CITY OF DE PERE

PROJECT
22-09

POND AND DRAINAGE SYSTEM
CONSTRUCTION

BID DATE:
MAY 5, 2022
@ 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. Bidders will be charged an additional fee of $30 to submit a bid electronically. 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.
## INTRODUCTORY INFORMATION

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>00 00 01</td>
<td>PROJECT MANUAL COVER</td>
</tr>
<tr>
<td>00 01 10</td>
<td>TABLE OF CONTENTS</td>
</tr>
</tbody>
</table>

## PROJECT BID DOCUMENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>00 11 13</td>
<td>ADVERTISEMENT TO BID</td>
</tr>
<tr>
<td>00 21 13</td>
<td>INSTRUCTIONS TO BIDDERS</td>
</tr>
<tr>
<td>00 41 13</td>
<td>BID FORM</td>
</tr>
<tr>
<td>00 41 43</td>
<td>BID SCHEDULE</td>
</tr>
<tr>
<td>00 43 13</td>
<td>BID BOND</td>
</tr>
<tr>
<td>00 43 33</td>
<td>PROPOSED PRODUCTS FORM</td>
</tr>
<tr>
<td>00 43 36</td>
<td>TABULATION OF SUBCONTRACTORS</td>
</tr>
</tbody>
</table>

## CONTRACTING REQUIREMENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>00 51 00</td>
<td>NOTICE OF AWARD</td>
</tr>
<tr>
<td>00 52 13</td>
<td>CONTRACT</td>
</tr>
<tr>
<td>00 55 00</td>
<td>NOTICE TO PROCEED</td>
</tr>
<tr>
<td>00 61 13</td>
<td>PAYMENT BOND</td>
</tr>
<tr>
<td>00 61 16</td>
<td>PERFORMANCE BOND</td>
</tr>
<tr>
<td>00 62 76</td>
<td>APPLICATION FOR PAYMENT</td>
</tr>
<tr>
<td>00 65 16</td>
<td>CERTIFICATE OF SUBSTANTIAL COMPLETION</td>
</tr>
</tbody>
</table>
### DIVISION 1  GENERAL REQUIREMENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 10 00</td>
<td>SUMMARY OF WORK</td>
</tr>
<tr>
<td>01 22 02</td>
<td>MEASUREMENT AND PAYMENT STORM SEWER</td>
</tr>
<tr>
<td>01 22 04</td>
<td>MEASUREMENT AND PAYMENT STREET AND DRAINAGE CONSTRUCTION</td>
</tr>
<tr>
<td>01 22 05</td>
<td>MEASUREMENT AND PAYMENT SPECIAL CONSTRUCTION</td>
</tr>
<tr>
<td>01 29 00</td>
<td>PAYMENT PROCEDURES</td>
</tr>
<tr>
<td>01 32 33</td>
<td>CONSTRUCTION PHOTOGRAPHS</td>
</tr>
<tr>
<td>01 33 00</td>
<td>SUBMITTALS</td>
</tr>
<tr>
<td>01 41 00</td>
<td>REGULATORY REQUIREMENTS</td>
</tr>
<tr>
<td>01 71 23</td>
<td>FIELD ENGINEERING</td>
</tr>
</tbody>
</table>

### SUPPLEMENTAL SPECIAL PROVISIONS

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>32 90 10</td>
<td>NATIVE LANDSCAPING</td>
</tr>
</tbody>
</table>

### EXHIBITS

A Geotechnical Engineering Services Report for the Front Street Pond, De Pere, WI

### CITY OF DE PERE 2022 STANDARD SPECIFICATIONS

### CONTRACTING REQUIREMENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>00 70 00</td>
<td>GENERAL CONDITIONS</td>
</tr>
<tr>
<td></td>
<td>(See City of De Pere 2022 Standard Specifications)</td>
</tr>
</tbody>
</table>

### DIVISION 31 – EARTHWORK

(See City of De Pere 2022 Standard Specifications)

### DIVISION 32 – EXTERIOR IMPROVEMENTS

(See City of De Pere 2022 Standard Specifications)

### DIVISION 33 – UTILITIES

(See City of De Pere 2022 Standard Specifications)
Online bids will be received and accepted for Project 22-09 Pond and Drainage System Construction via the online electronic bidding service through QuestCDN.com, until 1:00 PM, Thursday, May 5, 2022, at which time they will be publicly accepted, displayed and read aloud.

Project 22-09 for which proposals are being sought includes the following approximate quantities:

- 450 LF New and Relay Storm Sewer (12-Inch to 42-Inch) and Associated Appurtenances
- 6,850 CY Unclassified Excavation for Pond Construction
- 4,000 SY Landscape Restoration
- Spot Curb and Gutter Repair

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 #8145721 on Quest’s Project Search page. Project documents must be downloaded from QuestCDN which will add your company to the Planholder List and allow access to vBid online bidding for the submittal of your bid. Bidders will be charged an additional fee of $30 to submit a bid electronically. 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. Contact QuestCDN Customer Support at 952-233-1632 or info@questcdn.com for assistance in membership registration, downloading digital project information and vBid online bid submittal questions.

Each proposal shall be accompanied by a 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 bid bond shall be forfeited to the City of De Pere as liquidated damages.

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, May 2, 2022. Prospective bidders who have previously submitted such forms subsequent to January 1, 2022 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 15th day of April 2022.

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

Project 22-09
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 for the Front Street Stormwater Pond, De Pere, WI dated January 25, 2021 prepared 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. The fully executed bid bond must be uploaded into QuestCDN. If the bidder elects to furnish bid security other than a bid bond, the bid security must be submitted in a sealed envelope enclosed in a separate package plainly marked on the outside with the notation “BID SECURITY” along with the project number and name and addressed to the Board of Public Works of the City of De Pere, Municipal Service Center, 925 S. Sixth Street, De Pere, WI 54115 prior to the deadline for submission of bids.

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 submitted electronically using the QuestCDN online bidding vBid platform. No paper bids will 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 as indicated in the Advertisement to Bid. The bid opening can be viewed live via the GoToMeeting information shown below. An abstract of the amounts of the base bids and major alternatives, 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://meet.goto.com/740420981

You can also dial in using your phone. (For supported devices, tap a one-touch number below to join instantly.)
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 identity 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 22-09

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 May 5, 2022 is to furnish and deliver all materials, and to perform and do all work on the project designated per Section 01 10 00 Summary of Work.

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:

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<tr>
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<th>Addendum Date</th>
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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: $__________________________
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)
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)
### BID SCHEDULE – UNIT PRICE

<table>
<thead>
<tr>
<th>ITEM</th>
<th>ITEM DESCRIPTION</th>
<th>UNIT</th>
<th>QUANTITY</th>
<th>UNIT PRICE</th>
<th>AMOUNT BID</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STORM SEWER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST-01</td>
<td>Provide 42” RCP (Class III) Storm Sewer (Granular Backfill)</td>
<td>LF</td>
<td>32</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>ST-02</td>
<td>Provide 42” RCP (Class III) Storm Sewer (Natural Backfill)</td>
<td>LF</td>
<td>100</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>ST-03</td>
<td>Remove and Relay 36” RCP (Class III) Storm Sewer</td>
<td>LF</td>
<td>34</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>ST-04</td>
<td>Provide 24” RCP (Class III) Storm Sewer</td>
<td>LF</td>
<td>340</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>ST-05</td>
<td>Provide 12” PVC or RCP (Class III) Storm Sewer</td>
<td>LF</td>
<td>160</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>ST-06</td>
<td>Provide 12” PVC Storm Sewer</td>
<td>LF</td>
<td>110</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>ST-07</td>
<td>Provide 8’ Diameter Storm Manhole (With Internal Weir)</td>
<td>VF</td>
<td>7</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>ST-08</td>
<td>Provide 6’ Diameter Storm Manhole</td>
<td>VF</td>
<td>13</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>ST-09</td>
<td>Provide 4’ Diameter Storm Manhole</td>
<td>VF</td>
<td>9</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>ST-10</td>
<td>Provide Pond Discharge Structure</td>
<td>EA</td>
<td>1</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>ST-11</td>
<td>Provide Type B Inlet</td>
<td>EA</td>
<td>2</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>ST-12</td>
<td>Connect to Structure and/or Existing Pipe</td>
<td>EA</td>
<td>3</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>ST-13</td>
<td>Core Drill Existing Structure</td>
<td>EA</td>
<td>1</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>ITEM</td>
<td>ITEM DESCRIPTION</td>
<td>UNIT</td>
<td>QUANTITY</td>
<td>UNIT PRICE</td>
<td>AMOUNT BID</td>
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<tr>
<td>ST-14</td>
<td>Provide 42” RCP Endwall</td>
<td>EA</td>
<td>1</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>ST-15</td>
<td>Provide 24” RCP Endwall with Grate</td>
<td>EA</td>
<td>1</td>
<td>$________</td>
<td>$________</td>
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<tr>
<td>ST-16</td>
<td>Provide 12&quot; RCP Endwall</td>
<td>EA</td>
<td>3</td>
<td>$________</td>
<td>$________</td>
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<tr>
<td>ST-17</td>
<td>12&quot; Backflow Preventer (Tideflex Checkmate or Equal)</td>
<td>EA</td>
<td>1</td>
<td>$________</td>
<td>$________</td>
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<tr>
<td>ST-18</td>
<td>Abandon/Remove Existing Storm Sewer Appurtenances</td>
<td>LS</td>
<td>1</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>SD-01</td>
<td>Provide Clearing and Grubbing</td>
<td>IN</td>
<td>155</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>SD-02</td>
<td>Unclassified Excavation</td>
<td>CY</td>
<td>6,150</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>SD-03</td>
<td>Provide Large Asphalt Patch (4&quot; Depth Minimum)</td>
<td>SY</td>
<td>62</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>SD-04</td>
<td>Remove and Replace 24” Concrete Curb and Gutter</td>
<td>LF</td>
<td>35</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>SD-05</td>
<td>Provide #4 Reinforcement Bars for Curb and Sidewalk</td>
<td>LF</td>
<td>40</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>SD-06</td>
<td>Drilled Tie Bars (Existing Sidewalk, Driveway, and Curb and Gutter)</td>
<td>EA</td>
<td>4</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>SD-07</td>
<td>Landscaping – Topsoil, Fertilizer, Mesic Prairie Planting, and Erosion Mat</td>
<td>SY</td>
<td>3,000</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>SD-08</td>
<td>Landscaping – Topsoil, Fertilizer, Mesic Prairie Planting, and Mulch</td>
<td>SY</td>
<td>200</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>SD-09</td>
<td>Landscaping – Topsoil, Seed, Fertilizer and Erosion Mat</td>
<td>SY</td>
<td>450</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>SD-10</td>
<td>Landscaping – Topsoil, Seed, Fertilizer and Mulch</td>
<td>SY</td>
<td>200</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>ITEM</td>
<td>ITEM DESCRIPTION</td>
<td>UNIT</td>
<td>QUANTITY</td>
<td>UNIT PRICE</td>
<td>AMOUNT BID</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------------------------------------------</td>
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<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td>SC-01</td>
<td>Pipe Foundation Stabilization</td>
<td>CY</td>
<td>20</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>SC-02</td>
<td>Adjust Manhole Provide New Casting</td>
<td>EA</td>
<td>1</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>SC-03</td>
<td>Provide Silt Fence</td>
<td>LF</td>
<td>170</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>SC-04</td>
<td>Bentonite Clay Dam on Sanitary Sewer</td>
<td>EA</td>
<td>1</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>SC-05</td>
<td>Inlet Protection Type D</td>
<td>EA</td>
<td>5</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>SC-06</td>
<td>Provide Medium Rip Rap w/ Geotextile Fabric (Type HR)</td>
<td>SY</td>
<td>150</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>SC-07</td>
<td>Tracking Pad</td>
<td>EA</td>
<td>1</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>SC-08</td>
<td>Remove and Reset Existing Fence, Remove and Replant Existing Apple Trees</td>
<td>LS</td>
<td>1</td>
<td>$________</td>
<td>$________</td>
</tr>
</tbody>
</table>

**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 22-09 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)
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:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>MATERIAL</th>
<th>SUPPLIER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storm Sewer</td>
<td>RCP</td>
<td></td>
</tr>
<tr>
<td>Storm Sewer</td>
<td>PVC</td>
<td></td>
</tr>
<tr>
<td>Manhole</td>
<td>RCP</td>
<td></td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>PORTION OF WORK</th>
<th>BUSINESS NAME</th>
<th>BUSINESS ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utility Work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landscape Restoration</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION 00 51 00

NOTICE OF AWARD

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

Project Description: 22-09 Pond and Drainage System Construction

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 April 15, 2022 and April 22, 2022.

