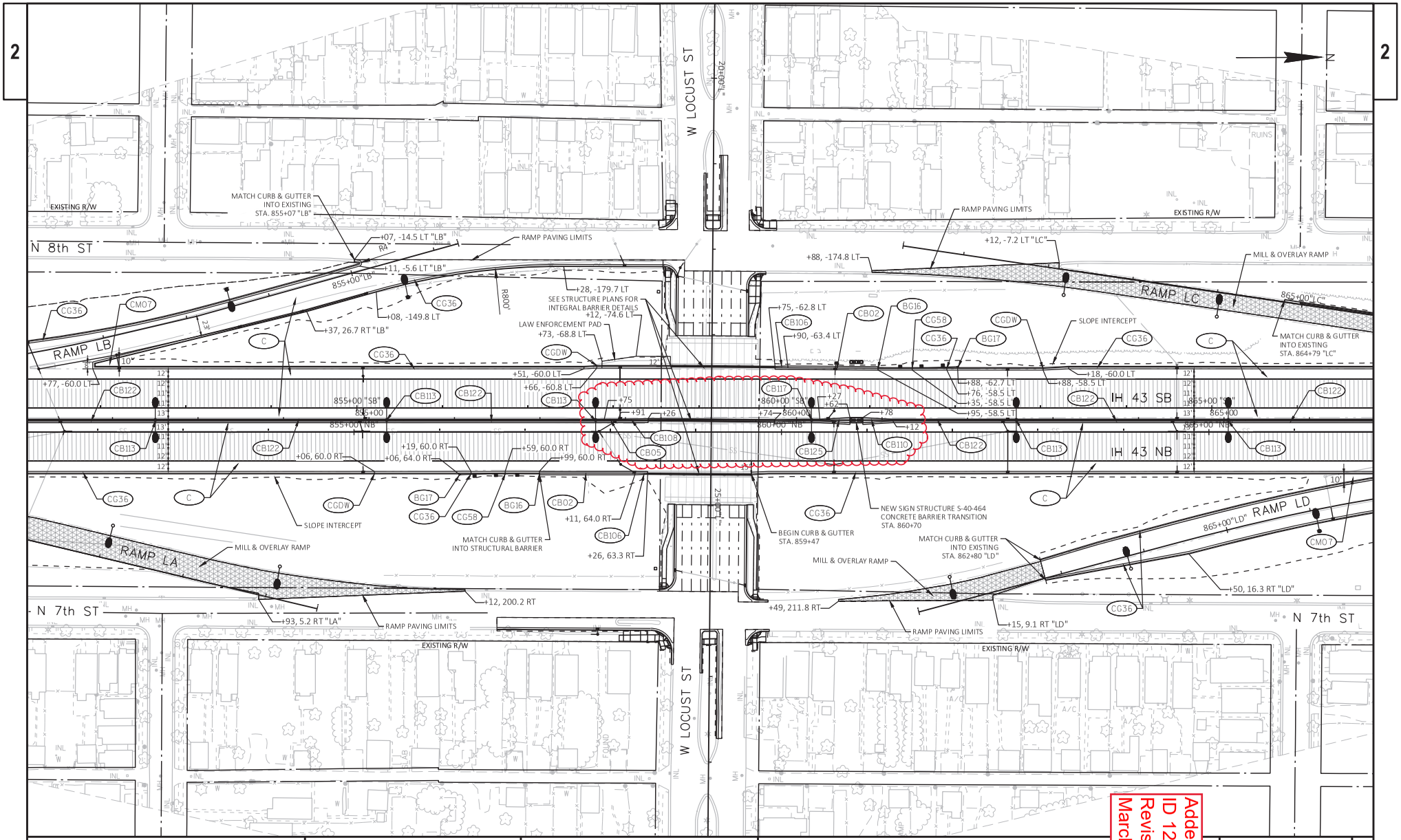
Addendum No. 01
ID 1228-22-70
Revised Sheet 78
March 7, 2023



PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 79	E

FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\1228270\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021204_pd
PLOT DATE : 2/14/2023 8:51 AM
PLOT BY : JOHANSEN, AMANDA A
PLOT NAME :
WISDOT/CADDS SHEET 42

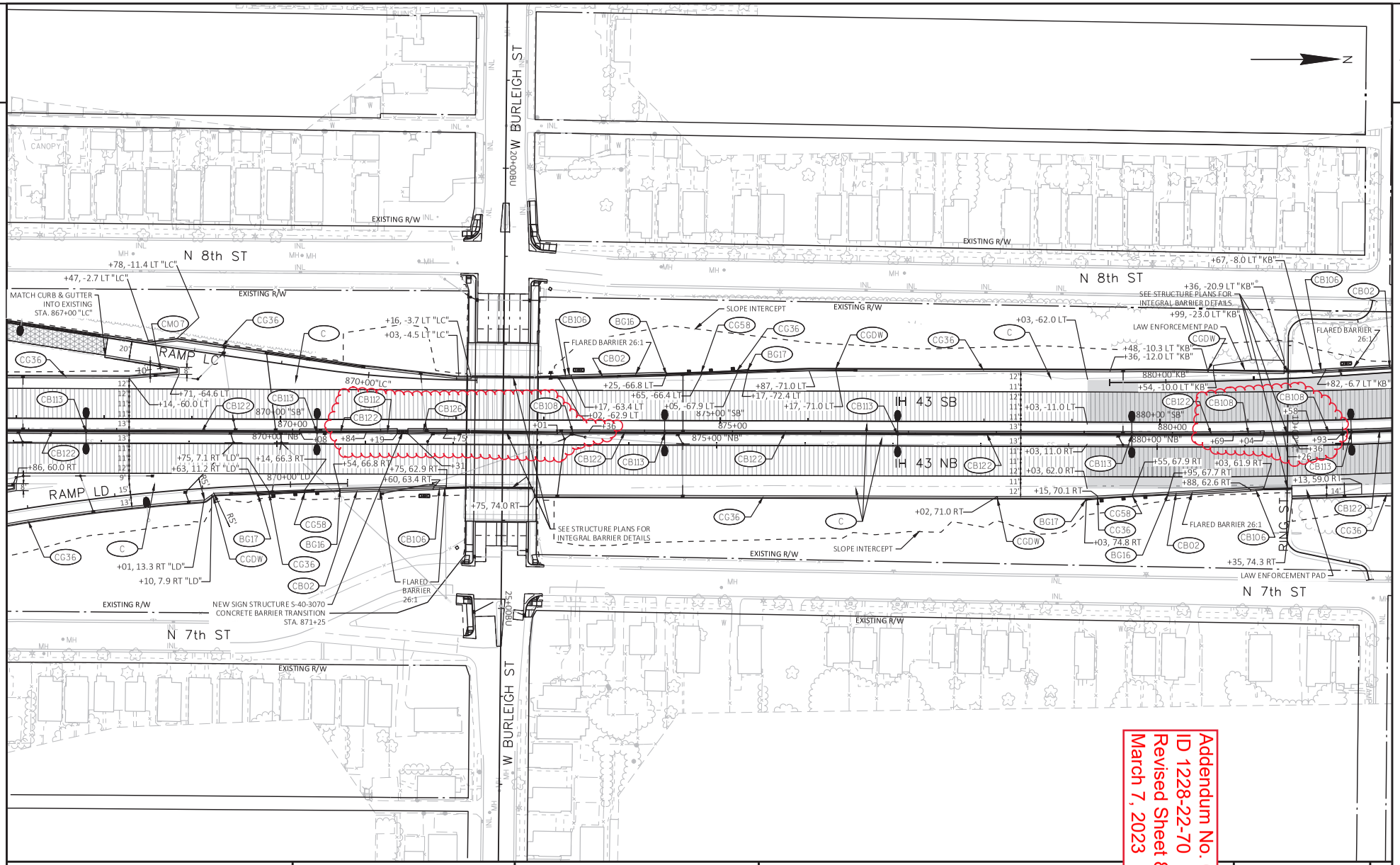
Addendum No. 01
ID 1228-22-70
Revised Sheet 79
March 7, 2023



PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 80	E

FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\122822 70\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021205_pd
PLOT DATE : 2/14/2023 8:57 AM
PLOT BY : JOHANSEN, AMANDA A
PLOT NAME :
PLOT
WISDOT/CADDS SHEET 42

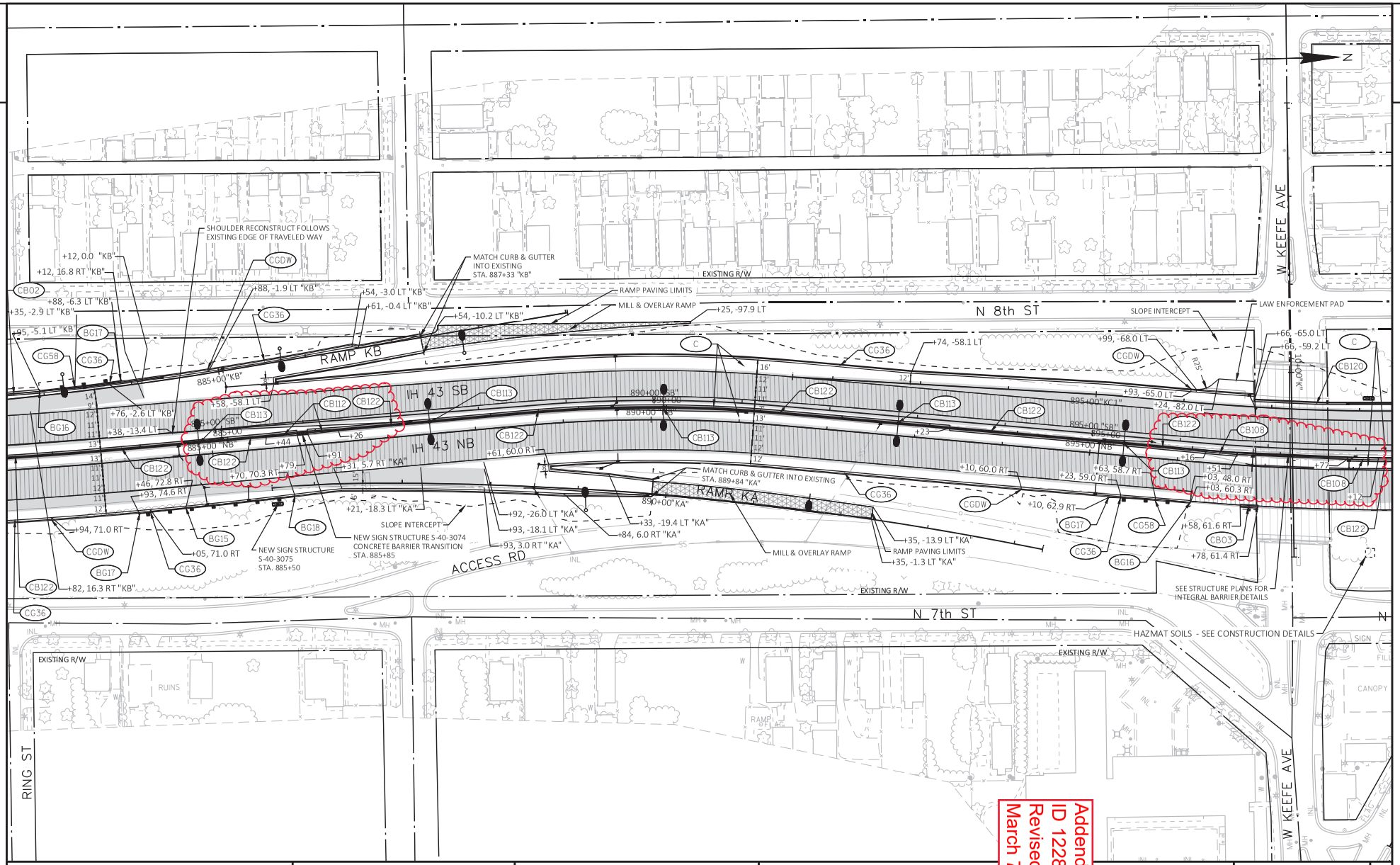
Addendum No. 01
ID 1228-22-70
Revised Sheet 80
March 7, 2023



PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 81	E

FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\122822 70\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021206_pd
PLOT DATE : 2/8/2023 7:45 AM
PLOT BY : JOHANSEN, AMANDA A
PLOT NAME :
PLOT

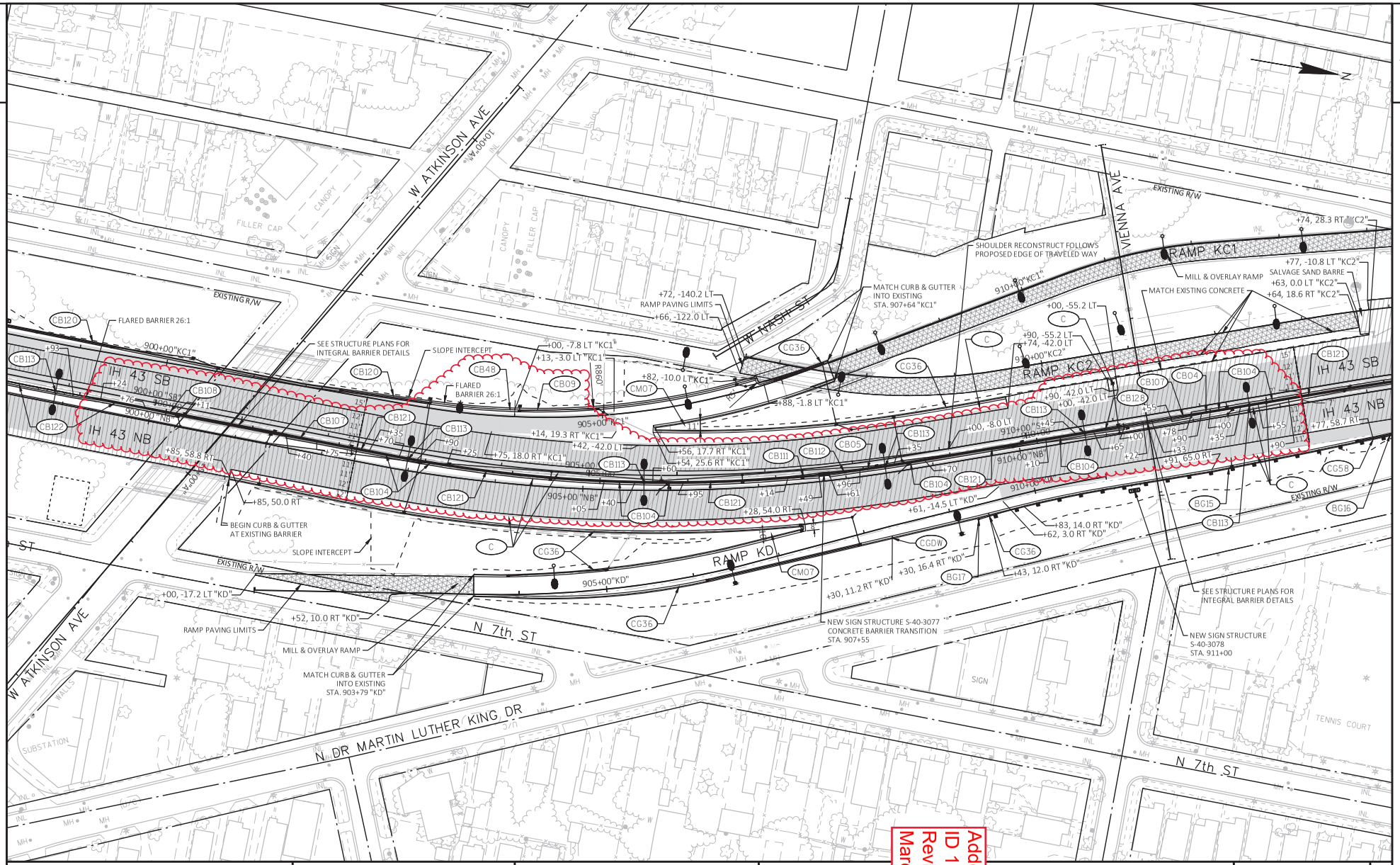
WISDOT/CADDS SHEET 42



PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 82	E

FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\122822 70\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021207_pd
PLOT DATE : 2/14/2023 9:03 AM
PLOT BY : JOHANSEN, AMANDA A
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

Addendum No. 01
ID 1228-22-70
Revised Sheet 82
March 7, 2023



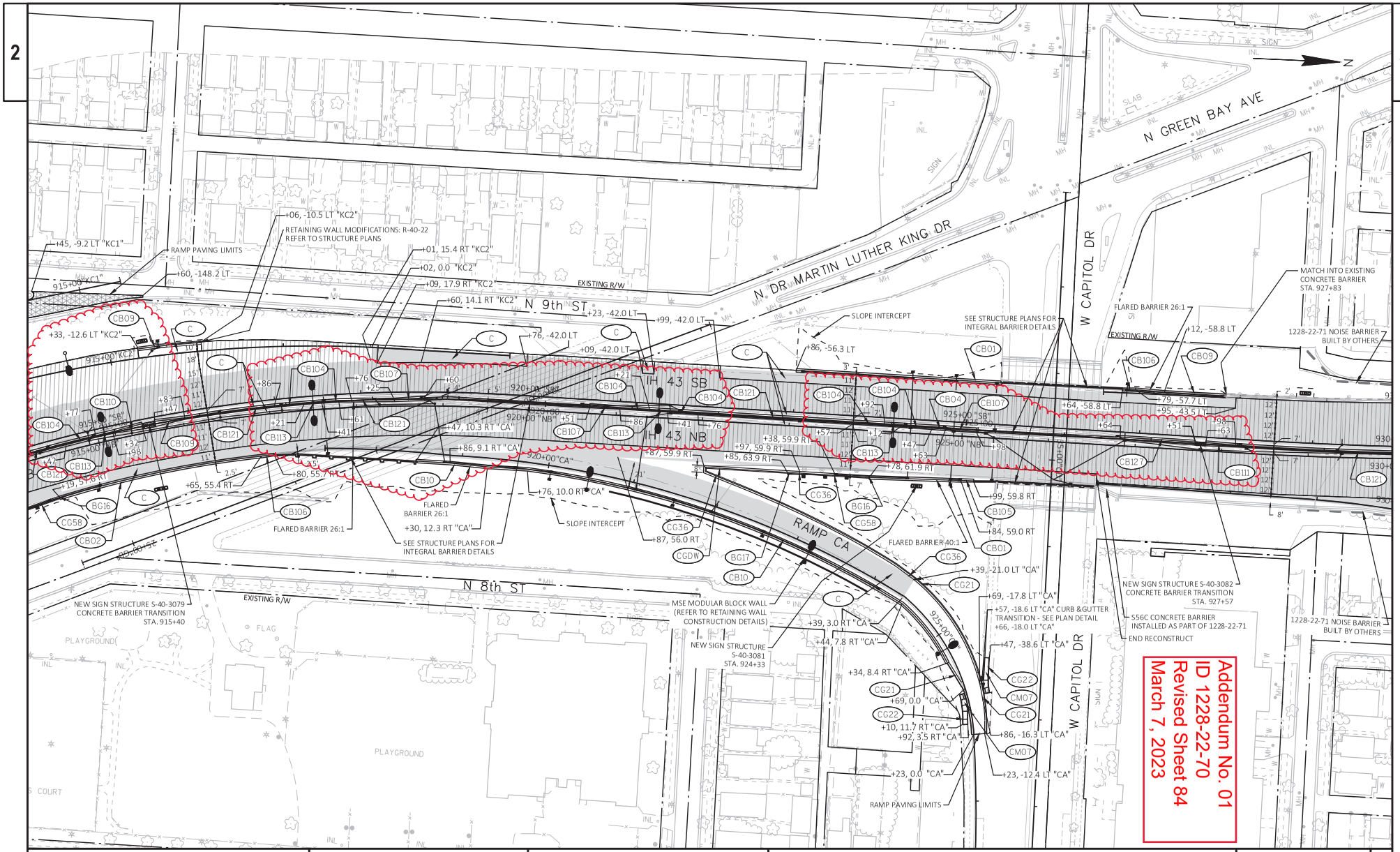
PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 83	E

FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\122822 70\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021208_pd

PLOT DATE : 2/14/2023 10:03 AM PLOT BY : JOHANSEN PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

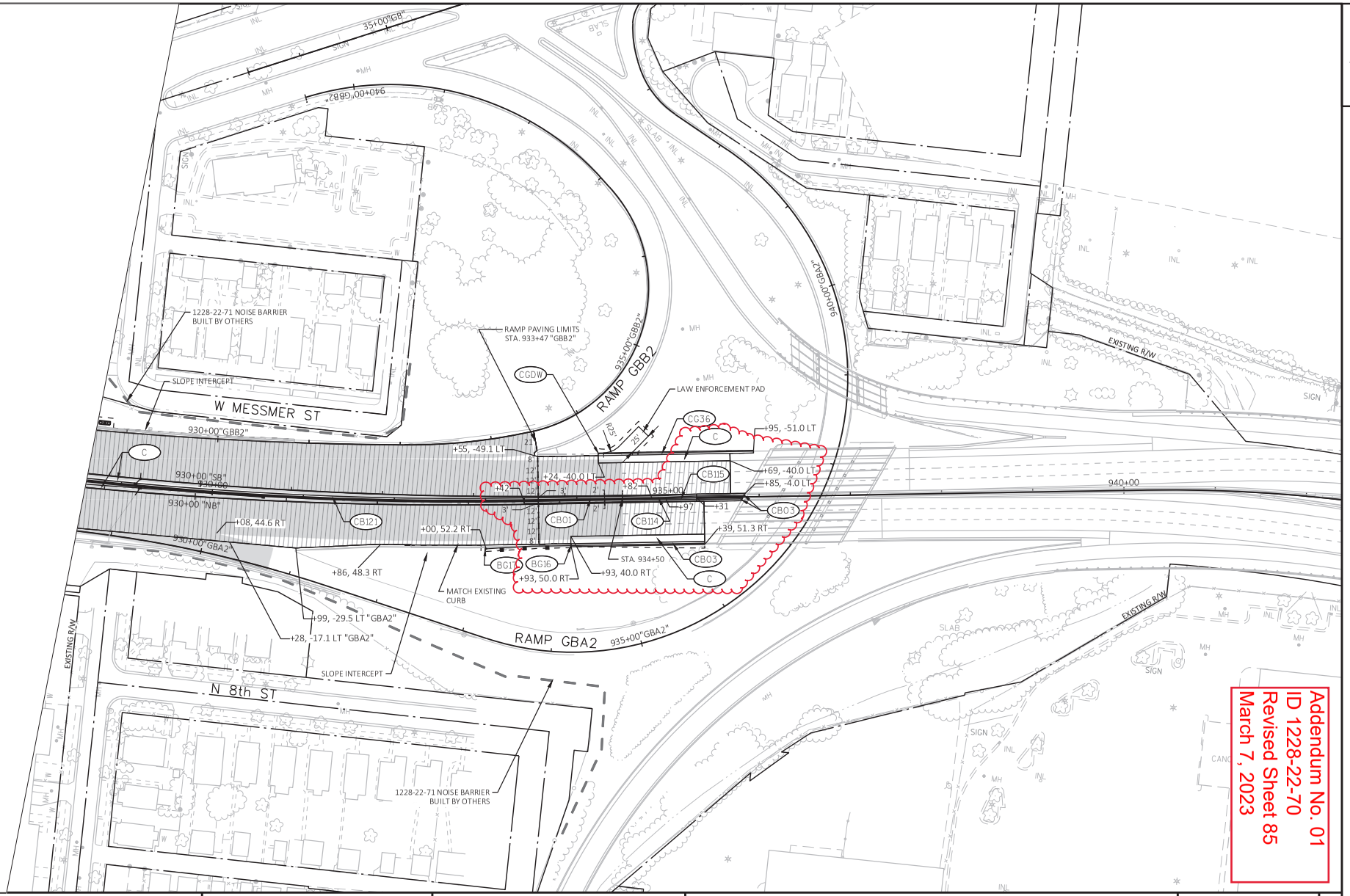
Addendum No. 01
ID 1228-22-70
Revised Sheet 83
March 7, 2023



Addendum No. 01
ID 1228-22-70
Revised Sheet 84
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 84	E

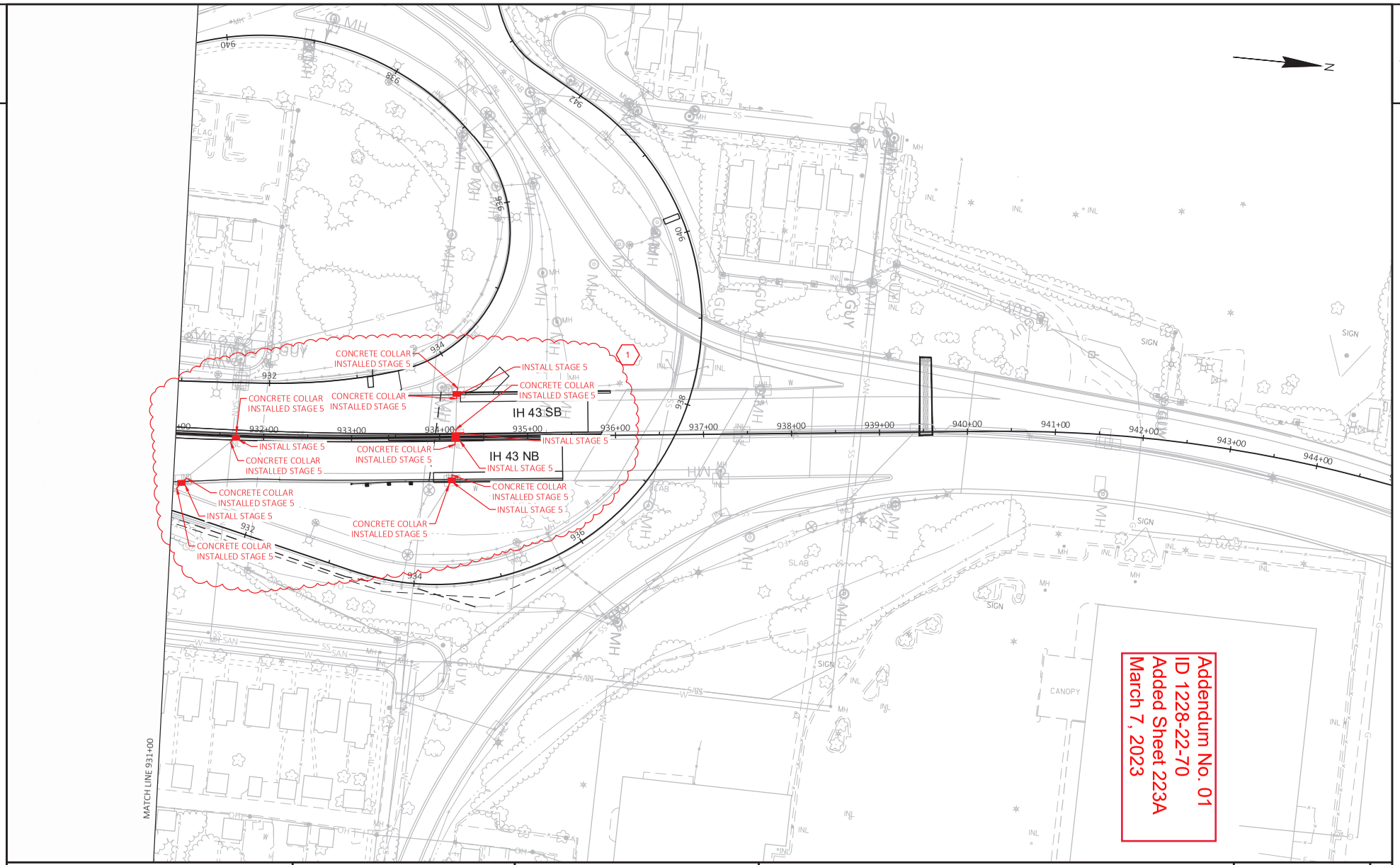
FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\122822 70\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021209_pd
PLOT DATE : 2/14/2023 11:03 AM
PLOT BY : JOHANSEN, AMANDA A
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



Addendum No. 01
ID 1228-22-70
Revised Sheet 85
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 85	E

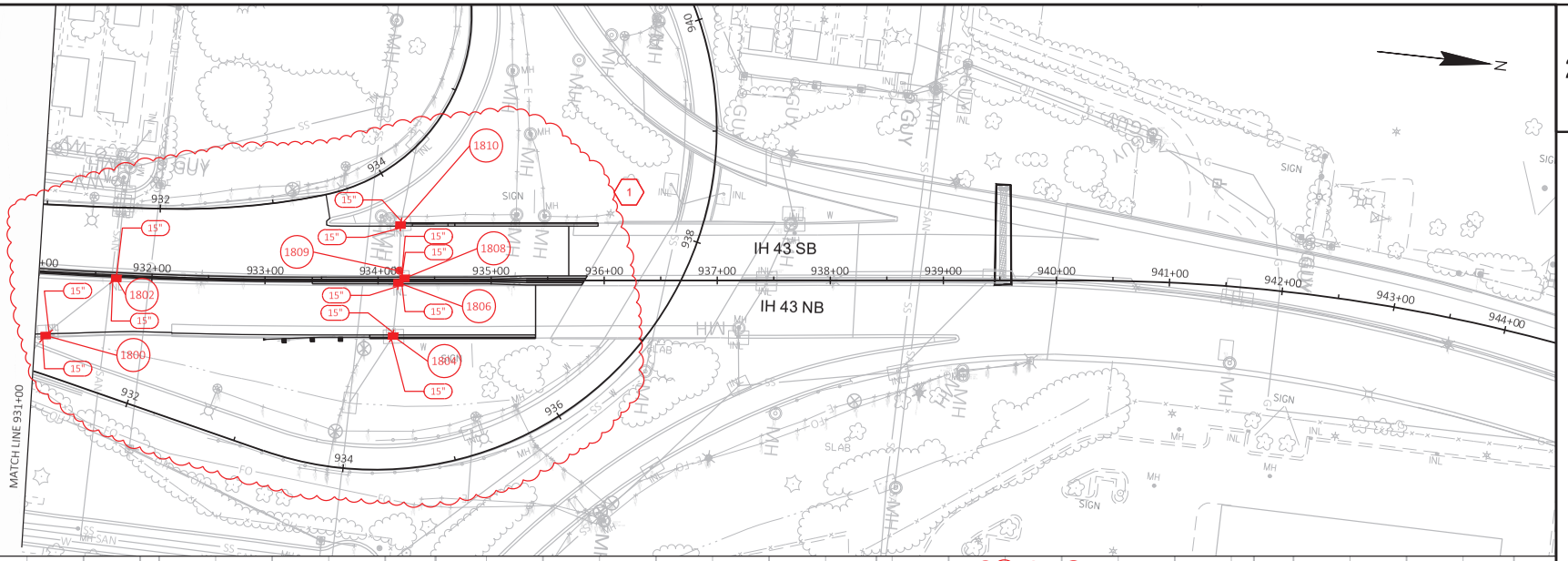
FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\122822 70\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021210_pd
PLOT DATE : 2/15/2023 7:36 AM
PLOT BY : JOHANSEN, AMANDA A
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

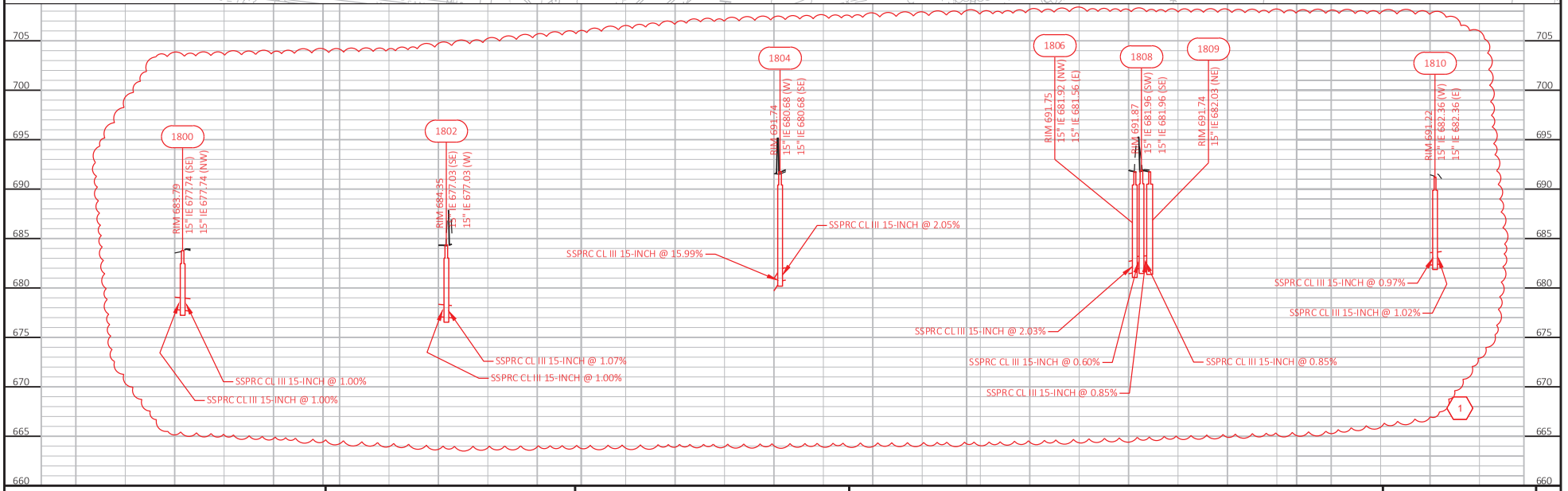


PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	STORM SEWER STAGING PLAN	SHEET 223A	E

FILE NAME : S:\DOT\DOT_SE\190224_I43_N-S_FREEWAY_NORTH-HAMPTON\DESIGN\1228270\SHEETSPLAN\022501_SS.DWG
LAYOUT NAME - 022501- (10)
PLOT DATE : 3/1/2023 2:31 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

Addendum No. 01
ID 1228-22-70
Added Sheet 256A
March 7, 2023





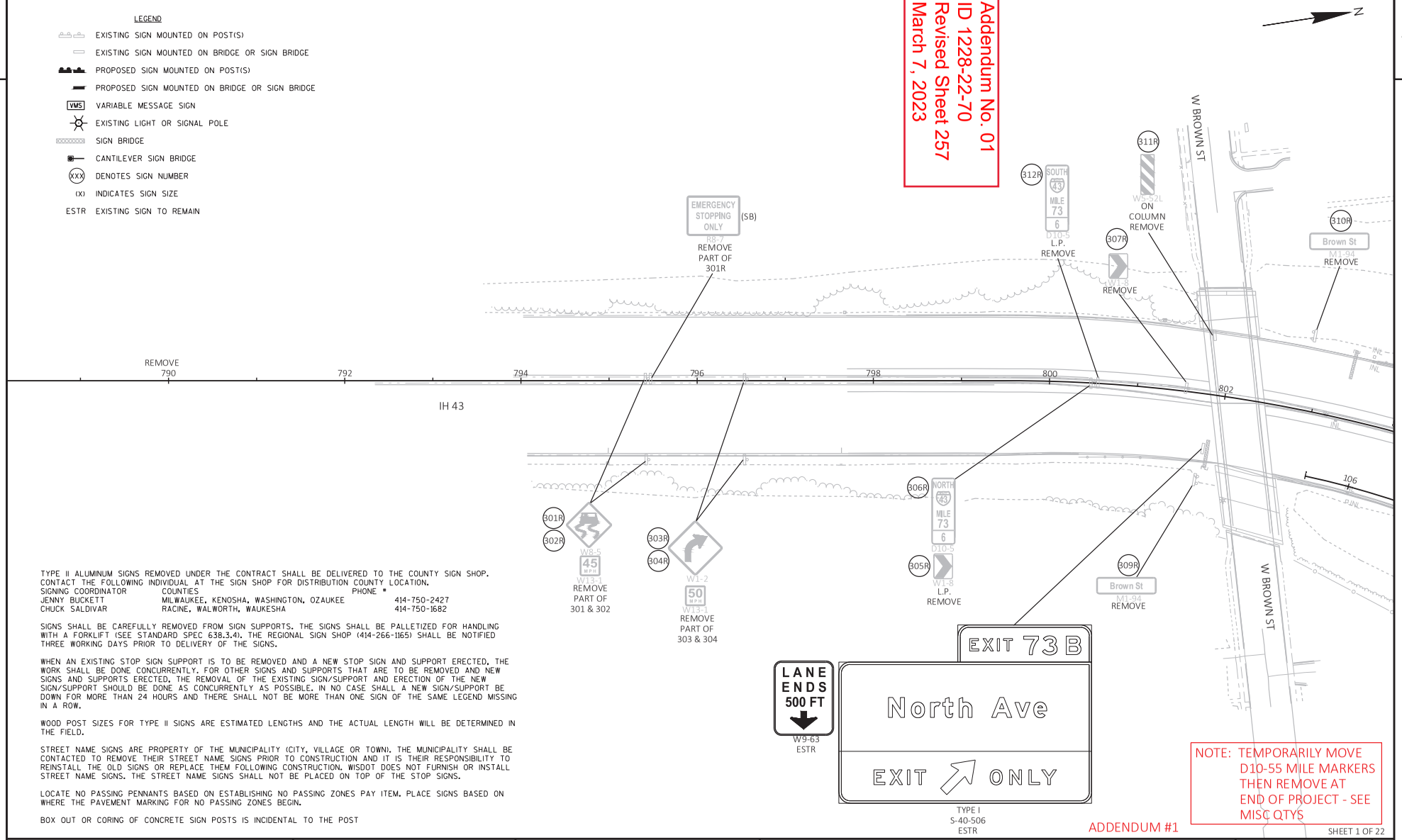
PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	STORM SEWER	SHEET 256A	E

FILE NAME : S:\DOT\DOT_SE\190224_I43_N-S_FREEWAY_NORTH-HAMPTON\DESIGN\1228270\SHEETSPLAN\022521_SS.DWG
LAYOUT NAME - SS_10
PLOT DATE : 3/1/2023 4:37 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

Addendum No. 01
ID 1228-22-70
Revised Sheet 257
March 7, 2023

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN



NOTE: TEMPORARILY MOVE D10-55 MILE MARKERS THEN REMOVE AT END OF PROJECT - SEE MISC QTYS

TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE COUNTY SIGN SHOP. CONTACT THE FOLLOWING INDIVIDUAL AT THE SIGN SHOP FOR DISTRIBUTION COUNTY LOCATION.

SIGNING COORDINATOR	COUNTIES	PHONE #
JENNY BUCKETT	MILWAUKEE, KENOSHA, WASHINGTON, OZAUKEE	414-750-2427
CHUCK SALDIVAR	RACINE, WALWORTH, WAUKESHA	414-750-1682

SIGNS SHALL BE CAREFULLY REMOVED FROM SIGN SUPPORTS. THE SIGNS SHALL BE PALLETIZED FOR HANDLING WITH A FORKLIFT (SEE STANDARD SPEC 638.3.4). THE REGIONAL SIGN SHOP (414-266-1165) SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF THE SIGNS.

WHEN AN EXISTING STOP SIGN SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED, THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POST SIZES FOR TYPE II SIGNS ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

STREET NAME SIGNS ARE PROPERTY OF THE MUNICIPALITY (CITY, VILLAGE OR TOWN). THE MUNICIPALITY SHALL BE CONTACTED TO REMOVE THEIR STREET NAME SIGNS PRIOR TO CONSTRUCTION AND IT IS THEIR RESPONSIBILITY TO REINSTALL THE OLD SIGNS OR REPLACE THEM FOLLOWING CONSTRUCTION. WISDOT DOES NOT FURNISH OR INSTALL STREET NAME SIGNS. THE STREET NAME SIGNS SHALL NOT BE PLACED ON TOP OF THE STOP SIGNS.

LOCATE NO PASSING PENNANTS BASED ON ESTABLISHING NO PASSING ZONES PAY ITEM. PLACE SIGNS BASED ON WHERE THE PAVEMENT MARKING FOR NO PASSING ZONES BEGIN.

BOX OUT OR CORING OF CONCRETE SIGN POSTS IS INCIDENTAL TO THE POST

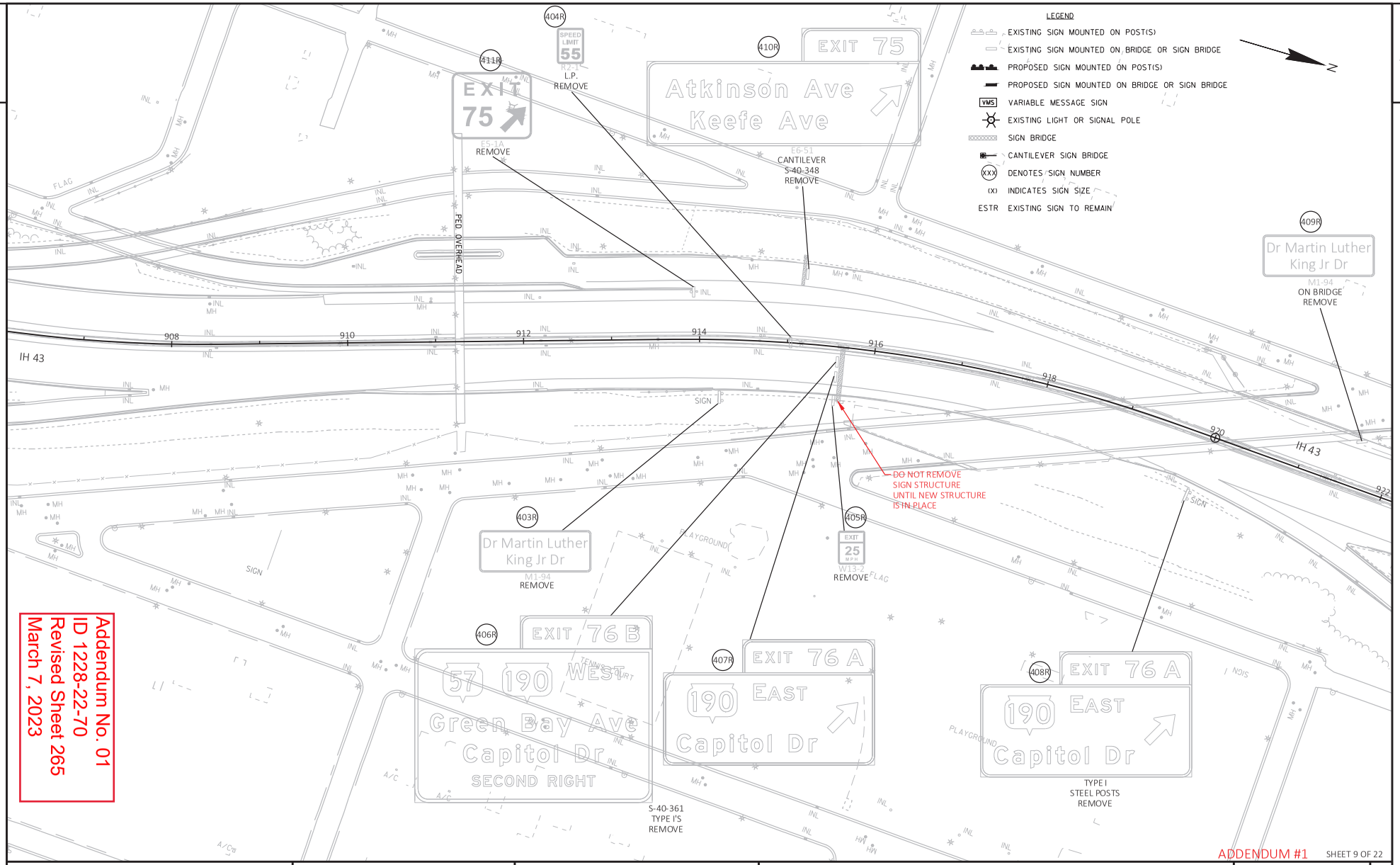
ADDENDUM #1

SHEET 1 OF 22

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET 257	E

FILE NAME : N:\PDS\C3D\CAD\12282200\70\SIGN\023101_PSML_18.DWG
LAYOUT NAME - 023101_PS
PLOT DATE : 2/23/2023 12:47 PM
PLOT BY : WAGNER, SCOTT H
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

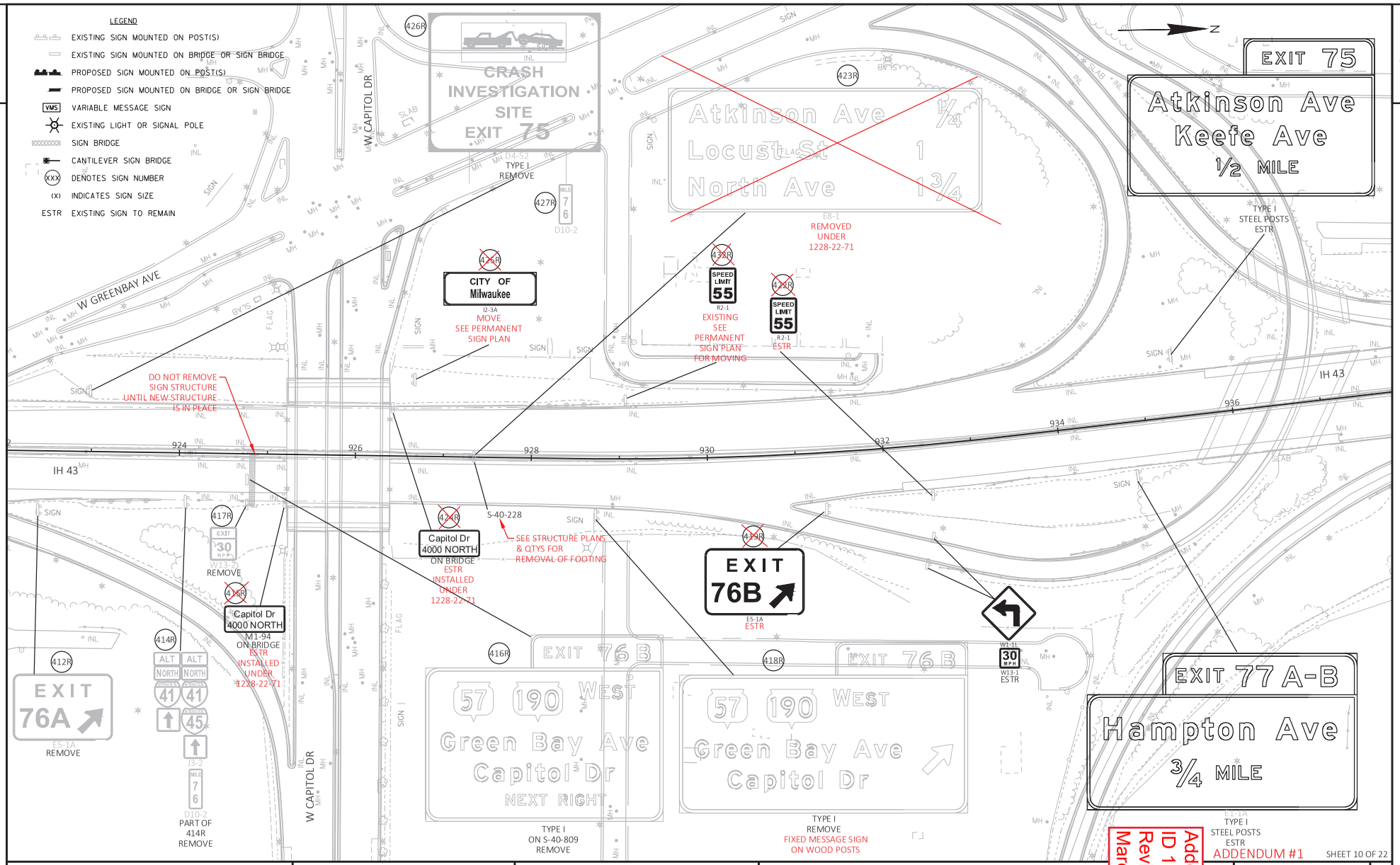


ADDENDUM #1 SHEET 9 OF 22

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET 265	E

FILE NAME : N:\PDS\C3D\CAD\12282200\70\SIGN\023101_PSML_18.DWG
LAYOUT NAME - 023109_PS
PLOT DATE : 2/23/2023 10:07 AM
PLOT BY : WAGNER, SCOTT H
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

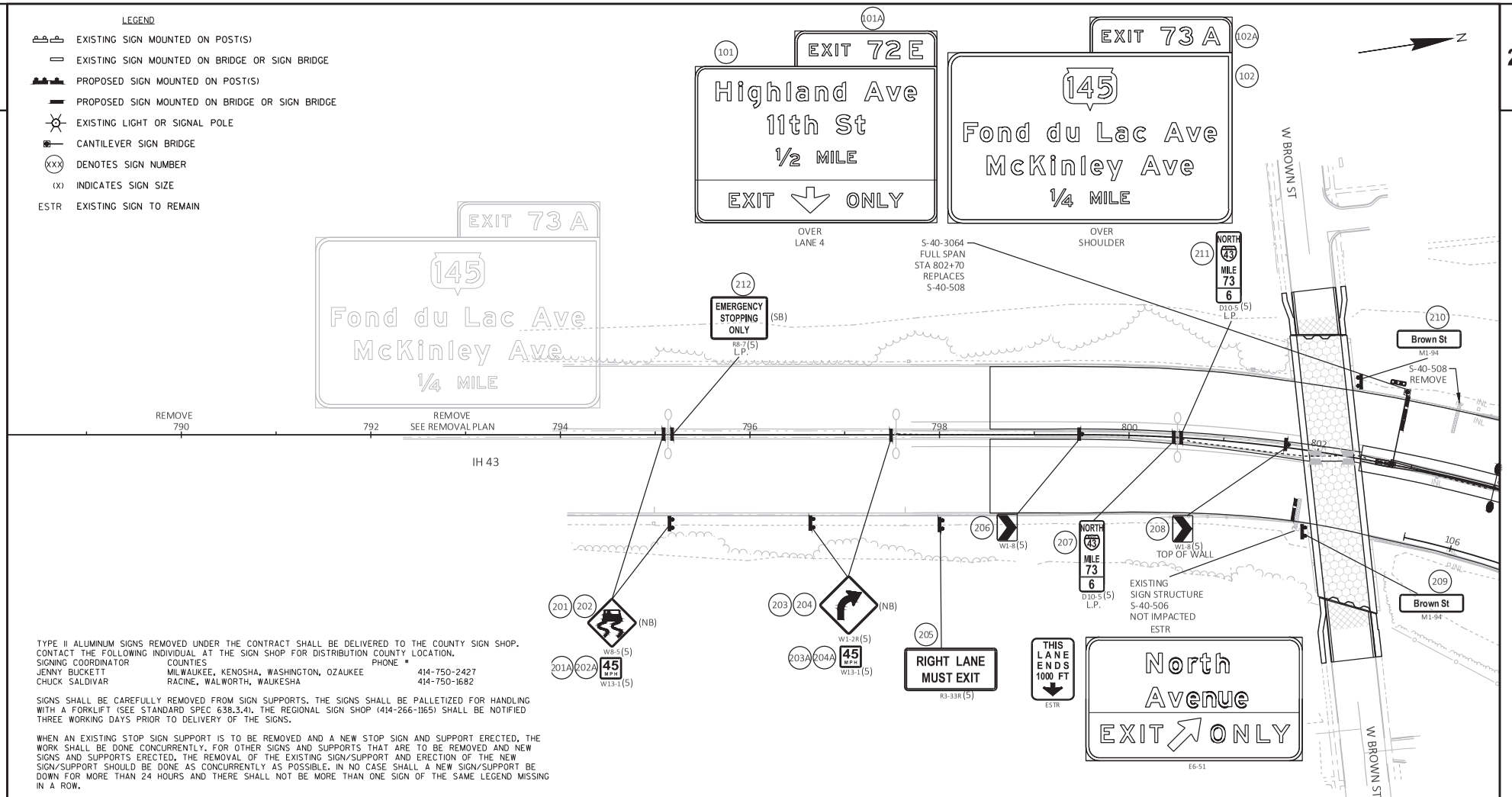


PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET 266	E

FILE NAME : N:\PDS\C3D\CAD\1228200\70\SIGN\023101_PSML_18.DWG
LAYOUT NAME - 023110_PS
PLOT DATE : 2/23/2023 1:12 PM
PLOT BY : WAGNER, SCOTT H
PLOT NAME :

WISDOT/CADDS SHEET 42

Addendum No. 01
ID 1228-22-70
Revised Sheet 266
March 7, 2023



TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE COUNTY SIGN SHOP. CONTACT THE FOLLOWING INDIVIDUAL AT THE SIGN SHOP FOR DISTRIBUTION COUNTY LOCATION.

SIGNING COORDINATOR	COUNTIES	PHONE #
JENNY BUCKETT	MILWAUKEE, KENOSHA, WASHINGTON, OZAUKEE	414-750-2427
CHUCK SALDIVAR	RACINE, WALWORTH, WAUKESHA	414-750-1682

SIGNS SHALL BE CAREFULLY REMOVED FROM SIGN SUPPORTS. THE SIGNS SHALL BE PALLETIZED FOR HANDLING WITH A FORKLIFT (SEE STANDARD SPEC 638.3.4). THE REGIONAL SIGN SHOP (414-266-1165) SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF THE SIGNS.

WHEN AN EXISTING STOP SIGN SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED, THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POST SIZES FOR TYPE II SIGNS ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

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LOCATE NO PASSING PENNANTS BASED ON ESTABLISHING NO PASSING ZONES PAY ITEM. PLACE SIGNS BASED ON WHERE THE PAVEMENT MARKING FOR NO PASSING ZONES BEGIN.

BOX OUT OR CORING OF CONCRETE SIGN POSTS IS INCIDENTAL TO THE POST

Addendum No. 01
ID 1228-22-70
Revised Sheet 279
March 7, 2023

NOTE: TEMPORARILY MOVE D10-55 MILE MARKERS SEE MISC QTYS

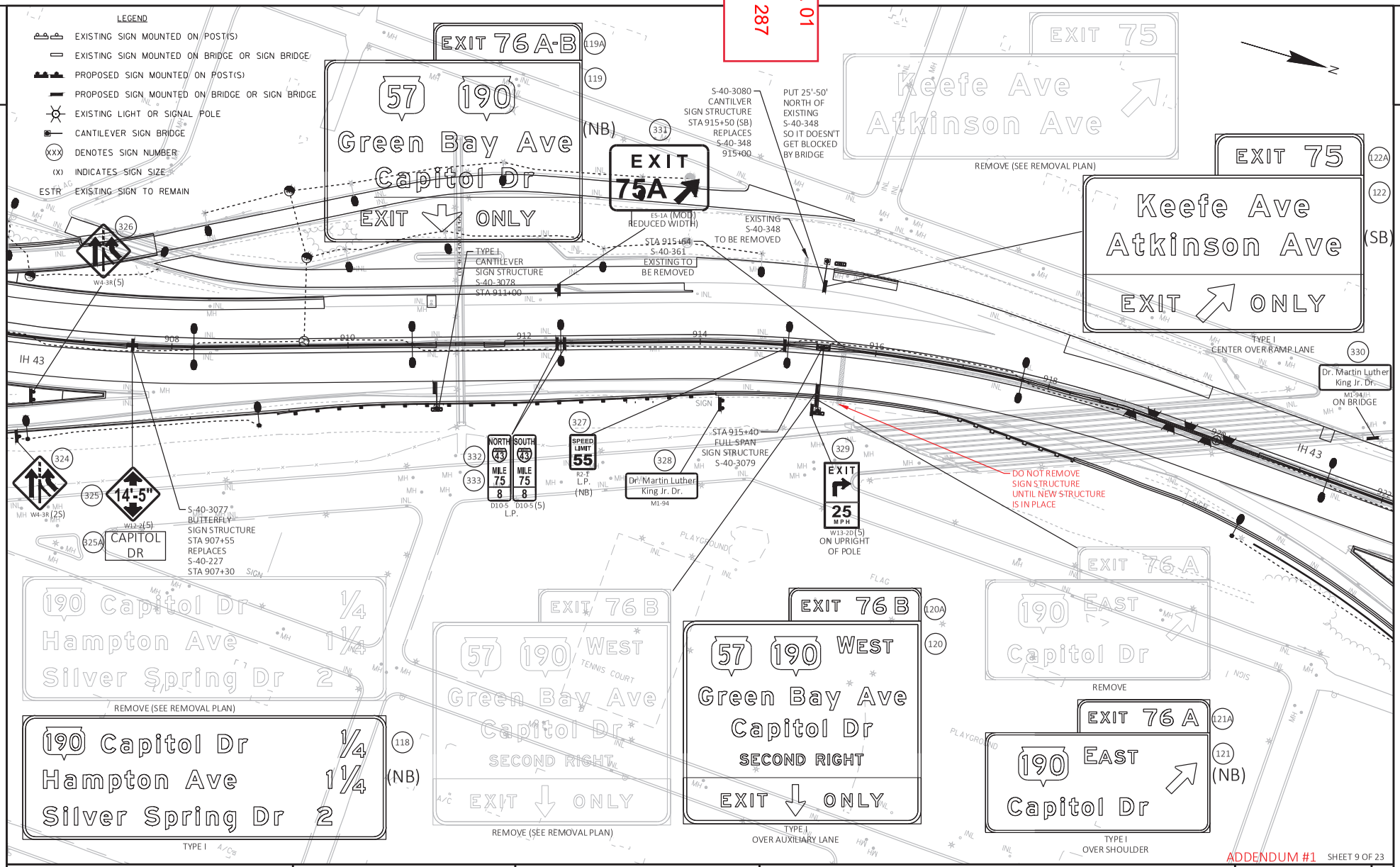
ADDENDUM #1

SHEET 1 OF 23

PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 279	E

FILE NAME : N:\PDS\C3D\CAD\12282200\70\SIGN\023201_PS_18_ML.DWG
LAYOUT NAME - 023201_PS
PLOT DATE : 2/22/2023 3:03 PM
PLOT BY : WAGNER, SCOTT H
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

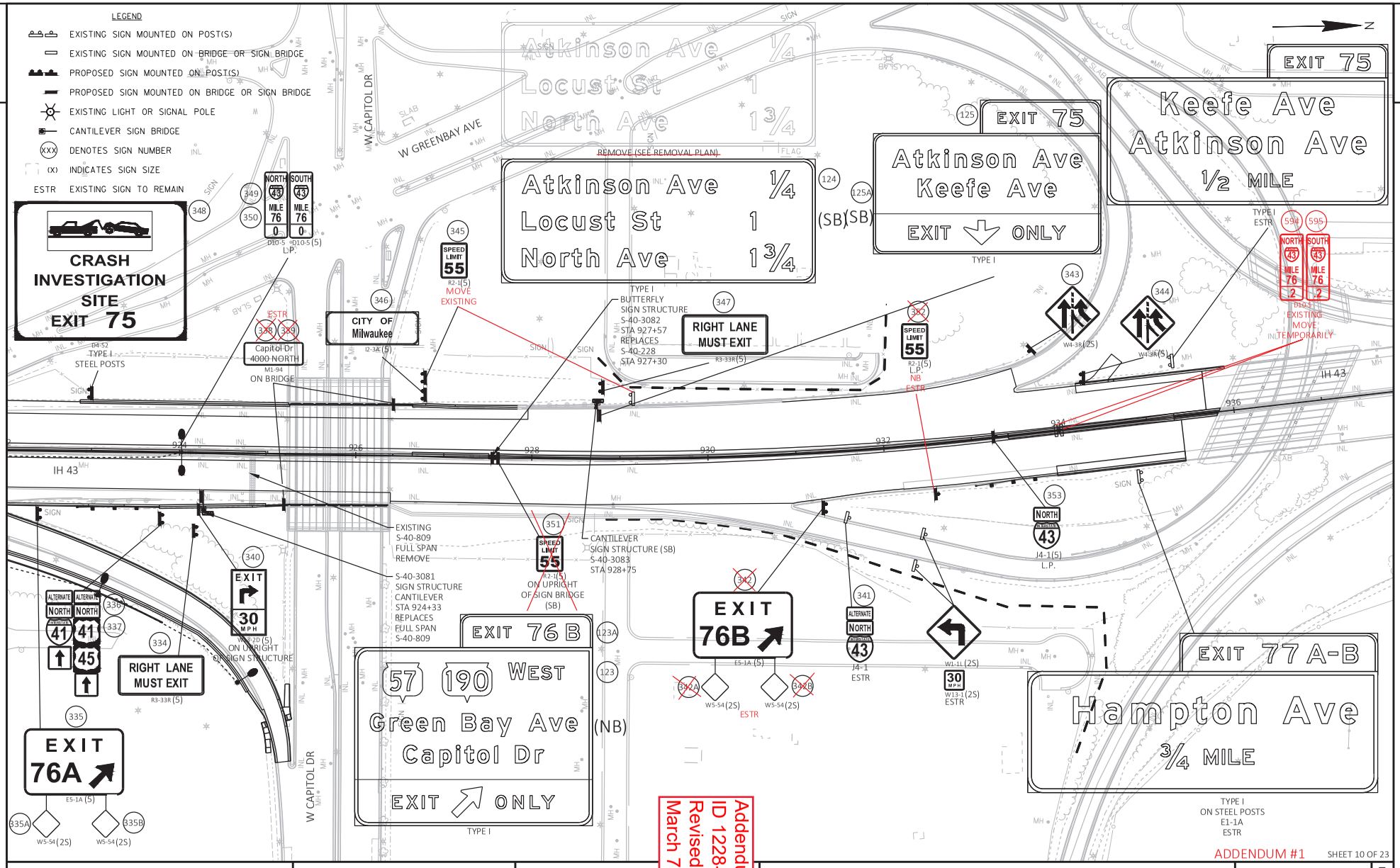
Addendum No. 01
ID 1228-22-70
Revised Sheet 287
March 7, 2023



ADDENDUM #1 SHEET 9 OF 23

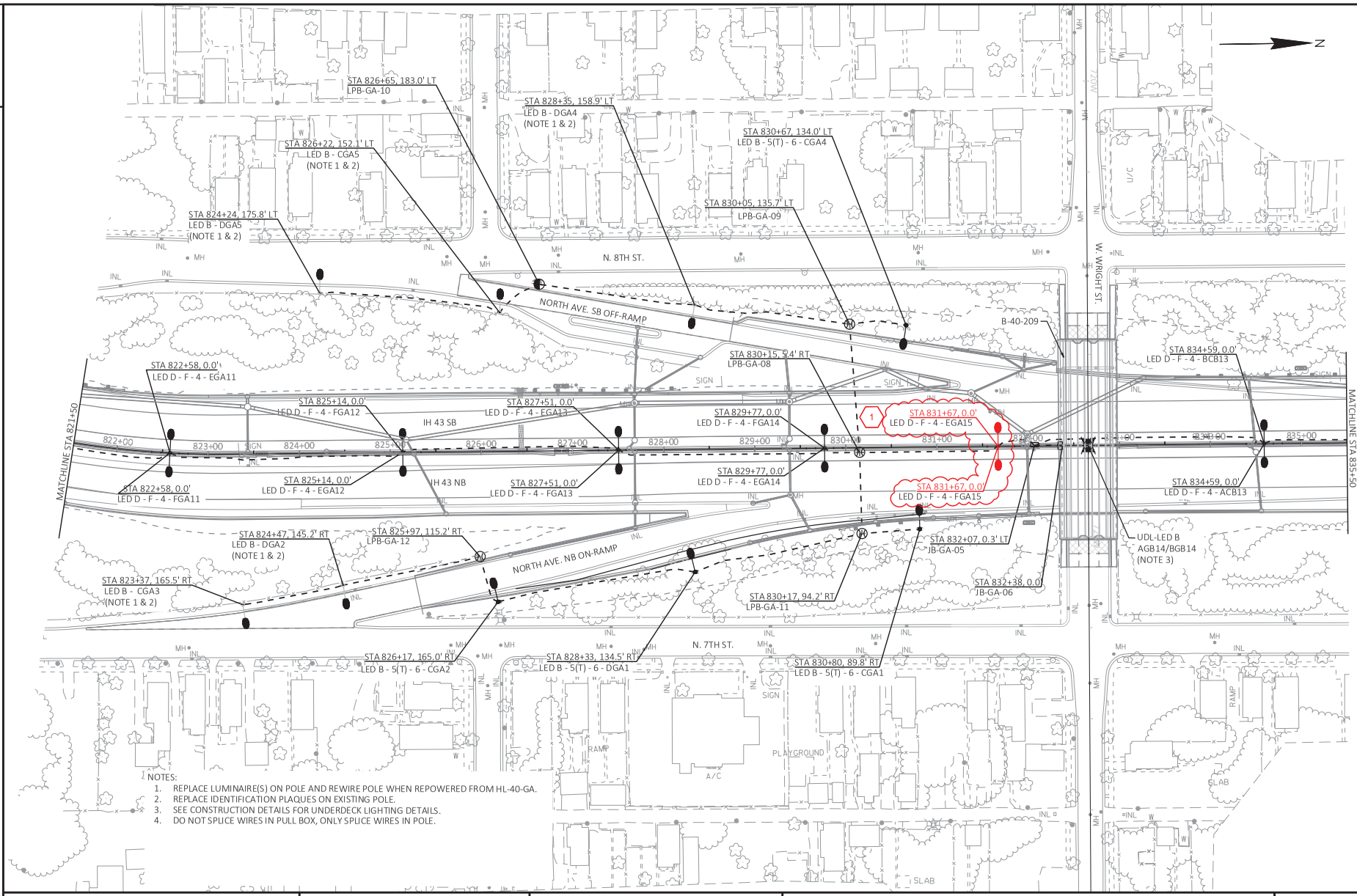
PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 287	E

FILE NAME : N:\PDS\C3D\CAD\12282200\70\SIGN\023201_PS_18_ML.DWG
LAYOUT NAME - 023209_PS
PLOT DATE : 2/23/2023 11:18 AM
PLOT BY : WAGNER, SCOTT H
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



PROJECT NO: 1228-22-70	HWY: IH-43	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 288	E

FILE NAME : N:\PDS\C3D\CAD\12282200\70\SIGN\023201_PS_18_ML.DWG
LAYOUT NAME - 023210_PS
PLOT BY : WAGNER, SCOTT H
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

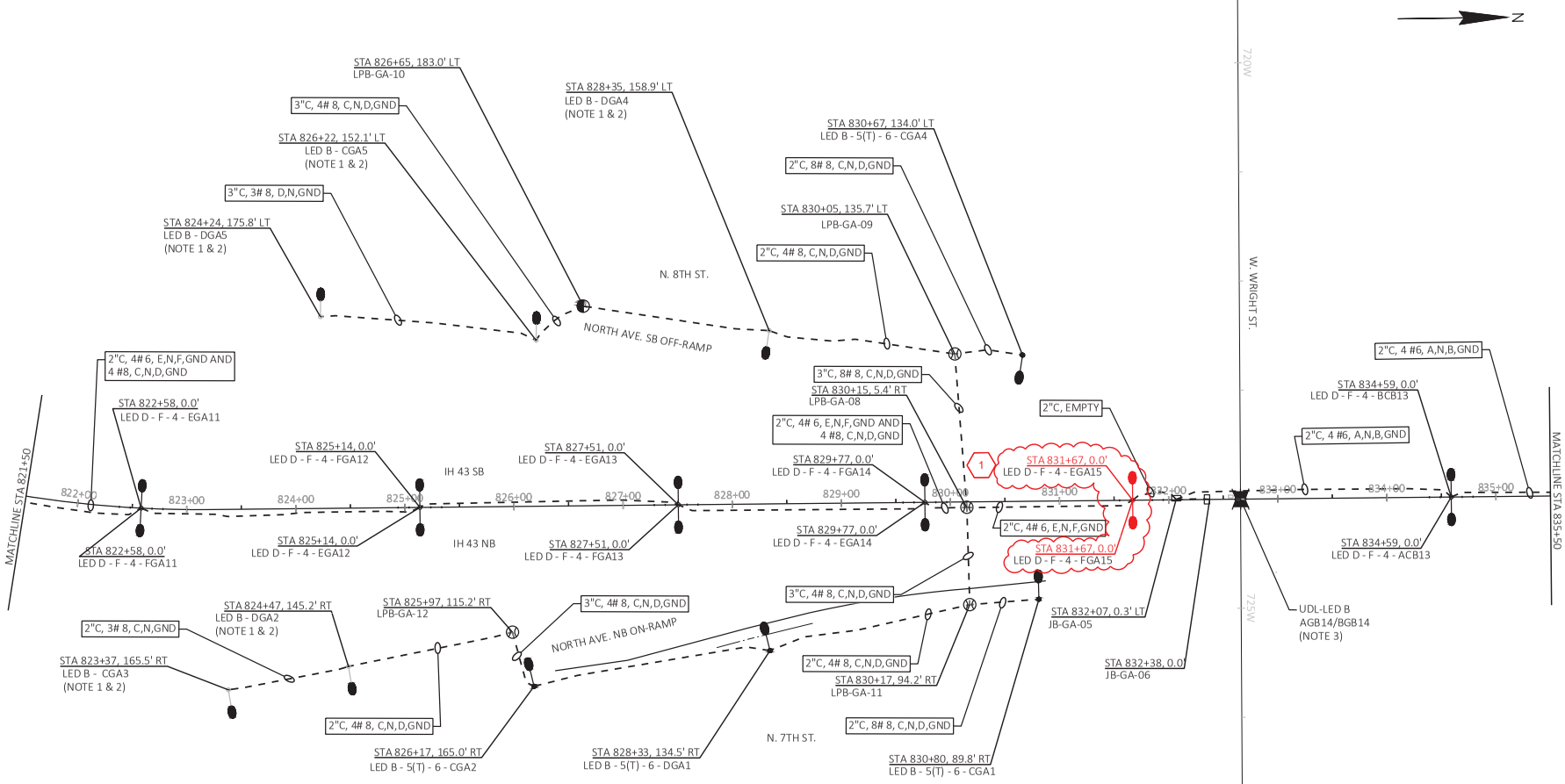


NOTES:
1. REPLACE LUMINAIRE(S) ON POLE AND REWIRE POLE WHEN REPOWERED FROM HL-40-GA.
2. REPLACE IDENTIFICATION PLAQUES ON EXISTING POLE.
3. SEE CONSTRUCTION DETAILS FOR UNDERDECK LIGHTING DETAILS.
4. DO NOT SPLICE WIRES IN PULL BOX, ONLY SPLICE WIRES IN POLE.

Addendum No. 01
ID 1228-22-70
Revised Sheet 336
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	LIGHTING PLANS - FINAL	SHEET 336	E

FILE NAME : S:\DOT\DOT_SE\190224_I43_N-S_FREEWAY_NORTH-HAMPTON\DESIGN\1228270\SHEETSPLAN\023503_LP.DWG
LAYOUT NAME - 025003_LP
PLOT DATE : 3/1/2023 3:24 PM
PLOT BY : KIAN K. CHAI
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

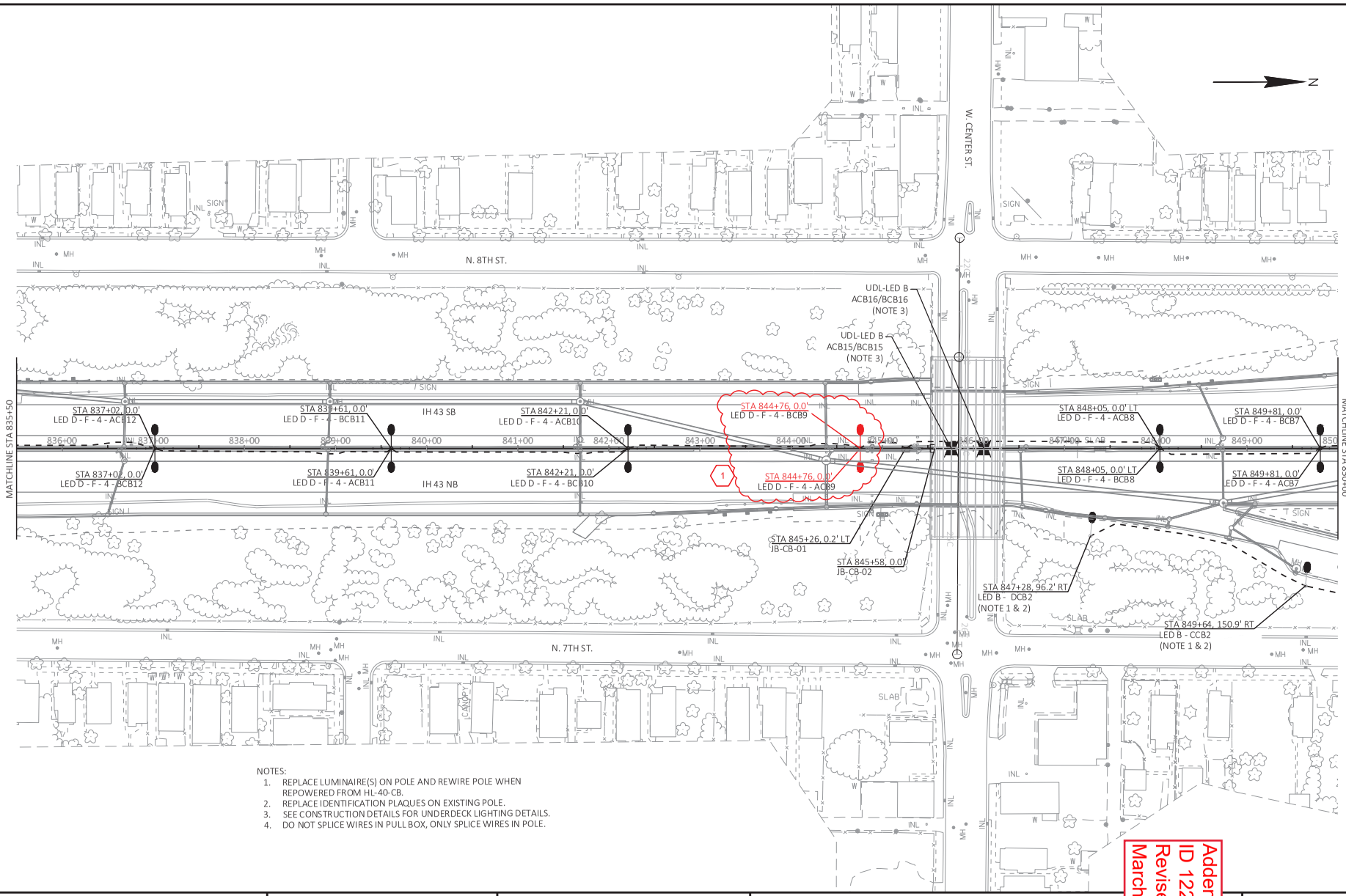


NOTES:
1. REPLACE LUMINAIRE(S) ON POLE AND REWIRE POLE WHEN REPOWERED FROM HL-40-GA.
2. REPLACE IDENTIFICATION PLAQUES ON EXISTING POLE.
3. SEE CONSTRUCTION DETAILS FOR UNDERDECK LIGHTING DETAILS.
4. DO NOT SPLICE WIRES IN PULL BOX, ONLY SPLICE WIRES IN POLE.

Addendum No. 01
ID 1228-22-70
Revised Sheet 337
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	LIGHTING PLANS - SCHEMATIC	SHEET 337	E

FILE NAME : S:\DOT\DOT_SE\190224_I43_N-S_FREEWAY_NORTH-HAMPTON\DESIGN\1228270\SHEETSPLAN\023503_LP.DWG
LAYOUT NAME - 025003_LP_SCH
PLOT DATE : 3/1/2023 3:24 PM
PLOT BY : KIAN K. CHAI
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



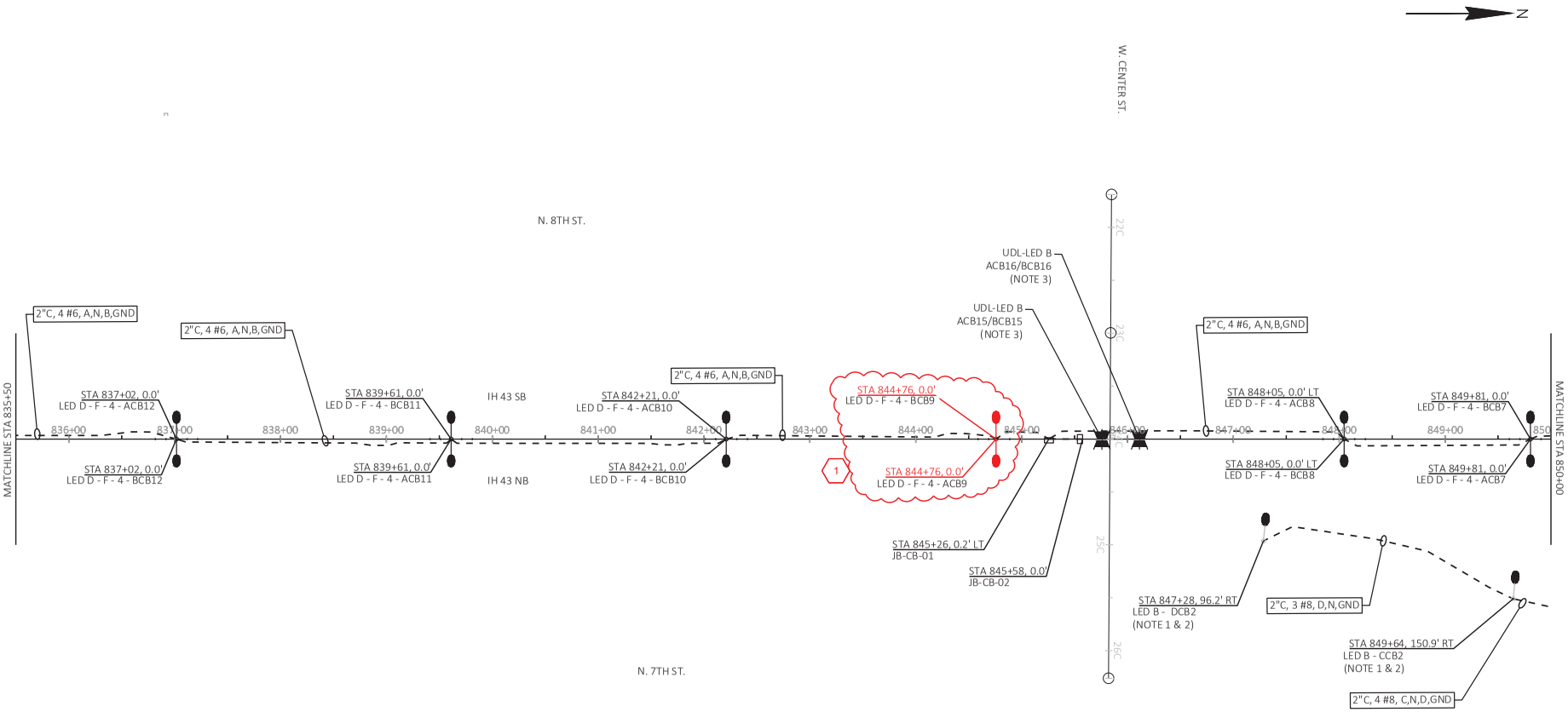
NOTES:

1. REPLACE LUMINAIRE(S) ON POLE AND REWIRE POLE WHEN REPOWERED FROM HL-40-CB.
2. REPLACE IDENTIFICATION PLAQUES ON EXISTING POLE.
3. SEE CONSTRUCTION DETAILS FOR UNDERDECK LIGHTING DETAILS.
4. DO NOT SPLICE WIRES IN PULL BOX, ONLY SPLICE WIRES IN POLE.

Addendum No. 01
ID 1228-22-70
Revised Sheet 338
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	LIGHTING PLANS - FINAL	SHEET 338	E

FILE NAME : S:\DOT\DOT_SE\190224_I43_N-S_FREEWAY_NORTH-HAMPTON\DESIGN\1228270\SHEETSPLAN\023503_LP.DWG
LAYOUT NAME - 025004_LP
PLOT DATE : 3/1/2023 3:24 PM
PLOT BY : KIAN K. CHAI
PLOT NAME :
WISDOT/CADDS SHEET 42



NOTES:

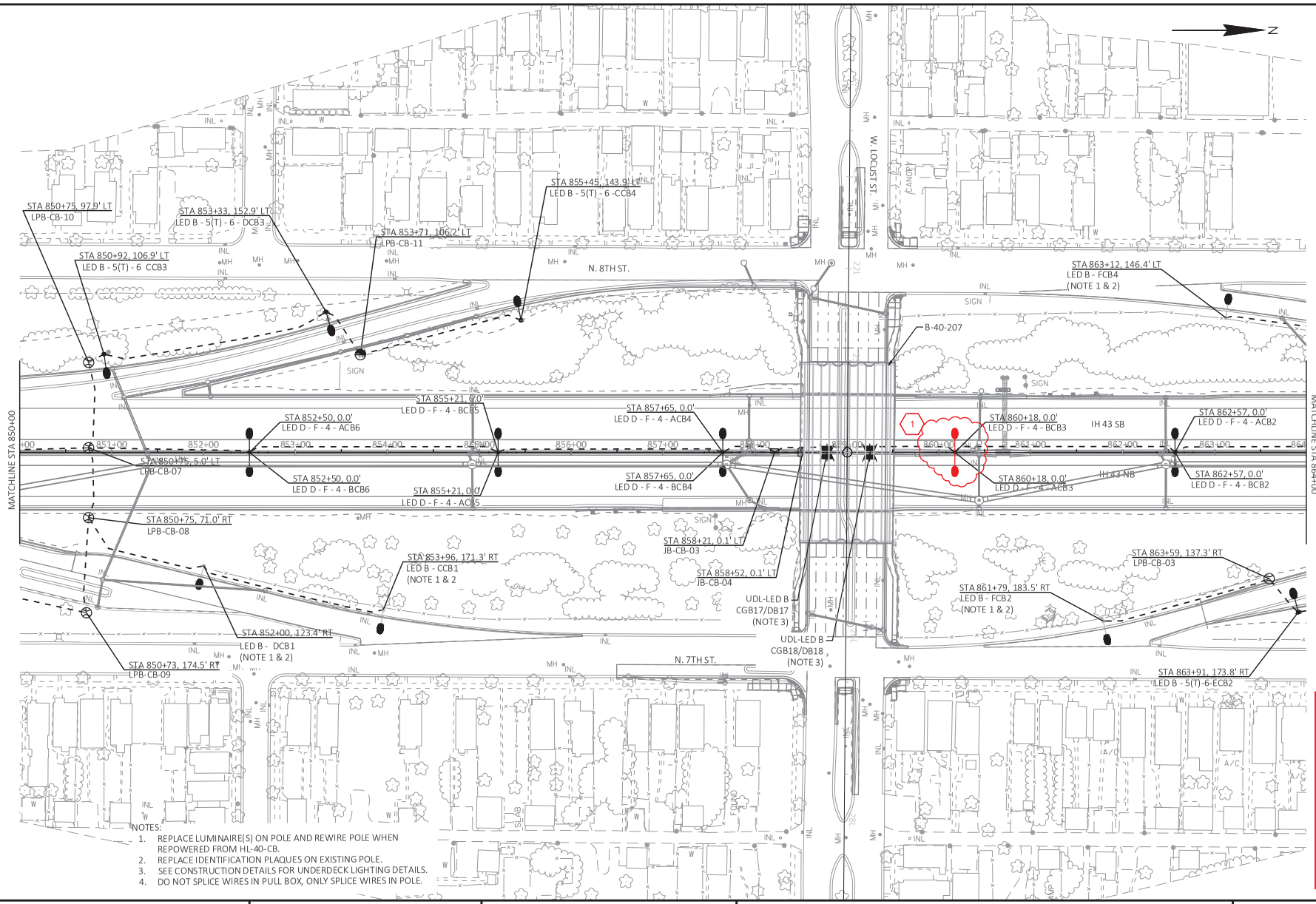
1. REPLACE LUMINAIRE(S) ON POLE AND REWIRE POLE WHEN REPOWERED FROM HL-40-CB.
2. REPLACE IDENTIFICATION PLAQUES ON EXISTING POLE.
3. SEE CONSTRUCTION DETAILS FOR UNDERDECK LIGHTING DETAILS.
4. DO NOT SPLICE WIRES IN PULL BOX, ONLY SPLICE WIRES IN POLE.

Addendum No. 01
ID 1228-22-70
Revised Sheet 339
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	LIGHTING PLANS - SCHEMATIC	SHEET 339	E

FILE NAME : S:\DOT\DOT_SE\190224_I43_N-S_FREEWAY_NORTH-HAMPTON\DESIGN\1228270\SHEETSPLAN\023503_LP.DWG
LAYOUT NAME - 025004_LP_SCH
PLOT DATE : 3/1/2023 3:25 PM
PLOT BY : KIAN K. CHAI
PLOT NAME :
PLOT

WISDOT/CADDS SHEET 42

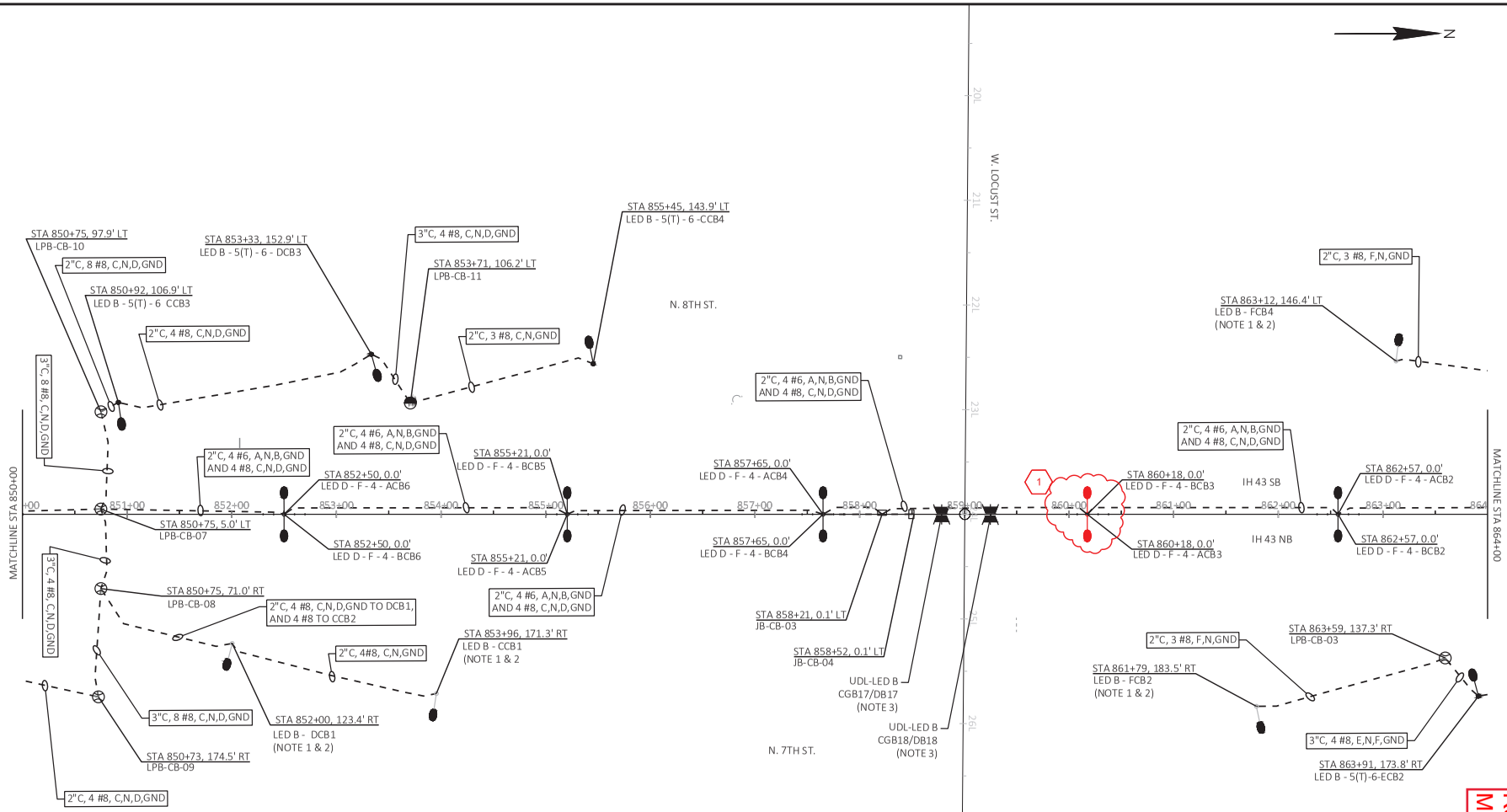


NOTES:
1. REPLACE LUMINAIRE(S) ON POLE AND REWIRE POLE WHEN REPOWERED FROM HL-40-CB.
2. REPLACE IDENTIFICATION PLAQUES ON EXISTING POLE.
3. SEE CONSTRUCTION DETAILS FOR UNDERDECK LIGHTING DETAILS.
4. DO NOT SPLICE WIRES IN PULL BOX, ONLY SPLICE WIRES IN POLE.

Addendum No. 01
ID 1228-22-70
Revised Sheet 340
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	LIGHTING PLANS - FINAL	SHEET 340	E

FILE NAME : S:\DOT\DOT_SE\190224_I43_N-S_FREEWAY_NORTH-HAMPTON\DESIGN\12282270\SHEETSPLAN\023503_LP.DWG
LAYOUT NAME - 025005_LP
PLOT DATE : 3/1/2023 3:25 PM
PLOT BY : KIAN K. CHAI
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

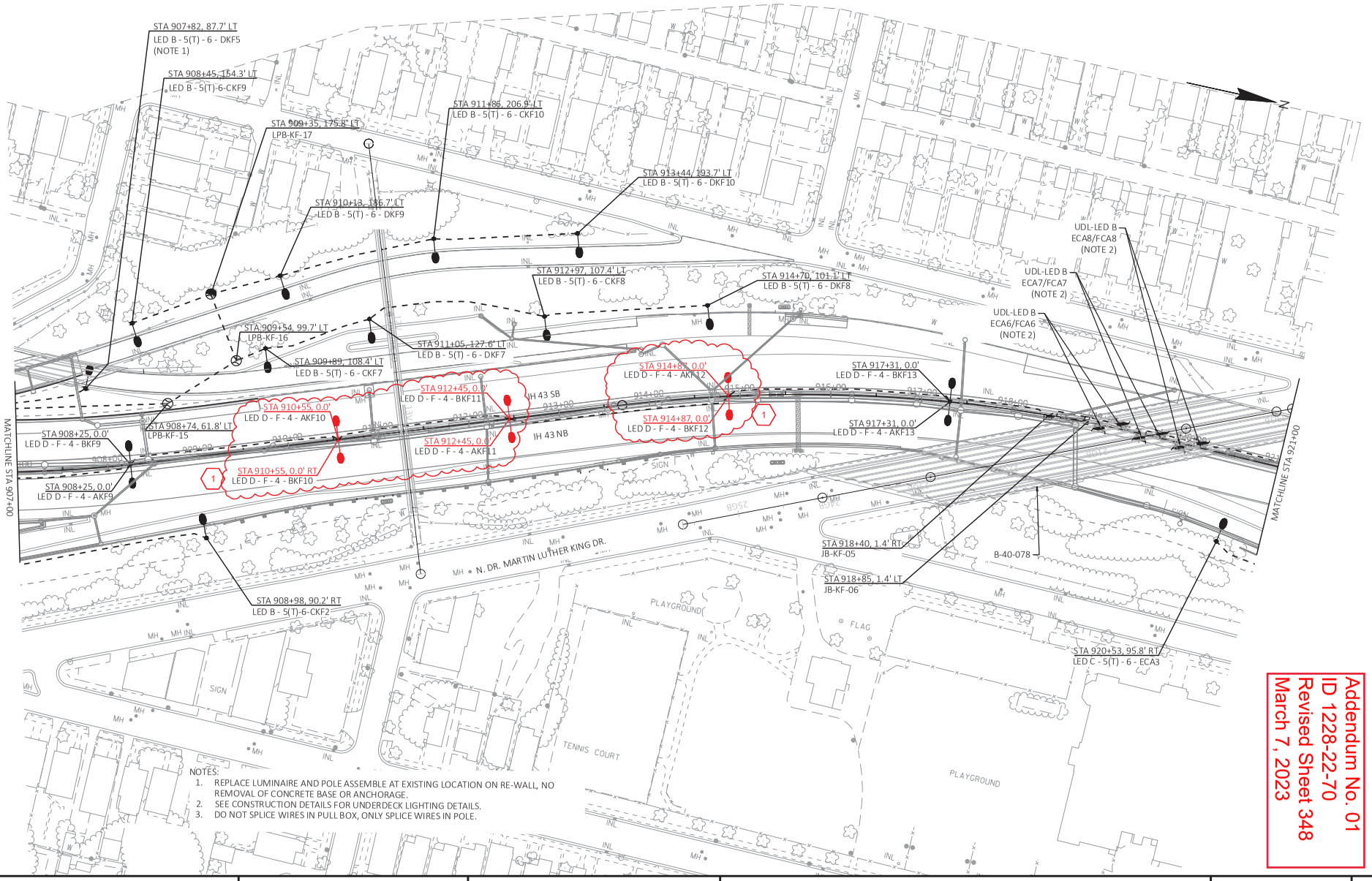


NOTES:
1. REPLACE LUMINAIRE(S) ON POLE AND REWIRE POLE WHEN REPOWERED FROM HL-40-CB.
2. REPLACE IDENTIFICATION PLAQUES ON EXISTING POLE.
3. SEE CONSTRUCTION DETAILS FOR UNDERDECK LIGHTING DETAILS.
4. DO NOT SPLICE WIRES IN PULL BOX, ONLY SPLICE WIRES IN POLE.

