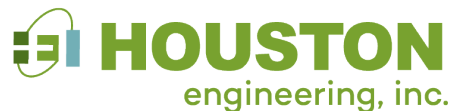

Specifications/Bid Package
for
Fergus Falls Class I C&D Landfill
Phase 3B Expansion Project #9774
MPCA Permit SW-572

Prepared for the
CITY OF FERGUS FALLS, MINNESOTA
December 2024



by



7550 Meridian Circle North, Suite 120
Maple Grove, MN 55369-5455

SPECIFICATIONS/BID PACKAGE FOR

Fergus Falls Class I C&D Landfill

Phase 3B Expansion

MPCA Permit SW-572,

Project #9774

in
Otter Tail County, Minnesota

Owner (for purpose of this contract): City of Fergus Falls
112 West Washington Avenue
PO Box 868
Fergus Falls, MN 56537
Phone: 218.332.5413

Prepared By: Houston Engineering, Inc.
7550 Meridian Circle North, Suite 120
Maple Grove, MN 55369-5455
Phone: 763.493.4522

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: Dennis D. McAlpine II, PE

Sign Name: _____

Date: 2/3/2025 License No. 46827

SECTION 00010

TABLE OF CONTENTS

DIVISION 0 - BIDDING AND CONTRACT DOCUMENTS

00030: Advertisement for Bids.....	6
00200: Instructions to Bidders.....	8
00400: Bid Forms.....	17
00401: Bid Bond.....	27
00410: Responsible Contractor Verification of Compliance.....	28
00500: Construction Agreement.....	31
00510: Notice of Award.....	34
00550: Notice to Proceed.....	35
00610: Construction Performance Bond.....	36
00620: Construction Payment Bond.....	40
00700: General Conditions.....	44
00800: Supplementary Conditions.....	123
00920: Payment Certification.....	136
00930: Change Order Form.....	138
00940: Certificate of Substantial Completion.....	140

DIVISION 1- GENERAL REQUIREMENTS

01100: Summary of Work.....	143
01120: Special Provisions.....	147
01127: Applications for Payment.....	165
01130: Construction Surveying.....	167
01150: Measurement and Payment.....	171
01300: Submittals.....	183
01700: Project Closeout.....	188

DIVISION 2- SITE CONSTRUCTION

02025: Test-Pit Excavation.....	190
02100: Site Preparation & Demolition.....	192
02105: Earthwork.....	195
02240: Control of Water.....	200
02241: Aggregate & Soil Materials.....	202
02245: Geotextiles.....	206
02247: Re-Compacted Soil Barrier Layer.....	211
02503: Storm Sewer System.....	216
02575: Erosion Control & Turf Establishment.....	222
02622: Leachate Collection System Piping.....	225
02731: Gravel Surfacing.....	227

LIST OF DRAWINGS

G1 – Cover Sheet
G2 – Legend
C1 – Overall Existing Site
C2 – Demolition Plan
C3 – Site Map
C4 – Cell 3B Grading Plan
C5 – Exterior Grading Plan – Access Road and Pond
C6 – Exterior Grading Plan – Phase Delineation Berm
C7 – Access Road Plan and Profile
C8 – Alternative Underdrain Extension Plan and Profile
C9 – Leachate Plan and Profile
C10 – Point Schedule
C11 – Sample Lines
C12 - C15 – W-E Cross Sections
C16 - C18 – N-S Cross Sections
D1 – D3 – Details

DIVISION

0

**SECTION 00030
ADVERTISEMENT FOR BIDS**

**Fergus Falls Class I C&D Landfill
Phase 3B Expansion Project**

Fergus Falls, Minnesota

NOTICE TO BIDDERS:

Sealed proposals will be received by the City Council of the City of Fergus Falls, Minnesota at the City Administrator's Office until 2:00 o'clock p.m., local time, on the 25th day of February, 2025, and will be opened and publicly read by representatives of the City in the Council Chambers of the City Hall at an open meeting on the above date at 2:00 o'clock pm, local time.

The project consists of the following public improvements:

**Fergus Falls Class I C&D Landfill
Phase 3B Expansion Project**

Public Improvement No. 9774

The work shall be performed in accordance with the drawings and special provisions and consists of the following major items:

Common Excavation (CV) (P) – 11,793 cubic yards
Placement of Re-Compacted Soil Barrier Layer (CV) (P) – 2,135 cubic yards
Placement of Sand Drainage Layer (P) – 2,988 cubic yards
Phase Separation Turnaround Pad and Temporary Drainage Berms (CV) (P) – 3,731 cubic yards
Leachate Collection Trench – 299 lineal feet
Gravel Surfacing – 850 tons
Seed, Mulch, Fertilizer up to 2.84 acres

Each bid must be accompanied by a money order, cash deposit, cashiers check, or Bid Bond payable to the City of Fergus Falls, Minnesota in the amount of five percent (5%) of the total bid. This is to serve as a guarantee that the bidder will enter into a contract for the performance of such work if the Contract is awarded to them. Only bids that are accompanied by such bond in the envelope will be considered.

All bids must be submitted on the proposal blanks furnished by the City of Fergus Falls, Minnesota. Bids must be in the hands of the City Administrator no later 2:00 P.M., local time, 25th day of February 2025, and must be in a sealed envelope plainly marked, **"Bid for Fergus Falls Class I C&D Landfill, Phase 3B Expansion Project – Public Improvement No. 9774"**

Digital Copies of the Bidding Documents are available at www.houstoneng.com or www.questcdn.com for a fee of \$22.00. These documents may be downloaded by selecting this project from the "Bid Documents" tab and entering **Quest Project Number 9455430** on the "Search Projects" page. For assistance and free membership registration, contact Quest CDN at (952) 233-1632 or info@questcdn.com. Paper copies of the Bidding Documents may be obtained from Houston Engineering, Inc., located at 7550 Meridian Cir N #120, Maple Grove, MN 55369, phone (763) 493-6660 for a fee of \$150.00 per set. The bidding and contract documents may also be examined at the office of the Fergus Falls City Engineer, Fergus Falls City Hall, 112 West Washington Ave, Fergus Falls, MN.

NOTE: A non-mandatory pre-bid meeting is scheduled for Thursday, February 13th at 10:00 AM at the Landfill Office (2010 South Oak Street, Fergus Falls, MN 56537).

The City of Fergus Falls reserves the right to reject any or all bids, to waive irregularities and informalities therein, and further reserves the right to award the contract in the best interest of the City.

The City of Fergus Falls is an Equal Opportunity/Affirmative Action Employer.

The City of Fergus Falls advertises projects on its public website at www.ci.fergus-falls.mn.us

By order of the City Council this 21st Day of January 2025.

Andrew Bremseth
City Administrator
Fergus Falls, Minnesota

SECTION 00200

INSTRUCTIONS TO BIDDERS

Fergus Falls Class 1 C&D Landfill, Phase 3B Expansion (Project #9774)

Owner: City of Fergus Falls, MN

The Specifications hereto attached, including therein drawings incorporated by reference and a complete set of forms of Bid Proposal, Agreement, and other Contract Documents, are furnished for the convenience of bidders and are not to be detached, filled out or executed. Separate copies of Bid Proposal forms will be furnished for submission of bids. In submitted Bid Proposals, bidders shall comply with the following instructions that shall control as to the submission of bids.

Bidders are responsible to review insurance requirements and ensure that conforming certificates and endorsements can be provided as required.

The City of Fergus Falls is the OWNER for all purposes related to the bidding and administration of this Work. The City of Fergus Falls owns and operates a Construction & Demolition Debris Landfill. Accordingly, under the Contract to be awarded, the City of Fergus Falls is to be considered beneficiaries of the Work. All warranties, insurance, hold harmless obligations, indemnification obligations and bonds in the Contract Documents are to run to the benefit of the City of Fergus Falls and, where applicable, shall so state.

1. DEFINED TERMS

- A. The term "General Conditions" refers to Section 00700 of these Specifications and is EJCDC C-700 Standard General Conditions of the Construction Contract, Copyright 2018 National Society of Professional Engineers for EJCDC.
- B. The term "MNDOT" in reference to a specification shall mean the latest published edition of the Minnesota Department of Transportation's Standard Specifications for Highway Construction, as modified by any MNDOT Supplemental Specification edition published prior to the date of the Advertisement.
- C. The term "Bidder" means one that submits a Bid directly to OWNER, as distinct from a sub-bidder, who submits a bid to the Bidder
- D. The term "Successful Bidder" means the lowest, qualified, responsible and responsive Bidder to whom OWNER (on the basis of OWNER'S evaluation as hereinafter provided) makes an award. The Successful Bidder becomes the CONTRACTOR upon execution of the Agreement.
- E. The term "Bidding Documents" includes this Information Available to Bidders, the Bid Proposal, and the other Contract Documents (including all addenda issued prior to receipt of Bids).
- F. The term "Bidding Requirements" means those set forth in this Information Available to Bidders and on the Bid Form and otherwise in the Contract Documents.
- G. The term "MNDOT" means Minnesota Department of Transportation.
- H. The term "ENGINEER" means Houston Engineering, Inc.

2. CONTRACT DOCUMENTS

The Contract Documents consist of the following:

- Modifications (change orders and directives)
- Notice to Proceed
- Contract
- Addenda
- Completed Bid Form
- Instruction to Bidders
- Contract Drawings
- Technical Specifications
- Payment Bond
- Performance Bond
- Insurance
- Supplementary Conditions
- General Conditions

In the case of a discrepancy between or among any of the terms and conditions set forth in any of the Contract Documents, the order listed above shall be the order of precedence for resolving any such discrepancy in the terms and conditions of the Contract Documents, that is, the governing document shall be the Modifications (starting with the most recently dated first followed in descending chronological order by the remaining Modifications) followed by the Notice, and so on.

A term used in a specific contract document shall have the meaning given by a specific definition of the term in that document. If there is not a specific definition, the term shall be governed by its plain and intended meaning or its customary meaning in the industry, if there is one. Notwithstanding, terms in the Supplementary Conditions, if not defined therein, will be governed first by definition in the General Conditions.

3. COPIES OF PROPOSED CONTRACT DOCUMENTS

- A. Complete sets of the proposed Contract Documents may be obtained from the ENGINEER for the deposit sum stated in the Advertisement for Bids. Plans and specifications shall only be available on a non-refundable, per plan basis, with all contractors and vendors being charged the same. Plan holders may obtain more than one set of plans and specifications for the stipulated amount; however, all are non-refundable. Drawings and specifications may be purchased at a cost of \$50 for which no refund will be made.
- B. Complete sets of the proposed Contract Documents must be used in preparing Bids. Neither OWNER nor ENGINEER assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of the Contract Documents.
- C. OWNER and ENGINEER in making copies of the Contract Documents available on the above terms do so only to obtain Bids on the Work and do not confer a license or grant for any other use.

4. QUALIFICATIONS OF BIDDERS

- A. To demonstrate qualifications to perform the Work, the Successful Bidder if requested by the

OWNER shall submit to OWNER (with copy to ENGINEER) within seven (7) calendar days following the request by the OWNER written documentation which demonstrates the Bidder's ability to complete the Work as specified. This documentation may include, but shall not be limited to a description of present commitments; description of the Bidder's project experience in the past five years including nature of project, owner's name, dollar value and name of bonding company; a description of the Bidder's equipment, key personnel and resources which demonstrate the Bidder's ability to successfully complete the Work; a list of subcontractors Bidder proposes to use; and such other information the OWNER believes is necessary.

5. EXAMINATION OF CONTRACT DOCUMENTS AND SITE

- A. It is the responsibility of each Bidder before submitting a Bid, to (a) examine the Contract Documents and become thoroughly familiar with all terms, conditions, and requirements; (b) visit the site to become familiar with local conditions that may affect cost, progress, performance or furnishing of the Work; (c) consider federal, state and local Laws, Codes, Ordinances, and Regulations that may affect cost, progress, performance or furnishing of the Work; (d) study and carefully correlate Bidder's observations with the Contract Documents; (e) assure itself of the timely fabrication and availability of any structural elements of the work; and (f) notify ENGINEER of all conflicts, errors or discrepancies in the Contract Documents.
- B. Reference is made to the General Conditions for identification of:
1. Existing Structures: All existing above and below ground structures at the site may not be shown on the Drawings and Bidder shall be responsible to verify the existence and location of all above and below ground structures. Bidder's Bid shall include the costs necessary for the performance, progress, furnishing, and installation of the Work as relates to existing above and below-ground structures.
 - (a) The OWNER and ENGINEER do not imply that the existing above and below ground structure information represented by the Drawings is necessarily representative, exhaustive, or comprehensive and expressly disclaim any warranties as to their accuracy or reliability for Bidder's purposes or purposes of construction. The Bidder may use this information and the data Bidder judges appropriate, but Bidder is not entitled to rely on any of the information, technical data, non-technical data, interpretations, or opinions contained therein or the completeness thereof. Bidder's reliance on such for Bidder's purposes is solely at Bidder's own risk.
 - (b) The OWNER and ENGINEER have no reliable information regarding the existence of subsurface structures at or contiguous to the Work other than those indicated in the Drawings. If the Bidder suspects or verifies the existence of subsurface structures which may affect the cost, performance, progress, furnishing, or installing of the Work in accordance with the Contract Documents prior to the time for the opening of bids, the Bidder shall notify OWNER and ENGINEER promptly, in writing, of the conflict. If such an existing subsurface structure is located at any time thereafter, OWNER and ENGINEER may consider the existing subsurface structure under the provisions for differing conditions as set forth in the General Conditions.
 2. Underground Facilities and Utilities: Information and data concerning Underground Facilities and Utilities at or contiguous to the site, and known to OWNER and ENGINEER, are available for review by any Bidder at the ENGINEER'S office by appointment but are not a part of the

Contract Documents. OWNER and ENGINEER do not imply that this information is necessarily representative, exhaustive, or comprehensive and expressly disclaim responsibility for or any warranties as to its accuracy. Whether Underground Facilities and Utilities are shown or indicated, or not shown or indicated, on the Drawings the CONTRACTOR shall have the full responsibility for locating all Underground Facilities and Utilities prior to the performance of all elements of the Work. The additional responsibilities of Bidder regarding Underground Facilities and Utilities are set forth in the General Conditions.

- C. Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain such reasonable additional examinations, investigations, explorations, tests and studies, and obtain any additional information and data which pertain to the physical conditions (surface, subsurface, Underground Facilities and Utilities) at or contiguous to the site or otherwise which may affect the cost, progress, performance or furnishing of the Work, and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents. Bidder's failure to conduct or perform such reasonable examinations, investigations, explorations, tests, and studies or obtain additional information, shall represent that Bid has included adequate cost contingencies as Bidder deems necessary for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents.
- D. It is the Bidder's responsibility to request access to the site from OWNER to conduct such explorations and tests as Bidder deems necessary for submission of a Bid. Bidder shall be responsible for restoration of all such lands to a condition equal to or better than the existing condition of such lands.
- E. The approximate boundaries of lands upon which the Work is to be performed, rights-of-way, and easements for access thereto, and other lands designated for use by CONTRACTOR in performing the Work are identified in the Contract Documents.
- F. The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Paragraph 5.0 of this section and that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents and by such means, methods, techniques, sequences or procedures of construction as may be specifically indicated in or required by the Contract Documents, if any, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work. Except where means, methods, techniques, sequences or procedures of construction are explicitly and specifically stated in the Contract Documents, the CONTRACTOR shall choose same in order to achieve the specified results.
- G. Permits and easements not specifically provided for by the ENGINEER and OWNER at the time of the bid offering, or secured by OWNER and communicated to plan holders by addendum, shall be the responsibility of the contractor and should be obtained prior to Notice to Proceed. Information on easements and permits obtained by the ENGINEER are available from the ENGINEER and will be communicated as an addendum.
- H. Prior to the submittal of Bids, if any potential Bidder is in doubt as to the true meaning, or finds discrepancies in or omissions from the Contract Documents, that potential Bidder shall submit to the ENGINEER a written request for an interpretation or clarification thereof. The Bidder submitting

the request shall be responsible for prompt delivery. Interpretations and clarifications considered necessary by the ENGINEER in response to such requests will be issued by Addenda mailed or delivered to all parties recorded by the ENGINEER as having received the Contract Documents. Requests received less than ten (10) calendar days prior to the date for opening of Bids may not be answered. Only interpretations and clarifications issued by Addenda will be binding. Oral interpretations and clarifications will be without legal effect.

- I. The estimate of quantities as shown in Section 00400, Bid Forms, shall be used as the basis for calculation upon which the award of Contract will be made and for calculation of the initial Contract Price, but these quantities are not guaranteed to be accurate and are furnished without liability on the part of OWNER and ENGINEER. The CONTRACTOR shall cooperate with and assist the ENGINEER as necessary to obtain the actual measurements required for the ENGINEER's determination of the actual quantities. The CONTRACTOR may also be required to furnish to the Resident Project Representative or OWNER's representative, on a daily basis, daily reports stating information such as quantities of work performed, labor force used, hours worked, equipment used, and the amount of time the equipment was operated.
- J. It is the intent of the Contract Documents to cover all aspects of the Work. Should there be some item or items shown on the Drawings or described in the Specifications which are required to complete the Work, but not specifically included in any of the unit prices on the bid form or as amended by modifications to the Contract, these items and the furnishing of all necessary labor, materials and equipment shall be considered incidental to the Work and no additional compensation will be provided.
- K. Any Addenda issued during the time of the bidding or forming a part of the Contract Documents loaned to the Bidder for the preparation of a Bid shall be included in the Bid and shall be made a part of the Contract Documents. Receipt of each Addendum shall be acknowledged in the Bid Form.

6. CONTRACT TIME

The CONTRACTOR shall substantially complete all work related to the Phase 3B Expansion Project of sufficient completion that the Cell may accept waste allowing for operation by September 1, 2025. The CONTRACTOR shall complete all ancillary work outside of the Cell, unrelated to the operation of the Cell to ready the project for final payment, including restoration of disturbed areas to at least seventy percent (70%) vegetated by October 31, 2025. If the CONTRACTOR fails to complete the work within this time or such additional time as has been granted for excusable delays, there shall be deducted from any money due the CONTRACTOR liquidated damages for each calendar day that the work is delayed beyond the completion date. Such deduction amount shall be charged as liquidate damages and not as a penalty.

7. LIQUIDATED DAMAGES

All time limits stated in the Contract Documents are of the essence in and to the Agreement. OWNER and CONTRACTOR recognize that time is of the essence regarding completion of the Work, and that OWNER will suffer financial loss, water quality and water management opportunity loss and other loss if the Work is not substantially completed or completed by the respective time specified in Paragraph 6.0 above, plus any extensions thereof allowed in accordance with the General Conditions. Accordingly, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as penalty), CONTRACTOR shall pay OWNER One Thousand dollars

(\$1,000.00) for each day that construction is delayed in its completion beyond the specified Substantial Completion or Completion Date to compensate OWNER for additional costs related to losses described above and engineering and administration for the extended period. Both parties agree that the specified amount is a reasonable approximation of the damages that would be suffered by the OWNER, which damages are difficult precisely to calculate.

8. SUBSTITUTE OR "OR-EQUAL" ITEMS

The Agreement, if awarded, will be based on materials and equipment described in the Drawings or stated in the Specifications without consideration of possible substitute or "or-equal" items. The procedure for submission of any application and consideration of application for Substitute or "Or-Equal" materials is set forth in the General Conditions.

9. BID FORM

- A. The Bid Form is included with the Specifications/Bid Package and Contract Documents; additional copies may be obtained from the ENGINEER.
- B. All blanks on the Bid Form must be completed in ink or typed.
- C. Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown below the signature.
- D. Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.
- E. All names must be typed or printed below the signature.
- F. The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which must be filled in on the Bid Form).
- G. The address, telephone number and fax number for communications regarding the Bid must be shown.

10. SUBMISSION OF BIDS

Bids shall be submitted as set forth in the Agreement as follows:

- A. Oral, email, or FAX proposals or modifications will not be considered.
- B. It is the sole responsibility of the Bidder to see that the submitted bid proposal is received in proper time. Any proposal received after the scheduled closing time for receipt of the proposals will be rejected.
- C. Discrepancies in the multiplication of units of Work with 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.

- D. All bid proposals shall be submitted on the unaltered forms included with these Contract Documents. The blank spaces on the proposals shall be filled in correctly in ink or typewritten where indicated for every item for which a quantity is given, and the Bidder shall clearly indicate the prices for which he/she proposes to do each item of work contemplated. Additional copies of the Bid Form and other forms may be obtained from the ENGINEER.
- E. The Bid Form including required attachments shall be submitted in a sealed envelope clearly marked: "Bid for Fergus Falls Class I C&D Landfill, Phase 3B Expansion – Public Improvement No. 9774" and shall also include the name of the Bidder.
- F. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notification "BID ENCLOSED" on its face.
- G. The Bid Proposal shall be delivered no later than the date and time stated in the Advertisement for Bids, unless modified by Addendum. The proposal should be mailed to this address:

City of Fergus Falls – Administrators Office

112 West Washington Avenue / P.O. Box 868

Attn: Bid for Fergus Falls Class I C&D Landfill, Phase 3B Expansion – Public Improvement No. 9774

- H. Each Bid shall be accompanied by a Bid Security (money order, cash deposit, cashiers check, or Bid Bond) in an amount equal to five percent (5%) of the Bidders total Bid price as a guarantee that such Bidder will enter into a Contract with the City in case such Bidder be Awarded a Contract. Said Bid Security shall be payable to the City of Fergus Falls and issued by either a state or national bank, or by a surety authorized to do business in the State of Minnesota. Failure to submit a Bid Security with a Bid shall result in the rejection of said Bid.

11. WITHDRAWAL OF BIDS

Any Bid may be withdrawn by the Bidder, provided the proper notice of the Bidders intent to withdraw the Bid is received by the Finance Officer before the time set forth for the opening of Bids. Proper notice of intent to withdraw a Bid shall be in writing and shall indicate the Project title, the Project number, the name, address, and telephone number of the Bidder, shall be signed by the Bidder, and shall be submitted by hand, facsimile, mail, or other delivery system. The Bidder shall assume all responsibility for the delivery of or failure to deliver such notice to the Finance Officer in an adequate manner. Upon receipt of Bidders intent to withdraw a Bid, the Finance Officer will return the Bid (including Bid Security) unopened to the Bidder.

12. OPENING OF BIDS

Sealed proposals for the Fergus Falls Class I C&D Landfill, Phase 3B Expansion (Project #9774) will be received, tabulated and awarded at the time and the date set in the Advertisement for Bids. Bidders or their authorized agents are invited to be present at the City Council meeting for the bid award.

13. BIDS TO REMAIN SUBJECT TO ACCEPTANCE

All bids will remain subject to acceptance for thirty (30) days after the Bid opening, but OWNER may, in its sole discretion, release any Bid and return the Bid security prior to that

date.

14. REJECTION OF BIDS AND AWARD OF CONTRACT

- A. OWNER reserves the right to reject any and all Bids, to waive any and all irregularities, informalities, or discrepancies in the Work and to negotiate contract terms with the Successful Bidder, and the right to disregard all non-conforming, non-responsive, unbalanced or conditional Bids. Also, OWNER reserves the right to 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, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by OWNER.
- B. If the Contract is to be awarded, it will be awarded to the lowest responsible and responsive Bidder, whose evaluation by OWNER indicates to OWNER that the Award will be in the best interest of the Project.
- C. If the contract is to be awarded, OWNER will give the Successful Bidder a Notice of Award within thirty (30) calendar days after the day of the Bid opening.

15. CONTRACT SECURITY

Performance and payment bonds will be submitted and maintained by CONTRACTOR in accordance with Sections 00610 and 00620 and the remaining Contract Documents. When the Successful Bidder delivers the executed Agreement to OWNER, it must be accompanied by the required Performance and Payment Bonds.

16. SIGNING OF AGREEMENT

When OWNER gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within fourteen (14) calendar days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to OWNER along with the required Bonds, evidence of insurance, and any other required submittals.

OWNER or ENGINEER will review required submittals and may require Successful Bidder to make revisions. Successful Bidder shall make required revisions and resubmit to OWNER within five (5) calendar days of OWNER'S request for such revision. Within thirty (30) days of final receipt of all acceptable materials, OWNER will deliver one (1) fully signed counterpart of the Contract Documents to CONTRACTOR.

Each counterpart is to be accompanied by a complete set of the Contract Documents with appropriate identification. Failure to deliver a complete set of Contract Documents does not have the effect of modifying the term Contract Documents.

FAILURE TO EXECUTE CONTRACT – If the Successful Bidder fails to execute and deliver the Agreement, furnish the required Payment Bond, Performance Bond, and Certificate of Liability Insurance, and meet all the requirements of the Notice of Award within fourteen (14) calendar days after said Notice, the City may annul said Award and the Bid Security of that Bidder shall be forfeited to the City, not as a penalty, but in liquidation of damages sustained. The City may then issue a Notice of Award to the next lowest responsible Bidder or schedule another Bid opening and solicit new Bids.

17. PAYMENT AND RETAINAGE

- A. Provisions concerning progress payments and final payment are set forth in the General Conditions and the other Contract Documents.
- B. No payment amounts on account of materials and equipment delivered to the site prior to installation will be made. Progress payments will only be made when materials are completely installed in accordance with the Contract Documents.
- C. The amount of retainage for all progress payments shall be five percent (5%) of the total amount due the Contractor as modified by the Change Order(s) or Written Amendment(s) and unless otherwise established by the Engineer.

18. PRE-BID MEETING

A non-mandatory/mandatory pre-bid meeting will be required for this project. The Landfill Supervisor and Project Engineer will be available on site for a **non-mandatory pre-bid meeting** on Thursday, February 13th 2025 at 10:00 AM at the Landfill Office located at:

2010 South Oak Street
Fergus Falls, MN 56537

19. PRE-CONSTRUCTION MEETING

Prior to the beginning of construction operations, a pre-construction meeting will be held at which time the CONTRACTOR will supply for the ENGINEER's approval a copy of the CONTRACTOR's proposed project schedule as provided for in the General Conditions.

END OF SECTION 00200

SECTION 00400 BID FORM

Fergus Falls Class I C&D Landfill

Phase 3B Expansion Project

Owner: City of Fergus Falls, MN

To: City of Fergus Falls
112 West Washington Avenue / P.O. Box 868
Fergus Falls, MN 56537
Attn: Phase 3B Expansion Project

Date _____, 20__

Proposal of _____
Bidder

Address

Pursuant to the bid for the Fergus Falls Class I C&D Landfill, Phase 3B Expansion Project to furnish all necessary machinery, equipment, tools, labor, materials and other means of construction and deliver materials and to do and perform all work set forth below (the "Work") at rates and at a total price or prices as hereinafter set forth, in accordance with the Contract Documents including the Drawings and Specifications, and addenda thereto on file in the office of the OWNER and OWNER'S ENGINEER, Houston Engineering, Inc. 7550 Meridian Circle North, Suite 120, Maple Grove, MN 55369-5455.

First: In submitting this Bid Proposal, the undersigned bidder understands and agrees that the Instructions to Bidders and other Contract Documents referred to therein control and, without limiting the foregoing, that this Bid Proposal is based upon the following undertakings:

1. That Bidder to the extent it deems necessary, has inspected the site of the work, existing construction in the areas of the proposed work, and is informed as to the condition thereof as the same bears on the work to be performed.
2. That Bidder has received and examined the Drawings and Specifications, and is informed of all addenda thereto, and of the forms of the Contract Documents, including but not limited to the Agreement, performance and payment bonds and insurance certificates and endorsements to be furnished in the event an Agreement is awarded.
3. Certain types of equipment and kinds of material are described in the specifications by

means of trade names and catalog numbers and/or manufacturer's names. The Agreement, if awarded, will be on the basis of materials and equipment described in the Drawings or stated in the Specifications without consideration of possible substitute or "or-equal" items. In some cases, it is indicated in the Drawings or stated in the Specifications that a substitute or "or-equal" item of material or equipment may be furnished or used by CONTRACTOR. If approved, application for such approval will not be considered by ENGINEER until after the Effective Date of the Agreement. The procedure for submission of any such application and consideration of application is set forth in the Contract Documents. Bidder acknowledges that this proposal is submitted in strict accord with specified requirements, and other requirements of these documents.

Second: The undersigned Bidder agrees, if it is the successful Bidder, to execute the Agreement as set forth at Section 00500 of the Contract Documents, and to furnish the required performance and payment bonds as set forth at Sections 00610 and 00620 of the Contract Documents and furnish insurance certificates and endorsements, all within fourteen (14) days of receiving the Notice of Award of contract from the OWNER.

Third: The undersigned Bidder further agrees to begin work upon receipt of the Notice to Proceed and to prosecute said work to complete the same as specified in the Information Available to Bidders, subject to Liquidated Damages and other remedies.

Fourth: The undersigned Bidder further agrees to guarantee performance of all work in accordance with Drawings and Specifications and in a good and workmanlike manner, and to renew or repair any work that may be rejected due to defective materials or workmanship prior to completion and acceptance of the material and installation by the OWNER.

Fifth: The undersigned Bidder further agrees prior to or with the signing of the Agreement, to provide the following upon OWNER'S request:

1. Such Catalogs, photographs, drawings, specifications, descriptive information and other details as to special equipment or materials bidder proposes to furnish for the work, to permit a valuation of the merits thereof and determination whether such special equipment or materials comply with the specifications.
2. A properly executed affidavit of non-collusion.
3. A statement of Bidder's qualifications.
4. A statement setting forth all items of work that the Bidder proposes to sublet, and names of the subcontractors to whom such items shall be sublet.

Sixth: Following is a tabulation of the undersigned Bidder's bid for all work performed to carry out the aforementioned construction being understood that this bid contemplates all machinery, equipment, tools, labor, materials and other means of construction and all materials and times specified in accordance with the Contract Documents, drawings and specifications and all Addenda thereto. At the opening of Bid Proposals, the total contract price will be read out loud for the primary bid. The undersigned Bidder proposes to do all unclassified work required to complete the contemplated Work, at a unit price contract as provide by the specifications and other Contract Documents.

Seventh: This bid is genuine and not made in the interest or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; Bidder has not directly or indirectly induced or solicited any other bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or a corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other bidder or over OWNER. Bidder agrees to complete the Work for the Primary Bid at the unit prices and/or lump sums as listed and set forth on the Bid Tabulation Schedules that follow.

**City of Fergus Falls Class I C&D Landfill
Phase 3B Expansion Project**

No.	Item Description	Unit	Estimated Quantity	Unit Price	Amount
PHASE 3B EXPANSION PROJECT #9774					
1	Mobilization (10% of estimated improvements)	LS	1		
2	Water for Construction	M GAL	1,500		
3	Control of Water	LS	1		
4	Traffic Control	LS	1		
5	Demolition and Removals - Salvage Existing 36" HDPE Storm Pipe/Culvert	LF	120		
6	Demolition and Removals - Salvage Existing 36" Storm Pipe/Culvert Flared End Sections	EA	2		
7	Demolition and Removals - Salvage Existing Gravel Mat'ls	CY	568		
8	Demolition and Removals - Salvage Rip-Rap	CY	29		
9	Demolition and Removals - PF-7 Well Abandonment	LS	1		
10	Test-pit Excavation	HR	40		
11	Common Excavation - Cell & Access Road (CV) (P)	CY	11,793		
12	Topsoil Management	CY	3,962		
13	Subgrade Correction (CV)	CY	4,032		

No.	Item Description	Unit	Estimated Quantity	Unit Price	Amount
14	Re-Compacted Soil Barrier Layer (CV) (P)	CY	2,135		
15	Sand Drainage Layer (In-Place) (P) - 1ft over waste limits	CY	2,988		
16	Phase Separation Berm, Turnaround Pads and Temporary Drainage Berms (CV) (P)	CY	3,731		
17	Leachate Collection Trench (includes fabric, perf pipe & rock)	LF	299		
18	Leachate Collection Cleanout Riser Pipe (Solid Pipe)	LF	16		
19	Groundwater Underdrain System - Piping Extension (includes fabric, perf pipe & rock)	LF	825		
20	Gravel Surfacing - Landfill Perimeter/Access Road(s)	TON	1,899		
21	North Turnaround Pad Ditch Grading	LS	1		
22	Silt Fence	LF	2,000		
23	Erosion Control Blanket - Straw	SY	500		
24	Erosion Control Fiber Roll - 12"	LF	500		
25	12" RCP Storm Pipe/Culvert	LF	88		
26	12" RCP Apron	EA	2		
27	36" RCP Storm Pipe/Culvert	LF	150		
28	36" RCP Apron	EA	2		
29	Rip-Rap	CY	24		
30	Seeding, Mulch, Fertilizer & Disk Anchoring	AC	2.84		
	TOTAL (PHASE 3B EXPANSION PROJECT) =				

Eight: **Responsible Contractor Verification.** Per Minnesota Statute 16C.285, bidders must complete *"Attachments A & A-1 of Section 410 – Responsible Contractor Verification and Certification of Compliance."*

BIDDER'S QUALIFICATION STATEMENT

1. The name, address and phone/fax number of the bidder.

Name _____

Address _____

Phone/fax _____

2. Years in business _____

3. List of contractor owned equipment available for this project.

Attach as separate submittal, if necessary.

4. List at least three (3) similar projects performed within the last five (5) years. The list of references shall include earthwork projects consisting of at least 50,000 CY of excavation. Attach as submittal, if necessary.

1. Name of Client _____ Date _____

Name of Contact _____ Phone _____

Description of Project _____

2. Name of Client _____ Date _____

Name of Contact _____ Phone _____

Description of Project _____

3. Name of Client _____ Date _____

Name of Contact _____ Phone _____

Description of Project _____

4. Name of Client _____ Date _____

Name of Contact _____ Phone _____

Description of Project _____

5. Name of Client _____ Date _____

Name of Contact _____ Phone _____

Description of Project _____

5. List of person(s) who are employed by you and will supervise and be available to perform the work on this project and the number of years of experience.

Names:	Years of experience
--------	---------------------

Project Manager:	_____
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Superintendent:	_____
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Foreman:	_____
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Personnel:	_____
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6. Such additional information as will assist the Owner and Engineer in determining whether the bidder is adequately prepared to fulfill the contract. Attach as submittal, if necessary.

7. Contractors Anticipated Work Schedule

To demonstrate qualification to perform the Work, each Bidder shall complete and submit to the OWNER a detailed project schedule identifying the initiation, duration (time) and anticipated completion of each work task identified below.

Work Task	Initiation Date	Duration (days or weeks)	Completion Date
Mobilization			NA
Topsoil stripping & stockpiling			
Common Excavation			
Groundwater Underdrain System Extension			
Recompacted Clay Barrier Layer & Subgrade Correction			
Leachate Collection Trench			
Phase Delineation Berm, Turnaround Pad, and Temporary Drainage Berm			
Sand Drainage Layer			
Gravel Surfacing			
Site Restoration – Erosion Control, Seeding, Mulch, Disk Anchoring, Fertilizer			

Substantial Completion	NA	NA	September 1, 2025
Final Project Completion/Closeout	NA	NA	October 31, 2025

8. The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the Owner in verification of the recitals constituting this statement of contractor's qualifications.

State the true, exact correct and complete name of the partnership, corporation or trade name under which you do business, and the address of the place of business. If a corporation, state the name of the President and secretary. If a partnership, state the names of the partners. If a trade name, state the names of the firms and/or individuals who do business under the trade name. **It is absolutely necessary that this information be provided.**

8.1 Correct and complete name of bidder: _____

8.2 The Business is a: _____

8.3 The address of the principal place of business is:

8.4 Telephone Number: _____

Dated at: _____ this _____ day

of _____, 20__.

By: _____

Attest: _____

**AFFIDAVIT OF RESPONSIBLE CONTRACTOR COMPLIANCE TO BE EXECUTED BY
BIDDER AND SUBMITTED WITH BID**

CERTIFICATE OF EXECUTION

Receipt is acknowledged of the following addenda:

Addenda _____, _____, _____, _____.

Witness this _____ day of _____, 20__

Name: _____

Title: _____

Company: _____

Signature: _____

STATEMENT OF NONCOLLUSION

_____, of _____, the party making the foregoing bid, states that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and further, that the bidder has not, directly or indirectly, submitted his or her bid price or breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Signed: _____

LIST OF SUBCONTRACTORS

The Bidder shall list below the name and the location of the place of business of each Subcontractor who will perform work or labor or render service to the prime contractor in or about the construction of the work or improvement, or a Subcontractor who, under subcontract to the prime contractor, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of 1 percent of the prime contractor's total bid or, in the case of bids or offers for the construction of streets or highways, including bridges, in excess of one-half of 1 percent of the prime contractor's total bid or ten thousand dollars (\$10,000), whichever is greater. The Bidder shall also list below the portion of the WORK which will be performed by each Subcontractor under its contract. The prime contractor shall list only one Subcontractor for each portion as is defined by the prime contractor in its bid. The Bidder's attention is directed to the General Conditions. Failure to comply with this requirement will render the Bid non-responsive and may cause its rejection.

Note: Attach additional sheets if required.