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 _______ day of _____________________2022.

____________________________________
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 22-09 Pond and Drainage System Construction, 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 April 15, 2022 and April 22, 2022.

(b) Drawings designated for Project 22-09 Pond and Drainage System Construction dated March 15, 2022.

(c) City of De Pere 2022 Construction Specifications.


(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 0070 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)

___________________________________    BY: ______________________________
(WITNESS)    BY: ___________________________________

___________________________________    (TITLE)

___________________________________    BY: ___________________________________
(TITLE)

___________________________________    (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:_______________________________    BY:________________________________
(MAYOR)  (CITY CLERK)
SECTION 00 55 00

NOTICE TO PROCEED

Date: ________________

(CONTRACTOR NAME)
(Address)
(Address)

Project Description: 22-09 Pond and Drainage System Construction

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: _______________________________

4/15/2022 00 55 00-1 Notice to Proceed
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 ____________________________ ($____________) 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 22-09, 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.
   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)
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 22-09, 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.

<table>
<thead>
<tr>
<th>Application Period:</th>
<th>Application Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner: City of De Pere</td>
<td>Contractor:</td>
</tr>
<tr>
<td>Contractor's Project No.:</td>
<td></td>
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APPLICATION FOR PAYMENT

Change Order Summary

<table>
<thead>
<tr>
<th>Approved Change Orders</th>
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<tr>
<td>Number</td>
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<td>Deductions</td>
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<td>1. ORIGINAL CONTRACT PRICE:</td>
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<td>2. Net change by Change Orders and Written Amendments (+ or -):</td>
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<td>3. CURRENT CONTRACT PRICE (Line 1 plus Line 2):</td>
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<tr>
<td>4. Total completed and stored to date Column H on Progress Estimate:</td>
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<td>5. Retainage (per Agreement):</td>
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<tr>
<td>a. Work Completed - Column H (95% up to 50% of Contract or 2.5% of 100% of Contract)</td>
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<td>Total</td>
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NET CHANGE BY CHANGE ORDERS: $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.

Payment of: $ (Line 8 or other - attach explanation of other amount)

is recommended by: ________________________________ (Contractor) (Date)

Payment of: $ (Line 8 or other - attach explanation of other amount)

is recommended by: ________________________________ (Owner) (Date)

4/15/2022

00 62 76-1

Application for Payment
SECTION 00 65 16

CERTIFICATE OF SUBSTANTIAL COMPLETION

Project:  
Owner:  
Contractor:  
Owner’s Contract No.:  

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:

________________________________________
________________________________________

4/15/2022  00 65 16-1  Certificate of Substantial Completion
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/Schedule
   4. Use of Premises
   5. Warranty
   6. Work by Others
   7. Project Utility Sources

1.2 REFERENCES

A. General Specifications. The work under this contract shall be in accordance with the City of De Pere, 2022 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. Front Street extended from Franklin Street to 250 feet north of Fulton Street.
   2. Work will be performed under the following prime contract:
      a. Project 22-09 Pond and Drainage System Construction

B. The Work includes:
   1. Relay and/or new storm sewer and associated appurtenances
   2. Unclassified excavation
   3. Grading
   4. Erosion Control
   5. Landscape Restoration
   6. Curb and gutter repair and/or installation
   7. Asphalitic concrete pavement patching

1.4 WORK SEQUENCE/SCHEDULE

A. Project shall be completed by November 1, 2022.

B. Project is anticipated to start after August 1, 2022.

C. Conduct construction activities to maintain access to businesses and residences throughout construction.

D. Topsoil, seed, and mulch shall be completed prior to asphalitic concrete pavement placement.

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. 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, Victoria Kassab, (vk352k@att.com) (920-202-4002)

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, (relocations@lumen.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. Access to the site shall be from Franklin Street.

C. Maintain access to the Fox River Trail at all times.

D. The following specific events are planned on the Fox River Trail. If trench is not fully restored, provide cold mix patch.
   1. 988 Suicide Prevention Run/Walk – September 10
   2. Headbanger Half Marathon – September 11
   3. Green Bay Hot Cider Hustle – October 23
   4. Veteran Suicide Awareness March – November 12

E. Wisconsin Public Service is required to be on standby when excavating near the gas main.

PART 2 – PRODUCTS

PART 3 – EXECUTION

END OF SECTION
SECTION 01 22 02

MEASUREMENT AND PAYMENT STORM SEWER

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes:
   1. Storm Sewer Mains (Granular Backfill) ST-01
   2. Storm Sewer Mains (Natural Backfill) ST-02, ST-03, ST-04, ST-05, ST-06
   3. Storm Sewer Manholes ST-07, ST-08, ST-09
   4. Pond Discharge Structure ST-10
   5. Catch Basin/Inlets ST-11
   6. Connect to Structure and/or Existing Pipe ST-12
   7. Core Drill Existing Structure ST-13
   8. Flared End Section ST-14, ST-15, ST-16
   9. 12” Backflow Preventer ST-17
   10. Abandon/Remove Existing Storm Sewer Appurtenances ST-18

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.
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:
   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 MAINS (NATURAL BACKFILL)

A. The unit price for Storm Sewer Main (Natural Backfill) work includes:
   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.

1.5 STORM SEWER MANHOLES

A. The unit price for Storm Sewer Manholes work includes:
   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.

1.6 POND DISCHARGE STRUCTURES

A. The unit price for Pond Discharge Structure work includes:
   2. Precast reinforced concrete components.
   3. Joint flexible gasket material.
   4. Grout seal between the manhole and structure and the sewer pipe.
   5. Installation of the Grate.
6. Bedding material.
7. Sewer pipe stub with connections and watertight plug (where required).

B. Measurement for payment will be each.

C. The unit of measurement for payment is each.

1.7 CATCH BASIN/INLETS

A. The unit price for Catch Basin/Inlets work includes:
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.
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 EXISTING STORM SEWER PIPE

A. The unit price for Connect to Existing Storm Sewer Pipe work includes:
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.

1.9 CORE DRILLING TO STORM MANHOLE

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

1.10 FLARED END SECTION

A. The unit price for Flared End Section includes:
   2. Precast concrete components.
   3. Anchors to storm sewer pipe.

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

C. The unit of measurement for payment is each.

1.11 PROVIDE BACKFLOW PREVENTER (TIDEFLEX CHECKMATE OR EQUAL)

A. The unit price for Backflow Preventer:
   2. Provide Tideflex Checkmate or Equal and all appurtenances.
   3. Installing and attaching as shown on plans.

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

C. The unit of measurement for payment is each.

1.12 ABANDON/REMOVE STORM SEWER AND APPURTENANCES

A. The unit price for Abandon/Remove Storm Sewer and Appurtenances work includes:
   2. Excavating, backfilling and compacting.
   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.
   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 04

MEASUREMENT AND PAYMENT STREET AND DRAINAGE CONSTRUCTION

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes:
   1. Clearing and Grubbing  
   2. Topsoil and Unclassified Excavation  
   3. Provide Large Asphalt Patch  
   4. Portland Cement Concrete Curb and Gutter  
   5. Deformed Reinforcement Bars  
   6. Drilling Tie Bars and Dowel Bars  
   7. Landscaping – Topsoil, Seed, Fertilize, and Mulch or Erosion Mat

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:
   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 circumference 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:
   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 ASPHALT CONCRETE PAVEMENT PATCH

A. The unit price for Asphaltic Concrete Pavement Patch work includes:
   2. Sawcutting.
   4. Asphaltic concrete mixture, tack coat and other required materials.
   5. Surface preparation.
   7. Asphaltic concrete placement and compaction to thickness matching surrounding pavements or a minimum depth of 4 inches.
   8. Tack coat between asphaltic courses and abutting pavement.

B. Measurement for payment will be the average horizontal length and width of roadway.
   1. All patches greater than 10 square yards will be paid as a large patch.
   2. All patches less than or equal to 10 square yards will be paid as a small patch.

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

1.6 PORTLAND CEMENT CONCRETE CURB AND GUTTER

A. The unit price for Portland Cement Concrete Curb and Gutter work includes:
   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.
   7. Provide crushed aggregate base.
   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.

1.7 DEFORMED REINFORCEMENT BARS

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

1.8 DRILLING TIE BARS

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

1.9 LANDSCAPING- TOPSOIL, SEED, FERTILIZE AND MULCH OR EROSION MAT

A. The unit price for Landscaping- Topsoil, Seed, Fertilize, and Mulch or Erosion Mat work includes:
   2. Provide 4” topsoil or salvaged topsoil.
   3. Provide seed.
   4. Provide fertilizer.
   5. Provide mulch or erosion mat per the bid item.
   6. Provide maintenance.

B. Measurement for payment will be the width and length of disturbed area.
C. The unit of measurement for payment is square yard.

END OF SECTION
PART 1 – GENERAL

1.1 SUMMARY

A. Section includes:
   1. Pipe Foundation Stabilization SC-01
   2. Silt Fence Erosion Control SC-03
   3. Bentonite Clay Dam on Sanitary Sewer SC-04
   4. Inlet Protection Erosion Control SC-05
   5. Rip Rap Erosion Control SC-06
   6. Tracking Pad SC-07
   7. Adjusting Existing Structure Frame and Casting SC-02
   8. Remove and Reset Fence and Trees SC-08

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:
   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 SILT FENCE EROSION CONTROL

A. The unit price for Silt Fence Erosion Control work includes:
   3. Excavate to anchor fabric and compact soil or provide soil class C-3 to anchor the fabric.
   4. Inspection and maintenance of the installed silt fence.
   5. Removal of the silt fence.
   6. Finish grading.
   7. Topsoil, seeding, fertilizing, and mulching area in the vicinity of the removed silt fence which does not have established turf.

B. Measurement of payment will be the actual horizontal length installed.

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

1.5 BENTONITE CLAY DAM ON SANITARY SEWER

A. The unit price work for Bentonite Clay Dam on Sanitary Sewer work includes:
   2. Excavation.
   3. Exposing sanitary sewer.
   4. Remove stone around pipe and replace with bentonite.
   5. Backfill with natural backfill.
B. Measurement for payment will be the actual number completed.

C. The unit of measurement for payment is each.

1.6 INLET PROTECTION EROSION CONTROL

A. The unit price for Inlet Protection Erosion Control work includes:
   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.