Addendum No. 01
ID 1228-22-70
Revised Sheet 341
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	LIGHTING PLANS - SCHEMATIC	SHEET 341	E

FILE NAME : S:\DOT\DOT_SE\190224_I43_N-S_FREEWAY_NORTH-HAMPTON\DESIGN\1228270\SHEETSPLAN\023503_LP.DWG
LAYOUT NAME - 025005_LP_SCH
PLOT DATE : 3/1/2023 3:25 PM
PLOT BY : KIAN K. CHAI
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



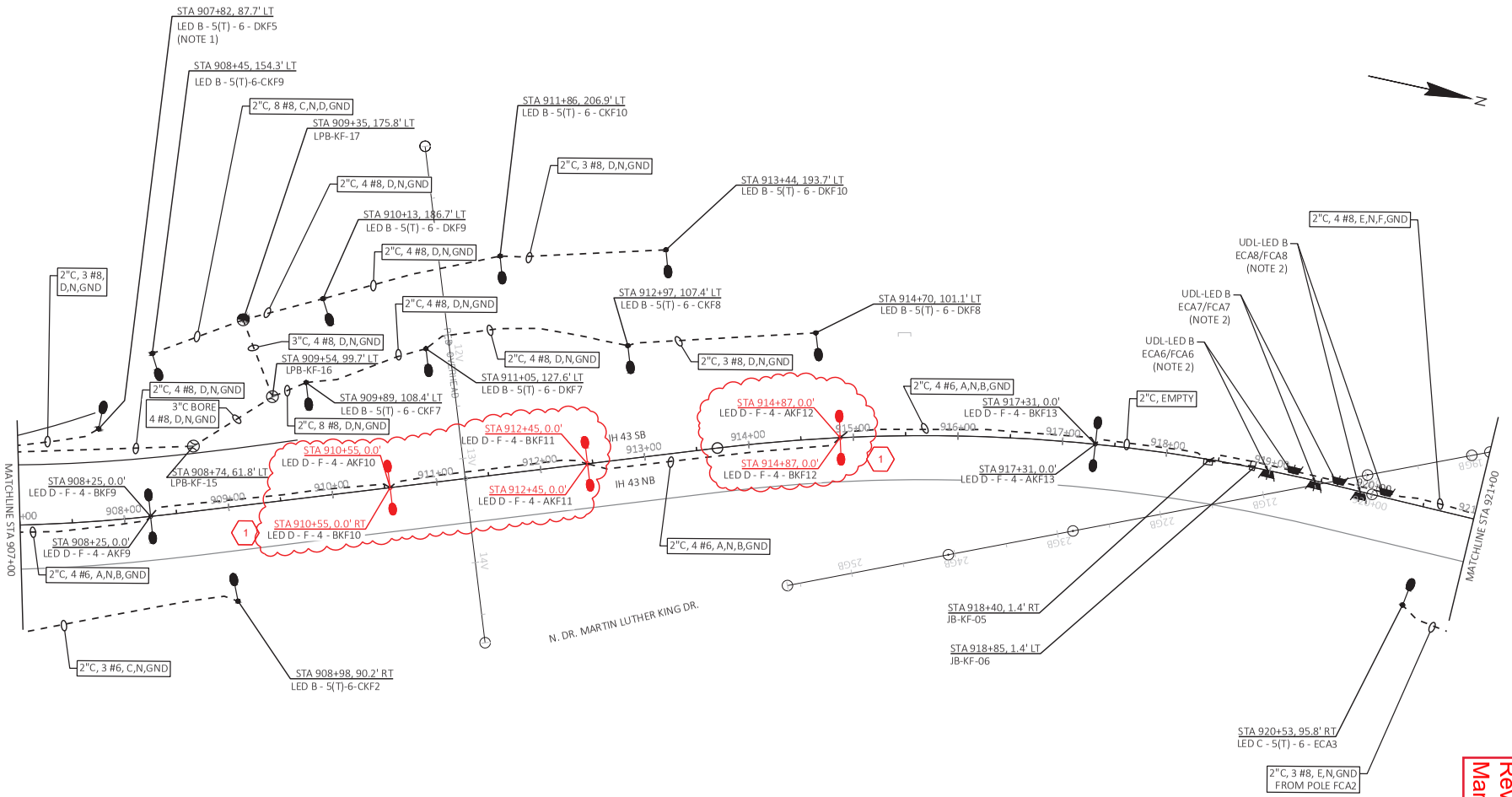
NOTES:

1. REPLACE LUMINAIRE AND POLE ASSEMBLE AT EXISTING LOCATION ON RE-WALL, NO REMOVAL OF CONCRETE BASE OR ANCHORAGE.
2. SEE CONSTRUCTION DETAILS FOR UNDERDECK LIGHTING DETAILS.
3. DO NOT SPLICE WIRES IN PULL BOX, ONLY SPLICE WIRES IN POLE.

Addendum No. 01
ID 1228-22-70
Revised Sheet 348
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	LIGHTING PLANS - FINAL	SHEET 348	E

FILE NAME : S:\DOT\DOT_SE\190224_I43_N-S_FREEWAY_NORTH-HAMPTON\DESIGN\1228270\SHEETSPLAN\023503_LP.DWG
LAYOUT NAME - 025009_LP
PLOT DATE : 3/1/2023 3:28 PM
PLOT BY : KIAN K. CHAI
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



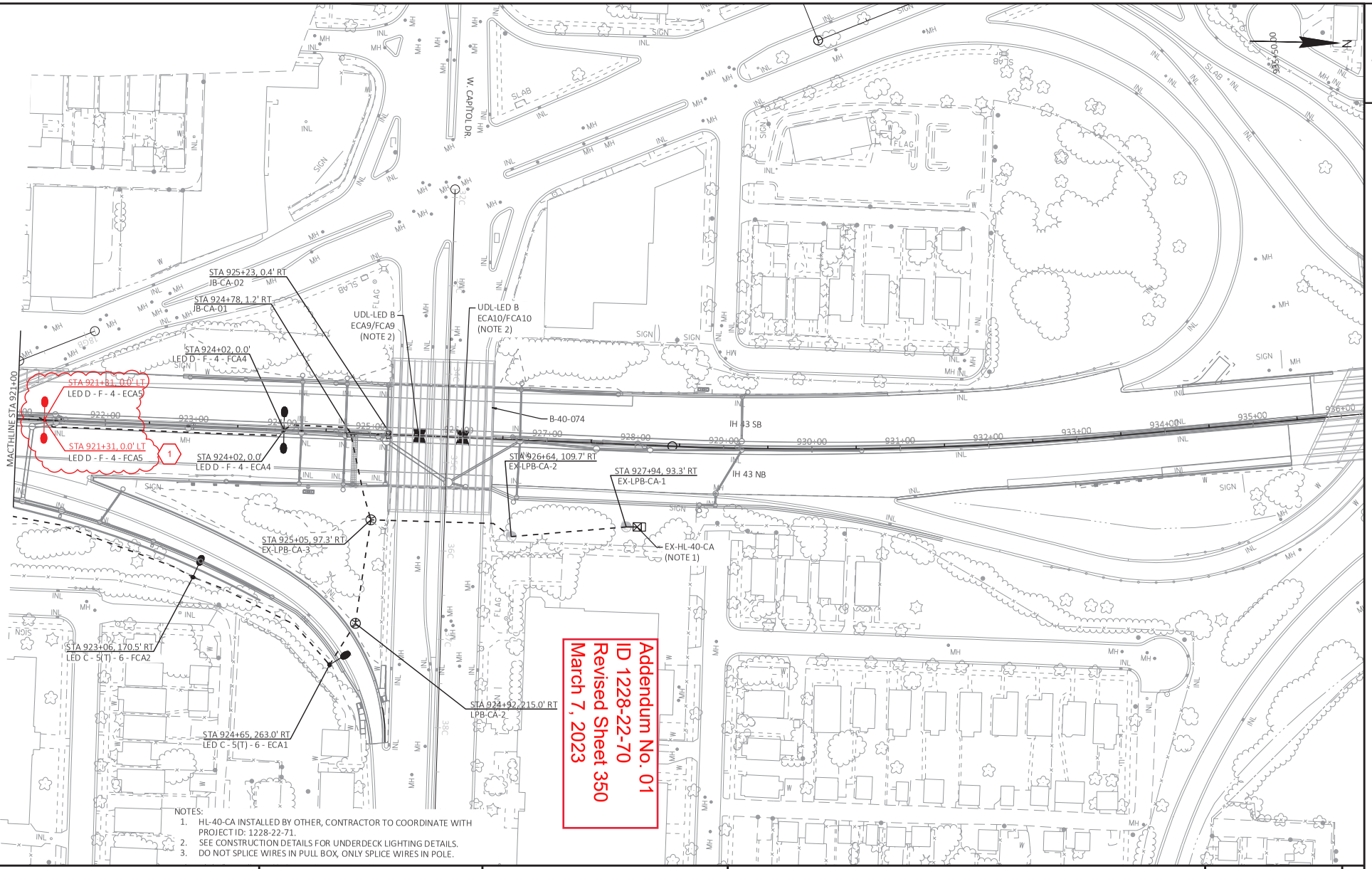
NOTES:

1. REPLACE LUMINAIRE AND POLE ASSEMBLE AT EXISTING LOCATION ON RE-WALL, NO REMOVAL OF CONCRETE BASE OR ANCHORAGE.
2. SEE CONSTRUCTION DETAILS FOR UNDERDECK LIGHTING DETAILS.
3. DO NOT SPLICE WIRES IN PULL BOX, ONLY SPLICE WIRES IN POLE.

Addendum No. 01
ID 1228-22-70
Revised Sheet 349
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	LIGHTING PLANS - SCHEMATIC	SHEET 349	E

FILE NAME : S:\DOT\DOT_SE\190224_I43_N-S_FREEWAY_NORTH-HAMPTON\DESIGN\1228270\SHEETSPLAN\023503_LP.DWG
LAYOUT NAME - 025009_LP_SCH
PLOT DATE : 3/1/2023 3:28 PM
PLOT BY : KIAN K. CHAI
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

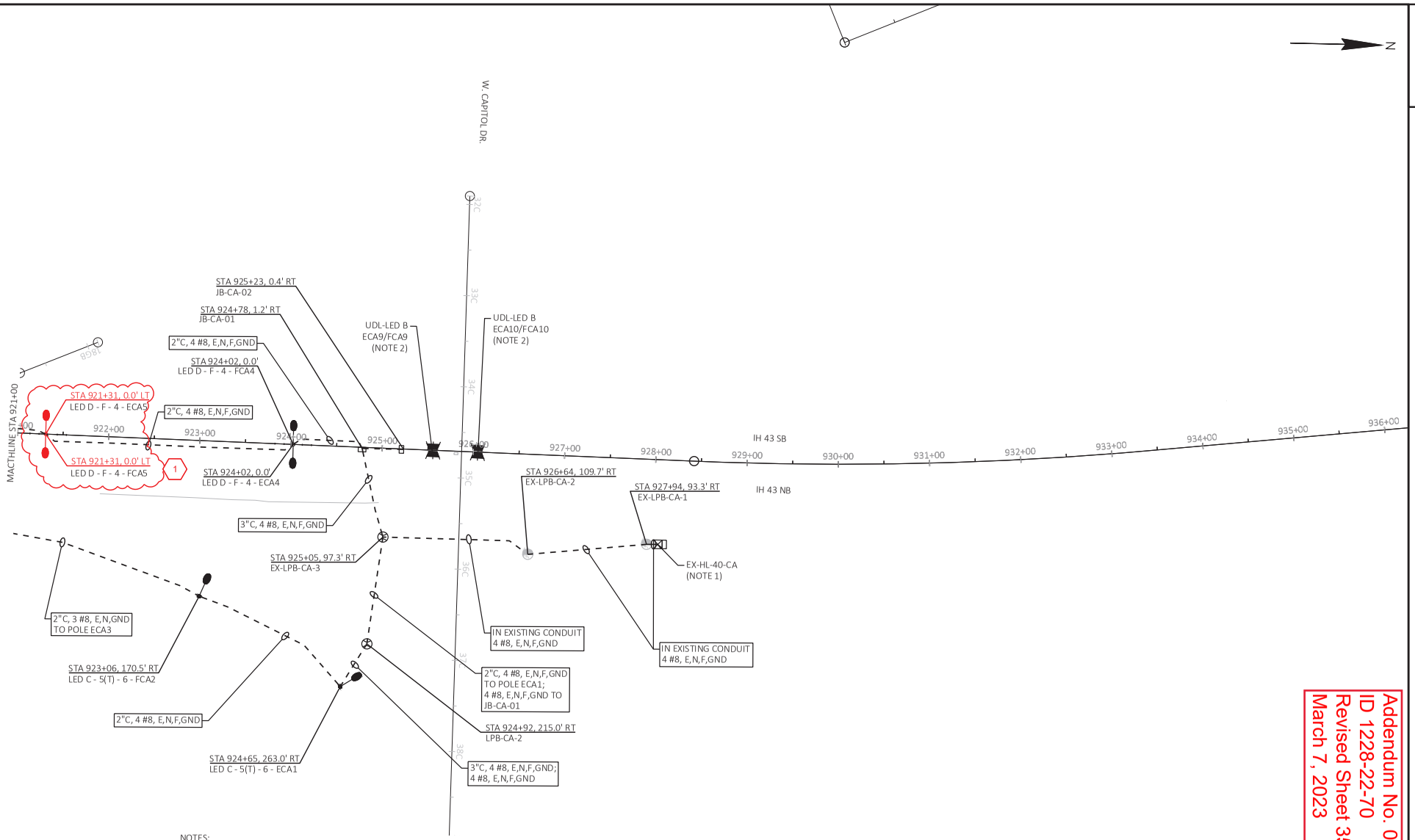


Addendum No. 01
ID 1228-22-70
Revised Sheet 350
March 7, 2023

NOTES:
1. HL-40-CA INSTALLED BY OTHER, CONTRACTOR TO COORDINATE WITH PROJECT ID: 1228-22-71.
2. SEE CONSTRUCTION DETAILS FOR UNDERDECK LIGHTING DETAILS.
3. DO NOT SPLICE WIRES IN PULL BOX, ONLY SPLICE WIRES IN POLE.

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	LIGHTING PLANS - FINAL	SHEET 350	E

FILE NAME : S:\DOT\DOT_SE\190224_I43_N-S_FREEWAY_NORTH-HAMPTON\DESIGN\12282270\SHEETSPLAN\023503_LP.DWG
LAYOUT NAME - 025010_LP
PLOT DATE : 3/1/2023 3:29 PM
PLOT BY : KIAN K. CHAI
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



NOTES:
1. HL-40-CA INSTALLED BY OTHER, CONTRACTOR TO COORDINATE WITH PROJECT ID: 1228-22-71.
2. SEE CONSTRUCTION DETAILS FOR UNDERDECK LIGHTING DETAILS.
3. DO NOT SPLICE WIRES IN PULL BOX, ONLY SPLICE WIRES IN POLE.

Addendum No. 01
ID 1228-22-70
Revised Sheet 351
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	LIGHTING PLANS - SCHEMATIC	SHEET 351	E

FILE NAME : S:\DOT\DOT_SE\190224_I43_N-S_FREEWAY_NORTH-HAMPTON\DESIGN\1228270\SHEETSPLAN\023503_LP.DWG
LAYOUT NAME - 025010_LP_SCH
PLOT DATE : 3/1/2023 3:29 PM
PLOT BY : KIAN K. CHAI
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN & TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — PORTABLE CRASH CUSHION
- WORK ZONE
- FMS — FIXED MESSAGE SIGN
- 1 — TEMPORARY MARKING LINE PAINT 4 INCH, WHITE
- 2 — TEMPORARY MARKING LINE PAINT 4 INCH, YELLOW

GENERAL NOTES:

- TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL OUTSIDE LANE CLOSURES AND SHORT TERM RAMP CLOSURES AS NEEDED ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)" AND CONSTRUCTION DETAIL "TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE SHORT TERM ONLY".

N

VLIET STREET

12TH STREET

1600'

1000'

765+00

760+00

770+00

IH 43

IH 43

ROAD WORK AHEAD W20-1A

RELOCATE SIGN NORTH OF LOCUST STREET ON I-43 NB TO START THE STAGE HERE

WISDOT SAFETY PATROL COVERAGE BEGINS

SPONSORED BY GEICO

RIGHT SHOULDER CLOSED AHEAD W21-5B

ROAD WORK AHEAD W20-1A

Addendum No. 01
ID 1228-22-70
Revised Sheet 440
March 7, 2023

WINNEBAGO STREET

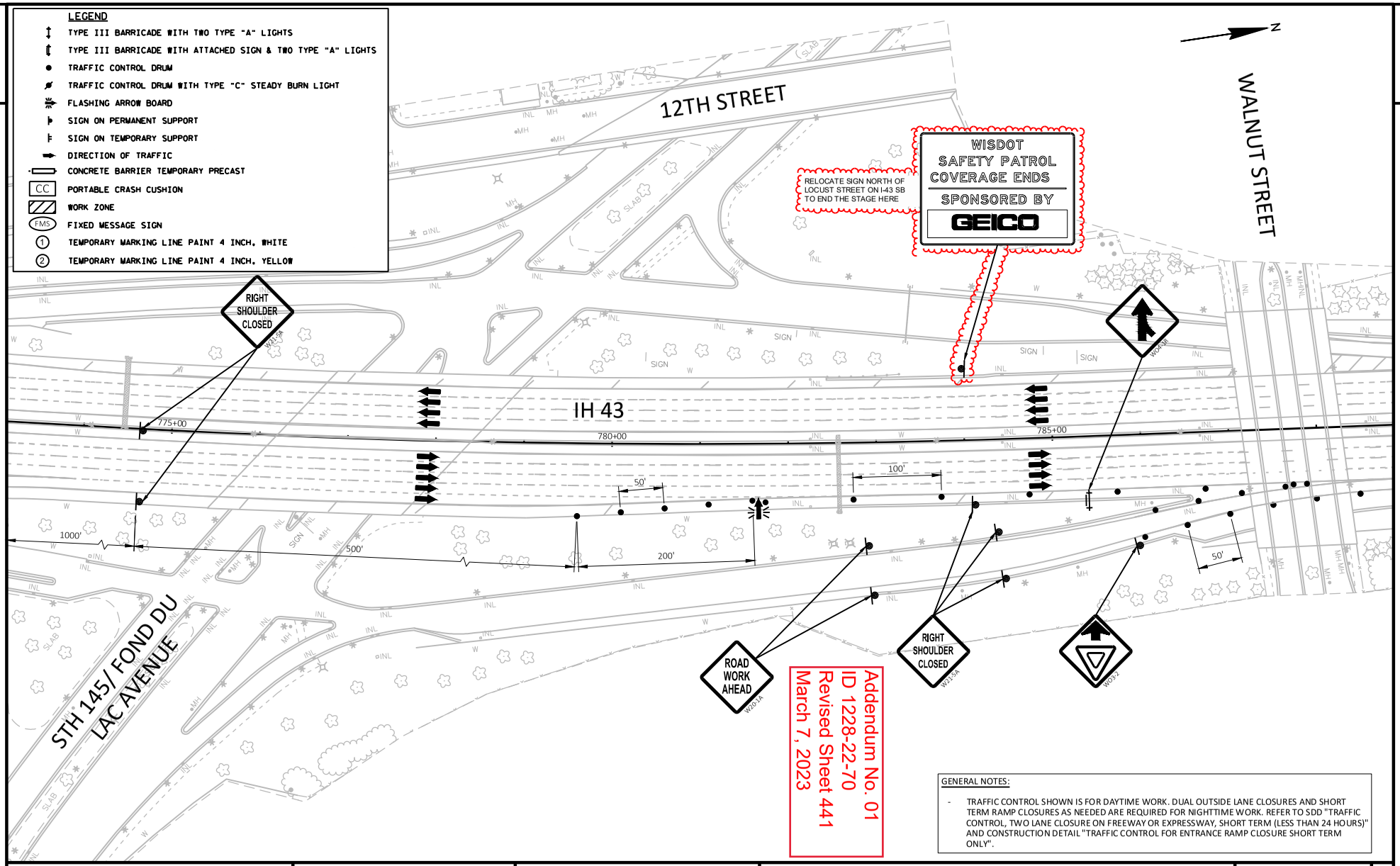
STH 145/ FOND DU LAC AVENUE

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE I	SHEET 440	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025001_TC_AD1.DWG
LAYOUT NAME - 025001_tc_AD1

PLOT DATE : 2/21/2023 8:37 AM PLOT BY : RING, STEVEN M PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42



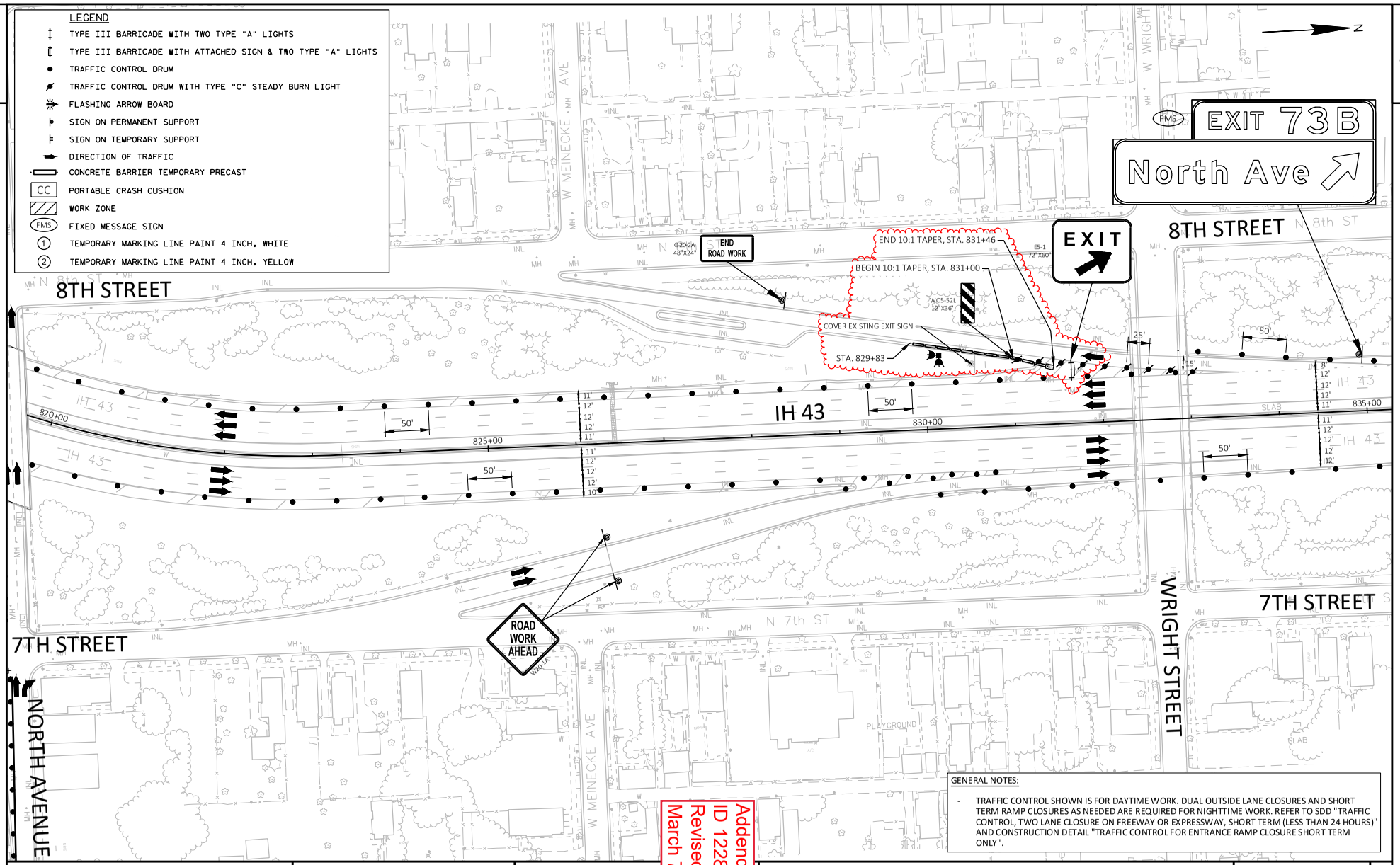
Addendum No. 01
ID 1228-22-70
Revised Sheet 441
March 7, 2023

GENERAL NOTES:

- TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL OUTSIDE LANE CLOSURES AND SHORT TERM RAMP CLOSURES AS NEEDED ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)" AND CONSTRUCTION DETAIL "TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE SHORT TERM ONLY".

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE I	SHEET 441	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025001_TC_AD1.DWG
LAYOUT NAME - 025002_tc_AD1
PLOT DATE : 2/23/2023 6:54 AM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



GENERAL NOTES:

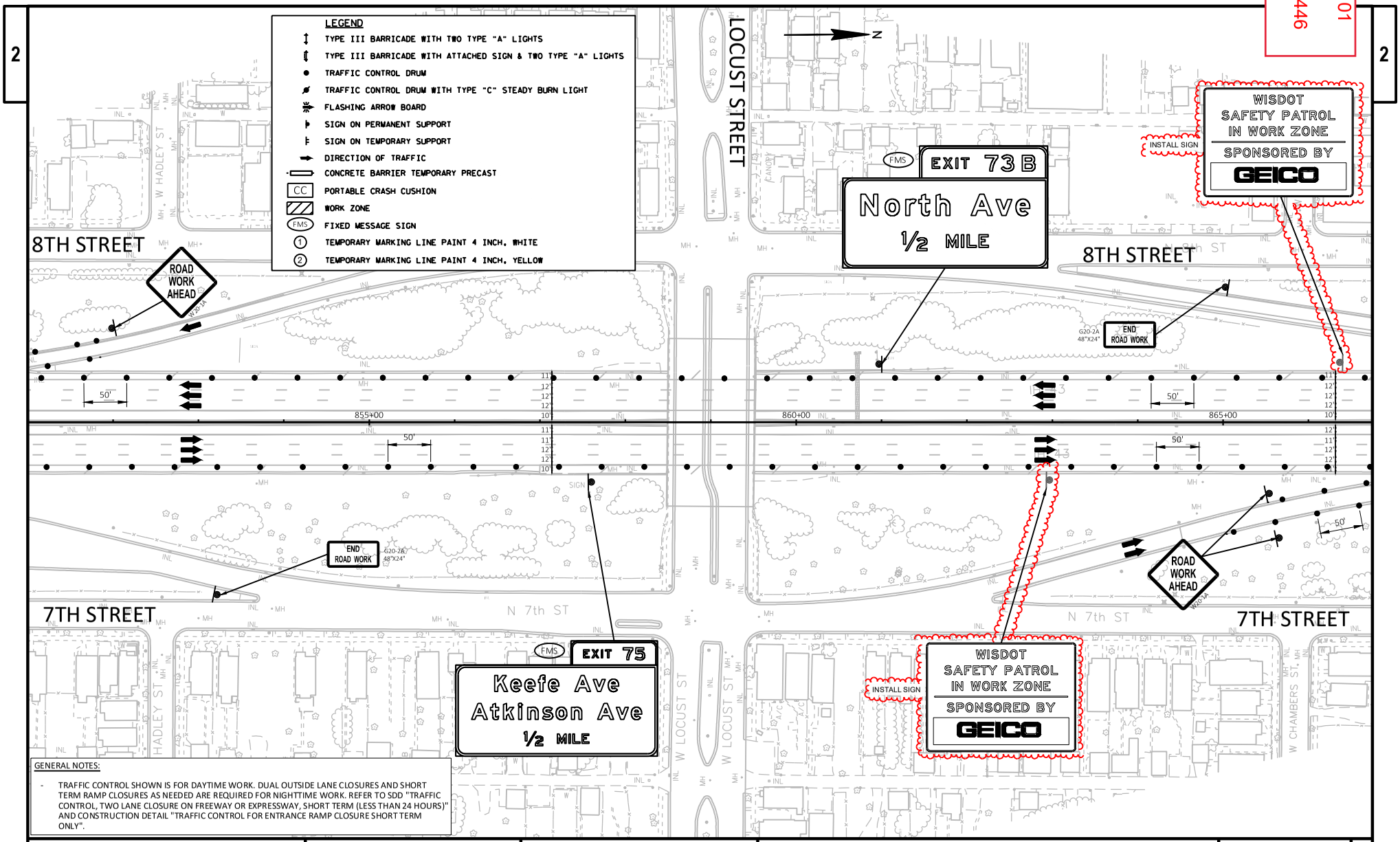
- TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL OUTSIDE LANE CLOSURES AND SHORT TERM RAMP CLOSURES AS NEEDED ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)" AND CONSTRUCTION DETAIL "TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE SHORT TERM ONLY".

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE I	SHEET 444	E

Addendum No. 01
ID 1228-22-70
Revised Sheet 444
March 7, 2023

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025001_TC_AD1.DWG
LAYOUT NAME - 025005_tc_AD1
PLOT DA
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

Addendum No. 01
ID 1228-22-70
Revised Sheet 446
March 7, 2023



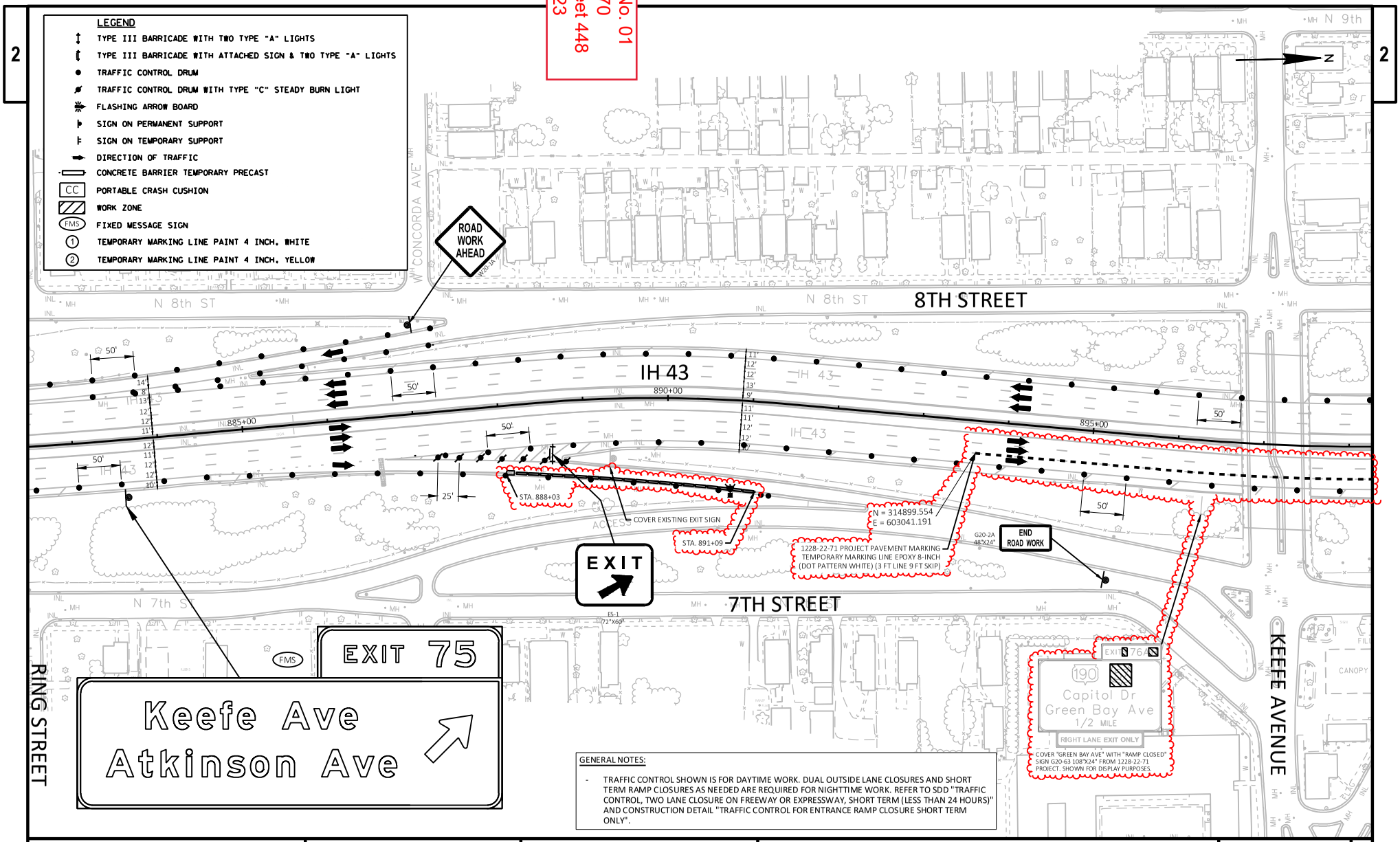
GENERAL NOTES:

- TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL OUTSIDE LANE CLOSURES AND SHORT TERM RAMP CLOSURES AS NEEDED ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)" AND CONSTRUCTION DETAIL "TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE SHORT TERM ONLY".

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE I	SHEET 446	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025001_TC_AD1.DWG
LAYOUT NAME - 025007_tc_AD1
PLOT DATE : 2/23/2023 9:07 AM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

Addendum No. 01
ID 1228-22-70
Revised Sheet 448
March 7, 2023



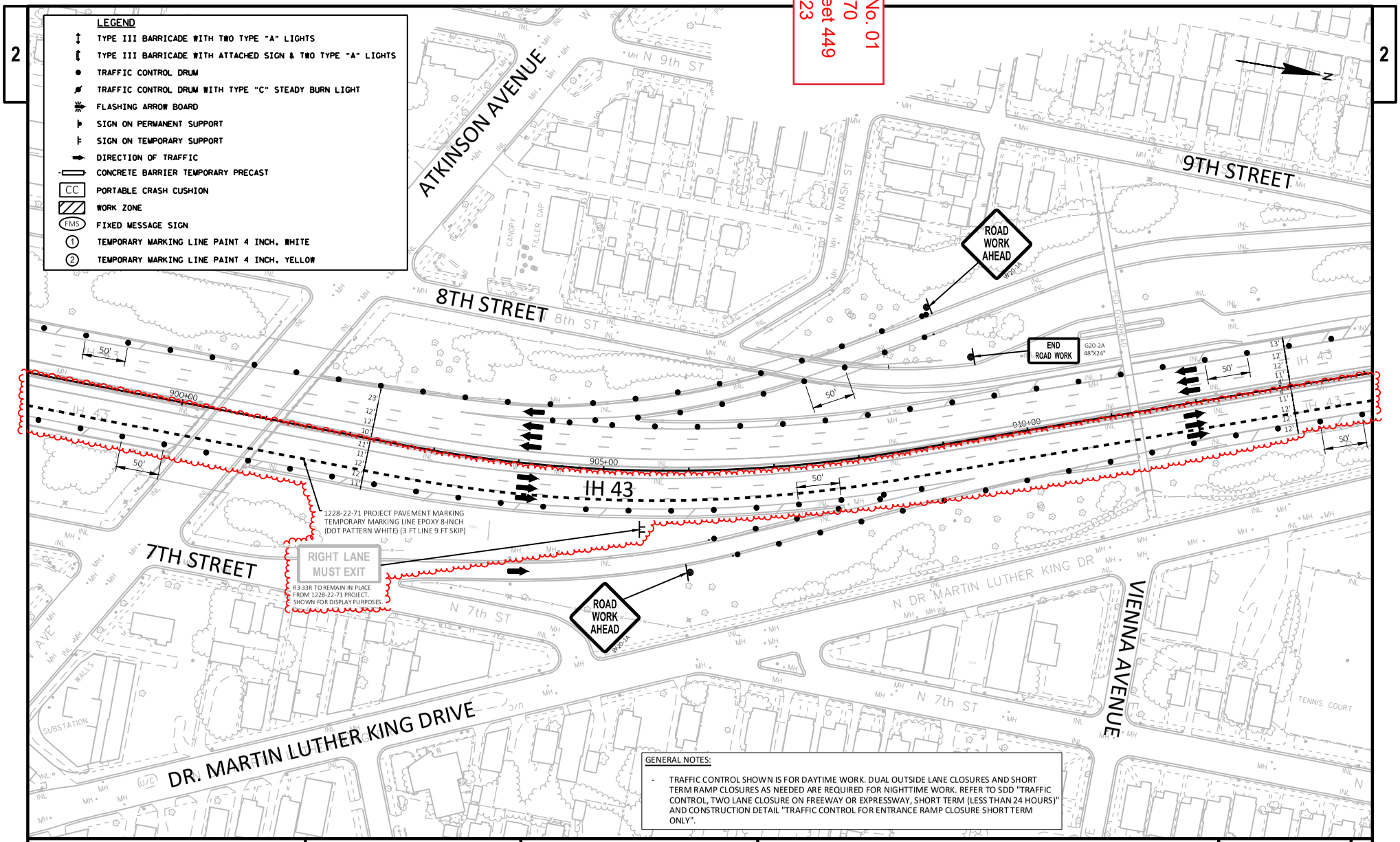
GENERAL NOTES:

- TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL OUTSIDE LANE CLOSURES AND SHORT TERM RAMP CLOSURES AS NEEDED ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)" AND CONSTRUCTION DETAIL "TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE SHORT TERM ONLY".

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE I	SHEET 448	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025001_TC_AD1.DWG
LAYOUT NAME - 025009_tc_AD1
PLOT DATE : 2/22/2023 10:34 AM PLOT BY : RING, STEVEN M PLOT NAME : PLOT SCALE : 1 IN:100 FT

Addendum No. 01
ID 1228-22-70
Revised Sheet 449
March 7, 2023



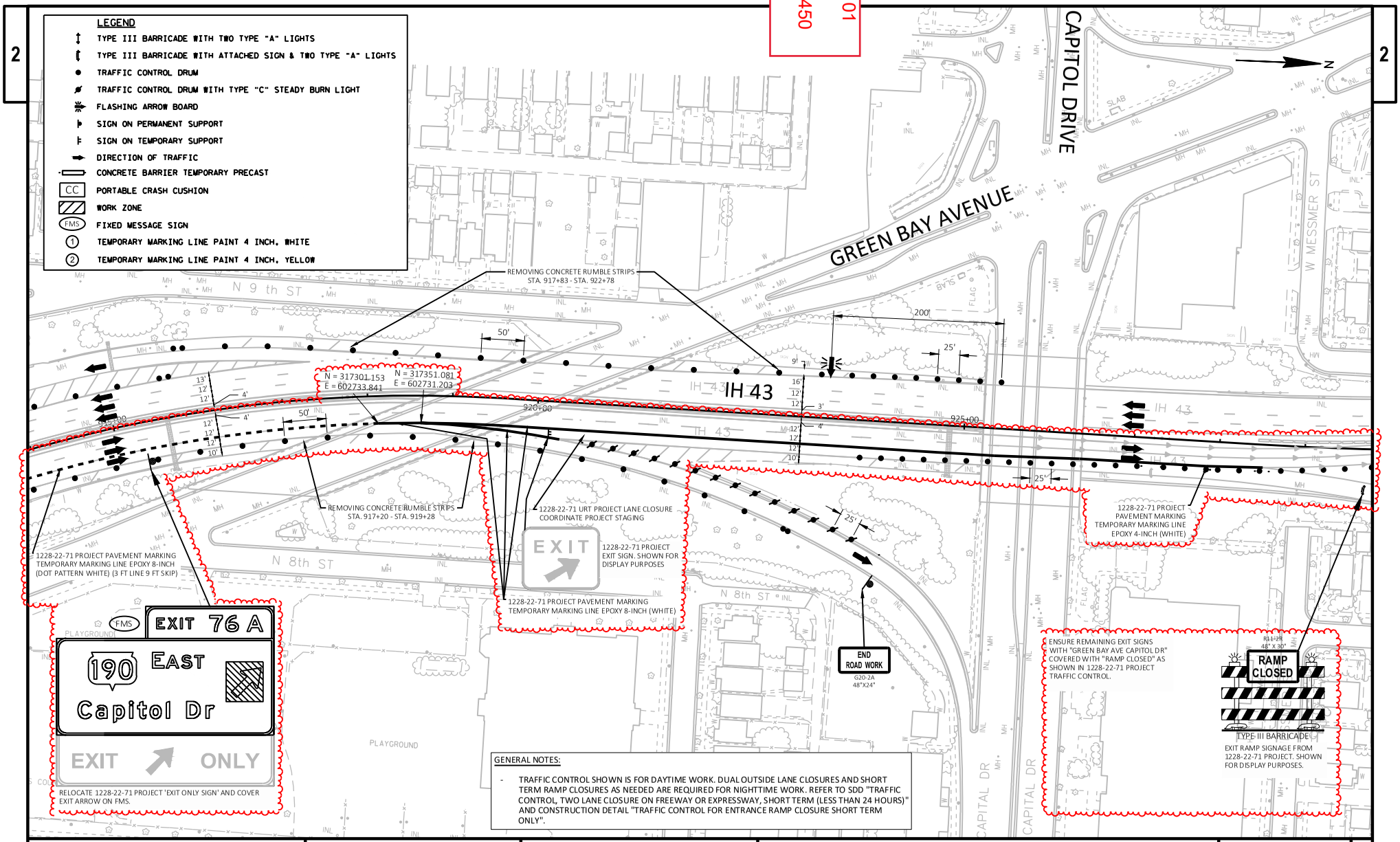
GENERAL NOTES:

- TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL OUTSIDE LANE CLOSURES AND SHORT TERM RAMP CLOSURES AS NEEDED ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)" AND CONSTRUCTION DETAIL "TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE SHORT TERM ONLY".

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE I	SHEET 449	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025001_TC_AD1.DWG
LAYOUT NAME - 025010_tc_AD1
PLOT DATE : 2/22/2023 10:32 AM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

Addendum No. 01
ID 1228-22-70
Revised Sheet 450
March 7, 2023

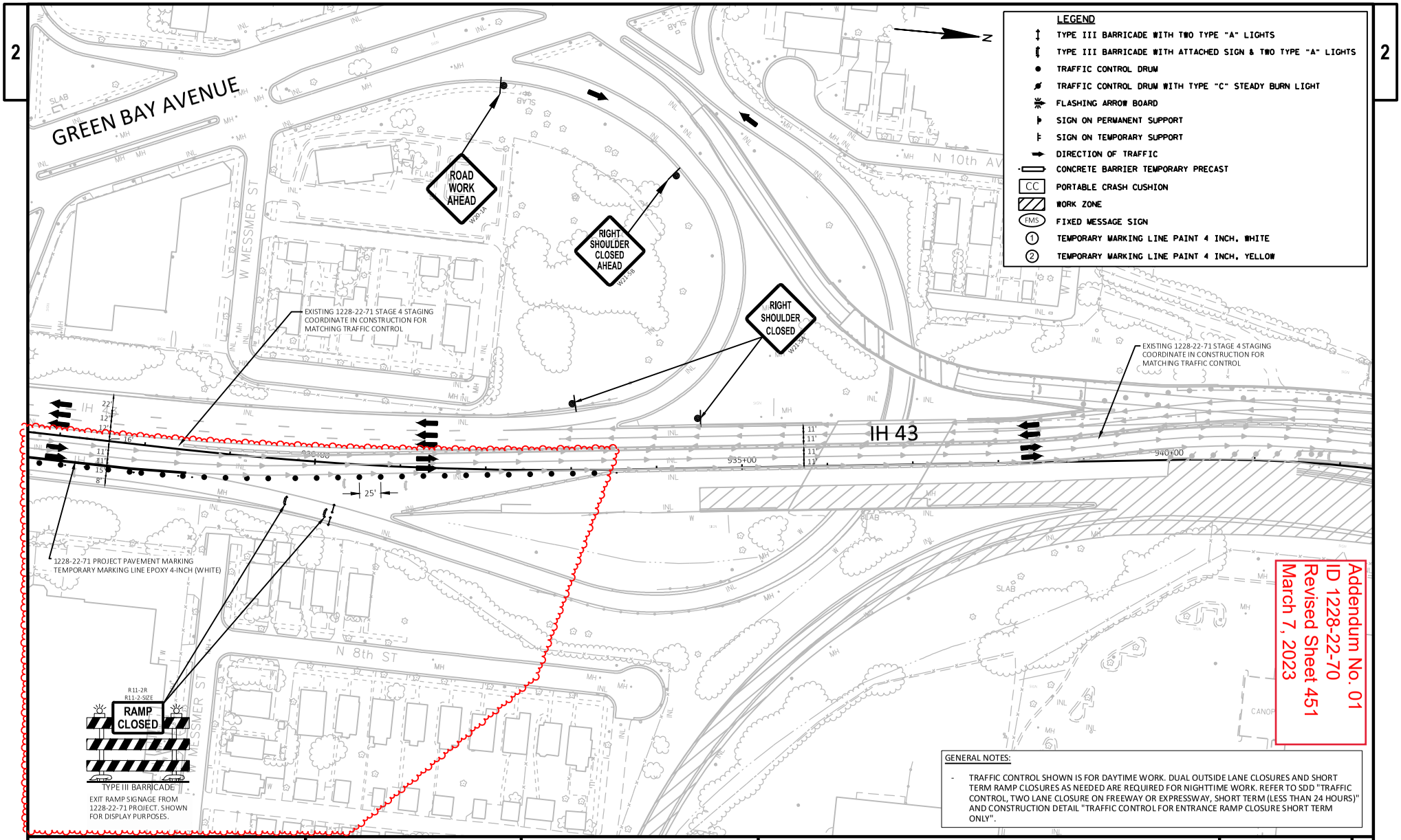


GENERAL NOTES:

- TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL OUTSIDE LANE CLOSURES AND SHORT TERM RAMP CLOSURES AS NEEDED ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)" AND CONSTRUCTION DETAIL "TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE SHORT TERM ONLY".

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE I	SHEET 450	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025001_TC_AD1.DWG
LAYOUT NAME - 025011_tc_AD1
PLOT DATE : 2/22/2023 2:34 PM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE I	SHEET 451	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025001_TC_AD1.DWG
LAYOUT NAME - 025012_tc_AD1
PLOT DATE : 2/22/2023 10:28 AM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

LEGEND - PORTABLE CHANGEABLE MESSAGE SIGN

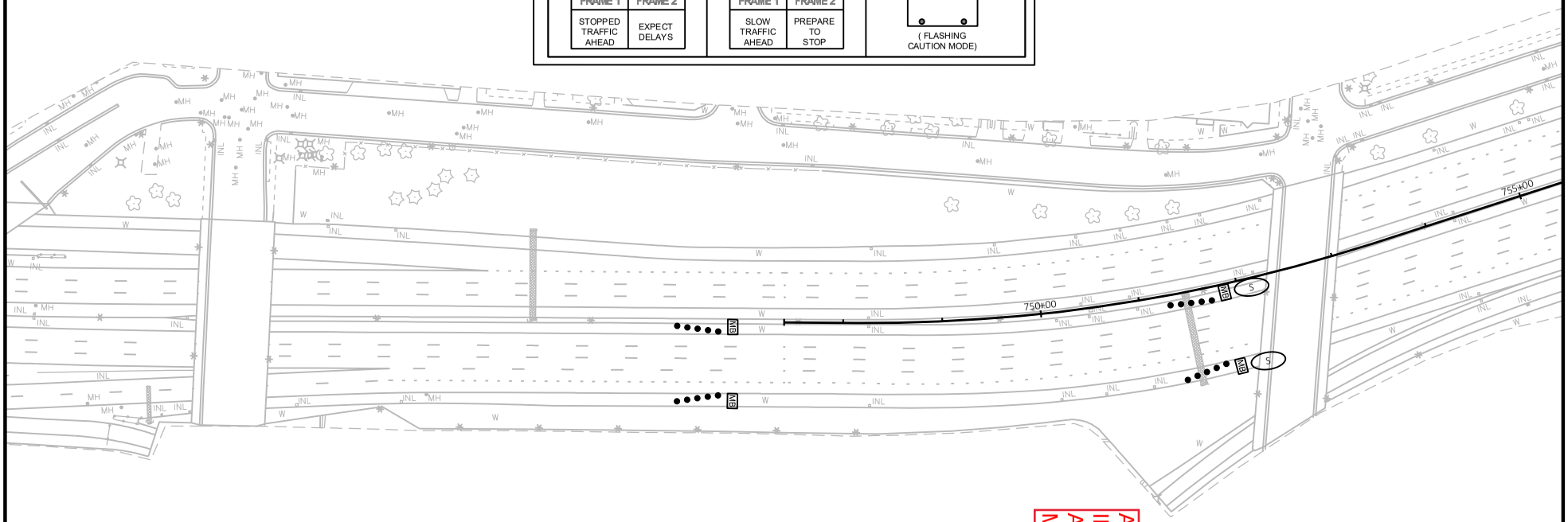
MB — PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

S — PORTABLE TRAFFIC SENSOR (PTS)

PCMS MESSAGING

SPEEDS 0 MPH TO 19 MPH		SPEEDS 20 MPH TO 39 MPH		SPEEDS 40 MPH AND GREATER
FRAME 1	FRAME 2	FRAME 1	FRAME 2	
STOPPED TRAFFIC AHEAD	EXPECT DELAYS	SLOW TRAFFIC AHEAD	PREPARE TO STOP	(FLASHING CAUTION MODE)

N



LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN & TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — TEMPORARY CRASH CUSHION
- WORK ZONE
- FMS — FIXED MESSAGE SIGN

Addendum No. 01
ID 1228-22-70
Added Sheet 452A
March 7, 2023

GENERAL NOTES:

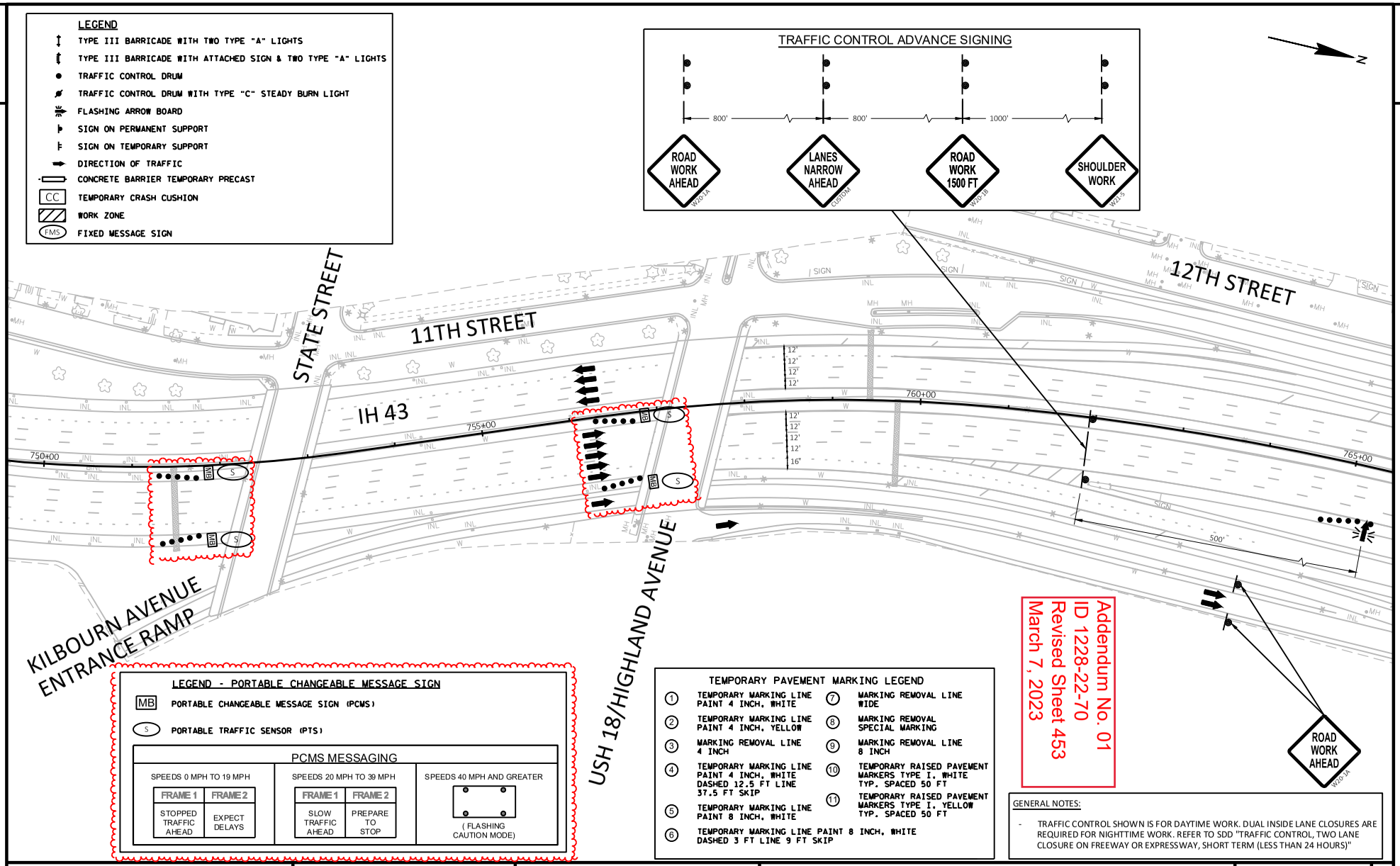
- TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL INSIDE LANE CLOSURES ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)"

TEMPORARY PAVEMENT MARKING LEGEND

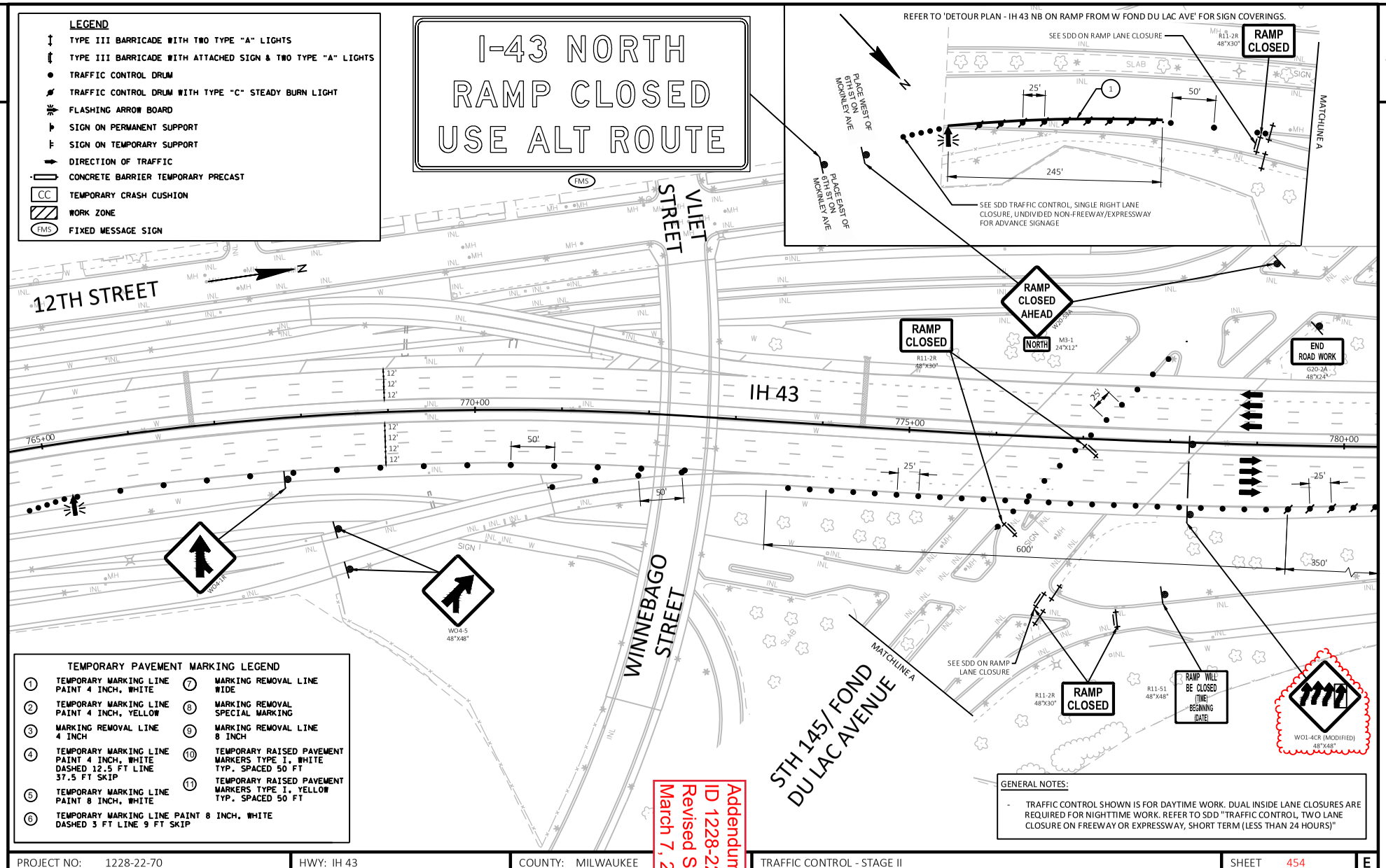
1. TEMPORARY MARKING LINE PAINT 4 INCH, WHITE
2. TEMPORARY MARKING LINE PAINT 4 INCH, YELLOW
3. MARKING REMOVAL LINE 4 INCH
4. TEMPORARY MARKING LINE PAINT 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP
5. TEMPORARY MARKING LINE PAINT 8 INCH, WHITE
6. TEMPORARY MARKING LINE PAINT 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP
7. MARKING REMOVAL LINE WIDE
8. MARKING REMOVAL SPECIAL MARKING
9. MARKING REMOVAL LINE 8 INCH
10. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
11. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE II	SHEET 452A	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025002_TC_AD1.DWG
LAYOUT NAME - 025012_tc_AD1
PLOT DATE : 2/27/2023 9:29 AM PLOT BY : RING, STEVEN M PLOT NAME : PLOT SCALE : 1 IN:100 FT


LEGEND
TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
TYPE III BARRICADE WITH ATTACHED SIGN & TWO TYPE "A" LIGHTS
TRAFFIC CONTROL DRUM
TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
FLASHING ARROW BOARD
SIGN ON PERMANENT SUPPORT
SIGN ON TEMPORARY SUPPORT
DIRECTION OF TRAFFIC
CONCRETE BARRIER TEMPORARY PRECAST
CC
TEMPORARY CRASH CUSHION
WORK ZONE
FMS
FIXED MESSAGE SIGN
TRAFFIC CONTROL ADVANCE SIGNING
800'
800'
1000'
ROAD WORK AHEAD
W20-1A
LANES NARROW AHEAD
CUSTOM
ROAD WORK 1500 FT
W20-1B
SHOULDER WORK
W21-5
N
STATE STREET
11TH STREET
IH 43
12TH STREET
750+00
755+00
760+00
765+00
MB
S
12'
16'
500'
KILBOURN AVENUE ENTRANCE RAMP
USH 18/HIGHLAND AVENUE
LEGEND - PORTABLE CHANGEABLE MESSAGE SIGN
MB PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
S PORTABLE TRAFFIC SENSOR (PTS)
PCMS MESSAGING
SPEEDS 0 MPH TO 19 MPH
FRAME 1: STOPPED TRAFFIC AHEAD
FRAME 2: EXPECT DELAYS
SPEEDS 20 MPH TO 39 MPH
FRAME 1: SLOW TRAFFIC AHEAD
FRAME 2: PREPARE TO STOP
SPEEDS 40 MPH AND GREATER
(FLASHING CAUTION MODE)
TEMPORARY PAVEMENT MARKING LEGEND
1 TEMPORARY MARKING LINE PAINT 4 INCH, WHITE
2 TEMPORARY MARKING LINE PAINT 4 INCH, YELLOW
3 MARKING REMOVAL LINE 4 INCH
4 TEMPORARY MARKING LINE PAINT 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP
5 TEMPORARY MARKING LINE PAINT 8 INCH, WHITE
6 TEMPORARY MARKING LINE PAINT 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP
7 MARKING REMOVAL LINE WIDE
8 MARKING REMOVAL SPECIAL MARKING
9 MARKING REMOVAL LINE 8 INCH
10 TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
11 TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT
Addendum No. 01
ID 1228-22-70
Revised Sheet 453
March 7, 2023
ROAD WORK AHEAD
W20-1A
GENERAL NOTES:
- TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL INSIDE LANE CLOSURES ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)"
PROJECT NO: 1228-22-70
HWY: IH 43
COUNTY: MILWAUKEE
TRAFFIC CONTROL - STAGE II
SHEET 453
E
FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025002_TC_AD1.DWG
LAYOUT NAME - 025013_tc_AD1
PLOT DATE : 2/27/2023 8:04 AM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

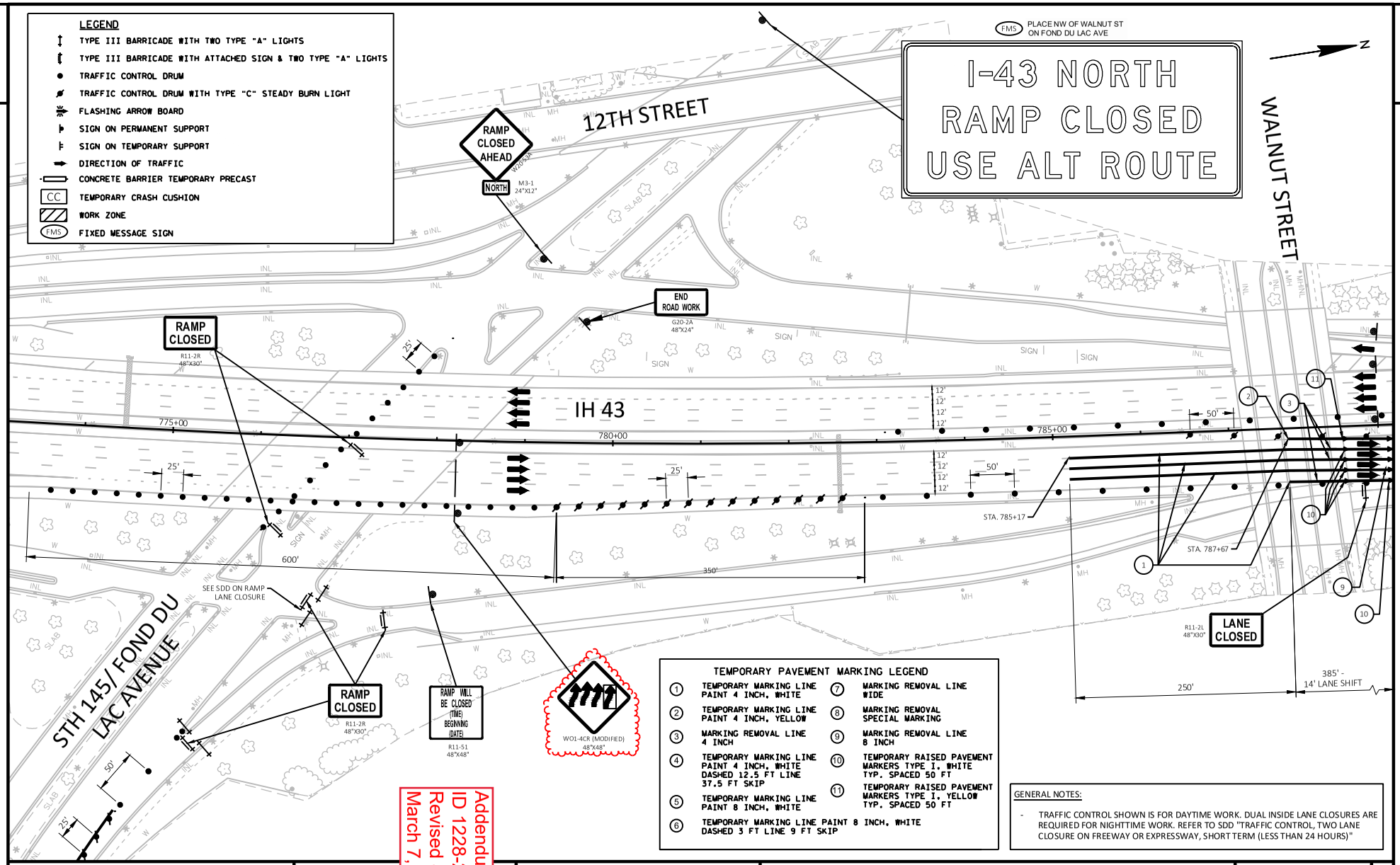
I-43 NORTH
RAMP CLOSED
USE ALT ROUTE



Addendum No. 01
ID 1228-22-70
Revised Sheet 454
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE II	SHEET 454	E

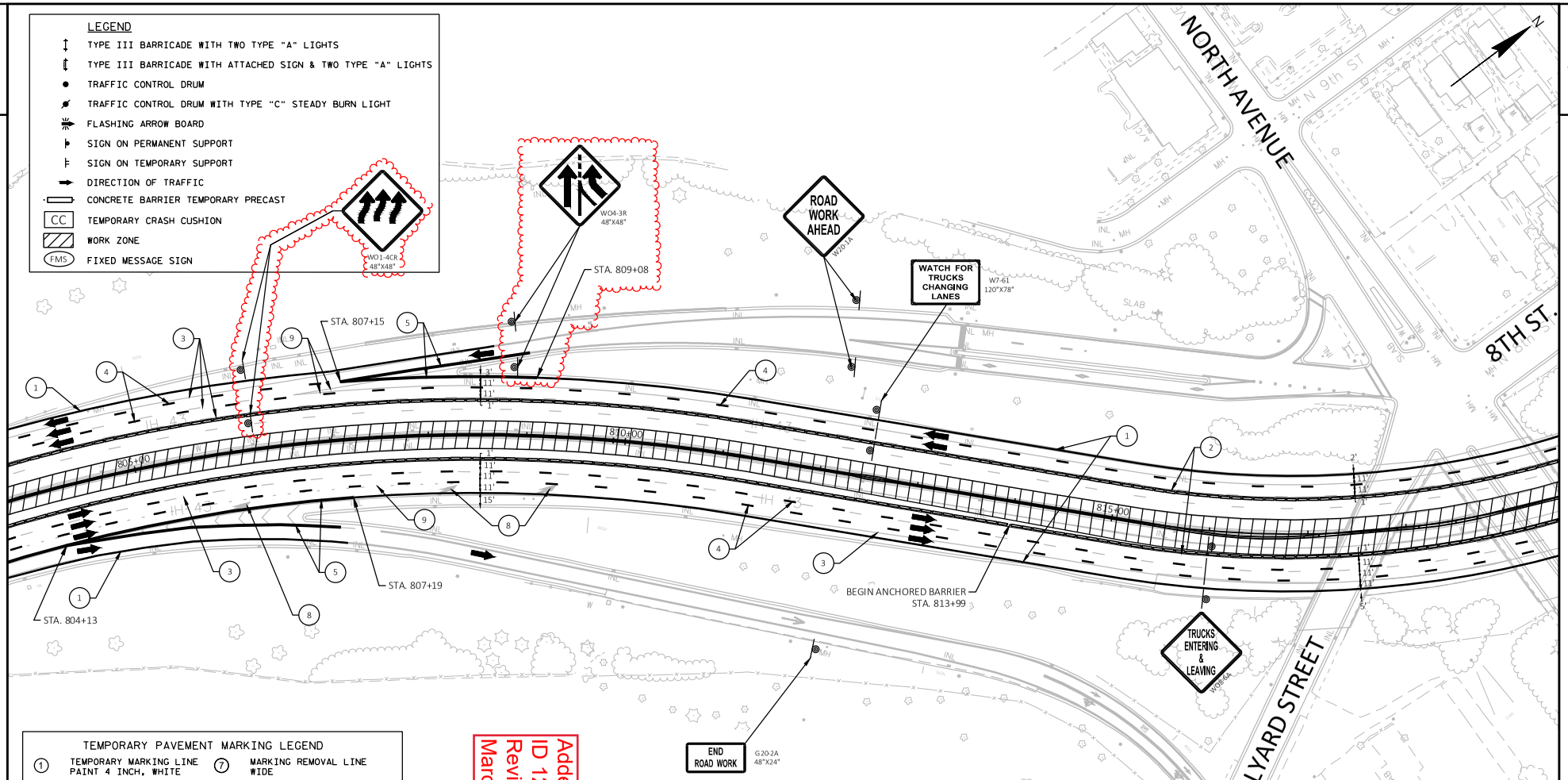
FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025002_TC_AD1.DWG
LAYOUT NAME - 025014_tc_AD1
PLOT DA
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



Addendum No. 01
ID 1228-22-70
Revised Sheet 455
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE II	SHEET 455	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ AD1.DWG
LAYOUT NAME - 025015_tc_AD1
PLOT DATE : 2/13/2023 3:33 PM PLOT BY : RING, STEVEN M PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



TEMPORARY PAVEMENT MARKING LEGEND

1	TEMPORARY MARKING LINE PAINT 4 INCH, WHITE	7	MARKING REMOVAL LINE WIDE
2	TEMPORARY MARKING LINE PAINT 4 INCH, YELLOW	8	MARKING REMOVAL SPECIAL MARKING
3	MARKING REMOVAL LINE 4 INCH	9	MARKING REMOVAL LINE 8 INCH
4	TEMPORARY MARKING LINE PAINT 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP	10	TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
5	TEMPORARY MARKING LINE PAINT 8 INCH, WHITE	11	TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT
6	TEMPORARY MARKING LINE PAINT 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP		

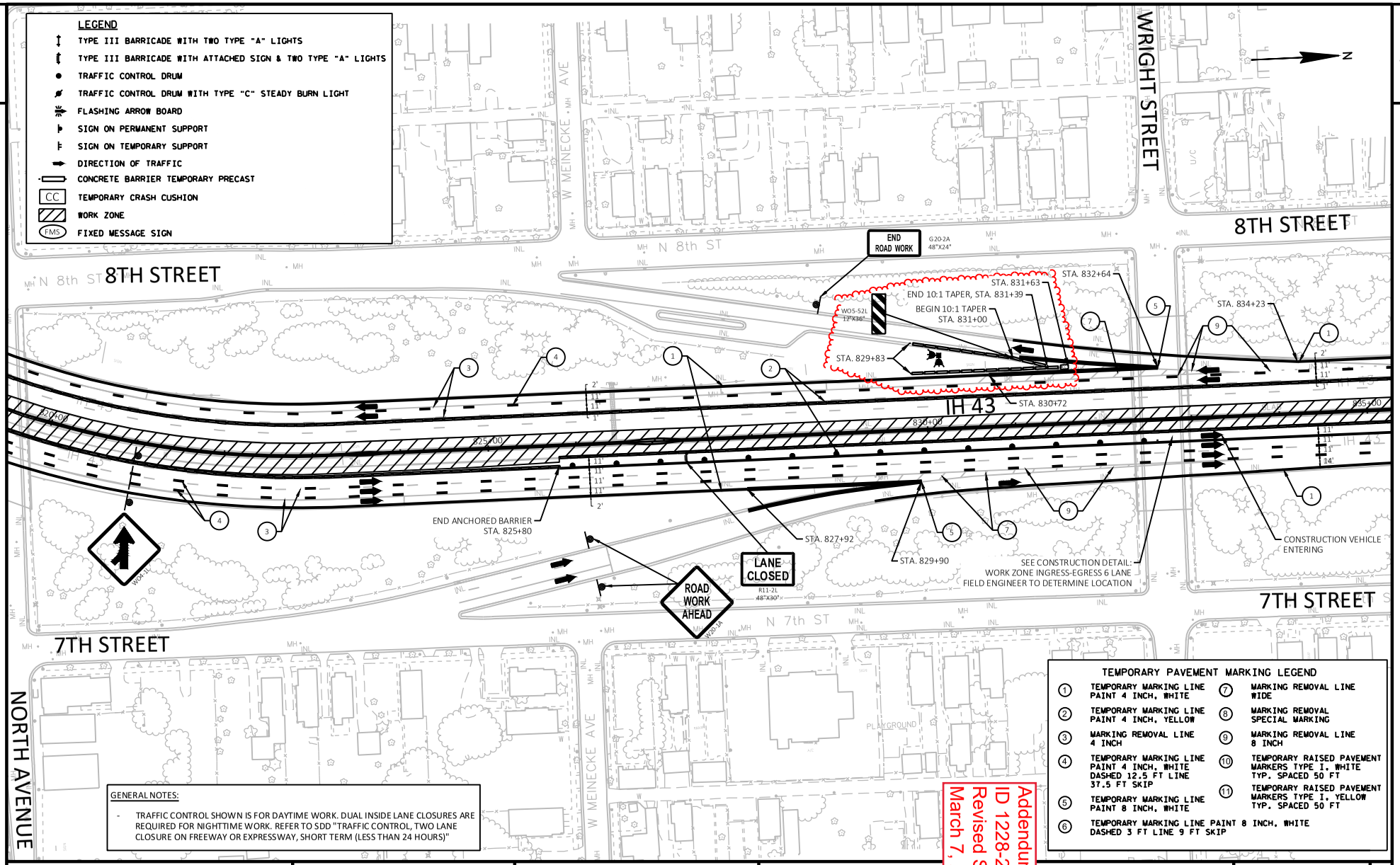
Addendum No. 01
ID 1228-22-70
Revised Sheet 457
March 7, 2023

GENERAL NOTES:

- TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL INSIDE LANE CLOSURES ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)"

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE II	SHEET 457	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025002_TC_AD1.DWG
LAYOUT NAME - 025017_tc_AD1
PLOT DATE : 3/1/2023 2:53 PM PLOT BY : RING, STEVEN M PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



GENERAL NOTES:

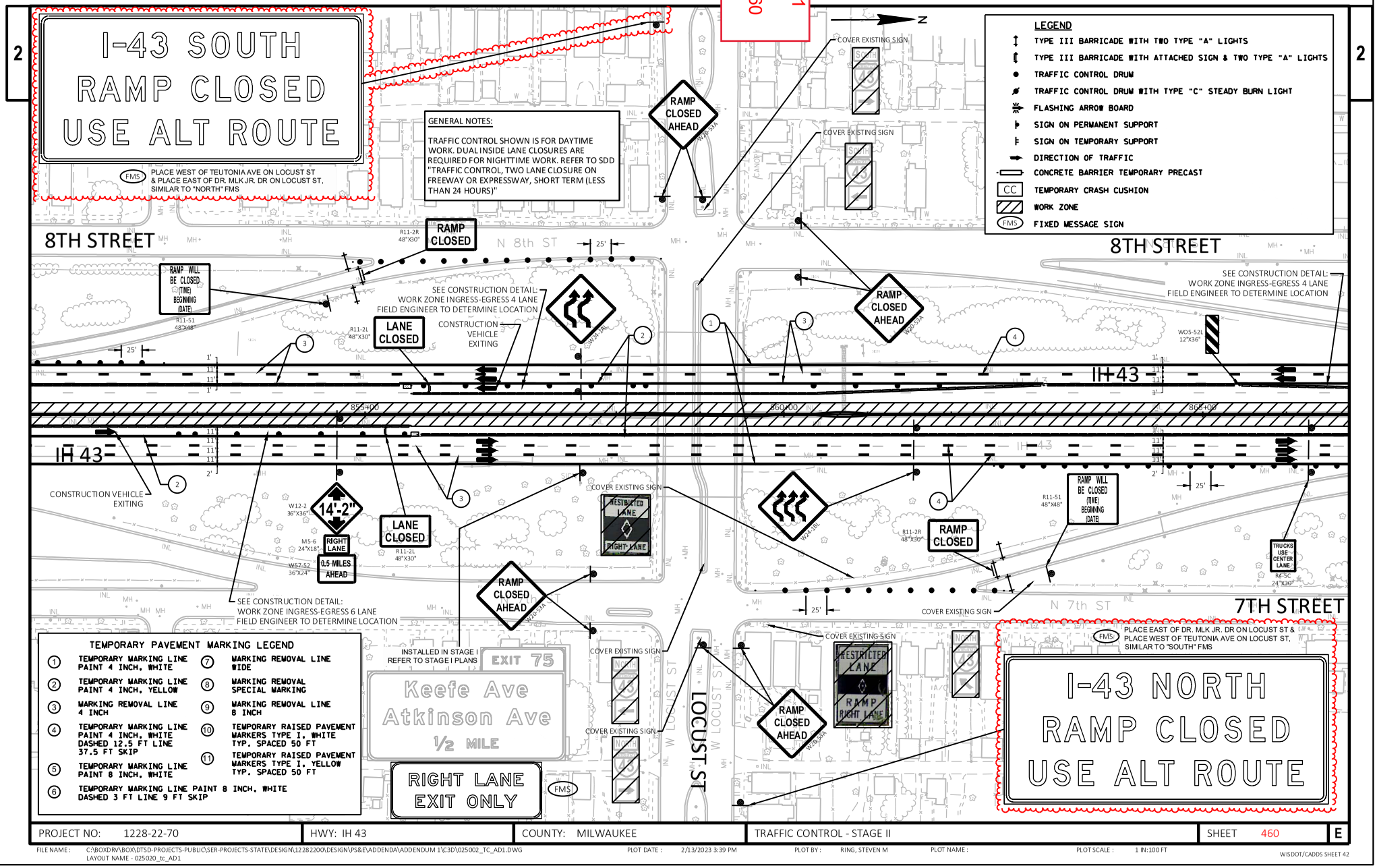
- TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL INSIDE LANE CLOSURES ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)"

Addendum No. 01
ID 1228-22-70
Revised Sheet 458
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE II	SHEET 458	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025002_TC_AD1.DWG
LAYOUT NAME - 025018_tc_AD1
PLOT DATE : 2/21/2023 8:48 AM
PLOT BY : RING, STEVEN M
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

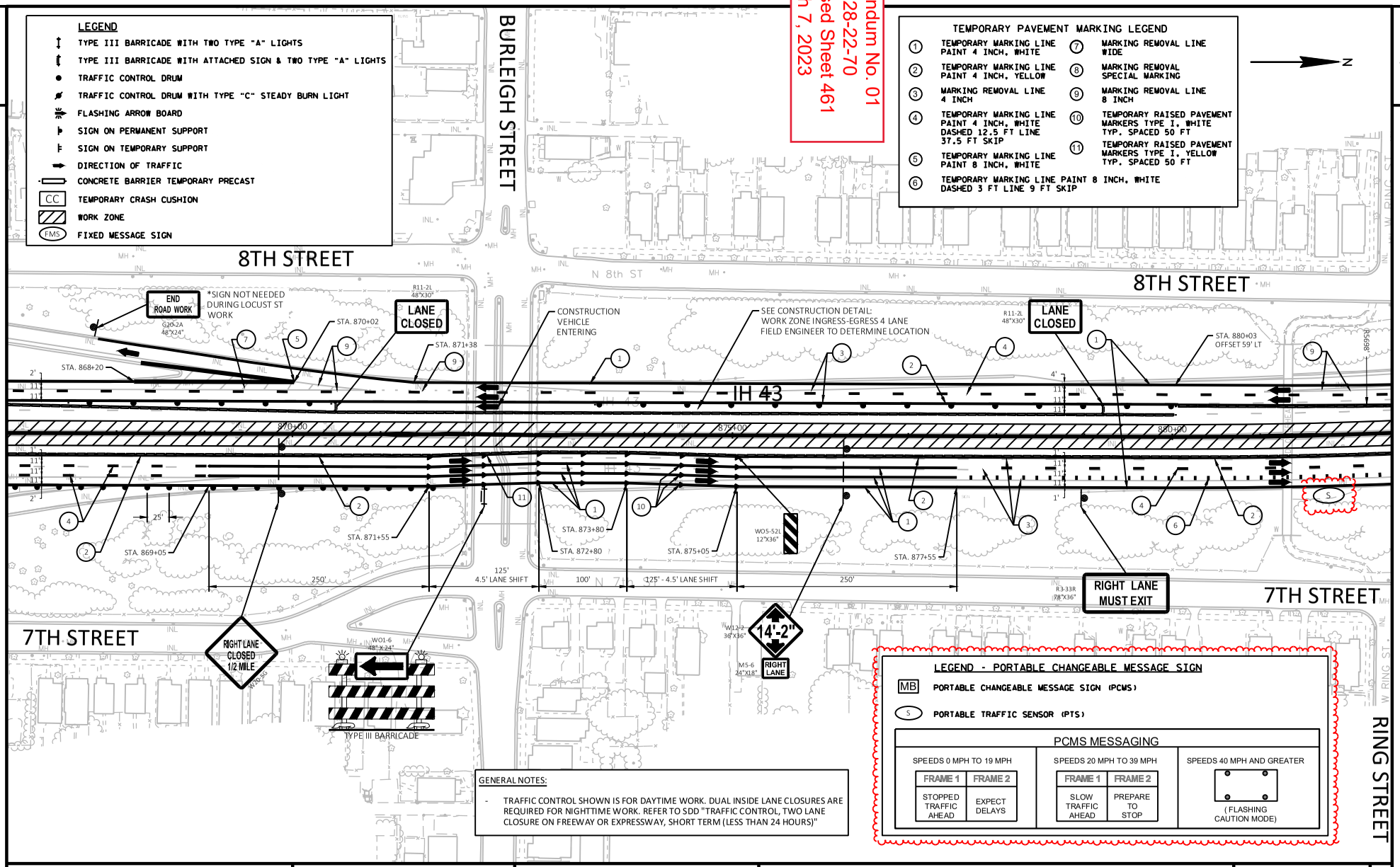
Addendum No. 01
ID 1228-22-70
Revised Sheet 460
March 7, 2023



PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE II	SHEET 460	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025002_TC_AD1.DWG
LAYOUT NAME - 025020_tc_AD1
PLOT DATE : 2/13/2023 3:39 PM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

Addendum No. 01
ID 1228-22-70
Revised Sheet 461
March 7, 2023



GENERAL NOTES:

- TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL INSIDE LANE CLOSURES ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)"

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE II	SHEET 461	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025002_TC_AD1.DWG
LAYOUT NAME - 025021_tc_AD1
PLOT DATE : 3/1/2023 11:46 AM PLOT BY : RING, STEVEN M PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

GENERAL NOTES:

- TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL INSIDE LANE CLOSURES ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)"

TEMPORARY PAVEMENT MARKING LEGEND

1	TEMPORARY MARKING LINE PAINT 4 INCH, WHITE	7	MARKING REMOVAL LINE WIDE
2	TEMPORARY MARKING LINE PAINT 4 INCH, YELLOW	8	MARKING REMOVAL SPECIAL MARKING
3	MARKING REMOVAL LINE 4 INCH	9	MARKING REMOVAL LINE 8 INCH
4	TEMPORARY MARKING LINE PAINT 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP	10	TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
5	TEMPORARY MARKING LINE PAINT 8 INCH, WHITE	11	TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT
6	TEMPORARY MARKING LINE PAINT 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP		

8TH STREET

7TH STREET

RING STREET

KEEFE AVENUE

W CONCORDIA AVE

N 8th ST

N 9th

N 7th ST

IH 43

W12-2 36"X36" 14'-7" RIGHT LANE M5-6 24"X18"

R11-51 48"X48" RAMP WILL BE CLOSED (TIME) BEGINNING (DATE)

SEE SDD ON RAMP LANE CLOSURE

RAMP CLOSED R11-2R 48"X30" INSTALL AT START OF RAMP

COVER EXISTING SIGN

R11-2L 48"X30" LANE CLOSED

RAMP CLOSED AHEAD W20-5AR

300' - RAMP MERGE

600'

END RAMP MERGE STA. 893+90

BEGIN RAMP MERGE STA. 896+90

STA. 885+27 OFFSET 50' LT

STA. 888+26 OFFSET 50' LT

STA. 891+17 OFFSET 48' LT

R1666'

R1659'

25'

12'

11'

13'

2'

STA. 885+00

STA. 890+00

STA. 895+00

STA. 889+26

STA. 888+03

STA. 886+27

STA. 891+09

ACCESS RD

END ROAD WORK G20-2A 48"X24"

R4-5L 24"X30" TRUCKS USE LEFT LANE

R3-33R 78"X36" RIGHT LANE MUST EXIT

Locust St WEST ONLY FMS

North Ave 1

145 McKinley Ave 1 3/4

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN & TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CC TEMPORARY CRASH CUSHION
- WORK ZONE
- FMS FIXED MESSAGE SIGN

Addendum No. 01
ID 1228-22-70
Revised Sheet 462
March 7, 2023

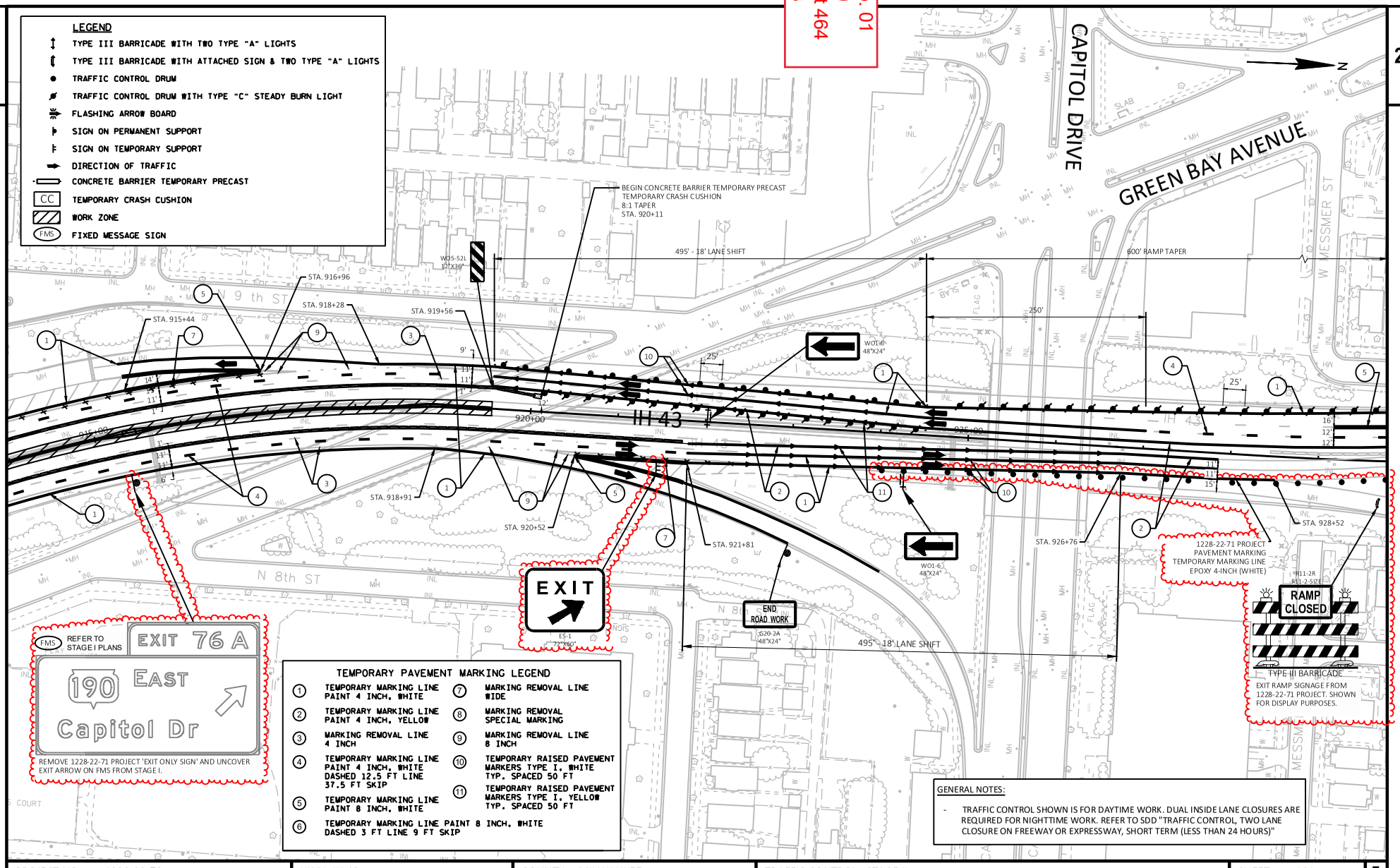
PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE II	SHEET 462	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025002_TC_AD1.DWG
LAYOUT NAME - 025022_tc_AD1

PLOT DATE : 2/13/2023 3:41 PM PLOT BY : RING, STEVEN M PLOT NAME : PLOT SCALE : 1 IN:100 FT

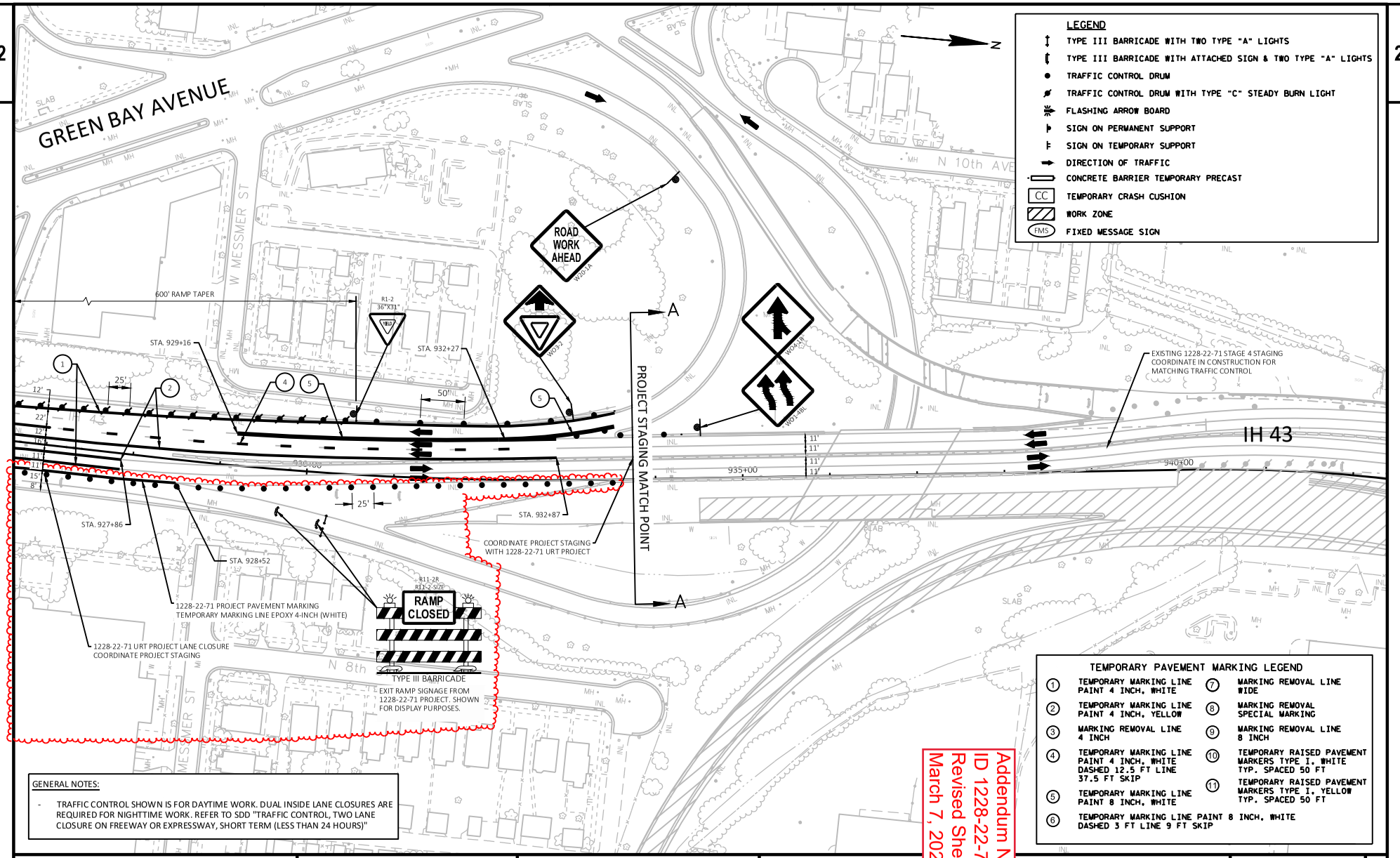
WISDOT/CADDS SHEET 42

Addendum No. 01
ID 1228-22-70
Revised Sheet 464
March 7, 2023



PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE II	SHEET 464	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025002_TC_AD1.DWG
LAYOUT NAME - 025024_tc_AD1
PLOT DATE : 2/22/2023 3:53 PM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



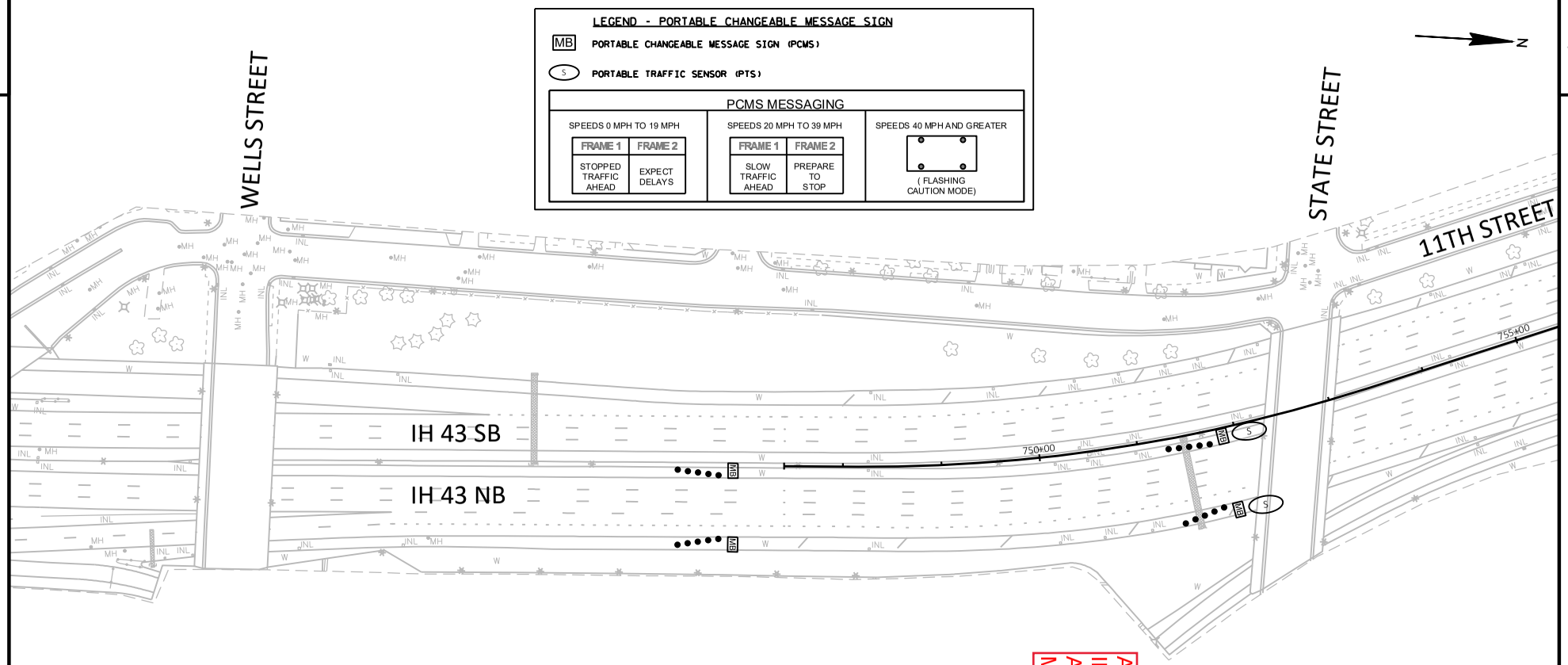
GENERAL NOTES:

- TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL INSIDE LANE CLOSURES ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)"

Addendum No. 01
ID 1228-22-70
Revised Sheet 465
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE II	SHEET 465	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025002_TC_AD1.DWG
LAYOUT NAME - 025025_tc_AD1
PLOT DATE : 2/22/2023 3:43 PM
PLOT BY : RING, STEVEN M
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN & TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CC TEMPORARY CRASH CUSHION
- WORK ZONE
- FMS FIXED MESSAGE SIGN

Addendum No. 01
ID 1228-22-70
Added Sheet 466A
March 7, 2023

GENERAL NOTES:

- TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL INSIDE LANE CLOSURES ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)"
- TEMPORARY PAVEMENT MARKINGS PLACED IN STAGE II SHOWN IN GREY. REFER TO TRAFFIC CONTROL - STAGE II PLANS FOR DETAILS

TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE PAINT 4 INCH, WHITE
2. TEMPORARY MARKING LINE PAINT 4 INCH, YELLOW
3. MARKING REMOVAL LINE 4 INCH
4. TEMPORARY MARKING LINE PAINT 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP
5. TEMPORARY MARKING LINE PAINT 8 INCH, WHITE
6. TEMPORARY MARKING LINE PAINT 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP
7. MARKING REMOVAL LINE WIDE
8. MARKING REMOVAL SPECIAL MARKING
9. MARKING REMOVAL LINE 8 INCH
10. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
11. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE III	SHEET 466A	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025003_TC_AD1.DWG
LAYOUT NAME - 025025_tc_AD1
PLOT DATE : 3/1/2023 11:34 AM PLOT BY : RING, STEVEN M PLOT NAME : PLOT SCALE : 1 IN:100 FT

Addendum No. 01
ID 1228-22-70
Revised Sheet 467
March 7, 2023

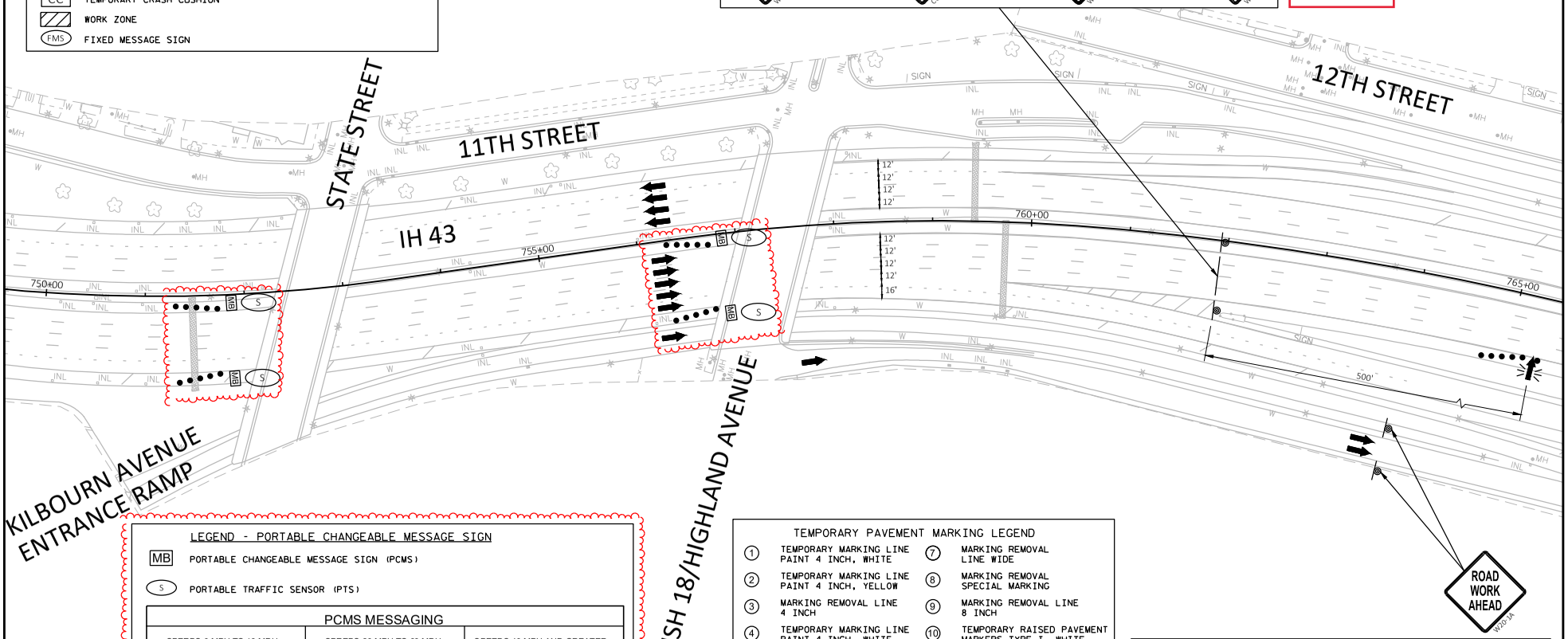
LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN & TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — TEMPORARY CRASH CUSHION
- WORK ZONE
- FMS — FIXED MESSAGE SIGN

TRAFFIC CONTROL ADVANCE SIGNING

800' 800' 1000'

ROAD WORK AHEAD W20-1A | LANES NARROW AHEAD CUSTOM | ROAD WORK 1500 FT W20-1B | SHOULDER WORK W21-5



LEGEND - PORTABLE CHANGEABLE MESSAGE SIGN

- MB — PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- S — PORTABLE TRAFFIC SENSOR (PTS)

PCMS MESSAGING

SPEEDS 0 MPH TO 19 MPH		SPEEDS 20 MPH TO 39 MPH		SPEEDS 40 MPH AND GREATER
FRAME 1	FRAME 2	FRAME 1	FRAME 2	
STOPPED TRAFFIC AHEAD	EXPECT DELAYS	SLOW TRAFFIC AHEAD	PREPARE TO STOP	(FLASHING CAUTION MODE)

TEMPORARY PAVEMENT MARKING LEGEND

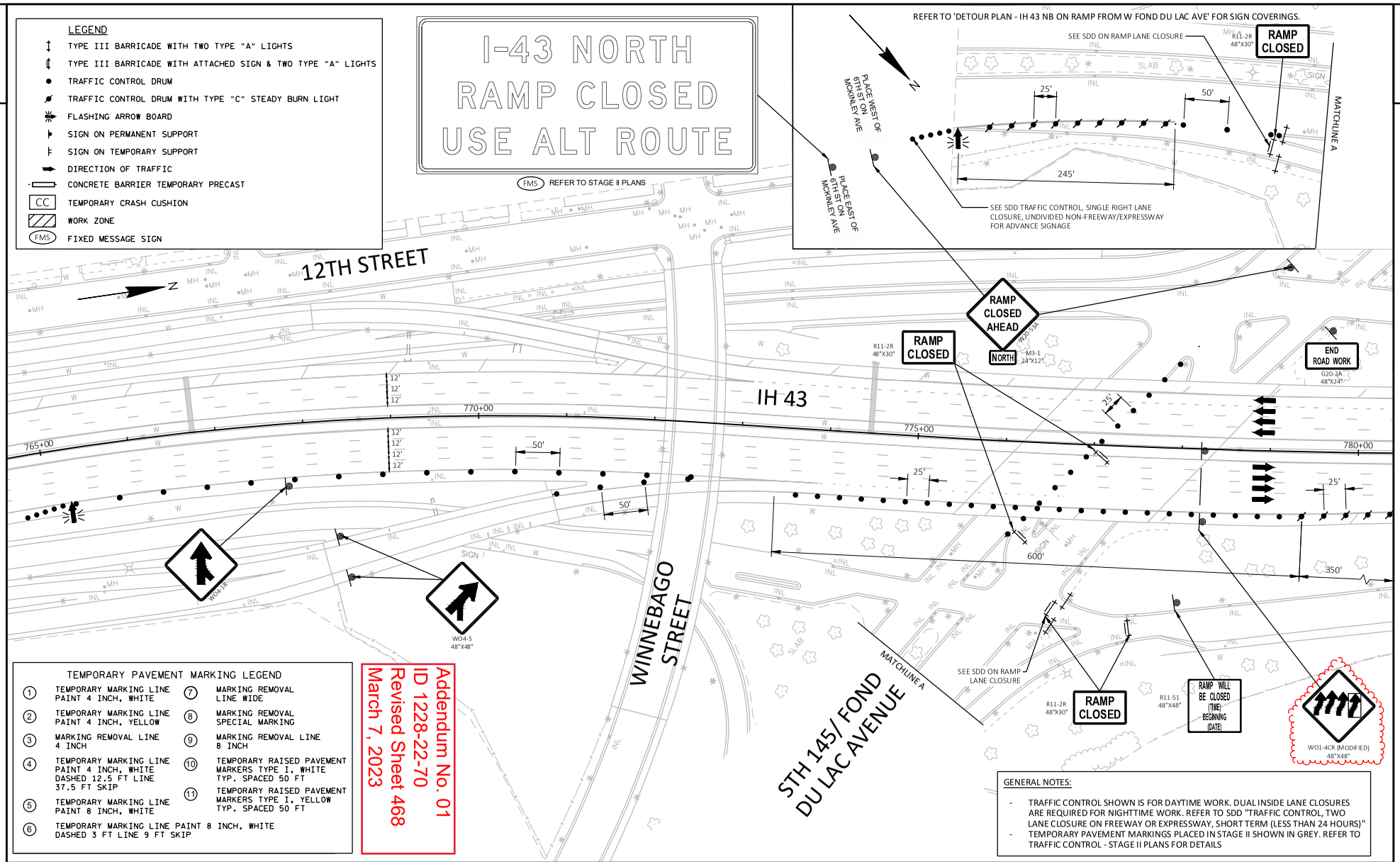
1. TEMPORARY MARKING LINE PAINT 4 INCH, WHITE
2. TEMPORARY MARKING LINE PAINT 4 INCH, YELLOW
3. MARKING REMOVAL LINE 4 INCH
4. TEMPORARY MARKING LINE PAINT 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP
5. TEMPORARY MARKING LINE PAINT 8 INCH, WHITE
6. TEMPORARY MARKING LINE PAINT 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP
7. MARKING REMOVAL LINE WIDE
8. MARKING REMOVAL SPECIAL MARKING
9. MARKING REMOVAL LINE 8 INCH
10. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
11. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT

GENERAL NOTES:

- TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL INSIDE LANE CLOSURES ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)"
- TEMPORARY PAVEMENT MARKINGS PLACED IN STAGE II SHOWN IN GREY. REFER TO TRAFFIC CONTROL - STAGE II PLANS FOR DETAILS

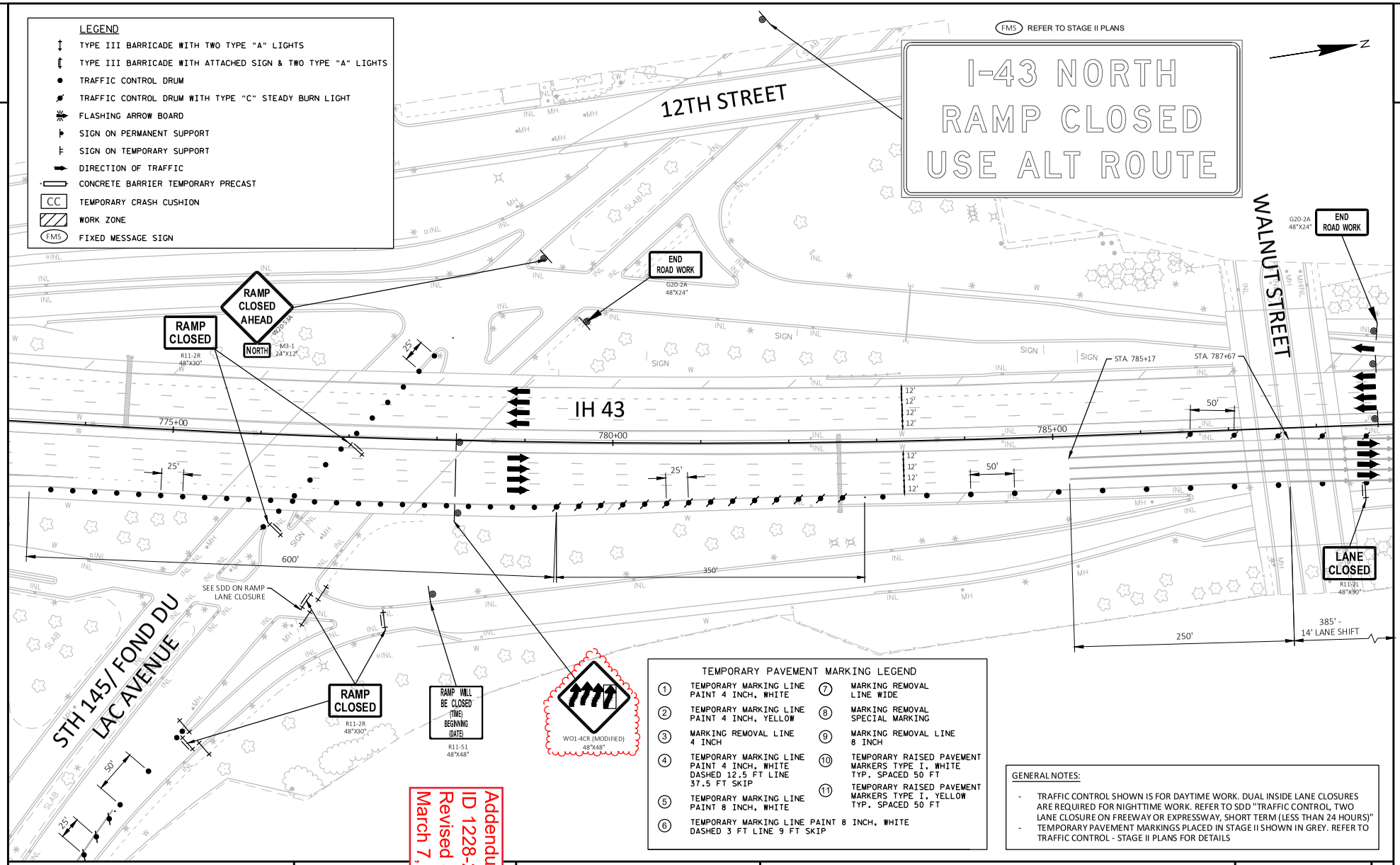
PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE III	SHEET 467	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025003_TC_AD1.DWG
LAYOUT NAME - 025026_tc_AD1
PLOT DATE : 3/1/2023 11:20 AM PLOT BY : RING, STEVEN M PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE III	SHEET 468	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025003_TC_AD1.DWG
LAYOUT NAME - 025027_tc_AD1
PLOT DATE : 3/1/2023 9:06 AM PLOT BY : RING, STEVEN M PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE PAINT 4 INCH, WHITE
2. TEMPORARY MARKING LINE PAINT 4 INCH, YELLOW
3. MARKING REMOVAL LINE 4 INCH
4. TEMPORARY MARKING LINE PAINT 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP
5. TEMPORARY MARKING LINE PAINT 8 INCH, WHITE
6. TEMPORARY MARKING LINE PAINT 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP
7. MARKING REMOVAL LINE WIDE
8. MARKING REMOVAL SPECIAL MARKING
9. MARKING REMOVAL LINE 8 INCH
10. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
11. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT

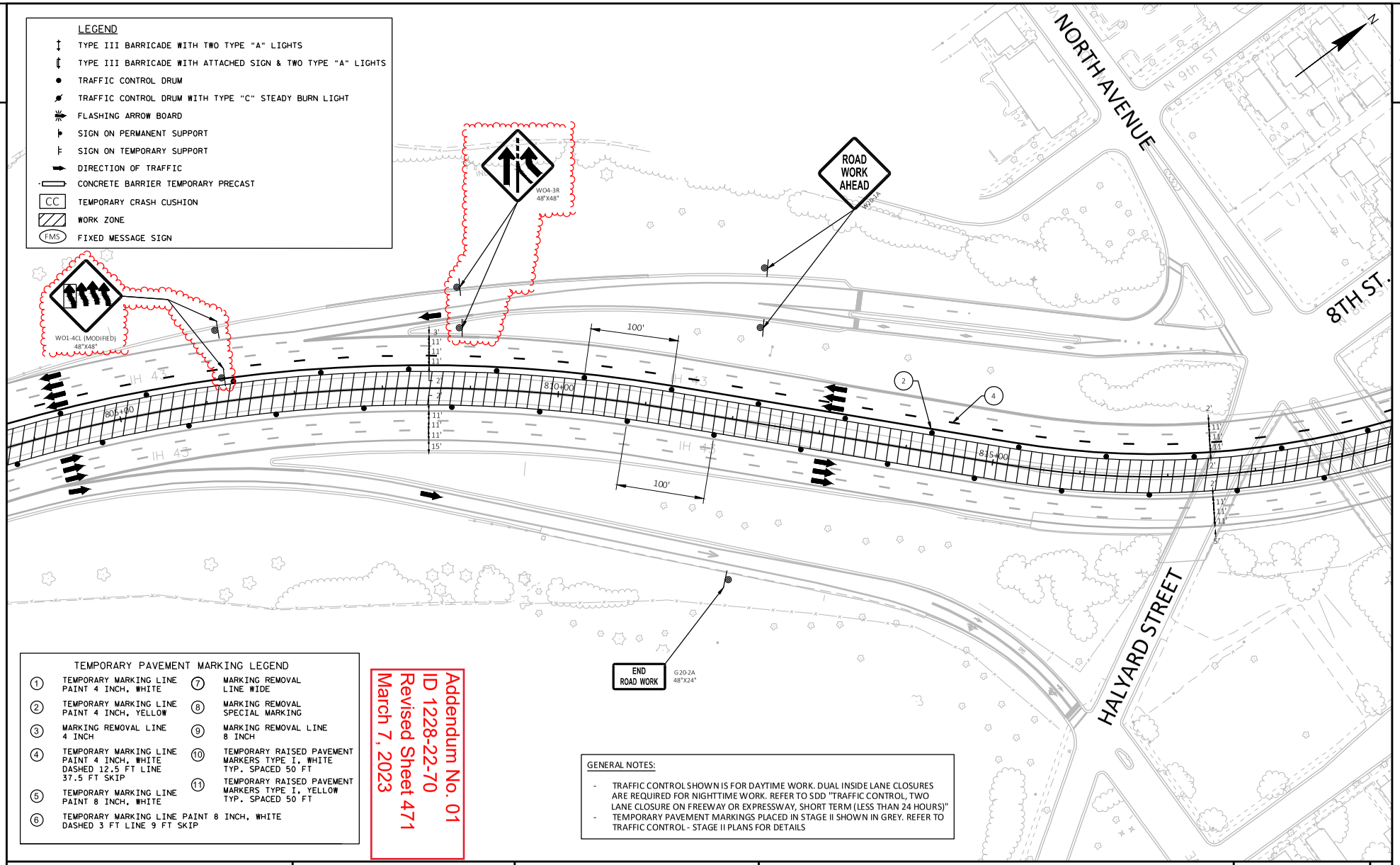
GENERAL NOTES:

- TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL INSIDE LANE CLOSURES ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)"
- TEMPORARY PAVEMENT MARKINGS PLACED IN STAGE II SHOWN IN GREY. REFER TO TRAFFIC CONTROL - STAGE II PLANS FOR DETAILS

Addendum No. 01
ID 1228-22-70
Revised Sheet 469
March 7, 2023

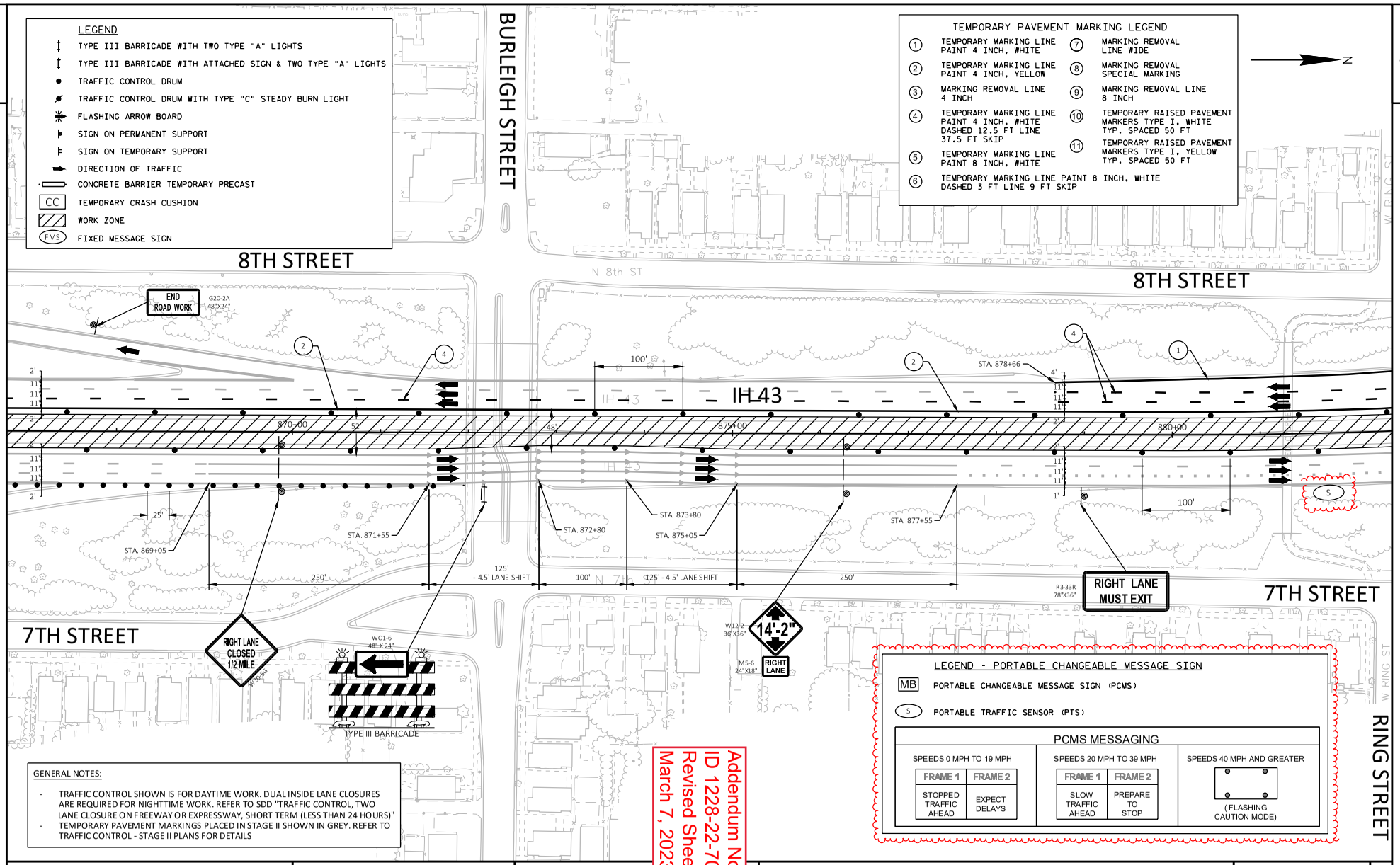
PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE III	SHEET 469	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADD 1.DWG
LAYOUT NAME - 025028_tc_AD1
PLOT DATE : 3/1/2023 10:57 AM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE III	SHEET 471	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025003_TC_AD1.DWG
LAYOUT NAME - 025030_tc_AD1
PLOT DATE : 3/1/2023 2:51 PM PLOT BY : RING, STEVEN M PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



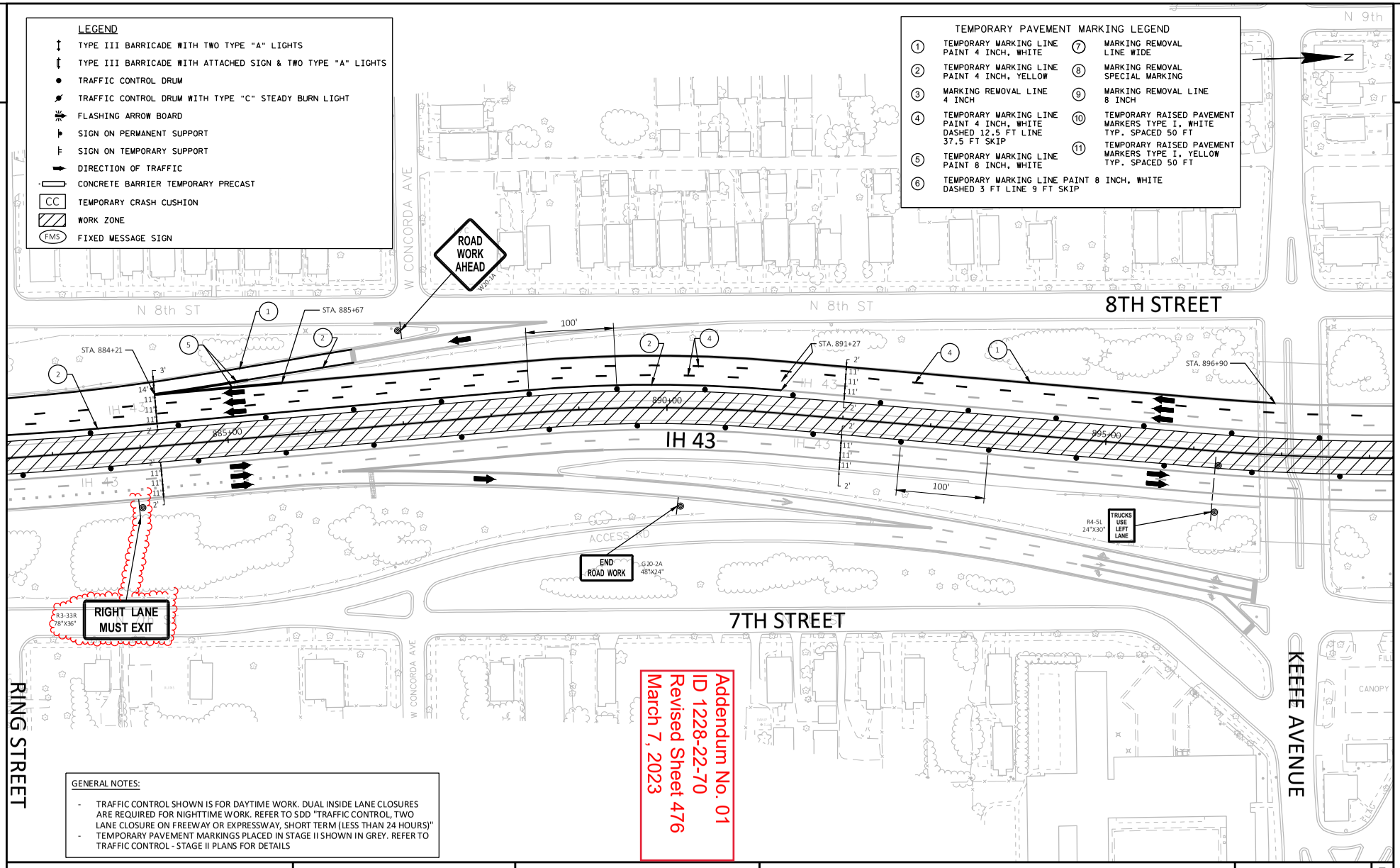
GENERAL NOTES:

- TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL INSIDE LANE CLOSURES ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)"
- TEMPORARY PAVEMENT MARKINGS PLACED IN STAGE II SHOWN IN GREY. REFER TO TRAFFIC CONTROL - STAGE II PLANS FOR DETAILS

Addendum No. 01
ID 1228-22-70
Revised Sheet 475
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE III	SHEET 475	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025003_TC_AD1.DWG
LAYOUT NAME - 025034_tc_AD1
PLOT BY : RING, STEVEN M PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



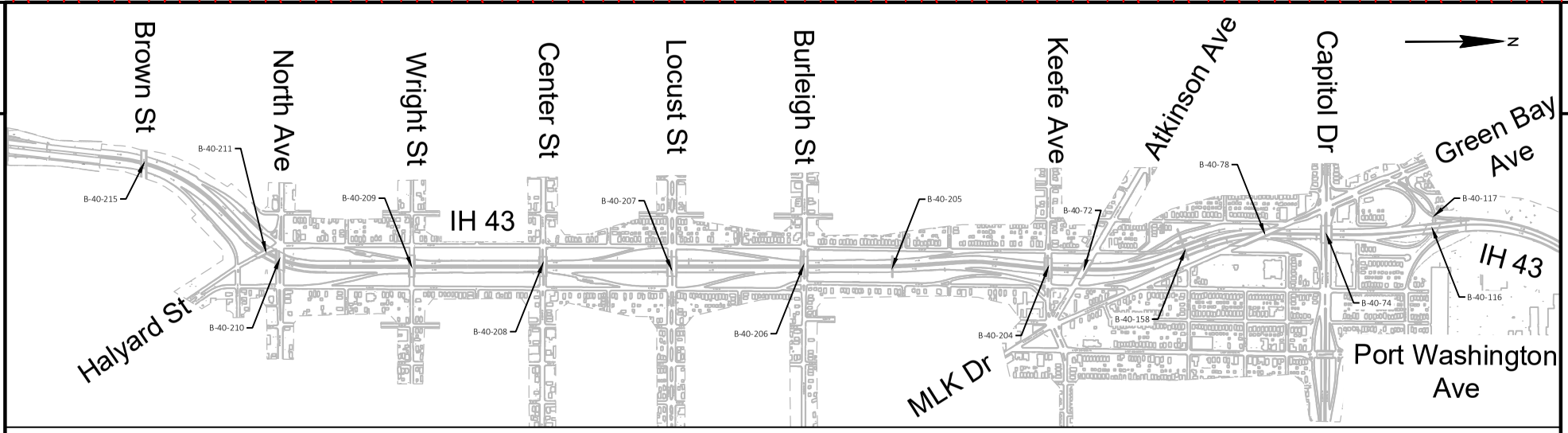
GENERAL NOTES:

- TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL INSIDE LANE CLOSURES ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)"
- TEMPORARY PAVEMENT MARKINGS PLACED IN STAGE II SHOWN IN GREY. REFER TO TRAFFIC CONTROL - STAGE II PLANS FOR DETAILS

Addendum No. 01
ID 1228-22-70
Revised Sheet 476
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE III	SHEET 476	E

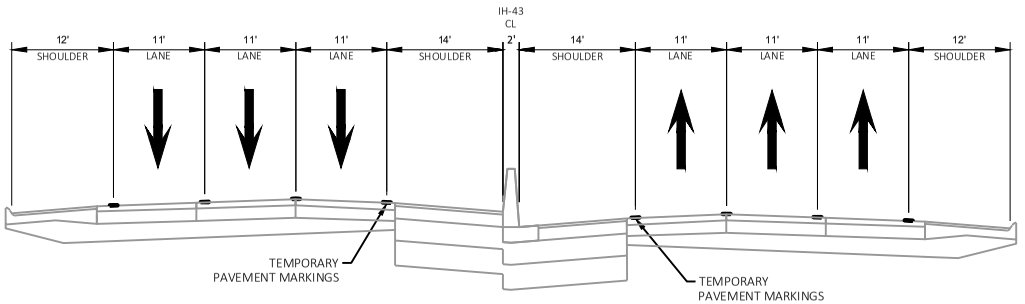
FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\025003_TC_AD1.DWG
LAYOUT NAME - 025035_tc_AD1
PLOT DATE : 1/18/2023 7:42 AM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



IH-43 - WINTER STAGE

TRAFFIC:

- TRAFFIC STAGING DURING WINTER SEASON BETWEEN STAGE III COMPLETION AND BEGINNING OF STAGE IV
  - ALL RAMPS TO REMAIN OPEN DURING WINTER STAGE
- LONG TERM SHIFT INTO SET-UP CONFIGURATION FOR STAGE IV



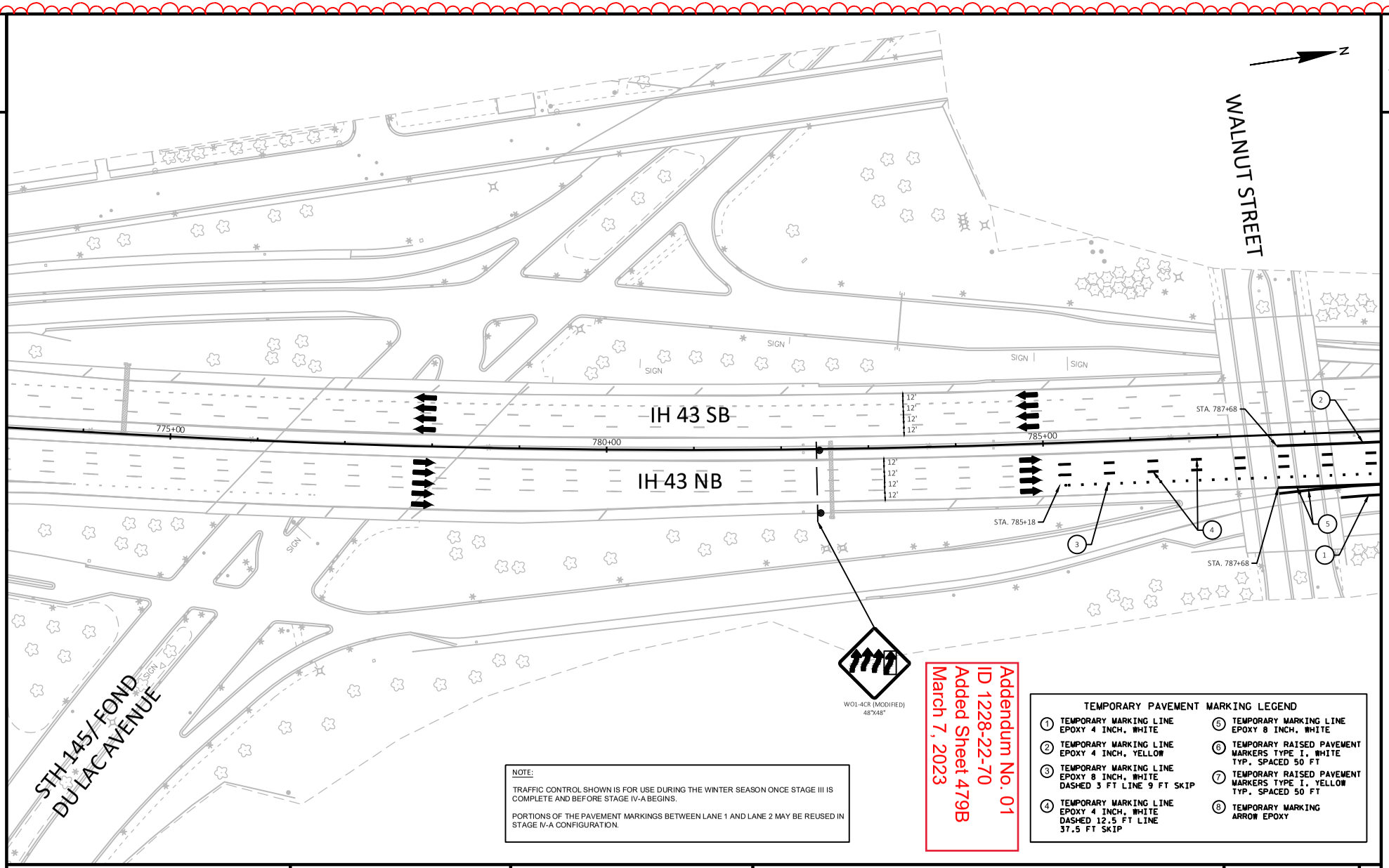
IH-43 WINTER STAGE - TYPICAL SECTION

Addendum No. 01
ID 1228-22-70
Added Sheet 479A
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL WINTER STAGE OVERVIEW	SHEET 479A	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\ADDENDUM 1 - WINTER STAGE OVERVIEW.DWG PLOT DATE : 3/1/2023 3:52 PM PLOT BY : RING, STEVEN M PLOT NAME : PLOT SCALE : 1 IN:1000 FT
LAYOUT NAME - 00

WISDOT/CADDS SHEET 42



NOTE:

TRAFFIC CONTROL SHOWN IS FOR USE DURING THE WINTER SEASON ONCE STAGE III IS COMPLETE AND BEFORE STAGE IV-A BEGINS.

PORTIONS OF THE PAVEMENT MARKINGS BETWEEN LANE 1 AND LANE 2 MAY BE REUSED IN STAGE IV-A CONFIGURATION.

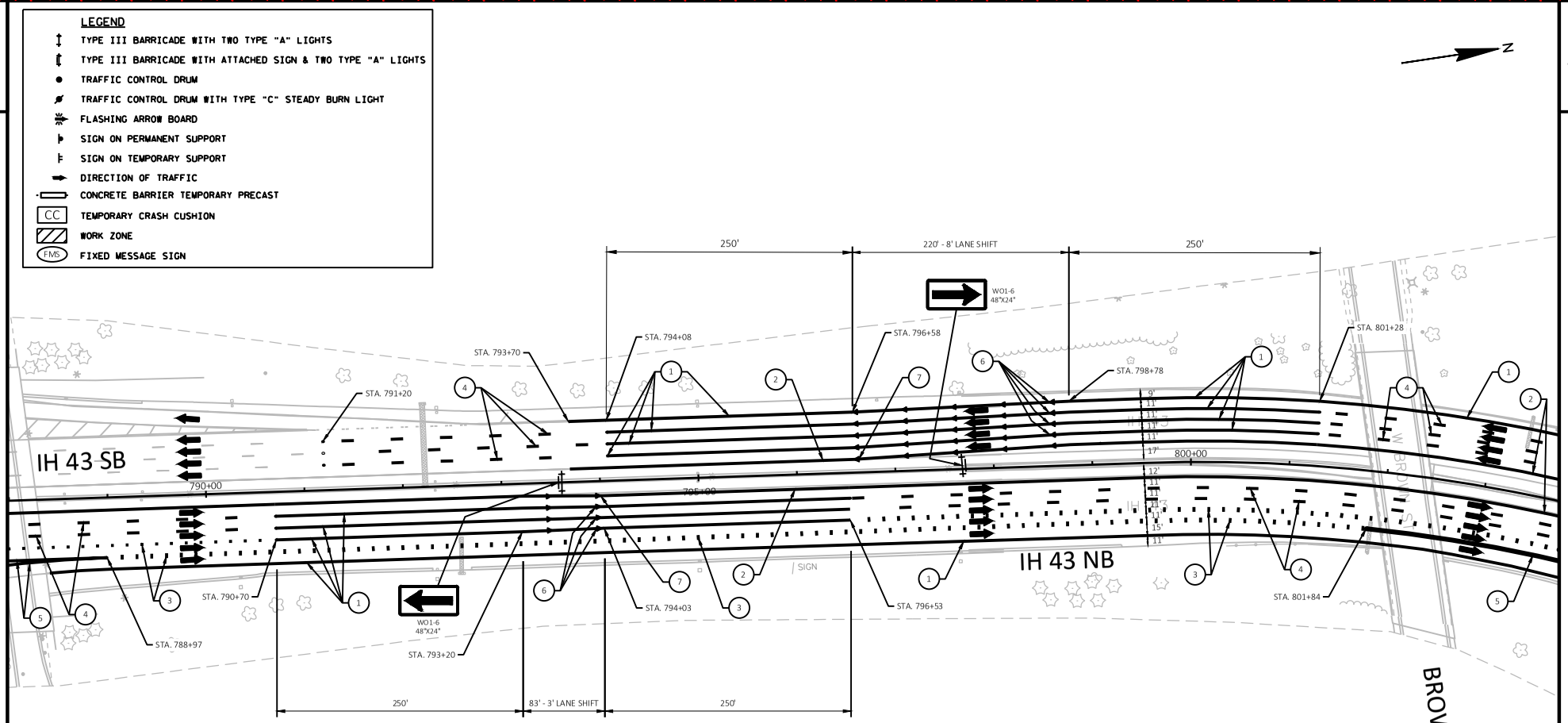
Addendum No. 01
ID 1228-22-70
Added Sheet 479B
March 7, 2023

TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE EPOXY 4 INCH, WHITE
2. TEMPORARY MARKING LINE EPOXY 4 INCH, YELLOW
3. TEMPORARY MARKING LINE EPOXY 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP
4. TEMPORARY MARKING LINE EPOXY 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP
5. TEMPORARY MARKING LINE EPOXY 8 INCH, WHITE
6. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
7. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT
8. TEMPORARY MARKING ARROW EPOXY

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - WINTER STAGE	SHEET 479B	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\ADDENDUM 1 - WINTER STAGE.DWG
LAYOUT NAME - 01
PLOT DATE : 3/1/2023 3:52 PM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE EPOXY 4 INCH, WHITE
2. TEMPORARY MARKING LINE EPOXY 4 INCH, YELLOW
3. TEMPORARY MARKING LINE EPOXY 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP
4. TEMPORARY MARKING LINE EPOXY 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP
5. TEMPORARY MARKING LINE EPOXY 8 INCH, WHITE
6. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
7. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT
8. TEMPORARY MARKING ARROW EPOXY

NOTE:

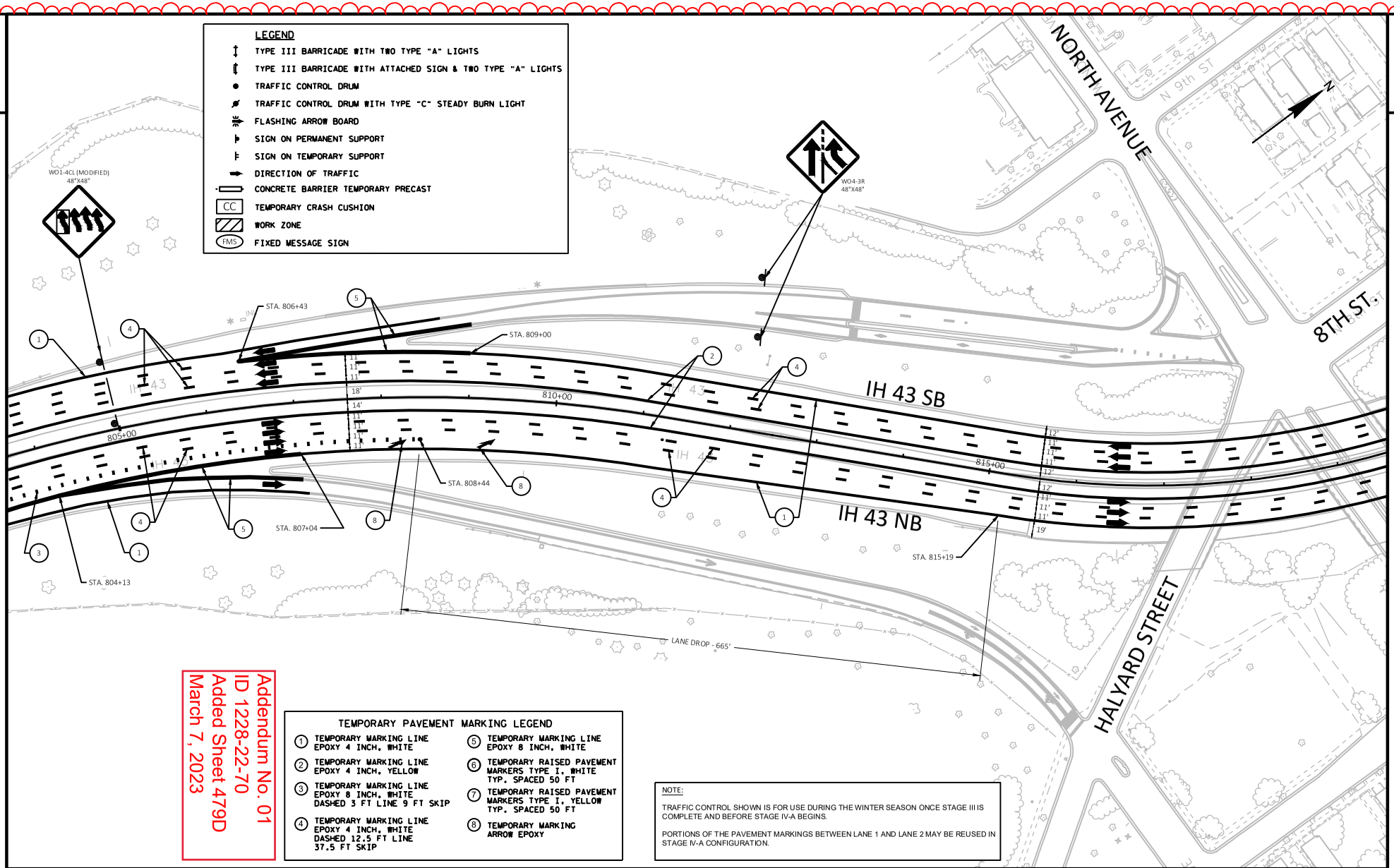
TRAFFIC CONTROL SHOWN IS FOR USE DURING THE WINTER SEASON ONCE STAGE III IS COMPLETE AND BEFORE STAGE IV-A BEGINS.

PORTIONS OF THE PAVEMENT MARKINGS BETWEEN LANE 1 AND LANE 2 MAY BE REUSED IN STAGE IV-A CONFIGURATION.

Addendum No. 01
ID 1228-22-70
Added Sheet 479C
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - WINTER STAGE	SHEET 479C	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\ADDENDUM 1 - WINTER STAGE.DWG
LAYOUT NAME - 02
PLOT DATE : 3/1/2023 3:53 PM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



Addendum No. 01
ID 1228-22-70
Added Sheet 479D
March 7, 2023

TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE EPOXY 4 INCH, WHITE
2. TEMPORARY MARKING LINE EPOXY 4 INCH, YELLOW
3. TEMPORARY MARKING LINE EPOXY 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP
4. TEMPORARY MARKING LINE EPOXY 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP
5. TEMPORARY MARKING LINE EPOXY 8 INCH, WHITE
6. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
7. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT
8. TEMPORARY MARKING ARROW EPOXY

NOTE:

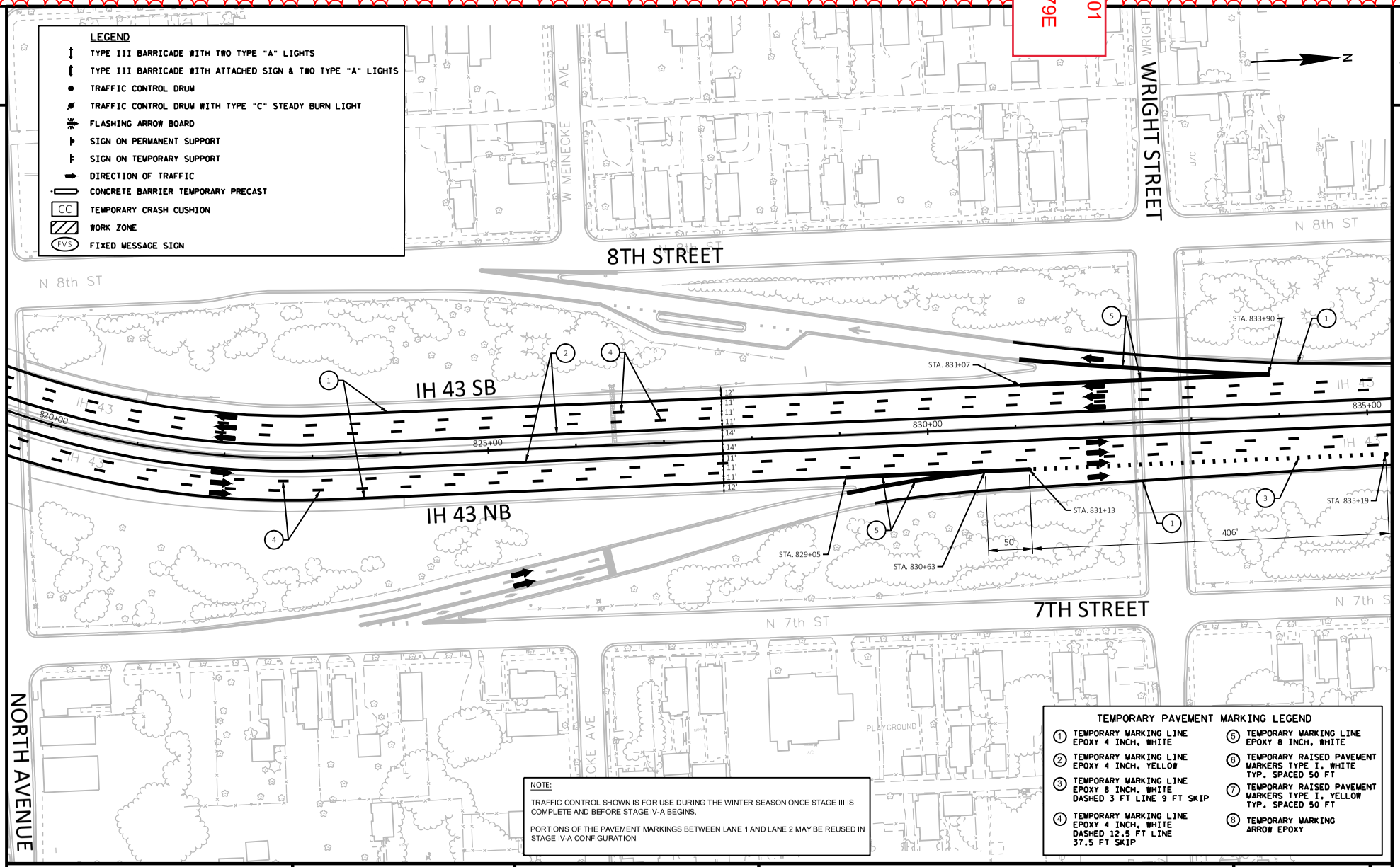
TRAFFIC CONTROL SHOWN IS FOR USE DURING THE WINTER SEASON ONCE STAGE III IS COMPLETE AND BEFORE STAGE IV-A BEGINS.

PORTIONS OF THE PAVEMENT MARKINGS BETWEEN LANE 1 AND LANE 2 MAY BE REUSED IN STAGE IV-A CONFIGURATION.

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - WINTER STAGE	SHEET 479D	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\ADDENDUM 1 - WINTER STAGE.DWG
LAYOUT NAME - 03
PLOT DATE : 3/1/2023 3:54 PM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

Addendum No. 01
ID 1228-22-70
Added Sheet 479E
March 7, 2023



NOTE:

TRAFFIC CONTROL SHOWN IS FOR USE DURING THE WINTER SEASON ONCE STAGE III IS COMPLETE AND BEFORE STAGE IV-A BEGINS.

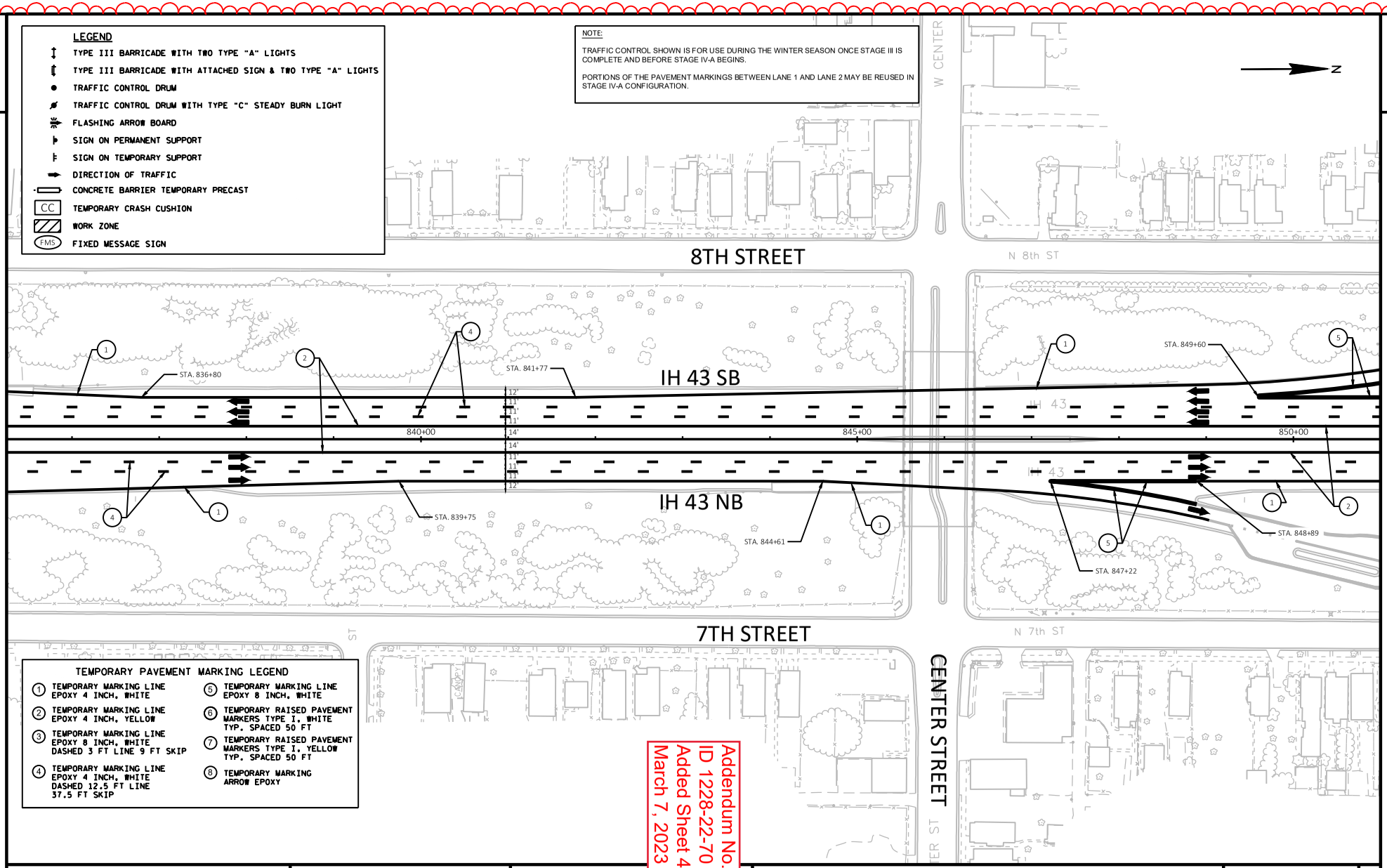
PORTIONS OF THE PAVEMENT MARKINGS BETWEEN LANE 1 AND LANE 2 MAY BE REUSED IN STAGE IV-A CONFIGURATION.

TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE EPOXY 4 INCH, WHITE
2. TEMPORARY MARKING LINE EPOXY 4 INCH, YELLOW
3. TEMPORARY MARKING LINE EPOXY 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP
4. TEMPORARY MARKING LINE EPOXY 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP
5. TEMPORARY MARKING LINE EPOXY 8 INCH, WHITE
6. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
7. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT
8. TEMPORARY MARKING ARROW EPOXY

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - WINTER STAGE	SHEET 479E	E

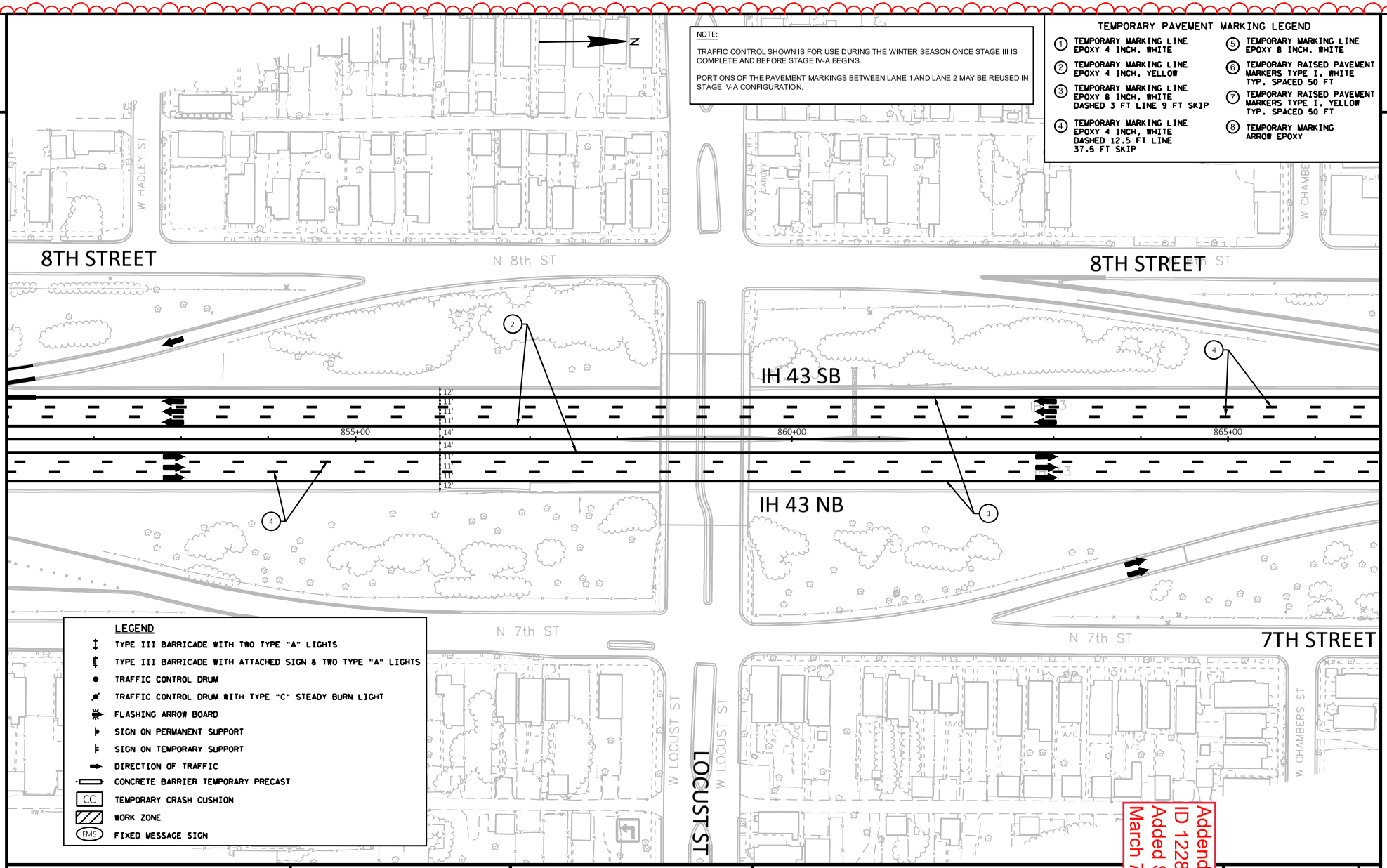
FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\ADDENDUM 1 - WINTER STAGE.DWG
LAYOUT NAME - 04
PLOT DATE : 3/1/2023 3:55 PM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



Addendum No. 01
ID 1228-22-70
Added Sheet 479F
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - WINTER STAGE	SHEET 479F	E

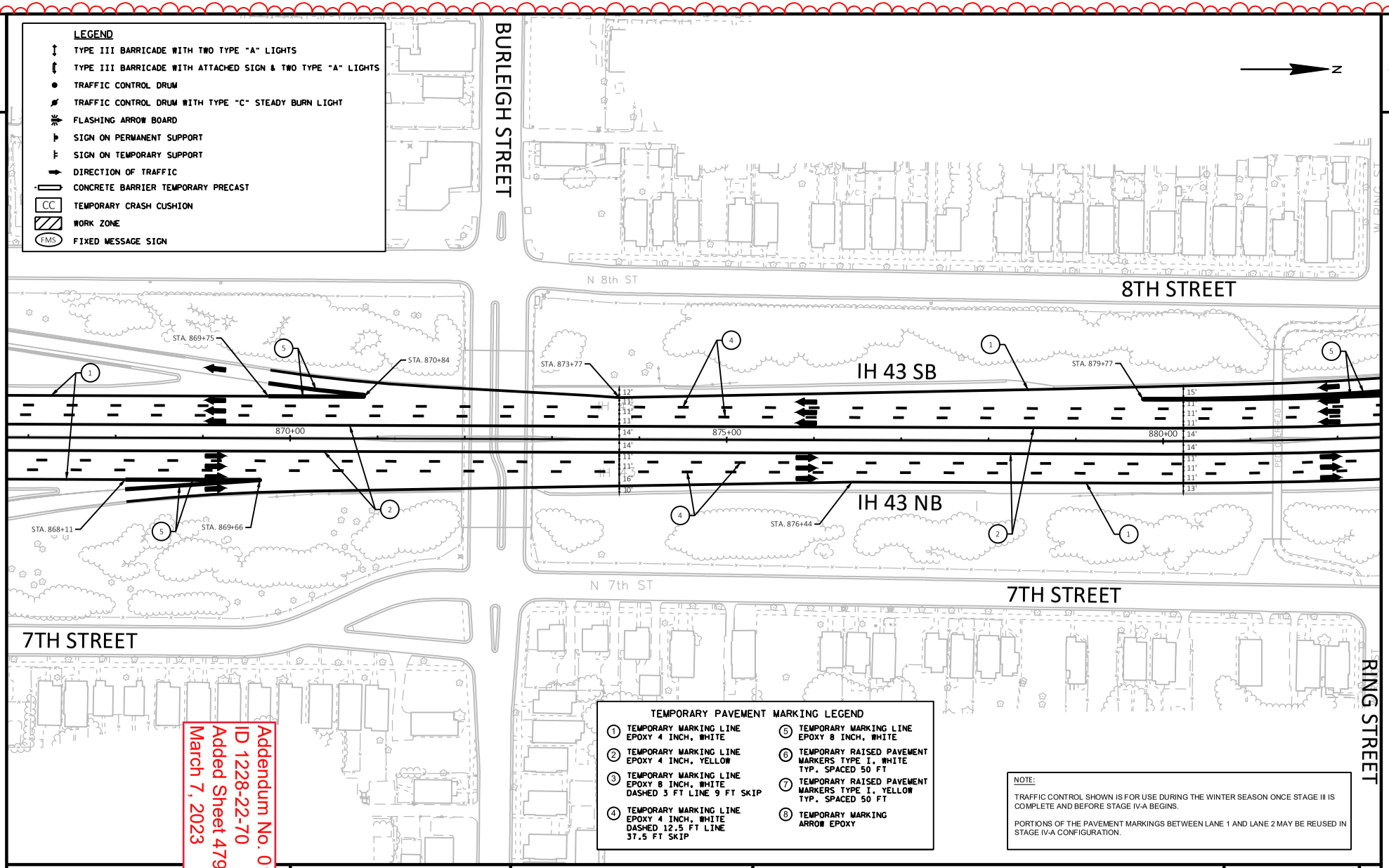
FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\ADDENDUM 1 - WINTER STAGE.DWG
LAYOUT NAME - 05
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - WINTER STAGE	SHEET 479G	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\ADDENDUM 1 - WINTER STAGE.DWG
LAYOUT NAME - 06
PLOT DATE : 3/1/2023 3:57 PM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SC
WISDOT/CADDS SHEET 42

Addendum No. 01
ID 1228-22-70
Added Sheet 479G
March 7, 2023

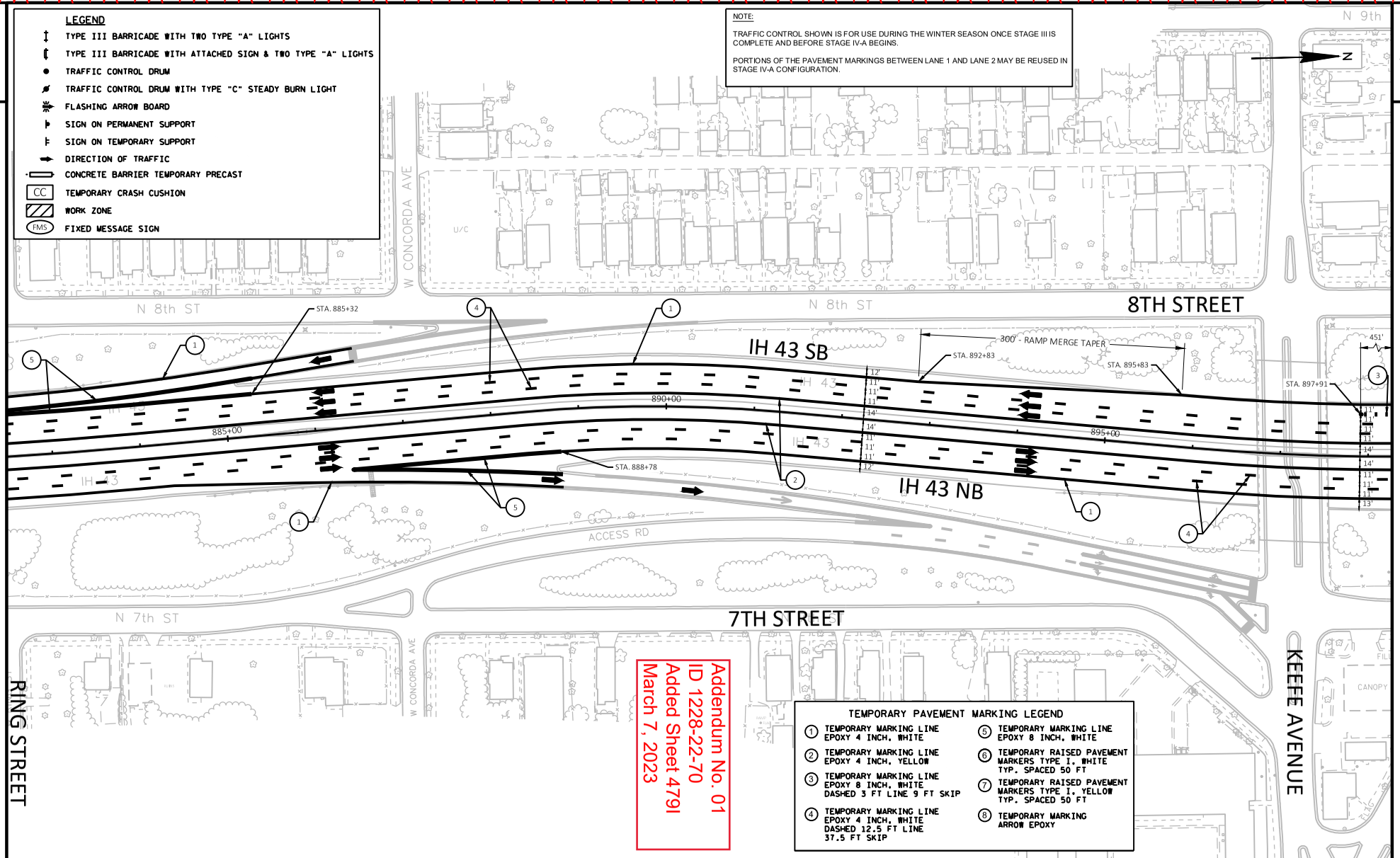


Addendum No. 01
ID 1228-22-70
Added Sheet 479H
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - WINTER STAGE	SHEET 479H	E

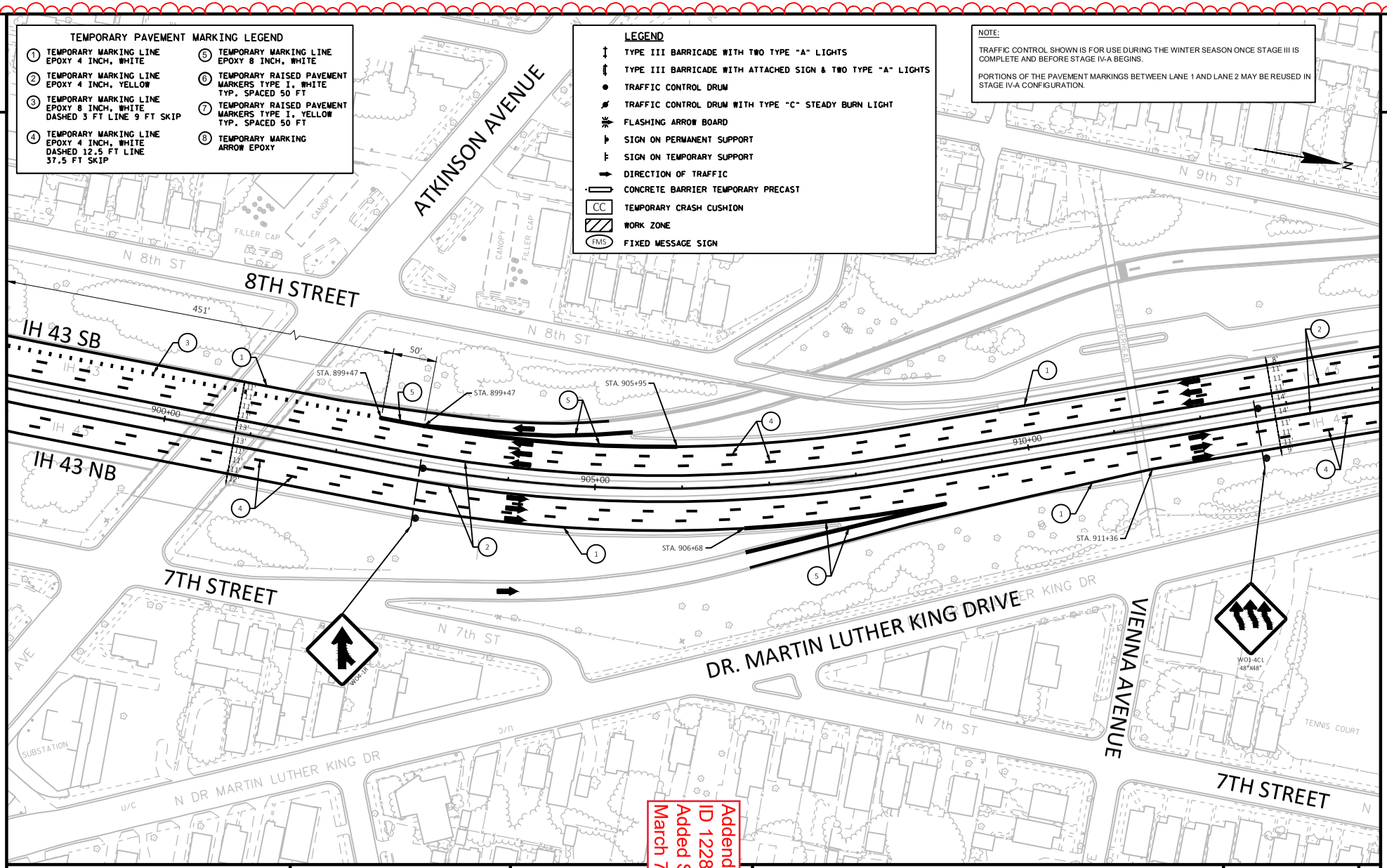
FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBL...N\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\ADDENDUM 1 - WINTER STAGE.DWG PLOT DATE : 3/1/2023 3:58 PM PLOT BY : RING, STEVEN M PLOT NAME : PLOT SCALE : 1 IN:100 FT
LAYOUT NAME - 07

WISDOT/CADDS SHEET 42



PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - WINTER STAGE	SHEET 479I	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\ADDENDUM 1 - WINTER STAGE.DWG
LAYOUT NAME - 08
PLOT DATE : 3/1/2023 3:59 PM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



Addendum No. 01
ID 1228-22-70479J
Added Sheet
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - WINTER STAGE	SHEET 479J	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\ADDENDUM 1 - WINTER STAGE.DWG
LAYOUT NAME - 09
PLOT BY : RING, STEVEN M PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

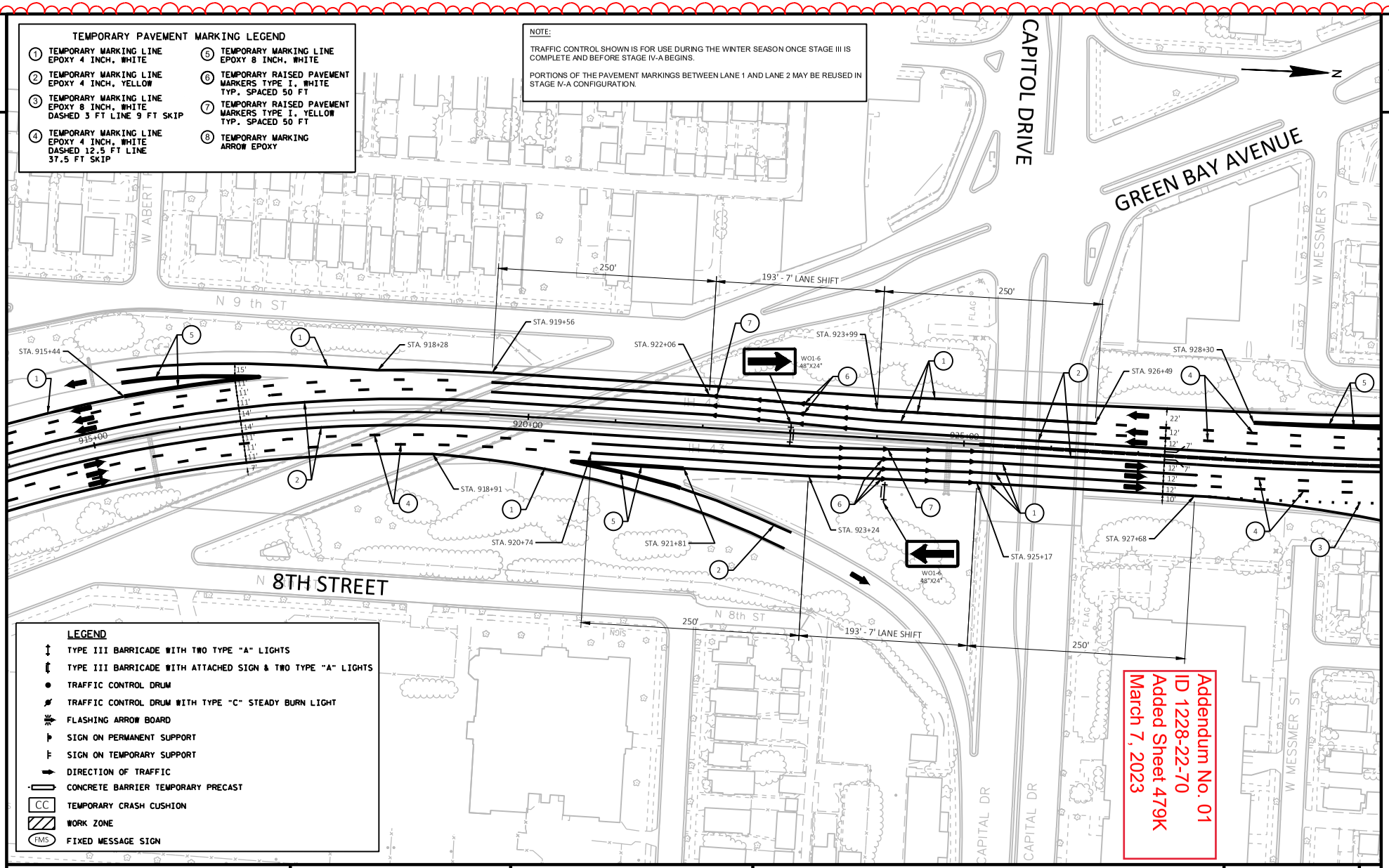
TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE EPOXY 4 INCH, WHITE
2. TEMPORARY MARKING LINE EPOXY 4 INCH, YELLOW
3. TEMPORARY MARKING LINE EPOXY 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP
4. TEMPORARY MARKING LINE EPOXY 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP
5. TEMPORARY MARKING LINE EPOXY 8 INCH, WHITE
6. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
7. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT
8. TEMPORARY MARKING ARROW EPOXY

NOTE:

TRAFFIC CONTROL SHOWN IS FOR USE DURING THE WINTER SEASON ONCE STAGE III IS COMPLETE AND BEFORE STAGE IV-A BEGINS.

PORTIONS OF THE PAVEMENT MARKINGS BETWEEN LANE 1 AND LANE 2 MAY BE REUSED IN STAGE IV-A CONFIGURATION.



LEGEND

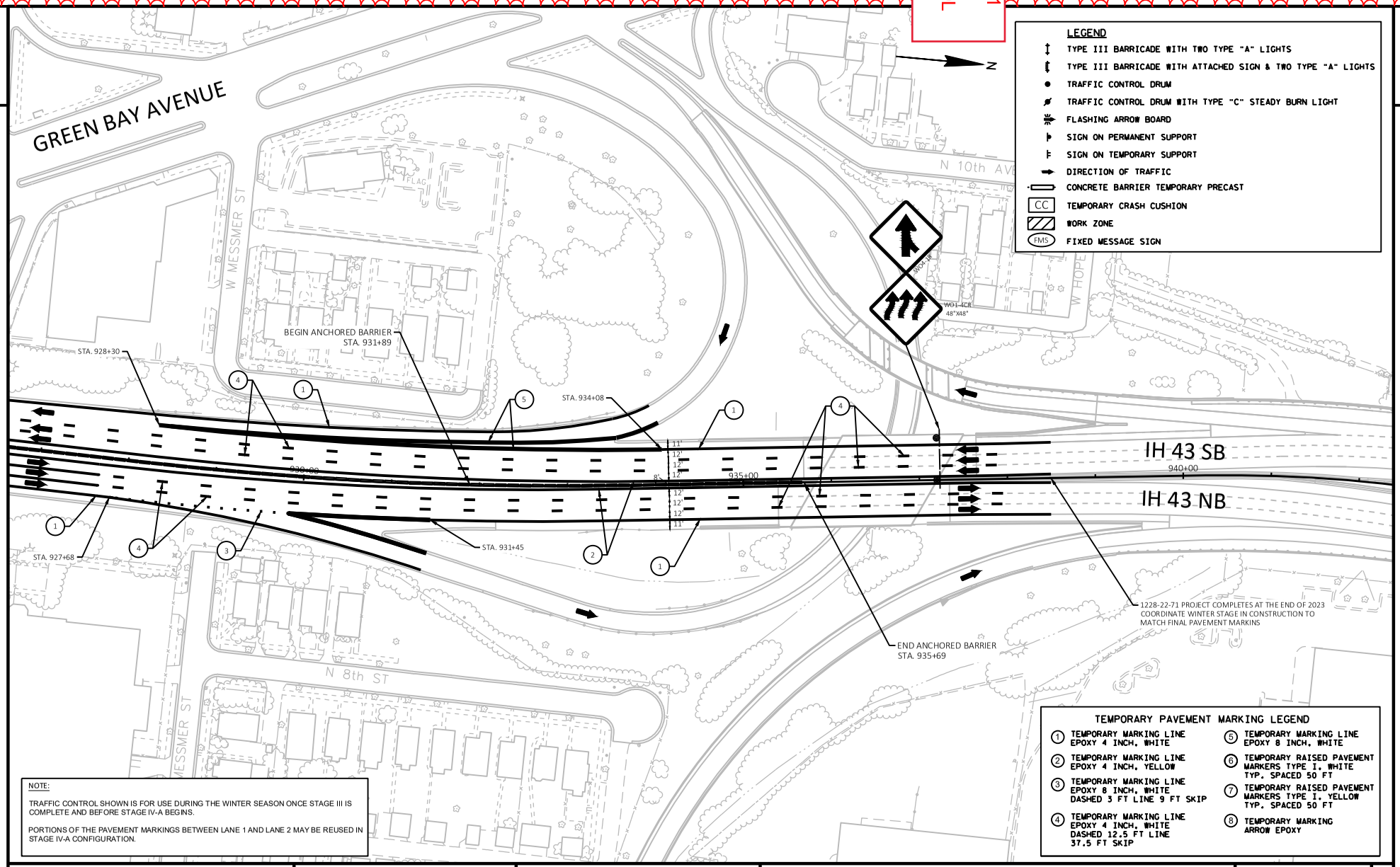
- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN & TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CC TEMPORARY CRASH CUSHION
- WORK ZONE
- FMS FIXED MESSAGE SIGN

Addendum No. 01
ID 1228-22-70
Added Sheet 479K
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - WINTER STAGE	SHEET 479K	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\ADDENDUM 1 - WINTER STAGE.DWG
LAYOUT NAME - 10
PLOT DATE : 3/1/2023 4:01 PM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

Addendum No. 01
ID 1228-22-70
Added Sheet 479L
March 7, 2023



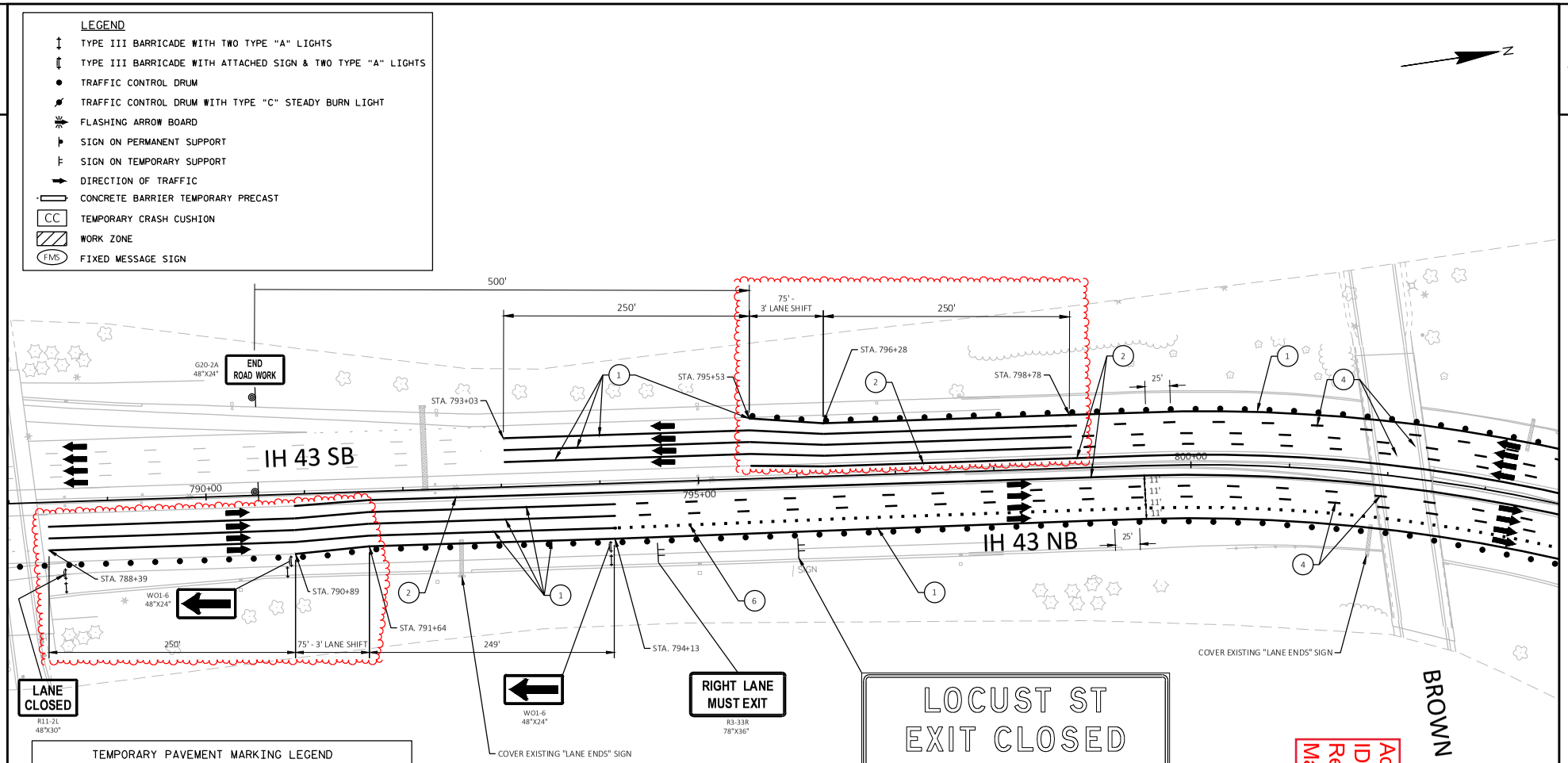
NOTE:

TRAFFIC CONTROL SHOWN IS FOR USE DURING THE WINTER SEASON ONCE STAGE III IS COMPLETE AND BEFORE STAGE IV-A BEGINS.

PORTIONS OF THE PAVEMENT MARKINGS BETWEEN LANE 1 AND LANE 2 MAY BE REUSED IN STAGE IV-A CONFIGURATION.

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - WINTER STAGE	SHEET 479L	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\ADDENDUM 1 - WINTER STAGE.DWG
LAYOUT NAME - 11
PLOT DATE : 3/1/2023 4:02 PM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE PAINT 4 INCH, WHITE
2. TEMPORARY MARKING LINE PAINT 4 INCH, YELLOW
3. MARKING REMOVAL LINE 4 INCH
4. TEMPORARY MARKING LINE PAINT 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP
5. TEMPORARY MARKING LINE PAINT 8 INCH, WHITE
6. TEMPORARY MARKING LINE PAINT 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP
7. MARKING REMOVAL LINE WIDE
8. MARKING REMOVAL SPECIAL MARKING
9. MARKING REMOVAL LINE 8 INCH
10. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
11. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT
12. TEMPORARY MARKING ARROW PAINT

NOTE:

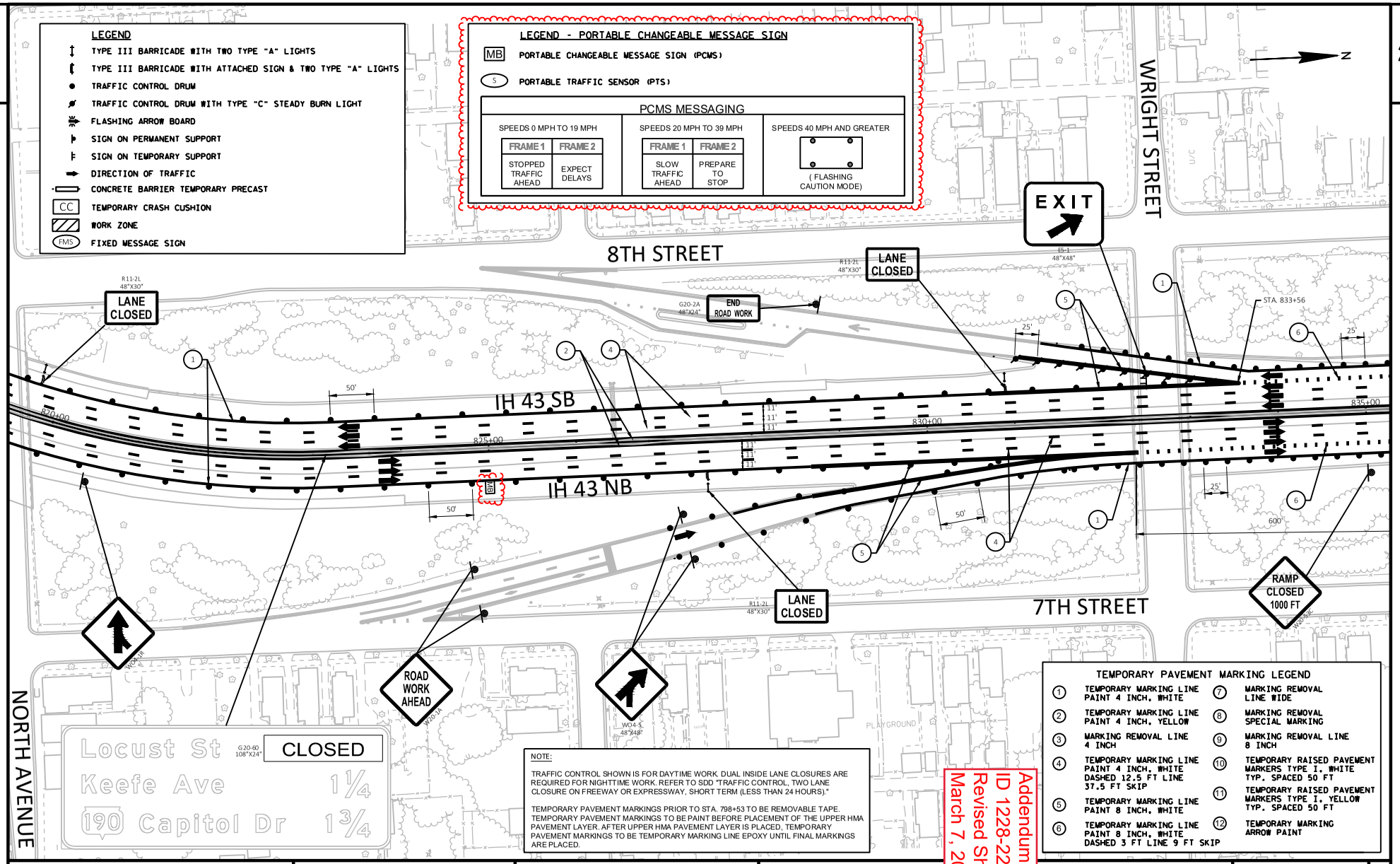
TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL INSIDE LANE CLOSURES ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)."

TEMPORARY PAVEMENT MARKINGS PRIOR TO STA. 798+53 TO BE REMOVABLE TAPE. TEMPORARY PAVEMENT MARKINGS TO BE PAINT BEFORE PLACEMENT OF THE UPPER HMA PAVEMENT LAYER. AFTER UPPER HMA PAVEMENT LAYER IS PLACED, TEMPORARY PAVEMENT MARKINGS TO BE TEMPORARY MARKING LINE EPOXY UNTIL FINAL MARKINGS ARE PLACED.

Addendum No. 01
ID 1228-22-70
Revised Sheet 483
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE IV-A	SHEET 483	E

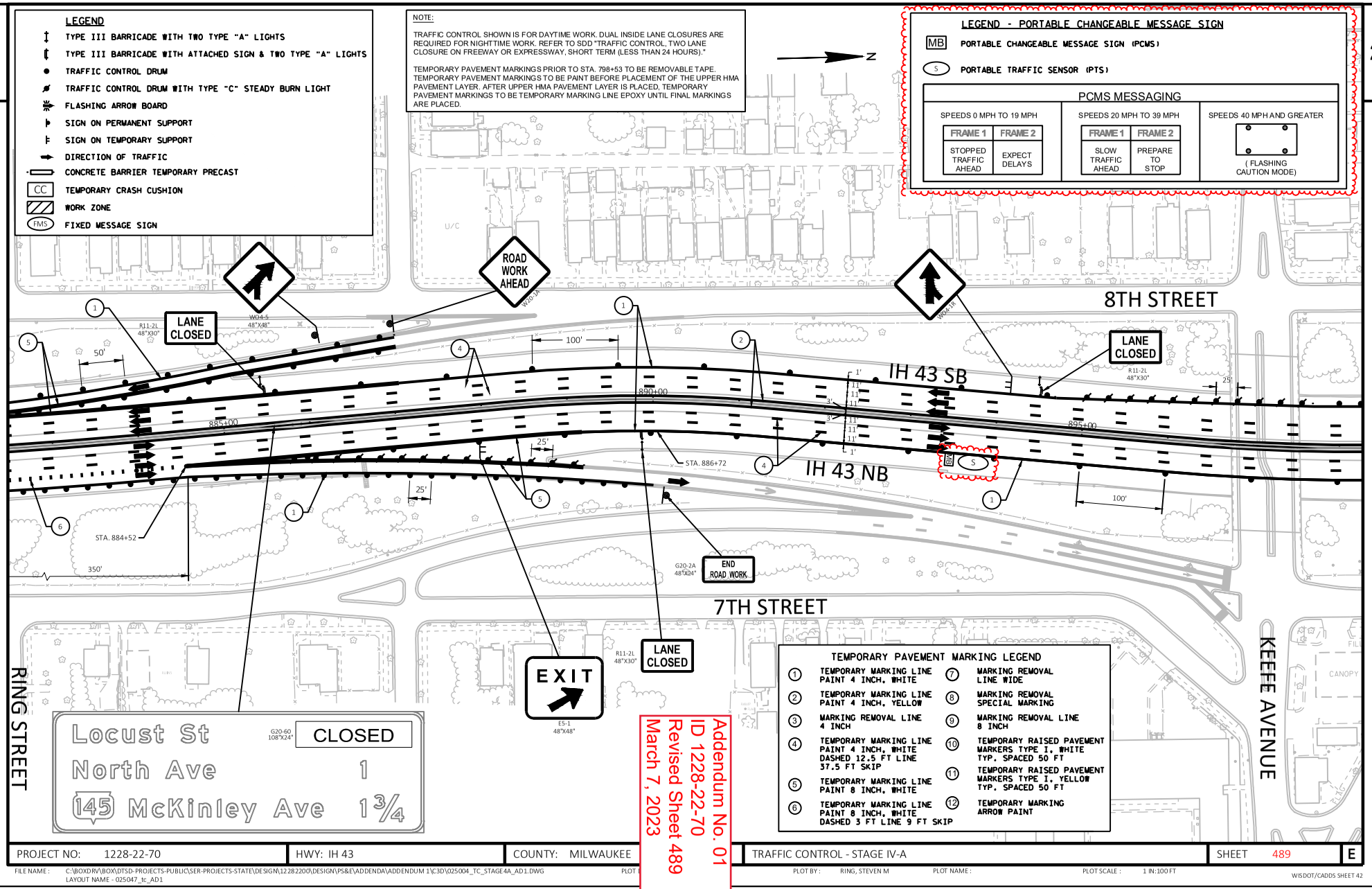
FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\025004_TC_STAGE4A_AD1.DWG
LAYOUT NAME - 025041_tc_AD1
PLOT DATE : 1/18/2023 7:42 AM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



Addendum No. 01
ID 1228-22-70
Revised Sheet 485
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE IV-A	SHEET 485	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025004_TC_STAGE4A_AD1.DWG
LAYOUT NAME - 025043_tc_AD1
PLOT DATE : 3/1/2023 1:33 PM
PLOT BY : RING, STEVEN M
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



Addendum No. 01
ID 1228-22-70
Revised Sheet 489
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE IV-A	SHEET 489	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025004_TC_STAGE4A_AD1.DWG
LAYOUT NAME - 025047_tc_AD1
PLOT BY : RING, STEVEN M PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

Addendum No. 01
ID 1228-22-70
Revised Sheet 491
March 7, 2023

2

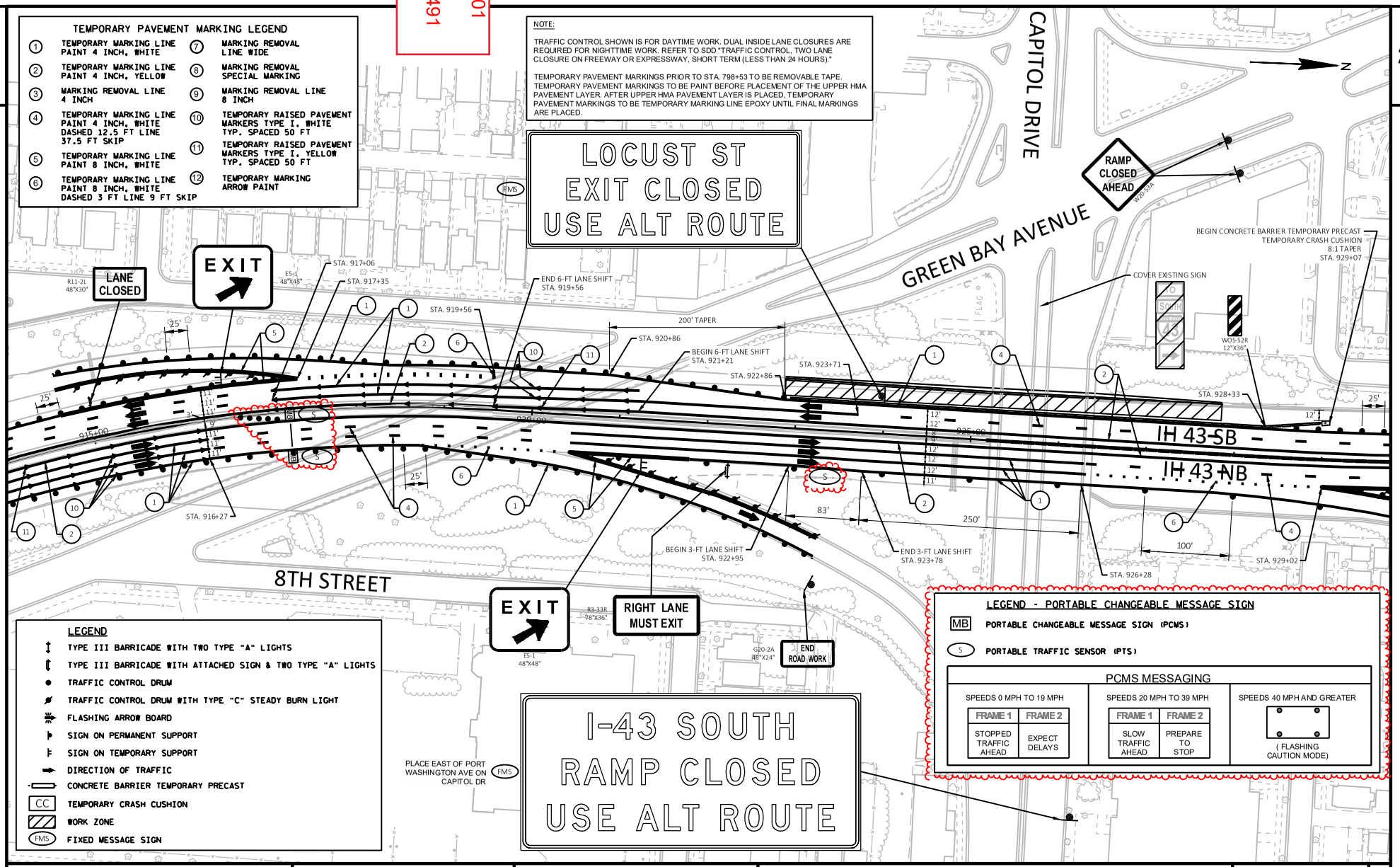
TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE PAINT 4 INCH, WHITE
2. TEMPORARY MARKING LINE PAINT 4 INCH, YELLOW
3. MARKING REMOVAL LINE 4 INCH
4. TEMPORARY MARKING LINE PAINT 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP
5. TEMPORARY MARKING LINE PAINT 8 INCH, WHITE
6. TEMPORARY MARKING LINE PAINT 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP
7. MARKING REMOVAL LINE WIDE
8. MARKING REMOVAL SPECIAL MARKING
9. MARKING REMOVAL LINE 8 INCH
10. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
11. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT
12. TEMPORARY MARKING ARROW PAINT

NOTE:

TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL INSIDE LANE CLOSURES ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)."