Work to be Performed	Subcontractor License No.	Percent of Total Bid	Subcontractor Name & Address

END OF SECTION 00400

Section 00401 BID BOND

KNOW ALL BY THESE PRESENTS, that we, the undersigned Contractor as Principal and Surety, are hereby held and firmly bound unto the **City of Fergus Falls, Minnesota** in the penal sum of **Five (5) Percent of the total amount bid** as listed in the Bid Form, for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

The Condition of the above obligation is such that whereas the Contractor as Principal has submitted to said City a certain Bid, attached hereto and hereby made a part hereof to enter into a Contract for the Construction of the

_____ Project No. _____.

NOW, THEREFORE, if said Bid shall be rejected by said City, or if said Bid shall be accepted by said City and the Contractor as Principal shall execute and deliver the Agreement in accordance with the Contract Documents, and shall furnish a Payment Bond, a Performance Bond, and Certificates of Insurance as provided in the Contract Documents, and shall in all other respects execute the Contract created by the acceptance of said Bid as set forth in the Notice of Award, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its Bid Bond shall be in no way impaired or affected by any extension of the time within which said City may accept such Bid, and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Contractor as Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year set forth.

Signed, this the _____ day of _____, 20____.

PRINCIPAL: _____ (Type or Print)

AUTHORIZED SIGNATURE: _____ (Signature)

NAME: _____ (Type or Print)

TITLE: _____ (Type or Print)

SURETY: _____ (Type or Print)

AUTHORIZED SIGNATURE: _____ (Signature)

NAME: _____ (Type or Print)

TITLE: _____ (Type or Print)

ADDRESS: _____ (Type or Print)

_____ (Type or Print)

TELEPHONE NUMBER: _____ (Type or Print)

FACSIMILE NUMBER: _____ (Type or Print)

IMPORTANT: Surety companies executing Bonds must appear authorized to transact business in the State of Minnesota.

SECTION 00410

RESPONSIBLE CONTRACTOR VERIFICATION OF COMPLIANCE

Minnesota Statutes, Section [16C.285](#), subdivision 3. **Responsible Contractor, Minimum Criteria.** “Responsible Contractor” means a contractor that conforms to the responsibility requirements in the solicitation document for its portion of the work on the project and verifies that it meets the minimum criteria set forth below. Each contractor or subcontractor shall obtain from all subcontractors with which it will have a direct contractual relationship a signed statement under oath by an owner or officer verifying that they meet all of the minimum criteria in subdivision 3 prior to execution of a construction contract with each subcontractor.

1. The Contractor:
 - i. is in compliance with workers' compensation and unemployment insurance requirements;
 - ii. is in compliance with the Department of Revenue and the Department of Employment and Economic Development registration requirements if it has employees;
 - iii. has a valid federal tax identification number or a valid Social Security number if an individual; and
 - iv. has filed a certificate of authority to transact business in Minnesota with the secretary of state if a foreign corporation or cooperative.
2. The contractor or related entity is in compliance with and, during the three-year period before submitting verification, has not violated section [177.24](#), [177.25](#), [177.41](#) to [177.44](#), [181.13](#), [181.14](#), or [181.722](#), and has not violated United States Code, [title 29, sections 201 to 219](#), or United States Code, [title 40, section 3141 to 3148](#). For purposes of this clause, a violation occurs when a contractor or related entity:
 - i. repeatedly fails to pay statutorily required wages or penalties on one or more separate projects for a total underpayment of \$25,000 or more within the three-year period, provided that a failure to pay is “repeated” only if it involves two or more separate and distinct occurrences of underpayment during the three-year period;
 - ii. has been issued an order to comply by the commissioner of labor and industry that has become final;
 - iii. has been issued at least two determination letters within the three-year period by the Department of Transportation finding an underpayment by the contractor or related entity to its own employees;
 - iv. has been found by the commissioner of labor and industry to have repeatedly or willfully violated any of the sections referenced in this clause pursuant to section [177.27](#);
 - v. has been issued a ruling or findings of underpayment by the administrator of the Wage and Hour Division of the United States Department of Labor that have become final or have been upheld by an administrative law judge or the Administrative Review Board; or
 - vi. has been found liable for underpayment of wages or penalties or misrepresenting a construction worker as an independent contractor in an action brought in a court having jurisdiction.
3. The contractor or related entity is in compliance with and, during the three-year period before submitting the verification, has not violated section [181.723](#) or chapter [326B](#). For purposes of this clause, a violation occurs when a contractor or related entity has been issued a final administrative or licensing order;*
4. The contractor or related entity has not, more than twice during the three-year period before submitting the verification, had a certificate of compliance under section [363A.36](#) revoked or suspended based on the provisions of section [363A.36](#), with the revocation or suspension becoming final because it was upheld by the Office of Administrative Hearings or was not appealed to the office;*

5. The contractor or related entity has not received a final determination assessing a monetary sanction from the Department of Administration or Transportation for failure to meet targeted group business, disadvantaged business enterprise, or veteran-owned business goals, due to a lack of good faith effort, more than once during the three-year period before submitting the verification; and*
6. The contractor or related entity is not currently suspended or debarred by the federal government or the state of Minnesota or any of its departments, commissions, agencies, or political subdivisions that have authority to debar a contractor.

Certification

By signing this document, I am certifying that I am an owner or officer of the contractor and am verifying under oath that:

1. Contractor is in compliance with Minnesota Statutes, Section [16C.285](#),
2. I have included Attachment A-1, and
3. If contractor is awarded a contract, I or another owner or officer will also submit supporting documentation of subcontractors that are subsequently added to the project.

Contractor Company Name

Date

Authorized Signature of Owner or Officer

Printed Name

Title

ATTACHMENT A-1:FIRST-TIER SUBCONTRACTOR LIST
(Initial List)

SUBMIT WITH CONTRACTOR SOLICITATION RESPONSE

Minnesota Statutes, Section [16C.285](#), subdivision 5. A prime contractor or subcontractor shall include in its verification of compliance . . . a list of all of its first-tier subcontractors that it intends to retain for work on the project.

NAMES OF FIRST TIER SUBCONTRACTORS (Legal name of company as registered with the Secretary of State)	Company Address	Work To Be Performed

SECTION 00500 CONSTRUCTION AGREEMENT

THIS AGREEMENT made the _____ day of _____ in the year Two Thousand and _____ by and _____, hereinafter called the Contractor, and the City of Fergus Falls, Minnesota, hereinafter called the Owner.

WITNESSETH, that the Contractor and the Owner for the considerations hereinafter named agree as follows:

Article I. Scope of Work:

The Contractor shall furnish all the materials, equipment, supplies and labor, including all Contractor's superintendents, and perform all of the work described in the specifications and other contract documents entitled, Fergus Falls Class I C&D Landfill, Phase 3B Expansion (Project# 9774) Fergus Falls, Minnesota prepared by Houston Engineering Inc, Maple Grove, Minnesota, acting as and in these contract documents entitled the Engineer, and shall do everything required by the contract documents as hereinafter specified.

Article II. Engineer:

The project has been designed by Houston Engineering, Inc. who is hereinafter called ENGINEER and who is to act as OWNER'S representative, assume all duties and responsibilities and have the rights and authority assigned to ENGINEER in the Contract Documents for completion of the work.

Article III. Time of Completion:

The work to be performed under this contract shall commence on issuance of the Notice to Proceed and shall be substantially completed by September 1, 2025. The exact date of commencement and completion of the work shall be stated in the Notice-to-Proceed.

Article IV. Liquidated Damages:

The time of completion of the construction of the Project is of the essence of this contract. Should the Contractor neglect, refuse, or fail to complete the construction within the time herein agreed upon, after giving due effect to extensions of time, if any herein provided, then in that event and in view of the difficulty of estimating with exactness damage caused by such delay, the Owner shall have the right to deduct from and retain out of moneys which may then be due or which may become due and payable to the Contractor the sum of one thousand dollars (\$1000) per day for each day that such construction is delayed in its completion beyond the specified time, as liquidated damages and not as a penalty; if the amount due and to become due from the Owner to the Contractor is insufficient to pay in full any such liquidated damages, the Contractor shall pay to the Owner the amount necessary to effect such payment in full; provided, however, that the Owner shall promptly notify the Contractor in writing of the manner in which the amount retained, deducted or claimed as liquidated damages, was computed.

Article V. The Contract Sum:

The Owner shall pay the Contractor for the performance of the contract, subject to additions and deductions therein, in current funds as follows:

_____ (\$_____).

Article VI. Payment of Contract:

The Contractor shall submit and the Engineer shall process the Applications for payment in accordance with Article 14 of the General Conditions.

The Owner shall make progress payments on account of the contract price on the basis of the Contractor's Application for Payment as recommended by the Engineer each month during construction. The Contractor will be paid based on the Engineer's estimate of the value of acceptable work completed by the end of the preceding month minus the retainage. The amount of retainage for all progress payments shall be five (5%) of the total amount due the Contractor as modified by Change Order(s) or Written Amendment(s), and unless otherwise established by the Engineer.

Upon receipt of written notice that the work is ready for final inspection and acceptance, the Engineer shall promptly make such inspection and when he finds the work acceptable under the contract and the contract fully performed, he shall promptly issue a final certificate over his own signature, stating that the work provided for in the contract has been completed and is acceptable by him under the terms and conditions hereof, and the entire amount found to be due the Contractor shall be paid to the Contractor at the office of the Owner in the manner specified in the General Conditions.

Before issuance of final certificate, the Contractor shall submit evidence satisfactory to the Engineer that all payrolls, material bills and other indebtedness connected with the work have been paid. The making and acceptance of the final payment shall constitute a waiver of all claims by the Owner, other than those arising from unsettled liens, from faulty work appearing after the final payment, or from requirements of the specifications still unsettled

Article VII. The Contract Documents:

The Contract Documents, which constitute the entire agreement between the Owners and the Contractor regarding the work, consist of the following:

- Modifications (change orders and directives)
- Notice to Proceed
- Contract
- Addenda
- Completed Bid Form
- Instruction to Bidders
- Contract Drawings
- Technical Specifications
- Payment Bond
- Performance Bond
- Insurance
- Supplementary Conditions
- General Conditions

Article VIII. Contractor's Representations:

The Contractor is familiar with the nature and extent of the Contract Documents, the Work, site locality, and all local conditions and Laws and Regulations that may affect the project.

The Contractor has studied all tests and reports of explanation of subsurface conditions and has studied any drawings of physical conditions included with the Contract Documents.

The Contractor agrees to take full responsibility for any damage to public or private property caused by him, his representatives or his subcontractors during all phases of construction and agrees that the Owner will not be held liable for any said damage.

The Contractor agrees to renew or repair any work or materials found to be defective within one (1) year after acceptance of the project by the Owner.

The Contractor will maintain all records pertaining to the Contract for six years from the date of completion.

The Contractor agrees that any authorized representative of Owner may have access to and the right to examine, audit, and copy any such records during normal business hours.

Article IX. Miscellaneous:

The Contractor and the Owner agree that all of the terms of this Agreement shall be binding upon themselves, their heirs, administrators, executors, legal and personal representatives, successors and assigns.

This Agreement is entered under and pursuant to the laws of the State of Minnesota and shall in all respects be construed in accordance with the laws of said State.

IN WITNESS WHEREOF, the parties hereto have executed this instrument under their several seals this _____ day of _____, 20____, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Form and Execution: _____

Title: _____

OWNER: City of Fergus Falls, MN

CONTRACTOR: _____

By: _____

By: _____

Title: _____

Title: _____

(CORPORATE SEAL)

Address for giving notices:

Address for giving notices:

**SECTION 00510
NOTICE OF AWARD**

To: _____

Fergus Falls Class 1 C&D Landfill, Phase 3B Expansion (Project# 9774)

Owner: City of Fergus Falls, MN

The OWNER has considered the Bid submitted by you for the above-described work in response to its Advertisement of Bids dated Month Day, 2025 and the Information to Bidders.

You are hereby notified that your Bid has been accepted in the Amount of \$ _____. You are required to execute the Agreement and furnish the required CONTRACTOR's Performance Bond, Payment Bond, and Certificate(s) of Insurance and endorsement(s) within fourteen (14) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said bonds, certificate(s) and endorsement(s) within fourteen (14) calendar days from the date of this Notice, said OWNER will be entitled to consider all your rights arising out of the OWNER'S acceptance of your bid as abandoned and to your bid bond proceeds. The OWNER will be entitled to such other rights and remedies as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award to the OWNER.

Dated this _____ day of _____, 20__.

(OWNER)

By: _____

Title: _____

ACCEPTANCE OF NOTICE

Receipt of the above Notice of Award is hereby acknowledged by _____ this the
____ day of _____, 20__.

By: _____

Title: _____

END OF SECTION 00510

**SECTION 00550
NOTICE TO PROCEED**

To: _____

Date: _____

Fergus Falls Class 1 C&D Landfill, Phase 3B Expansion (Project# 9774)

You are hereby notified to commence WORK in accordance with the Agreement dated

_____, on or before _____, 20__, and you are to substantially complete the

WORK on or before Month Day, 2025.

City of Fergus Falls _____

(OWNER)

By: _____

Title: _____

ACCEPTANCE OF NOTICE

Receipt of this above Notice to Proceed is hereby acknowledged by _____ this the

___ day of _____, 20__.

By: _____

Title: _____

END OF SECTION 00550

**SECTION 00610
CONSTRUCTION PERFORMANCE BOND**

NOTE TO BIDDERS: SECTION 00610 PERFORMANCE BOND LANGUAGE CONTAINS CHANGES FROM EJCDC BOND LANGUAGE AS INDICATED IN ITALICS AND STRIKETHROUGH BELOW.

Any singular reference to CONTRACTOR, SURETY, OWNER, or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address)

SURETY (Name and Principal Place of Business)

OWNER (Name and Address)

CONSTRUCTION CONTRACT

DATE: _____, 20__

AMOUNT: _____

(Written Amount) _____

Description (Project Name and Location):

BOND

DATE: _____, 20__

AMOUNT: _____

(Written Amount) _____

Contractor (Corporate Seal)

Surety (Corporate Seal)

Company Name:_____

Company Name:_____

By:_____
(Signature)

By:_____
(Signature)

Name:(Typewritten)

Name:(Typewritten)

ITS:_____
(Title)

ITS:_____
(Title)

On this ____ day of _____, 20____, before me personally appeared _____
and

_____, on behalf of the CONTRACTOR and SURETY named in this
Performance Bond above, respectively, and each of them, as their free act and deed, caused this
Performance Bond to be executed as of this date.

Notary Public

ATTACH POWER OF ATTORNEY FROM SURETY TO THIS BOND

For Information Only (Name, Address and Telephone)

Agent or Broker:

Owner's Representative (Engineer)

1. Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in conferences as provided in Subparagraph 3.1.
3. *Unless lawfully excused*, the Surety's obligation under this Bond shall arise after:
 - 3.1. The Owner has notified the Contractor and the Surety at its address described in Paragraph 10 below, that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default; and
 - 3.2. The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the contract. Such Contractor Default shall not be declared earlier than twenty days after the Contractor and the Surety have received notice as provided in Subparagraph 3.1: and
 - 3.3. The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Construction Contract or to a contractor selected to perform the Construction Contract in accordance with the terms of the contract with the Owner.
4. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall ~~promptly~~ *within 15 calendar days* and at the Surety's expense take one of the following actions:
 - 4.1. Arrange for the Contractor, with consent of the Owner, to perform and complete the Construction Contract; or
 - 4.2. Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors: or
 - 4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and the contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default: or
 - 4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:
 1. After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, tender payment therefore to the Owner; or
 2. Deny liability in whole or in part and notify the Owner citing reasons therefore.
5. If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any and all remedies available to the Owner. If the Surety proceeds as provided in Subparagraph 4.4, and the Owner refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.
6. After the Owner has terminated the Contractor's right to complete the Construction Contract, and if the Surety elects to act under Subparagraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction

Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. To the limit of the amount of this Bond, but subject to commitment by the Owner of the Balance of the Contract Price to mitigation of costs and damages on the Construction Contract, the Surety is obligated without duplication for:

- 6.1. The responsibilities of the contractor for correction of defective work and completion of the Construction Contract;
 - 6.2. Additional costs incurred by the OWNER, including without limitation legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 4; and
 - 6.3. Liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
7. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, or successors.
 8. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.
 9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after Contractor Default *is declared by the OWNER or within two years after Surety provides OWNER written notice of its refusal or failure* to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
 10. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page.
 11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
 12. Definitions.
 - 12.1. Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
 - 12.2. Construction Contract: The agreement between the Owner and the Contractor identified in the signature page, including all Contract Documents and changes thereto.
 - 12.3. Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.
 - 12.4. Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.
 - 12.5 CONTRACTOR: *CONTRACTOR is defined to include any subcontractor or sub-subcontractor.*

END OF SECTION 00610

SECTION 00620
CONSTRUCTION PAYMENT BOND

NOTE TO BIDDERS: SECTION 00620 PAYMENT BOND LANGUAGE CONTAINS CHANGES FROM EJCDC BOND LANGUAGE AS INDICATED IN ITALICS AND STRIKETHROUGH BELOW.

Any singular reference to CONTRACTOR, SURETY, OWNER, or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address)

SURETY (Name and Principal Place of Business)

OWNER (Name and Address)

CONSTRUCTION CONTRACT

DATE: _____, 20__

AMOUNT: _____

(Written Amount) _____

Description (Project Name and Location):

BOND

DATE: _____, 20__

AMOUNT: _____

(Written Amount) _____

Contractor (Corporate Seal)

Surety (Corporate Seal)

Company Name:_____

Company Name:_____

By:_____
(Signature)

By:_____
(Signature)

Name:(Typewritten)

Name:(Typewritten)

ITS:_____
(Title)

ITS:_____
(Title)

On this ____ day of _____, 20____, before me personally appeared _____
and

_____, on behalf of the CONTRACTOR and SURETY named in this Payment
Bond above, respectively, and each of them, as their free act and deed, caused this Payment Bond to be
executed as of this date.

Notary Public

ATTACH POWER OF ATTORNEY FROM SURETY TO THIS BOND

For Information Only (Name, Address and Telephone)

Agent or Broker:

Owner's Representative (Engineer)

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.
2. With respect to the Owner, this obligation shall be null and void if the Contractor:
 - 2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants, and
 - 2.2. Defends, indemnifies and holds harmless the Owner from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Construction Contract, provided the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands liens or suits to the Contractor and the Surety, and *unless CONTRACTOR is lawfully excused due to Owner Default.*
3. With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.
4. The Surety shall have no obligation to Claimants under this Bond until:
 - 4.1. Claimants who are employed by or have direct contract with the Contractor have given notice to the Surety (at the address described in Paragraph 12) and send a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
 - 4.2. Claimants who do not have a direct contract with the Contractor:
 1. Have furnished written notice to the Contractor and sent a copy, or notice thereof, to the Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed: and
 2. Have either received a rejection in whole or in part from the Contractor, or not received within 30 days of furnishing the above notice any communication from the Contractor by which the Contractor has indicated the claim will be paid directly or indirectly; and
 3. Not having been paid within the above 30 days, have send a written notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the Contractor.
5. If a notice required by Paragraph 4 is given by the Owner to the Contractor or to the Surety, that is sufficient compliance
6. When the Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:
 - 6.1. Send an answer to the Claimant, with a copy to the Owner within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
 - 6.2. Pay or arrange for payment of any undisputed amounts.
7. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
8. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used *by the Contractor* for the performance of the construction Contract and to satisfy claims, if any, under any Construction Performance Bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the contractor and the Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work *and the Owner's right to retain said funds as provided by the Construction Contract.*

9. The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.
11. No suite or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the work or part of the work is located *in accordance with the applicable period specified by Minnesota Law*.
12. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the Owner or the Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is, that this Bond shall be construed as a statutory bond and not as a common law bond.
14. Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. DEFINITIONS

- 15.1. Claimant: An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.
- 15.2. Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.
- 15.3. Owner Defaults: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

END OF SECTION 00620

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By



Endorsed By



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GUIDELINES FOR USE OF EJCDC® C-700, STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

1.0 PURPOSE AND INTENDED USE OF THE DOCUMENT

EJCDC® C-700, Standard General Conditions of the Construction Contract (2018), is the foundation document for the EJCDC Construction Series. The General Conditions define the basic rights, responsibilities, risk allocations, and contractual relationship of the Owner and Contractor, and establish how the Contract is to be administered.

2.0 OTHER DOCUMENTS

EJCDC documents are intended to be used as a system and changes in one EJCDC document may require a corresponding change in other documents. Other EJCDC documents may also serve as a reference to provide insight or guidance for the preparation of this document.

These General Conditions have been prepared for use with either EJCDC® C-520, Agreement Between Owner and Contractor for Construction Contract (Stipulated Price), or EJCDC® C-525, Agreement Between Owner and Contractor for Construction Contract (Cost-Plus-Fee) (2018 Editions). The provisions of the General Conditions and the Agreement are interrelated, and a change in one may necessitate a change in the other.

To prepare supplementary conditions that are coordinated with the General Conditions, use EJCDC® C-800, Supplementary Conditions of the Construction Contract (2018).

The full EJCDC Construction series of documents is discussed in the EJCDC® C-001, Commentary on the 2018 EJCDC Construction Documents (2018).

3.0 ORGANIZATION OF INFORMATION

All parties involved in a construction project benefit significantly from a standardized approach in the location of subject matter throughout the documents. Experience confirms the danger of addressing the same subject matter in more than one location; doing so frequently leads to confusion and unanticipated legal consequences. Careful attention should be given to the guidance provided in EJCDC® N-122/AIA® A521, Uniform Location of Subject Matter (2012 Edition) when preparing documents. EJCDC® N-122/AIA® A521 is available at no charge from the EJCDC website, www.ejcdc.org, and from the websites of EJCDC's sponsoring organizations.

If CSI MasterFormat™ is used for organizing the Project Manual, consult CSI MasterFormat™ for the appropriate document number (e.g., under 00 11 00, Advertisements and Invitations), and accordingly number the document and its pages.

4.0 EDITING THIS DOCUMENT

Remove these Guidelines for Use. Some users may also prefer to remove the two cover pages.

Although it is permissible to revise the Standard EJCDC Text of C-700 (the content beginning at page 1 and continuing to the end), it is common practice to leave the Standard EJCDC Text of C-700 intact and unaltered, with modifications and supplementation of C-700's provisions set forth in EJCDC® C-800, Supplementary Conditions of the Construction Contract (2018). If the Standard Text itself is revised, the

user must comply with the terms of the License Agreement, Paragraph 4.0, Document-Specific Provisions, concerning the tracking or highlighting of revisions. The following is a summary of the relevant License Agreement provisions:

1. The term “Standard EJCDC Text” for C-700 refers to all text prepared by EJCDC in the main body of the document. Document covers, logos, footers, instructions, or copyright notices are not Standard EJCDC Text for this purpose.
2. During the drafting or negotiating process for C-700, it is important that the two contracting parties are both aware of any changes that have been made to the Standard EJCDC Text. Thus, if a draft or version of C-700 purports to be or appears to be an EJCDC document, the user must plainly show all changes to the Standard EJCDC Text, using “Track Changes” (redline/strikeout), highlighting, or other means of clearly indicating additions and deletions.
3. If C-700 has been revised or altered and is subsequently presented to third parties (such as potential bidders, grant agencies, lenders, or sureties) as an EJCDC document, then the changes to the Standard EJCDC Text must be shown, or the third parties must receive access to a version that shows the changes.
4. Once the document is ready to be finalized (and if applicable executed by the contracting parties), it is no longer necessary to continue to show changes to the Standard EJCDC Text. The user may produce a final version of the document in a format in which all changes are accepted, and the document at that point does not need to include any “Track Changes,” redline/strikeout, highlighting, or other indication of additions and deletions to the Standard EJCDC Text.

5.0 LICENSE AGREEMENT

This document is subject to the terms and conditions of the **License Agreement, 2018 EJCDC® Construction Series Documents**. A copy of the License Agreement was furnished at the time of purchase of this document, and is available for review at www.ejcdc.org and the websites of EJCDC’s sponsoring organizations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

TABLE OF CONTENTS

	Page
Article 1—Definitions and Terminology.....	1
1.01 Defined Terms.....	1
1.02 Terminology	6
Article 2—Preliminary Matters	7
2.01 Delivery of Performance and Payment Bonds; Evidence of Insurance.....	7
2.02 Copies of Documents	7
2.03 Before Starting Construction	7
2.04 Preconstruction Conference; Designation of Authorized Representatives	8
2.05 Acceptance of Schedules	8
2.06 Electronic Transmittals	8
Article 3—Contract Documents: Intent, Requirements, Reuse	9
3.01 Intent.....	9
3.02 Reference Standards	9
3.03 Reporting and Resolving Discrepancies	10
3.04 Requirements of the Contract Documents.....	10
3.05 Reuse of Documents	11
Article 4—Commencement and Progress of the Work	11
4.01 Commencement of Contract Times; Notice to Proceed	11
4.02 Starting the Work.....	11
4.03 Reference Points	11
4.04 Progress Schedule	12
4.05 Delays in Contractor’s Progress	12
Article 5—Site; Subsurface and Physical Conditions; Hazardous Environmental Conditions	13
5.01 Availability of Lands	13
5.02 Use of Site and Other Areas.....	14
5.03 Subsurface and Physical Conditions.....	15
5.04 Differing Subsurface or Physical Conditions	16

5.05	Underground Facilities.....	17
5.06	Hazardous Environmental Conditions at Site	19
Article 6—Bonds and Insurance.....		21
6.01	Performance, Payment, and Other Bonds	21
6.02	Insurance—General Provisions.....	22
6.03	Contractor’s Insurance.....	24
6.04	Builder’s Risk and Other Property Insurance	25
6.05	Property Losses; Subrogation	25
6.06	Receipt and Application of Property Insurance Proceeds	27
Article 7—Contractor’s Responsibilities		27
7.01	Contractor’s Means and Methods of Construction	27
7.02	Supervision and Superintendence	27
7.03	Labor; Working Hours	27
7.04	Services, Materials, and Equipment	28
7.05	“Or Equals”	28
7.06	Substitutes	29
7.07	Concerning Subcontractors and Suppliers.....	31
7.08	Patent Fees and Royalties.....	32
7.09	Permits	33
7.10	Taxes	33
7.11	Laws and Regulations.....	33
7.12	Record Documents.....	33
7.13	Safety and Protection	34
7.14	Hazard Communication Programs	35
7.15	Emergencies.....	35
7.16	Submittals	35
7.17	Contractor’s General Warranty and Guarantee	38
7.18	Indemnification	39
7.19	Delegation of Professional Design Services	39
Article 8—Other Work at the Site.....		40
8.01	Other Work	40
8.02	Coordination	41
8.03	Legal Relationships.....	41

Article 9—Owner’s Responsibilities	42
9.01 Communications to Contractor	42
9.02 Replacement of Engineer	42
9.03 Furnish Data	42
9.04 Pay When Due.....	42
9.05 Lands and Easements; Reports, Tests, and Drawings	43
9.06 Insurance.....	43
9.07 Change Orders	43
9.08 Inspections, Tests, and Approvals.....	43
9.09 Limitations on Owner’s Responsibilities	43
9.10 Undisclosed Hazardous Environmental Condition.....	43
9.11 Evidence of Financial Arrangements.....	43
9.12 Safety Programs	43
Article 10—Engineer’s Status During Construction	44
10.01 Owner’s Representative.....	44
10.02 Visits to Site.....	44
10.03 Resident Project Representative.....	44
10.04 Engineer’s Authority	44
10.05 Determinations for Unit Price Work	45
10.06 Decisions on Requirements of Contract Documents and Acceptability of Work	45
10.07 Limitations on Engineer’s Authority and Responsibilities	45
10.08 Compliance with Safety Program.....	45
Article 11—Changes to the Contract	46
11.01 Amending and Supplementing the Contract	46
11.02 Change Orders	46
11.03 Work Change Directives.....	46
11.04 Field Orders.....	47
11.05 Owner-Authorized Changes in the Work.....	47
11.06 Unauthorized Changes in the Work.....	47
11.07 Change of Contract Price	47
11.08 Change of Contract Times.....	49
11.09 Change Proposals.....	49
11.10 Notification to Surety.....	50

Article 12—Claims.....	50
12.01 Claims.....	50
Article 13—Cost of the Work; Allowances; Unit Price Work	51
13.01 Cost of the Work	51
13.02 Allowances	55
13.03 Unit Price Work.....	55
Article 14—Tests and Inspections; Correction, Removal, or Acceptance of Defective Work	56
14.01 Access to Work.....	56
14.02 Tests, Inspections, and Approvals.....	56
14.03 Defective Work	57
14.04 Acceptance of Defective Work.....	58
14.05 Uncovering Work	58
14.06 Owner May Stop the Work	58
14.07 Owner May Correct Defective Work.....	59
Article 15—Payments to Contractor; Set-Offs; Completion; Correction Period	59
15.01 Progress Payments.....	59
15.02 Contractor’s Warranty of Title	62
15.03 Substantial Completion.....	62
15.04 Partial Use or Occupancy	63
15.05 Final Inspection	64
15.06 Final Payment.....	64
15.07 Waiver of Claims	65
15.08 Correction Period	66
Article 16—Suspension of Work and Termination	67
16.01 Owner May Suspend Work	67
16.02 Owner May Terminate for Cause.....	67
16.03 Owner May Terminate for Convenience.....	68
16.04 Contractor May Stop Work or Terminate	68
Article 17—Final Resolution of Disputes	69
17.01 Methods and Procedures.....	69
Article 18—Miscellaneous	69
18.01 Giving Notice	69
18.02 Computation of Times.....	69

18.03	Cumulative Remedies	70
18.04	Limitation of Damages	70
18.05	No Waiver	70
18.06	Survival of Obligations	70
18.07	Controlling Law	70
18.08	Assignment of Contract.....	70
18.09	Successors and Assigns	70
18.10	Headings.....	70

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*
 - a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

- requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.
- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
 - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
 - d. A demand for money or services by a third party is not a Claim.
11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
 - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
 - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
 - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers’ instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
- a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
 - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
 - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:* The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:* The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:* The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - 1. does not conform to the Contract Documents;
 - 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - 3. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).
- E. *Furnish, Install, Perform, Provide*
 - 1. The word “furnish,” when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 - 2. The word “install,” when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 - 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
 - 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
 - 4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- G. Nothing in the Contract Documents creates:
 - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
 - 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

- A. *Standards Specifications, Codes, Laws and Regulations*
 - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. Abnormal weather conditions;
 - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
 - 4. Acts of war or terrorism.

- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
 2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
 3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
1. The circumstances that form the basis for the requested adjustment;
 2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
 3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
 4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
 5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.
- Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.
- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
 - C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
3. Technical Data contained in such reports and drawings.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

- C. *Reliance by Contractor on Technical Data:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

- D. *Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, 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;
 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
 3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
 4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
 2. is of such a nature as to require a change in the Drawings or Specifications;
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
 - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions:* Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
 2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
 3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
 4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
 - c. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
 4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, 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;
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.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Regulations, and must be issued and signed by a surety named in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner’s termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.
- H. Contractor shall require:
 - 1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
 - 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
 - 1. include at least the specific coverages required;
 - 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
 - 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
 - 4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and
 - 5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds:* The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
 - 1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
 - 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
 - 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and
5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
 2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
 - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) has a proven record of performance and availability of responsive service; and
 - 4) is not objectionable to Owner.
- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 Substitutes

- A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
 2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
 - a. will certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design;
 - 2) be similar in substance to the item specified; and
 - 3) be suited to the same use as the item specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from the item specified; and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.09 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.
- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

- 1. Before submitting a Shop Drawing or Sample, Contractor shall:
 - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determine and verify:
 - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
 - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
 - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
- 2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.
1. *Shop Drawings*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.
 2. *Samples*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Engineer's Review of Shop Drawings and Samples*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. Resubmittal Procedures for Shop Drawings and Samples

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
 - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
 - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
 - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

- d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
- 2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.
- F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 Contractor's General Warranty and Guarantee

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
 - 1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
 - 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 - 2. normal wear and tear under normal usage.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
 - 1. Observations by Engineer;
 - 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
 - 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 4. Use or occupancy of the Work or any part thereof by Owner;
 - 5. Any review and approval of a Shop Drawing or Sample submittal;
 - 6. The issuance of a notice of acceptability by Engineer;
 - 7. The end of the correction period established in Paragraph 15.08;
 - 8. Any inspection, test, or approval by others; or

9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 Indemnification

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 Delegation of Professional Design Services

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
 - 1. Checking for conformance with the requirements of this Paragraph 7.19;
 - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
 - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. An itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
 - 1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
 - 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
 - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

- B. If Owner has issued a Work Change Directive and:
 - 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
 - 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

- A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
 3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit will be determined as follows:
1. A mutually acceptable fixed fee; or
 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
 - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
 - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
 - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
 - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

- A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

- B. *Change Proposal Procedures*

- 1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
- 2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
 - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
 - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

- 3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
- 4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
 4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
 - 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 - 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.
 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
 5. Other costs consisting of the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

- 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
 - 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
 - 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.
- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded:* The term Cost of the Work does not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
- 2. The cost of purchasing, renting, or furnishing small tools and hand tools.
- 3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 6. Expenses incurred in preparing and advancing Claims.
- 7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

- 1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
 - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
 - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
 - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
 - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
- 2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

- E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances*: Contractor agrees that:
1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.
- C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 3. by manufacturers of equipment furnished under the Contract Documents;
 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 Owner May Correct Defective Work

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 Progress Payments

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments*
 - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
 - 2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. Review of Applications

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work;
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

- b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. The Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. The Contract Price has been reduced by Change Orders;
 - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
 - j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
 - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
 3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

- d. a list of all duly pending Change Proposals and Claims; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
- 3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. *Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such adjacent areas;
 - 2. correct such defective Work;
 - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
 - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
 - 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this article, Owner or Contractor may:
 - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
 - 2. agree with the other party to submit the dispute to another dispute resolution process; or
 - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
 - 1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
 - 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
 - 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

1.01 *Supplementary Conditions OF THE CONSTRUCTION CONTRACT*

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, "Paragraph SC-4.05."

SC-2.02 Delete Paragraph 2.02.A in its entirety and insert the following new paragraph in its place:

- A. Owner shall furnish to Contractor one (1) electronic portable document format (PDF) copy of conformed Contract Documents incorporating and integrating all Addenda and any amendments negotiated prior to the Effective Date of the Contract (including one fully signed counterpart of the Agreement).

SC-2.06 Delete Paragraphs 2.06.B and 2.06.C in their entirety and insert the following in their place:

- B. *Electronic Documents Protocol*: The parties shall conform to the following provisions in Paragraphs 2.06.B and 2.06.C, together referred to as the Electronic Documents Protocol ("EDP" or "Protocol") for exchange of electronic transmittals.

1. *Basic Requirements*

- a. To the fullest extent practical, the parties agree to and will transmit and accept Electronic Documents in an electronic or digital format using the procedures described in this Protocol. Use of the Electronic Documents and any information contained therein is subject to the requirements of this Protocol and other provisions of the Contract.
- b. The contents of the information in any Electronic Document will be the responsibility of the transmitting party.
- c. Electronic Documents as exchanged by this Protocol may be used in the same manner as the printed versions of the same documents that are exchanged using non-electronic format and methods, subject to the same governing requirements, limitations, and restrictions, set forth in the Contract Documents.
- d. Except as otherwise explicitly stated herein, the terms of this Protocol will be incorporated into any other agreement or subcontract between a party and any third party for any portion of the Work on the Project, or any Project-related services, where that third party is, either directly or indirectly, required to exchange Electronic Documents with a party or with Engineer. Nothing herein will modify the requirements of the Contract regarding communications between and among the parties and their subcontractors and consultants.

- e. When transmitting Electronic Documents, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the receiving party's use of software application packages, operating systems, or computer hardware differing from those established in this Protocol.
- f. Nothing herein negates any obligation 1) in the Contract to create, provide, or maintain an original printed record version of Drawings and Specifications, signed and sealed according to applicable Laws and Regulations; 2) to comply with any applicable Law or Regulation governing the signing and sealing of design documents or the signing and electronic transmission of any other documents; or 3) to comply with the notice requirements of Paragraph 18.01 of the General Conditions.

2. *System Infrastructure for Electronic Document Exchange*

- a. Each party will provide hardware, operating system(s) software, internet, e-mail, and large file transfer functions ("System Infrastructure") at its own cost and sufficient for complying with the EDP requirements. With the exception of minimum standards set forth in this EDP, and any explicit system requirements specified by attachment to this EDP, it is the obligation of each party to determine, for itself, its own System Infrastructure.
 - 1) Each Party assumes full and complete responsibility for any and all of its own costs, delays, deficiencies, and errors associated with converting, translating, updating, verifying, licensing, or otherwise enabling its System Infrastructure, including operating systems and software, for use with respect to this EDP.
- b. Each party is responsible for its own system operations, security, back-up, archiving, audits, printing resources, and other Information Technology ("IT") for maintaining operations of its System Infrastructure during the Project, including coordination with the party's individual(s) or entity responsible for managing its System Infrastructure and capable of addressing routine communications and other IT issues affecting the exchange of Electronic Documents.
- c. Each party will operate and maintain industry-standard, industry-accepted, ISO-standard, commercial-grade security software and systems that are intended to protect the other party from: software viruses and other malicious software like worms, trojans, adware; data breaches; loss of confidentiality; and other threats in the transmission to or storage of information from the other parties, including transmission of Electronic Documents by physical media such as CD/DVD/flash drive/hard drive. To the extent that a party maintains and operates such security software and systems, it shall not be liable to the other party for any breach of system security.
- d. In the case of disputes, conflicts, or modifications to the EDP required to address issues affecting System Infrastructure, the parties shall cooperatively resolve the issues; but, failing resolution, the Owner is authorized to make and require reasonable and necessary changes to the EDP to effectuate its original intent. If the changes cause additional cost or time to Contractor, not reasonably anticipated under the original EDP, Contractor may seek an adjustment in price or time under the appropriate process in the Contract.

