

CITY OF DE PERE

PROJECT

21-02

ERIE STREET RECONSTRUCTION AND UTILITY RELAY

**BID DATE:
APRIL 1, 2021
@ 1:00 PM**

Bid documents, including plans and specifications, are available for download at www.QuestCDN.com. The QuestCDN website can also be accessed through the City website at www.deperewi.gov/projects or by pressing the *Projects* icon at the bottom of any City website page. Download cost is \$15 for each contract. Bidding documents may be viewed on the QuestCDN website or at the Municipal Service Center, 925 S. Sixth Street, De Pere, WI 54115.

Bid Tabs must be verified by staff prior to posting and will be available for viewing on the website within 7 days following the bid opening. Award information will be pending until approved by the Common Council.

SECTION 00 01 10

TABLE OF CONTENTS

INTRODUCTORY INFORMATION

<u>Section</u>	<u>Title</u>
00 00 01	PROJECT MANUAL COVER
00 01 10	TABLE OF CONTENTS

PROJECT BID DOCUMENTS

<u>Section</u>	<u>Title</u>
00 11 13	ADVERTISEMENT TO BID
00 21 13	INSTRUCTIONS TO BIDDERS
00 41 13	BID FORM
00 41 43	BID SCHEDULE
00 43 13	BID BOND
00 43 33	PROPOSED PRODUCTS FORM
00 43 36	TABULATION OF SUBCONTRACTORS

CONTRACTING REQUIREMENTS

<u>Section</u>	<u>Title</u>
00 51 00	NOTICE OF AWARD
00 52 13	CONTRACT
00 55 00	NOTICE TO PROCEED
00 61 13	PAYMENT BOND
00 61 16	PERFORMANCE BOND
00 62 76	APPLICATION FOR PAYMENT
00 65 16	CERTIFICATE OF SUBSTANTIAL COMPLETION

DIVISION 1 GENERAL REQUIREMENTS

<u>Section</u>	<u>Title</u>
01 10 00	SUMMARY OF WORK
01 22 01	MEASUREMENT AND PAYMENT SANITARY SEWER
01 22 02	MEASUREMENT AND PAYMENT STORM SEWER
01 22 03	MEASUREMENT AND PAYMENT WATER SYSTEM
01 22 04	MEASUREMENT AND PAYMENT STREET AND DRAINAGE CONSTRUCTION
01 22 05	MEASUREMENT AND PAYMENT SPECIAL CONSTRUCTION
01 29 00	PAYMENT PROCEDURES
01 32 33	CONSTRUCTION PHOTOGRAPHS
01 33 00	SUBMITTALS
01 41 00	REGULATORY REQUIREMENTS
01 71 23	FIELD ENGINEERING

SUPPLEMENTAL SPECIAL PROVISIONS

03 35 33	STAMPED COLORED CONCRETE
32 11 26.16	PULVERIZED ASPHALT AND AGGREGATE BASE COURSE
33 00 05	DOUBLE AND TRIPLE WALLED POLYPROPYLENE PIPE

APPENDIX

A.	GEOTECHNICAL ENGINEERING SERVICES REPORT, NORTH ERIE STREET RECONSTRUCTION, DE PERE, WISCONSIN, BY INTERTEK PSI
----	--

CITY OF DE PERE 2020 STANDARD SPECIFICATIONS

CONTRACTING REQUIREMENTS

<u>Section</u>	<u>Title</u>
00 70 00	GENERAL CONDITIONS (See City of De Pere 2020 Standard Specifications)
DIVISION 31 –	EARTHWORK (See City of De Pere 2020 Standard Specifications)
DIVISION 32 –	EXTERIOR IMPROVEMENTS (See City of De Pere 2020 Standard Specifications)
DIVISION 33 –	UTILITIES (See City of De Pere 2020 Standard Specifications)

SECTION 00 11 13

MARCH 11 – MARCH 18, 2021

CITY OF DE PERE

ADVERTISEMENT TO BID

PROJECT 21-02

ERIE STREET RECONSTRUCTION AND UTILITY RELAY

Sealed proposals will be received by the Board of Public Works of the City of De Pere at the Municipal Service Center, 925 South Sixth Street, De Pere, Wisconsin 54115, until 1:00 PM, Thursday, April 1, 2021, at which time they will be publicly opened and read aloud. The bid opening will occur virtually. See section 00 21 13, Instructions to Bidders, for additional information.

Project 21-02 for which proposals are being sought includes the following approximate quantities:

- 600 LF New and Relay Sanitary Sewer (8-inch) and Associated Appurtenances
- 500 LF New and Relay Storm Sewer (8-inch to 30-inch) and Associated Appurtenances
- 2,400 LF Relay Water Main (8-inch to 16-inch) and Associated Appurtenances
- New Storm Lateral Installation (6-inch), Relay Sanitary Sewer Laterals (4-inch and 6-inch) and Relay Water Services (1-inch to 2-inch).
- 1,500 Tons Asphaltic Concrete Pavement Placement
- 800 SY Asphaltic Concrete Pavement Milling
- 6,300 Tons Crushed Aggregate Base Course
- 4,600 CY Unclassified Excavation
- 2,400 LF Slip Form Curb and Gutter
- Replacement Concrete Pavement, Stamped Colored Concrete Pavement, Sidewalk, Driveway
- Restoration
- Pavement Marking Lines
- Traffic Control

Complete digital project bidding documents are available for viewing and/or downloading at www.QuestCDN.com or may be examined at the office of the Director of Public Works. Digital plan documents may be downloaded for \$15 by inputting Quest project #7460692 on Quest's Project Search page. The QuestCDN website can also be accessed through the City website at www.deperewi.gov/projects or by pressing the *Projects* icon at the bottom of any City website page.

Each proposal shall be accompanied by a certified check or bid bond in an amount equal to five percent (5%) of the bid, payable to the City of De Pere, as a guarantee that if the bid is accepted, the bidder will execute a contract and furnish a contract bond as set forth in the General Conditions of the City of De Pere. In case the bidder fails to file such contract and bond, the amount of the check or bid bond shall be forfeited to the City of De Pere as liquidated damages.

Project 21-02
Erie Street Reconstruction and Utility Relay

City of De Pere

The letting of the contract is subject to the provisions of the following Wisconsin Statutes:

Section 62.15 regarding Public Works.

Section 66.0901(3) regarding Prequalification of Contractor.

Each bidder shall pre-qualify by submitting proof of responsibility on forms furnished by the Director of Public Works. Such forms shall be filed with the Director of Public Works no later than 4:00 PM, Monday, March 29, 2021. Prospective bidders who have previously submitted such forms subsequent to January 1, 2021 will not be required to separately submit such form for this project.

The City of De Pere reserves the right to reject any or all bids, to waive any informalities in bidding and to accept any proposal which the Common Council deems most favorable to the interest of the City of De Pere.

Dated this 11th day of March 2021.

Board of Public Works
City of De Pere
Eric Rakers, P.E.
City Engineer

Project 21-02

SECTION 00 21 13

INSTRUCTIONS TO BIDDERS

ARTICLE 1 – DEFINED TERMS

- 1.1 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- None

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

- 2.1 Complete sets of the Bidding documents in the number and for the deposit sum, if any, stated in the Advertisement to Bid may be obtained as stated in the Advertisement for bids.
- 2.2 Complete sets of Bidding Documents shall be used in preparing Bids; Owner does not assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.3 Owner, in providing the Bidding Documents on the terms stated in the Advertisement for Bids, does so only for the purpose of obtaining Bids for the Work and does not confer a license or grant for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

- 3.1 In accordance with Section 66.0901(3), each bidder shall pre-qualify by submitting proof of responsibility on forms furnished by the Director of Public Works. Such forms shall be filed with the Director of Public Works as stated in the Advertisement for Bids. Prospective bidders who have previously submitted such forms after January 1st of this year will not be required to separately submit such form for this project.

ARTICLE 4 – EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA AND SITE

- 4.1 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated conditions appear in the General Conditions.
- 4.2 Underground Facilities
- A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

4.3 Subsurface and Physical Conditions

- A. The technical data includes:
 - 1. Those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
 - 2. Those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except underground Facilities).
 - 3. In preparation of the Plans and Specifications, Engineer relied upon the following reports of explorations and tests of subsurface conditions at the Site:
 - a. Geotechnical Engineering Services Report, North Erie Street Reconstruction, De Pere, Wisconsin, by Intertek PSI
- B. Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the accuracy of the “technical data” contained in such reports and drawings, but such reports and drawings are not Contract Documents. Contractor may not rely upon or make any claim against Owner, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 - 1. the completeness of such reports and drawings for Contractor’s purposes, including but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
 - 2. Other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 - 3. Any Contractor interpretation of or conclusion drawn from any “technical data” or any such other data, interpretations, opinions, or information.

4.4 On request, Owner will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates.

4.5 Reference is made to Section 01 10 00: Summary of Work, for work that will be completed and for the identification of the general nature of other work that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) that relates to the Work contemplated by these Bidding Documents. On request, Owner will provide to each Bidder for examination access to or copies of Contract Documents (other portions thereof related to price) for such other work.

4.6 It is the responsibility of each Bidder before submitting a Bid to:

- A. Examine and carefully study the Bidding Documents, the other related data identified in the Bidding Documents, and any Addenda;
- B. Visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site

conditions that may affect cost, progress, and performance of the Work;

- C. Become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work;
- D. Obtain and carefully study (or accept consequences of not doing so) all examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto;
- E. Agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;
- F. Become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- G. Correlate the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;
- H. Promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies, that bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder; and
- I. Determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

- 4.7 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and, procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 5 – SITE AND OTHER AREAS

- 5.1 The Site is identified in the Bidding Documents. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor.

ARTICLE 6 – INTERPRETATIONS AND ADDENDA

- 6.1 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than ten days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 6.2 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by Owner and Engineer.

ARTICLE 7 – BID SECURITY

- 7.1 A Bid shall be accompanied by Bid security made payable to Owner in an amount of five percent (5%) of Bidder's maximum Bid price and in the form of a certified check or bank money order or Bid bond (on the form attached) issued by a surety meeting the requirements of the General Conditions. Submittal of a Bid Bond on a form other than the Bid Bond form included in the Bidding Documents may be cause for rejection of Bid.
- 7.2 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within fifteen (15) days after the Notice of Award, Owner may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner per the General Conditions.
- 7.3 Bid security of other Bidders whom Owner believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

ARTICLE 8 – CONTRACT TIMES

- 8.1 The number of days within which, or the dates by which, Milestones are to be achieved and the Work is to be substantially completed and ready for final payment are set forth in the Bid Form and Summary of Work.

ARTICLE 9 – LIQUIDATED DAMAGES

9.1 Provisions for liquidated damages are set forth in the General Conditions.

ARTICLE 10 – SUBSTITUTE AND “OR-EQUAL” ITEMS

10.1 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or “or-equal” items. Whenever it is specified or described in the Bidding Documents that a substitute or “or-equal” item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Bid Form and Summary of Work.

ARTICLE 11 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

11.1 The Bidder shall submit with the Bid to Owner a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute, in which case apparent Successful Bidder shall submit an acceptable substitute, Bidder’s Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

11.2 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposed to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner subject to revocation of such acceptance after the Effective Date of the Agreement.

11.3 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.

ARTICLE 12 – PREPARATION OF BID

12.1 The Bid form is included with the Bidding documents.

12.2 All blanks on the Bid Form shall be completed by printing in ink or by typewrite and the Bid signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each alternative, and unit price item listed therein, or the words “No Bid,” “No Change,” or “Not Applicable” entered.

- 12.3 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporations shall be shown below the seal.
- 12.4 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown below the signature.
- 12.5 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown below the signature.
- 12.6 A Bid by an individual shall show the Bidder's name and official address.
- 12.7 A Bid by a joint venture shall be executed by each joint venture in the manner indicated on the Bid Form. The official address of the joint venture shall be shown below the signature.
- 12.8 All names shall be typed or printed in ink below the signatures.
- 12.9 The Bid shall contain an acknowledgement of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 12.10 The address and telephone number for communications regarding the Bid shall be shown.
- 12.11 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the Contract. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.

ARTICLE 13 – BASIS OF BID; COMPARISON OF BIDS

- 13.1 Unit Price
 - A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid Schedule.
 - B. The total of all estimated prices will be the sum of the products of the estimated quantity of each item and the corresponding unit price. The final quantities and Contract Price will be determined in accord with the General Conditions.
 - C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

ARTICLE 14 – SUBMITTAL OF BID

- 14.1 A Bid shall be submitted no later than date and time prescribed and at place indicated in Advertisement for Bids and shall be enclosed in a plainly marked package with the Project title (and, if applicable, designated portion of the Project for which the Bid is submitted), name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to City of De Pere, Municipal Service Center, 925 South Sixth Street, De Pere, WI 54115. Electronically transmitted Bids will not be accepted.
- 14.2 See Bid Form for a list of documents typically required to be submitted with the Bid.

ARTICLE 15 – MODIFICATION AND WITHDRAWAL OF BID

- 15.1 A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.
- 15.2 If within 24 hours after Bids are opened, any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 16 – OPENING BIDS

- 16.1 Bids will be opened at the time and place indicated in the Advertisement to Bids. The bid opening can be viewed live via GoToMeeting information shown below. With the current COVID-19 restrictions, the Municipal Service Center is closed for access. An abstract of the amounts of the base bids and major alternates, if any, will be made available to Bidders after opening the bids.

The bid opening can be viewed live via GoToMeeting as follows:
Please join my meeting from your computer, tablet or smartphone.

<https://global.gotomeeting.com/join/218839925>

You can also dial in using your phone.
(For supported devices, tap a one-touch number below to join instantly.)

United States (Toll Free): 1 866 899 4679
- One-touch: <tel:+18668994679,,218839925#>

United States: +1 (571) 317-3116

- One-touch: <tel:+15713173116,,218839925#>

Access Code: 218-839-925

New to GoToMeeting? Get the app now and be ready when your first meeting starts:

<https://global.gotomeeting.com/install/218839925>

ARTICLE 17 – BIDS REMAIN SUBJECT TO ACCEPTANCE

- 17.1 All bids will remain subject to acceptance for the period of time stated in the General Conditions, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 18 – EVALUATION OF BIDS AND AWARD OF CONTRACT

- 18.1 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to not be responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.
- 18.2 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.
- 18.3 In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- 18.4 In evaluating Bidders, Owner will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Supplier, and other individuals or entities proposed for those portions of the Work for which the identify of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.
- 18.5 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents.
- 18.6 Bidder agrees to waive any claim it has or may have against the Owner and the respective employees arising out of or in connection with the administration, evaluation or recommendation of any Bid.

- 18.7 If the Contract is to be awarded, Owner will award the Contract to the lowest responsible responsive Bidder whose Bid is in the best interests of the Project.

ARTICLE 19 – CONTRACT SECURITY AND INSURANCE

- 19.1 The General Conditions set forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by such bonds and a certificate of insurance.

ARTICLE 20 – SIGNING OF AGREEMENT

- 20.1 When Owner gives a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement with the other Contract Documents which are identified in the Agreement as attached thereto. Within ten (10) days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner. Within ten (10) days thereafter, Owner shall deliver one fully signed counterpart to Successful Bidder with a complete set of Drawings with appropriate identification.

END OF SECTION

SECTION 00 41 13

CITY OF DE PERE

BID FORM

PROJECT 21-02

This bid, submitted by the undersigned Bidder to the City of De Pere, in accordance with the Advertisement to Bid, which will be received until 1:00 PM, Thursday, April 1, 2021 is to furnish and deliver all materials, and to perform and do all work on the project designated, by September 15, 2021.

Bidder has examined and carefully prepared the bid from the plans and specifications and has checked the same in detail before submitting said proposal or bid; and that said bidder or bidder's 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 or bid.

Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.

Addendum Date

BASIS OF BID:

Bidder will complete the Work in accordance with the Contract documents for the following price(s):

As stated in the attached Unit Price Bid Schedule.

Unit Prices have been computed in accordance with the General Conditions.

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

TOTAL BID PRICE: \$_____

Project 21-02
Erie Street Reconstruction and Utility Relay

City of De Pere

ATTACHMENTS TO THIS BID

The following documents are submitted with and made a condition of this Bid:

- A. Required Bid Security
- B. Unit Price Bid Schedule (Section 00 41 43)
- C. Proposed Products Form (Section 00 43 33)
- D. Tabulation of Subcontractors (Section 00 43 36)

BID SUBMITTAL

This Bid is submitted by _____ of _____,

The Bidder, being duly sworn, does dispose that they are an authorized representative of

Bidder, if Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name: _____

By: _____
(Signature of general partner – attach evidence of authority to sign)

Name (typed or printed): _____

A Corporation

Corporation Name: _____

State of Incorporation: _____

Type (General Business, Professional, Service, Limited Liability): _____

By: _____
(Signature – attach evidence of authority to sign)

Project 21-02
Erie Street Reconstruction and Utility Relay

City of De Pere

Name (typed or printed): _____

Title: _____

(CORPORATE SEAL)

Attest _____

Date of Qualification to do business in Wisconsin is ____/____/____.

Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____ (SEAL)

By: _____

(Signature of first joint venture partner – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Second Joint Venturer Name: _____ (SEAL)

By: _____

(Signature of second joint venture partner – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(Each joint venturer must sign. Manner of signing for each individual, partnership, and corporation that is a party to joint venture should be in manner indicated above.)

Bidder's Business Address _____

Phone No. _____ Fax No. _____

E-mail _____

SUBMITTED on _____, 20__.

State Contractor License No. _____ (if applicable)

SECTION 00 41 43

CITY OF DE PERE

PROJECT 21-02

BID SCHEDULE – UNIT PRICE

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT BID
SANITARY SEWER					
SS-01	Remove and Relay 8" PVC Sanitary Sewer	LF	400	\$ _____	\$ _____
SS-02	Provide 8" PVC Sanitary Sewer	LF	290	\$ _____	\$ _____
SS-03	Remove and Relay 6" or 4" PVC Sanitary Lateral	LF	440	\$ _____	\$ _____
SS-04	Provide 4" PVC Sanitary Sewer Lateral	LF	30	\$ _____	\$ _____
SS-05	Provide Sanitary Sewer Risers	LF	20	\$ _____	\$ _____
SS-06	Provide 8"x6" or 8"x4" Sanitary Wye	EA	2	\$ _____	\$ _____
SS-07	Provide 8"x4" Sanitary Wye	EA	1	\$ _____	\$ _____
SS-08	Provide 6" or 4" Saddle to Existing Sanitary Sewer	EA	9	\$ _____	\$ _____
SS-09	Dig Down and Verify Active Lateral	EA	2	\$ _____	\$ _____
SS-10	Remove and Replace 4' Diameter Sanitary Sewer Manhole	VF	25	\$ _____	\$ _____
SS-11	Provide 4' Diameter Outside Drop Sanitary Sewer Manhole	VF	19	\$ _____	\$ _____
SS-12	Core Drill Sanitary Manhole	EA	1	\$ _____	\$ _____
SS-13	Connect to Existing Sanitary Sewer Pipe	EA	5	\$ _____	\$ _____

Project 21-02
Erie Street Reconstruction and Utility Relay

City of De Pere

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT BID
SANITARY SEWER (CONTINUED...)					
SS-14	Connect to Existing CIPP Sanitary Sewer Pipe	EA	3	\$ _____	\$ _____
STORM SEWER					
ST-01	Remove 24" and Relay 30" PVC, PP, or RCP Class III Storm Sewer	LF	400	\$ _____	\$ _____
ST-02	Remove and Relay 12" PVC or RCP Class III Storm Sewer	LF	40	\$ _____	\$ _____
ST-03	Provide 30" RCP Class III Storm Sewer	LF	10	\$ _____	\$ _____
ST-04	Provide 12" PVC or RCP Class III Storm Sewer	LF	830	\$ _____	\$ _____
ST-05	Provide 8" PVC Storm Sewer	LF	250	\$ _____	\$ _____
ST-06	Provide 6" PVC Storm Sewer Lateral	LF	1,450	\$ _____	\$ _____
ST-07	Provide 30"x6" Storm Branch or Inserta Tee	EA	9	\$ _____	\$ _____
ST-08	Provide 12"x6" Storm Branch or Inserta Tee	EA	2	\$ _____	\$ _____
ST-09	Core Drill Storm Sewer and Provide Lateral Connection	EA	25	\$ _____	\$ _____
ST-10	Remove and Replace 4' Diameter Storm Manhole	VF	6	\$ _____	\$ _____
ST-11	Remove and Replace 6' Diameter Storm Manhole	VF	14	\$ _____	\$ _____
ST-12	Provide 5' Diameter Storm Manhole (Construct Over Existing-Doghouse)	VF	11	\$ _____	\$ _____
ST-13	Provide 4' Diameter Storm Manhole	VF	38	\$ _____	\$ _____
ST-14	Provide 5' Diameter Storm Manhole	VF	14	\$ _____	\$ _____

Project 21-02
Erie Street Reconstruction and Utility Relay

City of De Pere

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT BID
STORM SEWER (CONTINUED...)					
ST-15	Remove and Replace Type B Inlet	EA	2	\$ _____	\$ _____
ST-16	Provide Type B Inlet	EA	18	\$ _____	\$ _____
ST-17	Connect to Existing Storm Structure	EA	2	\$ _____	\$ _____
ST-18	Connect to Existing Pipe	EA	8	\$ _____	\$ _____
ST-19	Concrete Collar (Connection to Existing Pipe)	EA	7	\$ _____	\$ _____
ST-20	Core Drill Storm Manhole (12" Opening)	EA	1	\$ _____	\$ _____
ST-21	Core Drill Storm Manhole (6" Opening)	EA	1	\$ _____	\$ _____
ST-22	Storm Sewer Dig Down Spot Repair -10 Feet	EA	1	\$ _____	\$ _____
ST-23	Abandon/Remove Existing Storm Sewer and Appurtenances	LS	1	\$ _____	\$ _____
WATER MAIN					
W-01	Provide 16" PVC Water Main	LF	2,140	\$ _____	\$ _____
W-02	Provide 12" PVC Water Main	LF	10	\$ _____	\$ _____
W-03	Provide 8" PVC Water Main	LF	350	\$ _____	\$ _____
W-04	Provide 6" PVC Water Main and Hydrant Lead	LF	90	\$ _____	\$ _____
W-05	Provide 1 ½" HDPE Water Service	LF	25	\$ _____	\$ _____
W-06	Provide 1" HDPE Water Service	LF	1,510	\$ _____	\$ _____
W-07	Provide 1 ½" Corporation and Curb Stop	EA	1	\$ _____	\$ _____

Project 21-02
Erie Street Reconstruction and Utility Relay

City of De Pere

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT BID
WATER MAIN (CONTINUED...)					
W-08	Provide 1" Corporation and Curb Stop	EA	47	\$ _____	\$ _____
W-09	Provide 2" Corporation with Plug/Saddle with 2" Galvanized Pipe	EA	5	\$ _____	\$ _____
W-10	Provide 16" Butterfly Valve	EA	5	\$ _____	\$ _____
W-11	Provide 12" Gate Valve	EA	1	\$ _____	\$ _____
W-12	Provide 8" Gate Valve	EA	3	\$ _____	\$ _____
W-13	Provide 6" Gate Valve	EA	4	\$ _____	\$ _____
W-14	Provide Connection to Existing Water Main	EA	9	\$ _____	\$ _____
W-15	Provide Hydrant 7.5' Bury	EA	2	\$ _____	\$ _____
W-16	Provide Hydrant 7.0' Bury	EA	1	\$ _____	\$ _____
W-17	Provide 16" Water Main Offset	EA	2	\$ _____	\$ _____
W-18	Provide 8" Water Main Offset	EA	1	\$ _____	\$ _____
W-19	Provide 16" - ½ Water Main Offset	EA	2	\$ _____	\$ _____
W-20	Abandon/Remove Water Main and Appurtenances	LS	1	\$ _____	\$ _____
STREET AND DRAINAGE					
SD-01	Clearing and Grubbing	ID	230	\$ _____	\$ _____
SD-02	Unclassified Excavation	CY	4,650	\$ _____	\$ _____

Project 21-02
Erie Street Reconstruction and Utility Relay

City of De Pere

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT BID
STREET AND DRAINAGE (CONTINUED...)					
SD-03	Mill Asphaltic Concrete Pavement	SY	820	\$ _____	\$ _____
SD-04	Provide 1 ¼" Crushed Aggregate Base Course	CY	3,250	\$ _____	\$ _____
SD-05	Provide Asphaltic Concrete Pavement Type 4 LT 58-28 S, 1 ¾" Upper Layer	TON	700	\$ _____	\$ _____
SD-06	Provide Asphaltic Concrete Pavement Type 3 LT 58-28 S, 2 ¼" Lower Layer	TON	950	\$ _____	\$ _____
SD-07	Provide Asphaltic Concrete Pavement Type 4 LT 58-28 S, 2" Overlay or Upper Layer	TON	100	\$ _____	\$ _____
SD-08	Provide Asphaltic Concrete Pavement Type 4 LT 58-28 S, 2" Lower Layer-James Street	TON	80	\$ _____	\$ _____
SD-09	Provide Temporary Asphalt Patch on George Street	LS	1	\$ _____	\$ _____
SD-10	Provide 24" Concrete Curb and Gutter (Slip Form)	LF	4,000	\$ _____	\$ _____
SD-11	Remove and Replace 24" Concrete Curb and Gutter	LF	250	\$ _____	\$ _____
SD-12	Remove and Replace 24" Concrete Curb and Gutter (Integral Curb)	LF	25	\$ _____	\$ _____
SD-13	Remove and Replace 24" Concrete Curb and Gutter (Hand Excavate and Form at Trees)	LF	20	\$ _____	\$ _____
SD-14	Concrete Curb Pedestrian	LF	100	\$ _____	\$ _____
SD-15	Remove and Replace 8-Inch Doweled Concrete Pavement	SY	80	\$ _____	\$ _____
SD-16	Remove and Replace 9-Inch Doweled Concrete Pavement (HES-3Day)	SY	90	\$ _____	\$ _____
SD-17	Remove and Replace 9-Inch Doweled Concrete Pavement (HES-3Day Red Stamped)	SY	20	\$ _____	\$ _____

Project 21-02
Erie Street Reconstruction and Utility Relay

City of De Pere

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT BID
STREET AND DRAINAGE (CONTINUED...)					
SD-18	Remove and Replace 9-Inch Doweled Concrete Pavement (HES-24HR)	SY	25	\$ _____	\$ _____
SD-19	Remove and Replace 4" Concrete Sidewalk	SY	525	\$ _____	\$ _____
SD-20	Remove and Replace 6" Concrete Ramp and Driveway	SY	925	\$ _____	\$ _____
SD-21	Remove and Replace 8" Concrete Driveway	SY	40	\$ _____	\$ _____
SD-22	Provide #4 Reinforcement Bars for Curb and Sidewalk	LF	2,850	\$ _____	\$ _____
SD-23	Drilled Tie Bars (Existing Sidewalk, Driveway, and Curb and Gutter)	EA	410	\$ _____	\$ _____
SD-24	Drilled Dowel Bars	EA	110	\$ _____	\$ _____
SD-25	Drilled Tie Bars (Concrete Pavement)	EA	80	\$ _____	\$ _____
SD-26	Provide Detectable Warning Field (Natural)	EA	30	\$ _____	\$ _____
SD-27	Traffic Control With Flaggers or Temporary Traffic Signal (George Street)	LS	1	\$ _____	\$ _____
SD-28	Pavement Marking Stop Line Epoxy 18-Inch White	LF	40	\$ _____	\$ _____
SD-29	Pavement Marking Epoxy 8-Inch White	LF	180	\$ _____	\$ _____
SD-30	Pavement Marking Epoxy 4-Inch Yellow	LF	550	\$ _____	\$ _____
SD-31	Landscaping – Topsoil, Seed, Fertilizer and Mulch	SY	2,400	\$ _____	\$ _____

Project 21-02
Erie Street Reconstruction and Utility Relay

City of De Pere

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT BID
SPECIAL CONSTRUCTION					
SC-01	Pipe Foundation Stabilization	CY	100	\$ _____	\$ _____
SC-02	Aggregate Slurry Backfill	CY	20	\$ _____	\$ _____
SC-03	Inlet Protection Type D	EA	37	\$ _____	\$ _____
SC-04	Rock Filled Filter Bags	EA	20	\$ _____	\$ _____
SC-05	Adjust Inlet	EA	1	\$ _____	\$ _____
SC-06	Adjust Manhole	EA	2	\$ _____	\$ _____
TOTAL AMOUNT BID:					\$ _____

SECTION 00 43 13

CITY OF DE PERE

BID BOND

KNOW ALL MEN BY THESE PRESENTS: That _____,

as Principal, hereinafter called Principal, and _____,

as Surety, hereinafter called Surety, are held and firmly bound unto the City of De Pere, a municipal corporation of the State of Wisconsin, as Obligee, hereinafter called City, in the amount of _____ dollars (\$_____) for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presence.

WHEREAS, Principal has made a proposal to the City for furnishing all materials, labor, tools, equipment and incidentals necessary to complete the work of Project 21-02 in accordance with drawings and specifications prepared by the Director of Public Works of said City, which proposal is by reference made a part hereof, and is hereinafter referred to as the BID.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Principal shall be awarded the contract for said project and Principal shall enter into a contract in accordance with the BID, then this obligation shall be null and void; otherwise it shall remain in full force and effect, provided that:

1. The liability of Surety shall in no event exceed the penalty of this bond.
2. Any suits at law or proceedings, in equity brought or to be brought against Surety to recover any claim hereunder shall be executed within six (6) months from the date of this instrument.

Signed and sealed this _____ day of _____, 20_____.

In the presence of:

WITNESS

PRINCIPAL (SEAL)

WITNESS

SURETY (SEAL)

SECTION 00 43 33

PROPOSED PRODUCTS FORM

The following is a list of material, type or model numbers and manufacturers used in the preparation of this proposal and to be used on this project:

ITEM	MATERIAL	SUPPLIER
Valves		
Hydrants		
Manholes	Concrete	
Inlets	Concrete	
Storm Sewer (PVC) (List Proposed Size)		
Storm Sewer (RCP) (List Proposed Size)		
Storm Sewer (PP) (List Proposed Size)		

SECTION 00 43 36

TABULATION OF SUBCONTRACTORS

The following information is submitted which gives the name, business address, and portion of work for each subcontractor that will be used in the work if the bidder is awarded the contract, and no subcontractor doing work in excess of one-half of one percent of the total amount of the bid and who is not listed will be used without the written approval of the Engineer. Additional numbered pages outlining this portion of the proposal may be attached to this page.

<u>PORTION OF WORK</u>	<u>BUSINESS NAME</u>	<u>BUSINESS ADDRESS</u>
Concrete Sidewalk and Pavement		
Asphaltic Concrete Pavement		
Utility Work		
Traffic Control		
Landscaping		

SECTION 00 51 00

NOTICE OF AWARD

(Contractor)
(Contractor Name)
(Address)
(Address)

Project Description: 21-02 Erie Street Reconstruction and Utility Relay

The City has considered the proposal submitted by you dated (BID DATE) for the above-described project in response to its Advertisement for Bids dated March 11, 2021 and March 18, 2021.

You are hereby notified that the Common Council of the City of De Pere has accepted your bid of (Contract Amount \$_____.00).

You are required to execute the Contract and furnish the required Performance Bond, Payment Bond and Certificates of Insurance within ten (10) calendar days from the date of this notice to you.

If you fail to execute said Agreement and to furnish said bonds within ten (10) days from the date of this notice, said City will be entitled to consider all your rights arising out of the City's acceptance of your bid as abandoned and as a forfeiture of your Bid Bond. The City will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the City.

Dated this __th day of _____ 2021.

DEPARTMENT OF PUBLIC WORKS

BY: Eric P. Rakers, P.E.
City Engineer

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged by:

_____, this the _____ day of _____, 20____

By: _____

Title: _____

SECTION 00 52 13

CONTRACT

This Contract, made and entered into this day _____ (date to be affixed by City), by and between (Contractor Name), hereinafter called Contractor, and the City of De Pere, a municipal corporation of the State of Wisconsin, hereinafter called City.

WITNESSETH: That, in consideration of the covenants and agreements herein contained, to be performed by the parties hereto, and of the payments hereinafter agreed to be made, it is mutually agreed as follows:

ARTICLE I - SCOPE OF WORK

The Contractor shall furnish all materials and all equipment and labor necessary, and perform all work shown on the drawings and described in the specifications for the project entitled Project 21-02 Erie Street Reconstruction and Utility Relay, all in accordance with the requirements and provisions of the following documents, which are hereby made a part of this Contract:

- (a) Advertisement for Bids, dated March 11, 2021 and March 18, 2021.
- (b) Drawings designated for Project 21-02 Erie Street Reconstruction and Utility Relay dated March 11, 2021.
- (c) City of De Pere 2020 Construction Specifications.
- (d) Special Provisions dated March 11, 2021.
- (e) Proposal submitted by (Contractor Name) dated Bid Date.
- (f) Addenda No. _____ dated _____

ARTICLE II - TIME OF COMPLETION

- (a) The work to be performed under the Contract shall be commenced within (number spelled out) (__) calendar days after receipt of written notice to proceed. The work shall be completed within (Number spelled out) (__) calendar days) or (specific calendar dates) after receipt of Notice to Proceed.
- (b) Time is of the essence with respect to the date of completion herein above stated. Failure to complete the work within the number of calendar days stated in this Article, or interim dates included in the work sequence in Section 01 10 00, Summary of Work, including any extensions granted thereto, shall entitle the City to deduct from the monies due the Contractor an amount equal to Update based on 00 70 00 - General Conditions (Page 27)(\$) per day for each calendar day of delay in the completion of the work. Such amount shall be considered and treated not as a penalty but as liquidated damages, which the City will sustain, by failure of the Contractor to complete the work within the time stated.

ARTICLE III - PAYMENT

- (a) The Contract Sum. The City shall pay to the Contractor for the performance of the Contract the amounts determined for the total number of each of the following units of work completed at the unit price stated thereafter. The number of units contained in this schedule is approximate only, and the final payment shall be made for the actual number of units that are incorporated in or made necessary by the work covered by the Contract.
- (b) Progress Payments. The City shall make payments on account of the Contract as follows:
1. On not later than the fourth Friday of every month the Contractor shall present to the City an invoice covering an estimate of the amount and proportionate value of the work done as verified by the City under each item of work that has been completed from the start of the job up to and including the fourth Friday of the preceding month, and the value of the work so completed determined in accordance with the schedule of unit prices for such items, together with such supporting evidence as may be required. This invoice shall also include an allowance for the cost of such materials and equipment required in the permanent work as have been delivered to the site but not as yet incorporated in the work.
 2. On not later than the third week of the following month, the City shall, after deducting previous payments made, pay to the Contractor 95% of the amount of the approved invoice, retaining 5% of the estimate of work done until 50% of the work has been completed. At 50% completion of the work, the previous retainage shall not yet be paid, but further partial payments shall be made in full to the contractor without additional retainage being taken unless the engineer certifies that the work is not proceeding satisfactorily. If the work is not proceeding satisfactorily, additional amounts may be retained. After substantial completion, an amount retained may be paid to the contractor, keeping retained only such amount as is needed for the remaining work.
 3. The Contractor shall notify the City in writing when all work under this Contract has been completed. Upon receipt of such notice the City shall, within a reasonable time, make the final inspection and issue a final certificate stating that the work provided for in this Contract has been completed and is accepted under the terms and conditions thereof, and that the entire balance due the Contractor as noted in said final certificate is due and payable. Before issuance of the final certificate the Contractor shall submit evidence satisfactory to the City that payrolls, material bills, and other indebtedness connected with the work under this Contract have been paid. The City shall make final payment as soon after issuance of the final certificate as practicable.

ARTICLE IV – CONTRACT DOCUMENTS

(a) Contents

1. The Contract documents consist of the following:
 - a. This Contract (pages 00 52 13-1 to 0052-13-3, inclusive).
 - b. Payment bond (pages 00 61 13-1 to 00 61 13-2, inclusive).
 - c. Performance bond (page 00 61 16-1).
 - d. General Conditions (pages 00 70 00-1 to 00 70 00-27, inclusive).

- e. Specifications as listed in the table of contents of the Project Manual.
 - f. Drawings consisting of ____ sheets with each sheet bearing the following general title: ____ [or] the Drawings listed on attached sheet index.
 - g. Addenda (numbers ____ to ____ inclusive), dated ____.
 - h. Exhibits to this Agreement (enumerated as follows):
 - 1) Contractor's Bid (pages 00 41 13-1 to 00 41 13-3, inclusive).
 - 2) Bid Schedule – Unit Prices (Pages 00 41 43-1 to 00 41 43-, inclusive).
 - 3) Proposed Products Form (Page 00 43 33-1).
 - 4) Tabulation of Subcontractors (page 00 43 36-1).
 - 5) Documentation submitted by Contractor prior to Notice of Award (00 51 00-1).
 - i. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
 - 1) Notice to Proceed (Page 00 55 00-1).
 - 2) Change Orders.
2. The documents listed in Paragraph (a) Contents, are attached to this Agreement (except as expressly noted otherwise above).
3. There are no Contract Documents other than those listed above in this Article IV.

IN WITNESS WHEREOF, the parties hereto have executed this Contract, the day and year first written above.

(WITNESS) _____ (CONTRACTOR) (SEAL)

(WITNESS) BY: _____

(TITLE)

BY: _____

(TITLE)

CITY OF DE PERE (SEAL)

Approved as to Form By: _____ (City Attorney)

Sufficient funds are available to provide for the payment of this obligation.

(COMPTROLLER)

BY: _____
(MAYOR)

BY: _____
(CITY CLERK)

SECTION 00 55 00

NOTICE TO PROCEED

Date: _____

(CONTRACTOR NAME)
(ADDRESS)
(ADDRESS)

Project: 21-02 Erie Street Reconstruction and Utility Relay

You are hereby notified to commence work in accordance with the CONTRACT dated _____, within ten (10) days of this Notice. All work under this contract shall be completed within _____ (NUMBER IN WORDS) (___#) consecutive days from the start of construction or _____ (DATE) whichever comes first.

Department of Public Works

By: Eric P. Rakers, P.E.
Title: City Engineer

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by

_____, this _____ day of _____, 20____.
Company Name

Signature

BY: _____
Printed Name

TITLE: _____

SECTION 00 61 13

CITY OF DE PERE

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That (CONTRACTOR NAME), as Principal, hereinafter called Contractor, and _____, as Surety, hereinafter called Surety, are held and firmly bound unto the City of De Pere, a municipal corporation of the State of Wisconsin, as Obligee, hereinafter called the City, for the use and benefit of claimants as herein below defined in the amount _____ (CONTRACT AMT. SPELLED OUT) (\$) _____ for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated _____ (date to be affixed by City) entered into a contract with City for Project 21-02, in accordance with drawings and specifications prepared by the Director of Public Works of said City, which contract is by reference made a part hereof, and is hereinafter referred to as the CONTRACT.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly make payments to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the CONTRACT, then this obligation shall be null and void; otherwise it shall remain in full force and effect, subject, however, to the following conditions.

1. A claimant is defined as one having a direct contract with Contractor or with a subcontractor of Contractor for labor, material, or both, used or reasonably required for use in the performance of the contract, labor and material being construed to include that part of water, gas, power, lights, heat, oil, gasoline, telephone service, or rental of equipment directly applicable to the contract.
2. The above named Contractor and Surety hereby jointly and severally agree with the City that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant may sue on this bond for the use of such claimant in the name of the City, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon, provided, however, that the City shall not be liable for the payment of any costs or expenses of any such suit.
3. No suit or action shall be commenced hereunder by any claimant:
 - a. Unless claimant shall have given written notice to any two of the following: The Contractor, the City, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail, postage prepaid, in an envelope addressed to the Contractor, City, or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the State of Wisconsin, save that such service need not be made by a public officer.

Project 21-02
Erie Street Reconstruction and Utility Relay

City of De Pere

- b. After the expiration of one (1) year following the date on which Contractor ceased work on said CONTRACT.
 - c. Other than in a state court of competent jurisdiction in and for the County or other political subdivision of the state in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.
4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens, which may be filed or recorded against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.

SIGNED AND SEALED THIS _____ DAY OF _____, 20__.

In Presence of:

_____ (WITNESS)	_____ (CONTRACTOR)
_____ (WITNESS)	_____ (SURETY)

SECTION 00 61 16

CITY OF DE PERE

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: That (CONTRACTOR'S NAME), as Principal, hereinafter called Contractor, and _____, as Surety, hereinafter called Surety, are held and firmly bound unto the City of De Pere, a municipal corporation of the State of Wisconsin, as Obligee, hereinafter called City, in the amount of (AMOUNT WRITTEN OUT) (\$_____) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assign, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated _____ (date to be affixed by City), entered into a contract with the City for Project 21-02, in accordance with drawings and specifications prepared by the Director of Public Works of said City, which contract is by reference made a part hereof, and is hereinafter referred to as the CONTRACT.

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if the Contractor shall promptly and faithfully perform said CONTRACT, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

Whenever Contractor shall be, and declared by the City to be in default under the CONTRACT, the City having performed City's obligations there under, the Surety may promptly remedy the default, or shall promptly

1. Complete the CONTRACT in accordance with its terms and conditions or
2. Obtain a bid or bids for submission to City for completing the CONTRACT in accordance with its terms and conditions, and upon determination by the City and Surety of the lowest responsible bidder, arrange for a contract between such bidder and City make available as work progresses (even though there should be a default or succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable by City to Contractor under the CONTRACT and any amendments thereto, less the amount properly paid by City to Contractor.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the CONTRACT falls due. No right of action shall accrue on this bond to or for the use of any person or corporation other than the owner named herein or the heirs, executors, administrators or successors of City.

SIGNED AND SEALED THIS _____ DAY OF _____, 20_____.

In the Presence of:

_____ (WITNESS)	_____ (CONTRACTOR)	_____ (SEAL)
_____ (WITNESS)	_____ (SURETY)	_____ (SEAL)

SECTION 00 62 76

APPLICATION FOR PAYMENT

Contractor's Application for Payment No.

Application Period:	Application Date:
Owner: City of De Pere	Contractor:
	Contractor's Project No.:

APPLICATION FOR PAYMENT

Change Order Summary

Approved Change Orders			1. ORIGINAL CONTRACT PRICE:.....	
Number	Additions	Deductions	2. Net change by Change Orders and Written Amendments (+ or -):.....	\$0.00
			3. CURRENT CONTRACT PRICE (Line 1 plus Line 2):.....	\$0.00
			4. Total completed and stored to date Column H on Progress Estimate:.....	\$0.00
			5. Retainage (per Agreement):	
			a. Work Completed - Column H (95% up to 50% of Contract or 2.5% of 100% of Contract)	\$0.00
Total	\$0.00	\$0.00	6. AMOUNT ELIGIBLE TO DATE (Line 4 minus 5):.....	\$0.00
NET CHANGE BY CHANGE ORDERS:			7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application):.....	\$0.00
			8. AMOUNT DUE THIS APPLICATION (Line 6 minus Line 7):.....	\$0.00

CONTRACTOR'S CERTIFICATION

The undersigned Contractor certifies that:(1) all previous progress payments received from Owner on account of Work done under Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with Work covered by prior Applications for Payment; (2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to Owner indemnifying Owner against any such Liens, security interest or encumbrances); and (3) all Work covered by the Application for Payment is in accordance with the Contract Documents and is not defective.

By:	Date:

Payment of:	\$	
	(Line 8 or other - attach explanation of other amount)	
is recommended by:		(Date)
	(Contractor)	
Payment of:	\$	
	(Line 8 or other - attach explanation of other amount)	
is recommended by:		(Date)
	(Owner)	

SECTION 00 65 16

CERTIFICATE OF SUBSTANTIAL COMPLETION

Project:

Owner:

Owner's Contract No.:

Contractor:

This [tentative] [definitive] Certificate of Substantial Completion applies to:

☐ All Work under the Contract Documents: ☐ The following specified portions of the Work:

Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Contractor and Engineer, and found to be substantially complete. The Date of Substantial completion of the Project or portion thereof designated above is hereby declared and is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below.

A [tentative] [definitive] list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance and warranties shall be as provided in the Contract Documents except as amended as follows:

☐ Amended Responsibilities

☐ Not Amended

Owner's Amended Responsibilities:

Contractor's Amended Responsibilities:

The following documents are attached to and made part of this Certificate:

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Executed by Engineer

Date

Accepted by Contractor

Date

SECTION 01 10 00

SUMMARY OF WORK

PART 1 – GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. References
 - 2. Work Covered by the Contract Documents
 - 3. Work Sequence
 - 4. Use of Premises
 - 5. Warranty
 - 6. Work by Others
 - 7. Project Utility Sources
 - 8. Miscellaneous Provisions

1.2 REFERENCES

- A. General Specifications. The work under this contract shall be in accordance with the City of De Pere, 2020 Construction Specifications and these Special Provisions and plans, and the latest edition of the Wisconsin Department of Transportation Standards Specifications for Highway and Structure Construction, where referenced in the City Specifications.
- B. Definitions. Any reference to the “state” or the “department” in said Standard Specifications shall mean the “City of De Pere” for the purposes of this contract.
- C. Industry Standards
 - 1. Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
 - 2. Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
 - 3. If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement.
 - 4. The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements.

5. Each section of the specifications generally includes a list of reference standards normally referred to in that respective section. The purpose of this list is to furnish the Contractor with a list of standards normally used for outlining the quality control desired on the project. The lists are not intended to be complete or all inclusive, but only a general reference of standards that are regularly referred to.
6. Each entity engaged in construction on the Project shall be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents. Where copies of standards are needed to perform a required construction activity, obtain copies directly from the publication source and make them available on request.

1.3 WORK COVERED BY THE CONTRACT DOCUMENTS

A. Project Identification

1. Project Location
 - a. Erie Street from George Street to Ridgeway Boulevard
 - b. James Street from Huron Street to Erie Street
2. Work will be performed under the following prime contract:
 - a. Project 21-02 Erie Street Reconstruction and Utility Relay

B. The Work includes:

1. Sanitary sewer and associated appurtenances relay and new.
2. Storm sewer and associated appurtenances relay and new.
3. Water main and associated appurtenances relay.
4. Concrete curb and gutter slip form and spot repairs.
5. Concrete pavement, driveway aprons, and sidewalk removal and repairs.
6. Remove/pulverize existing asphaltic concrete and concrete pavement.
7. Unclassified excavation.
8. Asphaltic concrete paving.
9. Terrace restoration.
10. Erosion control.
11. Traffic control
12. Tree and stump removal
13. Pavement marking

1.4 WORK SEQUENCE

- A. Conduct construction activities to maintain access to businesses and residences throughout construction.
- B. Topsoil, seed, and mulch shall be completed prior to asphaltic concrete pavement placement.
- C. All water main tracer wire is to be tested prior to paving.

- D. Neither work nor the running of equipment or machinery is permitted between the hours of 10:00 PM and 7:00 AM pursuant to the City of De Pere Municipal Code without City approval, excluding the work at the intersection of Erie Street and George Street.
- E. Water shutoffs/water work at the intersection of Erie Street and George Street is to be coordinated with businesses. Water work at this intersection is anticipated to be completed at night due to several food preparation businesses.
- F. The Erie and George Street intersection work shall not start until June 7th and be completed by August 20th, 2021. George Street shall be open to two lanes of traffic over the July 4th weekend and July 16th thru the 18th, 2021 for the Pink Flamingo softball tournament.
- G. Erie and George Street Construction Sequence Option
 - 1. Phase I - Utility Installation – Work in intersection can be completed with flaggers and/or temporary traffic signal.
 - a. Isolate 8" water main to the north. Install plug with 2" corporation and galvanized pipe on existing water main north of valve. Keep 8" valve near George closed. Work can be done during the day.
 - b. Isolate 8"/16" water main to south. Install plug on 8" or 16" water main with 2" corporation and galvanized pipe on existing water main south of valve. Keep 8" valve near George Street closed.
 - c. Saw cut concrete during the day with flagger or traffic signals.
 - d. Coordinate with Brown County to place signals in flash mode during intersection work.
 - e. Close Erie Street (south)
 - f. Close 12" water valves east and west of George Street intersection during the night. Time to be determined based on input from businesses. Dig down at cross and install both 16" valves. Keep valves closed and re-open valves on 12" for water main to existing businesses. Once businesses have water, remainder of work can be completed during the day.
 - g. Utility work at the intersection is to be completed with flaggers. Provide cold or hot mix asphalt on the trench after completion.
 - h. Open intersection (including Erie Street S) after water main is across.
 - i. Take signals out of flash.
 - 2. Phase II – Concrete Restoration – Maintain one lane of traffic.
 - a. Reclose Erie Street (S)
 - b. Coordinate with Brown County to place signals in flash mode during intersection work.
 - c. Maintain traffic by completing the two center lanes first while maintaining a lane in each direction on the outside lanes.
 - d. Switch traffic to inside lanes and complete patches on the outside lanes.
 - 3. Other Items
 - a. Consider 15mph advisory construction signs on George Street.
 - b. When making the final connection on the south side after testing has been completed, close the valve at Erie and Charles Street and blow air out of hydrant, re-loading water main from George Street.

1.5 USE OF PREMISES

- A. Contractor shall have full use of the premises for construction operations, including use of the Project Site, as allowed by law, ordinances, permits, easement agreements and the Contract documents.
- B. Contractor's use of premises is limited only by Owner's right to perform work or to retain other contractors on portions of the Project.
- C. The Project Site is limited to property boundaries, rights-of-way, easements, and other areas designated in the Contract Documents.
- D. Provide protection and safekeeping of material and products stored on or off the premises.
- E. Move any stored material or products which interfere with operations of Owner or other Contractors.

1.6 WARRANTY

- A. The Contractor warrants and guarantees to the City that all work shall be in accordance with the Contract Documents and will not be defective. Prompt notice of all defects will be given to the Contractor. All defective work, whether or not in place, may be rejected, corrected or accepted as provided in this proposal.
- B. If within one (1) year after the date of contract work completion or such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents or by a special provision of the Contract Documents, any work is found to be defective, the Contractor shall comply in accordance with the City's written instructions. These written instructions will include either correcting such defective work or, if it has been rejected by the City, removing it from the site and replacing it with non-defective work. If the Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk or loss or damage, the City may have the defective work corrected or the rejected work removed and replaced. All direct and indirect costs of correction or removal and replacement of defective work, including compensation for additional professional services, shall be paid by the Contractor.

1.7 WORK BY OTHERS

- A. The City of De Pere Park Department will trim trees in conflict with construction if the City receives advanced notification. Questions regarding trees or landscaping that is bid as part of this contract can be directed to the Engineer.

- B. Owner has awarded a separate contract for performance of certain construction operations which will be conducted at the Project Site simultaneously with work under this Contract. This Contract includes the following:
 - 1. Project 21-01 Sewer and Water Relay and Street Resurfacing – Water main installation on Ridgeway Boulevard may be occurring simultaneously with this project. Coordinate water relay, connections, and restoration work.
- C. Cooperate fully with separate contractors and/or Owner so work by others may be carried out smoothly, without interfering with or delaying work under this Contract.

1.8 PROJECT UTILITY SOURCES

- A. Green Bay Metropolitan Sewer District (NEW Water), Lisa Sarau, (lsarau@newwater.us) (920-438-1039)
- B. AT&T, Shea Gorzelanczyk, (sg2528@att.com) (920-433-4250)
- C. Wisconsin Public Service, Bob Laskowski, (rtlaskowski@wisconsinpublicservice.com) (920-617-2775)
- D. Charter, Vince Albin, (vince.albin@charter.com) (920-378-0444)
- E. Nsight, Rick Vincent, (rick.vincent@nsight.com) (920-617-7316)
- F. TDS Metrocom, Steve Jakubiec, (steve.jakubiec@tdstelecom.com) (920-882-4166)
- G. Net-Lec (Mi-Tech Services), Dennis Lafave, (dlafave@mi-tech.us) (920-619-9774)
- H. CenturyLink, Relocation Team, (nationalrelo@centurylink.com) (800-871-9244)
- I. Central Brown County Water Authority, Rob Michaelson, (rmichaelson@mpu.org) (920-686-4354)

1.9 MISCELLANEOUS PROVISIONS

- A. Notification to Residents –notify individually all residents and businesses 2-weeks prior to the start of operations, giving an estimated time that vehicle movement will be limited or prohibited. Property owners shall be notified 24-hours prior to closing a drive.
- B. Utility installation shall be completed from existing paved or gravel surfaces and/or new gravel surfaces. All gravel surfaces will need to be maintained if the existing asphalt is removed at the beginning of the project and rutting, pumping, or failures occur. During street excavation, all exposed subgrade shall be graded and covered with crushed aggregate base course at the end of each day.

- C. Salvaged pulverized asphaltic concrete pavement, recycled crushed concrete, and/or virgin asphaltic concrete pavement will be allowed for the base course on the project per the plans. Pulverized asphaltic concrete pavement shall be placed on the bottom of the crushed aggregate base course. Pulverizing the asphaltic concrete pavement shall be accomplished by milling or crushing and mixing with crushed concrete or aggregate to conform to the requirements of Section 32 11 26.16.
- D. Ingress and egress to the site of work for delivery of materials, hauling of excavation, daily construction activities and all vehicular traffic shall be as follows:

Location	Route
Erie Street	Access from George Street or Ridgeway Boulevard
James Street	Erie Street or Huron Street from George Street

- E. City staff will be verifying if sanitary laterals are active during construction. This will be completed with a City push camera. The Contractor shall assist City staff by placing the camera in the lateral and pushing up the line.

PART 2 – PRODUCTS

PART 3 – EXECUTION

END OF SECTION

SECTION 01 22 01

MEASUREMENT AND PAYMENT SANITARY SEWER

PART 1 – GENERAL

1.1 SUMMARY

- | | |
|---|---------------------|
| A. Section includes: | <u>Bid Item No.</u> |
| 1. Sanitary Sewer Mains (Granular Backfill) | SS-01, SS-02 |
| 2. Sanitary Sewer Laterals | SS-03, SS-04 |
| 3. Sanitary Sewer Risers | SS-05 |
| 4. Sanitary Sewer Service Branches | SS-06, SS-07, SS-08 |
| 5. Dig Down and Verify Active Laterals | SS-09 |
| 6. Sanitary Sewer Manholes | SS-10, SS-11 |
| 7. Core Drilling to Existing Sanitary Manhole | SS-12 |
| 8. Connect to Existing Sanitary Sewer Main | SS-13, SS-14 |
- B. Unit Prices include:
1. Defined work for each Unit Price Item which will provide a functionally complete Project when combined with all unit price items. If there are specific work items which the Contractor believes are not identified in any Unit Price Item, but is required to provide a functionally complete Project, then the identified specific work items shall be included in the appropriate Unit Price Item.
 2. The method of measurement for payment.
 3. The price per unit for payment.

1.2 GENERAL WORK ITEMS

- A. Include with the appropriate Unit Price Item the following work items which are common to the Unit Price Items for sanitary sewer systems.
- B. If there is a specific Unit Price Item for any of the following items, then the work item shall be included with that specific unit price item.
1. Traffic Control.
 2. Sawcutting asphalt and/or concrete.
 3. Removal, hauling and disposal of surface materials including road pavement, curb and gutter, sidewalk, driveways and other pavement surfaces in the trench area and as shown on the drawings.
 4. Dewatering.
 5. Bypass pumping.
 6. Excavation.
 7. Open Trench installation method (unless bid item specifies other method).
 8. Pipe Bedding.

9. Backfilling and compacting native obtained from the excavation.
10. Supplying, hauling, backfilling and compacting granular material.
11. Loading, hauling and disposing of surplus excavated material.
12. Landscaping – turf establishment surface restoration and trees and bushes damaged during construction.
13. Maintenance, protection, replacement and/or repair of facilities not designated for alteration on the Site beyond the limits identified.
14. Site access requirements including temporary aggregate material as required for local traffic access.
15. Bulkhead and abandoned existing sanitary sewer with flowable fill as shown on Drawings.
16. If crossing or undermining of existing public or private utility, then include:
 - a. Maintaining the utility in service.
 - b. Replacing of existing utilities, if damaged.
 - c. Providing support and bedding material.
17. Dust control.
18. Remove and replace existing mailboxes and traffic signs.
19. Restroom facilities.
20. Easement and right-of-way requirements.
21. Construction staking and other survey work not provided by the Engineer.
22. Regulatory requirements.
23. Preconstruction videotaping and video equipment.
24. Quality assurance and quality control testing and inspections.
25. Shop drawings and other submittals.

1.3 SANITARY SEWER MAINS (GRANULAR BACKFILL)

- A. The unit price for Sanitary Sewer Main (Granular Backfill) work includes:
 1. General Work Items of Article 1.2.
 2. Sanitary sewer pipe and fittings of material stated in the Unit Price Bid Schedule and installed using the open trench method.
 3. Excavation, breakdown and removal of abandoned piping inside the trench area, including plugging of existing connections.
 4. Excavation, breakdown and removal of abandoned pipeline structures inside the trench area, including plugging of existing connections.
- B. Measurement of payment will be the actual horizontal length along the centerline of the installed sewer from centerline of the manhole to centerline of manhole with no deductions for manholes, sewer services branches and other fittings.
- C. The unit of measurement for payment is linear feet.

1.4 SANITARY SEWER LATERALS

- A. The unit price for Sanitary Sewer Laterals work includes:

1. General Work Items of Article 1.2.
2. Sanitary sewer lateral pipe and fittings of the material stated in the Unit Price Bid Schedule and installed using the open trench method.
3. Watertight plug in the end of the sewer service lateral or connection including transition coupling to the existing building sewer lateral.
4. Tracer wire.
5. Install an 8' – 4" X 4" board at the end of the lateral.

B. Measurement of payment will be the actual horizontal length along the centerline of the installed sewer service lateral pipe (excluding risers) from centerline of the service branch to the end of the pipe at the right of way, easement or existing sewer service lateral with no deductions for fittings.

C. The unit of measurement for payment is linear feet.

1.5 SANITARY SEWER RISERS

A. The unit price for Sanitary Sewer Risers work includes:

1. General Work Items of Article 1.2.
2. Sanitary sewer riser pipe and fittings of material stated in the Unit Price Bid Schedule and installed using the open trench method.
3. Risers to be at the right of way.
4. Tracer wire.

B. Measurement for payment will be the actual length of pipe along the centerline of the installed sewer service riser pipe from centerline of fitting to centerline of fitting having a vertical rise of 45 degrees or greater with no deductions for fittings.

C. The unit of measurement for payment is linear feet.

1.6 SANITARY SEWER SERVICE BRANCHES

A. The unit price for Sanitary Sewer Service Branches work includes:

1. General Work Items of Article 1.2.
2. Sanitary sewer service branches of same material strength or better than sanitary sewer main pipe on PVC sewer mains or saddles on lined sanitary sewer.
3. Installation along with the sanitary sewer main pipe installation.
4. Plug (where required).

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.7 SANITARY SEWER MANHOLES

- A. The unit price for Sanitary Sewer Manholes work includes:
 - 1. General Work Items of Article 1.2.
 - 2. Precast reinforced concrete components.
 - 3. Joint flexible gasket material.
 - 4. Resilient flexible connector between the manhole structure and the sewer pipe.
 - 5. Adjusting rings and bituminous plastic cement sealant at chimney.
 - 6. Manhole steps.
 - 7. Manhole frame and cover (Neenah Foundry R-1500 Manhole Cover with Non-Rocking Lid or equal). Sanitary Sewer manhole covers shall have gaskets and concealed pick holes.
 - 8. Bedding material.
 - 9. Sewer pipe stub with connections and watertight plug (where required).
 - 10. Final casting adjustment.
- B. Measurement for payment will be the distance from the invert of the lowest sewer to the top of the frame and cover as set.
- C. The unit of measurement for payment is vertical feet.

1.8 DIG DOWN AND VERIFY ACTIVE SANITARY LATERAL

- A. The unit price for Dig Down and Verify Active Sanitary Lateral work includes:
 - 1. General Work Items of Article 1.2.
 - 2. Televis or excavate down to existing sanitary sewer lateral to expose the lateral to verify if the lateral is active.
 - 3. Assist City staff with televising. City staff will provide a push camera to televise the lateral.
 - 4. City staff will dye test the lateral if needed.
 - 5. Backfilling and compacting.
 - 6. Plug lateral if not active.
- B. Measurement for payment will be the actual number completed.
 - 1. This item only applies to laterals on existing main that get plugged.
 - 2. Laterals that are reconnected will be paid under a separate bid item.
- C. The unit of measurement for payment is each.

1.9 CORE DRILLING TO EXISTING SANITARY MANHOLE

- A. The unit price for Core Drilling to Existing Sanitary Manhole work includes:
 - 1. General Work Items of Article 1.2.
 - 2. Core drilling into existing sanitary sewer manhole (where required).
 - 3. Install A-Lok boot.
 - 4. Reform flow line in existing sanitary manhole.

- B. Measurement for payment will be the actual number complete.
- C. The unit of measurement for payment is each.

1.10 RECONNECT TO EXISTING SANITARY SEWER PIPE

- A. The unit price for Reconnect to Existing Sanitary Sewer Pipe work includes:
 - 1. General Work Items of Article 1.2.
 - 2. Sanitary Sewer Pipe same material strength or better than sewer main. Provide Fernco with stainless steel sheer bands and connection water tight seal.
 - 3. Backfilling and compaction.
- B. Measurement for payment will be the actual number completed.
- C. The unit of measurement for payment is each.

END OF SECTION

SECTION 01 22 02

MEASUREMENT AND PAYMENT STORM SEWER

PART 1 – GENERAL

1.1 SUMMARY

- A. Section includes:
- | | <u>Bid Item No.</u> |
|---|-----------------------------------|
| 1. Storm Sewer Mains (Granular Backfill) | ST-01, ST-02, ST-03, ST-04, ST-05 |
| 2. Storm Sewer Laterals | ST-06 |
| 3. Storm Sewer Service Branches | ST-07, ST-08, ST-09 |
| 4. Storm Sewer Manholes | ST-10, ST-11, ST-12, ST-13, ST-14 |
| 5. Catch Basin/Inlets | ST-15, ST-16 |
| 6. Connect to Existing Storm Structure | ST-17 |
| 7. Connect to Existing Pipe | ST-18 |
| 8. Concrete Collar | ST-19 |
| 9. Core Drill Structure | ST-20, ST-21 |
| 10. Storm Sewer Dig Down Spot Repair -10 Feet | ST-22 |
| 11. Abandon/Remove Existing Storm Sewer and Appurtenances | ST-23 |
- B. Unit Prices include:
1. Defined work for each Unit Price Item which will provide a functionally complete Project when combined with all unit price items. If there are specific work items which the Contractor believes are not identified in any Unit Price Item, but is required to provide a functionally complete Project, then the identified specific work items shall be included in the appropriate Unit Price Item.
 2. The method of measurement for payment.
 3. The price per unit for payment.

1.2 GENERAL WORK ITEMS

- A. Include with the appropriate Unit Price Item the following work items which are common to the Unit Price Items for storm sewer systems.
- B. If there is a specific Unit Price Item for any of the following items, then the work item shall be included with that specific unit price item.
1. Traffic Control.
 2. Sawcutting asphalt and/or concrete.
 3. Removal, hauling and disposal of surface materials including road pavement, curb and gutter, sidewalk, driveways and other pavement surfaces in the trench area and as shown on the drawings.
 4. Dewatering.
 5. Excavation.

6. Open trench installation method (unless bid item specifies other method).
7. Pipe bedding.
8. Backfilling and compacting native obtained from the excavation.
9. Supplying, hauling, backfilling and compacting granular material.
10. Loading, hauling and disposing of surplus excavated material.
11. Landscaping – turf establishment surface restoration and trees and bushes damaged during construction.
12. Maintenance, protection, replacement and/or repair of facilities not designated for alteration on the Site beyond the limits identified.
13. Site access requirements including temporary aggregate material as required for local traffic access.
14. Bulkhead and abandon existing storm sewer with flowable fill as shown on drawings.
15. If crossing or undermining of existing public or private utility, then include:
 - a. Maintaining the utility in service.
 - b. Replacing of existing utilities, if damaged.
 - c. Providing support and bedding material.
16. Dust control.
17. Remove and replace existing mailboxes and traffic signs.
18. Restroom facilities.
19. Easement and right-of-way requirements.
20. Construction staking and other survey work not provided by the Engineer.
21. Regulatory requirements.
22. Preconstruction videotaping and video equipment.
23. Quality assurance and quality control testing and inspections.
24. Shop drawings and other submittals.

1.3 STORM SEWER MAINS (GRANULAR BACKFILL)

- A. The unit price for Storm Sewer Main (Granular Backfill) work includes:
 1. General Work Items of Article 1.2.
 2. Storm sewer pipe and fittings of material stated in the Unit Price Bid Schedule and installed using the open trench method.
 3. Excavation, breakdown and removal of abandoned piping inside the trench area, including plugging of existing connections.
 4. Excavation, breakdown and removal of abandoned pipeline structures inside the trench area, including plugging of existing connections.
- B. Measurement of payment will be the actual horizontal length along the centerline of the installed sewer from centerline of the manhole to centerline of manhole with no deductions for manholes, sewer services branches and other fittings.
- C. The unit of measurement for payment is linear feet.

1.4 STORM SEWER LATERALS

- A. The unit price for Storm Sewer Laterals work includes:
 - 1. General Work Items of Article 1.2.
 - 2. Storm sewer lateral pipe and fittings of the material stated in the Unit Price Bid Schedule and installed using the open trench method.
 - 3. Watertight plug in the end of the sewer service lateral or connection including transition coupling to the existing building sewer lateral.
 - 4. Tracer wire.
 - 5. Install an 8' – 4" X 4" board at the end of the lateral.
- B. Measurement of payment will be the actual horizontal length along the centerline of the installed sewer service lateral pipe from centerline of the service branch to the end of the pipe at the right of way, easement or existing sewer service lateral with no deductions for fittings.
- C. The unit of measurement for payment is linear feet.

1.5 STORM SEWER SERVICE BRANCHES/INSERTA TEES

- A. The unit price for Storm Sewer Service Branches/Inserta Tees work includes:
 - 1. General Work Items of Article 1.2.
 - 2. Storm sewer service branches of same material strength or better than storm sewer main pipe (where required).
 - 3. Core drilling into concrete storm sewer main (where required).
 - 4. Installation along with the storm sewer main pipe installation.
 - 5. Plug (where required).
- B. Measurement for payment will be the actual number installed.
- C. The unit of measurement for payment is each.

1.6 STORM SEWER MANHOLES

- A. The unit price for Storm Sewer Manholes work includes:
 - 1. General Work Items of Article 1.2.
 - 2. Precast reinforced concrete components.
 - 3. Joint flexible gasket material.
 - 4. Grout seal between the manhole and structure and the sewer pipe.
 - 5. Adjusting rings and bituminous plastic cement sealant at chimney.
 - 6. Manhole steps.
 - 7. Manhole frame and cover.
 - 8. Bedding material.
 - 9. Sewer pipe stub with connections and watertight plug (where required).
 - 10. Final casting adjustment.

- B. Measurement for payment will be the distance from the invert of the lowest sewer to the top of the frame and cover as set.
- C. The unit of measurement for payment is vertical feet.

1.7 CATCH BASIN/INLETS

- A. The unit price for Catch Basin/Inlets work includes:
 - 1. General Work Items of Article 1.2.
 - 2. Precast reinforced concrete components.
 - 3. Joint flexible gasket material.
 - 4. Grout seal between the catch basin/inlet structure and the sewer pipe.
 - 5. Adjusting rings grouted in place.
 - 6. Casting frame and grate.
 - 7. Bedding material.
 - 8. Supply and install 6 to 10 feet of 4 inch flexible perforated plastic pipe with geotextile wrap subgrade drain.
 - 9. Sand fill and Class "B" concrete floor and flow line.
 - 10. Temporary cover over catch basin/inlet to prevent eroded materials from entering.
 - 11. Final casting adjustment.
- B. Measurement for payment will be the actual number installed.
- C. The unit of measurement for payment is each.

1.8 CONNECT TO STORM STRUCTURE

- A. The unit price for Connect to Storm Structure work includes:
 - 1. General Work Items of Article 1.2.
 - 2. Modify existing storm sewer manhole opening (where required).
 - 3. Provide concrete around the pipe, gasket, and manhole opening to form a sediment tight seal.
 - 4. Reform flow line in existing storm manhole.
- B. Measurement for payment will be the actual number complete.
- C. The unit of measurement for payment is each.

1.9 CONNECT TO EXISTING STORM SEWER PIPE

- A. The unit price for Connect to Existing Storm Sewer Pipe work includes:
 - 1. General Work Items of Article 1.2.
 - 2. Storm sewer pipe same material strength or better than sewer main. Provide Fernco with stainless steel sheer bands and connection water tight seal.

3. Bends as required in the field.
4. Backfilling and compaction.

B. Measurement for payment will be the actual number complete.

C. The unit of measurement for payment is each.

1.10 CONCRETE COLLAR

A. The unit price for Concrete Collar work includes:

1. General Work Items of Article 1.2.
2. Providing and installing concrete and wire or mesh components.
3. Connection to storm sewer pipe or manhole.

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.11 CORE DRILLING TO STORM MANHOLE

A. The unit price for Core Drilling to Storm Manhole work includes:

1. General Work Items of Article 1.2.
2. Core drilling into existing storm sewer manhole (where required).
3. Install A-Lok boot or mortar connection.
4. Reform flow line in existing storm manhole.

B. Measurement for payment will be the actual number complete.

C. The unit of measurement for payment is each.

1.12 STORM SEWER DIG DOWN SPOT REPAIR -10 FEET

A. The unit price work for Storm Sewer Dig Down Spot Repair – 10 Feet work includes:

1. General Work Items of Article 1.2.
2. Excavation.
3. Exposing storm sewer line for repairs.
4. Sawing existing storm sewer.
5. Remove and replace pipe.
6. Connection to existing storm sewer.
7. Repairing offset joints where present.

- B. Measurement for payment will be the actual number completed.
- C. The unit of measurement for payment is each.

1.13 ABANDON/REMOVE STORM SEWER AND APPURTENANCES

- A. The unit price for Abandon/Remove Storm Sewer and Appurtenances work includes:
 - 1. General Work Items of Article 1.2.
 - 2. Excavating
 - 3. Install bulkheads and abandon storm sewer and/or structures.
 - 4. Removing existing storm sewer and/or structures where in conflict with other utilities.
 - 5. Providing and placing flowable fill.
 - 6. Backfilling and compacting.
 - 7. Removal and disposal as shown on the Drawings.
- B. Measurement for payment will not be made. This includes all of the project area.
- C. The unit of measurement for payment is lump sum.

END OF SECTION

SECTION 01 22 03

MEASUREMENT AND PAYMENT WATER SYSTEM

PART 1 – GENERAL

1.1 SUMMARY

- A. Section includes:
- | | <u>Bid Item No.</u> |
|---|------------------------|
| 1. Water Mains (Granular Backfill) | W-01, W-02, W-03, W-04 |
| 2. Water Services | W-05, W-06 |
| 3. Corporation and Curb Stop | W-07, W-08 |
| 4. 2" Corporation with Plug or Saddle and Galvanized Pipe | W-09 |
| 5. Valves | W-10, W-11, W-12, W-13 |
| 6. Connection to Existing Water Mains | W-14 |
| 7. Fire Hydrants | W-15, W-16 |
| 8. Water Main Offset | W-17, W-18, W-19 |
| 9. Abandon/Remove Water Main and Appurtenances | W-20 |
- B. Unit Prices include:
1. Defined work for each Unit Price Item which will provide a functionally complete Project when combined with all unit price items. If there are specific work items which the Contractor believes are not identified in any Unit Price Item, but is required to provide a functionally complete Project, then the identified specific work items shall be included in the appropriate Unit Price Item.
 2. The method of measurement for payment.
 3. The price per unit for payment.