TEMPORARY PAVEMENT MARKINGS PRIOR TO STA. 798+53 TO BE REMOVABLE TAPE. TEMPORARY PAVEMENT MARKINGS TO BE PAINT BEFORE PLACEMENT OF THE UPPER HMA PAVEMENT LAYER. AFTER UPPER HMA PAVEMENT LAYER IS PLACED, TEMPORARY PAVEMENT MARKINGS TO BE TEMPORARY MARKING LINE EPOXY UNTIL FINAL MARKINGS ARE PLACED.



LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN & TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — TEMPORARY CRASH CUSHION
- WORK ZONE
- FMS — FIXED MESSAGE SIGN

LEGEND - PORTABLE CHANGEABLE MESSAGE SIGN

- MB — PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- S — PORTABLE TRAFFIC SENSOR (PTS)

PCMS MESSAGING

SPEEDS 0 MPH TO 19 MPH		SPEEDS 20 MPH TO 39 MPH		SPEEDS 40 MPH AND GREATER
FRAME 1	FRAME 2	FRAME 1	FRAME 2	
STOPPED TRAFFIC AHEAD	EXPECT DELAYS	SLOW TRAFFIC AHEAD	PREPARE TO STOP	(FLASHING CAUTION MODE)

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE IV-A	SHEET 491	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025004_TC_STAGE4A_AD1.DWG
LAYOUT NAME - 025049_tc_AD1
PLOT DATE : 3/1/2023 1:22 PM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

Addendum No. 01
ID 1228-22-70
Revised Sheet 495
March 7, 2023

2

TEMPORARY PAVEMENT MARKING LEGEND

1	TEMPORARY MARKING LINE PAINT 4 INCH, WHITE	7	MARKING REMOVAL LINE WIDE
2	TEMPORARY MARKING LINE PAINT 4 INCH, YELLOW	8	MARKING REMOVAL SPECIAL MARKING
3	MARKING REMOVAL LINE 4 INCH	9	MARKING REMOVAL LINE 8 INCH
4	TEMPORARY MARKING LINE PAINT 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP	10	TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
5	TEMPORARY MARKING LINE PAINT 8 INCH, WHITE	11	TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT
6	TEMPORARY MARKING LINE PAINT 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP	12	TEMPORARY MARKING ARROW PAINT

MILWAUKEE RIVER

HAMPTON AVE

N

ROAD WORK AHEAD

LANE CLOSED

R11-2L 48"X30"

660' LANE CLOSURE

STA. 974+88

STA. 982+00

STA. 969+69

25'

50'

100'

970+00

975+00

980+00

985+0

IH 43 SB

IH 43 NB

PORT WASHINGTON RD

RIPRAP

A/C

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN & TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — TEMPORARY CRASH CUSHION
- WORK ZONE
- FMS — FIXED MESSAGE SIGN

NOTE:

TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL INSIDE LANE CLOSURES ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)."

TEMPORARY PAVEMENT MARKINGS PRIOR TO STA. 798+53 TO BE REMOVABLE TAPE. TEMPORARY PAVEMENT MARKINGS TO BE PAINT BEFORE PLACEMENT OF THE UPPER HMA PAVEMENT LAYER. AFTER UPPER HMA PAVEMENT LAYER IS PLACED, TEMPORARY PAVEMENT MARKINGS TO BE TEMPORARY MARKING LINE EPOXY UNTIL FINAL MARKINGS ARE PLACED.

LEGEND - PORTABLE CHANGEABLE MESSAGE SIGN

- MB — PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- S — PORTABLE TRAFFIC SENSOR (PTS)

PCMS MESSAGING

SPEEDS 0 MPH TO 19 MPH		SPEEDS 20 MPH TO 39 MPH		SPEEDS 40 MPH AND GREATER
FRAME 1	FRAME 2	FRAME 1	FRAME 2	
STOPPED TRAFFIC AHEAD	EXPECT DELAYS	SLOW TRAFFIC AHEAD	PREPARE TO STOP	(FLASHING CAUTION MODE)

PROJECT NO:	HWY:	COUNTY:		SHEET	
1228-22-70	IH 43	MILWAUKEE	TRAFFIC CONTROL - STAGE IV-A	495	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025004_TC_STAGE4A_AD1.DWG
LAYOUT NAME - 025053_tc_AD1
PLOT DATE : 2/27/2023 11:57 AM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

TEMPORARY PAVEMENT MARKING LEGEND

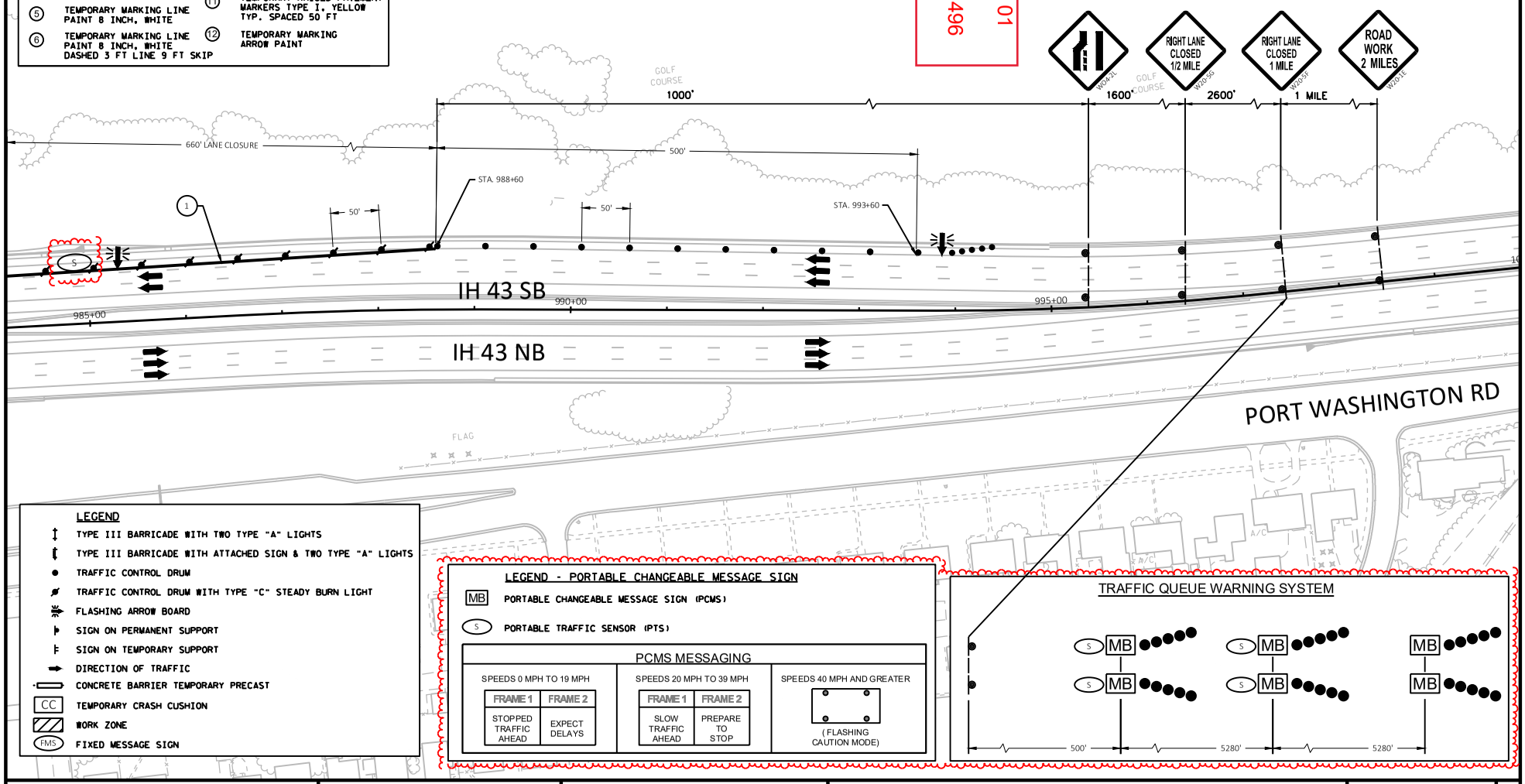
1	TEMPORARY MARKING LINE PAINT 4 INCH, WHITE	7	MARKING REMOVAL LINE WIDE
2	TEMPORARY MARKING LINE PAINT 4 INCH, YELLOW	8	MARKING REMOVAL SPECIAL MARKING
3	MARKING REMOVAL LINE 4 INCH	9	MARKING REMOVAL LINE 8 INCH
4	TEMPORARY MARKING LINE PAINT 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP	10	TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
5	TEMPORARY MARKING LINE PAINT 8 INCH, WHITE	11	TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT
6	TEMPORARY MARKING LINE PAINT 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP	12	TEMPORARY MARKING ARROW PAINT

NOTE:

TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL INSIDE LANE CLOSURES ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)."

TEMPORARY PAVEMENT MARKINGS PRIOR TO STA. 798+53 TO BE REMOVABLE TAPE. TEMPORARY PAVEMENT MARKINGS TO BE PAINT BEFORE PLACEMENT OF THE UPPER HMA PAVEMENT LAYER. AFTER UPPER HMA PAVEMENT LAYER IS PLACED, TEMPORARY PAVEMENT MARKINGS TO BE TEMPORARY MARKING LINE EPOXY UNTIL FINAL MARKINGS ARE PLACED.

Addendum No. 01
ID 1228-22-70
Revised Sheet 496
March 7, 2023



LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN & TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — TEMPORARY CRASH CUSHION
- WORK ZONE
- FMS — FIXED MESSAGE SIGN

LEGEND - PORTABLE CHANGEABLE MESSAGE SIGN

MB — PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

S — PORTABLE TRAFFIC SENSOR (PTS)

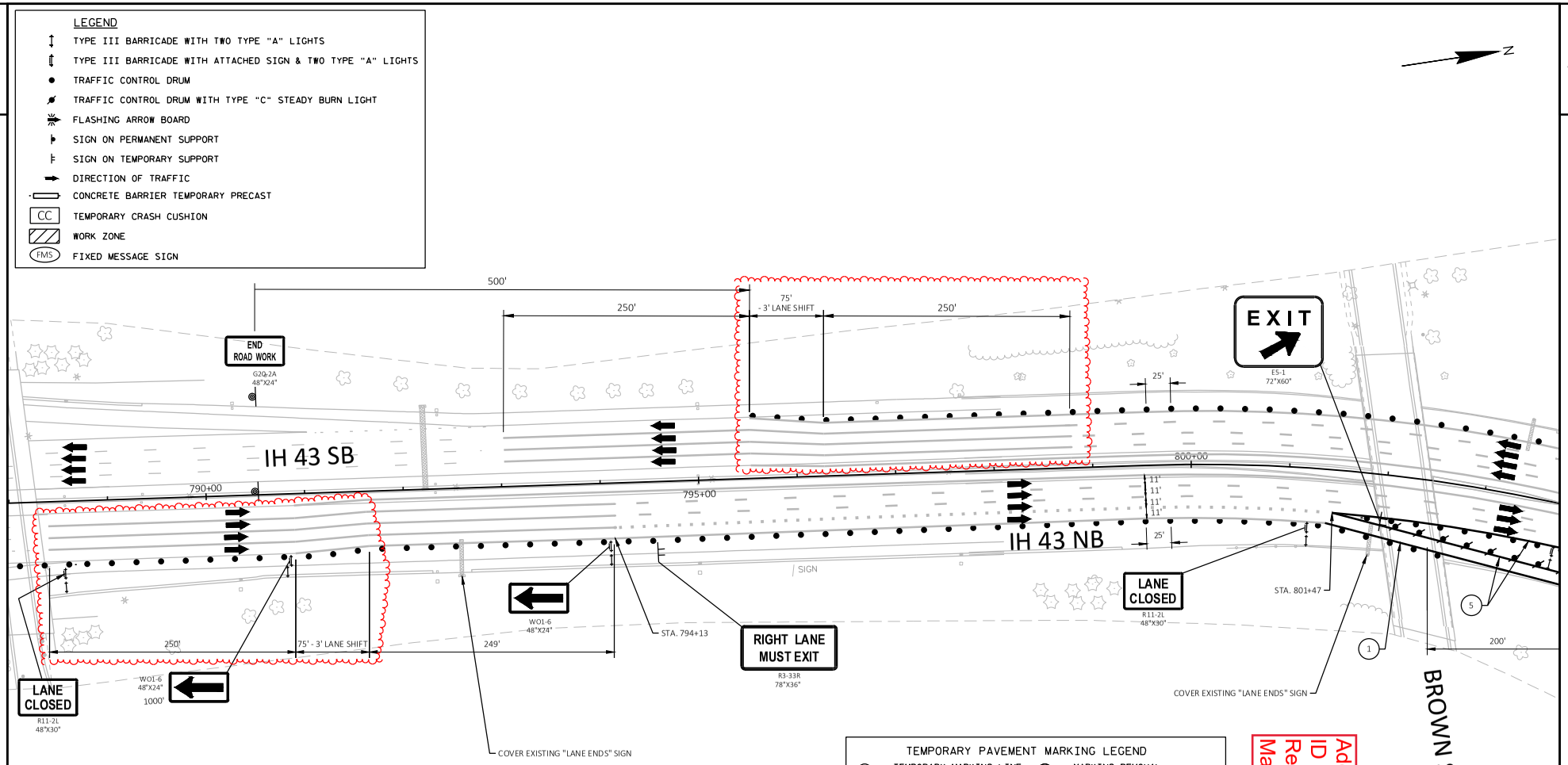
PCMS MESSAGING

SPEEDS 0 MPH TO 19 MPH		SPEEDS 20 MPH TO 39 MPH		SPEEDS 40 MPH AND GREATER
FRAME 1	FRAME 2	FRAME 1	FRAME 2	
STOPPED TRAFFIC AHEAD	EXPECT DELAYS	SLOW TRAFFIC AHEAD	PREPARE TO STOP	(FLASHING CAUTION MODE)

TRAFFIC QUEUE WARNING SYSTEM

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE IV-A	SHEET 496	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025004_TC_STAGE4A_AD1.DWG
LAYOUT NAME - 025054_tc_AD1
PLOT DATE : 2/27/2023 11:51 AM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



NOTE:

TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL INSIDE LANE CLOSURES ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)."

TEMPORARY PAVEMENT MARKINGS PRIOR TO STA. 798+53 TO BE REMOVABLE TAPE. EXISTING TEMPORARY PAVEMENT MARKINGS PLACED IN STAGE IV-A TO BE REUSED. TEMPORARY PAVEMENT MARKINGS TO BE PAINT BEFORE PLACEMENT OF THE UPPER HMA PAVEMENT LAYER. AFTER UPPER HMA PAVEMENT LAYER IS PLACED, TEMPORARY PAVEMENT MARKINGS TO BE TEMPORARY MARKING LINE EPOXY UNTIL FINAL MARKINGS ARE PLACED.

TEMPORARY PAVEMENT MARKING LEGEND

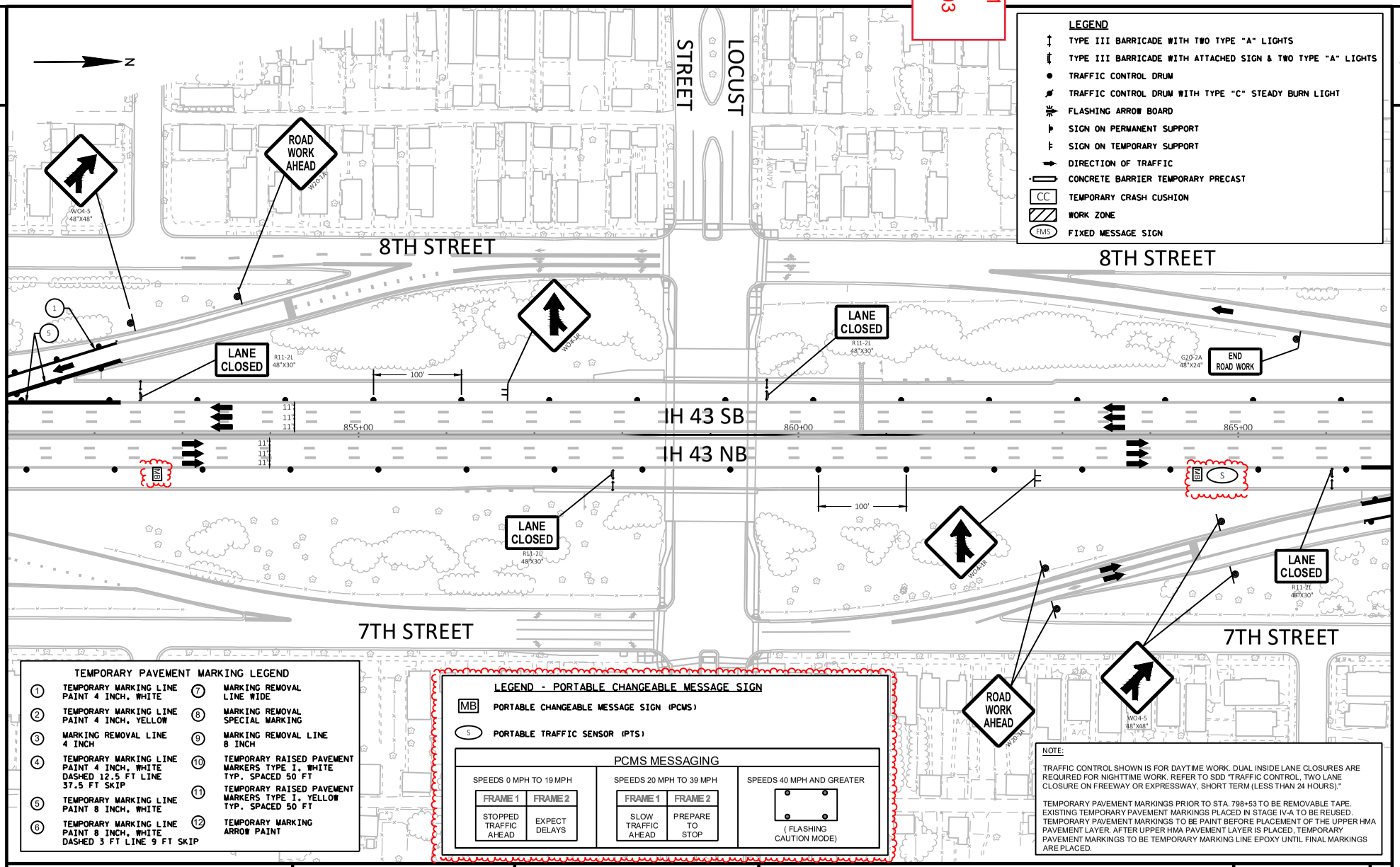
1	TEMPORARY MARKING LINE PAINT 4 INCH, WHITE	7	MARKING REMOVAL LINE WIDE
2	TEMPORARY MARKING LINE PAINT 4 INCH, YELLOW	8	MARKING REMOVAL SPECIAL MARKING
3	MARKING REMOVAL LINE 4 INCH	9	MARKING REMOVAL LINE 8 INCH
4	TEMPORARY MARKING LINE PAINT 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP	10	TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
5	TEMPORARY MARKING LINE PAINT 8 INCH, WHITE	11	TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT
6	TEMPORARY MARKING LINE PAINT 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP	12	TEMPORARY MARKING ARROW PAINT

Addendum No. 01
ID 1228-22-70
Revised Sheet 499
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE IV-B	SHEET 499	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\025004_TC_STAGE4B_AD1.DWG
LAYOUT NAME - 025057_tc_AD1
PLOT DATE : 1/18/2023 7:43 AM PLOT BY : RING, STEVEN M PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

Addendum No. 01
ID 1228-22-70
Revised Sheet 503
March 7, 2023



TEMPORARY PAVEMENT MARKING LEGEND

1	TEMPORARY MARKING LINE PAINT 4 INCH, WHITE	7	MARKING REMOVAL LINE WIDE
2	TEMPORARY MARKING LINE PAINT 4 INCH, YELLOW	8	MARKING REMOVAL SPECIAL MARKING
3	MARKING REMOVAL LINE 4 INCH	9	MARKING REMOVAL LINE 8 INCH
4	TEMPORARY MARKING LINE PAINT 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP	10	TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
5	TEMPORARY MARKING LINE PAINT 8 INCH, WHITE	11	TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT
6	TEMPORARY MARKING LINE PAINT 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP	12	TEMPORARY MARKING ARROW PAINT

LEGEND - PORTABLE CHANGEABLE MESSAGE SIGN

MB — PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

S — PORTABLE TRAFFIC SENSOR (PTS)

PCMS MESSAGING

SPEEDS 0 MPH TO 19 MPH		SPEEDS 20 MPH TO 39 MPH		SPEEDS 40 MPH AND GREATER
FRAME 1	FRAME 2	FRAME 1	FRAME 2	
STOPPED TRAFFIC AHEAD	EXPECT DELAYS	SLOW TRAFFIC AHEAD	PREPARE TO STOP	(FLASHING CAUTION MODE)

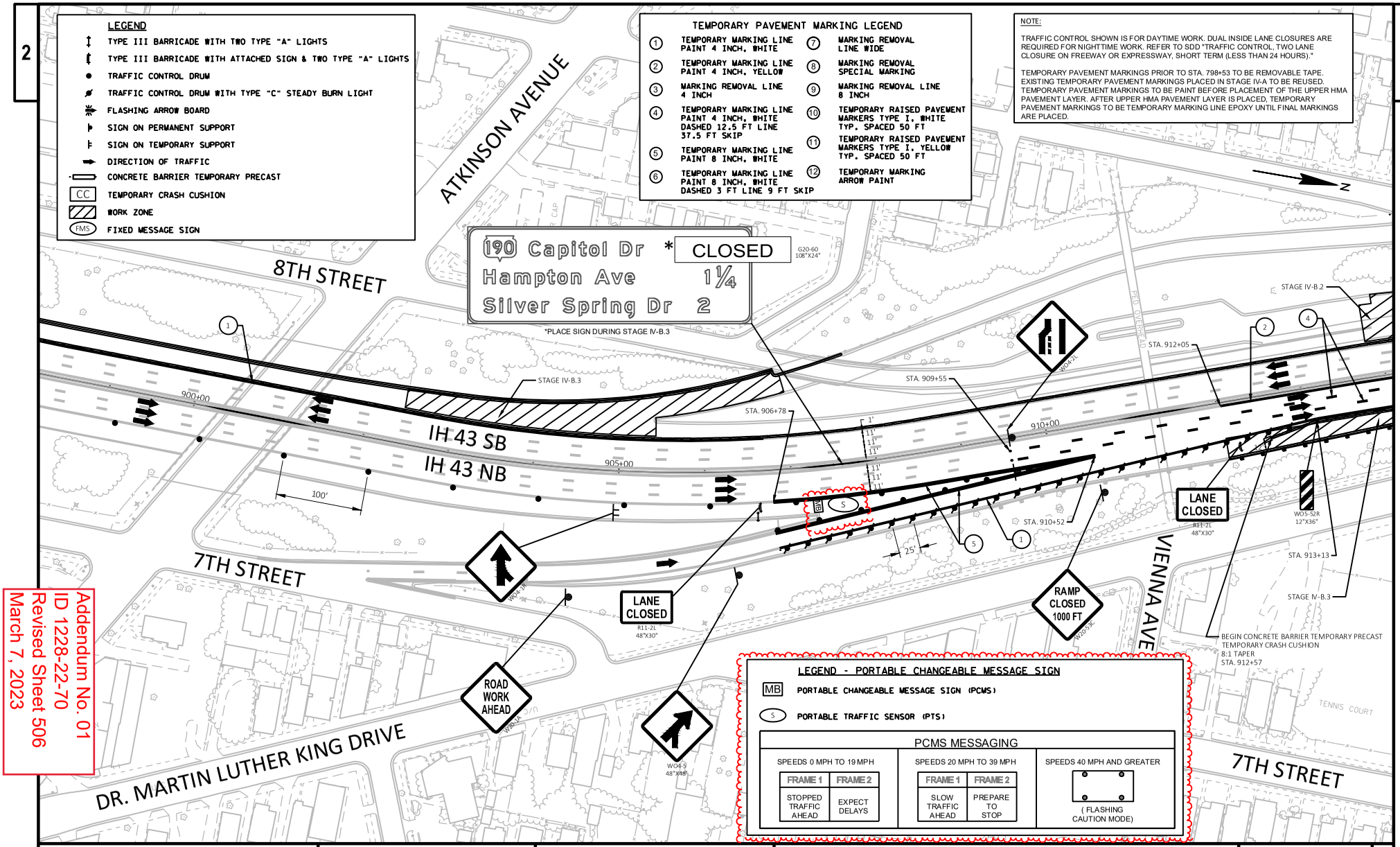
NOTE:

TRAFFIC CONTROL SHOWN IS FOR DAYTIME WORK. DUAL INSIDE LANE CLOSURES ARE REQUIRED FOR NIGHTTIME WORK. REFER TO SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)."

TEMPORARY PAVEMENT MARKINGS PRIOR TO STA. 798+53 TO BE REMOVABLE TAPE. EXISTING TEMPORARY PAVEMENT MARKINGS PLACED IN STAGE IV-A TO BE REUSED. TEMPORARY PAVEMENT MARKINGS TO BE PAINT BEFORE PLACEMENT OF THE UPPER HMA PAVEMENT LAYER. AFTER UPPER HMA PAVEMENT LAYER IS PLACED, TEMPORARY PAVEMENT MARKINGS TO BE TEMPORARY MARKING LINE EPOXY UNTIL FINAL MARKINGS ARE PLACED.

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE IV-B	SHEET 503	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025004_TC_STAGE4B_AD1.DWG
LAYOUT NAME - 025061_tc_AD1
PLOT DATE : 3/1/2023 2:33 PM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

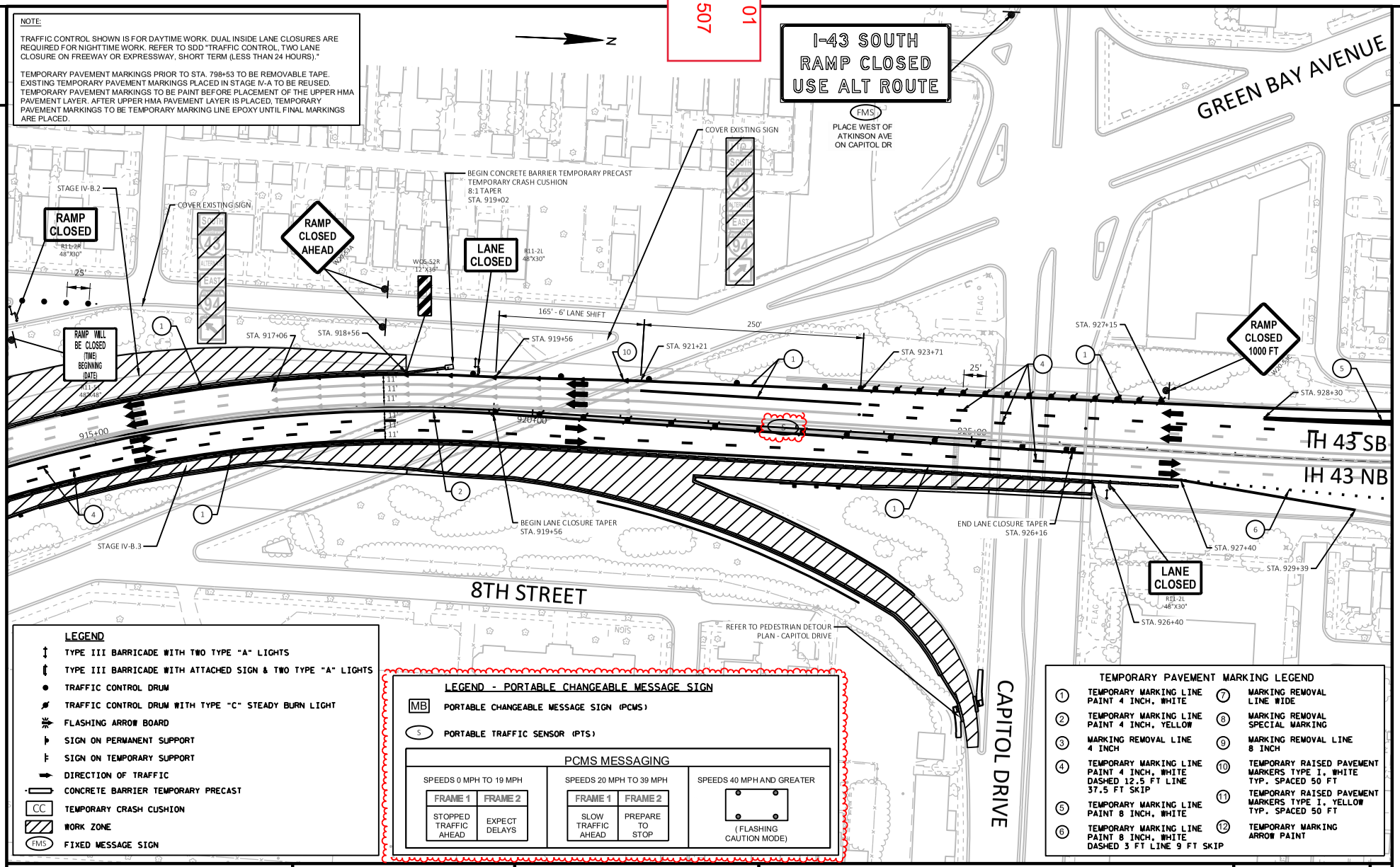


Addendum No. 01
ID 1228-22-70
Revised Sheet 506
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE IV-B	SHEET 506	E

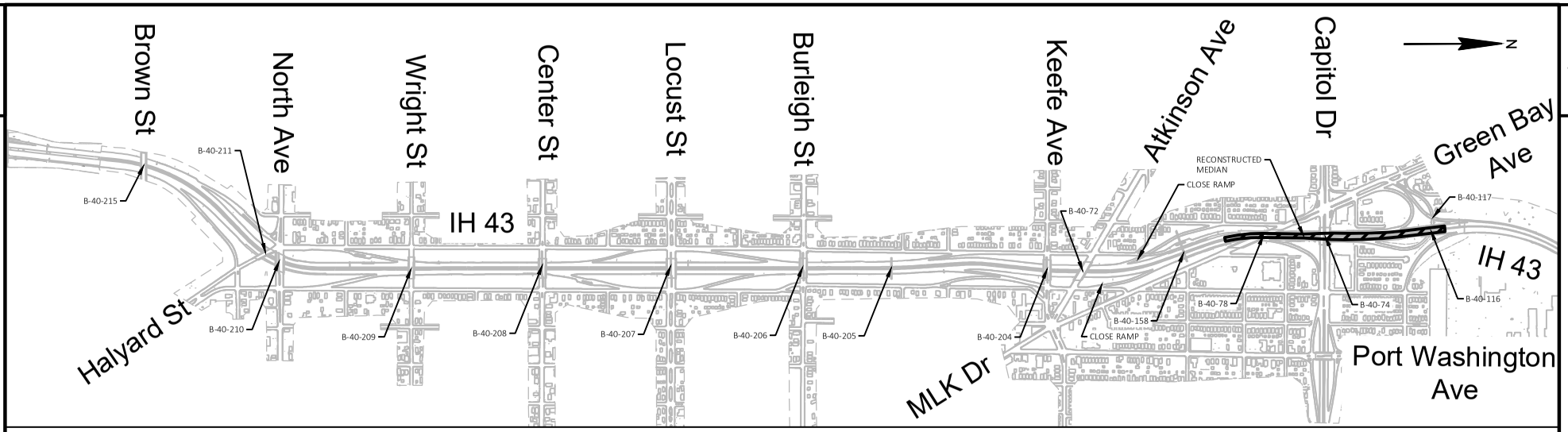
FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025004_TC_STAGE4B_AD1.DWG
LAYOUT NAME - 025064_tc_AD1
PLOT DATE : 3/1/2023 2:27 PM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

Addendum No. 01
ID 1228-22-70
Revised Sheet 507
March 7, 2023



PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE IV-B	SHEET 507	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025004_TC_STAGE4B_AD1.DWG
LAYOUT NAME - 025065_tc_AD1
PLOT DATE : 3/1/2023 2:19 PM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



LEGEND

WORK ZONE

WORK ZONE - BASE PATCHING

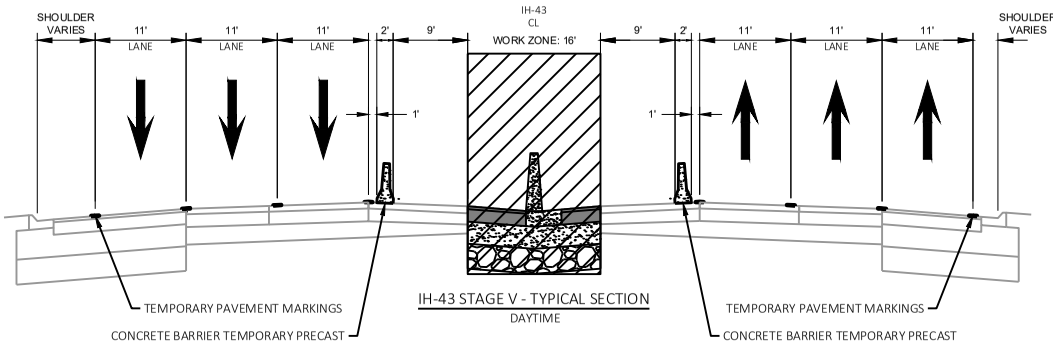
IH-43 - STAGE V

CONSTRUCTION:

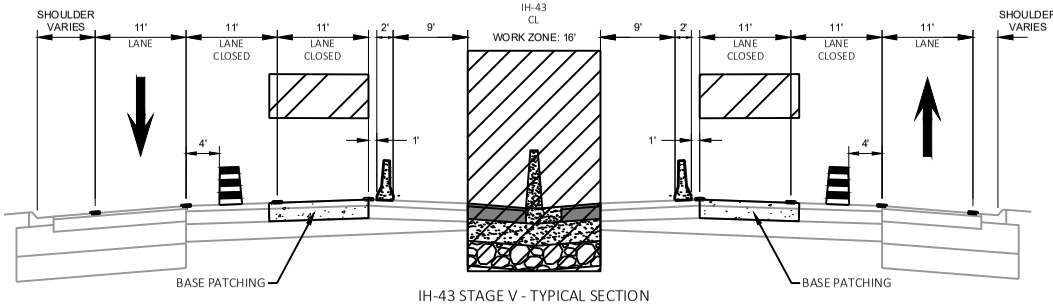
- RECONSTRUCT MEDIAN INCLUDING:
  - CONCRETE BARRIER
  - STORM SEWER
  - LIGHTING
  - SIGN STRUCTURE BASES
- CONTINUE MIDDLE LANE BASE PATCHING WITH DUAL LANE CLOSURES

TRAFFIC:

- LONG TERM SHIFT ONTO OUTSIDE SHOULDER
- LONG TERM LANE CLOSURE NORTH OF CAPITOL DRIVE IN THE NB DIRECTION
- LONG TERM LANE CLOSURE IN THE SB DIRECTION
- LONG TERM RAMP CLOSURES (AS NOTED ABOVE)
- NIGHTTIME INNER LANE CLOSURES
- NIGHTTIME FULL FREEWAY CLOSURE STORM SEWER CROSSING WORK



IH-43 STAGE V - TYPICAL SECTION
DAYTIME



IH-43 STAGE V - TYPICAL SECTION
NIGHTTIME

Addendum No. 01
ID 1228-22-70
Revised Sheet 509
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE V OVERVIEW	SHEET 509	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\026008_S1.DWG
LAYOUT NAME - 026008_s1
PLOT DATE : 2/22/2023 4:20 PM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:1000 FT
WISDOT/CADDS SHEET 42

Addendum No. 01
ID 1228-22-70
Revised Sheet 510
March 7, 2023

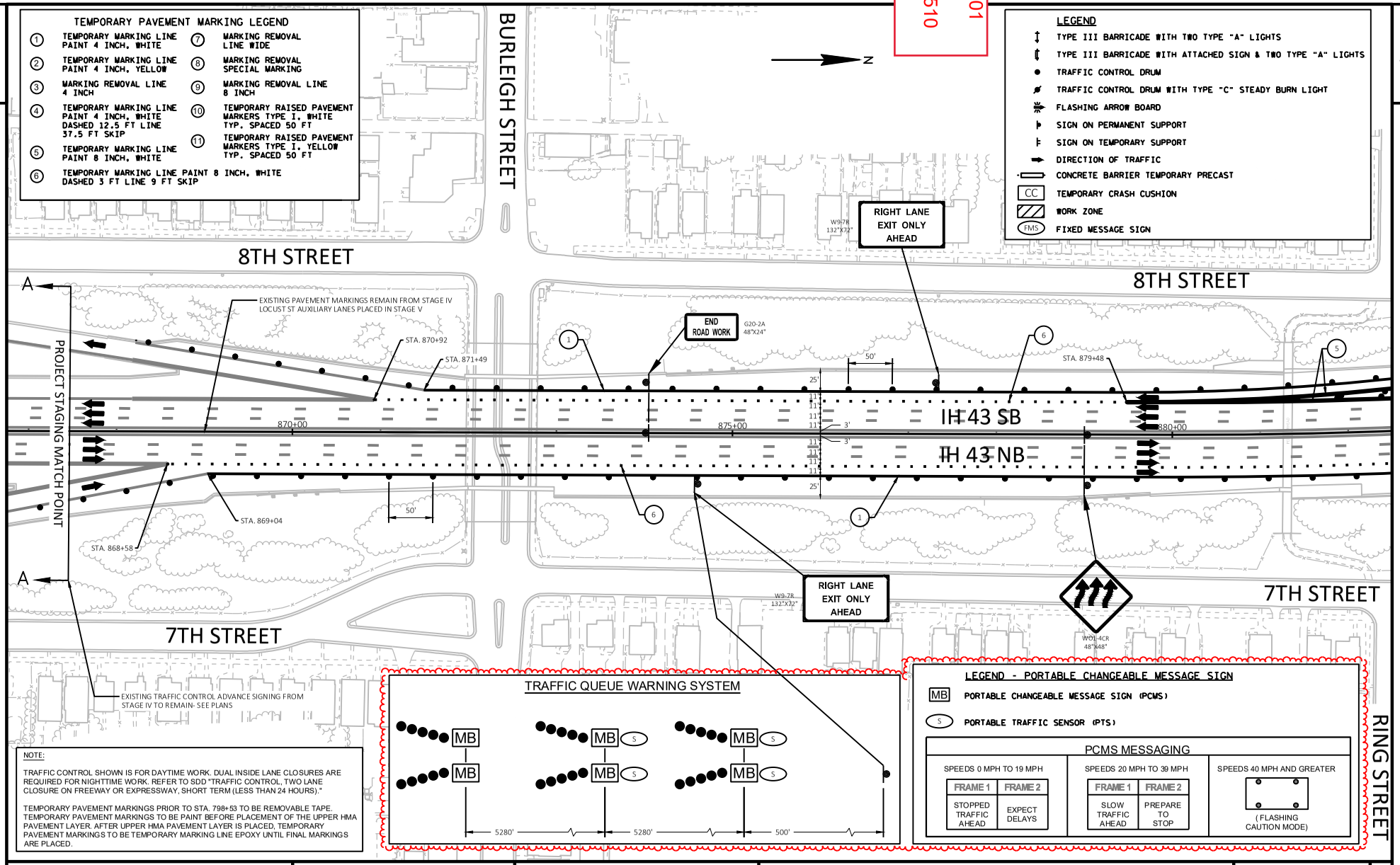
2

TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE PAINT 4 INCH, WHITE
2. TEMPORARY MARKING LINE PAINT 4 INCH, YELLOW
3. MARKING REMOVAL LINE 4 INCH
4. TEMPORARY MARKING LINE PAINT 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP
5. TEMPORARY MARKING LINE PAINT 8 INCH, WHITE
6. TEMPORARY MARKING LINE PAINT 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP
7. MARKING REMOVAL LINE WIDE
8. MARKING REMOVAL SPECIAL MARKING
9. MARKING REMOVAL LINE 8 INCH
10. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
11. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN & TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CC TEMPORARY CRASH CUSHION
- WORK ZONE
- FMS FIXED MESSAGE SIGN



NOTE:

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TEMPORARY PAVEMENT MARKINGS PRIOR TO STA. 798+53 TO BE REMOVABLE TAPE. TEMPORARY PAVEMENT MARKINGS TO BE PAINT BEFORE PLACEMENT OF THE UPPER HMA PAVEMENT LAYER. AFTER UPPER HMA PAVEMENT LAYER IS PLACED, TEMPORARY PAVEMENT MARKINGS TO BE TEMPORARY MARKING LINE EPOXY UNTIL FINAL MARKINGS ARE PLACED.

TRAFFIC QUEUE WARNING SYSTEM

LEGEND - PORTABLE CHANGEABLE MESSAGE SIGN

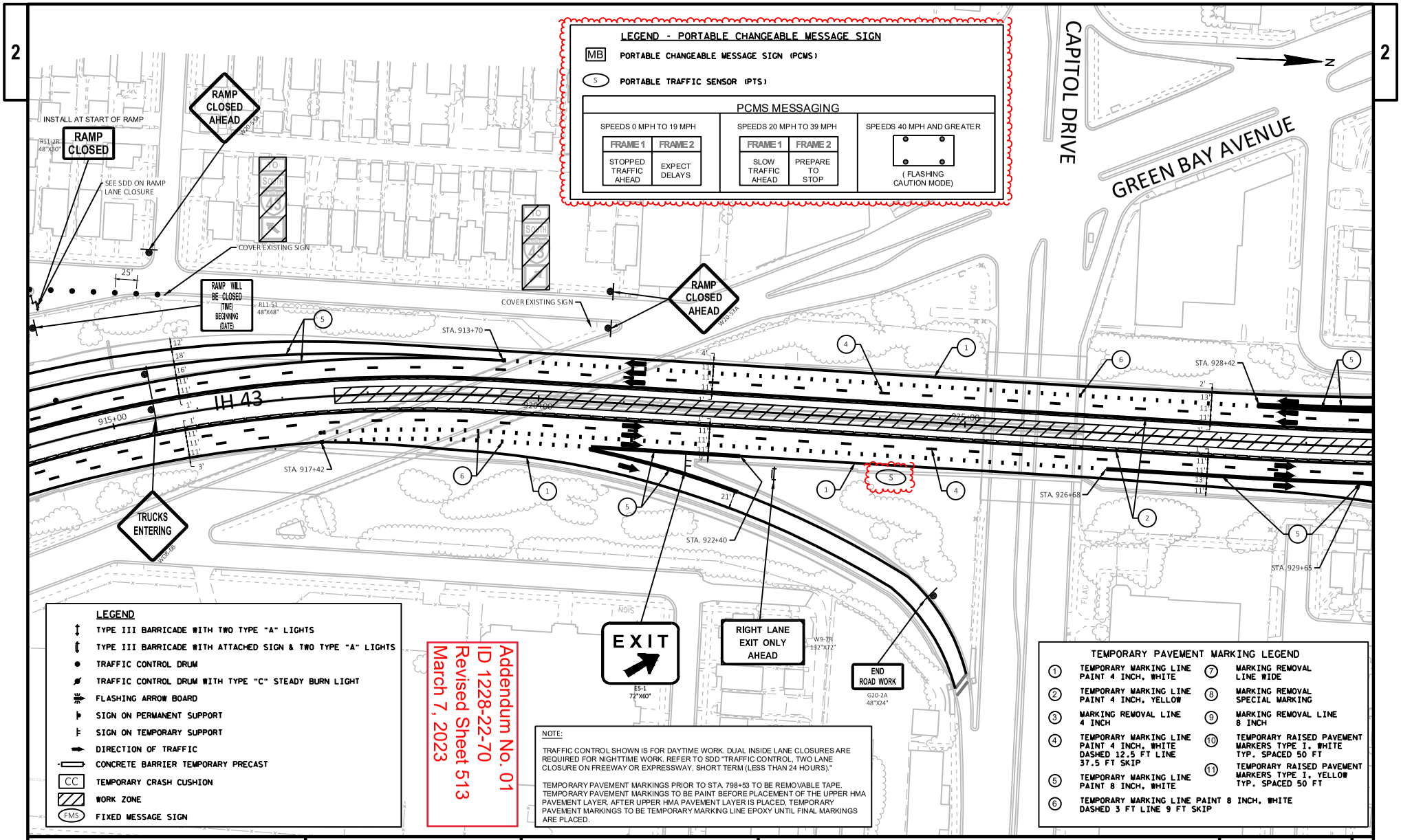
- MB PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- S PORTABLE TRAFFIC SENSOR (PTS)

PCMS MESSAGING

SPEEDS 0 MPH TO 19 MPH		SPEEDS 20 MPH TO 39 MPH		SPEEDS 40 MPH AND GREATER
FRAME 1	FRAME 2	FRAME 1	FRAME 2	
STOPPED TRAFFIC AHEAD	EXPECT DELAYS	SLOW TRAFFIC AHEAD	PREPARE TO STOP	(FLASHING CAUTION MODE)

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE V	SHEET 510	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025005_TC_AD1.DWG
LAYOUT NAME - 025062_tc_AD1
PLOT DATE : 2/28/2023 7:36 AM PLOT BY : RING, STEVEN M PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE V	SHEET 513	E

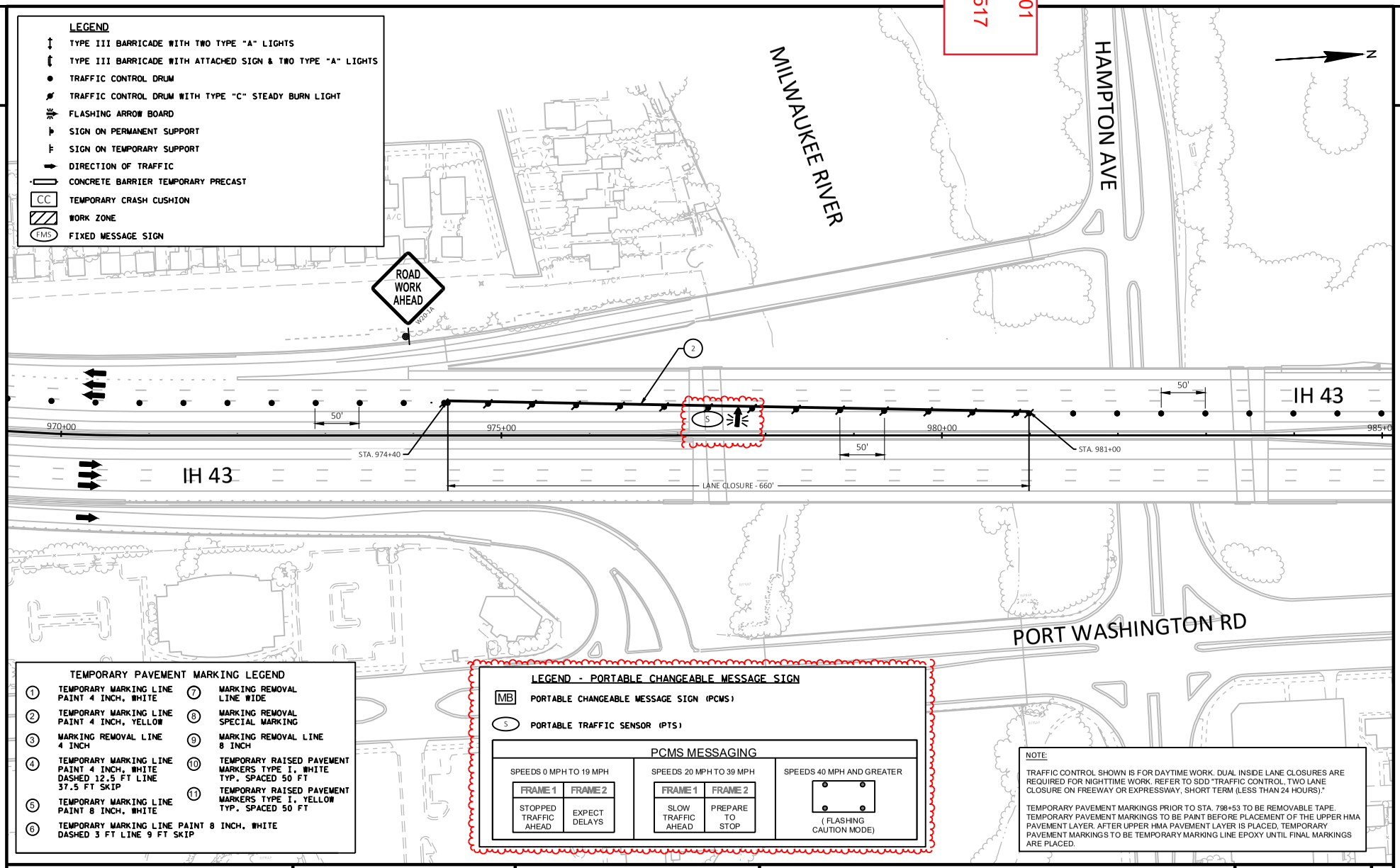
FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025005_TC_AD1.DWG
LAYOUT NAME - 025065_tc_AD1
PLOT DATE : 3/1/2023 1:18 PM PLOT BY : JOHANSEN, AMANDA A PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

Addendum No. 01
ID 1228-22-70
Revised Sheet 517
March 7, 2023

2

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN & TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — TEMPORARY CRASH CUSHION
- WORK ZONE
- FMS — FIXED MESSAGE SIGN



TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE PAINT 4 INCH, WHITE
2. TEMPORARY MARKING LINE PAINT 4 INCH, YELLOW
3. MARKING REMOVAL LINE 4 INCH
4. TEMPORARY MARKING LINE PAINT 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP
5. TEMPORARY MARKING LINE PAINT 8 INCH, WHITE
6. TEMPORARY MARKING LINE PAINT 8 INCH, WHITE DASHED 3 FT LINE 9 FT SKIP
7. MARKING REMOVAL LINE WIDE
8. MARKING REMOVAL SPECIAL MARKING
9. MARKING REMOVAL LINE 8 INCH
10. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, WHITE TYP. SPACED 50 FT
11. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT

LEGEND - PORTABLE CHANGEABLE MESSAGE SIGN

MB — PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

S — PORTABLE TRAFFIC SENSOR (PTS)

PCMS MESSAGING

SPEEDS 0 MPH TO 19 MPH		SPEEDS 20 MPH TO 39 MPH		SPEEDS 40 MPH AND GREATER
FRAME 1	FRAME 2	FRAME 1	FRAME 2	
STOPPED TRAFFIC AHEAD	EXPECT DELAYS	SLOW TRAFFIC AHEAD	PREPARE TO STOP	(FLASHING CAUTION MODE)

NOTE:

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TEMPORARY PAVEMENT MARKINGS PRIOR TO STA. 798+53 TO BE REMOVABLE TAPE. TEMPORARY PAVEMENT MARKINGS TO BE PAINT BEFORE PLACEMENT OF THE UPPER HMA PAVEMENT LAYER. AFTER UPPER HMA PAVEMENT LAYER IS PLACED, TEMPORARY PAVEMENT MARKINGS TO BE TEMPORARY MARKING LINE EPOXY UNTIL FINAL MARKINGS ARE PLACED.

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE V	SHEET 517	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025005_TC_AD1.DWG
LAYOUT NAME - 025069_tc_AD1
PLOT DATE : 2/28/2023 7:48 AM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE PAINT 4 INCH, WHITE
2. TEMPORARY MARKING LINE PAINT 4 INCH, YELLOW
3. MARKING REMOVAL LINE 4 INCH
4. TEMPORARY MARKING LINE PAINT 4 INCH, WHITE DASHED 12.5 FT LINE 37.5 FT SKIP
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8. MARKING REMOVAL SPECIAL MARKING
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11. TEMPORARY RAISED PAVEMENT MARKERS TYPE I, YELLOW TYP. SPACED 50 FT

NOTE:

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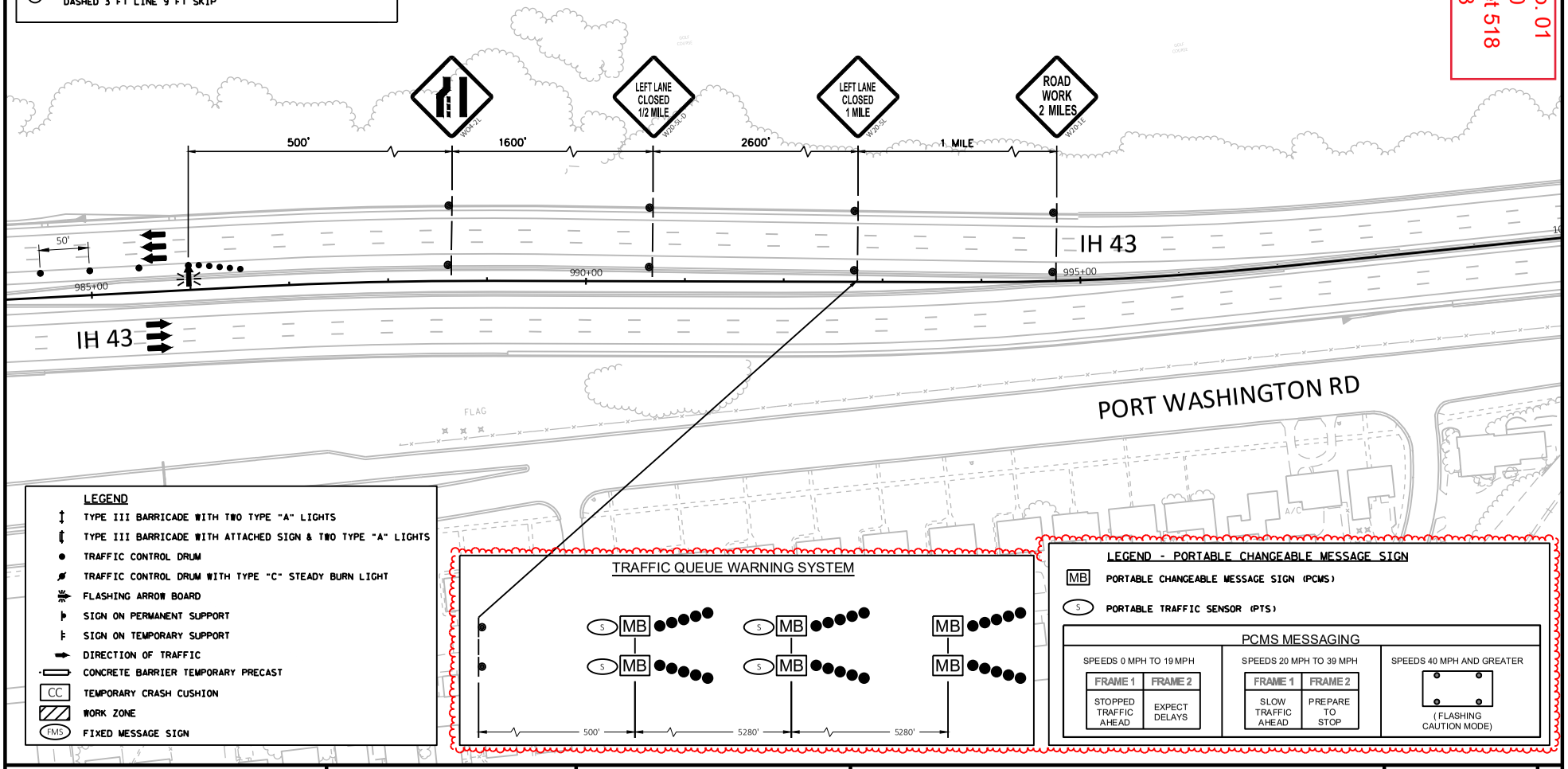
TEMPORARY PAVEMENT MARKINGS PRIOR TO STA. 798+53 TO BE REMOVABLE TAPE. TEMPORARY PAVEMENT MARKINGS TO BE PAINT BEFORE PLACEMENT OF THE UPPER HMA PAVEMENT LAYER. AFTER UPPER HMA PAVEMENT LAYER IS PLACED, TEMPORARY PAVEMENT MARKINGS TO BE TEMPORARY MARKING LINE EPOXY UNTIL FINAL MARKINGS ARE PLACED.

N

Addendum No. 01
ID 1228-22-70
Revised Sheet 518
March 7, 2023



LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN & TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — TEMPORARY CRASH CUSHION
- WORK ZONE
- FMS — FIXED MESSAGE SIGN

TRAFFIC QUEUE WARNING SYSTEM

LEGEND - PORTABLE CHANGEABLE MESSAGE SIGN

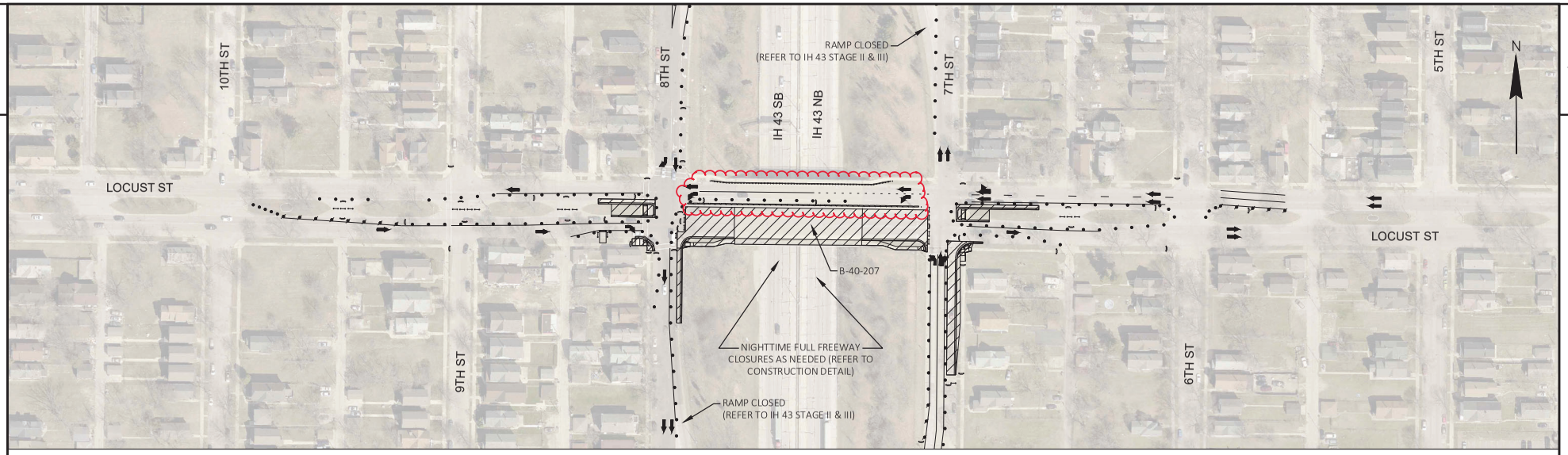
- MB — PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- S — PORTABLE TRAFFIC SENSOR (PTS)

PCMS MESSAGING

SPEEDS 0 MPH TO 19 MPH		SPEEDS 20 MPH TO 39 MPH		SPEEDS 40 MPH AND GREATER
FRAME 1	FRAME 2	FRAME 1	FRAME 2	
STOPPED TRAFFIC AHEAD	EXPECT DELAYS	SLOW TRAFFIC AHEAD	PREPARE TO STOP	(FLASHING CAUTION MODE)

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE V	SHEET 518	E

FILE NAME : C:\BOXDRV\BOX\DTSD-PROJECTS-PUBLIC\SER-PROJECTS-STATE\DESIGN\12282200\DESIGN\PS&E\ADDENDA\ADDENDUM 1\C3D\025005_TC_AD1.DWG
LAYOUT NAME - 025070_tc_AD1
PLOT DATE : 2/28/2023 7:47 AM
PLOT BY : RING, STEVEN M
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



LEGEND

WORK ZONE

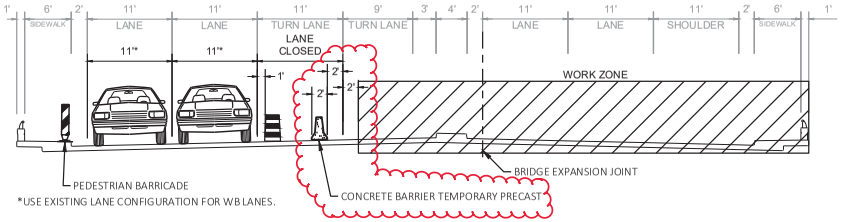
LOCUST STREET - STAGE I

CONSTRUCTION:

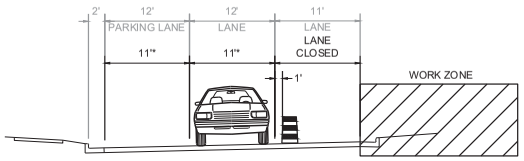
- COMPLETE EASTBOUND SIDE DECK REPLACEMENT
- CONSTRUCT EASTBOUND PAVEMENT ON LOCUST STREET, CURB & GUTTER AND SIDEWALK
- COMPLETE MEDIAN WORK ON LOCUST STREET AT 8TH STREET AND 7TH STREET
- BEGIN 8TH STREET WIDENING UP TO IH 43 SB ON-RAMP
- REMOVE RAISED MEDIAN ON 7TH STREET AT LOCUST STREET INTERSECTION
- INSTALL TEMPORARY TRAFFIC SIGNALS ON LOCUST STREET AT 8TH STREET AND 7TH STREET
- BEGIN PERMANENT TRAFFIC SIGNAL INSTALLATION ON LOCUST STREET AT 8TH STREET AND 7TH STREET

TRAFFIC:

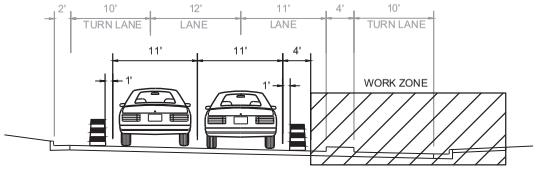
- EASTBOUND LOCUST STREET CLOSED TO TRAFFIC FROM 7TH STREET TO 8TH STREET
- WESTBOUND TRAFFIC IS REDUCED TO ONE LANE BETWEEN 9TH STREET AND 7TH STREET
- NIGHTTIME FULL CLOSURE OF IH 43 FOR DECK REMOVAL AND DECK STRIPPING
  - IH 43 ON-RAMPS FROM LOCUST STREET TO BE REOPENED DURING CLOSURE
- SOUTHBOUND 8TH STREET AT LOCUST STREET WILL HAVE ONE RIGHT TURN ONLY LANE AND ONE THROUGH LANE OPEN TO TRAFFIC
- NORTHBOUND 7TH STREET AT LOCUST STREET WILL HAVE A DEDICATED LEFT TURN LANE AND A SHARED THROUGH/RIGHT TURN LANE OPEN TO TRAFFIC



STAGE I - TYPICAL SECTION
LOCUST STREET



STAGE I - TYPICAL SECTION
8TH STREET

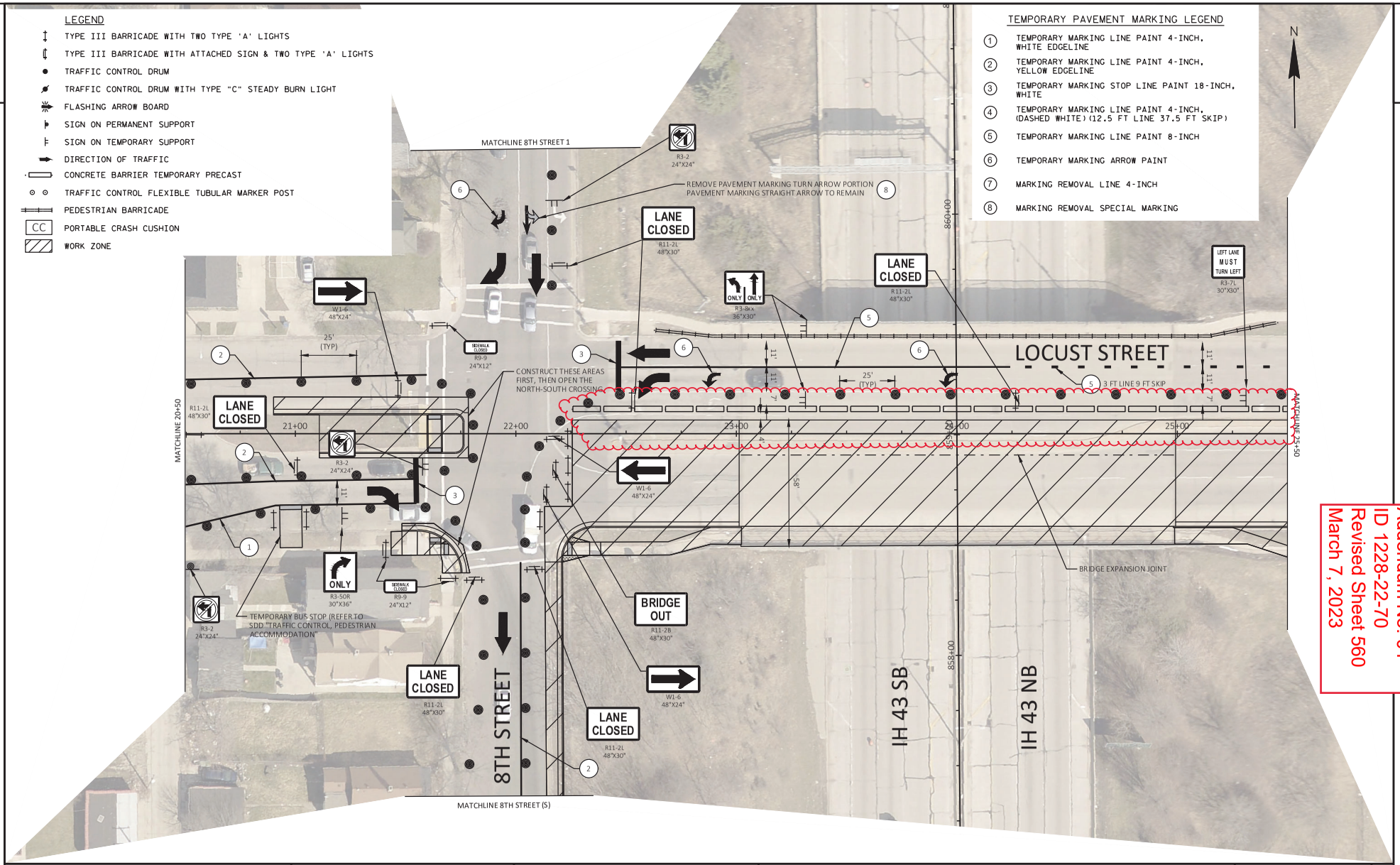


STAGE I - TYPICAL SECTION
7TH STREET

Addendum No. 01
ID 1228-22-70
Revised Sheet 557
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - LOCUST ST - STAGE I OVERVIEW	SHEET 557	E

FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\122822 70\SHEETSPLAN\025001_TC_LOCUST_OVERVIEW.DWG
LAYOUT NAME - 026001_s1
PLOT DATE : 2/17/2023 10:34 AM PLOT BY : JOHANSEN, AMANDA A PLOT NAME : PLOT SCALE : NTS
WISDOT/CADDS SHEET 42

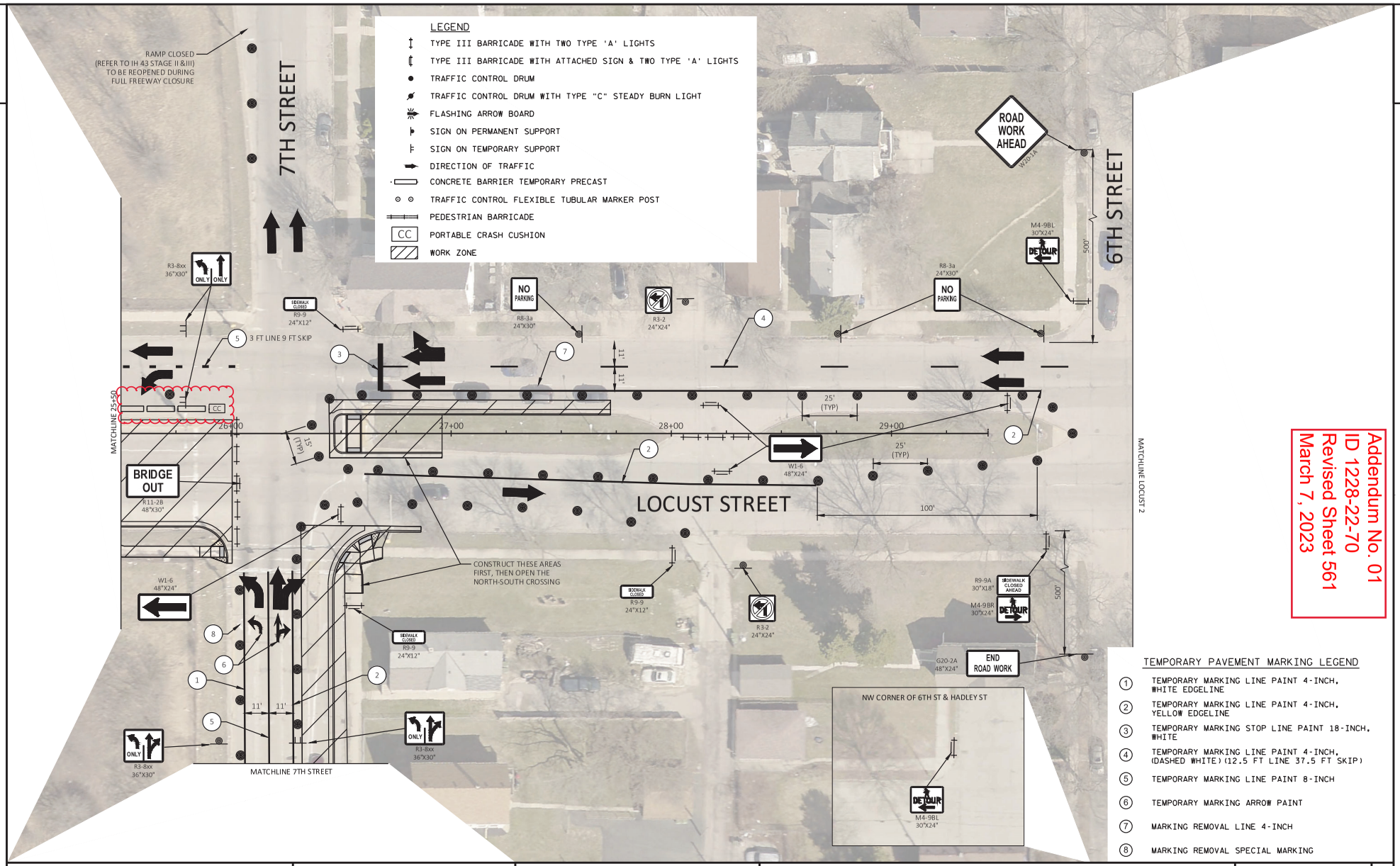


Addendum No. 01
ID 1228-22-70
Revised Sheet 560
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - LOCUST STREET BRIDGE - DIRECTIONAL STAGE I	SHEET 560	E

FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\1228270\SHEETSPLAN\025001_TC_LOCUST.DWG
LAYOUT NAME - 025001_tc_Locust3
PLOT DATE : 2/17/2023 1:10 PM PLOT BY : JOHANSEN, AMANDA A PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42



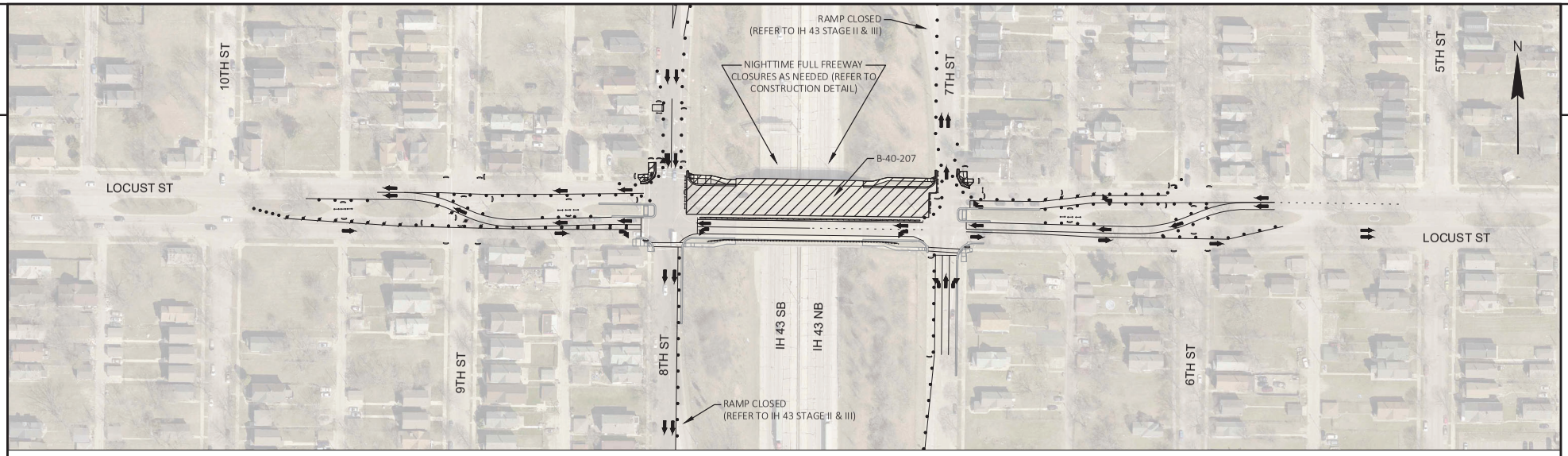
TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE PAINT 4-INCH, WHITE EDGELINE
2. TEMPORARY MARKING LINE PAINT 4-INCH, YELLOW EDGELINE
3. TEMPORARY MARKING STOP LINE PAINT 18-INCH, WHITE
4. TEMPORARY MARKING LINE PAINT 4-INCH, (DASHED WHITE)(12.5 FT LINE 37.5 FT SKIP)
5. TEMPORARY MARKING LINE PAINT 8-INCH
6. TEMPORARY MARKING ARROW PAINT
7. MARKING REMOVAL LINE 4-INCH
8. MARKING REMOVAL SPECIAL MARKING

Addendum No. 01
ID 1228-22-70
Revised Sheet 561
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - LOCUST STREET BRIDGE - DIRECTIONAL STAGE I	SHEET 561	E

FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\122822 70\SHEETSPLAN\025001_TC_LOCUST.DWG
LAYOUT NAME - 025001_tc_Locust4
PLOT DATE : 2/17/2023 1:17 PM
PLOT BY : JOHANSEN, AMANDA A
PLOT NAME :
PLOT SCALE : 1 IN:40 FT



LEGEND

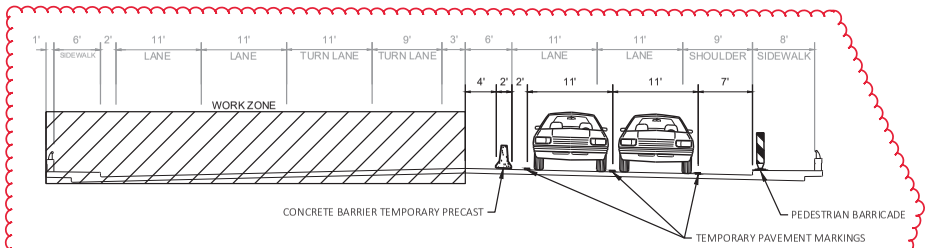
WORK ZONE

LOCUST STREET - STAGE II

CONSTRUCTION:
- COMPLETE WESTBOUND SIDE DECK REPLACEMENT
- CONSTRUCT WESTBOUND PAVEMENT ON LOCUST STREET, CURB & GUTTER AND SIDEWALK
- COMPLETE TRAFFIC SIGNAL INSTALLATION AT THE 8TH STREET AND 7TH STREET INTERSECTIONS.

TRAFFIC:
- EASTBOUND LOCUST STREET CLOSED TO TRAFFIC FROM 7TH STREET TO 8TH STREET
- WESTBOUND LOCUST STREET IS CLOSED WITH TRAFFIC SHIFTED TO THE EASTBOUND SIDE VIA A CROSSOVER. TRAFFIC IS REDUCED TO ONE LANE BETWEEN 9TH STREET AND 7TH STREET
- NIGHTTIME FULL CLOSURE OF IH 43 FOR DECK REMOVAL AND DECK STRIPPING
  - IH 43 ON-RAMPS FROM LOCUST STREET TO BE REOPENED DURING CLOSURE
- SOUTHBOUND 8TH STREET AT LOCUST STREET WILL HAVE A SHARED THROUGH/RIGHT TURN LANE AND ONE THROUGH LANE ONLY OPEN TO TRAFFIC
- NORTHBOUND 7TH STREET AT LOCUST STREET WILL HAVE A DEDICATED LEFT TURN LANE, A THROUGH LANE, AND A RIGHT TURN LANE OPEN TO TRAFFIC

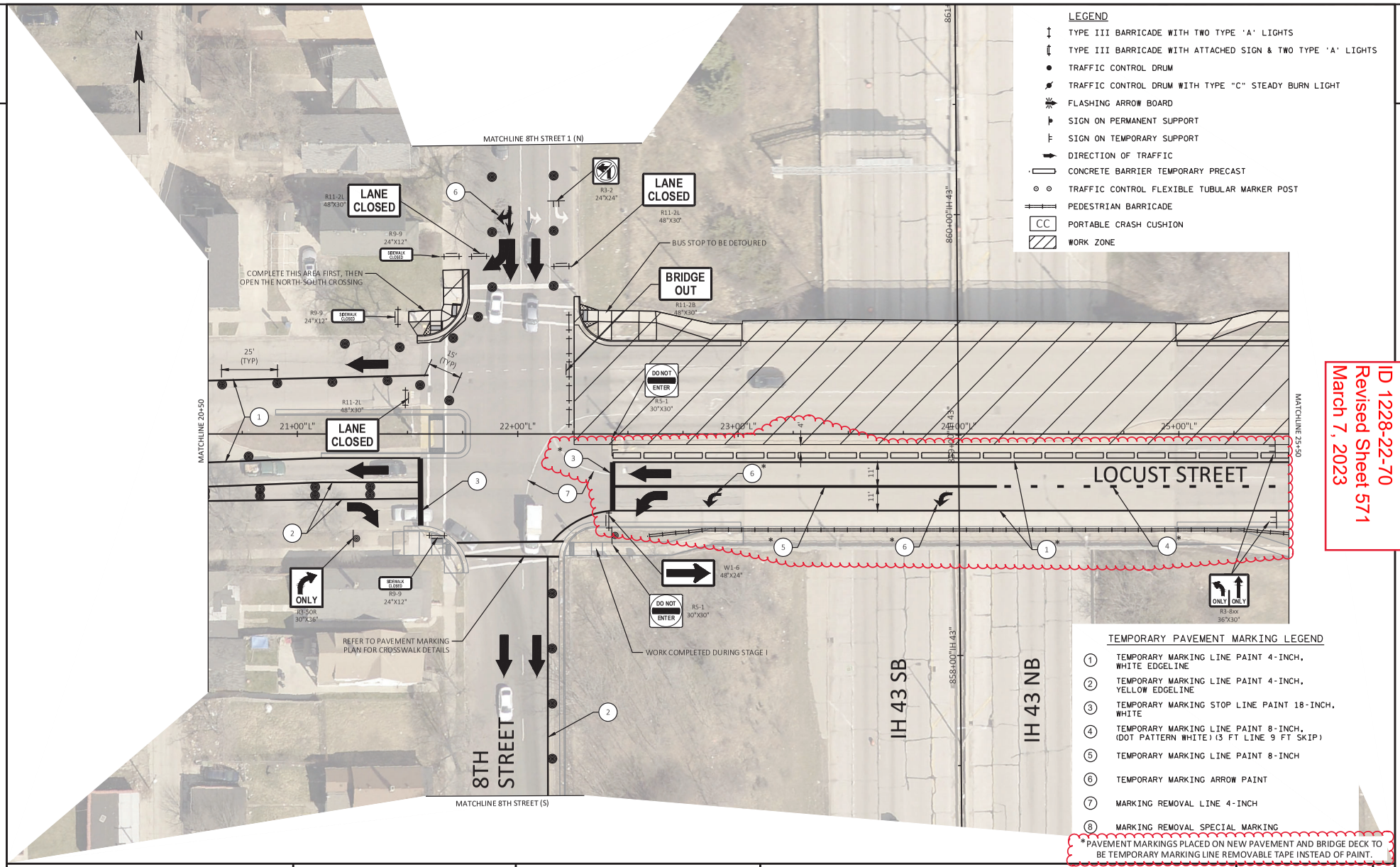
Addendum No. 01
ID 1228-22-70
Revised Sheet 568
March 7, 2023



STAGE II - TYPICAL SECTION
LOCUST STREET

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - LOCUST ST - STAGE II OVERVIEW	SHEET 568	E

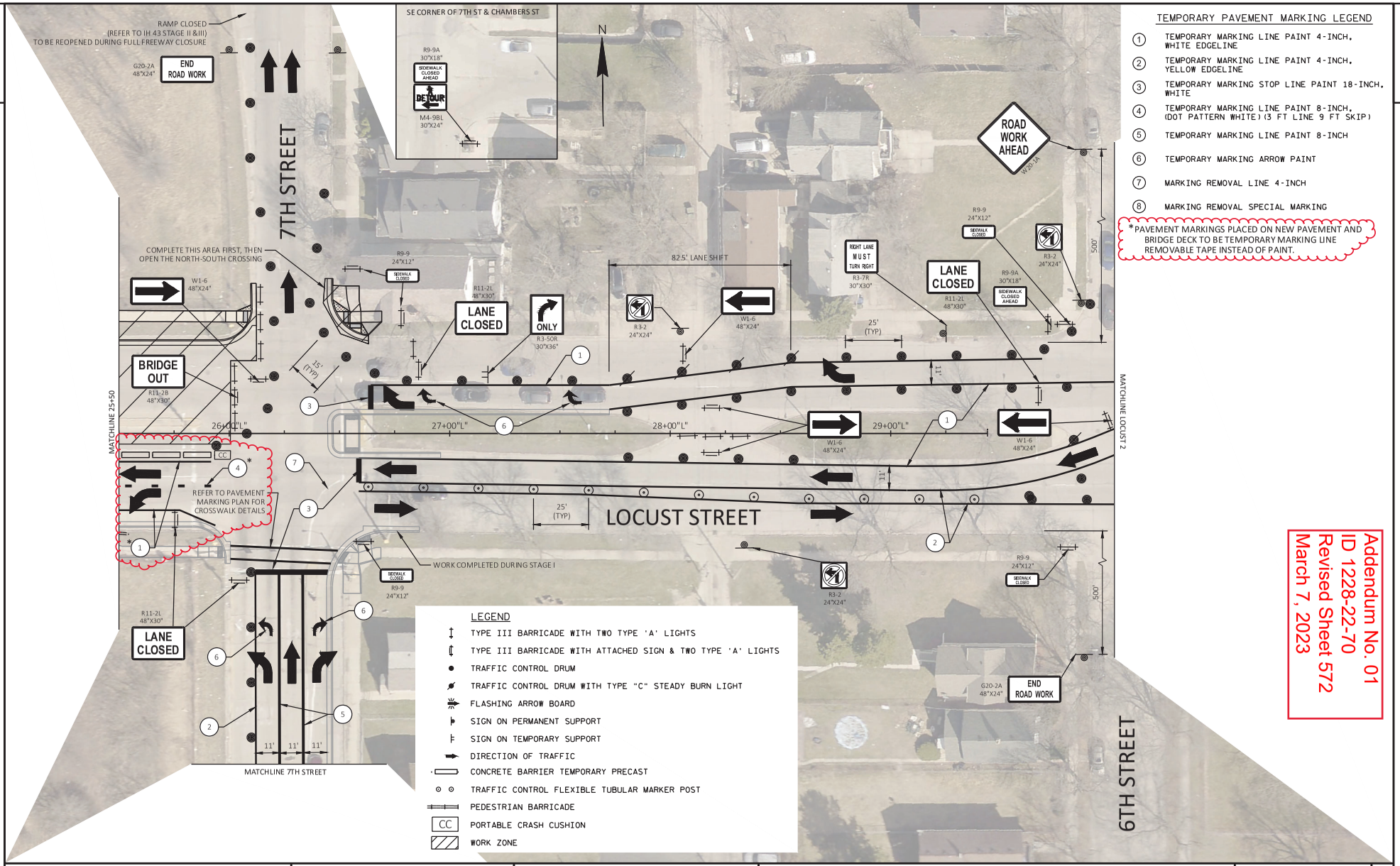
FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\122822 70\SHEETSPLAN\025002_TC_LOCUST_OVERVIEW.DWG
LAYOUT NAME - 026002_s2
PLOT DATE : 2/18/2023 9:15 AM
PLOT BY : JOHANSEN, AMANDA A
PLOT NAME :
PLOT SCALE : NTS



Addendum No. 01
ID 1228-22-70
Revised Sheet 571
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - LOCUST STREET BRIDGE - DIRECTIONAL STAGE II	SHEET 571	E

FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\1228270\SHEETSPLAN\025002_TC_LOCUST.DWG
LAYOUT NAME - 025002_tc_Locust3
PLOT DATE : 2/18/2023 9:48 AM
PLOT BY : JOHANSEN, AMANDA A
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42



TEMPORARY PAVEMENT MARKING LEGEND

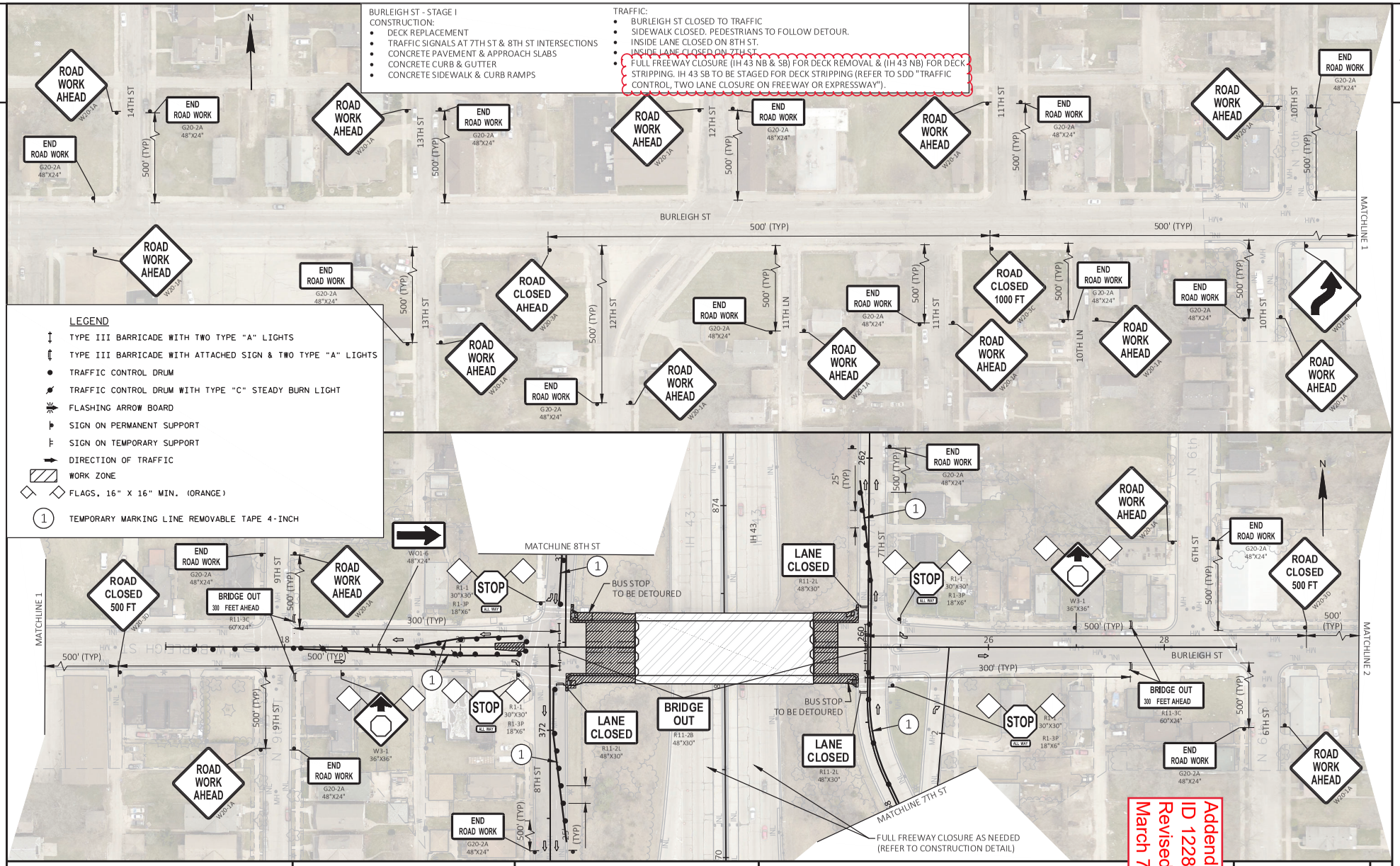
1. TEMPORARY MARKING LINE PAINT 4-INCH, WHITE EDGELINE
2. TEMPORARY MARKING LINE PAINT 4-INCH, YELLOW EDGELINE
3. TEMPORARY MARKING STOP LINE PAINT 18-INCH, WHITE
4. TEMPORARY MARKING LINE PAINT 8-INCH, (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
5. TEMPORARY MARKING LINE PAINT 8-INCH
6. TEMPORARY MARKING ARROW PAINT
7. MARKING REMOVAL LINE 4-INCH
8. MARKING REMOVAL SPECIAL MARKING

*PAVEMENT MARKINGS PLACED ON NEW PAVEMENT AND BRIDGE DECK TO BE TEMPORARY MARKING LINE REMOVABLE TAPE INSTEAD OF PAINT.