- e. Each party is responsible for its own back-up and archive of documents sent and received during the term of the contract under this EDP, unless this EDP establishes a Project document archive, either as part of a mandatory Project website or other communications protocol, upon which the parties may rely for document archiving during the specified term of operation of such Project document archive. Further, each party remains solely responsible for its own post-Project back-up and archive of Project documents after the term of the Contract, or after termination of the Project document archive, if one is established, for as long as required by the Contract and as each party deems necessary for its own purposes.
- f. If a receiving party receives an obviously corrupted, damaged, or unreadable Electronic Document, the receiving party will advise the sending party of the incomplete transmission.
- g. The parties will bring any non-conforming Electronic Documents into compliance with the EDP. The parties will attempt to complete a successful transmission of the Electronic Document or use an alternative delivery method to complete the communication.

SC-3.02 Add following paragraph immediately following 3.02.A.2

- 3. All materials used and tests made shall be judged by applicable standards of the American Society for Testing Materials (A.S.T.M.), American Association of State Highway Transportation Officials (A.A.S.H.T.O.), Minnesota Department of Transportation (Mn/DOT), City Engineers Association of Minnesota (C.E.A.M.), and other standards applicable to the particular phase of the construction being performed.

SC-4.01.A Revise to delete last sentence.

SC-4.05 Add the flowing immediately following 4.05.C.2:

- i. Time extensions to the Contract construction time period due to unusually inclement weather may be requested by the Contractor and considered by the Engineer. However, the Contractor shall provide actual climatological data prepared by the United States Weather Bureau listing the average days of wet weather and the average amount of precipitation that can be expected during the construction period at the Project site. The Engineer will then base his decision on the anticipated average and the actual average data and foreseeable variations thereof and recommend additional days of extension if warranted. If warranted, a change order will be prepared and executed.

SC-5.01 Delete paragraphs 5.01B and 5.01C in their entirety, and insert the following in its place:

- B. Contractor shall provide for all additional lands and access thereto that Contractor may require for performance of the Work, temporary construction facilities, or storage of materials and equipment.

SC-5.03 Add the following new paragraphs immediately after Paragraph 5.03.D:

E. The following table lists the reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and specifically identifies the Technical Data in the report upon which Contractor may rely:

Report Title	Date of Report	Technical Data
Field Boring Log Borehole No.: PF-7	9/15/2023	Geotechnical boring and well construction

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.A:

1. *Required Performance Bond Form:* The performance bond that Contractor furnishes will be in the form of EJCDC® C-610, Performance Bond (2018 edition).
2. *Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of EJCDC® C-615, Payment Bond (2018 edition).

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

- D. *Other Additional Insureds:* As a supplement to the provisions of Paragraph 6.03.C of the General Conditions, the commercial general liability, automobile liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies must include as additional insureds (in addition to Owner and Engineer) the following: **Houston Engineering, Inc., and the City of Fergus Falls.** E. *Workers' Compensation and Employer's Liability:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers' compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

Workers' Compensation and Related Policies	Policy limits of not less than:
Workers' Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman's)	Statutory
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory

- F. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:
1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
 2. damages insured by reasonably available personal injury liability coverage, and

3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- G. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage.
 - a. Such insurance must be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
 4. Underground, explosion, and collapse coverage.
 5. Personal injury coverage.
 6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
 7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- H. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:
1. Any modification of the standard definition of "insured contract".
 2. Any exclusion for water intrusion or water damage.
 3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
 4. Any exclusion of coverage relating to earth subsidence or movement.
 5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).
 6. Any limitation or exclusion based on the nature of Contractor's work.
 7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.

I. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	Policy limits of not less than:
General Aggregate	\$2,000,000
Products—Completed Operations Aggregate	\$2,000,000
Personal and Advertising Injury	\$1,500,000
Bodily Injury and Property Damage—Each Occurrence	\$1,500,000

- J. *Automobile Liability*: Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy must be written on an occurrence basis.

Automobile Liability	Policy limits of not less than:
Bodily Injury	
Each Person	\$1,500,000
Each Accident	\$1,500,000
Property Damage	
Each Accident	\$1,500,000
[or]	
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	\$2,000,000

- K. *Umbrella or Excess Liability*: Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

Excess or Umbrella Liability	Policy limits of not less than:
Each Occurrence	\$2,000,000
General Aggregate	\$2,000,000

- L. *Using Umbrella or Excess Liability Insurance to Meet CGL and Other Policy Limit Requirements*: Contractor may meet the policy limits specified for employer's liability, commercial general liability, and automobile liability through the primary policies alone, or through combinations of the primary insurance policy's policy limits and partial attribution of the policy limits of an umbrella or excess liability policy that is at least as broad in coverage as that of the underlying policy, as specified herein. If such umbrella or excess liability policy was required under this Contract, at a specified minimum policy limit, such umbrella or excess policy must retain a minimum limit of \$2,000,000 after accounting for partial attribution of its limits to underlying policies, as allowed above.

SC-6.04 Delete paragraph 6.04 in its entirety, including all subparagraphs

- SC-6.05 Delete paragraph 6.05 in its entirety, including all subparagraphs
- SC-6.06 Delete paragraph 6.06 in its entirety, including all subparagraphs
- SC-7.09 Add the following new paragraph immediately after paragraph 7.09.A:
- B. The Contractor shall complete section V. General Contractor Certification of the MPCA Application for General Storm Water Permit for Construction (#MNR100000) available from the Engineer, if applicable to the Work. The Contractor shall comply with all conditions of this permit.
- SC-7.13 Add the following new paragraphs following 7.13.J
- K. The Contractor shall make every effort to schedule and conduct his work in such a manner that the public will be inconvenienced as little as possible. The Contractor shall provide all barricades, lights, and signs required to protect his work. Any activities affecting local traffic shall be coordinated with the local road authority.
- L. In accordance with generally accepted construction practices, the Contractor will be solely and completely responsible for conditions of the job site, including security of the site and all materials and equipment thereon, and the safety of all persons and property during the performance of work, including but not limited to the general public. This requirement will apply continuously and not be limited to normal working hours. Additionally, the Contractor shall install a child-proof barrier completely around all excavations every night, and whenever the construction site is to be left unattended by authorized workmen, when said excavations are not backfilled to the level of the surrounding grade. Observation of the Contractor's performance by Engineer is not intended to include review of the adequacy of the Contractor's safety measures on or near the Site.
- M. The Contractor shall be responsible for furnishing the Contractor's and any Subcontractor's employees with all safety equipment, including but not limited to, hard hats, eye protection, respiratory protection equipment and all other protection devices needed to comply with Laws and Regulations or with accepted safety practices. The Contractor shall be responsible for any safety violation and/or fine that may occur because of any neglect by the Contractor, the Contractor's employees or any third party.
- SC-7.20 Add the following paragraph 7.20A:
- A. The Contractor shall permit entry and inspection by authorized representatives of Federal, State, County and local governmental agencies and the Owner, as well as to the authorized project representative or representatives of the Engineer and his subcontractors.
- SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:
- C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:
1. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings

(but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.

2. *Safety Compliance:* Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.

3. *Liaison*

- a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
- b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
- c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.

4. *Review of Work; Defective Work*

- a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.
- b. Observe whether any Work in place appears to be defective.
- c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.

5. *Inspections and Tests*

- a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.
- b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.

6. *Payment Requests:* Review Applications for Payment with Contractor.

7. *Completion*

- a. Participate in Engineer's visits regarding Substantial Completion.
- b. Assist in the preparation of a punch list of items to be completed or corrected.
- c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.
- d. Observe whether items on the final punch list have been completed or corrected.

D. The RPR will not:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.

3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.
- 5 Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Authorize Owner to occupy the Project in whole or in part.

SC-10.09 Add the following paragraph 10.09.A:

- A. The Owner may employ and pay for, services of an independent testing laboratory to perform testing. The Contractor shall furnish at his own expense such labor, materials and facilities as may be required by the Engineer for compaction and other inspection. This shall not include the expense of the project observer or representative of the Engineer. Any inspections, tests, or approvals, or waiver of tests will in no way relieve the Contractor of full responsibility for meeting the guaranteed performance and requirements of the Contract.

SC-11.07 Delete the first sentence of Paragraph 11.07.B and replace with the following:

The value of any work covered by a change order or of any claim for an adjustment on the Contract Price will be determined in the following order of precedence.

SC-14.01 Add the following paragraph following 14.01.A:

- B. Said access shall conform to all requirements of the regulatory agency or agencies who claim jurisdiction over the safety of the project site. Failure by the Contractor to provide safe access for the above parties will be a violation in a substantial way of the provisions of the Contract Documents as provided for in paragraph 16.02.A of the General Conditions.

SC-15.01: Delete reference to “ten days” from paragraph from 15.01.D.1 and replace with “Thirty-five days”

SC-15.01 Add the following paragraph following 15.01.D.1:

2. OWNER will pay CONTRACTOR obligations within 35 days of the date of receipt of invoice from CONTRACTOR, unless OWNER in good faith disputes the obligation. The rate of interest calculated and paid by OWNER on the outstanding balance of the obligation not paid according to the terms of the contract or during the standard payment period shall be 1-1/2 percent per month or part of a month. No interest penalties will accrue against OWNER if payment is delayed due to a good faith dispute regarding the fitness of the product or service, contract compliance, or any defect, error or omission related thereto. The minimum monthly interest penalty payment that OWNER shall calculate and pay

CONTRACTOR for the unpaid balance for any one overdue bill of \$100 or more is \$10. For unpaid balances of less than \$100, OWNER shall calculate and pay the actual interest penalty due CONTRACTOR.

CONTRACTOR must pay any subcontractor within ten days of CONTRACTOR's receipt of payment from OWNER for undisputed services provided by the subcontractor. CONTRACTOR must pay interest of 1-1/2 percent per month or any part of a month to the subcontractor on any undisputed amount not paid on time to the subcontractor. The minimum monthly interest penalty payment for an unpaid balance of \$100 or more is \$10. For an unpaid balance of less than \$100, CONTRACTOR shall pay the actual penalty due to the subcontractor. A subcontractor who prevails in a civil action to collect interest penalties from CONTRACTOR must be awarded its costs and disbursements, including attorney's fees, incurred in bringing the action.

SC-15.08 Delete reference to "one year" from paragraph from 15.08.A and replace with "two years"

SC-17.01 Delete entire Article 17.01 and replace with the following:

17.1 Importance of Adherence to Claims and Dispute Resolution Procedures

- A. This contract includes carefully designed dispute resolution provisions designed to assure that all issues are brought to the attention of the Engineer at the earliest possible time and at the first responsible level to increase the possibility for such matters to be resolved or for appropriate action to be taken promptly.
- 1. Strict compliance with the notification, mediation, and arbitration provisions of this contract are important for several reasons. Adherence to these provisions affords appropriate public oversight of the cost, or potential cost of the project and prevents increases in costs without the opportunity for that oversight. Adherence to these provisions assures that the Owner can provide early notification to funding sources if the Contractor is contemplating a claim for additional compensation under the terms of the contract. Adherence to these provisions are essential because they provide each party an equal opportunity to maintain records and obtain evidence necessary for dispute resolution. One of the fundamental purposes of the mediation provisions of this contract is to assure that parties provide information about the nature, factual basis, and amount of claims during initial dispute resolution. The arbitration provisions contemplate cost effective dispute resolution with limited discovery. Those provisions require early disclosure of claims notification, exchange of full and complete information during mediation.
- 2. The intent of this contract is that compensation arising from this contract shall be strictly contractual, in accordance with the provisions of this contract. Any requests or demands for additional compensation, however characterized, must be submitted to the Engineer under the claims provisions of Article 12. No claim for additional compensation may be considered for subsequent dispute resolution unless it has been timely submitted. Timely appeals from the Engineer's decision must follow the mediation procedure provided for in this contract before submission to arbitration.

17.2 Methods and Procedures

- A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 12.01.D before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, the Claim shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
 - (1) agrees with the other party to submit the Claim to another dispute resolution process, or
 - (2) gives written notice to the other party of their intent to submit the Claim to arbitration
- D. Arbitration. The intent of this special provision is to override any provision of the EJCDC general provisions which would otherwise allow dispute resolution by litigation and instead to require arbitration. Any controversy or claim arising out of or relating to this contract, or breach thereof, shall be settled by arbitration administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules, as modified by this special provision. A judgment on the award by the arbitrator may be entered in Minnesota State District Court venue in **Otter Tail County, Minnesota**.
 - (1) Notwithstanding the amount of the claim, arbitration shall occur before a single arbitrator under the rules for cases on the “Regular Track” The arbitrator shall be an attorney qualified by experience to handle construction cases.
 - (2) The following preconditions to a demand for arbitration apply.
 - (a) The Contractor must establish that the Contractor complied with the claims provisions of Article 12, including timely submission of claims.
 - (b) Any party seeking arbitration must demonstrate that the Engineer’s decision on the claim has not become final and binding under 10.05(E) of the contract as a result of failure of the party to seek further dispute resolution on a timely basis. If the engineer’s decision has become final and binding and a claim dispute resolution has not been timely perfected, all claims for relief, however characterized, in tort, contract, equity or otherwise are absolutely barred.
 - (c) Any party seeking arbitration must demonstrate that it was timely sought mediation under the contract. During that mediation process, the Contractor must fully disclose the factual basis for any claim, must provide

detailed documentation for any claim, and must disclose the amount claimed. A Contractor may not assert a claim, nor may a Contractor assert a claim in amounts, not timely submitted during the claims provisions under Article 10, and during the mediation process.

(d) All subcontracts for work done on this project shall contain an agreement requiring binding arbitration of disputes with the Contractor, upon provisions satisfactory to the Owner. The Contractor shall present forms of such subcontracts to the Owner for review of compliance with these provisions. Nothing in this contract shall be deemed to provide direct rights of action in arbitration or otherwise by the subcontractor against the Owner.

ADDITIONAL SUPPLEMENTARY CONDITIONS

1. Confined Space The workplace in which the Work is to be performed may include permit-required confined spaces as defined in 29 CFR 1910.146 and, if so, permit space entry is allowed only through compliance with a confined space entry program meeting the requirements of 29 CFR 1910.146.

2. Civil Rights

CONTRACTOR agrees as follows:

- (1) In the hiring of common or skilled labor for the performance of any work under any contract, or any subcontract, CONTRACTOR will not, by reason of race, creed, or

color, discriminate against the person or persons who are citizens of the United States or resident aliens who are qualified and available to perform the work to which the employment relates;

- (2) CONTRACTOR will not, in any manner, discriminate against, or intimidate, or prevent the employment of any person or persons identified in clause (1) of this section, or on being hired, prevent, or conspire to prevent, the person or persons from the performance of work under any contract on account of race, creed, or color;

- (3) A violation of this section is a misdemeanor; and

- (4) The contract may be canceled or terminated, and all money due, or to become due under the contract, may be forfeited for a second or any subsequent violation of these terms.

3. Final Documentation

Contractor must submit Form IC-134, record drawings, warranties, lien waivers and all other documents specified in the Contract Documents before final payment. OWNER will not make

final payment until CONTRACTOR has given proof of compliance with state income tax withholding requirements pursuant to Minnesota Statutes section 270C.66

CONTRACTOR will maintain all records pertaining to fees or costs incurred in connection with the contract for six years from the date of completion of the work. CONTRACTOR agrees that any authorized representative of OWNER or the state auditor may have access to and the right to examine, audit and copy any such records during normal business hours.

4. Out-of-State Contractor Surety Deposit

Minnesota Statutes §290.9705 regarding payment withholding for surety purposes applies if CONTRACTOR is an out-of-state contractor within the meaning of that statute.

5. Minnesota Data Practices Act

If CONTRACTOR receives a request for data pursuant to the Data Practices Act, Minnesota Statutes chapter 13 (DPA), that may encompass data (as that term is defined in the DPA) CONTRACTOR possesses or has created as a result of this agreement, it will inform OWNER immediately and transmit a copy of the request. If the request is addressed to OWNER, CONTRACTOR will not provide any information or documents, but will direct the inquiry to OWNER. If the request is addressed to CONTRACTOR, CONTRACTOR will be responsible to determine whether it is legally required to respond to the request and otherwise what its legal obligations are, but will notify and consult with OWNER and its legal counsel before replying. Nothing in the preceding sentence supersedes CONTRACTOR's obligations under this agreement with respect to protection of OWNER's data, property rights in data or confidentiality. Nothing in this section constitutes a determination that CONTRACTOR is performing a governmental function within the meaning of Minnesota Statutes §13.05, subdivision 11, or otherwise expands the applicability of the DPA beyond its scope under governing law.

SECTION 00920
PARTIAL PAYMENT CERTIFICATION

OWNER: City of Fergus Falls, Minnesota
ENGINEER: Houston Engineering Inc.

PROJECT: Fergus Falls Class I C&D Landfill,
Phase 3B Expansion Project

CONTRACTOR:

PARTIAL PAYMENT:
PERIOD OF ESTIMATE:

CONTRACT CHANGE ORDER SUMMARY

No.	Deduction	Additions
-----	-----------	-----------

Totals
Net Change to
Contract

CONTRACT TIME:

Original Days:

Revisions:

Days Remaining:

On Schedule (y/n):

Starting Date:

Substantial
Completion: September 1,
2025

ESTIMATE

Original Contract Amount.....	\$ _____
Change Orders.....	\$ _____
Revised Contract Amount.....	\$ _____
Completed to Date Amount.....	\$ _____
Materials On-Site.....	\$ _____
Subtotal.....	\$ _____
Retainage.....	\$ _____
Previous Payments.....	\$ _____
Amount Due This Payment.....	\$ _____

(see attached breakdown)

CONTRACTOR'S CERTIFICATION

The undersigned Contractor certifies that to the best of their knowledge, information and belief, the work covered by this payment estimate has been completed in accordance with the contract documents, that all amounts have been paid by the Contractor for work for which previous payment estimates were issued and for which payments were received from the Owner, and that current payment shown herein is now due.

Contractor: _____

By: _____

Date: _____

ENGINEER'S CERTIFICATION

The undersigned certifies that the work has been carefully inspected and to the best of their knowledge and belief, the quantities shown in this estimate are correct and the work has been performed in accordance with the contract documents.

Engineer: _____

By: _____

Date: _____

OWNER'S APPROVAL

Owner: _____

By: _____

Date: _____

END OF SECTION 00920

**SECTION 00930
CHANGE ORDER FORM**

Change Order No. _____

Date _____

Agreement Date _____

Fergus Falls Class 1 C&D Landfill, Phase 3B Expansion (Project# 9774)

Owner: City of Fergus Falls

Contractor: _____

The following changes are hereby made to the Contract Documents:

Justification:

Change to Contract Price: \$ _____

Original Contract Price: \$ _____

Current Contract Price adjusted to previous Change Order: \$ _____

The Contract Price due to this Change Order will be (increased) (decreased) by
\$ _____

The new Contract Price including this Change Order will be \$ _____

Change to Contract Time: _____

The Contract Time will be (increased) (decreased) by _____ calendar days.

The date for completion of all work will be _____ (Date).

Approvals Required:

To be effective, this Change Order must be approved by the Owner and the Contractor as required by the Contract Documents.

Requested by: _____
(Engineer) (date)

Ordered by: _____
(Owner) (date)

Accepted by: _____
(Contractor) (date)

END OF SECTION 00930

SECTION 00940
CERTIFICATE OF SUBSTANTIAL COMPLETION

Project: _____

OWNER's Project No.: _____ Engineer's Project No.: _____

CONTRACTOR: _____

Contract For: _____ Contract Date: _____

This Certificate of Substantial Completion applies to all Work under the Contract Documents or to the following specified parts thereof:

To: _____
(Owner)

And To: _____
(Contractor)

The Work to which this Certificate applies has been inspected by authorized representatives of OWNER, CONTRACTOR, and ENGINEER, and that Work is hereby declared to be substantially complete in accordance with the Contract Documents on

Date of Substantial Completion

A tentative list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include an item in it does not alter the responsibility of CONTRACTOR to complete all the Work in accordance with the Contract Documents. The items in the tentative list shall be completed or corrected by CONTRACTOR within thirty (30) days of the above date of Project Completion.

The responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, heat, utilities, insurance and warranties shall be as follows:

RESPONSIBILITIES:

OWNER

CONTRACTOR

The following documents are attached to and made a 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 the ENGINEER on: _____, _____

Houston Engineering, Inc.
(Engineer)

By

CONTRACTOR accepts this certificate of Substantial Completion on: _____, _____

(Contractor)

By

OWNER accepts this Certificate of Substantial Completion on: _____, _____

(Owner)

END OF SECTION 00940

DIVISION

1

SECTION 01100

SUMMARY OF WORK

PART 1 GENERAL REQUIREMENTS

1.1 PROJECT DESCRIPTION

Perform all work necessary to construct the Phase 3B Expansion at the Fergus Falls Class I C&D Landfill Facility as described in the Project Drawings and Specifications.

Work includes but is not limited to common excavation; placement and compaction of the clay (soil barrier) liner; placement of the granular drainage layer; installation of a leachate collection, conveyance system. The Work will require staging and construction delay(s) to accommodate construction of Phase 3B (new disposal area). The Contractor must accommodate facility traffic to not restrict ongoing composting and material drop-off operations at the site.

1.2 CONTRACT DOCUMENTS

- A. The Contract Documents are as defined in the Instruction to Bidders. The terms of the Contract Documents apply to these Specifications as fully as though repeated herein.
 - 1. The term "MNDOT" in reference to specifications shall mean the latest published edition of the Minnesota Department of Transportation's Standard Specifications for Highway construction, as modified by any MNDOT Supplemental Specification edition published prior to the date of the Advertisement for Bid.
 - 2. The terms "ASTM or ASTM Specification" shall mean the latest published edition of the American Standards for Testing and Materials Specifications available on the date of the Advertisement for Bid.
- B. It is the CONTRACTOR's sole responsibility to thoroughly read and understand these Technical Specifications and request written clarification of those portions which are unclear.
- C. Division of the Work as made in these Contract Documents is for specifying and describing work which is to be completed. There has been no attempt to make a classification according to trade or agreements which may exist between CONTRACTOR, Subcontractors, or trade unions or other organizations. Such division and classification of the Work shall be the CONTRACTOR's sole responsibility.

1.3 EXISTING SITE CONDITIONS AND USES

The project is located at the Fergus Falls class I C&D Landfill facility:

2010 South Oak Street
Fergus Falls, MN 56537

1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The overall scope of the Work which is more fully described in these Contract Documents includes, but is not necessarily limited to, furnishing all labor, tools, equipment, and materials, and performing all operations necessary to construct Phase 3B Expansion at the Fergus Falls Class I C&D landfill Facility.

- B. It is the intent of the Contract Documents to cover all aspects of the Project. Should there be some item or items not shown on the Contract Drawings or not described in these Specifications that is required for the Work, those items and the furnishing of all labor, materials, and equipment shall be considered incidental to the Work and no additional compensation will be provided.
- C. The Work includes the furnishing of all labor, equipment, tools, machinery, materials, and other items required for the construction of a complete project as specified. Equipment furnished shall be in safe operating condition and of adequate size, capacity, and condition for the performance of the Work.
- D. CONTRACTOR shall be solely responsible for the coordination of its activities regarding the Project and the activities of Subcontractors and OWNER.
- E. The CONTRACTOR shall maintain all books, records, documents, and accounting procedures and practices relating to the contract for examination by the City of Fergus Falls and the state or legislative auditor as required by the laws of the State of Minnesota.
- F. In its performance of the Work, CONTRACTOR shall ensure that no person shall be excluded from full employment rights or participation in or the benefits of any program, service, or activity on the ground of race, color, creed, religion, age, sex, disability, marital status, sexual orientation, public assistance status or national origin; and no person who is protected by applicable federal or state laws, rules or regulations against discrimination otherwise shall be subjected to discrimination.

1.5 WORK BY OWNER

ENGINEER will provide benchmark survey information and site coordinate information necessary for construction of the Work. Once provided, it is CONTRACTOR's responsibility to protect the information. The ENGINEER will also conduct assurance testing of the re-compacted soil barrier layer, sand drainage layer and other aggregate materials as specified within this specification. CONTRACTOR shall request such information or testing from ENGINEER a minimum of five days prior to the time when such information or testing is needed.

1.6 OWNER FURNISHED PRODUCTS

- A. The use of various salvaged materials has been identified within the plans and/or specifications. Additional work and/or materials may be necessary to implement re-use of salvaged materials.
- B. Soil barrier layer materials may be available onsite. Previous cells have been constructed with on-site materials. The CONTRACTOR shall be responsible to conduct construction quality control (CQC) testing of on-site materials to ensure conformance with source material specifications provided herein.

1.7 CONTRACTOR USE OF PREMISES

- A. Definition of Site: The Site is defined as the area within the construction limits shown on the Drawings. CONTRACTOR shall limit operations, including material and equipment storage, to within those construction limits defined by the easement boundaries shown on the Drawings.
- B. Hours of Operation: CONTRACTOR'S operations shall be limited to the hours allowed by the County, the City, and other applicable requirements.

- C. Protection and Repair of Existing Facilities and Utilities: CONTRACTOR shall perform operations carefully and in such a manner as to protect existing structures, Underground Facilities, and Utilities. Obstructions not shown on the Drawings may exist and shall be exposed by CONTRACTOR without damage. CONTRACTOR shall be solely responsible for damage to existing structures, Underground Facilities, and Utilities resulting from CONTRACTOR'S operations, and shall repair or replace damaged items to OWNER'S satisfaction. Special care should be taken to protect existing bituminous trails and roadways. The CONTRACTOR is also responsible for calling Minnesota One Call for project utility locations before starting construction.
- E. Unfavorable Construction Conditions: When unfavorable weather, soil, drainage, or other unsuitable construction conditions exist, CONTRACTOR shall immediately notify ENGINEER and confine operations to work which will not be adversely affected by such conditions. No portion of the Work shall be constructed under conditions, which would adversely affect the quality of the Work, unless special means or precautions are taken to perform the Work in a proper and satisfactory manner. All CONTRACTOR vehicles leaving and entering the site will comply with all local regulation concerning tracking mud and other construction debris onto public or private properties. Nothing in this paragraph alters CONTRACTOR's responsibility to timely and properly complete the work as provided for by the Contract Documents.
- F. Survey Markers: CONTRACTOR shall conduct operations to preserve benchmarks, survey reference points, and stakes existing or established by ENGINEER for the construction. CONTRACTOR will be charged the expense of repairing or replacing survey markers and shall be responsible for mistakes or lost time that result due to damage or destruction of survey markers due to CONTRACTOR'S operations.
- G. The CONTRACTOR is fully responsible for control and protection of the site until Final Completion of the Work.

1.8 SEQUENCE OF WORK

Work shall commence within 5 calendar days of the Notice to Proceed and all work shall be completed according to the schedule prescribed in Section 00200 Instruction to Bidders, Paragraph 6, Contract Time, related to Substantial Completion, Completion and Contract Time.

All temporary erosion control work shall be completed as shown on the plans prior to any clearing, grubbing or other work that involves disturbance of vegetative or soil surface.

1.9 EXAMINATION OF THE SITE WORK

- A. It will be required and expected that each Contractor, before submitting a proposal for Work required under this specification, will review the site, make a thorough examination of conditions, and familiarize himself with all existing conditions and all limitations pertaining to work herein contemplated.
- B. No extras will be allowed because of the Contractor's misunderstanding as to the amount of Work involved or his lack of knowledge of any of the conditions pertaining to the Work based on his neglect or failure to conduct an examination of the site.

1.10 CONTRACTOR USE OF PREMISES

- A. Contractor shall limit use of site for Work, for storage, and for access, and as coordinated with the

Owner.

- B. Confine operations to areas within Contract limits indicated. Portions of the site beyond areas in which construction operations are indicated are not to be disturbed unless prior approval is obtained from the Engineer. Any damage to drives, parking lots or areas beyond the Contract Limits caused by the Contractor shall be restored to pre-contract conditions prior to project close-out.
- C. Assume full responsibility for protection and safekeeping of products under this Contract.
- D. Schedule deliveries to minimize space and time requirements, coordinate with the Owner for locations for storage of materials and equipment as indicated on site.

1.11 MEASUREMENTS

- A. The Contractor shall be responsible for all measurements, layout work, and quantity and quality of materials. He shall also be required to employ crafts-persons skilled in their trade. All work shall be completed in conformance with prevailing codes and standard construction practice.

1.12 CLEANING UP AND FINAL CLEANING

- A. The Contractor shall always, keep the project area free from accumulation of waste materials or rubbish caused by his operations, and keep areas clean and free from fire hazards. The Contractor shall be responsible for handling of all their debris, cartons, crates and surplus materials, in a manner consistent with the disposal operations at the landfill.

1.13 PERMITS

- A. The CONTRACTOR shall utilize the "Gopher State One Call" excavation notice system as required under Minnesota Statute Chapter 216D, 48 hours prior to performing any excavation (Phone 651-454-0002). The CONTRACTOR shall contact the owners of the in-place utilities and make all arrangements for relocation as required due to the construction of this project. The work must be conducted pursuant to and in compliance with all required permits and approvals of all governmental bodies including OWNER.

END OF SECTION 01100

SECTION 01120 SPECIAL PROVISIONS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 and 2 Specification Sections, apply to this Section.
- B. The MNDOT Standard Specifications for Constructions, 2020 Edition.
- C. Geotechnical boring and well construction. Borehole No.: PF-7 provided as **Attachment A** herein.

1.2 EXISTING UTILITIES

- A. It shall be the Contractor's responsibility to verify the location of all existing utilities prior to the commencement of any excavation operations. Gopher One Call locate services will be required. Any utilities damaged or disturbed by the Contractor's operation shall be repaired by him, at his expense, to the satisfaction of the Utility Owner and the Engineer.

1.3 INSPECTION AND TESTING

- A. The Owner will employ, and pay for, services of an independent testing laboratory to perform testing. The Contractor shall furnish at his own expense such labor, materials, and facilities as may be required by the Engineer for compaction and other inspection. This shall not include the expense of the project observer or representative of the Engineer.
- B. Decision as to the quality of materials and workmanship shall rest with the Engineer and any portion of the work rejected shall be replaced by the Contractor with approved work at no additional cost to the Owner.
- C. Any inspections, tests, or approvals, or waiver of tests will in no way relieve the Contractor of full responsibility for meeting the guaranteed performance and requirements of the Contract.

1.4 HEALTH AND SAFETY REQUIREMENTS

- A. Construction activities at the landfill site may place the Contractor's personnel in potentially hazardous situations due to exposure to landfill refuse, leachate and gases. Hazardous atmospheres may occur as result of construction operations at the site. These hazards include but are not limited to: Oxygen deficient and explosive atmospheres. These hazards are likely to occur within excavations near of within the waste limits.
- B. The Contractor is responsible for implementation and enforcement of safe Work practices including, but not limited to, personnel exposure to refuse, leachate condensate and gases; excavation and embankment; trenching, shoring; and materials handling; operation of equipment; electrical; mechanical; and safety of public during progress of Work. The Contractor is responsible for initiating, maintaining, and supervising safety precautions and programs relating to their Work. The Contractor shall take necessary precautions for safety of employees on the Project site and other persons and organizations that may be affected by construction operations.

- C. The Contractor shall prepare a site-specific health and safety plan (HASP). If the Contractor does not have capability to prepare a site-specific HASP, the Contractor shall employ others with appropriate capabilities. The Contractor is solely responsible for adequacy of the HASP's preparation and implementation. At minimum, the Contractor's HASP shall address the following.
1. Project activities, including coordination with other Contractors.
 2. Hazard evaluation.
 3. On-site safety responsibilities.
 4. Work zones.
 5. Personnel training.
 6. Atmospheric monitoring.
 7. Personal protection, clothing, and equipment.
 8. Emergency procedures.
- C. When the Engineer or its representatives are required to be present on the Project site to perform engineering services, the Engineer will comply with Contractor's safety plans, programs, and procedures. If the Engineer determines that the Contractor's safety plans, programs, and procedures do not provide adequate protection for the Engineer or their representatives, the Engineer may direct its employees or representatives to leave the Project site or implement additional safeguards for the Engineer's protection. Such actions are related to the Engineer's responsibility for their own employees and/or representatives, and the Engineer does not assume responsibility for protection of any other persons affected by the Work.
- D. The Contractor shall submit copies of the HASP to the Owner and the Engineer prior to commencement of construction operations. Work on-site shall not proceed until the HASP has been submitted to the Engineer. **Submittal of the Contractor's HASP shall neither impose on the Engineer responsibility for adequacy of the HASP nor relieve the Contractor from the full responsibility for the HASP and HASP implementation.**

1.5 CONSTRUCTION STAKING

- A. See Specification Section 01130 Construction Surveying

1.6 DEMOLITION AND REMOVALS

- A. Monitoring Well PF-7 (MN Unique Well ID # 856836) shall be abandoned in accordance w/Minnesota Department of Health standards. The Contractor shall be responsible for providing permitting fees and well sealing documentation. The work shall be completed and documented by a licensed water well contractor in the State of Minnesota.

1.7 MAINTENANCE OF TRAFFIC

- A. Traffic flow must be maintained on the landfill site roads and into and out of the active areas, including but limited to the Phase 3A disposal area always. The Contractor shall be responsible for all traffic control within areas subject to construction operations.
- B. Sufficient barricades, direction and warning signs shall be in place at all times to adequately accommodate free and safe passage of vehicles. Costs associated with traffic maintenance are considered incidental to the Mobilization item and no direct compensation shall be made therefore.

1.8 WATER FOR DUST CONTROL

- A. The Contractor shall routinely apply water to disturbed surfaces utilized by construction vehicles for the purposes of dust control. It is preferred that water be obtained from the on-site stormwater basins, as directed by the Engineer.
- B. In the event onsite surface water sources are exhausted the City will allow for use of the onsite water service/hydrant per the following fee(s):
 - 3" hydrant meter at \$150.00 plus \$260.00 deposit + monthly fee \$105.75
 - A Minnesota State Surcharge is applied to all fixed fee permits calculated at a rate of \$1.00 for total fees up to \$2,010.00 or 0.0005 times the total fixed fee for fees of \$2,010 and over.
 - An investigation fee equal to the permit fee shall be charged whenever work is started prior to obtaining a permit.
- C. The cost of applying water for the purposes of soil compaction shall be considered incidental.

1.09 EARTHWORK

- A. All earthwork items shall be treated as a plan, (P), quantity. The contractor is responsible for subgrade preparation. The management of topsoil is provided as a separate bid item.
- B. All areas disturbed by excavation operations are to be restored with topsoil placement, to a depth of 4 inches, in preparation of turf establishment.
- C. Excess soils shall be stockpiled at locations as indicated in the plans, or as directed by the Owner. The Owner reserves the right to change the location of stockpiling operations within the landfill site at any time during construction, at no additional cost to the Owner.
- D. For purposes of estimating earthwork quantities, a summary table representing the volumetric values derived during project design is provided in **Attachment B**. This summary provides the basis of the common excavation plan (P) quantity.

1.10 TOPSOIL MANAGEMENT (P)

- C. Excavation, hauling, stockpiling and placement of topsoil to the proposed lines and grades as denoted in the Contract Documents to support project restoration activities.
- D. The removal of vegetation from areas identified for topsoil stripping will not be required.
- E. Materials shall be disposed of in the stockpile area(s) as shown in the plans or as directed by the ENGINEER. Topsoil shall not be used in fills or in subgrades but shall be handled and placed as directed.

- F. The CONTRACTOR shall inform and satisfy itself as to the character, quantity, and distribution of all materials to be excavated. No payment will be made for any excavated material which is used for purposes other than those designated.
- G. All spoil areas shall be leveled to a uniform line and section and shall present a neat appearance before project acceptance. The surface elevation of spoil pile areas shall not extend above the surface elevation of adjacent or contiguous usable areas unless approved by the ENGINEER. All spoil piles approved by the ENGINEER shall be vegetatively restored.