1.7 RIP RAP EROSION CONTROL

A. The unit price for Rip Rap Erosion Control work includes:
   2. Provide rip rap material and geotextile fabric.
   3. Excavate and place rip rap material.

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

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

1.8 TRACKING PAD

A. The unit price for Tracking Pad work includes:
   2. Install to the dimensions as shown on the drawing or specified elsewhere.
   4. Providing crushed aggregate base course (3 inch clear stone).
   5. Daily maintenance of aggregate.
   6. Removal of aggregate and restore with topsoil, seed, fertilizer and mulch.

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

C. The unit of measurement for payment is each.
1.9 ADJUST EXISTING STRUCTURE FRAME CASTING

A. The unit price for Adjusting Existing Structure Frame Casting work includes:
   2. Provide structure castings.
   3. Removal of the casting and existing adjusting rings from the structure as required.
   4. Providing concrete adjusting rings and a 2 inch rubber riser ring from the WisDOT approved product list.
   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 $5/16$ inch bead above and below the ring of sealant type as recommended by the rubber manufacturer.
   8. Initial and final adjustment.

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

C. The unit of measurement for payment is each.

1.10 REMOVE AND RESET CHAIN LINK FENCE AND APPLE TREES

A. The unit price for Remove and Reset Chain Link Fence and Apple Trees work includes:
   2. Remove existing fence shown on the plans and in conflict with the storm sewer.
   3. Excavate and reinstall apple trees in conflict.
   4. Provide metal stakes to keep trees straight.
   5. Reinstall of chain link fence.

B. Measurement for payment will not be made.

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

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.
   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
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
Project 22-09
Pond and Drainage System Construction

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:
1. WDNR – Chapter 30
2. WDNR – WRAPP
3. WDNR – Fox River Trail Crossing
4. ARMY CORPS

B. Any costs associated with violations pertaining to the NOI 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 PROVIDE 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, benchmarks, 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 32 90 10

NATIVE LANDSCAPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes requirements for the following:
   1. Site Preparation.
   2. Seeding.
   3. Planting.
   5. Warranty.

1.2 REFERENCES

A. Native material references:


C. Wisconsin Statutes and Wisconsin Administrative Code - Chapters ATCP 20 and 29.


E. Standard Methods of the Association of Official Agricultural Chemists.

1.3 SUBMITTALS

A. Submit the following to the OWNER and ENGINEER prior to installation:
1. Information indicating vendor, species botanical and common names, gross weight, seed purity (% PLS), harvest date, and origin. Original nursery packaging for each species must be provided 14 days after seeding activities are completed.

2. Information indicating vendor, species botanical and common names, and pot size. Plant material shall comply with State of Wisconsin and federal laws with respect to inspection for plant diseases and insect infestation.

3. Inspection certificates and paperwork indicating the licensed nursery, species botanical and common names, and material size within 14 days of shipment.

4. Chemical Labels and Herbicide Application Record(s) within 30 days after application.

5. Photograph or detailed design of goose fencing system.

1.4 QUALITY ASSURANCE

A. Qualifications:
   1. CONTRACTOR or Subcontractor shall be a company specializing in native landscaping installation and be able to show three (3) successful projects.
   2. Perform planting by personnel familiar with accepted native landscape planting procedures. Qualified foreman, representing CONTRACTOR or Subcontractor, shall be on-site during planting procedures. The individual shall be an ecologist with at least 3 years of native plant installation experience.
   3. Submit qualifications requested on the qualification form with the bid. OWNER has sole authority to approve or disapprove native landscape contractor and/or subcontractor at OWNER’s sole discretion.

B. Ability to Deliver:
   1. Investigate sources of supply and confirm they can supply plants specified on plant list in sizes, variety, and quantity noted and specified before submitting bid. Failure to take this precaution will not relieve responsibility for furnishing and installing plant material in accordance with Contract requirements.
   2. Substitutions may be permitted only upon submission of written proof that specified plant is not obtainable locally. Such substitution may be made upon written authorization by qualified botanist. Adjustments will be made at no additional cost to OWNER.
   3. Provide seed and plant materials discussed below in quantity and size designated.

C. Inspection:
   1. OWNER and ENGINEER may inspect plant material at nursery. Such inspection shall be in addition to inspection at job site.
   2. Upon delivery and before seeding and/or planting, OWNER and ENGINEER may inspect seed packages and plants.
   3. Inspection and approval is for quality, size, and variety only, and in no way impairs right of rejection for failure to meet other requirements during progress of Work.
   4. CONTRACTOR shall be present during required inspections.

D. Source Quality Control.
1. Certification: Landscape materials shall be from stock inspected and certified by authorized governmental agencies. Material shall comply with governmental regulations prevailing at supply source and project.

2. Plant material shall comply with State of Wisconsin and federal laws with respect to inspection for plant diseases and insect infestation.


E. VHS and INVASIVE SPECIES

1. To the extent practicable, equipment and gear used on infested waters should not be used on other non-infested waters.

2. All equipment utilized for the project including but not limited to tracked equipment, barges, boats, silt/turbidity curtains, hoses and pumps shall be decontaminated for invasive and exotic viruses and species prior to and after use. The following steps shall be taken every time equipment is moved to avoid transporting invasive and exotic viruses and species:
   a. Inspect and remove terrestrial and aquatic plants, seeds, animals and mud from equipment.
   b. Drain all water from equipment that comes in contact with infested waters.
   c. Dispose of aquatic plants and animals in the trash. Never release or transfer aquatic plants, animals or water from one water body to another.
   d. Wash equipment with hot (>104 degrees F) and/or high pressure water OR allow your equipment to dry thoroughly for 5 days.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Preparation for Delivery:

1. Seed:
   a. Pack seeds for delivery in suitable bags in accordance with standard commercial practice.
   b. Tag or label each bag as required by laws of State of Wisconsin and Federal Seed Act. Vendor’s name shall show on or be attached to each bag together with statement signed by vendor indicating following:
      i. Kind of seed contained.
      ii. Percentage of purity and germination for native grass/sedge mix.
      iii. Percentage of hard seed, if any.
      iv. Statement conforming to laws of State of Wisconsin herein before mentioned showing percentage of weed seeds, if any.

2. Potted or Container Plants:
   a. Provide container to hold rootstock protecting root mass and structure during delivery and handling.
   b. Roots shall be developed and free from root rot.
   c. Roots shall be kept cool and moist and out of sun and wind.
   d. Bare root plants are unacceptable unless potted material is unavailable and substitution is accepted by OWNER and ENGINEER. Where bare root stock is used, it must be delivered and handled in such a way that roots are never allowed to dry out.
e. Before wetland plant stock is transported, the top of the bulrush and other tall emergent shall be cut to leave an approximate 2-foot height. The intent is to promote rapid regrowth upon transplanting and to make them easier to transport.

B. Delivery:
1. Schedule shipping to minimize on-site storage of materials.
2. Plant Material: Take precautions in accordance with best trade practices and nursery recommendations to ensure arrival of material at Project Site in good condition and without injury. Cover plants to prevent freezing, drying, transit injury, or other exposure. During shipment, plants shall not be bent, stacked, or bound in manner that damages or destroys natural shape. Soil moisture shall be checked and material watered, if necessary.
3. Seed: Each species shall be delivered to the project site in the nursery's original, sealed packaging and labeled in accordance with Wisconsin State Law and the Federal Seed Act.
4. Notify ENGINEER 48 hours before delivery of seed and/or plant material.
5. Each shipment shall be accompanied by paperwork showing sizes and varieties included. Failure to notify ENGINEER in advance, in order to arrange proper scheduling, may result in loss of time or removal of plant material not installed as specified.
6. Protect seed against weather-related damage or other damages occurring during transit. Remove from site, seed that has become wet, moldy, or otherwise damaged and replace without extra cost to OWNER.
7. Fertilizer: Deliver fertilizer to site in original, unopened containers bearing weight, manufacturer's guaranteed chemical analysis, name, trade name, trademark, and conformance to state law.
8. Deliver topsoil in an unfrozen and non-muddy condition.

C. Temporary Storage:
1. Storage of Plant Material:
   a. Set plants that are not to be planted within 4 hours, on ground and heal in with peat, soil, mulch or other approved media.
   b. Protect roots of plant material from drying or other possible injury.
   c. Water plants as necessary until planted.
   d. Plants shall not remain unplanted for longer than 3 days.
   e. Maintain plants in cold storage at approximately 30°F prior to being delivered to Site.
2. Keep seed cool and dry and protect against weather-related damage or other damages occurring during storage so their effectiveness will not be impaired. Do not store in direct contact with ground. Replace seed that has become wet, moldy, or otherwise damaged at CONTRACTOR’S expense.
3. Store fertilizer, humus, and spray materials in weatherproof storage areas and in such manner their effectiveness will not be impaired.

PART 2 - PRODUCTS

2.1 PLANT SPECIMENS
A. General:
1. Plant material shall be nursery grown or harvested unless otherwise specified or approved in writing by ENGINEER.
2. Unless specifically noted otherwise, plant material shall be of selected specimen quality, have normal habit of growth, and be sound, healthy, vigorous plants with well-developed root systems. Plants shall be free of disease, insect pests, their eggs or larvae, and injuries.
3. Plant/Seed information:
   a. See Paragraphs 2.01 E. & F. for seed mix and plant quantity requirements. It is the CONTRACTOR’S responsibility to ensure plants and/or seed are true to species and variety and conform to measurement specified in Paragraphs 2.01 E. & F., except plants larger than specified may be used if approved by ENGINEER. Use of such plants shall not result in increase in Contract Price.
   b. Where plants larger than specified have been submitted in writing for approval and approved in writing by ENGINEER, CONTRACTOR shall assume responsibility of guarantee for plant in size as planted.
   c. ENGINEER must approve any substitutions.

B. Cover Crop
1. Cover Crop Seed mix for all restored areas shall be as follows:

<table>
<thead>
<tr>
<th>SPECIES</th>
<th>% MINIMUM PURITY</th>
<th>% MINIMUM GERMINATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Oats</td>
<td>98</td>
<td>90</td>
</tr>
<tr>
<td>Winter Wheat</td>
<td>95</td>
<td>90</td>
</tr>
<tr>
<td>Barnyard Grass(Echinochloa crus-galli)</td>
<td>95</td>
<td>90</td>
</tr>
</tbody>
</table>

2. Seeding a cover crop by itself between April 15th & August 15th shall be conducted using Annual Oats at a rate of 120 lbs/acre.
3. Seeding a cover crop by itself between August 15th & November 30th shall be conducted using Winter Wheat at a rate of 90 lbs/acre.
4. Native seeding conducted between April 15th & June 15th shall include a cover crop of Annual Oats at a rate of 20 lbs/acre.
5. Native seeding conducted between October 15th & November 30th shall include a cover crop of Winter Wheat at a rate of 10 lbs/acre.
6. Native wetland seeding shall also include a cover crop of Barnyard Grass at a rate of 1 lb/acre.

C. Native Seed
1. Seed stock shall be wild ecotype indigenous to Wisconsin or have natural origins within a 250 mile radius of the intended planting site.
2. Grasses classified as “Agricultural Grasses” shall be PLS as specified. Other seed shall be “clean” according to high quality industry standards.
3. Seed shall not be more than one year old at time of seeding.
4. Legumes shall be inoculated with proper rhizobia immediately prior to planting (six hours or less).