1.2 GENERAL WORK ITEMS

- A. Include with the appropriate Unit Price Item the following work items which are common to the Unit Price Items for water systems.
- B. If there is a specific Unit Price Item for any of the following items, then the work item shall be included with that specific unit price item.
1. Traffic Control.
 2. Sawcutting asphalt and/or concrete.
 3. Removal, hauling and disposal of surface materials including road pavement, curb and gutter, sidewalk, driveways and other pavement surfaces in the trench area and as shown on the drawings.
 4. Dewatering.
 5. Excavation.
 6. Open Trench installation method (unless bid item specifies other method).
 7. Pipe Bedding.

8. Backfilling and compacting native obtained from the excavation.
9. Supplying, hauling, backfilling and compacting granular material.
10. Loading, hauling and disposing of surplus excavated material.
11. Landscaping – turf establishment surface restoration and trees and bushes damaged during construction.
12. Maintenance, protection, replacement and/or repair of facilities not designated for alteration on the Site beyond the limits identified.
13. Site access requirements including temporary aggregate material as required for local traffic access.
14. Bulkhead and abandoned existing water main with flowable fill as shown on Drawings.
15. If crossing or undermining of existing public or private utility, then include:
 - a. Maintaining the utility in service.
 - b. Replacing of existing utilities, if damaged.
 - c. Providing support and bedding material.
16. Dust control.
17. Remove and replace existing mailboxes and traffic signs.
18. Restroom facilities.
19. Easement and right-of-way requirements.
20. Construction staking and other survey work not provided by the Engineer.
21. Regulatory requirements.
22. Preconstruction videotaping and video equipment.
23. Quality assurance and quality control testing and inspections.
24. Shop drawings and other submittals.

1.3 WATER MAINS (GRANULAR BACKFILL)

- A. The unit price for Water Main (Granular Backfill) work includes:
 1. General Work Items of Article 1.2.
 2. Water pipe and fittings of material stated in the Unit Price Bid Schedule and installed using the open trench method.
 3. Ductile or cast iron fittings.
 4. Tracer wire.
 5. Polyethylene encasement of ductile iron or cast iron pipe and fittings.
 6. Blocking and joint restraints.
 7. Disinfection of pipelines.
- B. Measurement of payment will be the actual horizontal length along the centerline of the installed water main with no deductions for fittings and valves.
- C. The unit of measurement for payment is linear feet.

1.4 WATER SERVICES

- A. The unit price for Water Services work includes:

1. General Work Items of Article 1.2.
2. Pipe and fittings of material stated in the Unit Price Bid Schedule.
3. Tracer wire.
4. Disinfection of pipelines.
5. Install an 8'- 4"x4" board at the end of the lateral.

B. Measurement of payment will be the actual horizontal length along the centerline of the installed water service with no deductions for fittings and curb stops.

C. The unit of measurement for payment is linear feet.

1.5 CORPORATION AND CURB STOPS

A. The unit price for Corporation and Curb Stops work includes:

1. General Work Items of Article 1.2.
2. Supply curb stops and curb boxes.
3. Connection to existing water service (where required).
4. Installation of curb stops and curb boxes.
5. Tracer wire.

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.6 2-INCH CORPORATION WITH PLUG OR SADDLE AND GALVANIZED PIPE

A. The unit price for 2-Inch Corporation with Plug or Saddle with Galvanized Pipe work includes:

1. General Work Items of Article 1.2.
2. Provide and install 2-inch corporation with plug or saddle (where required) with 2-inch galvanized pipe.
3. Remove 2-inch corporation with plug/saddle and repair water main.

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.7 VALVES

A. The unit price for Valves work includes:

1. General Work Items of Article 1.2.
2. Valve.
3. Valve box.
4. Polyethylene encasement.
5. Stem.

6. Bedding material.

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.8 CONNECTIONS TO EXISTING WATER MAINS

A. The unit price for Connection to Existing Water Mains work includes:

1. General Work Items of Article 1.2.
2. Locating existing water main.
3. Connection to the end of existing pipe.
 - a. Remove existing plug.
 - b. Direct connection to end of existing pipe.
 - c. Transition fittings, if required.

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.9 FIRE HYDRANTS

A. The unit price for Fire Hydrants work includes:

1. General Work Items of Article 1.2.
2. Fire hydrant complete of the specified bury depth.
3. Blocking and joint restraints.
4. Hydrant wrenches.
5. Hydrant markers.
6. Polyethylene encasement.
7. Drainage pit.
8. Disinfection of hydrant.
9. Tracer wire.
10. Tracer wire access box.

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.10 WATER MAIN OFFSET

A. The unit price for Water Main Offset work includes:

1. General Work Items of Article 1.2.
2. Ductile iron fittings and PVC pipe.
3. Tracer Wire.

4. Polyethylene encasement of ductile iron pipe and fittings.
5. Blocking and joint restraints.

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.11 ABANDON / REMOVE WATER MAIN AND APPURTENANCES

A. The unit price for Abandon/Remove Water Main and Appurtenances work includes:

1. General Work Items of Article 1.2.
2. Excavating
3. Install bulkheads and abandon water line.
4. Removing existing water main where in conflict with other utilities.
5. Providing and placing flowable fill.
6. Backfilling and compacting.
7. Removal and disposal of appurtenances as shown on the Drawings.

B. Measurement for payment will not be made. This includes all of the project area.

C. The unit of measurement for payment is lump sum.

END OF SECTION

SECTION 01 22 04

MEASUREMENT AND PAYMENT STREET AND DRAINAGE CONSTRUCTION

PART 1 – GENERAL

1.1 SUMMARY

- | | <u>Bid Item No.</u> |
|--|------------------------------------|
| A. Section includes: | |
| 1. Clearing and Grubbing | SD-01 |
| 2. Topsoil and Unclassified Excavation | SD-02 |
| 3. Mill Asphaltic Concrete Pavement | SD-03 |
| 4. Crushed Aggregate Base and Surface Course | SD-04 |
| 5. Asphaltic Concrete Pavement | SD-05, SD-06, SD-07 & SD-08 |
| 6. Temporary Asphalt Patch | SD-09 |
| 7. Portland Cement Concrete Curb and Gutter | SD-10, SD-11, SD-12, SD-13 & SD-14 |
| 8. Portland Cement Concrete Pavement | SD-15, SD-16, SD-17 & SD-18 |
| 9. Portland Cement Concrete Driveway and Sidewalk | SD-19, SD-20 & SD-21 |
| 10. Deformed Reinforcement Bars | SD-22 |
| 11. Drilling Tie Bars and Dowel Bars | SD-23, SD-24 & SD-25 |
| 12. Detectable Warning Field Natural | SD-26 |
| 13. Traffic Control | SD-27 |
| 14. Pavement Marking Epoxy Lines | SD-28, SD-29 & SD-30 |
| 15. Landscaping – Topsoil, Seed, Fertilize, and Mulch | SD-31 |
| B. Unit Prices include: | |
| 1. Defined work for each Unit Price Item which will provide a functionally complete Project when combined with all unit price items. If there are specific work items which the Contractor believes are not identified in any Unit Price Item, but is required to provide a functionally complete Project, then the identified specific work items shall be included in the appropriate Unit Price Item. | |
| 2. The method of measurement for payment. | |
| 3. The price per unit for payment. | |

1.2 GENERAL WORK ITEMS

- A. Include with the appropriate Unit Price Item the following work items which are common to the Unit Price Items for street and drainage systems.
- B. If there is a specific Unit Price Item for any of the following items, then the work item shall be included with that specific unit price item.
1. Traffic Control.
 2. Sawcutting asphalt and/or concrete.

3. Removal, hauling and disposal of surface materials including road pavement, curb and gutter, sidewalk, driveways and other pavement surfaces in the trench area and as shown on the drawings.
4. Maintenance, protection, replacement and/or repair of facilities not designated for alteration on the Site.
5. Site access requirements including temporary aggregate material as required for local traffic access.
6. Dust control.
7. Remove and replace existing mailboxes and traffic signs.
8. Restroom facilities.
9. Construction staking and other survey work not provided by the Engineer.
10. Regulatory requirements.
11. Quality assurance and quality control testing and inspections.
12. Final casting and valve box adjustment.
13. Shop drawings and other submittals.

1.3 CLEARING AND GRUBBING

- A. The unit price for Clearing and Grubbing work includes:
 1. General Work Items of Article 1.2.
 2. Cutting and disposing of tree.
 3. Grinding down of tree stump to a depth of one (1') foot.
 4. Removing and disposing of roots and stump grindings.
- B. Measurement and payment will be by the tree diameter in inches. The tree diameter will be determined by measuring the tree's trunk diameter approximately 4-1/2 feet above the existing ground level, but above the ground swell, and dividing by three. Diameters will be rounded to the nearest inch.
- C. The unit of measurement for payment in inch diameter.

1.4 TOPSOIL AND UNCLASSIFIED EXCAVATION

- A. The unit price for Topsoil and Unclassified Excavation work includes:
 1. General Work Items of Article 1.2.
 2. Removal of topsoil to depth available.
 3. Hauling and stockpiling topsoil.
 4. Excavation to subgrades shown on the Drawings.
 5. Hauling of unclassified material.
 6. Placing unclassified material in fill areas to subgrades shown on the Drawings and the subgrade required for placement of topsoil.
 7. Compaction of subgrade and fill areas.
 8. Test rolling subgrade.
 9. Excavation of undercut areas for placing topsoil.

10. Respreading topsoil to final grades shown on the Drawings.
11. Disposal of surplus topsoil, unclassified material and unsuitable material.
12. Preparation of disposal site and transportation of material over an Engineer approved haul route from the site including all loading and dumping of material.
13. Finish grading.

B. Measurement of payment will not be made unless there is a change in project scope. The estimated quantity represents the computed volume by comparing the triangulated surfaces and will be the basis for payment.

C. The unit of measurement for payment is cubic yards.

1.5 MILL ASPHALTIC CONCRETE PAVEMENT

A. The unit price for Mill Asphaltic Concrete Pavement work includes:

1. General Work Items of Article 1.2.
2. Milling to length, width and depth as shown on Drawings or specified elsewhere.
3. Hauling and disposing of millings.
4. Cleaning of area milled.

B. Measurement for payment will be the average horizontal length and width of roadway.

1. This item applies to James Street.

C. The unit of measurement for payment is square yards.

1.6 CRUSHED AGGREGATE BASE AND SURFACE COURSE

A. The unit price for Crushed Aggregate Base and Surface Course work includes:

1. General Work Items of Article 1.2.
2. Aggregate material (Consisting of virgin aggregate or pulverized asphaltic concrete pavement from this project).
3. Preparation of foundation.
4. Placing and compacting to thickness and width shown on the Drawings or specified elsewhere.
5. Maintenance until surface pavement is constructed.
6. Preparation of crushed aggregate base for paving.
7. Adjustment of manholes and valve boxes to proposed finish road grade.

B. Measurement of payment will be made based on the following:

1. Length will be the construction limits.
2. Width will be 6" behind the back of curb.
3. Depth is 15".
4. Area will be field verified by survey and calculated based on the computer generated area.

- C. The unit of measurement for payment is cubic yards.

1.7 ASPHALTIC CONCRETE PAVEMENT

- A. The unit price for Asphaltic Concrete Pavement work includes:
1. General Work Items of Article 1.2.
 2. Asphaltic concrete mixture, tack coat and other required materials
 3. Surface preparation.
 4. Provide tack coat on base material.
 5. Saw cutting and/or mill adjacent and abutting pavement surfaces.
 6. Asphaltic concrete placement and compaction to thickness and width shown on the drawings or specified elsewhere.
 7. Tack coat between asphaltic concrete courses and abutting pavements.
- B. Measurement for payment will be the actual amount of material required and incorporated in the work verified by submitting to the Engineer delivery tickets provided with each load showing the weight measured on a certified scale, type of material, the date delivered and the project name.
- C. The Unit Price shall be adjusted for deficiencies for less than minimum density represented by the average lot density of five nuclear density tests of 750 tons of asphaltic concrete placed as shown in the following table:

Density Deficiency-Percent of Unit Price for Payment	
%Lot Density Below Specified Minimum	WisDOT Mixes
From 0.5-1.0 inclusive	98%
From 1.1-1.5 inclusive	95%
From 1.6-2.0 inclusive	91%
From 2.1-2.5 inclusive	85%
From 2.6-3.0 inclusive	70%
More than 3.0	0%

- D. The unit of measurement for payment is tons.

1.8 TEMPORARY ASPHALT PATCH (COLD OR HOT MIX)

- A. The unit price for Temporary Asphalt Patch (Cold or Hot Mix) work includes:
1. General Work Items of Article 1.2.
 2. Provide Asphaltic Cold or Hot Mix material.
 3. Install and maintain patch from time of existing pavement removal through installation and curing of final pavement.

- B. Measurement for payment will not be made.
 - 1. This item applies to the George and Erie Street intersection.
- C. The unit of measurement for payment is for each intersection lump sum.

1.9 PORTLAND CEMENT CONCRETE CURB AND GUTTER

- A. The unit price for Portland Cement Concrete Curb and Gutter work includes:
 - 1. General Work Items of Article 1.2.
 - 2. Providing Portland cement concrete mixture of size shown in the drawings or specified elsewhere.
 - 3. Providing expansion joints.
 - 4. Providing curing.
 - 5. Existing curb and gutter removal.
 - 6. Subgrade preparation.
 - 7. Provide crushed aggregate base.
 - 8. Fine grading of subgrade.
 - 9. Providing contraction joints.
 - 10. Driveway entrances and handicap ramp entrances.
 - 11. Adjustment of catch basin/inlets.
 - 12. Finishing.
 - 13. Protection.
 - 14. Restoration behind the curb.
- B. Measurement for payment will be along the flow line of the gutter and through inlets/catch basins.
- C. The unit of measurement for payment is linear feet.

1.10 PORTLAND CEMENT CONCRETE PAVEMENT

- A. The unit price for Portland Cement Concrete Pavement work includes:
 - 1. General Work Items of Article 1.2.
 - 2. Furnish all labor, tools, equipment and services.
 - 3. Providing Portland cement concrete mixture of thickness shown in the drawings or specified elsewhere.
 - 4. Surface preparation.
 - 5. Providing reinforcement including tie bars and dowel bars.
 - 6. Drilling tie bars and dowel bars into existing pavement.
 - 7. Joint sealing.
 - 8. Providing curing.
 - 9. Concrete sealing with linseed oil.
 - 10. Fine grading of subgrade.
 - 11. Providing expansion joints and contraction joints.

12. Adjustment of manholes, water valves, inlets/catch basin and other structures to finish grade.
13. Finishing.
14. Protection.

B. Measurement for payment will be length and width of areas paved. Concrete curb and gutter will be measured separately, regardless if the curb is installed with integral curb. Curb and gutter will be paid per linear foot for twenty-four (24) inch width. The width and length will be subtracted from the concrete pavement area if integral curb is constructed.

C. The unit of measurement for payment is square yard.

1.11 PORTLAND CEMENT CONCRETE DRIVEWAY AND SIDEWALK

A. The unit price for Portland Cement Concrete Sidewalk and Driveway work includes:

1. General Work Items of Article 1.2.
2. Providing Portland cement concrete mixture of thickness shown in the drawings or specified elsewhere.
3. Providing reinforcement.
4. Providing expansion joint.
5. Providing curing.
6. Existing pavement removal.
7. Subgrade preparation.
8. Providing contraction joints.
9. Handicap ramps.
10. Sidewalk steps.
11. Saw cutting adjacent surfaces.
12. Finishing.
13. Protection.
14. Restoration.

B. Measurement for payment will be the average horizontal length and width of the concrete placed.

C. The unit of measurement for payment is square yards.

1.12 DEFORMED REINFORCEMENT BARS

A. The unit price for Deformed Reinforcement Bars work includes:

1. General Work Items of Article 1.2.
2. Supply and install two - #4 deformed reinforcement bars over all trenches that fall under any portion of the concrete curb and gutter, sidewalk, and driveway being constructed.

B. Measurement for payment will be the horizontal length of each bar installed.

1. This item applies to concrete curb and gutter, sidewalk, and driveway.
2. This item does not apply to concrete pavement and patches.

C. The unit of measurement for payment is linear feet.

1.13 DRILLING TIE BARS

A. The unit price for Drilling Tie Bars work includes:

1. General Work Items of Article 1.2.
2. Providing and installing tie bars, including coating.
3. For drilling holes in concrete not placed under the contract.
4. For epoxying or driving.

B. Measurement for payment will be the actual number of bars installed.

1. This item applies to concrete curb and gutter, sidewalk, and driveway.
2. This item does not apply to concrete pavement and patches.

C. The unit of measurement for payment is each.

1.14 DETECTABLE WARNING FIELD NATURAL

A. The unit price for Detectable Warning Field Natural work includes:

1. General Work Items of Article 1.2.
2. Providing and installing Detectable Warning Field per ADA requirements.
3. Each detectable warning field shall be two (2) feet by four (4) feet.

B. Measurement for payment will be the actual number of detectable warning field installed.

C. The unit of measurement for payment is each.

1.15 TRAFFIC CONTROL

A. The unit price for Traffic Control work includes:

1. General Work Items of Article 1.2.
2. Providing, installing, maintaining, and removing the traffic control signing and barricades as shown on the plans or per the MUTCD.
3. Traffic Detour, including covering signs when not in use (if applicable).
4. Flaggers per the MUTCD.
5. Temporary traffic control signals (activated) per the MUTCD, if utilized.
6. Sidewalk closure.

B. Measurement for payment will not be made.

C. The unit of measurement for payment is for each intersection lump sum.

1.16 PAVEMENT MARKING EPOXY LINES

- A. The unit price for Pavement Marking Epoxy Lines work includes:
 - 1. General Work Items of Article 1.2.
 - 2. Providing and installing the Pavement Marking Epoxy Lines includes preparing the surface, including brush-off blasting of concrete, for providing all marking, including reflectorization with glass beads, for protecting marking until dry or cured, and for replacing marking improperly constructed or that fails during the warranty period.
 - 3. For remarking if initially applies at less than 90% of the specified rate.
- B. Measurement for payment will be by the linear foot, calculated as follows:
 - 1. For solid lines; by adding the linear feet of solid line measured end to end.
 - 2. For intermittent lines; by multiplying the specified length of the individual marking of the line by the number of markings in the intermittent line end to end.
- C. The unit of measurement for payment is linear feet.

1.17 LANDSCAPING- TOPSOIL, SEED, FERTILIZE AND MULCH

- A. The unit price for Landscaping- Topsoil, Seed, Fertilize, and Mulch work includes:
 - 1. General Work Items of Article 1.2.
 - 2. Provide 4" topsoil or salvaged topsoil.
 - 3. Provide seed.
 - 4. Provide fertilizer.
 - 5. Provide mulch.
 - 6. Provide maintenance.
- B. Measurement for payment will be the width and length not greater than the road right-of-way, not greater than the easement and not greater than fifteen (15) feet beyond the top of either side of ditches outside the right-of-way.
- C. The unit of measurement for payment is square yard.

END OF SECTION

SECTION 01 22 05

MEASUREMENT AND PAYMENT SPECIAL CONSTRUCTION

PART 1 – GENERAL

1.1 SUMMARY

- | | |
|---|---------------------|
| A. Section includes: | <u>Bid Item No.</u> |
| 1. Pipe Foundation Stabilization | SC-01 |
| 2. Slurry Backfill | SC-02 |
| 3. Inlet Protection Erosion Control | SC-03 |
| 4. Rock Filled Filter Bags | SC-04 |
| 5. Adjusting Existing Structure Frame and Casting | SC-05, SC-06 |
- B. Unit Prices include:
1. Defined work for each Unit Price Item which will provide a functionally complete Project when combined with all unit price items. If there are specific work items which the Contractor believes are not identified in any Unit Price Item, but is required to provide a functionally complete Project, then the identified specific work items shall be included in the appropriate Unit Price Item.
 2. The method of measurement for payment.
 3. The price per unit for payment.

1.2 GENERAL WORK ITEMS

- A. Include with the appropriate Unit Price Item the following work items which are common to the Unit Price Items for special construction.
- B. If there is a specific Unit Price Item for any of the following items, then the work item shall be included with that specific unit price item.
1. Traffic Control.
 2. Loading, hauling and disposing of surplus material.
 3. Maintenance, protection, replacement and/or repair of facilities not designated for alteration on the Site beyond the limits identified.
 4. Dust control.
 5. Restroom facilities.
 6. Construction staking and other survey work not provided by the Engineer.
 7. Regulatory requirements.
 8. Quality assurance and quality control testing and inspections.
 9. Shop drawings and other submittals.

1.3 PIPE FOUNDATION STABILIZATION

- A. The unit price for Pipe Foundation Stabilization work includes:
 - 1. General Work Items of Article 1.2.
 - 2. Excavation below the limits of the pipe bedding with the bottom of the excavation wider than the top with 1:1 side slopes.
 - 3. Dewatering.
 - 4. Soil Class A-7 or A-8 aggregate material.
 - 5. Loading, hauling and disposing of surplus excavated material.
- B. Measurement of payment will be the volume calculated based on:
 - 1. The actual depth from four (4) inches below the bottom of pipe to the bottom of the aggregate material placed.
 - 2. The bottom width is the actual width not to exceed the pipe outside diameter plus twenty-four (24) inches plus 1:1 side slopes.
 - 3. The top width is the pipe outside diameter plus twenty-four (24) inches.
- C. The unit of measurement for payment is cubic yards.

1.4 SLURRY BACKFILL

- A. The unit price for Slurry Backfill work includes:
 - 1. General Work Items of Article 1.2.
 - 2. Provide Aggregate Slurry Backfill mix per Section 31 23 33.
 - 3. Install per details.
 - 4. All items of work to protect existing underground utilities.
- B. Measurement of payment will be the actual area installed per the detail.
 - 1. Slurry backfill used beyond the limits of the detail will not be paid unless approved by the Engineer.
- C. The unit of measurement for payment is cubic yards.

1.5 INLET PROTECTION EROSION CONTROL

- A. The unit price for Inlet Protection Erosion Control work includes:
 - 1. General Work Items of Article 1.2.
 - 2. Provide geotextile and wood materials for type shown on the Drawings.
 - 3. Placing inlet protection system.
 - 4. Inspection and maintenance of the installed inlet protection.
 - 5. Removal of the inlet protection.
 - 6. Cleaning debris buildup around inlet.
- B. Measurement for payment will be actual number of inlet protection erosion control installed.

C. The unit of measurement for payment is each.

1.6 ROCK FILLED FILTER BAGS

A. The unit price for Rock Filled Filter Bags work includes:

1. General Work Items of Article 1.2.
2. Provide rock filled filter bags.
3. Place Bags.
4. Inspection and maintenance of bags.
5. Remove bags.
6. Finish grading.
7. Topsoil, seeding, fertilizing, and mulching area in the vicinity of the rock filled filter bags which does not have established turf.

B. Measurement for payment will be the actual number of bags installed.

C. The unit of measurement for payment is each.

1.7 ADJUST EXISTING STRUCTURE FRAME CASTING

A. The unit price for Adjusting Existing Structure Frame Casting work includes:

1. General Work Items of Article 1.2.
2. Removal of the casting and existing adjusting rings from the structure as required.
3. Providing concrete adjusting rings and a 2 inch rubber riser ring from the WisDOT approved product list.
4. Provide castings.
5. Bituminous plastic cement sealing the exterior of the adjusting rings and casting.
6. The ring will be secured to the precast section with a 3 ½ inch wide Kent Seal or equal.
7. Above the concrete ring attach ¼ inch thru 3 inch thick ring using two $\frac{5}{16}$ inch bead above and below the ring of sealant type as recommended by the rubber manufacturer.
8. Initial and final adjustment.
9. Backfilling and compacting.

B. Measurement for payment will be the actual number of structure frame casting adjusted.

C. The unit of measurement for payment is each.

END OF SECTION

SECTION 01 29 00

PAYMENT PROCEDURES

PART 1 – GENERAL

1.1 SUMMARY

A. This section includes:

1. Administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.2 SCHEDULE OF VALUES

- A. Unit Price work will be the Schedule of Values used as the basis for reviewing Applications for Payment.

1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as recommended by the Engineer and approved by Owner.
- B. The date for each progress payment should be the 3rd Wednesday of each month. The period covered by each Application for Payment starts on the day following the end of the preceding period and ends the 4th Friday of the Month.
- C. Use forms provided by Engineer for Applications for Payment. Sample copy of the Application for Payment and Continuation Sheet is included in Section 00 62 76.
- D. Application Preparation Procedures
 1. When requested by the Contractor, the Engineer will determine the actual quantities and classifications of Unit Price Work performed.
 - a. Preliminary determinations will be reviewed with the Contractor before completing Application for Payment.
 - b. Engineer will complete the Application for Payment based on Engineer's decision on actual quantities and classifications.
 - c. Engineer will submit three original copies of Application for Payment to Contractor for certification of all three original copies.
 - d. Contractor shall submit signed Application for payment to Owner for approval within time frame agreed to at the Preconstruction Conference.
 2. If payment is requested for materials and equipment not incorporated in the Work, then the following shall be submitted with the Application for Payment:
 - a. Evidence that materials and equipment are suitably stored at the site or at another location agreed to in writing.

- b. A bill of sale, invoice, or other documentation warranting that the materials and equipment are free and clear of all liens.
 - c. Evidence that the materials and equipment are covered by property insurance.
- 3. Complete every entry on form. Execute by a person authorized to sign legal documents on behalf of Contractor.
- E. With each Application for Payment, submit waivers of liens from subcontractors and suppliers for the construction period covered by the previous application.
 - 1. Submit partial waivers on each item for amount requested before deduction for retainage on each item.
 - 2. When an application shows completion for an item, submit final or full waivers.
 - 3. Owner reserves the right to designate which entities involved in the Work shall submit waivers.
 - 4. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application.
 - 5. Submit waivers of lien on forms executed in a manner acceptable to Owner.
- F. The following administrative actions and submittals shall precede or coincide with submittal of first Application for Payment:
 - 1. List of subcontractors.
 - 2. Schedule of Values (For Lump Sum Work).
 - 3. Contractor's construction schedule.
- G. Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted including, but not limited, to the following:
 - 1. Evidence of completion of Project closeout requirements.
 - 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 - 3. Updated final statement, accounting for final changes to the Contract Sum.
 - 4. Consent of Surety to Final Payment.
 - 5. Final lien waivers as evidence that claims have been settled.
 - 6. Final liquidated damages settlement statement.

PART 2 – PRODUCTS

PART 3 – EXECUTION

END OF SECTION

SECTION 01 32 33

CONSTRUCTION PHOTOGRAPHS

PART 1 – GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Photographs for utility construction sites.

1.2 SUBMITTALS

- A. Submit electronic files of each photographic view within seven (7) days of taking photographs.

1.3 QUALITY ASSURANCE

- A. Photographs are to be submitted to the Engineer for approval prior to the start of construction.

PART 2 – PRODUCTS

PART 3 – EXECUTION

3.1 UTILITY AND STREET CONSTRUCTION SITES

- A. Prior to start of construction provide sufficient photographs to adequately show the existing facilities and conditions within and adjacent to the construction Site to serve as a guide for final restoration including:
 - 1. Roads including shoulders and/or curb and gutter.
 - 2. Sidewalks, parking areas, and driveways.
 - 3. Utility structures.
 - 4. Landscaping including signs, plantings, walls, fences, trees, shrubbery, etc.
 - 5. Mailboxes.
 - 6. Drainage facilities including culverts, inlets, ditches.
 - 7. Building structures.
- B. During construction provide sufficient photographs (a minimum of one per 100 feet of installed utility) to adequately show construction means, methods, and Site conditions including:
 - 1. Crossings of other utilities.
 - 2. Exposure of existing structures.
 - 3. Soil conditions.

END OF SECTION

SECTION 01 33 00

SUBMITTALS

PART 1 – GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for submittals:
 - 1. Progress Schedule.
 - 2. Schedule of Shop Drawings and Sample Submittals.
 - 3. Shop Drawings.
- B. Failure to meet Submittal requirements to the satisfaction of the Engineer will constitute unsatisfactory performance of the work in accordance with the Contract Documents, therefore, the Engineer may recommend to the Owner that all or a portion of payments requested during the corresponding pay period be withheld until these requirements are met.

1.2 SUBMITTAL PROCEDURES

- A. Coordination: Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related elements of the work so processing will not be delayed by the need to review submittals concurrently for coordination.
 - a. The Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
 - 3. To avoid the need to delay installation as a result of the time required to process submittals, allow sufficient time for submittal review, including time for re-submittals.
 - a. Allow two weeks for initial submittal.
 - b. Allow two weeks for reprocessing each submittal.
 - c. No extension of Contract Time will be authorized because of failure to transmit submittals to the Engineer sufficiently in advance of the work to permit processing.
- B. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.
 - 1. Assign a reference number to each submittal and re-submittal.
 - 2. Provide a space approximately four (4) by five (5) inches (100 by 125 mm) on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.
 - 3. Include the following information on the label for processing and recording action taken.

- a. Project name.
 - b. Date.
 - c. Name and address of the Engineer.
 - d. Name and address of the Contractor.
 - e. Name and address of the subcontractor.
 - f. Name and address of the supplier.
 - g. Name of the manufacturer.
 - h. Number and title of appropriate Specification Section.
 - i. Drawing number and detail references, as appropriate.
 4. Each submittal shall be stamped by the Contractor indicating that submittal was reviewed for conformance with the Contract Documents. The Engineer will not accept unstamped submittals.
- C. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal to the Engineer. The Engineer will not accept submittals received from sources other than the Contractor.
1. On the transmittal, record relevant information and requests for Engineer action. On a form, or separate sheet, record deviations from Contract Document requirements, including variations, limitations, and justifications. Include Contractor's certification that information complies with Contract Document requirements.

1.3 CONTRACTOR'S PROGRESS SCHEDULE

- A. Prepare and submit to the Engineer within 10 (ten) days after the Effective Date of the Agreement, four copies of a preliminary progress schedule of the work activities from Notice to Proceed until Substantial Completion.
1. Provide sufficient detail of the work activities comprising the schedule to assure adequate planning and execution of the work, such that in the judgment of the Engineer, it provides an appropriate basis for monitoring and evaluation of the progress of the work. A work activity is defined as an activity which requires substantial time and resources (manpower, equipment, and/or material) to complete and must be performed before the contract is considered complete.
 2. The schedule shall indicate the sequence of work activities. Identify each activity with a description, start date, completion date and duration. Include, but do not limit to the following items, as appropriate to this contract:
 - a. Shop drawing review by the Engineer.
 - b. Excavation and grading.
 - c. Asphalt and concrete placement sequence.
 - d. Restoration.
 - e. Construction of various segments of utilities.
 - f. Subcontractor's items of work.
 - g. Allowance for inclement weather.
 - h. Contract interfaces, date of Substantial Completion.
 - i. Interfacing and sequencing with existing facilities and utilities.

- j. Sequencing of major construction activities.
 - k. Milestones and completion dates.
- B. Distribution: Following response to the initial submittal, print and distribute copies of the revised construction schedule to the Engineer, Subcontractors, and other parties required to comply with scheduled dates. When revisions are made, distribute to the same parties. Delete parties from distribution when they have completed their assigned portion of the work and are no longer involved in construction activities.
- C. Schedule Updating: Revise the schedule after each meeting, event, or activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.
- D. Punch List: Prepare and submit to the Engineer within ten (10) days after substantial completion a detailed progress schedule for outstanding work and punch list items.

1.4 SCHEDULE OF SHOP DRAWINGS AND SAMPLE SUBMITTALS

- A. Submit four (4) hard copies or electronic copies of preliminary submittal schedule in accordance with the General Conditions of the Contract and as follows:
- 1. Coordinate submittal schedule with the subcontractors, Schedule of Values, and of products as well as the Contractor's Progress Schedule.
 - 2. Prepare the schedule in chronological order. Provide the following information:
 - a. Scheduled date for the first submittal.
 - b. Related Section number.
 - c. Submittal category (Shop Drawings, Product Data, or Samples).
 - d. Name of the subcontractor.
 - e. Description of the part of the work covered.
 - f. Scheduled date for the Engineer's final release or approval.
- B. Distribution: Following response to the initial submittal, print and distribute copies of the revised construction schedule to the Engineer, Subcontractors, and other parties required to comply with scheduled dates. Post copies in the field office. When revisions are made, distribute to the same parties. Delete parties from distribution when they have completed their assigned portion of the work and are no longer involved in construction activities.
- C. Schedule Updating: Revise the schedule after each meeting or activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

1.5 SHOP DRAWINGS

- A. Submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or

copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.

- B. Collect product data into a single submittal for each element of construction of system. Product data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, and performance curves.
 - 1. Mark each copy to show actual product to be provided. Where printed Product Data includes information on several products that are not required, mark copies to indicate the applicable information. Include the following information:
 - a. Manufacturer's printed recommendations.
 - b. Compliance with trade association standards.
 - c. Compliance with recognized testing agency standards.
 - d. Application of testing agency labels and seals.
 - e. Notation of dimensions verified by field measurement.
 - f. Notation of coordination requirements.
- C. Do not use shop drawings without an appropriate final stamp indicating action taken.
- D. Submittals: Submit four (4) copies of each required submittal. The Engineer will retain two (2) copies, and return the others to the Contractor marked with action taken and corrections or modifications required.
- E. Distribution: Furnish copies of reviewed submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms. Maintain one copy at the project site for reference.
 - 1. Do not proceed with installation until a copy of the Shop drawing is in the Installer's possession.
 - 2. Do not permit use of unmarked copies of the Shop Drawing in connection with construction.

1.6 ENGINEER'S ACTION

- A. Except for submittals for the record or information, where action and return is required, the Engineer will review each submittal, mark to indicate action taken, and return promptly. The Engineer will stamp each submittal with a uniform action stamp. The Engineer will mark the stamp appropriately to indicate the action taken, as follows:
 - 1. "No Exceptions Taken": The work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents.
 - 2. "Make Corrections Noted": The work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents.

3. "Amend and Resubmit": Do not proceed with work covered by the submittal. Resubmit without delay. Do not use, or allow others to use, submittals marked "Amend and Resubmit" at the Project Site or elsewhere where work is in progress.
 4. "Rejected – See Remarks": Do not proceed with work covered by the submittal. Resubmit without delay. Do not use, or allow others to use, submittals marked "Rejected and Resubmit" at the Project Site or elsewhere where work is in progress.
- B. Unsolicited Submittals: The Engineer will return unsolicited submittals to the sender without action.

PART 2 – PRODUCTS

PART 3 – EXECUTION

END OF SECTION

SECTION 01 41 00

REGULATORY REQUIREMENTS

PART 1 – GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Underground Utilities.
 - 2. Property Monuments.
 - 3. Traffic Control.
 - 4. Permits for Project.

1.2 UNDERGROUND UTILITIES

- A. Under the provisions of Wisconsin Statutes, Section 182.0175, all contractors, subcontractors, and any firm or individual intending to do work on this Contract shall contact all utility firms in the affected area of construction a minimum of three (3) working days prior to beginning construction so that affected utilities will be located and marked.

1.3 PROPERTY MONUMENTS

- A. Protect iron pipe monuments from movement.
- B. The cost of replacement of any monuments moved or destroyed during construction shall be the Contractor's responsibility.
- C. Perpetuation of destroyed or moved monuments shall be performed in accordance with state statutes by a registered land surveyor.

1.4 TRAFFIC CONTROL

- A. Provide traffic control facilities including barricades, signs, lights, warning devices, pavement markings, flaggers, etc.
- B. Construct and use traffic control facilities in accordance with the U.S. D. O. T. Federal Highway Administration's Manual on Uniform Traffic Control Devices for Streets and Highways.
- C. Maintain traffic control devices as required to properly safeguard the public travel through final completion, including during periods of suspension of work.

1.5 PERMITS FOR PROJECT

- A. The following permits are being obtained by the Owner:

Project 21-02
Erie Street Reconstruction and Utility Relay

City of De Pere

1. WDNR – Sanitary Sewer
2. WDNR – Water Main
3. WDNR WRAPP
4. Brown County Highway Department

- B. Any costs associated with violations pertaining to the WRAPP permit will be the responsibility of the Contractor.

PART 2 – PRODUCTS (Not used)

PART 3 – EXECUTION (Not used)

END OF SECTION

SECTION 01 71 23

FIELD ENGINEERING

PART 1 – GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Engineering Surveys Provided by the Engineer.
 - 2. Engineering Surveys Provided by the Contractor.

1.2 SUBMITTALS

- A. None

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.1 PREPARATION

- A. Investigate and verify the existence and location of site improvements, utilities, and other existing facilities.
- B. Before construction, verify the location of invert elevations at points of connection of sanitary sewer, storm sewer, water piping and underground electrical services.
- C. Furnish information to the Engineer and the appropriate utility regarding conflicts that are necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction.
- D. Provide the Engineer two (2) working days advance notification when ready for engineering surveys for construction to be provided by the Engineer.

3.2 ENGINEERING SURVEYS TO BE PROVIDED BY THE ENGINEER

- A. General
 - 1. Establish benchmarks for construction as shown on the drawings.
 - 2. Establish control points as shown on the drawings.
- B. Gravity Sewer Systems and Water Distribution Systems
 - 1. Provide construction reference stakes set for pipe construction location at critical changes in horizontal and vertical alignment.

2. Provide construction stakes for location of pipe at connections.

C. New Road Construction

1. Provide construction slope intercept stakes for horizontal and vertical alignment on each side of the road base on each cross section in the cross section sheets for requests received at least seventy-two (72) hours before the related work begins.
2. Provide construction reference stakes for subgrade at a minimum of fifty (50) foot intervals and maximum of one-hundred (100) foot intervals on tangents. Provide construction reference stakes for subgrade at twenty-five (25) foot intervals within vertical and horizontal curves. Provide a reference line stake at each location.
3. Provide construction reference stakes for top of crushed aggregate at a minimum of fifty (50) foot intervals and maximum of one-hundred (100) foot intervals on tangents. Provide construction reference stakes for top of crushed aggregate at twenty-five (25) foot intervals within vertical and horizontal curves. Provide a reference or centerline stake.

3.3 ENGINEERING SURVEYS TO BE PROVIDED BY THE CONTRACTOR

A. General

1. Locate, preserve and protect established construction reference stakes, benchmarks and control points.
2. Locate, preserve and protect property corners and section corner monuments. If moved or destroyed due to Contractor negligence, then replace in accordance with state requirements; some of which are referenced in the "Regulatory Requirements".
3. Provide additional construction staking as necessary to complete construction based on the construction reference stakes provided by the Engineer and the Drawings.
4. Before beginning with necessary construction staking, verify the information shown on the Drawings, in relation to the established construction reference stakes, bench marks, control points and property corners. Notify the Engineer of any discrepancies.
5. Remove construction reference stakes when directed by the Engineer.

B. Gravity Sewer Systems and Water Distribution Systems

1. Provide any intermediate construction reference points as required to verify installation at the line and grade established and locate appurtenant structures.
2. Check the line and grade with construction reference stakes at each pipe length.

C. New Road Construction

1. Provide additional construction reference stakes necessary to establish location and grade in accordance with the plans.

END OF SECTION

SECTION 03 35 33

STAMPED COLORED CONCRETE FINISHING

1.1 SUMMARY

A. Section Includes:

1. Constructing stamped colored concrete.

1.2 REFERENCES

- A. WisDOT Standard Specification for Highway and Structure Construction, Latest Edition.

1.3 SUBMITTALS

A. Design Mixes

1. Submit copies of the composition and strength testing results for design mix for each type of concrete.

B. Certificates

1. Manufacturer's certification of the curing compound.
2. Manufacturer's certification of evaporation retarders.
3. Manufacturer's certification of sealer with sure grip.

C. Samples

1. Provide all material samples needed for the required testing.

1.4 QUALITY ASSURANCE

- A. Independent testing will be completed by the Owner.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Concrete shall be in accordance with the Standard Specifications.
- B. The stamping pattern shall be Belgian Basket Weave used brick.
- C. The coloring admixture shall be WisDOT Red, conforming to Section 405 of the WisDOT Standard Specification for Highway and Structure Construction.
- D. The maximum amount of chert allowed shall be less than one percent (1.0%) by weight.

- E. The City of De Pere will provide three sets of six basic concrete stamping and patterning tools. The contractor shall provide other tools necessary to complete the work.
- F. Evaporation retarders: Waterborne monomolecular film forming manufactured for application to fresh concrete, Dayton Superior Day-Chem Sure Film J-74 or equal.
- G. Form Release Agent.
- H. AK-2 ACHRO KURE 1315 sealer with sharp grip added.
- I. Curing and sealing materials shall be compatible with colored concrete as recommended by the manufacturer.

PART 3 – EXECUTION

3.1 PLACING AND FINISHING CONCRETE

- A. Construct stamped colored concrete pavement in accordance with the standard specifications and as hereinafter provided. The coloring of the concrete shall be full depth color, not surface application
- B. The City of De Pere will provide the decorative stamping and patterning tools for stamping the concrete. The City has 21 rigid stamps and 3 flexible stamps. The stamps owned by the City are Belgian Basket Weave used brick. If the Contractor needs to purchase more stamps to perform the work, the additional stamps purchased shall be considered incidental to the stamped colored concrete. Return the concrete stamping and patterning tools to the City once work is complete. Return concrete stamping and patterning tools in good condition. If the concrete stamping and patterning tools are not returned to the City in good condition the contractor shall replace the stamping and patterning tools.
- C. Provide all other standard finishing tools for stamping the colored concrete.
- D. Colored concrete shall be produced in one (1) cubic yard increments. No ½ cubic yard loads will be accepted.
- E. Water/cement in mix design shall be consistent to maintain consistent color.
- F. Colored concrete mixes for the entire project shall be consistent. If the mix is started with High Early Strength then all colored concrete shall be provided as High Early Strength. Switching from regular colored concrete to High Early Strength colored concrete or High Early Strength colored concrete to regular colored concrete will not be allowed.
- G. Once pouring of the colored concrete on the project has begun, cement switching in the colored concrete will not be allowed because it will affect the color consistency of the colored concrete.

- H. Any additional water added to colored concrete once the truck is on site will be rejected.
- I. Blessing of the colored concrete pavement with water once concrete is in place will not be allowed. If water is added to the surface of the colored concrete surface once concrete is in place, the colored concrete will be rejected and will need to be removed.
- J. Evaporation reducers will be used throughout the construction of the colored concrete.
- K. Cover and protect adjacent construction and concrete from discoloration and spillage during placement of colored concrete, application of release agents, and sealers.
- L. Liquid release agent shall be uniformly applied onto the colored still plastic state concrete to provide clean release of imprinting tools from the concrete surface without lifting imprint or tearing concrete.
- M. While initially finished concrete is in plastic state, accurately align and place imprinting stamps. Monitor the setting up of the concrete. Once the concrete has set to the point it can be stamped the contractor shall begin stamping. Uniformly pound or press imprint tool into concrete to produce required pattern and depth of imprint on concrete surface. Remove platform tools immediately. Hand texture and stamp edges and surfaces unable to be imprinted by stamp mats. Touch up imperfections such as broken corners, double imprints and surface cracks.
- N. Stamp concrete consistently so that stamped concrete does not have a vertical elevation difference of ½ inch or depressions in concrete capable of causing ponding water or ice.
- O. For concrete hand stamp edges and surfaces that are unable to be imprinted by platform tools, use texture mats and single blade hand stamps to match platform tool stamping pattern. Finished imprinting shall match pre-construction mock-up.
- P. After concrete has been stamped and the sheen has left the surface of the colored concrete, the colored concrete shall be sealed with AK-2 ACHRO KURE 1315 with sharp grip added. Apply per manufacturer's recommendations. Two coats of seal shall be applied. Apply second coat after first coat has dried. Do not seal over blemishes or imperfections caused by rainfall or protection materials.
- Q. In general colored concrete must be protected from premature drying and excessive cold or hot temperatures. Apply evaporation retarders to concrete surfaces only if hot, dry, or windy conditions causing a moisture loss approaching 0.20lb./sq.ft. x h before and during initial finishing operations. Apply according to manufacturer's written instructions after placing and screeding and during initial floating operations.
- R. Protect the colored concrete from damage.

- S. Adjacent concrete that is discolored shall be removed and replaced to the approval of the engineer.

END OF SECTION

SECTION 32 01 16.10SP

PULVERIZE ASPHALT PAVEMENTS

PART 1 – GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Cold Recycling of asphaltic pavements

PART 2 – PRODUCTS

2.1 EQUIPMENT

- A. Crushing Equipment
 - 1. Crushing equipment may be an in-place crusher or a central crusher.
 - 2. In-place crusher:
 - a. Provide a self-propelled machine designed and built for reduction in size of old pavement material in-place.
 - b. Provide a rotary reduction machine, having positive depth and control adjustments in increments of ½ inch and capable of reducing material to at least 6 inches thick.
 - c. Provide a totally enclosed drum to prevent discharge of any loosened material on adjacent areas.
- B. Compaction
 - 1. Provide a vibratory roller capable of exerting a minimum total force of 450 lbs. per linear inch of roller drum.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Clean the pavement surfaces of excessive dirt, clay or other foreign material immediately prior to milling the pavement.
- B. Saw cut pavement at project ends and side roads to provide proper butt joint.

3.2 APPLICATION

- A. Work includes scarifying, pulverizing, crushing, redistributing, blending, shaping, rolling and compacting of recrushed aggregate material to proper elevation and slope.
- B. Protect from damage manholes, valve boxes, and any other items in the roadway.

END OF SECTION

SECTION 33 00 05

DOUBLE AND TRIPLE WALLED POLYPROPYLENE PIPE

PART 1 – GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Double walled polypropylene pipe for mainline gravity storm sewer.
 - 2. Triple walled polypropylene pipe for mainline gravity storm sewer.
- B. The products described are not installed under this Section.

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. D3212 Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
 - 2. F477 Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
 - 3. F2736 Standard Specification for 6 to 27 in. (152 To 762 mm) Polypropylene (PP) Corrugated Single Wall Pipe And Double Wall Pipe
 - 4. F2764 Standard Specification for 30 to 60 in. [750 to 1500 mm] Polypropylene (PP) Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications

1.3 SUBMITTALS

- A. Submit the following:
 - 1. Certification of productions date of all materials.
 - 2. Manufacturer's certification that the materials delivered were manufactured, sampled, tested, and inspected in accordance with this specifications and appropriate referenced standards.
 - 3. Product data sheet.
 - 4. Manufacturer's recommendations for assembly.

1.4 QUALITY ASSURANCE

- A. Make pipe available to the Engineer's Representative for inspection.
- B. Pipe shall be considered defective and will be rejected when:
 - 1. Pitted or cratered.
 - 2. Flaking.

3. Straightness varies more than ½ inch in 10 feet.
4. Any defect which prevents assembly according to manufacturer's recommendations.
5. Not utilized within twelve months of date of production.
6. Pipe is not properly marked.

C. Material brands and/or pipe classes shall not be mixed.

D. Pipe Marking – pipe and fittings shall be marked as follows:

1. Manufacturer's name, trademark or logo.
2. Nominal size.
3. Pipe stiffness designation, dimension ration, or schedule size and pressure class.
4. ASTM specification designation.
5. Production date.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inspect the pipe shipment to identify shifted loads, broken packaging or rough treatment, which could be an indication of damage.
- B. Unload the pipe in a manner which will not put stress on the pipe or strike anything causing damage.
- C. Place and store the pipe package units on level ground stacked no more than 8 feet high. Do not store close to heat sources.
- D. For onsite gasket installation on pipe, store gaskets away from excessive exposure to heat, direct sunlight, ozone, oil or grease.
- E. For gaskets installed on the pipe offsite, keep the protective wrap on gaskets until installation.
- F. Handle pipe in a manner to prevent impact blows, abrasion damage, gouging or cutting.
- G. When handling pipe in cold weather, provide additional care to prevent damage due to impact.

PART 2 – PRODUCTS

2.1 NON-PRESSURE RATED PIPE

A. Mainline Gravity Sewer and Sewer Services

1. Pipe fittings and repair couplings shall be manufactured and tested in accordance with the following standards:
 - a. Sizes 8 inch through 27 inch and depths up to 20 feet: ASTM F2736, PSM SDR-35 PVC
 - b. Sizes 30 inch through 60 inch and depths up to 20 feet: ASTM F2764, PS46 PVC, T-1 minimum cell classification

2. Pipe shall have a minimum pipe stiffness of 46 PSI.
3. Minimum height of cover to the top of pipe to the existing elevation or proposed finished elevation (whichever is less) shall be two feet.
4. Elastomeric Gaskets: Conform with ASTM F477
5. Elastomeric Joints: Conform with ASTM D3212
6. Solvent Weld Joints: Not permitted.

B. Sewer Services

1. 4" and 6" pipe shall be Schedule 40 PVC and conform to section 33 00 02, Polyvinyl Chloride (PVC) Pipe and Fittings.
2. Branch laterals shall be designed to accept SDR 35.

2.2 DEFLECTION TEST REQUIREMENTS

- A. Deflection testing procedures shall conform to Section 01 45 23 10, Testing and Inspection of Pipeline and Appurtenances.
- B. The following table shall be used for the mandrel setting for Polypropylene Pipe:

Table 1
SaniTite HP Recommended Mandrel Settings

Pipe Type	Pipe Diameter (Inches)	Minimum Inside Diameter (Inches)	Inside Diameter With 5% Deflection (Inches)
Dual Wall	12	11.90	11.31
	15	14.85	14.11
	18	17.93	17.03
	21	20.79	19.75
	24	23.90	22.71
	30	29.79	28.30
Triple Wall	30	29.62	28.14
	36	35.40	33.63
	42	41.31	39.24
	48	47.31	44.94
	60	59.30	56.34

END OF SECTION

EXHIBIT A

**GEOTECHNICAL ENGINEERING
SERVICES REPORT**



GEOTECHNICAL ENGINEERING SERVICES REPORT

For the:

North Erie Street Reconstruction
De Pere, Wisconsin

A handwritten signature in black ink, appearing to read 'James M. Becco'.

James M. Becco, P.E.
Regional Vice President

Prepared for:

City of De Pere
925 South Sixth Street
De Pere, Wisconsin 54115

A handwritten signature in black ink, appearing to read 'Patrick Bray'.

Patrick Bray, E.I.T.
Branch Manager

Prepared by:

Professional Service Industries, Inc.
3009 Vandebroek Road
Kaukauna, Wisconsin 54130
Phone (920) 735-1200
Fax (920) 735-1840

A handwritten signature in black ink, appearing to read 'Logan Joniaux'.

Logan Joniaux
Staff Geologist

January 22, 2021

PSI Report Number: 00941316

TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	GENERAL	1
1.2	PURPOSE	1
1.3	SCOPE	1
1.4	AUTHORIZATION	1
2	SITE AND PROJECT DESCRIPTION	1
2.1	SITE FEATURES	1
2.2	PROJECT DESCRIPTION	2
3	EXPLORATION AND LABORATORY PROCEDURES	2
3.1	SCOPE SUMMARY	2
3.2	FIELD EXPLORATION	2
3.3	LABORATORY PHYSICAL TESTING	3
4	DESCRIPTION OF SUBSURFACE CONDITIONS	3
4.1	GENERAL	3
4.2	SUBSURFACE CONDITIONS	3
4.3	GROUNDWATER OBSERVATIONS	4
5	EVALUATION AND RECOMMENDATIONS	4
5.1	EXISTING PAVEMENT SECTION	4
5.2	PAVEMENT SUBGRADE EVALUATION	5
5.3	SELECTIVE SUBGRADE REMOVAL AND REPLACEMENT	5
5.4	SITE DRAINAGE	6
6	CONSTRUCTION CONSIDERATIONS	6
6.1	PAVEMENT SUBGRADE PREPARATION	6
6.2	BORROW MATERIAL	7
6.3	FILL PLACEMENT AND COMPACTION	8
6.4	GROUNDWATER CONTROL	8
6.5	EXCAVATION CONSIDERATIONS	9
6.6	SUBGRADE FROST ACTION	10
7	GENERAL COMMENTS	10

Appendix (in order of appearance)

Figure 1 – Boring Location Plan
Soil Boring Logs
General Notes





1 INTRODUCTION

1.1 GENERAL

This report presents the results of the subsurface exploration and subgrade evaluation for the North Erie Street Reconstruction project in De Pere, Wisconsin. The work was performed for the City of De Pere, at the request of Mr. Michael Walsh.

1.2 PURPOSE

The purpose of this study was to evaluate the subsurface conditions at specific boring locations and to establish parameters for use by the design engineers in preparing the pavement designs for the proposed project.

1.3 SCOPE

The scope of services included the subsurface exploration, an evaluation of soil characteristics by field and laboratory testing, and an evaluation of the data obtained. Subgrade preparation recommendations and construction considerations are also provided. The scope of the field work, including the number, depth, and locations of the borings was determined by the client.

1.4 AUTHORIZATION

The description of services and authorization to perform this subsurface exploration and evaluation were in the form of signed acceptance copy of PSI Proposal No. 0094-301529, dated January 31, 2020. The general conditions for the performance of the work were referenced in the proposal. This report has been prepared on behalf of, and exclusively for the use of the City of De Pere. The information contained in this report may not be relied upon by any other parties without the express written consent of PSI, and acceptance by such parties of PSI's General Conditions.

2 SITE AND PROJECT DESCRIPTION

2.1 SITE FEATURES

The subject site is located along North Erie Street, generally extending from the intersection with Ridgeway Boulevard south/southwest to the intersection with George Street (about 2,000 feet), in De Pere, Wisconsin. At the time of the exploration, North Erie Street consisted of asphalt pavement (approximately 28 feet wide), which was generally in fair to poor condition with cracking and surface depressions observed throughout. Sidewalks were generally present on both sides of North Erie Street. Usage along the project route consisted primarily of residential properties with trees and manicured grass. A review of historical aerial images available on Google Earth between the years of 1992 and 2018, indicates that the subject site has remained relatively similar in appearance to that described above. The subject site is depicted on the enclosed Boring Location Plan (Figure 1).



2.2 PROJECT DESCRIPTION

Based on information provided by the client, it is understood that the project will consist of the reconstruction of North Erie Street generally extending from the intersection with Ridgeway Boulevard, southwest/south to the intersection with George Street (about 2,000 feet). The existing pavement is planned to consist of a complete reconstruction. The reconstructed roadway will consist of asphalt pavement, with concrete curb, gutter, and sidewalk. It is understood that the vertical alignment of the roadway will remain near existing, with the exception of possible minor changes to ensure proper drainage. No additional design information was provided for inclusion in this report.

3 EXPLORATION AND LABORATORY PROCEDURES

3.1 SCOPE SUMMARY

The field and laboratory data utilized in the evaluation of the subsurface materials was obtained by drilling exploratory test borings, securing soil samples by the split-spoon sampling method, and subjecting the samples to standard laboratory testing.

3.2 FIELD EXPLORATION

A total of four (4) soil test borings were performed to depths of about 5 and 11.5 feet below existing grade. The number, depths, and location of the borings was determined by the client. The borings were staked in the field by the client. Surface elevations for the boring locations were not provided to PSI for inclusion in this evaluation.

The soil test borings were performed with a truck-mounted rotary drilling rig utilizing continuous flight augers to advance the boreholes. Representative soil samples were obtained by the Standard Penetration Test (SPT) method in general accordance with ASTM D-1586 procedures at 2.5-foot intervals to 10 feet, and then at 5-foot intervals thereafter to the end of the borings. The standard penetration value (N) is defined as the number of blows of a 140-pound hammer, falling thirty (30) inches, required to advance the split-spoon sampler one (1) foot into the soil. The sampler is lowered to the bottom of the drill hole and the number of blows recorded for each of the three (3) successive increments of six (6) inches penetration. The "N" value is obtained by adding the second and third incremental numbers. The SPT provides a means of estimating the relative density of granular soils and comparative consistency of cohesive soils, thereby providing a method of evaluating the relative strength and compressibility characteristics of the subsoils.

The soil samples were transferred into clean glass jars immediately after retrieval, and returned to the laboratory upon completion of the field operations. Samples will be discarded unless other instructions are received. All soil samples were visually classified in general accordance with the Unified Soil Classification System (ASTM D-2488-75). A description of the subsurface conditions encountered at each boring location is shown on the enclosed Soil Boring Logs.



After completion of the borings, the auger holes were backfilled to the ground surface with bentonite chips, and the surface patched with cold mix asphalt.

A copy of the Soil Boring Logs and Boring Location Plan (Figure 1) are enclosed in the Appendix. The soil stratification shown on the logs represents the approximate soil conditions in the actual boring locations at the time of the exploration. The terms and symbols used on the logs are described in the General Notes found in the Appendix.

3.3 LABORATORY PHYSICAL TESTING

Soil samples obtained from the exploration were visually classified in the laboratory, and subjected to testing, which included moisture content determinations. Selected cohesive soil samples were tested in unconfined compression with an uncontrolled strain loading rate and/or with a calibrated hand penetrometer to aid in evaluating the soil strength characteristics. The values of strength tests performed on soil samples obtained by the Standard Penetration Test Method (SPT) are considered approximate, recognizing that the SPT method provides a representative but somewhat disturbed soil sample.

The laboratory testing was performed in general accordance with the respective ASTM methods, and the results are shown on the boring logs in the Appendix.

4 DESCRIPTION OF SUBSURFACE CONDITIONS

4.1 GENERAL

A description of the subsurface conditions encountered at the test boring locations is shown on the Soil Boring Logs. The lines of demarcation shown on the logs represent approximate boundaries between the various soil classifications. It must be recognized that the soil descriptions are considered representative for the specific test boring location, but that variations may occur between and beyond the sampling intervals and boring locations. Soil depths, topsoil and layer thicknesses, and demarcation lines utilized for preconstruction planning should not be expected to yield exact and final quantities. A summary of the major soil profile components is described in the following paragraphs.

4.2 SUBSURFACE CONDITIONS

The surface at the boring locations consisted of about 5 to 7 inches of asphalt pavement, overlying about 6 to 8 inches of base course comprised of gray, dark brown, and grayish brown fine sand with gravel. Fill and possible fill comprised of brown or reddish brown clay was encountered in B-1, B-2, and B-4 to depths ranging from about 2.5 to 3 feet below existing grade. Beneath the base course at B-3; and beneath the fill and possible topsoil fill in the B-1, B-2, and B-4, the natural soils predominantly consisted of reddish brown and bluish gray clay to the maximum depths explored by the borings.



The fill and possible fill materials were classified as such based on their varied visual characteristics and composition. However, it must be recognized that in the absence of foreign substances and/or debris within the soil samples obtained, it is often difficult to distinguish between natural soils and clean soil fill.

The existing cohesive fill soils encountered in the borings were generally medium stiff to very stiff in comparative consistency with Standard Penetration Resistances (N-values) ranging from about 10 to 12 blows per foot (bpf) and unconfined compressive strengths ranging from about 0.6 to 2.4 tons per square foot (tsf). The natural cohesive soils encountered in the borings were generally medium stiff to very stiff in comparative consistency, with N-values typically ranging from about 7 to 13 bpf, and unconfined compressive strengths ranging from about 1.0 to 3.1 tsf.

The foregoing discussion of soil conditions on this site represents a generalized soil profile as determined at the test boring locations. A more detailed description and supporting data for each test location can be found on the individual Soil Boring Logs.

4.3 GROUNDWATER OBSERVATIONS

Groundwater observations were made during the drilling operations, and in the open boreholes upon completion. Groundwater was not encountered during auger advancement or upon completion and removal of the augers. The borings caved at depths ranging from about 4 to 8.5 feet below existing grade; therefore, observations could not be made below the caved depths.

The groundwater observations reported herein are considered approximate. It must be recognized that groundwater levels fluctuate with time due to variations in seasonal precipitation, lateral drainage conditions, and soil permeability characteristics. Longer term monitoring would be required to better evaluate groundwater levels on this site.

5 EVALUATION AND RECOMMENDATIONS

5.1 EXISTING PAVEMENT SECTION

The asphalt pavement observed along North Erie Street is considered to be in generally fair to poor condition, with respect to serviceability and structural integrity. Cracking and surface depressions were observed throughout the project route.

The existing pavement section at the borings generally consisted of about 5 to 7 inches of asphalt pavement, overlying about 6 to 8 inches of base course comprised of gray, dark brown, and grayish brown fine sand with gravel. Fill and possible fill comprised of brown or reddish brown clay were encountered in B-1, B-2, and B-4 to depths ranging from about 2.5 to 3 feet below existing grade. The fill materials encountered at the borings may generally be utilized for pavement support after proper subgrade preparation. However, some removal and replacement of soft, loose, or otherwise unsuitable soils may be necessary.



The WisDOT Standard Specifications referenced in the following sections, refers to the State of Wisconsin Standard Specifications for Highway and Structure Construction, latest edition, with current interim specifications.

5.2 PAVEMENT SUBGRADE EVALUATION

On the basis of the data obtained in the exploration, the subgrade soils encountered along the project route below the existing base course generally consisted of natural and fill clay soils, which have been assigned an estimated visual classification of A-6 by the AASHTO classification method. They are generally rated as poor for pavement subgrade support due to moderate to high frost susceptibility, poor drainage characteristics, and high susceptibility to strength loss when exposed to free water. Provided that the subgrade soils are prepared as outlined in the Pavement Subgrade Preparation section of this report, the in-place subgrade soils and any new structural fill can be used for standard flexible or rigid pavement construction.

Design of a conventional flexible (asphalt) pavement on the existing subgrade soils will require proper subgrade preparation to include visual observations and proofrolling (as described in the Pavement Subgrade Preparation section of this report). Depending on the condition of the exposed subgrade and the results of the field evaluation after proofcompacting and proofrolling, it may be necessary to undercut unsuitable soils, which may extend over large areas, especially if the soils are or become wet during construction. The cohesive soils are highly moisture sensitive and subject to substantial instability.

Evaluation of the visual soil classifications and laboratory testing information has been made in determining pertinent engineering properties of the subgrade soils. Based on the engineering properties determined from the subgrade soils tested, and with proper subgrade preparation and drainage, the following pavement subgrade design coefficients are recommended for pavement section thickness design along the project route. These values are representative of the support conditions exhibited by the anticipated clay subgrade materials. All fill used to raise grades or replace unsuitable materials must have equal or greater support characteristics.

PAVEMENT SUBGRADE DESIGN COEFFICIENTS

AASHTO Soil Classification	A-6
Design Frost Index	F-4
Design Group Index	14
Soil Support Value	4.0
Estimated Subgrade Modulus (k)	125 pci

5.3 SELECTIVE SUBGRADE REMOVAL AND REPLACEMENT

The soils encountered in the borings can generally be used as the pavement subgrade provided they are evaluated and prepared as discussed in this report. However, zones of unsuitable soils may be encountered, especially within existing fill materials. Therefore, some removal and replacement of these soils may be required in some areas. In addition, the subgrade soils along the project routes are moderately to highly moisture sensitive and subject to substantial



instability in the presence of water, especially when exposed to construction traffic. During wet and/or cool weather, softened subgrade soils can be expected to develop over large areas. This can result in the need for substantial drying times; significant reworking, drying, discing; and/or the necessity for removal and replacement with crushed stone or compacted structural fill.

5.4 SITE DRAINAGE

The subject site is located in an area that experiences annual freezing cycles and the subgrade soils encountered have been classified as highly susceptible to frost action when free water is present. In order to reduce the potential for frost action, it will be necessary to control surface runoff and water seepage, because complete removal and replacement of the frost susceptible subgrade soils is not considered economically feasible. It is recommended that underdrains be placed within the subgrade, just below the granular base, to help reduce the potential for trapping water within the aggregate base layer. Sufficient drain tiles extending radially outward an adequate distance from each interior catch basin must be installed. In addition, drain tiles should extend along curb lines, up the slope from curb inlets. The drain tile should be directly connected to the storm sewer manholes or catch basins (if permissible by local municipal or other applicable code). The drain tile should consist of perforated PVC pipe of adequate diameter placed beneath the base layer, extending a sufficient distance into the subgrade. The pipe should be surrounded by appropriately sized clean stone, with the pipe and stone being wrapped with a geotextile filter fabric to reduce the potential for soils to migrating into and obstruct the pipe.

6 CONSTRUCTION CONSIDERATIONS

6.1 PAVEMENT SUBGRADE PREPARATION

Subgrade preparation is planned to include a full reconstruction of the existing pavements and base. The exposed subgrade will consist of clay soils. Zones of soft, loose, wet, or otherwise unsuitable soils may be encountered. Although evaluation of the existing asphalt was beyond the scope of this project, the existing asphalt pavement and base may be recycled and used as aggregate base if the milling and crushing operations produce a product that conforms to Section 305 of the WisDOT Standard Specification. The suitability for reuse of the existing materials should be verified prior to or at the time of construction.

After removal of the existing asphalt pavements, vegetation, and topsoil; and any soft, yielding, or unsuitable soils, the exposed subgrade should be prepared as outlined in Section 211 of the WDOT Standard Specifications. Prior to any fill placement, the exposed subgrade must be thoroughly proofrolled to detect unstable, yielding soils, which must be removed or improved by appropriate preparation and compaction techniques. Proofrolling should consist of overlapping passes in a perpendicular grid pattern with a fully-loaded tandem axle dump truck. It should be noted that the proofcompacting and proofrolling operations should be observed by a qualified soil engineer during dry weather, on a frost-free subgrade. Scarification and drying of unsuitable soils or removal and replacement with suitable fill, are two methods, which can



be considered, but this should be determined at the time of construction by a qualified soils engineer. Low areas may then be raised to the planned grades with suitable properly compacted fill, where necessary. Care must be used during proofcompacting and proofrolling to avoid damage to buildings, pavements, utilities and other structures. Portions of the existing base course can be re-used as base course for the new pavement section, provided it is properly prepared as described above. Some sorting is likely to be required to remove unsuitable zones.

In areas where isolated organic, wet, soft or yielding subgrade conditions are encountered during subgrade preparation or a stable subgrade cannot be obtained, selective excavation below subgrade (EBS) and replacement may be required for proper support of new fills, or pavement reconstruction. Excavation below subgrade (EBS) should be performed as outlined in Section 205 of the WisDOT Standard Specifications. The necessity and ultimate extent of undercutting will be dependent upon the soil type encountered, moisture condition, and stability of the exposed subgrade at the time of construction. In areas of EBS, limited excavation below subgrade to a depth of 2 feet and replacement with granular fill, such as those specified in Section 305 of the WisDOT Standard Specification for $\frac{3}{4}$ -inch or $1\frac{1}{4}$ -inch materials, can generally be used to improve the stability of the subgrade. It must be recognized that soil stability is dependent on such factors as soil type and moisture content, weather conditions at the time of construction, and also construction disturbance. Thus, the necessity of EBS generally must be determined in the field at the time of construction, based upon observations made during subgrade preparation.

If relatively wet or unstable soils are encountered below EBS, it may be necessary to use an SAS (Subgrade Aggregate Separation) geotextile fabric, grid, and/or a select crushed material for stabilization (such as that specified in Section 312 of the WisDOT Standard Specifications) before placing backfill soils. The SAS geotextile fabric used in this application should meet the physical requirements identified in Section 645 of the WisDOT Standard Specifications and shown in the following table.

Test	Units	Values
Grab Tensile Strength	N	750 min.
Puncture Strength	N	300 min.
Apparent Opening Size	um	212 max.
Permittivity	s ⁻¹	0.35 min.

The soils present within the subgrade are considered to be highly sensitive to moisture and construction activity; therefore, every effort should be made to prevent ponding during construction operations and maintain a relatively dry and stable working subgrade. If the soils become disturbed, removal and replacement may be required, and may become extensive.

6.2 BORROW MATERIAL

Generally, granular material with low fines content is recommended for use in regrading, or to replace unsuitable soils, such as those specified in Section 305 of the WisDOT Standard



Specification for $\frac{3}{4}$ -inch or $1\frac{1}{4}$ -inch materials. Clayey and silty soils, organic materials, and wet granular soils are not considered suitable for such purposes. All fill used must have subgrade design coefficients equal to or greater than those previously specified. Some importing of granular fill may be necessary.

6.3 FILL PLACEMENT AND COMPACTION

Fill should be placed in layers of not more than 9 inches in loose lift thickness before compaction. As an exception, when the fill consists of well-graded granular material and the compaction equipment is adequate for such purpose, the loose layer thickness may be increased to a maximum of 12 inches. Each lift must be compacted to a density of at least 95 percent of the maximum dry density as determined by the Standard Proctor method, ASTM designation D-698.

Proper moisture control is essential to reduce the amount of compactive effort necessary to achieve the desired densities. This is especially true of silty and clayey soils, where scarification and aeration may be required to achieve near-optimum moisture levels prior to compaction. It is recommended the fill soils be placed at moisture contents within a few percent of their optimum moisture content. Depending upon seasonal moisture conditions, some drying and/or reworking of these fine-grained soils may be necessary prior to placement.

The selection of fill materials for various applications should be done in consultation with the soils engineer. Similarly, the evaluation of the subgrade preparation, and placement and compaction of fill for structural application should be monitored and tested by a qualified representative of the soils engineer.

Compaction testing is recommended so that the pavement subgrade materials develop the subgrade design coefficients previously specified for adequate pavement section thickness design. Compaction should be performed with equipment suitable for such purpose, such as a sheepfoot roller for clayey soils, and a vibratory smooth drum roller for granular material.

6.4 GROUNDWATER CONTROL

Because no groundwater was encountered in the boreholes during the exploration, no major difficulties with groundwater are anticipated during shallow excavation work associated with road reconstruction. If excavations extend only a few inches or so below the groundwater or perched zones, filtered sump pumps or other conventional means may suffice to control the groundwater. However, for deeper excavations, or for substantial perched zones, prolonged dewatering with a series of sumps or well points and high capacity sump pumps, or other more comprehensive means may be necessary to facilitate construction.

Groundwater levels can vary seasonally, with changes in precipitation, and due to other factors. They can also vary between and beyond boring locations from the estimates made at the time of the exploration. It should be noted that perched water may also be encountered along the project route or accumulate in the base course subsequent to construction. Proper drainage of the road must be provided.



Since portions of the anticipated subgrade soils are subject to softening when exposed to free moisture, every effort should be made to keep excavations dry. Site grading should be performed to direct runoff away from the construction area, so that the potential for the softening of the subgrade soils is reduced.

While no groundwater was encountered at the time the borings were drilled, seasonal variations in precipitation, site drainage conditions, soil permeability, and other factors can cause groundwater to be present in the upper soils at other times, including during construction.

6.5 EXCAVATION CONSIDERATIONS

Sloping, shoring or bracing of the excavation sidewalls may be necessary. Excavating may be difficult due to the instability of vertical slopes, and will therefore require a flattening of trench sides, or some other means of protection, to facilitate construction and to protect life and property. Sloughing and caving may be experienced within unprotected excavations, especially within existing fill and/or in the presence of water. The degree of excavation instability problems is dependent upon the depth and length of time that excavations remain open, excavation bank slopes, water levels and the effectiveness of any dewatering systems. All excavation work must be performed in accordance with OSHA and local building code requirements.