1.11 RE-COMPACTED SOIL BARRIER LAYER

- A. The base liner system will be constructed by scarifying and discing in-place materials to a depth of eight (8) inches. Re-compacted in-situ clay barrier soil materials absent of sand materials/observable sand seams will be utilized to construct the in-place liner. In areas where non-conforming materials (sand) coincide with the base liner grades the material will be removed via subgrade correction operations and replaced with two (2) feet of clay barrier soil materials. The soil barrier layer will be constructed to provide a maximum hydraulic conductivity of 1×10^{-7} centimeters per second

1.12 SUBGRADE CORRECTION

- A. Excavation below the subgrade elevation shown in the plans may be required where unsuitable soils or rock are encountered. The Contractor shall over-excavate the subgrade at these locations to a depth and extent as determined by the Engineer. The over-excavated soils shall be spoiled on site at a location to be determined by the Owner. The Contractor shall fill and compact the excavation to the subgrade elevation only after the Engineer has measured the dimensions of the over-excavation and the Contractor has confirmed concurrence of the measurements via a signature or other documentation.

1.13 GROUNDWATER UNDERDRAIN SYSTEM

REFERENCE STANDARDS

1. ASTM D 2122-98 (2004) Standard Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings
2. ASTM D 2657-07 Standard Practice for Heat Fusion Joining Polyolefin Pipe and Fittings
3. ASTM D 2774-08 Standard Practice for Underground Installation of Thermoplastic Pressure Piping
4. ASTM D 3035-08 Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter
5. ASTM D 3350-08 Standard Specification for Polyethylene Plastics Pipe and Fittings Materials
6. ASTM D 4101-08 Standard Specification for Propylene Plastic Injection and Extrusion Materials
7. ASTM F 714-08 Standard Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter
8. ASTM D 3261-03 Standard Specification for Butt Heat Fusion of Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing
9. ASTM F 2164-02 (2007) Standard Practice for Field Leak Testing of Polyethylene (PE) Pressure Piping Systems Using Hydrostatic Pressure

SUBMITTALS

- A. Manufacturers Pipe and Material Certifications that the piping materials meet the physical and hydraulic properties.

- B. Installer's recommended procedures for butt-fusion of HDPE pipe.
- C. Qualifications of the butt-fusion foreman and technician(s)

QUALITY ASSURANCE

- A. Pipe shall be checked for outside diameter, wall thickness, length, roundness, and surface finish on the inside and outside and end cut.
- D. High-density polyethylene (HDPE) resins for manufacturing of pipe shall be checked for density, melt flow rate, and contamination.
- E. If requested, the pipe or fittings manufacturer can be required to retest or verify certification data. All retesting shall be at the manufacturer's expense, and shall be performed as required in the specifications.
- F. Accurately record locations of pipe runs, connections, manholes, and inverts.
- G. Noticeable variations from true alignment and grade of installed pipe will be considered sufficient cause for rejection of work.
- H. Accurately record locations of pipe runs, connections, manholes, and inverts.

MATERIAL LABELING, DELIVERY, STORAGE AND HANDLING

- A. Unloading, on-site handling, and storage of the pipes are the responsibility of the contractor.
- B. All materials will be stored in the designated areas.
- C. Pipe, fittings and accessories, and pipe coatings shall not be damaged during delivery, handling, and storage.
- D. Keep pipe interiors completely free of dirt and foreign matter. Cover ends with caps/tape while transporting individual/fused sections of non-perforated pipe.
- E. Transport of fused perforated sections will not be allowed. Fusing operations for perforated sections must occur adjacent proposed placement location(s).

GROUNDWATER UNDERDRAIN (PERFORATED) PIPING

- A. High Density Polyethylene (HDPE) Pipe
 - 1. All piping materials shall be IPS size.
 - 2. Piping: 4-in. diameter, SDR-13.5, perforated.
 - 3. Perforations: 3/8-5/8in. diameter holes. See spacing provided per perforations identified in Special Provision 20.
 - 4. Perforations can be field fit as needed. Care must be taken to flush out all shavings from field fit or factory drilled holes or slots.
 - 5. Butt Fusion Welding: In accordance with pipe manufacturer's requirements.
 - 6. Fittings: SDR-11.
- B. Coarse Aggregate (washed stone)
 - 1. Section 02241: Aggregate and Soil Materials
- C. Non-woven Filter Geotextile
 - 1. Section 02245: Geotextiles

PIPING INSTALLATION

- A. Underdrain (Perforated) Pipe

1. Place pipe on top of the filter geotextile fabric layer. Orient pipe perforations down. Place underdrain drainage aggregate on both sides of pipe to provide uniform lateral support. Continue placing underdrain drainage aggregate above top of pipe. Wrap filter geotextile fabric over the underdrain drainage aggregate with edges extending beyond the underdrain drainage aggregate as shown in the Contract Drawings. Secure geotextile fabric layer with earthen and/or buffer layer materials to prevent fabric from being displaced by wind. Pipe joints shall be tight and true and welded in accordance with manufacturer's recommendations.

B. Record Survey

1. After placing pipe and underdrain drainage aggregate to provide uniform lateral support, leave top of pipe exposed in 2-ft sections of pipe at locations requested by the Engineer to accurately record as-built conditions.

1.14 TEMPORARY EROSION CONTROL

- A. Fiber rolls, silt fence, erosion control blanket and rip-rap shall be installed in locations as indicated on the plans or directed by the Engineer. Though not specified within the project plans fiber rolls, silt fence, erosion control blanket and rip-rap shall be installed in locations as directed by the Engineer to maintain compliance with NPDES permit conditions. The project is exempt from a Construction Stormwater NPDES Permit. **Notwithstanding permit coverage the project shall be constructed in a manner that is consistent with the Construction Stormwater NPDES Permitting process.**

1.15 TURF ESTABLISHMENT

- A. Seeding for turf establishment shall be performed in accordance with Mn/DOT 2575 and Mn/DOT 2014 Seeding Manual. Seeding shall be conducted in accordance with the seasonal planting guide detailed in the Mn/DOT 2014 Seeding Manual.
- B. Permanent Seed Mix: The seed mix for permanent restoration activities onsite shall consist of the following components, or approved equal, applied at a rate of 250 lb/acre:
1. Park Kentucky Bluegrass (25%)
 2. Minnifine Kentuck Bluegrass (25%)
 3. Creeping Red Fescue (25%)
 4. Quest Perennial Ryegrass (12%)
 5. Atlantis Perennial Ryegrass (12%)
 6. Other Ingredients (1%)
- C. Temporary Seed Mix: The seed mix for temporary restoration activities onsite shall conform to Mn/DOT Seed Mix 21-111 at a rate of 100lb/acre.
- D. Seeding (temporary & permanent) shall include the following operations:
1. Soil preparation.
 2. Application of commercial fertilizer (14-14-14)
 3. Sowing of Seed Mixture
 4. Application of straw mulch at a rate of 2 tons-per-acre.
 5. Disk anchoring of straw mulch
 6. Maintenance.
- E. **At the direction of the ENGINEER the CONTRACTOR shall conduct one (1) re-application (spot treatment) of seed and mulch in areas with poor vegetation establishment and/or**

excessive erosion has occurred. This work shall be consisted incidental to the project.

1.16 CONTROL OF WATER

- A. During the project, construction operations may encounter groundwater, leachate (water that flows over or through waste, or mixes with other leachate), and stormwater (surface water that does not flow over or through waste or leachate). The Contractor is responsible for removing groundwater, leachate, or stormwater from the construction area(s) as necessary to complete the project per the plans and specifications.
1. Prior to starting the project, the Contractor shall submit a complete temporary pumping plan for the entire project to the Engineer for review. The temporary pumping shall identify locations of pumps, outlets, and discharge treatment practices.
 2. Prior to beginning pumping operations at any time during construction, the Contractor shall request the Engineer to verify whether the liquid to be pumped is groundwater, leachate, or stormwater. Pumping shall commence only after the Engineer has authorized the discharge location.
 3. Pumped leachate shall be discharged into the existing site leachate collection system(s).
 4. Discharges from the water control systems shall be the responsibility of the Contractor. Rates of discharge will have to be controlled so no erosion takes place.
- B. The Contractor shall be paid for temporary pumping as a Lump Sum as notated in the Bid Form. All labor, equipment, and materials required to remove water or prevent water from entering the site shall be considered incidental to the Control of Water bid item.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Unless otherwise stated, all materials shall meet the requirements of DIVISION III, MATERIALS of the MNDOT Standard Specifications for Constructions, 2020 Edition.

2.2 APPROVED EQUAL

- A. Whenever, in any Contract Documents, an item of material or equipment is defined by describing a proprietary product or by using the name of a manufacturer or vendor, the term "or approved equal," if not inserted, shall be implied. The specified items of materials or equipment mentioned shall be understood as establishing a standard of type, function, efficiency, minimum basis of design and quality desired. Other manufacturer's products of comparable quality, design and efficiency and suitable for the service intended will be considered. No substitute materials or equipment shall be ordered without the written approval of the Engineer who shall be the judge of equality.
- B. The Engineer will receive submittals from prospective Bidders requesting "or equal" status for materials and equipment up to seven calendar days before the day set for the Bid Opening. The Bidder shall submit the request for "or equal" status with complete information that will demonstrate the item to be considered will fit within the provided space limitations. Detailed drawings and specifications will be required.
- C. At least four calendar days before the day set for the Bid Opening, the Engineer may issue an

Addendum to all plan-holder wherein acceptable "or equal" materials and will be listed. This Addendum will include only acceptable "or equal" materials and equipment and will not address unsatisfactory or non-approved items. The Bidder shall prepare and submit his/her bid using only originally specified materials and equipment or Engineer approved equals as stated in the Addendum.

- D By executing the Contract, the Contractor represents that he/she has understood the requirements of the Contract Documents.

PART 3 – EXECUTION (See Division 2)

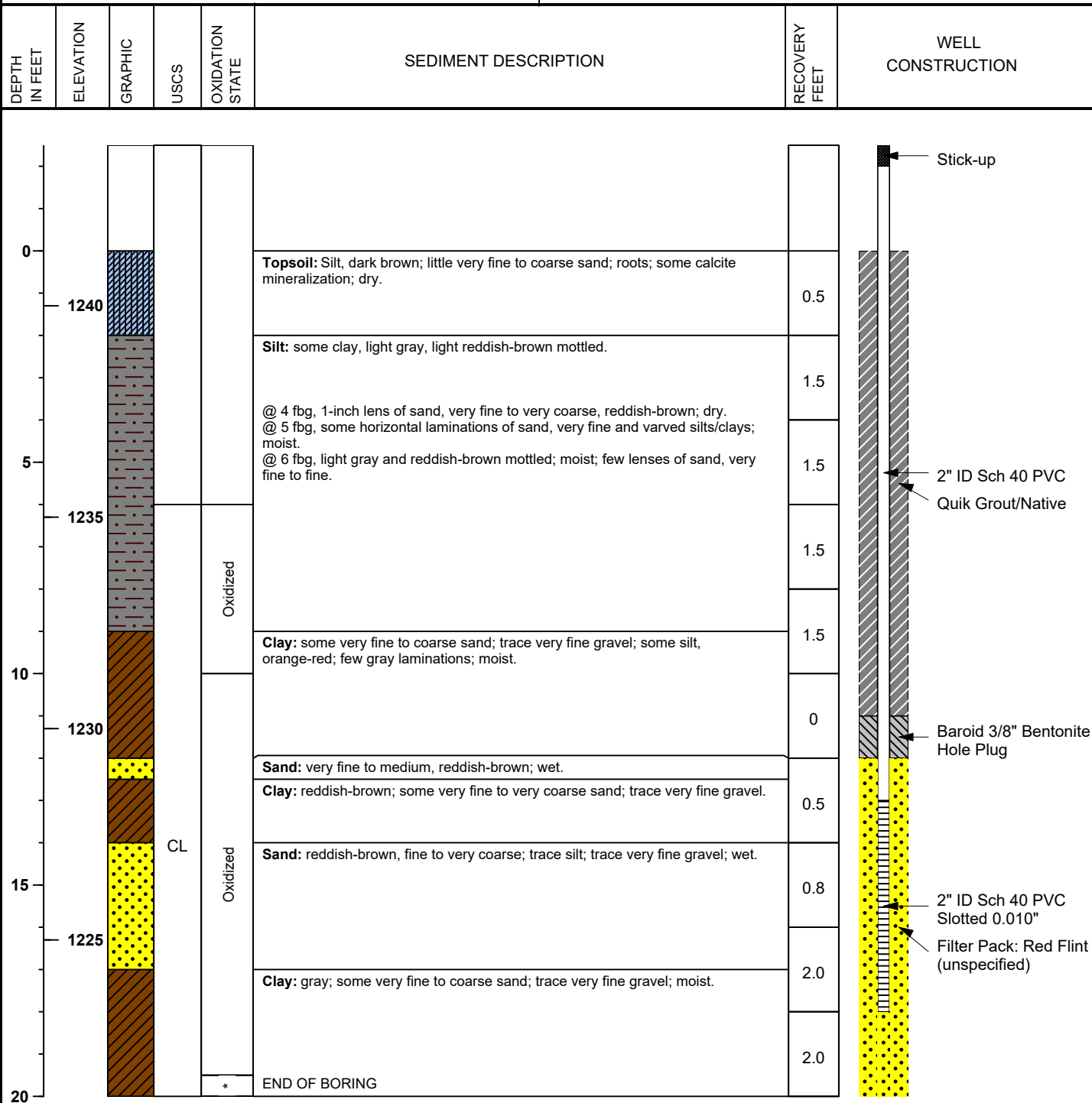
END OF SECTION 01120

Attachment

A

SITE: Fergus Falls Landfill
LOCATION: Fergus Falls, Minnesota
JOB NO.: R006018-0013
LOGGED BY: Brad Peschong
DATE STARTED: September 15, 2023
DATE COMPLETED: September 15, 2023

DRILLING CO.: Braun Intertec, Fargo, ND
DRILLING METHOD: 4¼" Hollow Stem Auger
SAMPLING METHOD: Split Barrel Sampler
TOTAL DEPTH OF HOLE: 20 feet below grade
SURFACE ELEVATION: 1241.3 feet
TOP OF CASING ELEVATION: feet (1929 USGS datum)



856836

County Otter Tail
Quad
Quad ID

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
Minnesota Statutes Chapter 1031

Entry Date 04/18/2024
Update Date 04/19/2024
Received Date 01/12/2024

Well Name CITY OF	Township 132	Range 43	Dir Section W 9	Subsection ADD
Elevation	Elev. Method			
Address Contact 112 WASHINGTON AV W FERGUS FALLS MN 56537 Well N/A MN				
Stratigraphy Information Geological Material From To (ft.) Color Hardness SANDY LOAM CLAY 0 20 BROWN				
Well Depth 20 ft. Depth Completed 20 ft. Date Well Completed 09/15/2023				
Drill Method Auger (non-specified) Drill Fluid				
Use piezometer Status Active				
Well Hydrofractured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> From To				
Casing Type Single casing Joint Threaded				
Drive Shoe? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Above/Below				
Casing Diameter 2 in. Weight 15 lbs./ft. Hole Diameter 8 in. To 20 ft.				
Open Hole From ft. To ft.				
Screen? <input checked="" type="checkbox"/> Type plastic Make Diameter Slot/Gauze Length Set 2 in. 10 5 ft. 15 ft. 20 ft.				
Static Water Level				
Pumping Level (below land surface) ft. hrs. Pumping at g.p.m.				
Wellhead Completion Pitless adapter manufacturer Model <input checked="" type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade <input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)				
Grouting Information Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified Material Amount From To high solids bentonite 0.5 Sacks 4 ft. 15 ft. concrete 3.5 Sacks ft. 4 ft.				
Nearest Known Source of Contamination feet Direction Type Well disinfected upon completion? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Pump <input checked="" type="checkbox"/> Not Installed Date Installed Manufacturer's name Model Number HP Volt Length of drop pipe ft Capacity g.p. Typ				
Abandoned Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Variance Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Miscellaneous First Bedrock Aquifer Last Strat Depth to Bedrock ft Located by Locate Method System UTM - NAD83, Zone 15, Meters X Y Unique Number Verification Input Date				
Angled Drill Hole				
Well Contractor Braun Intertec Drilling, LLC 3886 GORMAN, C. Licensee Business Lic. or Reg. No. Name of Driller				

WELL OR BORING LOCATION

County Name

Ottawa Trail

Township Name
Fergus FallsTownship No.
132Range No.
43Section No.
9Fraction (sm. → lg.)
SE/SE/NEMINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING CONSTRUCTION RECORD

Minnesota Statutes, chapter 103I

MINNESOTA UNIQUE WELL
AND BORING NO.

856836

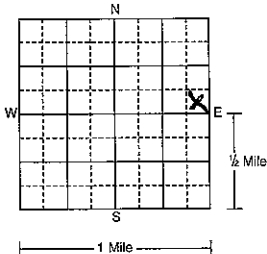
GPS LOCATION — decimal degrees (to four decimal places).

Latitude _____ Longitude _____

House Number, Street Name, City, and ZIP Code of Well Location

P.O. 7100 45000 24000

Show exact location of well/boring in section grid with "X."

Sketch map of well/boring location.
Showing property lines,
roads, buildings, and direction.See
attached
Sketch

PROPERTY OWNER'S NAME/COMPANY NAME

City of Fergus Falls

Property owner's mailing address if different than well location address indicated above.

112 W. Washington Ave
Fergus Falls, MN 56537

WELL OWNER'S NAME/COMPANY NAME

Same

Well/boring owner's mailing address if different than property owner's address indicated above.

WELL/BORING DEPTH (completed)

20'

DATE WORK COMPLETED

9/15/23

DRILLING METHOD

☐ Cable Tool
☒ Auger
☐ Other

☐ Driven
☐ Rotary

☐ Dual Rotary
☐ Rotasonic

DRILLING FLUID

NONE

WELL HYDROFRACTURED? ☐ Yes ☒ No

From _____ ft. To _____ ft.

USE

☐ Domestic
☐ Noncommunity PWS
☐ Community PWS
☐ Elevator

☐ Monitoring
☐ Irrigation
☐ Dewatering

☐ Heating/Cooling
☐ Industry/Commercial
☐ Remedial

☒ piezometer

CASING MATERIAL

☐ Steel
☒ Plastic
Drive Shoe? ☐ Yes ☒ No
☒ Threaded ☐ Welded

HOLE DIAM.

CASING
Diameter

Weight

Specifications

2 in.

To 15 ft.

lbs./ft.

Sch 40 PVC

8 in.

To 20 ft.

in.

To _____ ft.

lbs./ft.

in.

To _____ ft.

lbs./ft.

SCREEN

Make

Type PVC Sch 40

OPEN HOLE

From _____ ft. To _____ ft.

Slot/Gauge

.010

Diam.

2"

Set between

15 ft.

and 20 ft.

Fittings

flush thread

STATIC WATER LEVEL

dry

ft.

☐ Below ☐ Above land surface

Date measured

not observed

Dry hole

☒ Yes ☐ No

PUMPING LEVEL (below land surface)

N/A

ft. after

hrs. pumping

g.p.m.

WELLHEAD COMPLETION

☐ Pitless/adaptor manufacturer

Model

☒ Casing protection

6" locking steel

☐ 12 in. above grade☐ At-grade☐ Well House☐ Hand Pump

GROUT INFORMATION (specify bentonite, cement-sand, neat cement, concrete, cuttings, or other)

Material

Concrete

From 0

To 4

ft.

3/2

☐ Yds.☒ Bags

Material

Bitch Grout

From 4

To 15

ft.

1/2

☐ Yds.☒ Bags

Material

From _____

To _____

ft.

☐ Yds.☐ Bags

Driven casing seal

From _____

To _____

Bags

One bag = 94 lbs. cement
or 50 lbs. bentonite

NEAREST KNOWN SOURCE OF CONTAMINATION

Well is

unknown

feet

direction from

type

Well disinfected upon completion?

☐ Yes ☒ No

PUMP

☒ Not installed

Date installed _____

Manufacturer's name

Model Number

HP

Volts

Length of drop pipe

ft.

Capacity

g.p.m.

Type: ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐ _____

ABANDONED WELLS

Does property have any not in use and not sealed well(s)?

☐ Yes ☒ No

VARIANCE

Was a variance granted from the MDH for this well?

☐ Yes ☒ No

TN#

WELL CONTRACTOR CERTIFICATION

This well was drilled under my supervision and in accordance with Minnesota Rules, chapter 4725.

The information contained in this report is true to the best of my knowledge.

Braum Intertec Drilling LLC 3886

Licensee Business Name

Lic. or Reg. No.

Greg Scallan

870

12-22-23

Certified Representative Signature

Certified Rep. No.

Date

C. Gorman

Name of Driller

GEOLOGICAL MATERIALS

COLOR

HARDNESS OF
MATERIAL

FROM

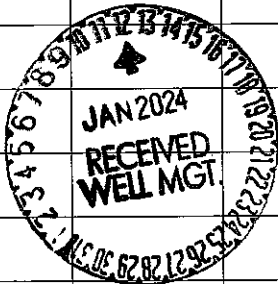
TO

Sandy loam Clay BRN

moist

0

20



Use a second sheet, if needed.

REMARKS, ELEVATION, SOURCE OF DATA, etc.

B2308923

mathiason

MINN DEPT. OF HEALTH COPY

856836

Stoak St

Fergus Falls Landfill

PF-7 - Includes Well Installation

PF-8

WELL OR BORING LOCATION

County Name

Township Name

Township No.

Range No.

Section No.

Fraction (sm. → lg.)

WELL/BORING DEPTH (completed)

DATE WORK COMPLETED

MINNESOTA UNIQUE WELL AND BORING NO.

856836

WELL AND BORING CONSTRUCTION RECORD

Minnesota Statutes, chapter 1031

GPS LOCATION — decimal degrees (to four decimal places).

Latitude

Longitude

House Number, Street Name, City, and ZIP Code of Well Location

P.O. 71804500024030

Show exact location of well/boring in section grid with "X."

Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.

N

W

E

S

1 Mile

1/2 Mile

attached

Sketch

PROPERTY OWNER'S NAME/COMPANY NAME

City of Fergus Falls

Property owner's mailing address if different than well location address indicated above.

112 W. Washington Ave

Fergus Falls, MN 56537

WELL OWNER'S NAME/COMPANY NAME

Same

Well/boring owner's mailing address if different than property owner's address indicated above.

DRILLING METHOD

☐ Cable Tool

☒ Auger

☐ Other

☐ Driven

☐ Rotary

☐ Dual Rotary

☐ Rotasonic

DRILLING FLUID

NONE

WELL HYDROFRACTURED? ☐ Yes ☒ No

From

ft. To

ft.

USE

☐ Domestic☐ Noncommunity PWS☐ Community PWS☐ Elevator

☐ Monitoring☐ Irrigation☐ Dewatering

☐ Heating/Cooling☐ Industry/Commercial☐ Remedial

☒ piezometer

CASING MATERIAL

☐ Steel☒ Plastic

Drive Shoe? ☐ Yes ☒ No

☒ Threaded☐ Welded

HOLE DIAM.

in. To

ft.

in. To

ft.

in. To

ft.

in. To

ft.

CASING DIAMETER

2

in. To

15

ft.

Weight

lbs./ft.

Specifications

Sch 40 PVC

8

in. To

20

ft.

SCREEN

Make

Type

PVC Sch 40

Slot/Gauze

010

Set between

15

ft. and

20

ft.

OPEN HOLE

From

ft. To

ft.

Diam.

2"

Length

3'

FITTINGS

Flush thread

STATIC WATER LEVEL

dry

ft.

☐ Below ☐ Above land surface

Date measured

not observed

Dry hole ☒ Yes ☐ No

PUMPING LEVEL (below land surface)

N/A

ft. after

hrs. pumping

g.p.m.

WELLHEAD COMPLETION

☐ Pileless/adaptor manufacturer

☒ Casing protection

☐ At-grade

☐ Well House

☐ Hand Pump

6" locking steel

12 in. above grade

GROUT INFORMATION (specify bentonite, cement-sand, neat-cement, concrete, cuttings, or other)

Material

Concrete

From

0

To

4

ft.

3 1/2

Yds.

☒ Bags

Material

Ditch Grout

From

4

To

15

ft.

1 1/2

Yds.

☒ Bags

Material

From

To

ft.

Yds.

Bags

Driven casing seal

From

To

Bags

One bag = 94 lbs. cement or 60 lbs. bentonite

NEAREST KNOWN SOURCE OF CONTAMINATION

Well is

unknown

direction from

type

Well disinfected upon completion? ☐ Yes ☒ No

PUMP

☒ Not installed

Date installed

Manufacturer's name

Model Number

HP

Volts

Length of drop pipe

ft.

Capacity

g.p.m.

Type: ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐

ABANDONED WELLS

Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

VARIANCE

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

TN#

WELL CONTRACTOR CERTIFICATION

This well was drilled under my supervision and in accordance with Minnesota Rules, chapter 4725. The information contained in this report is true to the best of my knowledge.

BRAM TINTOR DRILLING LLC 3886

Lic. or Reg. No.

GREG SCALLON

Certified Representative Signature

870 12-22-08

Certified Rep. No.

Date

C. COLMAN

Name of Driller

REMARKS, ELEVATION, SOURCE OF DATA, etc.

07308923 mathiason

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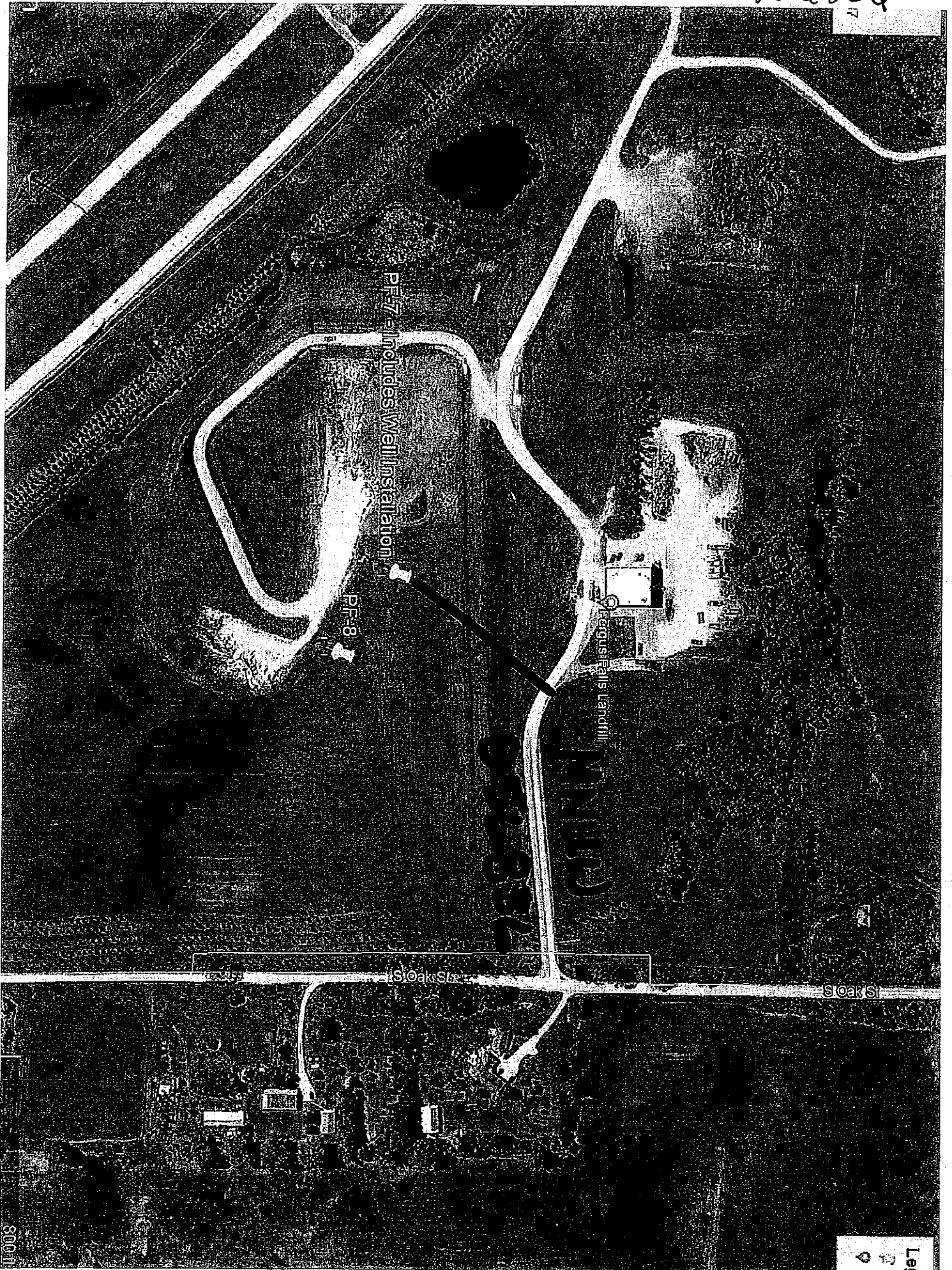
RECEIVED

JAN 03 2024

WELL MGT.

856836

17



PF-7 - Includes Well Installation

PF-8

Leagus Falls Landfill

St. Oak St.

St. Oak St.

800 ft

Leg

Attachment

B

Fergus Falls Landfill 3B Expansion

Basis of Quantity Estimate

Assumptions

Value	Unit	Description
9,604	SY	Liner Area (3-dimensional per CAD). Area represents bounds of Re-compacted Clay Barrier = (1)
0.667	FT	Thickness of Re-compacted Clay Barrier Layer = (2)
7,947	SY	Cell Floor Liner Area (3-dimensional per CAD) = (3)
1.333	FT	Thickness of Subgrade Correction = (4)
500	CY	Assumed Subgrade Correction of Liner on North Slope (5)
8,887	SY	Sand Area (3-dimensional per CAD). Area represents bounds Sand Drainage Layers = (6)
13.46	SF	Cross sectional area corresponding to washed sand placement for leachate collection trench = (7)
3,354.44	SF	3D area corresponding to sand drainage layer to be omitted for placement of imported sand for leachate collection trench = (8)
299	LF	Length of leachate collection trench = (9)
1.0	FT	Thickness of Sand Drainage Layer = (10)
825	LF	Length of underdrain piping for trench for Aggregate and geotextile = (11)
8.0	IN	Assumed topsoil removal depth for area within Cell 3B limits = (12)
4.0	IN	Assumed topsoil removal depth for North Perimeter Road = (13)
4.0	IN	Topsoil placement depth = (14)
12.0	IN	Class 5 placement depth = (15)
12.0	IN	Assumed remove and salvage aggregate surfacing depth = (16)
1.3	unitless	Fill factor = (17)
1.5	unitless	Ton/CY conversion factor for aggregates = (18)
1.8	unitless	Ton/CY conversion factor for Class 13 aggregate surfacing and sand drainage layer = (19)

CAD Areas

Value	Unit	Description
17,527	SY	Total Area of topsoil stripping within cell 3B limits and exterior grading (Does not include north perimeter road) = (20)
598	SY	Total Area of topsoil stripping North Perimeter Road = (21)
7,095	SY	Total area of topsoil placement in grading areas (3-dimensonal per CAD). Includes all areas receiving topsoil, excluding stockpiles, laydown yard, and access to North Stockpiles = (22)
1,703	SY	Total area for removal and salvaging of aggregate surfacing = (23)
885	SY	Class 5 aggregate surfacing Access Road (3-dimnensional per CAD) = (24)
1,273	SY	Class 5 aggregate surfacing Turnaround Pad (3-dimnensional per CAD) = (25)
598	SY	Class 5 aggregate surfacing North Perimeter Road (3-dimnensional per CAD) = (26)
404	SY	Class 5 aggregate surfacing North Access Pad (3-dimnensional per CAD) = (27)

Calculated Volumes

Value	Unit	Description
2,135	CY	Over excavation to establish Re-compacted Clay Barrier Layer subgrade =[(2) / 3] x (1) = (28)
4,032	CY	Estimated over excavation to complete subgrade correction of Cell 3B (At discretion of conditions/Engineer authorization) (29)
2,963	CY	Volume of sand drainage layer materials (Sand placement TOTAL - UNADJUSTED) = [(10) / 3] x (6) = (30)
125	CY	Volume of sand drainage layer to be deducted for leachate collection trenches = (8) x (10) = (31)
150	CY	Volume of imported sand for leachate collection trench graded filter = (7) x (9) = (32)
2,988	CY	Volume of sand drainage layer (TOTAL - ADJUSTED) = (29) + (31) - (30) = (33)
789	CY	Volume of topsoil to be placed (Excludes Stockpiles) = [(14) / 36] x (22) = (34)
568	CY	Volume of remove and salvage aggregate surfacing = [(16) / 36] x (23) = (35)
295	CY	Volume Class 5 aggregate surfacing Access Road = [(15) / 36] x (24) = (36)
425	CY	Volume Class 5 aggregate surfacing Turnaround Pad = [(15) / 36] x (25) = (37)
200	CY	Volume Class 5 aggregate surfacing North Perimeter Road = [(15) / 36] x (26) = (38)
135	CY	Volume Class 5 aggregate surfacing North Access Pad = [(15) / 36] x (27) = (39)

1,055

CY

Total Volume Class 5 aggregate surfacing = (36) + (37) + (38) + (39) = (40)

3,962

CY

Total volume of topsoil management (includes all topsoil stripping areas) = { [(12) / 36] x (20) } + { [(13) / 36] x (21) } = (41)

Cut / Excavation (CY)		Fills (CY - in place)		
Compacted		Compacted	Fill Factor	Loose (adjusted w/fill factor)
12,891	Excavation per CAD to establish Finished Ground and top of re-compacted soil barrier layer (without berms)	2,650	1.3	3,446
-3,962	Amount of topsoil strip removed from common excavation (41)			
2,135	Over excavation to establish re-compacted soil barrier layer subgrade (27)	2,135	1.3	2,776
508	Additional excvation for earthwork balances			
		15	1.3	20
		2,273	1.3	2,956
		1,908	1.3	2,481
		90	1.3	117
789	Hold down for topsoil placement (34)			
12,361	Subtotal - Cuts			
-568	Less remove and salvage aggregate surfacing (paid as separate quantity)			
11,793	Common Excavation Pay Quantity (CV) (P)	9,071	1.3	11,793
				3,962
				789
				3,173

SECTION 01127

APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Procedures for preparation and submittal of Applications for Payment.

1.2 RELATED REQUIREMENTS

- A. Conditions of Contract govern work of this section.
- B. Section 01300 - Submittals: Contract Unit Price Schedule.
- C. Section 01700 - Contract Closeout: Final Payment.

1.3 FORMAT

- A. For each item, provide a column for listing: Item Number; Description of Work; Contract Unit Price; Previous Applications; Work in Place and Stored Materials under this Application; Authorized Change Orders; Total Completed and Stored to Date of Application; Percentage of Completion; Balance to Finish; and Retainage.
- B. Attach invoices for all Materials stored on site.

1.4 PREPARATION OF APPLICATIONS

- A. Type required information or use media-driven printout.
- B. Execute certification by signature of authorized officer.
- C. Use data from Contract Unit Price Schedule. Provide dollar value in each column for each line item for portion of Work performed and for stored products.
- D. List each authorized Change Order as an extension on continuation sheet, listing Change Order number and dollar amount as for an original item of Work.
- E. Prepare Application for Final Payment as specified in Section 01700.

1.5 SUBMITTAL PROCEDURES

- A. Submit three (3) copies of each Application for Payment at times stipulated in Agreement.
- B. Submit under transmittal letter specified in Section 01300.
- C. Provide bill of sale, invoice, or other documentation warranting that the owner has received the materials and equipment free and clear of all liens, charges, security interests and encumbrances.

1.6 SUBSTANTIATING DATA

- A. When Engineer requires substantiating information, submit data justifying line item amounts in

question.

- B. Provide one copy of data with cover letter for each copy of submittal. Show Application number and date and line item by number and description.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

****END OF SECTION 01127****

SECTION 01130 CONSTRUCTION SURVEYING

PART 1 – GENERAL

1.1 SUMMARY

- A. CONTRACTOR will be required to complete all construction staking.
- B. OWNER will complete surveying required to provide as-built documentation, definition of as-built quantities, and CQA/CQC verification surveying as defined in the Project Manual.
- C. CONTRACTOR will be responsible for all restaking of damaged or destroyed staking, as required to construct all components of the Phase 3B cell, and other associated project Work. CONTRACTOR may verify any survey data staked or obtained for documentation purposes, including existing conditions survey and survey data gathered for definition of as-built quantities for payment. CONTRACTOR will coordinate with OWNER to allow for activities of the OWNER's surveyor, as defined in this section and in the CQA Manual.

1.2 MEASUREMENT AND PAYMENT

- A. See **SECTION 01150**: Measurement and Payment.

1.3 PRIMARY CONTROL MONUMENTS

- A. Benchmarks, monuments, references and control provided by the OWNER to establish primary vertical control for Work are as indicated in Drawings.
- B. Protect and maintain primary control monuments shown on Drawings through duration of project.
- C. If marked corners and monuments are damaged by CONTRACTOR or CONTRACTOR's subcontractor or supplier, CONTRACTOR shall repair or replace damaged feature and document repair under supervision of Registered Land Surveyor (RLS) licensed in the State of Minnesota, employed by or subcontracted to CONTRACTOR.