D. Mesic Prairie and Wet Meadow Seed Mix species and quantities:

<table>
<thead>
<tr>
<th>Mesic Prairie Planting Zone</th>
<th>Species</th>
<th>Scientific Name</th>
<th>Ounces Required Per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forbs</td>
<td>Nodding Pink Onion</td>
<td>Allium cernuum</td>
<td>5.9</td>
</tr>
<tr>
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**TOTAL 294.7**

*North American native species introduced into Wisconsin*
### Wet Meadow Planting Zone

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**TOTAL** 218.7

### 2.2 PLANTING MATERIALS

A. Topsoil:

1. Obtained from natural well drained areas, and be fertile, friable soil, clean of undesirable materials such as plants, weeds, roots, stalks, stones, and other debris.
2. Existing topsoil shall be salvaged as it will be placed during restoration activities.
3. Acidity range of pH 5.0 and pH 7.0 and shall contain no less than 4% organic matter as determined by loss on ignition of moisture free samples dried at 100°C.

B. Soil Amendments:
   1. Planting to be installed in native soils.

C. Water: CONTRACTOR shall make arrangements for water used for planting with appropriate water utilities. Cost of water usage is responsibility of CONTRACTOR and is incidental to contract.
   1. Obtain from fresh water sources and free from injurious chemical or other toxic substances harmful to plant life. No water, which is brackish, may be used.
   2. Provide hose and equipment necessary for proper watering of plant material.

2.3 EROSION CONTROL MATERIALS

A. Mulch:
   1. Straw:
      a. Oat or wheat straw shall be air-dried, free of noxious and invasive weed species including reed canary grass, and other objectionable foreign matter.
      b. Wet and/or moldy straw is not acceptable and shall be removed from the site by the CONTRACTOR.

B. Erosion Blanket & Stakes:
   1. Materials shall be completely biodegradable (Class I, Urban, Type A) and included on WisDOT PAL
   2. Anchoring devices shall be a minimum of 4” in length, be completely biodegradable (Urban) and included on WisDOT PAL

2.4 HERBICIDE, ADJUVANT & DYES

A. General:
   1. Use only chemicals approved by and registered with the Environmental Protection Agency (EPA).
   2. Chemicals used around water shall be aquatic approved.
   3. The chemical or combination of chemicals shall be chosen based on the target species present and the desired treatment outcome.

PART 3 - SUPPLIERS

3.1 PLANT SUPPLIERS

A. At CONTRACTOR’S option, CONTRACTOR may contact the following companies for seed and plant supplies:
3.2 HERBICIDE SUPPLIERS

A. At CONTRACTOR’S option, CONTRACTOR may contact following companies for chemical supplies:

- Crop Production Services
  - N125 County Highway C
  - DeForest, WI 53532
  - (608) 846-1100

- Red River Specialties, Inc
  - 7545 Haygood Road
  - Shreveport, LA 71107
  - (317) 440-7103

PART 4 - EXECUTION

4.1 PROJECT/SITE CONDITIONS

A. Inspection:
   1. Prior to beginning Work, CONTRACTOR shall examine and verify acceptability of Project site for conditions under which seeding and planting are to be performed. Do not proceed with Work until satisfactory conditions are present.
2. Starting Work constitutes acceptance of conditions under which Work is to be performed. After such acceptances, CONTRACTOR shall be responsible for correcting unsatisfactory and defective Work resulting from such unsatisfactory conditions.

3. When landscape work is executed in conjunction with construction of other work, coordinate schedule to permit execution of landscape work.

4.2 SEEDING

A. Seedbed Preparation

1. Prior to seeding a cover crop or native species, the planting area shall be prepared through the following sequence:
   a. Topsoil shall be worked with a pulverizer, tiller, disc, or harrow to a depth of 1-2”. The topsoil shall be free of heavy clay, refuse, stumps, large roots, rocks over 2 inches in diameter, weeds, or other extraneous material which would be detrimental to good seed-to-soil contact, and therefore seed establishment.
   b. The surface shall then be dragged or raked to provide a smooth, fine textured soil throughout the planting area. All debris (e.g., wood, rocks, garbage, etc.) shall be removed during final seedbed preparation.
   c. A temporary cover crop shall then be seeded. The species chosen and the rate utilized will follow the requirements per Paragraph 2.01 B. Seed shall be sown with a broadcast seeder and follow those guidelines found in Paragraph 4.02 C. Straw mulch may be applied to assist with cover crop establishment.
   d. Once the cover crop has grown to a height of 6-8”, a series of three (3) or four (4) herbicide applications will be conducted throughout the growing season(s). A combination of Glyphosate and 2,4-D are to be utilized for each application and shall be applied at the rates recommended on the label for the vegetation species present. The first application is expected to be completed in late May to early June. The second and third applications are expected to be undertaken in late July and mid-September – prior to the first hard freeze. The schedule for herbicide applications will be flexible to accommodate the weather and existing growing conditions; however, the Contractor must communicate with the Owner and the Engineer prior to conducting any application. Incomplete, untimely or unsuccessful herbicide treatments may result in additional treatment requirements to be conducted at the Contractor’s expense.
   e. Following the last herbicide application and prior to sowing the native seed the soil shall be lightly worked to a depth of ¼” – ½” in depth with a disc or harrow. If the soil is too light and fluffy, the area shall be cultipacked to provide a firmer seedbed prior to seeding.

B. Installation and Procedures:

1. Seeding shall occur immediately after seedbed preparation. Restored areas shall be seeded with the native seed mixes at the PLS ounces per acre rate indicated in Paragraph 2.01 E. Seeding shall be conducted within the designated communities (Drawings) between October 15th and November 30th.
2. All native seed species shall be mixed on-site prior to installation.
3. If the communities are hand sown, the seed shall be mixed with a carrier (e.g., sawdust, vermiculite, moist sand, etc.) to ensure even seed distribution. If a broadcast seeder is utilized, it shall be properly calibrated to ensure an even seed distribution is achieved within the planting area.

4. After the seed has been installed, the area shall be rolled to ensure good seed to soil contact.

5. Once seed installation is complete, erosion blanket shall be placed in those areas designated on the Drawings. Mulch, if applied with the cover crop, and erosion blanket installation shall follow those requirements outlined in 4.05 below.

C. Seeding shall not be permitted during the following conditions unless otherwise approved:
   1. Saturated soil conditions.
   2. Frozen soil conditions.
   3. Wind speeds >15 miles per hour.
   4. Temperatures less than 32 degrees Fahrenheit.
   5. Temperatures greater than 90 degrees Fahrenheit.

4.3 EROSION CONTROL MATERIALS

A. Mulch
   1. General:
      a. Place clean, straw mulch on the cover crop seeding within 72 hours after seeding, if desired.
      b. Do not apply during high winds.
      c. Place loosely enough to allow some sunlight penetration and air circulation, but thickly enough to shade the ground, conserve moisture and reduce erosion.

B. Erosion Blanket & Stakes
   1. General:
      a. Install Class I, Urban, Type A erosion blanket and biodegradable stakes on the slopes of the native seeding per Sheets 6 and 7 within 72 hours after seeding.
      b. Do not apply during high winds.
   2. The CONTRACTOR shall install the erosion blanket and stakes per manufacturer’s recommendations.

4.4 CLEAN UP AND REPAIR

A. Remove excess and waste material daily.

B. Upon completion of planting, remove excess soil, stones, and debris and dispose of off-site.
C. CONTRACTOR shall be liable for any damage caused to surrounding properties as a result of negligence when conducting landscape installation. Damage to existing landscape, pavements, or other site features as result of Work shall be repaired to its original condition.

4.5 PRELIMINARY ACCEPTANCE

A. Notify ENGINEER at conclusion of planting and seeding operations so OWNER and ENGINEER can determine completion by field inspection.

B. Completion requires:
   1. Seed and plant material conforms to Contract Documents with respect to quantity, quality, size, species, and location, except those items accepted or revised in the field by OWNER and ENGINEER.
   2. Plant material shall be established, upright, green (i.e., healthy condition), and exist in the locations as determined by the OWNER and ENGINEER.

4.6 MAINTENANCE DURING WARRANTY PERIOD

A. General:
   1. CONTRACTOR shall provide maintenance during the two-year warranty period in accordance with the submitted and approved Maintenance Plan.
   2. Repair work necessitated by CONTRACTOR’S operations, land disturbance outside designated work areas, CONTRACTOR’S failure to perform adequate maintenance or due to CONTRACTOR’S negligence shall be performed without cost to OWNER.
   3. Any soil erosion resulting from inadequate cover crop or permanent seed establishment shall be corrected at the CONTRACTOR’S expense.

B. Protection:
   1. CONTRACTOR is liable for damage to planted areas caused by deicing compounds, toxic substances, fertilizers, pesticides, and other materials applied by CONTRACTOR. CONTRACTOR is not liable for materials applied by others or damage caused by vandalism or natural causes.
   2. Protect landscape Work and materials from damage due to landscape operations, operations by other contractors and trades, and trespassers. Maintain protection until completion and acceptance.
   3. Protect existing property and improvements within these sites and those adjacent to OWNER’S property.

4.7 WARRANTY

A. During the 1-year warranty period CONTRACTOR shall re-seed areas with poor germination to meet the following criteria:
   1. Seeding success criteria – An area will be considered satisfactory if it meet the following:
      a. A minimum of 75% total native vegetative coverage.
b. No bare areas larger than 10 square feet.
c. Vegetation is in healthy condition.

2. 90% of the installed plants are living and healthy.

B Replacement and Damages:

1. On or about expiration of the 1-year warranty period, follow-up inspections will be made to determine replacements or corrections required to be made by CONTRACTOR in accordance with provisions of these Specifications and the Maintenance Plan. ENGINEER will document findings in field report, and forward copies to CONTRACTOR. Items identified for replacement will be tagged during inspection with plastic flagging. Decision of OWNER and ENGINEER for required replacements is final and binding upon CONTRACTOR.

2. CONTRACTOR is responsible for repairing damage to property caused by defective workmanship and materials.

C. Exclusions:

1. CONTRACTOR is not liable for replacement cost of seeds damaged by extreme weather conditions. CONTRACTOR is not liable for plants not installed by CONTRACTOR under CONTRACTOR’S supervision, by relocation or removal by others, by acts of God, or by vandalism, and losses because of curtailment of water by local authorities.

4.8 REPLACEMENTS

A. General Procedure

1. Reseeding shall be performed at the CONTRACTOR’S expense and in conformance with the original seeding and planting specifications unless they are modified by the ENGINEER.

2. Seed shall be of the same species, quality, and size as originally installed, or with substitutes pre-approved in writing by the ENGINEER.

3. Reseeding activities shall be conducted during the first available period, as determined by the OWNER and ENGINEER.

4. Dispose of dead plants off-site.

5. Restore areas damaged by replacement operations to original condition.

6. Notify OWNER and ENGINEER at conclusion of replacement program

7. OWNER and ENGINEER will conduct inspection of replacements for determining final acceptance.

4.9 FINAL ACCEPTANCE

A. Procedure

1. Upon completion of replacement program, CONTRACTOR shall notify OWNER and ENGINEER.

2. OWNER and ENGINEER will inspect the site to determine acceptability of required replacements.

3. If acceptable and the warranty criteria outlined in 4.09.A.1.&2. are met, OWNER and ENGINEER shall notify CONTRACTOR, in writing, of final acceptance of Work.

4. After acceptance, OWNER will be responsible for all future replacements and maintenance.
4.10 MEASUREMENT AND PAYMENT

A. Include cost of:
   1. Providing and installing seed mixtures.
   2. Providing and installing wetland plants.
   3. Providing and installing goose fencing.
   4. Providing and installing erosion blanket.
   6. All labor, materials and equipment necessary for planting and maintenance during establishment of native vegetation.
   7. Replacement of plants under warranty period.
   8. Cleanup.
   9. Other appurtenant and incidental Work.