Addendum No. 01
ID 1228-22-70
Revised Sheet 572
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - LOCUST STREET BRIDGE - DIRECTIONAL STAGE II	SHEET 572	E

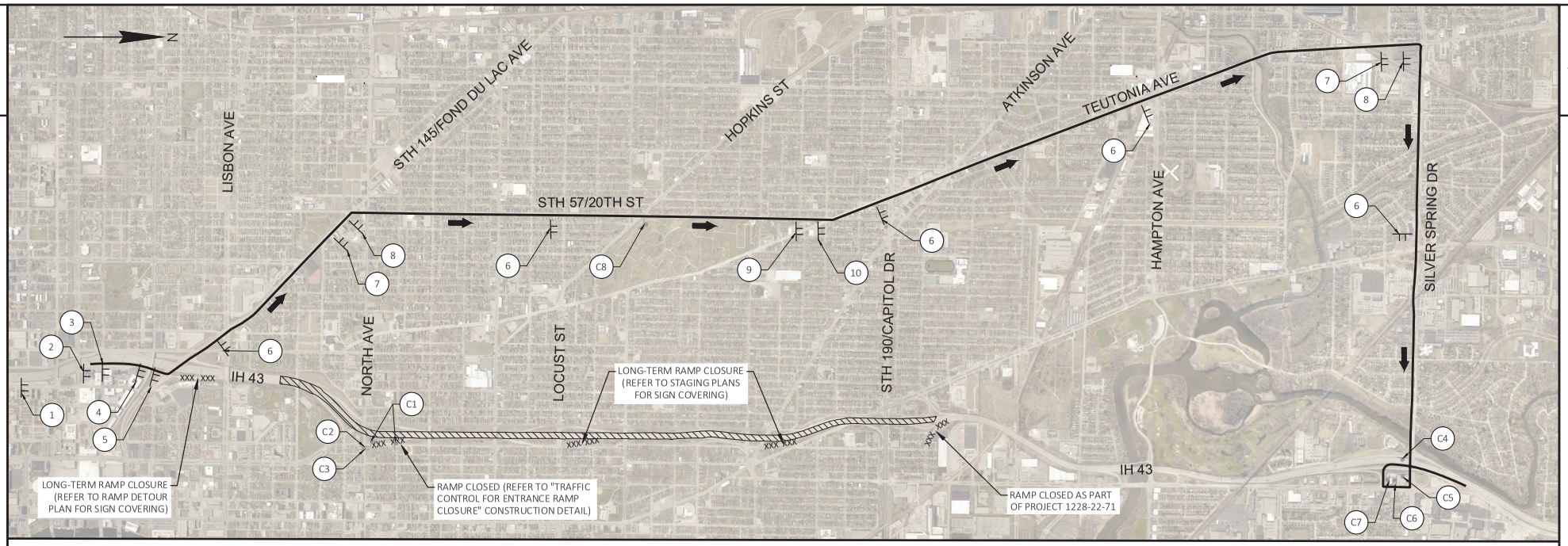
FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\122822 70\SHEETSPLAN\025002_TC_LOCUST.DWG
LAYOUT NAME - 025002_tc_Locust4
PLOT DATE : 2/18/2023 9:56 AM
PLOT BY : JOHANSEN, AMANDA A
PLOT NAME :
PLOT SCALE : 1 IN:40 FT



PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - BURLEIGH STREET (STAGE I)	SHEET 578	E

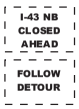
FILE NAME : \\WKERTOVFILP101\N3 PUBLIC\PDS\C3D\122822 70\SHEETSPLAN\026007_S1.DWG
LAYOUT NAME - 026007_1_s1
PLOT DATE : 2/16/2023 10:01 AM
PLOT BY : JOHANSEN, AMANDA A
PLOT NAME :
PLOT SC
WISDOT/CADDS SHEET 44

Addendum No. 01
ID 1228-22-70
Revised Sheet 578
March 7, 2023



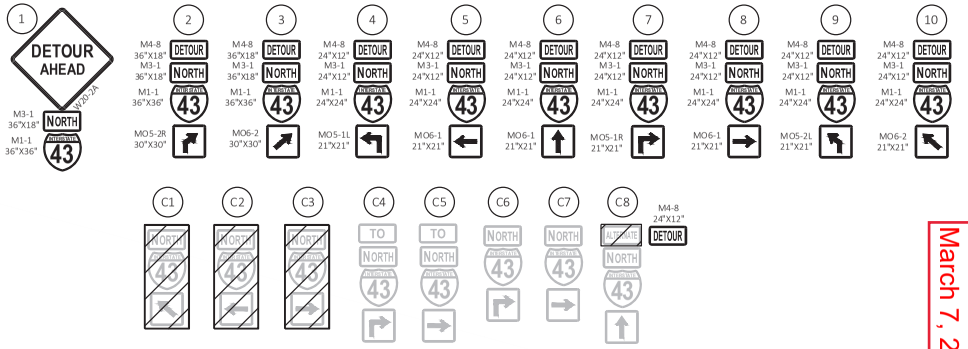
NOTES

- DETOUR ON THIS PAGE WILL BE UTILIZED FOR TRAFFIC CONTROL SETUP BETWEEN STAGES IN 2023.
- REFER TO CONSTRUCTION DETAIL "THREE LANE FULL FREEWAY CLOSURE".
- ALL EXISTING SIGN MESSAGES IN CONFLICT WITH TRAFFIC CONTROL DETOUR SIGNS SHALL BE COVERED OR REMOVED.
- THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS. SIGNS MAY BE MOUNTED ON EXISTING POSTS, LIGHTS, OR TEMPORARY SIGN SUPPORTS AS APPROVED BY THE ENGINEER.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.
- PLACE TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE BOARD (PCMS) PRIOR TO THE MARQUETTE INTERCHANGE ON BOTH SIDES WITH 5 REFLECTORIZED TRAFFIC CONTROL DRUMS AHEAD OF IT USING THE FOLLOWING MESSAGE:



LEGEND

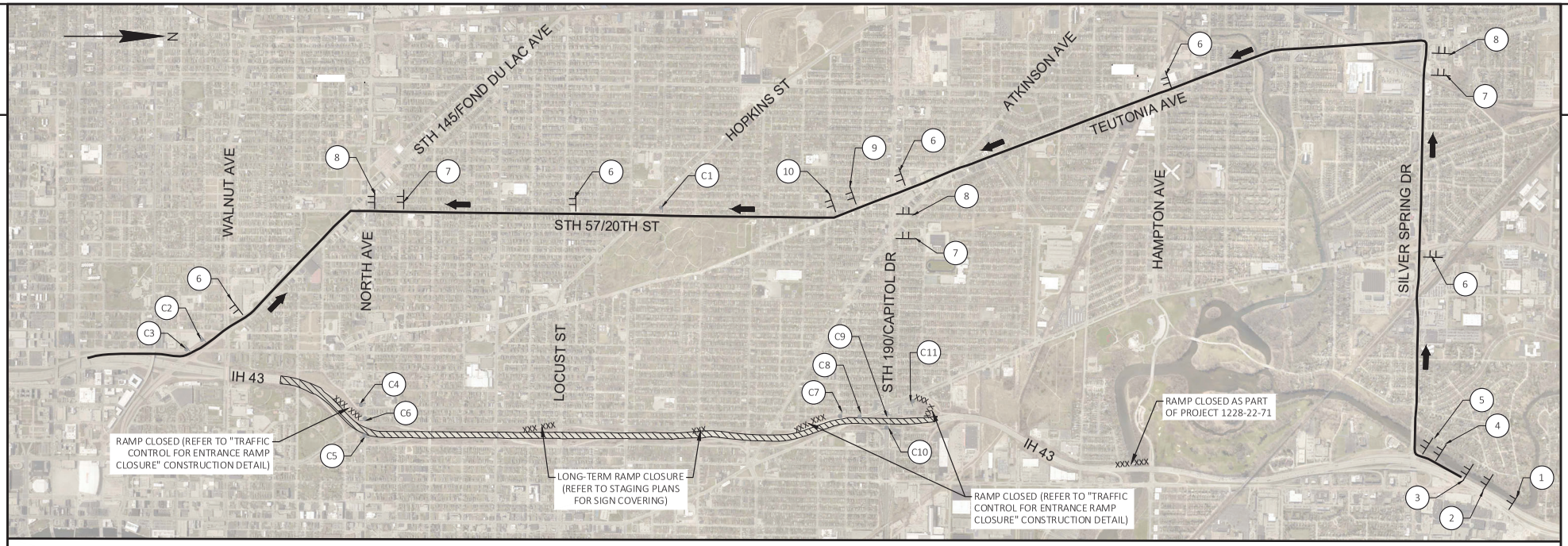
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- EXISTING SIGN
- CLOSURE
- DIRECTION OF TRAFFIC
- DETOUR ROUTE



Addendum No. 01
ID 1228-22-70
Added Sheet 588A
March 7, 2023

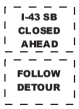
PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - NB FULL FREEWAY CLOSURE 2023	SHEET 588A	E

FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\1228270\SHEETSPLAN\027012_FULL FREEWAY CLOSURE_NB_DT.DWG
LAYOUT NAME - 027007_IH 43 NB - W Burleigh St
PLOT DATE : 2/24/2023 5:49 PM
PLOT BY : JOHANSEN, AMANDA A
PLOT NAME :
PLOT SCALE : 1 IN:2000 FT
WISDOT/CADDS SHEET 42



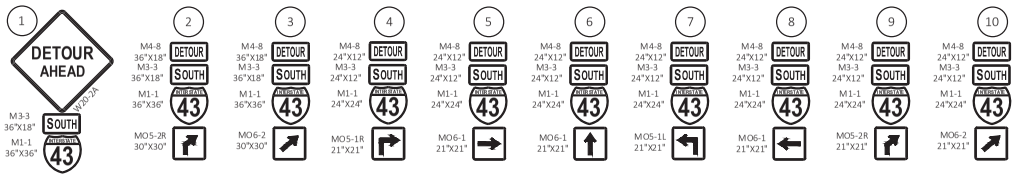
NOTES

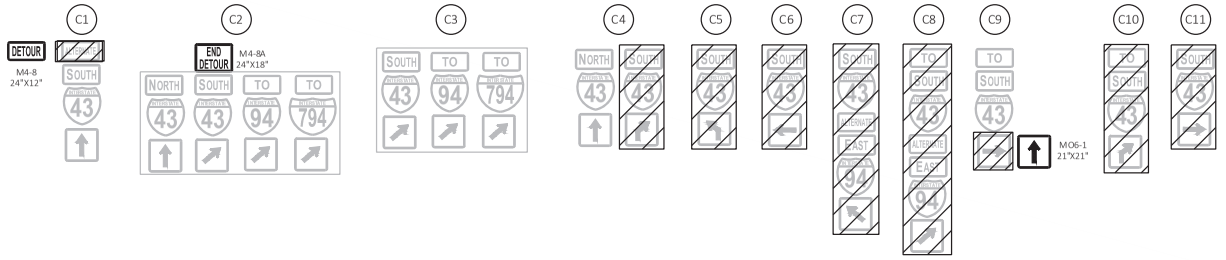
- DETOUR ON THIS PAGE WILL BE UTILIZED FOR TRAFFIC CONTROL SETUP BETWEEN STAGES IN 2023.
- REFER TO CONSTRUCTION DETAIL "THREE LANE FULL FREEWAY CLOSURE".
- ALL EXISTING SIGN MESSAGES IN CONFLICT WITH TRAFFIC CONTROL DETOUR SIGNS SHALL BE COVERED OR REMOVED.
- THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS. SIGNS MAY BE MOUNTED ON EXISTING POSTS, LIGHTS, OR TEMPORARY SIGN SUPPORTS AS APPROVED BY THE ENGINEER.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.
- PLACE TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE BOARD (PCMS) PRIOR TO THE MARQUETTE INTERCHANGE ON BOTH SIDES WITH 5 REFLECTORIZED TRAFFIC CONTROL DRUMS AHEAD OF IT USING THE FOLLOWING MESSAGE:



LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- EXISTING SIGN
- CLOSURE
- DIRECTION OF TRAFFIC
- DETOUR ROUTE



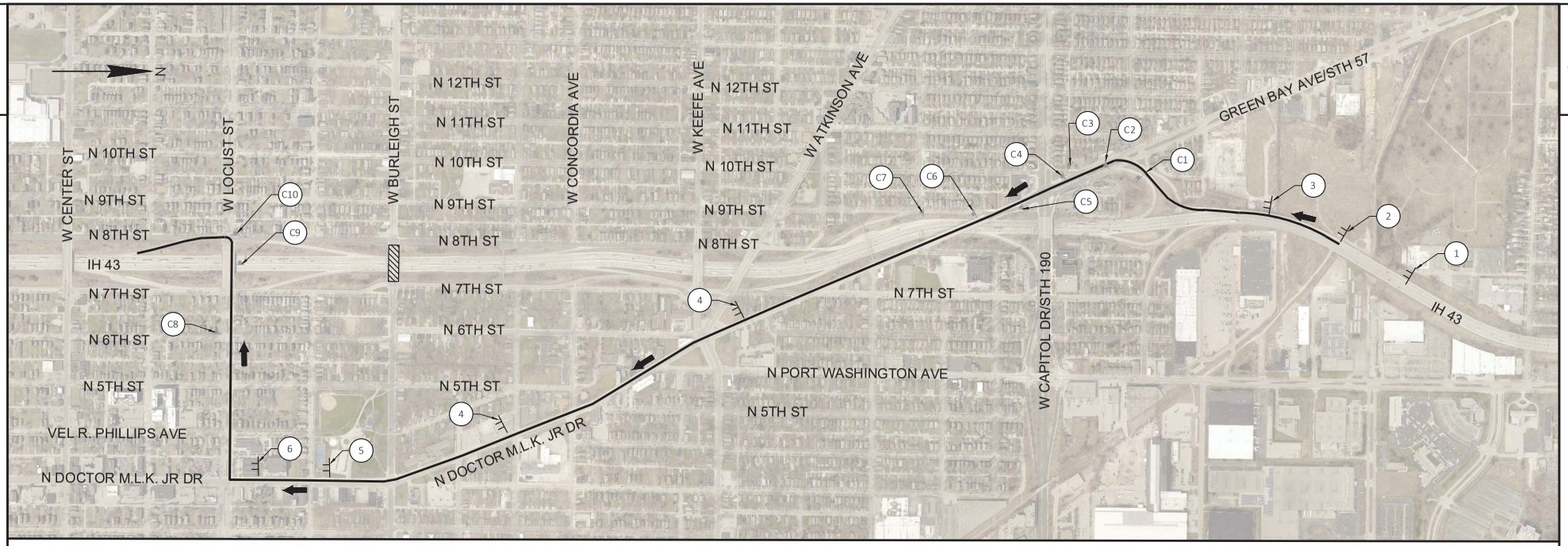


Addendum No. 01
ID 1228-22-70
Added Sheet 588B
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - SB FULL FREEWAY CLOSURE 2023	SHEET 588B	E

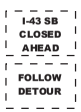
FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\1228270\SHEETSPLAN\027013_FULL FREEWAY CLOSURE_SB_DT.DWG
LAYOUT NAME - 027007_IH 43 NB - W Burleigh St
PLOT DATE : 2/25/2023 10:39 AM
PLOT BY : JOHANSEN, AMANDA A
PLOT NAME :
PLOT SCALE : 1 IN:2000 FT

WISDOT/CADDS SHEET 42



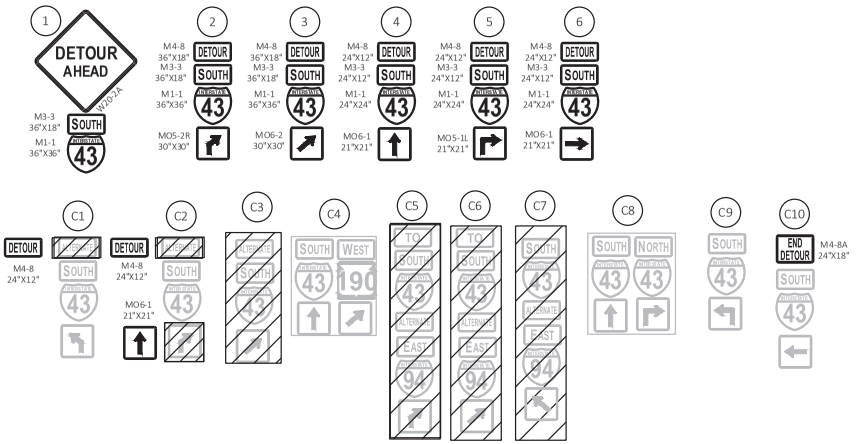
NOTES

- DETOUR ON THIS PAGE WILL BE UTILIZED FOR DECK REMOVAL ON BURLEIGH ST.
- REFER TO CONSTRUCTION DETAIL "THREE LANE FULL FREEWAY CLOSURE".
- ALL EXISTING SIGN MESSAGES IN CONFLICT WITH TRAFFIC CONTROL DETOUR SIGNS SHALL BE COVERED OR REMOVED.
- THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS. SIGNS MAY BE MOUNTED ON EXISTING POSTS, LIGHTS, OR TEMPORARY SIGN SUPPORTS AS APPROVED BY THE ENGINEER.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.
- PLACE TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE BOARD (PCMS) PRIOR TO EXIT 78 (IH 43 SB OFF RAMP TO W SILVER SPRING DR) ON BOTH SIDES WITH 5 REFLECTORIZED TRAFFIC CONTROL DRUMS AHEAD OF IT USING THE FOLLOWING MESSAGE:



LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- EXISTING SIGN
- CLOSURE
- DIRECTION OF TRAFFIC
- DETOUR ROUTE



Addendum No. 01
ID 1228-22-70
Revised Sheet 593
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - SB FULL FREEWAY CLOSURE AT BURLEIGH STREET	SHEET 593	E

FILE NAME : \\WKERTOVFILP101\N3PUBLIC\PDS\C3D\1228270\SHEETSPLAN\027008_IH 43 SB_W BURLEIGH_DT.DWG
LAYOUT NAME - 027008_IH 43 SB - W Burleigh St
PLOT DATE : 2/16/2023 9:21 AM
PLOT BY : JOHANSEN, AMANDA A
PLOT NAME :
PLOT SCALE : 1 IN:800 FT

WISDOT/CADDS SHEET 42

3

CLEARING AND GRUBBING

STAGE	ROADWAY	STATION	TO	STATION		201.0105 CLEARING STA	201.0205 GRUBBING STA
1	**MAINLINE**						
	IH 43 NB						
		802+00	-	821+00	RT	19	19
		821+00	-	824+00	RT	--	--
		824+00	-	858+00	RT	34	34
		858+00	-	860+00	RT	--	--
		860+00	-	862+00	RT	--	2
		862+00	-	891+00	RT	29	29
		891+00	-	894+00	RT	--	--
		894+00	-	901+00	RT	7	7
		901+00	-	903+00	RT	--	--
		903+00	-	928+00	RT	25	25
	IH 43 SB						
		801+00	-	818+00	LT	17	17
		818+00	-	819+00	LT	--	--
		819+00	-	856+00	LT	37	37
		856+00	-	858+00	LT	--	--
		858+00	-	887+00	LT	29	29
		887+00	-	889+00	LT	--	--
		889+00	-	920+00	LT	31	31
		920+00	-	921+00	LT	--	--
		921+00	-	929+00	LT	8	8
				STAGE 1 SUBTOTAL		236	238
				TOTAL CAT 1000		236	238

REMOVING CONCRETE RUMBLE STRIPS

LOCATION	STATION	TO	STATION	SPV.0180.0002 REMOVING CONCRETE RUMBLE STRIPS SY
IH 43 AT GREEN BAY AVE	917+20	-	922+78	160
TOTAL CAT 1000				160

REMOVING CONCRETE BARRIER

STAGE	ROADWAY	STATION	TO	STATION	OFFSET	204.0157 REMOVING CONCRETE BARRIER LF	REMARKS
2	**MAINLINE**						
	IH 43 NB						
		802+45	-	934+50	RT	13,205	
	IH 43 SB						
		802+45	-	934+50	LT	13,203	
					STAGE 2 SUBTOTAL	26,408	
4	**MAINLINE**						
	IH 43 NB						
		815+51	-	819+91	RT	467	
		844+00	-	846+38	RT	238	INCLUDING 36LF ON RAMP LA
		856+99	-	859+50	RT	274	
		870+56	-	872+90	RT	233	INCLUDING 6LF ON RAMP LD
		879+83	-	881+44	RT	173	
		896+58	-	896+78	RT	20	
		914+13	-	918+99	RT	476	INCLUDING 159LF ON RAMP CA
		923+71	-	926+40	RT	268	
	IH 43 SB						
		845+49	-	847+88	LT	238	
		858+41	-	860+96	LT	260	
		871+96	-	874+37	LT	240	INCLUDING 13LF ON RAMP LC
		896+70	-	903+05	LT	629	
		922+87	-	927+93	LT	505	INCLUDING 151LF ON RAMP GBB2
4	**RAMPS**						
	RAMP NC						
		832+39 NC	-	835+50 IH 43	LT	318	
	RAMP ND						
		830+89 ND	-	833+02 ND	RT	215	
	RAMP KB						
		881+33 KB	-	883+03 KB	LT	169	
	RAMP KC2						
		914+28 KC2	-	915+66 KC2	LT	138	
					STAGE 4 SUBTOTAL	4,861	
					TOTAL CAT 1000	31,269	

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REMOVING GUARDRAIL

ROADWAY	STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF
MAINLINE					
IH 43 NB					
	814+70	-	815+52	RT	84
	830+03	-	830+85	RT	82
	843+19	-	844+02	RT	83
	856+18	-	857+00	RT	83
	869+75	-	870+58	RT	83
	878+95	-	879+78	RT	83
	894+49	-	895+31	RT	82
	913+32	-	914+15	RT	82
	922+96	-	923+78	RT	82
IH 43 SB					
	821+02	-	821+89	LT	82
	835+57	-	836+39	LT	83
	847+85	-	848+69	LT	84
	861+02	-	861+84	LT	83
	874+31	-	875+13	LT	82
	882+90	-	883+74	LT	83
	902+95	-	903+82	LT	83
	927+91	-	928+77	LT	85
				TOTAL CAT 1000	1,409

REMOVING MANHOLES

STAGE	ROADWAY	STATION	TO	STATION	LOCATION	204.0210 REMOVING MANHOLES EACH	REMARKS
2	**MAINLINE**						
	IH 43 NB						
		802+58	-	832+33	RT	1	
					STAGE 2 SUBTOTAL	1	
4	**MAINLINE**						
	IH 43 NB						
		802+58	-	832+33	RT	1	
		832+33	-	858+49	RT	2	
		858+49	-	871+97	RT	3	
		871+97	-	913+11	RT	6	INCLUDING RAMP KA OUTSIDE SHOULDER
		913+11	-	934+50	RT	1	RAMP CA TRAVEL LANE
	IH 43 SB						
		802+58	-	832+33	LT	5	
		832+33	-	858+49	LT	5	
		858+49	-	871+97	LT	1	
		871+97	-	913+11	LT	5	
		913+11	-	934+50	LT	1	RAMP KC2 OUTSIDE SHOULDER
					STAGE 4 SUBTOTAL	30	
					TOTAL CAT 1000	31	

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FILE NAME: S:\DOT\DOT_SE\190224_I43_N-S_Freeway_North-Hampton\Design\12282270\Design\Quantities\90%\030201_MQ.ppt
ORIGINATOR: Neal Styka, P.E.!, PTOE, RSP1
ORIG. DATE: June 14, 2022
PLOTTED DATE: 3/2/2023 6:15 AM

3

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REMOVING INLETS

204.0220

REMOVING INLETS

STAGE	ROADWAY	STATION	TO	STATION	LOCATION	EACH	REMARKS
2	**MAINLINE**						
	IH 43 NB						
		802+58	-	832+33	RT	19	
		832+33	-	858+49	RT	17	
		858+49	-	871+97	RT	14	
		871+97	-	913+11	RT	27	
		913+11	-	934+50	RT	10	
	IH 43 SB						
		802+58	-	832+33	LT	11	
		832+33	-	858+49	LT	16	
		858+49	-	871+97	LT	13	
		871+97	-	913+11	LT	19	
		913+11	-	934+50	LT	19	
					STAGE 2 SUBTOTAL	165	
4	**MAINLINE**						
	IH 43 NB						
		802+58	-	832+33	RT	11	INCLUDING RAMP ND
		832+33	-	858+49	RT	19	INCLUDING RAMP LA
		858+49	-	871+97	RT	12	INCLUDING RAMP LD
		871+97	-	913+11	RT	16	INCLUDING RAMPS KA AND KD
		913+11	-	934+50	RT	16	INCLUDING RAMP CA
	IH 43 SB						
		802+58	-	832+33	LT	16	INCLUDING RAMPS NB AND NC
		832+33	-	858+49	LT	18	INCLUDING RAMP LB
		858+49	-	871+97	LT	13	INCLUDING RAMP LC
		871+97	-	913+11	LT	23	INCLUDING RAMPS KB AND KC1
		913+11	-	934+50	LT	11	INCLUDING RAMP KC2
					STAGE 4 SUBTOTAL	155	
5	**MAINLINE**						
	IH 43 NB						
		931+14	-	934+19	RT	4	
	IH 43 SB						
		934+17		934+21	LT	2	
					STAGE 5 SUBTOTAL	6	
					1000 TOTAL	326	

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REMOVING TEMORARY PRECAST TRENCH DRAIN

STAGE	ROADWAY	STATION UPSTREAM END	OFFSET UPSTREAM END	STATION DOWNSTREAM END	OFFSET DOWNSTREAM END	204.9090.S.0001 REMOVING TEMPROARY PRECAST TRENCH DRAIN LF
5	I43					
		931+59	3.6' RT	929+21	0.3' RT	239
		934+09	3.5' RT	931+70	3.6' RT	239
		PROJECT TOTAL				478

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REMOVING STORM SEWER PIPE (CONTINUED)

STAGE	ROADWAY	STATION	OFFSET	TO	STATION	OFFSET	204.0245.0001 REMOVING STORM SEWER 12-INCH LF	204.0245.0002 REMOVING STORM SEWER 15-INCH LF	204.0245.0003 REMOVING STORM SEWER 18-INCH LF	204.0245.0004 REMOVING STORM SEWER 21-INCH LF	204.0245.0005 REMOVING STORM SEWER 24-INCH LF	204.0245.0006 REMOVING STORM SEWER 30-INCH LF	204.0245.0007 REMOVING STORM SEWER 36-INCH LF	204.0245.0008 REMOVING STORM SEWER 42-INCH LF	204.0245.0009 REMOVING STORM SEWER 48-INCH LF	204.0245.0010 REMOVING STORM SEWER 54-INCH LF	204.0245.0011 REMOVING STORM SEWER 60-INCH LF	204.0245.0012 REMOVING STORM SEWER 66-INCH LF
5	**MAINLINE**																	
	IH 43 MEDIAN																	
		916+23	6' RT	-	917+43	1' RT	-	-	-	-	-	120	-	-	-	-	-	-
		917+43	0' RT	-	918+52	0' RT	-	-	-	-	-	109	-	-	-	-	-	-
		917+43	0' RT	-	917+49	6' RT	8	-	-	-	-	-	-	-	-	-	-	-
		917+43	0' RT	-	917+43	7' LT	-	7	-	-	-	-	-	-	-	-	-	-
		917+44	0' RT	-	917+44	16' RT	-	15	-	-	-	-	-	-	-	-	-	-
		918+52	0' RT	-	918+71	8' LT	20	-	-	-	-	-	-	-	-	-	-	-
		921+18	7' RT	-	921+44	1' RT	-	28	-	-	-	-	-	-	-	-	-	-
		921+34	24' RT	-	921+43	7' LT	-	19	-	-	-	-	-	-	-	-	-	-
		921+43	7' LT	-	921+44	0' RT	-	9	-	-	-	-	-	-	-	-	-	-
		921+44	0' RT	-	924+22	0' RT	-	-	-	-	-	-	278	-	-	-	-	-
		921+44	0' RT	-	921+49	5' RT	6	-	-	-	-	-	-	-	-	-	-	-
		921+44	0' RT	-	921+49	4' LT	-	8	-	-	-	-	-	-	-	-	-	-
		924+17	5' LT	-	924+22	0' RT	-	7	-	-	-	-	-	-	-	-	-	-
		924+22	0' RT	-	924+72	2' RT	-	-	-	-	-	-	50	-	-	-	-	-
		924+22	0' RT	-	924+22	24' RT	16	-	-	-	-	-	-	-	-	-	-	-
		924+22	0' RT	-	924+22	8' LT	-	7	-	-	-	-	-	-	-	-	-	-
		924+22	0' RT	-	924+26	5' RT	6	-	-	-	-	-	-	-	-	-	-	-
		924+22	0' RT	-	924+22	11' RT	11	-	-	-	-	-	-	-	-	-	-	-
		924+66	5' RT	-	924+72	2' RT	7	-	-	-	-	-	-	-	-	-	-	-
		924+66	5' LT	-	924+72	2' RT	-	7	-	-	-	-	-	-	-	-	-	-

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REMOVING STORM SEWER PIPE (CONTINUED)

STAGE	ROADWAY	STATION	OFFSET	TO	STATION	OFFSET	204.0245.01 REMOVING STORM SEWER 12-INCH LF	204.0245.02 REMOVING STORM SEWER 15-INCH LF	204.0245.03 REMOVING STORM SEWER 18-INCH LF	204.0245.04 REMOVING STORM SEWER 21-INCH LF	204.0245.05 REMOVING STORM SEWER 24-INCH LF	204.0245.06 REMOVING STORM SEWER 30-INCH LF	204.0245.07 REMOVING STORM SEWER 36-INCH LF	204.0245.08 REMOVING STORM SEWER 42-INCH LF	204.0245.09 REMOVING STORM SEWER 48-INCH LF	204.0245.10 REMOVING STORM SEWER 54-INCH LF	204.0245.11 REMOVING STORM SEWER 60-INCH LF	204.0245.12 REMOVING STORM SEWER 66-INCH LF
5	**MAINLINE**																	
	IH 43 MEDIAN																	
		924+72	9' LT	-	924+72	2' RT	-	9	-	-	-	-	-	-	-	-	-	-
		924+72	2' RT	-	925+19	6' RT	-	-	-	-	-	-	47	-	-	-	-	-
		924+72	2' RT	-	924+72	10' RT	-	10	-	-	-	-	-	-	-	-	-	-
		925+13	5' RT	-	925+19	7' RT	6	-	-	-	-	-	-	-	-	-	-	-
		925+19	7' RT	-	925+75	42' RT	-	-	-	-	-	-	66	-	-	-	-	-
		925+19	7' RT	-	925+19	17' RT	10	-	-	-	-	-	-	-	-	-	-	-
		925+19	7' RT	-	925+19	8' LT	15	-	-	-	-	-	-	-	-	-	-	-
		926+05	42' RT	-	926+70	0' RT	-	77	-	-	-	-	-	-	-	-	-	-
		926+61	4' LT	-	926+70	0' RT	9	-	-	-	-	-	-	-	-	-	-	-
		926+69	10' LT	-	926+70	0' RT	10	-	-	-	-	-	-	-	-	-	-	-
		926+69	10' RT	-	926+70	0' RT	10	-	-	-	-	-	-	-	-	-	-	-
		926+70	0' RT	-	929+19	1' LT	249	-	-	-	-	-	-	-	-	-	-	-
		926+70	0' RT	-	926+76	4' RT	8	-	-	-	-	-	-	-	-	-	-	-
		929+12	3' RT	-	929+19	1' LT	8	-	-	-	-	-	-	-	-	-	-	-
		929+16	10' RT	-	929+19	1' LT	5	-	-	-	-	-	-	-	-	-	-	-
		929+19	1' LT	-	929+19	15' LT	14	-	-	-	-	-	-	-	-	-	-	-
		929+19	1' LT	-	929+19	6' RT	7	-	-	-	-	-	-	-	-	-	-	-
		931+11	60' RT	-	931+15	55' RT	-	7	-	-	-	-	-	-	-	-	-	-
		931+15	55'RT	-	931+21	50' RT	-	8	-	-	-	-	-	-	-	-	-	-
		931+63	8' RT	-	931+68	3' RT	-	7	-	-	-	-	-	-	-	-	-	-
		931+68	3' RT	-	931+69	4' LT	-	7	-	-	-	-	-	-	-	-	-	-
		934+10	54' RT	-	934+13	49' RT	-	6	-	-	-	-	-	-	-	-	-	-
		934+13	49' RT	-	934+14	43' RT	-	6	-	-	-	-	-	-	-	-	-	-
		934+17	8' RT	-	934+18	2' RT	-	6	-	-	-	-	-	-	-	-	-	-
		934+18	2' RT	-	934+19	3' LT	-	6	-	-	-	-	-	-	-	-	-	-
		934+18	3' LT	-	934+18	9' LT	-	6	-	-	-	-	-	-	-	-	-	-
		934+20	50' LT	-	934+21	56' LT	-	6	-	-	-	-	-	-	-	-	-	-
		934+20	44' LT	-	934+20	50' LT	-	6	-	-	-	-	-	-	-	-	-	-
						STAGE 5 SUBTOTAL	425	274	0	0	0	229	441	0	0	0	0	0
						0010 TOTAL	3,592	2,197	483	577	1,004	948	627	534	49	131	82	11

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AGGREGATE (CONTINUED)

STAGE	ROADWAY	STATION	TO	STATION	OFFSET	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	310.0110 BASE AGGREGATE OPEN-GRADED TON	312.0110 CRUSHED MATERIAL TON
4	**RAMPS**							
	RAMP NC							
		828+74 NC	-	833+50 NC	LT	1,954	465	2,089
	RAMP ND							
		825+25 ND	-	832+91 ND	RT	3,341	791	3,556
	RAMP LA							
		847+40 LA	-	850+68 LA	RT	320	77	343
	RAMP LB							
		850+02 LB	-	858+45 LB	LT	1,963	464	2,088
	RAMP LC							
		867+51 LC	-	870+59 LC	LT	1,088	256	1,151
	RAMP LD							
		862+80 LD	-	868+86 LD	RT	2,464	582	2,617
	RAMP KA							
		886+82 KA	-	889+84 KA	RT	947	226	1,013
	RAMP KB							
		881+3 KB	-	887+30 KB	LT	1,563	372	1,671
	RAMP KC1							
		902+41 KC1	-	906+99 KC1	LT	1,690	397	1,786
		915+51 KC1	-	916+17 KC1	LT	--	--	--
		918+08 KC1	-	918+57 KC1	LT	--	--	--
	RAMP KD							
		903+99 KD	-	909+33 KD	RT	1,954	461	2,071
	RAMP CA							
		920+64 CA	-	926+12 CA	RT	1,323	309	1,388
	RAMP GBA2							
		929+88 GBA2	-	931+45 GBA2	RT	437	104	468
					STAGE 4 SUBTOTAL	57,113	13,730	61,720
5	**MAINLINE**							
	IH 43 MEDIAN NB							
		918+00		934+50	RT	1,327	--	1,421
	IH 43 MEDIAN SB							
		918+00		934+50	LT	1,370	--	1,536
					STAGE 5 SUBTOTAL	2,697	--	2,957
					TOTAL 1000	95,428	15,639	108,590

AGGREGATE UNIT WEIGHTS USED	
Base Aggregate Dense 1 1/4 - inch (TONS/CY)	2.0
Base Aggregate Open Graded (TONS/CY)	1.9
Select Crushed (TONS/CY)	1.9

CONTAMINATED SOILS

STAGE	ROADWAY	STATION	TO	STATION	205.0501.S EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL TON
4	IH 43 SB	845+15	-	845+60	332
					496
	TOTAL CAT 1000				828

BASE PATCHING

LANE	LOCATION	390.0403 Base Patching Concrete SHES SY
OUTSIDE (INCLUDING AUX)	IH 43 (UNDISTRIBUTED)	4,236
MIDDLE	IH 43 (UNDISTRIBUTED)	3,409
INSIDE	IH 43 (UNDISTRIBUTED)	3,388
	TOTAL CAT 1000	11,032

CONCRETE PAVEMENT

ROADWAY	STATION	TO	STATION	OFFSET	415.0090 CONCRETE PAVEMENT 9-INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY
LOCAL ROADS						
BROWN ST						
	10+58"BROWN ST"	-	11+09 "BROWN ST"	LT/RT	140	81
	13+86 "BROWN ST"	-	14+52 "BROWN ST"	LT/RT	156	110
WRIGHT ST						
	722+54 "WRIGHT ST"	-	722+83 "WRIGHT ST"	LT/RT	67	71
	725+03 "WRIGHT ST"	-	725+34 "WRIGHT ST"	LT/RT	72	74
LOCUST ST						
	20+90 "LOCUST ST"	-	23+02 "LOCUST ST"	LT/RT	649	133
	24+99 "LOCUST ST"	-	27+73 "LOCUST ST"	LT/RT	859	133
7TH ST						
	243+84 "7TH ST"	-	245+93 "7TH ST"	RT	295	0
BURLEIGH ST						
	20+39 "BURLEIGH ST"	-	21+98 "BURLEIGH ST"	LT/RT	300	97
	24+02 "BURLEIGH ST"	-	25+44 "BURLEIGH ST"	LT/RT	235	97
				TOTAL CAT 1000	2,773	795

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CONCRETE BARRIER & LIGHT POLE BASES

STAGE	ROADWAY	STATION	TO	STATION	603.0105 CONCRETE BARRIER SINGLE-FACED 32-INCH LF	603.0405 CONCRETE BARRIER TRANSITION SECTION 32-INCH LF	603.1132 CONCRETE BARRIER TYPE S32 LF	603.1142 CONCRETE BARRIER TYPE S42 LF	603.1232 CONCRETE BARRIER TYPE S32A LF	603.1242 CONCRETE BARRIER TYPE S42A LF	603.1332 CONCRETE BARRIER TYPE S32B LF	603.1342 CONCRETE BARRIER TYPE S42B LF	603.1442 CONCRETE BARRIER TYPE S42C LF	603.1456 CONCRETE BARRIER TYPE S56C LF	603.2142 CONCRETE BARRIER FIXED OBJECT PROTECTION TYPE S42 LF	SPV.0060.0032 CONCRETE BARRIER TYPE S42A LIGHT POLE BASE EACH	SPV.0060.0033 CONCRETE BARRIER TYPE V42 LIGHT POLE BASE EACH	SPV.0060.0034 CONCRETE BARRIER TYPE V42 SPECIAL LIGHT POLE BASE EACH
2	**MAINLINE**																	
	IH 43 MEDIAN																	
		802+46	-	817+11	--	--	--	--	--	1,140	–	22	–	–	–	6	–	–
		818+13	-	818+51	--	--	--	--	--	--	–	–	–	–	–	--	1	–
		819+94	-	832+12	--	--	--	--	--	829	–	32	–	–	–	6	–	–
		833+20	-	845+31	--	--	--	--	--	1,031	–	10	–	–	–	5	–	–
		846+57	-	858+26	--	--	--	--	--	880	–	31	–	–	–	5	–	–
		859+74	-	871+75	--	--	--	--	--	892	–	–	–	–	–	4	–	1
		873+01	-	881+04	--	--	--	--	--	673	–	–	–	–	–	3	–	–
		881+58	-	896+51	--	--	--	--	--	1,221	–	–	–	–	–	6	–	–
		897+77	-	900+11	--	--	--	--	--	145	–	–	–	–	–	1	–	–
		901+40	-	911+00	--	--	--	--	500	--	–	19	–	–	–	4	–	–
		911+55	-	918+60	--	--	--	--	306	--	10	–	–	–	–	3	–	–
	STAGE 2 SUBTOTAL				0	0	0	0	806	6,811	10	114	0	0	0	43	1	1
4	**MAINLINE**																	
	IH 43 NB																	
		815+53	-	816+78	--	--	--	120	--	--	–	–	–	–	–	--	--	–
		817+53	-	818+80	--	--	--	105	--	--	–	–	–	–	–	--	--	–
		844+03	-	845+26	--	--	--	108	--	--	–	–	–	–	–	--	--	–
		856+99	-	858+26	--	--	--	112	--	--	–	–	–	–	–	--	--	–
		870+54	-	871+75	--	--	--	106	--	--	–	–	–	–	–	--	--	–
		879+95	-	881+03	--	--	--	94	--	--	–	–	–	–	–	--	--	–
		896+58	-	896+78	20	--	--	–	--	--	–	–	–	–	–	--	--	–
		914+19	-	916+81	--	--	--	238	--	--	–	–	–	–	–	--	--	–
		923+78	-	924+99	--	--	106	–	--	--	–	–	–	–	–	--	--	–
		933+93	-	935+39	147	--	--	--	--	--	–	–	–	–	–	--	--	–
	IH 43 SB																	
		846+57	-	847+86	--	--	--	114	--	--	–	–	–	–	–	--	--	–
		859+75	-	860+95	--	--	--	105	--	--	–	–	–	–	–	--	--	–
		873+02	-	874+25	--	--	--	108	--	--	–	–	–	–	–	--	--	–
		922+86	-	925+24	--	--	238	–	--	--	–	–	–	–	–	--	--	–
		926+64	-	927+83	--	--	--	--	--	--	–	–	105	–	–	--	--	–
4	**RAMPS**																	
	RAMP NC																	
		831+37 NC	-	833+67 NC	--	--	--	228	--	--	–	–	–	–	–	--	--	–
	RAMP ND																	
		830+88 ND	-	832+15 ND	--	--	--	112	--	--	–	–	–	–	–	--	--	–
	RAMP KB																	
		881+67 KB	-	882+95 KB	--	--	--	113	--	--	–	–	–	–	–	--	--	–
	RAMP KC1																	
		896+79 KC1	-	906+80 KC1	--	--	--	--	--	--	–	–	372	–	624	--	–	–
	RAMP KC2																	
		915+33 KC2	-	915+66 KC2	--	--	--	--	--	--	–	–	34	–	–	--	--	–
	RAMP CA																	
		918+47 CA	-	925+34 CA	--	--	--	--	--	--	–	–	–	678	–	--	–	–
	STAGE 4 SUBTOTAL				167	0	344	1,663	0	0	0	0	511	678	624	0	0	0
5	**MAINLINE**																	
	IH 43 MEDIAN																	
		920+51	-	924+98	--	--	--	--	181	--	16	–	–	–	–	2	–	–
		926+64	-	935+85	102	34	141	–	544	--	–	–	–	–	–	--	--	–
	STAGE 5 SUBTOTAL				102	34	141	0	725	0	16	0	0	0	0	2	0	0
	TOTAL CAT 1000				269	34	485	1,663	1,531	6,811	26	114	511	678	624	45	1	1

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CONCRETE BARRIER TRANSITIONS

STAGE	ROADWAY	STATION	TO	STATION	603.3611 CONCRETE BARRIER TRANSITION TYPE V32 TO S32 EACH	603.3655 CONCRETE BARRIER TRANSITION TYPE V42 TO S42 EACH	603.3311 CONCRETE BARRIER TRANSITION TYPE NJ32DF TO S32 EACH	SPV.0060.0019 CONCRETE BARRIER TRANSITION TYPE V32 TO S32A EACH	SPV.0060.0020 CONCRETE BARRIER TRANSITION TYPE V42 TO S42A EACH	SPV.0060.0021 CONCRETE BARRIER TRANSITION TYPE S56 TO S32A EACH	SPV.0060.0022 CONCRETE BARRIER TRANSITION TYPE S56 TO S42A EACH	SPV.0060.0023 CONCRETE BARRIER TRANSITION TYPE V56 TO S32A EACH	SPV.0060.0024 CONCRETE BARRIER TRANSITION TYPE V56 TO S42A EACH	SPV.0060.0025 CONCRETE BARRIER TRANSITION TYPE S32A TO S42A EACH	SPV.0060.0026 CONCRETE BARRIER TRANSITION TYPE V51 TO S56 SPECIAL EACH	SPV.0060.0027 CONCRETE BARRIER TRANSITION TYPE V56 TO V42 SPECIAL EACH	SPV.0060.0028 CONCRETE BARRIER TRANSITION TYPE V42 TO S56 EACH	SPV.0060.0029 CONCRETE BARRIER TRANSITION TYPE V56 TO V56 SPECIAL I EACH	SPV.0060.0030 CONCRETE BARRIER TRANSITION TYPE V56 TO V56 SPECIAL II EACH	SPV.0060.0031 CONCRETE BARRIER TRANSITION TYPE V32 TO S42A EACH
2	**MAINLINE**																				
	IH 43 MEDIAN																				
		802+46	-	817+11	–	--	--	--	1	–	1	--	2	--	1	--	–	--	--	--	
		818+13	-	818+51	–	--	--	--	--	--	--	--	–	--	--	--	–	--	--	--	
		819+94	-	832+12	–	--	--	--	2	–	2	--	2	--	--	--	–	--	--	--	
		833+20	-	845+31	–	--	--	--	2	–	--	--	–	--	--	--	–	--	--	--	
		846+57	-	858+26	–	--	--	--	1	–	--	--	1	--	--	1	–	--	--	--	
		859+74	-	871+75	–	--	--	--	1	–	--	--	1	--	--	--	1	1	--	--	
		873+01	-	881+04	–	--	--	--	2	–	--	--	–	--	--	--	–	--	--	--	
		881+58	-	896+51	–	--	--	--	2	–	--	--	2	--	--	--	–	--	--	--	
		897+77	-	900+11	–	--	--	--	2	–	--	--	–	--	--	--	–	--	--	--	
		901+40	-	911+00	–	--	--	1	--	–	--	1	1	6	--	--	–	--	--	1	
		911+55	-	918+60	–	--	--	2	--	1	1	--	–	5	--	--	–	--	--	--	
		STAGE 2 SUBTOTAL			0	0	0	3	13	1	4	1	9	11	1	1	1	1	0	1	
4	**MAINLINE**																				
	IH 43 NB																				
		815+53	-	816+78	–	1	--	--	--	–	--	--	–	--	--	--	–	--	--	--	
		817+53	-	818+80	–	2	--	--	--	–	--	--	–	--	--	--	–	--	--	--	
		844+03	-	845+26	–	1	--	--	--	–	--	--	–	--	--	--	–	--	--	--	
		856+99	-	858+26	–	1	--	--	--	–	--	--	–	--	--	--	–	--	--	--	
		870+54	-	871+75	–	1	--	--	--	–	--	--	–	--	--	--	–	--	--	--	
		879+95	-	881+03	–	1	--	--	--	–	--	--	–	--	--	--	–	--	--	--	
		896+58	-	896+78	–	--	--	--	--	–	--	--	–	--	--	--	–	--	--	--	
		914+19	-	916+81	–	1	--	--	--	–	--	--	–	--	--	--	–	--	--	--	
		923+78	-	924+99	1	--	--	--	--	–	--	--	–	--	--	--	–	--	--	--	
		933+93	-	935+39	–	--	--	--	--	--	--	--	–	--	--	--	–	--	--	--	
	IH 43 SB																				
		846+57	-	847+86	–	1	--	--	--	–	--	--	–	--	--	--	–	--	--	--	
		859+75	-	860+95	–	1	--	--	--	–	--	--	–	--	--	--	–	--	--	--	
		873+02	-	874+25	–	1	--	--	--	–	--	--	–	--	--	--	–	--	--	--	
		922+86	-	925+24	–	--	--	--	--	--	--	--	–	--	--	--	–	--	--	--	
		926+64	-	927+83	–	1	--	--	--	–	--	--	–	--	--	--	–	--	--	--	
4	**RAMPS**																				
	RAMP NC																				
		831+37 NC	-	833+67 NC	–	--	--	--	--	--	--	--	–	--	--	--	--	--	--	--	
	RAMP ND																				
		830+88 ND	-	832+15 ND	–	1	--	--	--	–	--	--	–	--	--	--	–	--	--	--	
	RAMP KB																				
		881+67 KB	-	882+95 KB	–	1	--	--	--	–	--	--	–	--	--	--	–	--	--	--	
	RAMP KC1																				
		896+79 KC1	-	906+80 KC1	–	--	--	--	--	--	--	--	–	--	--	--	--	--	--	--	
	RAMP KC2																				
		915+33 KC2	-	915+66 KC2	–	--	--	--	--	--	--	--	–	--	--	--	–	--	--	--	
	RAMP CA																				
		918+47 CA	-	925+34 CA	–	--	--	--	--	--	--	--	–	--	--	--	–	--	--	--	
		STAGE 4 SUBTOTAL			1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5	**MAINLINE**																				
	IH 43 MEDIAN																				
		920+51	-	924+98	–	--	--	2	--	–	--	--	–	4	--	--	–	--	--	--	
		926+64	-	935+85	–	--	1	--	--	–	--	1	–	--	--	--	–	--	1	--	
		STAGE 5 SUBTOTAL			0	0	1	2	0	0	0	1	0	4	0	0	0	0	1	0	
		TOTAL CAT 1000			1	14	1	5	13	1	4	2	9	15	1	1	1	1	1	1	

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PAVEMENT CLEANUP PROJECT

LOCATION	SPV.0075.0001 SPECIAL (PAVEMENT CLEANUP PROJECT) HRS
PROJECT 1228-22-70	1,500
TOTAL CAT 1000	1,500

MOBILIZATIONS EMERGENCEY PAVEMENT REPAIR

STAGE	LOCATION	SPV.0060.0009 SPECIAL (MOBILIZATIONS EMERGENCY PAVEMENT REPAIR) EACH
ALL	PROJECT 1228-22-70	10
	TOTAL CAT 1000	10

CPM SCHEDULE ITEMS

STAGE	LOCATION	SPV.0060.001 SPECIAL (BASELINE CPM PROGRESS SCHEDULE) EACH	SPV.0060.002 SPECIAL (MONTHLY CPM PROGRESS SCHEDULE UPDATES) EACH
ALL	PROJECT 1228-22-70	1	36
	TOTAL CAT 1000	1	36

ADJUSTING WATER VALVE BOXES & MANHOLES

LOCATION	STATION	OFFSET	SPV.0060.0080 ADJUSTING WATER VALVE BOXES EACH	SPV.0060.0081 ADJUSTING WATER MANHOLES EACH
IH 43	809+18	61' RT	2	2
IH 43	865+80	61' RT	2	2
IH 43	926+50	61' RT	2	2
TOTAL CAT 8000			6	6

EMERGENCY RESPONSE TO TRAFFIC INCIDENT

LOCATION	SPV.0060.0012 SPECIAL (EMERGENCY RESPONSE TO TRAFFIC INCIDENT INVOLVING CONCRETE BARRIER TEMPORARY) EACH	SPV.0060.0013 SPECIAL (EMERGENCY RESPONSE TO TRAFFIC INCIDENT INVOLVING CRASH CUSHIONS) EACH
1228-22-70	40	10
TOTAL CAT 1000	40	10

CLEANING DRAINAGE STRUCTURES

LOCATION	SPV.0060.0037 CLEANING DRAINAGE STRUCTURES EACH
PROJECT 1228-22-70	40
TOTAL CAT 1000	40

WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH

LOCATION	STATION	TO	STATION	OFFSET	SPV.0165.0001 WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH SF
IH 43 NB OFF RAMP TO CAPITOL DR	920+75 CA	-	924+00 CA	RT	1,445
TOTAL CAT 1000					1,445

HIGH FRICTION SURFACE TREATMENT

ROADWAY	STATION	TO	STATION	OFFSET	SPV.0180.0001 SPECIAL (RESIN BINDER HIGH FRICTION SURFACE TREATMENT) SY
MAINLINE					
IH 43 NB					
	798+53	-	806+67	RT	5,719
	806+67	-	818+50	RT	6,292
	818+50	-	824+19	RT	2,742
	879+03	-	897+00	RT	9,011
	897+00	-	911+25	RT	6,625
	911+25	-	926+00	RT	8,743
	926+00	-	934+50	RT	4,557
				SUBTOTAL	43,689
MAINLINE					
IH 43 SB					
	798+53	-	806+67	LT	5,014
	806+67	-	818+50	LT	5,559
	818+50	-	824+19	LT	2,602
	879+03	-	897+00	LT	9,001
	897+00	-	911+25	LT	7,333
	911+25	-	926+00	LT	7,354
	926+00	-	934+50	LT	4,572
				SUBTOTAL	41,435
RAMPS					
RAMP NA	107+60 NA	-	109+26 NA		376
RAMP NB	119+54 NB	-	121+48 NB		385
RAMP KB	882+81 KB	-	884+12 KB		242
RAMP KA	887+21 KA	-	887+93 KA		169
RAMP KC1	903+74 KC1	-	905+14 KC1		341
RAMP CA	920+73 CA	-	924+40 CA		1,096
RAMP GBA2	930+12 GBA2	-	930+75 GBA2		183
RAMP GBB2	931+72 GBB2	-	933+43 GBB2		349
				SUBTOTAL	3141
				TOTAL CAT 1000	88,265

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FASTENING SEWER ACCESS COVERS

LOCATION	SPV.0060.0004 FASTENING SEWER ACCESS COVERS EACH
IH 43 - OUTSIDE SHOULDER	160
TOTAL CAT 1000	160

UTILITY LINE OPENING (ULO)

LOCATION		SPV.0060.0011 UTILITY LINE OPENING (ULO) EACH
PROJECT	1228-22-70	20
TOTAL CAT 1000		20

HMA LONGITUDINAL JOINT REPAIR

LOCATION	STATION	TO	STATION	SPV.0195.0002 HMA LONGITUDINAL JOINT REPAIR TON
IH 43 NB	798+53	-	934+50	1,140
IH 43 SB	798+53	-	934+50	1,140
TOTAL CAT 1000				2,280

CONCRETE BARRIER TEMPORARY

CATEGORY	LOCATION	STAGE	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	603.8500 ANCHORING CONCRETE BARRIER TEMPORARY PRECAST LF	614.0905 CRASH CUSHIONS TEMPORARY EACH
1000	IH 43	I	469	469	--	2
		II	25,198	25,198	1,181	6
		OVER WINTER	1,052	1,052	380	--
		IV-A	8,946	8,946	--	6
		IV-B	15,387	15,387	--	7
		V	5,653	5,653	--	2
	SUBTOTAL		56,705	56,705	1,561	23
	LOCUST ST	I	364	364	--	1
		II	--	350	--	1
	SUBTOTAL		364	714	--	2
	TOTAL		57,069	57,419	1,561	25

PAVEMENT MARKING REMOVAL ITEMS

CATEGORY	LOCATION	STAGE	646.9000 MARKING REMOVAL LINE 4-INCH LF	646.9100 MARKING REMOVAL LINE 8-INCH LF	646.9200 MARKING REMOVAL LINE WIDE LF	646.9300 MARKING REMOVAL SPECIAL MARKING EACH
1000	IH 43	II	40,732	11,935	2,884	3
		OVER WINTER	89,113	5,544	--	–
		IV-A	80,148	9,254	276	2
		IV-B	5,732	1,784	16	3
		V	310	--	391	–
		VI	825	166	--	–
		VII	--	--	--	–
	IH 43 TOTAL		216,860	28,682	3,567	8
	LOCUST ST	I	286	100	--	2
		II	258	--	--	–
	LOCUST ST TOTAL		544	100	--	2
	TOTAL		217,403	28,782	3,567	10

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TEMPORARY PAVEMENT MARKING ITEMS

CATEGORY	LOCATION	STAGE	643.3105 TEMPORARY MARKING LINE PAINT 4-INCH LF	643.3120 TEMPORARY MARKING LINE EPOXY 4-INCH LF	643.3150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH LF	643.3205 TEMPORARY MARKING LINE PAINT 8-INCH LF	643.3220 TEMPORARY MARKING LINE EPOXY 8-INCH LF	643.3250 TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH LF	643.3505 TEMPORARY MARKING ARROW PAINT EACH	643.3520 TEMPORARY MARKING ARROW EPOXY EACH	643.3550 TEMPORARY MARKING ARROW REMOVABLE TAPE EACH	643.3760 TEMPORARY MARKING RAISED PAVEMENT MARKER TYPE I EACH	643.3805 TEMPORARY MARKING STOP LINE PAINT 18-INCH LF	643.3850 TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH LF
1000	IH 43	I	--	--	1,037	--	--	--	--	--	--	--	--	--
		II	64,807	--	8,173	5,178	--	113	--	--	--	162	--	--
		III	14,918	--	1,216	253	--	--	--	--	--	26	--	--
		OVER WINTER	--	80,148	--	--	9,254	--	--	2	--	61	--	--
		IV-A	75,166	--	5,612	8,847	--	110	1	--	--	63	--	--
		IV-B	22,634	--	--	8,061	--	--	--	--	--	9	--	--
		V	33,047	--	--	6,628	--	--	--	--	--	128	--	--
		VI	69,690	--	7,734	13,347	--	1,290	--	--	--	86	--	--
		VII	68,843	68,843	--	15,870	15,870	--	--	--	--	--	--	--
	TOTAL IH 43		349,103	148,990	23,772	58,183	25,123	1,513	1	2	--	535	--	--
	LOCUST ST	I	3,442	--	--	794	--	--	7	--	--	--	65	--
		II	4,286	--	732	359	--	219	7	--	2	--	86	22
	TOTAL LOCUST ST		7,728	--	732	1,153	--	219	14	--	2	--	151	22
	BURLEIGH ST	I	--	--	1,494	--	--	--	--	--	--	--	--	--
		II	--	--	176	--	--	--	--	--	--	--	--	--
		III	--	--	307	--	--	--	--	--	--	--	--	--
	TOTAL		356,831	148,990	26,481	59,336	25,123	1,732	15	2	2	535	151	22

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FIXED MESSAGE SIGNS

CATEGORY	STAGE	LOCATION	SIZE	SF	NO. OF SIGNS	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	NOTES
1000	I	IH 43 NB	72"x18"	9	2	18.00	"EXIT 74"
			90"x48"	30	1	30.00	"LOCUST ST 1 MILE"
			114"x30"	23.75	1	23.75	"LOCUST ST (WITH ARROW)"
			72"x18"	9	2	18.00	"EXIT 75"
			126"x60"	52.5	1	52.50	"KEEFE AVE ATKINSON AVE 1/2 MILE"
			144"x48"	48	1	48.00	"KEEFE AVE ATKINSON AVE (WITH ARROW)"
			84"x18"	10.5	1	10.50	"EXIT 76A"
			120"x60"	50	1	50.00	"190 EAST CAPITOL DR (WITH ARROW)"
		IH 43 SB	84"x18"	10.5	2	21.00	"EXIT 73B"
			120"x30"	25	1	25.00	"NORTH AVE (WITH ARROW)"
			96"x48"	32	1	32.00	"NORTH AVE 1/2 MILE"
			72"x18"	9	1	9.00	"EXIT 74"
			114"x30"	23.75	1	23.75	"LOCUST ST (WITH ARROW)"
						0.00	
		NORTH AVE	78"x36"	19.5	2	39.00	"I-43 SOUTH RAMP CLOSED USE ALT ROUTE"
	SUBTOTAL					400.50	
	II	IH 43 NB	96"x36"	24	1	24.00	"RIGHT LANE EXIT ONLY"
		IH 43 SB	120"x18"	15	1	15.00	"WEST ONLY"
		STH 145, LOCUST ST, DR MLK DR, ATKINSON ST	78"x36"	19.5	7	136.50	"I-43 NORTH RAMP CLOSED USE ALT ROUTE"
		LOCUST ST	78"x36"	19.5	2	39.00	"I-43 SOUTH RAMP CLOSED USE ALT ROUTE"
		VARIOUS LOCATIONS (REFER TO PLANS)	132"x72"	66	10	660.00	"I-43 LANE CLOSURES X MILES AHEAD USE ALT ROUTE"
	SUBTOTAL					874.50	
	IV	IH 43 NB	126"x54"	47.25	1	47.25	"LOCUST ST EXIT CLOSED USE ALT ROUTE"
			126"x72"	63	1	63.00	"KEEFE AVE ATKINSON AVE EXIT CLOSED USE ALT ROUTE"
			126"x72"	63	1	63.00	"HWY 190 CAPITOL DR EXIT CLOSED USE ALT ROUTE"
		IH 43 SB	126"x54"	47.25	1	47.25	"LOCUST ST EXIT CLOSED USE ALT ROUTE"
			126"x54"	47.25	1	47.25	"NORTH AVE EXIT CLOSED USE ALT ROUTE"
	SUBTOTAL					267.75	
	TOTAL					1,543	

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TRAFFIC CONTROL

LOCATION	STAGE	STAGE DURATION	643.0300 TRAFFIC CONTROL DRUMS		643.0420 TRAFFIC CONTROL BARRICADES TYPE III		643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS		643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES		643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C		643.0800 TRAFFIC CONTROL ARROW BOARDS		643.0900 TRAFFIC CONTROL SIGNS		643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I			643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II			643.1050 TRAFFIC CONTROL SIGNS PCMS	
			*EACH	DAYS	*EACH	DAYS	*EACH	DAYS	*EACH	DAYS	*EACH	DAYS	*EACH	DAYS	*EACH	DAYS	*EACH	DAYS	# OF SIGNS	# OF CYCLES	EACH	# OF SIGNS	# OF CYCLES	EACH	*EACH	DAYS
IH 43	I	30	876	26,280	24	720	--	--	--	--	48	1,440	76	2,280	6	180	74	2,220	4	1	4	1	1	1	2	14
	II	120	608	72,960	42	5,040	--	--	--	--	84	10,080	122	14,640	5	600	197	23,640	--	--	--	13	1	13	--	--
	III	60	679	40,740	29	1,740	--	--	--	--	58	3,480	108	6,480	5	300	134	8,040	--	--	--	12	1	12	--	--
	OVER WINTER	100	--	--	4	400	--	--	--	--	8	800	--	--	--	--	18	1,800	--	--	--	--	--	--	--	--
	IV-A	40	1,211	48,440	67	2,680	--	--	--	--	134	5,360	185	7,400	7	280	156	6,240	--	--	--	7	1	7	--	--
	IV-B	80	685	54,800	68	5,440	--	--	--	--	136	10,880	140	11,200	5	400	142	11,360	--	--	--	9	1	9	--	--
	V	30	559	16,770	21	630	--	--	--	--	42	1,260	65	1,950	5	150	77	2,310	--	--	--	9	1	9	2	14
	VI	30	778	23,340	49	1,470	--	--	--	--	98	2,940	192	5,760	5	150	109	3,270	--	--	--	--	--	--	--	--
	VII	30	363	10,890	3	90	--	--	--	--	6	180	24	720	5	150	54	1,620	--	--	--	--	--	--	--	--
FULL FREEWAY CLOSURE		40	96	3,840	7	280	--	--	--	--	14	560	40	1,600	4	160	17	680	--	--	--	--	--	--	4	160
EXIT RAMP CLOSURES (7 RAMPS, CLOSE 6 TIMES EACH)		42	15	630	3	126	--	--	--	--	6	252	10	420	--	--	4	168	--	--	--	--	--	--	7	294
ENTRANCE RAMP CLOSURES (8 RAMPS, CLOSE 6 TIMES EACH)		48	25	1,200	6	288	--	--	--	--	12	576	5	240	--	--	26	1,248	--	--	--	--	--	--	--	--
IH 43 TOTAL				299,890		18,904		--		--		37,808		52,690		2,370		62,596			4			51		482
BROWN ST		45	10	450	18	810	--	--	--	--	36	1,620	--	--	--	--	35	1,575	--	--	--	--	--	--	4	104
WRIGHT ST		45	10	450	15	675	--	--	--	--	30	1,350		--		--	42	1,890			--			--	4	104
LOCUST ST	I	60	247	14,820	70	4,200	--	--	--	--	140	8,400	32	1,920	2	120	127	7,620	--	--	--	--	--	--	1	7
	II	60	192	11,520	69	4,140	12	720	12	720	138	8,280	20	1,200	2	120	132	7,920	--	--	--	--	--	--	--	--
LOCUST ST TOTAL				26,340		8,340		720		720		16,680		3,120		240		15,540			--			--		7
BURLEIGH ST	I	45	63	2,835	20	900	--	--	--	--	32	1,440	23	1,035	2	90	89	4,005	--	--	--	--	--	--	2	14
IH 43 SB (FOR DECK STRIPPING)	I	4	77	308	2	8	--	--	--	--	4	16	26	104	3	12	13	52	--	--	--	--	--	--	--	--
BURLEIGH ST	II	15	21	315	20	300	--	--	--	--	32	480	--	--	--	--	89	1,335	--	--	--	--	--	--	--	--
BURLEIGH ST	III	15	48	720	26	390	--	--	--	--	44	660	4	60	--	--	93	1,395	--	--	--	--	--	--	--	--
BURLEIGH ST TOTAL				4,178		1,598		--		--		2,596		1,199		102		6,787			--			--		14
DETOURS - IH 43 RAMP CLOSURES																										
IH 43 NB ON RAMP FROM W FOND DU LAC AVE	II, III & IV	300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22	6,600	3	2	6	5	2	10	--	--
IH 43 NB ON RAMP FROM W FOND DU LAC AVE & NORTH AVE	IV	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	26	364	3	1	3	6	1	6	--	--
IH 43 NB OFF RAMP TO W CAPITOL DR/STH 190 EB	IV	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11	154	2	1	2	--	--	--	--	--
IH 43 NB OFF RAMP TO N GREEN BAY AVE/STH 57	IV	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	61	854	4	1	4	--	--	--	--	--
IH 43 SB ON RAMP FROM N GREEN BAY AVE/STH 57	IV	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	43	602	--	--	--	3	1	3	--	--
FULL FREEWAY CLOSURES																										
IH 43 NB - TRAFFIC CONTROL SETUP FOR STAGING	N/A	2	141	282	9	18	--	--	--	--	18	36	40	80	4	8	84	168	--	--	--	4	2	8	4	8
IH 43 SB - TRAFFIC CONTROL SETUP FOR STAGING	N/A	2	192	384	20	40	--	--	--	--	40	80	40	80	5	10	110	220	--	--	--	9	2	18	4	8
IH 43 NB - STORM SEWER WORK	V	2	128	256	6	12	--	--	--	--	12	24	40	80	4	8	44	88	--	--	--	--	--	--	4	8
IH 43 AT LOCUST ST	LOCAL	4	128	512	6	24	--	--	--	--	12	48	40	160	4	16	48	192	--	--	--	1	4	4	4	16
IH 43 NB AT BURLEIGH ST - DECK REMOVAL & STRIPPING	LOCAL	8	128	1,024	6	48	--	--	--	--	12	96	40	320	4	32	45	360	--	--	--	1	8	8	4	32
IH 43 SB AT BURLEIGH ST - DECK REMOVAL ONLY	LOCAL	4	128	512	6	24	--	--	--	--	12	48	40	160	4	16	48	192	--	--	--	7	4	28	4	16
DETOUR ROUTE TOTALS				2,970		166		--		--		332		880		90		9,794			15			85		88
UNDISTRIBUTED				83,570		7,623		180		180		15,097		14,472		701		24,546			5			34		200
TOTAL				417,848		38,116		900		900		75,483		72,361		3,503		122,728			24			170		999

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TRAFFIC CONTROL (PEDESTRIAN ACCOMMODATIONS)

CATEGORY	LOCATION	STAGE	644.1430 TEMPORARY PEDESTRIAN SURFACE PLATE SF	644.1601 TEMPORARY PEDESTRIAN CURB RAMP DAY	644.1605 TEMPORARY PEDESTRIAN DETECTABLE WARNING FIELD SF	644.1810 TEMPORARY PEDESTRIAN BARRICADE LF
1000	IH 43 NB (OFF RAMP TO CAPITOL DR)	IV	--	--	--	36
	BROWN STREET		--	--	--	715
	WRIGHT STREET		--	--	--	774
	LOCUST STREET	I	--	--	--	283
		II	--	--	--	296
	SUBTOTAL		--	--	--	579
	BURLEIGH STREET	I	--	--	--	--
		II	80	90	40	161
		III	40	75	20	92
	TOTAL		120	165	60	2,357

TRAFFIC CONTROL - CLOSURES

CATEGORY	STAGE	LOCATION	643.4100 TRAFFIC CONTROL INTERIM LANE CLOSURE EACH	SPV.0060.0016 TRAFFIC CONTROL CLOSE-OPEN FREEWAY ENTRANCE RAMP EACH	SPV.0060.0017 TRAFFIC CONTROL FULL FREEWAY CLOSURE EACH
1000		IH 43 - SHORT-TERM SINGLE LANE CLOSURE	220	--	--
		IH 43 - SHORT-TERM DUAL LANE CLOSURE	250	--	--
		IH 43 - LONG TERM CLOSURE, STAGE II	2	--	--
		LOCAL STREET CLOSURES (8 STREETS, 2 DIRECTIONS)	16	--	--
		ENTRANCE RAMPS (8 RAMPS, CLOSE 6 TIMES)	--	48	--
		FULL FREEWAY CLOSURES	--	--	40
	UNDISTRIBUTED		122	12	10
	TOTAL		610	60	50

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DEPARTMENT FURNISHED FREEWAY SERVICE TEAM (FST) SIGNS

CATEGORY	STAGE	LOCATION	**634.0622 POSTS WOOD 4X6-INCH X 22-FT EACH	SPV.0060.0035 MOVING STATE FURNISHED SIGNS EACH	SPV.0060.0036 INSTALL STATE FURNISHED SIGNS EACH	NOTES
1000	I	IH 43 NB	3	1	--	"WISDOT SAFETY PATROL COVERAGE BEGINS SPONSORED BY GEICO
			3	--	1	"WISDOT SAFETY PATROL IN WORK ZONE SPONSORED BY GEICO"
		IH 43 SB	3	--	1	"WISDOT SAFETY PATROL IN WORK ZONE SPONSORED BY GEICO"
			3	1	--	"WISDOT SAFETY PATROL COVERAGE ENDS SPONSORED BY GEICO"
	TOTAL		12	2	2	

**QUANTITIES SHOWN ELSEWHERE.

PORTABLE AUTOMATED REAL-TIME TRAFFIC QUEUE WARNING SYSTEM (QWS ITEM 643.1200.S)

CATEGORY	LOCATION	STAGE	PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)	PORTABLE TRAFFIC SENSORS (PTS)	QUEUE WARNING SYSTEM (DAY)
1000	IH 43	II	6	5	120
		III	6	5	60
		IV-A	10	9	40
		IV-B	3	3	80
		V	12	10	30

*THESE ITEMS ARE PART OF THE QWS AND ARE PAID FOR ONE COMPLETE SYSTEM PER ROADWAY

STORM SEWER PIPES

FROM	TO	LOCATION	608.0312 SSPRC CLASS III 12-INCH LF	608.0315 SSPRC CLASS III 15-INCH LF	608.0318 SSPRC CLASS III 18-INCH LF	608.0321 SSPRC CLASS III 21-INCH LF	608.0324 SSPRC CLASS III 24-INCH LF	608.0330 SSPRC CLASS III 30-INCH LF	608.0336 SSPRC CLASS III 36-INCH LF	608.0342 SSPRC CLASS III 42-INCH LF	608.0348 SSPRC CLASS III 48-INCH LF	608.0354 SSPRC CLASS III 54-INCH LF	608.0360 SSPRC CLASS III 60-INCH LF	608.0366 SSPRC CLASS III 66-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	608.0424 SSPRC CLASS IV 24-INCH LF	608.0436 SSPRC CLASS IV 36-INCH LF	608.0442 SSPRC CLASS IV 42-INCH	INLET ELEVATION	DISCHARGE ELEVATION	SLOPE FT/FT	STAGE
1722 -	1724	43 RL	135	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	670.02	668.67	1.00%	5
1724 -	1732	43 RL	104	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	668.70	667.66	1.00%	5
1725 -	1726	43 RL	---	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	670.27	670.19	1.00%	5
1726 -	1724	43 RL	---	7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	670.18	670.11	1.00%	5
1732 -	1734	43 RL	---	61	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	667.46	666.85	1.00%	5
1734 -	1742	43 RL	---	87	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	666.74	663.45	3.79%	5
1736 -	1732	43 RL	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7	---	---	---	669.20	669.15	0.68%	5
1738 -	1736	43 RL	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9	---	---	---	669.25	669.20	0.59%	5
1742 -	E1712	43 RL	---	---	94	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	663.43	662.49	1.00%	4-23.0 FT, 5
1756 -	1742	43 RL	---	---	---	---	---	---	---	---	---	---	---	---	---	10	---	---	---	---	665.09	665.00	0.95%	5
1758 -	1762	43 RL	---	---	---	---	---	---	---	---	---	---	---	---	---	7	---	---	---	---	665.10	664.99	1.54%	4
1760 -	1762	43 RL	---	---	---	---	---	---	---	---	---	---	---	---	---	110	---	---	---	---	666.83	664.99	1.68%	4
1762 -	CC-PE1763	43 RL	---	---	---	---	---	---	---	---	---	---	---	---	---	8	---	---	---	---	664.99	664.79	2.57%	4
1800 -	CC-1800-B	43 RL	---	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	677.74	677.66	1.00%	5
1802 -	CC-1802-B	43 RL	---	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	677.03	676.97	1.07%	5
1804 -	CC-1804-A	43 RL	---	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	680.68	679.70	15.99%	5
1806 -	CC-1806	43 RL	---	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	681.56	681.43	2.03%	5
1808 -	1806	43 RL	---	7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	681.96	681.92	0.60%	5
1809 -	1808	43 RL	---	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	682.03	681.96	0.85%	5
1810 -	CC-1810-A	43 RL	---	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	682.36	682.31	0.97%	5
CC-1207 -	1208	43 RL	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	696.29	696.14	1.87%	2
CC-1213 -	1214	43 RL	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	696.95	696.90	0.55%	2
CC-1267 -	1268	43 RL	7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	690.43	690.11	4.75%	2
CC-1277 -	1278	43 RL	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	689.33	689.02	5.71%	2
CC-1285 -	1290	43 RL	---	---	---	---	8	---	---	---	---	---	---	---	---	---	---	---	---	---	686.05	685.97	0.99%	2
CC-1305 -	1305	43 RL	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	687.42	687.05	4.83%	2
CC-1315 -	1316	43 RL	---	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	686.00	685.03	10.08%	4
CC-1321 -	1300	43 RL	---	---	---	---	5	---	---	---	---	---	---	---	---	---	---	---	---	---	680.95	680.73	4.41%	2
CC-1376 -	1376	43 RL	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	684.59	684.56	0.41%	4
CC-1425 -	1396	43 RL	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	682.10	682.00	2.35%	2
CC-1427 -	1427	43 RL	---	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	682.66	682.37	4.76%	2
CC-1479 -	1486	43 RL	---	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	676.56	676.48	1.41%	2
CC-1510 -	1510	43 RL	---	7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	667.60	667.44	2.09%	5
CC-1525 -	1526	43 RL	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5	---	---	---	669.67	669.26	8.97%	5
CC-1555 -	1556	43 RL	---	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	667.43	667.20	1.50%	5
CC-1587 -	1590	43 RL	---	---	---	---	---	---	---	---	---	---	---	---	---	16	---	---	---	---	664.98	664.02	6.16%	4
CC-1637 -	1620	43 RL	9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	661.32	661.22	1.21%	5
CC-1677 -	1656	43 RL	7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	660.92	660.83	1.27%	5
CC-1685 -	1656	43 RL	---	12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	660.87	660.54	2.79%	5
CC-1702 -	1703	43 RL	9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	661.11	660.98	1.46%	5
CC-1705 -	1706	43 RL	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	661.44	661.38	1.06%	5
CC-1725 -	1725	43 RL	---	7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	670.34	670.27	1.16%	5
CC-1753 -	1742	43 RL	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	663.82	663.54	3.42%	5
CC-1763 -	1742	43 RL	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	663.72	663.51	2.56%	5
CC-1800-A -	1800	43 RL	---	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	677.82	677.74	1.00%	5
CC-1802-A -	1802	43 RL	---	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	677.11	677.03	1.00%	5
CC-1804-B -	1804	43 RL	---	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	680.80	680.68	2.05%	5
CC-1810-B -	1810	43 RL	---	7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	682.43	682.36	1.02%	5
CC-PE1217 -	1208	43 RL	7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	696.97	696.44	7.12%	2
CC-PE1359 -	1360	43 RL	---	---	---	---	---	---	---	---	---	---	---	---	---	---	16	---	---	---	685.73	685.28	2.92%	2
CC-PE1467 -	1446	43 RL	---	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	674.84	674.69	2.89%	2
CC-PE1485 -	1486	43 RL	9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	676.78	676.67	1.22%	2
CC-PE1721 -	1724	43 RL	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	671.16	671.08	0.79%	5
CC-1596A -	CC-1596B	43 RL	---	---	---	---	---	---	20	---	---	---	---	---	---	---	---	---	---	---	660.87	660.66	1.08%	4, REMOVED IN 5
2000 -	2002	LOCUST	7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	674.10	674.00	1.48%	1
2002 -	CC-2002	LOCUST	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	673.96	673.80	2.00%	1
2004 -	CC-2004	LOCUST	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	675.17	675.05	1.50%	1
2008 -	CC-2008	LOCUST	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	675.06	674.94	1.50%	2
2010 -	CC-2010	LOCUST	13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	673.82	673.62	1.54%	1
2014 -	CC-2014	LOCUST	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	673.80	673.68	1.50%	2
2016 -	2042	LOCUST	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	672.52	672.38	1.39%	1
2020 -	CC-2020	BURLEIGH	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	675.80	675.63	2.13%	1
2022 -	2044	BURLEIGH	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	674.52	674.28	3.00%	1
2026 -	CC-2026	BURLEIGH	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	674.90	674.74	2.00%	1
2030 -	CC-2030	BURLEIGH	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	675.54	675.38	2.00%	1
2034 -	CC-2034	BURLEIGH	25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	676.51	676.15	1.46%	3
2038 -	CC-2038	BURLEIGH	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	674.86	674.70	2.00%	1
2042 -	CC-2042	LOCUST	7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	672.38	672.27	1.58%	1
2044 -	CC-2044	BURLEIGH	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	674.05	673.89	2.00%	1
CC-2016 -	2016	LOCUST	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	672.67	672.55	1.50%	1
CC-2022 -	2022	BURLEIGH	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	674.69	674.52	2.12%	1
PROJECT TOTAL			3204	4295	576	26	2187	316	1290	1368	49	137	82	11	584	1326	589	121	408	68				

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Revised Sheet 715
March 7, 2023

STORM SEWER STRUCTURES

STRUCTURE	STATION	OFFSET*	LOCATION	611.0530 MANHOLE COVERS TYPE J SPECIAL EACH	611.0606 INLET COVERS TYPE B EACH	611.0627 INLET COVERS TYPE HM EACH	611.0654 INLET COVERS TYPE V EACH	611.0660 INLET COVERS TYPE WM EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.2007 MANHOLES 7-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	611.2009 MANHOLES 9-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3220 INLETS 2X2-FT EACH	RIM** ELEVATION	INVERT*** ELEVATION	DEPTH**** FT	STAGE
1620	924+22.28	1.93' RT	43 RL	---	---	---	1	---	---	---	1	---	---	---	---	---	666.82	655.71	10.14	5
1630	923+39.39	60.86' RT	43 RL	---	---	1	---	---	---	---	---	---	---	---	1	---	667.45	663.61	3.00	4
1632	924+21.90	59.72' RT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	666.73	661.03	4.36	4
1640	922+94.02	55.33' LT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	668.11	663.05	3.91	4
1642	923+56.85	55.32' LT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	667.35	662.20	4.00	4
1644	924+20.90	62.67' LT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	668.31	661.49	5.67	4
1646	924+21.28	55.30' LT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	666.75	661.39	4.22	4
1650	924+16.08	1.94' LT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	666.90	663.67	2.09	5
1656	924+72.02	2.72' RT	43 RL	---	---	---	1	---	---	---	1	---	---	---	---	---	666.65	655.22	10.48	5
1670	924+71.87	64.58' RT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	667.55	662.40	3.98	4
1672	924+82.60	58.09' RT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	666.63	662.43	3.03	4
1674	924+71.85	58.37' RT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	666.61	660.75	4.53	4
1680	924+71.38	61.46' LT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	666.97	662.09	3.74	4
1682	924+59.00	55.30' LT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	666.59	662.15	3.30	4
1684	924+71.67	55.31' LT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	666.56	662.02	3.40	4
1688	924+61.24	1.59' LT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	666.69	661.48	4.07	5
1694	925+09.16	2.75' RT	43 RL	---	---	---	1	---	---	---	1	---	---	---	---	---	666.76	654.74	11.06	5
1700	925+19.24	56.45' RT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	666.58	662.01	3.40	4
1703	925+18.69	7.40' RT	43 RL	1	---	---	---	---	---	---	---	---	1	---	---	---	667.03	654.65	11.52	5
1704	925+18.30	55.30' LT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	666.59	661.94	3.49	4
1706	925+19.10	1.73' LT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	666.82	661.35	4.30	5
1714	926+10.23	55.29' RT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	667.70	661.51	5.04	4
1722	930+56.13	1.94' RT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	681.02	670.02	9.82	5
1724	929+20.72	1.95' RT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	676.85	668.67	7.01	5
1725	929+20.27	8.11' LT	43 RL	1	---	---	---	---	---	1	---	---	---	---	---	---	677.17	670.27	5.85	5
1726	929+15.33	1.96' LT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	676.78	670.18	5.45	5
1732	928+17.02	5.33' RT	43 RL	1	---	---	---	---	---	1	---	---	---	---	---	---	673.93	667.46	5.42	5
1734	927+56.27	6.56' RT	43 RL	1	---	---	---	---	---	---	1	---	---	---	---	---	672.15	666.74	4.36	5
1736	928+10.50	1.95' RT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	673.58	669.20	3.23	5
1738	928+02.95	1.96' LT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	673.40	669.25	3.00	5
1742	926+69.58	1.15' RT	43 RL	---	---	---	1	---	---	---	1	---	---	---	---	---	669.38	663.43	4.82	5
1756	926+60.97	3.09' LT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	669.19	665.09	2.93	5
1758	926+69.06	63.83' LT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	670.58	665.10	4.32	4
1760	927+78.49	56.00' LT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	672.26	666.83	4.27	4
1762	926+68.67	56.69' LT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	669.05	664.99	2.90	4
1800	931+09.14	55.70' RT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	683.79	677.74	4.90	5
1802	931+68.53	1.95' RT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	684.35	677.03	6.17	5
1804	934+13.26	49.05' RT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	691.74	680.68	9.92	5
1806	934+17.97	1.95' RT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	691.75	681.56	9.05	5
1808	934+23.40	1.97' LT	43 RL	---	---	---		---	---	---	---	---	---	---	1	---	691.87	681.96	8.76	5
1809	934+18.62	8.68' LT	43 RL	1	---	---	---	---	---	1	---	---	---	---	---	---	691.74	682.03	8.66	5
1810	934+19.84	48.96' LT	43 RL	---	---	---	1	---	---	---	---	---	---	---	1	---	691.22	682.36	7.71	5
2000	26+45.08	131.14' RT	LOCUST	---	---	---	---	1	---	---	---	---	---	---	1	---	677.35	674.35	1.65	1
2002	26+51.84	131.05' RT	LOCUST	1	---	---	---	---	1	---	---	---	---	---	---	---	677.06	673.96	2.03	1
2004	25+75.89	40.98' RT	LOCUST	---	---	---	---	1	---	---	---	---	---	---	1	---	678.60	675.17	2.24	1
2008	25+93.04	40.92' LT	LOCUST	---	---	---	---	1	---	---	---	---	---	---	1	---	678.69	675.06	2.44	2
2010	22+19.80	103.03' RT	LOCUST	---	---	---	---	1	---	---	---	---	---	---	1	---	679.22	673.82	4.21	1
2014	22+48.63	40.75' LT	LOCUST	---	---	---	---	1	---	---	---	---	---	---	1	---	679.51	673.80	4.52	2
2016	22+31.75	41.23' RT	LOCUST	---	---	---	---	1	---	---	---	---	---	---	1	---	679.38	672.52	5.67	1
2020	21+49.94	28.56' LT	BURLEIGH	---	---	---	---	1	---	---	---	---	---	---	1	---	679.17	675.80	2.18	1
2022	21+49.93	30.92' RT	BURLEIGH	---	---	---	---	1	---	---	---	---	---	---	1	---	679.12	674.52	3.41	1
2026	24+34.10	28.55' LT	BURLEIGH	---	---	---	---	1	---	---	---	---	---	---	1	---	679.29	674.90	3.20	1
2030	24+41.68	30.93' RT	BURLEIGH	---	---	---	---	1	---	---	---	---	---	---	1	---	679.29	675.54	2.56	1
2034	25+04.45	30.81' RT	BURLEIGH	---	---	---	---	1	---	---	---	---	---	---	1	---	679.14	676.14	1.65	3
2038	25+07.36	26.17' LT	BURLEIGH	---	---	---	---	1	---	---	---	---	---	---	1	---	678.78	674.86	2.73	1
2042	22+22.17	38.08' RT	LOCUST	1	---	---	---	---	---	1	---	---	---	---	---	---	679.34	672.38	5.89	1
2044	21+47.02	38.38' RT	BURLEIGH	1	---	---	---	---	1	---	---	---	---	---	---	---	679.68	674.05	4.55	1
E2046	20+46.00	26.41' LT	BURLEIGH	---	---	---	---	1	---	---	---	---	---	---	---	---	679.10	---	---	1
			TOTALS	104	12	117	211	13	9	49	48	6	13	1	321	10				

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REMARKS:

*STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE

**RIM ELEV IS AT THE INLET COVER FLANGE LOCATION

***FOR STRUCTURES WITH SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE SUMP. FOR STRUCTURES WITHOUT

****DEPTH = RIM ELEV - TOP OF STRUCTURE BASE ELEV - COVER HEIGHT - 6-INCH ADJUSTMENT RING HEIGHT

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March 7, 2023

CONCRETE COLLARS CONT.

STAGE	NAME	LOCATION	STA	OFFSET	520.8000 CONCRETE COLLARS FOR PIPE EACH
4					
	CC*	43 RL	862+47.10	23.09	1
	CC-747	43 RL	864+45.12	-53.25	1
	CC-PE741	43 RL	864+45.20	52.96	1
	CC-PE759	43 RL	866+25.12	101.37	1
	CC-773	43 RL	866+93.32	-52.14	1
	CC-PE771	43 RL	866+93.83	45.50	1
	CC-PE767	43 RL	867+02.28	51.49	1
	CC-767	43 RL	867+52.91	51.17	1
	CC-765	43 RL	867+61.10	57.07	1
	CC-763	43 RL	867+65.34	51.11	1
	CC-PE765	43 RL	867+68.41	76.98	1
	CC-807	43 RL	867+81.36	-108.36	1
	CC-PE763	43 RL	868+33.52	50.88	1
	CC-PE809	43 RL	868+54.71	-62.48	1
	CC-809	43 RL	868+84.89	-59.95	1
	CC-PE811	43 RL	868+96.44	-63.77	1
	CC-PE807	43 RL	869+15.48	-89.84	1
	CC-811	43 RL	869+16.71	-84.30	1
	CC-815	43 RL	869+22.12	-83.94	1
	CC-PE833	43 RL	869+78.31	60.56	1
	CC-PE1071	43 RL	871+46.52	-55.69	1
	CC-1077	43 RL	871+57.50	53.74	1
	CC-1081	43 RL	871+64.03	60.78	1
	CC-1051	43 RL	871+64.59	56.36	1
	CC-1083	43 RL	871+73.91	64.33	1
	CC-PE1031	43 RL	874+43.58	59.00	1
	CC*	43 RL	874+43.64	-34.91	1
	CC-PE1013	43 RL	879+43.89	-61.37	1
	CC-PE1005	43 RL	881+93.12	-64.39	1
	CC-PE997	43 RL	881+93.64	57.00	1
	CC-953	43 RL	884+64.65	45.71	1
	CC-947	43 RL	884+74.98	52.12	1
	CC-967	43 RL	885+01.65	-75.98	1
	CC-PE971	43 RL	885+01.94	-52.89	1
	CC-9277	43 RL	885+02.74	-65.86	1
	CC-PE947	43 RL	885+12.29	54.63	1
	CC-941	43 RL	885+24.46	55.62	1
	CC-PE941	43 RL	888+29.85	84.67	1
	CC-935	43 RL	888+43.38	80.24	1
	CC-913	43 RL	888+47.74	97.71	1

CONCRETE COLLARS CONT.

STAGE	NAME	LOCATION	STA	OFFSET	520.8000 CONCRETE COLLARS FOR PIPE EACH
4					
	CC-PE935	43 RL	888+48.17	65.12	1
	CC-933	43 RL	888+58.46	60.51	1
	CC-PE933	43 RL	889+17.29	67.38	1
	CC-928	43 RL	889+43.50	51.59	1
	CC-927	43 RL	889+43.52	45.54	1
	CC-921	43 RL	889+43.53	-51.94	1
	CC*	43 RL	894+94.01	22.99	1
	CC-1217	43 RL	896+68.17	59.23	1
	CC-PE1213	43 RL	896+69.03	-43.33	1
	CC*	43 RL	900+36.94	-34.88	1
	CC-PE1277	43 RL	901+19.17	53.08	1
	CC-PE1285	43 RL	902+93.62	-60.77	1
	CC-1315	43 RL	905+00.04	-87.49	1
	CC-1317	43 RL	905+06.67	-75.44	1
	CC-PE1305	43 RL	905+14.48	95.94	1
	CC-1376	43 RL	907+17.05	-106.18	1
	CC-1359	43 RL	907+85.46	48.81	1
	CC*	43 RL	908+43.82	-34.76	1
	CC*	43 RL	910+95.06	-34.95	1
	CC-PE1425	43 RL	912+14.50	55.17	1
	CC-1467	43 RL	914+69.24	47.16	1
	CC-1485	43 RL	915+53.84	-78.89	1
	CC-1522	43 RL	917+44.26	43.66	1
	CC-1596A	43 RL	921+08.08	11.06	1
	CC-1596B	43 RL	921+27.11	4.94	1
	CC-1587	43 RL	922+06.91	99.62	1
	CC-1635	43 RL	924+22.00	45.15	1
	CC-PE1685	43 RL	924+71.75	-44.50	1
	CC-1675	43 RL	924+71.88	42.03	1
	CC-PE1705	43 RL	925+18.47	-44.33	1
	CC-1701	43 RL	925+19.13	42.96	1
	CC-PE1753	43 RL	926+68.61	52.17	1
	CC-PE1763	43 RL	926+68.79	-48.92	1
	CC-1721	43 RL	928+95.67	46.06	1
	CC-1721	43 RL	928+95.67	46.06	1
	STAGE 4 SUBTOTAL				140

CONCRETE COLLARS CONT.