All excavations must be performed with caution and utilize methods which will prevent undermining or destabilization of buildings, utilities, pavements, or other structures. The use of a properly designed shoring and bracing, sheet piling, or underpinning system must be utilized as necessary to adequately protect utilities, pavements, and other structures. This must be performed by an experienced specialty contractor. Additionally, extreme care must be used during the installation of any bracing system, especially those using driven or vibratory methods, in order to avoid damaging existing buildings, utilities, and other structures. Consideration should be given to the performance of video and/or photographic documentation of the condition of nearby buildings, utilities, and other structures prior to installation. Extreme difficulty may be experienced with driving sheet piling or the installation of other excavation bracing systems.

Since the subgrade soils are generally sensitive to moisture, every effort should be made to provide adequate drainage across the site during construction, and to prevent ponding of runoff on the subgrade. These soils are also subject to erosion caused by runoff, and erosion control measures should be implemented where needed or required by local ordinances.

It is mandated that all excavations be constructed in accordance with current Occupational Safety and Health Administration (OSHA) requirements.

The contractor is solely responsible for designing and constructing stable, temporary excavations and should shore, slope, or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. The contractor's "responsible person", as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination,



or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations.

PSI is providing this information solely as a service to our client. PSI does not assume responsibility for construction site safety or the contractor's or other parties' compliance with local, state, and federal safety or other regulations.

6.6 SUBGRADE FROST ACTION

The soils encountered in the borings are considered to meet the criteria for Site Class D in accordance with 1613.2.5.2 of the International Building Code-2018 (which directs to the simplified design procedure outlined in ASCE 7 – Minimum Design Loads and Associated Criteria for Buildings and Other Structures).

7 GENERAL COMMENTS

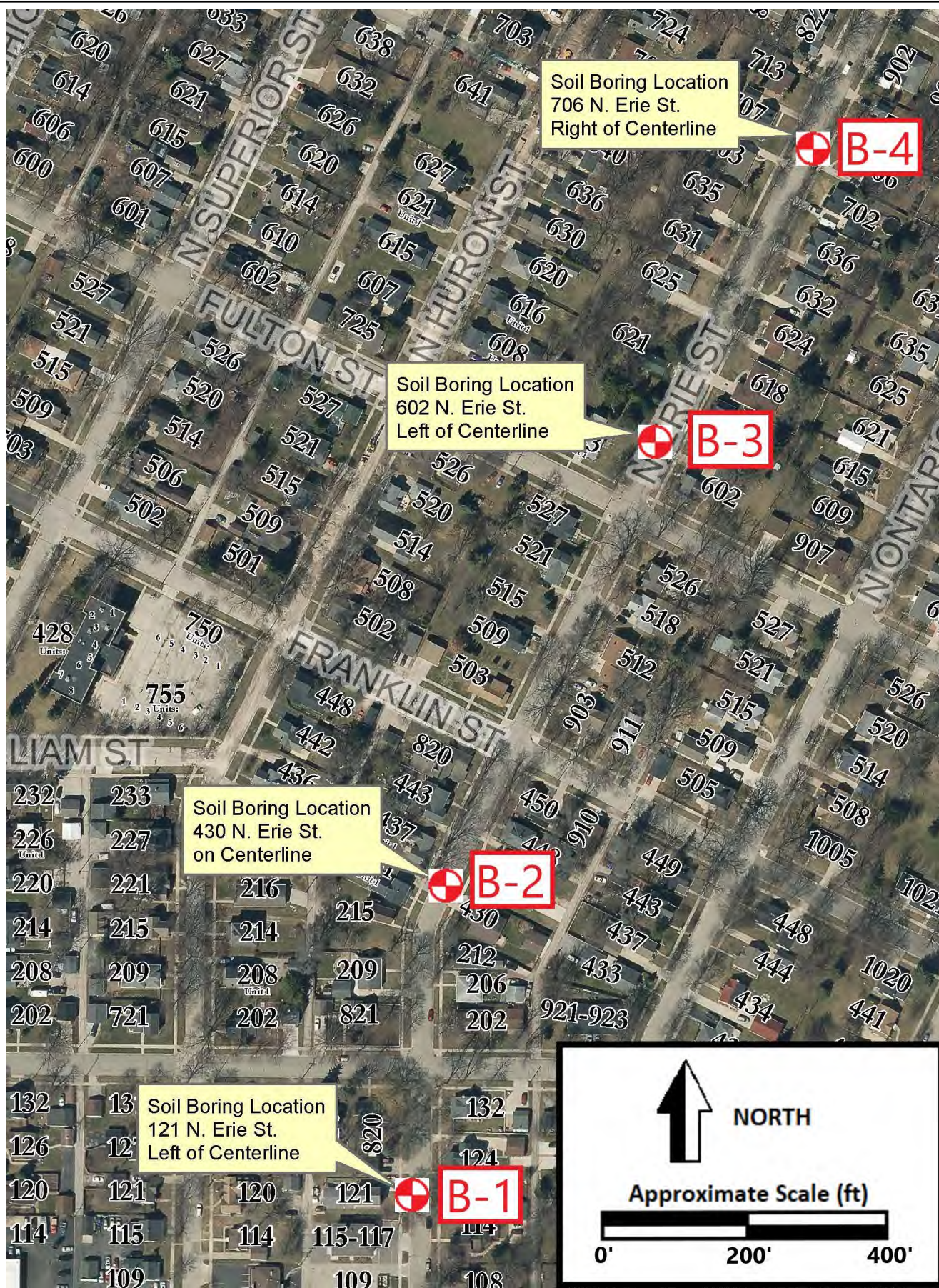
This geotechnical exploration and subgrade evaluation has been prepared to aid in the evaluation of the soil conditions on this site. The recommendations presented herein are based on the available soil information and the preliminary project information provided. Any changes in the planned project activities should be brought to the attention of the soil engineer to determine if modifications in the recommendations are required. The final design plans and specifications should also be reviewed by the soil engineer to determine that the recommendations presented herein have been interpreted and implemented as intended.

This geotechnical study has been conducted in a manner consistent with that level of care ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. The findings, recommendations and opinions contained herein have been promulgated in accordance with generally accepted practice in the fields of foundation engineering, soils mechanics, and engineering geology. No other representations, expressed or implied, and no warranty or guarantee is included or intended in this report.

It is recommended that the earthwork and foundation operations be monitored by the soil engineer, to test and evaluate the subgrade stability, bearing capacities, and the selection, placement and compaction of controlled fills. The Wisconsin DOT Standard Specifications for Highway and Structure Construction can also serve as a guide in implementing the subgrade preparation and other earthwork operations.

APPENDIX

Figure 1 - Boring Location Plan
Soil Boring Logs
General Notes





Project No.: 941316

Drill Date: January 8, 2021
Drilled By: KD/MD

DEPTH/EL. (feet)		VISUAL SOIL CLASSIFICATION	SAMPLE NO.	N (bpf)	Qp (tsf)	Qu (tsf)	MC (%)	REMARKS	
1		0-5": ASPHALT Pavement	1-AU	-	-	-	-		
	-0.5	5-13": Light grayish brown Fine SAND, with trace gravel, moist (BASE COURSE)			-	-	4		
	-1.0	Reddish brown CLAY, with trace silt and dark brown blotches, moist (FIILL)	2-SS	10	3.25	2.4	29		
-1.5									
-2.0									
2									
3									
	-2.5								
	-3.0								
4		Reddish brown CLAY, with trace silt, moist	3-SS	11	3.5	3.1	27	↓	
	-3.5								
	-4.0								
5									
	-4.5								
	-5.0								
6		END OF BORING @ 5± FEET							
	-5.5								
	-6.0								

FIELD OBSERVATIONS:			ADDITIONAL COMMENTS:		
Water Level during drilling : Not Encountered					
Water Level upon completion : Not Present					
Caved at upon completion : 4± feet below ground surface					
Delay Time: N/A					
Water Level delayed : N/A					
Caved at delayed : N/A					

▼

▾

⌵

¥

Note: Lines of stratification represent an approximate boundary between soil types. Variations may occur between sampling intervals and/or boring locations. Transitions may also be gradual.



SOIL BORING LOG: B - 2

Project: North Erie Street Reconstruction

Project No.: 941316

Location: North Erie Street
De Pere, Wisconsin

Drill Date: January 8, 2021
Drilled By: KD/MD

DEPTH/EL. (feet)	VISUAL SOIL CLASSIFICATION	SAMPLE NO.	N (bpf)	Qp (tsf)	Qu (tsf)	MC (%)	REMARKS
	0-7": ASPHALT Pavement	1-AU	-	-	-	-	
1	-1.0	7-15": Grayish brown Fine SAND, with trace gravel, moist (BASE COURSE)		-	-	4	
		2-SS	12				
2	-2.0	Brown CLAY, with trace silt, moist (POSSIBLE FILL)		2.0	0.6	22	
3	-3.0	Reddish brown CLAY, with trace silt, moist					
		2-SS	8	3.0	2.1	25	
4	-4.0						
5	-5.0						
6	-6.0	3-SS	12	4.5+	3.1	26	
7	-7.0						
8	-8.0	Reddish brown CLAY, with trace silt and sand seams, moist					
		4-SS	12	-	1.5	16	
9	-9.0						
10	-10.0	Bluish gray CLAY, with silt and trace sand, moist					
		5-SS	7	-	1.0	17	
11	-11.0						
12	-12.0	END OF BORING @ 11.5± FEET					
13	-13.0						
14	-14.0						
15	-15.0						

FIELD OBSERVATIONS: Water Level during drilling: Not Encountered Water Level upon completion: Not Present Caved at upon completion: 8.5± feet below ground surface Delay Time: N/A Water Level delayed: N/A Caved at delayed: N/A	ADDITIONAL COMMENTS:
--	-----------------------------

Note: Lines of stratification represent an approximate boundary between soil types. Variations may occur between sampling intervals and/or boring locations. Transitions may also be gradual.



Project No.: 941316

Drill Date: January 8, 2021
Drilled By: KD/MD

FIELD OBSERVATIONS:

Water Level during drilling: Not Encountered

Water Level upon completion: Not Present

Caved at upon completion: 4.5± feet below ground surface

Delay Time: N/A

Water Level_{delayed}: N/A

Caved at_{delayed}: N/A

ADDITIONAL COMMENTS:

Note: Lines of stratification represent an approximate boundary between soil types. Variations may occur between sampling intervals and/or boring locations. Transitions may also be gradual.



Project No.: 941316

Drill Date: January 8, 2021
Drilled By: KD/MD

DEPTH/EL. (feet)		VISUAL SOIL CLASSIFICATION	SAMPLE NO.	N (bpf)	Qp (tsf)	Qu (tsf)	MC (%)	REMARKS
	-0.5	0-6.5":ASPHALT Pavement	1-AU	-	-	-	-	
		6.5-12.5": Dark brown Fine SAND, with trace gravel, moist (BASE COURSE)			-	-	4	
1	-1.0	Reddish brown CLAY, with trace silt, sand seams, and dark brown blotches, moist (FILL)	2-SS	12	2.25	1.2	18	
	-1.5							
2	-2.0							
	-2.5		3-SS	13	2.25	1.5	23	
3	-3.0	Reddish brown CLAY, with trace silt, moist						
	-3.5							
4	-4.0		END OF BORING @ 5± FEET					
	-4.5							
5	-5.0							
	-5.5							
6	-6.0							
FIELD OBSERVATIONS:				ADDITIONAL COMMENTS:				
Water Level during drilling : Not Encountered								
Water Level upon completion : Not Present								
Caved at upon completion : 4± feet below ground surface								
Delay Time: N/A								
Water Level delayed : N/A								
Caved at delayed : N/A								

Note: Lines of stratification represent an approximate boundary between soil types. Variations may occur between sampling intervals and/or boring locations. Transitions may also be gradual.

GENERAL NOTES

SAMPLE IDENTIFICATION

- Information on each log is a compilation of subsurface conditions, based on visual soil classifications of soil samples obtained from the field as assigned by a soils engineer, as well as from laboratory testing of samples, if performed. The strata lines on the logs may be approximate or the transition between the strata may be gradual rather than distinct. Water level measurements refer only to those observed at the times and locations indicated, and may vary with time, geologic condition and construction activity.
- Unified Soil Classification System (USCS) designations are based on visual soil classification estimates on the basis of textural and particle size categorization and various soil behavior characteristics. If laboratory tests were performed to classify the soil, the USCS designation is shown in parenthesis.

USCS SOIL PARTICLE SIZE CLASSES

U.S. Std. Sieve		#200	#40		#10	#4	¾"		3"	12"	
Soil Type	Clay	Silt	Sand			Gravel		Cobbles	Boulders		
			Fine	Medium	Coarse	Fine	Coarse				
Millimeters	0.002	0.074	0.42		2	4.8	19	76		300	

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487-00)

Criteria for assigning group symbols and group names using laboratory tests ^A				Soil Classification	
				Group Symbol	Group Name ^B
COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve)	Gravels (More than 50% of coarse fraction retained on No. 4 sieve)	Clean gravels w/ < 5% fines ^E	$Cu \geq 4$ and $1 \leq Cc \leq 3$ ^C	GW	Well-graded gravel ^D
			$Cu < 4$ and/or $1 > Cc > 3$ ^C	GP	Poorly graded gravel ^D
		Gravels w/ > 12% fines ^E	Fines classify as ML or MH	GM	Silty gravel ^{D,F,G}
			Fines classify as CL or CH	GC	Clayey gravel ^{D,F,G}
	Sands (More than 50% of coarse fraction passes the No. 4 sieve)	Clean sands w/ < 5% fines ^I	$Cu \geq 6$ and $1 \leq Cc \leq 3$ ^C	SW	Well-graded sand ^H
			$Cu < 6$ and/or $1 > Cc > 3$ ^C	SP	Poorly graded sand ^H
		Sands w/ > 12% fines ^I	Fines classify as ML or MH	SM	Silty sand ^{F,G,H}
			Fines classify as CL or CH	SC	Clayey sand ^{F,G,H}
FINE-GRAINED SOILS (More than 50% passes the No. 200 sieve)	Silts and clays w/ liquid limit (LL) < 50	Inorganic	PI > 7 and plots on or above “A” line ^J	CL	Lean clay ^{K,L,M}
			PI < 4 and plots below “A” line ^J	ML	Silt ^{K,L,M}
		Organic	LL (Oven dried) / LL (Not dried) < 0.75	OL	Organic clay ^{K,L,M,N}
				OL	Organic silt ^{K,L,M,O}
	Silts and clays w/ liquid limit (LL) ≥ 50	Inorganic	PI plots on or above “A” line	CH	Fat clay ^{K,L,M}
			PI plots below “A” line	MH	Elastic silt ^{K,L,M}
		Organic	LL (Oven dried) / LL (Not dried) < 0.75	OH	Organic clay ^{K,L,M,P}
				OH	Organic silt ^{K,L,M,Q}
HIGHLY ORGANIC SOILS		Primarily organic matter, dark in color, and organic odor		PT	Peat

^A Based on the material passing the 3-inch (75 mm) sieve

^B If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name

^C $Cu = D_{60}/D_{10}$; $Cc = (D_{30})^2 / D_{10} \times D_{60}$

^D If soil contains ≥ 15% sand, add "with sand" to group name

^E Gravels with 5 to 12% fines require dual symbols:

GW-GM well-graded gravel with silt
GW-GC well-graded gravel with clay
GP-GM poorly graded gravel with silt
GP-GC poorly graded gravel with clay

^F If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM

^G If fines are organic, add "with organic fines" to group name

^H If soil contains ≥ 15% gravel, add "with gravel" to group name

^I Sands with 5 - 12% fines require dual symbols:

SW-SM well-graded sand with silt
SW-SC well-graded sand with clay
SP-SM poorly graded sand with silt
SP-SC poorly graded sand with clay

^J If Atterberg limits plot in hatched area, soil is a CL-ML, silty clay

^K If soil contains 15 - 29% plus No. 200, add "with sand" or "with gravel"

^L If soil contains ≥ 30% plus No. 200, predominantly sand, add "sandy" to group name

^M If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name

^N PI ≥ 4 and plots on or above "A" line

^O PI < 4 or plots below "A" line

^P PI plots on or above "A" line

^Q PI below "A" line

RELATIVE SOIL COMPOSITION

Trace - 0 - 15% of sample
With - 15 - 35% of sample
Soil modifier - > 35% of sample (i.e. sandy, silty, clayey, gravelly)

DRILLING & SAMPLING SYMBOLS

- AU - Auger sample from cuttings
- BS - Bag sample
- HA - Hand auger sample
- SS - Split spoon sample (2" O.D. by 1½" I.D.)
- ST - Shelby Tube sample (2" or 3" O.D.)
- WS - Wash sample from wash water return

SOIL PROPERTY SYMBOLS

- N - N-value (blow count) is the standard penetration resistance based on the total number of blows required to advance a split spoon sampler one (1) foot, using a 140 lb. hammer with a 30 inch free fall. To avoid damage to sampling tools, driving is typically limited to 50 blows during any 6 inch interval. Additional description is provided below:

N-value (bpf)

Description

- HW - Sampler penetrated soil under weight of hammer and rods; no driving required
- 25 - 25 blows to advance sampler 12 inches after initial 6 inches of seating
- 75/10" - 75 blows to advance sampler 10 inches after initial 6 inches of seating
- 50/S3" - 50 blows to advance sampler 3 inches during initial 6 inch seating interval

- MC - Moisture content, %
- Qu - Unconfined compressive strength, tons per square foot (tsf)
- Qp - Calibrated hand penetrometer resistance, tsf
- γ_d - Dry density, pounds per cubic foot (pcf)
- RQD - Rock quality designation of NX-size core sample
- RMR - Rock mass rating, as developed by Z.T. Bieniawski
- PID - Photoionization detector (Hnu meter) volatile vapor level, ppm
- LL - Liquid limit, % (ASTM D4318)
- PL - Plastic limit, % (ASTM D4318)
- PI - Plasticity index, % (ASTM D4318)
- %P200 - Percent of sample passing the No. 200 sieve

SOIL RELATIVE DENSITY & CONSISTENCY CLASSIFICATION

NON-COHESIVE SOILS		COHESIVE SOILS		
Density	N-Value Range	Consistency	Qu Range (tsf)	Approximate N-value Range
Very loose	0 - 3	Very soft	0 - 0.25	0 - 2
Loose	3 - 7	Soft	0.25 - 0.5	2 - 5
Medium dense	7 - 15	Medium stiff	0.5 - 1.0	5 - 10
Dense	15 - 38	Stiff	1.0 - 2.0	10 - 14
Very dense	38+	Very Stiff	2.0 - 4.0	14 - 32
		Hard	4.0+	32+

SOIL STRUCTURE TERMINOLOGY

- Interlayered - Alternating layers of different soil types
- Layer - Inclusion greater than 3 inches thick
- Seam - Inclusion ½ to 3 inches thick
- Laminated - Alternating seams of different soil type
- Intermixed - Pockets of different soil types, no layering
- Pocket - Inclusion of material of different texture
- Varved - Alternating layers or seams of sand, silt, and/or clay

GROUNDWATER & MOISTURE CONDITIONS

- ▽ - Approximate groundwater level as noted during drilling and sampling
- ▼ - Groundwater level as noted within the open borehole upon removal of the augers
- ¥ - Delayed groundwater level within open borehole
- Dry - Absence of moisture, dry to the touch
- Moist - Damp, but no visible water
- Wet - Visible free water, saturated, usually below water table

NOTE: General Notes have been adapted from and incorporate portions of ASTM D2487 "Classification of Soils for Engineering Purposes (Unified Soil Classification System)" and ASTM D2488 "Description and Identification of Soils (Visual-Manual Procedure)."

PROJECT# 21-02
ERIE STREET RECONSTRUCTION
AND UTILITY RELAY

CITY OF DE PERE



ENGINEER DIVISION
925 S. SIXTH ST
DE PERE, WI 54115



SITE LOCATION MAP
N.T.S.

SHEET NO.	DESCRIPTION
G001	TITLE SHEET
G002	STANDARD ABBREVIATION & SYMBOLS
G003-G004	TYPICAL SECTIONS
C101 - C110	PLAN AND PROFILE SHEETS
C301 - C315	CROSS SECTIONS
C401	BENCH MARKS & CONTROL POINTS
C402 - C404	INTERSECTION DETAILS
C405	EROSION CONTROL
C406 - C409	TRAFFIC CONTROL
C410	PAVEMENT MARKING
C501 - C508	CONSTRUCTION DETAILS
C509 - C515	TRAFFIC CONTROL DETAILS

CITY OF DE PERE
BOARD OF PUBLIC WORKS

3/19/2021 DATE CITY ENGINEER
3/19/21 DATE CITY ADMINISTRATOR
3/19/21 DATE MAYOR

STAMPS:



3/19/2021

LIST OF STANDARD ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC	N	NORTH
AGGR	AGGREGATE	NB	NORTHBOUND
AH	AHEAD	NC	NORMAL CROWN
ASPH	ASPHALT	NE	NORTHEAST
B/B	BACK TO BACK	NO	NUMBER
BARR	BARRICADE	NTS	NOT TO SCALE
BC	BACK OF CURB	NW	NORTHWEST
BK	BACK	O	OIL
BL	BASELINE	O&C	OIL AND CHIP
BLDG	BUILDING	OBLIT	OBLITERATE
BM	BENCHMARK	OD	OUTSIDE DIAMETER
BOW	BACK OF SIDEWALK	PC	POINT OF CURVATURE
BSMT	BASEMENT	PCC	POINT OF COMPOUND CURVE
C	CUT	PCC	PORTLAND CEMENT CONCRETE
C&G	CURB AND GUTTER	PED	PEDESTAL
C/C	CENTER TO CENTER	PLE	PERMANENT LIMITED EASEMENT
CABC	CRUSHED AGGREGATE BASE COURSE	PVMT	PAVEMENT
CB	CATCH BASIN	PE	PRIVATE ENTRANCE
CE	CONSTRUCTION ENTRANCE	PI	POINT OF INTERSECTION
CI	CAST IRON PIPE	PJF	PRE-FORMED JOINT FILLER
CL	CENTERLINE	PL	PROPERTY LINE
CMP	CORRUGATED METAL PIPE	POC	POINT OF CURVE
CNTY	COUNTY	POT	POINT ON TANGENT
CO	CLEANOUT	PP	POLYETHYLENE
CONC	CONCRETE	PRC	POINT OF REVERSE CURVATURE
CONSTR	CONSTRUCTION	PROJ	PROJECT
CONSTR JT	CONSTRUCTION JOINT	PROP	PROPOSED
CORP	CORPORATION	PSI	POUND PER SQUARE INCH
CP	CONTROL POINT	PT	POINT OF TANGENCY
CTH	COUNTY TRUNK HIGHWAY	PVC	POLYVINYL CHLORIDE
CTRL JT	CONTROL JOINT	R	RANGE OR RADIUS
CTV	CABLE TV	RCP	REINFORCED CONCRETE PIPE
CY	CUBIC YARD	REBAR	REINFORCEMENT BAR
D	DEPTH	REL	RELOCATE
DIA	DIAMETER	REM	REMAINING
DI	DUCTILE IRON PIPE	REQD	REQUIRED
DISCH	DISCHARGE	RL	REFERENCE LINE
DW	DRIVEWAY	ROW	RIGHT OF WAY
E	EAST (SEE ELEC BELOW)	RP	REFERENCE POINT
EA	EACH	RR	RAILROAD
EB	EASTBOUND	RT	RIGHT
EBS	EXCAVATION BELOW SUBGRADE	RW	RETAINING WALL
ECS	EXTERNAL CHIMNEY SEAL	S	SOUTH
EL	ELEVATION	SALV	SALVAGE
ELEC	ELECTRIC (E WHEN USED IN LINE STYLE)	SAN	SANITARY
EMB	EMBANKMENT	SB	SOUTHBOUND
ENTR	ENTRANCE	SDWK	SIDEWALK
EP	EDGE OF PAVEMENT	SE	SOUTHEAST
EW	ENDWALL	SF	SQUARE FEET
EXC	EXCAVATION	SHLDR	SHOULDER
EXIST	EXISTING	SY	SQUARE YARD
F	FILL	SS	STORM SEWER
F/F	FACE TO FACE	SSD	STOPPING SIGHT DISTANCE
FDN	FOUNDATION	STA	STATION
FE	FIELD ENTRANCE	STD	STANDARD
FERT	FERTILIZER	STH	STATE HIGHWAY TRUNK
FIN GR	FINISHED GRADE	STM	STORM
FL	FLOWLINE	STP	SEWAGE TREATMENT PLANT
FO	FIBER OPTIC	STRUCT	STRUCTURE OR STRUCTURAL
FOW	FRONT OF SIDEWALK	SW	SOUTHWEST
FT	FOOT	TAN	TANGENT
FTG	FOOTING	T	TOWN (T WHEN USED FOR TELEPHONE LINE)
G	GAS	TEL	TELEPHONE
GV	GAS VALVE	TEMP	TEMPORARY
GW	GUY WIRE	TLE	TEMPORARY LIMITED EASEMENT
HDPE	HIGH DENSITY POLYETHYLENE	TOC	TOP OF CURB
HR	HANDICAP RAMP	TOW	TOP OF WATER
HSE	HOUSE	TRANS	TRANSITION
HT	HEIGHT	TYP	TYPICAL
HYD	HYDRANT	UG	UNDERGROUND
I	INTERSECTION ANGLE	USH	US HIGHWAY
ICS	INTERNAL CHIMNEY SEAL	VC	VERTICAL CURVE
ID	INSIDE DIAMETER	VERT	VERTICAL
IN	INCH	VOL	VOLUME
INL	INLET	VPC	VERTICAL POINT OF CURVATURE
INTERS	INTERSECTION	VPI	VERTICAL POINT OF INTERSECTION
INV	INVERT	VPRC	VERTICAL POINT OF REVERSE CURVE
IP	IRON PIPE OR PIN	VPT	VERTICAL POINT OF TANGENCY
JCT	JUNCTION	W	WEST
L	LENGTH (OF CURVE)	WB	WESTBOUND
LC	LONG CHORD OF CURVE	WM	WATERMAIN
LP	LIGHTPOLE	WSO	WATER SHUTOFF VALVE
LS	LIFT STATION OR LUMP SUM	WTP	WATER TREATMENT PLANT
LT	LEFT	WV	WATER VALVE
MAINT	MAINTENANCE	WWTP	WASTE WATER TREATMENT PLANT
MATL	MATERIAL	YD	YARD
MB	MAILBOX		
MH	MANHOLE		
MP	MARKER POST		

MAPPING & TOPOGRAPHY SYMBOLOGY

DESCRIPTION	SYMBOL	
	EXISTING	PROPOSED
BENCHMARK		
BUSH		
CATCH BASIN		
CABLE TV BOX		
CONTROL POINT		
ELECTRICAL BOX		
EROSION CONTROL - INELT		
FIELD INLET		
GAS VALVE		
HEDGE		
HYDRANT		
IRON PIPE		
LIGHTPOLE		
MAILBOX		
MANHOLE ELECTRIC		
MANHOLE SANITARY		
MANHOLE STORM		
MONITORING WELL		
POWER POLE		
LIGHT POLE		
SIGN		
SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE		
SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE		
STUMP		
TELEPHONE MANHOLE		
TELEPHONE PEDESTAL		
TREE		
WELL		
WATER SERVICE VALVE		
BUTTERFLY WATER VALVE		
WATER VALVE		

MAPPING & TOPOGRAPHY SYMBOLOGY

DESCRIPTION	SYMBOL	
PLAN		
EXISTING SANITARY SEWER LINE	(SIZE AND MATERIAL) San	
PROPOSED SANITARY SEWER LINE	100'–8" PVC SAN San	
EXISTING STORM SEWER LINE	(SIZE AND MATERIAL) ST	
PROPOSED STORM SEWER LINE	100'–8" PVC STM ST	
EXISTING WATER MAIN LINE	(SIZE AND MATERIAL) W	
PROPOSED WATER MAIN LINE	100'–8" PVC WM (TEE–BEND) W	
EXISTING ELECTRICAL LINE	E	
EXISTING GAS MAIN LINE	G	
EXISTING TELEPHONE LINE	T	
EXISTING CABLE TV LINE	TV	
EXISTING SANITARY LATERAL	San	
EXISTING WATER SERVICE	W	
RIGHT OF WAY	ROW	
PROPERTY LINE	PL	
EASEMENT	Esm Esm	
SILT FENCE EROSION CONTROL		
EXISTING FIBER OPTIC	FO	
EXISTING MAJOR CONTOUR	615	
EXISTING MINOR CONTOUR	612	
PROPOSED MAJOR CONTOUR	615	
PROPOSED MINOR CONTOUR	612	
PROFILE		
EXISTING SANITARY SEWER LINE	(SIZE AND MATERIAL)	
PROPOSED SANITARY SEWER LINE	100'–8" PVC SAN @ 0.40%	
EXISTING STORM SEWER LINE	(SIZE AND MATERIAL)	
PROPOSED STORM SEWER LINE	100'–8" PVC STM @ 1.0%	
EXISTING WATER MAIN LINE	(SIZE AND MATERIAL)	
PROPOSED WATER MAIN LINE	PROPOSE 8" PVC WM	

GENERAL CONSTRUCTION NOTES:

- ALL ELEVATIONS ARE REFERENCED TO NAVD 88.
- THE WORK UNDER THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE CITY OF DE PERE, CURRENT CONSTRUCTION SPECIFICATIONS AND THESE SPECIAL PROVISIONS AND PLANS, AND THE LATEST ADDITION OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARDS SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION SPECIFICATIONS, LATEST EDITION, WHERE REFERENCED IN THE CITY SPECIFICATIONS.
- ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO CONSTRUCTION AND SHALL CONFIRM TO THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES CONSTRUCTION SITE EROSION CONTROL AND TECHNICAL STANDARDS.
- EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING EXACT LOCATIONS AND ELEVATIONS OF ALL UTILITIES. WHETHER SHOWN OR NOT, FROM THE OWNERS OF THE RESPECTIVE UTILITIES. ALL UTILITIES OWNERS SHALL BE NOTIFIED BY THE CONTRACTOR 72 HOURS PRIOR TO EXCAVATION.

PATCH SYMBOLS

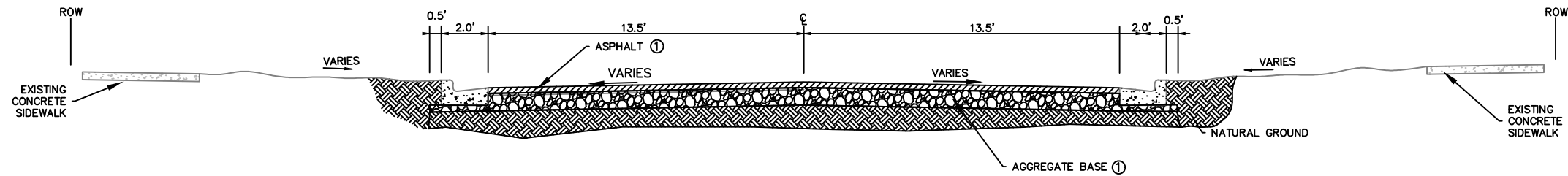
ASPHALTIC CONCRETE PAVEMENT		CRUSHED AGGREGATE BASE COURSE	
PORTLAND CEMENT CONCRETE			

CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4060 FAX 920-339-4071

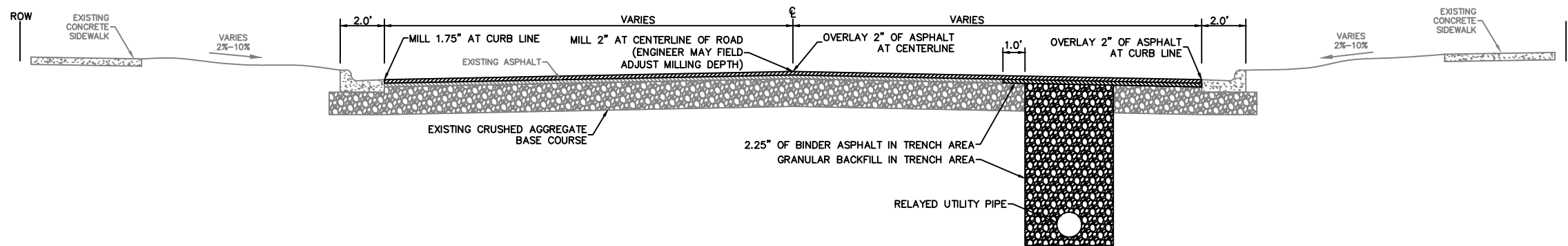
STANDARD ABBREVIATIONS
AND SYMBOLS

NAME: ERIE STREET RECONSTRUCTION AND UTILITY RELAY		BY	DATE	REVISIONS / ISSUES				PAGE NO. G002
PROJECT # 21-02				NO.	DATE	BY	REMARKS	



EXISTING TYPICAL STREET DETAIL

NOTE:
1 SEE SOIL BORING INFORMATION FOR EXISTING ASPHALT, AGGREGATE BASE, AND SUBSOILS.



TYPICAL MILLING AND OVERLAY SECTION
WITH CURB AND GUTTER
JAMES STREET



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

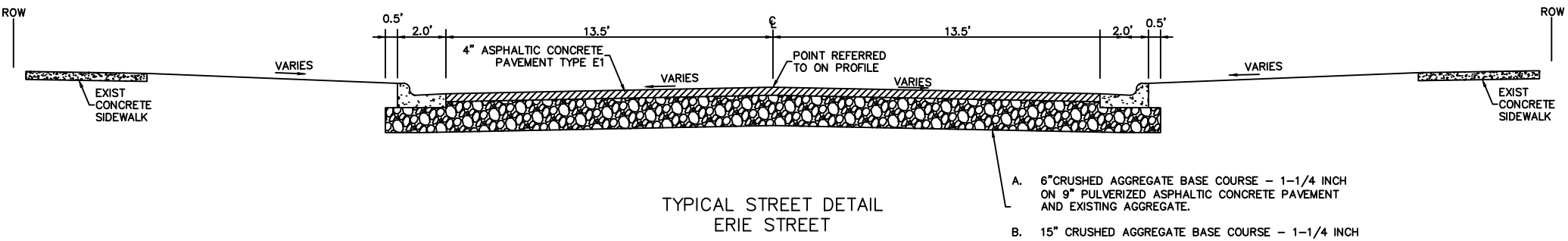
ERIE STREET
TYPICAL SECTIONS

NAME:
ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

	BY	DATE
SURVEYED		
DRAWN	BK	01-2021
DESIGNED	BK	01-2021
CHECKED	EPR	03-2021

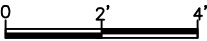
REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

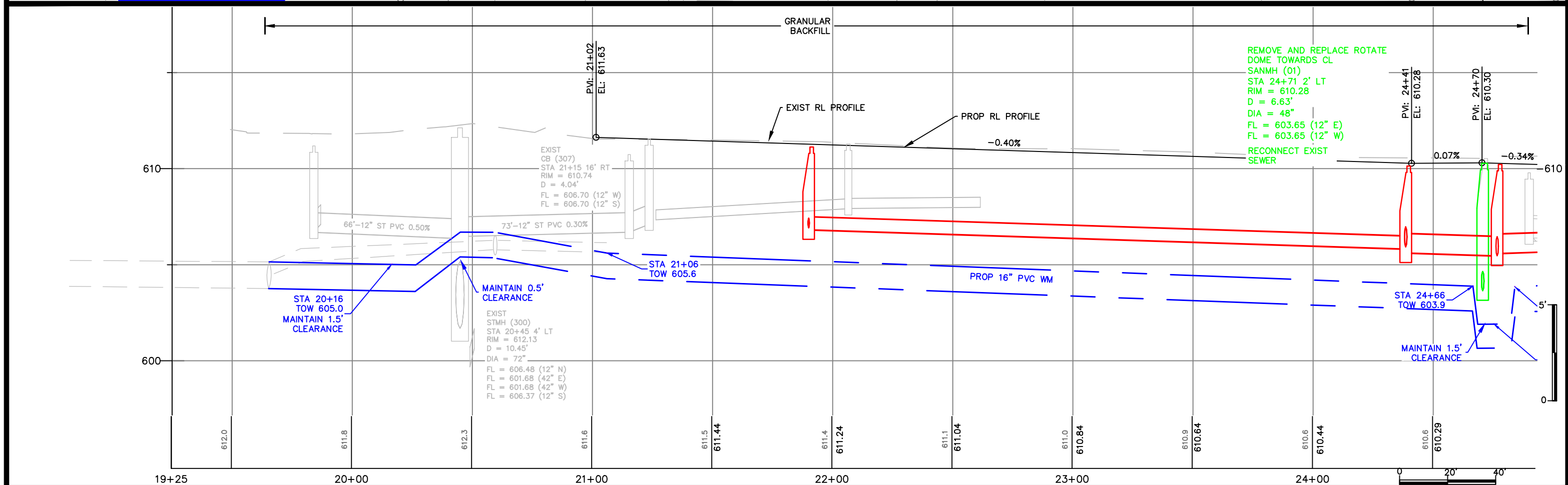
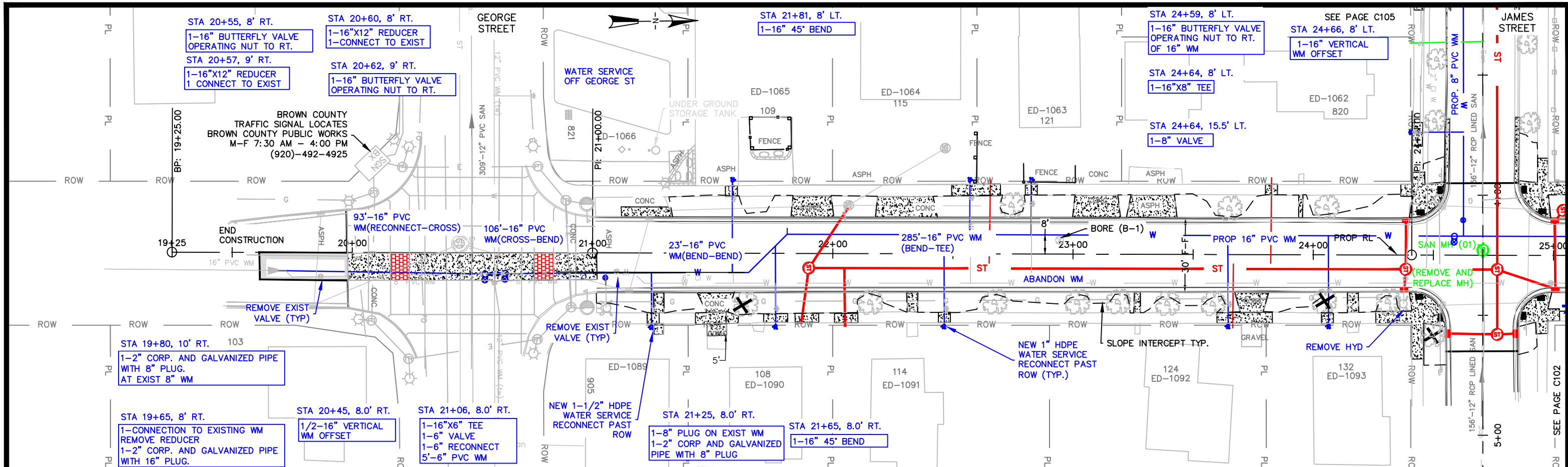
PAGE
NO.
G003

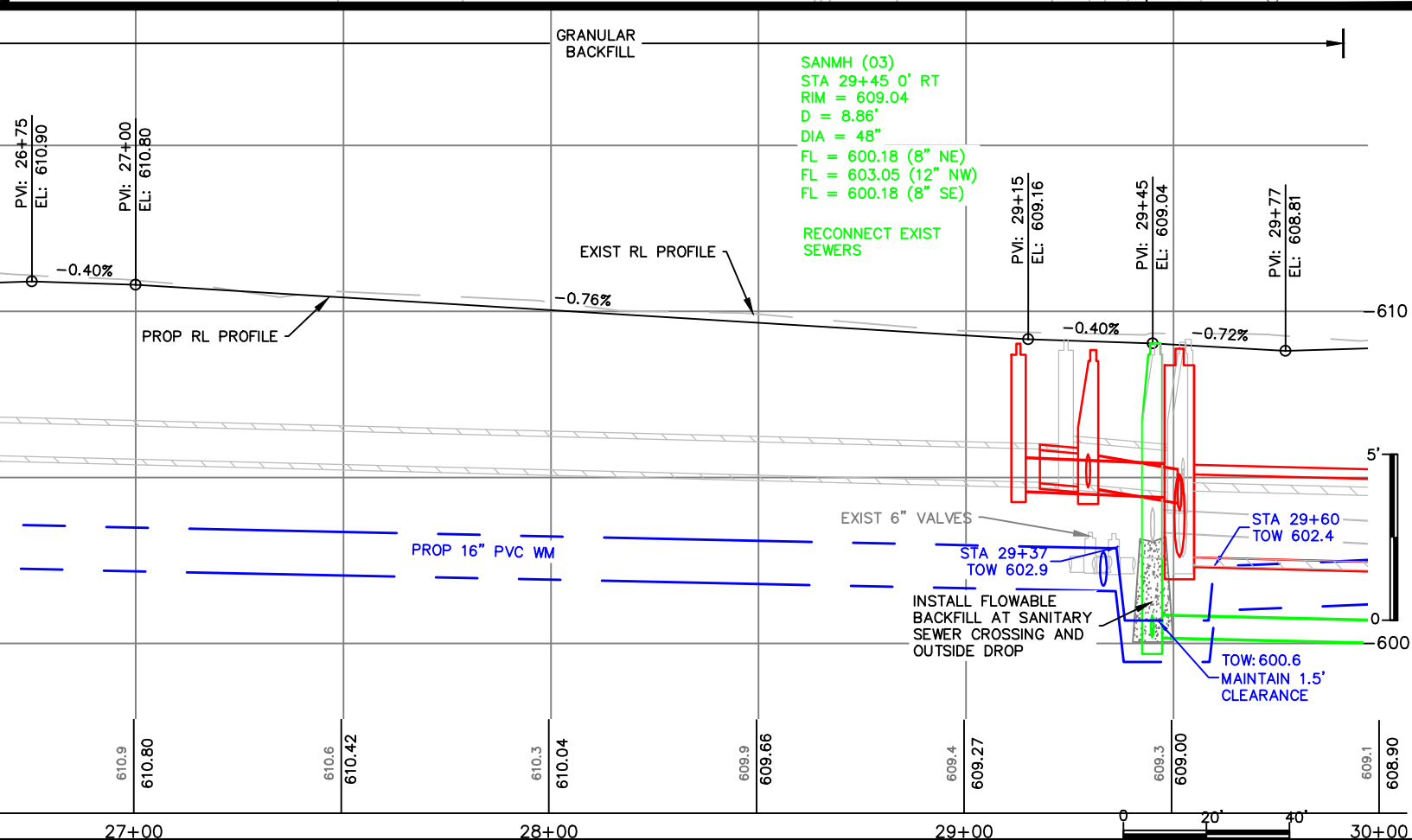
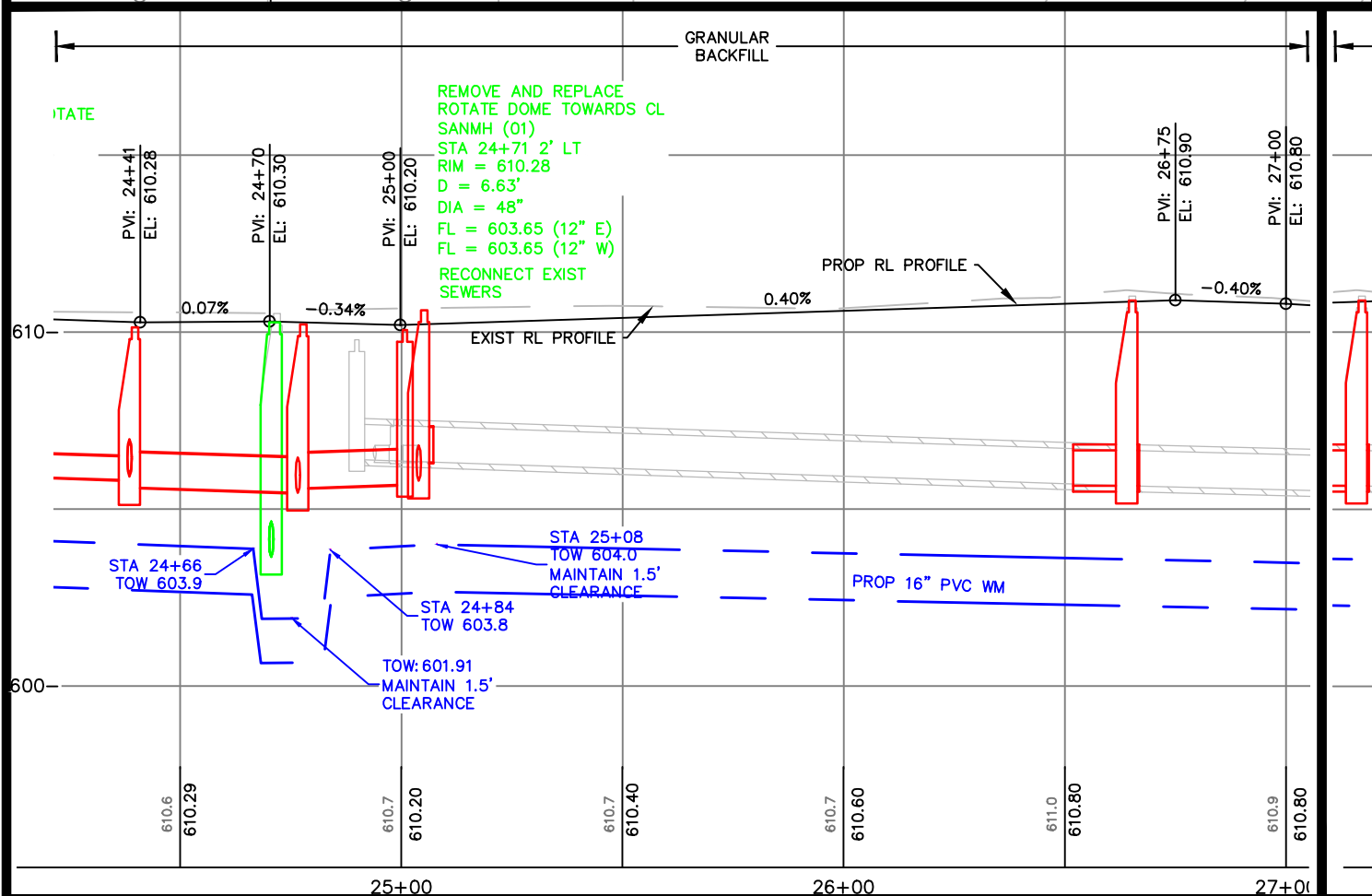
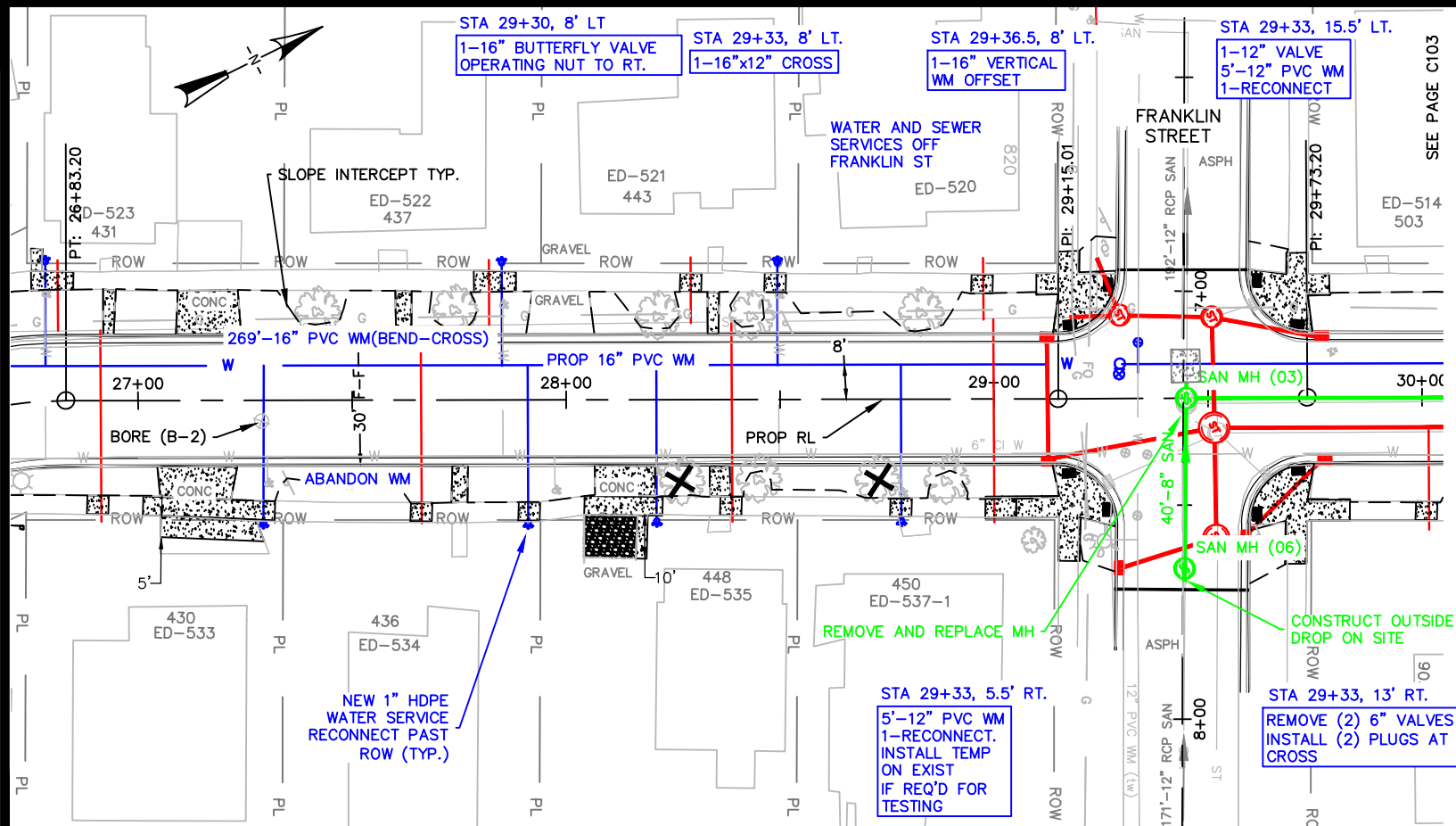
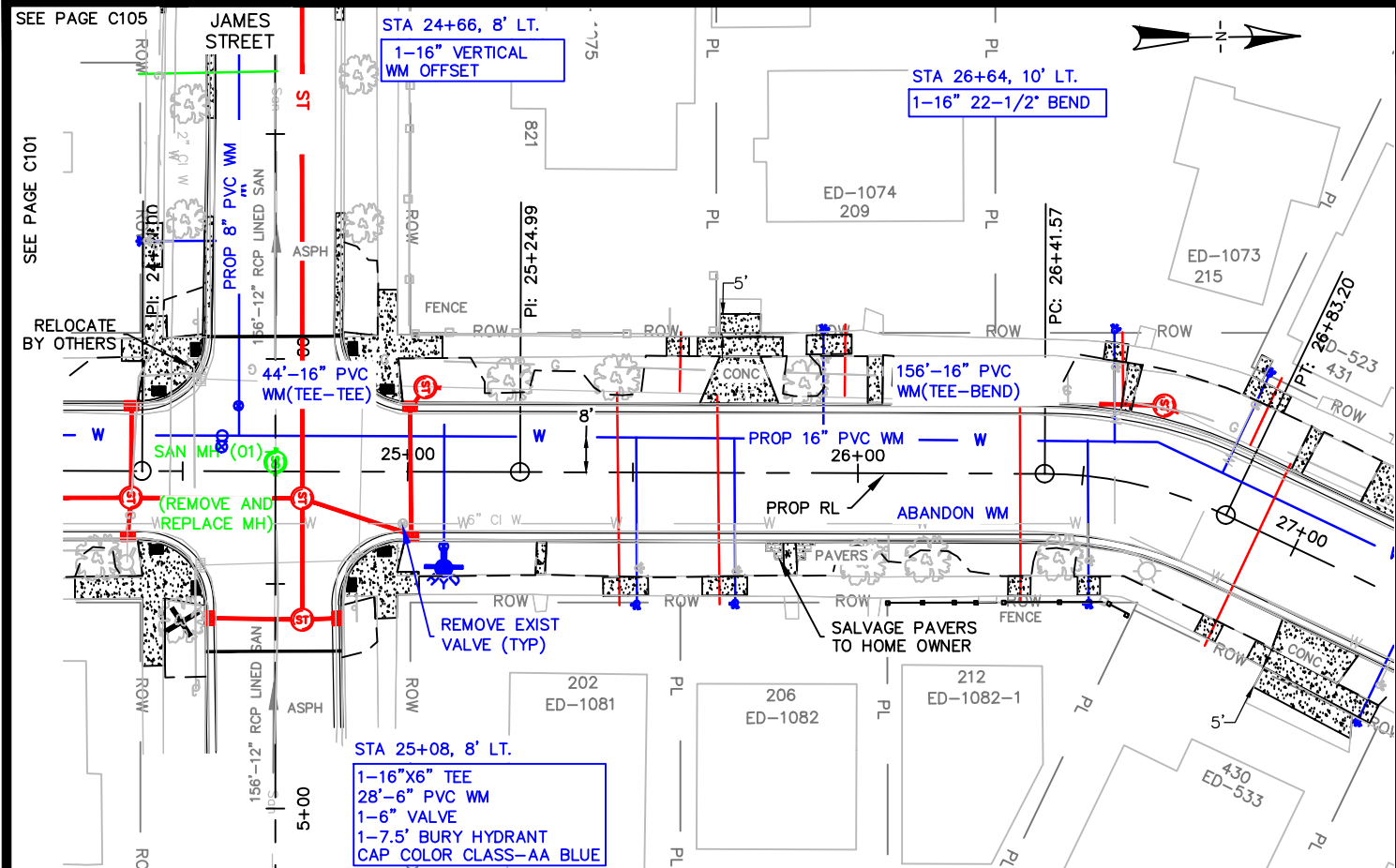


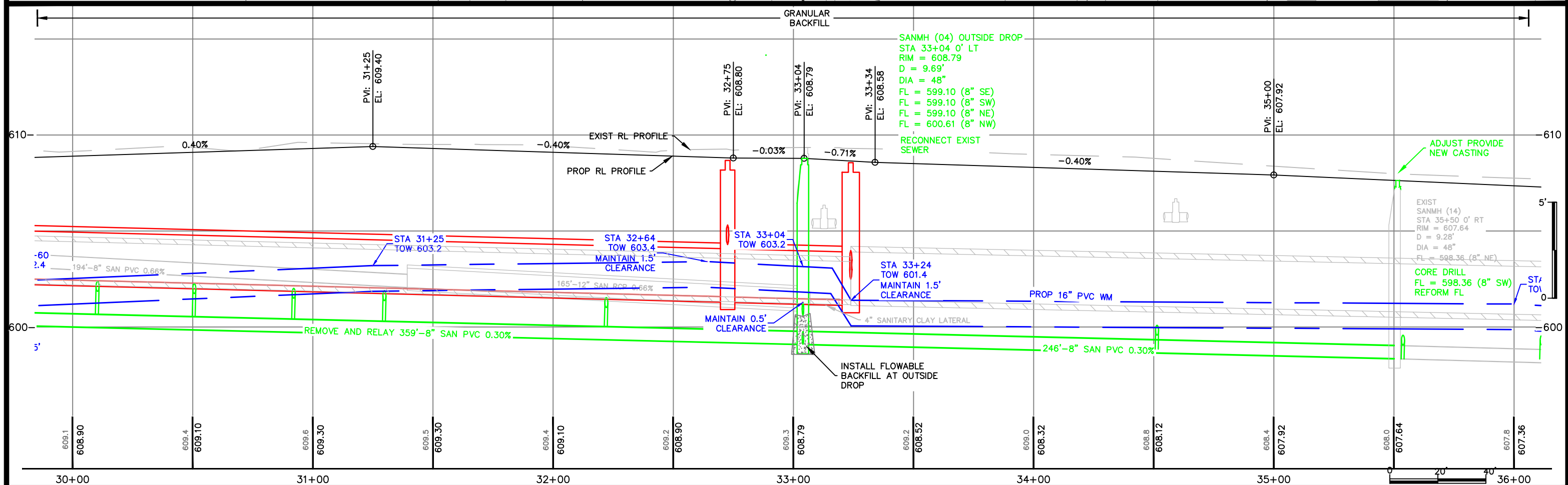
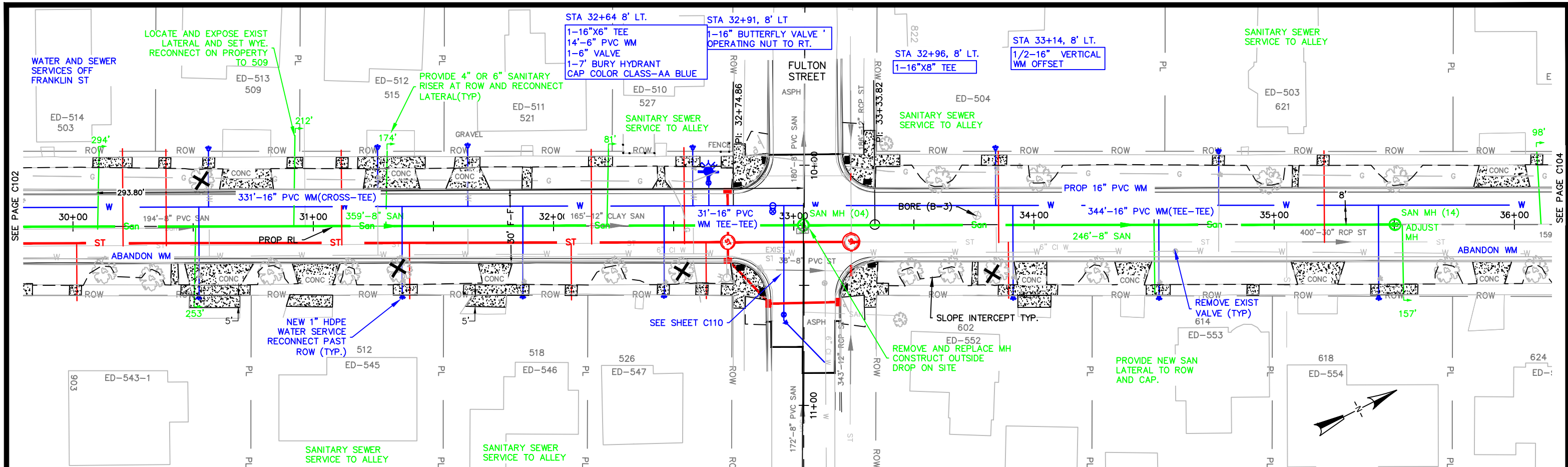
Cross Slopes			
Left		Right	
21+02	1.50%		2.50%
24+41			
James St			
25+00	3.00%		1.00%
29+15			
Franklin St			
29+73	3.00%		2.00%
30+00			
30+00	3.00%		2.00%
31+00	1.00%		2.00%
31+00			
31+00	1.00%		2.00%
32+00			
32+00	1.00%		2.00%
32+50	2.00%		2.00%
32+50			
32+50	2.00%		2.00%
32+75			
Fulton St			

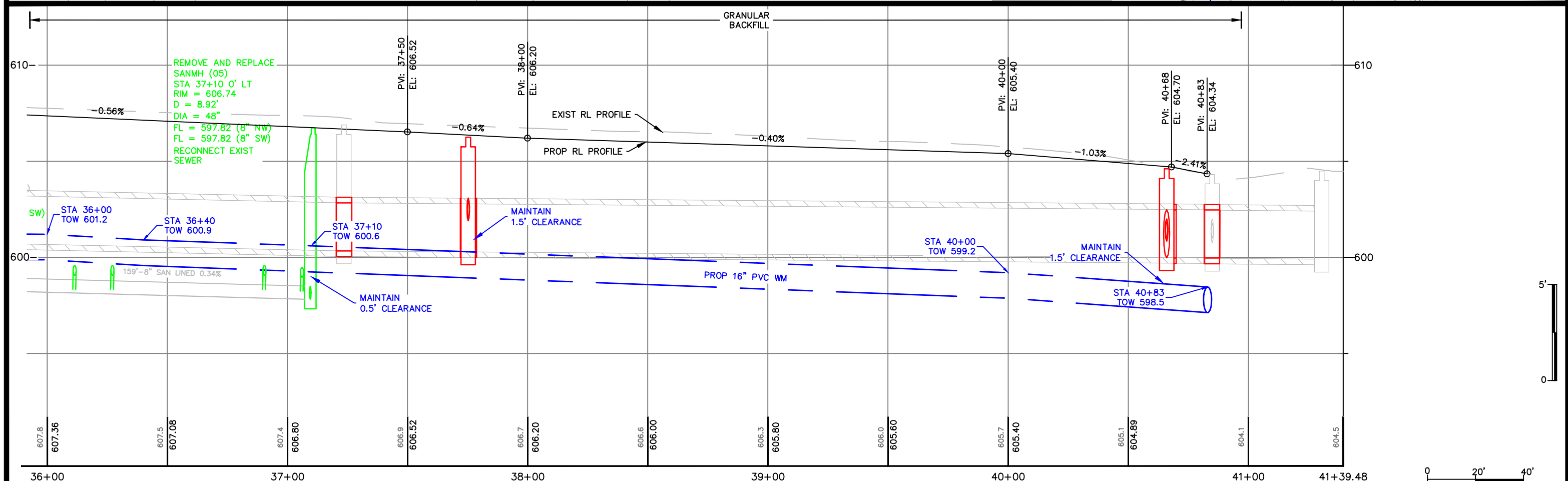
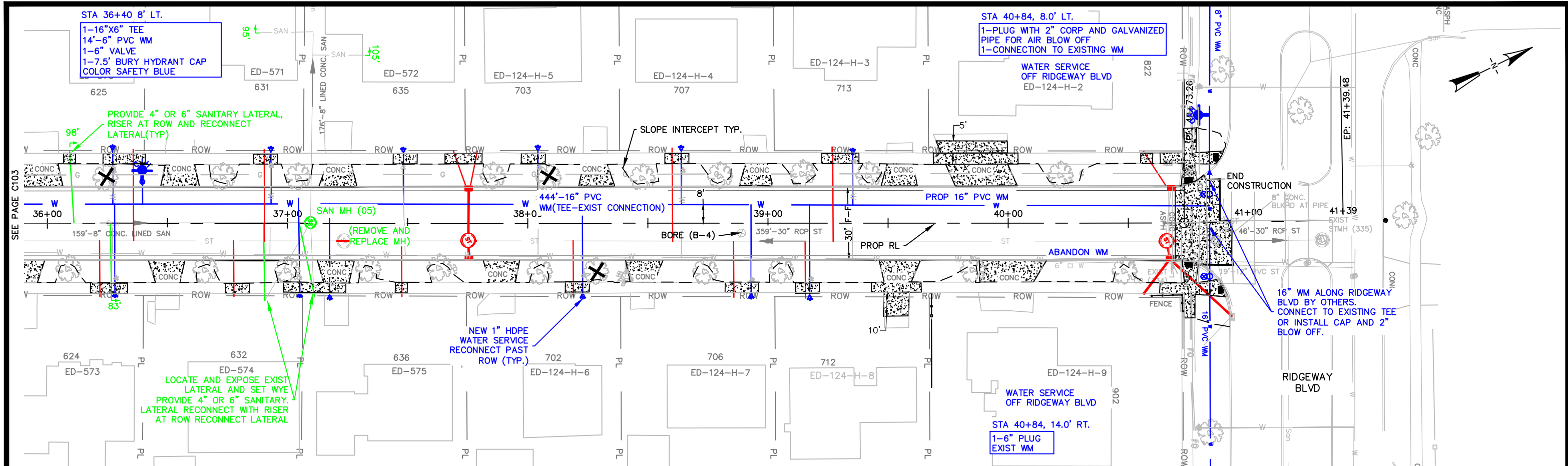
Cross Slopes			
Left		Right	
Fulton St			
33+34	2.50%		1.50%
35+50			
35+50	2.50%		1.50%
36+50	1.50%		
36+50	1.50%		1.50%
37+50			
37+50	1.50%		1.50%
37+90	2.00%		
37+90	2.00%		1.50%
40+00			
40+00	2.00%		1.50%
40+50			

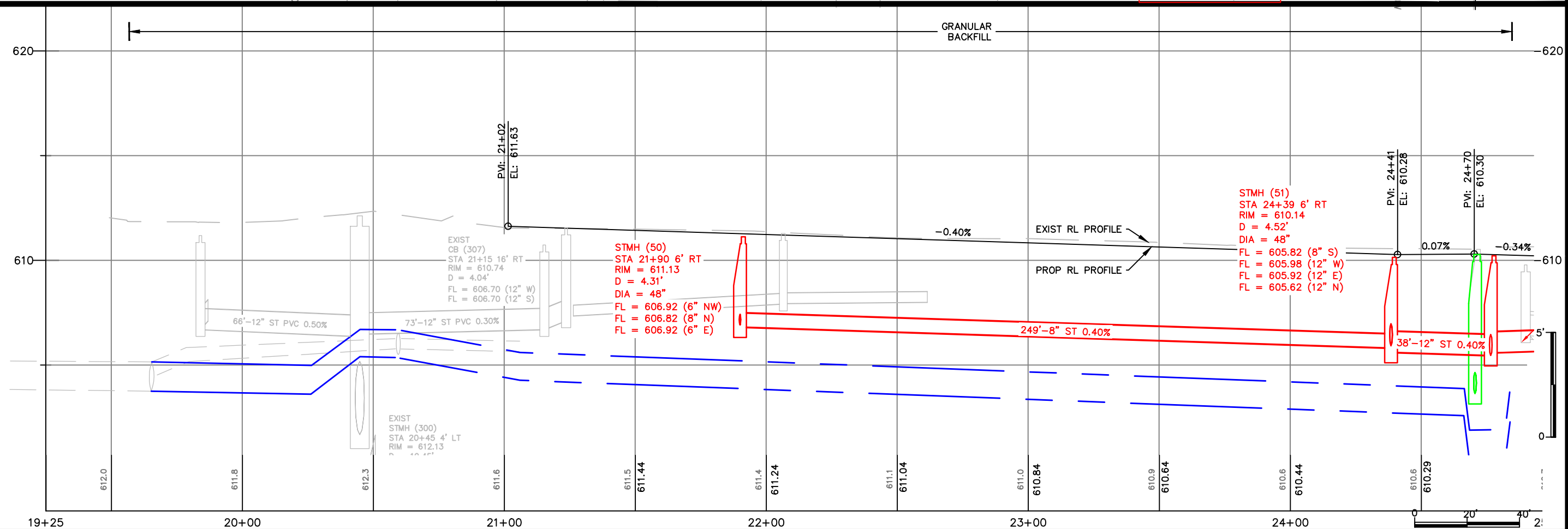
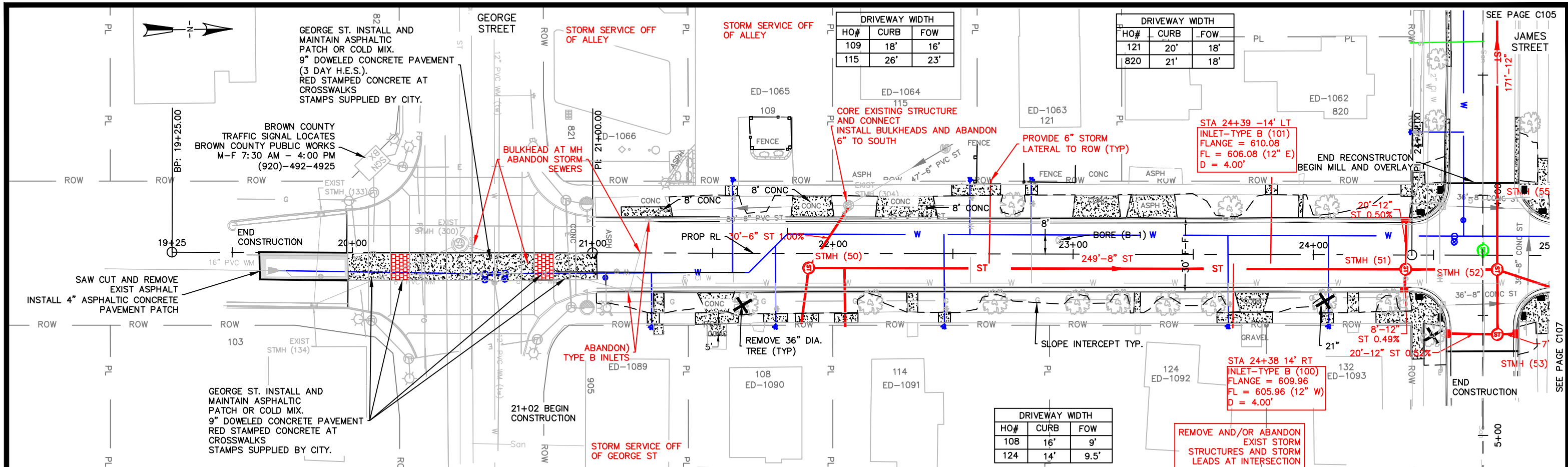