1.4 CONTRACTOR RESPONSIBILITIES

- A. Coordinate with OWNER as required to schedule and coordinate documentation activities to be completed by OWNER.
- B. Repair or replace all control damaged by CONTRACTOR, CONTRACTOR's subcontractors or suppliers.
- C. Employ RLS licensed in the State of Minnesota to provide line and grade staking, as necessary to complete the project.

1.5 OWNER RESPONSIBILITIES

- A. OWNER shall be available onsite for all surveying activities defined as "OWNER's responsibility" during construction within two working days notice by the CONTRACTOR.
- B. OWNER shall complete the following, as defined in this section, and the Project Manual:
 - 1. Establish control benchmarks, as shown in the Drawings.
 - 2. Document construction quantities.
 - 3. Document as-built conditions
 - 4. Quantities will be documented based upon OWNER's survey of surfaces.
 - 5. OWNER reserves the right to check accuracy of constructed line and grade by visual inspection

and field survey.

6. OWNER will establish a point grid system to be utilized for thickness documentation survey activities.

1.6 SUBMITTALS

- A. Should the CONTRACTOR conduct surveying verification activities of his/her own, such documentation data will be provided to the OWNER daily or as requested. Data to be submitted in accordance with **SECTION 01300**.
- B. Certificate of licensure for CONTRACTOR's RLS, when requested by OWNER.
- C. CONTRACTOR shall provide OWNER cut-sheets describing staked features for each site visit. Cut-sheets shall be made available at the end of each staking event (day).

PART 2 – PRODUCTS

2.1 SURVEYOR

- A. CONTRACTOR'S survey activities shall be performed under supervision of a RLS licensed in the State of Minnesota.

PART 3 – EXECUTION

3.1 PRIMARY LINE AND GRADE

- A. Primary line and grade and intermediate staking, as necessary, will be staked by the CONTRACTOR.
- B. Stakes for excavation and embankment fill will be set by the CONTRACTOR to identify, at a minimum, the following features:
 1. Proposed limits of waste
 2. Subgrade & top of compacted clay liner
 3. Slope grading (top & toe of slopes)
 4. Stormwater ponds, ditches
 5. Phase delineation berm(s)
 6. Landfill Access Roads
- C. Stakes for other construction will be set by the CONTRACTOR, including, but not limited to the following features:
 1. Leachate collection trench & sump(s)
 2. Liner sumps and collection trenches
- D. Stakes for roadway construction will be set by the CONTRACTOR:
 1. At subgrade elevation offset from road centerline
 2. At top of roadway surface course elevation offset from road centerline
- E. The CONTRACTOR shall stake piping, trenches and electrical conduit as follows:
 1. Piping shall be staked at 50-foot intervals. Locations of all pipe fittings, changes in slope, pipe bends shall be staked. A 20-foot offset shall be used for staking pipe, unless another offset is agreed to by the OWNER prior to placement of the stakes.
 2. The pipe stakes shall be labeled with the stake elevation, cut/fill to pipe invert elevation, pipe

survey section designation and station.

3. The OWNER's surveyor shall conduct the documentation survey to verify minimum slopes and cover requirements are met.

3.2 CQA DOCUMENTATION

- A. CONTRACTOR's surveyor will establish and utilize a 100 ft x 100 ft grid as shown on the plans over the project site.
- B. CONTRACTOR shall complete documentation of thicknesses and allowable grades of the at all intersections of 100 ft x 100 ft grid, by survey, localized excavation or probing using probing procedures approved by the OWNER and under observation of the OWNER:

FOR LANDFILL BASE GRADES:

1. Subgrade (including subgrade correction areas)
 2. Soil Barrier / Compacted clay layer
 3. Sand drainage layer
- C. OWNER will document the following features to verify that grades are within specified tolerances and meet intent of design.
 1. Subgrade elevations prior to placement of soil barrier/clay layer
 2. Top of clay layer prior to placement of sand drainage layer
 - D. OWNER will document the following surfaces to measure quantities for payment.
 1. Surface of areas from which soil is excavated (mass excavation)
 2. As-built grades at completion

3.3 DOCUMENTATION OF QUANTITIES

- A. OWNER will determine and complete surveys and calculations necessary to define final pay quantities.
- B. CONTRACTOR will coordinate construction activities as required to facilitate documentation of quantities. This requirement implies that work will remain uncovered and available to the OWNER's surveyor for no less than three working days, unless otherwise approved by OWNER.
- C. CONTRACTOR will coordinate with OWNER to provide access to all constructed features as requested by OWNER for documentation purposes.
- D. Quantities to be documented by survey include, but may not be limited to, the following:
 1. Mass excavation and grading – volume excavated.
 2. Final cover area – area within waste limits
- E. All submitted data will be certified by the OWNER.
- F. Progress payments will be in accordance with partial documentation verified by visual estimates of percent complete based on plan quantity or verified by quantity calculated based on excavated surfaces as surveyed or as-built limits of lined or covered areas as surveyed.

3.4 AS-BUILT SURVEY

- A. OWNER's surveyor will gather as-built data on the following features:
 1. Finished grades within cell – as part of thickness documentation
 2. Surface water control including berms, ditches, catch basins, manholes, culverts and pond

outlets.

3. Leachate collection and leachate conveyance structures and piping
4. Leachate storage, including tanks and appurtenances.
5. Roadways
6. Utilities

****END OF SECTION****

SECTION 01150 MEASUREMENT AND PAYMENT

PART 1 -- GENERAL REQUIREMENTS

1.01 GENERAL

- A. This Section of the Specifications describes the measurement and payment for the Work to be done under the items listed on the Bid Form.
- B. Each unit or lump sum price stated on the Bid Form shall constitute full compensation as herein specified for each item of work completed in accordance with the requirements of the Contract Documents including Drawings and Specifications, including all clean up and restoration.
- C. All costs in connection with the Work, including furnishing all materials, machinery, supplies and appurtenances; providing all construction equipment and tools; and performing all necessary labor, coordination, supervision, and management to fully complete the Work shall be included in the unit prices quoted on the Bid Form. All Work not specifically set forth as a separate bid item herein shall be considered a subsidiary obligation of the CONTRACTOR and all costs in connection therewith shall be included in the amounts and prices submitted on the Bid Form. The price on the Bid Form shall include all Work necessary to complete the Work.
- D. The Contract Price identified in the Agreement includes all Work associated with the project, whether such Work is identified in this section or not. This section identifies each item upon which progress payments will be based.
- E. Measurement:
 - 1. When measurement is based on plan quantity (P), CONTRACTOR must submit any claim of inaccuracy in Contract Drawings relevant to determining plan quantity to ENGINEER before any disturbance is commenced. Plan quantity will not be adjusted for expansion due to water infiltration, freezing, or snow cover.
 - 2. When as-built quantities are designated as the basis for payment, quantities will be based upon final documentation survey and field measurements made by ENGINEER or observed by ENGINEER.

1.02 ESTIMATED QUANTITIES

- A. All quantities for Unit Price items in the Bid Form are to be used only as a basis for determining the bid Contract Price. The actual amount of Work completed or materials to be furnished under the Unit Price items may differ from the estimated quantities. The

basis of payment for work or materials furnished or placed will be the actual amount of Work completed unless designated as a Plan Quantity.

- B. CONTRACTOR's sole remedy for a change in unit price due to variation between Bid Form and actual quantities is a request for a contract price adjustment as provided for by the General Conditions. If quantities vary by no more than plus/minus 25%, there shall be no adjustment in unit price, but outside of this range an adjustment may be considered in accordance with the procedures and criteria of the General Conditions.

1.03 INTENT OF BID FORM ORGANIZATION

- A. Payment for all Work shall be in accordance with the terms and conditions set forth in the Contract Documents and the CONTRACTOR's Bid prices set forth in CONTRACTOR's conformed Bid Form. The Bid items set forth in the Bid Form subdivide the Project for purposes of measurement and payment only, and are intended to represent the entire and complete Project as set forth in the Contract Documents. The Bid prices set forth in the Bid Form shall constitute full compensation to CONTRACTOR for providing all material, equipment, labor, and supplies to complete the Work in complete accordance with the Contract Documents.
- B. Some of the Bid items are based on lump sum unit prices. In accordance with paragraphs of this section 01150, following partial progress payment for those items may be made in accordance with monthly estimates of percent completed for each item included in the breakdown in CONTRACTOR's approved Schedule of Values as stated in Subpart 1.3 of Section 01300 of these Specifications. For all other Bid items progress payments shall be based on the actual quantities of each item of Work completed in accordance with the Contract Documents. The procedures for submitting and processing progress payments are set forth elsewhere in the Contract Documents.
- C. Notwithstanding any term of the General conditions to the contrary, in the event the Work is not completed but CONTRACTOR is entitled to partial payment for a Bid Item for which payment is Lump Sum, payment will be a proportion of the bid Price for the Bid Item based on the Engineer's determination of percentage completion of elements constituting the Bid Item.
- D. Measurement for Bid Items for which Units are based on acres is plan projection.

1.04 PAYMENT FOR MATERIALS ON HAND

- A. The Contractor may request payment for materials that are on-site and slated for installation. Quantities of materials on site for which the Contractor requests payment shall be verified through a haul slip or on-site verification by the Engineer. Payment may not be requested for quantities greater than those indicated in the Contract Documents.

PART 2 -- DESCRIPTION OF BID ITEMS

2.01 MOBILIZATION (BID LINE ITEM 1)

- A. Measurement: Work specified in this section will be lump sum (LUMP SUM).
- B. Payment: Payment for this item includes, but is not limited to:
- Movement of equipment onto the site which would include multiple access locations as identified in the Project Drawings.
 - Locate and protect existing utilities and other site features.
 - General site preparation.
 - Communications with OWNER and ENGINEER
 - Preconstruction Conference
 - Weekly Progress Meetings
 - Submittals
 - Health & Safety costs
 - Insurance costs
 - All bonding costs
 - Obtaining NPDES Construction Permit, including all associated fees
 - Submittal of weekly SWPPP inspection logs to the ENGINEER throughout the length of the active construction period during non-frozen conditions per NPDES permit requirements.
 - Termination of NPDES Construction Permit as directed by the ENGINEER.
 - Disposal of waste materials (garbage) from construction operations as directed by the Owner.
 - Completion of project punchlist items, following substantial completion
 - Demobilization
 - Site cleanup and restoration of project area throughout duration of project and upon project completion.
- C. Payment shall not exceed one-half (1/2) of the total cost for the first pay request and shall not exceed ninety percent (90%) prior to final payment.

2.02 WATER FOR CONSTRUCTION (BID LINE ITEM 2)

- A. Measurement: Work specified in this section will be measured per 1000 gallon (1000 GAL).
- B. Payment: Payment for this includes, but is not limited to:
 - Provide suitable equipment to pump and apply water from on-site stormwater basins for purposes of dust control.
- C. This work is included in, but not limited to, the following sections:
 - Section 02240: Control of Water

2.03 CONTROL OF WATER (BID LINE ITEM 3)

- A. Measurement: Work specified in this section will be lump sum (LUMP SUM).
- B. Payment: Payment for this item includes but is not limited to the following Work:
 - CONTRACTOR will design, furnish, install, test, operate, monitor, and maintain pumping system(s) of sufficient scope, size, and capacity to control, remove, and dispose of ground and/or surface water (stormwater) or leachate and permit excavation and construction to proceed on dry, stable subgrades.
- C. This work is included in, but not limited to, the following sections:
 - Section 02240: Control of Water

2.04 TRAFFIC CONTROL (BID LINE ITEM 4)

- A. Measurement: Work specified in this section will be lump sum (LUMP SUM).
- B. Payment: Payment for this includes, but is not limited to:
 - Submittal of traffic control plan.
 - Maintenance of traffic flow coming into the existing Cell 3A area.
 - Placement of signs and barricades in the areas of construction.
 - Accommodation of free and safe vehicle passage.
- C. This work is included in, but not limited to, the following sections:
 - Section 01120: Special Provisions

2.05 DEMOLITION AND REMOVALS (BID LINE ITEMS 5-9)

- A. Measurement: Work specified in this section will be linear feet (LF), each (EA), lump sum (LS) and cubic yard (CY) per bid tab line item.
- B. Payment: Payment for this includes, but is not limited to:
- Abandonment, including all related permitting and documentation, of well PF-7 by a water well contractor licensed in the State of Minnesota.
 - Protection of items as noted in the Contract Documents.
 - Piping salvage includes stockpiling at onsite location per Owners discretion.
 - Rip-rap salvage includes stockpiling at onsite location and reusing as needed per owners discretion.
 - Gravel salvage includes stockpiling at onsite location per Owners discretion and placement of reused gravel. Salvaged gravel may be used in place of gravel surfacing with Owner approval. See section **2.14 Gravel Surfacing** below.
- C. This work is included in, but not limited to, the following sections:
- Section 02100: Site Preparation and Demolition

2.06 TEST PIT EXCAVATION (BID LINE ITEM 10)

- A. Measurement: Work specified in this section will be measured on an hourly basis (HOUR).
- B. Payment: Payment for this item includes but is not limited to the following Work:
- Providing suitable equipment and operator to excavate, backfill and compact test pits across the site, as necessary to delineate existing underground conditions and various other limits, as directed by ENGINEER.
- C. This work is included in, but not limited to, the following sections:
- Section 02025: Test-Pit Excavation
 - Section 02210: On-Site Spoils Disposal

2.07 COMMON EXCAVATION (CV) (P) (BID LINE ITEM 11)

- A. Measurement: Work specified in this section will be a plan (P) quantity, in cubic yards (CY).
- B. Payment: Payment will be made for the in-place compacted volume (CV) of excavated soils. Payment for this includes, but is not limited to, the following Work:
- Excavating, stockpiling, hauling, placing and compacting soil to the lines and grades indicated in the Contract Documents.
 - Miscellaneous site grading across site as indicated in the Contract Documents.
 - In-place disking and compaction of soil materials within landfill boundary
 - Placement of marking ribbon to delineate landfill boundary beneath phase delineation berm.
 - Water for compactive effort(s)
 - Construction Quality Control (CQC) testing costs
 - Construction Quality Assurance (CQA) testing will be conducted by the OWNER.
 - Maintenance of existing site roads to facilitate vehicular (public) traffic to ongoing landfill operations.
- C. This work is included in, but not limited to, the following sections:
- Section 02105: Earthwork

2.08 TOPSOIL MANAGEMENT (CV) (P) (BID LINE ITEM 12)

- A. Measurement: Work specified in this section will be measured in cubic yards (CY) based upon the engineer's surveyed volume.
- B. Payment: Payment will be made for the surveyed (CV) of excavated soil. Payment for this includes, but is not limited to, the following Work:
- Excavating, stockpiling, hauling and placing the soils to the lines and grades indicated in the Contract Documents.
 - Stockpiling at onsite location per Owners discretion.
- C. This work is included in, but not limited to, the following sections:
- Section 01120: 1.10 Topsoil Management

2.09 SUBGRADE CORRECTION / RE-COMPACTED SOIL BARRIER LAYER (CV) (BID LINE ITEMS 13-14)

- A. Measurement: Work specified in this section will be measured in cubic yards (CY) based upon the engineer's surveyed volume.
- B. Payment: Payment will be made for the in-place compacted volume (CV) of excavated soils. Payment for this includes, but is not limited to, the following Work:
- Excavating, stockpiling and hauling unsuitable subgrade material to a depth no greater than 2 ft below cell subgrade at the direction of the ENGINEER.
 - Placement and compaction of suitable soil for use as subgrade replacement from onsite sources.
 - Construction Quality Control (CQC) testing costs
 - Construction Quality Assurance (CQA) testing will be conducted by the OWNER.
- C. This work is included in, but not limited to, the following sections:
- Section 02105: Earthwork

2.10 SAND DRAINAGE LAYER (IN-PLACE) (P) (BID LINE ITEM 15)

- A. Measurement: Work specified in this section will be a plan (P) quantity, in cubic yards (CY).
- B. Payment: Payment for this includes, but is not limited to, the following Work:
- Furnishing and installing sand drainage layer including excavation, stockpiling, hauling and placing to the lines and grades indicated in the Contract Documents.
 - Shaping of the sand drainage layer in preparation for waste placement as indicated in the Contract Documents.
 - Removal of unsuitable material as result of OWNER provided Construction Quality Assurance testing. See Section SC-13.08 of Technical Specification 00800 Supplementary Conditions.
 - Construction Quality Conformance (CQC) testing costs
 - Construction Quality Assurance (CQA) testing will be conducted by the OWNER.
- C. This work is included in, but not limited to, the following sections:
- Section 02241: Aggregate

2.11 PHASE SEPARATION BERM, TURNAROUND PADS AND TEMPORARY DRAINAGE BERM (IN-PLACE) (P) (BID LINE ITEM 16)

- A. Measurement: Work specified in this section will be a plan (P) quantity, in cubic yards (CY).
- B. Payment: Payment for this includes, but is not limited to, the following Work:
- Hauling, placing and compacting onsite clay materials, as necessary, per the Contract Documents
- C. This work is included in, but not limited to, the following sections:
- Section 02105: Earthwork

2.12 LEACHATE COLLECTION TRENCH (BID LINE ITEM 17)

- A. Measurement: Work specified in this section will be measured based upon ENGINEER's surveyed horizontal length of perforated leachate collection pipe installation by linear foot (LF).
- B. Payment: Payment for this item includes, but is not limited to, the following Work:
- Furnishing and installing perforated-piping as indicated in the Contract Documents, including but not limited to, all fittings (such as reducers, wyes, bends), all associated appurtenances, trenching and backfill materials.
 - Furnishing & installing geotextile filter fabric and washed stone
 - Providing additional washed stone in leachate collection sump as shown in the Contract Documents.
 - Construction Quality Control (CQC) Source testing of washed stone to be provided by the CONTRACTOR.
- C. This work is included in, but not limited to, the following sections:
- Section 02241: Aggregate
 - Section 02245: Geotextiles
 - Section 02622: Leachate Collection System Piping

2.13 LEACHATE COLLECTION CLEANOUT RISER PIPE (BID LINE ITEM 18)

- A. Measurement: Work specified in this section will be measured based upon ENGINEER's surveyed horizontal length of solid wall leachate cleanout pipe installation by linear foot (LF).
- B. Payment: Payment for this item includes, but is not limited to, the following Work:
 - Furnishing and installing solid piping as indicated in the Contract Documents, including but not limited to, all fittings (such as reducers, wyes, bends, covers), all associated appurtenances, trenching, backfill, pipe bedding and compaction.
- C. This work is included in, but not limited to, the following sections:
 - Section 02622: Leachate Collection System Piping

2.14 GROUNDWATER UNDERDRAIN SYSTEM – PIPING EXTENSION (BID LINE ITEM 19)

- A. Measurement: Work specified in this section will be measured based upon ENGINEER's surveyed horizontal length of pipe installation by linear foot (LF).
- B. Payment: Payment for this includes, but is not limited to the following Work:
 - Furnishing and installing piping as indicated in the Contract Documents, including but not limited to, all fittings (such as reducers, wyes, bends, flanges/caps, and transition fittings), all hardware and associated appurtenances, trenching and backfilling.
- C. This work is included in, but not limited to, the following sections:
 - Section 01120: Special Provisions

2.15 GRAVEL SURFACING – LANDFILL PERIMETER/ACCESS ROADS (BID LINE ITEM 20)

- A. Measurement: Work specified in this section will be measured based upon CONTRACTOR provided load tickets in tons (TN).
- B. Payment: Payment for this includes, but is not limited to the following Work:
 - Furnishing and installing gravel surface for perimeter landfill access roadway and gravel surface turnaround pad.

- Contract quantity for gravel surfacing is the total gravel needed and will be adjusted based on the amount of gravel salvaged.

C. This work is included in, but not limited to, the following sections:

- Section 02241: Aggregate

2.16 NORTH TURNAROUND PAD DITCH GRADING (BID LINE ITEM 21)

A. Measurement: Work specified in this section will be lump sum (LUMP SUM).

B. Payment: Payment for this includes, but is not limited to the following Work:

- Re-establishing ditch grade to existing MH rim. And protecting existing MH.
- Removing and reinstalling rip-rap as needed.
- Restoration of adjacent ditch banks as needed.

C. This work is included in, but not limited to, the following sections:

- Section 02575: Erosion Control and Turf Establishment

2.17 SILT FENCE (BID LINE ITEM 22)

A. Measurement: Work specified in this section will be measured by the linear foot (LF), based upon ENGINEER's documented length of silt fence placement.

B. Payment: Payment for this includes, but is not limited to the following Work:

- Furnishing and installing silt fence at all areas disturbed by construction as indicated in the Contract Documents or approved by ENGINEER.
- Placement of silt fence for disturbances not indicated in the Contract Documents or approved by the ENGINEER shall be considered incidental and no payment will be made.
- Removal of silt fence upon project completion (final restoration).
- Maintenance throughout construction to maintain compliance with NPDES permit requirements.

C. This work is included in, but not limited to, the following sections:

- Section 02575: Erosion Control & Turf Establishment

2.18 EROSION CONTROL BLANKET – STRAW (BID LINE ITEM 23)

- A. Measurement: Work specified in this section will be measured based upon ENGINEER's documented area in square yards (SY) of the limits of erosion control blanket placement, taken as a 2-dimensional projected area.
- B. Payment: Payment for this item includes, but is not limited to the following:
- Furnishing and installing erosion control blanket as directed by the ENGINEER.
 - Anchoring and securing blanket per manufacturer's recommendations
 - Maintenance throughout construction to maintain compliance with NPDES permit requirements.
- C. This work is specified in the following sections:
- Section 02575: Erosion Control & Turf Establishment

2.19 EROSION CONTROL FIBER ROLL - 12" (BID LINE ITEM 24)

- A. Measurement: Work specified in this section will be measured by the linear foot (LF), based upon ENGINEER's documented length of wattle placement.
- B. Payment: Payment for this item includes, but is not limited to the following:
- Furnishing and installing fiber roll(s) per Contract Documents
 - Anchoring and securing rolls per manufacturer's recommendations
 - Maintenance throughout construction to maintain compliance with NPDES permit requirements.
- C. This work is specified in the following sections:
- Section 02575: Erosion Control & Turf Establishment

2.20 STORM SEWER PIPING (BID LINE ITEMS 25-28)

- A. Measurement: Work specified in this section will be measured based upon ENGINEER's documented length of pipe in linear feet (LF), according to size and the number of each stormwater structures (EACH) by size.
- B. Payment: Payment for this includes, but is not limited to the following Work:
- Furnishing and installing RCP pipe/culverts, pipe bedding (incidental), and flared end sections as indicated in the Contract Documents

- Excavation, backfilling and compaction as indicated in the Contract Drawings
- C. This work is included in, but not limited to, the following sections:
- Section 02105: Earthwork
 - Section 02503: Storm Sewer System

2.21 RIPRAP (MNDOT CL III) (BID LINE ITEM 29)

- A. Measurement: Work specified in this section will be a measured volume in cubic yards (CY) based upon plan quantities.
- B. Payment: Payment for this includes, but is not limited to the following Work:
- Furnishing and installing riprap and geotextile to the lines and grades as indicated in the Contract Documents.
- C. This work is included in, but not limited to, the following sections:
- Section 02241: Aggregate
 - Section 02245: Geotextiles

2.22 SEEDING, MULCH FERTILIZER & DISK ANCHORING (BID LINE ITEM 30)

- A. Measurement: Work specified in this section will be measured based upon ENGINEER's survey area in acres (AC) of the limits of topsoil and seeding.
- B. Payment: Payment for this includes, but is not limited to the following Work:
- Seeding, mulching, fertilizing, and disc anchoring all areas, including stockpiles, disturbed by construction as indicated in the Contract Documents or approved by ENGINEER. Includes both the application of temporary and permanent seeding.
 - Site cleanup and restoration of project area throughout duration of project and at the project completion.
 - Warranty Costs.
- C. This work is included in, but not limited to, the following sections:
- Section 02575: Erosion Control & Turf Establishment

****END OF SECTION****

SECTION 01300 SUBMITTALS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.2 SUMMARY:

- A. This Section specifies administrative and procedural requirements for submittals required for performance of the Work, including;

1. Contractor's construction schedule.
2. List of Materials.
3. List of Subcontractors.
4. Shop Drawings and product data.

1.3 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. 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 related submittals are received.

- B. Processing: Allow sufficient review time so that installation will not be delayed because of the time required to process submittals, including time for resubmittals.

1. Allow two weeks for initial review. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The Engineer will promptly advise the Contractor when a submittal being processed must be delayed for coordination.
2. If an intermediate submittal is necessary, process the same as the initial submittal.
3. Allow two weeks for reprocessing each submittal.
4. 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.

- D. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to Engineer using a transmittal form. Submittals received from sources other than the Contractor will be returned without action.
1. On the transmittal record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.

1.4 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Submit initial progress schedule in duplicate at the Preconstruction Meeting for review by Owner and Engineer. Revise and resubmit as required.
- B. Bar-Chart Schedule: Prepare a fully developed, horizontal bar-chart type Contractor's construction schedule. Submit within 14 days after "Notice of Award". Schedule to relate to the entire Project. (Recommended forms are included in Division 0.)
- C. ENGINEER will review schedule. CONTRACTOR will submit additional information as requested until ENGINEER is satisfied all items are adequately addressed. An ENGINEER approved schedule will be required prior to issuance of "Notice to Proceed".
- D. No work shall be done outside of the working hours identified in SECTION 01010, Project Summary.
- E. Night work may be established by CONTRACTOR as regular procedure with written permission from OWNER. Such permission may be revoked at any time by OWNER.
- F. Show expected dates for the start and completion of each major element of construction and installation dates for major items. Elements shall include, but not be limited to, the following:
1. Shop drawings, submittal list, and schedule.
 2. All testing and documentation activities.
 3. Allowance for inclement weather
- G. Schedule Updating: Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.

1.5 CONSTRUCTION PROGRESS SCHEDULES

- A. Prepare and submit Construction Progress Schedule in accordance with General Conditions.
- B. Other Items included in the Lump Sum Contract Price Breakdown. Schedule Revisions:
1. Weekly to reflect changes in progress of Work.
 2. Indicate progress of each activity at date of submittal.
 3. Show changes occurring since previous submittal of schedule.

1.6 LIST OF SUBCONTRACTORS

- A. Submit three copies of complete list of Subcontractors, including equipment and material supplies, proposed to be engaged in performance of Contract to Engineer and Owner for approval.
- B. Include Specification Division or Section, full legal name, address, telephone number and name of contact for this Project.
- C. Include evidence of Subcontractor's qualifications to perform Work as required in various Sections of the Specifications.

1.7 LIST OF MATERIALS

- A. Within fourteen (14) days after Notice to Award, submit three copies of complete list of materials, products and equipment proposed to be used in construction to Engineer for review and approval.
- B. Arrange list in order of Specification Sections.
- C. List only items conforming to project requirements and brand names and model numbers of products, materials and equipment specified or approved by Addendum.
- D. List manufacturer of each product and name, address and telephone number of local supplier.

1.8 MATERIALS HANDLING PLAN

- A. Prepare and submit Materials Handling Plan to facilitate coordination with ENGINEER regarding surveying staking and documentation activities. Address sequencing, coordination, equipment requirements and site staging for earthwork and/or waste excavation and consolidation operations. Plan will reference and coordinate with Construction Progress Schedule.
- B. ENGINEER will review plan. CONTRACTOR will submit information as required to assure that coordination issues are adequately addressed. Approved plan will be required within 7 days of issuance of NTP or OWNER shall stop work until adequate plan is approved.
- C. Include, at a minimum, the following.
 - 1. Phasing plans showing sequencing and phases of common excavation.
 - 2. Stockpiling plan
 - 3. Equipment used, including sizes, numbers and production rates anticipated.

1.9 SHOP DRAWING AND PRODUCT DATA

- A. Shop drawings and product data shall be clearly identified as to project, contract, contractor, manufacturer, specification section and item submitted. Substitutions and deviations from the requirements of the Contract Documents shall be noted in writing.
- B. Submit shop drawings in the form of one reproducible transparency with one print of submitter's original drawing, not copied or adapted from Contract Drawings. Transmit transparencies in mailing tubes without folding.

- C. The Engineer will review shop drawings, product data and samples with reasonable promptness in accordance with the schedule for submission of shop drawings and samples as agreed upon, and will return them to the Contractor with the Action of the Engineer's review noted thereon. Contractor to distribute approved shop drawings for record, fabrication, and field distribution. Where major corrections are required, the transparency will be returned to the Contractor who shall make a new drawing incorporating the required corrections and submit a transparency of the revised drawings for approval. Use only shop drawings bearing Engineer's approval stamp for construction.
- D. Clearly mark each copy of product data to identify information being submitted, and delete information which does not apply to the Project. Supplement standard information as necessary. Show dimensions and other selected characteristics.

1.10 ENGINEER'S ACTION

- A. Except for submittals for record, information or similar purposes, where action and return is required or requested, the Engineer will review each submittal, mark to indicate action taken, and return promptly.
 - 1. Compliance with specified characteristics is the Contractor's responsibility
- B. The Engineer will review shop drawings and samples with reasonable promptness in accordance with the schedule for submission of shop drawings and samples as agreed upon, and will return them to the Contractor with the Action of the Engineer's review noted thereon.
- C. The Engineer's review shall not relieve CONTRACTOR of the responsibility to ensure that submittal is correct and suitable, nor that Work represented by submittal complies with the Contract Documents, except as to matters of finish, color and other aesthetic matters left to the Engineer's decision by the Contract Documents.

1.11 GUARANTEES, WARRANTIES, MAINTENANCE AGREEMENTS, AND WORKMANSHIP BONDS

- A. Refer to Specification sections for requirements.

1.12 OPERATION AND MAINTENANCE (O&M) DATA

- A. Compile product data and related information appropriate for OWNER'S maintenance and operation of equipment furnished under Contract. Prepare O&M data as specified in this section and as referenced in Specifications in a comprehensive electronic (pdf) printable format.
- B. Product Data:
 - 1. Include only those sheets pertinent to specific product(s).
 - 2. Annotate each sheet or section to:
 - a. Identify specific product or part installed.
 - a. Identify data applicable to installation.
 - b. Delete references to inapplicable information.
 - 3. Provide table of contents.

4. Project installation schedule listing dates and locations of products installed.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

****END OF SECTION 01300****

SECTION 01700

PROJECT CLOSEOUT

PART 1 - GENERAL REQUIREMENTS

1.1 GENERAL CLEAN-UP

- A. CONTRACTOR shall promptly remove from the vicinity of the completed work, all rubbish, unused materials, concrete forms, construction equipment, and temporary structures and facilities used during construction. This work shall be completed at no cost to the OWNER. Final acceptance of the work by the OWNER will be withheld until the CONTRACTOR has satisfactorily performed the final cleanup of the project site.
- B. Remove tools, equipment and protections when work is complete and when authorized to do so by local authorities having jurisdiction and the owner or the Owner's representative.
- C. Replace to original condition or better damaged vegetation or landscape work.

1.2 FINAL SUBMITTALS

- A. The CONTRACTOR, prior to requesting final payment, shall obtain and submit the following items to the ENGINEER For transmittal to the OWNER:
 - 1. Completed record drawings.
 - 2. Certificates of inspection and acceptance by local governing agencies having jurisdiction.
 - 3. Releases from all parties who are entitled to claims against the subject project, property, or improvement pursuant to the provision of law.
 - 4. Manufacturer/supplier warranties and instructions.
 - 5. All other documentation required under these Contract Documents.

1.3 MAINTENANCE AND GUARANTEE

- A. The CONTRACTOR shall comply with the maintenance and guarantee requirements contained in the General Conditions.
- B. Replacement of earth fill or backfill, where it has settled below the required finish elevations, shall be considered as a part of such required repair work, and any repair of resurfacing constructed by the CONTRACTOR which becomes necessary by reason of such settlement shall likewise be considered as a part of such required repair work unless the CONTRACTOR shall have obtained a statement in writing from the affected private owner or public agency releasing the OWNER from further responsibility in connection with such repair or resurfacing.
- C. The CONTRACTOR shall make all repairs and replacements promptly upon receipt of written order from the OWNER. If the CONTRACTOR fails to make such repairs or replacements promptly, the OWNER reserves the right to do the work and the CONTRACTOR and its surety shall be liable to the OWNER for the cost thereof.

****END OF SECTION 01700****

DIVISION

2

SECTION 02025

TEST-PIT EXCAVATION

PART 1 - GENERAL

1.1 SUMMARY

- A. The CONTRACTOR shall provide suitable equipment and operator to excavate, backfill, and compact testpits across the site, as necessary to delineate existing underground conditions, waste and various other limits, as directed by ENGINEER.

1.2 MEASUREMENT AND PAYMENT

- A. See **SECTION 01150**: Measurement and Payment.

1.3 DEFINITIONS

- A. Testpit: Subsurface excavation to determine existing underground conditions.

1.4 PROJECT /SITE CONDITIONS

- A. Testpit locations are not shown in the Contract Drawings. They will be field determined by ENGINEER.
- B. Do not block or obstruct roads or streets with excavated materials, except as authorized by OWNER.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.1 PROTECTION

- A. Locate, protect and repair damaged utilities.

3.2 EXCAVATION

- A. Excavate to the lines and depths as directed by ENGINEER to approximate depths of 18 feet or less.

3.3 BACKFILL AND COMPACTION

- A. When soils free of waste are encountered, testpits shall be backfilled with the excavated soil.
- B. When waste is encountered, testpits shall be backfilled with excavated soil from on-site grading activities.
- C. Backfilled soils shall be compacted with the excavator bucket to an approximate original density of the original soils, to provide a relatively smooth surface, as approved by ENGINEER.
- D. Following completion of testpits, disturbed areas shall be smooth graded and restored as directed by the ENGINEER.

3.4 DISPOSAL

- A. All excavated waste shall be disposed of according to all local, state and federal regulations and these specifications.

END OF SECTION 02025

SECTION 02100 SITE PREPARATION & DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. Movement of equipment onto the site
- B. Locate and protect existing utilities and other site features
- C. General site preparation

1.2 MEASUREMENT AND PAYMENT

- A. See **SECTION 01150**: Measurement and Payment.

1.3 SUBMITTALS

- A. Submit in accordance with **SECTION 01300**: Submittals

1.4 DEFINITIONS

- A. Structures and Surface Features: existing structures and surface features including fences and other site improvements.
- B. Utilities: Existing gas mains, water mains, steam lines, electric lines and conduits, telephone and other communication lines and conduits, sewer pipe, cable television, other utilities, and appurtenances.
- C. Demolish: Provide physical force to remove existing structure or feature to point at least one foot below top of buffer grade or final restoration grade or as specified or noted on Drawings. Remove and dispose of the demolished items. Demolition includes all means and methods required to completely remove existing structure or other site features.
- D. Remove: Remove and dispose miscellaneous items above and below grade as specified within Contract Documents and as necessary for construction as indicated in the Contract Documents.
- E. Salvage: Remove and salvage miscellaneous items for re-use as indicated in the Contract Documents or as deemed desirable by CONTRACTOR. All reused items shall meet the project specifications for the intended use.

1.5 PROJECT CONDITIONS

- A. Coordination: Coordinate this work with the work of other Sections to avoid any delay or interference with other work.
- B. Nuisances: Keep dirt, dust, noise and other objectionable nuisances to a minimum. Use temporary enclosures, calcium chloride, coverings and sprinkling, or combinations thereof, as necessary to limit dust to lowest practicable level, except do not use water to the extent that it causes flooding, contaminated runoff, or icing.
- C. Traffic: Conduct work to ensure minimum interference with vehicular or pedestrian traffic and to permit unencumbered access to site and adjacent properties.

1. Do not close or obstruct perimeter access or landfill access roads or other public passageways without permission from authorities having jurisdiction.
2. If required by governing authorities, provide alternate routes around closed or obstructed traffic ways.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas in which work is to be performed. Report in writing to the Owner and Engineer all prevailing conditions that will adversely affect satisfactory execution of work. Do not proceed with work until unsatisfactory conditions have been corrected.
- B. Starting work constitutes acceptance of the existing conditions and this Contractor shall then, at his expense, be responsible for correcting all unsatisfactory and defective work encountered.

3.2 PREPARATION

- A. Provide three (3) working days' notice, prior to beginning construction, to owners of existing utilities, structures and surface features.

3.3 CLEARING

- A. Remove trees, shrubs, stumps, bushes, vines, rubbish, undergrowth, deadwood as well as fences and incidental structures from entire site except as otherwise designated on the drawings to remain.

3.4 GRUBBING

- A. Remove all stumps and roots in their entirety, brush, organic materials and debris. When indicated, such materials as topsoil and leaf mold, or other organic materials above the ground surface suitable for use as mulch or topsoil shall be salvaged and stockpiled.

3.5 PROTECTION

- A. Protect existing utilities against damage.
- B. Contact utilities' "Gopher State One Call" before beginning excavation.
 1. Local (in-state) requests: 811
 2. Outside of Minnesota: 800.252.1166
- C. Locate existing underground utilities by hand excavation, or with private utility location service.
- D. If uncharted utilities are encountered during excavation, stop work and notify ENGINEER.
 1. Repair damaged utilities at CONTRACTOR'S expense.
- E. Preserve and protect ground water monitoring wells and other existing site features; replace damages or destroyed monitoring wells and other site features at CONTRACTOR'S expense.
- F. Cap or remove and relocate services.