STAGE	NAME	LOCATION	STA	OFFSET	520.8000 CONCRETE COLLARS FOR PIPE EACH
5					
	CC-1498	43 RL	916+31.14	5.00	1
	CC-1525	43 RL	917+43.55	-6.55	1
	CC-1510	43 RL	917+44.17	15.25	1
	CC*	43 RL	918+78.21	39.00	1
	CC-1555	43 RL	918+70.87	-8.00	1
	CC-1637	43 RL	924+22.22	10.63	1
	CC-1677	43 RL	924+72.00	9.81	1
	CC-1685	43 RL	924+72.01	-9.20	1
	CC-1702	43 RL	925+18.89	16.32	1
	CC-1705	43 RL	925+19.02	-7.41	1
	CC*	43 RL	925+68.94	38.99	1
	CC*	43 RL	926+10.53	38.16	1
	CC-1753	43 RL	926+69.42	9.46	1
	CC-1763	43 RL	926+69.48	-7.07	1
	CC-PE1721	43 RL	929+15.95	10.26	1
	CC-1725	43 RL	929+20.22	-14.74	1
	CC-1800-A	43 RL	931+04.33	62.04	1
	CC-1800-B	43 RL	931+14.97	50.31	1
	CC-1802-A	43 RL	931+62.56	7.24	1
	CC-1802-B	43 RL	931+68.81	-3.67	1
	CC-1804-A	43 RL	934+09.96	54.21	1
	CC-1804-B	43 RL	934+13.84	43.22	1
	CC-1806	43 RL	934+17.33	8.33	1
	CC-1810-A	43 RL	934+19.69	-43.80	1
	CC-1810-B	43 RL	934+21.08	-55.69	1
	STAGE 5 SUBTOTAL				25
	PROJECT TOTAL				296

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NOTES: CC* INDICATES LOCATIONS OF PROPOSED PIPES CROSSING THE ROAD

TYPE I & II PERMANENT SIGNING REMOVALS **1228-22-70**

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	REMARKS / NEW SIGN LOCATION	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0885 POSTS TUBULAR STEEL 2X2X8.5 FT [EA]
101R	R7-1R		1		ON FENCE				
102R	R7-1L		1		ON FENCE				
103R	R7-1R		1		ON FENCE				
104R	R7-1L		1		ON FENCE				
105R	W3-3		1	1					
106R	W3-3		1		LIGHT POLE				
107R	D1-1		1	2					
108R	R3-8AF		1	1					
109R	R3-8AF		1	1					
110R	R5-1		1		SIGNAL POLE				
111R	R5-1A		1		SIGNAL POLE				
112R	R5-1		1		SIGNAL POLE				
113R	R5-1A		1		SIGNAL POLE				
114R	D1-1		1	2					
115R	R1-2		1	1					
116R	NOT USED								
117R	NOT USED								
118R	R3-51L		1	1					
119R	W3-8		1		SIGNAL POLE				
120R	W3-8		1		SIGNAL POLE				
121R	J3-1		1	1					
122R	R10-6		1		SIGNAL POLE				
123R	R10-65R		1		SIGNAL POLE				
124R	R10-65C		1	1					
125R	R10-6 MOD		1	1					
126R	R10-65L		1		SIGNAL POLE				
127R	R10-6 MOD		1		SIGNAL POLE				

Addendum No. 01
ID 1228-22-70
Revised Sheet 729
March 7, 2023

TYPE I & II PERMANENT SIGNING REMOVALS **1228-22-70**

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	REMARKS / NEW SIGN LOCATION	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0885 POSTS TUBULAR STEEL 2X2X8.5 FT [EA]
128R	W4-1R		1	1					
129R	R3-7L		1	1					
130R	R7-1D		1		LIGHT POLE				
131R	J3-1		1		LIGHT POLE				
132R	W3-8		1		SIGNAL POLE				
133R	J3-1		1	1					
134R	R10-6 MOD		1	1					
135R	R3-51R		1	1					
136R	R10-65L		1		ON S-40-701				
137R	R10-65C		1		ON S-40-701				
138R	W4-2L		1		ON UPRIGHT OF S-40-701				
139R	R7-1D		1	1					
140R	R10-65R		1		SIGNAL POLE				
141R	R10-6		1		SIGNAL POLE				
142R	R5-57		1	1					
143R	R5-1A		1		LIGHT POLE				
144R	R5-1		1		LIGHT POLE				
145R	NONE	CRASH INVESTIGATION SITE 73S	1	1					
146R	NOT USED								
147R	NOT USED								
148R	R5-1A		1	1					
149R	R8-55		1	1	INCLUDES REMOVAL OF 2 HOUR LIMIT PLAQUE				
150R	R8-55		1		INCLUDES REMOVAL OF 2 HOUR LIMIT PLAQUE				
151R	J2-1		1	1					
152R	D4-56L		1	1					
153R	R2-1	SPEED LIMIT 30	1		LIGHT POLE				
154R	R2-1	SPEED LIMIT 30	1		LIGHT POLE				
155R	R2-1	SPEED LIMIT 30	1		LIGHT POLE				

Addendum No. 01
ID 1228-22-70
Revised Sheet 730
March 7, 2023

TYPE I & II PERMANENT SIGNING REMOVALS **1228-22-70**

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	REMARKS / NEW SIGN LOCATION	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0885 POSTS TUBULAR STEEL 2X2X8.5 FT [EA]
156R	J3-1		1		LIGHT POLE				
157R	R3-7L		1		LIGHT POLE				
158R	R5-1		1		UPRIGHT OF CITY OVERHEAD SIGN STRUCTURE				
159R	J2-2		1		UPRIGHT OF CITY OVERHEAD SIGN STRUCTURE				
160R	NONE	CRASH INVESTIGATION SITE 74N	1	1					
161R	R8-55		1	1	INCLUDES REMOVAL OF 2 HOUR LIMIT PLAQUE				
162R	R8-55		1	1	INCLUDES REMOVAL OF 2 HOUR LIMIT PLAQUE				
163R	D4-56R		1	1					
164R	R7-1D		1		LIGHT POLE				
165R	R3-7R		1	1					
166R	J3-1		1		LIGHT POLE				
167R	R3-7R		1		ON UPRIGHT OF CITY OVERHEAD SIGN STRUCTURE				
168R	J3-1		1	1					
169R	R3-11R		1	1					
170R	R6-2R		1		SIGNAL POLE				
171R	R3-11R		1	1					
172R	W3-8		1		SIGNAL POLE				
173R	R4-7		1	1	REMOVAL OF W5-52R PART OF ITEM				
174R	NOT USED								
175R	R3-11R		1		SIGNAL POLE				
176R	R6-2L		1		SIGNAL POLE				
177R	R7-1D		1	1					
178R	J2-1		1		LIGHT POLE				
179R	R7-1D		1	1					
180R	R8-LF		1	1					
181R	R6-2L		1	1					
182R	R7-1D		1		LIGHT POLE				
183R	R5-1A		1		ON UPRIGHT OF CITY OVERHEAD SIGN STRUCTURE				

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Addendum No. 01
ID 1228-22-70
Revised Sheet 731
March 7, 2023

TYPE I & II PERMANENT SIGNING REMOVALS **1228-22-70**

SIGN NO.	SIGN CODE	SIGN MESSAGE	**638.2602** REM SIGNS TYPE II [EA]	**638.3000** REM SMALL SIGN SUP [EA]	REMARKS / NEW SIGN LOCATION	**638.2601** REM SIGNS TYPE I [EA]	**638.3100** REM STR STEEL SIGN SUP [EA]	**638.2102** MOVING SIGNS TYPE II [EA]	**634.0885** POSTS TUBULAR STEEL 2X2X8.5 FT [EA]
184R	R7-1D		1		LIGHT POLE				
185R	J2-1		1		LIGHT POLE				
186R	J3-2		1		LIGHT POLE				
187R	R5-1A		1	1					
188R	NOT USED								
189R	D2-3		1		LIGHT POLE				
190R	R7-1D		1	1					
191R	R7-1D		1		LIGHT POLE				
192R	R8-LL		1		SIGNAL POLE				
193R	R5-1		1	1	R5-1A PART OF REMOVAL				
194R	R6-2L		1		SIGNAL POLE				
195R	R6-2R		1		SIGNAL POLE				
196R	J3-1		1		SIGNAL POLE				
197R	W3-8		1		SIGNAL POLE				
198R	J3-1		1		LIGHT POLE				
199R	R3-8LL		1		LIGHT POLE				
200R	R10-6 MOD		1		SIGNAL POLE				
201R	R10-6		1		SIGNAL POLE				
202R	R5-57		1		LIGHT POLE				
203R	R3-8LF		1		SIGNAL POLE				
204R	J3-1		1	1					
205R	R10-65L		1		SIGNAL POLE				
206R	R10-6 MOD		1		SIGNAL POLE				
207R	R10-65R		1		SIGNAL POLE				
208R	R10-6		1		SIGNAL POLE				
209R	R3-51R		1	2					
210R	W4-2L		1	1					
211R	R7-1D		1		ON FENCE				

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Revised Sheet 732
March 7, 2023

ADDENDUM #1 SHEET: 4 OF 12

TYPE I & II PERMANENT SIGNING REMOVALS **1228-22-70**

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	REMARKS / NEW SIGN LOCATION	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0885 POSTS TUBULAR STEEL 2X2X8.5 FT [EA]
212R	R3-2		1		SIGNAL POLE				
213R	W5-52		1		SIGNAL POLE				
214R	R7-1D		1		ON FENCE				
215R	R6-2R		1		SIGNAL POLE				
216R	R6-2L		1		SIGNAL POLE				
217R	R6-2R		1		SIGNAL POLE				
218R	R6-2L		1		SIGNAL POLE				
219R	W5-52		1	1					
220R	NOT USED								
221R	R3-3		1	1	REMOVAL OF R5-1 PART OF ITEM				
222R	R5-1A		1	1					
223R	R5-1A		1	1					
224R	R10-65L		1		SIGNAL POLE				
225R	R10-6 MOD		1		SIGNAL POLE				
226R	R10-65R		1		SIGNAL POLE				
227R	R10-6		1		SIGNAL POLE				
228R	J3-1		1		LIGHT POLE				
229R	W3-8		1		SIGNAL POLE				
230R	J3-1		1		LIGHT POLE				
231R	R5-1A		1	1					
232R	R7-1D		1	1					
233R	W3-3		1	1					
234R	NOT USED								
235R	R3-7R		1	1					
236R	R5-1		1	1					
237R	R1-2		1		LIGHT POLE				
238R	R7-1D		1		LEAVE POST AND CITY SIGN				
239R	R3-7L		1	1					

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Revised Sheet 733
March 7, 2023

ADDENDUM #1 SHEET: 5 OF 12

TYPE I & II PERMANENT SIGNING REMOVALS **1228-22-70**

SIGN NO.	SIGN CODE	SIGN MESSAGE	**638.2602** REM SIGNS TYPE II [EA]	**638.3000** REM SMALL SIGN SUP [EA]	REMARKS / NEW SIGN LOCATION	**638.2601** REM SIGNS TYPE I [EA]	**638.3100** REM STR STEEL SIGN SUP [EA]	**638.2102** MOVING SIGNS TYPE II [EA]	**634.0885** POSTS TUBULAR STEEL 2X2X8.5 FT [EA]
240R	J3-1		1	1					
241R	W3-8		1		SIGNAL POLE				
242R	R10-65R		1		SIGNAL POLE				
243R	R10-6		1		SIGNAL POLE				
244R	W4-2L		1	1					
245R	R10-6 MOD		1		SIGNAL POLE				
246R	R10-65L		1		SIGNAL POLE				
247R	R5-57		1	1					
248R	R7-1D		1	1					
249R	R5-1A		1	1					
250R	W3-1		1	1					
251R	W3-1		1	1					
252R	R1-1		1		LIGHT POLE				
253R	R1-1		1	1					
254R	R5-1A		1		LIGHT POLE				
255R	R5-1		1	1					
256R	R5-1		1	1	REMOVAL OF R3-1 PART OF ITEM				
257R	NOT USED								
258R	R3-1		1	1					
259R	R10-6 MOD		1	1	REMOVAL OF R10-65L PART OF ITEM				
260R	NOT USED								
261R	R10-65R		1	1	REMOVAL OF R10-6 PART OF ITEM				
262R	NOT USED								
263R	R8-55		1	1	REMOVAL OF 2 HOUR PLAQUE INCLUDED				
264R	R8-55		1	1	REMOVAL OF 2 HOURS PLAQUE INCLUDED				
265R	D4-56R		1	1					
266R	NONE	CRASH INVESTIGATION SITE 75S	1	1					
267R	W3-8		1		SIGNAL POLE				

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ADDENDUM #1 SHEET: 6 OF 12

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES – REMOVAL SIGNING	SHEET: 734	E

FILE NAME : N:\SPO\Operations\Signing\Miscellaneous Quantities\1228-22-70\030501_MQ.pptx PLOT DATE : 2/23/2023 PLOT BY : DOTTAH PLOT NAME : 030501_MQ.pdf PLOT SCALE : 1:1

TYPE I & II PERMANENT SIGNING REMOVALS **1228-22-70**

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	REMARKS / NEW SIGN LOCATION	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0885 POSTS TUBULAR STEEL 2X2X8.5 FT [EA]
268R	W4-2R		1	1					
269R	R1-1		1	1					
270R	W11-2		1	1					
271R	W3-3		1		SIGNAL POLE				
272R	W11-2		1	1					
273R	R5-1		1	1	REMOVE R3-3 PART OF ITEM				
274R	R1-2		1	1					
275R	R1-2		1	1					
276R	W4-2L		1	1	SHEET 13				
277R	R5-1A		1	1	SHEET 18				
278R	R5-57		1		LIGHT POLE				
279R TO 300R	NOT USED								
301R	W8-5		1	2	REMOVAL OF R8-7 INCLUDED				
302R	W8-5		1	1					
303R	W1-2		1	1					
304R	W1-2		1	1					
305R	W1-8		1		LIGHT POLE				
306R	D10-5		1		LIGHT POLE			1	1
307R	W1-8		1	1					
308R	NOT USED								
309R	M1-94	BROWN ST	1	2					
310R	M1-94	BROWN ST	1	2					
311R	W5-52L		1		ON COLUMN OF BRIDGE				
312R	D10-5		1		LIGHT POLE			1	1
313R	NOT USED								
314R	W1-8		1	1					
315R	D10-5		1		LIGHT POLE			1	1
316R	W1-8		1		LIGHT POLE				

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PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES – REMOVAL SIGNING	SHEET: 735	E

FILE NAME : N:\SPO\Operations\Signing\Miscellaneous Quantities\1228-22-70\030501_MQ.pptx PLOT DATE : 2/23/2023 PLOT BY : DOTTAH PLOT NAME : 030501_MQ.pdf PLOT SCALE : 1:1

Addendum No. 01
ID 1228-22-70
Revised Sheet 735
March 7, 2023

TYPE I & II PERMANENT SIGNING REMOVALS **1228-22-70**

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	REMARKS / NEW SIGN LOCATION	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0885 POSTS TUBULAR STEEL 2X2X8.5 FT [EA]
317R	W1-8		1	1					
318R	J4-1		1		LIGHT POLE				
319R	E5-1A		1	2					
320R	W1-8		1		LIGHT POLE				
321R	E1-1A					1	2		
322R	W1-8		1		LIGHT POLE				
323R	D10-5		1		LIGHT POLE			1	1
324R	D4-52	CIS EXIT 74				1	2		
325R	W1-8		1	1					
326R	W12-2	14' 2" HEIGHT	1	1					
327R	W1-8		1	1					
328R	W1-8		1		ON BRIDGE COLUMN				
329R	E8-1				ON S-40-705	1			
330R	D10-5		1		LIGHT POLE			1	1
331R	W4-1R		1	2					
332R	D10-5		1		LIGHT POLE			1	1
333R	E6-1				ON S-40-508	1			
334R	M1-94	NORTH AVE 2300 NORTH	1		ON BRIDGE OVERHEAD				
335R	W1-8		1	1					
336R	W1-8		1	1					
337R	E8-1				ON S-40-224	1			
338R	W8-5		1	1	INCLUDES W13-1 PLAQUE				
339R	W8-5		1		ON S-40-224 UPRIGHT				
340R	NOT USED								
341R	W13-1		1		ON S-40-224 UPRIGHT				
342R	W1-13L		1		ON UPRIGHT OF S-40-424				
343R	W1-13L		1		ON UPRIGHT OF S-40-424				
344R	W13-1		1		ON UPRIGHT OF S-40-424				

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March 7, 2023

TYPE I & II PERMANENT SIGNING REMOVALS **1228-22-70**

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	REMARKS / NEW SIGN LOCATION	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0885 POSTS TUBULAR STEEL 2X2X8.5 FT [EA]
345R	W13-1		1		ON UPRIGHT OF S-40-424				
346R	J4-1		1		LIGHT POLE				
347R	M1-94	WRIGHT ST	1	2					
348R	E5-1A		1	2					
349R	W1-2		1	2					
350R	E8-1				ON S-40-224 BUTTERFLY	1			
351R	E6-1					1	3		
352R	W1-8		1	1					
353R	W1-8		1	1					
354R	W1-8		1	1					
355R	W1-8		1	1					
356R	M1-94	NORTH AVE 2300 NORTH	1		MOUNTED OVERHEAD ON BRIDGE				
357R	R2-1	SPEED LIMIT 50	1		LIGHT POLE				
358R	D12-2		1	2					
359R	E4-1A					1	2		
360R	M1-94	CENTER ST 2700 NORTH	1		MOUNTED OVERHEAD ON BRIDGE				
361R	M1-94	CENTER ST 2700 NORTH	1		MOUNTED OVERHEAD ON BRIDGE				
362R	W3-5		1	2					
363R	W3-5		1		LIGHT POLE				
364R	D12-2		1	2					
365R	R2-1	SPEED LIMIT 50	1	1					
366R	R2-1	SPEED LIMIT 50	1		LIGHT POLE				
367R	E4-1A					1	2		
368R	M1-94	WRIGHT ST	1	2					
369R	W1-2		1		LIGHT POLE				
370R	W13-1		1		LIGHT POLE				
371R	E5-1A		1	2					
372R	NOT USED								

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March 7, 2023

TYPE I & II PERMANENT SIGNING REMOVALS **1228-22-70**

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	REMARKS / NEW SIGN LOCATION	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0885 POSTS TUBULAR STEEL 2X2X8.5 FT [EA]
373R	E1-1A					1	2		
374R	M1-94	LOCUST ST 2900 NORTH	1		MOUNTED OVERHEAD ON BRIDGE				
375R	E1-1A					1	2		
376R	M1-94	LOCUST ST 2900 NORTH	1		MOUNTED OVERHEAD ON BRIDGE				
377R	NONE	43 SOUTH 94 EAST AHEAD 94 WEST				1	3		
378R	E8-1	794 EAST RIGHT 2 MILES			ON S-40-225 BUTTERFLY	1			
379R	D4-52	CIS EXIT 73B				1	2		
380R	d10-2		1	1					
381R	R2-1	SPEED LIMIT 55	1		LIGHT POLE				
382R	E8-1				MOUNTED ON S-40-226 BUTTERFLY SIGN STRUCTURE	1			
383R	M1-94	BURLEIGH ST 3100 NORTH	1		MOUNTED OVERHEAD ON BRIDGE				
384R	R2-1	SPEED LIMIT 55	1		LIGHT POLE				
385R	E4-1A					1	2		
386R	M1-94	BURLEIGH ST, 3100 NORTH	1		MOUNTED OVERHEAD ON BRIDGE				
387R	E5-1A		1	2					
388R	D10-2		1	1					
389R	E4-1A				MOUNTED ON S-40-818	1			
390R	E5-1A		1	2					
391R	E8-1				MOUNTED ON S-40-251 BUTTERLFY	1			
392R	E1-1A					1	2		
393R	M1-94	KEEFE AVE, 3500 NORTH	1		MOUNTED OVERHEAD ON BRIDGE				

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Revised Sheet 738
March 7, 2023

ADDENDUM #1

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES – REMOVAL SIGNING	SHEET: 738	E

FILE NAME : N:\SPO\Operations\Signing\Miscellaneous Quantities\1228-22-70\030501_MQ.pptx PLOT DATE : 2/23/2023 PLOT BY : DOTTAH PLOT NAME : 030501_MQ.pdf PLOT SCALE : 1:1

TYPE I & II PERMANENT SIGNING REMOVALS **1228-22-70**

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	REMARKS / NEW SIGN LOCATION	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0885 POSTS TUBULAR STEEL 2X2X8.5 FT [EA]
394R	M1-94	ATKINSON AVE	1		MOUNTED OVERHEAD ON BRIDGE				
395R	NONE	UNIV OF WISCONSIN MILW				1	2		
396R	W12-2		1	1					
397R	J4-1		1	1					
398R	E8-1				MOUNTED ON S-40-227 BUTTERFLY	1			
399R	E1-1A					1	2		
400R	M1-94	ATKINSON AVE	1	2					
401R	M1-94	KEEFE AVE, 3500 NORTH	1		MOUNTED OVERHEAD ON BRIDGE				
402R	R2-1	SPEED LIMIT 55	1	1					
403R	M1-94	DR MARTIN LUTHER KING JR DR	1	2					
404R	R2-1	SPEED LIMIT 55	1		LIGHT POLE				
405R	W13-2		1		MOUNTED ON UPRIGHT OF S-40-361				
406R	E6-1				MOUNTED ON SIGN STRUCTURE S-40-361	1			
407R	E6-51				MOUNTED ON SIGN STRUCTURE S-40-361	1			
408R	E4-1A					1	2		
409R	M1-94	DR MARTIN LUTHER KING JR DR	1		MOUNTED OVERHEAD ON BRIDGE				
410R	E6-51				MOUNTED ON SIGN STRUCTURE S-40-348	1			
411R	E5-1A		1	1					
412R	E5-1A		1	2					
413R	NOT USED								
414R	J3-2		1	2	INCLUDES REMOVAL OF D10-2				
415R	NOT USED								
416R	E6-1				MOUNTED ON S-40-809	1			
417R	W13-2		1		MOUNTED ON UPRIGHT OF S-40-809				
418R			1	3		1	2		
419R	NOT USED								
420R	NOT USED								
421R	NOT USED								

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ID 1228-22-70
Added Sheet 738A
March 7, 2023

ADDENDUM #1 SHEET: 11 OF 12

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES – REMOVAL SIGNING	SHEET: 738A	E

FILE NAME : N:\SPO\Operations\Signing\Miscellaneous Quantities\1228-22-70\030501_MQ.pptx PLOT DATE : 2/23/2023 PLOT BY : DOTTAH PLOT NAME : 030501_MQ.pdf PLOT SCALE : 1:1

TYPE I & II PERMANENT SIGNING REMOVALS **1228-22-70**

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	REMARKS / NEW SIGN LOCATION	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0885 POSTS TUBULAR STEEL 2X2X8.5 FT [EA]
422R	NOT USED								
423R	NOT USED								
424R	NOT USED								
425R	I2-3A	CITY OF MILWAUKEE	1	2					
426R	D4-52	CIS , EXIT 75				1	2		
427R	D10-2		1		MOUNTED ON COLUMN OF 426R				
428R	NOT USED								
429R	NOT USED								
430R	NOT USED								
431R	NOT USED								
432R	NOT USED								
UNDISTRIBUTED			2	2		1	2		
TOTALS			255	145 *	--	30	36	5	5

* ADDITIONAL QTYS SHOWN ELSEWHERE

Addendum No. 01
ID 1228-22-70
Added Sheet 738B
March 7, 2023

ADDENDUM #1 SHEET: 12 OF 12

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES – REMOVAL SIGNING	SHEET: 738B	E

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W x H [IN.] x [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0622 POSTS WOOD 4" X 6" X 22' [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W x H [FT.] x [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F (SF)	638.2101 MOVING SIGNS TYPE I [EA]	531.2024 DRILLING SHAFT 24 INCH LF (EST)	531.1140 (EST) STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS- LBS	531.1100 (EST) CONCRETE MASONRY ANCILLIARY STRUCTURES TYPE NS - CY	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS EST LBS
101	E6-51	HIGHLAND AVE, 11TH ST, 1/2 MILE												MOUNT ON S-40-3064 , I BEAMS INCIDENTAL	17 X 8	136.00						
		EXIT ONLY												YELLOW PORTION	17 X 3		51.00					
101A	E1-5P	EXIT 72E											101		10 X 2.5	25.00						
102	E6-51	145, FOND DU LAC AVE												MOUNT ON S-40-3064, I BEAMS INCIDENTAL	20 X 12	240.00						
		MCKINLEY AV																				
		1/4 MILE																				
102A	E1-5P	EXIT 73A											102		10 X 2.5	25.00						
103	NOT USED																					
104	E8-1	145 MCKINLEY AVE 1/2												MOUNT ON S-40-3065, I BEAMS INCIDENTAL, SHEET 2	22 X 7.5	165.00						
		HIGHLAND AVE 3/4																				
		94 794 1 1/4																				
105	E8-1 MOD	DOWNTOWN EXITS												MOUNT ON S-40-3066, I BEAMS INCIDENTAL , SHEET 3	25 X 10	250.00						
		MCKINLEY AVE 1/2																				
		HIGHLAND AVE - 11TH ST 1																				
		794 PLANKINTON AVE 1 1/2																				
106	E8-1	LOCUST ST 1/2												MOUNT ON S-40-3066, I BEAMS INCIDENTAL , SHEET 3	20 X 7.5	150.00						
		KEEFE AVE 1 1/4																				
		190 CAPITOL DR 1 3/4																				
107	NOT USED																					
108	NOT USED																					
109	E6-1	LOCUST ST												MOUNT ON S-40-3068, I BEAMS INCIDENTAL, SHEET 4	14 X 3.5	49.00						
		EXIT ONLY												YELLOW PORTION	14 X 3.5		49.00					
109A	E1-5P	EXIT 74											109		9 X 2.5	22.50						
110	E8-1	NORTH AVE 1/4												MOUNT ON S-40-3069, I BEAMS INCIDENTAL, SHEET 5	25 X 7.5	187.50						
		145 MCKINLEY AVE 1 1/4																				
		HIGHLAND AVE - 11TH ST 1 1/2																				
111	E8-1	KEEFE AVE 1/4												MOUNT ON S-40-3070, I BEAMS INCIDENTAL , SHEET 6	19 X 7.5	142.50						
		190 CAPITOL DR 1																				
		HAMPTON AVE 2																				
112	E6-51	KEEFE AVE, ATKINSON AVE												MOUNT ON S-40-3071, I BEAMS INCIDENTAL, SHEET 6	17 X 6	102.00						
		EXIT ONLY												YELLOW PORTION	17 X 3		51.00					
112A	E1-5P	EXIT 75											112		9 X 2.5	22.50						
113	E6-1	LOCUST ST												MOUNT ON S-40-3072, I BEAMS INCIDENTAL , SHEET 6	14 X 3.5	49.00						
		EXIT ONLY												YELLOW PORTION	14 X 3.5		49.00					
113A	E1-5P	EXIT 74											113		9 X 2.5	22.50						
114	E6-1	KEEFE AVE, ATKINSON AVE												MOUNT ON S-40-3075, I BEAMS INCIDENTAL, SHEET 7	17 X 6	102.00						
		EXIT ONLY												YELLOW PORTION	17 X 3.5		59.50					
114A	E1-5P	EXIT 75											114		9 X 2.5	22.50						
115	E6-51	LOCUST ST												MOUNT ON S-40-3073, I BEAMS INCIDENTAL, SHEET 7	14 X 3.5	49.00						
		EXIT ONLY												YELLOW PORTION	14 X 3		42.00					
115A	E1-5P	EXIT 74											115		9 X 2.5	22.50						

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ADDENDUM #1

TYPE I & II PERMANENT SIGNING 1228-22-70

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W x H [IN.] x [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0622 POSTS WOOD 4" X 6" X 22' [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W x H [FT.] x [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F (SF)	638.2101 MOVING SIGNS TYPE I [EA]	531.2024 DRILLING SHAFT 24 INCH LF (EST)	531.1140 (EST) STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS- LBS	531.1100 (EST) CONCRETE MASONRY ANCILLIARY STRUCTURES TYPE NS - CY	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS EST LBS
116	E8-1	LOCUST S 1/4												MOUNT ON S-40-3074, I BEAMS INCIDENTAL, SHEET 7	23 X 7.5	172.50						
		NORTH AVE 1																				
		145 MCKINLEY 1 3/4																				
117	W9-62	THIS LANE ENDS												MOUNT ON S-40-3076, I BEAMS INCIDENTAL , SHEET 8	6 X 7.5		45.00					
118	E8-1	190 CAPITOL DR 1/4												MOUNT ON S-40-3077, I BEAMS INCIDENTAL , SHEET 9	22 X 7.5	165.00						
		HAMPTON AVE 1 1/4																				
		SILVER SPRIGN DR 2																				
119	E6-51	57 190												MOUNT ON S-40-3078, I BEAMS INCIDENTAL, SHEET 9	18 X 9.5	171.00						
		GREEN BAY AVE												YELLOW PORTION	18 X 3		54.00					
		CAPITOL DR																				
		EXIT ONLY																				
119A	E1-5P	EXIT 76 A-B											119		13 X 2.5	32.50						
120	E6-51	57 190 WEST												MOUNT ON S-40-3079 , I BEAMS INCIDENTAL , SHEET 9	18 X 11.5	207.00						
		GREEN BAY AVE												YELLOW PORTION	18 X 3		54.00					
		CAPITOL DR																				
		SECOND RIGHT																				
		EXIT ONLY																				
120A	E1-5P	EXIT 76B											120		10 X 2.5	25.00						
121	E6-1	190 EAST												MOUNT ON S-40-3079, I BEAMS INCIDENTAL, SHEET 9	16 X 7	112.00						
		CAPITOL DR																				
		ARROW RIGHT																				
121A	E1-5P	EXIT 76A											121		10 X 2.5	25.00						
122	E6-1	KEEFE AVE												MOUNT ON S-40-3080, I BEAMS INCIDENTAL, SHEET 9	17 X 6	102.00						
		ATKINSON AVE												YELLOW PORTION	17 X 3.5		59.50					
		EXIT ONLY																				
122A	E1-5P	EXIT 75											122		9 X 2.5	22.50						
123	E1-51	57 190												MOUNT ON S-40-3081, I BEAMS INCIDENTAL, SHEET 10	18 X 9.5	171.00						
		GREEN BAY AVE												YELLOW PORTION	18 X 3.5		63.00					
		CAPITOL DR																				
		EXIT ONLY																				
123A	E1-5P	EXIT 76B											123		10 X 2.5	25.00						
124	E8-1	ATKINSON AVE 1/4												MOUNT ON S-40-3082, I BEAMS INCIDENTAL, SHEET 10	19 X 7.5	142.50						
		LOCUST ST 1																				
		NORTH AVE 1 3/4																				
125	E6-1	KEEFE AVE												MOUNT ON S-40-3083, I BEAMS INCIDENTAL, SHEET 10	17 X 6	102.00						
		ATKINSON AVE												YELLOW PORTION	17 X 3		51.00					
		EXIT ONLY																				
125A	E1-5P	EXIT 75											125		9 X 2.5	22.50						
126	E6-1	LOCUST ST , 1/2 MILE												MOUNT ON S-40-3067, I BEAMS INCIDENTAL, SHEET 3	14 X 5.5	77.00						
		EXIT ONLY												YELLOW PORTION	14 X 3		42.00					
126A	E1-5P	EXIT 74											126		9 X 2.5	22.50						
127	E6-1	NORTH AVE												MOUNT ON S-40-3105, I BEAMS INCIDENTAL, SHEET 4	14 X 3.5	49.00						
		EXIT ONLY												YELLOW PORTION	14 X 3.5		49.00					
127A	E1-5P	EXIT 73B											127		10 X 2.5	25.00						
128	E6-51	NORTH AVE												MOUNT ON S-40-3104, I BEAMS INCIDENTAL , SHEET 5	14 X 3.5	49.00						
		EXIT ONLY												YELLOW PORTION	14 X 3		42.00					
128A	E1-5P	EXIT 73B											128		10 X 2.5	25.00						
129 - 200	NOT USED																					

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ID 1228-22-70
Revised Sheet 740
March 7, 2023

ADDENDUM #1 SHEET: 2 OF 14

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES – PERMANENT SIGNING	SHEET: 740	E

FILE NAME : N:\SPO\Operations\Signing\Miscellaneous Quantities\1228-22-70\030502_MQ.pptx PLOT DATE : 2/23/2023 PLOT BY : DOTTAH PLOT NAME : 030502_MQ.pdf PLOT SCALE : 1:1

TYPE I & II PERMANENT SIGNING 1228-22-70

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0622 POSTS WOOD 4" X 6" X 22' [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F (SF)	638.2101 MOVING SIGNS TYPE I [EA]	531.2024 DRILLING SHAFT 24 INCH LF (EST)	531.1140 (EST) STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS- LBS	531.1100 (EST) CONCRETE MASONRY ANCILLIARY STRUCTURES TYPE NS - CY	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS EST LBS
201	W8-5(5)		48 X 48			16.000				2												
201A	W13-1(5)	45 MPH	36 X 36			9.000							201									
202	W8-5(5)		48 X 48			16.000								MOUNT ON LIGHT POLE								
202A	W13-1(5)	45 MPH	36 X 36			9.000							202									
203	W1-2(5)		48 X 48			16.000				2												
203A	W13-1(5)	50 MPH	36 X 36			9.000							203									
204	W1-2(5)		48 X 48			16.000				2				BETWEEN BARRIER WALL								
204A	W13-1(5)	50 MPH	36 X 36			9.000							204									
205	R3-33(5)		78 X 36	19.500						2												
206	W1-8(5)		36 X 48			12.000					1			. 4 FOOT MOUNTING HEIGHT								
207	D10-5 (5)	MILE 73/6	21 X 60	8.750										MOUNT ON LIGHT POLE								
208	W1-8(5)		36 X 48			12.000						1		MOUNT ON TOP OF WALL SEE DETAIL. 4 FOOT MOUNTING HEIGHT								
209	M1-94	BROWN ST	72 X 21	10.500						2												
210	M1-94	BROWN ST	72 X 21	10.500						2												
211	D10-5 (5)	MILE 73/6	21 X 60	8.750										MOUNT ON LIGHT POLE								
212	R8-7(5)		48 X 36	12.000										MOUNT ON LIGHT POLE								
213	W1-8(5)		36 X 48			12.000								MOUNT ON LIGHT POLE. 4 FOOT MOUNTING HEIGHT								
214	NOT USED																					
215	W1-8(5)		36 X 48			12.000								MOUNT ON LIGHT POLE. 4 FOOT MOUNTING HEIGHT								
216	W1-8(5)		36 X 48			12.000						1		MOUNT ON TOP OF WALL SEE DETAIL. 4 FOOT MOUNTING HEIGHT								
217	E5-1A(5)		90 X 60	37.500						2												
217A	W5-54(2S)		18 X 18			2.250							217									
217B	W5-54(2S)		18 X 18			2.250							217									
218	J4-1(5)		36 X 54	13.500										MOUNT ON LIGHT POLE								
	MB3-1		36 X 18																			
	M1-1	IH 43	36 X 36																			
219	D10-5(5)	MILE 73/8	21 X 60	8.750										MOUNT ON LIGHT POLE								
220	D10-5(5)	MILE 73/8	21 X 60	8.750										MOUNT ON LIGHT POLE								
221	W1-8(5)		36 X 48			12.000								MOUNT ON LIGHT POLE								
222	NONE	JEANETTA SIMPSON - ROBINSON					1	3		3												
223	E1-1A	MEMORIAL HIGHWAY LOCUST ST 1 MILE													16 X 7	112.00			8.50	302	2.00	1200
223A	E1-5P	EXIT 74											223		9 X 2.5	22.50						
224	W12-2(5)	14' 2" CLEARANCE	48 X 48			16.000		2		2												
225	W12-2(5)	14' 2" CLEARANCE	48 X 48			16.000								MOUNT ON LIGHT POLE								
226	D4-52(5)	CIS EXIT 74													13 X 10.5	136.50			9	302	2.00	1200
227	W1-8(5)		36 X 48			12.000				1												
228	M1-94	HALYARD ST	84 X 21	12.250						2												
229	M1-94	HALYARD ST	84 X 21	12.250										LIGHT POLE								
230	W1-8(5)		36 X 48			12.000								MOUNT ON COLUMN OF BRIDGE. 4 FOOT MOUNTING HEIGHT								

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ID 1228-22-70
Revised Sheet 741
March 7, 2023

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PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES – PERMANENT SIGNING	SHEET: 741	E

FILE NAME : N:\SPO\Operations\Signing\Miscellaneous Quantities\1228-22-70\030502_MQ.pptx PLOT DATE : 2/23/2023 PLOT BY : DOTTAH PLOT NAME : 030502_MQ.pdf PLOT SCALE : 1:1

TYPE I & II PERMANENT SIGNING 1228-22-70

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0622 POSTS WOOD 4" X 6" X 22' [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.]	x	H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F (SF)	638.2101 MOVING SIGNS TYPE I [EA]	531.2024 DRILLING SHAFT 24 INCH LF (EST)	531.1140 (EST) STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS- LBS	531.1100 (EST) CONCRETE MASONRY ANCILLIARY STRUCTURES TYPE NS - CY	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS EST LBS
231	W1-8(5)		36	X	48			12.000				1				4 FOOT MOUNTING HEIGHT											
232	W4-1(5)		48	X	48			16.000				2															
233	NONE	FISERV FORUM																				1	6.50	142	1.60	600
234	NOT USED																										
235	M1-94	NORTH AVE 2300 NORTH	78	X	30	16.250										MOUNT ON BRIDGE SEE DETAIL INCIDENTAL											
236	M1-94	NORTH AVE 2300 NORTH	78	X	30	16.250										MOUNT ON BRIDGE SEE DETAIL INCIDENTAL											
237	D10-5(5)	MILE 74/0	21	X	60	8.750								1		TOP OF WALL. SEE DETAIL											
238	D10-5(5)	MILE 74/0	21	X	60	8.750								1		TOP OF WALL. SEE DETAIL											
239	W1-8(5)		36	X	48			12.000								MOUNT ON BRIDGE COLUMN SB- 4 FOOT MOUNTING HEIGHT											
240	W1-8(5)		36	X	48			12.000				1				4 FOOT MOUNTING HEIGHT											
241	W1-8(5)		36	X	48			12.000				1				4 FOOT MOUNTING HEIGHT											
242	W1-8(5)		36	X	48			12.000						1		MOUNT ON TOP OF WALL . SEE DETAIL. 4 FOOT MOUNTING HEIGHT											
243	W1-8(5)		36	X	48			12.000								MOUNT ON TOP OF WALL . SEE DETAIL. 4 FOOT MOUNTING HEIGHT											
244	W1-8(5)		36	X	48			12.000								ON UPRIGHT OF BUTTERFLY SIGN STRUCTURE. 4 FOOT HEIGHT											
245	W4-3(5)		48	X	48			16.000				2															
246	W4-3R(2S)		36	X	36			9.000			1																
247	J4-1(5)		36	X	54	13.500										MOUNT ON LIGHT POLE											
	MB3-1		36	X	18																						
	M1-1	IH 43	36	X	36																						
248	M1-94	WRIGHT ST	72	X	21	10.500						2															
249	M1-94	WRIGHT ST	72	X	21	10.500						2															
250	D10-5(5)	MILE 74/2	21	X	60	8.750										MOUNT ON LIGHT POLE											
251	D10-5(5)	MILE 74/2	21	X	60	8.750										MOUNT ON LIGHT POLE											
252	E5-1A(5)	EXIT 73B	90	X	60	37.500						2															
252A	W5-54(2S)		18	X	18			2.250							252												
252B	W5-54(2S)		18	X	18			2.250							252												
253	W1-2R(5)		48	X	48			16.000				2															
253A	W13-1(5)		36	X	36			9.000							253												
254	W1-13R(5)		48	X	48			16.000								MOUNT ON UPRIGHT OF SIGN STRUCTURE											
254A	W13-1(5)	45 MPH	36	X	36			9.000							254												
255	W1-13R(5)		48	X	48			16.000								MOUNT ON UPRIGHT OF SIGN STRUCTURE											
255A	W13-1(5)	45 MPH	36	X	36			9.000							255												
256	W8-5(5)		48	X	48			16.000				2															
256A	W13-1(5)	45 MPH	36	X	36			9.000							256												
257	W8-5(5)		48	X	48			16.000								MOUNT ON UPRIGHT OF BUTTERFLY IN MEDIAN											
257A	W13-1(5)	45 MPH	36	X	36			9.000							257												
258	W1-8(5)		36	X	48			12.000								LIGHT POLE											
259	W1-2R(5)		48	X	48			16.000								LIGHT POLE											
259A	W13-1(5)		36	X	36			9.000							259												
260	R2-1(5)	SPEED LIMIT 55	48	X	60	20.000										LIGHT POLE											

ADDENDUM #1

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES – PERMANENT SIGNING	SHEET: 742	E

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Addendum No. 01
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Revised Sheet 742
March 7, 2023

TYPE I & II PERMANENT SIGNING 1228-22-70

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261	R3-33R(5)		78	X	36	19.500						2												
262	D12-2(5)		78	X	48	26.000						2												
263	M1-94	CENTER ST, 2700 NORTH	72	X	30	15.000										MOUNT OVERHEAD ON BRIDGE. MOUNTING BRACKET INCIDENTAL								
264	M1-94	CENTER ST, 2700 NORTH	72	X	30	15.000										MOUNT OVERHEAD ON BRIDGE. MOUNTING BRACKET INCIDENTAL								
265	R3-33R(5)		78	X	36	19.500						2												
266	NONE	AMERICA'S BLACK HOLOCAUST MUSEUM EXIT 73B							1	3		3												
267	D10-5(5)	MILE 74/4	21	X	60	8.750										LIGHT POLE								
268	D10-5(5)	MILE 74/4	21	X	60	8..75										LIGHT POLE								
269	R2-1(5)	SPEED LIMIT 50	48	X	60	20.000						2												
270	R2-1(5)	SPEED LIMIT 50	48	X	60	20.000										LIGHT POLE								
271	W 13-2(5)	40 MPH	48	X	60			20.000								MOUNT ON UPRIGHT OF S-40-3105								
272	W3-5(5)	50 MPH	48	X	48			16.000				2												
273	W3-5(5)	50 MPH	48	X	48			16.000								LIGHT POLE								
274	J4-1(5)		36	X	54	13,5										LIGHT POLE								
	MB3-3		36	X	18																			
	M1-1	IH 43	36	X	36																			
275	D10-5(5)	MILE 74/6	21	X	60	8.750										LIGHT POLE								
276	D10-5(5)	MILE 74/6	21	X	60	8.750										LIGHT POLE								
277	E5-1A(5)	EIXT 74	72	X	60	30.000						2												
277A	W5-54(2S)		18	X	18			2.250							277									
277B	W5-54(2S)		18	X	18			2.250							277									
278	JVF-1(5)		24	X	69	11.500						1												
	MB4-1		24	X	12																			
	MB3-1		24	X	12																			
	M1-1	IH 43	24	X	24																			
	MB6-2		21	X	21																			
279	W4-3R(5)		48	X	48			16.000				2												
280	E1-1A	KEEFE AVE ATKINSON AVE 1/2 MILE															21	X 9.5	199.50			10.00	360	2.40	1600
280A	E1-5P	EXIT 75													280		9	X 2.5	22.50						
281	M1-94	LOCUST ST 2900 NORTH	72	X	30	15.000										MOUNT OVERHEAD ON BRIDGE. MOUNTING BRACKET INCIDENTAL								
282	M1-94	LOCOST ST 2900 NORTH	72	X	30	15.000										MOUNT OVERHEAD ON BRIDGE. MOUNTING BRACKET INCIDENTAL								
283	D10-5(5)	MILE 74/8	21	X	60	8.750										LIGHT POLE								
284	D10-5(5)	MILE 74/8	21	X	60	8.750										LIGHT POLE								
285	E1-1A	NORTH AVE, 1/2 MILE															16	X 7	112.00			8.50	302	2.00	1200
285A	E1-5P	EXIT 73B													285		10	X 2.5	25.00						
286	NONE	43 SOUTH, 94 EAST AHEAD 94 WEST, 794 EAST														3 POSTS	29	X 13	377.00			10.00	540	3.60	2400
		RIGHT 2 MILES																							
286A	E1-5P	EXIT 72 B AND D													286		14	X 2.5	35.00						
287	W4-3R(2S)		36	X	36			9.000			1													
288	D4-52	CRASH INVESTIGATION SITE EXIT 73B															13	X 10.5	136.50			8.50	302	2.00	1200
289	W4-3R(5)		48	X	48			16.000				2												
290	D10-5(5)	MILE 75/0	21	X	60	8.750										LIGHT POLE								

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ID 1228-22-70
Revised Sheet 743
March 7, 2023

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291	D10-5(5)	MILE 75/0	21	X	60	8.750										LIGHT POLE								
292	W4-3R(2S)		36	X	36			9.000			1													
293	M1-94	BURLEIGHT ST, 3100 NORTH	84	X	30	17.500						2												
294	M1-94	BURLEIGHT ST, 3100 NORTH	84	X	30	17.500						2												
295	R3-33R(5)		78	X	36	19.500						2												
296	R2-1(5)	SPEED LIMIT 55	48	X	60	20.000										LIGHT POLE NB								
297	D10-5(5)	MILE 75/2	21	X	60	8.750								1		TOP OF WALL								
298	D10-5(5)	MILE 75/2	21	X	60	8.750									297									
299	R2-1(5)	SPEED LIMIT 55	48	X	60	20.000										LIGHT POLE SB								
300	E5-1A(5)	EXIT 74	72	X	60	30.000						2												
300A	W5-54(2S)		18	X	18			2.250							300									
300B	W5-54(2S)		18	X	18			2.250							300									
301	J4-1(5)		36	X	54	13.500										LIGHT POLE								
	MB3-1		36	X	18																			
	M1-1	IH 43	36	X	36																			
302	J4-1(5)		36	X	54	13.500										LIGHT POLE								
	MB3-3		36	X	18																			
	M1-1	IH 43	36	X	36																			
303	R3-33R(5)		78	X	36	19.500						2												
304	D10-5(5)	MILE 75/4	21	X	60	8.750										LIGHT POLE								
305	D10-5(5)	MILE 75/4	21	X	60	8.750										LIGHT POLE								
306	W4-3R(5)		48	X	48			16.000				2												
307	E5-1A(5)	EXIT 75	72	X	60	30.000						2												
307A	W5-54(2S)		18	X	18			2.250							307									
307B	W5-54(2S)		18	X	18			2.250							307									
308	W4-3R(2S)		36	X	36			9.000			1													
309	E1-1A	57 190 CAPITOL DR GREEN BAY AVE 1/2 MILE															23	X 13.5	310.50			10.00	540	3.60	2400
309A	E1-5P	EXIT 76 A-B													309		13	X 2.5	32.50						
310	M1-94	ATKINSON AVE	96	X	21	14.000						2												
311	M1-94	ATKINSON AVE	96	X	21	14.000						2												
312	NONE	UNIVERSITY OF WISCONSIN MILWAUKEE EXIT 76A														REUSE EXISTING LOGO - MOVE TO NEW SIGN	14	X 7.5			1	8.00	220	2.00	1100
313	W 12-2(5)	14' 5"	48	X	48			16.000				2												
313A	NONE	CAPITOL DR	36	X	24			6.000							313									
314	J4-1(5)		36	X	54	13.500										LIGHT POLE								
	MB3-3		36	X	18																			
	M1-1	IH 43	36	X	36																			
315	W4-3R(5)		48	X	48			16.000				2												
316	W4-3R(2S)		36	X	36			9.000			1													
317	NONE	JEANNETTA SIMPSON - ROBINSON MEMORIAL HIGHWAY							1	3		3												
318	E1-1A	LOCUST ST 1/2 MILE															16	X 7	112.00			8.50	302	2.00	1200
318A	E1-5P	EXIT 74													318		9	X 2.5	22.50						
319	M1-94	KEEFE AVE, 3500 NORTH	78	X	30	16.250										MOUNT OVERHEAD ON BRIDGE. MOUNTING BRACKET INCIDENTAL									
320	R2-1(5)	SPEED LIMIT 55	48	X	60	20.000										LIGHT POLE SB								

ADDENDUM #1

Addendum No. 01
ID 1228-22-70
Revised Sheet 744
March 7, 2023

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0622 POSTS WOOD 4" X 6" X 22' [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.]	x	H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F (SF)	638.2101 MOVING SIGNS TYPE I [EA]	531.2024 DRILLING SHAFT 24 INCH LF (EST)	531.1140 (EST) STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS- LBS	531.1100 (EST) CONCRETE MASONRY ANCILLIARY STRUCTURES TYPE NS - CY	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS EST LBS
321	M1-94	KEEFE AVE , 3500 NORTH	78	X	30	16.250										MOUNT OVERHEAD ON BRIDGE. MOUNTING BRACKET INCIDENTAL										
322	D10-5(5)	MILE 75/6	21	X	60	8.750										LIGHT POLE										
323	D10-5(5)	MILE 75/6	21	X	60	8.750										LIGHT POLE										
324	W4-3R(2S)		36	X	36			9.000			1															
325	W12-2(5)	14' 5"	48	X	48			16.000								MOUNT ON UPRIGHT OF SIGN STRUCTURE										
325A	NONE	CAPITOL DR	36	X	24			6.000							325											
326	W4-3R(5)		48	X	48			16.000				2														
327	R2-1(5)	SPEED LIMIT 55	48	X	60	20.000										LIGHT POLE										
328	M1-94	DR MARTIN LUTHER KING JR DR	126	X	36	31.500						2														
329	W13-2D(5)	EXIT 25 MPH	48	X	90			30.000								MOUNT ON UPRIGHT OF POLE										
330	M1-94	DR MARTIN LUTHER KING JR DR	126	X	36	31.500										MOUNT OVERHEAD ON BRIDGE. MOUNTING BRACKET INCIDENTAL										
331	E5-1A MODIFIED	EXIT 75A	30	X	60	12.500							1			MOUNT ON TOP OF WALL. SEE MOUNTING DETAIL INCIDENTAL										
332	D10-5(5)	MILE 75/8	21	X	60	8.750										LIGHT POLE										
333	D10-5(5)	MILE 75/8	21	X	60	8.750										LIGHT POLE										
334	R3-33R(5)		78	X	36	19.500						2														
335	E5-1A(5)	EXIT 76A	90	X	60	37.500						2														
335A	W5-54(2S)		18	X	18			2.250							335											
335B	W5-54(2S)		18	X	18			2.250							335											
336	J3-2(5)		72	X	138	69.000						2														
	MB4-1		36	X	18																					
	MB3-1		36	X	18																					
	M1-1	IH 43	36	X	36																					
	MB6-1		30	X	30																					
	M4-1		36	X	18																					
	M3-1		36	X	18																					
	M1-4	USH 41	36	X	36																					
	M1-4	USH 45	36	X	36																					
	M6-1		30	X	30																					
337	NOT USED																									
338	NOT USED																									
339	NOT USED																									
340	W13-2D(5)	EXIT 30 ARROW	48	X	90			30.000								MOUNT ON UPRIGHT OF STRUCTURE										
341	NOT USED																									
342	NOT USED																									
342A	NOT USED																									
342B	NOT USED																									
343	W4-3R(2S)		36	X	36			9.000			1															
344	W4-3R(5)		48	X	48			16.000				2														
345	R2-1(5)	SPEED LIMIT 55							1			2														
346	I2-3A(5)	CITY OF MILWAUKEE							1			2														
347	R3-33R(5)		78	X	36	19.500						2														
348	D4-52	CRASH INVESTIGATION SITE EXIT 75															13	X	10.5	136.50			8.50	302	2.00	1200
349	D10-5(5)	MILE 76/0	21	X	60	8.750										LIGHT POLE										
350	D10-5(5)	MILE 76/0	21	X	60	8.750										LIGHT POLE										

ADDENDUM #1

Addendum No. 01
ID 1228-22-70
Revised Sheet 745
March 7, 2023

TYPE I & II PERMANENT SIGNING 1228-22-70

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0622 POSTS WOOD 4" X 6" X 22' [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F (SF)	638.2101 MOVING SIGNS TYPE I [EA]	531.2024 DRILLING SHAFT 24 INCH LF (EST)	531.1140 (EST) STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS- LBS	531.1100 (EST) CONCRETE MASONRY ANCILLIARY STRUCTURES TYPE NS - CY	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS EST LBS
351	NOT USED	SPEED LIMIT 55																				
352	NOT USED	SPEED LIMIT 55																				
353	J4-1(5)		36 X 54	13.500										LIGHT POLE								
	MB3-1		36 X 18																			
	M1-1	IH 43	36 X 36																			
354	W4-3R(5)		48 X 48			16.000				2												
355	W4-3R(2S)		36 X 36			9.000			1													
356	E1-1A	145													25 X 13.5	337.50			10.00	540	3.60	2400
		MCKINLEY AVE																				
		FOND DU LAC AVE																				
		1/2 MILE																				
356A	E1-5P	EXT 73A											356		10 X 2.5	25.00						
357-399	NOT USED																					
400	R7-1R(2S)		18 X 24	3.000										MOUNT ON FENCE. BRACKET INCIDENTAL								
401	R7-1L(2S)		18 X 24	3.000										MOUNT ON FENCE. BRACKET INCIDENTAL								
402	R7-1R(2S)		18 X 24	3.000										MOUNT ON FENCE. BRACKET INCIDENTAL								
403	R7-1L(2S)		18 X 24	3.000										MOUNT ON FENCE. BRACKET INCIDENTAL								
404	W3-3(2S)		36 X 36			9.000			1													
405	W3-3(2S)		36 X 36			9.000			1													
406	D1-1(2S)	NORTH AVE AHEAD ARROW	72 X 15	7.500					2													
407	R5-1A(3)		42 X 30	8.750					1													
408	R5-1A(3)		42 X 30	8.750					1													
409	R3-8AF(2S)		30 X 36	7.500									407									
410	R3-8AF(2S)		30 X 36	7.500									408									
411	D1-1(2S)	NORTH AVE AHEAD ARROW	72 X 15	7.500					2													
412	R5-1(3)		36 X 36	9.000					1													
413	R5-1A(2S)		36 X 24	6.000									412	3 FOOT MOUNTING HEIGHT								
414	R5-1(3)		36 X 36	9.000										SIGNAL POLE								
415	R5-1A(2S)		36 X 24	6.000									414	3 FOOT MOUNTING HEIGHT								
416	R1-2(2S)		36 X 31	3.880					1													
417	R3-11L(2S)		48 X 78	26.000						2												
418	W3-8(2S)		48 X 48			16.000								ON SIGNAL POLE								
419	J3-1(2S)		24 X 57	9.500					1													
	MB3-3		24 X 12																			
	M1-1	IH 43	24 X 24																			
	MB6-2		21 X 21																			
420	R10-6 MODIFIED		24 X 36	6.000										ON SIGNAL POLE								

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Addendum No. 01
ID 1228-22-70
Revised Sheet 746
March 7, 2023

ADDENDUM #1

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES – PERMANENT SIGNING	SHEET: 746	E

FILE NAME : N:\SPO\Operations\Signing\Miscellaneous Quantities\1228-22-70\030502_MQ.pptx PLOT DATE : 2/23/2023 PLOT BY : DOTTAH PLOT NAME : 030502_MQ.pdf PLOT SCALE : 1:1

TYPE I & II PERMANENT SIGNING 1228-22-70

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W x H [IN.] x [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0622 POSTS WOOD 4" X 6" X 22' [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W x H [FT.] x [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F (SF)	638.2101 MOVING SIGNS TYPE I [EA]	531.2024 DRILLING SHAFT 24 INCH LF (EST)	531.1140 (EST) STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS- LBS	531.1100 (EST) CONCRETE MASONRY ANCILLIARY STRUCTURES TYPE NS - CY	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS EST LBS
421	R10-65L(2S)		24 X 30	5.000										ON SIGNAL POLE								
422	R10-6		24 X 36	6.000										ON SIGNAL POLE								
423	R10-65R(2S)		24 X 30	5.000										ON SIGNAL POLE								
424	R10-65C(2S)		24 X 30	5.000										ON SIGNAL POLE								
425	R10-6 MODIFIED		24 X 36	6.000										ON SIGNAL POLE								
426	W4-2L(2S)		36 X 36			9.000			1													
427	W9-1R(2S)		36 X 36			9.000			1													
428	R5-1A(3)		42 X 30	8.750										UPRIGHT OF SIGN STRUCTURE								
429	R3-7L(2S)		30 X 30	6.250					1													
430	J3-1(2S)		24 X 57	9.500										LIGHT POLE								
	MB3-1		24 X 12																			
	M1-1	IH 43	24 X 24																			
	MB6-2		21 X 21																			
431	R7-1D(2S)		18 X 24	3.000										LIGHT POLE								
432	W3-8(2S)		48 X 48			16.000								SIGNAL POLE								
433	J3-1(2S)		24 X 57	9.500					1													
	MB3-1		24 X 12																			
	M1-1	IH 43	24 X 24																			
	MB6-2		21 X 21																			
434	R3-11R(2S)		48 X 78	26.000						2												
435	R5-57(5)		36 X 36	9.000					1													
436	R10-6 MODIFIED		24 X 36	6.000					1													
437	W4-2L(2S)		36 X 36			9.000								ON UPRIGHT OF SIGN SIGNAL STRUCTURE s-40-701								
438	R10-6(2S)		24 X 36	6.000										SIGNAL POLE								
439	R10-65R(2S)		24 X 30	5.000										SIGNAL POLE								
440	R10-65L(2S)		24 X 30	5.000										MOUNT OVERHEAD ON S-40-701 I BEAMS INCIDENTAL								
441	R10-65C(2S)		24 X 30	5.000										MOUNT OVERHEAD ON S-40-701 I BEAMS INCIDENTAL								
442	R7-1D(2S)		18 X 24	3.000							1											
443	R7-1D(2S)		18 X 24	3.000							1											
444	R7-1D(2S)		18 X 24	3.000							1											
445	R7-1D(2S)		18 X 24	3.000							1											
446	NONE	CIS SITE 73S	36 X 30	7.500					1													
447	D4-56L(2S)		36 X 36	9.000					1													
448	R8-55(2S)		42 X 36	10.500					1													
449	R8-55(2S)		42 X 36	10.500					1													
450	R8-56(2S)		24 X 18	3.000									448									

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ID 1228-22-70
Revised Sheet 747
March 7, 2023

TYPE I & II PERMANENT SIGNING 1228-22-70

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0622 POSTS WOOD 4" X 6" X 22' [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F (SF)	638.2101 MOVING SIGNS TYPE I [EA]	531.2024 DRILLING SHAFT 24 INCH LF (EST)	531.1140 (EST) STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS- LBS	531.1100 (EST) CONCRETE MASONRY ANCILLIARY STRUCTURES TYPE NS - CY	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS EST LBS
451	R8-56(2S)		24 X 18	3.000									449									
452	R5-1A(3)		42 X 30	8.750					1													
453	J2-1(2S)		24 X 57	9.500					1													
	MB3-3		24 X 12																			
	M1-1	IH 43	24 X 24																			
	MB5-2R		21 X 21																			
454	R5-1(3)		36 X 36	9.000										LIGHT POLE								
455	R5-1A(2S)		36 X 24	6.000									454									
456	J3-1(2S)		24 X 69	11.500					1													
	MB4-5		24 X 12																			
	MB3-1		24 X 12																			
	M1-1	IH 43	24 X 24																			
	MB6-1		21 X 21																			
457	R3-7L(2S)		30 X 30	6.250									456									
458	J3-2(2S)		48 X 69	23.000										MOUNT ON UPRIGHT OF SIGN STRUCTURE								
	MB4-5		24 X 12																			
	MB3-1		24 X 12																			
	M1-1	IH 43	24 X 24																			
	MB6-1		21 X 21																			
	MB3-3		24 X 12																			
	M1-1	IH 43	24 X 24																			
	MB5-2R		21 X 21																			
459	NONE	SITE 74N	36 X 30	7.500					1													
460	R8-55(2S)		42 X 36	10.500										LIGHT POLE								
461	R8-55(2S)		42 X 36	10.500					1													
462	R8-56(2S)		24 X 18	3.000									460									
463	R8-56(2S)		24 X 18	3.000									461									
464	R7-1D(2S)		18 X 24	3.000										LIGHT POLE								
465	J3-2(2S)		48 X 69	23.000										LIGHT POLE								
	MB4-5		24 X 12																			
	MB3-3		24 X 12																			
	M1-1	IH 43	24 X 24																			
	MB6-1		21 X 21																			
	MB3-1		24 X 12																			
	M1-1	IH 43	24 X 24																			
	MB6-1		21 X 21																			
466	D4-56R(2S)		36 X 36	9.000					1													
467	R5-1A(3)		42 X 30	8.750					1													
468	J3-1(2S)		24 X 69	11.500					1													
	MB4-1		24 X 12																			
	MB3-1		24 X 12																			
	M1-1	IH 43	24 X 24																			
	MB6-1		21 X 21																			
469	R3-7R(2S)		30 X 30	6.250					1													
470	R5-1A(3)		42 X 30	8.750										MOUNT ON UPRIGHT OF SIGN STRUCTURE								
471	R3-7R(2S)		30 X 30	6.250										MOUNT ON UPRIGHT OF SIGN STRUCTURE								
472	R5-1A(3)		42 X 30	8.750										MOUNT ON UPRIGHT OF SIGN STRUCTURE								
473	R3-11R(2S)		48 X 78	26.000						2												
474	W3-8(2S)		48 X 48			16.000								SIGNAL POLE								
475	R3-8LF(2S)		30 X 36	7.500					1													
476	R3-8LF(2S)		30 X 36	7.500					1													
477	D1-60	8TH ST AHEAD ARROW LOCUST ST EAST WEST	78 X 36	19.500					2													
478	R7-1D(2S)		18 X 24	3.000							1											
479	R5-1(3)		36 X 36	9.000										SIGNAL POLE								
480	R5-1A(2S)		36 X 24	6.000									479									

Addendum No. 01
ID 1228-22-70
Revised Sheet 748
March 7, 2023

TYPE I & II PERMANENT SIGNING 1228-22-70

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0622 POSTS WOOD 4" X 6" X 22' [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F (SF)	638.2101 MOVING SIGNS TYPE I [EA]	531.2024 DRILLING SHAFT 24 INCH LF (EST)	531.1140 (EST) STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS- LBS	531.1100 (EST) CONCRETE MASONRY ANCILLIARY STRUCTURES TYPE NS - CY	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS EST LBS
481	R5-5(T5)		36 X 36	9.000					1													
482	W3-8(2S)		48 X 48			16.000								SIGNAL POLE								
483	R10-6(2S)		24 X 36	6.000										SIGNAL POLE								
484	R10-65R(2S)		24 X 30	5.000										SIGNAL POLE								
485	R10-65L(2S)		24 X 30	5.000										SIGNAL POLE								
486	R10-6 MODIFIED		24 X 36	6.000										SIGNAL POLE								
487	D1-60	LOCUST ST WEST EAST	78 X 24	13.000					2													
488	R7-1D(2S)		18 X 24	3.000							1											
489	R3-1(2S)		24 X 24	4.000									488									
490	R6-2L(2S)		24 X 30	5.000					1													
491	R6-2R(2S)		24 X 30	5.000									490									
492	J3-1(2S)		24 X 57	9.500					1													
	MB3-1		24 X 12																			
	M1-1	IH 43	24 X 24																			
	MB6-1		21 X 21																			
493	NOT USED		-- X --																			
494	NOT USED		-- X --																			
495	R7-1D(2S)		18 X 24	3.000							1											
496	J2-1(2S)		24 X 57	9.500										LIGHT POLE								
	MB3-3		24 X 12																			
	M1-1	IH 43	24 X 24																			
	MB5-1L		21 X 21																			
497	R7-1D(2S)		18 X 24	3.000							1											
498	R3-1(2S)		24 X 24	4.000							1											
499	R6-2L(2S)		24 X 30	5.000									498									
500	R5-1(2S)		30 X 30	6.250									498									
501	J3-1(2S)		24 X 57	9.500					1													
	MB3-3		24 X 12																			
	M1-1	IH 43	24 X 24																			
	MB6-1		21 X 21																			
502	R3-8LL(2S)		30 X 36	7.500									501									
503	R3-2(2S)		24 X 24	4.000							1											
504	R6-2R(2S)		24 X 30	5.000							1											
505	NOT USED		-- X --																			
506	NOT USED		-- X --																			
507	NOT USED		-- X --																			
508	J3-1(2S)		24 X 57	9.500										HIGH ON SIGNAL POLE								
	MB3-3		24 X 12																			
	M1-1	IH 43	24 X 24																			
	MB6-1		21 X 21																			
509	J3-1(2S)		24 X 57	9.500					1													
	MB3-1		24 X 12																			
	M1-1	IH 43	24 X 24																			
	MB6-2		21 X 21																			
510	R3-11R(2S)		48 X 78	26.000						2												

ADDENDUM #1 SHEET: 11 OF 14

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES – PERMANENT SIGNING	SHEET: 749	E

FILE NAME : N:\SPO\Operations\Signing\Miscellaneous Quantities\1228-22-70\030502_MQ.pptx PLOT DATE : 2/23/2023 PLOT BY : DOTTAH PLOT NAME : 030502_MQ.pdf PLOT SCALE : 1:1

Addendum No. 01
ID 1228-22-70
Revised Sheet 749
March 7, 2023

TYPE I & II PERMANENT SIGNING 1228-22-70

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0622 POSTS WOOD 4" X 6" X 22' [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F (SF)	638.2101 MOVING SIGNS TYPE I [EA]	531.2024 DRILLING SHAFT 24 INCH LF (EST)	531.1140 (EST) STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS- LBS	531.1100 (EST) CONCRETE MASONRY ANCILLIARY STRUCTURES TYPE NS - CY	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS EST LBS
511	R10-6(2S)		24 X 36	6.000										SIGNAL POLE								
512	R10-65R(2S)		24 X 30	5.000										SIGNAL POLE								
513	W4-2L(2S)		36 X 36			9.000			1													
514	R10-6 MODIFIED		24 X 36	6.000										SIGNAL POLE								
515	R10-65L(2S)		24 X 30	5.000										SIGNAL POLE								
516	R7-1D(2S)		18 X 24	3.000							1											
517	R7-1D(2S)		18 X 24	3.000							1											
518	R3-2(2S)		24 X 24	4.000										LIGHT POLE								
519	R3-7L(2S)		30 X 30	6.250										LIGHT POLE								
520	W5-52L(2S)		12 X 36			3.000							519									
521	R6-2R(2S)		24 X 30	5.000										SIGNAL POLE								
522	R6-2L(2S)		24 X 30	5.000										SIGNAL POLE								
523	R6-2R(2S)		24 X 30	5.000										SIGNAL POLE								
524	NOT USED																					
525	R3-2(2S)		24 X 24	4.000										LIGHT POLE								
526	R6-2L(2S)		24 X 30	5.000									523									
527	R3-1(2S)		24 X 24	4.000							1											
528	R7-1D(2S)		18 X 24	3.000									527									
529	W5-52L(2S)		12 X 36			3.000								SIGNAL POLE								
530	R3-3(2S)		24 X 24	4.000					1													
531	R5-1(3)		36 X 36	9.000									530									
532	R5-1A(3)		42 X 30	8.750					1													
533	R7-1D(2S)		18 X 24	3.000							1											
534	R10-6(MOD)		24 X 36	6.000										SIGNAL POLE								
535	R10-65L(2S)		24 X 30	5.000										SIGNAL POLE								
536	R10-65R(2S)		24 X 30	5.000										SIGNAL POLE								
537	R10-6(2S)		24 X 36	6.000										SIGNAL POLE								
538	W3-8(2S)		48 X 48			16.000								SIGNAL POLE								
539	J3-1(2S)		24 X 57	9.500										LIGHT POLE								
	MB3-3		24 X 12																			
	M1-1	IH 43	24 X 24																			
	MB6-2		21 X 21																			
540	R5-1A(3)		42 X 30	8.750					1													

ADDENDUM #1 SHEET: 12 OF 14

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES – PERMANENT SIGNING	SHEET: 750	E

FILE NAME : N:\SPO\Operations\Signing\Miscellaneous Quantities\1228-22-70\030502_MQ.pptx PLOT DATE : 2/23/2023 PLOT BY : DOTTAH PLOT NAME : 030502_MQ.pdf PLOT SCALE : 1:1

Addendum No. 01
ID 1228-22-70
Revised Sheet 750
March 7, 2023

TYPE I & II PERMANENT SIGNING 1228-22-70

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W x H [IN.] x [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0622 POSTS WOOD 4" X 6" X 22' [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W x H [FT.] x [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F (SF)	638.2101 MOVING SIGNS TYPE I [EA]	531.2024 DRILLING SHAFT 24 INCH LF (EST)	531.1140 (EST) STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS- LBS	531.1100 (EST) CONCRETE MASONRY ANCILLIARY STRUCTURES TYPE NS - CY	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS EST LBS
541	R5-1A(3)		42 X 30	8.750					1													
542	J3-1(2S)		24 X 57	9.500										LIGHT POLE								
	MB3-3		24 X 12																			
	M1-1	IH 43	24 X 24																			
	MB6-2		21 X 21																			
543	R7-1D(2S)		18 X 24	3.000					1													
544	W3-3(2S)		36 X 36			9.000							543									
545	W3-3(2S)		36 X 36			9.000			1													
546	R3-7R(2S)		30 X 30	6.250					1													
547	R1-2(2S)		36 X 31	3.875							1											
548	R5-1(3)		36 X 36	9.000										LIGHT POLE								
549	R5-1A(2S)		36 X 24	6.000									548									
550	R5-1(3)		36 X 36	9.000					1													
551	R5-1A(2S)		36 X 24	6.000									550									
552	R7-1D(2S)		18 X 24	3.000							1											
553	J3-1(2S)		24 X 57	9.500					1													
	MB3-1		24 X 12																			
	M1-1	IH 43	24 X 24																			
	MB6-2		21 X 21																			
554	R3-7R(2S)		30 X 30	6.250										SIGNAL POLE								
555	W3-8(2S)		48 X 48			16.000								SIGNAL POLE								
556	R10-65L(2S)		24 X 30	5.000										SIGNAL POLE								
557	R10-6 MODIFIED		24 X 36	6.000										SIGNAL POLE								
558	R5-57(5)		36 X 36	9.000					1													
559	R10-65R(2S)		24 X 30	5.000										SIGNAL POLE								
560	R10-6(2S)		24 X 36	6.000										SIGNAL POLE								
561	W3-1(2S)		36 X 36			9.000					1											
562	W3-1(2S)		36 X 36			9.000					1											
563	R5-1A(3)		42 X 30	8.750							1											
564	R7-1D(2S)		18 X 24	3.000							1											
565	R5-1C(3)		36 X 36	9.000										LIGHT POLE								
566	R1-1(3)		36 X 36	7.460									565									
567	R1-1(3)		36 X 36	7.460							1											
568	R5-1(3)		36 X 36	9.000					1													
569	R5-1A92S)		36 X 24	6.000									568									
570	R5-1(3)		36 X 36	9.000					1													

Addendum No. 01
ID 1228-22-70
Revised Sheet 751
March 7, 2023

ADDENDUM #1 SHEET: 13 OF 14

TYPE I & II PERMANENT SIGNING 1228-22-70

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0622 POSTS WOOD 4" X 6" X 22' [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F (SF)	638.2101 MOVING SIGNS TYPE I [EA]	531.2024 DRILLING SHAFT 24 INCH LF (EST)	531.1140 (EST) STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS- LBS	531.1100 (EST) CONCRETE MASONRY ANCILLIARY STRUCTURES TYPE NS - CY	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS EST LBS
571	R3-1(2S)		24 X 24	4.000									570								
572	R3-2(2S)		24 X 24	4.000							1										
573	R1-1(2S)		30 X 30	5.180					1												
574	W4-2R(2S)		36 X 36			9.000					1										
575	R10-65R(2S)		24 X 30	5.000										SIGNAL POLE							
576	R10-6(2S)		24 X 36	6.000										SIGNAL POLE							
577	D4-56R(2S)		36 X 36	9.000					1												
578	R8-55(2S)		42 X 36	10.500					1												
579	R8-55(2S)		42 X 36	10.500					1												
580	R8-56(2S)		24 X 18	3.000									578								
581	R8-56(2S)		24 X 18	3.000									579								
582	W3-8(2S)		48 X 48			16.000								SIGNAL POLE							
583	R10-65L(2S)		24 X 30	5.000										SIGNAL POLE							
584	R10-6 MODIFIED		24 X 36	6.000										SIGNAL POLE							
585	NONE	CIS SITE 75S	36 X 30	7.500					1												
586	W11-2(2S)		30 X 30			6.250			1												
586A	W16-9P(2S)		24 X 12			2.000							586								
587	W3-3(2S)		36 X 36			9.000								SIGNAL POLE							
588	W11-2(2S)		30 X 30			6.250			1												
588A	W16-7R(2S)		24 X 12			2.000							588								
589	R3-3(2S)		24 X 24	4.000					1												
590	R5-1(2S)		30 X 30	6.250									589								
591	R1-2(2S)		36 X 31	3.875					1												
592	R1-2(2S)		36 X 31	3.875					1												
593	R5-67(5)		36 X 36	9.000										LIGHT POLE							
594	D10-5	MILE 76/2						1				1		SHEET 10							
595	D10-5	MILE 76/2						1				1		SHEET 10							
UNDISTRBUTED											5	6						2			
TOTALS				2398.855	0.000	1115.500	5	13 *	72	112	31 *	14	-	-		5684.500	761.000	4	106	4154	29	17700

*ADDITIONAL QTYS SHOWN ELSEWHERE

Addendum No. 01
ID 1228-22-70
Revised Sheet 752
March 7, 2023

LIGHTING AND MISCELLANEOUS - FINAL

CATEGORY	STAGE	DESCRIPTION	LOCATION	652.0700.S* INSTALL CONDUIT INTO EXISTING ITEM EACH	654.0105* CONCRETE BASES TYPE 5 EACH	~~654.0115 CONCRETE BASES TYPE F EACH~~	655.061* ELECTRICAL WIRE LIGHTING 12 AWG LF	657.0255* TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0322* POLES TYPE 5-ALUMINUM EACH	657.0381 POLES TYPE F EACH	657.0610 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6-FT EACH	657.0620 LUMINAIRE ARMS SINGLE MEMBER 6-INCH CLAMP 4-FT EACH	659.1120* LUMINAIRE UTILITY LED B EACH	659.1130 LUMINAIRE UTILITY LED D EACH	REMARKS
1100		EGA1/FGA1	797+54, 0.9'LT	--	--	--	390	--	--	--	--	--	--	2	REPLACE LUMINAIRE ONLY
		EGA2/FGA2	800+51, 0.0'LT	--	--	--	390	--	--	--	--	--	--	2	REPLACE LUMINAIRE ONLY
		EGA3/FGA3	803+90, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		EGA4/FGA4	806+07, 0.0'RT	--	--	--	390	--	--	1	--	2	--	2	
		EGA5/FGA5	808+66, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		EGA6/FGA6	811+26, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		EGA7/FGA7	813+84, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		EGA8/FGA8	816+44, 4.3'RT	--	--	--	390	--	--	1	--	2	--	2	
		EGA9/FGA9	818+32, 1.8'RT	--	--	--	390	--	--	1	--	2	--	2	
		EGA10/FGA10	820+61, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		EGA11/FGA11	822+58, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		EGA12/FGA12	825+14, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		EGA13/FGA13	827+51, 0.0'RT	--	--	--	390	--	--	1	--	2	--	2	
		EGA14/FGA14	829+77, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		EGA15/FGA15	831+67, 0.0'LT (1)	--	--	--	390	--	--	1	--	2	--	2	
		EX-LPB-GA-01	808+96, 249.0'LT	1	--	--	--	--	--	--	--	--	--	--	
		EX-LPB-GA-02	812+60, 229.8'LT	1	--	--	--	--	--	--	--	--	--	--	
		EX-LPB-GA-06	812+36, 176.7'RT	1	--	--	--	--	--	--	--	--	--	--	
		AGA1	816+67, 195.8'LT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		BGA1	814+72, 188.5'LT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		AGA2	813+03, 181.8'LT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		BGA2	811+27, 167.4'LT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		AGA3	809+68, 138.7'LT	--	1	--	135	1	1	--	1	--	1	--	
		BGA3	808+05, 116.2'LT	--	1	--	135	1	1	--	1	--	1	--	
		AGA4	806+39, 100.1'LT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		AGA5	815+41, 225.5'RT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		BGA5	813+73, 183.8'RT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		AGA6	811+99, 177.0'RT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		BGA6	810+14, 167.2'RT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		AGA7	808+28, 143.4'RT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		BGA7	806+43, 112.7'RT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		CGA1	830+80, 89.8'RT	--	1	--	135	1	1	--	1	--	1	--	
		DGA1	828+33, 134.5'RT	--	1	--	135	1	1	--	1	--	1	--	
		CGA2	826+17, 165.0'RT	--	1	--	135	1	1	--	1	--	1	--	
		DGA2	824+47, 145.2'RT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		CGA3	823+37, 165.5'RT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		CGA4	830+67, 134.0'LT	--	1	--	135	1	1	--	1	--	1	--	
		DGA4	828+35, 158.9'LT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		CGA5	826+22, 152.1'LT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		DGA5	824+24, 175.8'LT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY

(1)

* ADDITIONAL QUANTITIES FOUND ELSEWHERE

(CONTINUED ON NEXT SHEET)

Addendum No. 01
ID 1228-22-70
Revised Sheet 764
March 7, 2023

LIGHTING AND MISCELLANEOUS - FINAL (CONTINUED)

CATEGORY	STAGE	DESCRIPTION	LOCATION	652.0700.S* INSTALL CONDUIT INTO EXISTING ITEM EACH	654.0105* CONCRETE BASES TYPE 5 EACH	~~654.0115 CONCRETE BASES TYPE F~~ ~~EACH~~	655.061* ELECTRICAL WIRE LIGHTING 12 AWG LF	657.0255* TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0322* POLES TYPE 5-ALUMINUM EACH	657.0381 POLES TYPE F EACH	657.0610 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6-FT EACH	657.0620 LUMINAIRE ARMS SINGLE MEMBER 6-INCH CLAMP 4-FT EACH	659.1120* LUMINAIRE UTILITY LED B EACH	659.1130 LUMINAIRE UTILITY LED D EACH	REMARKS
1100		ACB1/BCB1	865+05, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		ACB2/BCB2	862+57, 0.0'RT	--	--	--	390	--	--	1	--	2	--	2	
		ACB3/BCB3	860+18, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		ACB4/BCB4	857+65, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		ACB5/BCB5	855+21, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		ACB6/BCB6	852+50, 0.0'RT	--	--	--	390	--	--	1	--	2	--	2	
		ACB7/BCB7	849+81, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		ACB8/BCB8	848+05, 0.0'RT	--	--	--	390	--	--	1	--	2	--	2	
		ACB9/BCB9	844+76, 0.0'LT (1)	--	--	--	390	--	--	1	--	2	--	2	
		ACB10/BCB10	842+21, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		ACB11/BCB11	839+61, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		ACB12/BCB12	837+02, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		ACB13/BCB13	834+59, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		ACB14/BCB14	867+65, 0.0'RT	--	--	--	390	--	--	1	--	2	--	2	
		ACB15/BCB15	870+28, 0.0'RT	--	--	--	390	--	--	1	--	2	--	2	
		ACB16/BCB16	874+23, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		ACB17/BCB17	876+88, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		ACB18/BCB18	879+54, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		ACB19/BCB19	882+03, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		CCB1	853+96, 171.3'RT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		DCB1	852+00, 123.4'RT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		CCB2	849+64, 150.9'RT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		DCB2	847+28, 96.2'RT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		CCB3	850+92, 106.9'LT	--	1	--	135	1	1	--	1	--	1	--	
		DCB3	853+33, 152.9'LT	--	1	--	135	1	1	--	1	--	1	--	
		CCB4	855+45, 143.9'LT	--	1	--	135	1	1	--	1	--	1	--	
		ECB1	868+49, 99.5'LT	--	1	--	135	1	1	--	1	--	1	--	
		FCB1	866+12, 129.8'RT	--	1	--	135	1	1	--	1	--	1	--	
		ECB2	863+91, 173.8'RT	--	1	--	135	1	1	--	1	--	1	--	
		FCB2	861+79, 183.5'RT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		ECB3	869+43, 113.1'LT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		FCB3	866+93, 134.1'LT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		ECB4	864+92, 121.0'LT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		FCB4	863+12, 146.4'LT	--	--	--	135	--	--	--	--	--	1	--	REPLACE LUMINAIRE ONLY
		AKF1/BKF1	895+22, 0.0'RT	--	--	--	390	--	--	1	--	2	--	2	
		AKF2/BKF2	892+64, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		AKF3/BKF3	889+97, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		AKF4/BKF4	887+30, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		AKF5/BKF5	884+67, 0.0'RT	--	--	--	390	--	--	1	--	2	--	2	
		AKF6/BKF6	898+73, 1.4'RT	--	--	--	390	--	--	1	--	2	--	2	

(1)

* ADDITIONAL QUANTITIES FOUND ELSEWHERE

(CONTINUED ON NEXT SHEET)

Addendum No. 01
ID 1228-22-70
Revised Sheet 765
March 7, 2023

LIGHTING AND MISCELLANEOUS - FINAL (CONTINUED)

CATEGORY	STAGE	DESCRIPTION	LOCATION	652.0700.S* INSTALL CONDUIT INTO EXISTING ITEM EACH	654.0105* CONCRETE BASES TYPE 5 EACH	~~654.0115 CONCRETE BASES TYPE F~~ ~~EACH~~	655.061* ELECTRICAL WIRE LIGHTING 12 AWG LF	657.0255* TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0322* POLES TYPE 5-ALUMINUM EACH	657.0381 POLES TYPE F EACH	657.0610 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6-FT EACH	657.0620 LUMINAIRE ARMS SINGLE MEMBER 6-INCH CLAMP 4-FT EACH	659.1120* LUMINAIRE UTILITY LED B EACH	659.1130 LUMINAIRE UTILITY LED D EACH	REMARKS
1100		AKF7/BKF7	902+80, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		AKF8/BKF8	905+50, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		AKF9/BKF9	908+25, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		AKF10/BKF10	910+55, 0.0'LT (1)	--	--	--	390	--	--	1	--	2	--	2	
		AKF11/BKF11	912+45, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		AKF12/BKF12	914+87, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		AKF13/BKF13	917+31, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		EKF1	891+72, 81.5'RT	--	1	--	135	1	1	1	1	--	1	--	
		FKF1	889+03, 115.0'RT	--	1	--	135	1	1	--	1	--	1	--	
		EKF2	887+76, 74.1'LT	--	1	--	135	1	1	--	1	--	1	--	
		FKF2	885+68, 97.9'LT	--	1	--	135	1	1	--	1	--	1	--	
		EKF3	883+18, 90.5'LT	--	1	--	135	1	1	--	1	--	1	--	
		CKF1	904+52, 145.3'RT	--	1	--	135	1	1	--	1	--	1	--	
		DKF1	906+49, 115.8'RT	--	1	--	135	1	1	--	1	--	1	--	
		CKF2	908+98, 90.2'RT	--	1	--	135	1	1	--	1	--	1	--	
		CKF3	903+35, 87.8'LT	--	1	--	135	1	1	--	1	--	1	--	
		DKF3	905+90, 107.9'LT	--	1	--	135	1	1	--	1	--	1	--	
		CKF5	905+96, 127.6'LT	--	--	--	135	--	1	--	1	--	1	--	STRUCTURE MOUNT
		DKF5	907+82, 87.7'LT	--	--	--	135	--	1	--	1	--	1	--	STRUCTURE MOUNT
		CKF7	909+89, 108.4"T	--	1	--	135	1	1	--	1	--	1	--	
		DKF7	911+05, 127.6'LT	--	1	--	135	1	1	--	1	--	1	--	
		CKF8	912+97, 107.4'LT	--	1	--	135	1	1	--	1	--	1	--	
		DKF8	914+70, 101.1'LT	--	1	--	135	1	1	--	1	--	1	--	
		CKF9	908+45, 154.3'LT	--	1	--	135	1	1	--	1	--	1	--	
		DKF9	910+13, 186.7'LT	--	1	--	135	1	1	--	1	--	1	--	
		CKF10	911+86, 206.9'LT	--	1	--	135	1	1	--	1	--	1	--	
		DKF10	913+44, 193.7'LT	--	1	--	135	1	1	--	1	--	1	--	
		EX-LPB-CA-1	924+94, 93.3"RT	1	--	--	--	--	--	--	--	--	--	--	
		EX-LPB-CA-2	926+64, 109.7'RT	1	--	--	--	--	--	--	--	--	--	--	
		EX-LPB-CA-3	925+05, 97.3'RT	1	--	--	--	--	--	--	--	--	--	--	FROM TEMP. LIGHTING
		ECA1	924+65, 263.0'RT	--	1	--	135	1	1	--	1	--	1	--	
		FCA2	923+06, 170.5'RT	--	1	--	135	1	1	--	1	--	1	--	
		ECA3	920+53, 95.8'RT	--	1	--	135	1	1	--	1	--	1	--	
		ECA4/FCA4	924+02, 0.0'LT	--	--	--	390	--	--	1	--	2	--	2	
		ECA5/FCA5	921+31, 0.0'LT (1)	--	--	--	390	--	--	1	--	2	--	2	
			TOTALS	6	33	-- (1)	27,210	33	35	48	35	94	60	98	--

* ADDITIONAL QUANTITIES FOUND ELSEWHERE

Addendum No. 01
ID 1228-22-70
Revised Sheet 766
March 7, 2023

N. 8TH ST. & W. LOCUST ST.

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

3

ELECTRICAL SERVICE METER BREAKER PEDESTAL
N. 8TH ST. & W. LOCUST ST.

BASE NO.	656.0201.0301 ELECTRICAL SERVICE METER BREAKER PEDESTAL EA
CB1	1
TOTALS	1

*** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

Addendum No. 01
ID 1228-22-70
Revised Sheet 792
March 7, 2023

CAST BASES, POLES, STANDARDS, MONOTUBE ARMS, LUMINAIRES
N. 8TH ST. & W. LOCUST ST.

SIGNAL BASE NO.	657.0100* PEDESTAL BASES EACH	657.0255* TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0347 POLES TYPE 9 SPECIAL EACH	657.0350* POLES TYPE 10 EACH	657.0352* POLES TYPE 10-SPECIAL EACH	657.0515 MONOTUBE ARMS 15-FT EACH	657.0535* MONOTUBE ARMS 35-FT EACH	657.0536* MONOTUBE ARMS 35-FT -SPECIAL EACH	657.0540* MONOTUBE ARMS 40-FT EACH	657.0541* MONOTUBE ARMS 40-FT -SPECIAL EACH	SPV.0060.0115* POLE TYPE 30-AL-BD EACH
SB1	--	--	--	--	--	1	--	--	1	--	--	--
SB2	--	--	--	--	--	1	--	--	--	--	1	--
SB3	1	--	1	--	--	--	--	--	--	--	--	--
SB4	--	--	--	--	1	--	1	--	--	--	--	--
SB5	--	--	--	1	--	--	--	--	1	--	--	--
SB6	1	--	1	--	--	--	--	--	--	--	--	--
SB7	--	1	--	--	--	--	--	--	--	--	--	1
SB8	--	1	--	--	--	--	--	--	--	--	--	1
TOTAL:	2	2	2	1	1	2	1	0	2	0	1	2

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

N. 7TH ST. & W. LOCUST ST.

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

3

ELECTRICAL SERVICE METER BREAKER PEDESTAL
N. 7TH ST. & W. LOCUST ST.

BASE NO.	656.0201.0302 ELECTRICAL SERVICE METER BREAKER PEDESTAL EA
CB1	1
TOTALS	1

*** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

CAST BASES, POLES, STANDARDS, MONOTUBE ARMS, LUMINAIRES
N. 7TH ST. & W. LOCUST ST.

SIGNAL BASE NO.	657.0100* PEDESTAL BASES EACH	657.0255* TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0350* POLES TYPE 10 EACH	657.0352* POLES TYPE 10-SPECIAL EACH	657.0530* MONOTUBE ARMS 30-FT EACH	657.0535* MONOTUBE ARMS 35-FT EACH	657.0536* MONOTUBE ARMS 35-FT -SPECIAL EACH	SPV.0060.0115* POLE TYPE 30-AL-BD EACH
SB1	--	1	--	--	--	--	--	--	1
SB2	--	--	--	--	1	--	--	1	--
SB3	--	--	--	1	--	1	--	--	--
SB4	1	--	1	--	--	--	--	--	--
SB5	--	--	--	--	--	1	--	--	--
SB6	--	1	--	--	--	--	--	--	1
SB7	--	1	--	--	--	--	--	--	1
TOTAL:	1	3	1	1	1	2	0	1	3

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

Addendum No. 01
ID 1228-22-70
Revised Sheet 799
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET NO: 799	E

FILE NAME : PLOT DATE : 2/28/2023 9:29 AM PLOT BY : PLOT NAME : 030201_mq PLOT SCALE : 1.000000:1.000000 WISDOT / CADDS SHEET 42

N. 8TH ST. & W. BURLEIGH ST.

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

3

ELECTRICAL SERVICE METER BREAKER PEDESTAL
N. 8TH ST. & W. BURLEIGH ST.

BASE NO.	656.0201.0303 ELECTRICAL SERVICE METER BREAKER PEDESTAL EA
CB1	1
TOTALS	1

*** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

CAST BASES, POLES, STANDARDS, MONOTUBE ARMS, LUMINAIRES
N. 8TH ST. & W. BURLEIGH ST.

SIGNAL BASE NO.	657.0255* TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0350* POLES TYPE 10 EACH	657.0352* POLES TYPE 10-SPECIAL EACH	657.0530* MONOTUBE ARMS 30-FT EACH	657.0535* MONOTUBE ARMS 35-FT EACH	657.0536* MONOTUBE ARMS 35-FT -SPECIAL EACH	657.0540* MONOTUBE ARMS 40-FT EACH	657.0541* MONOTUBE ARMS 40-FT -SPECIAL EACH	SPV.0060.0115* POLE TYPE 30-AL-BD EACH
SB1	1	--	--	--	--	--	--	--	1
SB2	--	--	1	--	--	1	--	--	--
SB3	--	1	--	1	--	--	--	--	--
SB4	1	--	--	--	--	--	--	--	1
SB5	--	--	1	--	--	--	--	1	--
SB6	1	--	--	--	--	--	--	--	1
TOTAL:	3	1	2	1	0	1	0	1	3

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

Addendum No. 01
ID 1228-22-70
Revised Sheet 806
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET NO: 806	E

N. 7TH ST. & W. BURLEIGH ST.

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

ELECTRICAL SERVICE METER BREAKER PEDESTAL
N. 7TH ST. & W. BURLEIGH ST.

BASE NO.	656.0201.0304 ELECTRICAL SERVICE METER BREAKER PEDESTAL EA
CB1	1
TOTALS	1

*** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

CAST BASES, POLES, STANDARDS, MONOTUBE ARMS, LUMINAIRES
N. 7TH ST. & W. BURLEIGH ST.

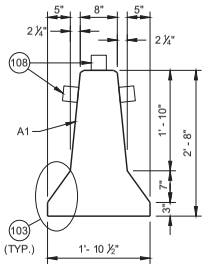
SIGNAL BASE NO.	657.0255* TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0350* POLES TYPE 10 EACH	657.0352* POLES TYPE 10-SPECIAL EACH	657.0530* MONOTUBE ARMS 30-FT EACH	657.0535* MONOTUBE ARMS 35-FT EACH	657.0536* MONOTUBE ARMS 35-FT -SPECIAL EACH	657.0545 MONOTUBE ARMS 45-FT EACH	657.0546 MONOTUBE ARMS 45-FT -SPECIAL EACH	SPV.0060.0115* POLE TYPE 30-AL-BD EACH
SB1	1	--	--	--	--	--	--	--	1
SB2	--	--	1	--	--	1	--	--	--
SB3	--	1	--	1	--	--	--	--	--
SB4	1	--	--	--	--	--	--	--	1
SB5	--	--	1	--	--	--	--	1	--
SB6	1	--	--	--	--	--	--	--	1
TOTAL:	3	1	2	1	0	1	0	1	3

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

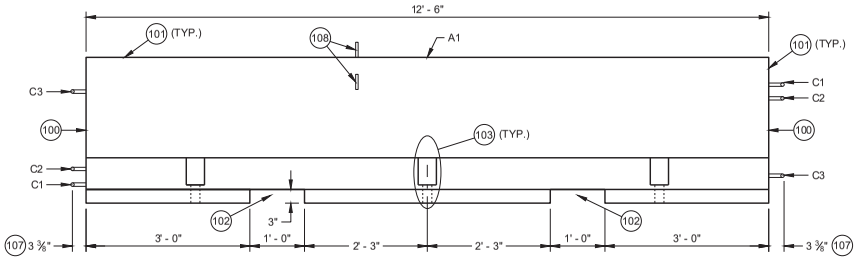
Addendum No. 01
ID 1228-22-70
Revised Sheet 812
March 7, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET NO: 812	E

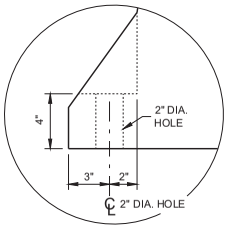
FILE NAME : PLOT DATE : 2/28/2023 9:35 AM PLOT BY : PLOT NAME : 030201_mq PLOT SCALE : 1.000000:1.000000 WISDOT / CADDS SHEET 42



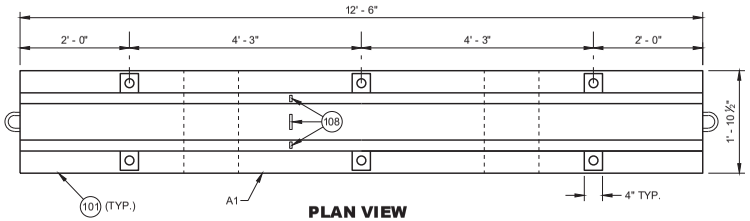
CROSS SECTION



PROFILE VIEW



ANCHOR BLOCK DETAIL



PLAN VIEW

TEMPORARY BARRIER

GENERAL NOTES

PLACE BARRIER ON PAVED SURFACE. BEFORE PLACEMENT OF TEMPORARY BARRIER, REMOVE ALL LOOSE MATERIAL FROM PAVED SURFACE.

LOOP BARS C1, C2 AND C3 ARE NOT FOR PLACEMENT OR MOVEMENT OF BARRIER.

(100) PERMANENTLY FORM INTO ONE END OF BARRIER THE FOLLOWING INFORMATION:
- A. TYPE OF BARRIER: WI-CBTP
- B. MANUFACTURER
- C. DATE OF MANUFACTURE (MONTH AND YEAR)

(101) 1" OPTIONAL CHAMFER

(102) SEE LIFTING SLOT DETAIL

(103) SEE ANCHOR BLOCK DETAIL

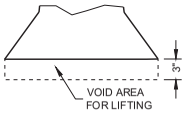
(104) 1 ¾" MIN. CLEAR COVER

(105) 2" MIN. CLEAR COVER

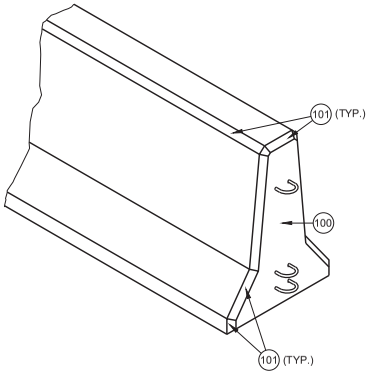
(106) 1" MIN. CLEAR COVER

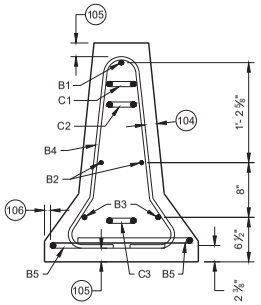
(107) ±½" MEASURED FROM FACE OF CONCRETE BARRIER TO OUTSIDE OF LOOP BAR (TYP.)

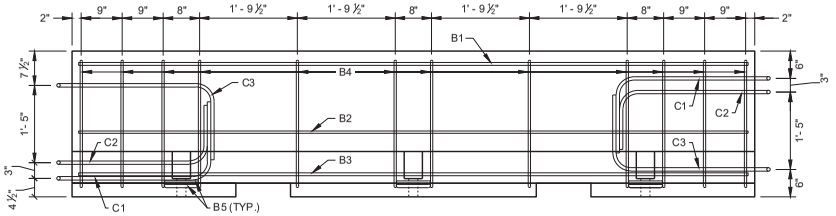
(108) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURERS INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED LEFT OF TRAFFIC AND WHITE WHEN BARRIER IS LOCATED RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART, PROVIDE TO MOUNTED DELINEATORS IN ADDITION TO SIDE MOUNTED DELINEATORS ON BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAT 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.



LIFTING SLOT DETAIL (TYP.)