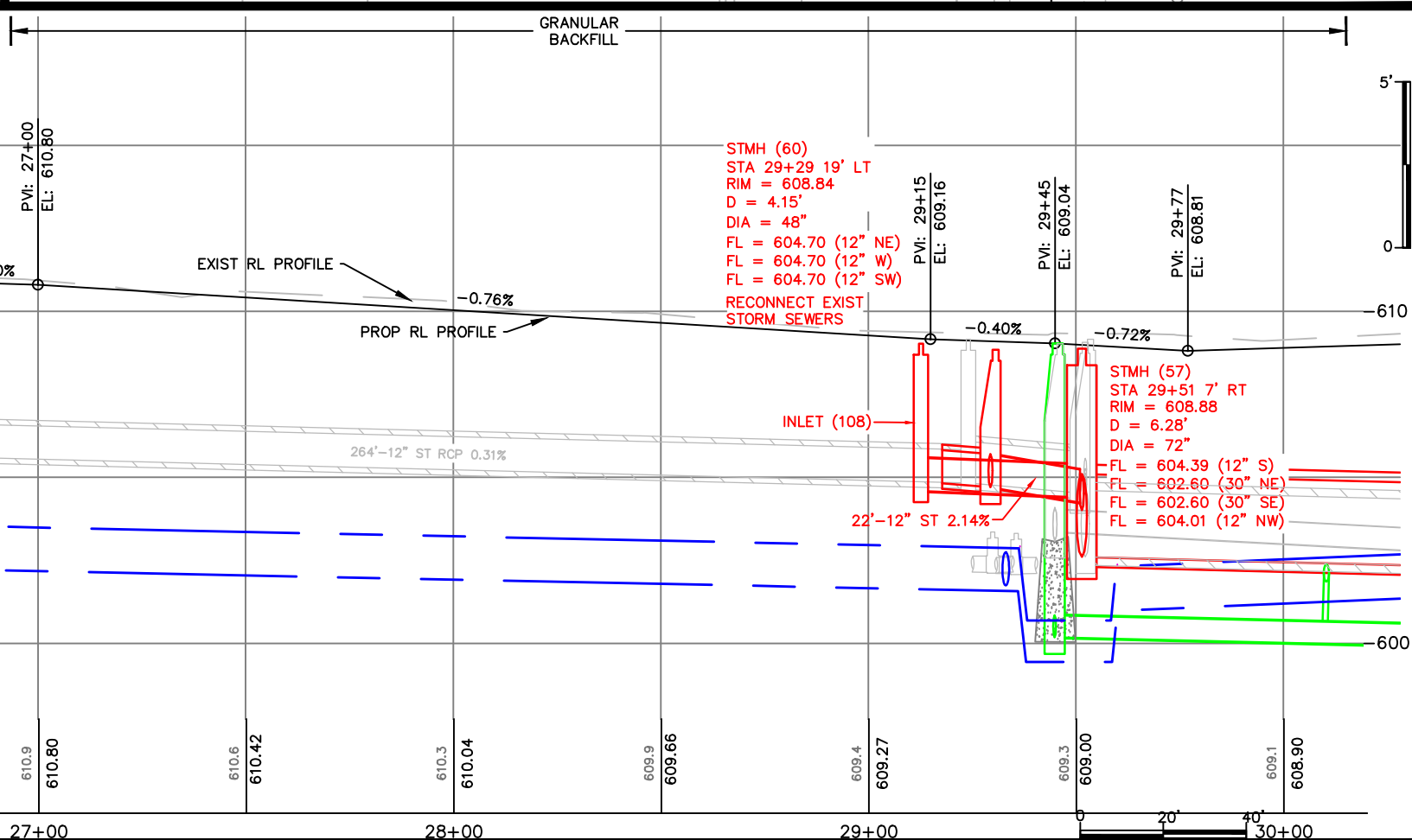
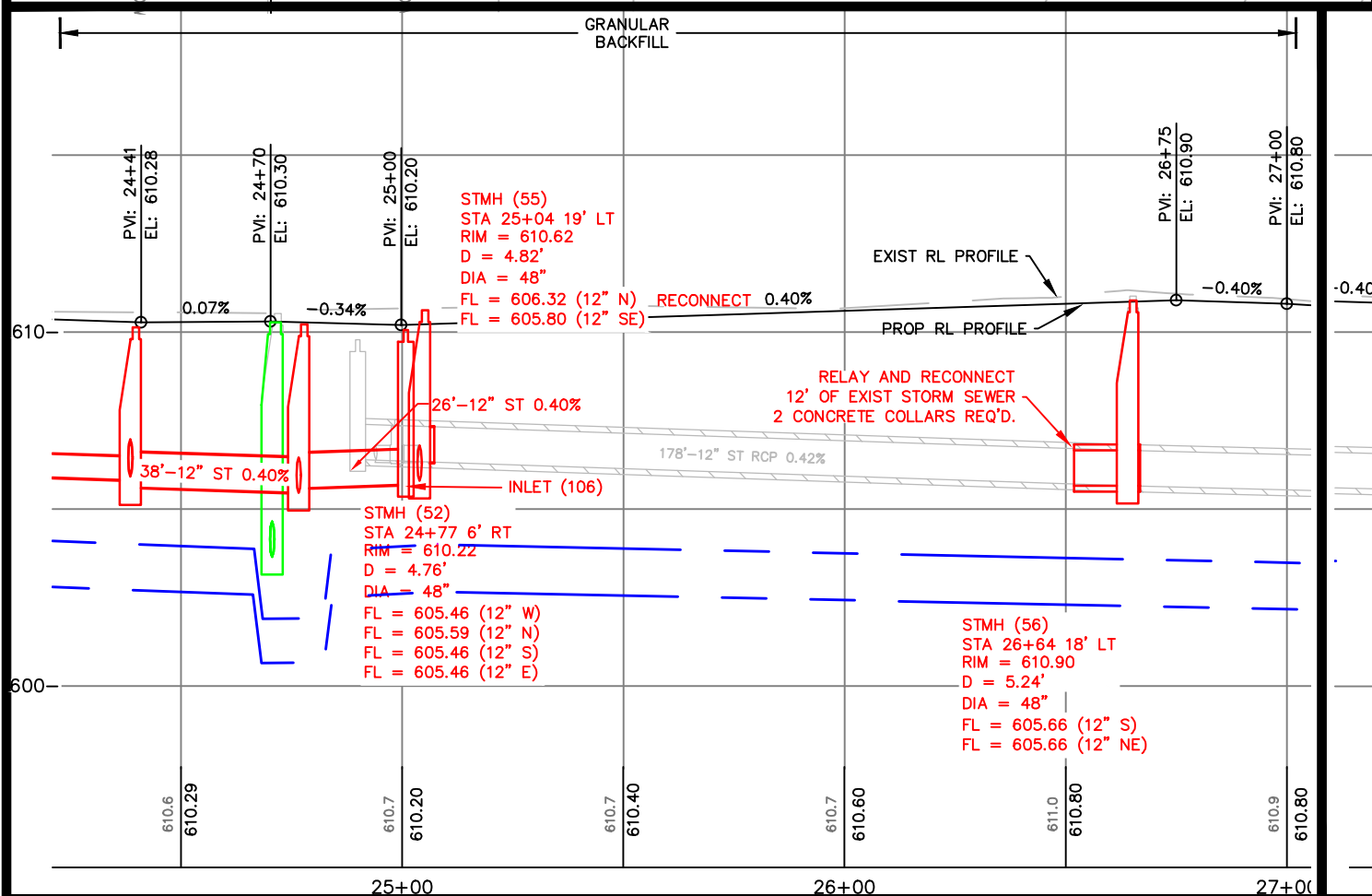
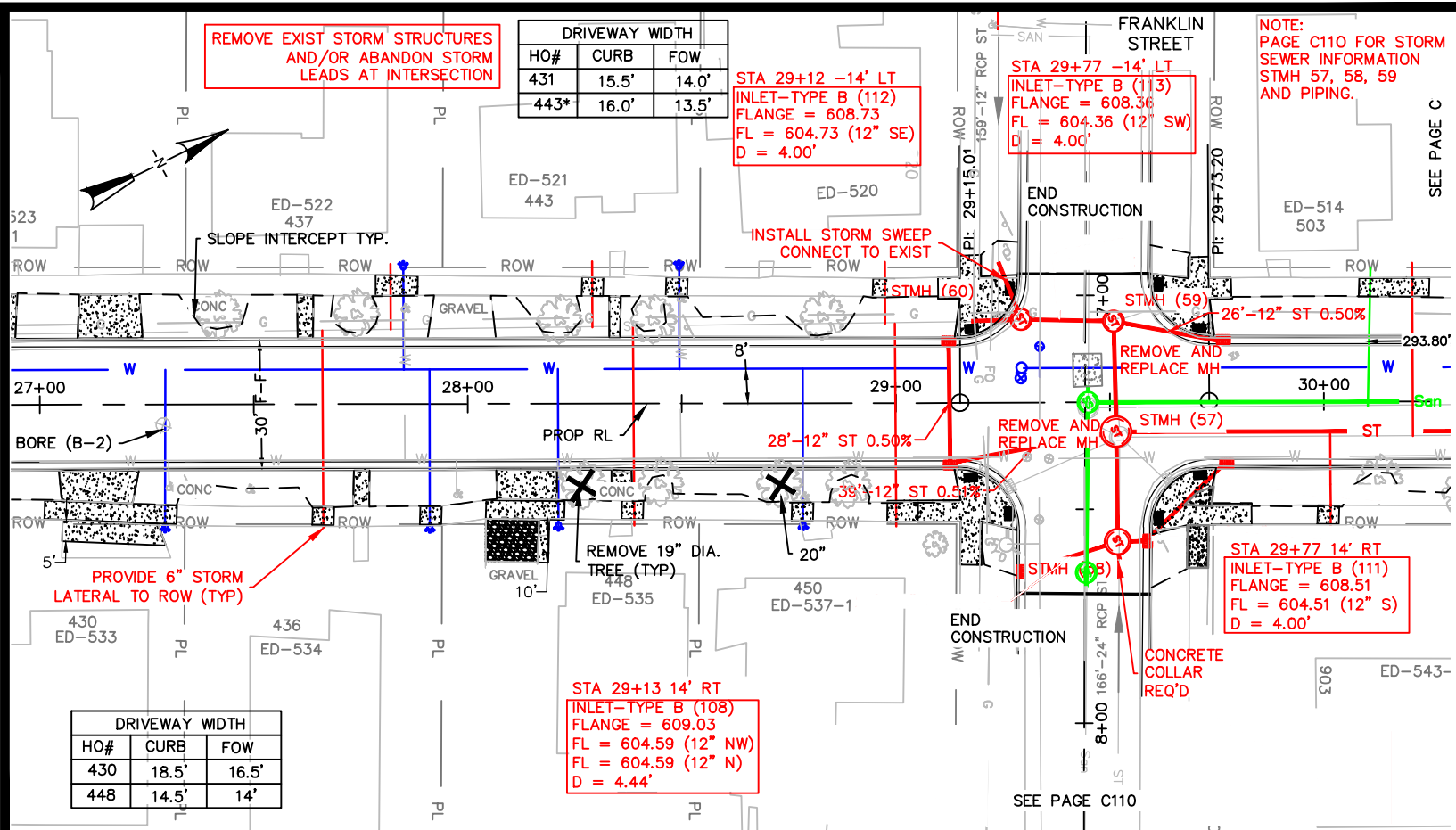
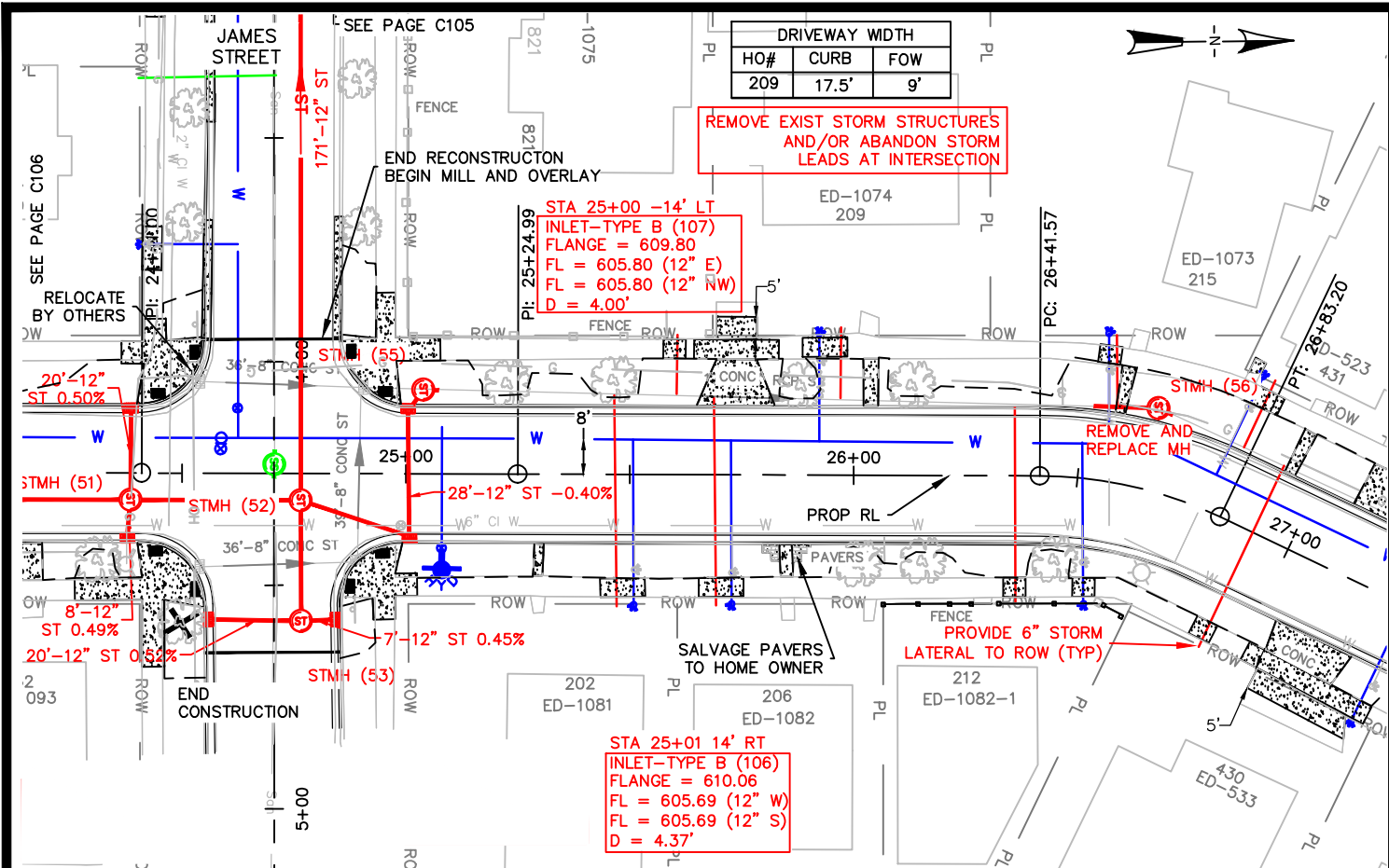


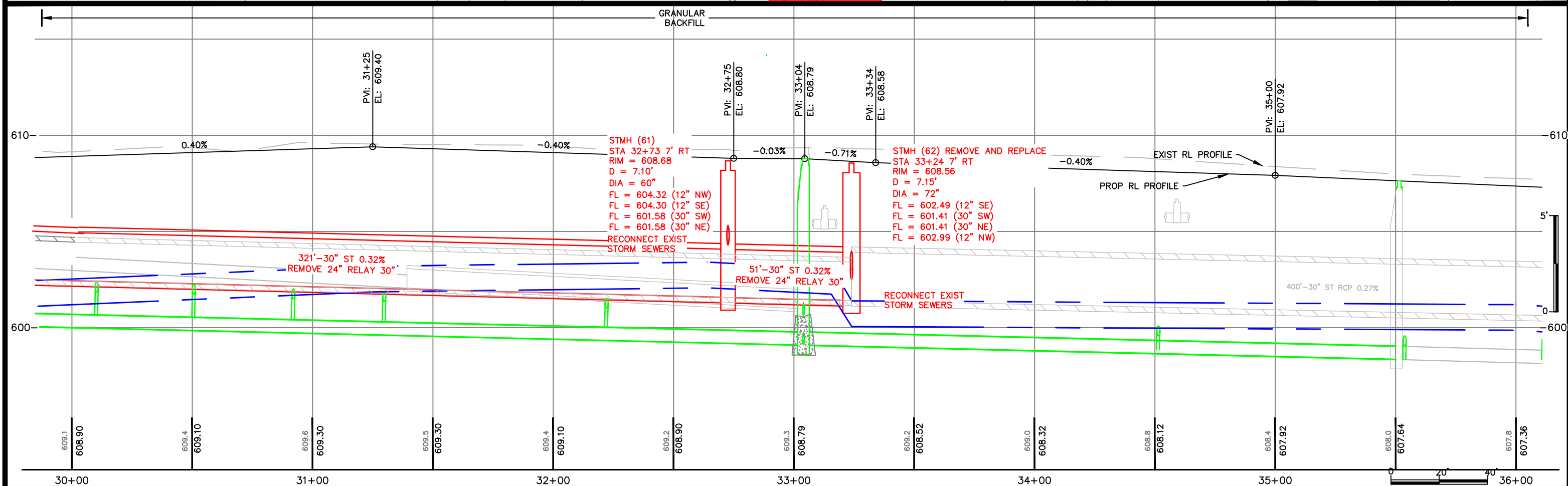
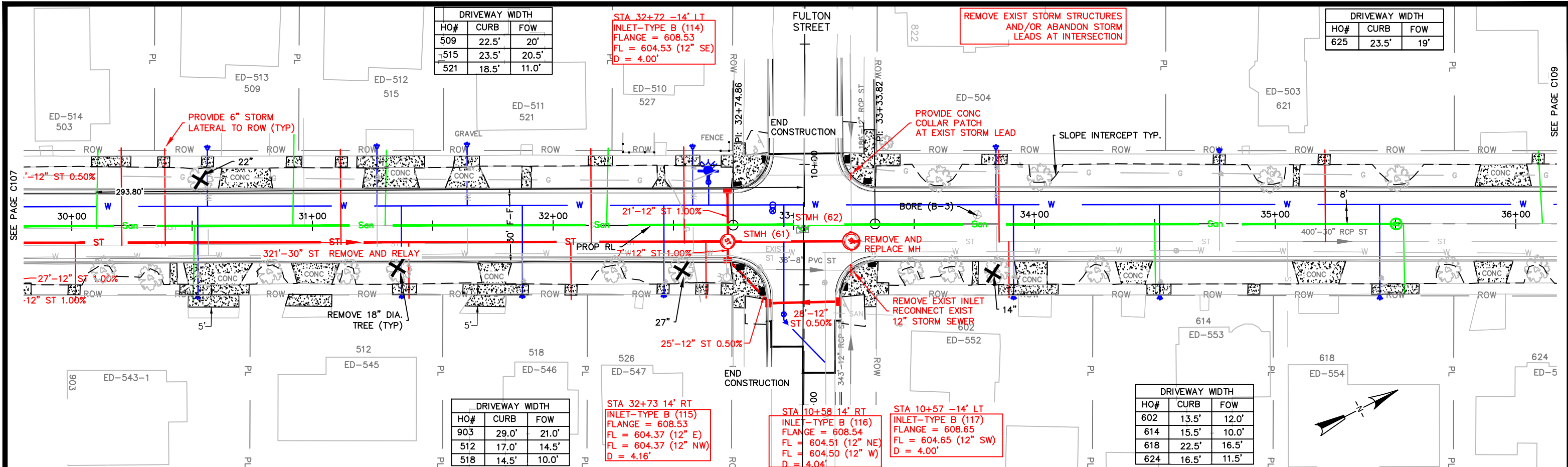


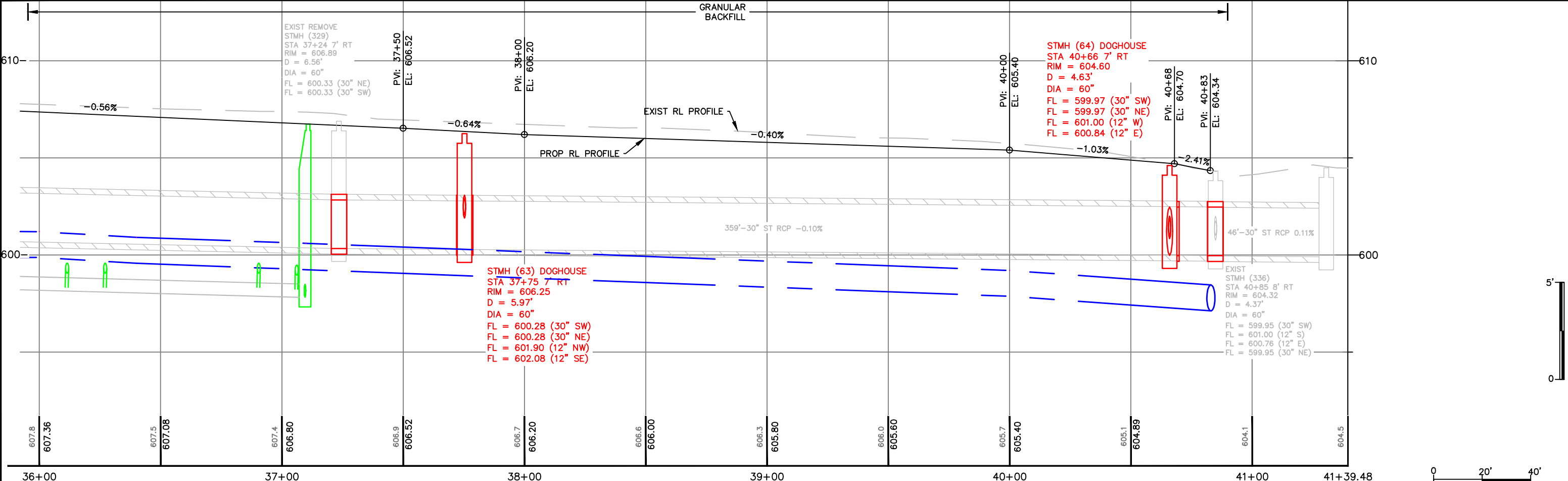
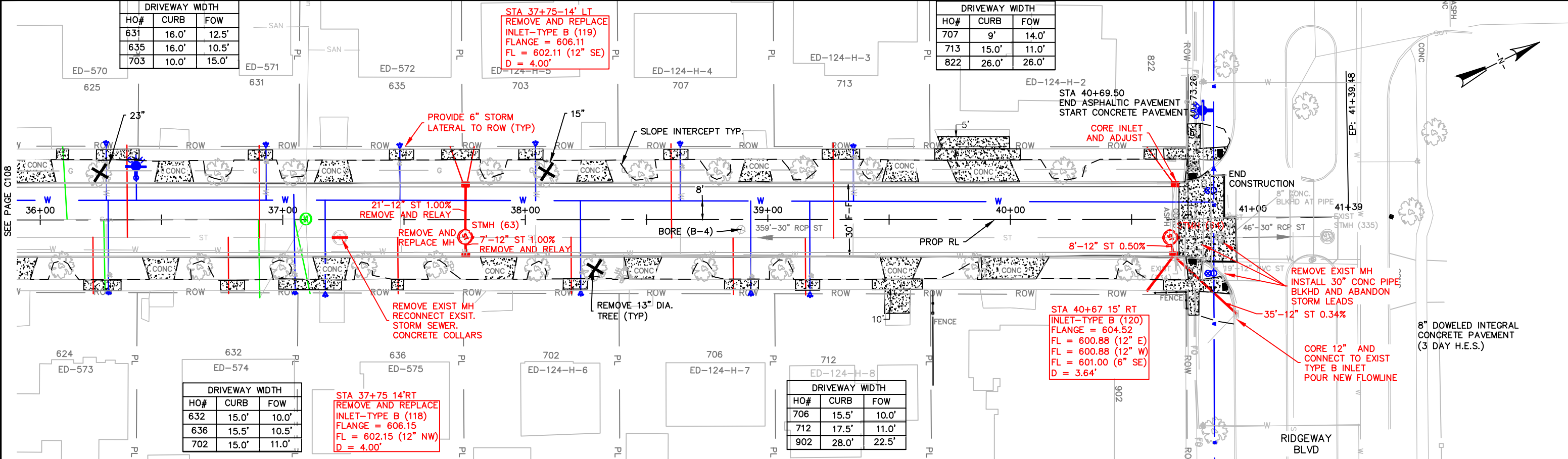




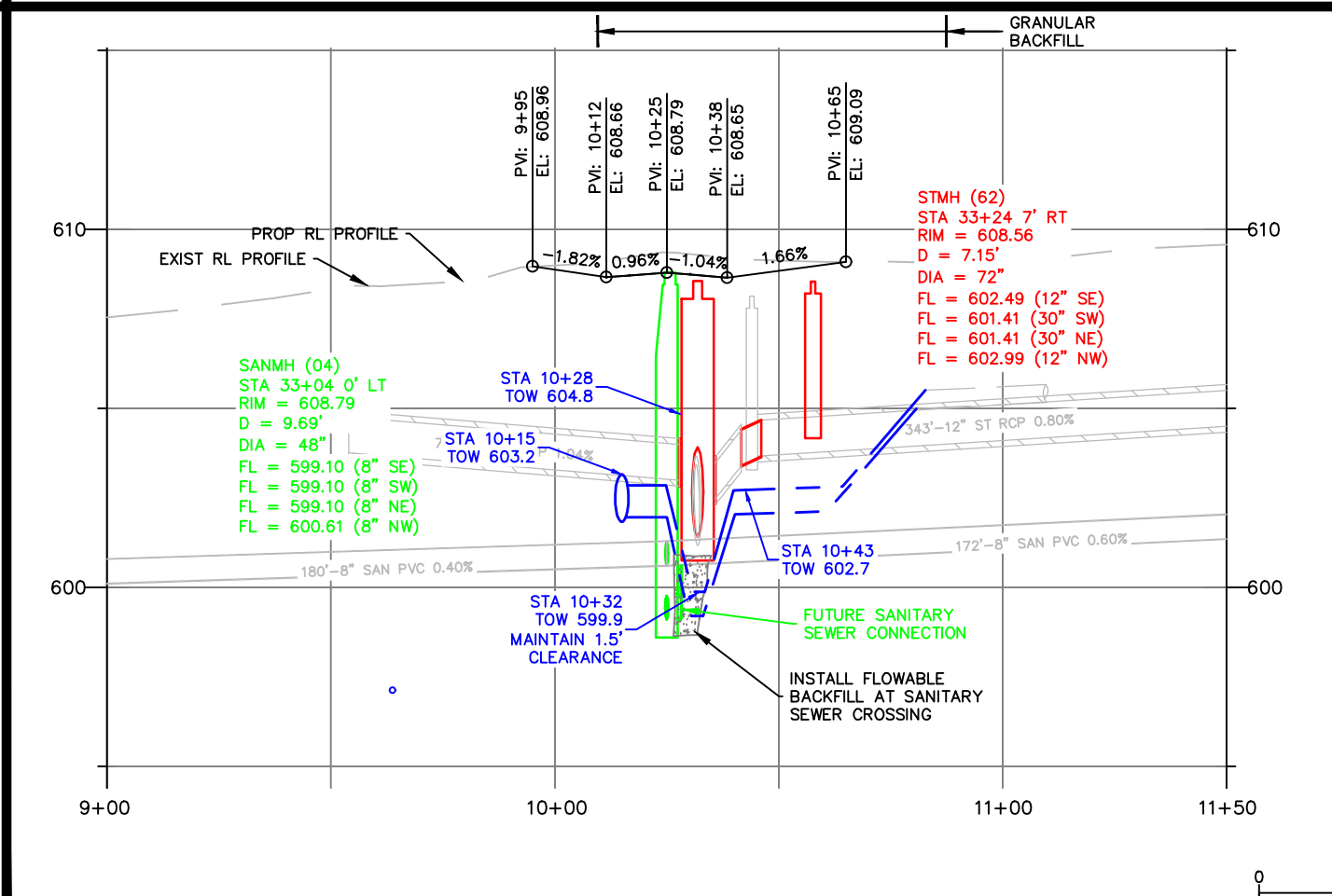
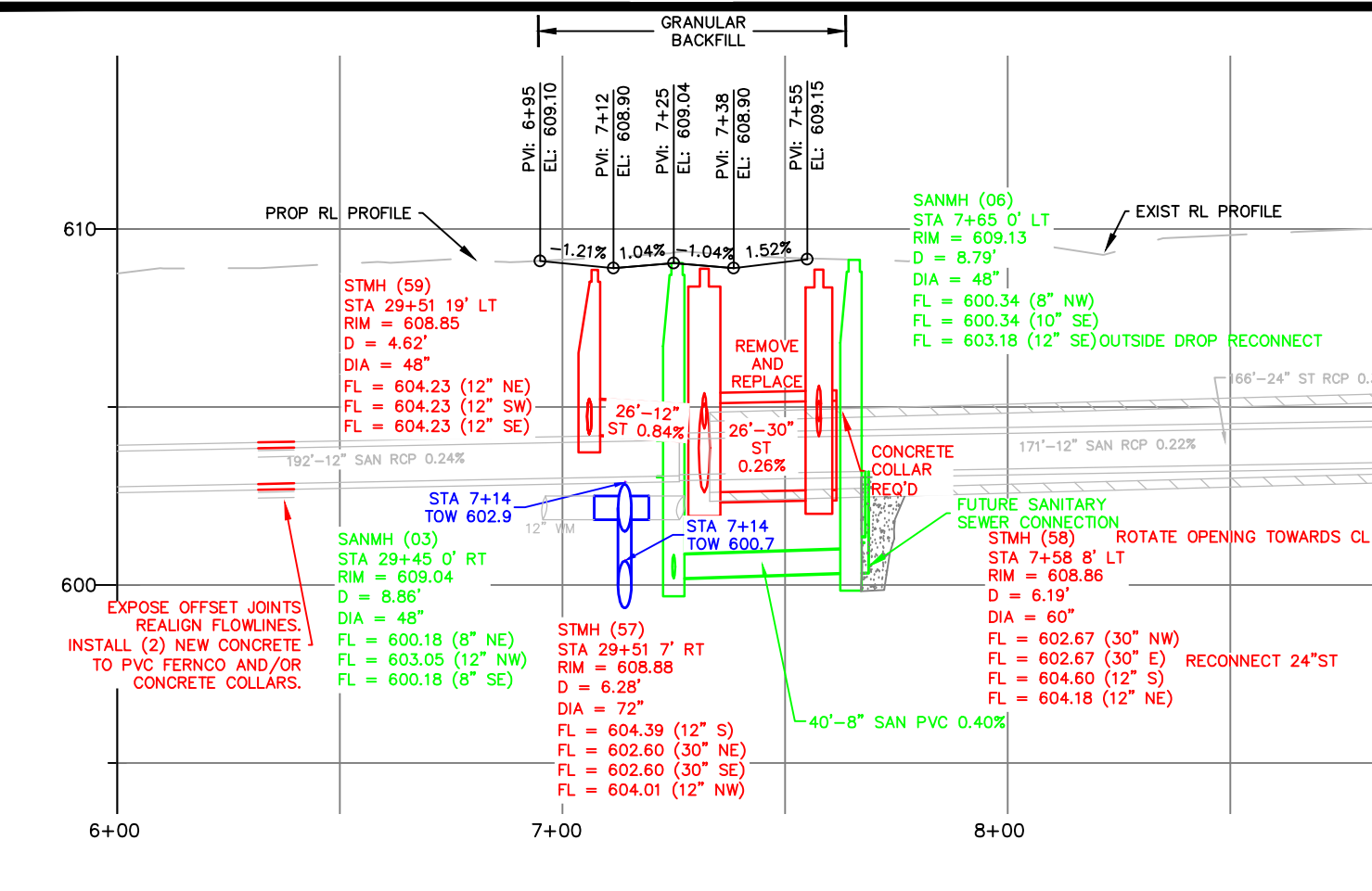
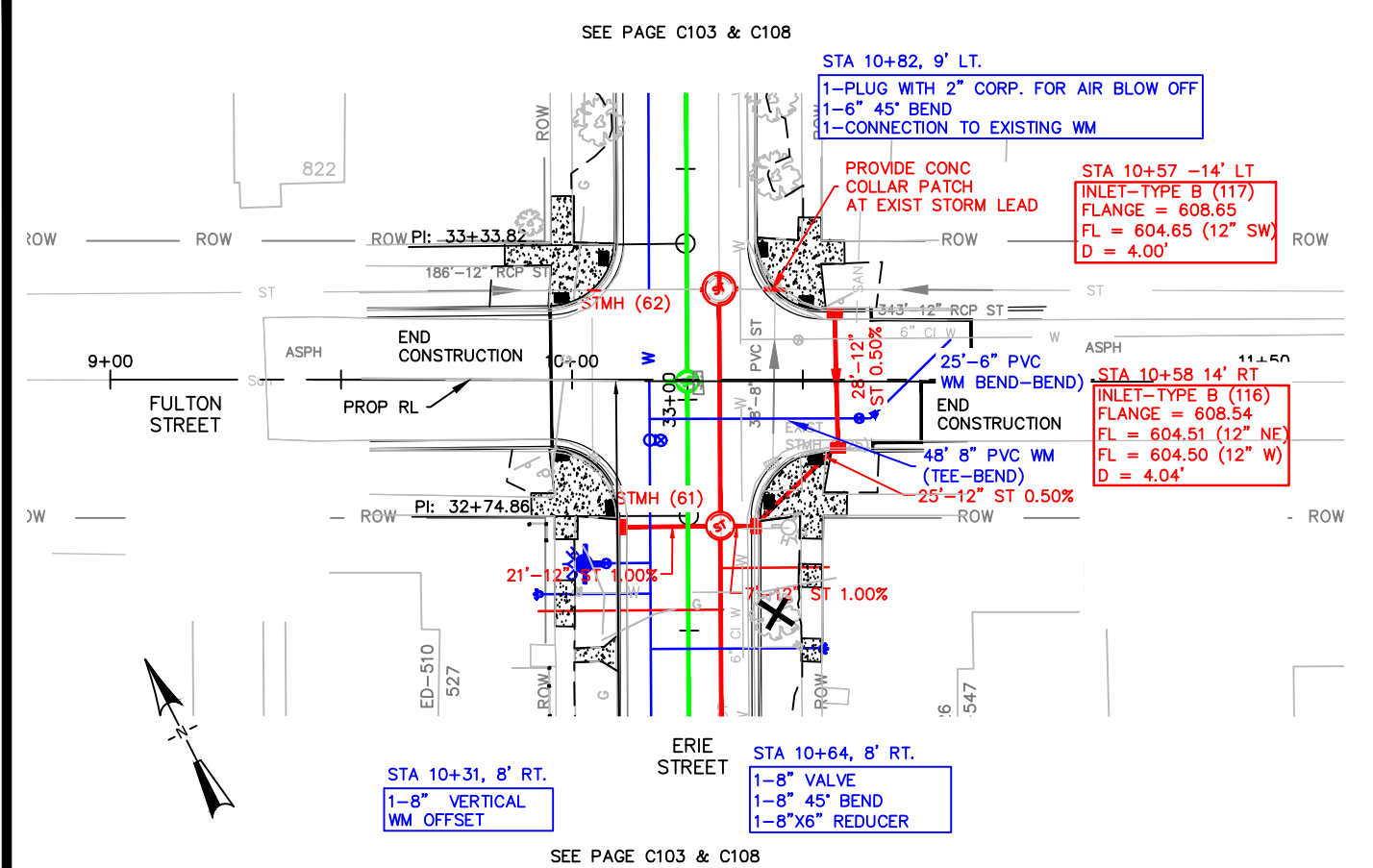
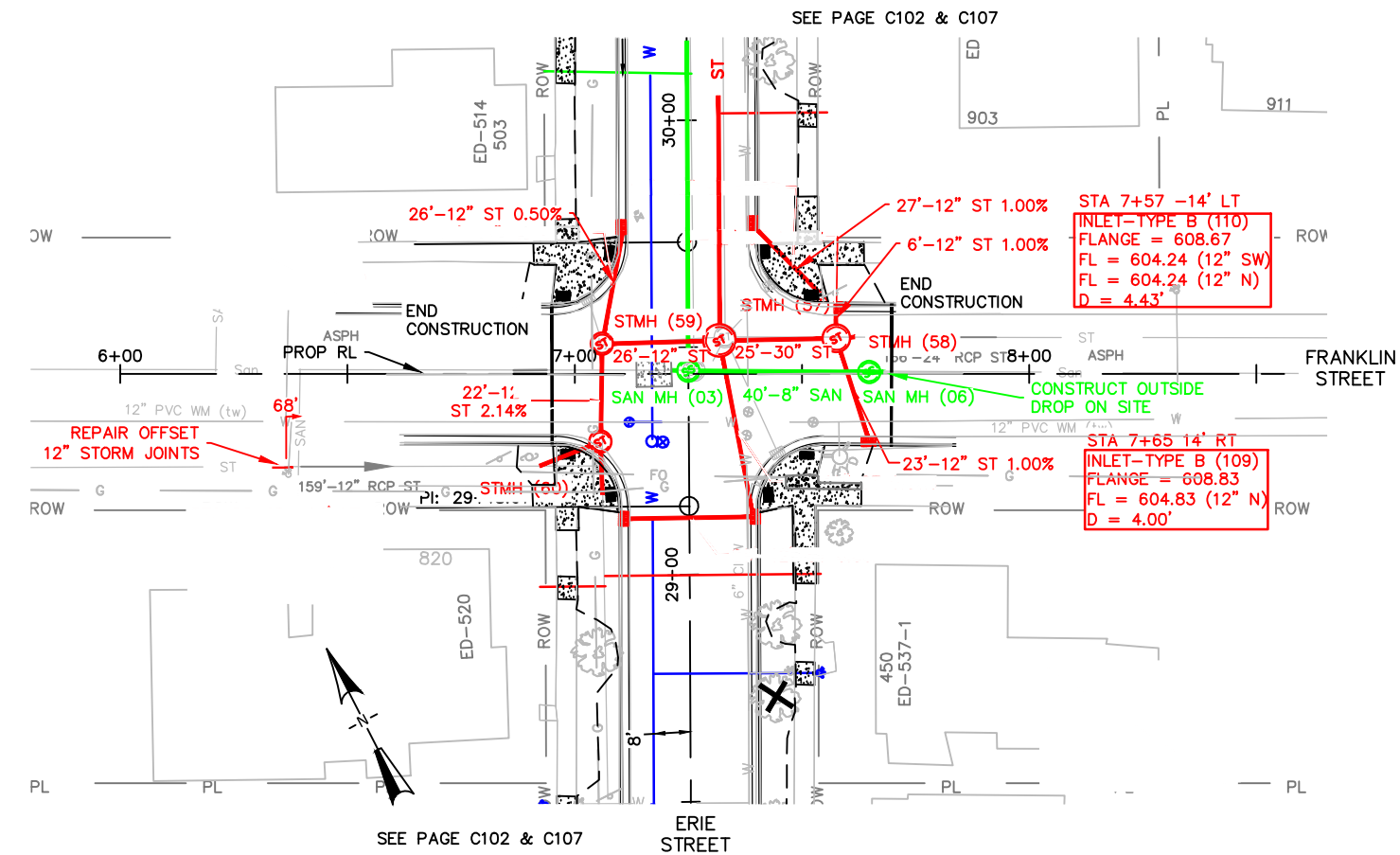
X:\ENG\Projects\City Projects\2021\Project 21-02 Erie Street Reconstruction\1200- CAD\Erie_P&P.dwg







X:\Projects\City Projects\2021\Project 21-02 Erie Street Reconstruction\1200- CAD\Erie_P&P.dwg



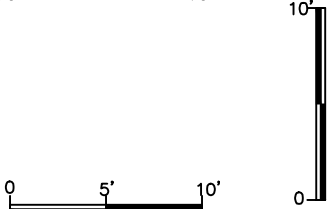
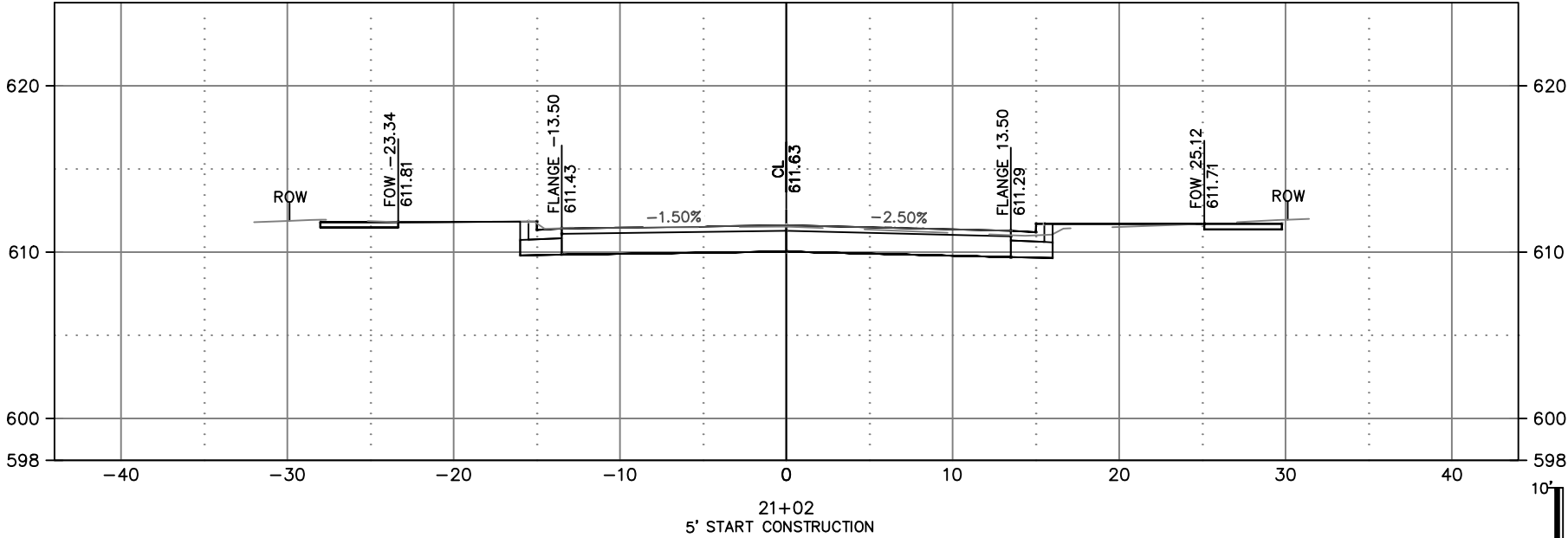
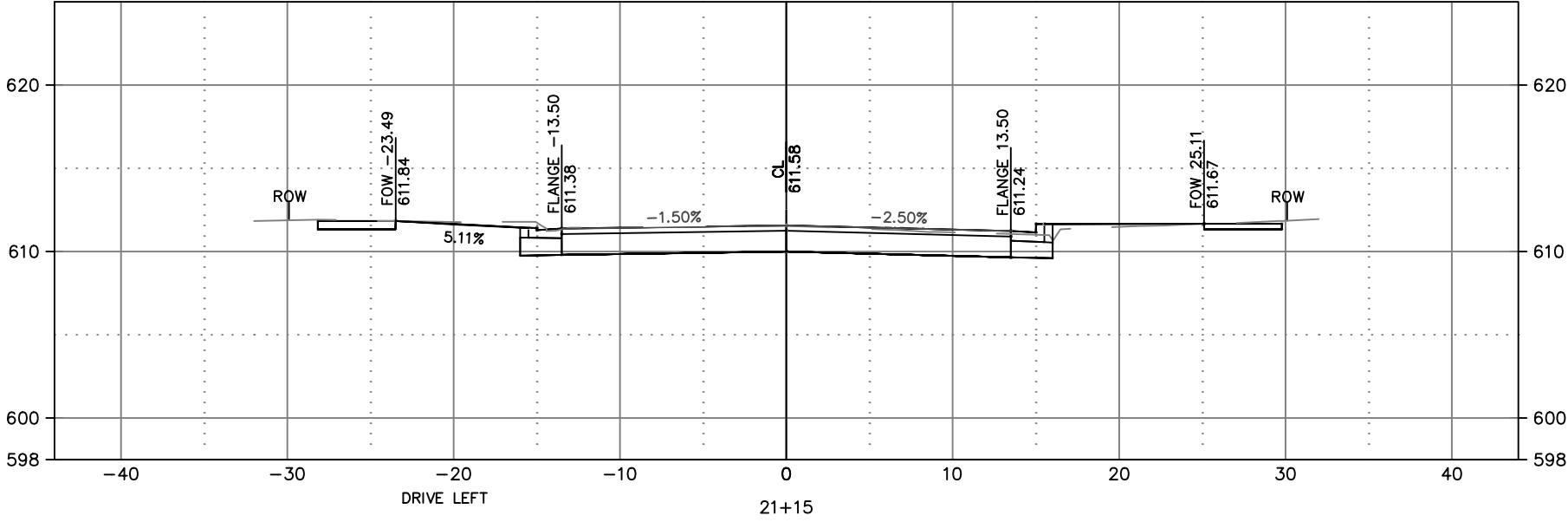
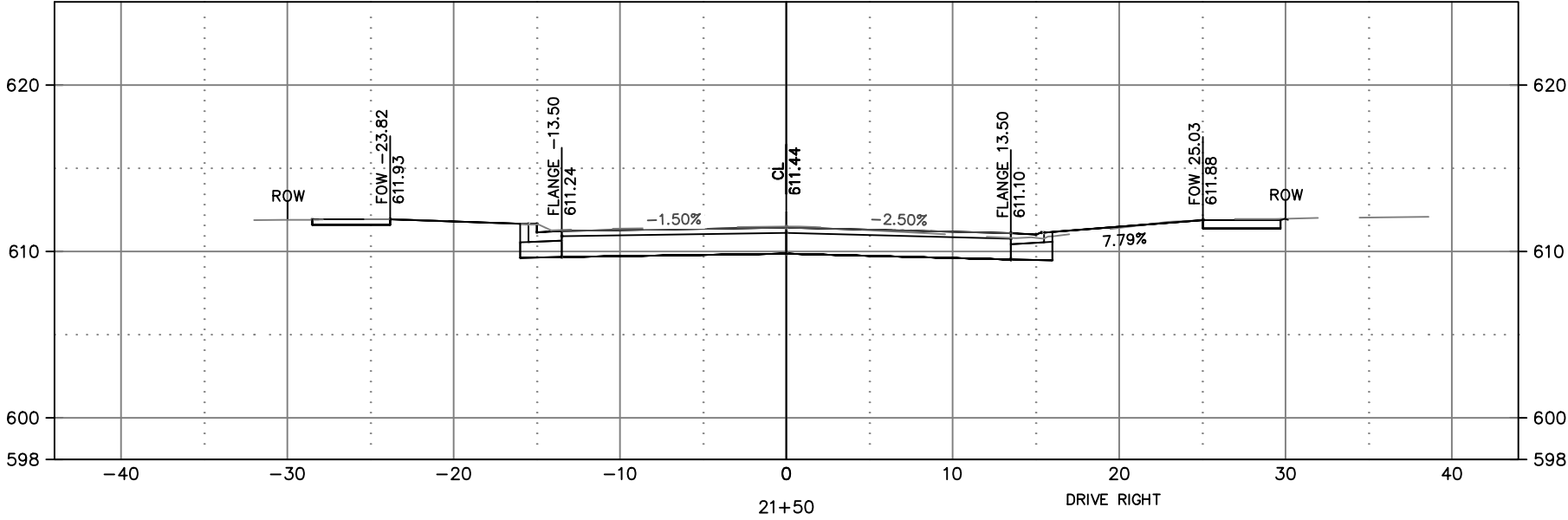
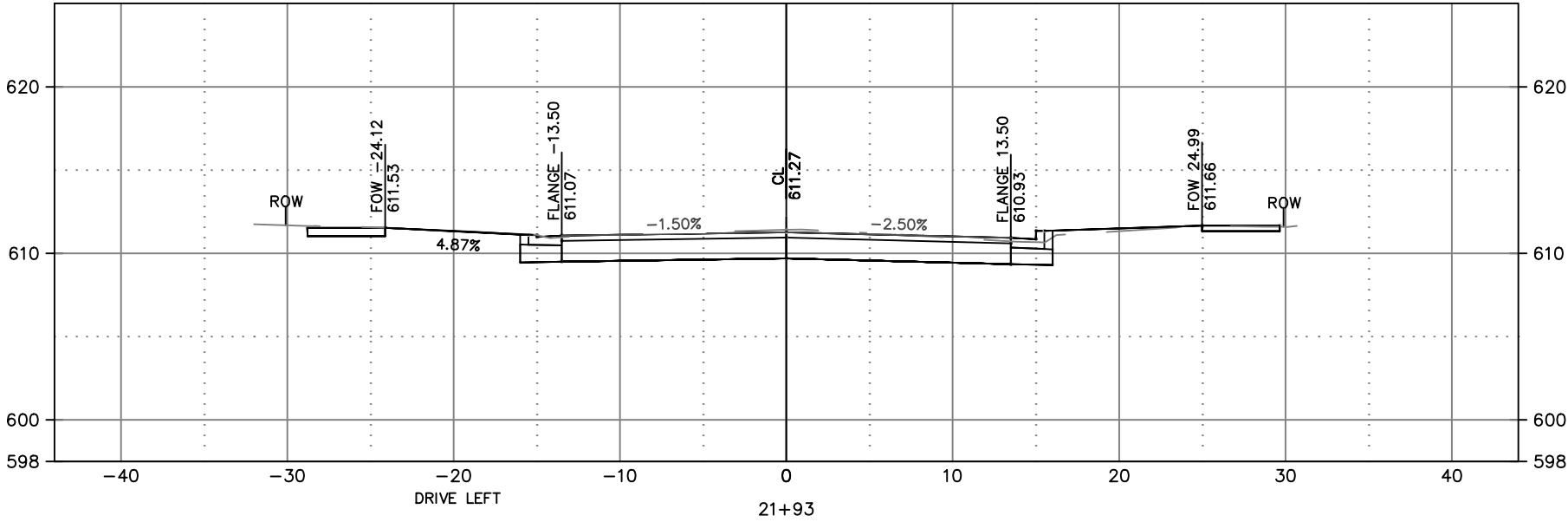


CITY OF DE PERE
ENGINEERING DIVISION
925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

ERIE STREET
CROSS SECTIONS

NAME:
AND UTILITY RELAY
PROJECT #

DATE	NO.	DATE	BY	REVISIONS / ISSUES
11-2020			BY	REMARKS
01-2021			BY	
01-2021			BY	
03-2021			BY	





CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

**ERIE STREET
CROSS SECTIONS**

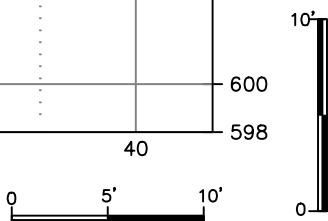
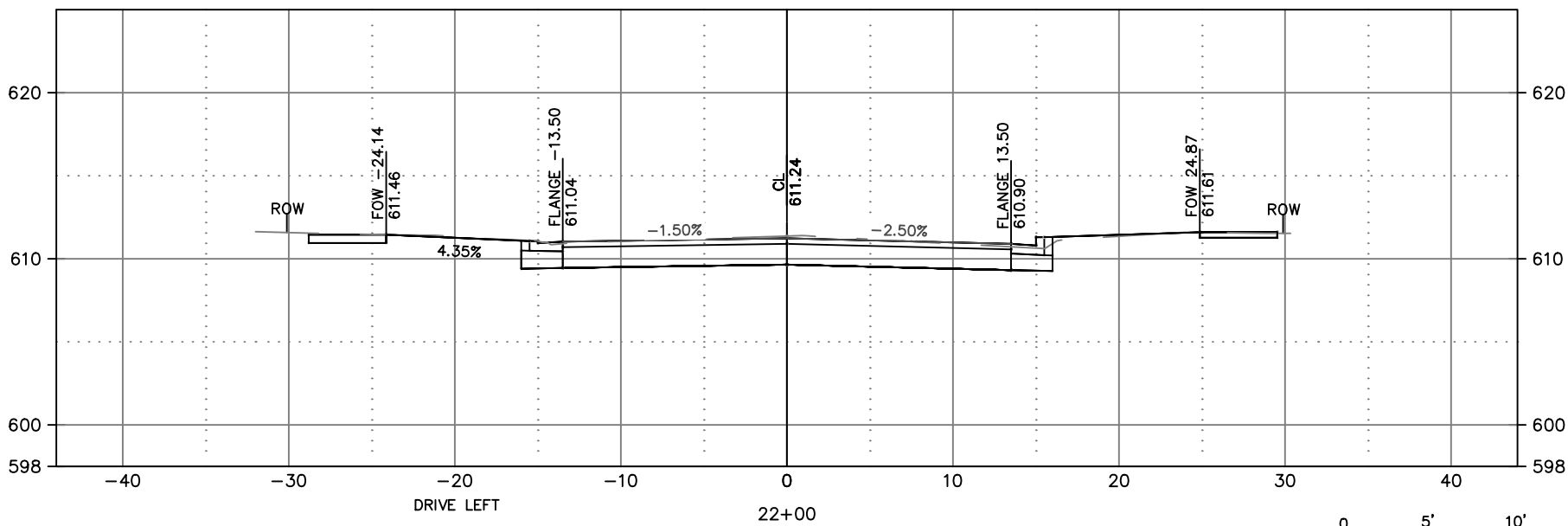
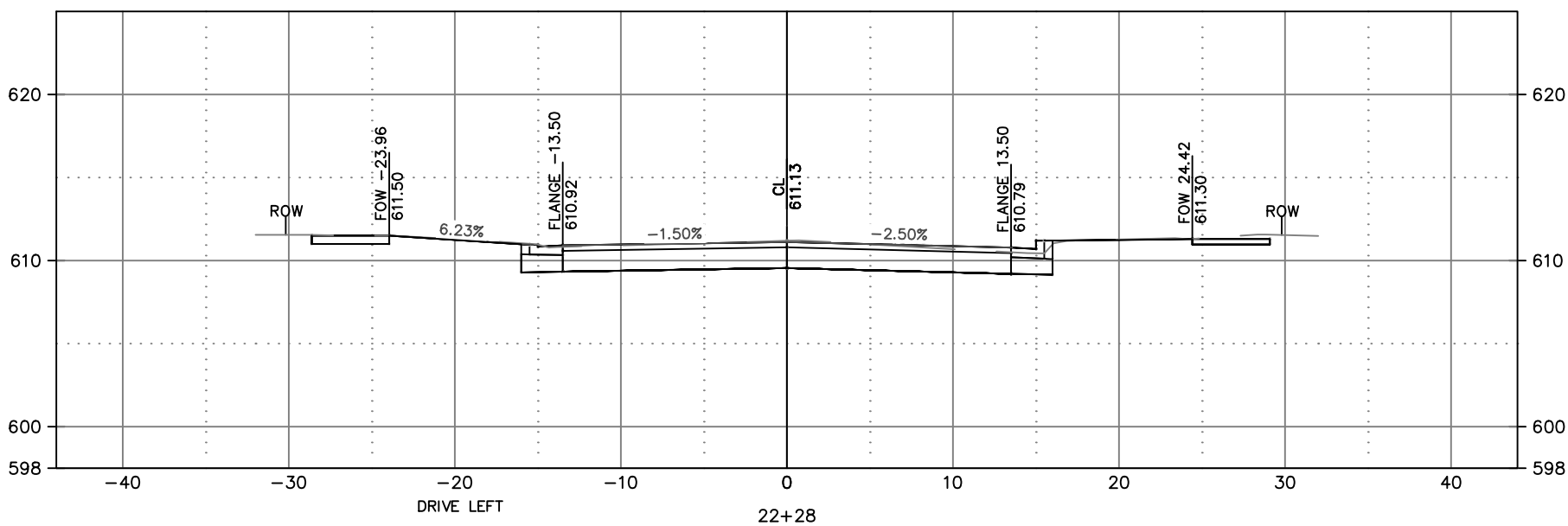
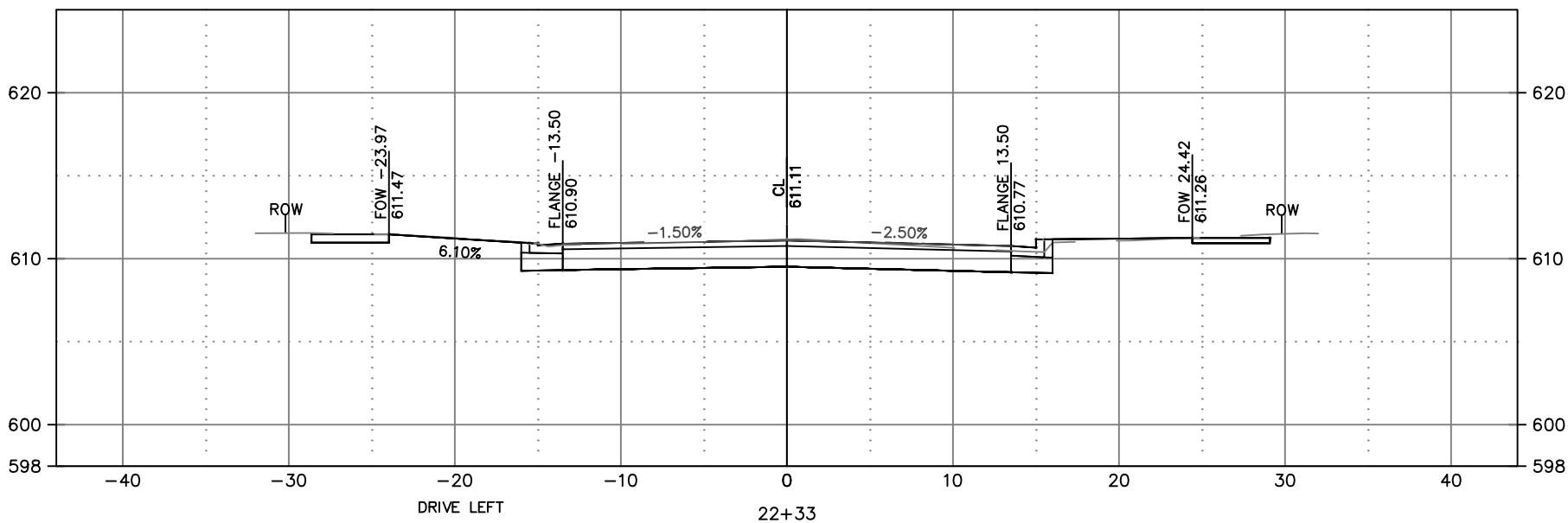
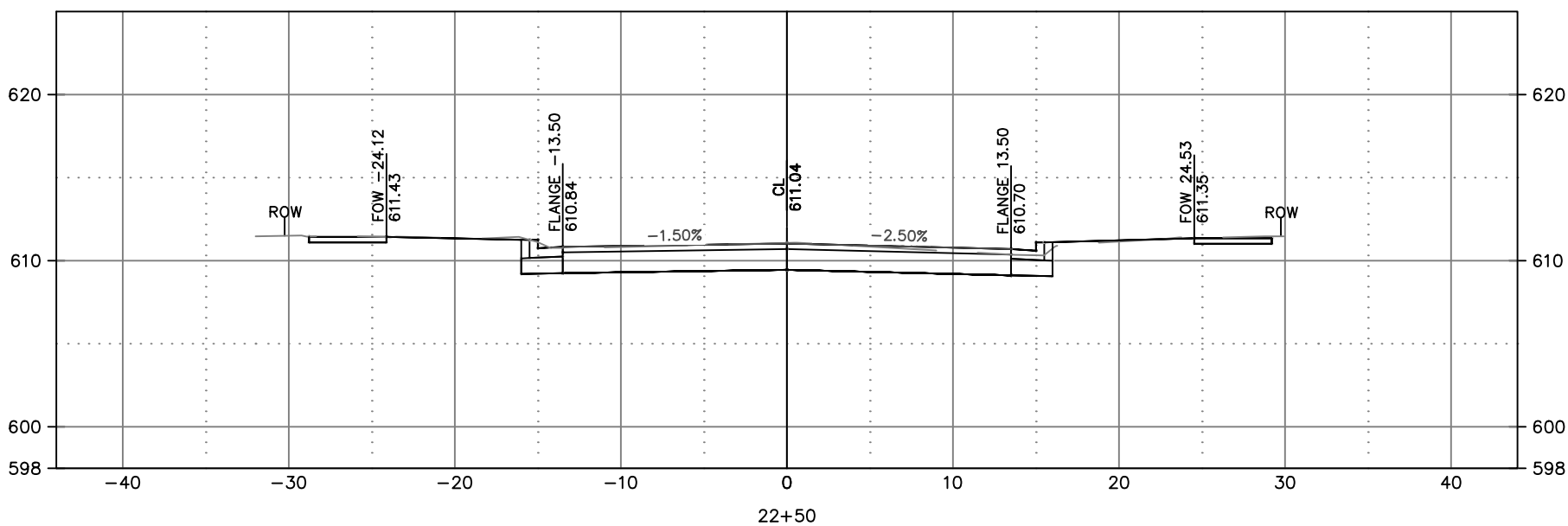
NAME: ERIE STREET RECONSTRUCTION AND UTILITY RELAY PROJECT #	21-02
---	-------

	BY	DATE
SURVEYED	BK	11-2020
DRAWN	BK	01-2021
DESIGNED	BK	01-2021
CHECKED	EPR	03-2021

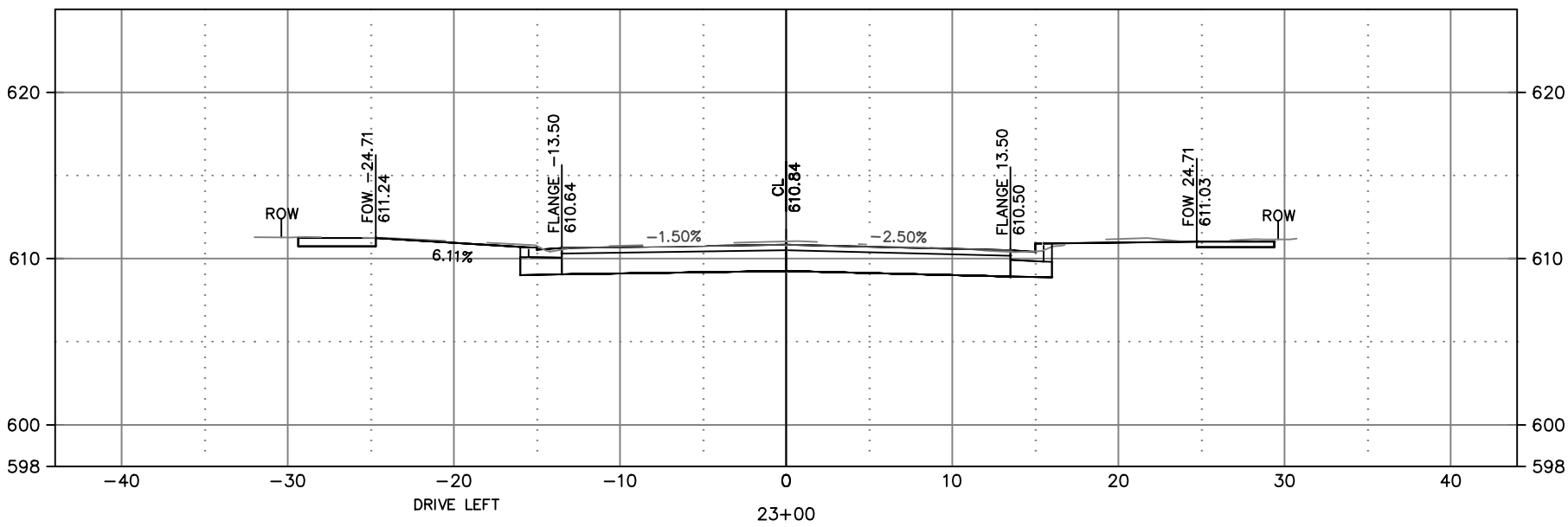
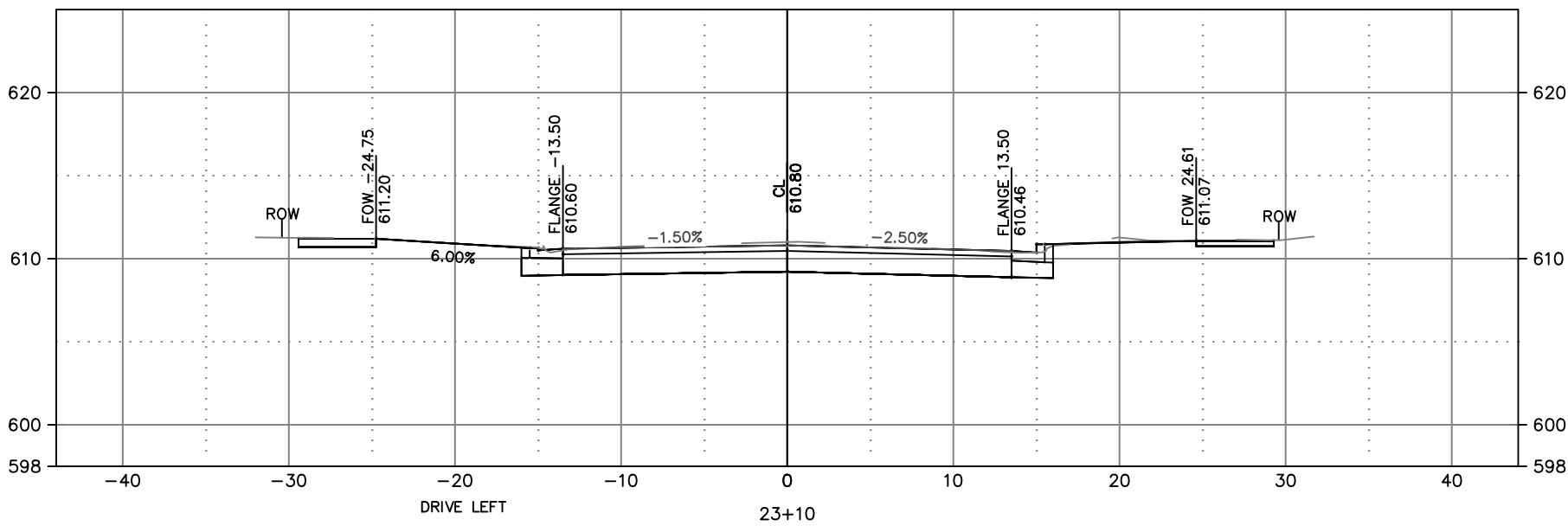
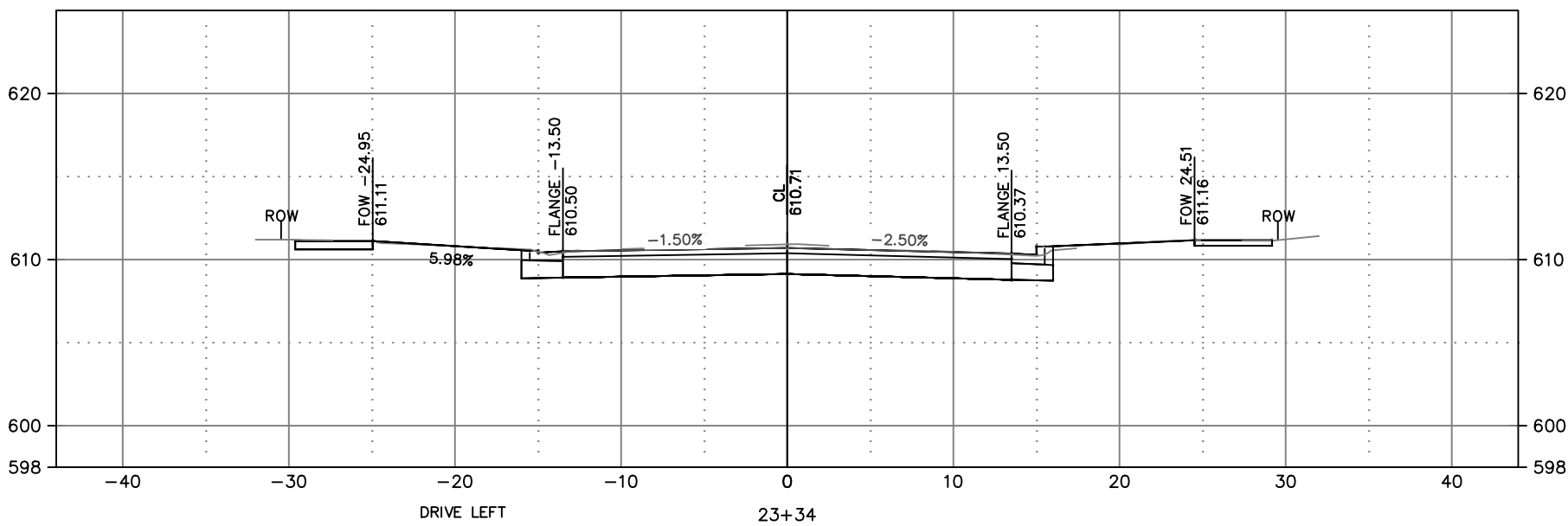
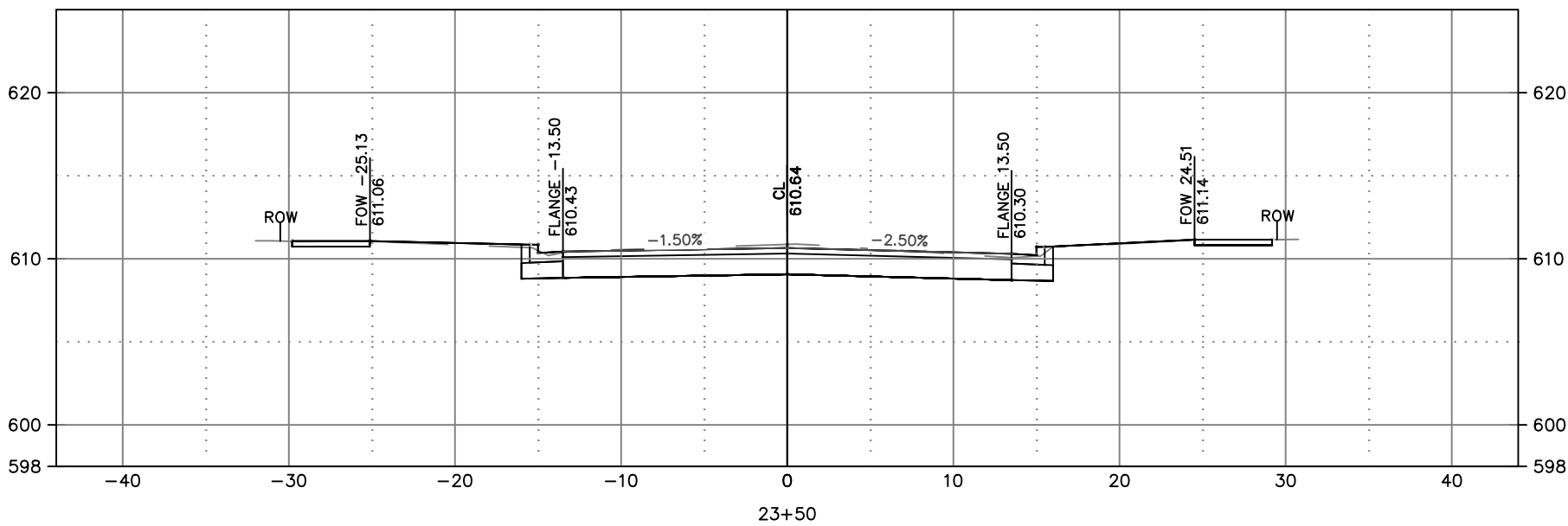
REVISIONS / ISSUES			
NO.	DATE	BY	R

[illegible]

PAGE
NO.
C302



CITY OF DE PERE





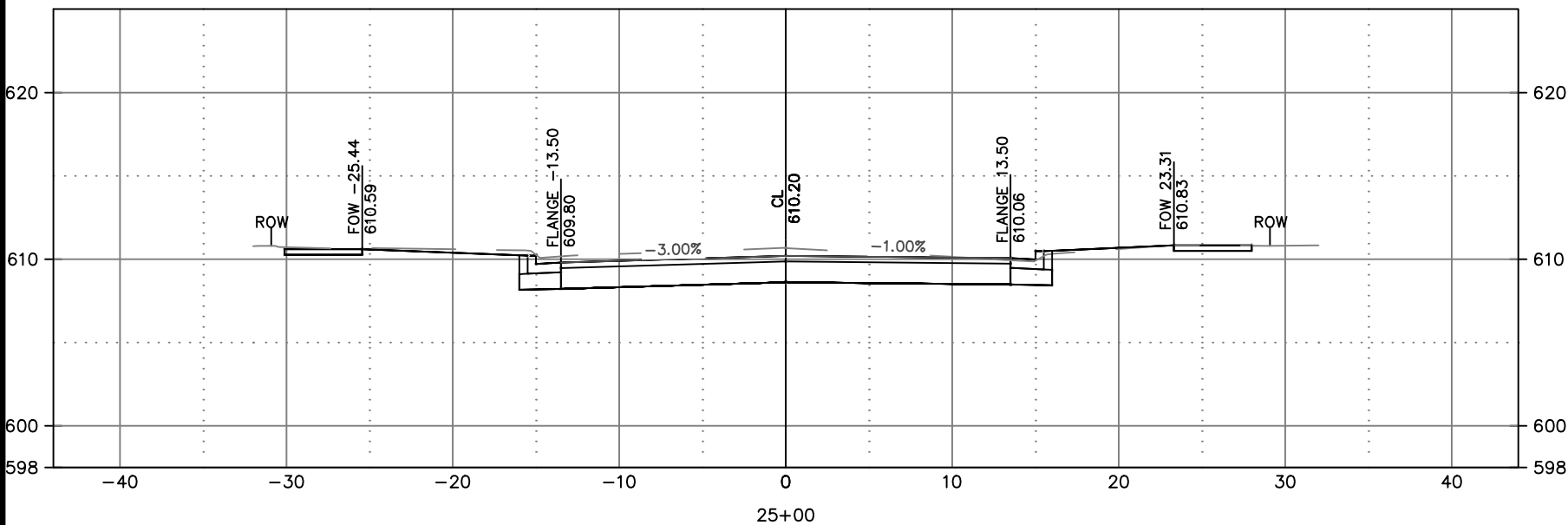
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

**ERIE STREET
CROSS SECTIONS**

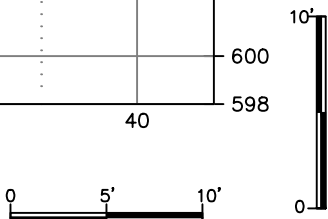
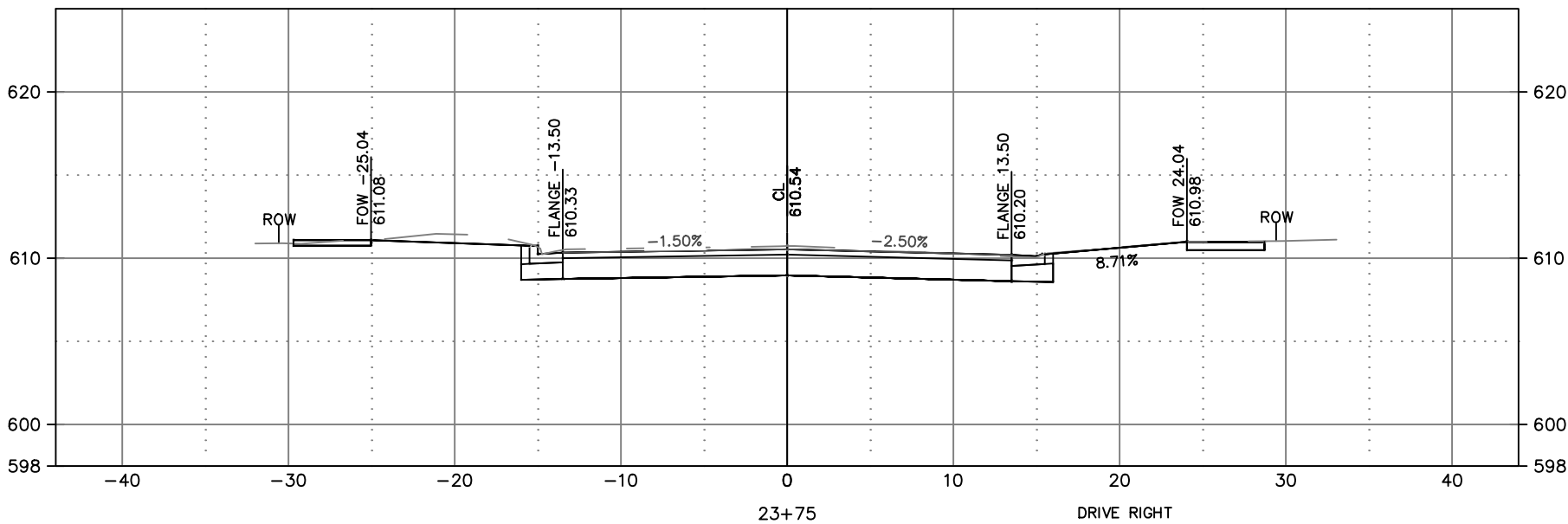
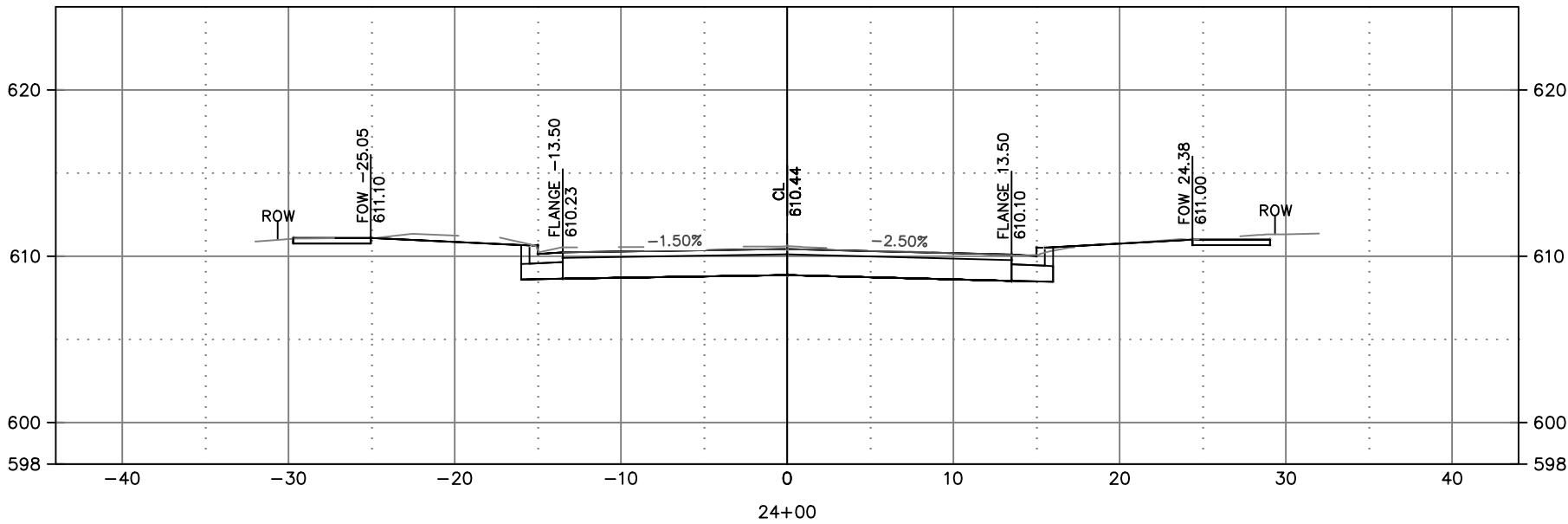
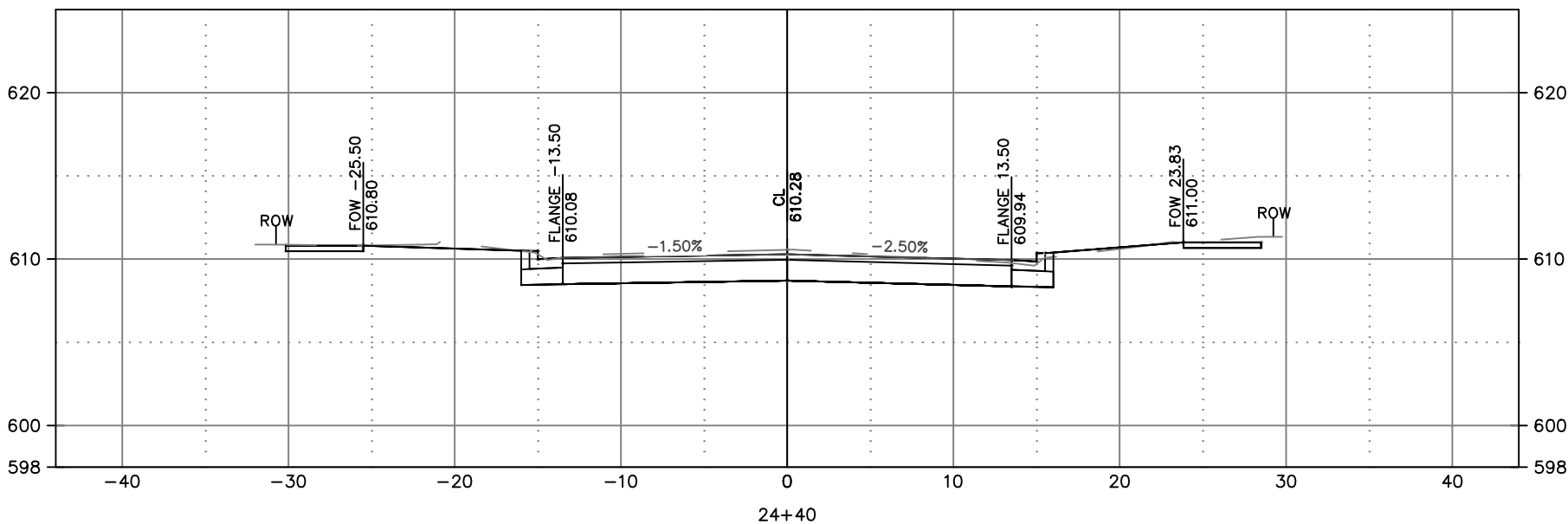
NAME: ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

	BY	DATE	REVISIONS / ISSUES		REMARKS
			NO.	DATE	
SURVEYED	BK	11-2020			
DRAWN	BK	01-2021			
DESIGNED	BK	01-2021			
CHECKED	EPR	03-2021			

PAGE
NO.