3.6 DEMOLITION AND REMOVALS

A. General:

1. Remove and demolish materials in orderly and careful manner.
2. If departures from drawing requirements are deemed necessary by Contractor, submit details and reasons therefore to the Engineer for action. Make no departures without prior written approval.
3. Repair or replace all demolition work performed in excess to that required, at no cost to the owner. Repair or replacement shall match and equal construction, condition, and finish existing at time of award of contract.
4. On-site burning not allowed.

B. Remove following from locations to extent shown on drawings:

1. Designated utility services occurring within demolition areas, including disconnection, capping and complete removal or abandonment as shown and noted on drawings.
2. Trees and their roots where they will interfere with the new construction shall be removed, except where designated on the drawings to remain. Removal shall be complete within five feet of on-site structures. Roots may be left under other fills exceeding 5' depth.

C. Backfill and compact areas excavated and open pits and holes resulting from demolition operations.

D. Rough grade site, within demolition areas, to meet adjacent contours and to provide positive drainage. Leave site in clean condition acceptable for performance of subsequent construction operations.

3.7 SALVAGE AND REUSE

- A. Miscellaneous items located on-site may be salvaged by the CONTRACTOR for use on the project. All items shall be approved by ENGINEER prior to their reuse. All reused items shall meet the project specifications for their intended use.

3.8 SPOILS DISPOSAL

- A. Excavated materials including waste from construction activities, test-pit excavations or other site operations shall be hauled to a designated on-site spoils disposal area or disposed of off-site as directed by the OWNER.

3.9 CLEAN-UP AND DISPOSAL

- A. Remove trash, rubbish and debris and dispose of accordingly.
1. Remove and promptly dispose of contaminated, vermin infested, or dangerous materials encountered.
 2. Do not burn or bury materials on site, unless otherwise approved by local authorities having jurisdiction and the owner.
- B. Remove tools, equipment and protections when work is complete and when authorized to do so by local authorities having jurisdiction and the owner or the Owner's representative.
- C. Replace to original condition or better damaged vegetation or landscape work.

END OF SECTION 02100

SECTION 02105 EARTHWORK

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Topsoil stripping
 - 2. Common excavation and grading
 - 3. Landfill access road construction
 - 4. Landfill phase & separation berm construction

1.2 DEFINITIONS

- A. Unsuitable Material: Topsoil, peat, organic soils, and materials containing slag, cinders, foundry sand, debris, and rubble, or soil with less than required bearing capacity as determined by ENGINEER.
- B. Subgrade: The undisturbed earth or the compacted soil layer immediately below aggregate base, drainage fill, or topsoil materials.
- C. Excavation consists of removal of material encountered to subgrade elevations indicated and subsequent backfill and/or disposal of materials removed.
- D. Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimensions without specific direction of Engineer. Unauthorized excavation, as well as remedial work directed by Engineer, shall be at Contractor's expense.
 - 1. In locations under pavements, backfill and compact unauthorized excavations as specified for authorized excavations of same classification, unless otherwise directed by Engineer.
- E. Subgrade Correction: When excavation has reached required subgrade elevations, notify Engineer, who will make an inspection of conditions. If Engineer determines that bearing materials at required subgrade elevations are unsuitable, continue excavation until suitable bearing materials are encountered and replace excavated material as directed by Engineer. When the depth of unsuitable material exceeds two feet below subgrade elevations, any additional excavation below said two foot level shall be considered subgrade correction. The Contract Sum may be adjusted by an appropriate Contract Modification.
 - 1. Compensation for subgrade correction, as directed by the Engineer, will be paid on basis of Conditions of the Contract relative to changes in work.

1.3 SUBMITTALS

- A. Submit in accordance with **SECTION 01300: Submittals**.
- B. Proposed stockpiling plan which identifies which piles CONTRACTOR will be hauling to and from the site. Plan shall identify access routes, stockpile dimensions, restoration plan and erosion control measures.

1.4 MEASUREMENT AND PAYMENT

- A. See **SECTION 01150**: Measurement and Payment.
- B. The CONTRACTOR may strip and salvage topsoil, soils across the site for re-use and as material meets specifications. On-site borrow soils shall be amended as necessary to meet project specifications.

1.5 PROJECT CONDITIONS

- A. Site Information: Data in subsurface investigation reports were used for the basis of the design and are available to the Contractor for information only. Conditions are not intended as representations or warranties of accuracy or continuity between soil borings. The Owner will not be responsible for interpretations or conclusions drawn from these data by Contractor.
 - 1. Additional test borings and other exploratory operations may be performed by Contractor, at the Contractor's option; however, no change in the Contract Sum will be authorized for such additional exploration.
- B. Existing Utilities: Locate existing underground utilities in areas of excavation work. If utilities are indicated to remain in place, provide adequate means of support and protection during earthwork operations.
 - 1. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult utility owner immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.
 - 2. Do not interrupt existing utilities serving facilities occupied by Owner or others, during occupied hours, except when permitted in writing by Engineer and then only after acceptable temporary utility services have been provided.
 - a. Provide minimum of 48-hour notice to Engineer, and receive written notice to proceed before interrupting any utility.
 - 3. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies for shutoff of services if lines are active.
- C. Use of Explosives: Use of explosives is not permitted.
- D. Protection of Persons and Property: Barricade open excavations occurring as part of this work and post with warning lights.
 - 1. Operate warning lights as recommended by authorities having jurisdiction.
 - 2. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
 - 3. All barricades and traffic control devices required due to excavations in proximity to existing and/or newly constructed roadways shall be incidental to the site grading or common excavation quantities.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. See **SECTION 2241** AGGREGATE AND SOIL MATERIALS:

PART 3 – EXECUTION

3.1 STABILITY OF EXCAVATIONS

- A. Slope sides of excavations to comply with local codes, ordinances, and requirements of agencies having jurisdiction. Shore and brace where sloping is not possible because of space restrictions or stability of material excavated. Maintain sides and slopes of excavations in safe condition until completion of backfilling.

3.2 PREPARATION OF SUBGRADE

- A. Prior to placement of controlled fill, remove unsuitable soils and dispose of accordingly, as directed by ENGINEER.
- B. Adequacy of the subgrade soils to support the design loads should be verified using a proofroll that is observed and approved by the Engineer. Proofrolling should be performed with a pneumatic tire vehicle weighing a minimum of 25 tons and applying a ground pressure of not less than 50 psi. Proofrolling shall be performed with up to three overlapping passes, as determined necessary by the Engineer. Deflection (pumping and/or rutting) of 2 inches or more is considered unsuitable subgrade. Unsuitable subgrades identified by proof-rolling should be undercut and replaced by Controlled fill. Other potential methods of repair can be provided by the Contractor for approval by the Engineer.
- C. Placement of embankment soils shall not proceed when the soil or subgrade are saturated or frozen and specified compaction cannot be met. Special construction efforts may be required to minimize freezing of soils, dry saturated soils and allow adequate compaction.

3.3 SITE GRADING

- A. Uniformly grade areas to smooth surface, free from irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
 - 1. Provide smooth transition between existing adjacent grades and new grades.
 - 2. Cut out soft spots, fill low spots, and trim high spots to conform to required surface tolerances.
- B. Fill settled areas where excavations or trenches were backfilled and holes made by demolition, removals, testpitting, tree removal, and site preparation work.
- C. Slope grades to direct water away from buildings and to prevent ponding to required elevations tolerances.

3.4 SOIL EXCAVATION AND PLACEMENT

- A. Excavate within proposed grading limits to lines, grades, and elevations shown in Contract Drawings.
- B. Dispose of unsuitable materials detailed in **SECTION 02100: Site Preparation & Demolition**.

Scarify prepared subgrade surface before placement of controlled fill to provide bonding between Controlled fill and prepared subgrade.

- C. Place backfill and fill materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
- D. Before compaction, moisten or aerate each layer as necessary to provide optimum moisture content. Compact each layer to required maximum dry density or relative dry density for each area classification. Do not place backfill or fill material on surfaces that are muddy, frozen or contain frost or ice.
- E. Place backfill and fill materials evenly adjacent to structures, piping, or conduit to required elevations. Prevent wedging action of backfill against structures or displacement of piping or conduit by carrying material uniformly around structure, piping, or conduit to approximately same elevation in each lift.
- F. Do not place materials such as stumps, logs, brush, broken stone or pavement or other unsuitable materials in embankment.
- G. Do not place frozen materials or when surface is frozen.
- H. Control soil and fill compaction in accordance with the Method of Quality Compaction (Visual Inspection). Correct improperly compacted areas or lifts as directed by Engineer if soil density is inadequate.
 - 1. Moisture Control: Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade or layer of soil material. Apply water in minimum quantity as necessary to prevent free water from appearing on surface during or subsequent to compaction operations.
 - a. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.
 - b. Stockpile or spread soil material that has been removed due to moisture content too high for compaction. Assist drying by discing, harrowing, or pulverizing until moisture content is reduced to a satisfactory value.

3.5 STORAGE OF EXCAVATED MATERIALS

- A. Stockpile excavated materials acceptable for backfill and fill where directed. Place, grade, and shape stockpiles for proper drainage.
 - 1. Locate and retain soil materials away from edge of excavations. Do not store within drip line of trees indicated to remain.
 - 2. Dispose of excess excavated soil material and materials not acceptable for use as backfill or fill.

3.6 TRENCH EXCAVATION FOR PIPES AND CONDUIT

- A. Excavate trenches to uniform width, sufficiently wide to provide ample working room and a minimum of 6 to 9 inches of clearance on both sides of pipe or conduit.
- B. Excavate trenches and conduit to depth indicated or required to establish indicated slope and invert elevations and to support bottom of pipe or conduit on undisturbed soil. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.
 - 1. Where rock is encountered, carry excavation 6 inches below required elevation and backfill with a 6-inch layer of crushed stone or gravel prior to installation of pipe.
 - 2. For pipes or conduit less than 6 inches in nominal size, and for flat-bottomed, multiple-duct conduit units, do not excavate beyond indicated depths. Hand-excavate bottom cut to accurate elevations and support pipe or conduit on undisturbed soil.
 - 3. For pipes and equipment 6 inches or larger in nominal size, shape bottom of trench to fit bottom of pipe for 60 degrees (bottom 1/6 of the circumference). Fill depressions with tamped sand backfill. At each pipe joint, dig bell holes to relieve pipe bell of loads ensure continuous bearing of pipe barrel on bearing surface.

3.7 DEWATERING

- A. Maintain surface water control and free drainage.
- B. Provide pumps, hoses, well points and other necessary equipment and labor to keep all excavations free of standing water, in all areas except the bottom of the sedimentation basins. Within sedimentation basins, CONTRACTOR shall dewater as necessary to completely remove waste and to construct basins to the lines and grades as indicated in the Contract Documents.
- C. Protect adjacent properties from damage resulting from dewatering operations.
- D. CONTRACTOR is responsible for disposal of dewatering effluent in conformance with all federal and state requirements.

3.8 MAINTENANCE

- A. Protection of Graded Areas: Protect newly graded areas from traffic and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades in settled, eroded, and rutted areas to specified tolerances.
- C. Reconditioning Compacted Areas: Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape, and compact to required density prior to further construction.
- D. Settling: Where settling is measurable or observable at excavated areas during general project warranty period, remove surface (pavement, lawn, or other finish), add backfill material, compact, and replace surface treatment. Restore appearance, quality, and condition of surface or finish to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

END OF SECTION 02105

SECTION 02240 CONTROL OF WATER

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes construction dewatering

1.2 MEASUREMENT AND PAYMENT

- A. See **SECTION 01150**: Measurement and Payment.

1.3 SUBMITTALS

- A. Submit in accordance with **SECTION 01300**: Submittals
- B. Site Plan detailing dewatering operations including a brief written summary.

1.4 PERFORMANCE REQUIREMENTS

- A. Dewatering Performance: Design, furnish, install, test, operate, monitor, and maintain dewatering system(s) of sufficient scope, size, and capacity to control, remove, and dispose of ground water, surface water and/or leachate and permit excavation and construction to proceed on dry, stable subgrades.
 - 1. Continuously monitor and maintain dewatering operations to ensure erosion control, stability of excavations and constructed slopes, that excavation does not flood, and that damage to subgrades and permanent structures is prevented.
 - 2. Prevent surface water from entering excavations by grading, dikes, or other means.
 - 3. Prior to discharge off-site, groundwater/surface water dewatering flows shall have appropriate erosion and sediment controls consistent with the erosion control plan and the facility's NPDES permit.
 - 4. Leachate will be discharged or pumped to appropriate on-site facilities as directed by the ENGINEER.
 - 5. Accomplish dewatering activities without damaging existing buildings, structures, and site improvements adjacent to excavation.
 - 6. Remove Dewatering system when no longer required for construction.

1.5 PROJECT RECORD DOCUMENTS AND SUBMITTALS

- A. Submit documents under provisions of **SECTION 01300**.
- B. Shop Drawings: Show arrangement, locations, and details of pumping locations; inlet and discharge piping, pumps, filters and power units; and means of discharge, control of sediment, and disposal of water.
 - 1. Include a sketch plan and brief written summary for dewatering operations including control procedures to be adopted if dewatering problems arise.
 - 2. Anticipated groundwater dewatering design (included appropriate maps and/or sketches)

- a. Location and number of wells/sumps
- b. Pump capacities
- c. Schematic of temporary piping.
- d. Discharge locations for specific pumping points
- e. Use and re-use of on-site soils and materials.
- f. Use of temporary and permanent erosion and sediment control facilities.
- g. Proposed power sources
- h. Estimate of schedule and level of effort
- i. Flow Monitoring Equipment
- j. Narrative indicating compliance with the facility's NPDES permit.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.1 GROUNDWATER / SURFACE WATER

- A. Surface water or groundwater containing suspended and settleable solids shall be treated prior to discharge.
- B. Surface water / stormwater / groundwater that comes / has come in contact with waste material or contaminated soils will be considered leachate and treated as leachate.
 - 1. Leachate shall be discharged or pumped to appropriate on-site facilities as directed by the ENGINEER. Leachate must be drawn through a temporary sump that removes floating debris and sediment from the leachate by passing the intake flows through gravel, geotextile, siltfence or other filtering media as to prevent solids accumulation.

END OF SECTION 02240

SECTION 02241

AGGREGATE & SOIL MATERIALS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section defines the aggregate and soil materials to be used in conjunction with construction of various facilities throughout the site, including the following components/systems:
 - 1. Earthwork
 - 2. Leachate Management
 - 3. Re-Compacted Soil Barrier Layer
 - 4. Stormwater Management Systems
 - 5. Perimeter and Landfill Access Roads

1.2 MEASUREMENT AND PAYMENT

- A. See **SECTION 01150**: Measurement and Payment.

1.3 SUBMITTALS

- A. Submit in accordance with **SECTION 01300**: Submittals

1.4 PROJECT RECORD DOCUMENTS AND SUBMITTALS

- A. Submit documents under provisions of **SECTION 01300**.
- B. Construction Quality Control (CQC) source testing results prior to placement.
- C. Ten working days prior to aggregate utilization, submit Certificate of Compliance from supplier or statement that source is certified/approved, and one truckload sample, at least one quarter ton of each proposed material, to be set aside at the project site as reference samples of approved material to be used on the project. Samples shall be retained until completion of the project construction.
- D. In lieu of sample inspection, ENGINEER may visit the source and view the aggregates subsequent to processing and curing, if blasted. The geologic formation from which the riprap is mined may be inspected.
- E. Weight slips for trucks and/or weight computations for vessel displacements for each load of stone arriving at the work site shall be submitted to the ENGINEER at the end of each working day.
- F. Results of all specified field tests shall be submitted to the ENGINEER within one (1) working day following completion of a test. Laboratory test results shall be submitted as soon as they are available.

PART 2 – PRODUCTS

2.1 EARTHWORK

- A. Controlled Fill

1. Controlled Fill shall consist of well-graded natural earth materials that are free of organics and other deleterious materials. Controlled fill shall consist of soil materials classified as GW, GP, GM, GC, SC, SP, SM, SW, CL-ML, or CL under the Unified Soils Classification System, ASTM D2487, and having a plasticity index (PI) less than 20 (for cohesive soils). Controlled fill soils should be capable of producing compaction of at least 95% of the maximum dry density. All Controlled fill shall be free of cobbles or boulders greater than 6-inches in any dimension and shall have an organic content that does not exceed 5% by weight.
- B. Earth / Earth Fill
1. Subsoil, excess topsoil or material of granular nature which is free of wood, peat, stones larger than 6 inches in any direction, or other unsuitable material.
- C. Topsoil
1. Topsoil shall be salvaged from the site and stockpiled in areas identified on the plans. Prior to placement the surface area of the stockpiled topsoil shall have no obvious weed material to minimize invasive volunteer weed species prior to seeding operations.
 2. Free from hard lumps, plants and their roots, gravel, cinders, and other deleterious material.

2.2 RE-COMPACTED SOIL BARRIER LAYER

- A. Re-Compacted Soil Barrier Layer
1. Gradation requirements: See **SECTION 02247: RE-COMPACTED SOIL BARRIER LAYER**

2.3 LEACHATE MANAGEMENT SYSTEM

- A. Leachate Collection Gravel (Washed Stone)
1. Gradation requirements: uniformly graded, nominal 2" particle size
 2. Material with a minimum permeability of 1×10^{-2} cm/sec in accordance with ASTM D2434
 3. Washed river rock (rounded)
 4. Clean rock free of organic substances or other deleterious material
- B. Sand Drainage Layer
1. Gradation Requirements:
 - a. No more than 5% by weight passing through the #200 sieve
 - b. 100% by weight passing through the 3/8" sieve
 2. Material with a minimum permeability of 1×10^{-3} cm/sec in accordance with ASTM D2434
 3. Free of organic substances or other deleterious material
 4. Have a uniformity coefficient less than 6
 5. USCS Classification SC, SM, SW-SM, SW-SC, SP-SM, SP-SC

2.4 STORMWATER MANAGEMENT SYSTEM

- A. Rip-Rap
1. Gradation Requirements: See **SECTION 02503: STORM SEWER SYSTEM**
 2. All stone shall be durable and of a quality to insure permanence in the structure and the climate in which it is to be used.
 3. The stone for riprap and riprap bedding shall be durable, sound, and free from detrimental cracks, seams or other defects that tend to increase deterioration from natural causes or cause breakage during handling and/or placing. It shall be free of objectable quantities of dirt, sand, clay, rock fines or other deleterious material. All stone shall be angular quarry stone.

PART 3 – EXECUTION

3.1 GENERAL

- A. Leachate collection pipe wrap aggregate shall be placed in accordance with **SECTION 02622** and the Construction Drawings.
- B. The Sand Drainage Layer shall be placed in 6-inch lifts. Placement of the Drainage Layer shall proceed such that all equipment operates on the sand only. The construction of each lift shall be documented for density, grain size distribution, and permeability. Areas failing a test shall be removed and new material placed and retested. The costs for removal, replacement, including new material and retesting, shall be incidental to the cost of the Project and shall be borne entirely by the Contractor.
- C. Riprap shall be placed in volume identified at the locations indicated in the Contract Drawings.

3.2 TESTING

3.2.1 Construction Quality Control (CQC) – CONTRACTOR provided:

- A. Aggregate & Soil Materials will be tested by the Contractor at their source (source testing) for their respective required parameters using the testing procedures and at the frequencies indicated below. The Contractor will submit the required testing data to the Engineer for approval prior to acceptance of Aggregate & Soil Materials for use in the project.

1. EARTHWORK

- a. Controlled Fill
 - 1) Standard Proctor (ASTM D698) One per source
 - 2) Particle Size Distribution (ASTM D422) One per source
 - 3) Soil Classification (ASTM D2487) One per source
- b. Earth / Earth Fill
 - 1) No requirements
- c. Topsoil
 - 1) No requirements

2. RE-COMPACTED SOIL BARRIER LAYER

- a. See **SECTION 02247: RE-COMPACTED SOIL BARRIER LAYER**

3. LEACHATE MANAGEMENT SYSTEM

- a. Washed Stone
 - 1) Permeability (ASTM D2434) One per source
 - 2) Particle Size Distribution (ASTM D422) One per source
 - 3) Soil Classification (ASTM D2487) One per source
- b. Sand Drainage Layer
 - 1) Permeability (ASTM D2434) One test per 2,000 CY
 - 2) Particle Size Distribution (ASTM D422) One test per 2,000 CY
 - 3) Soil Classification (ASTM D2487) One test per 2,000 CY
 - 4) Permeability (ASTM D2434) One test per 2,000 CY

4. STORMWATER MANAGEMENT SYSTEM
 - a. Rip-Rap
 - 1) No Requirements

3.2.2 Construction Quality Assurance (CQA) – OWNER provided:

- A. The Engineer will conduct assurance testing during construction of all Aggregate & Soil Materials for their respective required parameters using the testing procedures and at the frequencies indicated below.
 1. EARTHWORK
 - a. Controlled Fill
 - 1) Standard Proctor (ASTM D698) One per source
 - b. Earth / Earth Fill
 - 1) No requirements
 - c. Topsoil
 - 1) No requirements
 2. RE-COMPACTED SOIL BARRIER LAYER
 - a. See **SECTION 02247**: RE-COMPACTED SOIL BARRIER LAYER
 3. LEACHATE MANAGEMENT SYSTEM
 - a. Sand Drainage Layer
 - 1) Permeability (ASTM D2434) One test per acre placed
 - 2) Particle Size Distribution (ASTM D422) One test per acre placed
 - 3) Soil Classification (ASTM D2487) One test per acre placed
 4. STORMWATER MANAGEMENT SYSTEM
 - a. Rip-Rap
 - 1) No Requirements

END OF SECTION 02241

SECTION 02245

GEOTEXTILES

PART 1 - GENERAL

1.1 SUMMARY

- A. This section covers the work necessary to furnish and install nonwoven cushion and nonwoven filter geotextiles.

1.2 MEASUREMENT AND PAYMENT

- A. See **SECTION 01150**: Measurement and Payment

1.3 SUBMITTALS

- A. Submit in accordance with **SECTION 01300** – Submittals.
- B. Submit Manufacturer's Certification for the geotextiles indicating that the geotextile meets the physical requirements stated in Part 2 of this specification section.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Geotextile will be protected from precipitation, inundation, ultraviolet exposure, dirt puncture, cutting, and other damaging or deleterious condition.

PART 2 - PRODUCTS

2.1 GENERAL

- A. CONTRACTOR will furnish materials whose "Minimum Average Roll Values", as defined by the Federal Highway Administration (FHWA), meet or exceed the criteria listed in this section.
- B. Nonwoven geotextile products will be comprised of polymeric yarns of fibers oriented into a stable network, which retains its relative structure during handling, placement, and long-term service.

2.2 EQUIPMENT

- A. CONTRACTOR will furnish all necessary equipment required to accomplish the installation of the Geotextiles specified herein.

2.3 CUSHION GEOTEXTILE

- A. The cushion geotextile will be a nonwoven polypropylene or polyester geotextile, supplied by the Geosynthetics Contractor, which meets the requirements of **TABLE 02245-1** and **TABLE 02245-3**.

2.4 FILTER GEOTEXTILE

- A. The filter geotextile, supplied by the Geosynthetics Contractor, will be (1) a nonwoven, needle-punched, staple fiber or continuous filament, polyester material, or (2) a nonwoven, needle-punched, staple fiber or continuous filament polypropylene material, both meeting the requirements of **TABLES 02245-2** and **02245-3**.

2.5 GEOTEXTILE SEAMING

- A. Filter geotextile seams will be thermally seamed or sewn with polymeric thread. The thread will be capable of supplying a seam strength efficiency of 80 percent of the required tensile strength utilizing a Type 401 two-thread chain stitch with a "J" seam.
- B. Cushion geotextile seams will be thermally bonded at all overlaps.

PART 3 EXECUTION

3.1 GENERAL INSTALLATION REQUIREMENTS

- A. All geotextiles will be deployed in accordance with the manufacturer's recommendations, standards, and guidelines.
- B. Geotextile procurement, transportation, storage, handling and installation will be the responsibility of the CONTRACTOR. Any damaged or unacceptable material will be replaced at the sole expense of the CONTRACTOR. During shipment and storage, the geotextile will be protected from ultraviolet light exposure, precipitation or other inundation, mud, dirt, dust, puncture, cutting or any other damaging or deleterious conditions. To that effect, geotextile rolls will be shipped and stored in relatively opaque and watertight wrappings.
- C. Geotextile rolls will be handled in such a way that they are not damaged.
- D. Geotextile will be securely anchored and then deployed in such a manner as to continually keep the geotextile sheet in sufficient tension to preclude folding or wrinkling.
- E. Geotextile will be weighted with sandbags or the equivalent to prevent movement caused by wind. Such sandbags will be installed during placement and will remain until replaced with cover material.
- F. CONTRACTOR will take any necessary precautions to prevent damage to underlying materials during placement of the geotextile.
- G. During placement of geotextile, care will be taken not to entrap in the geotextile, stones, excessive dirt, or moisture that could damage the geomembrane or hamper subsequent seaming.
- H. Geotextile will not be exposed to precipitation prior to being installed. Wrappings protecting geotextile rolls will be removed less than one hour prior to unrolling the geotextile. After the wrapping has been removed, the geotextile will not be exposed to direct sunlight for more than 15 days.
- I. CONTRACTOR will pay particular attention at seams such that no earth cover material is inadvertently inserted beneath the geotextile.
- J. All sewing will be done using polymeric thread with properties equal to or exceeding those of the geotextile.
- K. CONTRACTOR will place all cover materials in such a manner such that the geotextile is not damaged, minimal slippage of the geotextile or underlying layers occurs, and no excess tensile stresses are present in the geotextile.
- L. Soil will be placed over the geotextile by "rolling" (not dragging) a minimum of 12 inches of material ahead of all construction equipment.
- M. On slopes steeper than 6H:1V, cover material will be placed from the bottom of the slope proceeding upward.

- N. No construction equipment with average ground pressure greater than 8 psi will operate on slopes unless they are more than 10 feet from exposed geotextiles and are operating on 2 feet or more of cover material thickness.
- O. Operation of equipment over geotextile will be in conformance with the following guidelines:

<u>Average Equipment Ground Pressure (psi)</u>	<u>Minimum Lift thickness Under Tracks (in)</u>
5	12
5-8	24
>8	36

3.2 SEAMING OF GEOTEXTILE

- A. On slopes flatter than or equal to 10H:1V, adjacent cushion geotextile panels may be sewn, or heat bonded. All seaming, heat bonding or overlapping of sheets will be done in accordance with the manufacturer's recommendations. For overlapped seams that are thermally bonded, overlap distances will be a minimum of 6 inches.
- B. On slopes greater than 10H:1V, adjacent panels will be sewn or heat bonded. All seams on such slopes will be oriented parallel to (in the direction of) the slope.
- C. Sewn seams will use a Type 401 stitch. One or two rows of stitching may be used.
- D. Seams may be heat bonded using thermal fusion or ultrasonic devices.
- E. Adjacent panels will be overlapped a minimum of 6 inches prior to seaming.
- F. Care will be taken not to introduce soil to the collection system drainage layer stone during backfilling operations

3.3 REPAIRS

- A. Holes or tears in the fabric will be repaired as follows: A fabric patch made from the same geotextile will be thermally welded into place. Provide a minimum overlap of 12 inches in all directions. Should any tear exceed 10 percent of the width of the roll, that roll will be removed from the slope and replaced.
- B. Care will be taken to remove any soil or other materials that may have penetrated the torn geotextile.
- C. Log any defects, holes, and tears that are identified and repaired.

3.4 CONFORMANCE TESTING

- A. Manufacturer conformance testing, prior to construction, of all geotextile materials is the responsibility of the CONTRACTOR. The CONTRACTOR shall contract with an independent laboratory to conduct testing for conformance with properties listed in **TABLES 02245-1 & 2** of this section and the site CQA Plan. Results of the conformance testing are to be submitted to the ENGINEER for approval prior to delivery and acceptance of the material for use in the project. Field quality assurance activities will be performed in accordance with the Construction Quality Assurance Manual and will include visual field inspection by the ENGINEER.

- B. In the event that a portion of the material fails the conformance testing, the CONTRACTOR will remove and replace the entire area failing the test at CONTRACTOR's sole expense.
- C. At the option of the ENGINEER or OWNER, additional independent construction testing may be conducted at a separate laboratory to be subcontracted to the ENGINEER or OWNER.

3.5 PROTECTION

- A. Geotextiles will be stored in such a manner to protect them from puncture, dirt, grease, water, mud, or excessive heat.

TABLE 02245-1 MINIMUM REQUIRED PROPERTIES CUSHION GEOTEXTILE (NONWOVEN POLYPROPYLENE OR POLYESTER)				
PROPERTIES AND REQUIREMENTS	QUALIFIER	UNITS	SPECIFIED VALUES⁽¹⁾	TEST METHOD
Fabric Mass Per Unit Area	Minimum ⁽¹⁾	oz/sy	15.5	ASTM D 5261
Grab Tensile Strength ⁽²⁾	Minimum ⁽¹⁾	lbf	375	ASTM D4632
Grab Tensile Elongation ⁽²⁾	Minimum ⁽¹⁾	%	50	ASTM D 4632
Puncture Strength	Minimum ⁽¹⁾	lb	240	ASTM D 4833
UV Resistance ^{(3) (4)}	Minimum ⁽¹⁾	%	70	ASTM D 4355
Trapezoidal Tear Strength	Minimum	lb	145	ASTM D 4533

Notes:

- (1) All values represent minimum average roll values [MARVs] (i.e., any roll in a lot should meet or exceed the values in this table).
- (2) Minimum value measured in either direction.
- (3) Ultraviolet resistance requirement is at 500 hours of exposure.
- (4) Manufacturer to provide factory certification.

TABLE 02245-2 MINIMUM REQUIRED PROPERTIES FILTER GEOTEXTILE (NONWOVEN)				
PROPERTIES AND REQUIREMENTS	QUALIFIER	UNITS	SPECIFIED VALUES⁽¹⁾	TEST METHOD
Fabric Mass Per Unit Area	Minimum ⁽¹⁾	oz/sy	12	ASTM D 5261
Grab Tensile Strength ⁽²⁾	Minimum ⁽¹⁾	lb	250	ASTM D 4632
Trapezoidal Tear Strength ⁽²⁾	Minimum ⁽¹⁾	lb	90	ASTM D 4533
Puncture Strength	Minimum ⁽¹⁾	lb	160	ASTM D 4833
Mullen Burst Strength	Minimum ⁽¹⁾	psi	500	ASTM D 3786
Vertical Water Flow 2" Head	Minimum ⁽¹⁾	gpm/ft ²	80	ASTM D 4491

TABLE 02245-2 MINIMUM REQUIRED PROPERTIES FILTER GEOTEXTILE (NONWOVEN)				
AOS (Apparent Opening Size)	Minimum ⁽¹⁾	Sieve (mm)	100(0.150)	ASTM D 4751
UV Resistance ⁽³⁾	Minimum ⁽¹⁾	%	70	ASTM D 4355

Notes:

- (1) All values represent minimum average roll values (i.e., any roll in a lot should meet or exceed the values in this table).
- (2) Minimum value measured in machine and cross machine direction.
- (3) Ultraviolet Resistance requirement is at 500 hours of exposure.
- (4) Manufacturer to provide factory certification.

END OF SECTION 02245

**SECTION 02247
RECOMPACTED SOIL BARRIER LAYER**

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes construction of the re-compacted soil barrier layer as part of the landfill liner system.
- B. Soil barrier layer materials are available onsite for use as the recompacted soil barrier layer. The CONTRACTOR may use onsite materials that conform to the specifications herein.

1.2 SUBMITTALS

- A. Submit in accordance with **SECTION 01300** – Submittals.
- B. Construction Quality Control (CQC) source testing results

1.3 MEASUREMENT AND PAYMENT

- A. See **SECTION 01150**: Measurement and Payment.

PART 2 - PRODUCTS

2.1 SUBGRADE/SUBGRADE CORRECTION

- A. Subgrade or in-situ foundation refers to a surface exposed after stripping topsoil/fill material or excavating to establish recompacted soil barrier layer or berm grades. The subgrade shall be hard, uniform, smooth, and relatively free of debris, rocks, plant materials or other deleterious foreign matter.
- B. The prepared subgrade should conform to the contours shown on the bottom of excavation plan and be verified by the OWNERS surveyor.
- C. Materials such as organics or soft/loose soils shall be removed and the resulting voids filled with Controlled Fill and appropriately compacted per **SECTION 02241**. All unsuitable soil located below the subgrade elevations in the containment areas shall be over-excavated to a competent, stable surface at a lower elevation and replaced with suitable Controlled fill material as directed by the ENGINEER.

2.2 RECOMPACTED SOIL BARRIER LAYER

- A. Re-compacted Soil Barrier Layer material shall be placed upon the approved, prepared subgrade surface as part of the composite liner system for the proposed landfill.
- B. Re-compacted Soil Barrier Layer shall consist of low-permeability cohesive material obtained from either an on-site or off-site borrow location(s).
- C. Re-compacted Soil Barrier Layer shall be free of waste, debris, frozen materials, vegetation, and other deleterious matter.
- D. Re-compacted Soil Barrier Layer shall have 100% of its particles passing the 2-inch sieve, and less than or equal to 5% larger than the ¾-inch sieve as determined by ASTM D422. Re-compacted Soil Barrier Layer shall have a maximum clod size of 2 inches.

- E. Re-compacted Soil Barrier Layer shall have not less than 50% of the soil particles, by weight, passing through the 200-mesh sieve (ASTM D422).
- F. Re-compacted Soil Barrier Layer shall have a liquid limit greater than or equal to 25% and plasticity index of greater than or equal to 12% as determined by ASTM D4318.
- G. The top 6 inches of the recompacted soil barrier layer shall be free of all extraneous materials greater than ½-inch.
- H. The in-place density of fully compacted Re-compacted Soil Barrier Layer shall be greater than or equal to 95% of its maximum dry density, as defined by the Standard Proctor test, ASTM D698.
- I. Re-compacted Soil Barrier Layer shall be placed at a moisture content that is between 0% to 5% wet of optimum as determined by ASTM D698.
- J. The permeability of compacted Re-compacted Soil Barrier Layer shall be less than or equal to 1.0×10^{-7} cm/sec as determined by ASTM 5084.

PART 3 - EXECUTION

3.1 GENERAL

- A. The Contractor shall provide all necessary supervision, labor, equipment and materials as needed to perform the specified work, including but not limited to, excavating, grading, stockpiling, processing, moisture control, and compaction of off-site soils and borrow material.
- B. Placement of any soil layer shall not begin until the previous layer has been accepted by the Engineer. Any damage to the previous layer or deterioration subsequent to acceptance shall be repaired by the Contractor to the satisfaction of the Engineer at the Contractor's sole expense.
- C. Contractor shall maintain all excavations and fill areas free of standing water by sumps, pumping or other methods approved by the Engineer.
- D. Material that fails to meet the specifications for Re-compacted Soil Barrier Layer shall be removed by the Contractor and replaced with suitable material at no additional cost to the Owner.
- E. Stockpiled material shall be protected from excessive drying or wetting and from contamination with deleterious substances such that it remains in a condition suitable for use on the project.
- F. At the completion of the project, all borrow areas and stockpile locations shall be graded to drain and seeded with grass.
- G. All earthwork shall be performed in compliance with applicable local, state and federal regulations governing erosion and sediment control. Fines or penalties incurred by the Contractor for violations shall be its sole responsibility.

3.2 RE-COMPACTED SOIL BARRIER LAYER / SUBGRADE PREPARATION

- A. In areas of subgrade correction, the final surface shall be compacted and proof rolled or tested in accordance with **Section 02105**.