B. Do not include cost of:
   1. Work included in other Bid items.

C. Measurement for Payment:
   1. Work under this section shall be paid for at the contract unit price.

END OF SECTION
EXHIBIT A

Geotechnical Engineering Services Report for the
Front Street Stormwater Pond, De Pere, WI

Prepared by: Intertek PSI
# 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 ..................................................................................................................... 4
   4.3 GROUNDWATER OBSERVATIONS ......................................................................................................... 4

5 CONSIDERATIONS ....................................................................................................................................... 5
   5.1 STORMWATER MANAGEMENT CONSIDERATIONS ........................................................................... 5
   5.2 GROUNDWATER CONTROL .................................................................................................................... 7
   5.3 EXCAVATIONS AND SITE DRAINAGE .................................................................................................... 7

6 GENERAL COMMENTS .............................................................................................................................. 8

Appendix (in order of appearance)
Figure 1 – Boring Location Plan
Soil Boring Logs
Laboratory Data Sheets
Storm Forms
General Notes
1 INTRODUCTION

1.1 GENERAL

This report presents the results of the subsurface exploration and stormwater evaluation for the proposed Front Street Stormwater Pond 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 on the site for use by the engineers in designing the stormwater management area for the proposed project.

1.3 SCOPE

The scope of services included the subsurface exploration, field and laboratory testing, and a presentation of the data obtained. Construction considerations have been 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 a signed Agreement for Contractor Services between The City of De Pere and PSI (2020 Soil Boring), dated April 9, 2020, referencing PSI Proposal No. 0094-301529, dated January 31, 2020. The general conditions for the performance of the work were referenced in the signed Agreement. 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 the northwest side of Front Street, generally extending from Franklin Street to Fulton Street, in De Pere, Wisconsin. At the time of the exploration, the subject site was vacant and covered with grass. The asphalt Fox River Trail borders the west/northwest side of the site, with the Fox River present beyond the trail to the west. The surrounding parcels primarily consisted of residential properties. Based on a review of historical aerial photographs available on Google Earth between the years of 1992 and 2018, the surface features of the site appear to have remained relatively similar in appearance to those described above since the earliest photo taken in 1992, and the site has remained vacant. The subject site is depicted on the enclosed Boring Location Plan (Figure 1).
The topography of the subject site is relatively flat, with an elevation difference of about 0.6 feet between the boring locations. The site generally slopes slightly down towards the north. Existing elevations at the boring locations ranged between about EL. 588.3 and EL. 587.7. At the time of the exploration, the surface of the site at the boring locations was snow covered; therefore, an ATV-drill rig was utilized to access the boring locations.

2.2 PROJECT DESCRIPTION

Based on the information provided by the client, the proposed project is planned to consist of the construction of an approximately 27,000 square foot stormwater management pond along the northwest side of Front Street. It is understood the preliminary bottom elevation of the pond will be at about EL. 577.3. No other details were provided.

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 laboratory testing consisting of moisture content determination and unconfined compressive strength estimates.

With respect to the stormwater management area, the field and laboratory work for classification of the subgrade soils was performed to provide information for use by the basin design personnel when considering requirements of Chapter NR151 of the Wisconsin Administrative Code, and of WDNR Technical Standard 1002, “Site Evaluation for Stormwater Infiltration” guidelines. The design of the proposed stormwater management area was beyond the scope of services for this project.

3.2 FIELD EXPLORATION

A total of two (2) soil test borings were performed to a depth of about 20 feet below existing grade. The number, depth, and locations of the borings were determined by the client. The borings were staked in the field by the client. The surface elevations shown on the boring logs were provided by the client.

The soil test borings were performed with an ATV-mounted rotary drilling rig utilizing continuous flight hollow stem augers to advance the holes. Representative samples were obtained by the Standard Penetration Test (SPT) method using split-spoon sampling procedures in general accordance with ASTM D-1586 procedures. Samples were collected at 2-foot continuous intervals. 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 SPT 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. The samples were visually classified by a certified soil tester in general accordance with USDA National Resources Conservation Service textural soil classification procedures (B-1 and B-2). The soil samples obtained from B-1 and B-2 were also visually classified in general accordance with the Unified Soil Classification System (ASTM D-2488-75), and are provided on boring logs B-1A and B-2A. 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.

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, mechanical grain size analyses and Atterberg Limits 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, as applicable, 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 borings B-1 and B-2 consisted of about 10 and 8 inches of topsoil comprised of very dark brown silty clay loam with intermixed root matter, respectively. Beneath the surface topsoil, the natural soils predominantly consisted of reddish brown and dark reddish gray clay to the maximum depth explored by the borings. As an exception, a layer of silty clay was present beneath the topsoil at B-2.

The soils samples obtained at B-1 and B-2 were also classified in general accordance with the Unified Soil Classification System (B-1A and B-2A). The topsoil encountered at the borings generally consisted of clayey silt with intermixed root matter. The natural soils encountered beneath the surface topsoil generally consisted of light reddish brown clay, with variable amounts of sand and silt, and reddish brown to dark reddish gray clay to the maximum depth explored by the borings.

The natural cohesive soils encountered in the borings were generally stiff to hard in comparative consistency, with Standard Penetration resistances (N-values) generally between about 6 and 13 blows per foot (bpf), and unconfined compressive strengths generally ranging from about 1.25 to 4.5+ tons per square foot (tsf).

Atterberg Limits and mechanical grain-size analyses were performed on a bulk composite SPT soil sample obtained from boring B-1 between depths of about 2 and 6 feet (EL. 586.3 to EL. 582.3) below existing grade, and another from boring B-2 between depths of about 6 to 10 feet (EL. 581.7 to EL. 577.7). The test results indicated the sample obtained from B-1 between depths of about 2 to 6 feet, and the sample obtained at B-2 between 6 to 10 feet, had Liquid Limits of about 38 and 37, and Plastic Limits of about 18 and 17, respectively. Each had a Plasticity Index of about 20. Based on the test results, the clay soils encountered in the upper portions of B-1 and B-2 are generally classified as CL by the USCS method. The laboratory data sheets provided in the Appendix.

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 at borings B-1 and B-2. The borings caved at depths ranging from about 16 to 17 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. The water level of the Fox River may have an effect on the groundwater fluctuations on this site. Longer term monitoring would be required to better evaluate groundwater levels on this site.

5 CONSIDERATIONS

5.1 STORMWATER MANAGEMENT CONSIDERATIONS

Based on the information provided by the client, it is understood that the proposed project is planned to consist of the construction of an approximately 27,000 square foot stormwater management pond along Front Street. The preliminary bottom elevation of the pond will be at about EL. 577.3.

Samples of the subgrade soils encountered in the borings have been given estimated visual classifications in general accordance with the USDA textural soil classification system. Beneath the surface topsoil, the natural soils predominantly consisted of reddish brown and dark reddish gray clay to the maximum depth explored by the borings. As an exception, a layer of silty clay was present beneath the topsoil at B-2. Groundwater was not encountered during drilling or upon completion and removal of the augers.

With regard to the above soil and groundwater conditions encountered at the borings, NR 151.124(4)(c)1 and 2 – Infiltration rate exemptions indicates that infiltration practices located in an area where the infiltration rate of the soil measured at the proposed bottom of the infiltration system is less than 0.6 inches per hour using a scientifically credible field test method; or an area where the least permeable soil horizon to 5 feet below the proposed bottom of the infiltration system using the USDA method of soils analysis consists of sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay or clay may be credited toward meeting the requirements, but the decision to infiltrate under these conditions is optional. In addition, NR 151.124(4)(b)1 – Separation distances indicates that infiltration practices shall be located so that the characteristics of the soil and the separation distance between the bottom of the infiltration system and the elevation of seasonal high groundwater or the top of bedrock are in accordance with the following Table (reproduced from NR 151.124):
Table 3. Separation Distances and Soil Characteristics

<table>
<thead>
<tr>
<th>Source Area</th>
<th>Separation Distance</th>
<th>Soil Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial, Commercial, Institutional Parking Lots and Roads</td>
<td>5 feet or more</td>
<td>Filtering Layer*</td>
</tr>
<tr>
<td>Residential Arterial Roads</td>
<td>5 feet or more</td>
<td>Filtering Layer*</td>
</tr>
<tr>
<td>Roofs Draining to Surface Infiltration Practices</td>
<td>1 foot or more</td>
<td>Native or Engineered Soil with Particles Finer than Coarse Sand</td>
</tr>
<tr>
<td>Roofs Draining to Surface Infiltration Practices</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>All Other Impervious Source Areas</td>
<td>3 feet or more</td>
<td>Filtering Layer*</td>
</tr>
</tbody>
</table>

*Defined in NR 151.002(14r) as a "soil that has at least a 3-foot deep layer with at least 20 percent fines; or at least a 5-foot deep layer with at least 10 percent fines; or an engineered soil with an equivalent level of protection as determined by the regulatory authority for the site.”

The laboratory testing of the bulk composite SPT samples obtained at B-1 between depths of about 2 to 6 feet (EL. 586.3 to EL. 582.3); and of the samples obtained from B-2 between depths of about 6 to 10 feet (EL. 581.7 to EL. 577.7), had 79 and 84% of the material passing the No. 200 sieve, Liquid Limits of about 38 and 37, and Plastic Limits of about 18 and 17, respectively. Each sample had a Plasticity Index of about 20. Appendix D of the Wet Detention Pond (1001) document, which is published by the Wisconsin Department of Natural Resources Conservation Practice Standards, indicates that materials for a Type A Clay Liner (for sites with the highest potential for groundwater pollution) must contain 50% or more of the material passing the No. 200 sieve; and have an average liquid limit of 25 or greater, with no value less than 20; and have an average plasticity index of 12 or more, with no value less than 10. The tested samples meet these requirements. However, other specifications or requirements also apply, such as outlined in Section B of Appendix D, or as may be included within other applicable state or local documents. In addition, soils may vary between and beyond the borings.

The information presented above is provided as general guidance for considering stormwater management in conjunction with the encountered subsurface conditions. However, Chapter NR151 of the Wisconsin Administrative Code; the Site Evaluation for Stormwater Infiltration (1002) document; the Wisconsin Department of Natural Resources Conservation Practice Standard for Wet Detention Ponds (1001), including additional specifications in Appendix D; or other applicable references must be consulted for appropriate site-specific stormwater design guidance and requirements.

Stormwater management basins are not recommended to be placed in close proximity to basements or other below grade structures. Proper and careful consideration of soils and subsurface conditions must be given during site and design planning, and extreme care must be exercised during construction. Lateral migration of water may result in substantially
increased sump pump activity and can quickly overcome the ability of such pumps to maintain a desirable water level, resulting in significant flooding. The potential for such conditions to occur can greatly increase when basement floors are below the elevation of basin bottoms and/or when basins are placed in close proximity to structures (strongly not recommended). In addition, the presence of granular or other generally permeable soils, which is typically necessary in the areas of structures, especially within utility backfill, alongside basement walls, or within other development excavations, can act as extensive migration channels to rapidly carry large volumes of water from basins and into nearby basements. Building codes or municipal regulations may require that basement floor elevations be a specified distance above the water level of nearby basins. It is therefore recommended that the design engineer (or other appropriate representative) review applicable municipal requirements, and if necessary, verify the design normal and design high water elevations of stormwater basins with respect to planned basement slab elevations.