JAMES ST. INTERSECTION





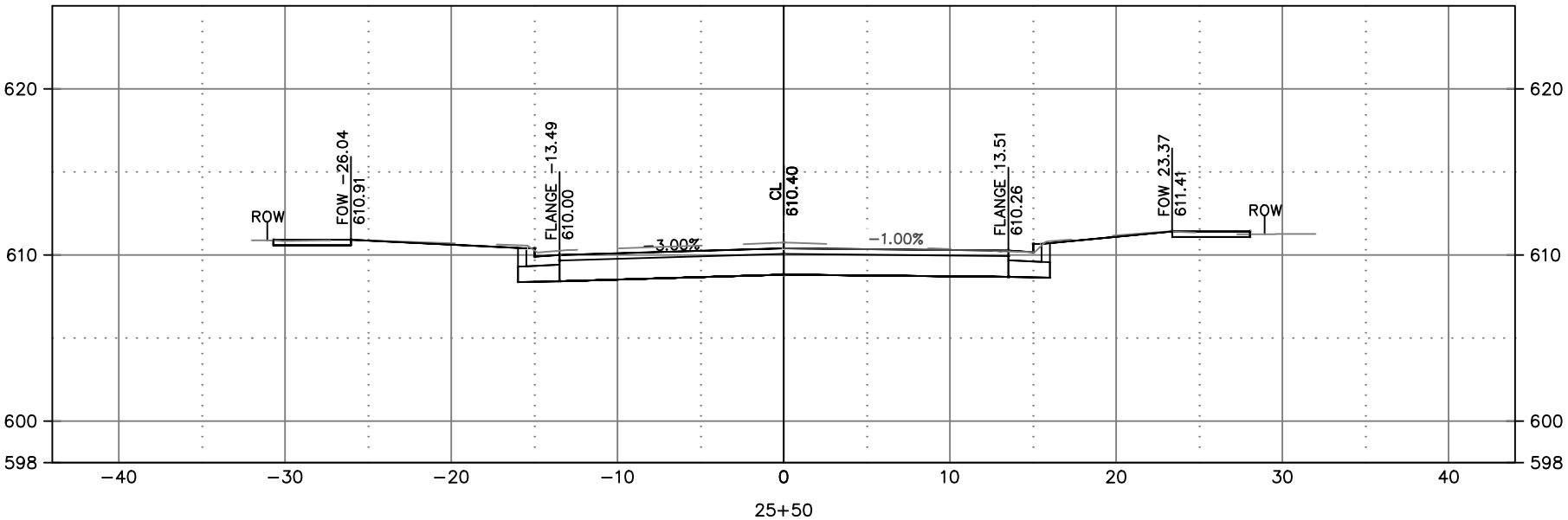
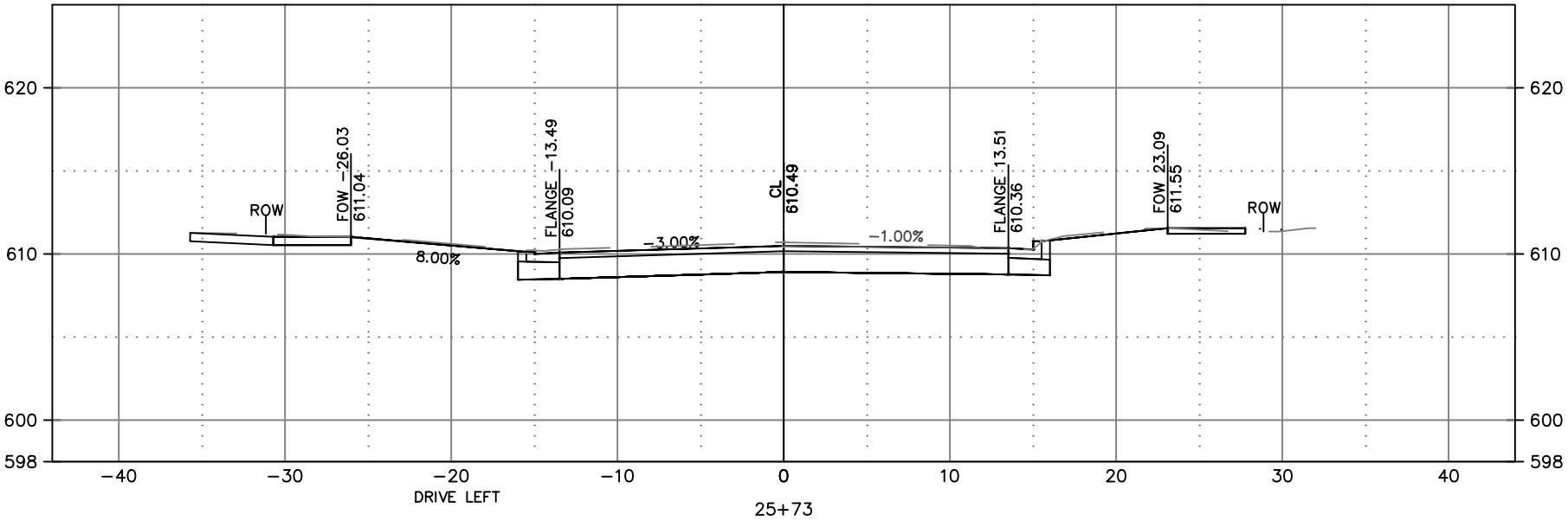
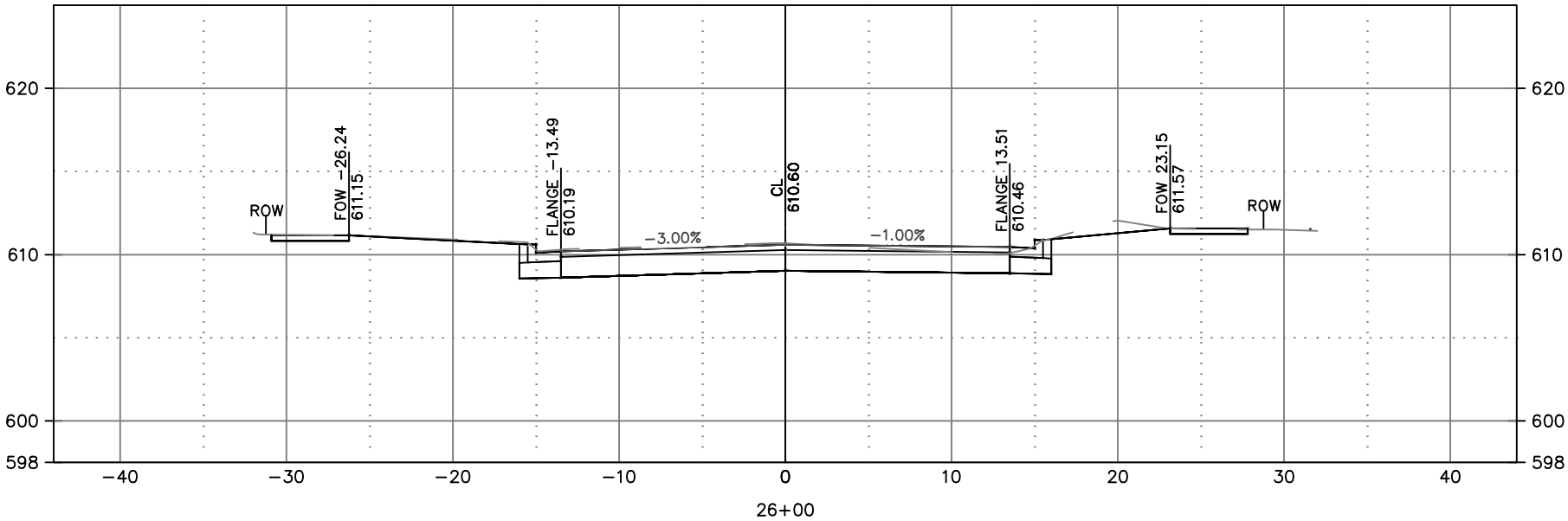
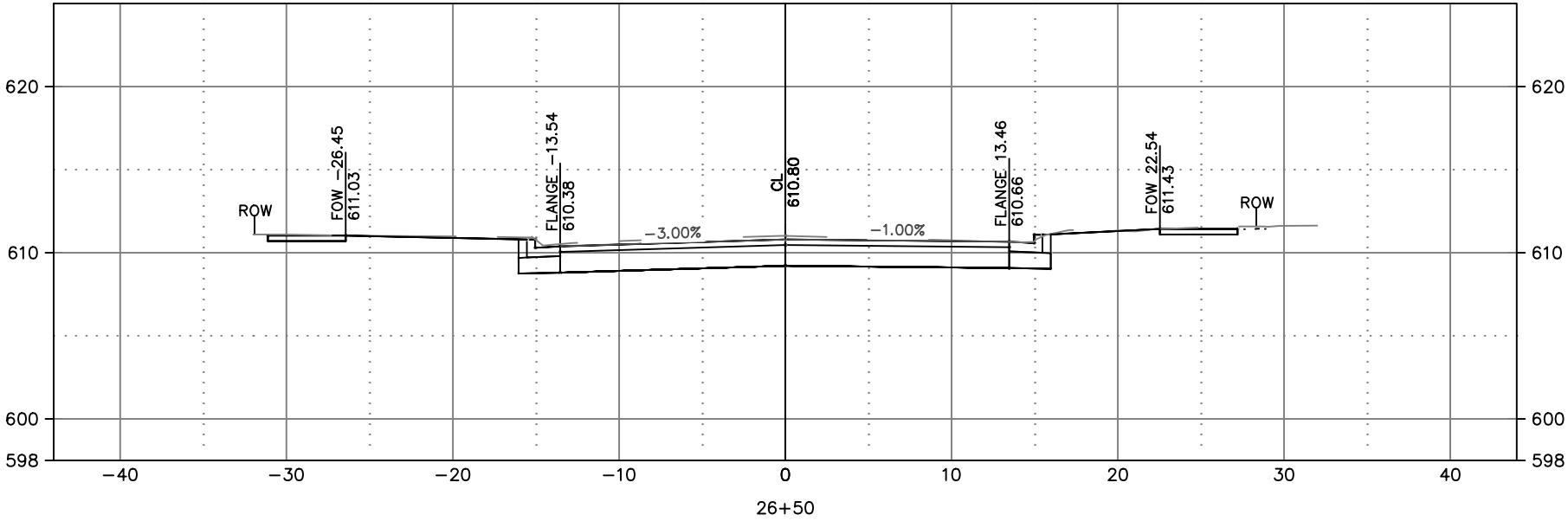
CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

ERIE STREET
CROSS SECTIONS

NAME:
ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

SUBMITTED	BY
DESIGNED	BK
CHECKED	BK
DATE	DATE
11-2020	11-2020
01-2021	01-2021
01-2021	01-2021
03-2021	03-2021

REVISIONS / ISSUES		REMARKS
NO.	DATE	BT



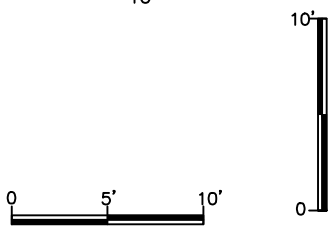
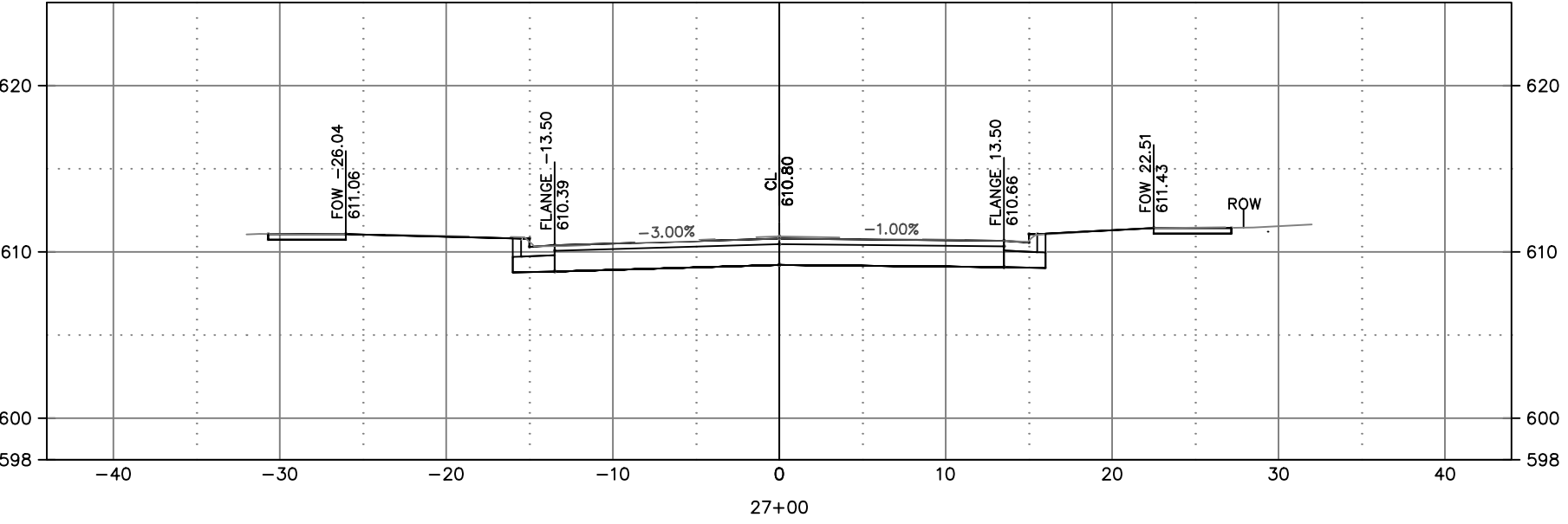
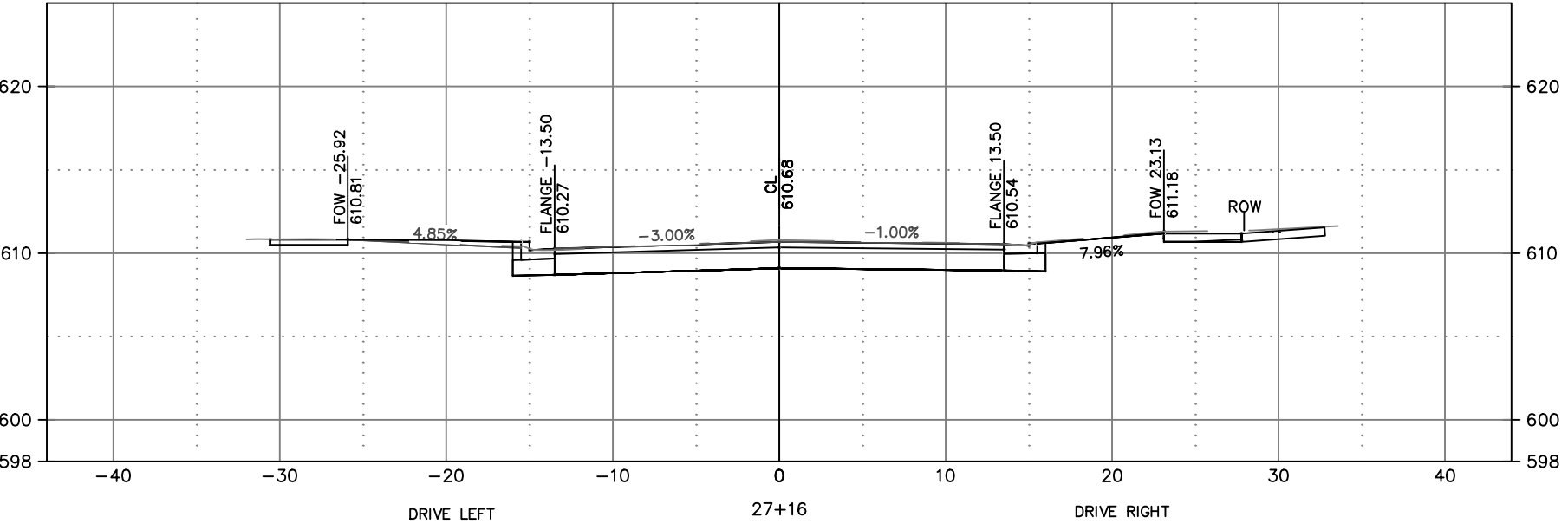
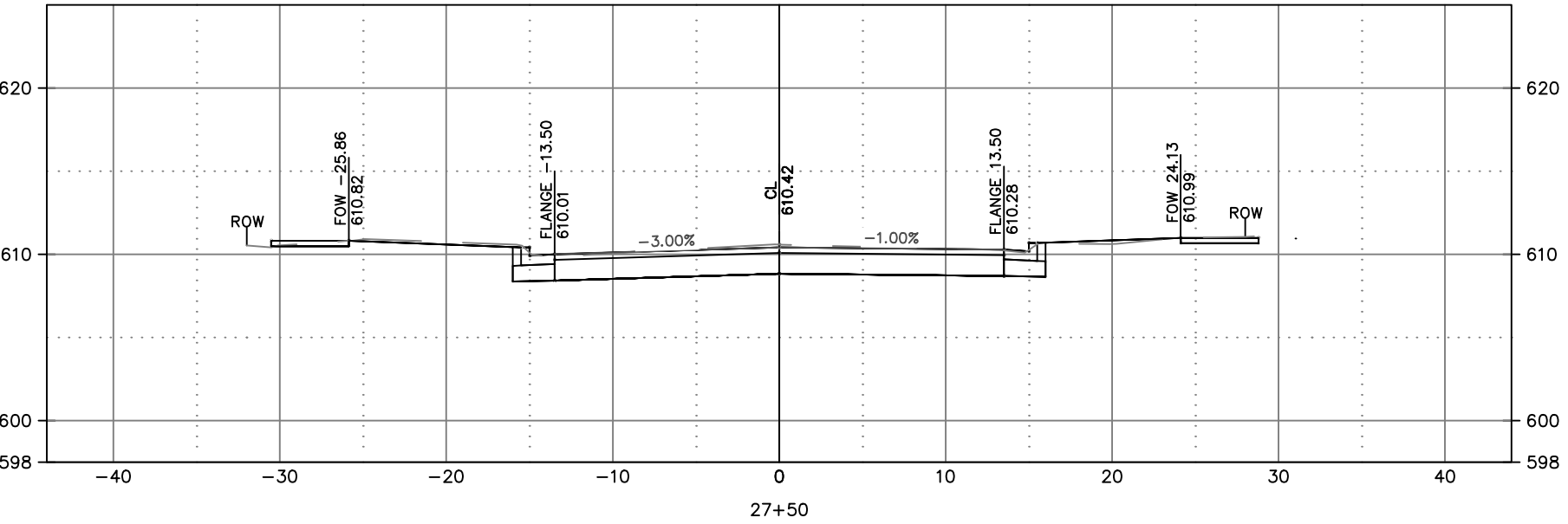
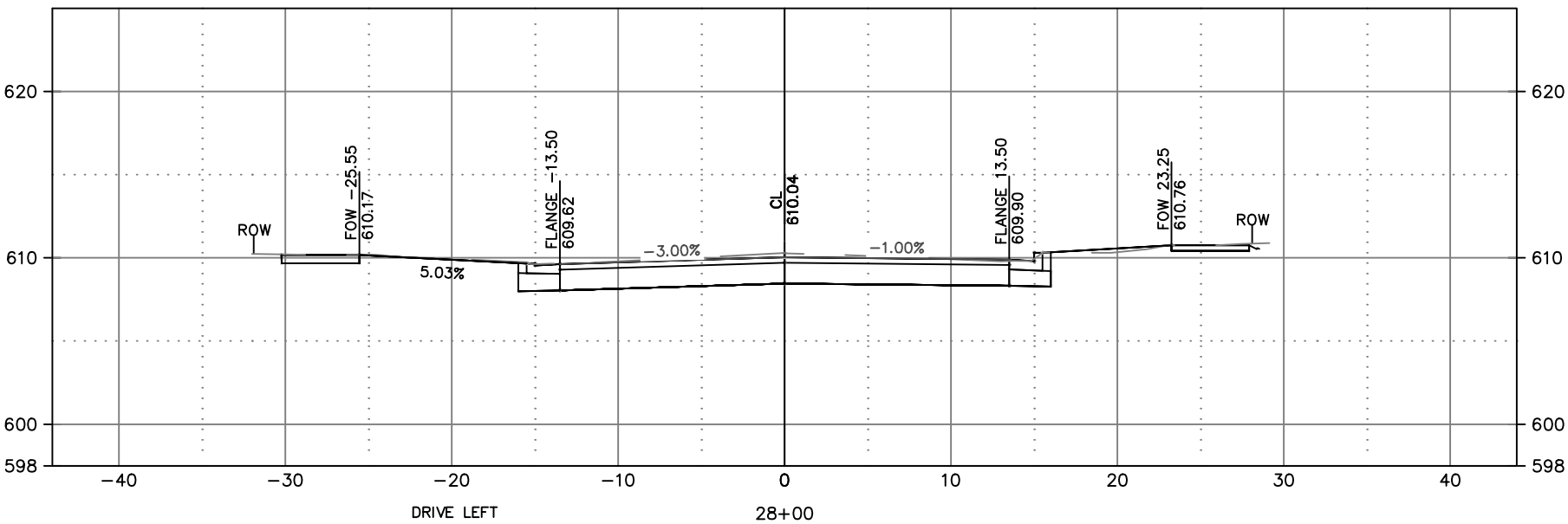


CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

ERIE STREET
CROSS SECTIONS

NAME: ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

DATE	NO.	DATE	BY	DATE	NO.	DATE	BY
11-2020		01-2021	BK	01-2021		03-2021	BK
01-2021		01-2021	BK	01-2021		03-2021	BK
03-2021							



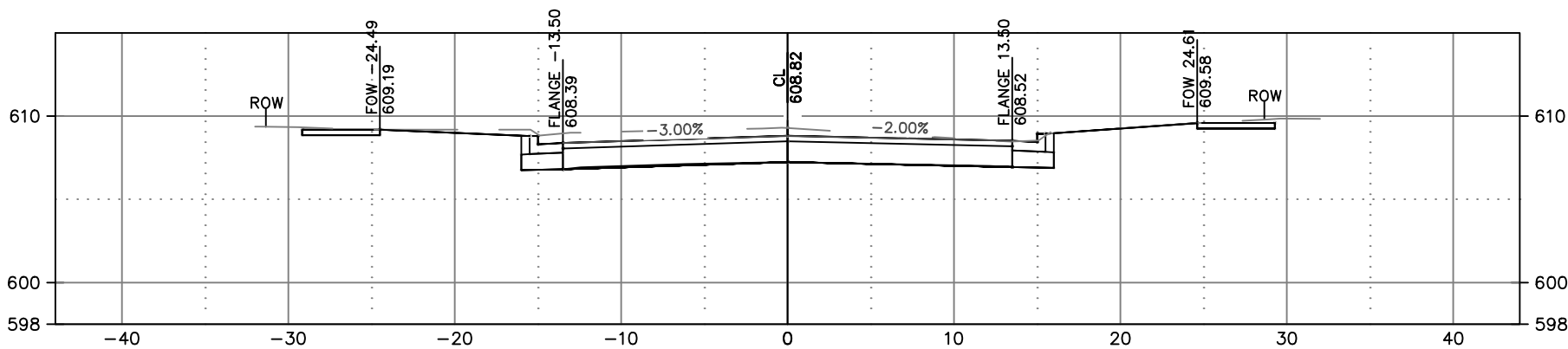


ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

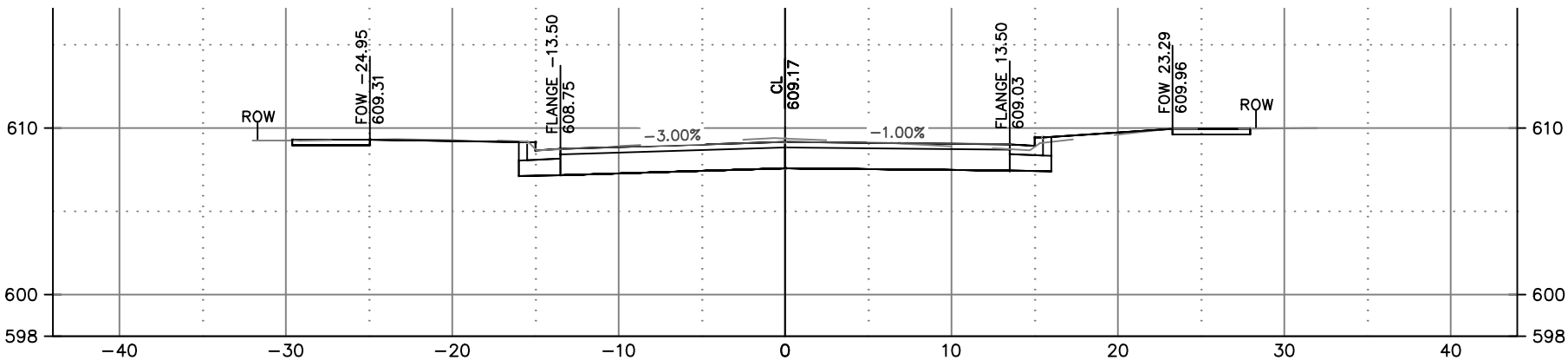
**ERIE STREET
CROSS SECTIONS**

NAME: ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

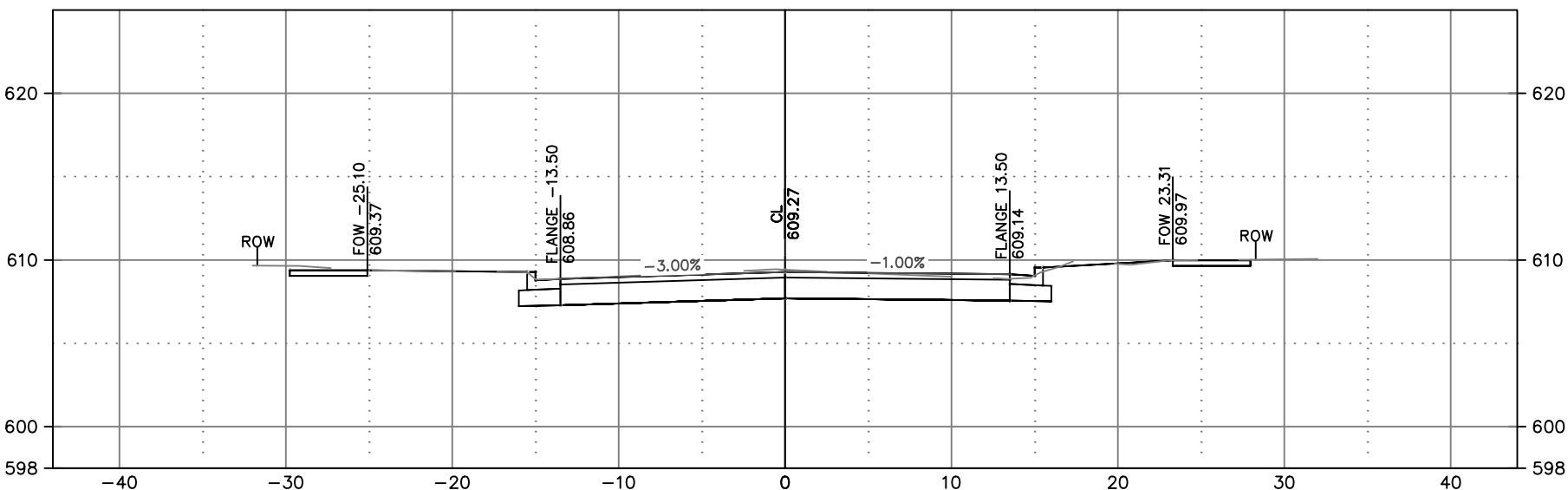
REVISIONS / ISSUES							PAGE NO.
	BY	DATE	NO.	DATE	BY	REMARKS	
SURVEYED	BK	11-2020					C307
DRAWN	BK	01-2021					
DESIGNED	BK	01-2021					
CHECKED	EPR	03-2021					



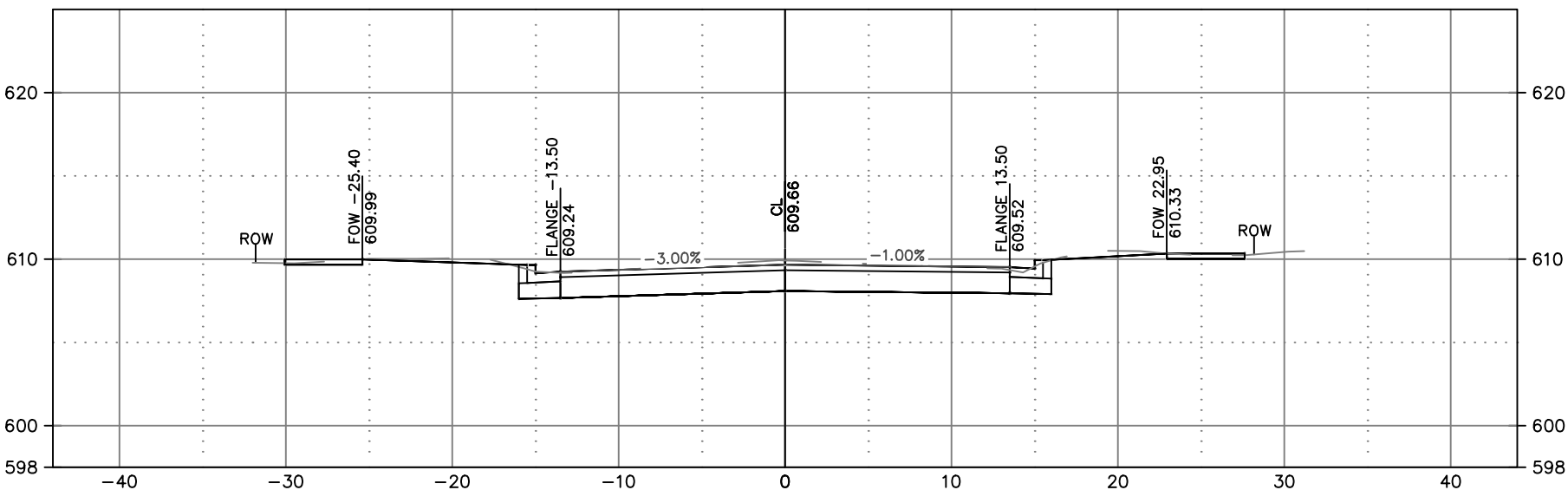
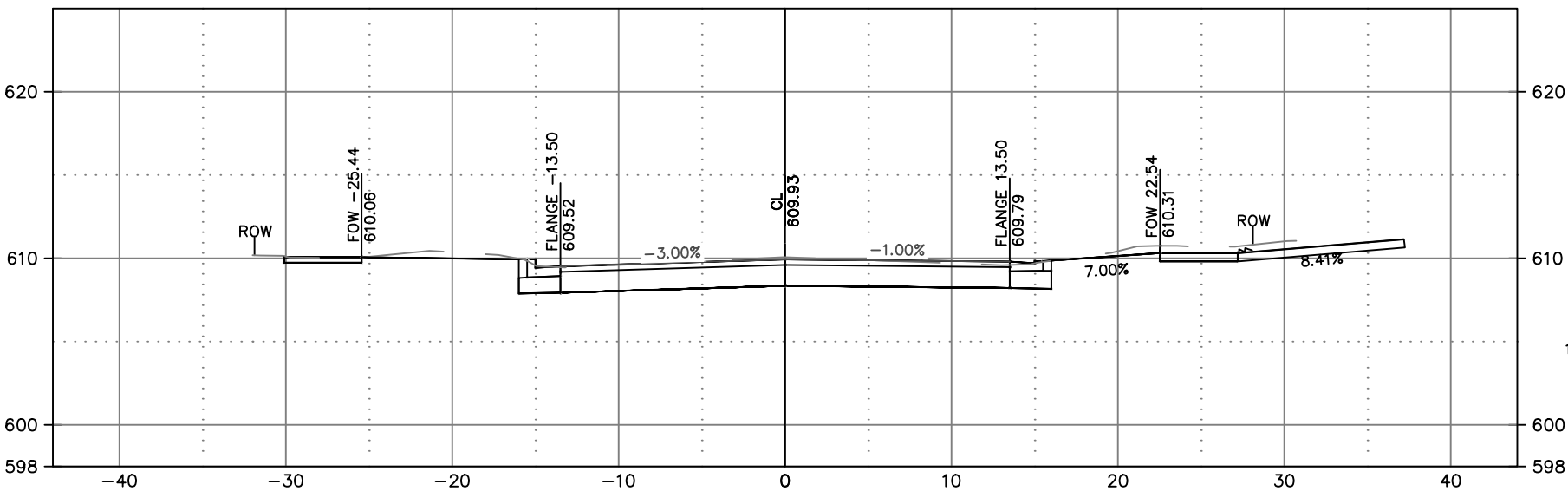
29+75
FRANKLIN ST. INTERSECTION



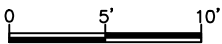
29+14



29+00

 $28+50$  $28+14$

DRIVE RIGHT



A vertical axis with labels 0, 3, 6, 9, and 10'.



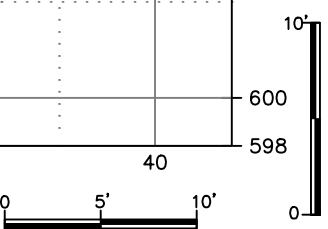
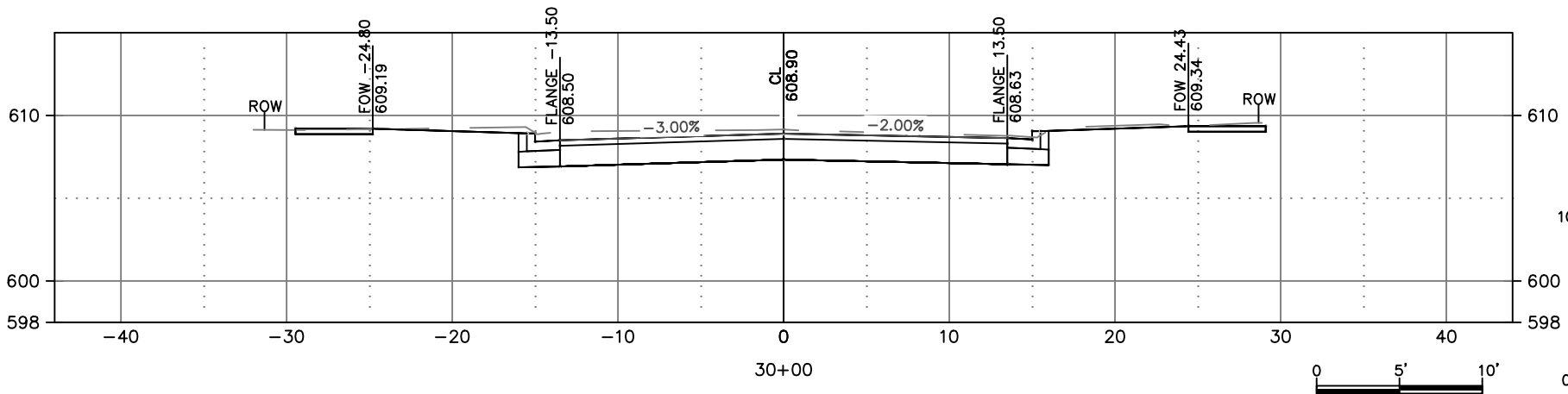
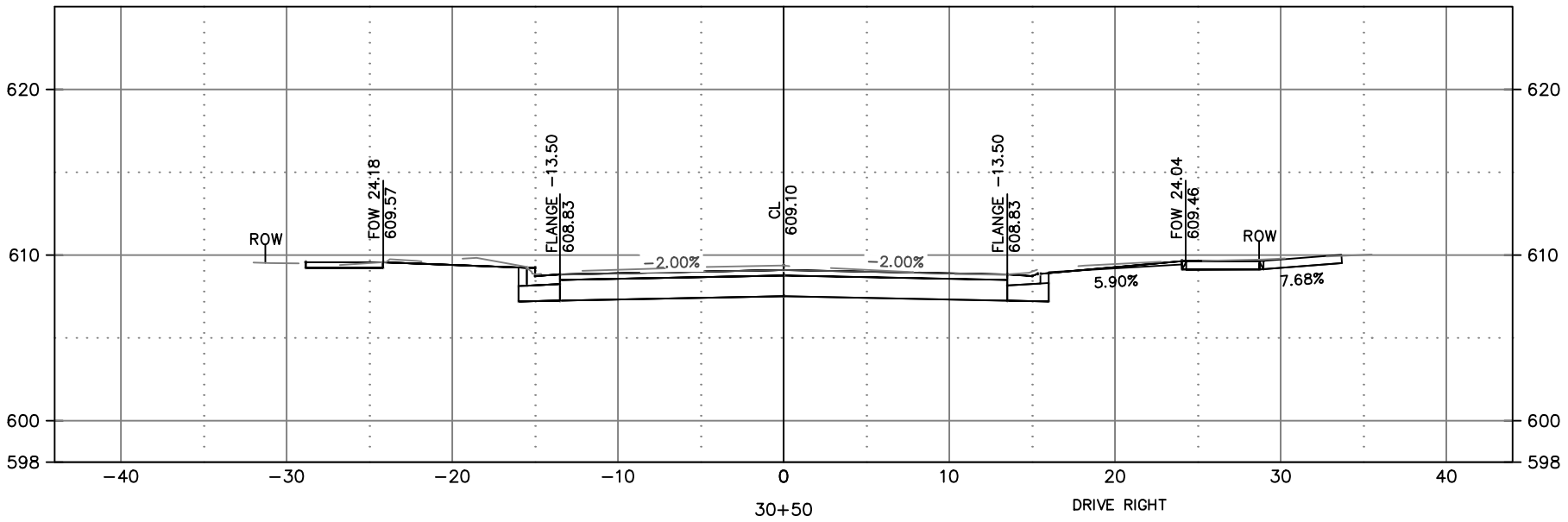
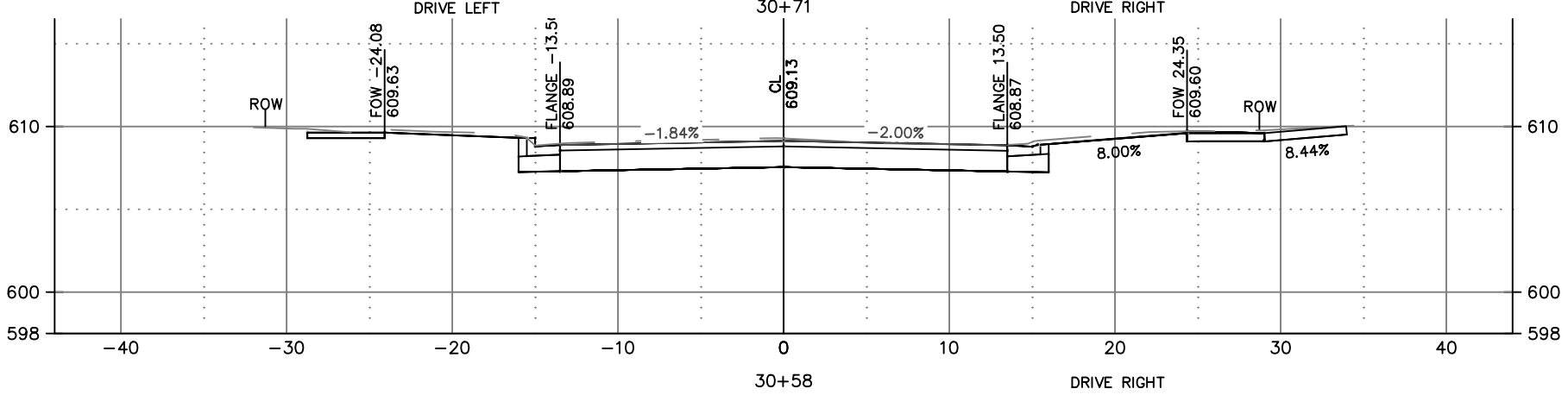
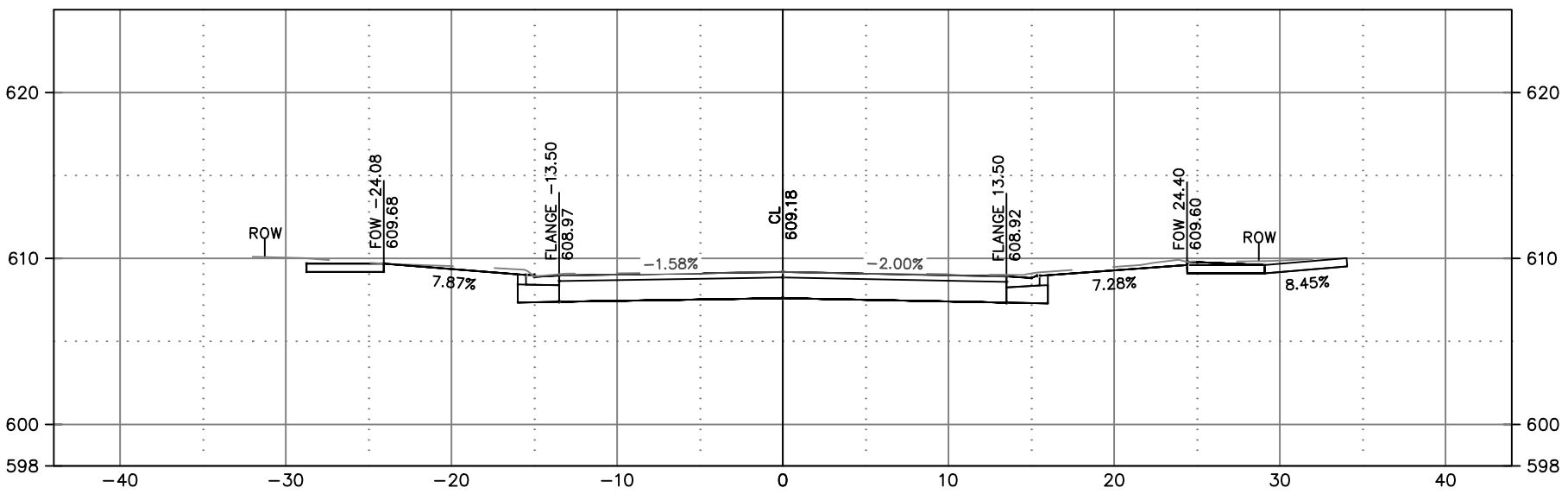
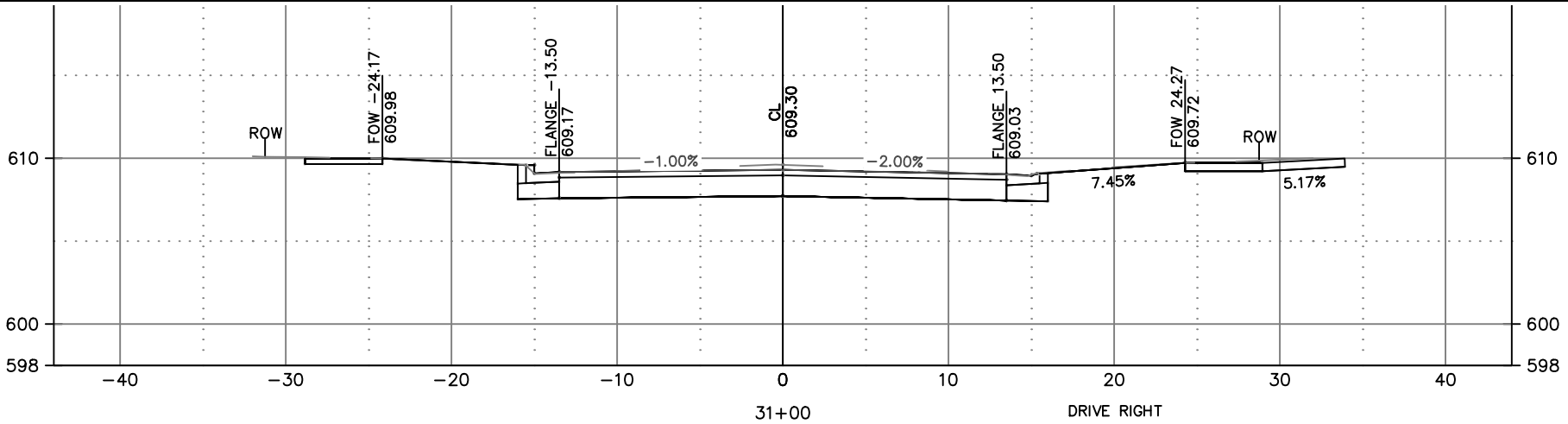
CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

ERIE STREET
CROSS SECTIONS

NAME:
ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

SURVEYED	BY	DATE
DRAWN	BK	11-2020
DESIGNED	BK	01-2021
CHECKED	BK	01-2021
	EPR	03-2021

REVISIONS / ISSUES		REMARKS
NO.	DATE	BT





ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

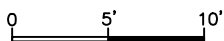
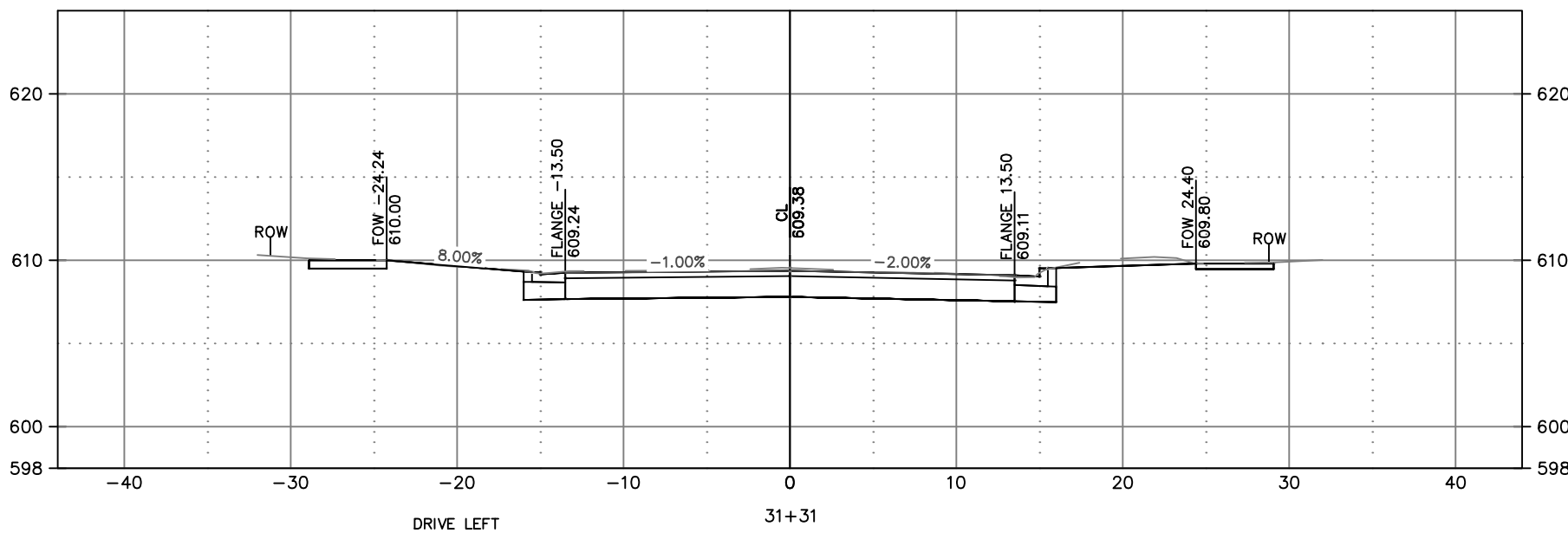
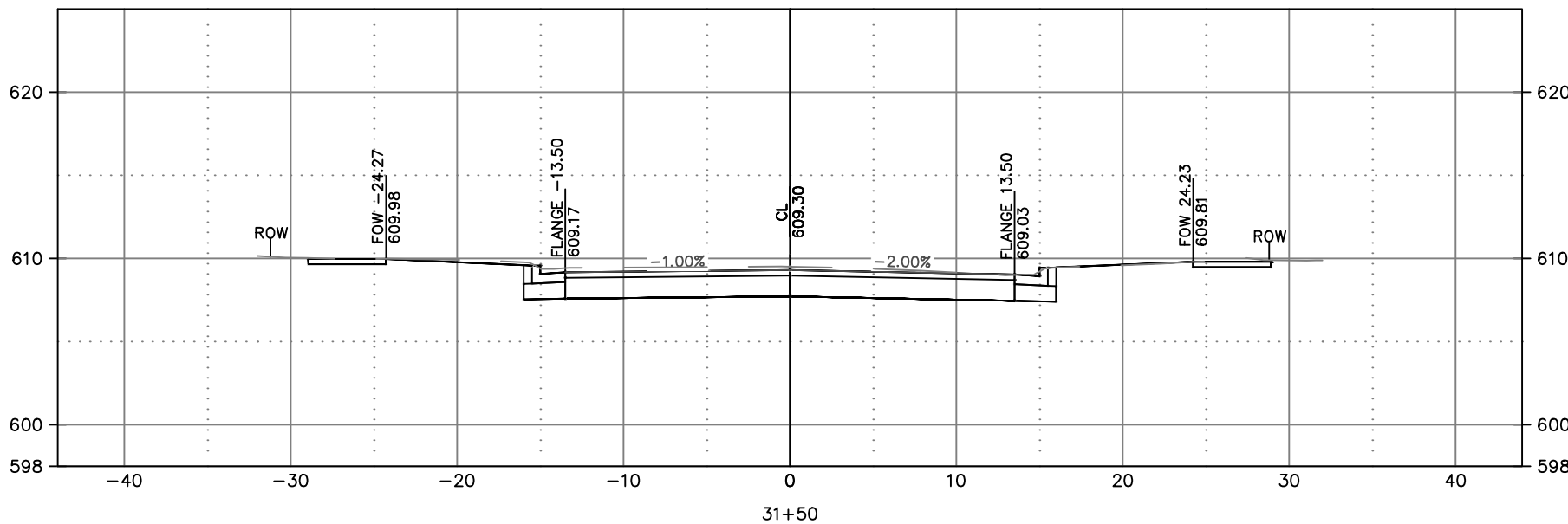
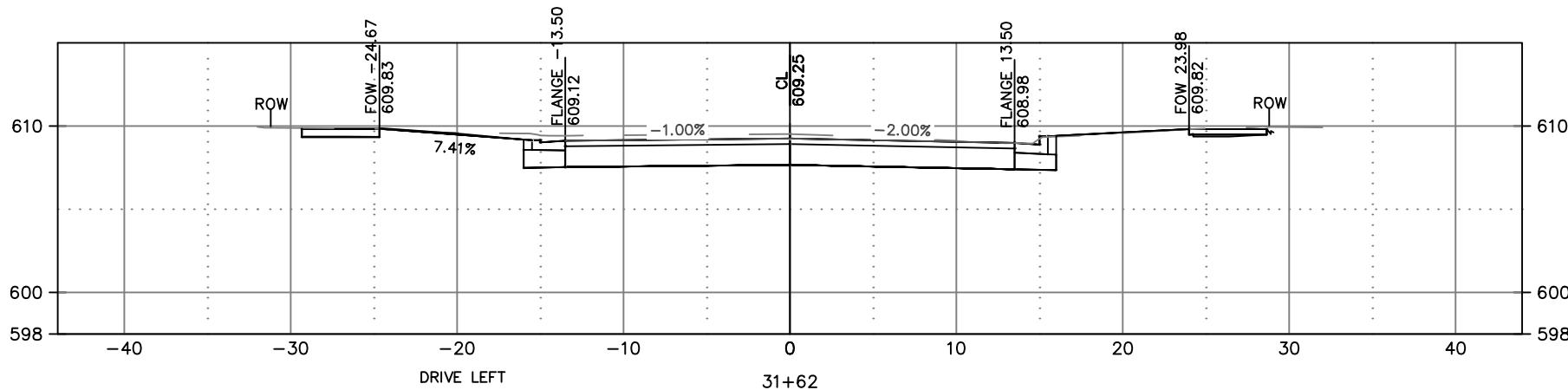
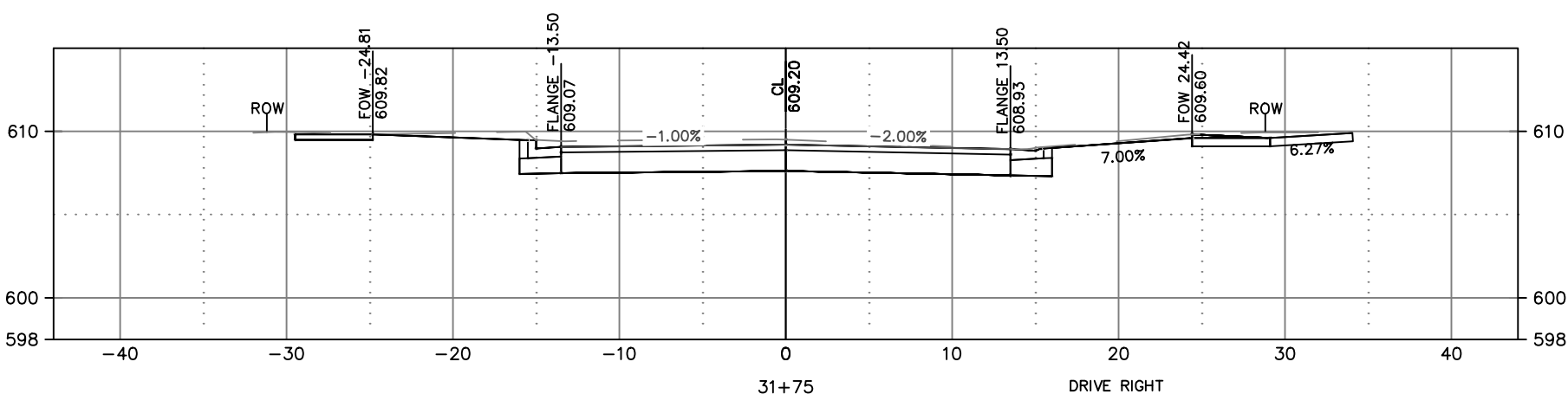
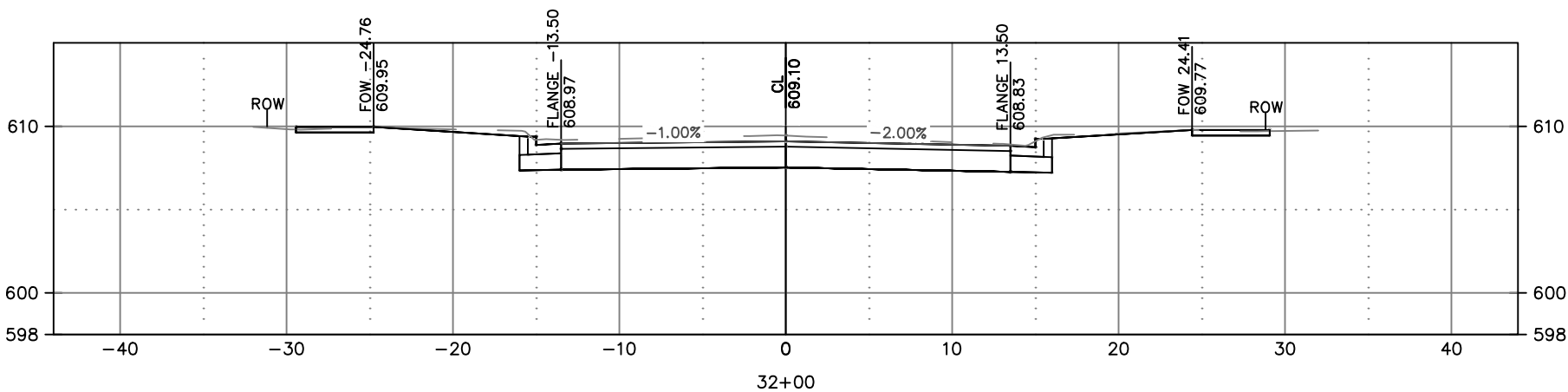
**ERIE STREET
CROSS SECTIONS**

NAME: ERIE STREET RECONSTRUCTION AND UTILITY RELAY PROJECT #	21-02
---	-------

	BY	DATE
SURVEYED	BK	11-2020
DRAWN	BK	01-2021
DESIGNED	BK	01-2021
CHECKED	EPR	03-2021

NO.	DATE	BY	REVISIONS / ISSUES	REMARKS

PAGE
NO.
C309





CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

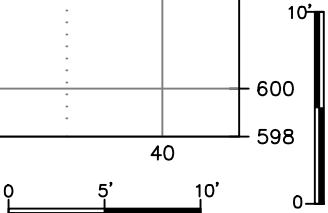
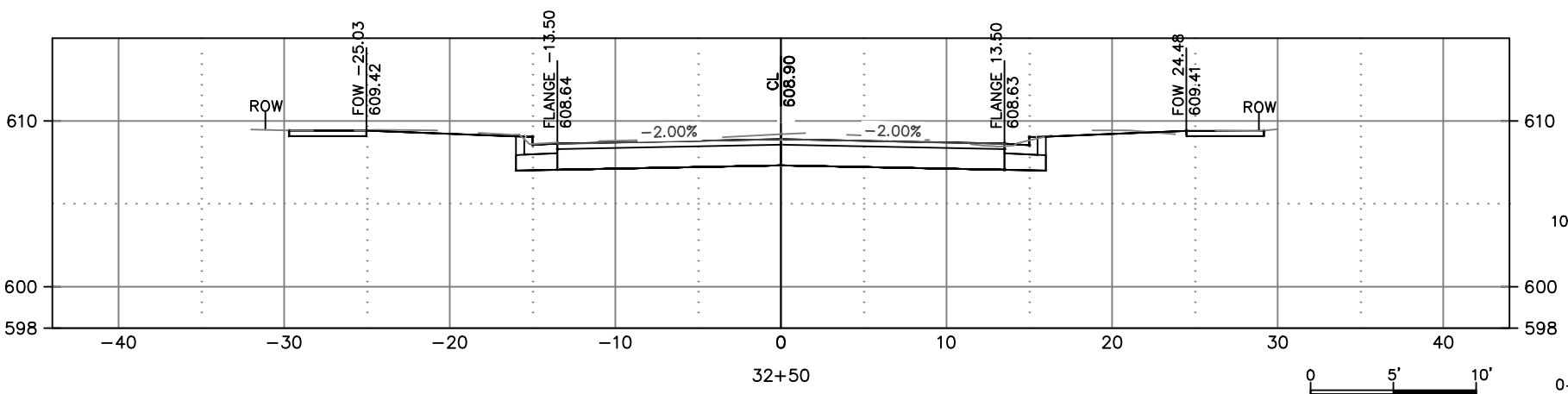
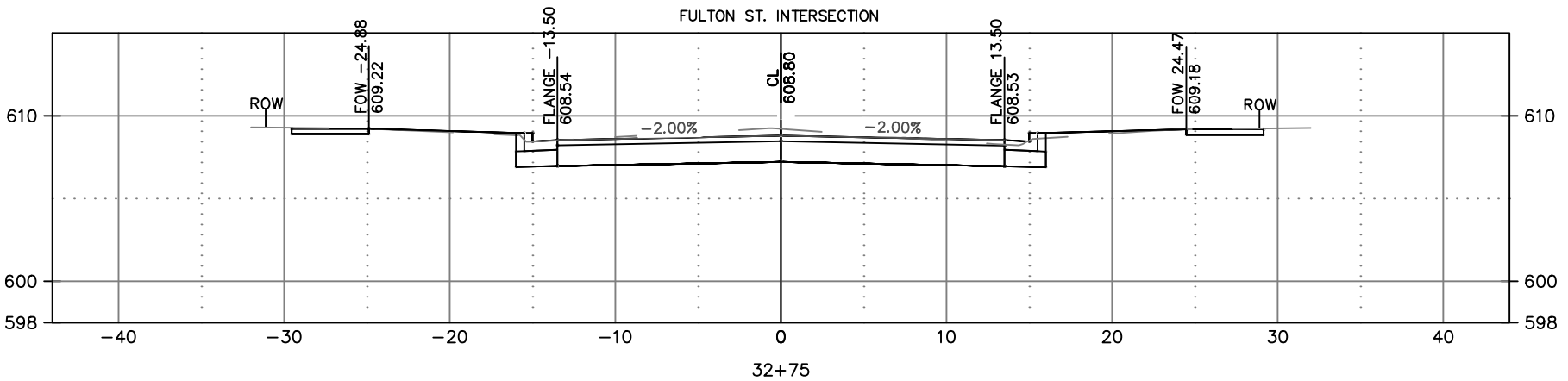
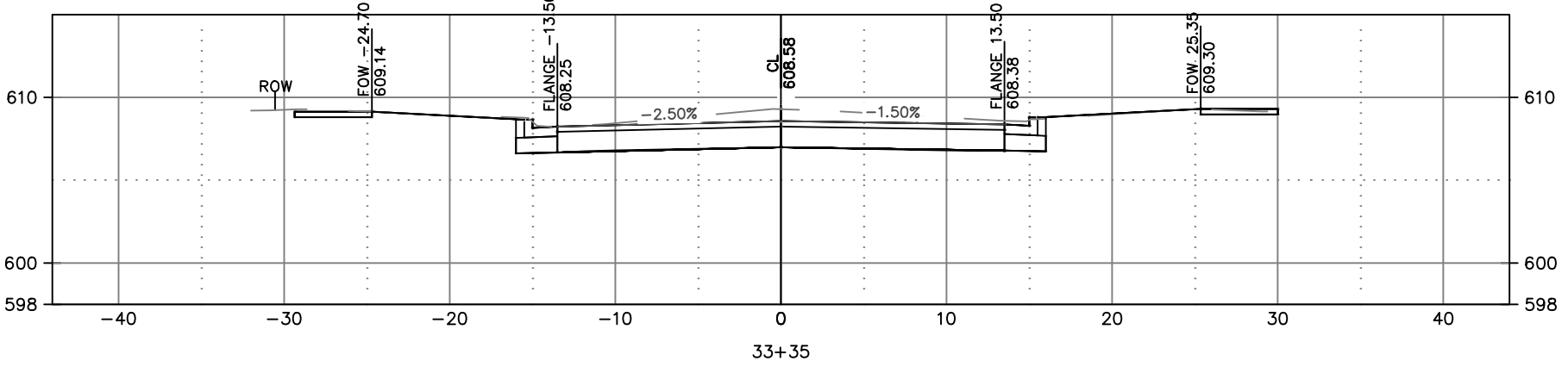
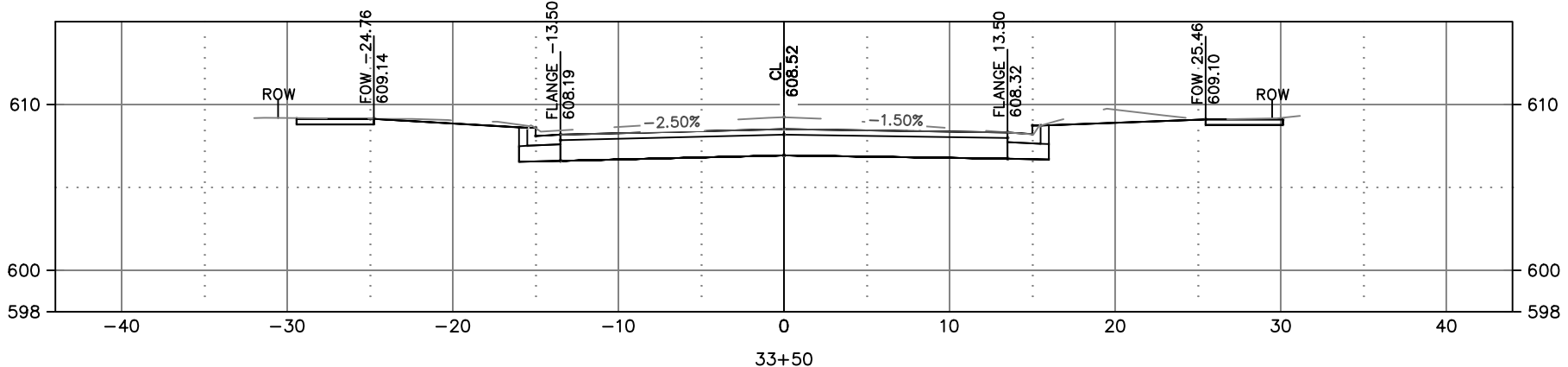
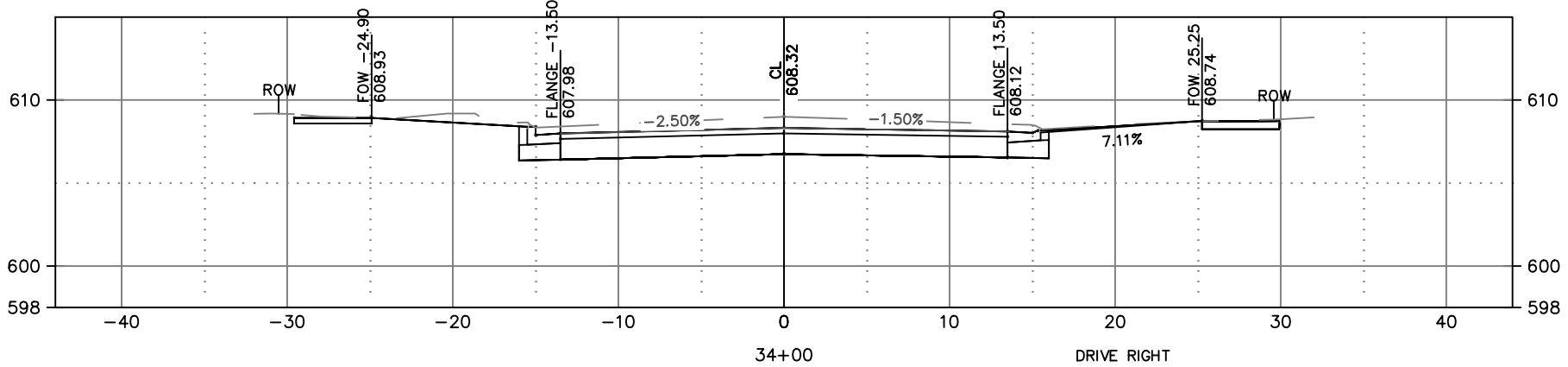
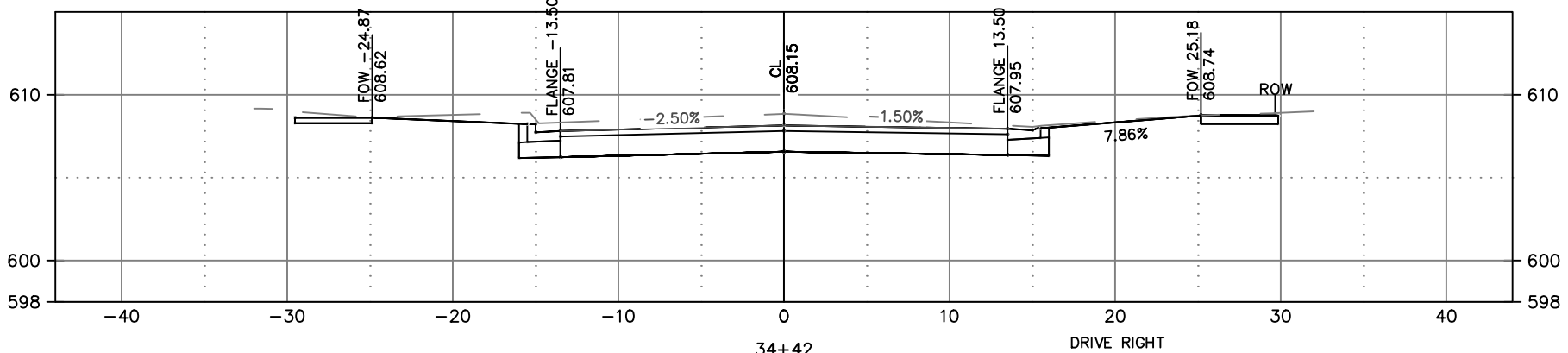
ERIE STREET
CROSS SECTIONS