3.3 PLACEMENT

- A. Re-Compacted Soil Barrier Layer material shall be placed upon the prepared subgrade surface as part of the composite liner system for the proposed landfill cell.
- B. Acceptable Re-Compacted Soil Barrier Layer material shall be placed and compacted in maximum eight-inch (8-inch) loose lifts or no greater than the length of the sheepsfoot on the compactor. Re-Compacted Soil Barrier Layer shall be placed at 0% to 5% wet of optimum moisture content. In-place dry density shall be at least 95 percent of maximum dry density, as determined by the Standard Proctor Test, ASTM D-698. The lifts shall be compacted with a sheepsfoot roller with feet at least 6-inches long. The lifts shall be compacted using a minimum of 4 one-way passes (2 roundtrips) of the compaction equipment or as required to achieve the required density.
- C. The Contractor shall not place any frozen soil material. In addition, no material shall be placed on any material that has become frozen or saturated. Said frozen or saturated material shall be completely removed prior to placement of additional lifts of soil material.
- D. Each lift shall be scarified to a depth of one (1) to two (2) inches by the Contractor prior to the placement of subsequent lifts, to provide adequate layer bonding between adjacent lifts.
- E. The Re-Compacted Soil Barrier Layer material shall be of proper moisture content before rolling to obtain the specified compaction and permeability. Wetting or drying of the material and manipulation, when necessary, to obtain uniform moisture content throughout the layer may be required.
- F. Any lift determined to have unacceptable moisture or density shall be reworked by approved methods, or shall be removed and replaced as directed by the Engineer. Further compaction, discing and aerating, and discing and wetting are some of the actions that may be necessary. The Engineer will record rework actions.
- G. Should the soil be too wet to permit proper compaction, all work on the portions of the compacted fill thus affected shall be delayed until the material has dried to the required moisture content throughout the material to achieve the specified compaction and permeability, and shall be accomplished by the Contractor, at no additional cost to the Owner. Any required manipulation or discing of in-place material shall be performed in those areas represented by failed test results or observations of unsatisfactorily wet conditions.
- H. Hauling and spreading equipment will not be considered as compaction equipment and will not be included in the count of the number of passes of compaction equipment over the work area.
- I. Any irregularities or depressions that develop under rolling which cannot be corrected by re-rolling shall be corrected by the Contractor by scarifying the material at these locations and adding, removing or replacing material, as necessary. These areas shall then be reworked and compacted until the surface is smooth and uniform. These areas shall meet the specifications provided herein.
- J. The Contractor shall be responsible for the stability of all in-place soil throughout the duration of the Contract, and shall replace any portion which, in the opinion of the Engineer, has become disturbed. The Contractor shall replace the damaged material to the specifications provided for compacted soil barrier layers at no additional cost to the Owner. The Contractor shall maintain and retain responsibility for the placed soil areas until the Engineer accepts the project.
- K. The Contractor shall perform the work to the lines and grades as shown on the contract drawings, and as otherwise directed by the Engineer. The right is reserved by the Engineer to make minor adjustments in lines or grades, if necessary, as the work progresses to obtain satisfactory construction to achieve the intended performance.

- L. The Contractor shall disc the soil and/or remove clods greater than 3-inches in diameter or half the lift thickness, whichever is less, prior to compaction of the compacted soil barrier layer.
- M. No additional lifts of soil shall be placed after a damaging rain event until the previously placed soil material has dried out sufficiently or the top affected few inches of soil material has been reworked and retested and/or removed.
- N. The Contractor shall maintain the surface moisture of a completed lift to prevent desiccation cracking. The Contractor shall place subsequent lifts of Re-Compacted Soil Barrier Layer as soon as possible after Construction Quality Assurance testing is complete and the lift approved by the Engineer. No desiccation cracking that exceeds 1 inch in depth will be allowed. The Contractor shall repair desiccation cracks in the compacted soil barrier layer at no additional cost to the Owner.

3.4 TESTING

A. Construction Quality Control (CQC) – CONTRACTOR provided:

1. Re-Compacted Soil Barrier Layer materials will be tested via a Construction Quality Control (CQC) process by the Contractor at their source (source testing) for their respective required parameters using the testing procedures and at the frequencies indicated below. The Contractor will submit the required testing data to the Engineer for approval prior to acceptance of Re-Compacted Soil Barrier Layer material for use in the project.
2. CQC TESTING SUMMARY

Material	Test Designation	Testing Frequency	Total Anticipated Test Quantity
Re-Compacted Soil Barrier Layer	Atterberg Limits (ASTM D4318)	One test per 3,000 cubic yards	TBD
	Particle Size Distribution (ASTM D422)	One test per 3,000 cubic yards	TBD
	USCS (ASTM D2487)	One test per 3,000 cubic yards	TBD
	Percentage Fines (ASTM D1140)	One test per 3,000 cubic yards	TBD
	Nuclear Density & Moisture (ASTM D6938)	At CONTRACTORS discretion	1 Per Source
	Standard Proctor (ASTM D698)	One test per 3,000 cubic yards	TBD
	Permeability (ASTM D5084)	One test per 3,000 cubic yards	TBD

B. Construction Quality Assurance (CQA) – OWNER provided:

1. The Engineer will conduct Construction Quality Assurance (CQA) testing during construction of Re-Compacted Soil Barrier Layer material for required parameters using the testing procedures and at the frequencies indicated below. A soils testing lab will be contracted to the Engineer or Owner to conduct the required assurance testing. The CQA program consists of:
 - a. Observation of the quality workmanship and soil materials used by the Contractor's personnel in performance of the work;
 - b. Construction quality testing; and
 - c. Thickness verification.
2. The Engineer will perform construction quality assurance (CQA) tests of the moisture content and dry density of the compacted soil by nuclear density/moisture gauge (ASTM D6938) on a 100 foot grid per lift. The in-place density tests will be performed to the full thickness of the lift.
3. The Engineer will also perform construction quality tests of hydraulic conductivity of the re-compacted soil barrier layer by ASTM D5084 at a rate of 1 test per 2.0 acre placement per lift

(starting with lift 2). Note: hydraulic conductivity testing will not be conducted on the first lift. Exact sampling locations of hydraulic conductivity will be selected randomly by the Engineer such that the required testing frequency is achieved.

4. CQA TESTING SUMMARY

Material	Test Designation	Testing Frequency	Total Anticipated Test Quantity
Re-Compacted Soil Barrier Layer	Atterberg Limits (ASTM D4318) Particle Size Distribution (ASTM D422) USCS (ASTM D2487) Percentage Fines (ASTM D1140) Nuclear Density & Moisture (ASTM D6938) Standard Proctor (ASTM D698) Permeability (ASTM D5084)	One test per 2-acre placement per lift One test per 2-acre placement per lift One test per 2-acre placement per lift One test per 2-acre placement per lift 100ft grid per lift One test per 5,000 cubic yards One test per 2-acre placement per lift	TBD TBD TBD TBD TBD TBD

5. The Engineer may conduct additional testing for suspected non-compliance areas when:

- Lift thickness is greater than specified.
- Soil is placed at undesirable and/or highly variable moisture content.
- Fewer specified number of passes are made by the compaction equipment.
- Soil material appears different than that used in previous work.
- The degree of compaction is in question.
- Adverse weather conditions are experienced.
- Regrading of existing layers has been performed.
- Material fails to meet specifications.
- The work area is increased causing testing frequency to increase to assure quality of placement.

6. The Engineer will maintain a log of failed in-place moisture/density tests and will indicate the remediation measures undertaken to correct deficient work. Construction quality test reports will identify the subsequent retest number after remediation. The retest report will also indicate the test number for the previous failed report. Retests will be performed at the same location as the failed test.

7. Contractor is responsible for providing methods and equipment for locating specific grid point locations of OWNER conducted CQA testing operations.

C. Tolerances

- Design layer thicknesses are shown on the contract drawings. Tolerance for the thickness shall be from 0.0 foot to plus 0.2 foot in all cases determined from surveyed elevations.

END OF SECTION 02247

SECTION 02503 STORM SEWER SYSTEM

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Culverts.
- B. Riprap and other erosion control measures.

1.2 RELATED SECTIONS

- A. Section 02105 - Earthwork.
- B. Document: MNDOT Standard Specifications for Construction, 2014 Edition.

1.3 SUBMITTALS

- A. Submit the following:
 - 1. Manufacturer's Literature: Materials description and installation instructions for;
 - a. Pipe and fittings.
 - b. Precast manhole sections.
 - c. Manhole frames, grates, and covers.

1.4 QUALITY ASSURANCE

- A. Comply with all codes, laws, ordinances and regulations of governmental authorities including, but not limited to, local municipalities and sanitary districts having jurisdiction over this part of the work.

1.5 REFERENCES

- A. Comply with the cited sections of the MNDOT Standard Specifications for Construction, 2018 Edition except where more stringent requirements are shown on the Drawings or as specified herein.
- B. City Engineers Association of Minnesota (CEAM), "Standard Utilities Specifications", 1999 Edition

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Concrete Pipe: The pipe material shall be of the product type specified in the drawings and shall conform to the applicable production and testing requirements cited in the CEAM specifications.
- B. Corrugated Steel Pipe: The pipe material shall be of the product type specified in the drawings and shall conform to the applicable production and testing requirements cited in the ASTM specifications.
- C. Dual-Wall Corrugated Polyethylene Pipe: Dual-Wall Corrugated Polyethylene Pipe shall conform to the requirements of AASHTO M-294 and Design 18 of the AASHTO Standard Specifications for Highway Bridges for storm sewer pipe sizes 12-inch through 36-inch. Joints shall be water-tight unless the Engineer approves a soil-tight joint. Pipe manufacture, water-tight joint testing, and

installation shall conform to current MNDOT requirements and/or as indicated in the Plans, Specifications, and Special Provisions.

- D. Riprap: Conform to MNDOT Specification 3601. Gradation as identified in the Construction Plans
- E. Geotextile filter fabric: Conform to MNDOT Specifications. Sand bedding may not be used in lieu of a geotextile filter for riprap.

PART 3 - EXECUTION

3.1 PREPARATION

A. Establishing Line and Grade

1. The primary line and grade will be established by the Engineer. For trench installation, line and grade stakes will be set parallel to the proposed pipeline at an appropriate offset as will best serve the Contractor's operations wherever practical.
2. The Contractor shall arrange his operations to avoid unnecessary interference with the establishment of the primary line and grade stakes; and shall render whatever assistance may be required by the Engineer in accomplishing the staking.
3. The Contractor shall be responsible for preservation of the primary stakes and shall bear the full cost of any re-staking.
4. The Contractor shall be solely responsible for the correct transfer of the primary line and grade to all working points and for construction of the work to the prescribed lines and grades as established by the Engineer.

B. Protection of Underground and Surface Structures.

1. Temporary support, adequate protection and maintenance of all underground and surface utility structures, drains, sewers and other obstructions encountered in the progress of the work shall be furnished by the Contractor at his own expense. When necessary to determine the location of existing pipes, valves or other underground structures, the Contractor, after an examination of available records, shall perform all explorations and excavation for such purposes.
2. Whenever existing utility structures, main sewer, drains, or other conduits, ducts, pipes or other structures present obstructions to the grade or alignment of the pipe, such structures shall be permanently supported, removed, relocated or reconstructed by the Contractor through cooperation with the owner of the structures involved. In those instances where relocation or reconstruction is impractical, a change in line and/or grade will be ordered by the Engineer and the change shall be made in the manner directed. No deviation shall be made from the required line or grade except by written consent of the Engineer.
3. Obstructions such as street signs, guard posts, small culverts, and other items of prefabricated construction may be temporarily removed during construction provided that essential service is maintained in a relocated setting as approved by the Engineer and that non-essential items are properly stored for the duration of construction. Upon completion of the underground work, all such items shall be replaced at their proper setting at the sole expense of the Contractor.

4. In the event of damage to any surface improvements, either privately or publicly owned, in the

absence of construction necessity, the Contractor will be required to replace or repair the damaged property to the satisfaction of the Engineer and without cost to the Owner.

5. The Contractor shall promptly repair at his expense any break or damage to other utility mains, or to house service connections for water, sewer, and gas caused by his work.

3.2 EXCAVATION AND PREPARATION OF TRENCH

- A. The trench shall be dug to the alignment and depth shown on the Drawings and only so far in advance of construction as the Engineer shall permit. The sides of the trench shall be sloped and/or braced and the trench drained so that workmen can work safely and efficiently. It is essential that discharge pumps be directed toward natural drainage channels or to drain sewers.
- B. Excavated materials will be classified for reuse as being either Suitable or Unsuitable for backfill or other specified use, subject to selective controls. All suitable materials shall be reserved for backfill to the extent needed, and any surplus remaining shall be utilized for other construction on the project as may be specified or ordered by the Engineer. To the extent practicable, granular materials and topsoil shall be segregated from other materials during the excavating and stockpiling operations so as to permit best use of the available materials at the time of backfilling. Unless otherwise specified in the Plans, Specifications, and Special Provisions, material handling as described above shall be considered incidental with no additional compensation provided therefor.
- C. All excavated materials reserved for backfill or other use on the project shall be stored at locations approved by the Engineer that will cause a minimum of inconvenience to public travel, adjacent properties, and other special interests. The material shall not be deposited so close to the edges of the excavations as would create hazardous conditions, nor shall any material be placed so as to block the access to emergency services. All materials considered unsuitable by the Engineer, for any use on the project, shall be immediately removed from the project and be disposed of as arranged for by the Contractor at no extra cost to the Contract.
 1. All excavated material shall be piled in a manner that will not endanger the work and that will avoid obstructing sidewalks and driveways, as far as practical. Gutters shall be kept clear or other satisfactory provisions made for street drainage at all times.
 2. While any open excavations are maintained, the Contractor shall have available a supply of steel plates suitable for temporary bridging of open trench sections where either vehicular or pedestrian traffic must be maintained. Use of the plates shall be as directed or approved by the Engineer and where installed they shall be secured against possible displacement and be replaced with the permanent structure as soon as possible.
- D. Trench excavating shall be to a depth that will permit preparation of the foundation as specified and installation of the pipeline and appurtenances at the prescribed line and grade, except where alterations are specifically authorized. Trench widths shall be sufficient to permit the pipe to be laid and joined properly and the backfill to be placed and compacted as specified. Extra width shall be provided as necessary to permit convenient placement of sheeting and shoring and to accommodate placement of appurtenances.
 1. Where no other grade controls are indicated or established for the pipeline, the excavating and foundation preparations shall be such as to provide a minimum cover over the top of the pipe as specified. Trench widths shall allow for at least six inches of clearance on each side of the

joint hubs. The maximum allowable width of the trench at the top of pipe level shall be the outside diameter of the pipe plus two feet, subject to the considerations for alternate pipe loading set forth below. The width of the trench at the ground surface shall be held to a minimum to prevent unnecessary destruction of the surface structures.

2. The maximum allowable trench width at the level of the top of pipe may be exceeded only by approval of the Engineer, after consideration of pipe strength and loading relationships. Any alternate proposals made by the Contractor shall be in writing, giving the pertinent soil weight data and proposed pipe strength alternate, at least seven days prior to the desired date of decision. Approval of alternate pipe designs shall be with the understanding that there will be no extra compensation allowed for any increase in material or construction costs.
 3. If the trench is excavated to a greater width than that authorized, the Engineer may direct the Contractor to provide a higher class of bedding and/or a higher strength pipe than that required by the Plans, Specifications, and Special Provisions in order to satisfy design requirements, without additional compensation therefor.
- E. Excavations shall be extended below the bottom of structure as necessary to accommodate any required Granular Foundation material. When rock or unstable foundation materials are encountered at the established grade, additional materials shall be removed as specified or ordered by the Engineer to produce an acceptable foundation. Unless otherwise indicated or directed, rock shall be removed to an elevation at least six inches below the bottom surface of the pipe barrel and below the lowest projection of joint hubs. All excavations below grade shall be to a minimum width equal to the outside pipe diameter plus two feet. Rock shall be removed to such additional horizontal dimensions as will provide a minimum clearance of six inches on all sides of appurtenant structures such as valves, housings, access structures, etc.
1. All costs of excavating below grade and placing foundation or bedding aggregates as required shall be included in the bid prices for pipe items to the extent that the need for such work is indicated in the Contract provisions and the Proposal does not provide for payment therefore under separate Contract Items.
 2. If examination by the Engineer reveals that the need for placement of foundation aggregate was caused by the Contractor's manipulation of the soils in the presence of excessive moisture or lack of proper dewatering, the cost of the corrective measures shall be borne by the Contractor.
- F. Ledge rock, boulders, and large stones shall be removed to provide clearance of at least 6" below outside pipe barrel and a clear width of 9" on each side of the pipe shall be provided.
1. The space between the bottom of the trench and rock and the bottom of the pipe shall be backfilled with suitable material thoroughly tamped.
 2. Rock excavation shall include such rocks as are not decomposed, weathered, or shattered, and which will require blasting, barring, wedging, or use of air tools for removal.
 3. Clay and hardpan will not be considered as rock, but included will be any concrete or masonry structure, except pavements, curbs, gutters and sidewalks. Any rock less than one cubic yard in volume shall be classified as regular or earth excavation, and no extra compensation shall be allowed.

- G. Blasting: Blasting will not be allowed.
- H. The Contractor shall be responsible for all on-site drainage and shall provide sedimentation basins to limit sediments from reaching the natural drainage course.

3.3 LAYING OF PIPE

- A. Pipe shall be laid to according to plan inverts and elevations.
- B. The interiors of the pipes shall be thoroughly cleaned of all foreign matter before being lowered into the trench and shall be kept clean during laying operations by means of tight plugs or other approved methods. No trench water shall be allowed to enter the pipes or fittings. At all times when work is not in progress, all open ends of pipes and fittings shall be securely closed.
- C. Remove areas of poor soil and install Granular Aggregate material special foundation material as directed by the Soils Consultant.
- D. Unless otherwise specified, Class C bedding shall be used for all storm sewer pipe.

3.4 BACKFILLING AND GRADING

- A. All excavation in trenches shall be backfilled to the original ground surface or to such grades as specified or shown on the Drawings. The backfill shall begin as soon as practical after the pipe has been placed and shall thereafter be carried on as rapidly as the protection of the balance of the work will permit. Backfilling shall be done as completely as possible so as to attain complete filling and using the best materials available for this purpose, free from boulders, rubbish, frozen lumps, and similar materials. Depositing of the backfill shall be done so the shock of falling material will not injure the structure. Grading over and around all parts of the work shall be done as directed by the Engineer.
- B. Whenever peat or other soil types which are determined by the Engineer to be undesirable for backfill are excavated from the trench, such materials shall be hauled away and deposited where directed by the Engineer at no additional compensation.
- C. The requirements for backfilling shall vary, depending on the portion of trench concerned, such requirements to be as follows:
 - 1. Bottom Portion of Trench. Granular material, free from rocks and boulders, shall be deposited in the trench simultaneously on both sides of the pipe for the full width of the trench to a height of at least 12 inches above the top of the pipe, shovel-placed and tamped to fill completely all spaces under and adjacent to the conduit. In the event that natural, suitable granular material is not encountered during the normal excavation of the trench or when the material encountered is determined unsuitable by the Engineer for backfilling around the conduit as required above, the Contractor shall provide and place such approved material as required.
 - 2. Mid-Portion of Trench: This portion which lies between a level of 12 inches above the top of the pipe and a level of 36 inches below finished grade shall be backfilled only with suitable material as approved by the Engineer, such material to be obtained from the excavation of the same trench or from any other trench under excavation with the site. Backfill shall be accomplished in layers or lifts by back casting or by filling and spreading. Placement shall be in 8-inch lifts, each lift being thoroughly compacted by pneumatic tamper, tamping rollers, vibrating rollers, or other

means, in accordance with the "ordinary compaction" method as described in MNDOT Specification. Where trenches cross areas outside of existing or proposed roadways and parking lots, backfill may be placed and compacted in 18-inch lifts.

3. Top Portion of Trench: The disturbed area lying within the top 36 inches shall be restored in accordance with Section 02105, Earthwork.

3.5 EROSION CONTROL

- A. The Contractor shall provide erosion control for the entire project as shown on the plans, directed in the field and as required by the appropriate permitting agencies. The Contractor shall provide holding areas and settling basins as necessary to control the suspended solids in construction dewatering discharges as required by the regulating agencies. Payment for holding areas and settling basins shall not be made directly but shall be considered incidental to the project.
- B. Riprap shall be installed as indicated in the plans.

3.6 INSPECTION

- A. Upon completion of the sewer construction all sewers shall be cleaned and ramped. All runs of sewer between manholes shall be straight and true. The Contractor shall clean the storm sewer system to ensure that it is free of sand, rubble, and debris.

END OF SECTION 02503

SECTION 02575

EROSION CONTROL & TURF ESTABLISHMENT

PART 1 - GENERAL

1.1 GENERAL

A. Related requirements specified elsewhere:

1. Site Preparation & Demolition: Section 02100

1.2 MEASUREMENT AND PAYMENT

A. See **SECTION 01150**: Measurement and Payment

1.3 SUBMITTALS

- A. Submit in accordance with **SECTION 01300** – Submittals.
- B. Certified Seed Tags – All seed used on this project shall be from certified sources. Documentation verifying the origin of this seed shall be provided to the ENGINEER at least 30 days prior to the installation date. In the event that certain species may not be available as certified, those species may be supplied by supplemented by a Certified Approved Collector/Producer along with documentation demonstrating the origin of those materials. All substitutions are subject to ENGINEER approval of the prior to placement.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Silt Fence - Heavy Duty

1. Silt fence must be of a type specified in the project plans and details.
2. Geotextile shall be uniform in texture and appearance and shall have no defects, flaws, or tears that would affect its physical properties. It shall contain sufficient ultraviolet rays (U.V.) inhibitor and stabilizers to provide a minimum 2 -year service life from outdoor exposure.
3. Heavy Duty fastening and sewing methods shall be consistent with connections to steel post(s). Site requirements may require J-hook installation of silt fence not shown on the Constuction Drawings.

B. Erosion Control Blanket - Straw

1. The contractor must supply an erosion control blanket of the type specified in the project plans and details.
2. See **SECTION 01120**: SPECIAL PROVISIONS and the following requirements:
 - (a) Each erosion control blanket shall consist of a uniform web of interlocking fibers with net backing. The blanket shall be of uniform thickness with the material fibers being evenly distributed over the entire area of the blanket. All blankets shall be smolder resistant.
 - (b) The net backing on each blanket shall consist of polypropylene mesh. The netting shall contain sufficient UV stabilization for breakdown to occur within a normal growing season.
 - (c) Machine-produced mat of 100% agricultural straw with a functional longevity of up to 12 months. The blanket shall be of consistent thickness with the straw evenly distributed over

the entire area of the mat. The blanket shall be covered on the top side with a lightweight photodegradable polypropylene netting.

C. RipRap

1. See **SECTION 02241: AGGREGATE & SOIL MATERIALS**

D. Seeding and Fertilizer

1. Fertilizer shall be delivered to the site in bags, or other convenient containers, each labeled and bearing the name, trademark, and warranty of the producer.
2. Seed shall be labeled in accordance with the U.S. Department of Agriculture Rules and Regulations and shall be furnished in sealed standard containers.
3. Grass seed shall consist of the species listed below; the aggregate percentage of material other than grass seed not exceeding one (1) percent of the total weight of the mixture.

- (a) See **SECTION 01120: SPECIAL PROVISIONS**

PART 3 - EXECUTION

3.1 PROCEDURE

A. Silt Fence

1. The geotextile of the heavy duty silt fence shall be attached to the upstream side of the net backing. The bottom edge of the geotextile shall be buried at least 6-inch deep in a vertical trench with the soil pressed firmly against the embedded geotextile. The geotextile of the machine sliced silt fence shall be inserted by machine in a slit in the soil 8-12 inch deep. The slit shall be created such that a horizontal chisel point at the base of a soil slicing blade slightly disrupts soil upward as the blade slices through the soil. The geotextile shall be mechanically inserted directly behind the soil slicing blade in a simultaneous operation, achieving consistent placement and depth. No turning over (plowing) of soil is allowed for the slicing method. Compact the soil immediately next to the silt fence fabric by operating the wheels of a tractor or skid steer on each side of the silt fence a minimum of 2 times. The bottom edge of the geotextile on the preassembled silt fence shall be buried at least 6 inches deep in a vertical trench and the soil pressed firmly against the embedded geotextile.
2. Each post shall be securely fastened to the geotextile by zip ties, clips or staples suitable for each purpose. Standard T metal posts with a welded plate shall be used on the machine sliced and heavy duty installations. Wooden posts used on the preassembled silt fence shall have a sharpened end and shall protrude below the bottom of the geotextile to allow for a minimum of 18-inch embedment. Maximum post spacing shall be 8-foot for heavy duty; 6-foot for machine sliced and 6-foot for preassembled. When machine sliced is used for ditch check installations the maximum post spacing shall be 4-foot.

B. Erosion Control Blanket - Straw

1. The material fiber in each blanket shall be securely attached to the net backing to prevent movement of the fiber in relation to the netting. For blankets consisting of 3-inch material fibers, the blanket shall be fastened together at a spacing not to exceed 2 inches. For blankets consisting of 6-inch material fibers, the blanket shall be fastened together at a spacing not to exceed 4 inches.

2. The staples used to anchor Category 1 and 2 blankets shall be U shaped, 11 gauge or heavier steel wire having a span width of 1 inch and a length of 6 inches or more from top to bottom after bending. Staples used to anchor Category 3, 4 and 5 blankets shall have a minimum length of 8 inches.

C. Rip-Rap

1. Random Riprap

- (a) Random riprap shall be positioned in a manner that will provide uniform distribution of the various sizes of stone and produce a dense, well-keyed layer of stones with the least practical quantity of void space. The surface shall be leveled as necessary, to produce a reasonably uniform appearance and the required thickness.
- (b) The riprap shall be placed on a filter layer consisting of geotextile fabric unless otherwise specified.
- (c) Filter material shall cover the entire area on which the riprap is to be placed. The Contractor may choose the type of filter material, except as restricted for geotextile filters, unless the type is specified in the Contract.

D. Seeding and Fertilizer

1. All existing vegetated areas disturbed by construction activities shall be fertilized and seeded.
2. Fertilizer or seed which has become wet or otherwise damaged in transit or in storage will not be acceptable.
3. Upon completion of spreading topsoil to the depth specified, the surface shall be hand raked or other means used that will provide a comparable job of fine grading prior to seeding. If the topsoil has become packed after spreading, it shall be disked and harrowed until the surface has been thoroughly loosened to a depth of 3 to 4 inches, after which it shall be fertilized and raked as specified above.
4. The seed shall be uniformly distributed over all disturbed areas inside the construction limits by sowing half the seed in one direction; the balance at right angles to the first. The seed shall then be covered to an average depth of 1/4 inch to 1/2 inch by means of disc anchoring. Hydroseeding methods may be used in lieu of broadcast seeding and disc anchoring. Seeding shall not be done during windy weather.
5. All seeding work shall be done between April 15 and June 1, or July 20 and September 20, except as otherwise approved in writing by the Engineer.
6. When conditions are such by reason of drought, high winds, excessive moisture or other factors, that satisfactory results are not likely to be obtained, the work shall be stopped and it shall be resumed only when conditions are favorable again, or when approved alternate or corrective measures and procedures have been adopted.
7. In the event that for any reason, whether it be caused by wind, rain, heat, cold, drought, or lack thereof, the seeding in the Engineer's opinion is not successful in producing a uniform and normal grass covering with the normal germination period, the Contractor shall at his own expense re-prepare the seed bed, re-fertilize and reseed until such time as a normal stand of growing grasses has been achieved.

END OF SECTION 02575

SECTION 02622

LEACHATE SYSTEM COLLECTION PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.

1.2 SUMMARY

- A. Leachate collection materials and construction requirements within proposed landfill phase are as follows.
 - 1. Install perforated leachate collection pipe and non-perforated cleanout risers.

1.3 SUBMITTALS

- A. Manufacturers Pipe and Material Certifications that the piping materials meet the physical and hydraulic properties.
- B. Installer's recommended procedures for butt-fusion of HDPE pipe.
- C. Qualifications of the butt-fusion foreman and technician(s)

1.4 QUALITY ASSURANCE

- A. Pipe shall be checked for outside diameter, wall thickness, length, roundness, and surface finish on the inside and outside and end cut.
- B. High-density polyethylene (HDPE) resins for manufacturing of pipe shall be checked for density, melt flow rate, and contamination.
- C. If requested, the pipe or fittings manufacturer can be required to retest or verify certification data. All retesting shall be at the manufacturer's expense, and shall be performed as required in the specifications.
- D. Accurately record locations of pipe runs, connections, manholes, and inverts.
- E. Noticeable variations from true alignment and grade of installed pipe will be considered sufficient cause for rejection of work.
- F. Accurately record locations of pipe runs, connections, manholes, and inverts.

1.5 MATERIAL LABELING, DELIVERY, STORAGE AND HANDLING

- A. Unloading, on-site handling, and storage of the pipes are the responsibility of the Contractor.
- B. All materials will be stored in the designated areas.
- C. Pipe, fittings and accessories, and pipe coatings shall not be damaged during delivery, handling, and storage.
- D. Keep pipe interiors completely free of dirt and foreign matter. Cover ends with caps/tape while transporting individual/fused sections of non-perforated pipe.
- E. Transport of fused perforated sections will not be allowed. Fusing operations for perforated sections must occur adjacent proposed placement location(s).

PART 2 - PRODUCTS

2.1 LEACHATE COLLECTION & CONVEYANCE PIPING

- A. High Density Polyethylene (HDPE) Pipe
 - 1. Leachate Collection piping: 8-in. diameter, SDR-11, perforated
 - a. Perforations: 3/8-5/8 in. diameter holes at locations shown on the drawings.

- b. Perforations may be field fit as necessary. Care must be taken to flush out shavings from filed fit and drilled holes.
- 2. Leachate Cleanout Riser: 8-in. diameter, SDR-11 non-perforated pipe with blind flange cover plate and backing ring (stainless steel hardware).
- 3. Butt Fusion Welding: In accordance with pipe manufacturer's requirements.
- 4. Fittings: SDR-11.

2.3 MISCELLANEOUS MATERIALS

- A. Nonwoven Geotextile
 - 1. See **SECTION 02245**, Geotextile.

PART 3 - EXECUTION

3.1 PIPING INSTALLATION

- A. Leachate Collection Pipe
 - 1. Place pipe on top of the filter geotextile fabric layer per SECTION 02245. Orient pipe perforations down. Place leachate collection pipe wrap aggregate on both sides of pipe to provide uniform lateral support. Continue placing leachate collection pipe wrap aggregate above top of collection pipe. Slope leachate collection pipe wrap aggregate placed above collection pipe as shown on Drawings. Wrap filter geotextile fabric per SECTION 02245 over the leachate collection pipe wrap aggregate (washed stone) with edges extending 12-in. beyond the leachate collection pipe wrap aggregate as shown on Drawings. Secure fabric with granular drainage layer material to prevent fabric from being displaced by wind. Pipe joints shall be tight and true and welded in accordance with manufacturer's recommendations.
- B. Sideslope Extraction and Cleanout Risers
- C. Record Survey
 - 1. After placing pipe and leachate collection pipe wrap aggregate to provide uniform lateral support, leave top of pipe exposed or 2-ft sections of pipe at locations required by surveyor to accurately record as-built conditions.

END OF SECTION 02622

SECTION 02731 GRAVEL SURFACING

PART I – GENERAL

1.1 SUMMARY

- A. This section defines the Aggregate Surfacing operations to be used to construct the perimeter access roads (outside waste limits) and landfill access roads (inside waste limits).

1.2 MEASUREMENT AND PAYMENT

- A. See **SECTION 01150**: Measurement and Payment.

1.3 SUBMITTALS

- A. Test Results:
 - 1. Submit results of source tests for aggregate material in accordance with this section and **SECTION 01300**.

1.4 PROJECT/SITE CONDITIONS

- A. Do not block or obstruct roads, streets, pavements or monitoring wells except when authorized by OWNER.

PART 2 – PRODUCTS

2.1 GRADATION

- A. Aggregates for gravel surfacing shall meet the requirements: Class 5 material per MN/DOT Specification 3138.
- B. If it is necessary to add a portion of the overburden or binder soil from an outside source, the materials shall be introduced into the aggregate producing plant at a uniform rate by a separate conveyor simultaneously with the base aggregate.

2.2 QUALITY CONTROL

- A. Samples for testing to determine compliance with the aggregate gradation specifications for gravel surfacing will be obtained from the roadway at a time when the material is ready for compaction. The samples may be obtained from the windrow or after blending and spreading of the material on the roadway.
- B. If additives such as calcium chloride or bituminous material are incorporated in a central mixing plant, the aggregate will be sampled before such materials are added.

PART 3 – EXECUTION

3.1 CONSTRUCTION REQUIREMENTS (GRAVEL SURFACING)

- A. Gravel Surfacing shall be constructed in accordance with MN/DOT Specification 2118.

- B. The specified quantity of aggregate shall be deposited on the road and spread to the required cross-section only when the roadbed is so dry and compact that no rutting or displacement will occur, and only on sections of such length as will meet the ENGINEER's approval. Aggregate shall be deposited and spread on public road approaches and private entrances in the quantities directed by the ENGINEER.
- C. Aggregate windrows shall be moved as necessary to permit drying and reshaping of the subgrade. The aggregate shall be mixed prior to spreading, as necessary to produce uniformity in the gradation of the material.
- D. No compaction will be required of the aggregate surfacing unless the quantity of aggregate placed results in a surface thickness in excess of 2 inches, in which case the aggregate surfacing shall be compacted in accordance with the Construction Requirements for aggregate base in Section 3.2 below.

3.2 CONSTRUCTION REQUIREMENTS (AGGREGATE BASE)

- A. At the time of spreading the base material for compaction, the aggregate shall be so uniformly mixed that it will meet specified gradation requirements, based on the results of gradation tests run on aggregate samples obtained after mixing and prior to compaction.
- B. The material for each layer shall be spread and compacted to the required cross section and density before placing aggregate thereon for a succeeding layer. The surface of each layer shall be maintained, with a uniform texture and firmly keyed particles, until the next layer required by the Contract is placed thereon or until the completed base is accepted if no other construction is required thereon.
- C. Specified Density Method
 - 1. Aggregate base course shall be compacted to not less than 95% of maximum standard Proctor dry density. Using the conventional rolling equipment, moisture content shall not be less than 90% nor more than 110% of optimum moisture contents.

Nuclear Density & Moisture (ASTM D6938)

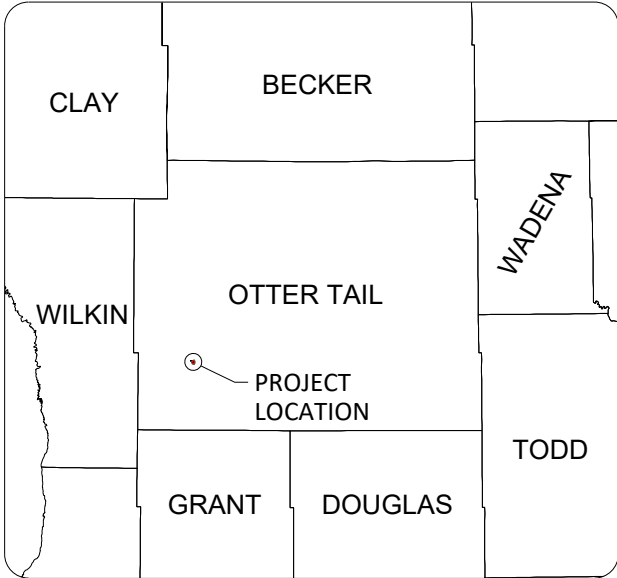
One test per 400 tons placement.

3.3 FIELD QUALITY CONTROL

- A. The CONTRACTOR shall construct each base course in conformity with the cross-sectional dimensions shown in the Plans and the staked grades. When the final layer of base has been completed, and at the time any additional construction is to be placed thereon, the finished surface of the base shall not vary more than 0.10 foot from the elevation prescribed for that point as determined from the staked grades and the typical section shown in the Plans. When the base is placed adjacent to a pavement, the elevation of the finished surface of the base shall be referenced to the edge of the pavement.
- B. When fine grading operations are required on the finished base prior to constructing pavement thereon, the surface elevation tolerance shall be met at the time of completing the fine grading. Any excess material deposited on the shoulders as a result of those operations, that is contaminated to the extent that it does not meet the Specification requirements for use in the aggregate shouldering, base or surfacing, will be deducted from the pay quantities.

END OF SECTION 02731

CONSTRUCTION PLANS FOR
FERGUS FALLS LANDFILL PHASE 3B EXPANSION
CITY OF FERGUS FALLS
MPCA PERMIT NO. SW-572
DECEMBER, 2024



VICINITY MAP

UTILITY NOTE:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION, AS-BUILT MAPS AS PROVIDED BY MUNICIPALITIES OR UTILITY COMPANIES, AND/OR EXISTING DRAWINGS. THERE IS NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN INDICATE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. NOR IS THERE A GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY RESULT FROM THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES.



LOCATION MAP



HOUSTON
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7550 MERIDIAN CIR N
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www.houstoneng.com



GOVERNING STANDARDS:
MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION. THIS SPECIFICATION INCLUDES THE SHAPES, COLORS, AND FONTS USED IN ROAD MARKINGS AND SIGNS. ALL TRAFFIC CONTROL DEVICES MUST CONFORM TO THESE STANDARDS.

GOVERNING SPECIFICATIONS:
CONSTRUCTION SPECIFICATIONS FOR MUNICIPAL PUBLIC WORKS IMPROVEMENTS, ADOPTED BY THE CITY OF FERGUS FALLS, MN SHALL APPLY TO ALL STANDARD DRAWINGS CURRENTLY IN EFFECT AND OTHER CONTRACT PROVISIONS SUBMITTED HEREIN:

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.