5.2 GROUNDWATER CONTROL

Groundwater was not encountered during drilling or upon completion and removal of the augers at the boring locations. Based on the observations, no major difficulties during excavation and construction of the proposed stormwater pond are anticipated. A gravity drainage system and filtered sump pumps or other conventional dewatering procedures, may be adequate to control isolated small volume perched water if encountered. However, if larger volume perched zones are encountered, or if groundwater levels rise due to seasonal variations, more comprehensive dewatering with a series of sump pumps may be required.

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. In addition, the water level of the Fox River may have an effect on the groundwater fluctuations on this site.

5.3 EXCAVATIONS AND SITE DRAINAGE

Sloping, shoring, or bracing of the excavation sidewalls will 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 should be expected within unprotected excavations. 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. However, severe instability may occur within granular soils, especially encroaching upon and extending below the groundwater or perched zones. All excavation work must be performed in accordance with OSHA and local building code requirements.

Where excavations encroach upon or extend below the groundwater or perched zones and into fine sand, silt, or soft clay, they may become substantially unstable when the confining effect of the overburden is removed. Significant sloughing or caving of sidewalls may also occur. Some overexcavation of softened or loosened soils, in conjunction with the use of a crushed
stone working mat, may be necessary to establish a stable bearing subgrade. Additionally, significantly widened excavations may result, or be required to maintain or achieve sidewall stability.

All excavations must be performed with caution and utilize methods which will prevent undermining or destabilization of buildings, utilities, pavements, sidewalks 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 buildings, 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.

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 excavations, whether they be for utility trenches, basement excavations or footing excavations, be constructed in accordance with current Occupational Safety and Health Administration (OSHA) guidelines to protect workers and others during construction. PSI recommends that these regulations be strictly enforced; otherwise, workers could be in danger and the owner(s) and the contractor(s) could be liable for substantial penalties.

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 GENERAL COMMENTS

This geotechnical exploration has been prepared to aid in the evaluation of the conditions on this site. The recommendations presented herein are based on the available soil information and the design information provided. Any changes in the design information or building locations should be brought to the attention of PSI to determine if modifications in the
recommendations are required. The final design plans and specifications should also be reviewed by PSI 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 operations be monitored by the soils engineer, to test and evaluate the bearing capacities, and the selection, placement and compaction of controlled fills.
Figure 1 - Boring Location Plan
Soil Boring Logs
Laboratory Data Sheets
Storm Forms
General Notes
Front Street Stormwater Pond
De Pere, Wisconsin

FIGURE 1: Boring Location Plan

SCALE: SHOWN ABOVE
PROJECT NO: 00941315
PAGE 1 OF 1  1/25/2021
## SOIL BORING LOG: B - 1

**Project:** Front Street Stormwater Pond  
**Project No.:** 00941315  
**Location:** Front Street (Franklin Street to Fulton Street)  
De Pere, Wisconsin  
**Drill Date:** January 6, 2020  
**Drilled By:** GW/KH

### DEPTH/EL. (feet) | VISUAL SOIL CLASSIFICATION | GROUND SURFACE ELEVATION: 588.3 | SAMPLE NO. | N (bpf) | Qp (tsf) | Qu (tsf) | MC (%) | REMARKS
---|---|---|---|---|---|---|---|---
1 | 587.3 | 0-10": 10YR 2/2 Very dark brown SILTY CLAY LOAM, with roots (3,vf), 2.sbk,vf, mfr-moist (TOPSOL) | 1-SS | 10 | - | - | 19 |  
1 | 587.3 | 5YR 4/4 Reddish brown CLAY, 1.sbk,vf, mvfi-moist | | | | | |  
2 | 586.3 | | | | | | |  
3 | 585.3 | 5YR 4/4 Reddish brown CLAY, with GLEY1 6/10Y greenish gray (f,1,P) blotches, 1.sbk,vf, mvfi-moist | 2-SS | 7 | 1.75 | 3.1 | 29 |  
4 | 584.3 | | | | | | |  
5 | 583.3 | | | | | | |  
6 | 582.3 | 5YR 4/3 Reddish brown CLAY, 0,m, mvfi-moist | 3-SS | 6 | 2.75 | - | 17 |  
7 | 581.3 | | | | | | |  
8 | 580.3 | | | | | | |  
9 | 579.3 | | | | | | |  
10 | 578.3 | | | | | | |  
11 | 577.3 | 5YR 4/3 Dark reddish gray CLAY, 0,m, mfr-moist | 6-SS | 11 | 2.75 | 1.7 | 20 |  
12 | 576.3 | | | | | | |  
13 | 575.3 | | | | | | |  
14 | 574.3 | | | | | | |  
15 | 573.3 | | | | | | |  
16 | 572.3 | | | | | | |  
17 | 571.3 | | | | | | |  
18 | 570.3 | | | | | | |  
19 | 569.3 | | | | | | |  
20 | 568.3 | END OF BORING @ 20± FEET | | | | | |  

### FIELD OBSERVATIONS

- **Water Level during drilling:** Not Encountered  
- **Water Level upon completion:** Not Present  
- **Caved at upon completion:** 16± feet below existing grade (EL 572.3±)  
- **Delay Time:** N/A  
- **Water Level upon completion:** N/A  
- **Caved at delay:** 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.
## SOIL BORING LOG: B - 1A

**Project:** Front Street Stormwater Pond  
**Project No.:** 00941315  
**Location:** Front Street (Franklin Street to Fulton Street)  
De Pere, Wisconsin  
**Drill Date:** January 6, 2020  
**Drilled By:** GW/KH

### DEPTH/EL. (feet) | VISUAL SOIL CLASSIFICATION | GROUND SURFACE ELEVATION: 588.3 | SAMPLE NO. | N (bpf) | Qp (tsf) | Qu (tsf) | MC (%) | REMARKS
--- | --- | --- | --- | --- | --- | --- | --- | ---
1 | 587.3 | 0-10": Very dark brown Clayey SILT, with trace root matter, moist (TOPSOIL) | 1-SS | 10 | - | - | 19 |  
2 | 586.3 | Light reddish brown CLAY, moist | | | 3.25 | - | 25 |  
3 | 585.3 | | | | 1.75 | 1.75 | 29 |  
4 | 584.3 | | | | | | |  
5 | 583.3 | Light reddish brown CLAY, with sand, trace gravel, and silt, moist | 3-SS | 6 | 2.75 | - | 17 |  
6 | 582.3 | Reddish brown CLAY, with trace sand, moist | 4-SS | 13 | 4.5+ | 4.5 | 20 |  
7 | 581.3 | | | | | | |  
8 | 580.3 | Dark reddish gray CLAY, with trace sand, moist | 6-SS | 11 | 2.75 | 1.7 | 20 |  
9 | 579.3 | | | | | | |  
10 | 578.3 | | | | | | |  
11 | 577.3 | | | | | | |  
12 | 576.3 | | | | | | |  
13 | 575.3 | | | | | | |  
14 | 574.3 | | | | | | |  
15 | 573.3 | | | | | | |  
16 | 572.3 | | | | | | |  
17 | 571.3 | | | | | | |  
18 | 570.3 | | | | | | |  
19 | 569.3 | | | | | | |  
20 | 568.3 | END OF BORING @ 20± FEET | | | | | | |

### FIELD OBSERVATIONS
- **Water Level during drilling:** Not Encountered  
- **Water Level upon completion:** Not Present
- **Caved at upon completion:** 16± feet below existing grade (EL. 572.3±)
- **Delay Time:** N/A
- **Water Level upon completion:** Not Present

### 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.

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**Project:** Front Street Stormwater Pond  
**Project No.:** 00941315  
**Location:** Front Street (Franklin Street to Fulton Street)  
De Pere, Wisconsin  
**Drill Date:** January 6, 2020  
**Drilled By:** GW/KH

### DEPTH/EL. (feet) | VISUAL SOIL CLASSIFICATION | GROUND SURFACE ELEVATION: 588.3 | SAMPLE NO. | N (bpf) | Qp (tsf) | Qu (tsf) | MC (%) | REMARKS
--- | --- | --- | --- | --- | --- | --- | --- | ---
1 | 587.3 | 0-10": Very dark brown Clayey SILT, with trace root matter, moist (TOPSOIL) | 1-SS | 10 | - | - | 19 |  
2 | 586.3 | Light reddish brown CLAY, moist | | | 3.25 | - | 25 |  
3 | 585.3 | | | | 1.75 | 1.75 | 29 |  
4 | 584.3 | | | | | | |  
5 | 583.3 | Light reddish brown CLAY, with sand, trace gravel, and silt, moist | 3-SS | 6 | 2.75 | - | 17 |  
6 | 582.3 | Reddish brown CLAY, with trace sand, moist | 4-SS | 13 | 4.5+ | 4.5 | 20 |  
7 | 581.3 | | | | | | |  
8 | 580.3 | Dark reddish gray CLAY, with trace sand, moist | 6-SS | 11 | 2.75 | 1.7 | 20 |  
9 | 579.3 | | | | | | |  
10 | 578.3 | | | | | | |  
11 | 577.3 | | | | | | |  
12 | 576.3 | | | | | | |  
13 | 575.3 | | | | | | |  
14 | 574.3 | | | | | | |  
15 | 573.3 | | | | | | |  
16 | 572.3 | | | | | | |  
17 | 571.3 | | | | | | |  
18 | 570.3 | | | | | | |  
19 | 569.3 | | | | | | |  
20 | 568.3 | END OF BORING @ 20± FEET | | | | | | |
<table>
<thead>
<tr>
<th>DEPTH/EL. (feet)</th>
<th>VISUAL SOIL CLASSIFICATION</th>
<th>GROUND SURFACE ELEVATION: 587.7</th>
<th>SAMPLE NO.</th>
<th>N (bpf)</th>
<th>Qp (tsf)</th>
<th>Qu (tsf)</th>
<th>MC (%)</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 586.7</td>
<td>0-8&quot;: 10YR 2/2 Very dark brown SILTY CLAY LOAM, with roots (3,vf), 2,skl,vf, mvfi-moist (TOPSOIL)</td>
<td>1-SS</td>
<td>6</td>
<td>-</td>
<td>4.5+</td>
<td>-</td>
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<tr>
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<td>5YR 5/3 Reddish brown SILTY CLAY, with roots (1,vf), 2,skl,vf, mvfi-moist</td>
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<td>6</td>
<td>3.0</td>
<td>2.6</td>
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<tr>
<td>3 584.7</td>
<td>5YR 4/4 Reddish brown CLAY, with GLEY 6/10Y greenish gray (f,1,P) blotches, 2,pf,f, mvfi-moist</td>
<td></td>
<td>3-SS</td>
<td>9</td>
<td>2.75</td>
<td>3.0</td>
<td>22</td>
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<tr>
<td>4 583.7</td>
<td>5YR 4/3 Reddish brown CLAY, with 5YR 5/2 reddish gray silt seams, 2,skl,vf, mvfi-moist</td>
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<td>3.9</td>
<td>19</td>
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<td>5-SS</td>
<td>9</td>
<td>3.0</td>
<td>2.6</td>
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<td>6 581.7</td>
<td>5YR 4/2 Dark reddish gray CLAY, 0,m, mfi-moist</td>
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<td>6-SS</td>
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<td>4.5+</td>
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<td></td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>20 567.7</td>
<td>END OF BORING @ 20± FEET</td>
<td>20</td>
<td></td>
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</tbody>
</table>

**FIELD OBSERVATIONS**

- Water Level *during* drilling: Not Encountered
- Water Level *upon completion*: Not Present
- Caved at *upon completion*: 17± feet below existing grade (EL. 570.7±)
- Delay Time: N/A
- Water Level *after* setting: N/A
- Caved at *after* setting: N/A