NAME:
ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

DATE	NO.	DATE	REVISIONS / ISSUES
11-2020			
01-2021			
01-2021			
03-2021			

BY	DATE	REMARKS
BK	11-2020	
BK	01-2021	
BK	01-2021	
EPR	03-2021	

PAGE NO. C310

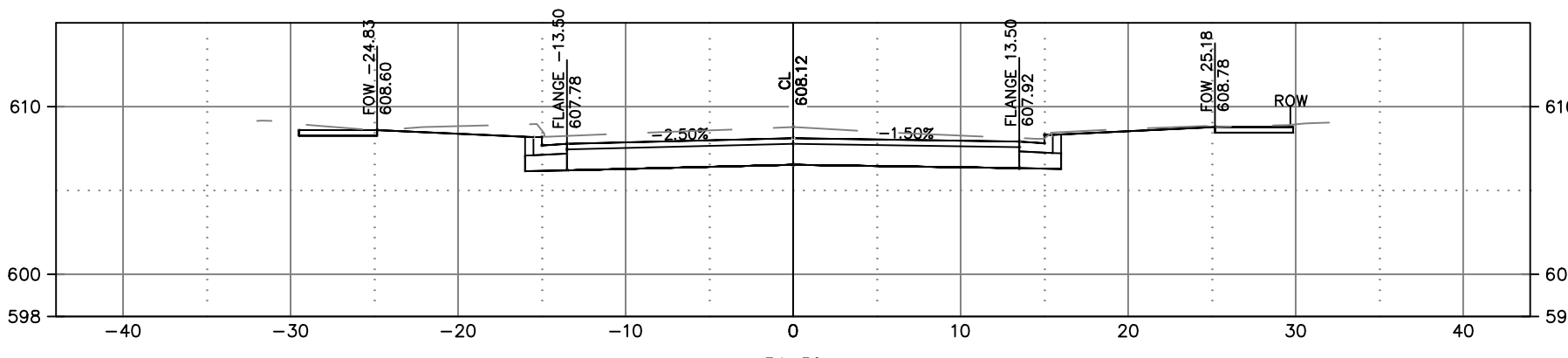
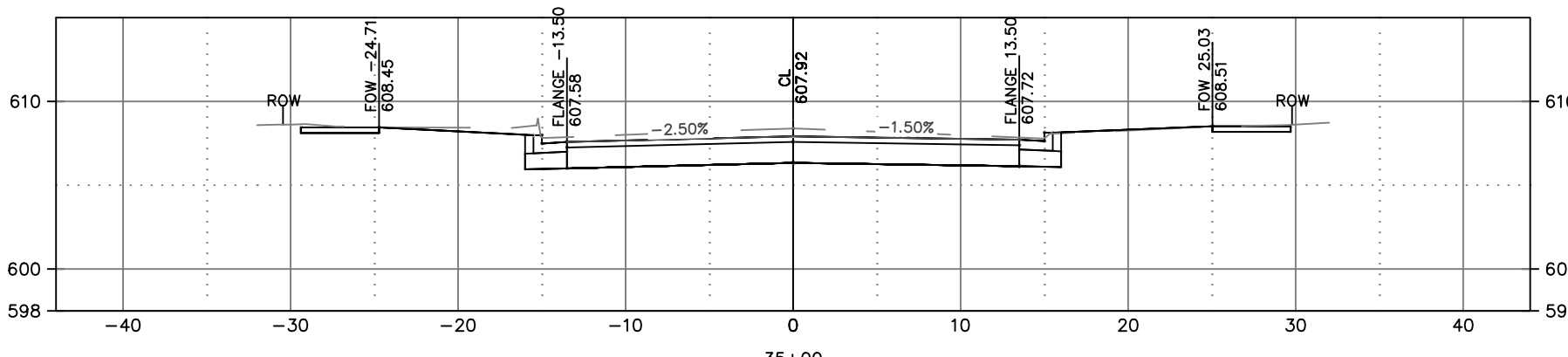
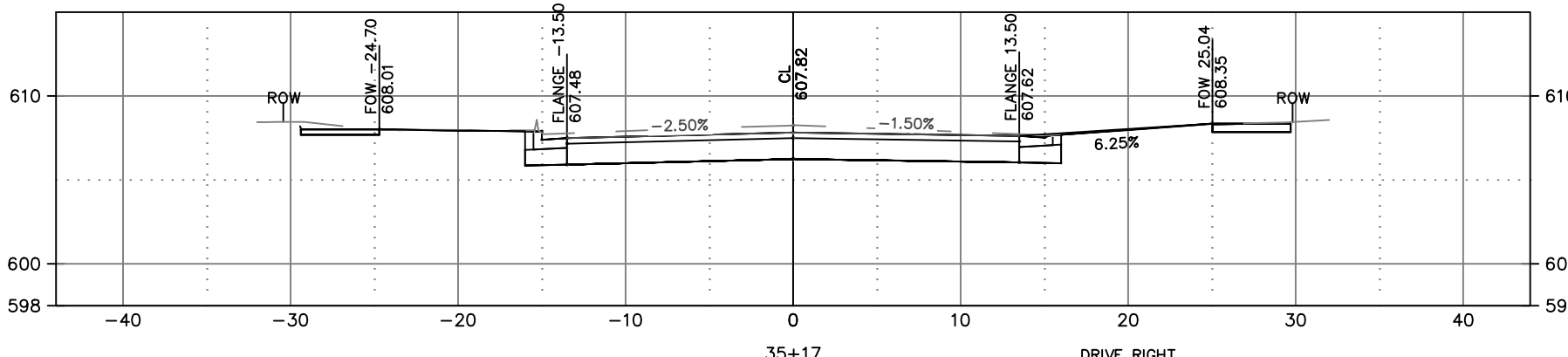
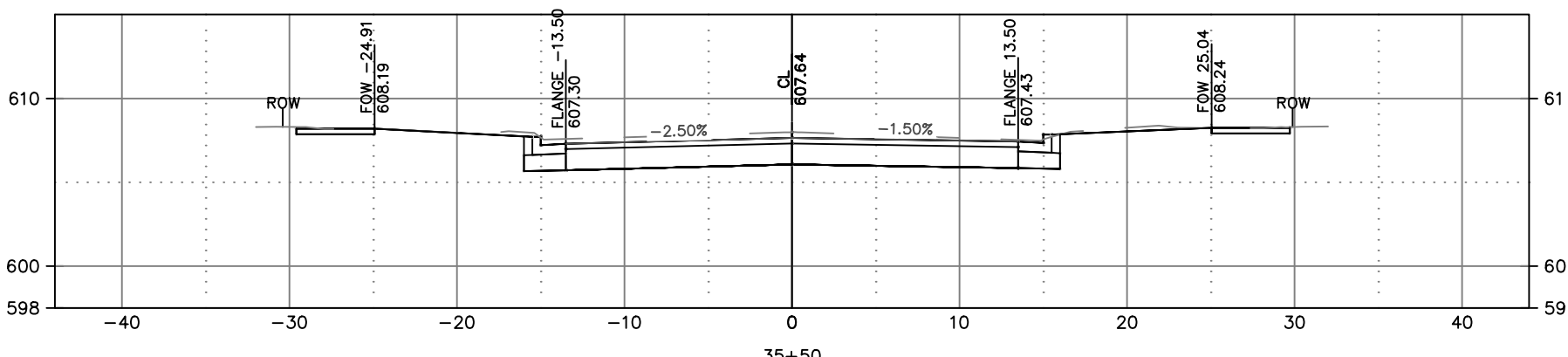
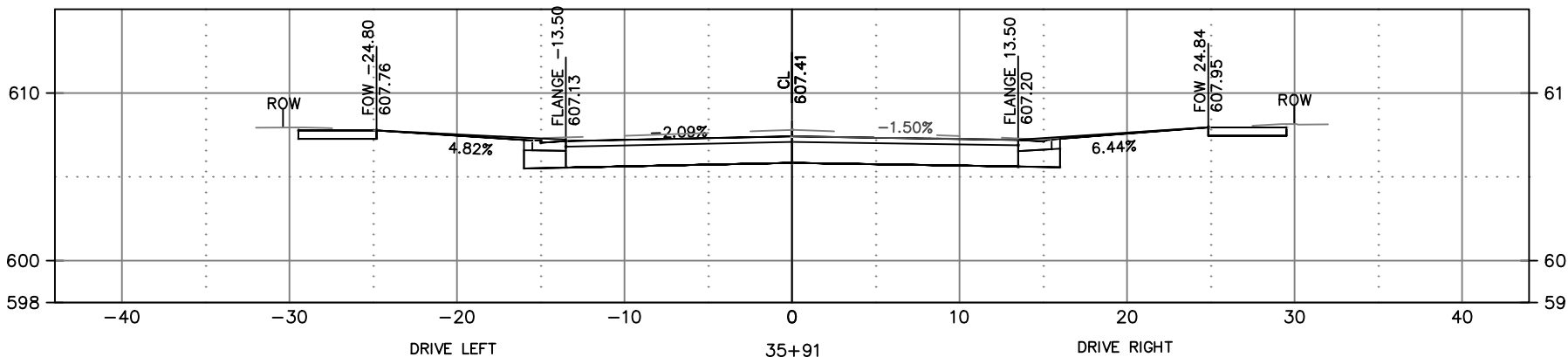




CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

ERIE STREET
CROSS SECTIONS

NAME: ERIE STREET RECONSTRUCTION AND UTILITY RELAY PROJECT # 21-02				REVISIONS / ISSUES			PAGE NO.
		BY	DATE	NO.	DATE	BY	REMARKS
		BK	11-2020				
		DRAWN					
		BK	01-2021				
		DESIGNED					
		BK	01-2021				
		CHECKED					
		EPR	03-2021				
							C311



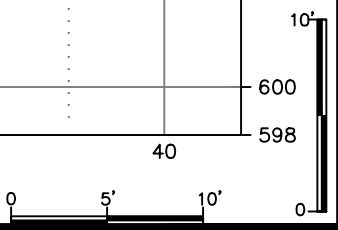
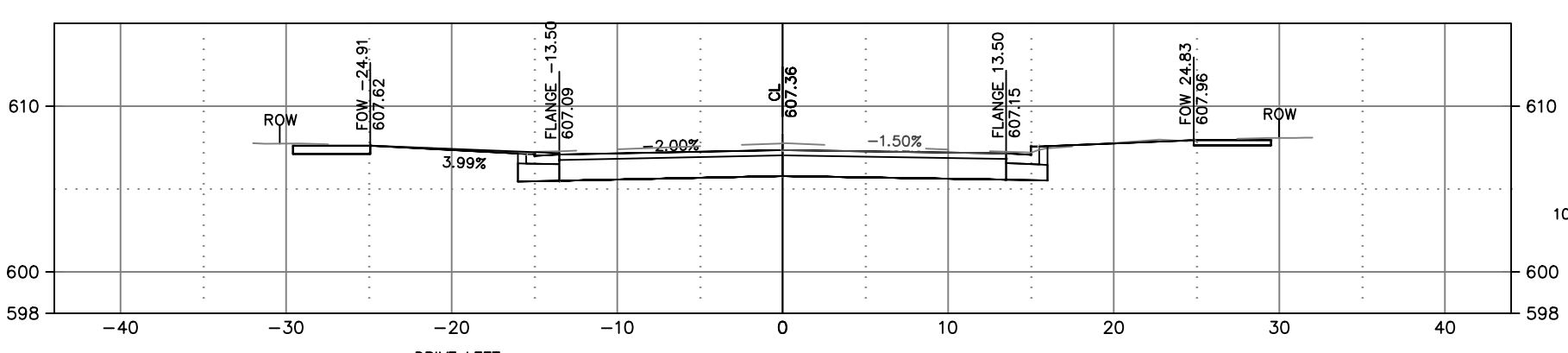
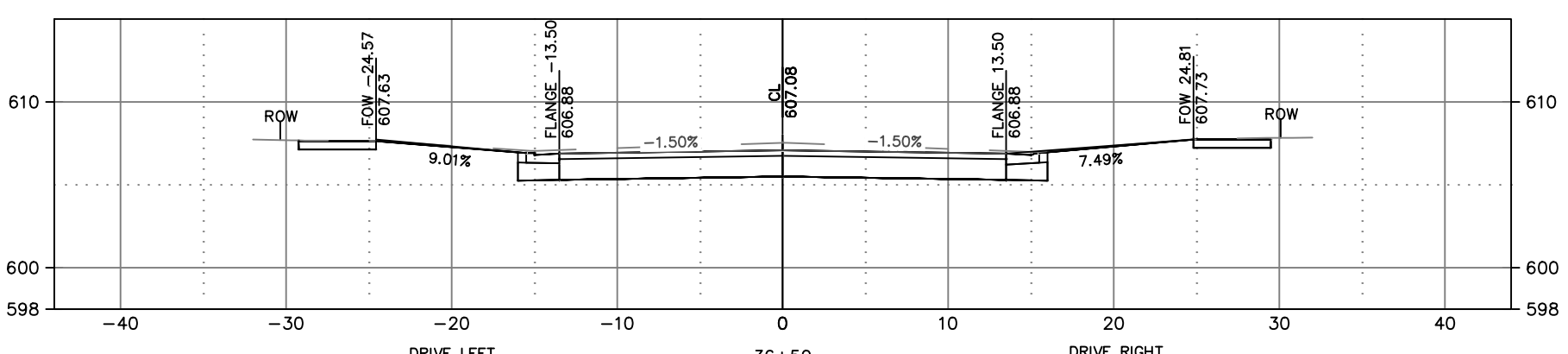
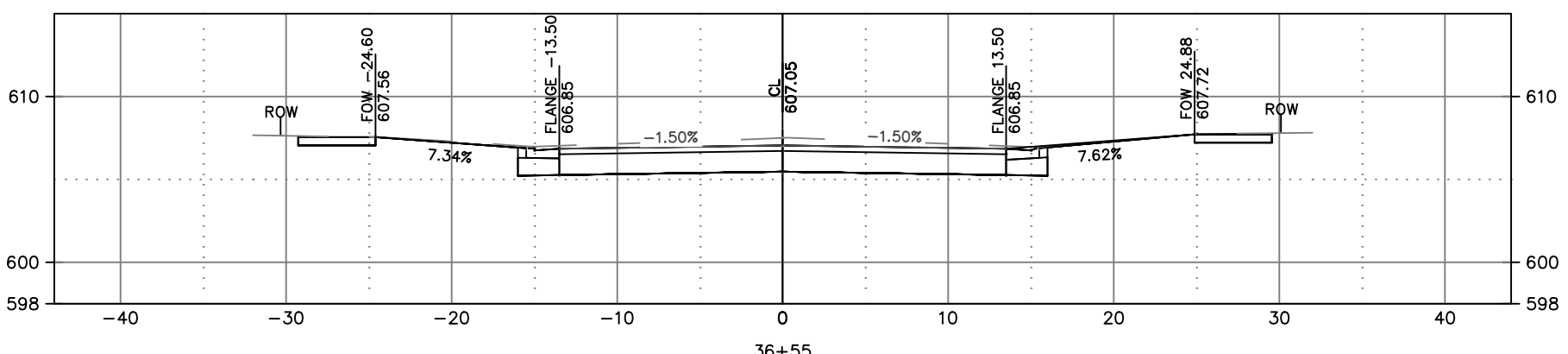
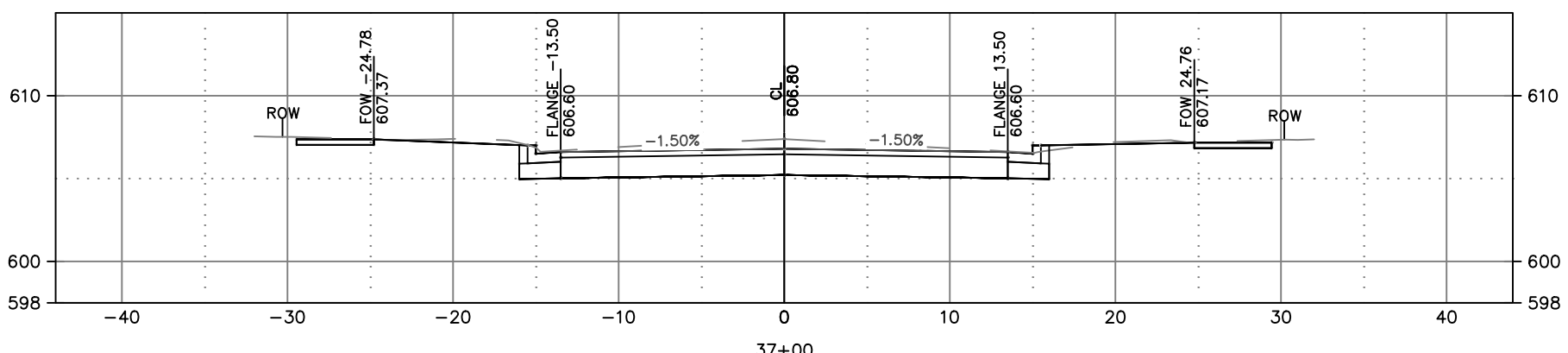
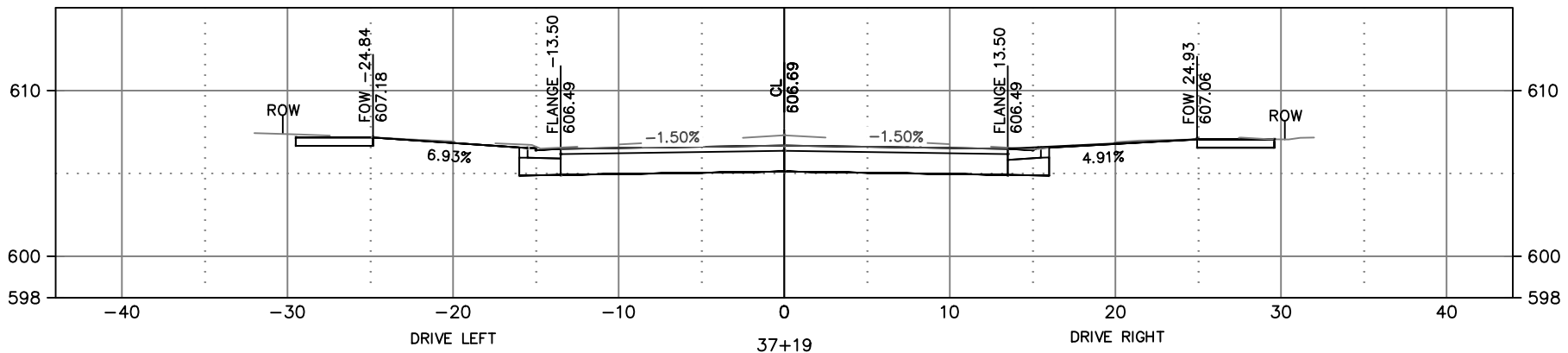
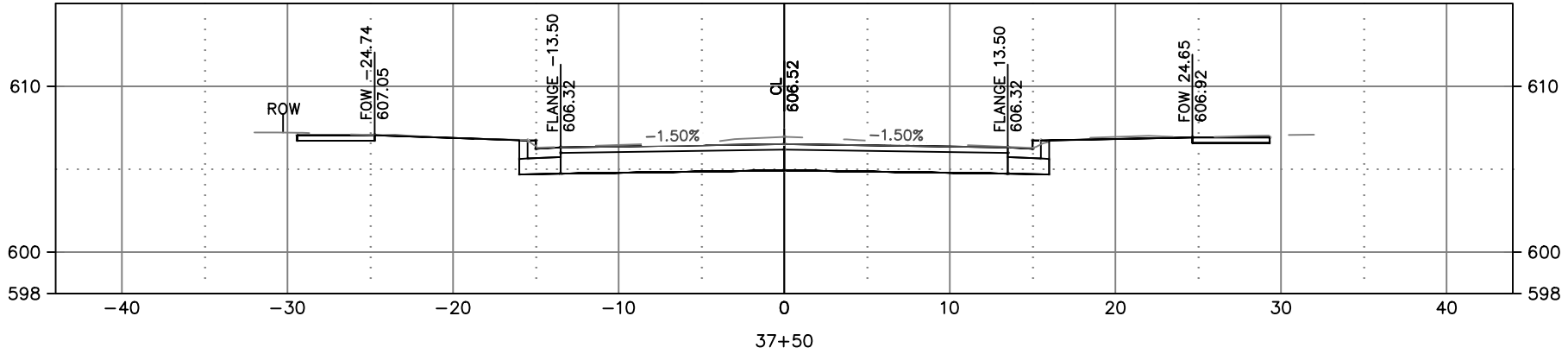


CITY OF ERIE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

ERIE STREET
CROSS SECTIONS

NAME:
ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

DATE	BY	NO.	DATE	REVISIONS / ISSUES
11-2020	BK			REMARKS
01-2021	BK			
01-2021	BK			
03-2021	EPR			





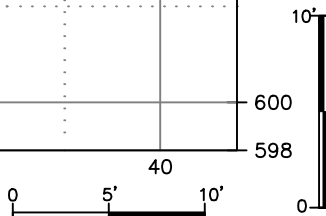
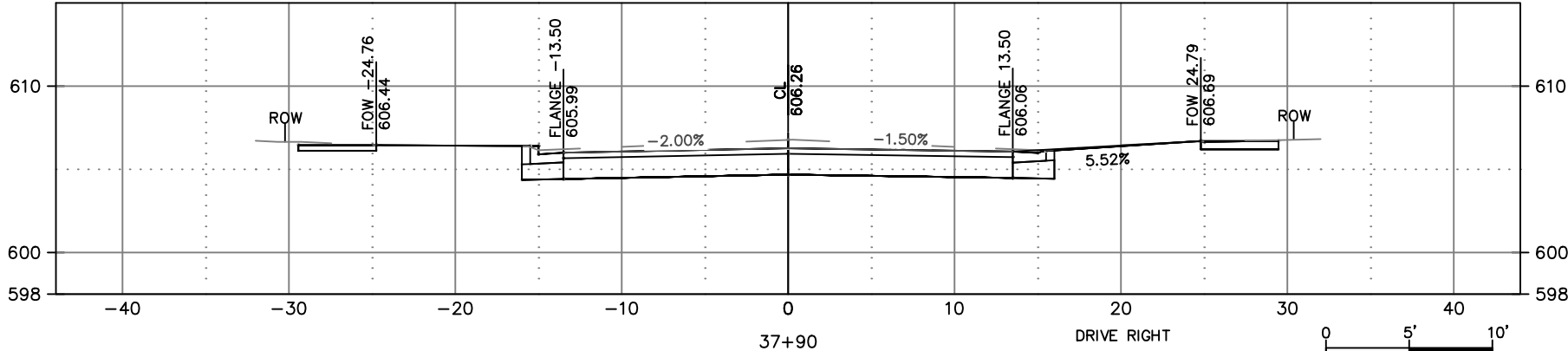
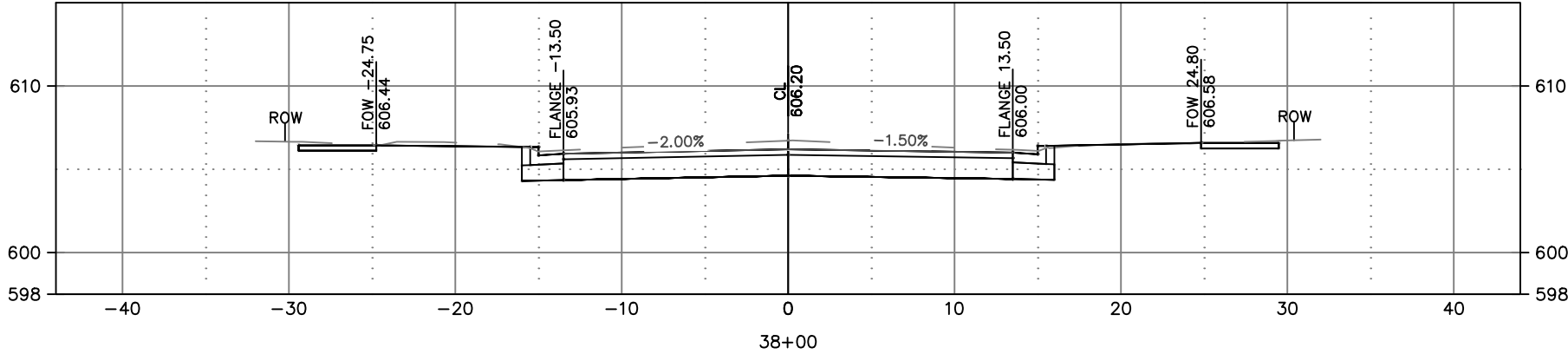
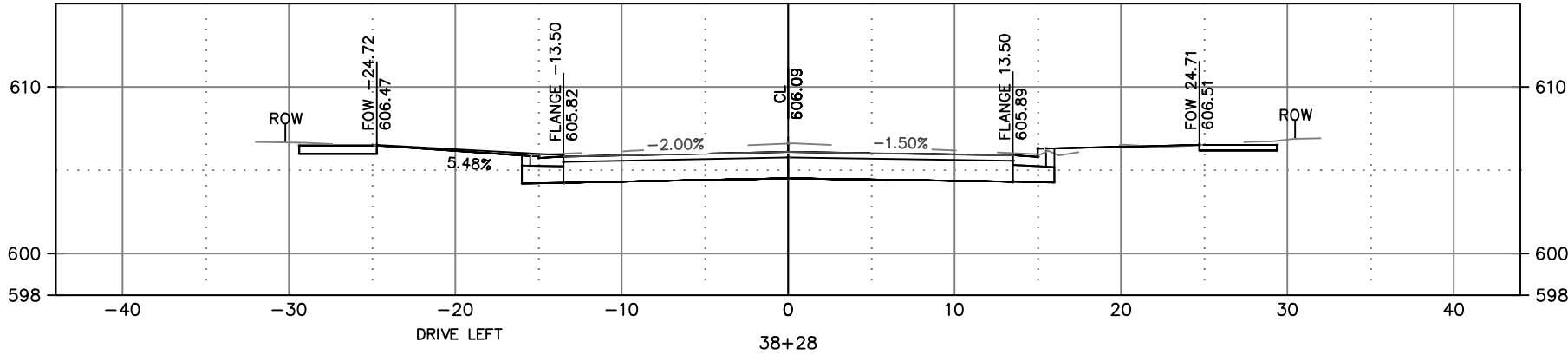
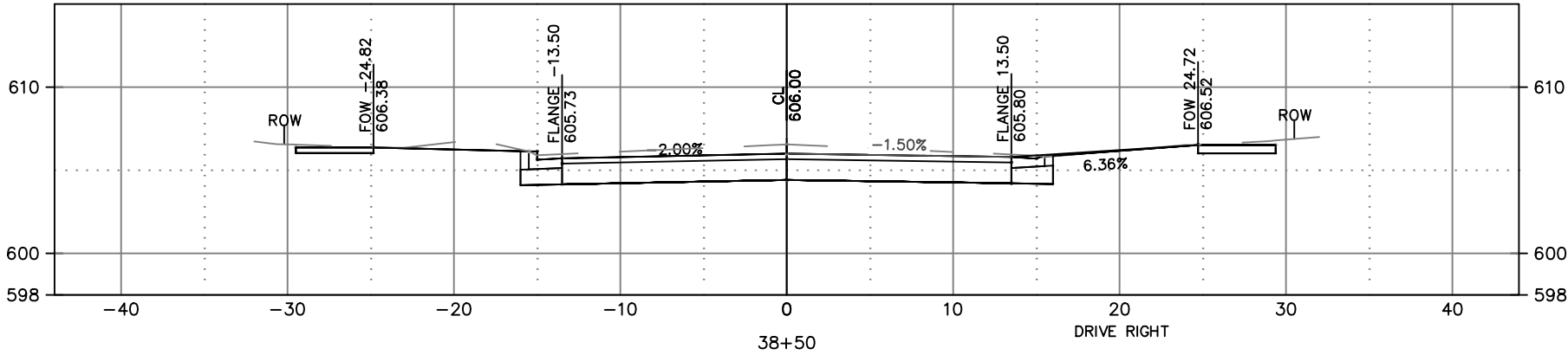
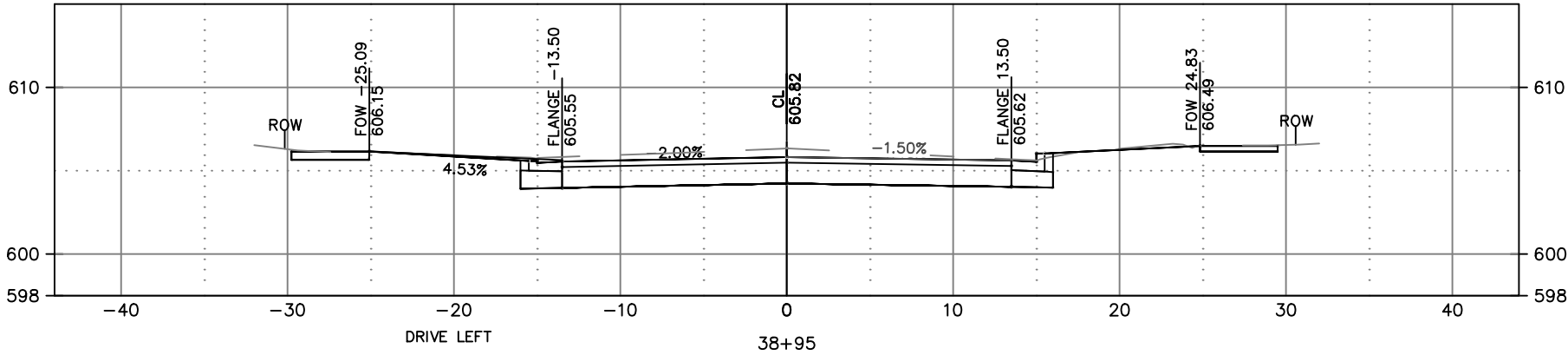
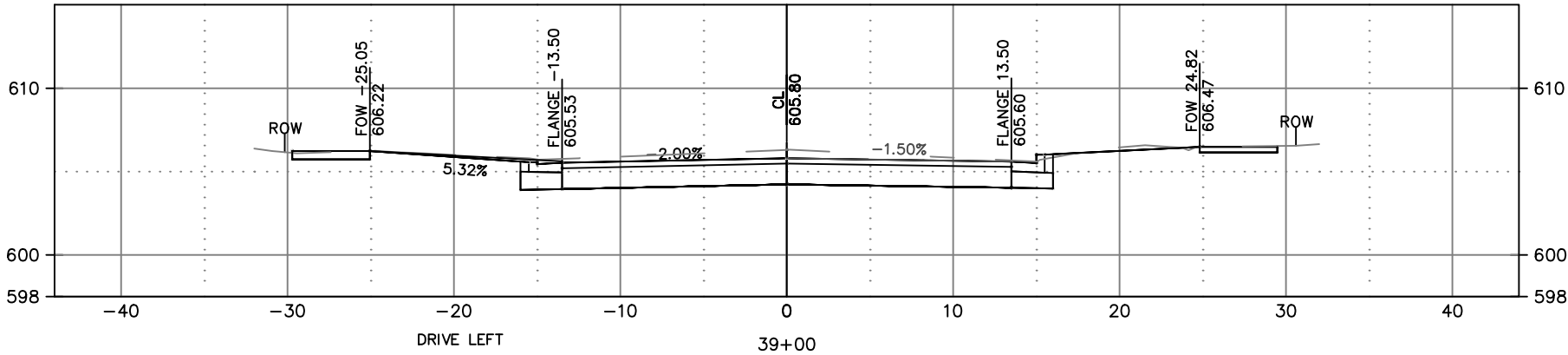
CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

ERIE STREET
CROSS SECTIONS

NAME:
ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

SURVEYED	BY
DRAWN	BK
DESIGNED	BK
CHECKED	EPR

NO.	DATE	REVISIONS / ISSUES
1	11-2020	BT
2	01-2021	REMARKS
3	01-2021	
4	03-2021	





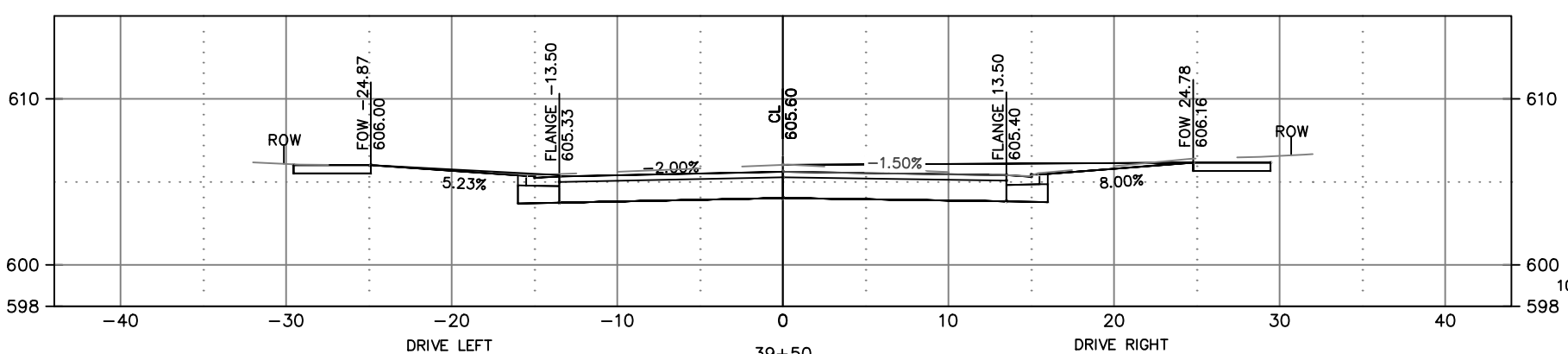
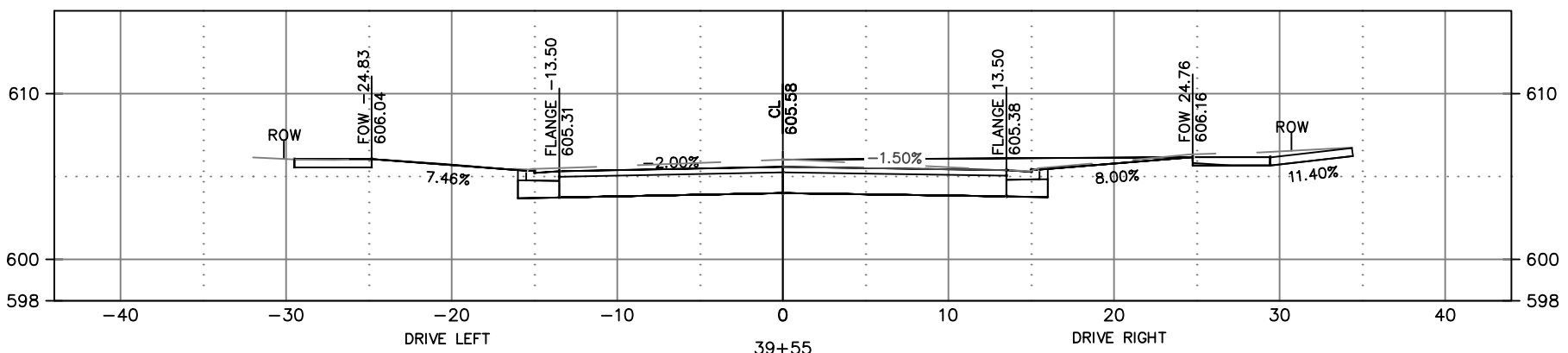
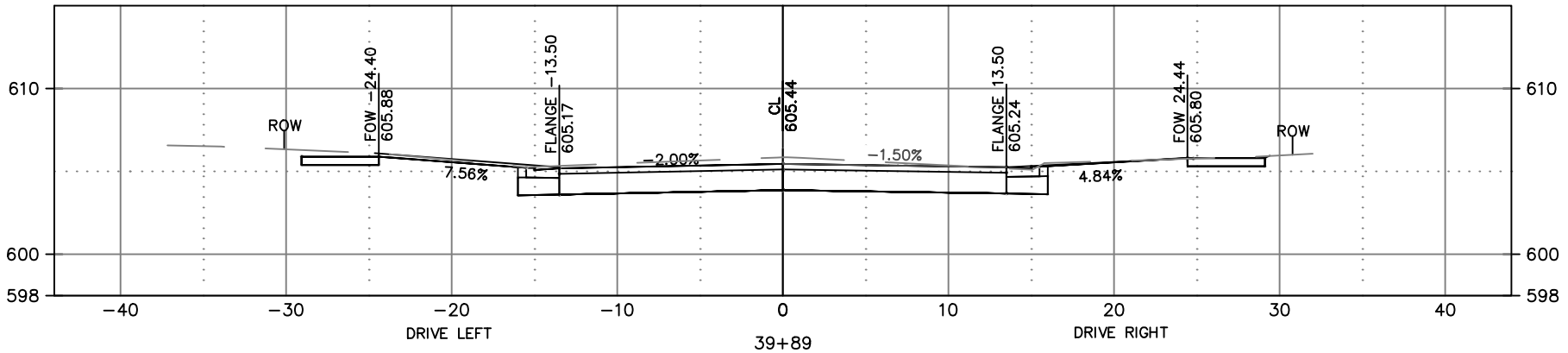
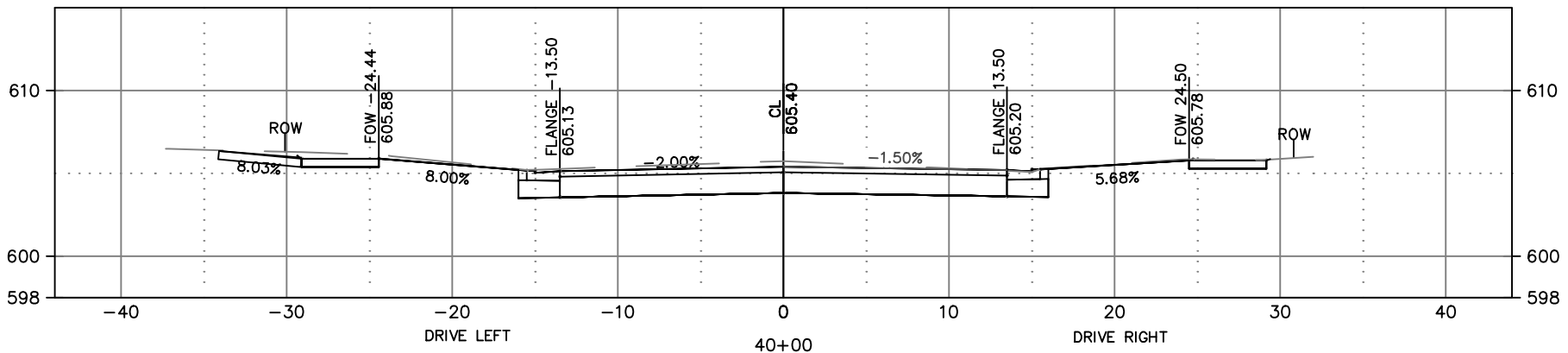
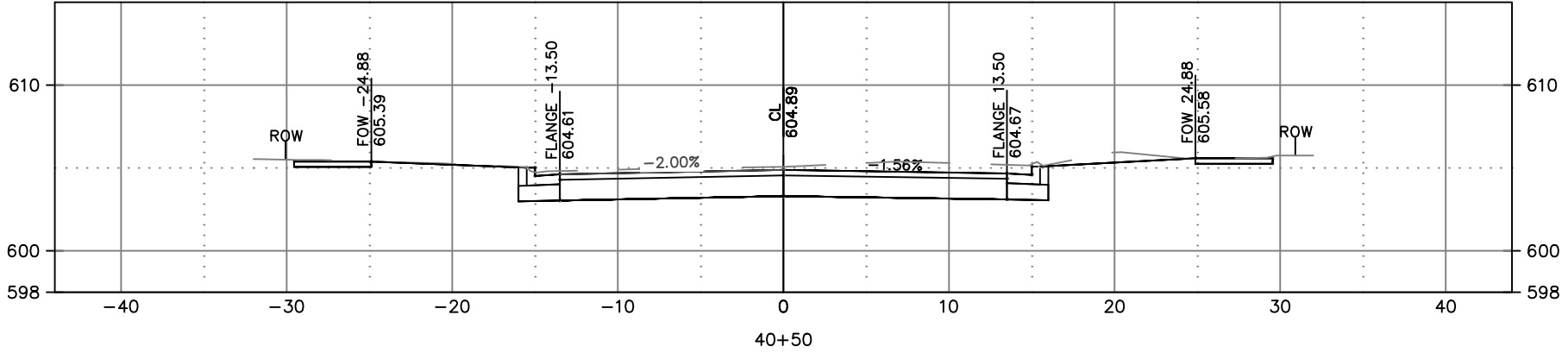
CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

ERIE STREET
CROSS SECTIONS

NAME: ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

SURVEYED	BY
DRAWN	BK
DESIGNED	BK
CHECKED	EPR

NO.	DATE	REVISIONS / ISSUES
		BT
		REMARKS





CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115

OFFICE 920-339-4061 FAX 920-339-4071

ERIE STREET CROSS SECTIONS

NAME: ERIE STREET RECONSTRUCTION AND UTILITY RELAY PROJECT

21-02

SURFACED BY BK 11-2020

DRAWN BY BK 01-2021

DESIGNED BY BK 01-2021

CHECKED BY EPR 03-2021

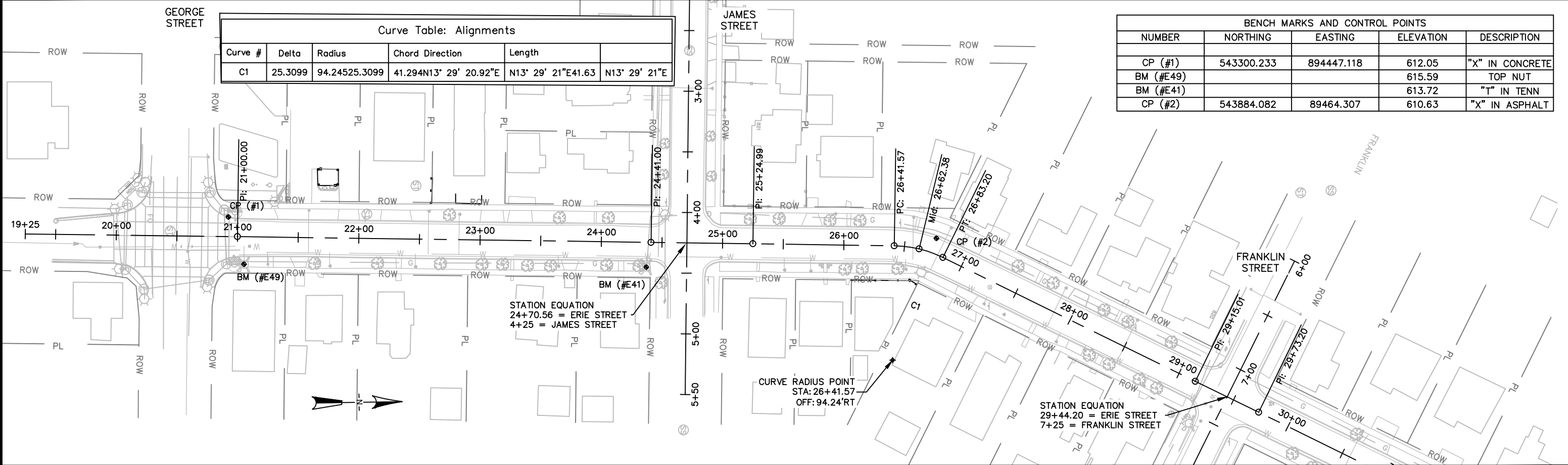
REVISIONS / ISSUES

NO. DATE BY

REMARKS

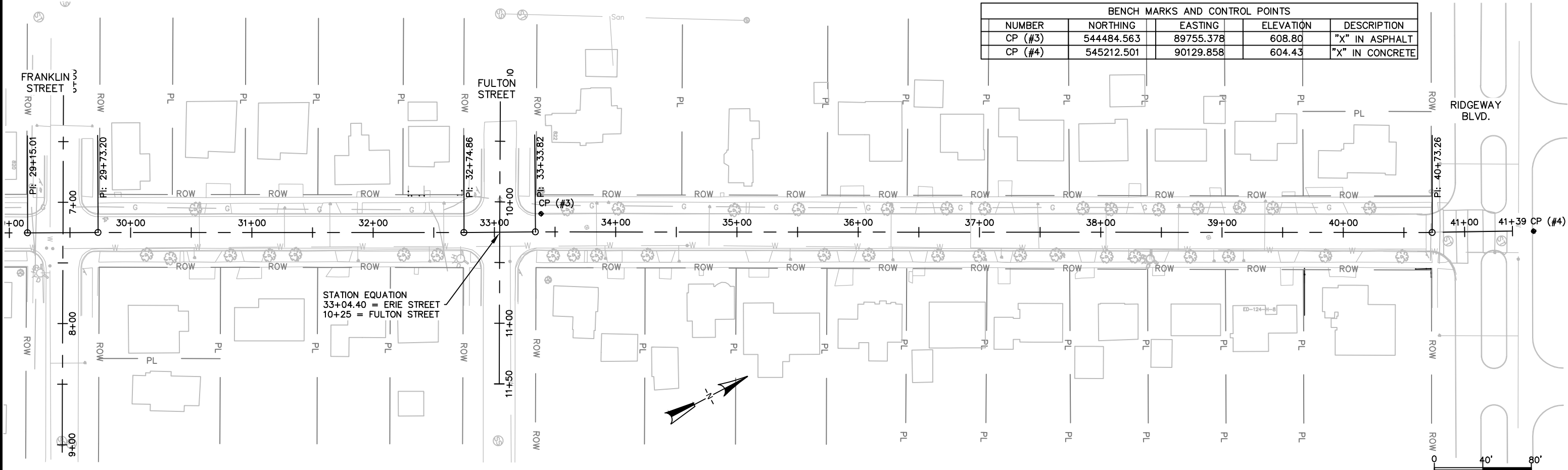
PAGE NO. C315

Total Volume Table – Mainline						
Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
20+50.00	0.00	0.00	0.00	0.00	0.00	0.00
21+02.04	1.57	51.84	1.51	49.97	1.51	49.97
21+15.00	1.63	54.48	0.77	25.51	2.28	75.48
21+27.00	1.77	54.70	0.76	24.26	3.03	99.74
21+50.00	0.77	54.66	1.08	46.58	4.12	146.31
21+93.00	1.33	54.72	1.67	87.10	5.78	233.41
22+00.00	0.80	54.90	0.28	14.21	6.06	247.62
22+28.00	0.10	53.95	0.47	56.44	6.53	304.06
22+33.00	1.00	53.02	0.10	9.90	6.63	313.97
22+50.00	0.65	52.28	0.52	33.15	7.15	347.12
23+00.00	0.15	59.58	0.75	103.57	7.90	450.69
23+10.00	0.11	58.36	0.05	21.84	7.94	472.53
23+27.00	0.63	57.19	0.23	36.38	8.18	508.91
23+34.00	0.79	57.48	0.18	14.86	8.36	523.77
23+50.00	1.03	55.41	0.54	33.45	8.90	557.22
23+75.00	0.00	61.66	0.48	54.20	9.38	611.42
23+94.00	0.49	59.06	0.17	42.48	9.55	653.90
24+00.00	0.27	61.75	0.08	13.42	9.64	667.32
24+16.00	0.11	60.99	0.11	36.37	9.75	703.69
24+40.00	0.79	60.02	0.40	53.78	10.15	757.47
24+50.00	0.66	66.50	0.27	23.43	10.42	780.90
25+00.00	0.61	65.17	1.18	121.92	11.60	902.82
25+29.00	0.16	64.08	0.42	69.40	12.02	972.22
25+50.00	0.00	61.75	0.06	48.93	12.08	1021.16
25+73.00	0.00	60.77	0.00	52.19	12.08	1073.34
25+85.00	0.02	59.45	0.00	26.72	12.08	1100.06
26+00.00	0.01	56.50	0.01	32.21	12.09	1132.27
26+04.00	0.00	56.16	0.00	8.35	12.09	1140.61
26+50.00	0.07	60.92	0.06	99.83	12.15	1240.44
26+57.00	0.12	60.59	0.02	15.82	12.17	1256.27
26+93.00	0.06	57.42	0.10	78.91	12.27	1335.17
27+00.00	0.11	56.28	0.02	14.74	12.29	1349.91
27+13.00	1.42	57.04	0.37	27.28	12.66	1377.19
27+16.00	1.58	56.62	0.17	6.31	12.83	1383.51
27+50.00	1.06	56.33	1.66	71.11	14.49	1454.62
27+62.00	1.13	55.19	0.49	24.78	14.98	1479.40
27+97.00	1.25	58.79	1.54	73.88	16.52	1553.28
28+00.00	1.00	58.35	0.12	6.51	16.64	1559.79
28+14.00	0.00	60.63	0.26	30.85	16.90	1590.63
28+35.00	0.33	55.01	0.13	44.97	17.03	1635.61
28+50.00	0.05	58.18	0.10	31.44	17.13	1667.05
29+00.00	0.22	55.29	0.24	105.06	17.37	1772.11
29+14.00	1.00	55.19	0.32	28.64	17.69	1800.75
29+50.00	1.84	73.66	1.89	85.91	19.58	1886.66
29+75.00	0.00	66.86	0.85	65.05	20.43	1951.71
30+00.00	0.01	65.78	0.01	61.41	20.43	2013.13
30+42.00	0.00	62.77	0.01	99.98	20.45	2113.11
30+50.00	0.00	63.19	0.00	18.66	20.45	2131.77
30+58.00	0.00	61.87	0.00	18.53	20.45	2150.30
30+71.00	0.00	62.55	0.00	29.95	20.45	2180.25
31+00.00	0.04	59.48	0.02	65.53	20.47	2245.78
31+31.00	0.10	60.22	0.08	68.71	20.55	2314.50
31+50.00	0.21	61.27	0.11	42.75	20.66	2357.24
31+62.00	0.46	63.34	0.15	27.69	20.81	2384.94
31+75.00	0.00	67.73	0.11	31.55	20.92	2416.49
31+89.00	0.00	65.44	0.00	34.53	20.92	2451.02
32+00.00	0.00	63.13	0.00	26.19	20.92	2477.20
32+45.00	1.13	57.39	0.94	100.43	21.86	2577.64
32+50.00	0.19	61.41	0.12	11.00	21.98	2588.64
32+75.00	1.80	57.48	0.92	55.04	22.90	2643.68
33+00.00	0.88	82.70	1.24	64.90	24.14	2708.58
33+35.00	0.41	65.94	0.84	96.34	24.97	2804.92
33+50.00	0.00	72.89	0.11	38.56	25.09	2843.48
33+75.00	0.00	72.05	0.00	67.10	25.09	2910.58
34+00.00	0.02	75.05	0.01	68.10	25.09	2978.69
34+42.00	0.00	75.93	0.01	117.43	25.11	3096.12
34+50.00	0.00	75.28	0.00	22.40	25.11	3118.52
35+00.00	0.37	67.03	0.35	131.77	25.46	3250.29
35+09.00	0.00	66.54	0.06	22.26	25.52	3272.55
35+17.00	0.05	65.94	0.01	19.63	25.53	3292.18
35+50.00	0.00	64.30	0.03	79.59	25.56	3371.77
35+91.00	0.00	64.93	0.00	98.12	25.56	3469.89
35+95.00	0.00	64.98	0.00	9.62	25.56	3479.51
36+00.00	0.26	63.86	0.02	11.93	25.58	3491.44
36+50.00	0.00	66.09	0.24	120.33	25.82	3611.77
36+55.00	0.00	65.90	0.00	12.22	25.82	3623.99
37+00.00	0.43	66.28	0.36	110.15	26.18	3734.14
37+19.00	0.00	67.04	0.15	46.91	26.33	3781.05
37+21.00	0.00	66.98	0.00	4.96	26.33	3786.02
37+48.00	0.13	61.47	0.07	64.22	26.40	3850.24
37+50.00	0.08	61.58	0.01	4.56	26.41	3854.80
37+90.00	0.12	65.56	0.15	94.18	26.56	3948.98
38+00.00	0.17	66.84	0.05	24.52	26.61	3973.50
38+28.00	0.90	65.90	0.55	68.83	27.16	4042.32
38+50.00	0.04	69.41	0.38	55.13	27.55	4097.45
38+95.00	0.21	65.70	0.21	112.59	27.75	4210.04
39+00.00	0.20	65.97	0.04	12.19	27.79	4222.23
39+50.00	0.00	66.02	0.18	122.21	27.98	4344.44
39+53.00	0.01	65.52	0.00	7.31	27.98	4351.75
39+55.00	0.04	65.35	0.00	4.85	27.98	4356.59
39+89.00	0.04	64.80	0.06	81.95	28.03	4438.54
40+00.00	0.00	64.11	0.01	26.26	28.04	4464.80
40+50.00	0.01	68.69	0.01	122.97	28.05	4587.77
40+72.87	0.81	55.85	0.35	52.75	28.40	4640.52



Curve Table: Alignments					
Curve #	Delta	Radius	Chord Direction	Length	
C1	25.3099	94.24525.3099	41.294N13° 29' 20.92"E	N13° 29' 21"E41.63	N13° 29' 21"E

BENCH MARKS AND CONTROL POINTS				
NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP (#1)	543300.233	894447.118	612.05	"X" IN CONCRETE
BM (#E49)			615.59	TOP NUT
BM (#E41)			613.72	"T" IN TENN
CP (#2)	543884.082	89464.307	610.63	"X" IN ASPHALT



BENCH MARKS AND CONTROL POINTS				
NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP (#3)	544484.563	89755.378	608.80	"X" IN ASPHALT
CP (#4)	545212.501	90129.858	604.43	"X" IN CONCRETE



CITY OF DE PERE

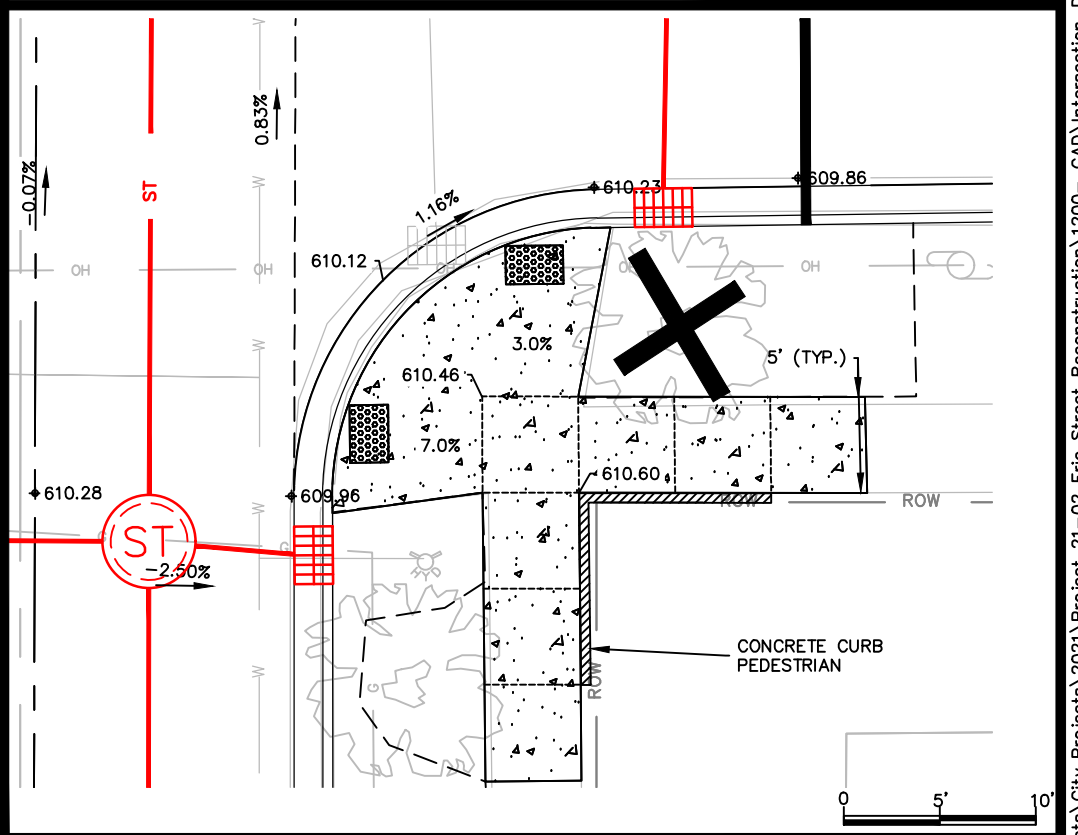
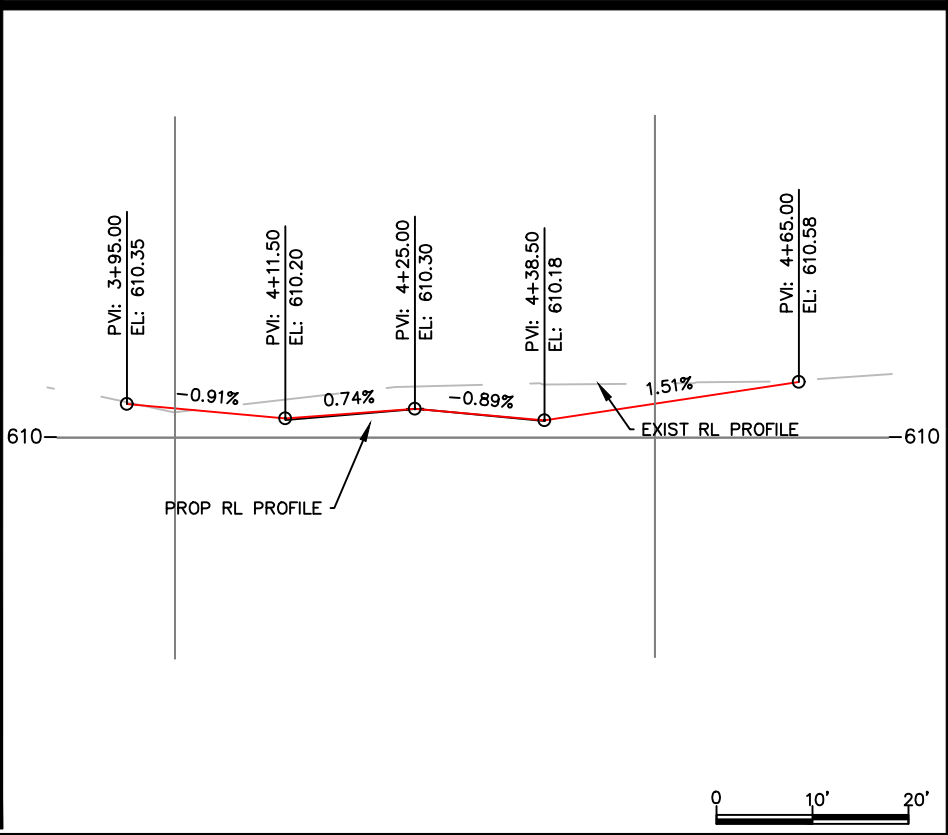
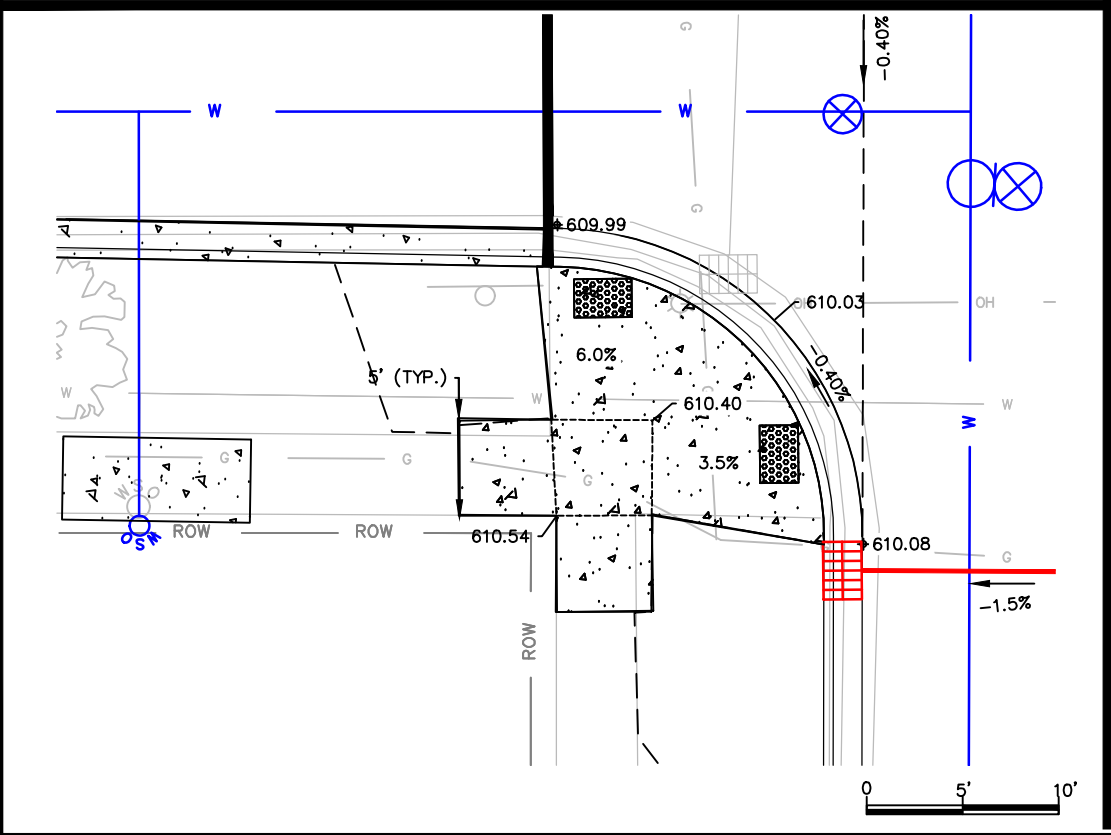
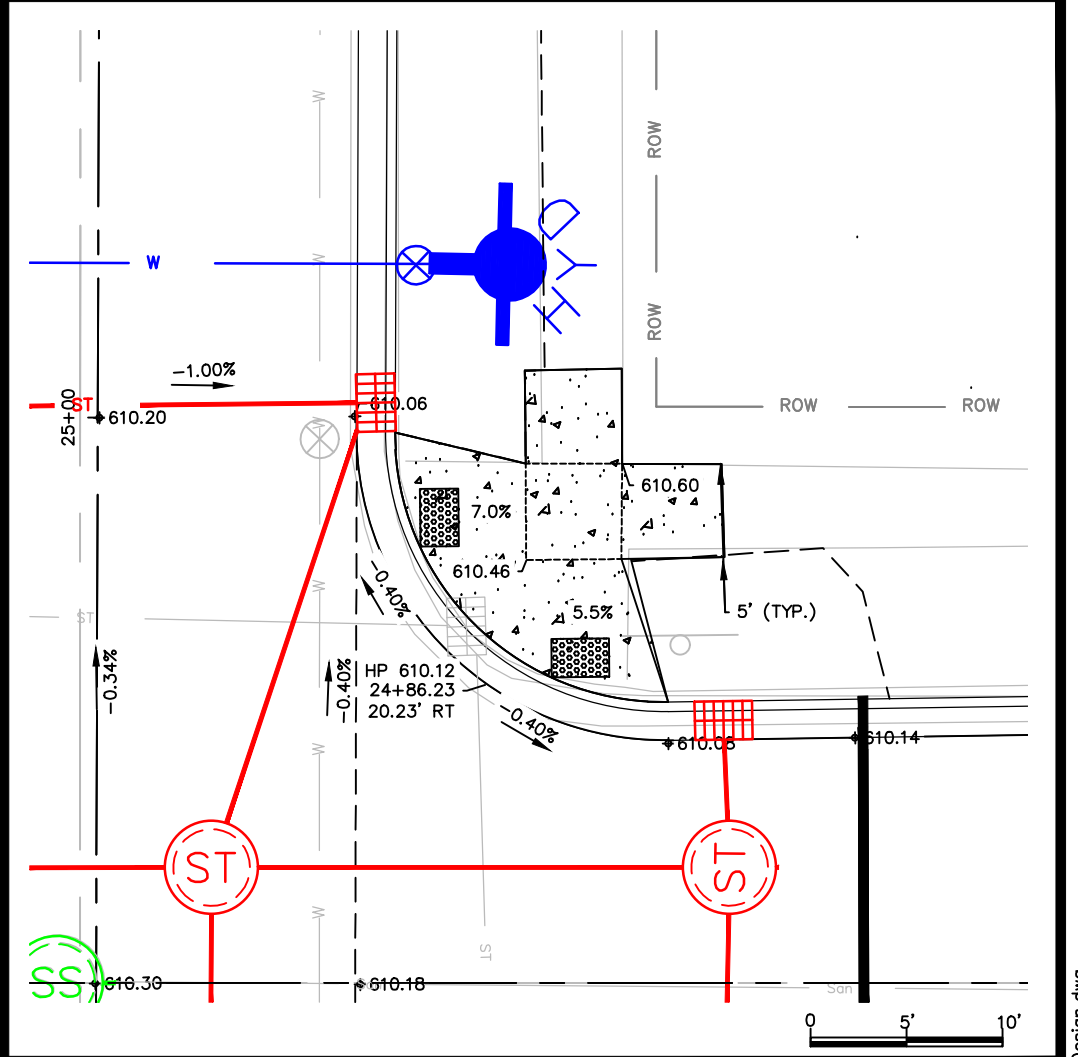
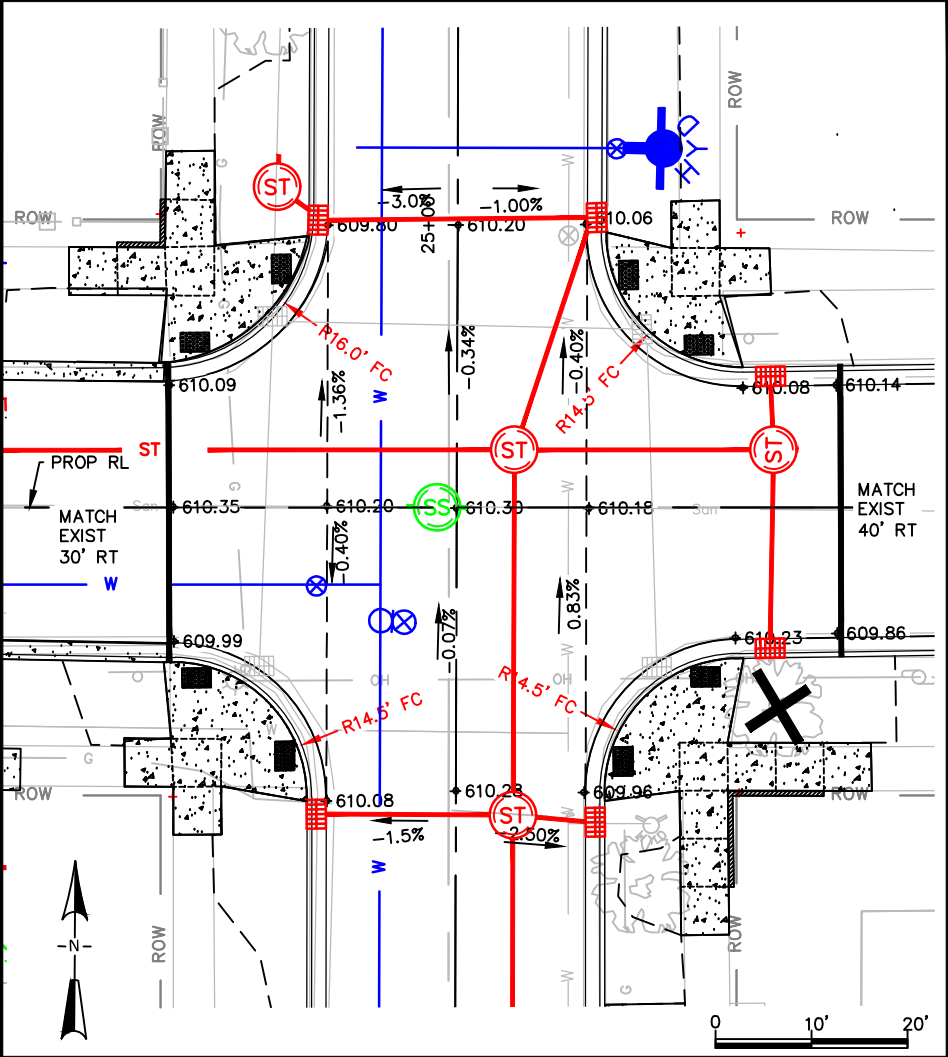
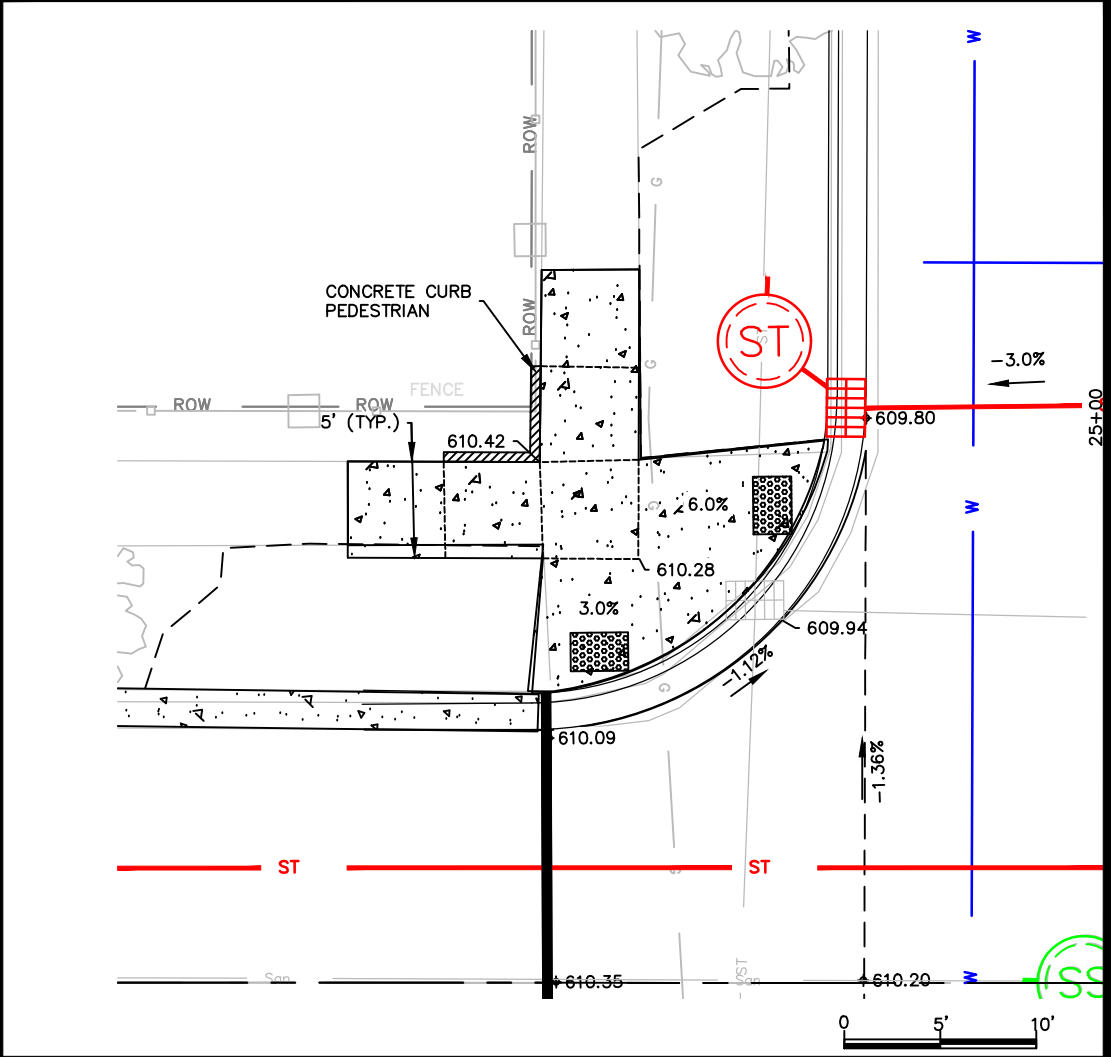
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