PROFILE VIEW

TEMPORARY BARRIER REINFORCEMENT

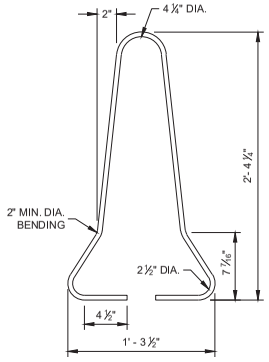
Addendum No. 01
ID 1228-22-70
Revised Sheet 901
March 7, 2023

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

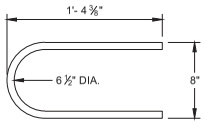
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B07-16a

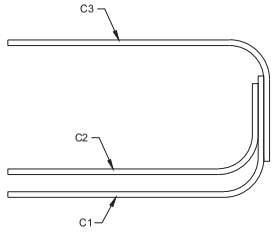
SDD 14B07-16a



B4 BAR DETAIL

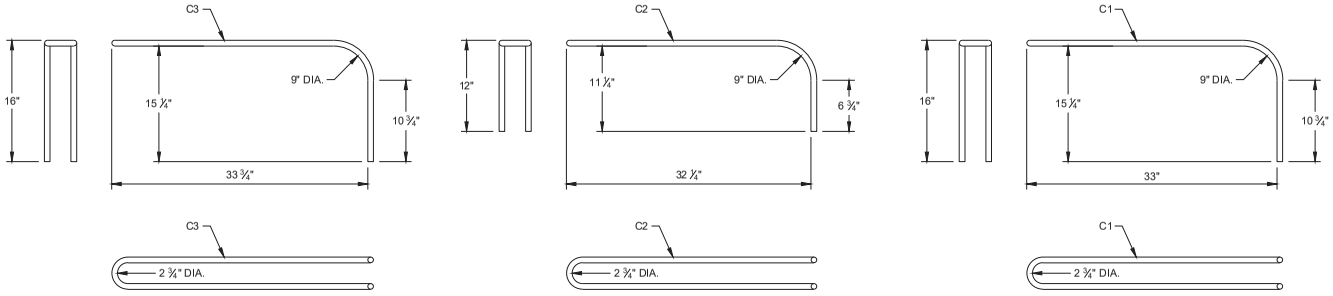


B5 BAR DETAIL



PROFILE VIEW

LOOP BAR ASSEMBLY



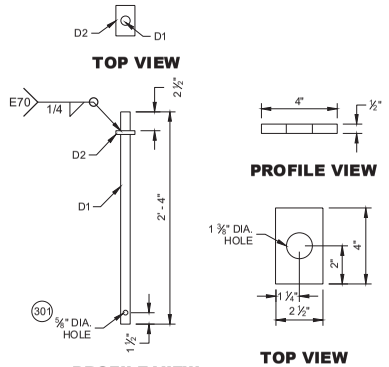
C BAR DETAILS

Addendum No. 01
ID 1228-22-70
Revised Sheet 902
March 7, 2023

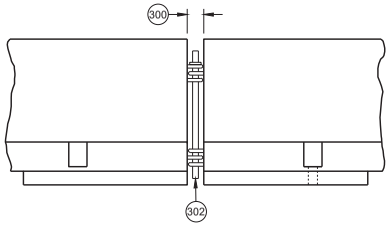
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16b



CONNECTOR PIN ASSEMBLY



CONNECTING TEMPORARY BARRIER SECTIONS

GENERAL NOTES

300 SET WITH 3 ⅝" WOOD BLOCK.

301 HOLE IS OPTIONAL.

302 CONNECTOR PIN ASSEMBLY.

303 CONCRETE PAVEMENT, APPROACH SLAB, OR DECK.

304 CONCRETE DECK.

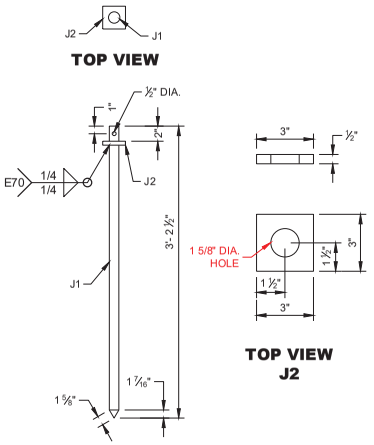
305 DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.

306 MINIMUM OF 2" OF ASPHALT.

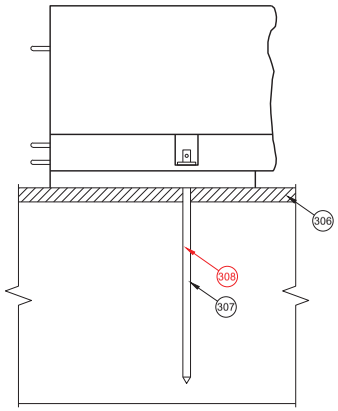
307 ASPHALT ANCHOR PIN ASSEMBLY

308 IF DRILLING A PILOT HOLE, THE MAX. DIA. OF THE HOLE IS 3/4"

309 WHEN THERE IS ASPHALT OVERLAYING CONCRETE PAVEMENT, A 1 5/8" DIA. PILOT HOLE CAN BE DRILLED INTO THE OVERLAY AND CONCRETE. IF NEEDED DRILL A 3/4" PILOT HOLE IN BASE COURSE.

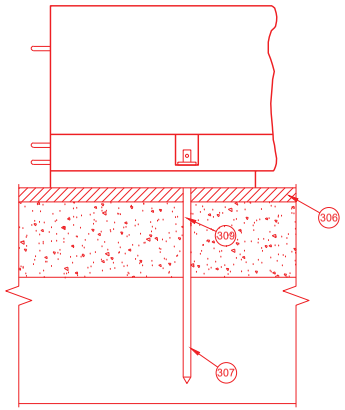


ASPHALT ANCHOR PIN ASSEMBLY



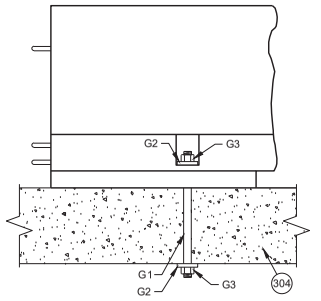
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT PAVEMENT



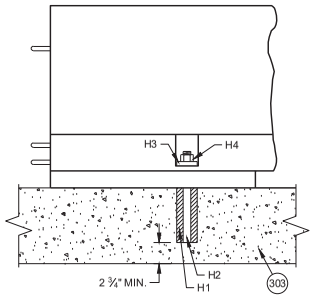
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT OVERLAY ON TOP OF CONCRETE PAVEMENT



SIDE VIEW

THROUGH BOLT ANCHOR INSTALLATION (305)



SIDE VIEW

ADHESIVE ANCHOR INSTALLATION (305)

Addendum No. 01
ID 1228-22-70
Revised Sheet 903
March 7, 2023

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

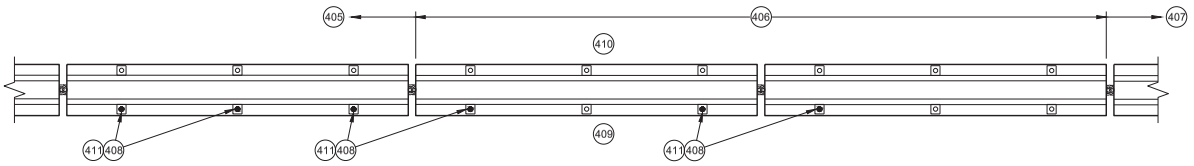
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B07-16c

SDD 14B07-16c

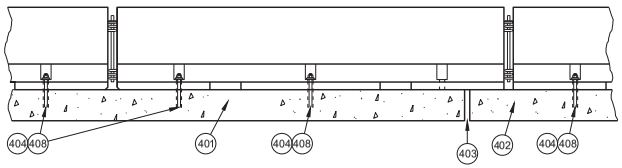
6

6



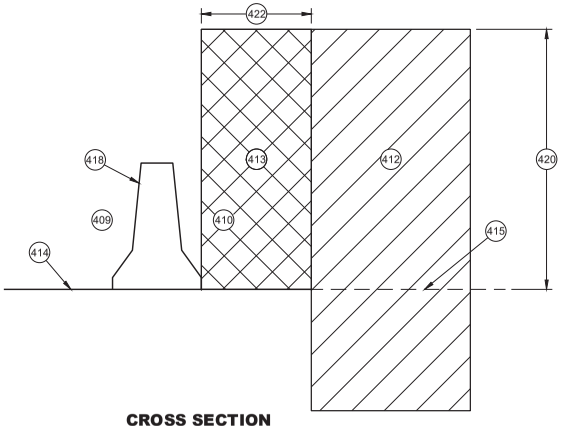
PLAN VIEW

TRANSITION FROM FREE STANDING TO ANCHORED BARRIER



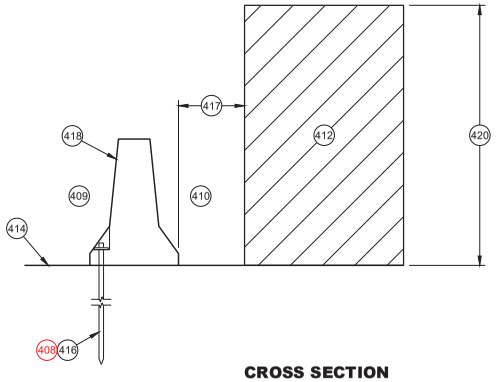
PROFILE VIEW

ANCHORED BARRIER NEAR EXPANSION JOINT 400



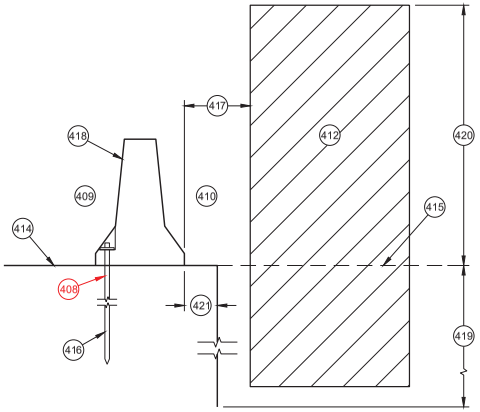
CROSS SECTION

FREE STANDING BARRIER



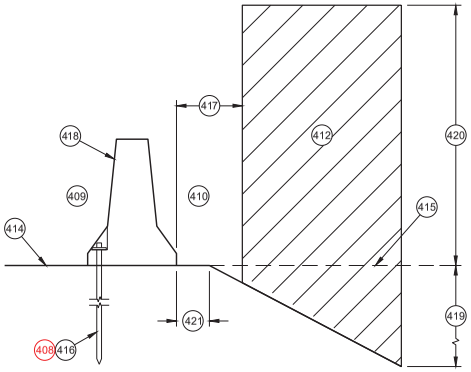
CROSS SECTION

ANCHORED BARRIER FOR OBJECTS ABOVE THE GRADE LINE AND NEAR THE BARRIER



CROSS SECTION

ANCHORED BARRIER NEAR VERTICAL DROP OFF



CROSS SECTION

ANCHORED BARRIER NEAR A SLOPE

GENERAL NOTES

400 NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.

401 CONCRETE DECK

402 CONCRETE DECK OR APPROACH SLAB.

403 EXPANSION JOINT

404 ADHESIVE ANCHOR SHOWN. SEE ANCHOR DETAILS.

405 ANCHORED TEMPORARY BARRIER

406 TRANSITION FROM ANCHORED TEMPORARY BARRIER TO FREE STANDING

407 FREE STANDING BARRIER

408 REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERCIAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

409 TRAFFIC SIDE

410 NON-TRAFFIC SIDE

411 ANCHOR LOCATION. SEE ANCHORING DETAILS.

412 WORK AREA

413 AREA FREE OF OBJECTS AND WORKERS

414 GRADE LINE

415 EXTENDED GRADE LINE

416 ANCHORED TEMPORARY BARRIER. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR AN ASPHALT ANCHOR ROD DETAILS FOR MORE INFORMATION. ASPHALT ANCHOR ROD SHOWN.

417 WHEN OBJECTS EXTEND ABOVE THE GRADE. A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT.

418 OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR ALLOWED TO LEAN AGAINST THE BARRIER WITHOUT WRITTEN PERMISSION OF THE PROJECT ENGINEER.

419 DEPTHS OF 3 FEET OR MORE.

420 Y = 6.5'

421 OFFSET FROM BACK OF BARRIER EDGE:

CONCRETE PAVEMENT	0.5'
ASPHALT	0.5'

422 POSTED SPEED (MPH):

45 OR GREATER	4.0'
40 OR LOWER	2.0'

Addendum No. 01
ID 1228-22-70
Revised Sheet 904
March 7, 2023

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16d

GENERAL NOTES

500 EXISTING RIGID BARRIERS (VARIES)

501 TEMPORARY BARRIER

502 SEE OTHER DETAIL ON HOW TO ANCHOR TEMPORARY BARRIER (BARRIER ASPHALT ANCHOR SHOWN).

503 ANCHORS ARE REQUIRED ON BOTH SIDE OF THE TEMPORARY BARRIER.

504 NESTED RAILS ARE REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

505 TRAFFIC TRAVELS FROM PERMANENT BARRIER TO TEMPORARY BARRIER.

506 TRAFFIC TRAVELS FROM TEMPORARY BARRIER TO PERMANENT BARRIER.

507 VERTICAL BARRIER

508 SAFETY SHAPE BARRIER

509 SINGLE SLOPE BARRIER

510 CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF RIGID BARRIER.

511 BENT THRIE BEAM TO FIT.

512 THRIE BEAM PIECES ARE OFFSET 15 ¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.

513 TWO (2) P1, P2 AND P3 ARE REQUIRED

514 FIVE (5) N1, N2 AND N3 ARE REQUIRED

515 TWO (2) R1, R2 AND R3 ARE REQUIRED

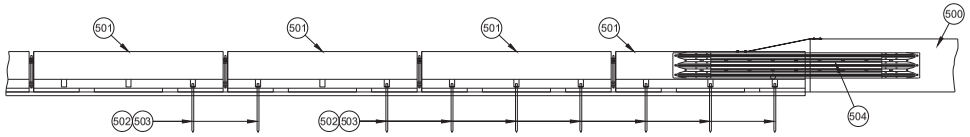
516 CUT WOOD BLOCK TO FIT.

517 SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL ASSEMBLY.

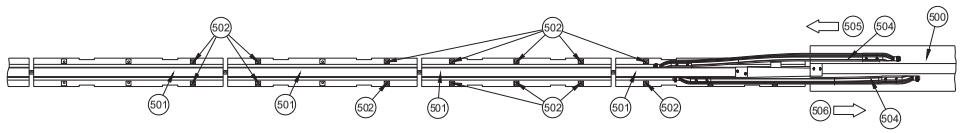
518 CAP ASSEMBLY

519 4" MAX. GAP BETWEEN TEMPORARY BARRIER AND RIGID BARRIER.

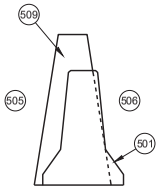
520 ALL TWELVE SPLICE HOLES REQUIRE M1 AND M2



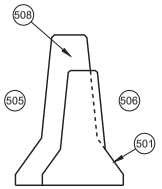
PROFILE VIEW



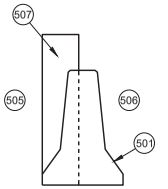
PLAN VIEW
TRANSITION TO RIGID BARRIER



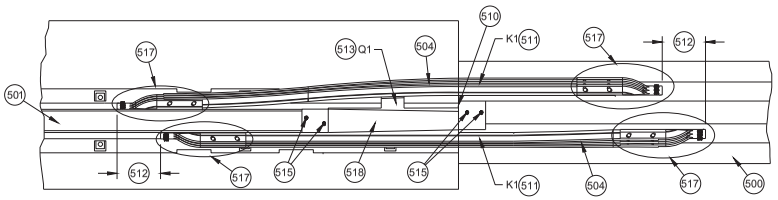
CROSS SECTION
TEMPORARY BARRIER
PLACEMENT SINGLE SLOPE



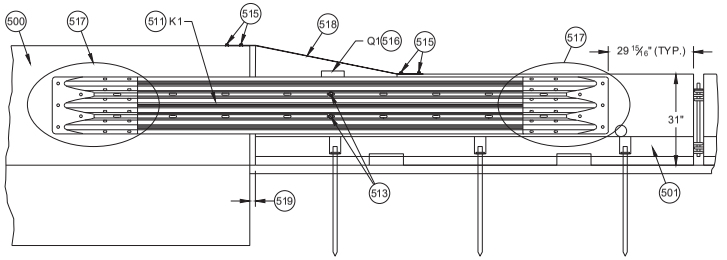
CROSS SECTION
TEMPORARY BARRIER
PLACEMENT SAFETY SHAPE



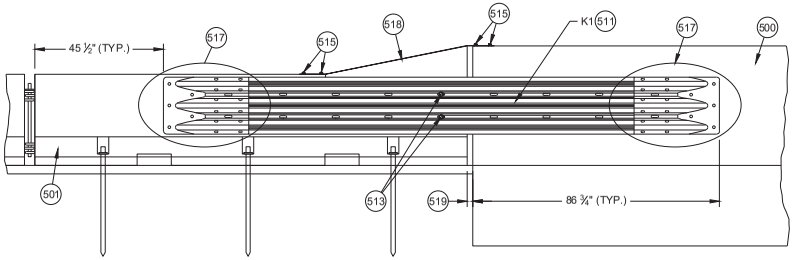
CROSS SECTION
TEMPORARY BARRIER
PLACEMENT VERTICAL



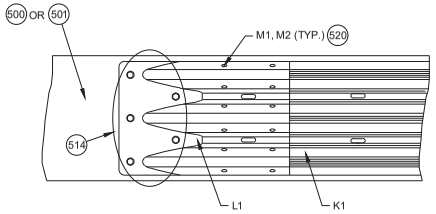
PLAN DETAIL VIEW
TRANSITION TO RIGID BARRIER



BACK DETAIL VIEW
TRANSITION TO RIGID BARRIER



FRONT DETAIL VIEW
TRANSITION TO RIGID BARRIER



517 DETAIL PLAN VIEW
THRIE BEAM RAIL TERMINAL CONNECTOR ASSEMBLY

Addendum No. 01
ID 1228-22-70
Revised Sheet 905
March 7, 2023

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

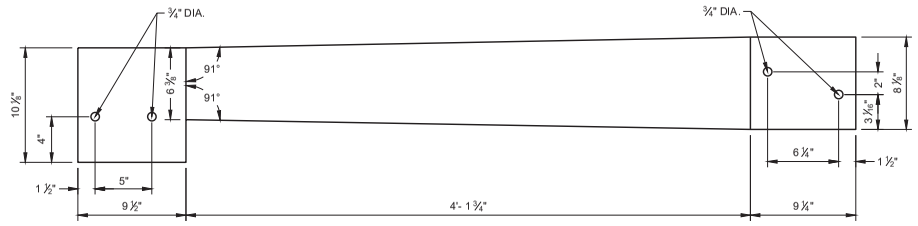
905

6

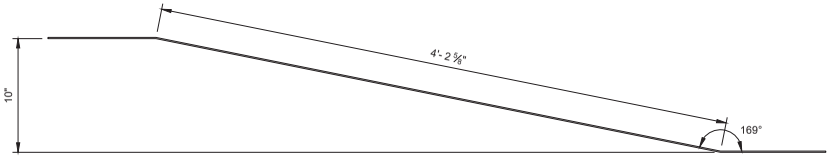
SDD 14B07-16e

6

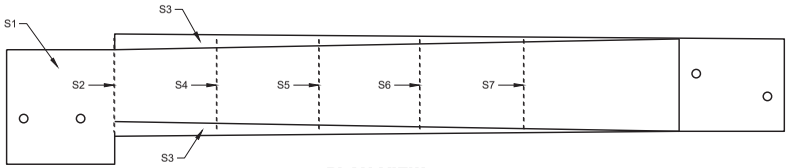
SDD 14B07-16e



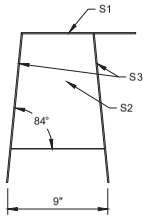
TOP VIEW
S1



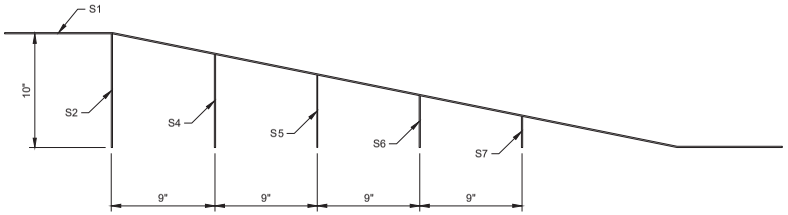
ELEVATION VIEW
S1



PLAN VIEW

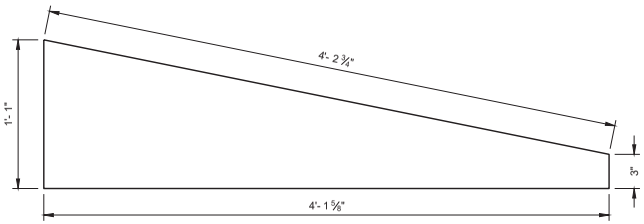


BACK VIEW

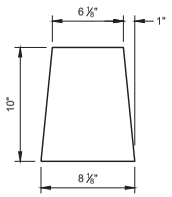


SIDE VIEW (600)

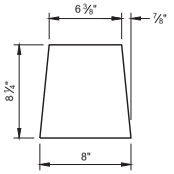
42" TOP CAP ASSEMBLY



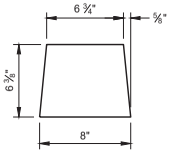
SIDE VIEW
S3



S2



S4



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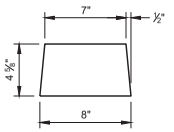

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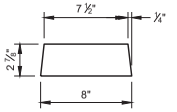


S7

GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THREE SIDES

STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

(600) SIDE PLATES (S3) NOT SHOWN FOR CLARITY.

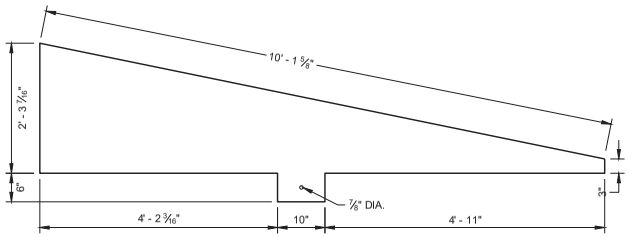
Addendum No. 01
ID 1228-22-70
Revised Sheet 906
March 7, 2023

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

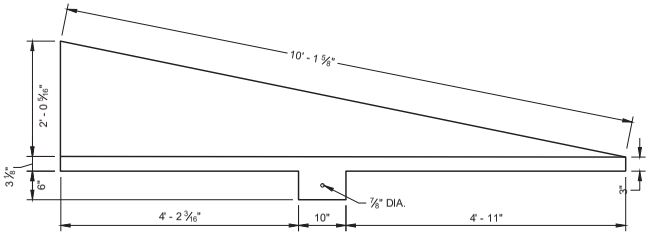
6

SDD 14B07-16f



SIDE VIEW
T4

END VIEW



SIDE VIEW
T3

END VIEW

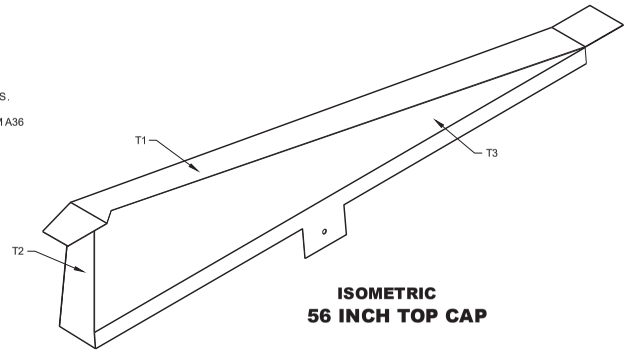
GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THRIE SIDES

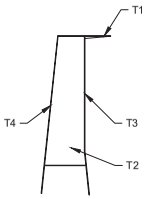
STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

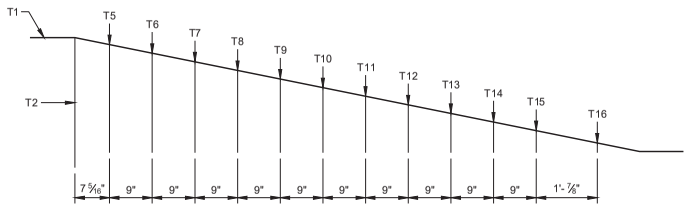
(700) SIDE PLATES (T3 AND T4) NOT SHOWN FOR CLARITY.



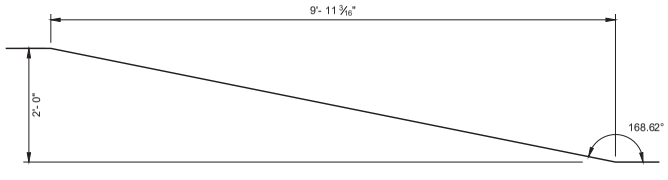
ISOMETRIC
56 INCH TOP CAP



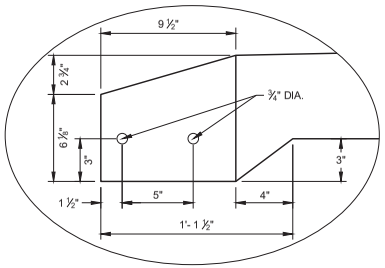
END VIEW
56 INCH TOP CAP



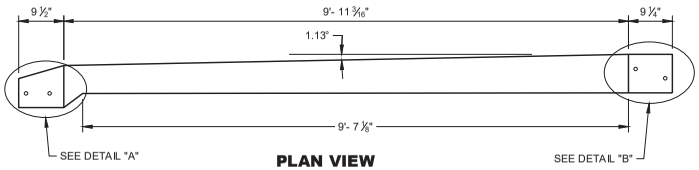
SIDE VIEW
56 INCH TOP CAP (700)



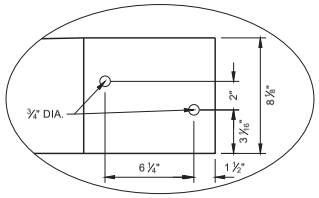
SIDE VIEW
TOP PLATE T1



DETAIL "A"



PLAN VIEW
TOP PLATE T1



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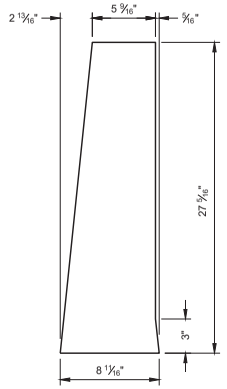
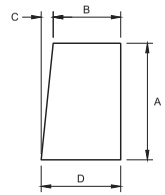


END PLATE T2



GUSSET PLATES
T5 - T16

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
T5	22 13/16"	5 1/16"	2 5/16"	8 1/16"
T6	21"	5 7/8"	2 3/16"	8 1/16"
T7	19 3/16"	6 1/16"	1 15/16"	8 1/16"
T8	17 3/8"	6 1/4"	1 13/16"	8 1/16"
T9	15 9/16"	6 7/16"	1 9/16"	8 1/16"
T10	13 3/4"	6 5/8"	1 7/16"	8 1/16"
T11	11 15/16"	6 13/16"	1 1/4"	8 1/16"
T12	10 1/8"	7"	1 1/16"	8 1/16"
T13	8 5/16"	7 3/16"	7/8"	8 1/16"
T14	6 1/2"	7 3/8"	11/16"	8 1/16"
T15	4 11/16"	7 9/16"	1/2"	8"
T16	2 7/8"	7 3/4"	1/4"	8"

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ID 1228-22-70
Revised Sheet 907
March 7, 2023

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

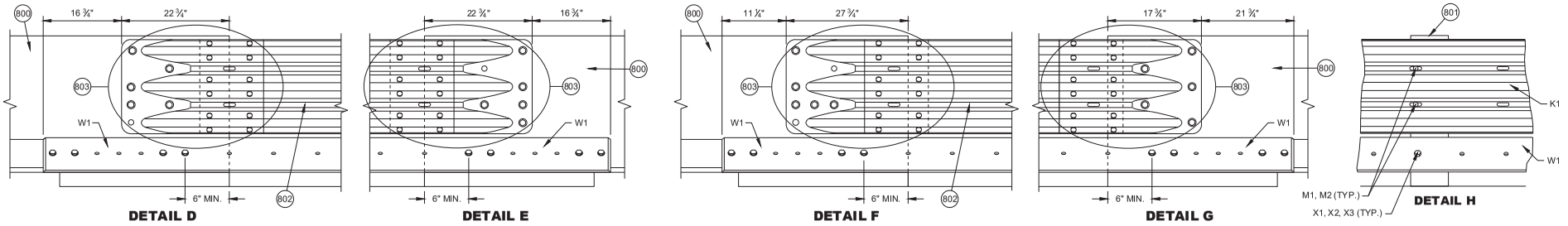
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

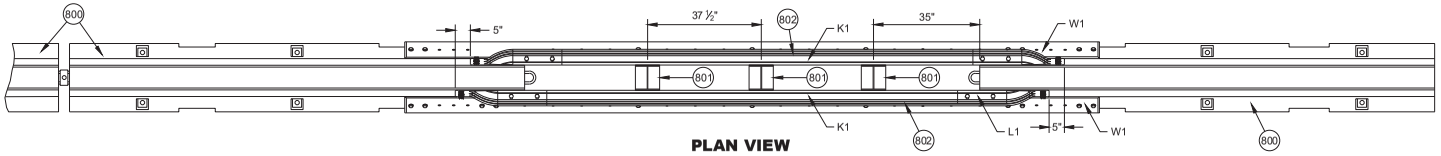
907

SDD 14B07-16g

6

SDD 14B07-16g





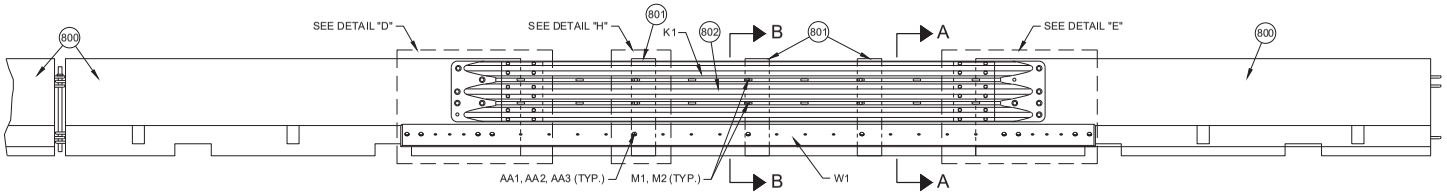
GENERAL NOTES

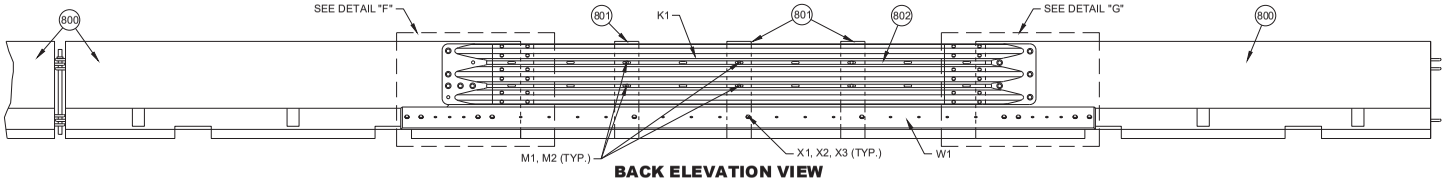
(800) FREE STANDING TEMPORARY BARRIER

(801) GAP STIFFENER ASSEMBLY

(802) THRIE BEAMS ARE NESTED ON BOTH SIDES OF THE TEMPORARY BARRIER.

(803) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL





PORTABLE CONCRETE BARRIER GAP THRIE BEAM COVER

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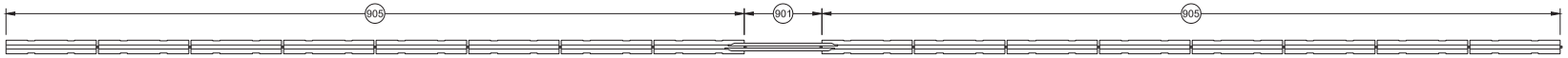
March 7, 2023

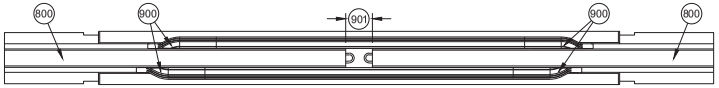
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

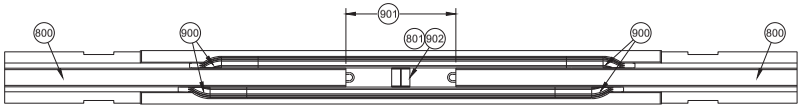
SDD 14B07-16h



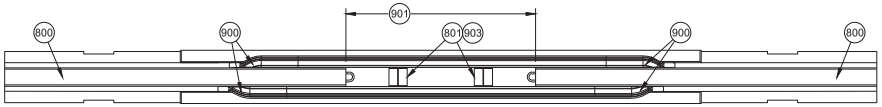
PLAN VIEW
GAP WITHIN SPACING



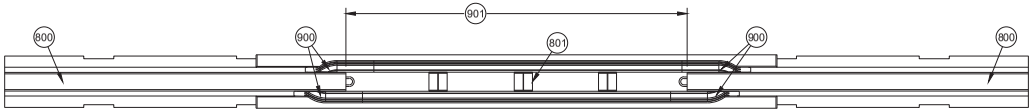
PLAN VIEW
TEMPORARY BARRIER GAP OVER 4" TO 1' MAX.(904)



PLAN VIEW
TEMPORARY BARRIER GAP OVER 1' TO 4' MAX.(904)



PLAN VIEW
TEMPORARY BARRIER GAP OVER 4' TO 7' MAX.(904)



PLAN VIEW
TEMPORARY BARRIER GAP OVER 7' TO 12.5' MAX.(904)

GENERAL NOTES

(900) SEE OTHER DETAILS FOR TEMPORARY GAP HARDWARE (TYP.)
(901) TEMPORARY BARRIER GAP
(902) GAP STIFFENER ASSEMBLY CENTERED IN THE GAP.
(903) GAP STIFFENER ASSEMBLY IS OFFSET 18 ¾" FROM CENTER
(904) MINIMUM NUMBER OF GAP STIFFENERS SHOWN FOR THE GAP RANGE SHOWN.
(905) MINIMUM OF 8 CONTINUOUS FREE STANDING TEMPORARY BARRIERS

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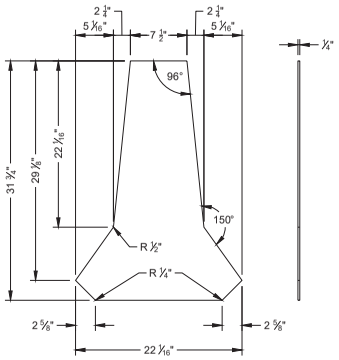
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

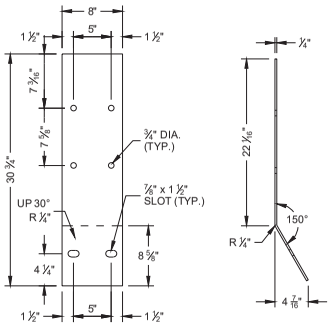
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16i



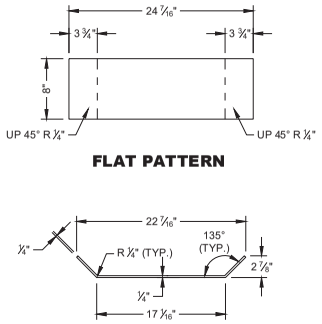
PROFILE VIEW SIDE VIEW

STIFFENER ASSEMBLY CENTER PANEL U1



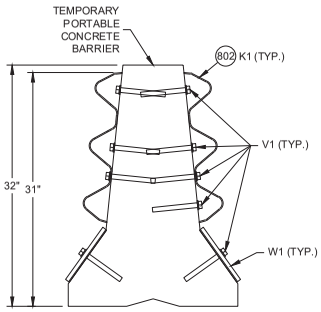
FLAT PATTERN SIDE VIEW

STIFFENER ASSEMBLY SIDE PANEL U2

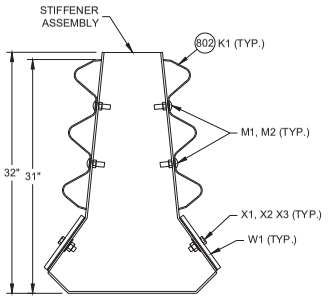


PROFILE VIEW

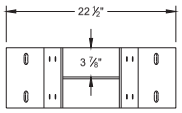
STIFFENER ASSEMBLY BOTTOM PANEL U3



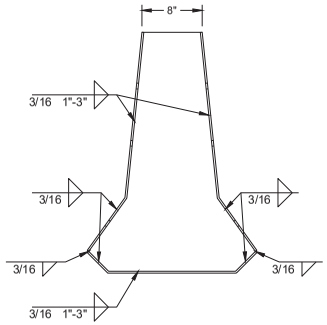
SECTION A - A



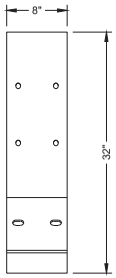
SECTION B - B



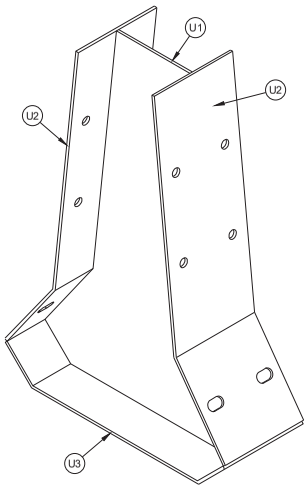
PLAN VIEW



PROFILE VIEW

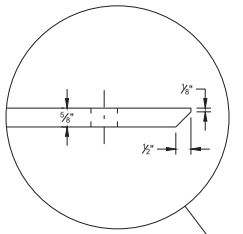


SIDE VIEW

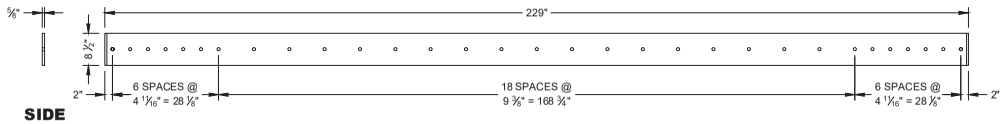


ISOMETRIC

GAP STIFFENER ASSEMBLY



PLAN VIEW



SIDE VIEW

ELEVATION VIEW

W1 TOE PLATE

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March 7, 2023

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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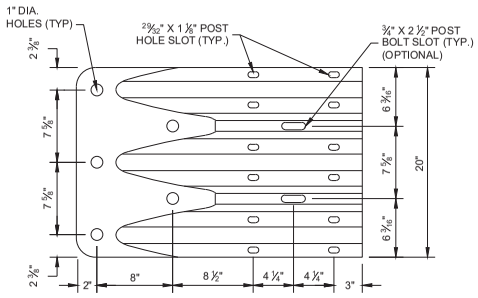
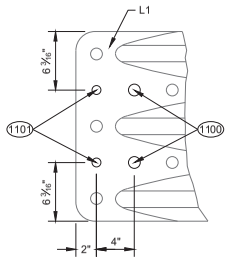


ELEVATION VIEW

THRIE BEAM TERMINAL CONNECTOR



ELEVATION VIEW

ADDITIONAL THRIE BEAM (102) TERMINAL CONNECTOR HOLE DETAIL

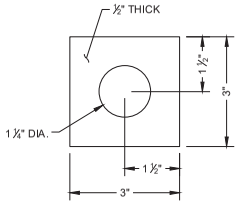


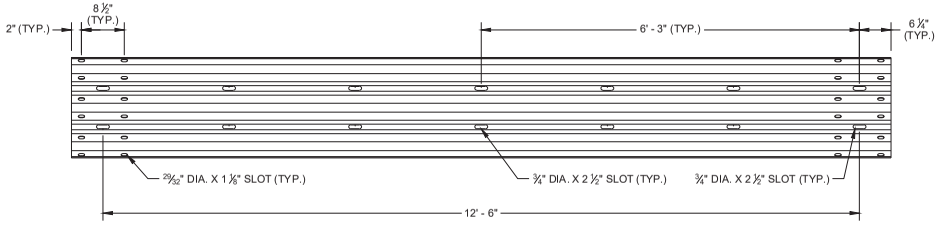
PLATE WASHER DETAIL G2, H3

GENERAL NOTES

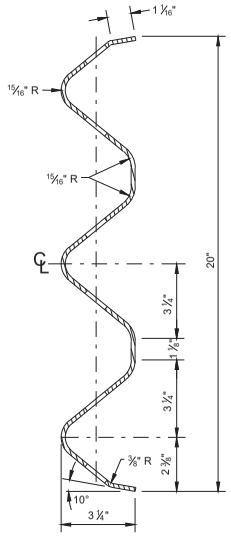
(100) 1" DIA. HOLE

(101) 3/4" DIA. HOLE

(102) PROVIDE HOLES IN THRIE BEAM TERMINAL CONNECTOR TO LIMIT STEEL REINFORCEMENT OR LOOP BAR CONFLICT. CONTRACTOR MAY FIELD DRILL ADDITIONAL HOLE OR PROVIDE THRIE BEAM TERMINAL CONNECTOR WITH ADDITIONAL HOLES FROM SUPPLIER.



SLOTTED THRIE BEAM RAIL K1



SECTION THROUGH BEAM K1

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ID 1228-22-70
Revised Sheet 911
March 7, 2023

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B07-16k

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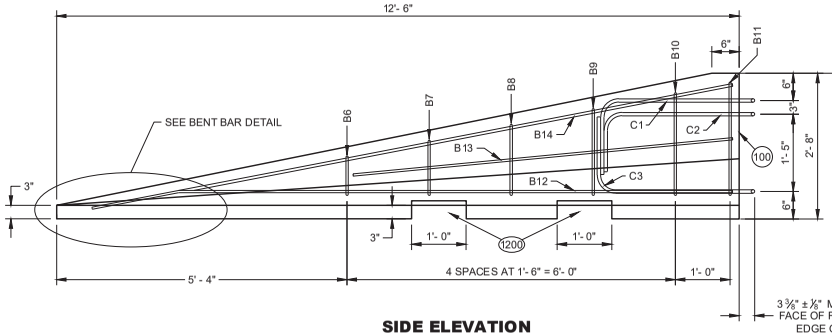
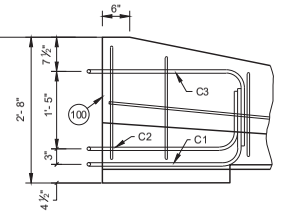
SDD 14B07-16k



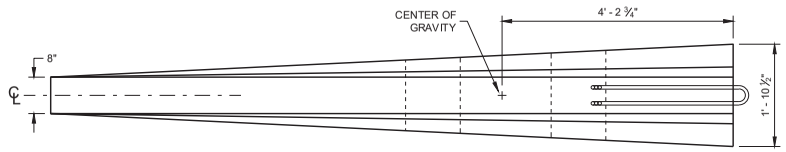
SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



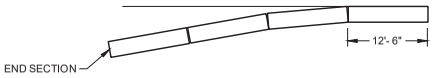
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

1200 SEE LIFTING SLOT DETAIL. LOCATION OF LIFTING SLOTS DETERMINED BY CONTRACTOR.

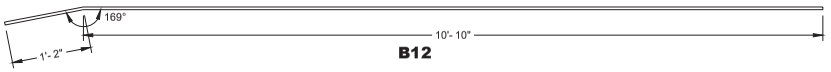


PLAN VIEW

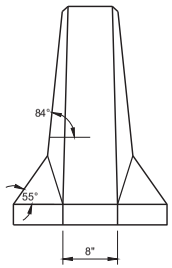


FLARE AT BARRIER END

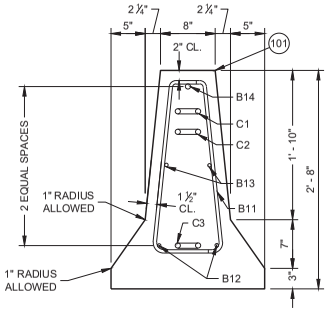
POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1



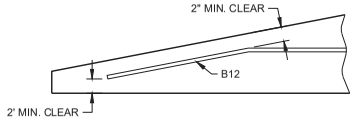
B12



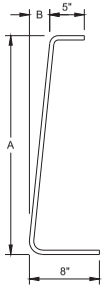
FRONT ELEVATION



END SECTION



BENT BAR DETAIL



BAR	A	B
B6	10"	1"
B7	1'- 1"	1 ¼"
B8	1'- 5"	1 ⅝"
B9	1'- 8"	1 ⅞"
B10	2'- 0 ½"	2 ⅜"
B11	2'- 3"	2 ¾"

B BARS
2 OF EACH SIZE REQUIRED FOR STIRRUP ASSEMBLY

DETAILS OF BARRIER TAPER SECTION

Addendum No. 01
ID 1228-22-70
Revised Sheet 912
March 7, 2023

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B07-16I

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	PRECAST TEMPORARY BARRIER - CONCRETE	MIN. = f'c 5000 PSI	
B1	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B2	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-2"
B3	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B4	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 6'-0"
B5	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#6 REBAR, LENGTH 2'-11"
B6	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 1'-11"
B7	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-2"
B8	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-6"
B9	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-9"
B10	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-2"
B11	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-4"
B12	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-0"
B13	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 7'-9"
B14	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 11'-9"
C1	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C2	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C3	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
D1	CONNECTION PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ¼" DIA.
D2	CONNECTION PIN - TOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G1	BOLT THROUGH ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A OR SAE J429 GRADE 2 UNC	1 ⅛" DIA.
G2	BOLT THROUGH ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G3	BOLT THROUGH ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
H1	ADHESIVE ANCHOR - ADHESIVE	ICC-ES-AC308 5 ½" EMBEDMENT WITH A MIN. BOND STRENGTH OF 1,650 PSI. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
H2	ADHESIVE ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A / SAE J429 GRADE 2 UNC	1 ⅛" DIA.
H3	ADHESIVE ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
H4	ADHESIVE ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
J1	ASPHALT ANCHOR PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ½" DIA.
J2	ASPHALT ANCHOR PIN - STOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
K1	THRIE BEAM RAIL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE
L1	THRIE BEAM RAIL - TERMINAL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
M1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	⅝" DIA.
M2	SPLICE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
N1	THRIE BEAM RAIL TERMINAL - MECHANICAL ANCHOR	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA. LENGTH 6"
N2	THRIE BEAM RAIL TERMINAL - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
N3	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
P1	THRIE BEAM RAIL CONNECTION 1-BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA.
P2	THRIE BEAM RAIL CONNECTION 1-WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
P3	THRIE BEAM RAIL CONNETION 1- MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
Q1	BLOCK WOOD	SEE STANDARD SPEC. 614	
R1	CAP - BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	⅝" DIA.
R2	CAP- BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
R3	CAP - BOLT - MECHANICAL ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	12 GAUGE
S1	CAP 42-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S2	CAP 42-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S3	CAP 42-INCH SIDE PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S4	CAP 42-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S5	CAP 42-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S6	CAP 42-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S7	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE

Addendum No. 01
ID 1228-22-70
Revised Sheet 913
March 7, 2023

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

913

6

SDD 14B07-16m

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SDD 14B07-16m

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
T1	CAP 56-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T2	CAP 56-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T3	CAP 56-INCH SIDE PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T4	CAP 56-INCH SIDE PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T5	CAP 56-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T6	CAP 56-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T7	CAP 56-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T8	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T9	CAP 42-INCH GUSSET 5	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T10	CAP 42-INCH GUSSET 6	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T11	CAP 42-INCH GUSSET 7	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T12	CAP 42-INCH GUSSET 8	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T13	CAP 42-INCH GUSSET 9	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T14	CAP 42-INCH GUSSET 10	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T15	CAP 42-INCH GUSSET 11	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T16	CAP 42-INCH GUSSET 12	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
U1	GAP STIFFENER	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U2	GAP STIFFENER - CONNECTOR PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U3	GAP STIFFENER - CONNECTOR PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
V1	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 24.0 KIPS AND ULTIMATE SHEAR LOAD 21.5 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	¾" DIA.
V2	GAP STIFFENER - BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C O R MECHANICAL GALVANIZE TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
W1	TOE PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
X1	TOE PLATE - CONNECTION BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC HEAVY HEX HEAD OR AASTHO M180 HEAD, ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED. PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	¾" DIA.
X2	TOE PLATE - CONNECTION BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1 (HARDEN WASHER ONLY)	
X3	TOE PLATE - CONNECTION BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	

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Addendum No. 01
ID 1228-22-70
Revised Sheet 914
March 7, 2023

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

SDD 14B07-16n

SDD 14B07-16n

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1E AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

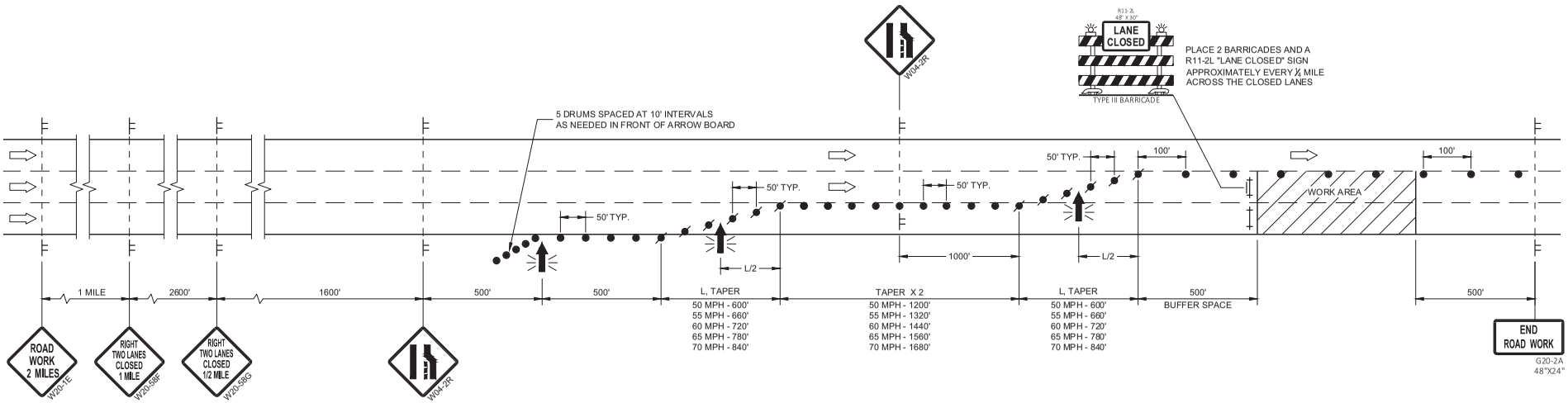
CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS.

WHEN A RAMP OR SIDE ROAD INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.



TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020 — DATE
/S/ Andrew Heidtke — STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

Addendum No. 01
ID 1228-22-70
Added Sheet 999A
March 7, 2023

999A

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SDD 15D14 - 04

SDD 15D14 - 04

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1E AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS.

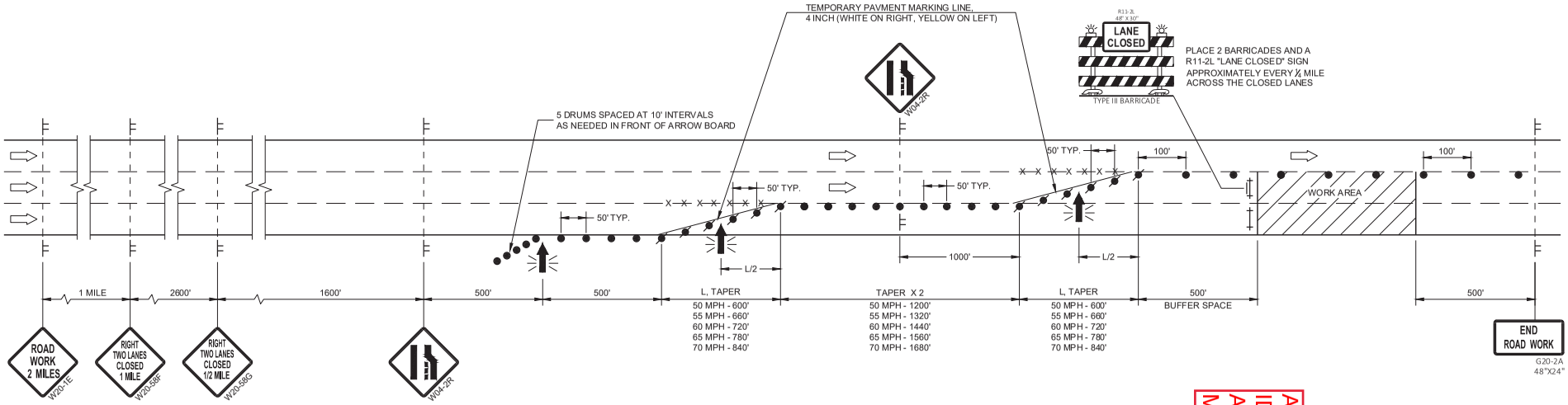
WHEN A RAMP OR SIDE ROAD INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.



Addendum No. 01
ID 1228-22-70
Added Sheet 999B
March 7, 2023

TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 — DATE
/S/ Andrew Heidtke — STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

999B

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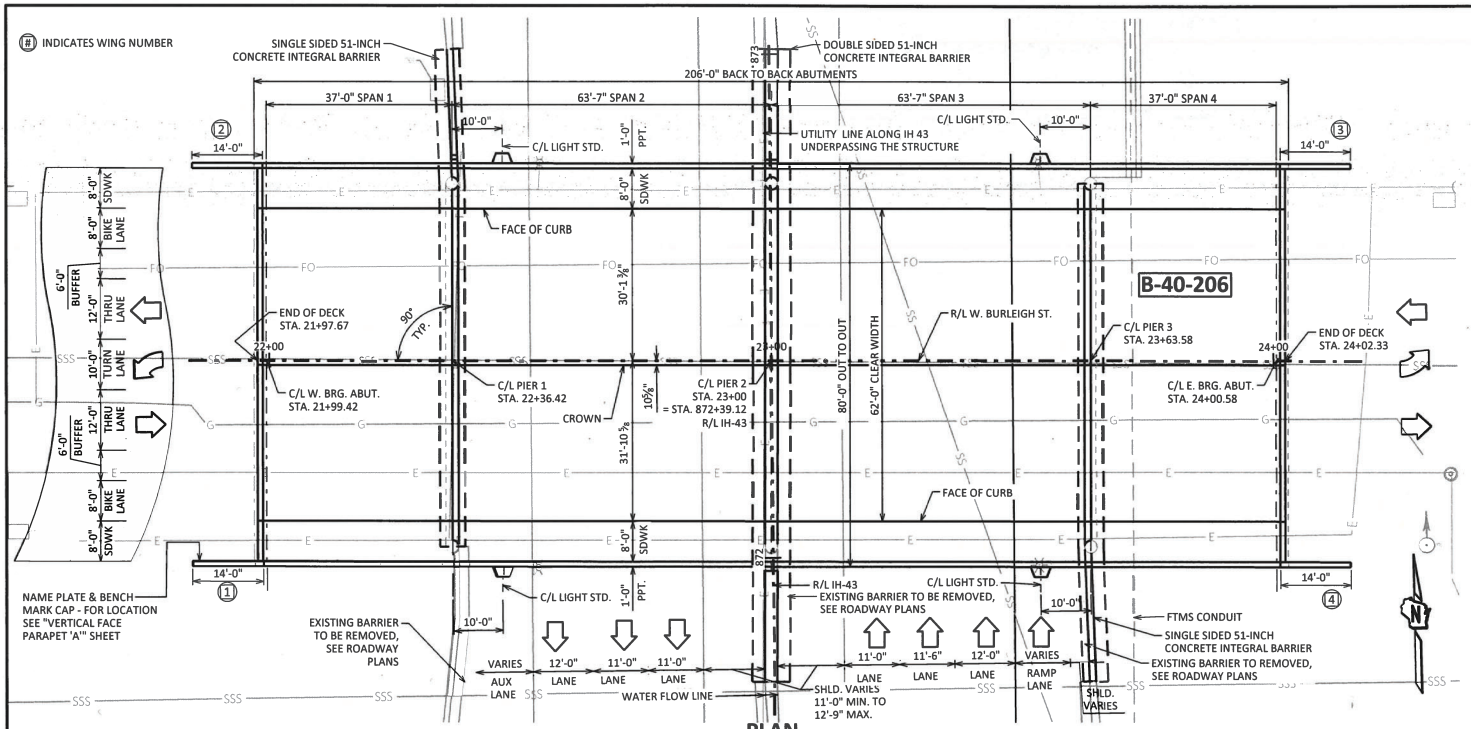
SDD 15D14 - 05

6

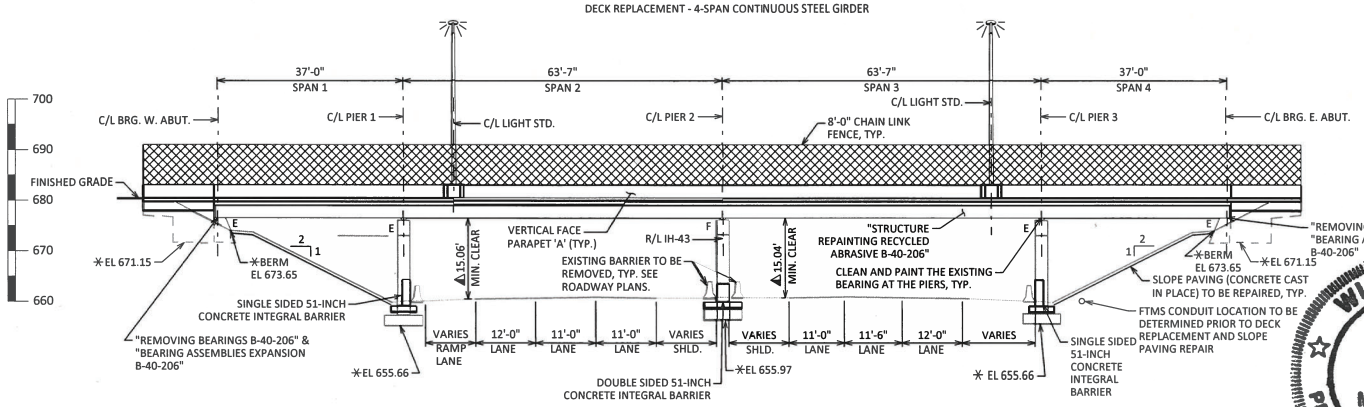
SDD 15D14 - 05

STATE PROJECT NUMBER
1228-22-70



PLAN

DECK REPLACEMENT - 4-SPAN CONTINUOUS STEEL GIRDER



ELEVATION

LOOKING NORTH

LEGEND

⚠ PER HSI (DIMENSION DATED 04-21-2017)
✳ PER 1963 ORIGINAL STRUCTURE PLAN ELEVATIONS PLUS 580.60

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS = 16
OPERATING RATING: HS = 28
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 210 (KIPS)

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE, PARAPETS & INTEGRAL BARRIER — f'_c = 4,000 PSI
ALL OTHERS — f'_c = 3,500 PSI

BAR STEEL REINFORCEMENT
GRADE 60 — f_y = 60,000 PSI

TRAFFIC DATA

FEATURE ON: W. BURLEIGH ST
ADT = 7,000 (2038)
R.D.S. = 35 MPH

FEATURE UNDER: IH 43
ADT = 168,000 (2042)
R.D.S. = 60 MPH

LIST OF DRAWINGS:

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. GENERAL NOTES & MISC. DETAILS
4. REMOVAL DETAILS
5. ABUTMENT & WINGWALL DETAILS
6. BEARING DETAILS
7. SUPERSTRUCTURE PLAN
8. SUPERSTRUCTURE CROSS-SECTION
9. SUPERSTRUCTURE DETAILS & BILL OF BARS
10. TOP OF DECK ELEVATIONS
11. STRIP SEAL EXPANSION JOINT DETAILS
12. STRIP SEAL COVER PLATE
13. VERTICAL FACE PARAPET 'A'
14. PARAPET 'A' ELECTRICAL WORK
15. CONDUIT DETAILS & NOTES
16. CHAIN LINK FENCE DETAILS
17. CATHODIC PROTECTION ⚠ & UIT
18. 51-INCH CONCRETE INTEGRAL BARRIER PIER 1
19. 51-INCH CONCRETE INTEGRAL BARRIER PIER 2
20. 51-INCH CONCRETE INTEGRAL BARRIER PIER 3
21. INTEGRAL BARRIER DETAILS

Addendum No. 01
ID 1228-22-70
Revised Sheet 1182
March 7, 2023

STRUCTURE DESIGN CONTACTS:
WYATT ROZMENOSKI (414) 266-9066
AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY
1	2/22/23	ADDED UIT DETAILS	WAR

GRAEF
275 W. Wisconsin Avenue Suite 300 Milwaukee, WI 53203 414/259-1500 414/259-0037 fax www.graef-usa.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORATION

ACCEPTED _____ CHIEF STRUCTURES DESIGN ENGINEER _____ DATE

STRUCTURE B-40-206

W. BURLEIGH STREET OVER IH 43

COUNTY: MILWAUKEE CITY: MILWAUKEE

DESIGN SPEC: N/A REHABILITATION

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
KGW	WAR	CMW	KGW

WISCONSIN PROFESSIONAL ENGINEER
KEVIN G. WOOD
E-32070
MILWAUKEE, WI
2-22-2023

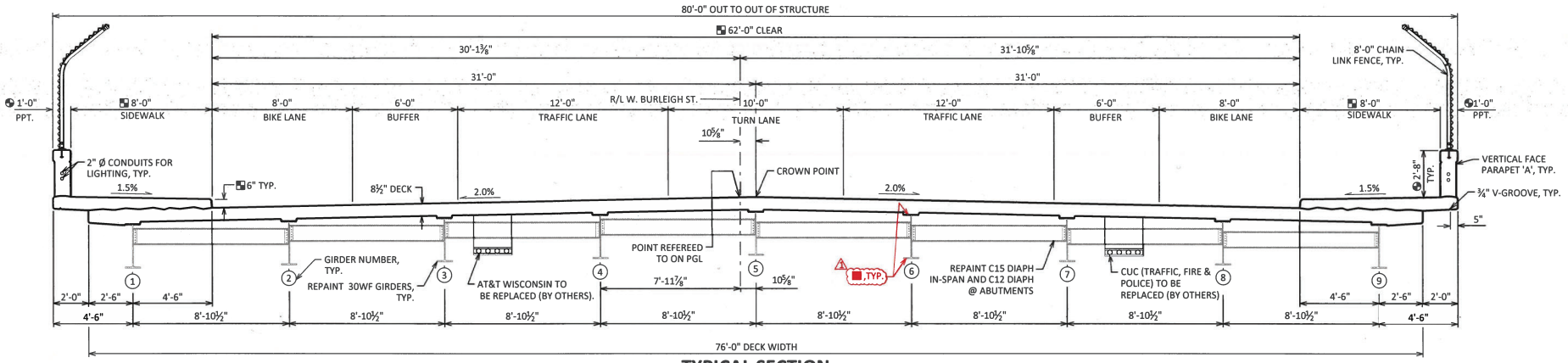
GENERAL PLAN

SHEET 1 OF 21
1182

I.D. DATE:

SCALE = 24.00

STATE PROJECT NUMBER
1228-22-70



TYPICAL SECTION

LOOKING EAST

TOTAL ESTIMATED QUANTITIES

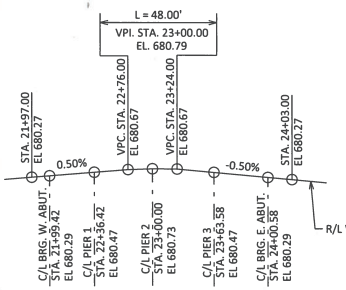
BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST ABUT.	PIER 1	PIER 2	PIER 3	EAST ABUT.	TOTALS
203.0220	REMOVING STRUCTURE B-40-206	EACH	---	---	---	---	---	---	1
203.0211.S.0001	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-40-206	EACH	---	---	---	---	---	---	1
204.0175	REMOVING CONCRETE SLOPE PAVING	SY	---	134	---	---	---	95	229
206.1001.0004	EXCAVATION FOR STRUCTURES BRIDGES B-40-206	EACH	---	---	---	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	19	---	---	---	19	38
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	---	---	36	78	36	---	150
312.0110	SELECT CRUSHED MATERIAL	TON	---	---	26	51	26	---	103
501.1000.S	ICE HOT WEATHER CONCRETING	LB	4,110	60	305	705	305	60	5,545
502.0100	CONCRETE MASONRY BRIDGES	CY	547.7	8.3	40.9	94.2	40.9	8.3	740
502.3101	EXPANSION DEVICE	LF	156	---	---	---	---	---	156
502.3200	PROTECTIVE SURFACE TREATMENT	SY	1,777	24	---	---	---	24	1,825
502.3210	PIGMENTED SURFACE SEALER	SY	165	12	98	161	98	12	546
502.4110	ADHESIVE ANCHORS 1 1/4-INCH	EACH	---	18	---	---	---	18	36
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	---	165	---	---	---	165	330
502.4206	ADHESIVE ANCHORS NO. 6 BAR	EACH	---	---	66	144	66	---	276
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	141,050	2,020	5,840	11,220	5,840	2,020	167,990
506.6000.0001	BEARING ASSEMBLIES EXPANSION B-40-206	EACH	18	---	---	---	---	---	18
506.7050.S.0001	REMOVING BEARINGS B-40-206	EACH	18	---	---	---	---	---	18
509.1500	CONCRETE SURFACE REPAIR	SF	---	---	199	113	111	---	423
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	6	---	---	---	6	12
517.0901.S.0001	PREPARATION AND COATING OF TOP FLANGES B-40-206	EACH	1	---	---	---	---	---	1
517.1801.S.0001	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-206	EACH	1	---	---	---	---	---	1
517.4501.S.0001	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-40-206	EACH	---	---	---	---	---	---	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	---	---	---	---	---	---	1
531.8990	ANCHOR ASSEMBLIES POLES ON STRUCTURES	EACH	4	---	---	---	---	---	4
604.0400	SLOPE PAVING CONCRETE	SY	---	134	---	---	---	95	229
616.0208	FENCE CHAIN LINK 8-FT.	LF	406	27	---	---	---	27	460
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	40	12	---	---	---	12	64
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	771	77	---	---	---	77	925
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	8	---	---	---	---	---	8
** SPV.0060.0400	EMBEDDED GALVANIC ANODES	EACH	---	---	127	78	99	---	304
⚠ ■ SPV.0060.0402	ULTRASONIC IMPACT TREATMENT PROCEDURE	EACH	144	---	---	---	---	---	144
	NON-BID ITEMS								
	BRIDGE SEAT PROTECTION	LS	---	---	---	---	---	---	1
	FILLER	SIZE	---	---	---	---	---	---	½"

ALL ITEMS ARE CATEGORY 2060

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
BM113	871+93.27, 219.75' LT	NNW UPPER FLANGE BOLT ON HYDRANT SQ QUAD	681.69
BM215	872+01.85, 101.79' LT	DISK IN SW ABUTMENT	680.03
CP13	871+94.45, 166.42' LT	CP FENO	679.91

Addendum No. 01
ID 1228-22-70
Revised Sheet 1183
March 7, 2023



PROFILE GRADE LINE R/L W. BURLEIGH ST.

SCOPE OF WORK: B-40-206

1. ABUTMENT BEARING REPLACEMENT
2. DECK AND JOINT REPLACEMENT
3. REPAINT GIRDERS
4. PARTIAL UPPER WINGWALL REPLACEMENT AND WINGWALL PARAPET REPLACEMENT
5. CONCRETE SURFACE REPAIRS
6. INTEGRAL BARRIERS
7. SLOPE PAVING REPAIRS

LEGEND

■ PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT PAVING BLOCKS, AND TOP AND SIDE SURFACES OF SIDEWALKS.

● PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON ABUTMENTS WINGS, AND ON TOPS AND BOTH FACES OF INTEGRAL BARRIERS .

** THIS QUANTITY IS FOR INFORMATIONAL PURPOSES ONLY. FIELD ENGINEER TO VERIFY THE EXACT NUMBER OF ANODES REQUIRED AT EACH INDIVIDUAL SURFACE REPAIR LOCATION PRIOR TO ANODE INSTALLATION.

⚠ ■ ULTRASONIC IMPACT TESTING TO BE PERFORMED AT TOP AND BOTTOM FLANGE COVER PLATE TERMINATIONS OF ALL GIRDERS. SEE SHEET 17 FOR DETAILS.

WISCONSIN
KEVIN G. WOOD
E-32070
MILWAUKEE, WI
PROFESSIONAL ENGINEER
2-22-2023

NO.	DATE	REVISION	BY
1	2/22/23	ADDED UIT DETAILS	WAR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-206

DRAWN BY CMW | PLANS CK'D KGW

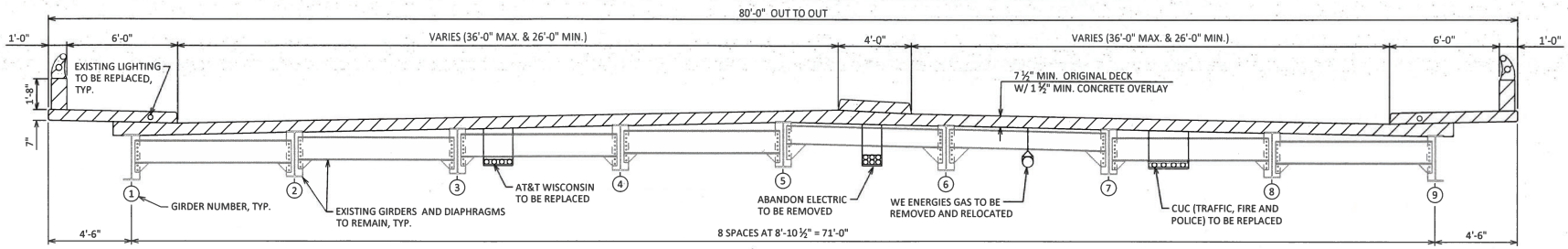
CROSS SECTION & QUANTITIES

SHEET 2 OF 21

1183

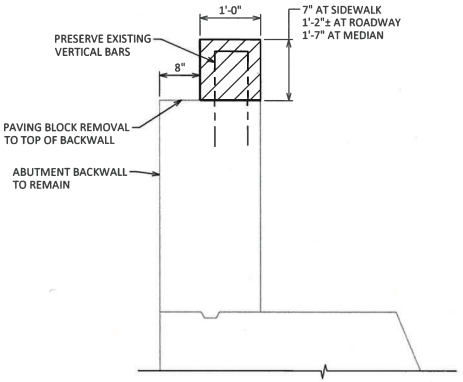
SCALE = 6.00

STATE PROJECT NUMBER
1228-22-70

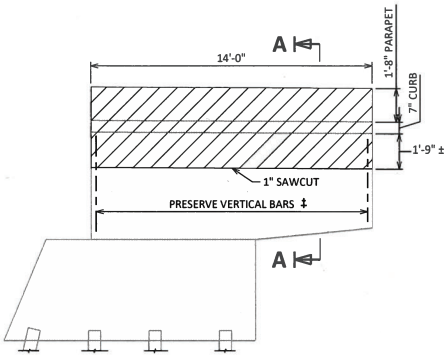


DECK REMOVAL

LOOKING EAST

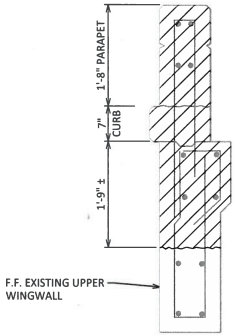


PAVING BLOCK REMOVAL



WINGWALL REMOVAL

TYPICAL ALL (4) WINGS



SECTION A-A

LEGEND

REMOVAL LIMITS

‡ EXISTING REINFORCEMENT INCORPORATED INTO NEW WORK ARE TO BE BLAST CLEANED AS THE ENGINEER DEEMS NECESSARY. SUPPLEMENT BROKEN OR HEAVILY CORRODED REINFORCEMENT BARS PER THE DIRECTION OF THE ENGINEER.

Addendum No. 01
ID 1228-22-70
Revised Sheet 1185
March 7, 2023

WISCONSIN
KEVIN G. WOOD
E-32070
MILWAUKEE, WI
PROFESSIONAL ENGINEER
2-22-2023

NO.	DATE	REVISION	BY
1	2/22/23	REVISED LEGEND NOTE	WAR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-206

DRAWN BY WAR | PLANS CK'D KGW

REMOVAL DETAILS

SHEET 4 OF 21

1185

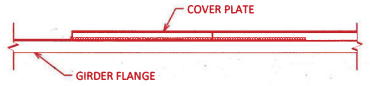
SCALE =

8

8

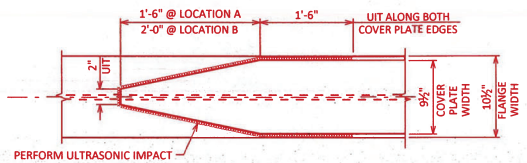
STATE PROJECT NUMBER

1228-22-70



DETAIL C

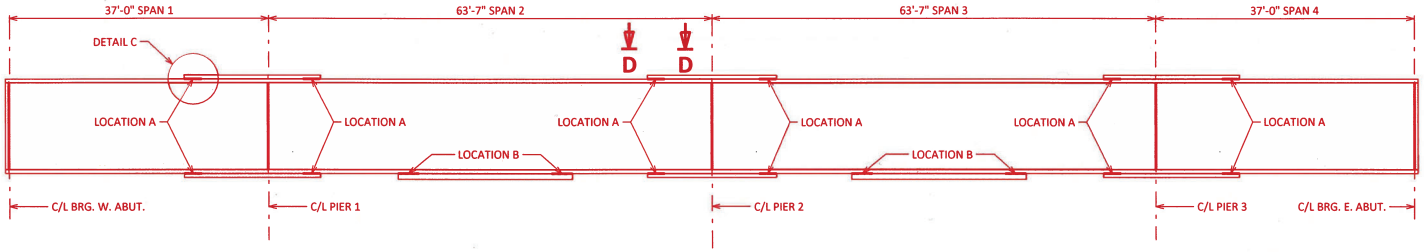
TOP FLANGE SHOWN,
BOTTOM FLANGE SIMILAR, TYP.



PERFORM ULTRASONIC IMPACT TREATMENT (UIT) ON EACH END OF TOP & BOTTOM FLANGE COVER PLATES AT LOCATIONS SHOWN BELOW.

SECTION D-D

TOP FLANGE SHOWN,
BOTTOM FLANGE SIMILAR, TYP.



UTRASONIC IMPACT TREATMENT (UIT) LOCATIONS

UIT SHALL BE PREFORMED ON ALL GIRDERS
16 LOCATIONS PER GIRDER

CATHODIC PROTECTION NOTES

SURFACE REPAIR AREAS WITH CATHODIC PROTECTION ARE BASED ON THE PLANS AND AS DIRECTED BY THE ENGINEER. THE PLAN QUANTITY FOR THE BID ITEM "EMBEDDED GALVANIC ANODES" IS BASED ON A MAXIMUM SPACING OF 24-INCHES AROUND THE SURFACE REPAIR PERIMETER. THE ACTUAL QUANTITY SHALL BE BASED ON THE FIELD CONDITIONS AND AS RECOMMENDED BY THE GALVANIC ANODE SUPPLIER.

SURFACE REPAIRS SHALL BE FILLED WITH REPAIR MATERIALS COMPATIBLE WITH CATHODIC PROTECTION, AS RECOMMENDED BY THE ANODE SUPPLIER.

EXISTING REINFORCING STEEL TO BE COMPLETELY CLEANED OF CORRODED MATERIAL AND CONCRETE TO PROVIDE SUFFICIENT ELECTRICAL CONNECTION AND BOND. CATHODIC PROTECTION PREPARATIONS ARE INCLUDED IN THE BID ITEM "EMBEDDED GALVANIC ANODES".

ANODES NEAREST THE EDGE OF THE REPAIR TO BE WITHIN 6" OF EDGE.

AFTER PLACEMENT, GALVANIC ANODES SHALL MAINTAIN A MINIMUM COVER OF 1½" AND MINIMUM BOTTOM COVER OF ¾".

CONCRETE SURFACE REPAIR ARE APPROXIMATE. PERFORM REPAIRS AS DIRECTED BY THE FIELD ENGINEER.

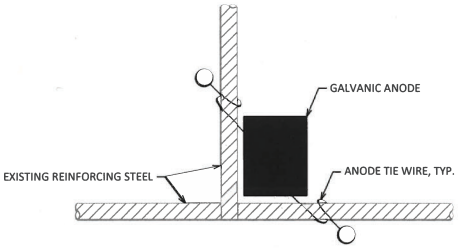
THE FINISHED CONCRETE SURFACE SHALL MATCH THE SHAPE AND FINISH OF THE ORIGINAL CONCRETE SURFACE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER TO PROVIDE ADDITIONAL CONCRETE.

GALVANIC ANODES ARE TO BE INSTALLED AT PIERS ONLY.

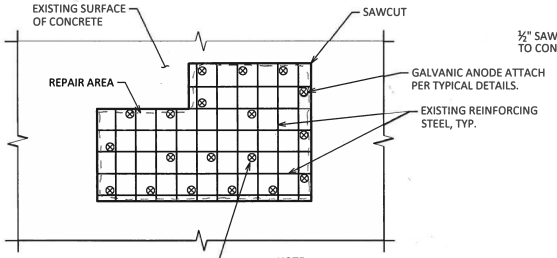
ENSURE ALL EXPOSED REINFORCING STEEL IS SECURELY FASTENED TOGETHER WITH TIE WIRE TO PROVIDE GOOD CONTINUITY. SEE SPECIAL PROVISIONS

LEGEND

DELAMINATED OR SPALLED AREA

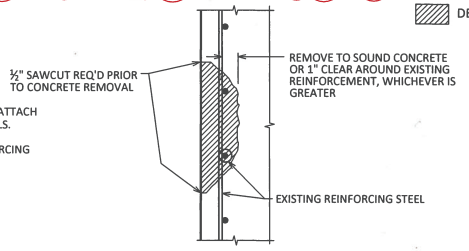


TYPICAL ANODE INSTALLATION AT BAR STEEL INTERSECTION

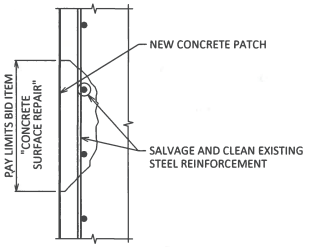


PLACE GALVANIC ANODE AT INTERIOR OF REPAIR WHEN REINFORCING STEEL IS IN CONTACT WITH THE EXISTING CONCRETE AT THE BOTTOM OF THE REPAIR.

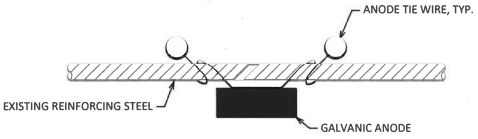
NOTE:
EXISTING REINFORCING STEEL TO BE COMPLETELY CLEANED OF CORRODED MATERIAL PRIOR TO INSTALLATION OF GALVANIC ANODES.



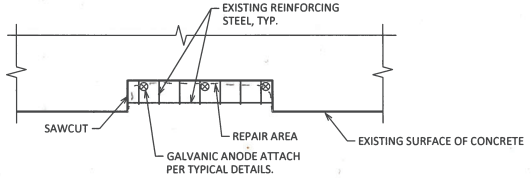
TYPICAL CONCRETE SURFACE REMOVAL DETAIL



TYPICAL CONCRETE SURFACE REPAIR DETAIL



TYPICAL ANODE INSTALLATION FOR BAR STEEL



PART. PLAN TYPICAL REPAIR DETAIL

Addendum No. 01
ID 1228-22-70
Revised Sheet 1198
March 7, 2023

WISCONSIN
KEVIN G. WOOD
E-32070
MILWAUKEE, WI
PROFESSIONAL ENGINEER

2-22-2023

NO.	DATE	REVISION	BY
1	2/22/23	ADDED UIT DETAILS	WAR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-206

DRAWN BY WAR | PLANS CK'D KGW

CATHODIC PROTECTION & UIT

SHEET 17 OF 21

1198

SCALE =

8

8

ID 1228-22-70 TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	WEST ABUT.	PIER 1	PIER 2	PIER 3	EAST ABUT.	TOTALS
203.0220	REMOVING STRUCTURE B-40-207	EACH	———	———	———	———	———	———	1
203.0211.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-40-207	EACH	———	———	———	———	———	———	1
204.0175	REMOVING CONCRETE SLOPE PAVING	SY	———	106	———	———	———	123	229
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-40-207	EACH	———	———	———	———	———	———	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	———	211	———	———	———	211	422
501.1000.S	ICE HOT WEATHER CONCRETING	LB	4,855	225	380	705	380	225	6,770
502.0100	CONCRETE MASONRY BRIDGES	CY	647.3	30.0	50.8	94.2	50.8	30.0	903
502.3101	EXPANSION DEVICE B-40-207	LF	———	100	———	———	———	100	200
502.3200	PROTECTIVE SURFACE TREATMENT	SY	2,261	———	———	———	———	———	2,261
502.3210	PIGMENTED SURFACE SEALER	SY	161	12	76	214	76	12	551
502.4106	ADHESIVE ANCHORS 3/4-INCH	EACH	———	12	———	———	———	12	24
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	———	244	———	———	———	244	488
502.4206	ADHESIVE ANCHORS NO. 6 BAR	EACH	———	———	78	168	78	———	324
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	167,100	4,540	7,330	9,810	7,330	4,620	200,730
506.6000	BEARING ASSEMBLIES EXPANSION B-40-207	EACH	———	12	———	———	———	12	24
506.7050.S	REMOVING BEARINGS B-40-207	EACH	———	12	———	———	———	12	24
◐ 509.1500	CONCRETE SURFACE REPAIR	SF	———	50	52	41	19	50	212
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	———	23	———	———	———	23	46
517.0901.S	PREPARATION AND COATING OF TOP FLANGES B-40-207	EACH	———	———	———	———	———	———	1
517.1801.S	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-207	EACH	———	———	———	———	———	———	1
517.4501.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-40-207	EACH	———	———	———	———	———	———	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	———	———	———	———	———	———	1
531.8990	ANCHOR ASSEMBLIES POLES ON STRUCTURES	EACH	4	———	———	———	———	———	4
604.0400	SLOPE PAVING CONCRETE	SY	———	106	———	———	———	123	229
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	———	230	———	———	———	230	460
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	———	———	———	———	———	4
616.0206	FENCE CHAIN LINK 6-FT.	LF	448	———	———	———	———	———	448
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	80	12	———	———	———	12	104
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	720	80	———	———	———	80	880
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	8	———	———	———	———	———	8
** SPV.0060	EMBEDDED GALVANIC ANODES	EACH	———	———	42	33	15	———	90
SPV.0060	ULTRASONIC IMPACT TREATMENT PROCEDURE	EACH	192	———	———	———	———	———	192
	NON-BID ITEMS								
	BRIDGE SEAT PROTECTION	LS							1
	FILLER	SIZE							½"

** "EMBEDDED GALVANIC ANODES" ONLY REQUIRED ON PIERS. QUANTITY FOR "EMBEDDED GALVANIC ANODES" IS FOR INFORMATIONAL PURPOSES ONLY. FIELD ENGINEER TO VERIFY THE EXACT NUMBER OF ANODES REQUIRED AT EACH INDIVIDUAL PIER SURFACE REPAIR LOCATION PRIOR TO ANODE INSTALLATION.

ID 1228-22-81 TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	WEST ABUT.	PIER 1	PIER 2	PIER 3	EAST ABUT.	TOTALS
SPV.0060	HEAT STRAIGHTENING OF DAMAGED GIRDERS	EACH	1	———	———	———	———	———	1

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

SOME DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

"PROTECTIVE SURFACE TREATMENT" TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK, TOP OF PAVING BLOCK, EXPOSED TOP AND SIDE FACES OF MEDIAN, AND TO THE EXPOSED TOP AND FRONT FACES OF RAISED SIDEWALK SURFACES.

"PIGMENTED SURFACE SEALER" TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON WINGS, AND ON TOPS AND TRAFFIC FACES OF INTEGRAL BARRIERS AT PIERS.

APPLY "BRIDGE SEAT PROTECTION", AS PER SECTION 502.3.12 OF THE STANDARD SPECIFICATIONS, TO THE TOP SURFACES OF ALL ABUTMENTS BELOW EXPANSION DEVICES. POWER WASH AND ADEQUATELY DRY SURFACES BEFORE APPLICATION.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "SUPERSTRUCTURE DETAILS" SHEET. SOME HAUNCH VALUES ARE EXPECTED TO BE LESS THAN 1¼". NON-STANDARD DECK FORMING SYSTEMS MAY BE REQUIRED.

THE COLOR OF THE FINISH EPOXY TOP COAT FOR ALL STRUCTURAL STEEL AREAS SHALL BE BLUE (AMS STANDARD COLOR NUMBER 25240).

REPLACE ALL EXISTING EXPANSION BEARINGS AT BOTH ABUTMENTS.
CLEAN & PAINT ALL EXISTING BEARINGS AT PIERS. (AMS STANDARD COLOR NUMBER 25240)

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR 1964.

REMOVE AND SALVAGE THE EXISTING RAILINGS (INCLUDES RAILS, POSTS, CHAIN LINK FENCING, AND ALL ASSOCIATED HARDWARE). AFTER REMOVAL, THE RAILINGS ARE TO BE SET ASIDE AND SHALL REMAIN THE PROPERTY OF THE STATE OF WISCONSIN. THE CONTRACTOR WILL COORDINATE WITH MILWAUKEE COUNTY HIGHWAY DEPARTMENT, AS TO WHEN THE RAILINGS ARE READY TO BE PICKED UP. THIS SHALL BE INCIDENTAL TO "REMOVING STRUCTURE B-40-207". ⚠

◐ FIELD ENGINEER TO DETERMINE "CONCRETE SURFACE REPAIR" AREAS ON PIERS & ABUTMENTS. CONCRETE SURFACE REPAIRS SHALL BE MADE ONLY AS DIRECTED BY THE ENGINEER

ASBESTOS LOCATED AT PARAPET EXPANSION JOINTS. REMOVAL TO BE INCLUDED WITH "ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-40-207" BID ITEM.

ALL CONCRETE REMOVAL LINES SHALL BE DEFINED BY A 1 INCH DEEP SAW-CUT.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN.
BLAST CLEAN TO THE ACCEPTANCE OF THE ENGINEER. ⚠

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL JOINTS AT BACKFACE OF ABUTMENTS/WINGS WITH "RUBBERIZED MEMBRANE WATERPROOFING".

"HEAT STRAIGHTENING OF DAMAGED GIRDERS" WORK SHALL BE DONE AS DIRECTED BY THE FIELD ENGINEER AND THE SPECIAL PROVISIONS.

BRIDGE STATIONING MAY VARY BASED ON EXACT LOCATION OF THE BRIDGE ALONG THE ALIGNMENT. CONTRACTOR TO VERIFY. VARIATIONS TO THE NEW GRADE LINE OVER ½" MUST BE SUBMITTED FOR REVIEW BY THE BUREAU OF STRUCTURES.

TAKE CARE TO NOT DAMAGE EXISTING SHEAR STUDS ON THE TOP FLANGES OF GIRDERS DURING DECK REMOVAL. IF SHEAR STUDS ARE DAMAGED, THEY SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER. COST FOR REPAIR OR REPLACEMENT OF DAMAGED SHEAR STUDS IS INCIDENTAL TO "REMOVING STRUCTURE B-40-207". ⚠

STATE PROJECT NUMBER
1228-22-70/1228-22-81

KHB 2/22/23

NO.	DATE	REVISION	BY
⚠1	FEB/2023	UIT & NOTES	JLR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-207

DRAWN BY WWR | PLANS CK'D. JLR

QUANTITIES & GENERAL NOTES

SHEET 6

1208

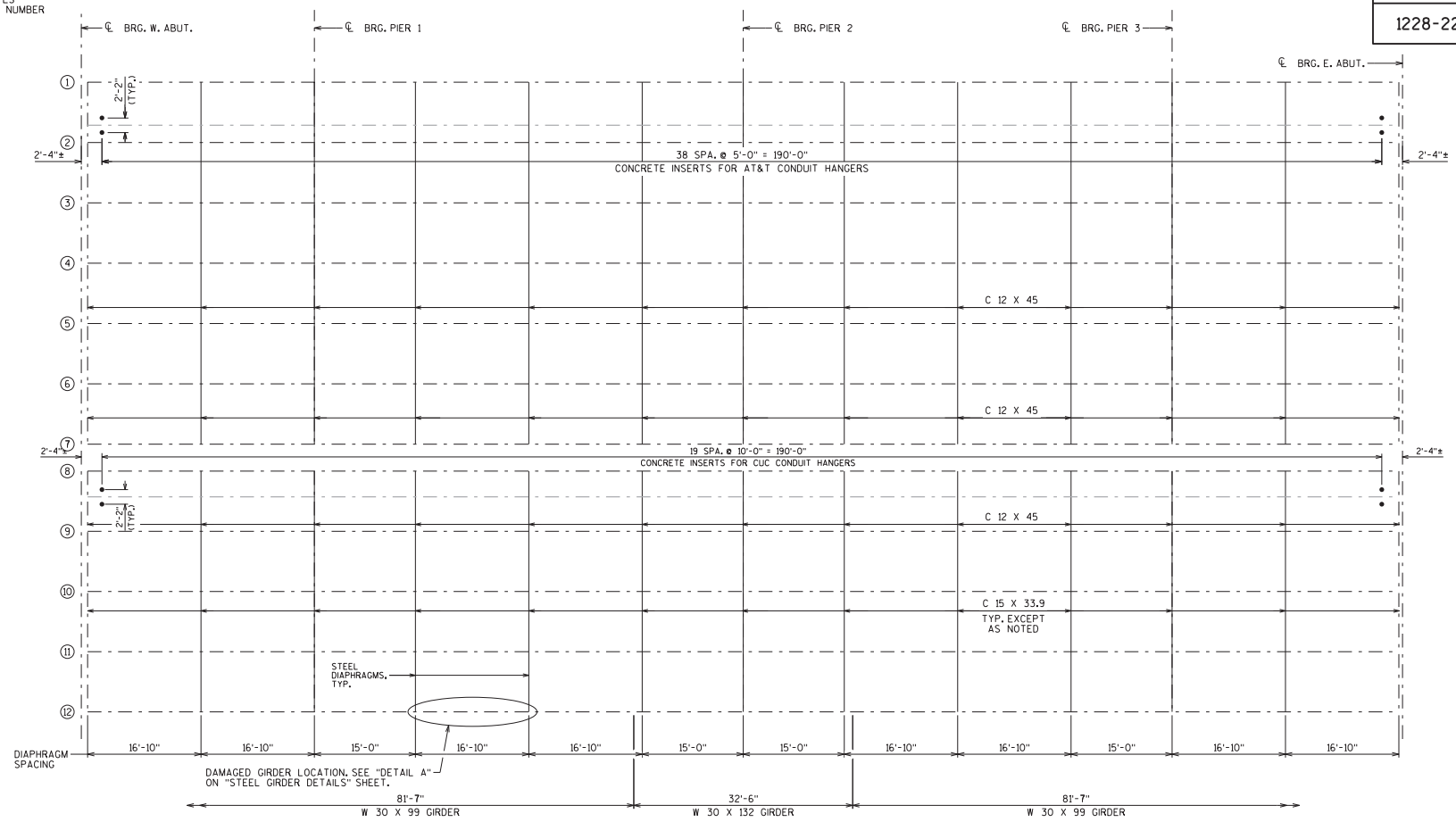
Addendum No. 01
ID 1228-22-70
Revised Sheet 1208
March 7, 2023

SCALE = 1.00

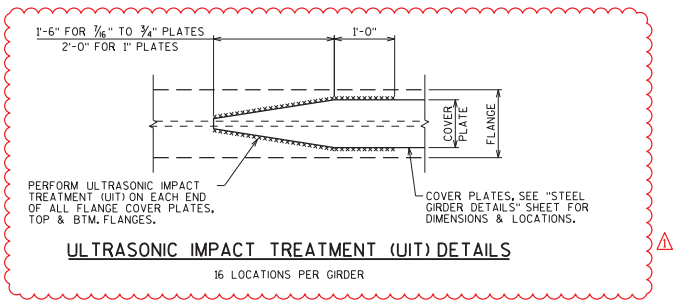
8

8

STATE PROJECT NUMBER
1228-22-70/1228-22-81



FRAMING PLAN



ULTRASONIC IMPACT TREATMENT (UIT) DETAILS

16 LOCATIONS PER GIRDER

NOTE: SEE "SUPERSTRUCTURE DETAILS" SHEET FOR UTILITY CONCRETE INSERT NOTES AND DETAILS.