**ADDITIONAL COMMENTS:**

- 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 - 2A

**Project:** Front Street Stormwater Pond  
**Project No.:** 00941315  
**Location:** Front Street (Franklin Street to Fulton Street)  
De Pere, Wisconsin  
**Drill Date:** January 6, 2020  
**Drilled By:** GW/KH

<table>
<thead>
<tr>
<th>DEPTH/EL. (feet)</th>
<th>VISUAL SOIL CLASSIFICATION</th>
<th>GROUND SURFACE ELEVATION: 587.7</th>
<th>SAMPLE NO.</th>
<th>N (bpf)</th>
<th>Qp (tsf)</th>
<th>Qu (tsf)</th>
<th>MC (%)</th>
<th>REMARKS</th>
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<td>1</td>
<td>0-8&quot;: Very dark brown Clayey SILT, with trace root matter, moist (TOPSOIL)</td>
<td>586.7</td>
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<td>3</td>
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<td>4.5+</td>
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<td>5</td>
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<tr>
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<td>END OF BORING @ 20± FEET</td>
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</tbody>
</table>

**FIELD OBSERVATIONS**
- Water Level during drilling: Not Encountered
- Water Level upon completion: Not Present
- Caved at upon completion: 17± feet below existing grade (EL. 570.7±)
- Delay Time: N/A
- Water Level during N/A

**ADDITIONAL COMMENTS:**
- 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.
Material Test Report

Project: FRONT STREET STORMWATER
MANAGE
DE PERE, WI

Sample Details

Sample ID: 00941315-1-S1
Client Sample ID:
Date Sampled: 01/21/21
Sampled By: Zachary Ashauer
Specification: Standard Sieve
Supplier: Soil Boring
Source: Light reddish brown CLAY
Material: Split Spoon
Soil Description: USCS:CL AASHTO:A-6
General Location: B-1 2-6'

Sample Description:

USCS:CL  AASHTO:A-6

Atterberg Limit:

Liquid Limit: 38
Plastic Limit: 18
Plasticity Index: 20

Grading: ASTM C 136

Date Tested: 1/21/2021
Tested By: Zachary Ashauer

Particle Size Distribution

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>% Passing</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>¾in (19.0mm)</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>3/8in (9.5mm)</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>No.4 (4.75mm)</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td>No.10 (2.0mm)</td>
<td>93</td>
<td></td>
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<tr>
<td>No.40 (425µm)</td>
<td>89</td>
<td></td>
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<tr>
<td>No.100 (150µm)</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td>No.200 (75µm)</td>
<td>79</td>
<td></td>
</tr>
</tbody>
</table>

COBBLES | GRAVEL | SAND | FINES (79.3%)
--------|--------|------|---------------- |
(0.0%)  |        |      |                |
Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
(0.0%) | (4.6%)| (2.3%)| (4.3%)| (9.5%)|      |      |      |

D85: 0.2344  D60: N/A  D50: N/A
D30: N/A    D15: N/A  D10: N/A
Material Test Report

Client: CITY OF DE PERE
925 SOUTH 6TH STREET
DE PERE, WI 54115

Project: FRONT STREET STORMWATER MANAGE
DE PERE, WI

Sample Details

Sample ID: 00941315-1-S1
Client Sample ID: 01/21/21
Date Sampled: 01/21/21
Sampled By: Zachary Ashauer
Specification: Standard Sieve
Supplier: Soil Boring
Source: Light reddish brown CLAY
Material: Split Spoon
Sampling Method: USCS:CL AASHTO:A-6
Soil Description: B-1 2-6'
General Location: 

Other Test Results

<table>
<thead>
<tr>
<th>Description</th>
<th>Method</th>
<th>Result</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approximate maximum grain size</td>
<td>ASTM D 4318</td>
<td>11.2</td>
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<tr>
<td>Material retained on 425µm (No. 40) (%)</td>
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<td></td>
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<tr>
<td>Method of Removal</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Grooving Tool Type</td>
<td>Plastic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specimen preparation method</td>
<td>Dry</td>
<td></td>
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<tr>
<td>Drying Method</td>
<td>Air</td>
<td></td>
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<tr>
<td>Special selection process</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rolling Method for PL</td>
<td>Hand</td>
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<tr>
<td>As Received Water Content (%)</td>
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<td>Liquid Limit Device Type</td>
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<td>Plastic Limit</td>
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<td>Plasticity Index</td>
<td>20</td>
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<tr>
<td>Liquid Limit Procedure</td>
<td>One-point (B)</td>
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<tr>
<td>Tested By</td>
<td>Zachary Ashauer</td>
<td></td>
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<tr>
<td>Date Tested</td>
<td>1/21/2021</td>
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</tbody>
</table>

Comments

N/A
Material Test Report

Client: CITY OF DE PERE
925 SOUTH 6TH STREET
DE PERE, WI 54115

Project: FRONT STREET STORMWATER
MANAGE
DE PERE, WI

Sample Details
Sample ID: 00941315-1-S2
Client Sample ID:
Date Sampled:
Sampled By: Zachary Ashauer
Specification: Standard Sieve
Supplier:
Source: Soil Boring
Material: Reddish brown CLAY
Sampling Method: Split Spoon
Soil Description: USCS:CL AASHTO:A-6
General Location: B-2 6-10'

Sample Description:
USCS:CL AASHTO:A-6

Atterberg Limit:
Liquid Limit: 37
Plastic Limit: 17
Plasticity Index: 20

Grading: ASTM C 136

Date Tested: 1/21/2021
Tested By: Zachary Ashauer

Particle Size Distribution

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>% Passing</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8in (9.5mm)</td>
<td>100</td>
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<td>91</td>
<td></td>
</tr>
<tr>
<td>No.200 (75µm)</td>
<td>84</td>
<td></td>
</tr>
</tbody>
</table>

COBBLES GRAVEL SAND FINES (84.4%)
(0.0%) Coarse (0.0%) Fine (0.4%) Coarse (0.6%) Medium (1.5%) Fine (13.0%) Silt Clay

Form No: 18909, Report No: MAT:00941315-1-S2 © 2000-2021 QESTLab by SpectraQEST.com
Material Test Report

Client: CITY OF DE PERE
925 SOUTH 6TH STREET
DE PERE, WI 54115

Project: FRONT STREET STORMWATER
MANAGE
DE PERE, WI

Sample Details

Sample ID: 00941315-1-S2
Client Sample ID: 
Date Sampled: 
Sampled By: Zachary Ashauer
Specification: Standard Sieve
Supplier: Soil Boring
Source: Reddish brown CLAY
Material: Split Spoon
Sampling Method: Sampling Method:
Soil Description: USCS:CL AASHTO:A-6
General Location: B-2 6-10'

Other Test Results

<table>
<thead>
<tr>
<th>Description</th>
<th>Method</th>
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</tr>
</thead>
<tbody>
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<tr>
<td>Material retained on 425µm (No. 40) (%)</td>
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<td>2.5</td>
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<td>Method of Removal</td>
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<tr>
<td>Date Tested</td>
<td>1/21/2021</td>
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</table>

Comments
N/A
**SOIL EVALUATION - STORM**

in accordance with SPS 382.365 and 385, Wis. Adm. Code

Attach complete site plan on paper not less than 8 1/2 x 11 inches in size. Plan must include, but not limited to: vertical and horizontal reference point (BM), direction and percent slope, scale, or dimensions, north arrow, and BM referenced to nearest road.

**Please print all information.**

Personal information you provide may be used for secondary purposes (Privacy Law, s. 15.04 (1) (m)).

---

### Property Owner

**City of De Pere**

**Property Location**

Govt. Lot: 1 and 2

City: De Pere

Nearest Road: Front Street

---

### Property Owner's Mailing Address

335 South Broadway

De Pere, WI 54115

---

### Drainage area

- **sq. ft.**
- **acres**

### Optional:

- **Irrigation**
- **Bioretention trench**
- **Trench(es)**
- **Rain Garden**
- **Grassed swale**
- **Reuse**
- **Infiltration Trench**
- **SDS (> 15' wide)**
- **Other**

### Hydraulic Application Test Method:

- **Morphological Evaluation**
- **Double-Ring Infiltrometer**
- **Other (specify)**

### Boring

**B-1**

- **Obs. #**
- **X**
- **Boring**
- **Pit**
- **Ground surface elev.** 588.3 ft.
- **Depth to limiting factor** 24* in.
- **Hydraulic App. Rate**

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*Water was not encountered during drilling or upon completion.

---

### B-2

**Obs. #**

- **X**
- **Boring**
- **Pit**
- **Ground surface elev.** 587.7 ft.
- **Depth to limiting factor** 24* in.
- **Hydraulic App. Rate**

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<td>144-240</td>
<td>5YR 4/2</td>
<td>-</td>
<td>c</td>
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<td>mfr</td>
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<td>&lt;15</td>
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<td></td>
</tr>
</tbody>
</table>

*Water was not encountered during drilling or upon completion.

---

### CST/PSS Name (Please Print)

Zachary Ashauer

**Signature**

---

**CST/PSS Number**

SP-111802007

---

**Address**

3009 Vandenbroek Road Kaukauna, WI 54130

**Date Evaluation Conducted**

1/6/2021

**Telephone Number**

920-735-1200

---

**SPD-10793 (R11/11)**
**GENERAL NOTES**

**SAMPLE IDENTIFICATION**

1. 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.

2. 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**

<table>
<thead>
<tr>
<th>U.S. Std. Sieve</th>
<th>#200</th>
<th>#40</th>
<th>#10</th>
<th>#4</th>
<th>3/16&quot;</th>
<th>3&quot;</th>
<th>12&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Millimeters</td>
<td>0.002</td>
<td>0.074</td>
<td>0.42</td>
<td>2</td>
<td>4.8</td>
<td>19</td>
<td>76</td>
</tr>
</tbody>
</table>

**UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487-00)**

| Coarse-Grained Soils (More than 50% of coarse fraction retained on No. 4 sieve) | Fine-Graded Soils (More than 50% of coarse fraction passes the No. 4 sieve) | Highly Organic Soils | Criteria for assigning group symbols and group names using laboratory tests
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gravels (More than 50% of coarse fraction retained on No. 4 sieve)</td>
<td>Clean gravels w/ &lt; 5% fines</td>
<td>Cu ≥ 4 and 1 ≤ Cc ≤ 3</td>
<td>GW</td>
</tr>
<tr>
<td>Gravels w/ &gt; 12% fines</td>
<td>Fines classify as ML or MH</td>
<td>GC</td>
<td>Silty gravel</td>
</tr>
<tr>
<td>Sands w/ &gt; 12% fines</td>
<td>Fines classify as CL or CH</td>
<td>GM</td>
<td>Clayey gravel</td>
</tr>
<tr>
<td>Clean sands w/ &lt; 5% fines</td>
<td>Cu ≥ 6 and 1 ≤ Cc ≤ 3</td>
<td>GW</td>
<td>Well-graded sand</td>
</tr>
<tr>
<td>Sands w/ &gt; 12% fines</td>
<td>Cu &lt; 6 and/or 1 &gt; Cc &gt; 3</td>
<td>SP</td>
<td>Poorly graded sand</td>
</tr>
<tr>
<td>Silts and clays w/ liquid limit (LL) &lt; 50</td>
<td>Inorganic</td>
<td>Pi &gt; 7 and plots on or above “A” line</td>
<td>CL</td>
</tr>
<tr>
<td>Organic</td>
<td>Pi &lt; 4 and plots below “A” line</td>
<td>OL</td>
<td>Organic clay</td>
</tr>
<tr>
<td>LL (Oven dried) / LL (Not dried) &lt; 0.75</td>
<td></td>
<td>CH</td>
<td>Fat clay</td>
</tr>
<tr>
<td>Organic</td>
<td>Pi plots below “A” line</td>
<td>MH</td>
<td>Elastic soil</td>
</tr>
<tr>
<td>LL (Oven dried) / LL (Not dried) ≥ 0.75</td>
<td>Organic</td>
<td>OH</td>
<td>Organic clay</td>
</tr>
</tbody>
</table>