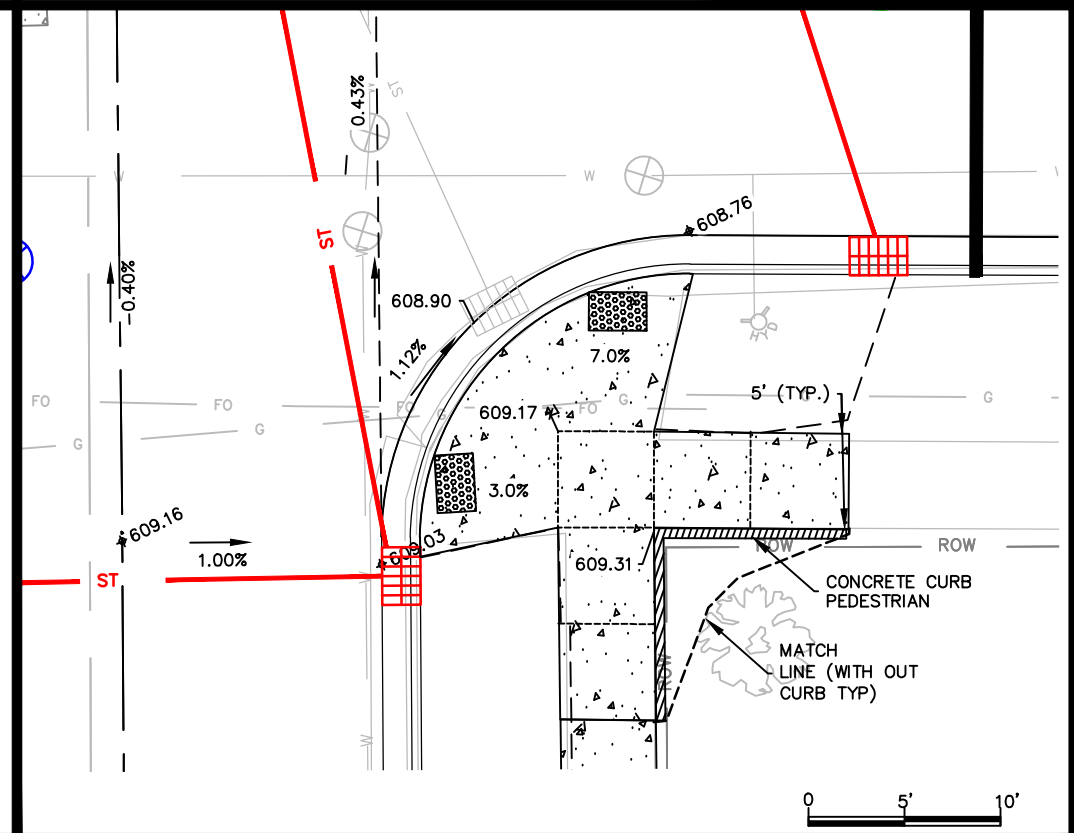
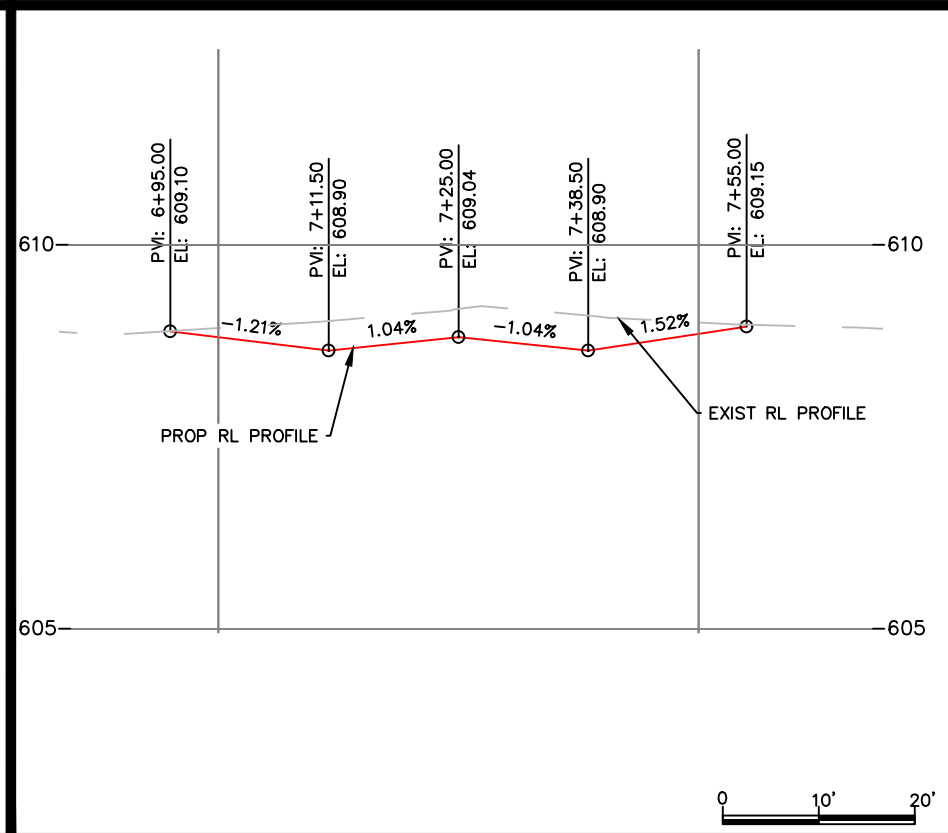
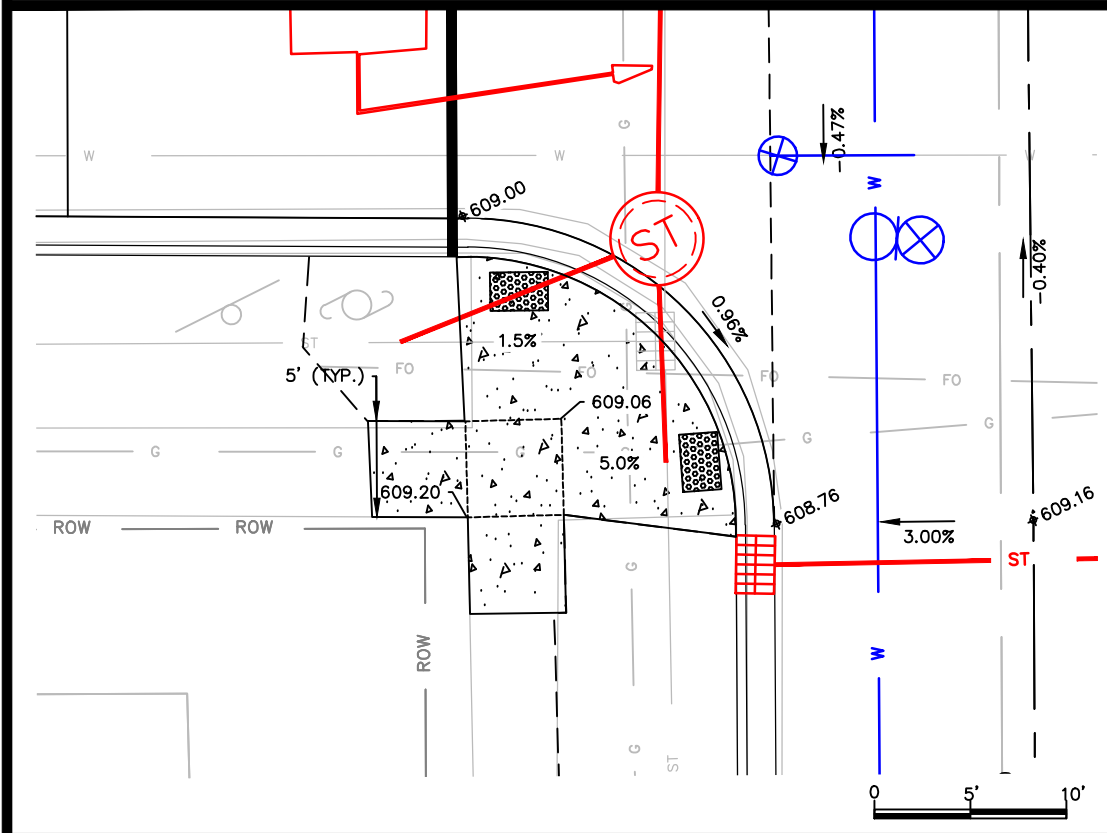
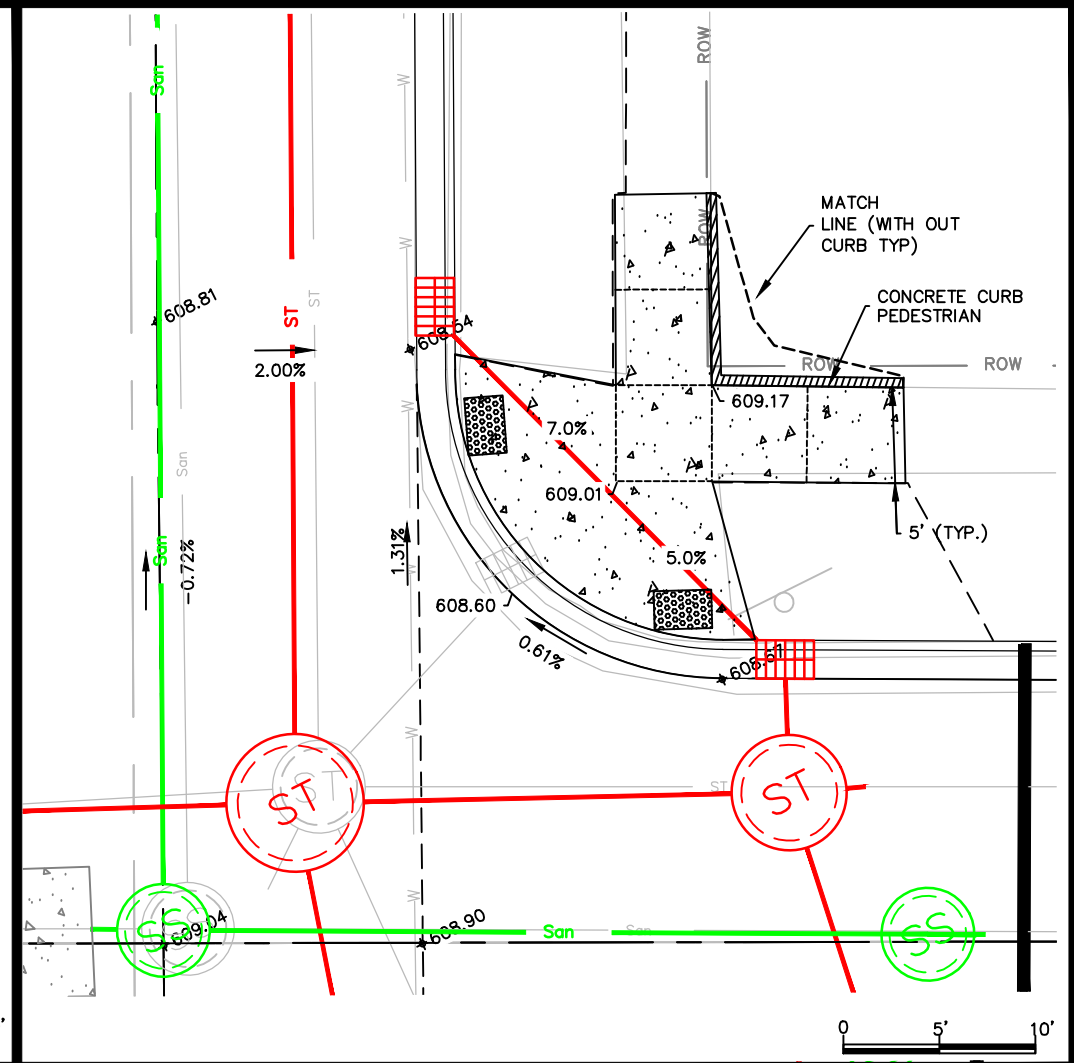
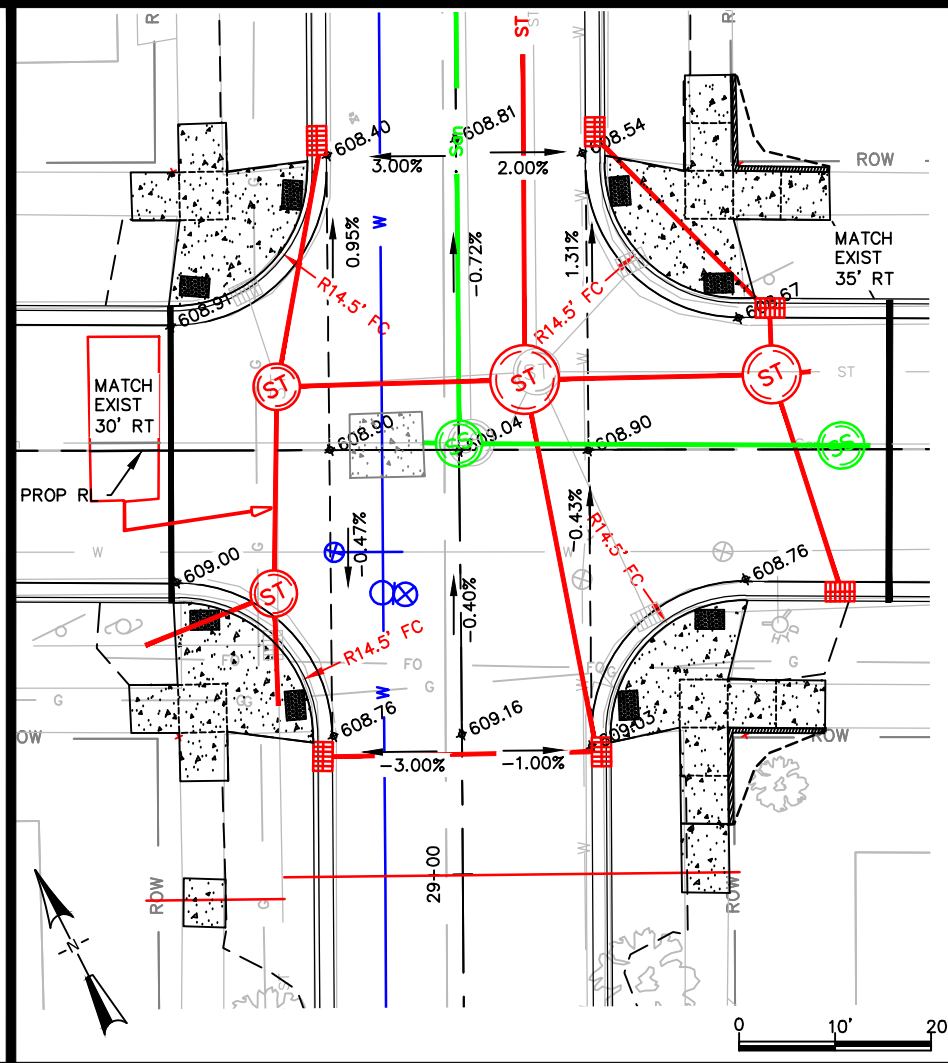
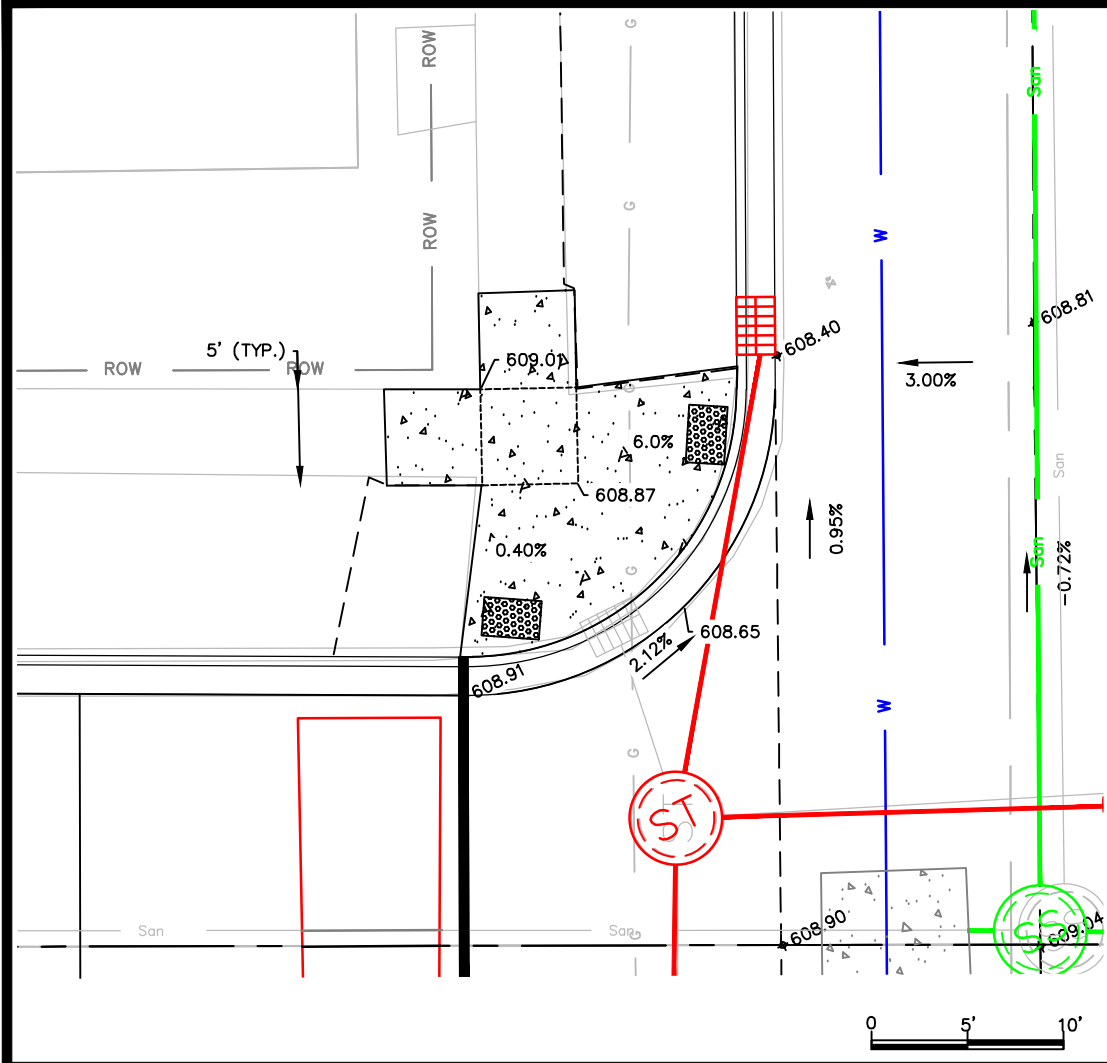
ERIE STREET
GEORGE ST. TO RIDGEWAY BLVD.
BENCHMARKS AND CONTROL POINTS

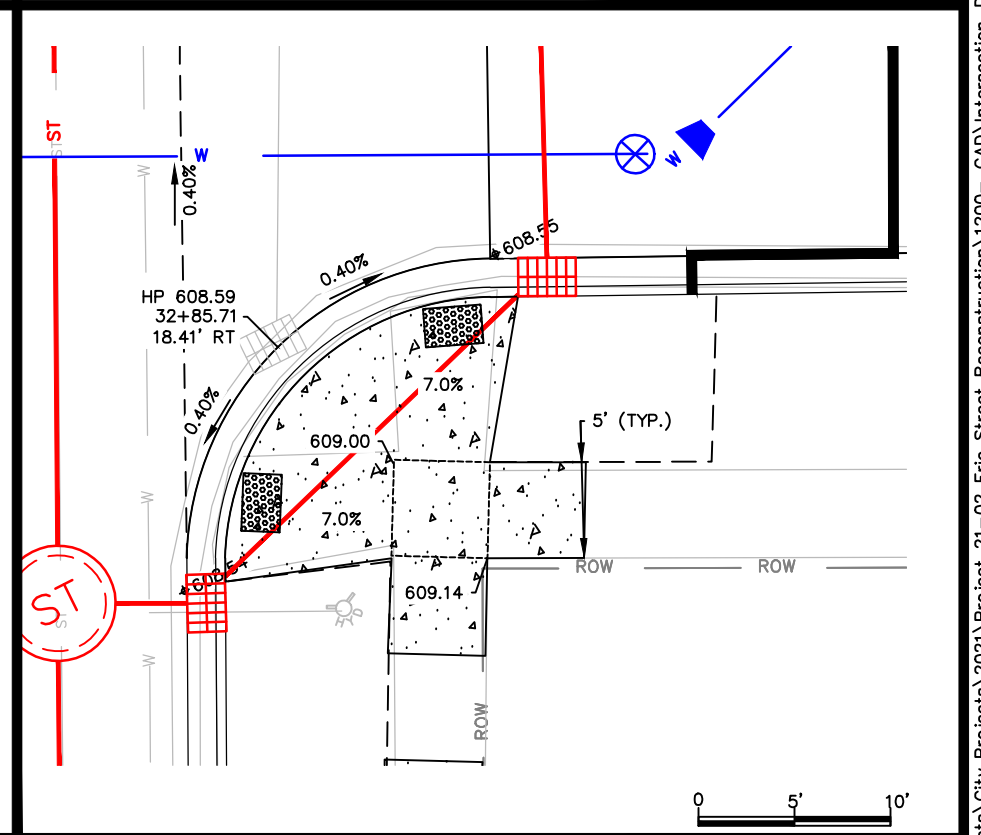
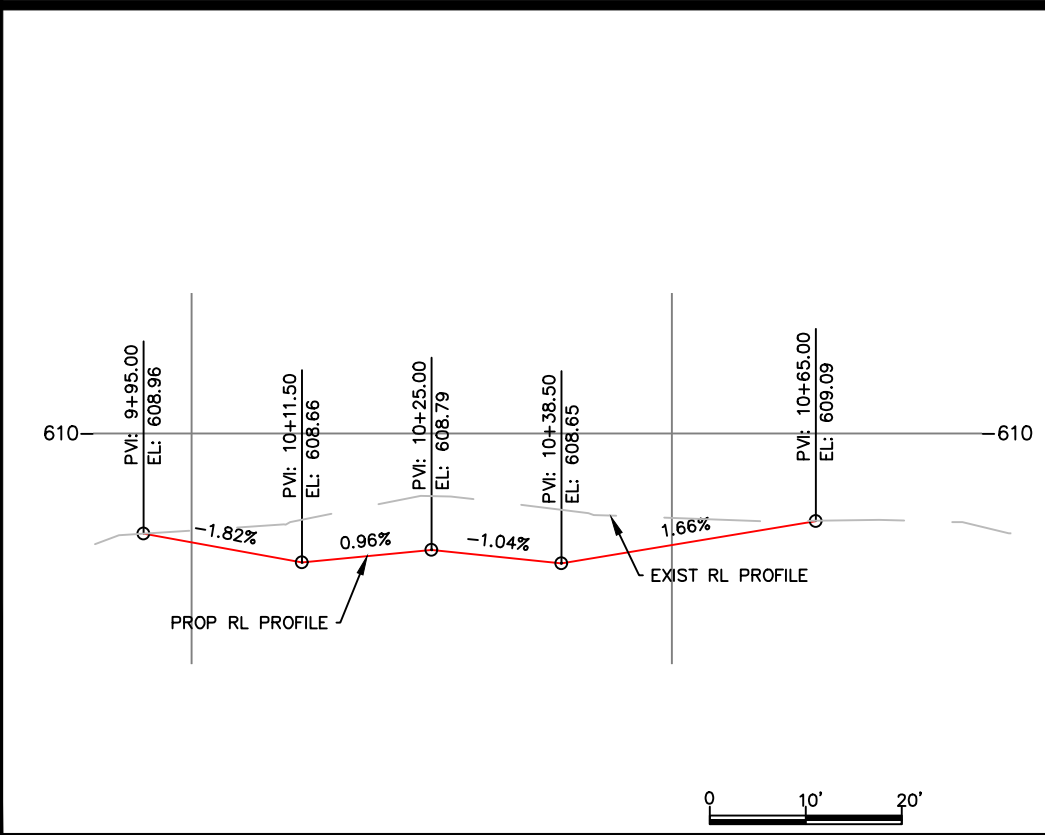
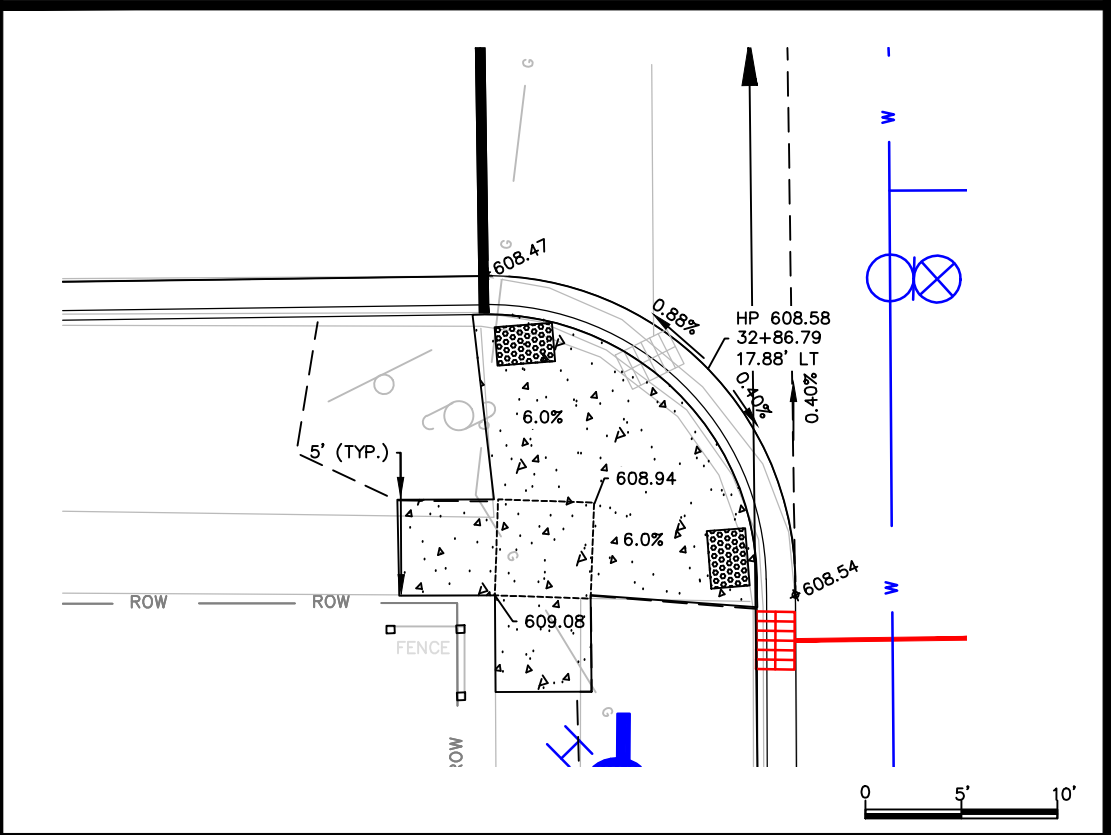
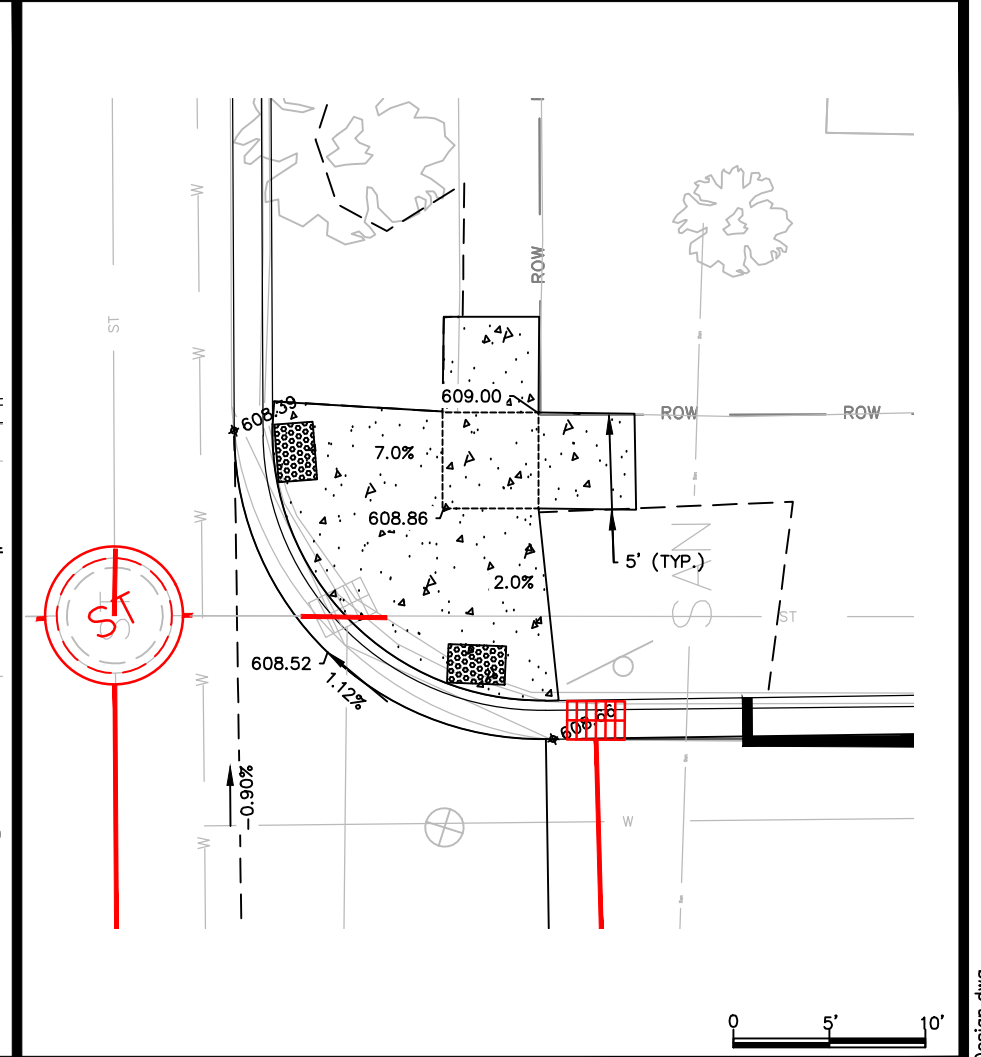
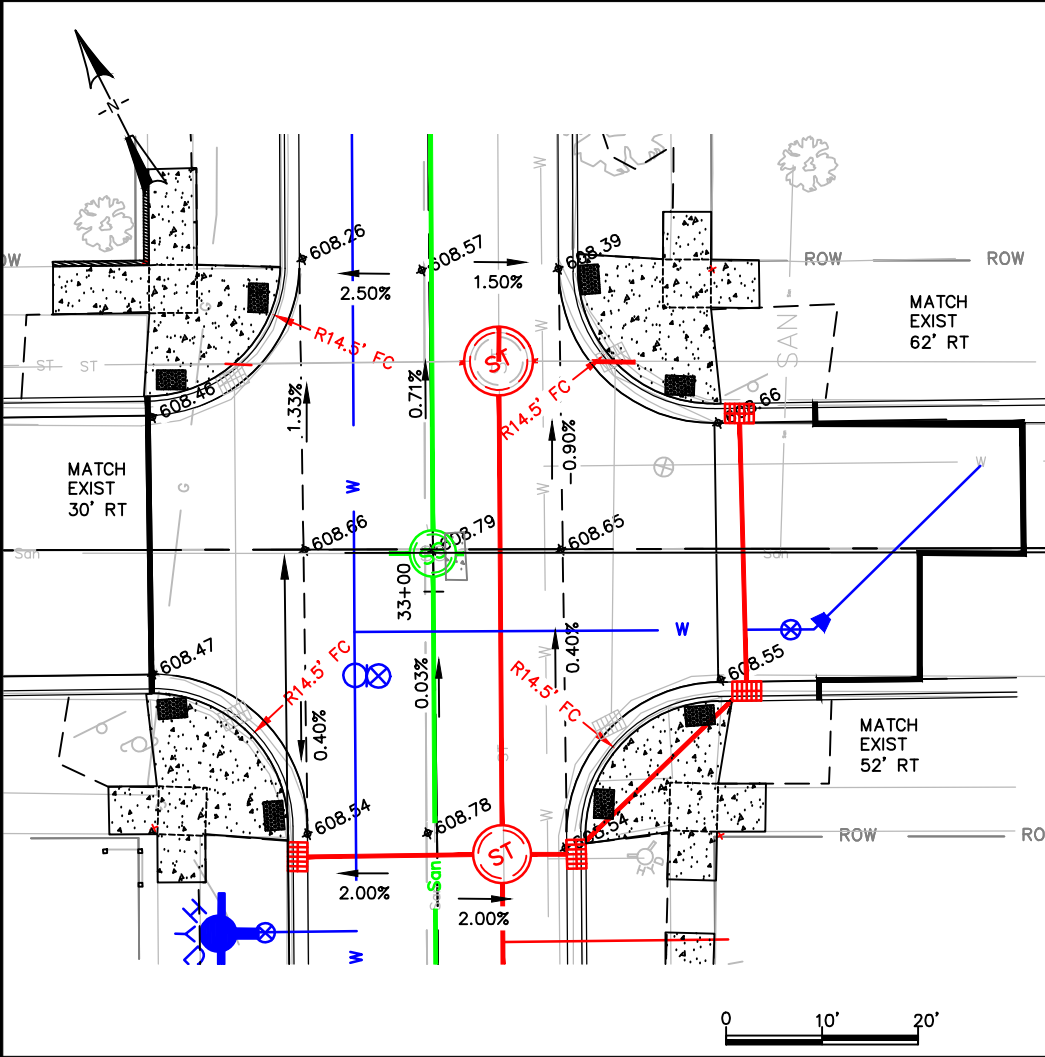
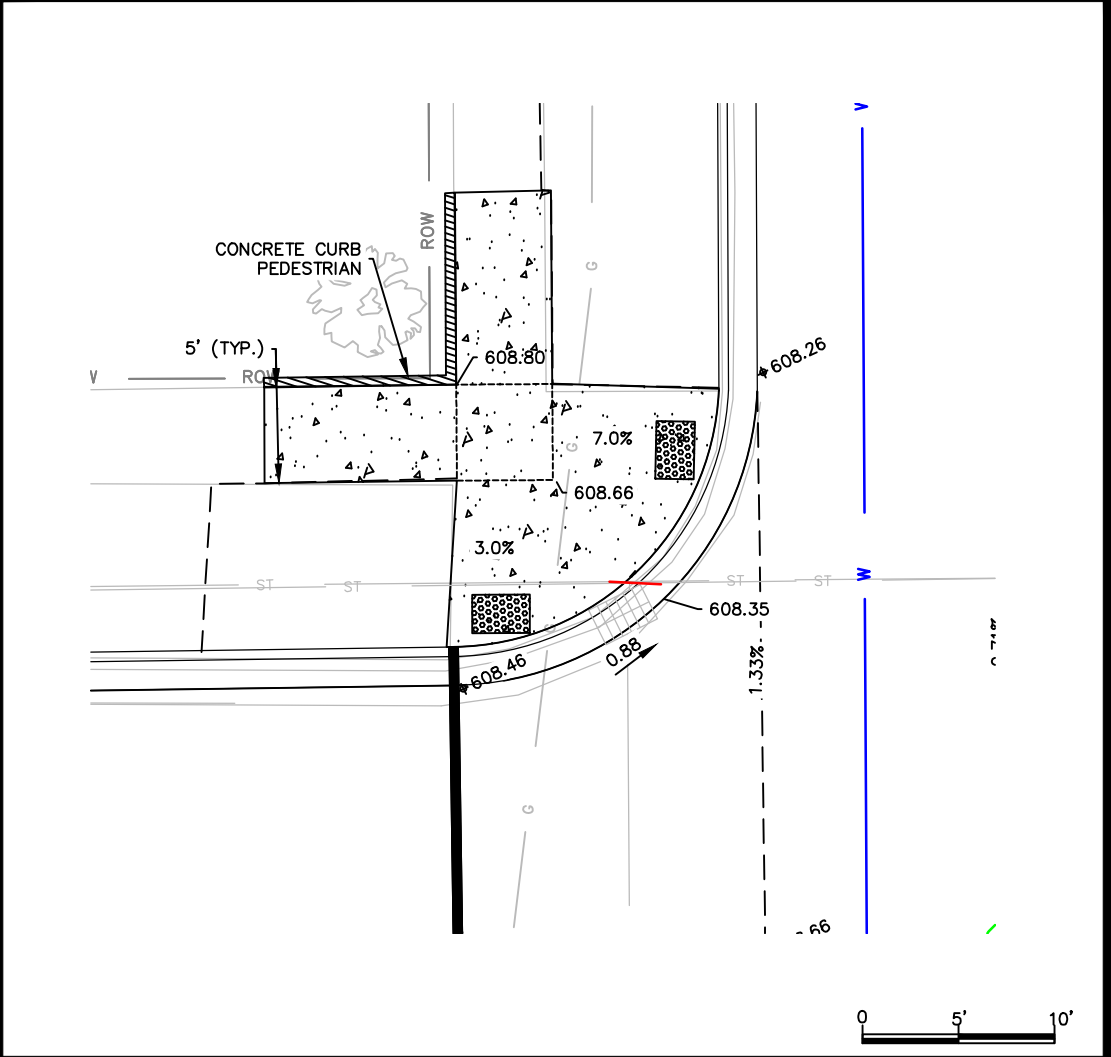
NAME:
ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

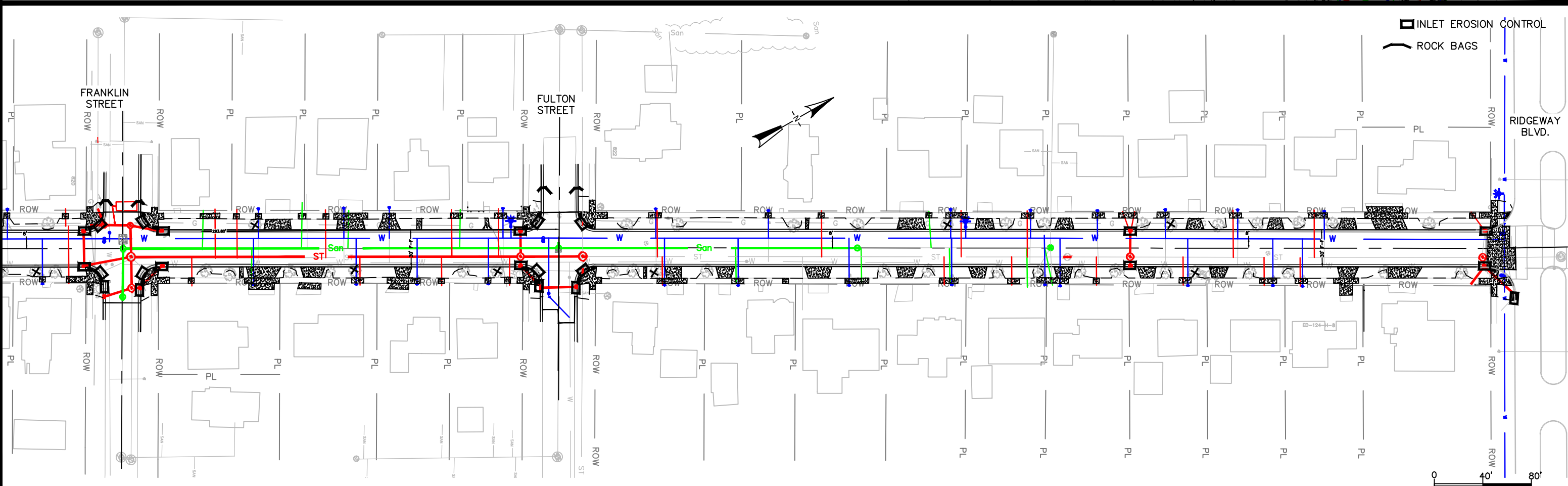
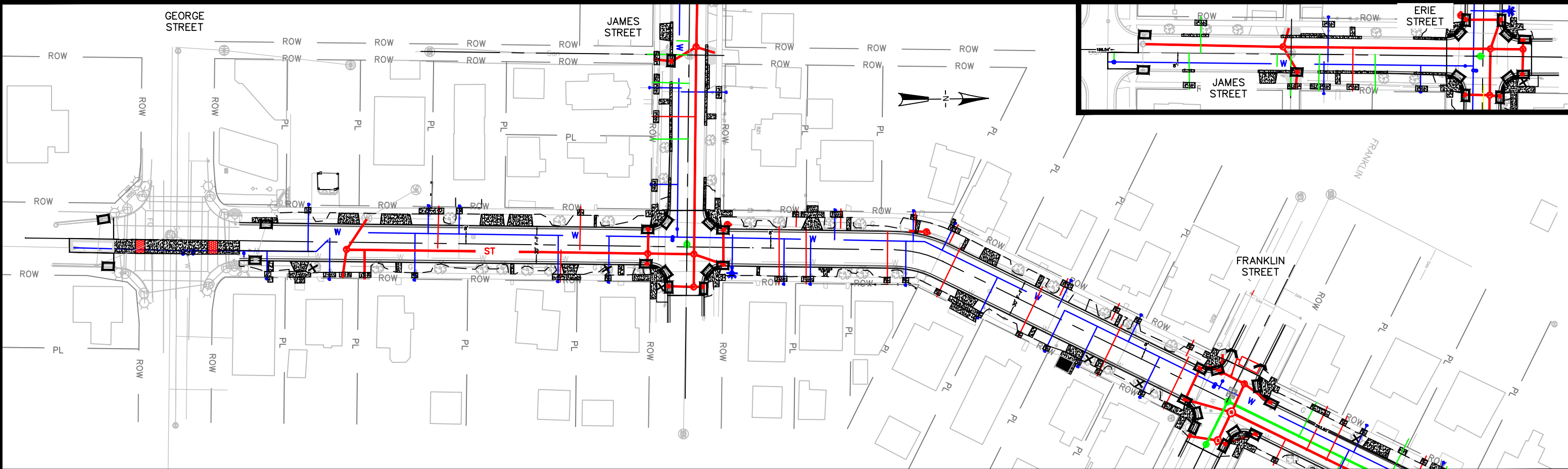
	BY	DATE
SURVEYED	BK	11-2020
DRAWN	BK	12-2020
DESIGNED	BK	12-2020
CHECKED	EPR	01-2021

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS









CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

**ERIE STREET
EROSION CONTROL**

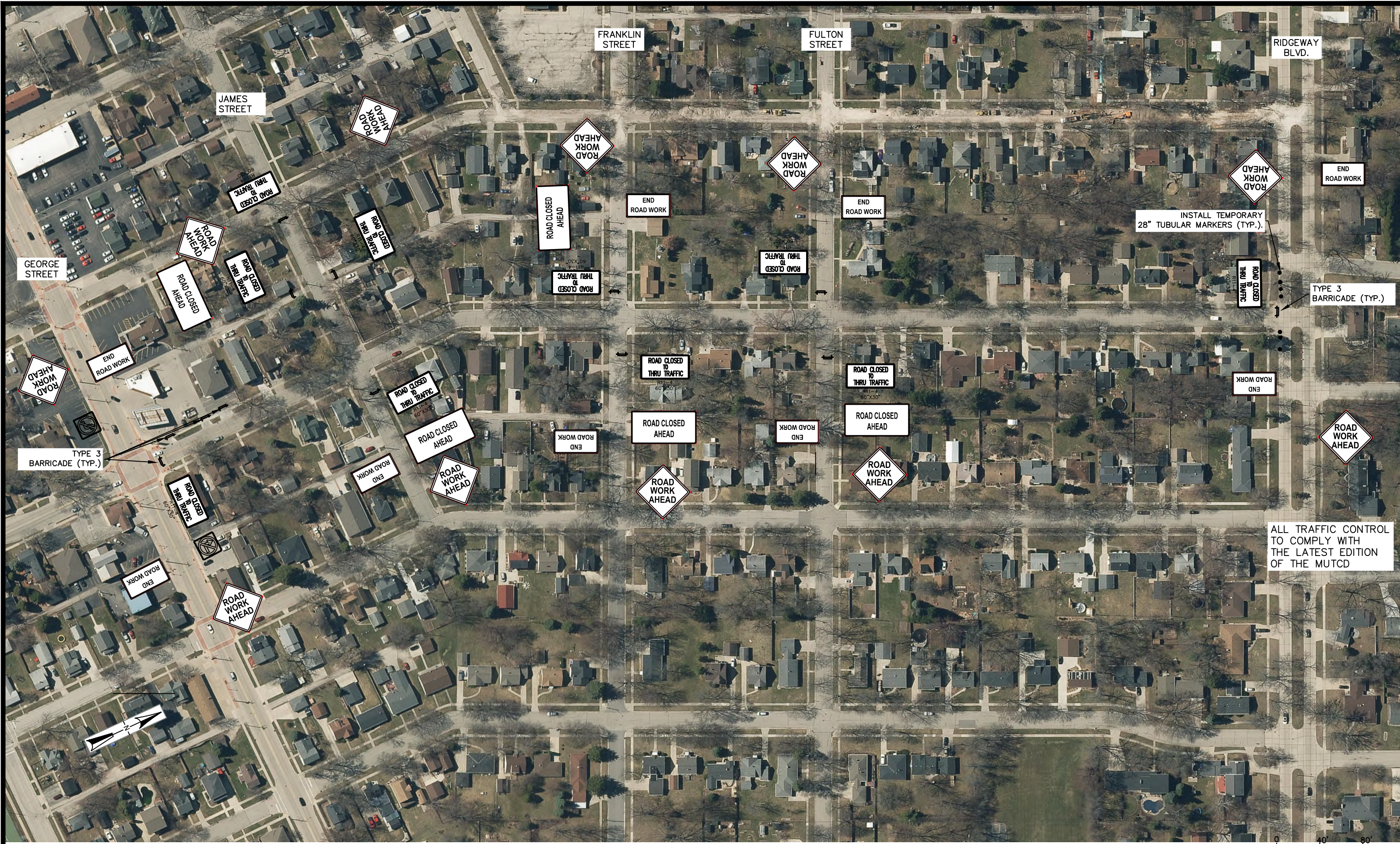
NAME:
ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

	BY	DATE
SURVEYED	BK	11-2020
DRAWN	BK	01-2021
DESIGNED	BK	01-2021
CHECKED	EPR	03-2021

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

PAGE
NO.
C405

x:\ENR\Projects\City Projects\2021\Prints\21-02 Erie Street Reconstruction\1900- PLAN\Close-print-arcsin.dwg



CITY OF DE PERE

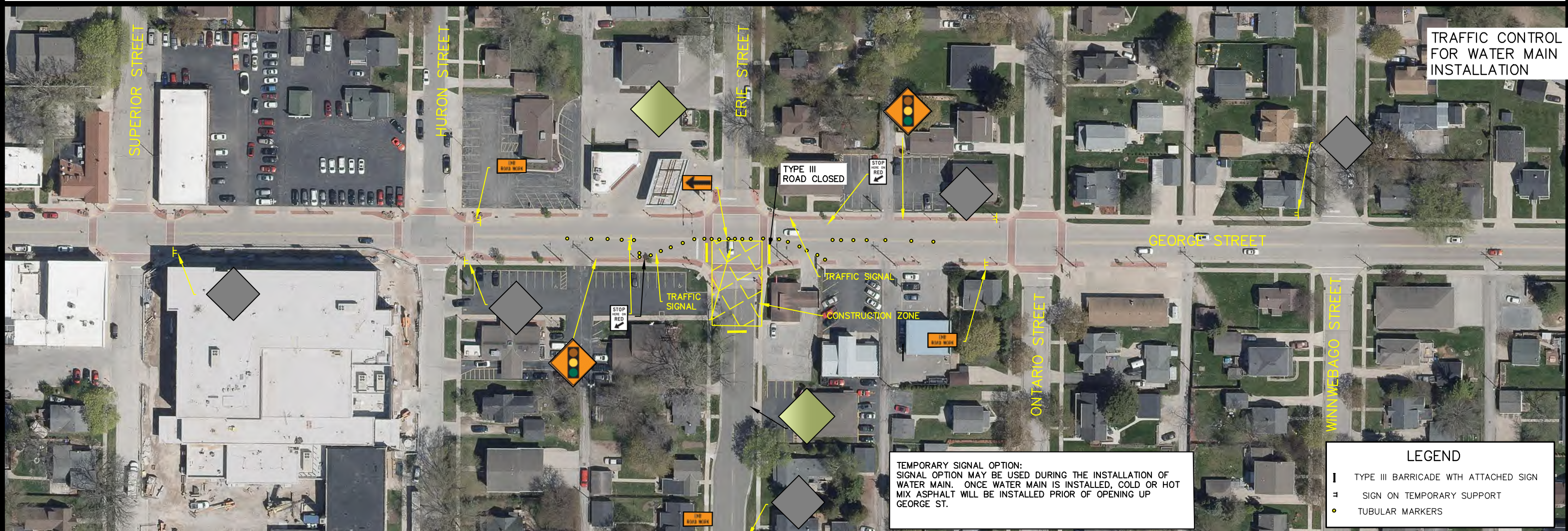
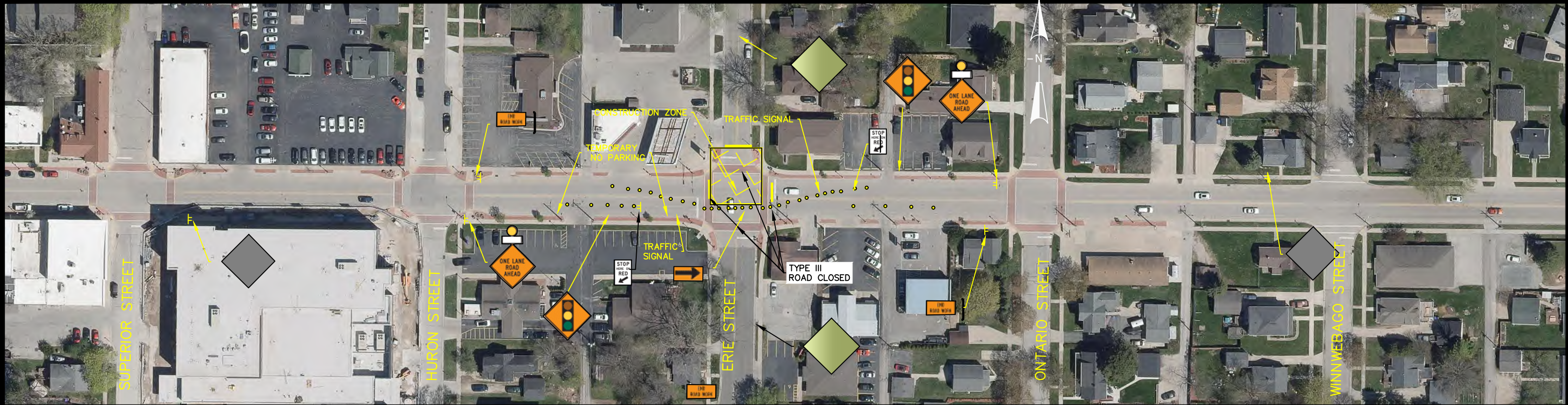
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

**ERIE STREET
LOCAL TRAFFIC CONTROL**

NAME:
ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

		BY	DATE	REVISIONS / ISSUES	
				NO.	DATE
SURVEYED	BK		11-2020		
DRAWN	BK		01-2021		
DESIGNED	BK		01-2021		
CHECKED	EPR		03-2021		

PAGE NO.
C406



TRAFFIC CONTROL
FOR WATER MAIN
INSTALLATION

TEMPORARY SIGNAL OPTION:
SIGNAL OPTION MAY BE USED DURING THE INSTALLATION OF
WATER MAIN. ONCE WATER MAIN IS INSTALLED, COLD OR HOT
MIX ASPHALT WILL BE INSTALLED PRIOR OF OPENING UP
GEORGE ST.

LEGEND			
I	TYPE III BARRICADE WITH ATTACHED SIGN		
=	SIGN ON TEMPORARY SUPPORT		
•	TUBULAR MARKERS		



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4060 FAX 920-339-4071

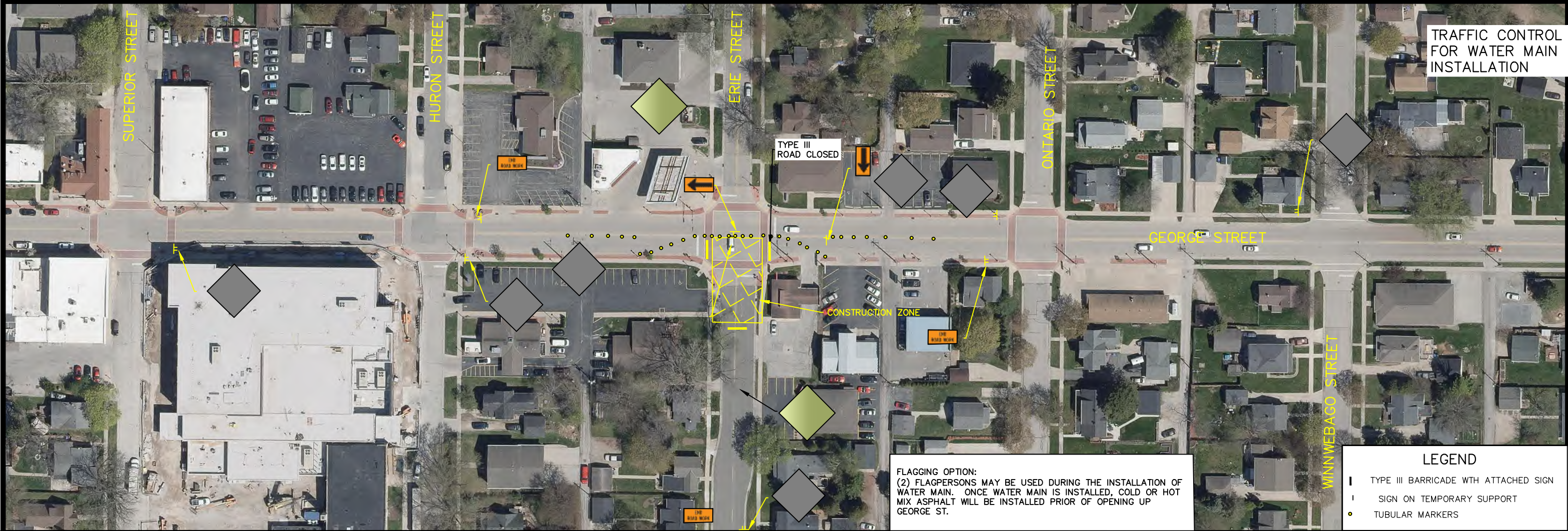
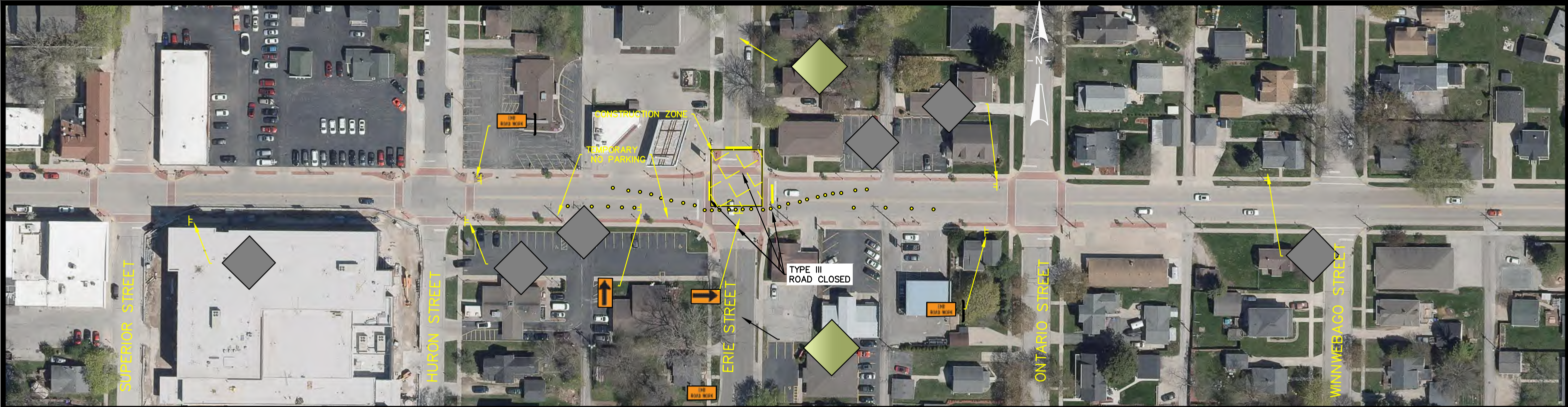
ERIE ST AND GEORGE ST
ROUTE
SIGNAL LIGHT TRAFFIC CONTROL

NAME:
ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

	BY	DATE
SURVEYED	BK	03-2021
DRAWN	BK	03-2021
CHECKED	EPR	03-2021

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

PAGE
NO.
C407



TRAFFIC CONTROL
FOR WATER MAIN
INSTALLATION

FLAGGING OPTION:
(2) FLAGPERSONS MAY BE USED DURING THE INSTALLATION OF
WATER MAIN. ONCE WATER MAIN IS INSTALLED, COLD OR HOT
MIX ASPHALT WILL BE INSTALLED PRIOR OF OPENING UP
GEORGE ST.

LEGEND			
	TYPE III BARRICADE WITH ATTACHED SIGN		
	SIGN ON TEMPORARY SUPPORT		
•	TUBULAR MARKERS		

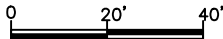


CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4060 FAX 920-339-4071

ERIE ST AND GEORGE ST
ROUTE
FLAGGING TRAFFIC CONTROL

NAME: ERIE STREET RECONSTRUCTION AND UTILITY RELAY PROJECT #	BY	DATE	REVISIONS / ISSUES				PAGE NO.
			NO.	DATE	BY	REMARKS	
21-02	SURVEYED	03-2021					C408
	DRAWN	03-2021					
	DESIGNED	03-2021					
	CHECKED	03-2021					





CITY OF DE PERE

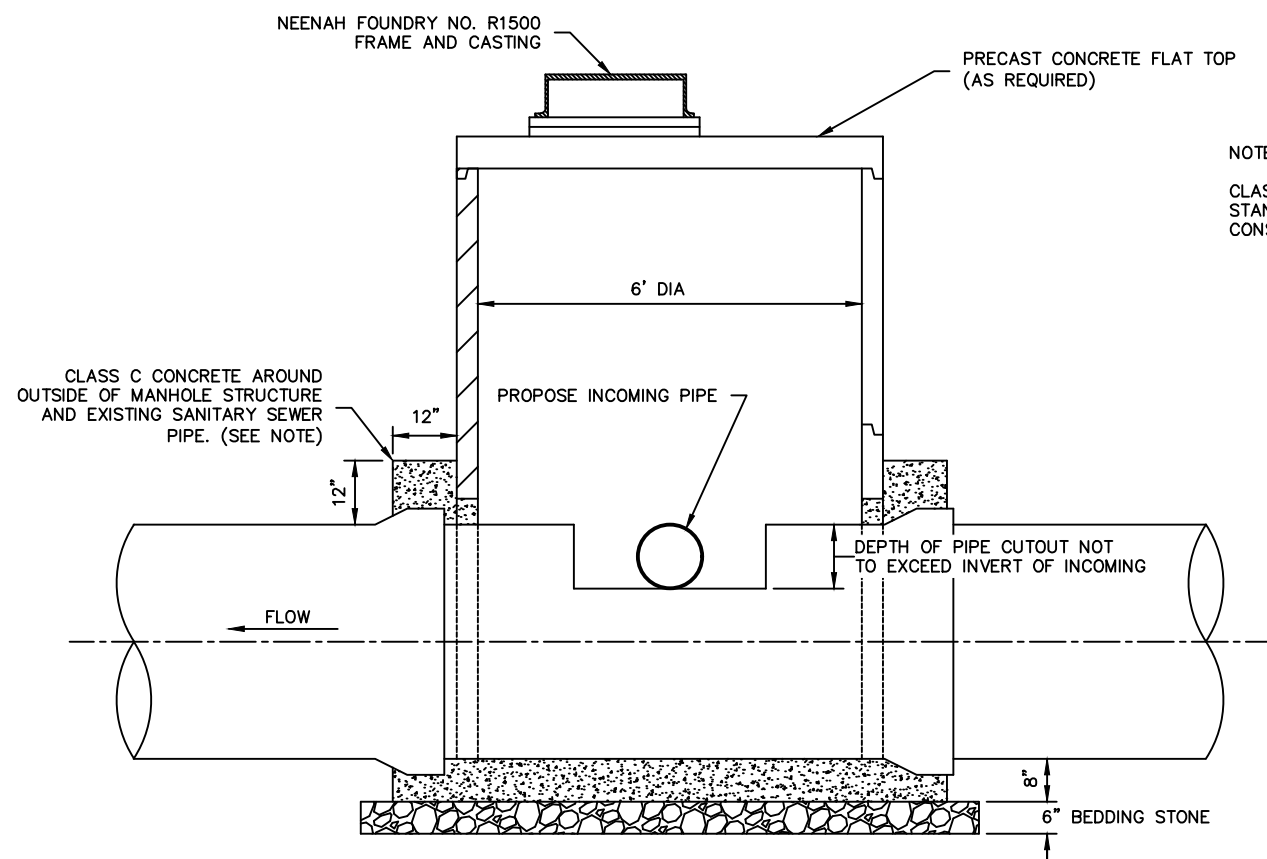
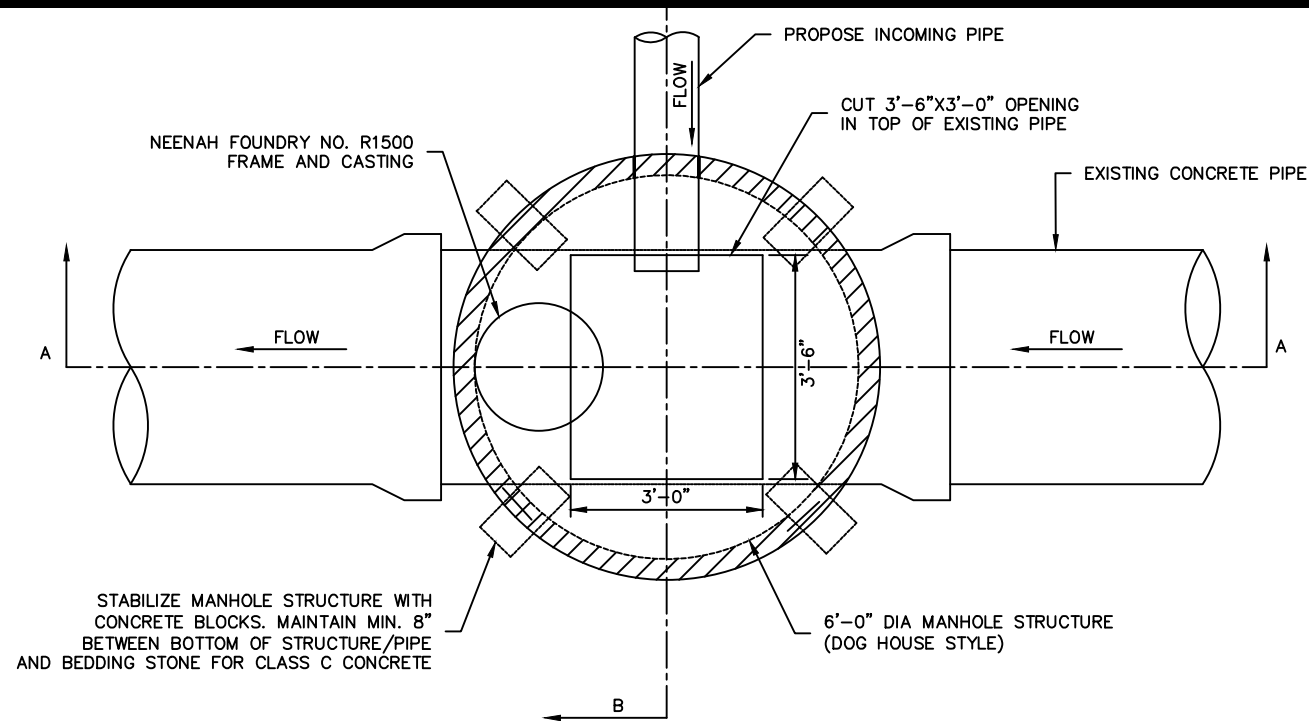
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

**ERIE STREET
PAVEMENT MARKING**

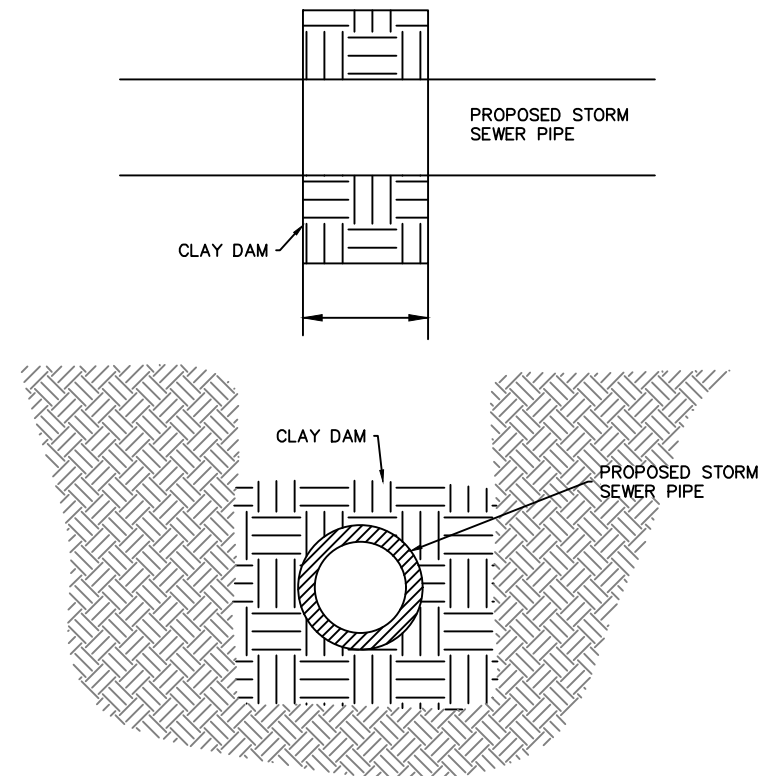
NAME:
ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

	BY	DATE
SURVEYED	BK	11-2020
DRAWN	BK	01-2021
DESIGNED	BK	01-2021
CHECKED	EPR	03-2021

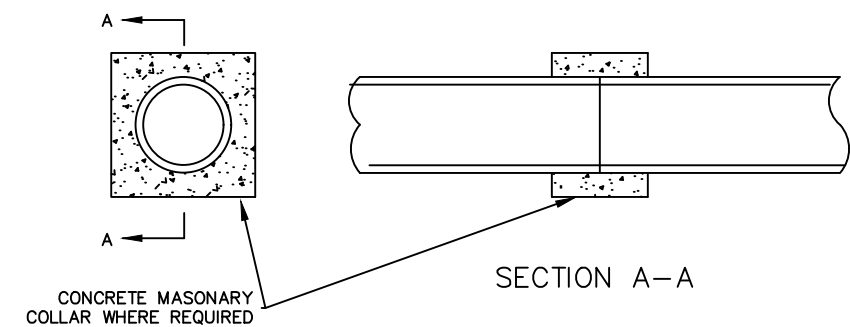
REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS



NOTE:
CLASS C CONCRETE SHALL BE IN ACCORDANCE WITH
STANDARD SPECIFICATIONS FOR SEWER AND WATER
CONSTRUCTION ON WISCONSIN.