Addendum No. 01
ID 1228-22-70
Revised Sheet 1219
March 7, 2023

KHB 2/22/23

NO.	DATE	REVISION	BY
1	FEB/2023	UIT & NOTES	JLR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-207

DRAWN BY WWR | PLANS CK'D. JLR

FRAMING PLAN (EXISTING)

SHEET 17

1219

SCALE = 8.00

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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	236.000 STA	_____.____	_____.____
0004	201.0205 Grubbing	238.000 STA	_____.____	_____.____
0006	203.0211.S Abatement of Asbestos Containing Material (structure) 0001. B-40-206	1.000 EACH	_____.____	_____.____
0008	203.0211.S Abatement of Asbestos Containing Material (structure) 0002. B-40-207	1.000 EACH	_____.____	_____.____
0010	203.0220 Removing Structure (structure) 0001. B-40-206	1.000 EACH	_____.____	_____.____
0012	203.0220 Removing Structure (structure) 0002. B-40-207	1.000 EACH	_____.____	_____.____
0014	204.0100 Removing Concrete Pavement	73,283.000 SY	_____.____	_____.____
0016	204.0115 Removing Asphaltic Surface Butt Joints	5,962.000 SY	_____.____	_____.____
0018	204.0120 Removing Asphaltic Surface Milling	153,962.000 SY	_____.____	_____.____
0020	204.0150 Removing Curb & Gutter	2,017.000 LF	_____.____	_____.____
0022	204.0155 Removing Concrete Sidewalk	983.000 SY	_____.____	_____.____
0024	204.0157 Removing Concrete Barrier	31,269.000 LF	_____.____	_____.____
0026	204.0165 Removing Guardrail	1,409.000 LF	_____.____	_____.____
0028	204.0170 Removing Fence	26,686.000 LF	_____.____	_____.____
0030	204.0175 Removing Concrete Slope Paving	1,075.000 SY	_____.____	_____.____
0032	204.0195 Removing Concrete Bases	118.000 EACH	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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	204.0205 Removing Utility Poles	15.000 EACH	_____.____	_____.____
0036	204.0210 Removing Manholes	31.000 EACH	_____.____	_____.____
0038	204.0220 Removing Inlets	326.000 EACH	_____.____	_____.____
0040	204.0245 Removing Storm Sewer (size) 0001. 12-Inch	3,592.000 LF	_____.____	_____.____
0042	204.0245 Removing Storm Sewer (size) 0002. 15-Inch	2,197.000 LF	_____.____	_____.____
0044	204.0245 Removing Storm Sewer (size) 0003. 18-Inch	483.000 LF	_____.____	_____.____
0046	204.0245 Removing Storm Sewer (size) 0004. 21-Inch	577.000 LF	_____.____	_____.____
0048	204.0245 Removing Storm Sewer (size) 0005. 24-Inch	1,004.000 LF	_____.____	_____.____
0050	204.0245 Removing Storm Sewer (size) 0006. 30-Inch	948.000 LF	_____.____	_____.____
0052	204.0245 Removing Storm Sewer (size) 0007. 36-Inch	627.000 LF	_____.____	_____.____
0054	204.0245 Removing Storm Sewer (size) 0008. 42-Inch	534.000 LF	_____.____	_____.____
0056	204.0245 Removing Storm Sewer (size) 0009. 48-Inch	49.000 LF	_____.____	_____.____
0058	204.0245 Removing Storm Sewer (size) 0010. 54-Inch	131.000 LF	_____.____	_____.____
0060	204.0245 Removing Storm Sewer (size) 0011. 60-Inch	82.000 LF	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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	204.0245 Removing Storm Sewer (size) 0012. 66-Inch	11.000 LF	_____._____	_____._____
0064	204.0246 Removing Ancillary Structure (structure) 0001. S-40-224	1.000 EACH	_____._____	_____._____
0066	204.0246 Removing Ancillary Structure (structure) 0002. S-40-225	1.000 EACH	_____._____	_____._____
0068	204.0246 Removing Ancillary Structure (structure) 0003. S-40-226	1.000 EACH	_____._____	_____._____
0070	204.0246 Removing Ancillary Structure (structure) 0004. S-40-227	1.000 EACH	_____._____	_____._____
0072	204.0246 Removing Ancillary Structure (structure) 0005. S-40-251	1.000 EACH	_____._____	_____._____
0074	204.0246 Removing Ancillary Structure (structure) 0006. S-40-705	1.000 EACH	_____._____	_____._____
0076	204.0246 Removing Ancillary Structure (structure) 0007. S-40-809	1.000 EACH	_____._____	_____._____
0078	204.0246 Removing Ancillary Structure (structure) 0008. S-40-3082	100.000 EACH	_____._____	_____._____
0080	204.0280 Sealing Pipes	3.000 EACH	_____._____	_____._____
0082	204.0291.S Abandoning Sewer	201.000 CY	_____._____	_____._____
0084	204.9001.S Removing Advance Flasher Assemblies Type 1	1.000 EACH	_____._____	_____._____
0086	204.9060.S Removing (item description) 0050. Bulkhead	3.000 EACH	_____._____	_____._____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
0088	204.9060.S Removing (item description) 0101. Distribution Center	4.000 EACH	_____.____	_____.____
0090	204.9060.S Removing (item description) 0102. Lighting Units	83.000 EACH	_____.____	_____.____
0092	204.9060.S Removing (item description) 0103. Luminaire	27.000 EACH	_____.____	_____.____
0094	204.9060.S Removing (item description) 0104. Underdeck Lighting	33.000 EACH	_____.____	_____.____
0096	204.9060.S Removing (item description) 0201. Controller Cabinet	1.000 EACH	_____.____	_____.____
0098	204.9060.S Removing (item description) 0202. Controller Cabinet Base	1.000 EACH	_____.____	_____.____
0100	204.9060.S Removing (item description) 0203. Speed Warning System DMS	3.000 EACH	_____.____	_____.____
0102	204.9060.S Removing (item description) 0204. Ramp Control Signal Assembly Sidemount	7.000 EACH	_____.____	_____.____
0104	204.9060.S Removing (item description) 0205. Communication Vault	9.000 EACH	_____.____	_____.____
0106	204.9060.S Removing (item description) 0206. Temporary Vehicle Detector Assembly	3.000 EACH	_____.____	_____.____
0108	204.9060.S Removing (item description) 0301. Traffic Signals Locust St & 8th St	1.000 EACH	_____.____	_____.____
0110	204.9060.S Removing (item description) 0302. Traffic Signals Locust St & 7th St	1.000 EACH	_____.____	_____.____
0112	204.9060.S Removing (item description) 0303. Traffic Signals Burleigh St & 8th St	1.000 EACH	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
0114	204.9060.S Removing (item description) 0304. Traffic Signals Burleigh St & 7th St	1.000 EACH	_____.____	_____.____
0116	204.9090.S Removing (item description) 0105. Aerial Cable	176.000 LF	_____.____	_____.____
0118	204.9090.S Removing (item description) 0400. R-40-22	40.000 LF	_____.____	_____.____
0120	205.0100 Excavation Common	178,690.000 CY	_____.____	_____.____
0122	205.0501.S Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	828.000 TON	_____.____	_____.____
0124	206.1001 Excavation for Structures Bridges (structure) 0001. B-40-074	1.000 EACH	_____.____	_____.____
0126	206.1001 Excavation for Structures Bridges (structure) 0002. B-40-078	1.000 EACH	_____.____	_____.____
0128	206.1001 Excavation for Structures Bridges (structure) 0003. B-40-158	1.000 EACH	_____.____	_____.____
0130	206.1001 Excavation for Structures Bridges (structure) 0004. B-40-206	1.000 EACH	_____.____	_____.____
0132	206.1001 Excavation for Structures Bridges (structure) 0005. B-40-209	1.000 EACH	_____.____	_____.____
0134	206.1001 Excavation for Structures Bridges (structure) 0006. B-40-210	1.000 EACH	_____.____	_____.____
0136	206.1001 Excavation for Structures Bridges (structure) 0007. B-40-072	1.000 EACH	_____.____	_____.____
0138	206.1001 Excavation for Structures Bridges (structure) 0008. B-40-207	1.000 EACH	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
0140	206.1001 Excavation for Structures Bridges (structure) 0009. B-40-208	1.000 EACH	_____.____	_____.____
0142	206.1001 Excavation for Structures Bridges (structure) 0010. B-40-204	1.000 EACH	_____.____	_____.____
0144	206.1001 Excavation for Structures Bridges (structure) 0011. B-40-205	1.000 EACH	_____.____	_____.____
0146	206.1001 Excavation for Structures Bridges (structure) 0012. B-40-211	1.000 EACH	_____.____	_____.____
0148	206.3001 Excavation for Structures Retaining Walls (structure) 0001. R-40-22	1.000 EACH	_____.____	_____.____
0150	210.1500 Backfill Structure Type A	532.000 TON	_____.____	_____.____
0152	213.0100 Finishing Roadway (project) 0001. 1228-22-70	1.000 EACH	_____.____	_____.____
0154	305.0120 Base Aggregate Dense 1 1/4-Inch	96,010.000 TON	_____.____	_____.____
0156	310.0110 Base Aggregate Open-Graded	15,639.000 TON	_____.____	_____.____
0158	312.0110 Select Crushed Material	109,163.000 TON	_____.____	_____.____
0160	390.0403 Base Patching Concrete Shes	11,032.000 SY	_____.____	_____.____
0162	415.0090 Concrete Pavement 9-Inch	2,773.000 SY	_____.____	_____.____
0164	415.0410 Concrete Pavement Approach Slab	795.000 SY	_____.____	_____.____
0166	416.0610 Drilled Tie Bars	5,977.000 EACH	_____.____	_____.____
0168	416.0620 Drilled Dowel Bars	7,712.000 EACH	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
0170	455.0605 Tack Coat	32,222.000 GAL	_____._____	_____._____
0172	460.0115.S HMA Pavement Test Strips Volumetrics	1.000 EACH	_____._____	_____._____
0174	460.0120.S HMA Pavement Test Strips Density	1.000 EACH	_____._____	_____._____
0176	460.2000 Incentive Density HMA Pavement	15,360.000 DOL	1.00000	15,360.00
0178	460.7423 HMA Pavement 3 HT 58-28 H	67,331.000 TON	_____._____	_____._____
0180	460.7425 HMA Pavement 5 HT 58-28 H	1,740.000 TON	_____._____	_____._____
0182	460.8624 HMA Pavement 4 SMA 58-28 V	23,986.000 TON	_____._____	_____._____
0184	460.9000.S Material Transfer Vehicle 0001. 1228-22-70	1.000 EACH	_____._____	_____._____
0186	465.0125 Asphaltic Surface Temporary	4,073.000 TON	_____._____	_____._____
0188	495.1000.S Cold patch	30.000 TON	_____._____	_____._____
0190	501.1000.S Ice Hot Weather Concreting	78,235.000 LB	_____._____	_____._____
0192	502.0100 Concrete Masonry Bridges	2,841.000 CY	_____._____	_____._____
0194	502.3101 Expansion Device	597.000 LF	_____._____	_____._____
0196	502.3200 Protective Surface Treatment	7,122.000 SY	_____._____	_____._____
0198	502.3205 Pigmented Surface Sealer Reseal	439.000 SY	_____._____	_____._____
0200	502.3210 Pigmented Surface Sealer	3,731.000 SY	_____._____	_____._____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
0202	502.3215 Protective Surface Treatment Reseal	1,137.000 SY	_____.____	_____.____
0204	502.4106 Adhesive Anchors 3/4-inch	24.000 EACH	_____.____	_____.____
0206	502.4110 Adhesive Anchors 1 1/4-inch	36.000 EACH	_____.____	_____.____
0208	502.4112 Adhesive Anchors 1 1/2-inch	32.000 EACH	_____.____	_____.____
0210	502.4205 Adhesive Anchors No. 5 Bar	1,048.000 EACH	_____.____	_____.____
0212	502.4206 Adhesive Anchors No. 6 Bar	3,847.000 EACH	_____.____	_____.____
0214	504.0500 Concrete Masonry Retaining Walls	13.400 CY	_____.____	_____.____
0216	505.0400 Bar Steel Reinforcement HS Structures	4,370.000 LB	_____.____	_____.____
0218	505.0600 Bar Steel Reinforcement HS Coated Structures	521,760.000 LB	_____.____	_____.____
0220	506.0605 Structural Steel HS	5.000 LB	_____.____	_____.____
0222	506.6000 Bearing Assemblies Expansion (structure) 0001. B-40-206	18.000 EACH	_____.____	_____.____
0224	506.6000 Bearing Assemblies Expansion (structure) 0002. B-40-209	8.000 EACH	_____.____	_____.____
0226	506.6000 Bearing Assemblies Expansion (structure) 0003. B-40-207	24.000 EACH	_____.____	_____.____
0228	506.6000 Bearing Assemblies Expansion (structure) 0004. B-40-215	14.000 EACH	_____.____	_____.____
0230	506.7050.S Removing Bearings (structure) 0001. B-40-206	18.000 EACH	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
0232	506.7050.S Removing Bearings (structure) 0002. B-40-209	8.000 EACH	_____.____	_____.____
0234	506.7050.S Removing Bearings (structure) 0003. B-40-207	24.000 EACH	_____.____	_____.____
0236	506.7050.S Removing Bearings (structure) 0004. B-40-215	14.000 EACH	_____.____	_____.____
0238	509.0301 Preparation Decks Type 1	489.000 SY	_____.____	_____.____
0240	509.0302 Preparation Decks Type 2	196.000 SY	_____.____	_____.____
0242	509.0500 Cleaning Decks	2,573.000 SY	_____.____	_____.____
0244	509.1000 Joint Repair	105.000 SY	_____.____	_____.____
0246	509.1200 Curb Repair	200.000 LF	_____.____	_____.____
0248	509.1500 Concrete Surface Repair	4,333.000 SF	_____.____	_____.____
0250	509.2000 Full-Depth Deck Repair	10.000 SY	_____.____	_____.____
0252	509.2500 Concrete Masonry Overlay Decks	245.000 CY	_____.____	_____.____
0254	509.9010.S Removing Asphaltic Concrete Deck Overlay (structure) 0001. B-40-209	1,138.000 SY	_____.____	_____.____
0256	509.9010.S Removing Asphaltic Concrete Deck Overlay (structure) 0002. B-40-215	1,475.000 SY	_____.____	_____.____
0258	511.1200 Temporary Shoring (structure) 0001. R-40-22	215.000 SF	_____.____	_____.____
0260	516.0500 Rubberized Membrane Waterproofing	59.000 SY	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
0262	517.0901.S Preparation and Coating of Top Flanges (structure) 0001. B-40-206	1.000 EACH	_____.____	_____.____
0264	517.0901.S Preparation and Coating of Top Flanges (structure) 0002. B-40-207	1.000 EACH	_____.____	_____.____
0266	517.1801.S Structure Repainting Recycled Abrasive (structure) 0001. B-40-206	1.000 EACH	_____.____	_____.____
0268	517.1801.S Structure Repainting Recycled Abrasive (structure) 0002. B-40-209	1.000 EACH	_____.____	_____.____
0270	517.1801.S Structure Repainting Recycled Abrasive (structure) 0003. B-40-208	1.000 EACH	_____.____	_____.____
0272	517.1801.S Structure Repainting Recycled Abrasive (structure) 0004. B-40-207	1.000 EACH	_____.____	_____.____
0274	517.1801.S Structure Repainting Recycled Abrasive (structure) 0005. B-40-215	1.000 EACH	_____.____	_____.____
0276	517.4501.S Negative Pressure Containment and Collection of Waste Materials (structure) 0001. B-40-206	1.000 EACH	_____.____	_____.____
0278	517.4501.S Negative Pressure Containment and Collection of Waste Materials (structure) 0002. B-40-209	1.000 EACH	_____.____	_____.____
0280	517.4501.S Negative Pressure Containment and Collection of Waste Materials (structure) 0003. B-40-208	1.000 EACH	_____.____	_____.____
0282	517.4501.S Negative Pressure Containment and Collection of Waste Materials (structure) 0004. B-40-207	1.000 EACH	_____.____	_____.____
0284	517.4501.S Negative Pressure Containment and Collection of Waste Materials (structure) 0005. B-40-215	1.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0286	517.6001.S Portable Decontamination Facility	5.000 EACH	_____.____	_____.____
0288	520.8000 Concrete Collars for Pipe	296.000 EACH	_____.____	_____.____
0290	521.2005.S Surface Drain Pipe Corrugated Metal Slotted (inch) 0001. 15-Inch	140.000 LF	_____.____	_____.____
0292	531.1100 Concrete Masonry Ancillary Structures Type NS	380.400 CY	_____.____	_____.____
0294	531.1140 Steel Reinforcement HS Ancillary Structures Type NS	38,534.000 LB	_____.____	_____.____
0296	531.1160 Steel Reinforcement HS Coated Ancillary Structures Type NS	18,920.000 LB	_____.____	_____.____
0298	531.2024 Drilling Shaft 24-Inch	106.000 LF	_____.____	_____.____
0300	531.2036 Drilling Shaft 36-Inch	933.000 LF	_____.____	_____.____
0302	531.2042 Drilling Shaft 42-Inch	92.000 LF	_____.____	_____.____
0304	531.4050 Foundation Camera Pole 50-FT	2.000 EACH	_____.____	_____.____
0306	531.6010 Foundation Two-Shaft Type FC-I (structure) 0001. S-40-3067	1.000 EACH	_____.____	_____.____
0308	531.6010 Foundation Two-Shaft Type FC-I (structure) 0002. S-40-3068	1.000 EACH	_____.____	_____.____
0310	531.6010 Foundation Two-Shaft Type FC-I (structure) 0003. S-40-3071	1.000 EACH	_____.____	_____.____
0312	531.6010 Foundation Two-Shaft Type FC-I (structure) 0004. S-40-3072	1.000 EACH	_____.____	_____.____

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Federal ID(s): WISC 2023278, N/A, N/A, N/A

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0314	531.6010 Foundation Two-Shaft Type FC-I (structure) 0005. S-40-3073	1.000 EACH	_____._____	_____._____
0316	531.6010 Foundation Two-Shaft Type FC-I (structure) 0006. S-40-3076	1.000 EACH	_____._____	_____._____
0318	531.6010 Foundation Two-Shaft Type FC-I (structure) 0007. S-40-3081	1.000 EACH	_____._____	_____._____
0320	531.6010 Foundation Two-Shaft Type FC-I (structure) 0008. S-40-3083	1.000 EACH	_____._____	_____._____
0322	531.6010 Foundation Two-Shaft Type FC-I (structure) 0009. S-40-3104	1.000 EACH	_____._____	_____._____
0324	531.6020 Foundation Two-Shaft Type FC-II (structure) 0001. S-40-3075	1.000 EACH	_____._____	_____._____
0326	531.6020 Foundation Two-Shaft Type FC-II (structure) 0002. S-40-3078	1.000 EACH	_____._____	_____._____
0328	531.6020 Foundation Two-Shaft Type FC-II (structure) 0003. S-40-3080	1.000 EACH	_____._____	_____._____
0330	531.6020 Foundation Two-Shaft Type FC-II (structure) 0004. S-40-3105	1.000 EACH	_____._____	_____._____
0332	531.8990 Anchor Assemblies Poles on Structures	8.000 EACH	_____._____	_____._____
0334	532.5020 Butterfly 2-Chord NS (structure) 0001. S-40-3065	1.000 EACH	_____._____	_____._____
0336	532.5020 Butterfly 2-Chord NS (structure) 0002. S-40-3066	1.000 EACH	_____._____	_____._____
0338	532.5020 Butterfly 2-Chord NS (structure) 0003. S-40-3069	1.000 EACH	_____._____	_____._____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0340	532.5020 Butterfly 2-Chord NS (structure) 0004. S-40-3070	1.000 EACH	_____._____	_____._____
0342	532.5020 Butterfly 2-Chord NS (structure) 0005. S-40-3074	1.000 EACH	_____._____	_____._____
0344	532.5020 Butterfly 2-Chord NS (structure) 0006. S-40-3077	1.000 EACH	_____._____	_____._____
0346	532.5020 Butterfly 2-Chord NS (structure) 0007. S-40-3082	1.000 EACH	_____._____	_____._____
0348	532.6010 Truss Cantilever 4-Chord Type I (structure) 0001. S-40-3067	1.000 EACH	_____._____	_____._____
0350	532.6010 Truss Cantilever 4-Chord Type I (structure) 0002. S-40-3068	1.000 EACH	_____._____	_____._____
0352	532.6010 Truss Cantilever 4-Chord Type I (structure) 0003. S-40-3071	1.000 EACH	_____._____	_____._____
0354	532.6010 Truss Cantilever 4-Chord Type I (structure) 0004. S-40-3072	1.000 EACH	_____._____	_____._____
0356	532.6010 Truss Cantilever 4-Chord Type I (structure) 0005. S-40-3073	1.000 EACH	_____._____	_____._____
0358	532.6010 Truss Cantilever 4-Chord Type I (structure) 0006. S-40-3076	1.000 EACH	_____._____	_____._____
0360	532.6010 Truss Cantilever 4-Chord Type I (structure) 0007. S-40-3081	1.000 EACH	_____._____	_____._____
0362	532.6010 Truss Cantilever 4-Chord Type I (structure) 0008. S-40-3083	1.000 EACH	_____._____	_____._____
0364	532.6010 Truss Cantilever 4-Chord Type I (structure) 0009. S-40-3104	1.000 EACH	_____._____	_____._____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0366	532.6020 Truss Cantilever 4-Chord Type II (structure) 0003. S-40-3075	1.000 EACH	_____.____	_____.____
0368	532.6020 Truss Cantilever 4-Chord Type II (structure) 0004. S-40-3078	1.000 EACH	_____.____	_____.____
0370	532.6020 Truss Cantilever 4-Chord Type II (structure) 0006. S-40-3080	1.000 EACH	_____.____	_____.____
0372	532.6020 Truss Cantilever 4-Chord Type II (structure) 0007. S-40-3105	1.000 EACH	_____.____	_____.____
0374	532.6120 Truss Full Span 4-Chord Type II (structure) 0001. S-40-463	1.000 EACH	_____.____	_____.____
0376	532.6120 Truss Full Span 4-Chord Type II (structure) 0002. S-40-464	1.000 EACH	_____.____	_____.____
0378	532.6120 Truss Full Span 4-Chord Type II (structure) 0003. S-40-3079	1.000 EACH	_____.____	_____.____
0380	532.6130 Truss Full Span 4-Chord Type III (structure) 0001. S-40-3064	1.000 EACH	_____.____	_____.____
0382	601.0409 Concrete Curb & Gutter 30-Inch Type A	2,096.000 LF	_____.____	_____.____
0384	601.0411 Concrete Curb & Gutter 30-Inch Type D	494.000 LF	_____.____	_____.____
0386	601.0553 Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	22,923.000 LF	_____.____	_____.____
0388	601.0588 Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	631.000 LF	_____.____	_____.____
0390	601.0600 Concrete Curb Pedestrian	263.000 LF	_____.____	_____.____
0392	602.0410 Concrete Sidewalk 5-Inch	11,569.000 SF	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0394	602.0505 Curb Ramp Detectable Warning Field Yellow	274.000 SF	_____.____	_____.____
0396	602.0605 Curb Ramp Detectable Warning Field Radial Yellow	61.000 SF	_____.____	_____.____
0398	603.0105 Concrete Barrier Single-Faced 32-Inch	269.000 LF	_____.____	_____.____
0400	603.1132 Concrete Barrier Type S32	485.000 LF	_____.____	_____.____
0402	603.1142 Concrete Barrier Type S42	1,663.000 LF	_____.____	_____.____
0404	603.1232 Concrete Barrier Type S32A	1,531.000 LF	_____.____	_____.____
0406	603.1242 Concrete Barrier Type S42A	6,811.000 LF	_____.____	_____.____
0408	603.1442 Concrete Barrier Type S42C	511.000 LF	_____.____	_____.____
0410	603.1456 Concrete Barrier Type S56C	678.000 LF	_____.____	_____.____
0412	603.2142 Concrete Barrier Fixed Object Protection Type S42	624.000 LF	_____.____	_____.____
0420	603.3611 Concrete Barrier Transition Type V32 to S32	1.000 EACH	_____.____	_____.____
0422	603.3655 Concrete Barrier Transition Type V42 to S42	14.000 EACH	_____.____	_____.____
0426	603.8000 Concrete Barrier Temporary Precast Delivered	57,069.000 LF	_____.____	_____.____
0428	603.8125 Concrete Barrier Temporary Precast Installed	57,419.000 LF	_____.____	_____.____
0430	603.8500 Anchoring Concrete Barrier Temporary Precast	1,561.000 LF	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0434	604.0400 Slope Paving Concrete	1,075.000 SY	_____.____	_____.____
0436	608.0312 Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	3,204.000 LF	_____.____	_____.____
0438	608.0315 Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	4,295.000 LF	_____.____	_____.____
0440	608.0318 Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	576.000 LF	_____.____	_____.____
0442	608.0321 Storm Sewer Pipe Reinforced Concrete Class III 21-Inch	26.000 LF	_____.____	_____.____
0444	608.0324 Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	2,187.000 LF	_____.____	_____.____
0446	608.0330 Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	316.000 LF	_____.____	_____.____
0448	608.0336 Storm Sewer Pipe Reinforced Concrete Class III 36-Inch	1,290.000 LF	_____.____	_____.____
0450	608.0342 Storm Sewer Pipe Reinforced Concrete Class III 42-Inch	1,368.000 LF	_____.____	_____.____
0452	608.0348 Storm Sewer Pipe Reinforced Concrete Class III 48-Inch	49.000 LF	_____.____	_____.____
0454	608.0354 Storm Sewer Pipe Reinforced Concrete Class III 54-Inch	137.000 LF	_____.____	_____.____
0456	608.0360 Storm Sewer Pipe Reinforced Concrete Class III 60-Inch	82.000 LF	_____.____	_____.____
0458	608.0366 Storm Sewer Pipe Reinforced Concrete Class III 66-Inch	11.000 LF	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0460	608.0412 Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	584.000 LF	_____.____	_____.____
0462	608.0415 Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	1,326.000 LF	_____.____	_____.____
0464	608.0418 Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	589.000 LF	_____.____	_____.____
0466	608.0424 Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	121.000 LF	_____.____	_____.____
0468	608.0436 Storm Sewer Pipe Reinforced Concrete Class IV 36-Inch	408.000 LF	_____.____	_____.____
0470	608.0442 Storm Sewer Pipe Reinforced Concrete Class IV 42-Inch	68.000 LF	_____.____	_____.____
0472	611.0535 Manhole Covers Type J-Special	104.000 EACH	_____.____	_____.____
0474	611.0606 Inlet Covers Type B	12.000 EACH	_____.____	_____.____
0476	611.0627 Inlet Covers Type HM	117.000 EACH	_____.____	_____.____
0478	611.0654 Inlet Covers Type V	211.000 EACH	_____.____	_____.____
0480	611.0660 Inlet Covers Type WM	13.000 EACH	_____.____	_____.____
0482	611.2004 Manholes 4-FT Diameter	9.000 EACH	_____.____	_____.____
0484	611.2005 Manholes 5-FT Diameter	49.000 EACH	_____.____	_____.____
0486	611.2006 Manholes 6-FT Diameter	48.000 EACH	_____.____	_____.____
0488	611.2007 Manholes 7-FT Diameter	6.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0490	611.2008 Manholes 8-FT Diameter	13.000 EACH	_____.____	_____.____
0492	611.2009 Manholes 9-FT Diameter	1.000 EACH	_____.____	_____.____
0494	611.3004 Inlets 4-FT Diameter	321.000 EACH	_____.____	_____.____
0496	611.3220 Inlets 2x2-FT	10.000 EACH	_____.____	_____.____
0498	611.8110 Adjusting Manhole Covers	6.000 EACH	_____.____	_____.____
0500	611.8115 Adjusting Inlet Covers	13.000 EACH	_____.____	_____.____
0502	612.0106 Pipe Underdrain 6-Inch	12,749.000 LF	_____.____	_____.____
0504	612.0406 Pipe Underdrain Wrapped 6-Inch	460.000 LF	_____.____	_____.____
0506	614.0150 Anchor Assemblies for Steel Plate Beam Guard	4.000 EACH	_____.____	_____.____
0508	614.0905 Crash Cushions Temporary	25.000 EACH	_____.____	_____.____
0510	614.0935 Salvaged Sand Barrels	11.000 EACH	_____.____	_____.____
0512	614.2300 MGS Guardrail 3	827.000 LF	_____.____	_____.____
0514	614.2500 MGS Thrie Beam Transition	630.000 LF	_____.____	_____.____
0516	614.2610 MGS Guardrail Terminal EAT	18.000 EACH	_____.____	_____.____
0518	614.2620 MGS Guardrail Terminal Type 2	1.000 EACH	_____.____	_____.____
0520	616.0204 Fence Chain Link 4-FT	199.000 LF	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0522	616.0206 Fence Chain Link 6-FT	26,936.000 LF	_____.____	_____.____
0524	616.0208 Fence Chain Link 8-FT	460.000 LF	_____.____	_____.____
0526	616.0329 Gates Chain Link (width) 0001. 12-FT	16.000 EACH	_____.____	_____.____
0528	618.0100 Maintenance And Repair of Haul Roads (project) 0001. 1228-22-70	1.000 EACH	_____.____	_____.____
0530	619.1000 Mobilization	1.000 EACH	_____.____	_____.____
0532	623.0200 Dust Control Surface Treatment	197,427.000 SY	_____.____	_____.____
0534	624.0100 Water	506.000 MGAL	_____.____	_____.____
0536	625.0100 Topsoil	110,955.000 SY	_____.____	_____.____
0538	627.0200 Mulching	88,764.000 SY	_____.____	_____.____
0540	628.1905 Mobilizations Erosion Control	2.000 EACH	_____.____	_____.____
0542	628.1910 Mobilizations Emergency Erosion Control	2.000 EACH	_____.____	_____.____
0544	628.2023 Erosion Mat Class II Type B	110,955.000 SY	_____.____	_____.____
0546	628.7005 Inlet Protection Type A	68.000 EACH	_____.____	_____.____
0548	628.7020 Inlet Protection Type D	898.000 EACH	_____.____	_____.____
0550	629.0210 Fertilizer Type B	101.000 CWT	_____.____	_____.____
0552	630.0120 Seeding Mixture No. 20	2,422.000 LB	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0554	630.0500 Seed Water	2,493.000 MGAL	_____.____	_____.____
0556	631.0300 Sod Water	46.000 MGAL	_____.____	_____.____
0558	631.1000 Sod Lawn	1,820.000 SY	_____.____	_____.____
0560	634.0618 Posts Wood 4x6-Inch X 18-FT	72.000 EACH	_____.____	_____.____
0562	634.0622 Posts Wood 4x6-Inch X 22-FT	126.000 EACH	_____.____	_____.____
0564	634.0814 Posts Tubular Steel 2x2-Inch X 14-FT	31.000 EACH	_____.____	_____.____
0566	634.0885 Posts Tubular Steel 2x2-Inch X 8.5-FT	19.000 EACH	_____.____	_____.____
0568	635.0200 Sign Supports Structural Steel HS	17,700.000 LB	_____.____	_____.____
0570	637.1220 Signs Type I Reflective SH	5,684.500 SF	_____.____	_____.____
0572	637.1230 Signs Type I Reflective F	761.000 SF	_____.____	_____.____
0574	637.2210 Signs Type II Reflective H	2,398.855 SF	_____.____	_____.____
0576	637.2230 Signs Type II Reflective F	1,115.500 SF	_____.____	_____.____
0578	638.2101 Moving Signs Type I	4.000 EACH	_____.____	_____.____
0580	638.2102 Moving Signs Type II	10.000 EACH	_____.____	_____.____
0582	638.2601 Removing Signs Type I	31.000 EACH	_____.____	_____.____
0584	638.2602 Removing Signs Type II	255.000 EACH	_____.____	_____.____
0586	638.3000 Removing Small Sign Supports	158.000 EACH	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0588	638.3100 Removing Structural Steel Sign Supports	36.000 EACH	_____.____	_____.____
0590	643.0300 Traffic Control Drums	417,848.000 DAY	_____.____	_____.____
0592	643.0420 Traffic Control Barricades Type III	38,116.000 DAY	_____.____	_____.____
0594	643.0500 Traffic Control Flexible Tubular Marker Posts	900.000 EACH	_____.____	_____.____
0596	643.0600 Traffic Control Flexible Tubular Marker Bases	900.000 EACH	_____.____	_____.____
0598	643.0705 Traffic Control Warning Lights Type A	75,483.000 DAY	_____.____	_____.____
0600	643.0715 Traffic Control Warning Lights Type C	72,361.000 DAY	_____.____	_____.____
0602	643.0800 Traffic Control Arrow Boards	3,503.000 DAY	_____.____	_____.____
0604	643.0900 Traffic Control Signs	122,728.000 DAY	_____.____	_____.____
0606	643.0910 Traffic Control Covering Signs Type I	24.000 EACH	_____.____	_____.____
0608	643.0920 Traffic Control Covering Signs Type II	170.000 EACH	_____.____	_____.____
0610	643.1000 Traffic Control Signs Fixed Message	1,543.000 SF	_____.____	_____.____
0612	643.1050 Traffic Control Signs PCMS	999.000 DAY	_____.____	_____.____
0614	643.3105 Temporary Marking Line Paint 4-Inch	356,831.000 LF	_____.____	_____.____
0616	643.3120 Temporary Marking Line Epoxy 4-Inch	148,990.000 LF	_____.____	_____.____
0618	643.3150 Temporary Marking Line Removable Tape 4-Inch	26,481.000 LF	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0620	643.3205 Temporary Marking Line Paint 8-Inch	59,336.000 LF	_____.____	_____.____
0622	643.3220 Temporary Marking Line Epoxy 8-Inch	25,123.000 LF	_____.____	_____.____
0624	643.3250 Temporary Marking Line Removable Tape 8-Inch	1,732.000 LF	_____.____	_____.____
0626	643.3505 Temporary Marking Arrow Paint	15.000 EACH	_____.____	_____.____
0628	643.3760 Temporary Marking Raised Pavement Marker Type I	535.000 EACH	_____.____	_____.____
0630	643.3805 Temporary Marking Stop Line Paint 18-Inch	22.000 LF	_____.____	_____.____
0632	643.4100 Traffic Control Interim Lane Closure	610.000 EACH	_____.____	_____.____
0634	643.5000 Traffic Control	1.000 EACH	_____.____	_____.____
0636	644.1430 Temporary Pedestrian Surface Plate	120.000 SF	_____.____	_____.____
0638	644.1601 Temporary Pedestrian Curb Ramp	165.000 DAY	_____.____	_____.____
0640	644.1605 Temporary Pedestrian Detectable Warning Field	60.000 SF	_____.____	_____.____
0642	644.1810 Temporary Pedestrian Barricade	2,357.000 LF	_____.____	_____.____
0644	645.0111 Geotextile Type DF Schedule A	7,083.000 SY	_____.____	_____.____
0646	646.1020 Marking Line Epoxy 4-Inch	7,126.000 LF	_____.____	_____.____
0648	646.1040 Marking Line Grooved Wet Ref Epoxy 4-Inch	38,453.000 LF	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0650	646.1555 Marking Line Grooved Contrast Permanent Tape 4-Inch	5,825.000 LF	_____.____	_____.____
0652	646.3020 Marking Line Epoxy 8-Inch	5,018.000 LF	_____.____	_____.____
0654	646.3555 Marking Line Grooved Contrast Permanent Tape 8-Inch	9,042.000 LF	_____.____	_____.____
0656	646.5020 Marking Arrow Epoxy	57.000 EACH	_____.____	_____.____
0658	646.5120 Marking Word Epoxy	6.000 EACH	_____.____	_____.____
0660	646.5220 Marking Symbol Epoxy	17.000 EACH	_____.____	_____.____
0662	646.6120 Marking Stop Line Epoxy 18-Inch	722.000 LF	_____.____	_____.____
0664	646.7120 Marking Diagonal Epoxy 12-Inch	6,356.000 LF	_____.____	_____.____
0666	646.7220 Marking Chevron Epoxy 24-Inch	1,368.000 LF	_____.____	_____.____
0668	646.7420 Marking Crosswalk Epoxy Transverse Line 6-Inch	1,372.000 LF	_____.____	_____.____
0670	646.8120 Marking Curb Epoxy	60.000 LF	_____.____	_____.____
0672	646.8220 Marking Island Nose Epoxy	6.000 EACH	_____.____	_____.____
0674	646.9000 Marking Removal Line 4-Inch	217,403.000 LF	_____.____	_____.____
0676	646.9100 Marking Removal Line 8-Inch	28,782.000 LF	_____.____	_____.____
0678	646.9200 Marking Removal Line Wide	3,567.000 LF	_____.____	_____.____
0680	646.9300 Marking Removal Special Marking	10.000 EACH	_____.____	_____.____

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Federal ID(s): WISC 2023278, N/A, N/A, N/A

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0682	652.0125 Conduit Rigid Metallic 2-Inch	229.000 LF	_____.____	_____.____
0684	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	36,083.000 LF	_____.____	_____.____
0686	652.0230 Conduit Rigid Nonmetallic Schedule 40 2 1/2-Inch	110.000 LF	_____.____	_____.____
0688	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	4,943.000 LF	_____.____	_____.____
0690	652.0605 Conduit Special 2-Inch	280.000 LF	_____.____	_____.____
0692	652.0615 Conduit Special 3-Inch	4,188.000 LF	_____.____	_____.____
0694	652.0700.S Install Conduit into Existing Item	20.000 EACH	_____.____	_____.____
0696	652.0800 Conduit Loop Detector	375.000 LF	_____.____	_____.____
0698	653.0135 Pull Boxes Steel 24x36-Inch	9.000 EACH	_____.____	_____.____
0700	653.0140 Pull Boxes Steel 24x42-Inch	69.000 EACH	_____.____	_____.____
0702	653.0222 Junction Boxes 18x12x6-Inch	23.000 EACH	_____.____	_____.____
0704	653.0905 Removing Pull Boxes	120.000 EACH	_____.____	_____.____
0706	654.0101 Concrete Bases Type 1	8.000 EACH	_____.____	_____.____
0708	654.0102 Concrete Bases Type 2	3.000 EACH	_____.____	_____.____
0710	654.0105 Concrete Bases Type 5	44.000 EACH	_____.____	_____.____
0712	654.0106 Concrete Bases Type 6	8.000 EACH	_____.____	_____.____

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Federal ID(s): WISC 2023278, N/A, N/A, N/A

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0714	654.0110 Concrete Bases Type 10	5.000 EACH	_____.____	_____.____
0718	654.0120 Concrete Bases Type 10-Special	8.000 EACH	_____.____	_____.____
0720	654.0230 Concrete Control Cabinet Bases Type L30	4.000 EACH	_____.____	_____.____
0722	654.1239 Concrete Control Cabinet Bases ITS	1.000 EACH	_____.____	_____.____
0724	655.0230 Cable Traffic Signal 5-14 AWG	3,160.000 LF	_____.____	_____.____
0726	655.0240 Cable Traffic Signal 7-14 AWG	1,154.000 LF	_____.____	_____.____
0728	655.0250 Cable Traffic Signal 9-14 AWG	603.000 LF	_____.____	_____.____
0730	655.0260 Cable Traffic Signal 12-14 AWG	904.000 LF	_____.____	_____.____
0732	655.0270 Cable Traffic Signal 15-14 AWG	1,207.000 LF	_____.____	_____.____
0734	655.0280 Cable Traffic Signal 19-14 AWG	996.000 LF	_____.____	_____.____
0736	655.0305 Cable Type UF 2-12 AWG Grounded	4,695.000 LF	_____.____	_____.____
0738	655.0515 Electrical Wire Traffic Signals 10 AWG	20,762.000 LF	_____.____	_____.____
0740	655.0610 Electrical Wire Lighting 12 AWG	27,210.000 LF	_____.____	_____.____
0742	655.0615 Electrical Wire Lighting 10 AWG	2,200.000 LF	_____.____	_____.____
0744	655.0620 Electrical Wire Lighting 8 AWG	91,106.000 LF	_____.____	_____.____
0746	655.0625 Electrical Wire Lighting 6 AWG	73,414.000 LF	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0748	655.0630 Electrical Wire Lighting 4 AWG	566.000 LF	_____.____	_____.____
0750	655.0640 Electrical Wire Lighting 1 AWG	72.000 LF	_____.____	_____.____
0752	655.0700 Loop Detector Lead In Cable	2,475.000 LF	_____.____	_____.____
0754	655.0800 Loop Detector Wire	1,050.000 LF	_____.____	_____.____
0756	655.0900 Traffic Signal EVP Detector Cable	2,398.000 LF	_____.____	_____.____
0758	656.0201 Electrical Service Meter Breaker Pedestal (location) 0201. MB827	1.000 EACH	_____.____	_____.____
0760	656.0201 Electrical Service Meter Breaker Pedestal (location) 0301. Locust St & 8th St	1.000 EACH	_____.____	_____.____
0762	656.0201 Electrical Service Meter Breaker Pedestal (location) 0302. Locust St & 7th St	1.000 EACH	_____.____	_____.____
0764	656.0201 Electrical Service Meter Breaker Pedestal (location) 0303. Burleigh St & 8th St	1.000 EACH	_____.____	_____.____
0766	656.0201 Electrical Service Meter Breaker Pedestal (location) 0304. Burleigh St & 7th St	1.000 EACH	_____.____	_____.____
0768	656.0401 Electrical Service Main Lugs Only Meter Pedestal (location) 0101. HL-40-GA	1.000 EACH	_____.____	_____.____
0770	656.0401 Electrical Service Main Lugs Only Meter Pedestal (location) 0102. HL-40-CB	1.000 EACH	_____.____	_____.____
0772	656.0401 Electrical Service Main Lugs Only Meter Pedestal (location) 0103. HL-40-KF	1.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0774	656.0401 Electrical Service Main Lugs Only Meter Pedestal (location) 0104. LCC-WR	1.000 EACH	_____.____	_____.____
0776	656.0501 Electrical Service Breaker Disconnect Box (location) 0201. S-40-463	1.000 EACH	_____.____	_____.____
0778	657.0100 Pedestal Bases	3.000 EACH	_____.____	_____.____
0780	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	60.000 EACH	_____.____	_____.____
0782	657.0322 Poles Type 5-Aluminum	35.000 EACH	_____.____	_____.____
0784	657.0327 Poles Type 6-Aluminum	8.000 EACH	_____.____	_____.____
0786	657.0347 Poles Type 9-Special	1.000 EACH	_____.____	_____.____
0788	657.0350 Poles Type 10	4.000 EACH	_____.____	_____.____
0790	657.0352 Poles Type 10-Special	7.000 EACH	_____.____	_____.____
0792	657.0381 Poles Type F	48.000 EACH	_____.____	_____.____
0794	657.0420 Traffic Signal Standards Aluminum 13-FT	2.000 EACH	_____.____	_____.____
0796	657.0425 Traffic Signal Standards Aluminum 15-FT	1.000 EACH	_____.____	_____.____
0798	657.0515 Monotube Arms 15-FT	1.000 EACH	_____.____	_____.____
0800	657.0530 Monotube Arms 30-FT	4.000 EACH	_____.____	_____.____
0808	657.0610 Luminaire Arms Single Member 4 1/2-Inch Clamp 6-FT	35.000 EACH	_____.____	_____.____

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Federal ID(s): WISC 2023278, N/A, N/A, N/A

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0810	657.0620 Luminaire Arms Single Member 6-Inch Clamp 4-FT	94.000 EACH	_____.____	_____.____
0812	658.0173 Traffic Signal Face 3S 12-Inch	40.000 EACH	_____.____	_____.____
0814	658.0174 Traffic Signal Face 4S 12-Inch	8.000 EACH	_____.____	_____.____
0816	658.0412 Pedestrian Signal Face 12-Inch	24.000 EACH	_____.____	_____.____
0818	658.5070 Signal Mounting Hardware (location) 0301. Locust St & 8th St	1.000 EACH	_____.____	_____.____
0820	658.5070 Signal Mounting Hardware (location) 0302. Locust St & 7th St	1.000 EACH	_____.____	_____.____
0822	658.5070 Signal Mounting Hardware (location) 0303. Burleigh St & 8th St	1.000 EACH	_____.____	_____.____
0824	658.5070 Signal Mounting Hardware (location) 0304. Burleigh St & 7th St	1.000 EACH	_____.____	_____.____
0826	659.0601 Underdeck Lighting (structure) 0101. N. Halyard St.	1.000 EACH	_____.____	_____.____
0828	659.0601 Underdeck Lighting (structure) 0102. W. North Ave.	1.000 EACH	_____.____	_____.____
0830	659.0601 Underdeck Lighting (structure) 0103. W. Wright St.	1.000 EACH	_____.____	_____.____
0832	659.0601 Underdeck Lighting (structure) 0104. W. Center St.	1.000 EACH	_____.____	_____.____
0834	659.0601 Underdeck Lighting (structure) 0105. W. Locust St.	1.000 EACH	_____.____	_____.____
0836	659.0601 Underdeck Lighting (structure) 0106. W. Burleigh St.	1.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0838	659.0601 Underdeck Lighting (structure) 0107. W. Keefe Ave.	1.000 EACH	_____.____	_____.____
0840	659.0601 Underdeck Lighting (structure) 0108. W. Atkinson Ave.	1.000 EACH	_____.____	_____.____
0842	659.0601 Underdeck Lighting (structure) 0109. N Martin Luther King Jr Dr	1.000 EACH	_____.____	_____.____
0844	659.0601 Underdeck Lighting (structure) 0110. W Capitol Dr	1.000 EACH	_____.____	_____.____
0846	659.1120 Luminaires Utility LED B	60.000 EACH	_____.____	_____.____
0848	659.1130 Luminaires Utility LED D	98.000 EACH	_____.____	_____.____
0850	659.1210 Luminaires Underdeck LED B	32.000 EACH	_____.____	_____.____
0852	659.2230 Lighting Control Cabinets 240/480 30-Inch	4.000 EACH	_____.____	_____.____
0854	659.5000.S Lamp, Ballast, LED, Switch Disposal by Contractor	267.000 EACH	_____.____	_____.____
0856	661.0201 Temporary Traffic Signals for Intersections (location) 0301. Locust St & 8th St	1.000 EACH	_____.____	_____.____
0858	661.0201 Temporary Traffic Signals for Intersections (location) 0302. Locust St & 7th St	1.000 EACH	_____.____	_____.____
0860	670.0101 Field System Integrator	2.000 EACH	_____.____	_____.____
0862	670.0201 ITS Documentation	2.000 EACH	_____.____	_____.____
0864	671.0142 Conduit HDPE 4-Duct 2-Inch	7,380.000 LF	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0866	671.0222 Conduit HDPE Directional Bore 2-Duct 2-Inch	445.000 LF	_____.____	_____.____
0868	671.0242 Conduit HDPE Directional Bore 4-Duct 2-Inch	2,470.000 LF	_____.____	_____.____
0870	673.0105 Communication Vault Type 1	11.000 EACH	_____.____	_____.____
0872	673.0200 Tracer Wire Marker Posts	11.000 EACH	_____.____	_____.____
0874	673.1200.S Install ITS Field Cabinet	1.000 EACH	_____.____	_____.____
0876	673.1225.S Install Pole Mounted Cabinet	2.000 EACH	_____.____	_____.____
0878	674.0200 Cable Microwave Detector	7,655.000 LF	_____.____	_____.____
0880	674.0300 Remove Cable	17,865.000 LF	_____.____	_____.____
0882	675.0100 Install Controller Ramp Meter Processor Assembly	1.000 EACH	_____.____	_____.____
0884	675.0300 Install Mounted Controller Microwave Detector Assembly	30.000 EACH	_____.____	_____.____
0886	677.0150 Install Camera Pole 50-FT	2.000 EACH	_____.____	_____.____
0888	677.0200 Install Camera Assembly	2.000 EACH	_____.____	_____.____
0890	677.9051.S Removing 50-FT Camera Pole	1.000 EACH	_____.____	_____.____
0892	678.0006 Install Fiber Optic Cable Outdoor Plant 6-CT	6,945.000 LF	_____.____	_____.____
0894	678.0072 Install Fiber Optic Cable Outdoor Plant 72-CT	9,540.000 LF	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0896	678.0100.S Install Overhead Freeway DMS Full Matrix	1.000 EACH	_____.____	_____.____
0898	678.0200 Fiber Optic Splice Enclosure	11.000 EACH	_____.____	_____.____
0900	678.0300 Fiber Optic Splice	404.000 EACH	_____.____	_____.____
0902	678.0400 Fiber Optic Termination	48.000 EACH	_____.____	_____.____
0904	678.0501 Communication System Testing	2.000 EACH	_____.____	_____.____
0906	678.0600 Install Ethernet Switches	5.000 EACH	_____.____	_____.____
0908	690.0150 Sawing Asphalt	3,899.000 LF	_____.____	_____.____
0910	690.0250 Sawing Concrete	51,457.000 LF	_____.____	_____.____
0912	715.0603 Incentive Strength Concrete Barrier	9,110.000 DOL	1.00000	9,110.00
0914	715.0720 Incentive Compressive Strength Concrete Pavement	1,070.000 DOL	1.00000	1,070.00
0916	740.0440 Incentive IRI Ride	30,900.000 DOL	1.00000	30,900.00
0918	ASP.1.1PA On-the-Job Training Pre-Apprentice at $5.00/HR	5,000.000 HRS	5.00000	25,000.00
0920	ASP.1.1PAA On-the-Job Training Pre-Apprentice with Advancement at $10.00/HR	1,500.000 HRS	10.00000	15,000.00
0922	ASP.1T0A On-the-Job Training Apprentice at $5.00/HR	6,300.000 HRS	5.00000	31,500.00
0924	ASP.1T0G On-the-Job Training Graduate at $5.00/HR	14,400.000 HRS	5.00000	72,000.00

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0926	SPV.0055 Special 0001. Core Pilot Project; Incentive Density PWL HMA Pavement	15,310.000 DOL	1.00000	15,310.00
0928	SPV.0055 Special 0002. Core Pilot Project; Incentive Air Voids HMA Pavement	71,410.000 DOL	1.00000	71,410.00
0930	SPV.0055 Special 0003. Core Pilot Project; Incentive Density HMA Pavement Longitudinal Joints	6,800.000 DOL	1.00000	6,800.00
0932	SPV.0060 Special 0001. Baseline CPM Progress Schedule	1.000 EACH	_____.____	_____.____
0934	SPV.0060 Special 0002. Monthly CPM Progress Schedule Updates	36.000 EACH	_____.____	_____.____
0936	SPV.0060 Special 0003. Field Facilities Office Space	1.000 EACH	_____.____	_____.____
0938	SPV.0060 Special 0004. Fastening Sewer Access Covers	160.000 EACH	_____.____	_____.____
0940	SPV.0060 Special 0009. Mobilizations Emergency Pavement Repair	10.000 EACH	_____.____	_____.____
0942	SPV.0060 Special 0010. Survey Project 1228-22-70	1.000 EACH	_____.____	_____.____
0944	SPV.0060 Special 0011. Utility Line Opening (ULO)	20.000 EACH	_____.____	_____.____
0946	SPV.0060 Special 0012. Emergency Response to Traffic Incident Involving Conc Barrier Temporary	40.000 EACH	_____.____	_____.____
0948	SPV.0060 Special 0013. Emergency Response to Traffic Incident Involving Crash Cushions	10.000 EACH	_____.____	_____.____
0954	SPV.0060 Special 0016. Traffic Control Close-Open Freeway Entrance Ramp	60.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0956	SPV.0060 Special 0017. Traffic Control Full Freeway Closure	50.000 EACH	_____.____	_____.____
0958	SPV.0060 Special 0018. Migratory Bird Nest Inspection B-40-207	1.000 EACH	_____.____	_____.____
0960	SPV.0060 Special 0050. Pipe Connection to Existing Structure	11.000 EACH	_____.____	_____.____
0962	SPV.0060 Special 0080. Adjusting Water Valve Boxes	6.000 EACH	_____.____	_____.____
0964	SPV.0060 Special 0081. Adjusting Water Manholes	6.000 EACH	_____.____	_____.____
0966	SPV.0060 Special 0101. Maintenance of Lighting System (1228-22-70)	1.000 EACH	_____.____	_____.____
0968	SPV.0060 Special 0102. Lighting System Integrator (1228-22-70)	1.000 EACH	_____.____	_____.____
0970	SPV.0060 Special 0103. Lighting System Survey (1228-22-70)	1.000 EACH	_____.____	_____.____
0972	SPV.0060 Special 0104. Wood Pole Lighting 60-Foot	68.000 EACH	_____.____	_____.____
0974	SPV.0060 Special 0105. Wood Pole 60-Foot	9.000 EACH	_____.____	_____.____
0976	SPV.0060 Special 0106. Removing Poles Wood 60-Foot And Floodlights	68.000 EACH	_____.____	_____.____
0978	SPV.0060 Special 0107. Removing Poles Wood 60-Foot	9.000 EACH	_____.____	_____.____
0980	SPV.0060 Special 0108. Luminaires Floodlight 400W HPS	75.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0982	SPV.0060 Special 0109. Removing Electrical Service Meter Breaker Pedestal Lighting	4.000 EACH	_____.____	_____.____
0984	SPV.0060 Special 0110. Remove and Salvage Street Lighting Unit	23.000 EACH	_____.____	_____.____
0986	SPV.0060 Special 0111. Remove Existing Wood Pole	1.000 EACH	_____.____	_____.____
0988	SPV.0060 Special 0112. Pull Box 13-Inch x 24-Inch x 24-Inch	13.000 EACH	_____.____	_____.____
0990	SPV.0060 Special 0113. Pull Box 17-Inch x 30-Inch x 24-Inch	2.000 EACH	_____.____	_____.____
0992	SPV.0060 Special 0114. Installing Luminaire Arms Steel 15-FT	9.000 EACH	_____.____	_____.____
0994	SPV.0060 Special 0115. Pole Type 30-AL-BD	19.000 EACH	_____.____	_____.____
0996	SPV.0060 Special 0116. Water Tight Splice & Connections	34.000 EACH	_____.____	_____.____
0998	SPV.0060 Special 0117. Luminaire Arm Single Member 8-Ft. (Special)	24.000 EACH	_____.____	_____.____
1000	SPV.0060 Special 0118. Installing City-Furnished Luminaire Utility LED	33.000 EACH	_____.____	_____.____
1002	SPV.0060 Special 0150. 5’ Diameter “Doghouse” Manhole Type CUC	4.000 EACH	_____.____	_____.____
1004	SPV.0060 Special 0151. Removing CUC Manhole	4.000 EACH	_____.____	_____.____
1006	SPV.0060 Special 0152. Underdeck Utility Structure B-40-206	1.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1008	SPV.0060 Special 0153. Underdeck Utility Structure B-40-207	1.000 EACH	_____.____	_____.____
1010	SPV.0060 Special 0160. Suspended Galvanized Steel Conduit Package Cleaning, Coating and Painting	1.000 EACH	_____.____	_____.____
1012	SPV.0060 Special 0161. Suspended Galvanized Steel Conduit Repair	3.000 EACH	_____.____	_____.____
1014	SPV.0060 Special 0162. Pull Ropes Anchored to Manholes	2.000 EACH	_____.____	_____.____
1016	SPV.0060 Special 0205. Speed Warning Sign System	1.000 EACH	_____.____	_____.____
1018	SPV.0060 Special 0206. Install Speed Warning System DMS	3.000 EACH	_____.____	_____.____
1020	SPV.0060 Special 0207. Salvaging Overhead Freeway DMS	1.000 EACH	_____.____	_____.____
1022	SPV.0060 Special 0210. Temporary Poles Wood 40-FT	3.000 EACH	_____.____	_____.____
1024	SPV.0060 Special 0211. Temporary Vehicle Detector Assembly	3.000 EACH	_____.____	_____.____
1026	SPV.0060 Special 0213. Ground Rod	18.000 EACH	_____.____	_____.____
1028	SPV.0060 Special 0214. Relocating Temporary Vehicle Detector Assembly	6.000 EACH	_____.____	_____.____
1030	SPV.0060 Special 0215. Refocus Vehicle Detector Assembly	35.000 EACH	_____.____	_____.____
1032	SPV.0060 Special 0216. Install Ethernet Radio	3.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1034	SPV.0060 Special 0219. Signal Assembly Advance Flasher Type 2	1.000 EACH	_____.____	_____.____
1036	SPV.0060 Special 0224. Signal Assembly Ramp Control Sidemount	7.000 EACH	_____.____	_____.____
1038	SPV.0060 Special 0301. Fiberglass/Polymer Concrete Pull Box 17-Inch X 30-Inch X 24-Inch	34.000 EACH	_____.____	_____.____
1040	SPV.0060 Special 0302. Install Precast Control Cabinet Base	4.000 EACH	_____.____	_____.____
1042	SPV.0060 Special 0303. ATC Controller and Cabinet Installed	4.000 EACH	_____.____	_____.____
1044	SPV.0060 Special 0304. Vehicular Video Detection System - 2 Cameras	2.000 EACH	_____.____	_____.____
1046	SPV.0060 Special 0305. EVP 1 Channel 1 Direction Infrared Detector	12.000 EACH	_____.____	_____.____
1048	SPV.0060 Special 0306. EVP Confirmation Light	12.000 EACH	_____.____	_____.____
1050	SPV.0060 Special 0307. EVP Phase Selector Card 4 Channel	4.000 EACH	_____.____	_____.____
1052	SPV.0060 Special 0308. Fiber Optic Patch Panel 8-Count St	2.000 EACH	_____.____	_____.____
1054	SPV.0060 Special 0309. Ethernet Switch	4.000 EACH	_____.____	_____.____
1056	SPV.0060 Special 0310. Pedestrian Countdown Signal Face 12-inch	24.000 EACH	_____.____	_____.____
1058	SPV.0060 Special 0311. Cellular Modem	2.000 EACH	_____.____	_____.____
1060	SPV.0060 Special 0312. Wireless Antenna	2.000 EACH	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
1062	SPV.0060 Special 0313. SFP	16.000 EACH	_____.____	_____.____
1064	SPV.0060 Special 0314. Fiber Optic Splice Enclosure	1.000 EACH	_____.____	_____.____
1066	SPV.0060 Special 0400. Embedded Galvanic Anodes	2,803.000 EACH	_____.____	_____.____
1068	SPV.0060 Special 0401. Heat Straightening of Damaged Girders	5.000 EACH	_____.____	_____.____
1070	SPV.0075 Special 0001. Pavement Cleanup Project	1,500.000 HRS	_____.____	_____.____
1072	SPV.0090 Special 0001. Marking Contrast Epoxy 4-Inch	39,747.000 LF	_____.____	_____.____
1074	SPV.0090 Special 0002. Marking Contrast Epoxy 8-Inch	9,052.000 LF	_____.____	_____.____
1076	SPV.0090 Special 0101. Cable Aerial Aluminum 6 AWG Quadruplex	8,984.000 LF	_____.____	_____.____
1078	SPV.0090 Special 0102. Cable Aerial Aluminum 4 AWG Quadruplex	2,987.000 LF	_____.____	_____.____
1080	SPV.0090 Special 0111. Electrical Cable in Duct Type 4#8/1#8 XLPE	2,539.000 LF	_____.____	_____.____
1082	SPV.0090 Special 0112. Electrical Cable in Duct Type 4#6/1#8 XLPE	1,680.000 LF	_____.____	_____.____
1084	SPV.0090 Special 0113. Electrical Cable in Duct Type 4#4/1#8 XLPE	612.000 LF	_____.____	_____.____
1086	SPV.0090 Special 0150. 8-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60	109.000 LF	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
1088	SPV.0090 Special 0151. 4-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60	82.000 LF	_____.____	_____.____
1090	SPV.0090 Special 0152. 2-Duct Conduit Cement Encased 4-Inch Rigid Nonmetallic Conduit DB-60	383.000 LF	_____.____	_____.____
1092	SPV.0090 Special 0201. Outdoor Rated Network Cable	420.000 LF	_____.____	_____.____
1094	SPV.0090 Special 0400. Fencing Repair	50.000 LF	_____.____	_____.____
1096	SPV.0165 Special 0001. Wall Modular Block Mechanically Stabilized Earth	1,445.000 SF	_____.____	_____.____
1098	SPV.0165 Special 0400. Removing Loose Concrete Overhead	104.000 SF	_____.____	_____.____
1100	SPV.0165 Special 0401. Fiber Wrap Reinforcing Non-structural	1,019.000 SF	_____.____	_____.____
1102	SPV.0180 Special 0001. Resin Binder High Friction Surface Treatment Modified	88,265.000 SY	_____.____	_____.____
1104	SPV.0180 Special 0002. Removing Concrete Rumble Strips	160.000 SY	_____.____	_____.____
1106	SPV.0180 Special 0400. Methacrylate Flood Seal	1,382.000 SY	_____.____	_____.____
1108	SPV.0195 Special 0002. HMA Longitudinal Joint Repair	2,280.000 TON	_____.____	_____.____
1110	204.9060.S Removing (item description) 0001. Temporary Precast Trench Drain	478.000 EACH	_____.____	_____.____
1112	603.0405 Concrete Barrier Transition Section 32-Inch	34.000 LF	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
1114	603.1332 Concrete Barrier Type S32B	26.000 LF	_____.____	_____.____
1116	603.1342 Concrete Barrier Type S42B	114.000 LF	_____.____	_____.____
1118	603.3311 Concrete Barrier Transition Type NJ32DF to S32	1.000 EACH	_____.____	_____.____
1120	643.1200.S Portable Automated Real-Time Traffic Queue Warning System	330.000 DAY	_____.____	_____.____
1122	643.3550 Temporary Marking Arrow Removable Tape	2.000 EACH	_____.____	_____.____
1124	643.3850 Temporary Marking Stop Line Removable Tape 18-Inch	22.000 LF	_____.____	_____.____
1126	657.0536 Monotube Arms 35-FT-Special	5.000 EACH	_____.____	_____.____
1128	657.0541 Monotube Arms 40-FT-Special	2.000 EACH	_____.____	_____.____
1130	657.0546 Monotube Arms 45-FT-Special	1.000 EACH	_____.____	_____.____
1132	SPV.0060 Special 0019. Concrete Barrier Transition Type V32 to S32A	5.000 EACH	_____.____	_____.____
1134	SPV.0060 Special 0020. Concrete Barrier Transition Type V42 to S42A	13.000 EACH	_____.____	_____.____
1136	SPV.0060 Special 0021. Concrete Barrier Transition Type S56 to S32A	1.000 EACH	_____.____	_____.____
1138	SPV.0060 Special 0022. Concrete Barrier Transition Type S56 to S42A	4.000 EACH	_____.____	_____.____
1140	SPV.0060 Special 0023. Concrete Barrier Transition Type V56 to S32A	2.000 EACH	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
1142	SPV.0060 Special 0024. Concrete Barrier Transition Type V56 to S42A	9.000 EACH	_____.____	_____.____
1144	SPV.0060 Special 0025. Concrete Barrier Transition Type S32A to S42A	15.000 EACH	_____.____	_____.____
1146	SPV.0060 Special 0026. Concrete Barrier Transition Type V51 to S56 Special	1.000 EACH	_____.____	_____.____
1148	SPV.0060 Special 0027. Concrete Barrier Transition Type V56 to V42 Special	1.000 EACH	_____.____	_____.____
1150	SPV.0060 Special 0028. Concrete Barrier Transition Type V42 to S56A	1.000 EACH	_____.____	_____.____
1152	SPV.0060 Special 0019. Concrete Barrier Transition Type V56 to V56 Special I	1.000 EACH	_____.____	_____.____
1154	SPV.0060 Special 0030. Concrete Barrier Transition Type V56 to V56 Special II	1.000 EACH	_____.____	_____.____
1156	SPV.0060 Special 0031. Concrete Barrier Transition Type V32 to S42A	1.000 EACH	_____.____	_____.____
1158	SPV.0060 Special 0032. Concrete Barrier Type S42A Light Pole Base	45.000 EACH	_____.____	_____.____
1160	SPV.0060 Special 0033. Concrete Barrier Type V42 Light Pole Base	1.000 EACH	_____.____	_____.____
1162	SPV.0060 Special 0034. Concrete Barrier Type V42 Special Light Pole Base	1.000 EACH	_____.____	_____.____
1164	SPV.0060 Special 0035. Moving State Furnished Signs	2.000 EACH	_____.____	_____.____
1166	SPV.0060 Special 0036. Install State Furnished Signs	2.000 EACH	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
1168	SPV.0060 Special 0037. Cleaning Drainage Structures	40.000 EACH	_____._____	_____._____
1170	SPV.0060 Special 0402. Ultrasonic Impact Treatment Procedure	336.000 EACH	_____._____	_____._____

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 9, 2023

NOTICE TO ALL CONTRACTORS:

Proposal #12:

1228-22-70, WISC 2023278
IH 43 North South Freeway
Brown Street to Capitol Drive
IH 43
Milwaukee County

1228-22-80
IH 43 North South Freeway
Center St Bridge B-40-208
Local Street
Milwaukee County

1228-22-81
IH 43 North South Freeway
Center B-40-208, Locust B-40-207
Local Street
Milwaukee County

1228-22-87
IH 43 North South
Wright St Bridge B-40-209
Local Street
Milwaukee County

Letting of March 14, 2023

This is Addendum No. 02, which provides for the following:

Special Provisions:

Revised Special Provisions	
Article No.	Description
8	Utilities

Added Special Provisions	
Article No.	Description
191	Fiber Optic Patch Panel 12-Count ST, Item SPV.0060.0315
192	Field Office Special, Item SPV.0135.0001

Deleted Special Provisions	
Article No.	Description
37	QMP Subgrade
102	Field Facilities Office Space, Item SPV.0060.0003
158	Fiber Optic Patch Panel, 12-Count, ST, Item SPV.0060.0308

Schedule of Items:

Revised Bid Item Quantities					
Bid Item	Item Description	Unit	Proposal Total Prior to Addendum	Proposal Quantity Change (-)	Proposal Total After Addendum
678.0300	Fiber Optic Splice	EACH	404	8	412
SPV.0060.0313	SFP	EACH	16	8	24

Added Bid Item Quantities					
Bid Item	Item Description	Unit	Proposal Total Prior to Addendum	Quantity Added	Proposal Total After Addendum
SPV.0060.0315	Fiber Optic Patch Panel 12-Count ST	EACH	0	2	2
SPV.0135.0001	Field Office Special	MONTH	0	18	18

Deleted Bid Item Quantities					
Bid Item	Item Description	Unit	Proposal Total Prior to Addendum	Proposal Quantity Change (-)	Proposal Total After Addendum
SPV.0060.0003	Field Facilities Office Space	EACH	1	-1	0
SPV.0060.0308	Fiber Optic Patch Panel 8-Count ST	EACH	2	-2	0

Plan Sheets:

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
412	TRAFFIC SIGNAL COMMUNICATRION PLAN (modified reference to Fiber Optic Patch Panel 12-Count ST)
814	MISCELLANEAOUS QUANTITES INTERCONNECT (modified item description for Fiber Optic Patch Panel 12-Count ST and modified associated quantities)

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

1228-22-70/80/81/87

March 9, 2023

Special Provisions

8. Utilities.

PROJECT 1228-22-70

Add the following after **AT&T Wisconsin** *and before* **City of Milwaukee – Milwaukee Water Works***:*

City of Milwaukee – Communications has existing communication cables within the city underground conduit (CUC).

- Locust Street Bridge
  - 1 75-pair copper cable
  - 1 50-pair copper cable
  - 1 24-strand fiber optic cable
- Burleigh Street Bridge
  - 2 25-pair copper cables

All circuits on the copper cables have been re-routed outside the project area. These cables have been discontinued in place and can be removed by the contractor during the existing CUC removal. The fiber optic cable on the Locust St bridge has active circuits that will be relocated outside the project area by April 28th, 2023. The fiber optics on the structure will be discontinued in place. Contractor to remove remaining cables discontinued in the CUC as part of the CUC removal noted in the plans. New CUC to be installed as shown on plans. Upon completion City of Milwaukee to be notified. Contact David Henke at David.henke@milwaukee.gov or at 414-286-3248 (office phone) or 414-708-3248 (cell phone). City is responsible for reinstallation of copper and fiber cables.

37. DELETED

102. DELETED

158. DELETED

191. Fiber Optic Patch Panel, 12-Count, ST, Item SPV.0060.0315.

A Description

Furnish and install a 12-count fiber optic patch panel according to the following standards.

B Materials

Furnish a combination Fiber Optic Patch Panel according to the following standards:

- 12 single mode fiber optic strands
- Factory terminated or ST connectors on panel end
- Bare, unterminated fiber strands on non-panel end
- Loose tube cable

- Cable length as indicated specified in the plan
- Patch panel must be designed and tested for 1,000 re-matings with less than 0.20 dB change
- Patch panel housing material must be ABS plastic

C Construction

Construction shall be according to standard spec 678.

Have a certified fiber optic technician perform work for fiber optic terminations, splicing and testing. Have a certified fiber optic technician supervise all fiber optic cable installation. Test the panel and demonstrate that all equipment is operational to the inspector. Ensure termination does not exceed attenuation limits specified in standard spec 678.3.4.

D Measurement

The department will measure Fiber Optic Patch Panel, 8-Count, ST 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.0060.0315	Fiber Optic Patch Panel, 12-Count, ST	EACH

Payment is full compensation for materials and installation necessary to complete the work.

192. Field Office Special, Item SPV.0135.0001.

A Description

This special provision describes furnishing, equipping, and maintaining field office facilities.

B Materials

Obtain engineer approval before providing an existing office building, or an existing building converted to office-type use. Ensure that the building meets all applicable health, fire, and building codes and standards. Provide first aid kits, fire extinguishers, and all other supplies required to meet all applicable health, fire, and building codes and standards. The field office must be located less than one mile from the project limits with all floor space located on the first floor.

Provide; maintain in clean good working condition; and stock lavatory with sanitary supplies, including a sufficient supply of soap; hand sanitizer; toilet paper; and paper towels. The on-site sanitary facilities must meet Federal, State, and local health department requirements at all times.

Equip these facilities with suitable natural and light emitting diode (LED)DSL lighting. Also provide adequate heating and air conditioning equipment and fuel necessary to maintain a temperature range from 68 F to 80 F during the hours occupied.

Equip:

- Doors and windows with locks.
- Exterior doors with dead bolt locks.
- Windows with exterior screens to allow adequate ventilation.

Provide at least 1,200 square feet interior useable floor space, including shared spaces, such as plan review areas, conference rooms, storage areas, meeting areas, hallways, and restrooms. Provide a minimum 150 square feet storage room with a lockable door. Obtain engineer's approval of a suitably sized, open meeting area, including tables and folding chairs to accommodate regularly scheduled meetings of 20 people. Include a wireless ceiling mounted 1080-pixel liquid crystal display projector with a minimum of 3,000 lumens, 6' x 8'

projector screen, a 4’ x 8’ white board with dry erase markers and erasers, and phone jack with phone service.

Provide 8 workstations with a lockable desk and drawers. Workstations shall be a minimum 36 SF. Provide 3 private rooms, additionally equipped with a four-shelf bookcase, a large lockable metal storage cabinet, and a 48" x 36" whiteboard with dry-erase markers and erasers. Supply the interior doors to these rooms with locksets. Rooms must be a minimum of 100 SF.

Provide one ergonomically correct office chair in working condition, with, at a minimum, the following features, for each workstation:

- Five-legged base with casters.
- High backrest.
- Seat adjustable from 15 inches to 22 inches from the floor with a "seamless waterfall, rounded front edge.

For all work stations, provide unlimited high-speed internet service for exclusive department use via cable or DSL connection with a modem/router and capable of supporting cloud enabled file sharing, voice over internet protocol (VoIP), video conferencing, and web-based applications. Ensure that system meets the following:

- Includes a wireless network for the field office.
- Can accommodate IPSec based VPN products.
- Has a broadband bandwidth range with minimum connection speed of 100 Mbps + 1/2 Mbps per user download and 20 Mbps upload. Coordinate network setup at the leased office with the WisDOT network team..

Provide and install into the field office telephone exchanges with local and long-distance service or VoIP phone network. The voice exchanges are to be configured so that the incoming calls for any voice exchange utilize an open exchange. The telephones and the communication services are for the sole use of the department staff.

Provide one new Windows 10 compliant, high-capacity color printer/photocopier/scanner capable of printing and copying up to 11" x 17" paper, with the ability to perform duplexing, sorting, stapling, and multiple sheet auto feeding, with a built-in scanner with the capability to scan black and white and color up to 11" x 17" at a minimum of 1200dpi, and with a direct or field office wireless network connection, as approved by the engineer.

Provide and maintain an adequate supply of bottled drinking water. Provide a refrigerator with a minimum 18 cubic foot capacity, including a freezer. Provide a microwave oven with a minimum 1.1 cubic foot capacity, a minimum of 1000 watts, and a removable glass turntable.

Maintain the field office equipment and provide supplies for the photocopiers as requested by the engineer.

Provide for the professional cleaning of the field office during regular business hours once per week.

Provide carpet runners at all entrances. Clean weekly and replace as necessary or as directed by the engineer.

Provide clearly marked recycling and waste receptacles within the field office, and separate recycling and waste dumpsters near the field office. Cover outdoor containers to keep out rain, and snow. Provide regularly scheduled recycling and waste pick-up.

Include an adjacent, no-fee, lighted parking lot large enough to accommodate 15 vehicles, as approved by the engineer. Maintain the parking lot and egress, including snow removal.

C Construction

Do not combine field offices, or combine them with, or attach them to, any buildings used by the contractor, unless the engineer allows in writing. The contractor may furnish, if the contract allows, the field offices jointly in cooperation with other contractors on designated projects.

Do not begin construction operations requiring the use of the field offices by the department until the required field offices are approved by the engineer, furnished, fully equipped, and made ready for use as the engineer directs.

The field office shall remain available for department until the engineer approves its closure. These field facilities are for the sole use of the department and upon contract completion remain the contractor's property.

D Measurement

The department will measure Field Office Special by the month, or partial month where applicable, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0135.0001	Field Office Special	MONTH

Payment is full compensation for providing, equipping, securing, cleaning and maintaining the facility and associated parking lot; for telecommunications equipment, installation, and service fees; and for providing all incidentals, including bottled water, refrigerator/freezer, microwave, utilities, fuel, safety, ventilation, toilet facilities, and office supplies as required, either independently or jointly, for the time specified in section C. The department will pay for long-distance telephone usage fees incurred by department staff.

sef-642-005 (20180627)

Schedule of Items
Attached, dated March 9, 2023, are the revised Schedule of Items Pages 31-41.

Plan Sheets
The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:
Revised: 412 & 814.

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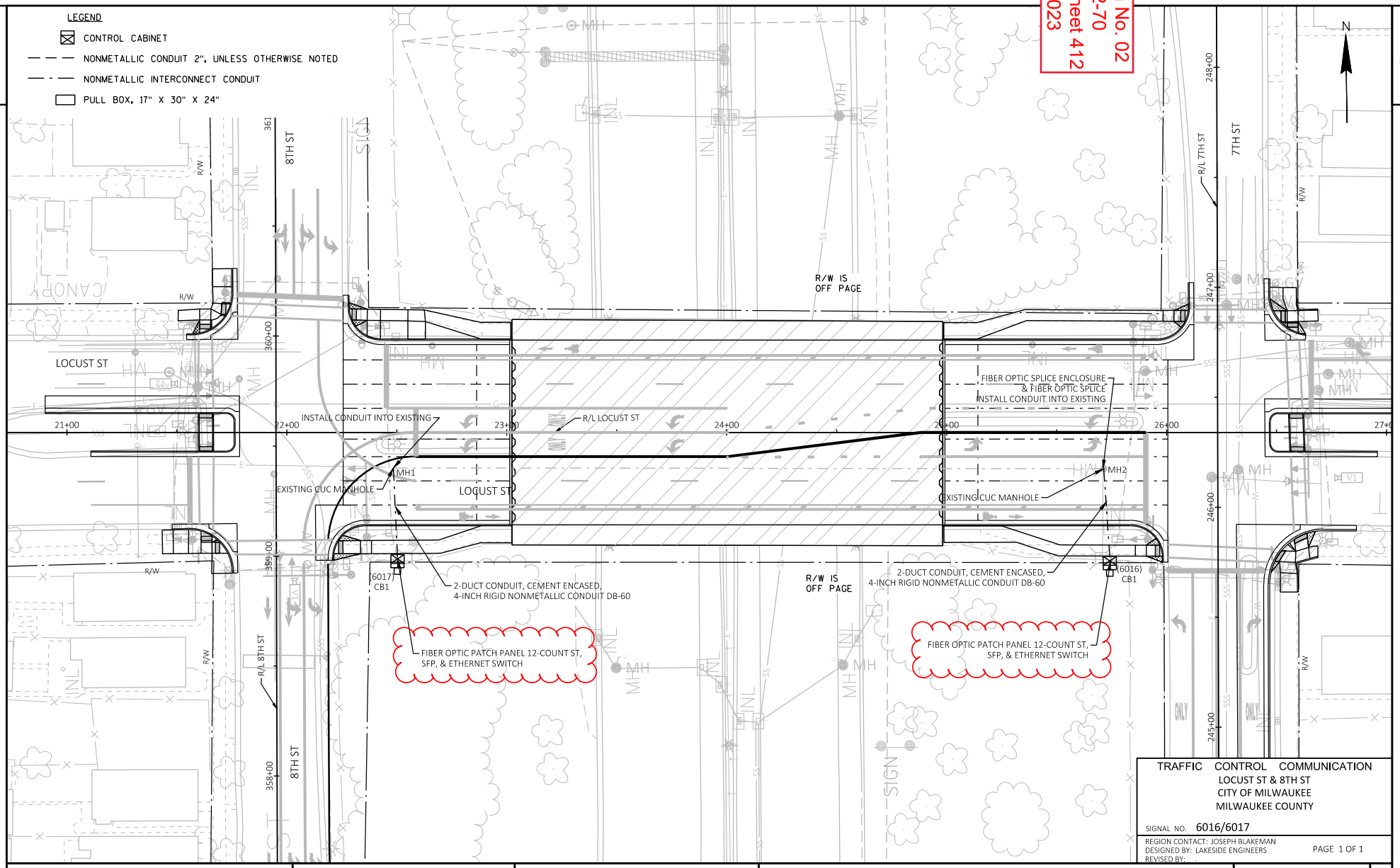
END OF ADDENDUM

Addendum No. 02
ID 1228-22-70
Revised Sheet 412
March 9, 2023



TRAFFIC CONTROL COMMUNICATION
LOCUST ST & 8TH ST
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. 6016/6017

REGION CONTACT: JOSEPH BLAKEMAN
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC SIGNAL COMMUNICATION PLAN	SHEET 412	E

FILE NAME : L:\DESIGN PROJECTS\1228-22-00 I-43 BROWN TO CAPITOL\10. ROADWAY\CADD\SHEETSPLAN\024291_SP.DWG
LAYOUT NAME - 024201_sp
PLOT DATE : 3/6/2023 11:37 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

INTERCONNECT

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

CONDUIT

FROM	TO	SPV.0090.0152 2-DUCT CONDUIT CEMENT ENCASED 4-INCH RIGID NONMETALLIC CONDUIT DB-60 LF	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
CB1 (6016)	MH1	45	1
CB1 (6017)	MH2	45	1
CB1 (6085)	MH3	74	1
CB1 (6086)	MH4	30	1
TOTALS		194	4

3

COMMUNICATION

LOCATION	670.0101.0300 FIELD SYSTEM INTEGRATOR EACH	678.0501.0300 COMMUNICATIONS SYSTEMS TESTING EACH	670.0201.0300 ITS DOCUMENTATION EACH
TRAFFIC SIGNAL COMMUNICATION	1	1	1
TOTALS	1	1	1

NETWORK

FROM	SPV.0060.0309 ETHERNET SWITCH EACH	SPV.0060.0311 CELLULAR MODEM EACH	SPV.0060.0312 WIRELESS ANTENNA EACH	SPV.0060.0313 SFP EACH
CB1 (6016)	1	--	--	12
CB1 (6017)	1	--	--	12
CB1 (6085)	1	1	1	--
CB1 (6086)	1	1	1	--
TOTALS	4	2	2	24

FIBER OPTIC

LOCATION	SPV.0060.0314 FIBER OPTIC SPLICE ENCLOSURE EACH	678.0300 FIBER OPTIC SPLICE EACH	SPV.0060.0315 FIBER OPTIC PATCH PANEL 12-COUNT ST EACH
CB1 (6016)	--	--	1
CB1 (6017)	--	--	1
MH2	1	24	--
TOTALS	1	24	2

FIBER OPTIC PATCH PANEL 8-COUNT ST FIBER OPTIC CABLE LENGTH

FROM	TO	LF
MH2	CB1 (6016)	150
MH2	CB1 (6017)	500

Addendum No. 02
ID 1228-20-70
Revised Sheet 814
March 9, 2023

PROJECT NO: 1228-22-70	HWY: IH 43	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET NO: 814	E

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
0896	678.0100.S Install Overhead Freeway DMS Full Matrix	1.000 EACH	_____.____	_____.____
0898	678.0200 Fiber Optic Splice Enclosure	11.000 EACH	_____.____	_____.____
0900	678.0300 Fiber Optic Splice	412.000 EACH	_____.____	_____.____
0902	678.0400 Fiber Optic Termination	48.000 EACH	_____.____	_____.____
0904	678.0501 Communication System Testing	2.000 EACH	_____.____	_____.____
0906	678.0600 Install Ethernet Switches	5.000 EACH	_____.____	_____.____
0908	690.0150 Sawing Asphalt	3,899.000 LF	_____.____	_____.____
0910	690.0250 Sawing Concrete	51,457.000 LF	_____.____	_____.____
0912	715.0603 Incentive Strength Concrete Barrier	9,110.000 DOL	1.00000	9,110.00
0914	715.0720 Incentive Compressive Strength Concrete Pavement	1,070.000 DOL	1.00000	1,070.00
0916	740.0440 Incentive IRI Ride	30,900.000 DOL	1.00000	30,900.00
0918	ASP.1.1PA On-the-Job Training Pre-Apprentice at $5.00/HR	5,000.000 HRS	5.00000	25,000.00
0920	ASP.1.1PAA On-the-Job Training Pre-Apprentice with Advancement at $10.00/HR	1,500.000 HRS	10.00000	15,000.00
0922	ASP.1T0A On-the-Job Training Apprentice at $5.00/HR	6,300.000 HRS	5.00000	31,500.00
0924	ASP.1T0G On-the-Job Training Graduate at $5.00/HR	14,400.000 HRS	5.00000	72,000.00

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, 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
0926	SPV.0055 Special 0001. Core Pilot Project; Incentive Density PWL HMA Pavement	15,310.000 DOL	1.00000	15,310.00
0928	SPV.0055 Special 0002. Core Pilot Project; Incentive Air Voids HMA Pavement	71,410.000 DOL	1.00000	71,410.00
0930	SPV.0055 Special 0003. Core Pilot Project; Incentive Density HMA Pavement Longitudinal Joints	6,800.000 DOL	1.00000	6,800.00
0932	SPV.0060 Special 0001. Baseline CPM Progress Schedule	1.000 EACH	_____.____	_____.____
0934	SPV.0060 Special 0002. Monthly CPM Progress Schedule Updates	36.000 EACH	_____.____	_____.____
0938	SPV.0060 Special 0004. Fastening Sewer Access Covers	160.000 EACH	_____.____	_____.____
0940	SPV.0060 Special 0009. Mobilizations Emergency Pavement Repair	10.000 EACH	_____.____	_____.____
0942	SPV.0060 Special 0010. Survey Project 1228-22-70	1.000 EACH	_____.____	_____.____
0944	SPV.0060 Special 0011. Utility Line Opening (ULO)	20.000 EACH	_____.____	_____.____
0946	SPV.0060 Special 0012. Emergency Response to Traffic Incident Involving Conc Barrier Temporary	40.000 EACH	_____.____	_____.____
0948	SPV.0060 Special 0013. Emergency Response to Traffic Incident Involving Crash Cushions	10.000 EACH	_____.____	_____.____
0954	SPV.0060 Special 0016. Traffic Control Close-Open Freeway Entrance Ramp	60.000 EACH	_____.____	_____.____
0956	SPV.0060 Special 0017. Traffic Control Full Freeway Closure	50.000 EACH	_____.____	_____.____

Proposal ID: 20230314012 Project(s): 1228-22-70, 1228-22-80, 1228-22-81, 1228-22-87

Federal ID(s): WISC 2023278, N/A, N/A, N/A

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0958	SPV.0060 Special 0018. Migratory Bird Nest Inspection B-40-207	1.000 EACH	_____.____	_____.____
0960	SPV.0060 Special 0050. Pipe Connection to Existing Structure	11.000 EACH	_____.____	_____.____
0962	SPV.0060 Special 0080. Adjusting Water Valve Boxes	6.000 EACH	_____.____	_____.____
0964	SPV.0060 Special 0081. Adjusting Water Manholes	6.000 EACH	_____.____	_____.____
0966	SPV.0060 Special 0101. Maintenance of Lighting System (1228-22-70)	1.000 EACH	_____.____	_____.____
0968	SPV.0060 Special 0102. Lighting System Integrator (1228-22-70)	1.000 EACH	_____.____	_____.____
0970	SPV.0060 Special 0103. Lighting System Survey (1228-22-70)	1.000 EACH	_____.____	_____.____
0972	SPV.0060 Special 0104. Wood Pole Lighting 60-Foot	68.000 EACH	_____.____	_____.____
0974	SPV.0060 Special 0105. Wood Pole 60-Foot	9.000 EACH	_____.____	_____.____
0976	SPV.0060 Special 0106. Removing Poles Wood 60-Foot And Floodlights	68.000 EACH	_____.____	_____.____
0978	SPV.0060 Special 0107. Removing Poles Wood 60-Foot	9.000 EACH	_____.____	_____.____
0980	SPV.0060 Special 0108. Luminaires Floodlight 400W HPS	75.000 EACH	_____.____	_____.____
0982	SPV.0060 Special 0109. Removing Electrical Service Meter Breaker Pedestal Lighting	4.000 EACH	_____.____	_____.____

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Federal ID(s): WISC 2023278, N/A, 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
0984	SPV.0060 Special 0110. Remove and Salvage Street Lighting Unit	23.000 EACH	_____.____	_____.____
0986	SPV.0060 Special 0111. Remove Existing Wood Pole	1.000 EACH	_____.____	_____.____
0988	SPV.0060 Special 0112. Pull Box 13-Inch x 24-Inch x 24-Inch	13.000 EACH	_____.____	_____.____
0990	SPV.0060 Special 0113. Pull Box 17-Inch x 30-Inch x 24-Inch	2.000 EACH	_____.____	_____.____
0992	SPV.0060 Special 0114. Installing Luminaire Arms Steel 15-FT	9.000 EACH	_____.____	_____.____
0994	SPV.0060 Special 0115. Pole Type 30-AL-BD	19.000 EACH	_____.____	_____.____
0996	SPV.0060 Special 0116. Water Tight Splice & Connections	34.000 EACH	_____.____	_____.____
0998	SPV.0060 Special 0117. Luminaire Arm Single Member 8-Ft. (Special)	24.000 EACH	_____.____	_____.____
1000	SPV.0060 Special 0118. Installing City-Furnished Luminaire Utility LED	33.000 EACH	_____.____	_____.____
1002	SPV.0060 Special 0150. 5’ Diameter “Doghouse” Manhole Type CUC	4.000 EACH	_____.____	_____.____
1004	SPV.0060 Special 0151. Removing CUC Manhole	4.000 EACH	_____.____	_____.____
1006	SPV.0060 Special 0152. Underdeck Utility Structure B-40-206	1.000 EACH	_____.____	_____.____
1008	SPV.0060 Special 0153. Underdeck Utility Structure B-40-207	1.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1010	SPV.0060 Special 0160. Suspended Galvanized Steel Conduit Package Cleaning, Coating and Painting	1.000 EACH	_____.____	_____.____
1012	SPV.0060 Special 0161. Suspended Galvanized Steel Conduit Repair	3.000 EACH	_____.____	_____.____
1014	SPV.0060 Special 0162. Pull Ropes Anchored to Manholes	2.000 EACH	_____.____	_____.____
1016	SPV.0060 Special 0205. Speed Warning Sign System	1.000 EACH	_____.____	_____.____
1018	SPV.0060 Special 0206. Install Speed Warning System DMS	3.000 EACH	_____.____	_____.____
1020	SPV.0060 Special 0207. Salvaging Overhead Freeway DMS	1.000 EACH	_____.____	_____.____
1022	SPV.0060 Special 0210. Temporary Poles Wood 40-FT	3.000 EACH	_____.____	_____.____
1024	SPV.0060 Special 0211. Temporary Vehicle Detector Assembly	3.000 EACH	_____.____	_____.____
1026	SPV.0060 Special 0213. Ground Rod	18.000 EACH	_____.____	_____.____
1028	SPV.0060 Special 0214. Relocating Temporary Vehicle Detector Assembly	6.000 EACH	_____.____	_____.____
1030	SPV.0060 Special 0215. Refocus Vehicle Detector Assembly	35.000 EACH	_____.____	_____.____
1032	SPV.0060 Special 0216. Install Ethernet Radio	3.000 EACH	_____.____	_____.____
1034	SPV.0060 Special 0219. Signal Assembly Advance Flasher Type 2	1.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1036	SPV.0060 Special 0224. Signal Assembly Ramp Control Sidemount	7.000 EACH	_____.____	_____.____
1038	SPV.0060 Special 0301. Fiberglass/Polymer Concrete Pull Box 17-Inch X 30-Inch X 24-Inch	34.000 EACH	_____.____	_____.____
1040	SPV.0060 Special 0302. Install Precast Control Cabinet Base	4.000 EACH	_____.____	_____.____
1042	SPV.0060 Special 0303. ATC Controller and Cabinet Installed	4.000 EACH	_____.____	_____.____
1044	SPV.0060 Special 0304. Vehicular Video Detection System - 2 Cameras	2.000 EACH	_____.____	_____.____
1046	SPV.0060 Special 0305. EVP 1 Channel 1 Direction Infrared Detector	12.000 EACH	_____.____	_____.____
1048	SPV.0060 Special 0306. EVP Confirmation Light	12.000 EACH	_____.____	_____.____
1050	SPV.0060 Special 0307. EVP Phase Selector Card 4 Channel	4.000 EACH	_____.____	_____.____
1054	SPV.0060 Special 0309. Ethernet Switch	4.000 EACH	_____.____	_____.____
1056	SPV.0060 Special 0310. Pedestrian Countdown Signal Face 12-inch	24.000 EACH	_____.____	_____.____
1058	SPV.0060 Special 0311. Cellular Modem	2.000 EACH	_____.____	_____.____
1060	SPV.0060 Special 0312. Wireless Antenna	2.000 EACH	_____.____	_____.____
1062	SPV.0060 Special 0313. SFP	24.000 EACH	_____.____	_____.____
1064	SPV.0060 Special 0314. Fiber Optic Splice Enclosure	1.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1066	SPV.0060 Special 0400. Embedded Galvanic Anodes	2,803.000 EACH	_____.____	_____.____
1068	SPV.0060 Special 0401. Heat Straightening of Damaged Girders	5.000 EACH	_____.____	_____.____
1070	SPV.0075 Special 0001. Pavement Cleanup Project	1,500.000 HRS	_____.____	_____.____
1072	SPV.0090 Special 0001. Marking Contrast Epoxy 4-Inch	39,747.000 LF	_____.____	_____.____
1074	SPV.0090 Special 0002. Marking Contrast Epoxy 8-Inch	9,052.000 LF	_____.____	_____.____
1076	SPV.0090 Special 0101. Cable Aerial Aluminum 6 AWG Quadruplex	8,984.000 LF	_____.____	_____.____
1078	SPV.0090 Special 0102. Cable Aerial Aluminum 4 AWG Quadruplex	2,987.000 LF	_____.____	_____.____
1080	SPV.0090 Special 0111. Electrical Cable in Duct Type 4#8/1#8 XLPE	2,539.000 LF	_____.____	_____.____
1082	SPV.0090 Special 0112. Electrical Cable in Duct Type 4#6/1#8 XLPE	1,680.000 LF	_____.____	_____.____
1084	SPV.0090 Special 0113. Electrical Cable in Duct Type 4#4/1#8 XLPE	612.000 LF	_____.____	_____.____
1086	SPV.0090 Special 0150. 8-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60	109.000 LF	_____.____	_____.____
1088	SPV.0090 Special 0151. 4-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60	82.000 LF	_____.____	_____.____
1090	SPV.0090 Special 0152. 2-Duct Conduit Cement Encased 4-Inch Rigid Nonmetallic Conduit DB-60	383.000 LF	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1092	SPV.0090 Special 0201. Outdoor Rated Network Cable	420.000 LF	_____.____	_____.____
1094	SPV.0090 Special 0400. Fencing Repair	50.000 LF	_____.____	_____.____
1096	SPV.0165 Special 0001. Wall Modular Block Mechanically Stabilized Earth	1,445.000 SF	_____.____	_____.____
1098	SPV.0165 Special 0400. Removing Loose Concrete Overhead	104.000 SF	_____.____	_____.____
1100	SPV.0165 Special 0401. Fiber Wrap Reinforcing Non-structural	1,019.000 SF	_____.____	_____.____
1102	SPV.0180 Special 0001. Resin Binder High Friction Surface Treatment Modified	88,265.000 SY	_____.____	_____.____
1104	SPV.0180 Special 0002. Removing Concrete Rumble Strips	160.000 SY	_____.____	_____.____
1106	SPV.0180 Special 0400. Methacrylate Flood Seal	1,382.000 SY	_____.____	_____.____
1108	SPV.0195 Special 0002. HMA Longitudinal Joint Repair	2,280.000 TON	_____.____	_____.____
1110	204.9060.S Removing (item description) 0001. Temporary Precast Trench Drain	478.000 EACH	_____.____	_____.____
1112	603.0405 Concrete Barrier Transition Section 32-Inch	34.000 LF	_____.____	_____.____
1114	603.1332 Concrete Barrier Type S32B	26.000 LF	_____.____	_____.____
1116	603.1342 Concrete Barrier Type S42B	114.000 LF	_____.____	_____.____
1118	603.3311 Concrete Barrier Transition Type NJ32DF to S32	1.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1120	643.1200.S Portable Automated Real-Time Traffic Queue Warning System	330.000 DAY	_____.____	_____.____
1122	643.3550 Temporary Marking Arrow Removable Tape	2.000 EACH	_____.____	_____.____
1124	643.3850 Temporary Marking Stop Line Removable Tape 18-Inch	22.000 LF	_____.____	_____.____
1126	657.0536 Monotube Arms 35-FT-Special	5.000 EACH	_____.____	_____.____
1128	657.0541 Monotube Arms 40-FT-Special	2.000 EACH	_____.____	_____.____
1130	657.0546 Monotube Arms 45-FT-Special	1.000 EACH	_____.____	_____.____
1132	SPV.0060 Special 0019. Concrete Barrier Transition Type V32 to S32A	5.000 EACH	_____.____	_____.____
1134	SPV.0060 Special 0020. Concrete Barrier Transition Type V42 to S42A	13.000 EACH	_____.____	_____.____
1136	SPV.0060 Special 0021. Concrete Barrier Transition Type S56 to S32A	1.000 EACH	_____.____	_____.____
1138	SPV.0060 Special 0022. Concrete Barrier Transition Type S56 to S42A	4.000 EACH	_____.____	_____.____
1140	SPV.0060 Special 0023. Concrete Barrier Transition Type V56 to S32A	2.000 EACH	_____.____	_____.____
1142	SPV.0060 Special 0024. Concrete Barrier Transition Type V56 to S42A	9.000 EACH	_____.____	_____.____
1144	SPV.0060 Special 0025. Concrete Barrier Transition Type S32A to S42A	15.000 EACH	_____.____	_____.____
1146	SPV.0060 Special 0026. Concrete Barrier Transition Type V51 to S56 Special	1.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1148	SPV.0060 Special 0027. Concrete Barrier Transition Type V56 to V42 Special	1.000 EACH	_____.____	_____.____
1150	SPV.0060 Special 0028. Concrete Barrier Transition Type V42 to S56A	1.000 EACH	_____.____	_____.____
1152	SPV.0060 Special 0019. Concrete Barrier Transition Type V56 to V56 Special I	1.000 EACH	_____.____	_____.____
1154	SPV.0060 Special 0030. Concrete Barrier Transition Type V56 to V56 Special II	1.000 EACH	_____.____	_____.____
1156	SPV.0060 Special 0031. Concrete Barrier Transition Type V32 to S42A	1.000 EACH	_____.____	_____.____
1158	SPV.0060 Special 0032. Concrete Barrier Type S42A Light Pole Base	45.000 EACH	_____.____	_____.____
1160	SPV.0060 Special 0033. Concrete Barrier Type V42 Light Pole Base	1.000 EACH	_____.____	_____.____
1162	SPV.0060 Special 0034. Concrete Barrier Type V42 Special Light Pole Base	1.000 EACH	_____.____	_____.____
1164	SPV.0060 Special 0035. Moving State Furnished Signs	2.000 EACH	_____.____	_____.____
1166	SPV.0060 Special 0036. Install State Furnished Signs	2.000 EACH	_____.____	_____.____
1168	SPV.0060 Special 0037. Cleaning Drainage Structures	40.000 EACH	_____.____	_____.____
1170	SPV.0060 Special 0402. Ultrasonic Impact Treatment Procedure	336.000 EACH	_____.____	_____.____
1172	SPV.0060 Special 0315. Fiber Optic Patch Panel 12-Count ST	2.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1174	SPV.0135	18.000		
	Special 0001. Field Office Special	MON	_____._____	_____._____

Section: 0001 Total: _____._____

Total Bid: _____._____