**RELATIVE SOIL COMPOSITION**

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

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**Footnotes:**

- 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 = D60/D10; Cc = (D60)² / D10 x D60
- 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-SC poorly graded sand with silt
- 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” to group name
- L: If soil contains ≥ 30% plus No. 200, predominantly sand, add “sandy” to group name
- M: If soil contains ≥ 30%, 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

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**Professional Service Industries, Inc.**
DRILLING & SAMPLING SYMBOLS

AU - Auger sample from cuttings
BS - Bag sample
HA - Hand auger sample
SS - Split spoon sample (2" O.D. by 1⅜" 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
γd - Dry density, pounds per cubic foot (pcf)

LL - Liquid limit, % (ASTM D4318)
PL - Plastic limit, % (ASTM D4318)
PI - Plasticity index, % (ASTM D4318)
%P200 - Percent of sample passing the No. 200 sieve

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

SOIL RELATIVE DENSITY & CONSISTENCY CLASSIFICATION

<table>
<thead>
<tr>
<th>Density</th>
<th>N-Value Range</th>
<th>Consistency</th>
<th>Qu Range (tsf)</th>
<th>Approximate N-value Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very loose</td>
<td>0 - 3</td>
<td>Very soft</td>
<td>0 - 0.25</td>
<td>0 - 2</td>
</tr>
<tr>
<td>Loose</td>
<td>3 - 7</td>
<td>Soft</td>
<td>0.25 - 0.5</td>
<td>2 - 5</td>
</tr>
<tr>
<td>Medium dense</td>
<td>7 - 15</td>
<td>Medium stiff</td>
<td>0.5 - 1.0</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Dense</td>
<td>15 - 38</td>
<td>Stiff</td>
<td>1.0 - 2.0</td>
<td>10 - 14</td>
</tr>
<tr>
<td>Very dense</td>
<td>38+</td>
<td>Very Stiff</td>
<td>2.0 - 4.0</td>
<td>14 - 32</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hard</td>
<td>4.0+</td>
<td>32+</td>
</tr>
</tbody>
</table>

SOIL STRUCTURE TERMINOLOGY

Interlayered - Alternating layers of different soil types
Layer - Inclusion greater than 3 inches thick
Seam - Inclusion ⅛ 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

v - 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)."
**USDA SOIL CLASSIFICATION SYSTEM**

Texture Triangle:
Fine Earth Texture Classes (\% by volume)

<table>
<thead>
<tr>
<th>Clay separate</th>
<th>Fine separate</th>
<th>Silt separate</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>90</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>80</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>70</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>60</td>
<td>40</td>
<td>0</td>
</tr>
<tr>
<td>50</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>40</td>
<td>60</td>
<td>0</td>
</tr>
<tr>
<td>30</td>
<td>70</td>
<td>0</td>
</tr>
<tr>
<td>20</td>
<td>80</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>90</td>
<td>0</td>
</tr>
</tbody>
</table>

**TEXTURE CLASS**

<table>
<thead>
<tr>
<th>Texture Class or Subclass</th>
<th>Code</th>
<th>Conv.</th>
<th>NASIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coarse Sand</td>
<td>ccs</td>
<td>C0S</td>
<td></td>
</tr>
<tr>
<td>Sand</td>
<td>a</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>Fine Sand</td>
<td>f</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>Very Fine Sand</td>
<td>vfs</td>
<td>VFS</td>
<td></td>
</tr>
<tr>
<td>Loamy Coarse Sand</td>
<td>lcsc</td>
<td>LCS</td>
<td></td>
</tr>
<tr>
<td>Loamy Sand</td>
<td>ls</td>
<td>LS</td>
<td></td>
</tr>
<tr>
<td>Loamy Fine Sand</td>
<td>lfs</td>
<td>LFS</td>
<td></td>
</tr>
<tr>
<td>Loamy Very Fine Sand</td>
<td>lvfs</td>
<td>LVFS</td>
<td></td>
</tr>
<tr>
<td>Coarse Sandy Loam</td>
<td>ccsl</td>
<td>CSS</td>
<td></td>
</tr>
<tr>
<td>sandy loam</td>
<td>s</td>
<td>SL</td>
<td></td>
</tr>
<tr>
<td>Fine Sandy Loam</td>
<td>fs</td>
<td>FSL</td>
<td></td>
</tr>
<tr>
<td>Very Fine Sandy Loam</td>
<td>vsl</td>
<td>VSL</td>
<td></td>
</tr>
<tr>
<td>loam</td>
<td>l</td>
<td>L</td>
<td></td>
</tr>
<tr>
<td>Silt loam</td>
<td>sl</td>
<td>SLL</td>
<td></td>
</tr>
<tr>
<td>Silt</td>
<td>s</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>Sandy Clay Loam</td>
<td>scl</td>
<td>SCL</td>
<td></td>
</tr>
<tr>
<td>Clay Loam</td>
<td>cl</td>
<td>CL</td>
<td></td>
</tr>
<tr>
<td>Silty Clay Loam</td>
<td>sscl</td>
<td>SCL</td>
<td></td>
</tr>
<tr>
<td>Sandy Clay</td>
<td>sc</td>
<td>SC</td>
<td></td>
</tr>
<tr>
<td>Silty Clay</td>
<td>sc</td>
<td>SC</td>
<td></td>
</tr>
<tr>
<td>Clay</td>
<td>c</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>

**TEXTURE MODIFIERS** - Conventions for using “Rock Fragment Texture Modifiers” and for using textual adjectives that convey the "% volume" ranges for Rock Fragments - Size and Quantity.

<table>
<thead>
<tr>
<th>Fragment Content</th>
<th>Rock Fragment Modifier Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; .15</td>
<td>No texture adjective is used (noun only); e.g., loam.</td>
</tr>
<tr>
<td>.15 to &lt; .5</td>
<td>Use adjective for appropriate size, e.g., gravel.</td>
</tr>
<tr>
<td>.5 to &lt; 1.0</td>
<td>Use <em>very</em> with the appropriate size adjective; e.g. very gravel.</td>
</tr>
<tr>
<td>1.0 to &lt; 5.0</td>
<td>Use <em>extremely</em> with appropriate size adjective; e.g., extremely gravel.</td>
</tr>
<tr>
<td>≥ 5.0</td>
<td>No adjective or modifier. If ≤ 10% fine earth, use the appropriate noun for dominant size class; e.g., gravel. Use Terms in Lies of Texture.</td>
</tr>
</tbody>
</table>

**ROCK MODIFIERS** - (adjectives)

<table>
<thead>
<tr>
<th>ROCK FRAGMENTS: Size &amp; Quantity</th>
<th>Code</th>
<th>Criteria: Percent (by Volume) of Total Rock Fragments and Dominated By (name size):</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 2 mm; &gt; Strongly Cemented</td>
<td></td>
<td></td>
</tr>
<tr>
<td>gravelly</td>
<td>gr</td>
<td>≥ 15 but &lt; 35 gravel</td>
</tr>
<tr>
<td>Fine Gravelly</td>
<td>fgr</td>
<td>≥ 15 but &lt; 35 fine gravel</td>
</tr>
<tr>
<td>Medium Gravelly</td>
<td>mgr</td>
<td>≥ 15 but &lt; 35 mod gravel</td>
</tr>
<tr>
<td>Coarse Gravelly</td>
<td>cg</td>
<td>≥ 15 but &lt; 35 coarse gravel</td>
</tr>
<tr>
<td>Very Gravelly</td>
<td>vgr</td>
<td>≥ 15 but &lt; 60 gravel</td>
</tr>
<tr>
<td>Extremely Gravelly</td>
<td>xgr</td>
<td>≥ 60 but &lt; 90 gravel</td>
</tr>
<tr>
<td>Cobby</td>
<td>cb</td>
<td>≥ 15 but &lt; 60 cobbles</td>
</tr>
<tr>
<td>Very Cobby</td>
<td>vcb</td>
<td>≥ 60 but &lt; 90 cobbles</td>
</tr>
<tr>
<td>Extremely Cobby</td>
<td>xcb</td>
<td>≥ 90 but &lt; 90 cobbles</td>
</tr>
<tr>
<td>Storyy</td>
<td>st</td>
<td>≥ 15 but &lt; 35 stones</td>
</tr>
<tr>
<td>Very Storyy</td>
<td>vst</td>
<td>≥ 35 but &lt; 60 stones</td>
</tr>
<tr>
<td>Extremely Storyy</td>
<td>xst</td>
<td>≥ 60 but &lt; 90 stones</td>
</tr>
<tr>
<td>Bouldery</td>
<td>by</td>
<td>≥ 15 but &lt; 35 boulders</td>
</tr>
<tr>
<td>Very Bouldery</td>
<td>vby</td>
<td>≥ 35 but &lt; 60 boulders</td>
</tr>
<tr>
<td>Extremely Bouldery</td>
<td>xby</td>
<td>≥ 60 but &lt; 90 boulders</td>
</tr>
<tr>
<td>Channery</td>
<td>ch</td>
<td>≥ 15 but &lt; 60 channels</td>
</tr>
<tr>
<td>Very Channery</td>
<td>vch</td>
<td>≥ 35 but &lt; 60 channels</td>
</tr>
<tr>
<td>Extremely Channery</td>
<td>xch</td>
<td>≥ 60 but &lt; 90 channels</td>
</tr>
<tr>
<td>Flagggy</td>
<td>fl</td>
<td>≥ 15 but &lt; 35 flagstones</td>
</tr>
<tr>
<td>Very Flagggy</td>
<td>vfl</td>
<td>≥ 35 but &lt; 60 flagstones</td>
</tr>
<tr>
<td>Extremely Flagggy</td>
<td>xfl</td>
<td>≥ 60 but &lt; 90 flagstones</td>
</tr>
</tbody>
</table>

* As outlined in the NRCS Field Book for Describing and Sampling Soils, Version 2.0 (2002).
### STANDARD ABBREVIATIONS AND SYMBOLS

#### CITY OF DE PERE

**ENGINEERING DIVISION, 925 S. SIXTH ST. DE PERE, WI 54115**

**OFFICE 920-339-4060 FAX 920-339-4079**

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### LIST OF STANDARD ABBREVIATIONS

<table>
<thead>
<tr>
<th>ABBREVIATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFT</td>
<td>AVERAGE DAILY TRAFFIC</td>
</tr>
<tr>
<td>AGRI</td>
<td>AGRICULTURAL</td>
</tr>
<tr>
<td>ANH</td>
<td>AERIAL</td>
</tr>
<tr>
<td>ASH</td>
<td>ASH-ALLOY</td>
</tr>
<tr>
<td>B/S</td>
<td>BACK TO BACK</td>
</tr>
<tr>
<td>BAR</td>
<td>BARRE</td>
</tr>
</tbody>
</table>
CITY OF DE PERE
CROSS SECTIONS
C301
FRONT / FRANKLIN / FULTON
STORM SEWER AND POND
CROSS SECTIONS