CLAY DAM DETAIL
N.T.S.



CONCRETE COLLAR DETAIL



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

**CONSTRUCTION DETAIL
STORM SEWER MANHOLE
CLAY DAM AND CONCRETE COLLAR**

NAME:
ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT #
21-02

	BY	DATE	REVISIONS / ISSUES			
			NO.	DATE	BY	REMARKS
SURVEYED						
DRAWN	SRL	4-2016				
DESIGNED						
CHECKED						

SHEET
NO.
C501



**** WIDTH SHOWN ELSEWHERE
IN THE PLANS**



- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN $\frac{1}{4}$ " - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE, THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

	1/2" EXPANSION JOINT SIDEWALK
	CONTRACTION JOINT FIELD LOCATED
	PAVEMENT MARKING CROSSWALK (WHITE)

SIDEWALK CURB HEAD TO BE SLOPPED FROM MAXIMUM 6" HEIGHT TO 0" FLUSH WITH BACK OF SIDEWALK.

STANDARD DETAIL MODIFIED

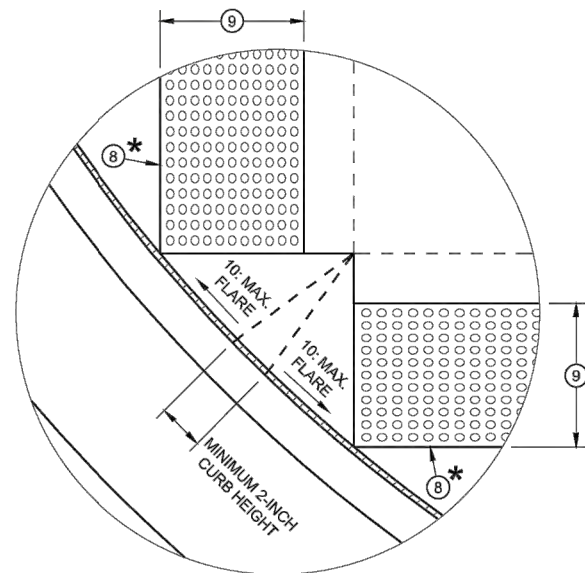
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

NAME:	ERIE STREET RECONSTRUCTION AND UTILITY RELAY
PROJECT #	21-02

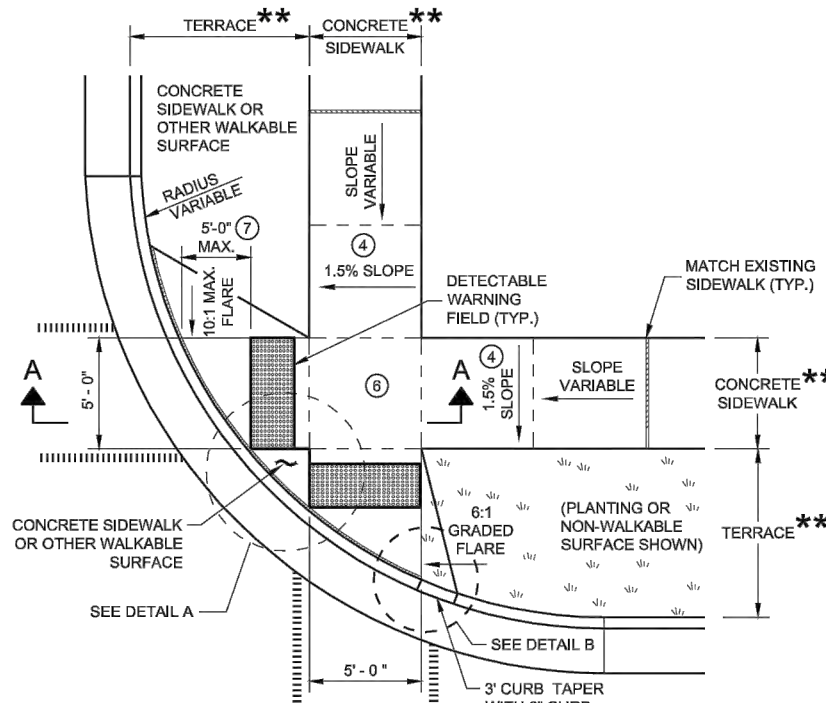
	BY	DATE	REVISIONS / ISSUES			
			NO.	DATE	BY	REMARKS
SURVEYED						
DRAWN	BK	02-2021				
DESIGNED						
CHECKED						



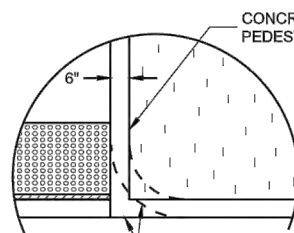
SDD 08D05-b Curb Ramps Types 2 and 3



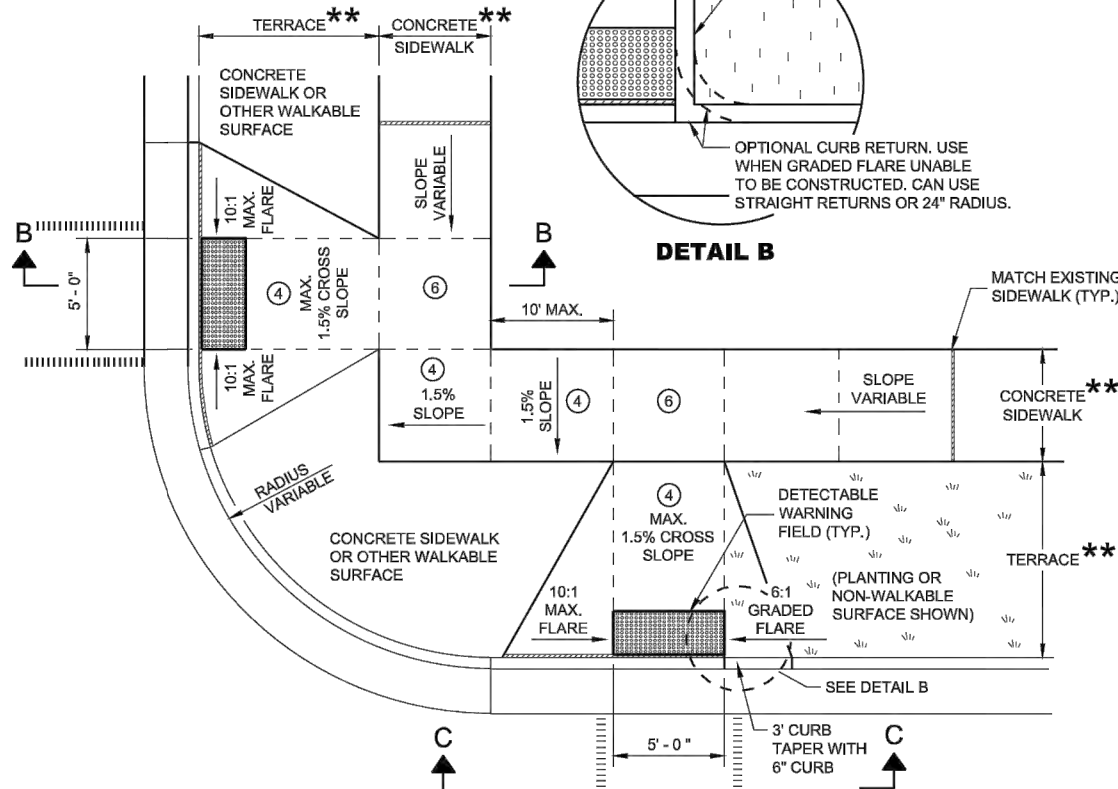
DETAIL A



PLAN VIEW
CURB RAMP TYPE 2
(CENTER OF CORNER RADIUS)



DETAIL B



PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)

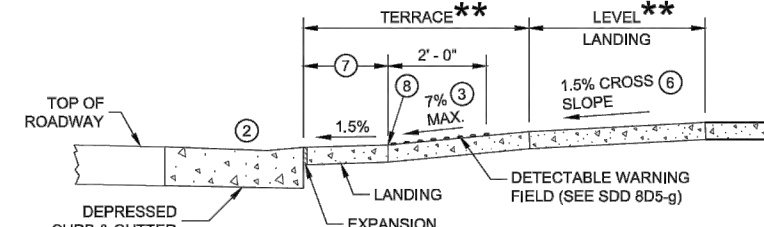
GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.

- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
- WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



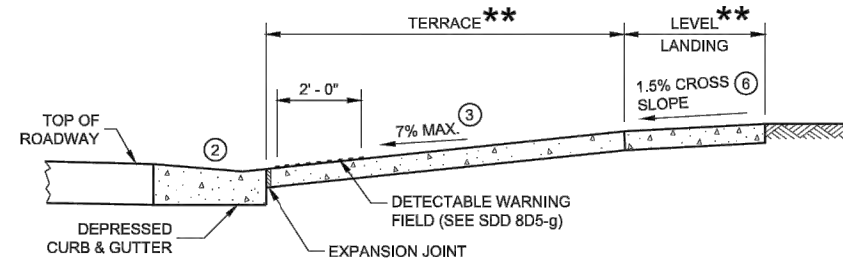
SECTION A - A FOR TYPE 2

* MAXIMUM 2.0% SLOPE
IN ALL DIRECTIONS IN
FRONT OF GRADE BREAK

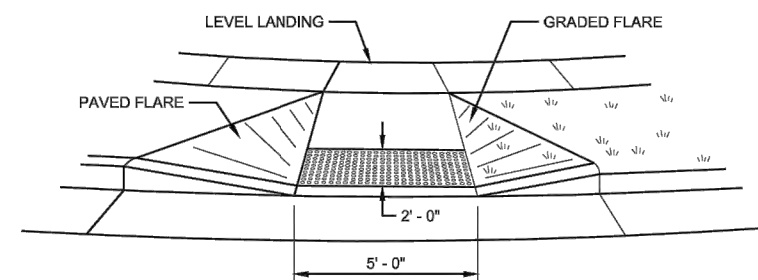
** WIDTH SHOWN ELSEWHERE
IN THE PLANS

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)



SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3

CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

CONSTRUCTION DETAILS CURB RAMPS

NAME:
ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

NO.	DATE	BY	REVISIONS / ISSUES	
			REMARKS	
SURVEYED				
DRAWN	BK	02-2021		
DESIGNED				
CHECKED				

PAGE
NO.

C503

SDD 08D05 - 20b

6

6

6

6

6

6

6

6

6

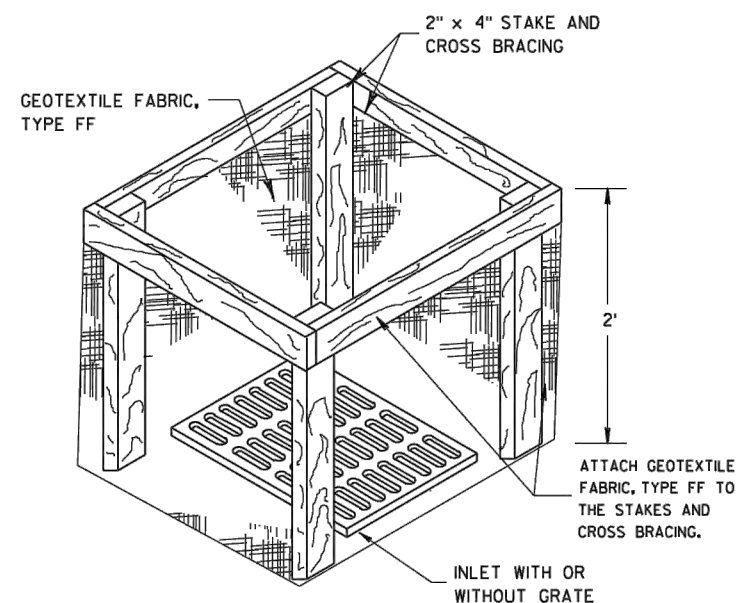
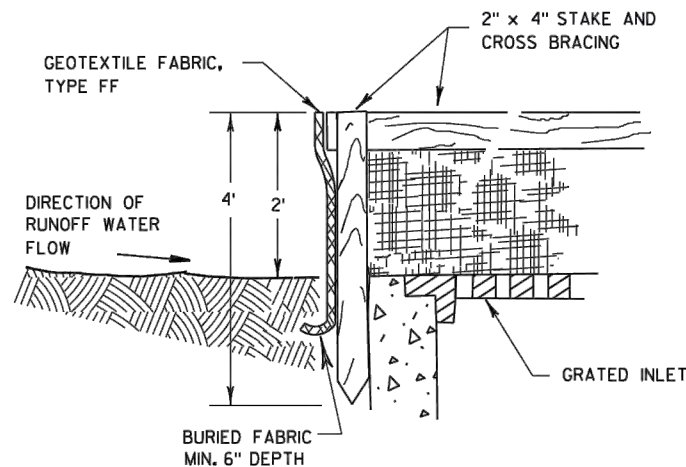
6

6

6

6

 SDD 8e10 Inlet Protection Type A, B, C and D



INLET PROTECTION, TYPE A

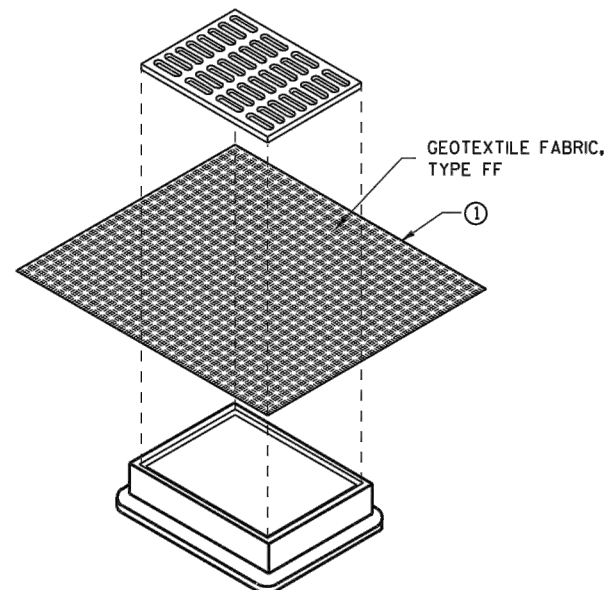
GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

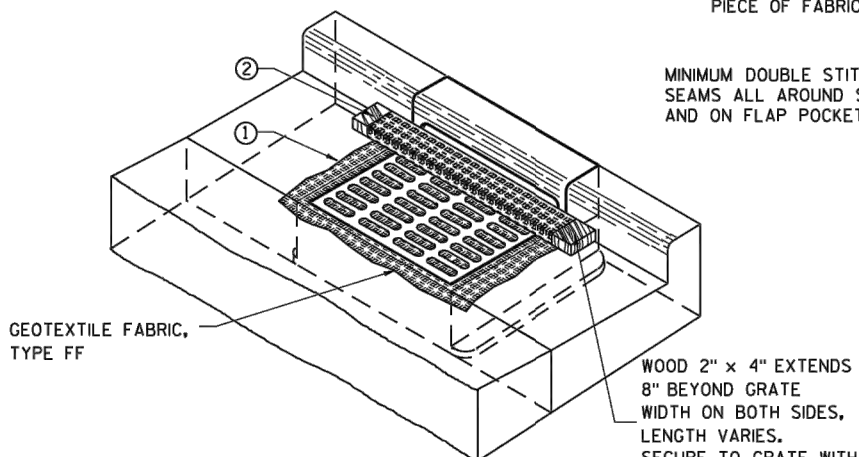
MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**
(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

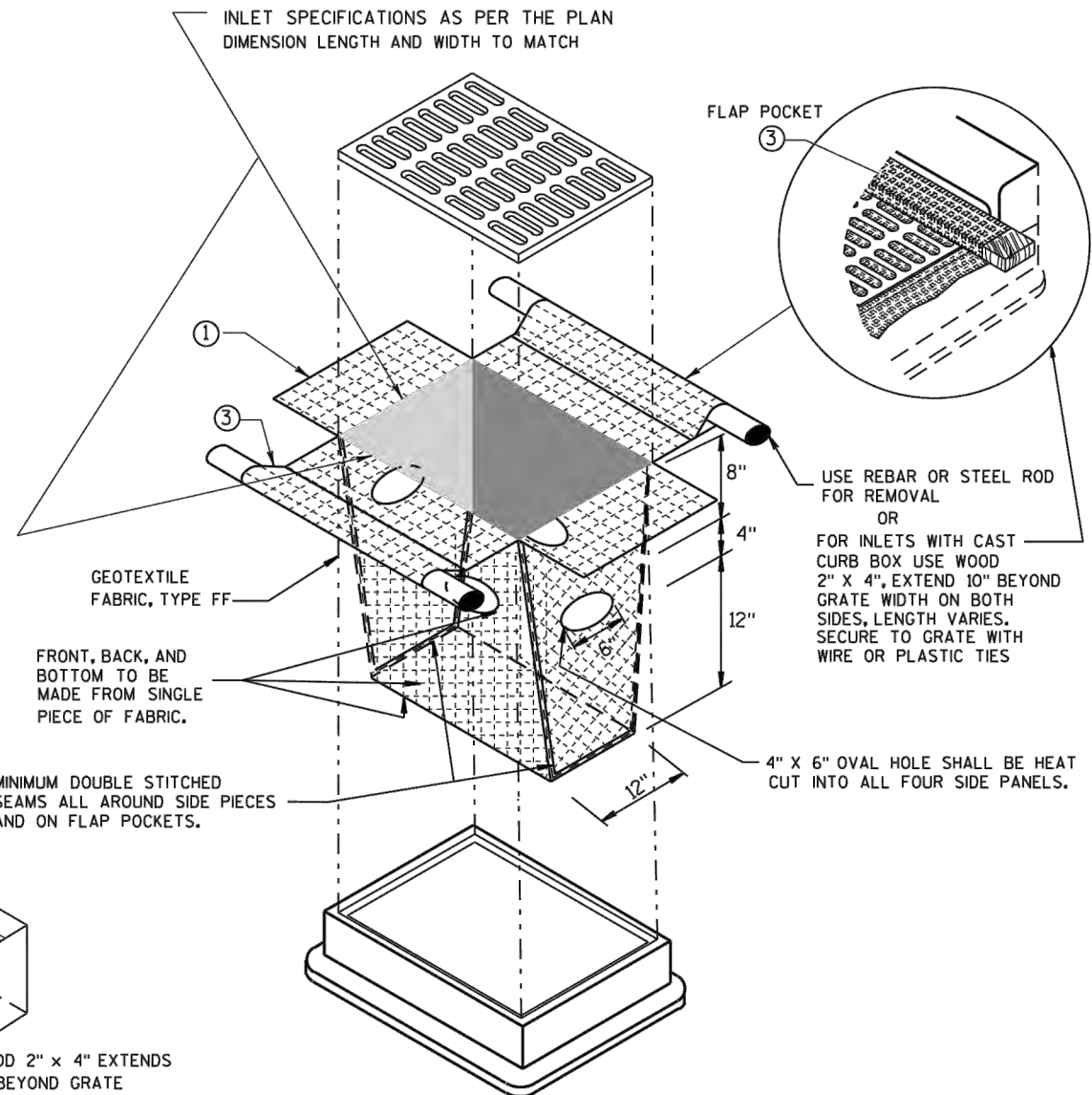
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



INLET PROTECTION, TYPE D
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10-16-02 /S/ Beth Cannestra
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

**CONSTRUCTION DETAIL
INLET PROTECTION**

NAME: ERIE STREET RECONSTRUCTION AND UTILITY RELAY		BY		DATE		REVISIONS / ISSUES				PAGE NO.			
		SURVEYED				NO.		DATE		BY		REMARKS	
PROJECT # 21-02		DRAWN		BK		02-2021							
		DESIGNED											
		CHECKED											
												C504	

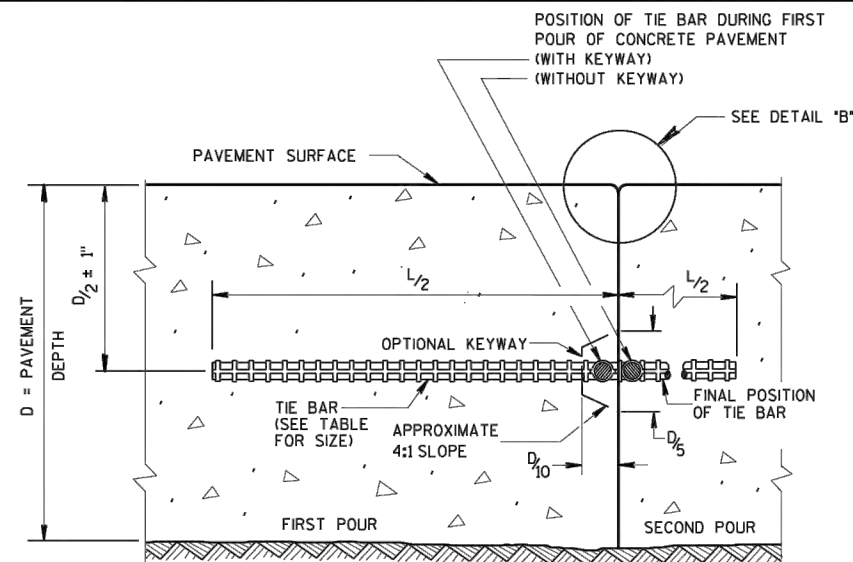
6

S.D.D. 8 E 10-2

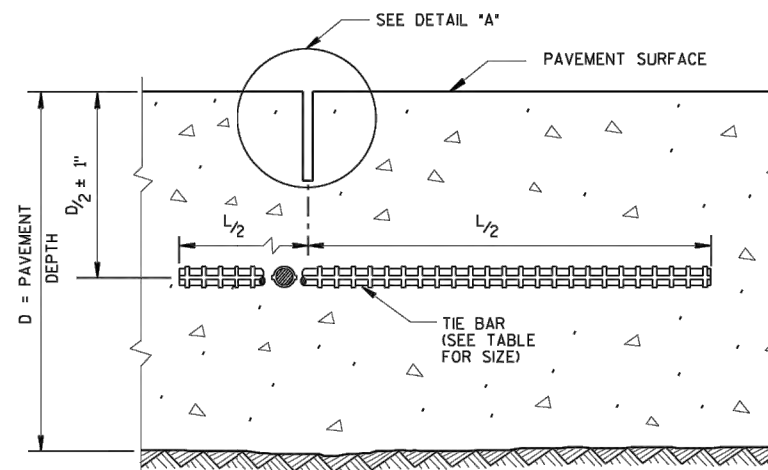
6

S.D.D. 8 E 10-2

SDD 13c1 Concrete Pavement Longitudinal Joints and Ties



CONSTRUCTION JOINT



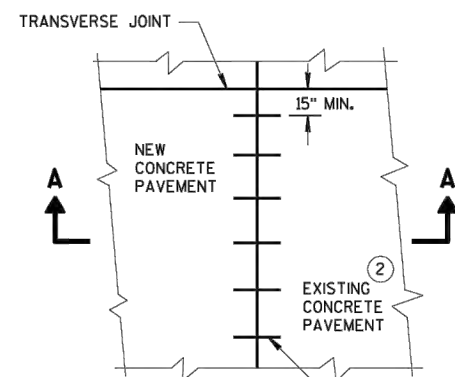
SAWED JOINT

GENERAL NOTES

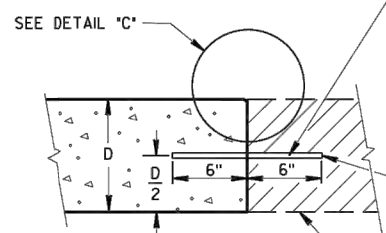
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

- ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

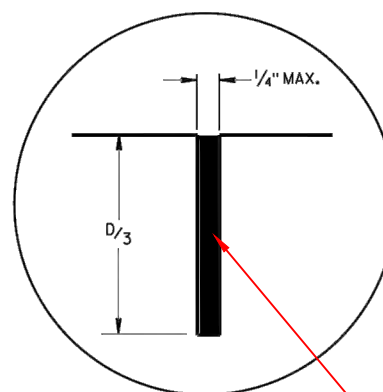


PLAN VIEW

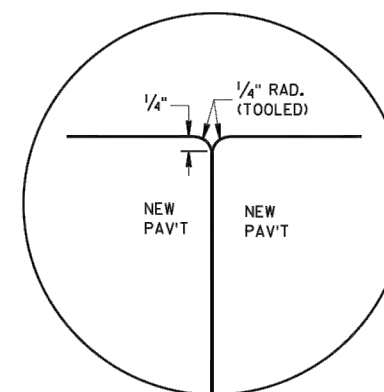


SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT

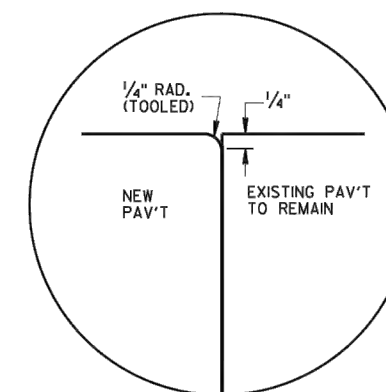
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



DETAIL "A"



DETAIL "B"



DETAIL "C"

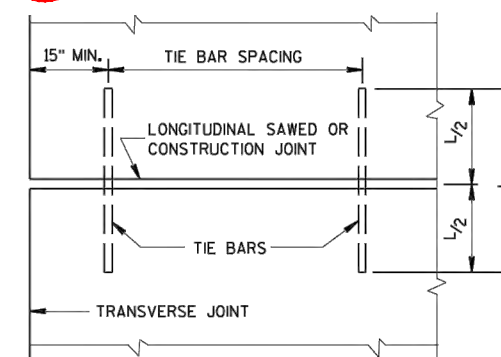
HOT POURED ELASTIC JOINT SEALER

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
$< 10 \frac{1}{2}"$	NO. 4	30"	36"
$\geq 10 \frac{1}{2}"$	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



PLAN VIEW
SHOWING LOCATION OF TIE BARS

STANDARD DETAIL MODIFIED

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR
FHWA

6

S.D.D. 13 C 1-19

6

S.D.D. 13 C 1-19



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

CONSTRUCTION DETAIL CONCRETE PAVING LONGITUDINAL JOINT AND TIES

NAME: ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

BY	DATE	NO.	DATE	BY	REMARKS
SURVEYED					
DRAWN	BK	02-2021			
DESIGNED					
CHECKED					

PAGE NO.
C505

X:\Projects\City Projects\2021\Project 21-02 Erie Street Reconstruction\1200- CAD\Standard Detail Drawing.dwg

 SDD 13c9-a Concrete Pavement Repair and Replacement

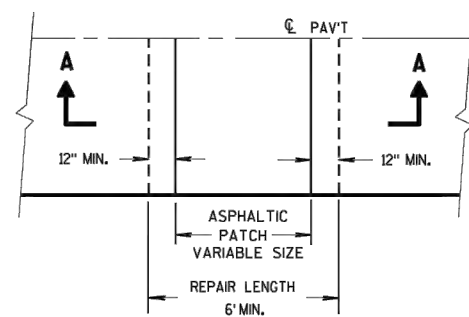
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

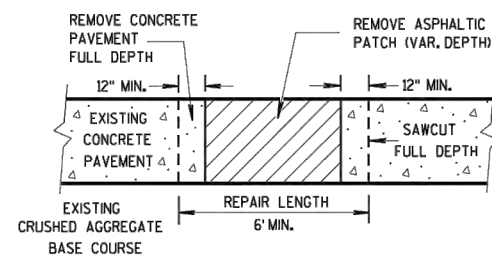
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

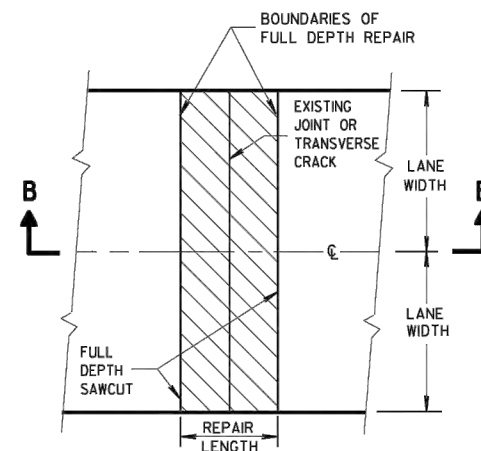
① DOWEL BARS MIGHT NOT EXIST.



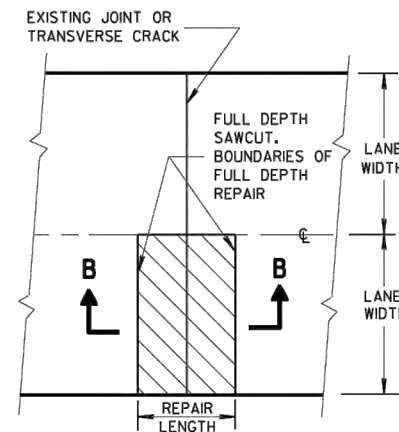
PLAN VIEW



**SECTION A-A
HMA PATCH REMOVAL**

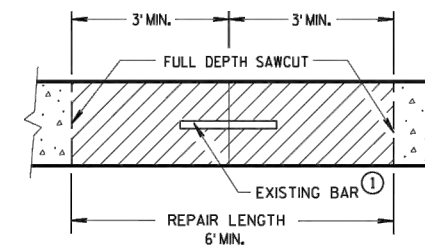


**PLAN VIEW
(DOUBLE LANE REPAIR)**



**PLAN VIEW
(SINGLE LANE REPAIR)**

FULL DEPTH CONCRETE PAVEMENT REMOVAL



**SECTION B-B
CONCRETE REMOVAL**

**CONCRETE PAVEMENT REPAIR
AND REPLACEMENT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

**CONSTRUCTION DETAILS
CONCRETE PAVEMENT REPAIRS**

NAME:
ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

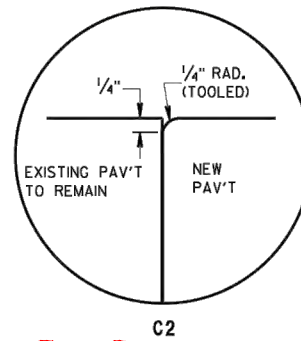
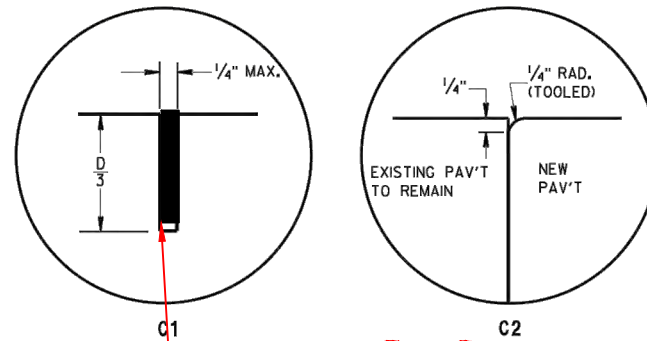
BY	DATE
SURVEYED	
DRAWN	BK
DESIGNED	02-2021
CHECKED	

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

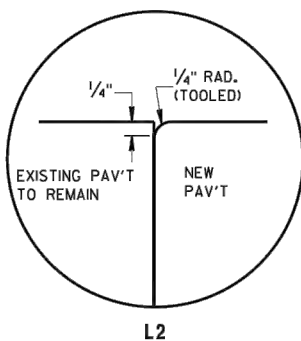
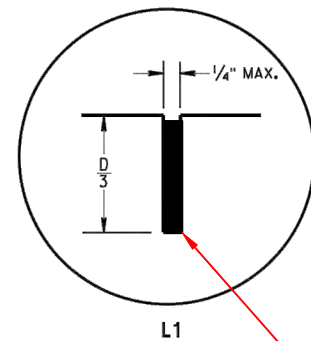
PAGE
NO.

C506

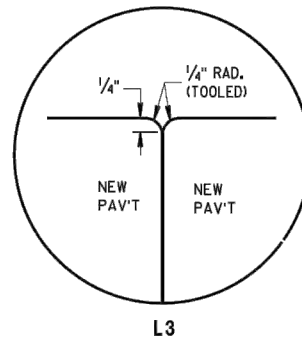
SDD 13c9-b Concrete Pavement Repair and Replacement



TRANSVERSE JOINTS
HOT POURED ELASTIC JOINT SEALER



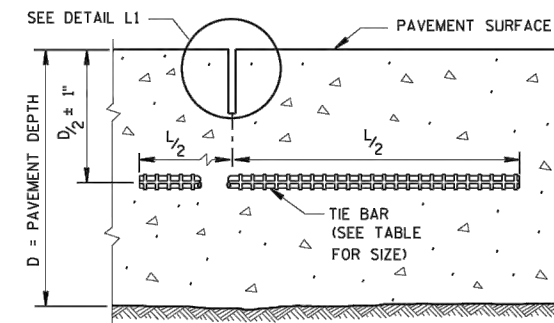
LONGITUDINAL JOINTS
HOT POURED ELASTIC JOINT SEALER



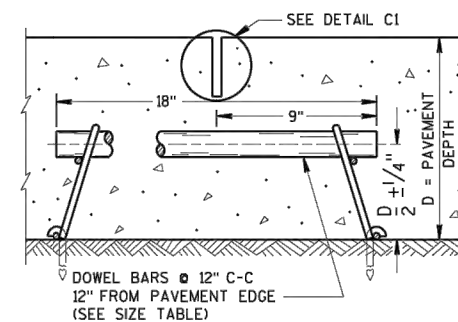
TIE BAR TABLE			
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



SECTION C-C
SAWED LONGITUDINAL JOINT



SECTION F-F
CONTRACTION JOINT

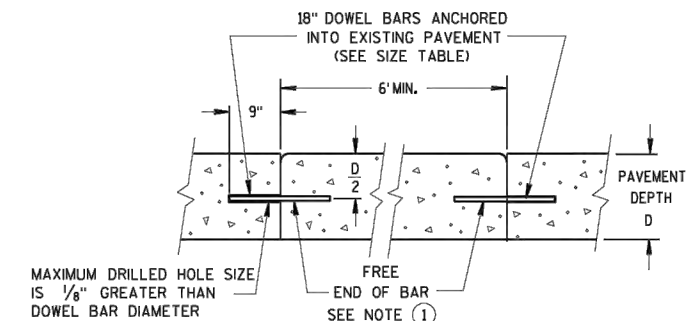
GENERAL NOTES

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

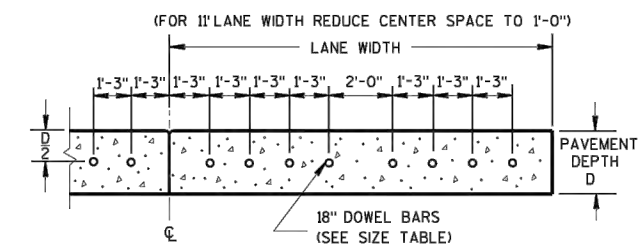
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

① APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



SECTION D-D



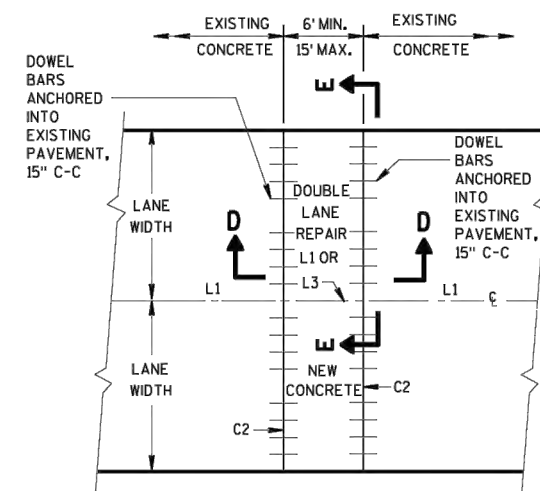
SECTION E-E
DRILLED DOWEL BAR CONSTRUCTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

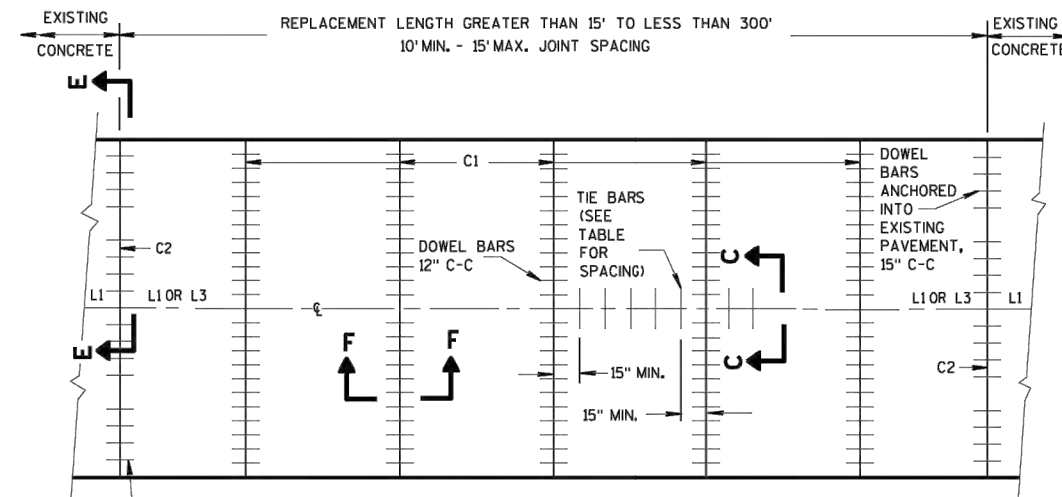
PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	NONE	12'
7", 7 1/2"	1"	1"	14'
8", 8 1/2"	1 1/4"	1 1/4"	15'
9", 9 1/2"	1 1/4"	1 1/4"	15'
10" & ABOVE	1 1/2"	1 1/4"	15'

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW
MULTI-LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW
MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

6

6

S.D.D. 13 C 9-15b

S.D.D. 13 C 9-15b

CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

CONSTRUCTION DETAILS CONCRETE PAVEMENT REPAIRS

NAME: ERIE STREET RECONSTRUCTION AND UTILITY RELAY
PROJECT # 21-02

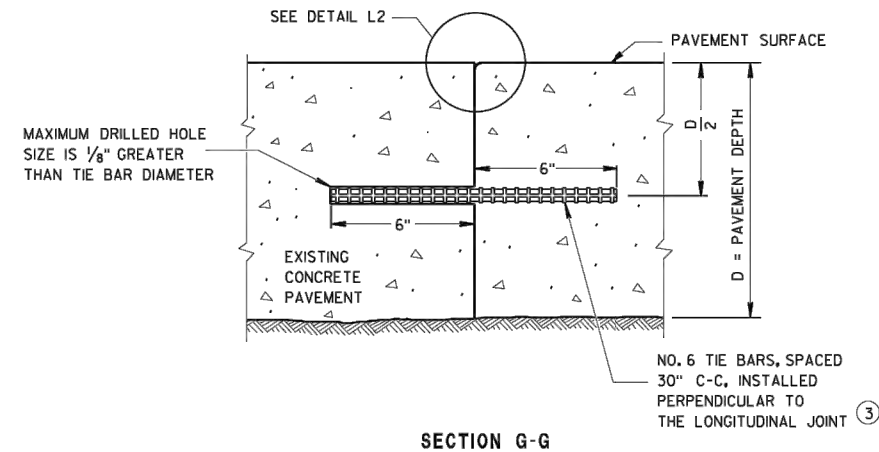
SURVEYED	BY	DATE	REVISIONS / ISSUES			PAGE NO.
			NO.	DATE	REMARKS	
DRAWN	BK	2-2021				C507
DESIGNED						
CHECKED						



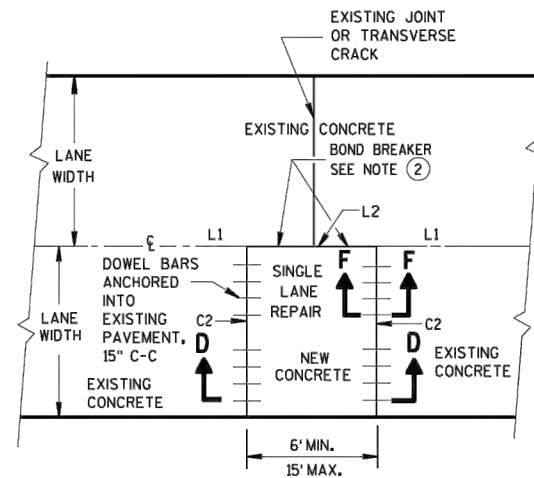
SDD 13c9-c Concrete Pavement Repair and Replacement

GENERAL NOTES

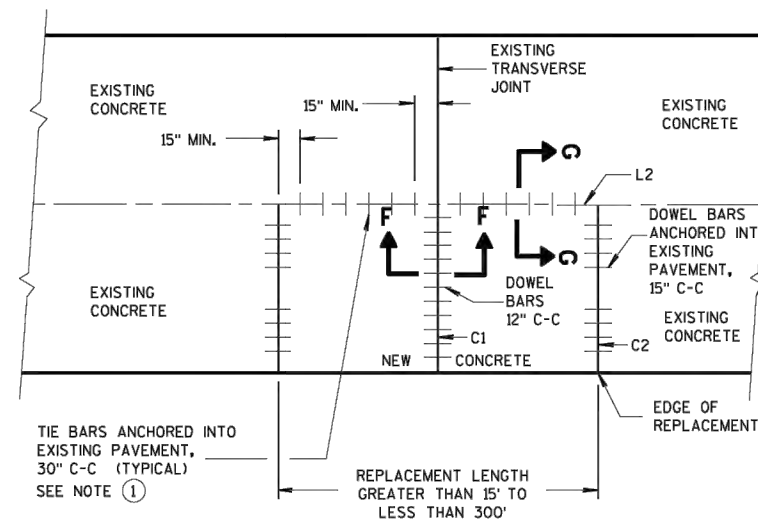
- WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
- ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



SECTION G-G
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



PLAN VIEW
SINGLE LANE
CONCRETE PAVEMENT REPAIR



PLAN VIEW
SINGLE LANE
CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE
FHWA

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVISOR



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

CONSTRUCTION DETAILS CONCRETE PAVEMENT REPAIRS

NAME:
ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT #
21-02

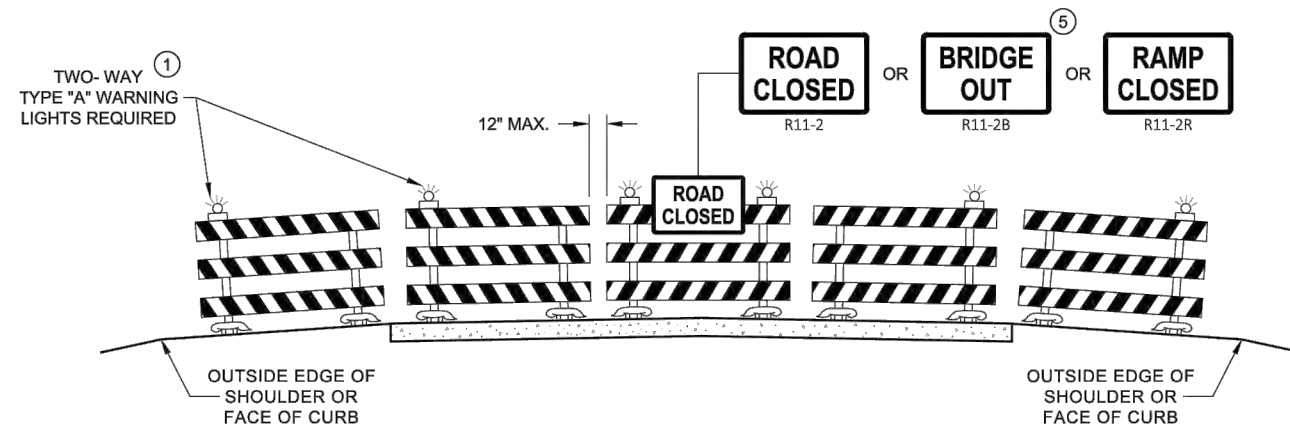
	BY	DATE	REVISIONS / ISSUES			
			NO.	DATE	BY	REMARKS
SURVEYED						
DRAWN	BK	02-2021				
DESIGNED						
CHECKED						

PAGE
NO.

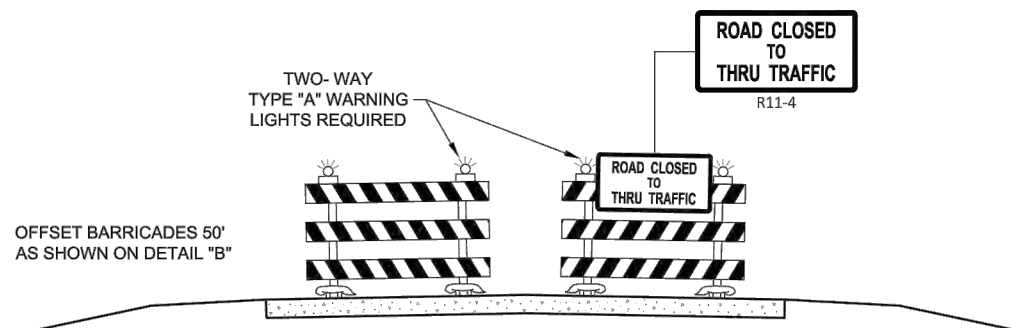
C508



SDD 15C02-b Barricades and Sign for Various Closures



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

TRAFFIC CONTROL DETAILS BARRICADES AND SIGNS

NAME:
ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

	BY	DATE
SURVEYED		
DRAWN	BK	01-2021
DESIGNED	BK	01-2021
CHECKED	EPR	01-2021

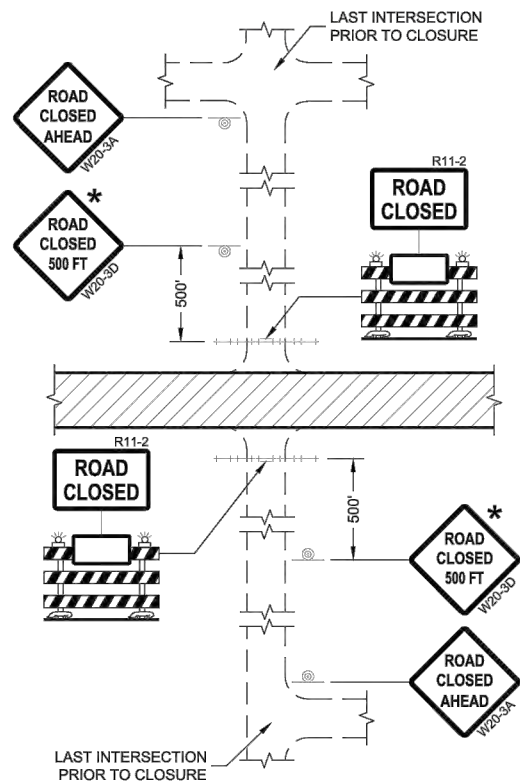
REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

PAGE
NO.

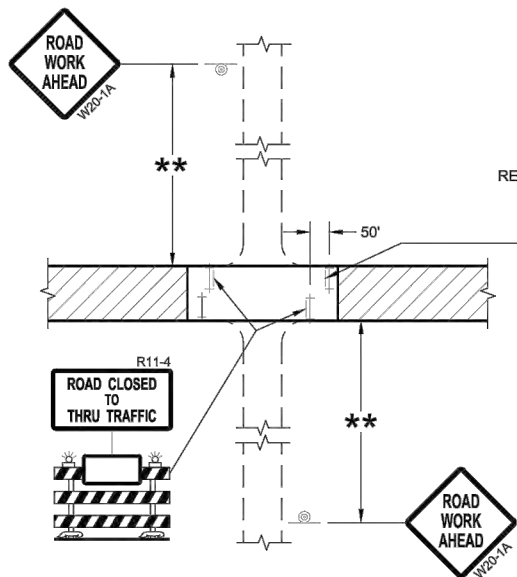
C509



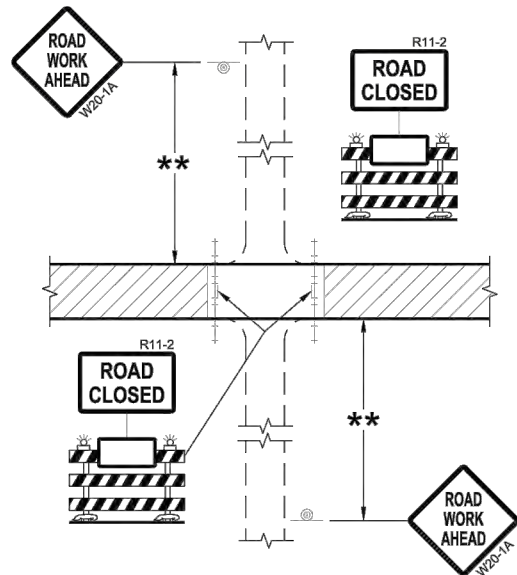
SDD 15C03 Barricades and Signs for Sideroad Closures



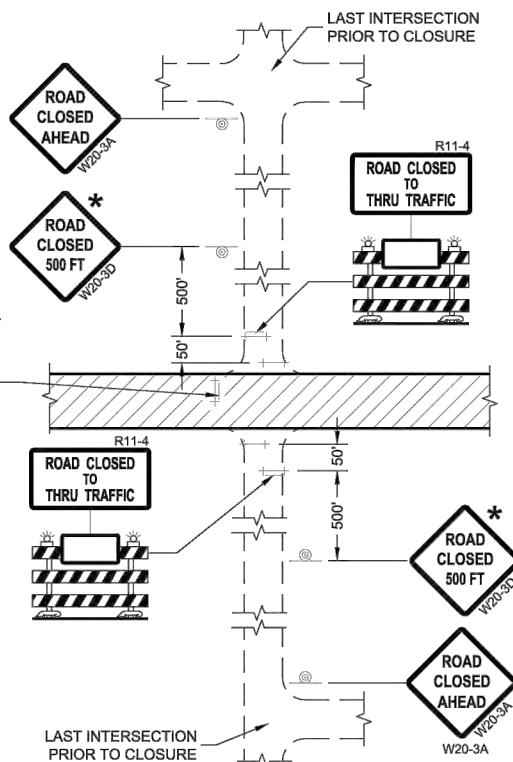
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

BARRICADES 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.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30",
R11-4 AND R11-3 SHALL BE 60" X 30".

- * OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- ** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA

6

SDD 15C03 - 05

6

SDD 15C03 - 05



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

TRAFFIC CONTROL DETAILS BARRICADES AND SIGNS

NAME:
ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

NO.	DATE	BY	REVISIONS / ISSUES
SURVEYED			
DRAWN	BK	01-2021	
DESIGNED	BK	01-2021	
CHECKED	EPR	01-2021	

NO.	DATE	BY	REVISIONS / ISSUES

PAGE
NO.
C510

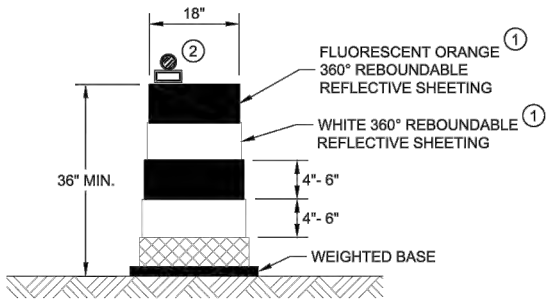
X:\ENG\Projects\City Projects\2021\Project 21-02 Erie Street Reconstruction\1200- CAD\DOT Traffic Details.dwg



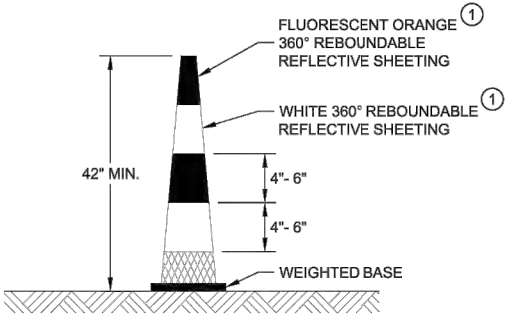
SDD 15C11-b Channelizing Devices, Drums, Cones, Barricades and Vertical Panels

GENERAL NOTES

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

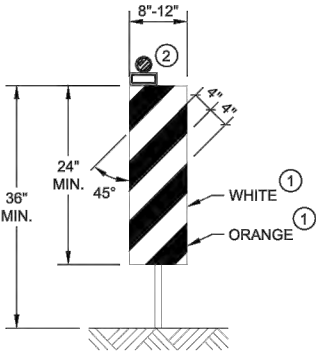


DRUM



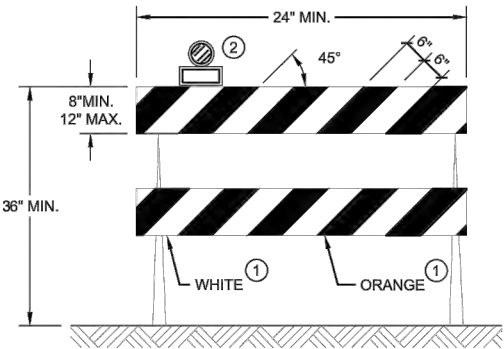
42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS



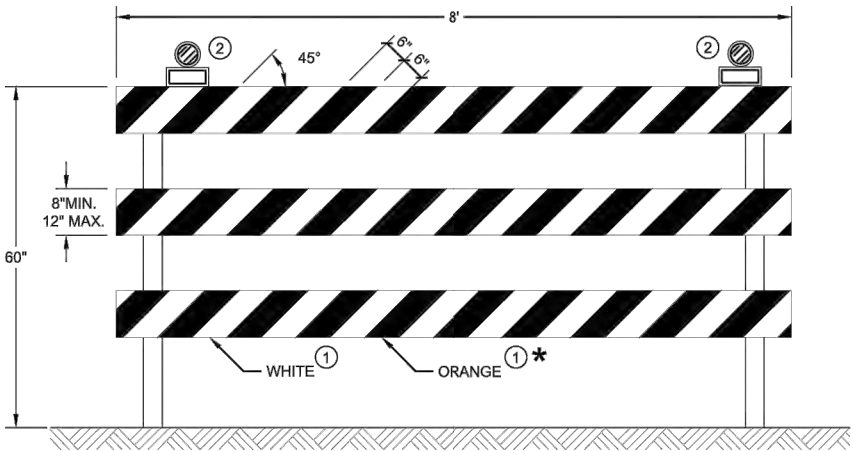
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

THWA



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

TRAFFIC CONTROL DETAILS BARRICADES AND SIGNS

NAME: ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

	BY	DATE
SURVEYED		
DRAWN	BK	01-2021
DESIGNED	BK	01-2021
CHECKED	EPR	01-2021

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

PAGE NO.
C511

X:\ENG\Projects\City Projects\2021\Project 21-02 Erie Street Reconstruction\1200- CAD\DOT Traffic Details.dwg



SDD 15C12 Traffic Control for Lane Closure With Flagging Operation

LEGEND

- SIGN ON PORTABLE OR PERMANENT SUPPORT
- ~~TEMPORARY PORTABLE RUMBLE STRIP ARRAY~~
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND LOCATION OF ALL FLAGGERS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

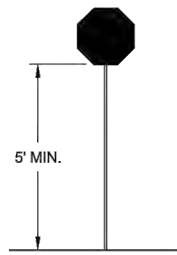
WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

- FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.
- FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
 - SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

~~TEMPORARY PORTABLE RUMBLE STRIPS~~

- UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.
- ~~EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.~~
- ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR THE APPROVED PRODUCTS LIST.
- INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.
- PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.
- DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



STOP/SLOW PADDLE ON SUPPORT STAFF

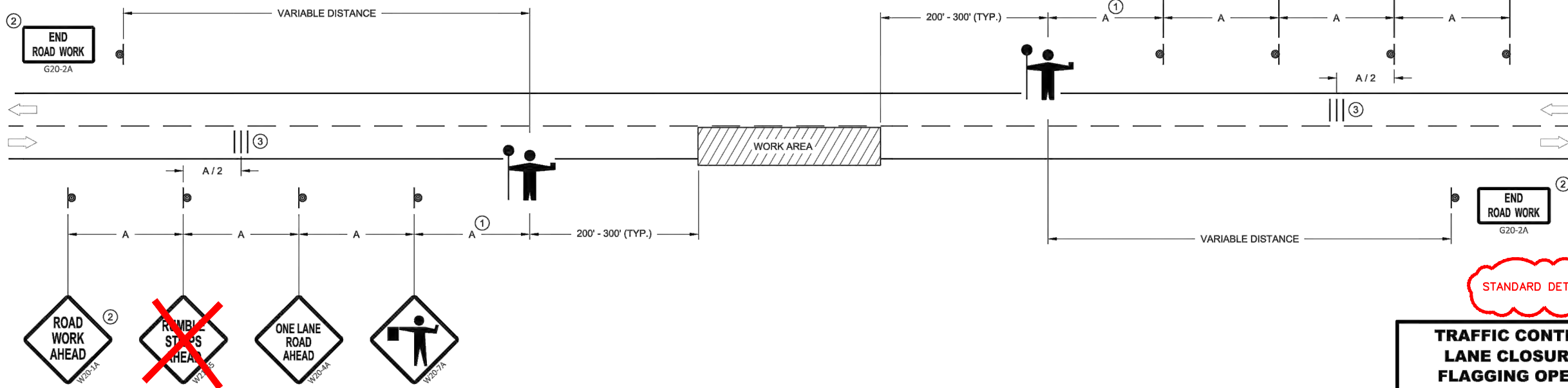
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".

RUMBLE STRIPS NOT REQUIRED



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FWHA



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

TRAFFIC CONTROL DETAILS LANE CLOSURE

NAME: ERIE STREET RECONSTRUCTION AND UTILITY RELAY
PROJECT # 21-02

	BY	DATE
SURVEYED		
DRAWN	BK	01-2021
DESIGNED	BK	01-2021
CHECKED	EPR	01-2021

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

PAGE NO.
C512

X:\ENG\Projects\City Projects\2021\Project 21-02 Erie Street Reconstruction\1200- CAD\DOT Traffic Details.dwg



SDD 15D28 Traffic Control, Work on Shoulder or Parking Lane, Undivided Roadway

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- WORK ZONE

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

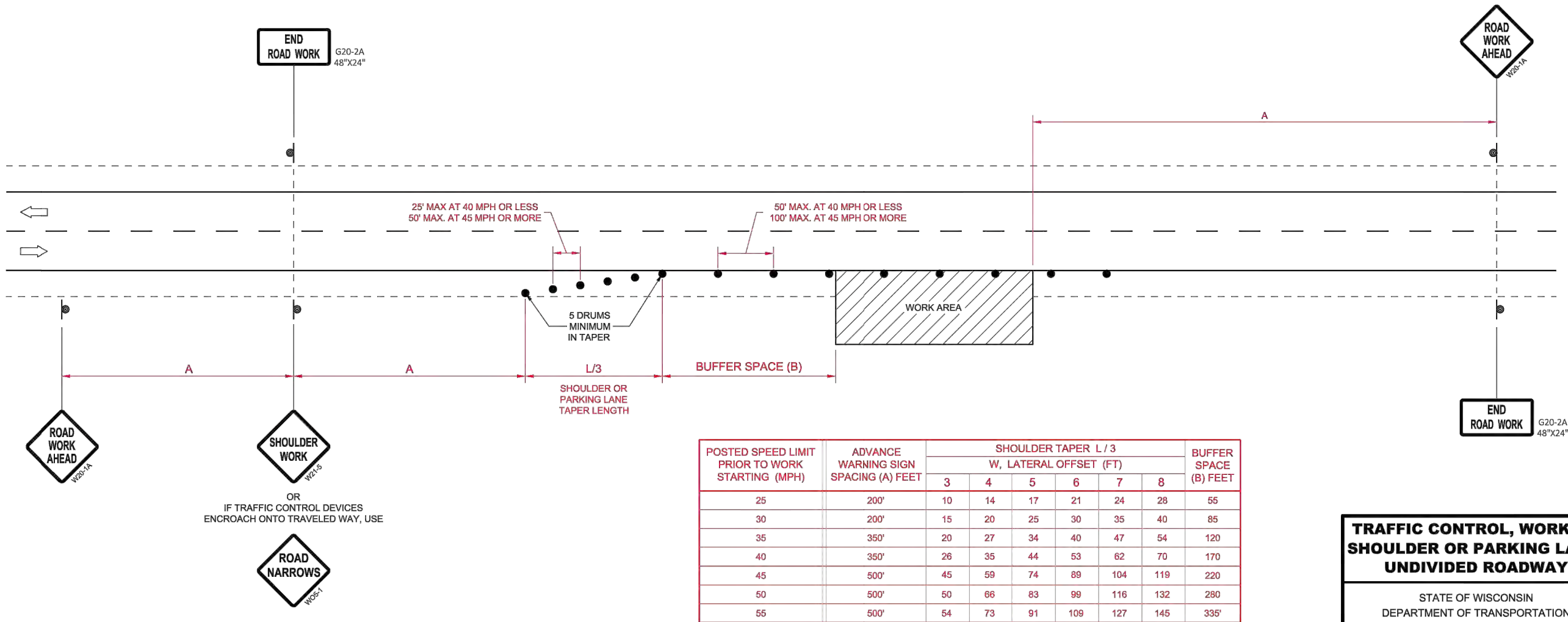
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

FHWA



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

TRAFFIC CONTROL DETAILS SHOULDER CLOSURE

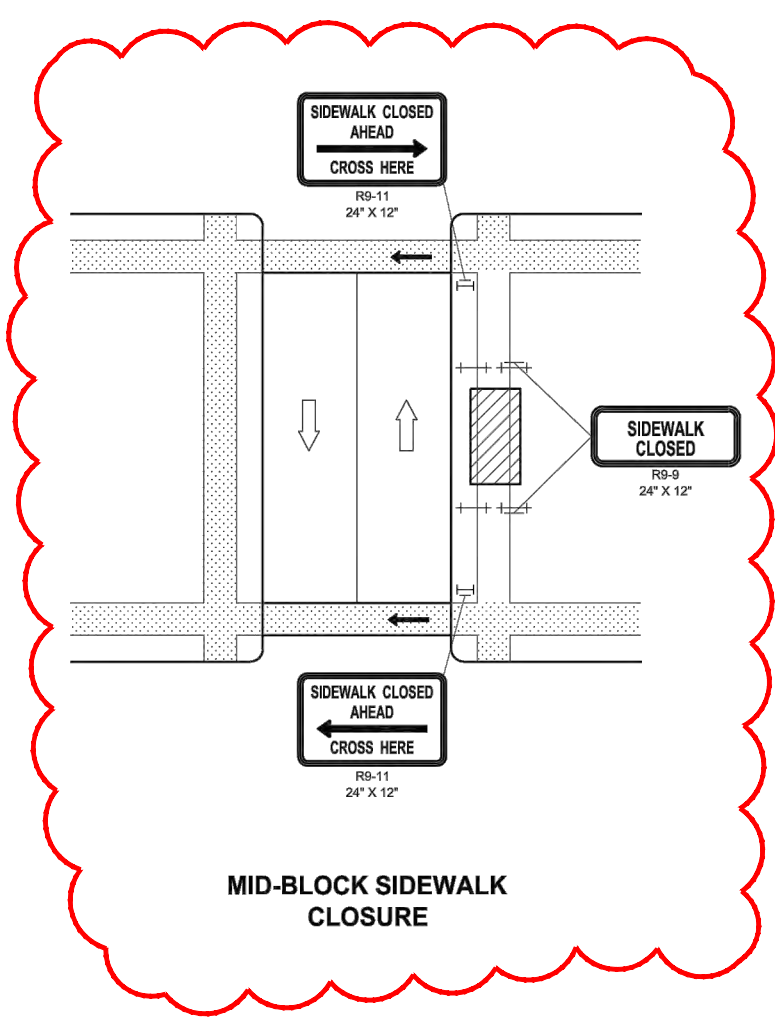
NAME: ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

	BY	DATE
SURVEYED	BK	01-2021
DRAWN	BK	01-2021
DESIGNED	BK	01-2021
CHECKED	EPR	01-2021

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS



SDD 15D30-a Traffic Control, Pedestrian Accommodation



MID-BLOCK SIDEWALK CLOSURE

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

"WO" SIGN IS THE SAME AS "W" SIGN, EXCEPT THE BACKGROUND IS ORANGE.

FOR NIGHTTIME CLOSURE, USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

- ① IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE
- ② "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.
- ③ IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND W011-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.
- ④ TEMPORARY CURB RAMPS. SEE SDD 15D30 SHEET "b".
- ⑤ DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.
- ⑥ TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.
- ⑦ LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STANDARD DETAIL MODIFIED

6

6

SDD 15D30 - 06a

SDD 15D30 - 06a



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

TRAFFIC CONTROL DETAILS
SIDEWALK CLOSURE

NAME: ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

	BY	DATE
SURVEYED		
DRAWN	BK	01-2021
DESIGNED	BK	01-2021
CHECKED	EPR	01-2021

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS



SDD 15D33 Traffic Control, One Lane Road with Temporary Signals

LEGEND

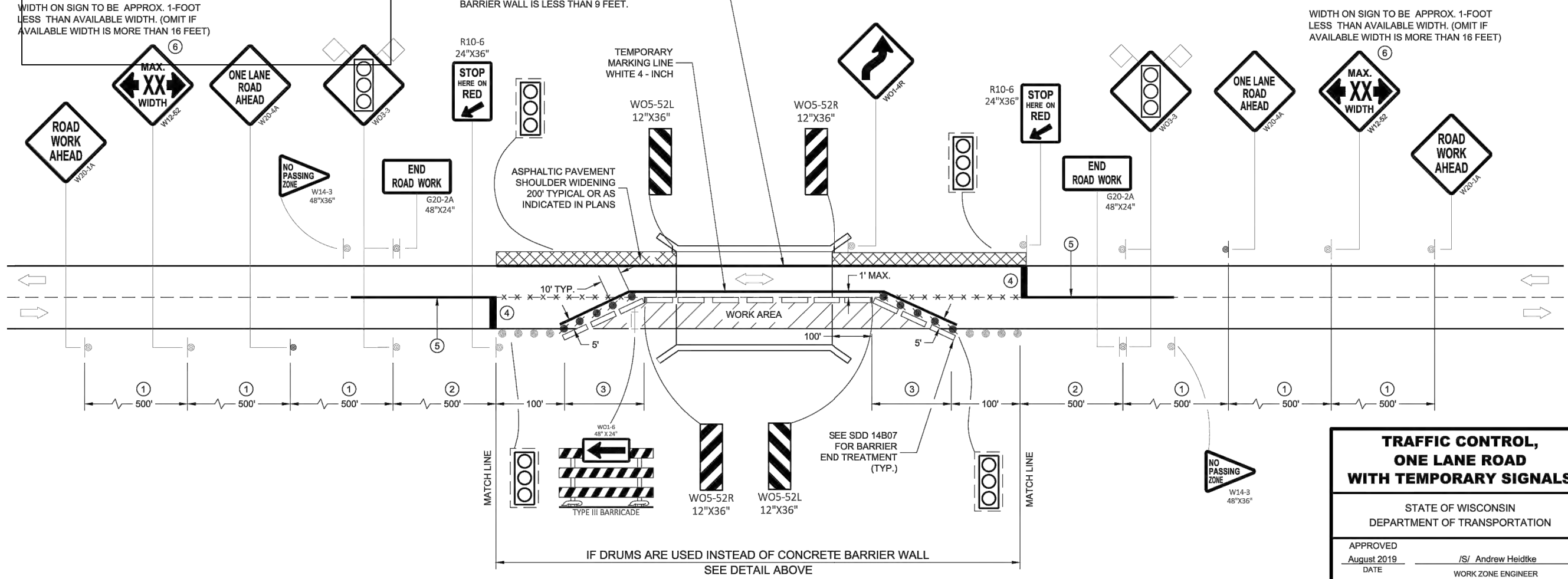
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLAGS, 16" X 16" MIN. (ORANGE)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- ASPHALTIC PAVEMENT WIDENING
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY SIGNAL. SEE SDD 09G02 FOR EXACT PLACEMENT

GENERAL NOTES

- 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 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.
- THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.
- ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER.
- PLACE TEMPORARY PAVEMENT MARKING EDGELINE AND CENTERLINE AND REMOVE EXISTING PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS OR AS NOTED ON DETAIL.
- 500 FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35 - 40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25 - 30 MPH, USE 200 FOOT TYPICAL SPACING.
 - USE 300 FOOT SPACING IF THE PRE - CONSTRUCTION REGULATORY SPEED IS 35 MPH OR LESS.
 - DIMENSION DETERMINED BY CBTP TAPER FROM EDGE LINE TO TANGENT SECTION OF THE ROAD.
 - TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18 - INCH.
 - 700 FOOT TEMPORARY MARKING LINE, DOUBLE YELLOW 4 - INCH. WHEN THE DISTANCE FOR THE PRECEDING NO - PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.
 - SEE SDD 15C02 - SHEET "F" FOR ADVANCED WIDTH RESTRICTION SIGNING.

6

SDD 15D33 - 06



6

SDD 15D33 - 06

**TRAFFIC CONTROL,
ONE LANE ROAD
WITH TEMPORARY SIGNALS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2019 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

TRAFFIC CONTROL DETAILS SIDEWALK CLOSURE

NAME: ERIE STREET RECONSTRUCTION
AND UTILITY RELAY
PROJECT # 21-02

	BY	DATE
SURVEYED	BK	01-2021
DRAWN	BK	01-2021
DESIGNED	BK	01-2021
CHECKED	EPR	01-2021

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

PAGE NO.
C515

X:\ENG\Projects\City Projects\2021\Project 21-02 Erie Street Reconstruction\1200- CAD\DOT Traffic Details.dwg