Dennis D. McAlpine
License No. 46827

Date: 12-20-2024

H:\JBN\6000\6018\6018_0014\CAD\Plans\6018-0014_ Legend.dwg-G-2 LEGEND-1/2/20/2024 12:24 PM-lazgan

LEGEND

	EXISTING	DEMO	NEW	FUTURE
LEACHATE PERFORATED	LC - P	LC - P	LC - P	LC - P
LEACHATE SOLID	LC - S	LC - S	LC - S	LC - S
STORMPIPING/CULVERT	>>	>>	>>	
UNDERDRAIN TRENCH	DR		DR	
SANITARY SEWER PIPING	SS			
WATERMAIN	W			
OVERHEAD POWER	P			
UNDERGROUND ELECTRIC	UGE			
UNDERGROUND TELEPHONE	UGT			
UNDERGROUND FIBER OPTIC	FO			
CABLE TV	CTV			
FENCE	X X		X X	
RIGHT OF WAY LINE	R/W			
CELL BOUNDARY				
CONSTRUCTION PROJECT LIMITS				
MINOR CONTOUR	2002		2002	
MAJOR CONTOUR	2010		2010	
FIBER ROLL				
SILT FENCE			XX XX	
WASTE LIMITS				
FLOWLINE				
MANHOLE	ST SS	ST SS		
CLEANOUT				
UTILITY POLE				
GUY WIRE				
SIGN				
GROUND WATER MONITORING WELL	MW-X	MW-X		
LATERAL MIGRATION WELL	LM-X	LM-X		
GAS VENT	GV-X	GV-X		
SOIL BORING	LBG-X			
CURB STOP				
HYDRANT				
GATE VALVE				
STREET LIGHT				
RIPRAP				
GRAVEL HAUL ROAD				
STOCKPILE				
CONCRETE PAVEMENT				
ASPHALT PAVEMENT				
TEMPORARY STORMWATER BERM FOOTPRINT				
TOPSOIL AND SEEDING				
LIMITS/AREA OF SOIL BARRIER LAYER				
POND/DITCH BOTTOM				
EROSION CONTROL BLANKET				

SHEET INDEX

SHEET NUMBER	SHEET TITLE
G-1	COVER
G-2	LEGEND
C-1	OVERALL EXISTING SITE
C-2	DEMO PLANS
C-3	SITE MAP
C-4	CELL 3B GRADING PLAN
C-5	EXTERIOR GRADING PLAN - ACCESS ROAD AND POND
C-6	EXTERIOR GRADING PLAN - PHASE DELINEATION BERM
C-7	ACCESS ROAD PLAN AND PROFILE
C-8	UNDERDRAIN EXTENSION PLAN & PROFILE
C-9	LEACHATE PLAN & PROFILE
C-10	POINT SCHEDULE
C-11	SAMPLE LINES
C-12	W-E CROSS SECTIONS
C-13	W-E CROSS SECTIONS
C-14	W-E CROSS SECTIONS
C-15	W-E CROSS SECTIONS
C-16	N-S CROSS SECTIONS
C-17	N-S CROSS SECTIONS
C-18	N-S CROSS SECTIONS
D-1	DETAILS
D-2	DETAILS
D-3	DETAILS

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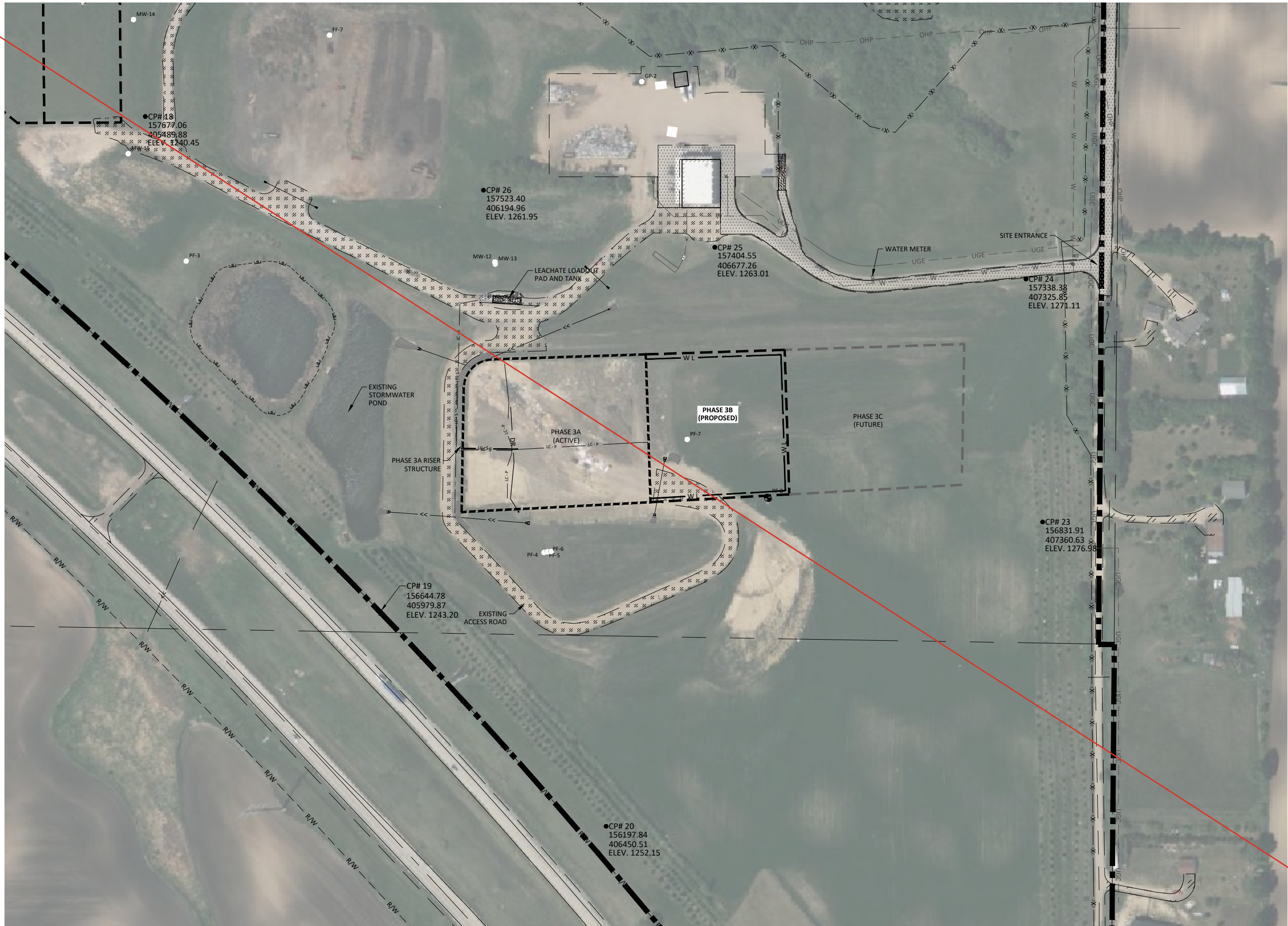
Drawn by	Date
AMZ	12-20-2024
Checked by	Scale
DDM	AS SHOWN

FERGUS FALLS LANDFILL PHASE 3B EXPANSION CITY OF FERGUS FALLS P.O. BOX 868, FERGUS FALLS, MN 56538-0868

LEGEND PROJECT NO. 9774

SHEET G-2

H:\JBN\6000\6018\6018_001\CAD\Plans\6018-0014_Existing Conditions.dwg-C-1 OVERALL EXISTING SITE-12/20/2024 12:24 PM-lazigan



EXISTING SITE CONTROL				
Point #	Elevation	Northing	Easting	Description
15	1238.76	157961.53	405512.87	CP15 0.5" IP
16	1229.33	157980.63	405022.55	CP16 0.5" IP
17	1233.34	157748.96	405035.84	CP17 0.5" IP
18	1240.45	157677.06	405489.88	CP18 0.5" IP
19	1243.20	156644.78	405979.87	CP19 0.5" IP
20	1252.15	156197.84	406450.51	CP20 0.5" IP
21	1249.75	155635.87	406931.78	CP21 0.5" IP
22	1265.40	155960.25	407375.67	CP22 0.5" IP
23	1276.98	156831.91	407360.63	CP23 0.5" IP
24	1271.11	157338.38	407325.85	CP24 0.5" IP
25	1263.01	157404.55	406677.26	CP25 0.5" IP
26	1261.95	157523.40	406194.96	CP26 0.5" IP

NOTE:
PROJECT COORDINATES PROVIDED BY THE CITY OF FERGUS FALLS

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Checked by	Scale
DDM	AS SHOWN

FERGUS FALLS LANDFILL PHASE 3B EXPANSION
CITY OF FERGUS FALLS
P.O. BOX 868, FERGUS FALLS, MN 56538-0868

OVERALL EXISTING SITE
PROJECT NO. 9774

SHEET
C-1



H:\JBN\6018\6018_0014\CAD\Plans\6018-0014_Site Plan.dwg C-3 SITE MAP-12/20/2024 12:25 PM- (azigan)

No.	Revision	Date	By	I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota. Dennis D. McAlpine License No. 46827	12-20-2024 Date



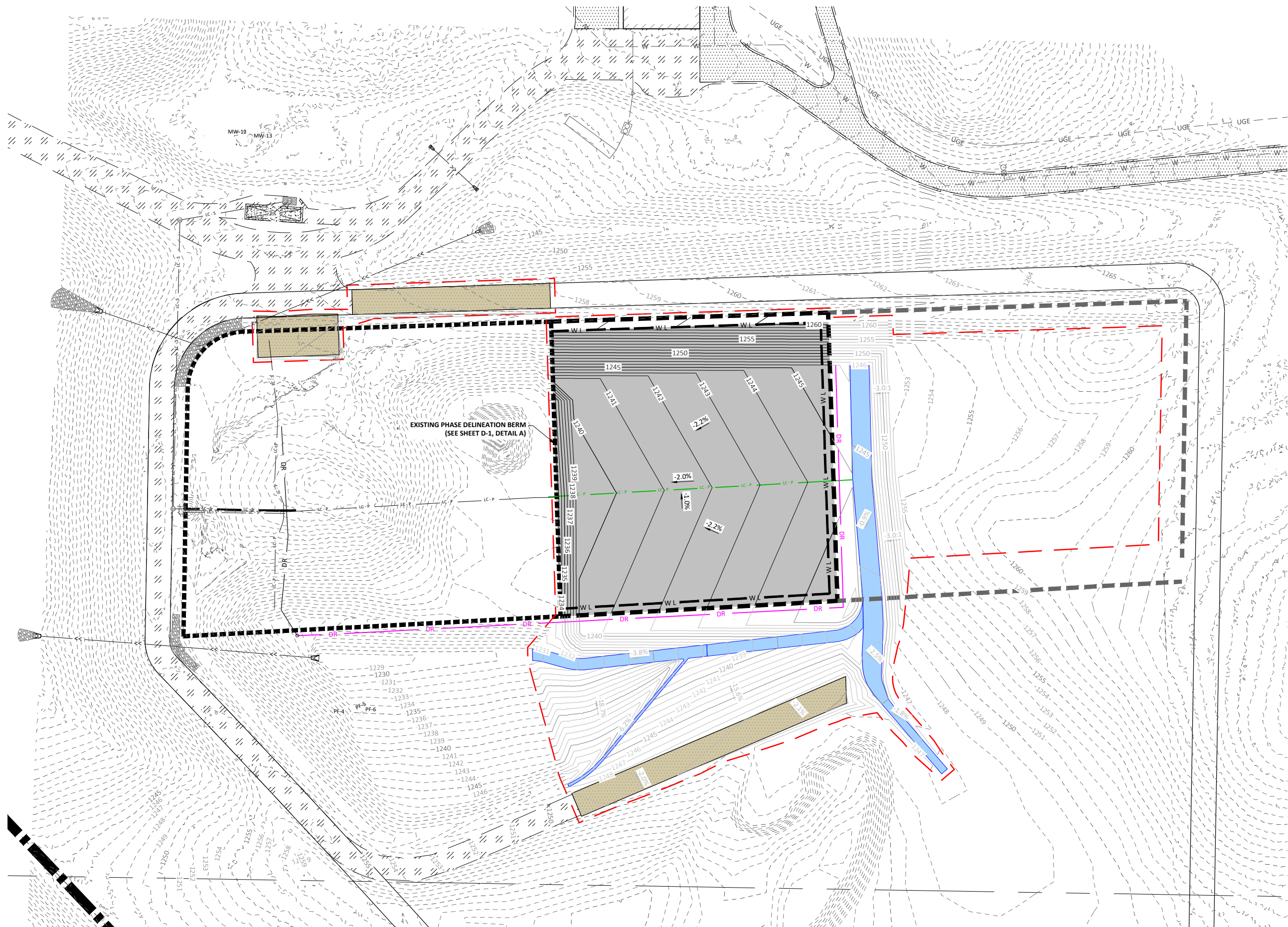
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AMZ	12-20-2024
Checked by	Scale
DDM	AS SHOWN

FERGUS FALLS LANDFILL PHASE 3B EXPANSION
CITY OF FERGUS FALLS
P.O. BOX 868, FERGUS FALLS, MN 56538-0868

SITE MAP
PROJECT NO. 9774

SHEET
C-3

H:\JBN\6018\6018_001\CAD\Plans\6018-0014_Site Plan.dwg C-4 CELL 3B GRADING PLAN-12/20/2024 12:25 PM: (arigen)



NOTES:

1. ALL GRADES WITHIN THE CELL 3B BOUNDARY ARE TO TOP OF RE-COMPACTED SOIL BARRIER LAYER.
2. ALL GRADES OUTSIDE OF THE CELL 3B BOUNDARY ARE TO FINISHED GRADE WITH THE EXCEPTION OF THE PHASE DELINEATION BERM, TURNAROUND PAD, AND TEMPORARY DRAINAGE BERM FOOTPRINTS. SEE SHEET C-6

No.	Revision	Date	By

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Dennis D. McAlpine

Dennis D. McAlpine
License No. 46827

12-20-2024
Date



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AMZ

Checked by
DDM

Date
12-20-2024

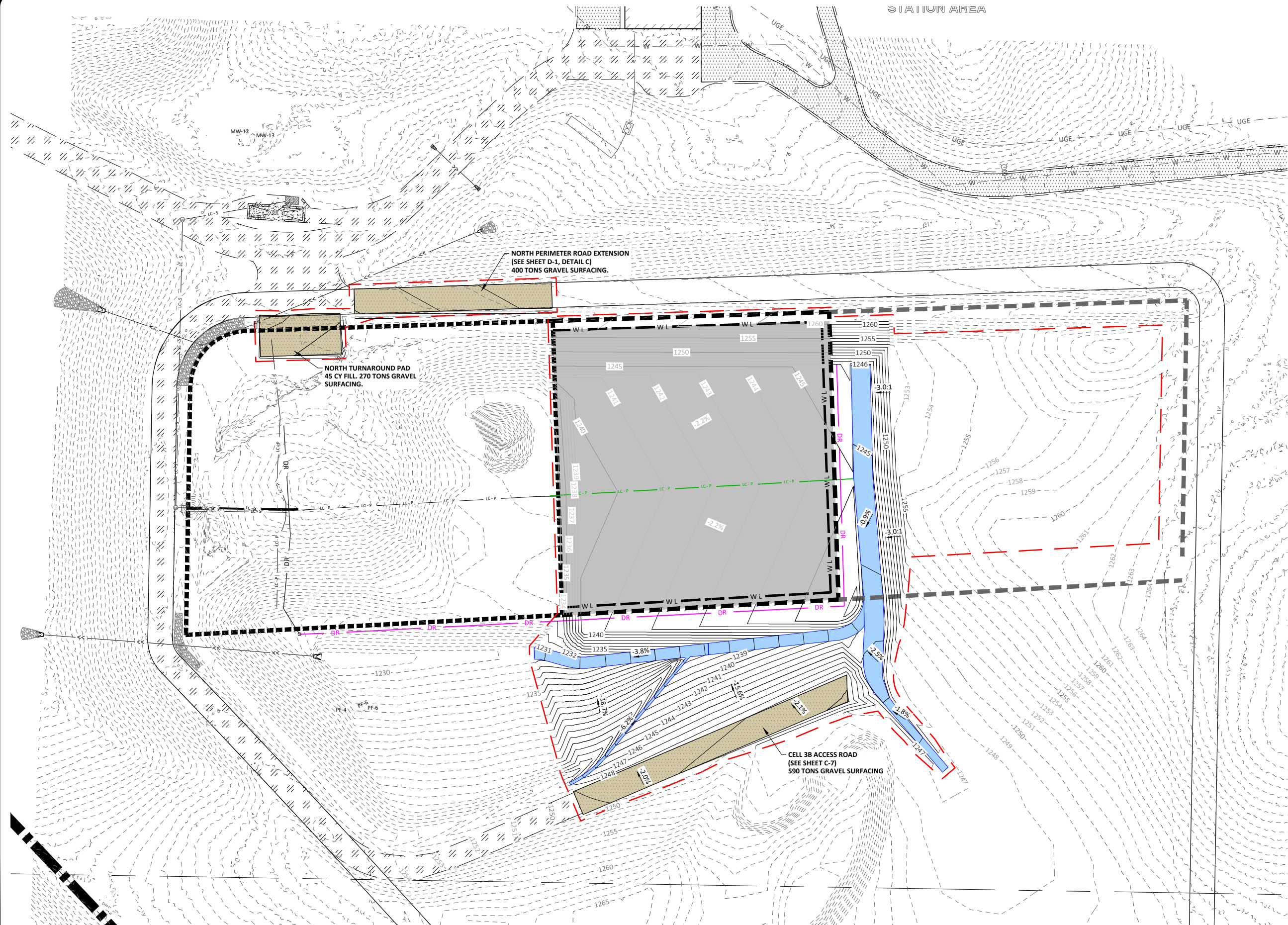
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FERGUS FALLS LANDFILL PHASE 3B EXPANSION
CITY OF FERGUS FALLS
P.O. BOX 868, FERGUS FALLS, MN 56538-0868

CELL 3B GRADING PLAN
PROJECT NO. 9774

SHEET
C-4

H:\JBN\6018\6018_0014\CAD\Plans\0018-0014_Access Road and Pond.dwg-C-5 EXTERIOR GRADING PLAN - ACCESS ROAD AND POND-12/20/2024 12:25 PM-larigan)



NOTES:

1. ALL GRADES WITHIN THE CELL 3B BOUNDARY ARE TO TOP OF RE-COMPACTED SOIL BARRIER LAYER.
2. ALL GRADES OUTSIDE OF THE CELL 3B BOUNDARY ARE TO FINISHED GRADE WITH THE EXCEPTION OF THE PHASE DELINEATION BERM, TURNAROUND PAD, AND TEMPORARY DRAINAGE BERM FOOTPRINTS. SEE SHEET C-6

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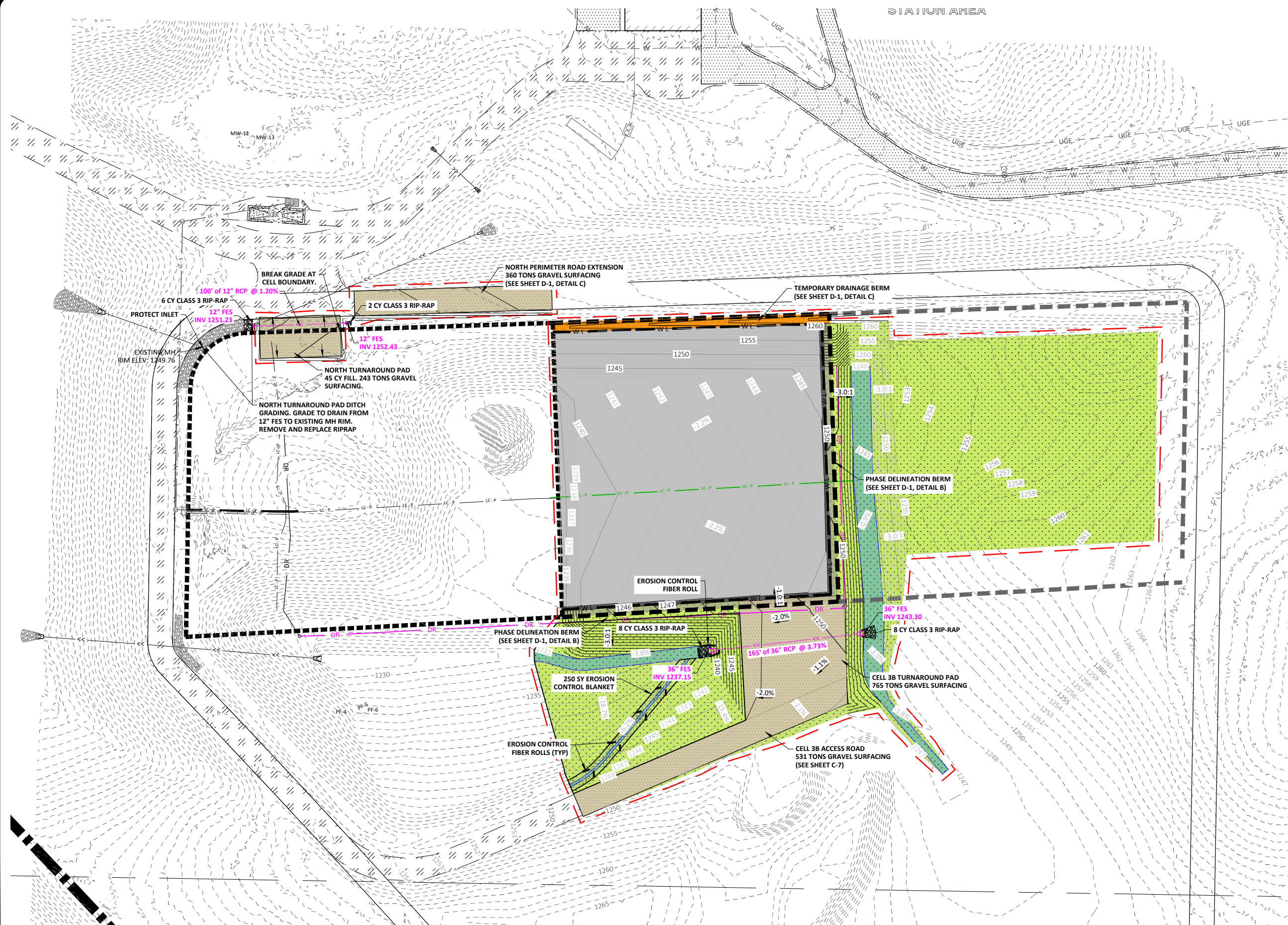
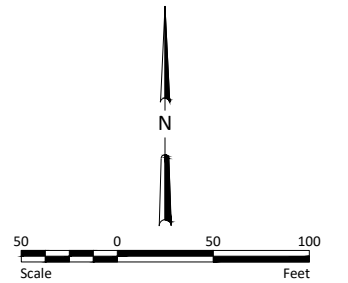
Drawn by	Date
AMZ	12-20-2024
Checked by	Scale
DDM	AS SHOWN

FERGUS FALLS LANDFILL PHASE 3B EXPANSION
CITY OF FERGUS FALLS
P.O. BOX 868, FERGUS FALLS, MN 56538-0868

EXTERIOR GRADING PLAN -
ACCESS ROAD AND POND
PROJECT NO. 9774

SHEET
C-5

STATION AREA



NOTES:

1. ALL GRADES WITHIN THE CELL 3B BOUNDARY ARE TO TOP OF RE-COMPACTED SOIL BARRIER LAYER.
2. ALL GRADES OUTSIDE OF THE CELL 3B BOUNDARY ARE TO FINISHED GRADE.

H:\JBN\6018\6018_0014\CAD\Plans\0018-0014_Phase Delineation Berm and Turnaround Pad.dwg C-6 EXTERIOR GRADING PLAN - PHASE DELINEATION BERM-12/20/2024 12:25 PM-azigan)

No.	Revision	Date	By	I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota. Dennis D. McAlpine License No. 46827	12-20-2024 Date



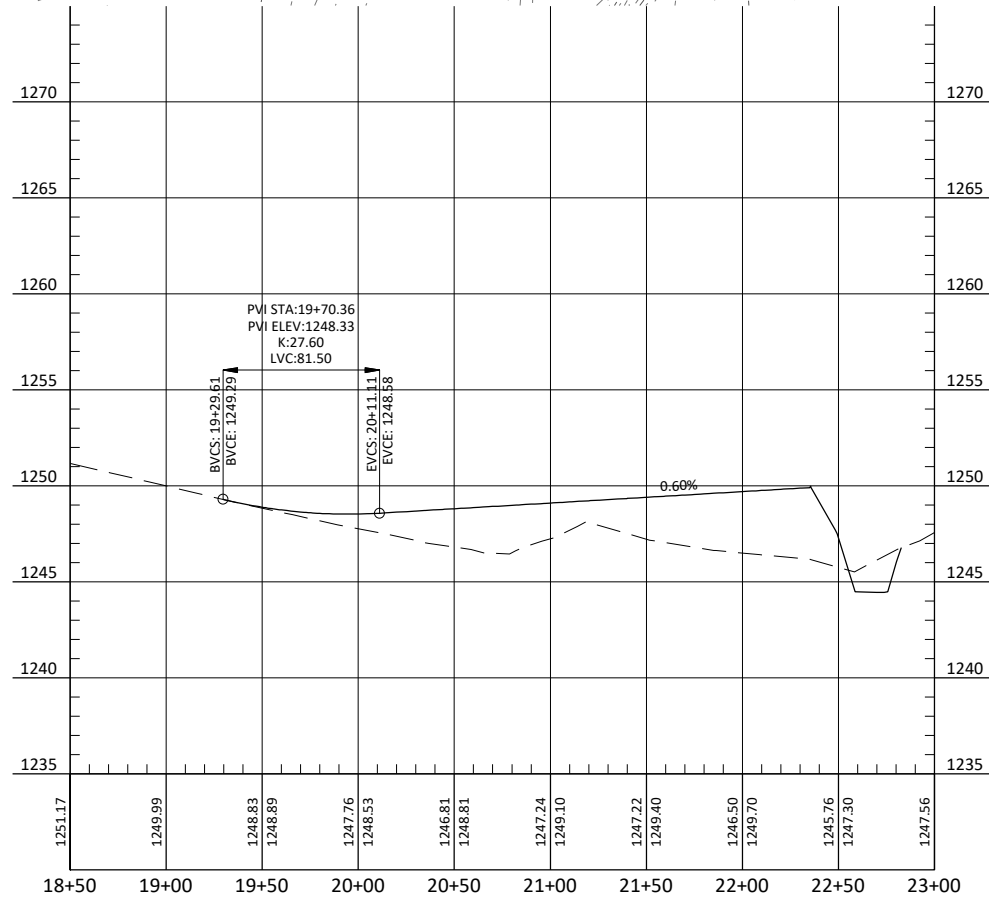
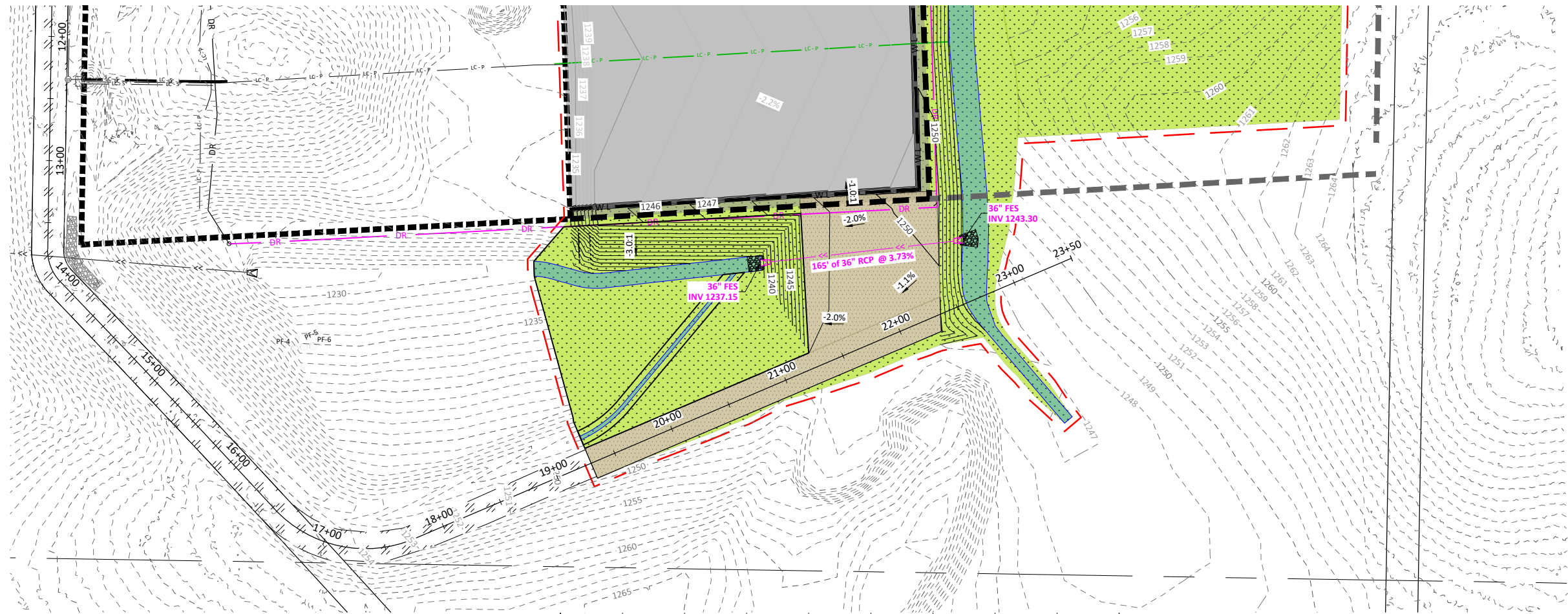
Drawn by	Date
AMZ	12-20-2024
Checked by	Scale
DDM	AS SHOWN

FERGUS FALLS LANDFILL PHASE 3B EXPANSION
CITY OF FERGUS FALLS
P.O. BOX 868, FERGUS FALLS, MN 56538-0868

EXTERIOR GRADING PLAN -
PHASE DELINEATION BERM
PROJECT NO. 9774

SHEET
C-6

H:\JBN\0000\6018_0014\CAD\Plans\6018-0014_Phase Delineation Berm and Turnaround Pad.dwg-C-7 ACCESS ROAD PLAN AND PROFILE-12/20/2024 12:25 PM-(arigan)



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Dennis D. McAlpine
Dennis D. McAlpine
License No. 46827

12-20-2024
Date



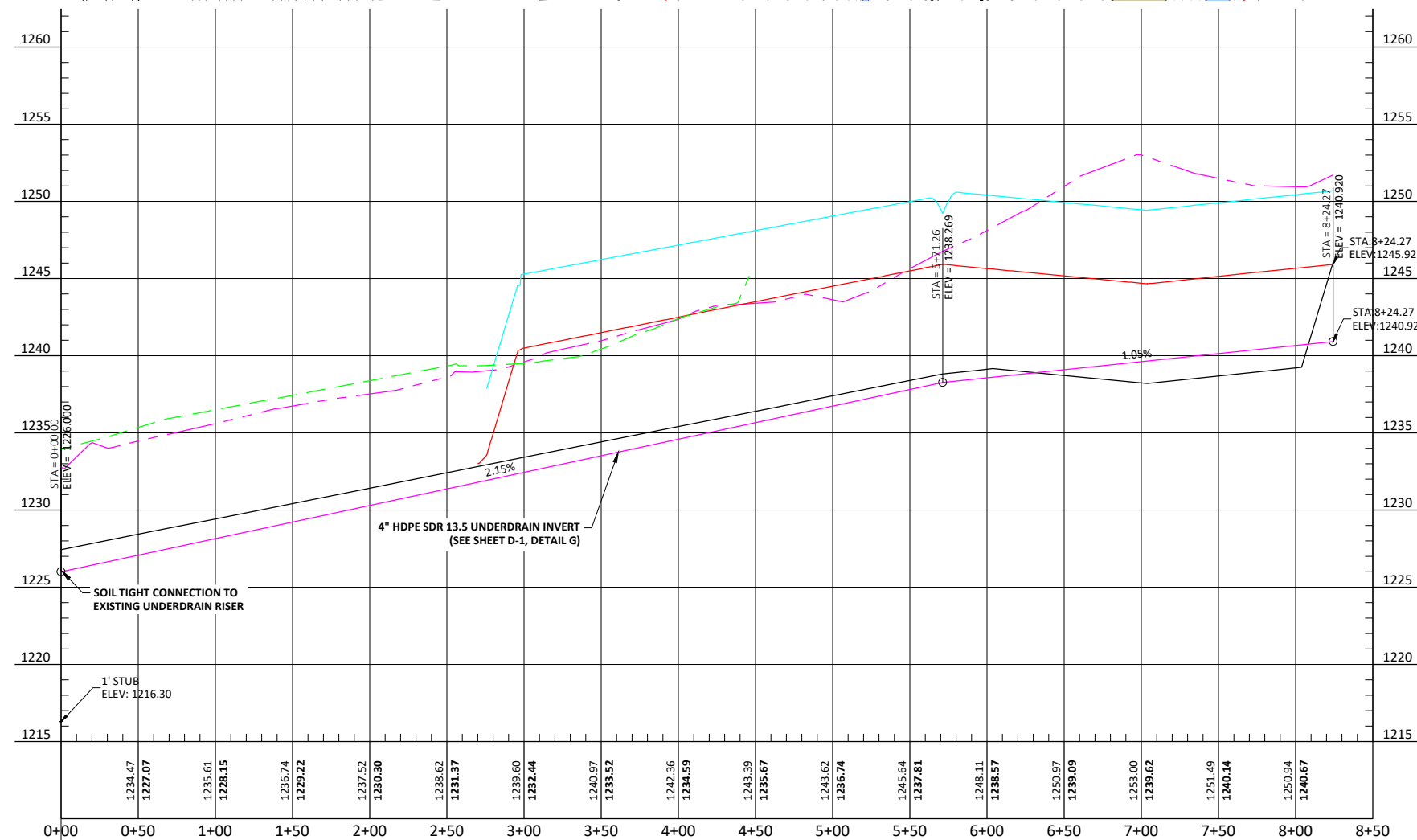
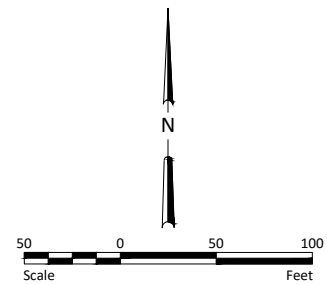
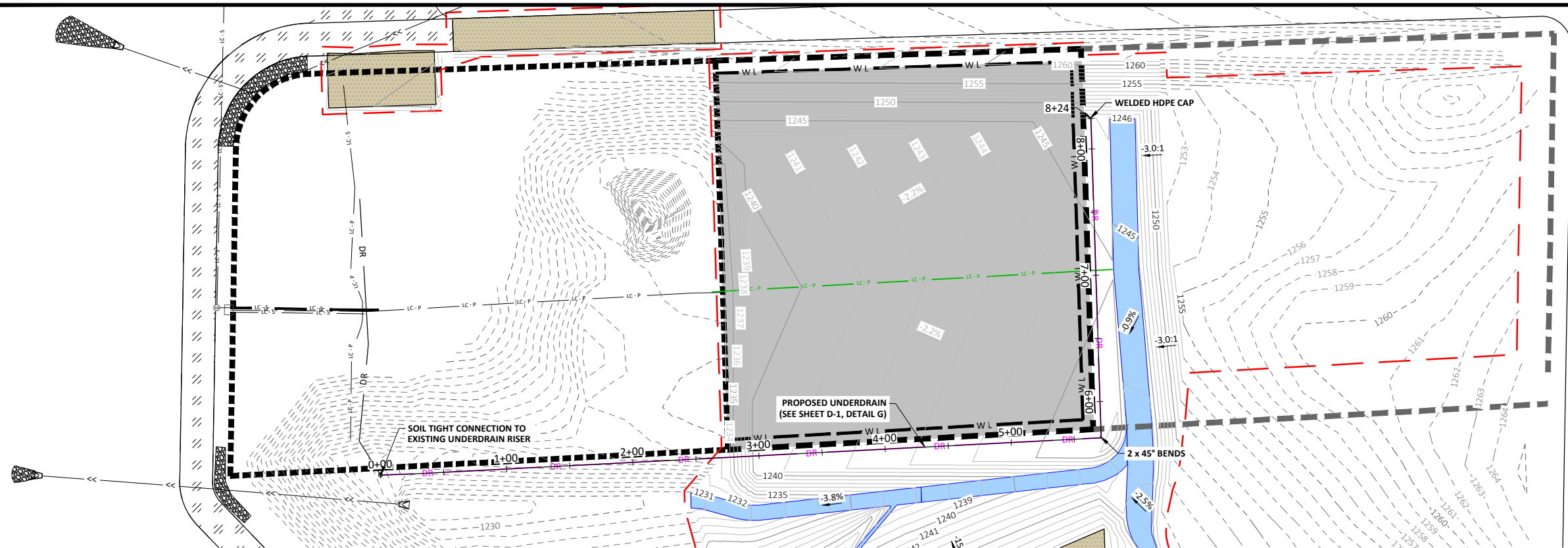
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AMZ
Date
12-20-2024
Checked by
DDM
Scale
AS SHOWN

FERGUS FALLS LANDFILL PHASE 3B EXPANSION
CITY OF FERGUS FALLS
P.O. BOX 868, FERGUS FALLS, MN 56538-0868

ACCESS ROAD PLAN AND PROFILE
PROJECT NO. 9774

SHEET
C-7

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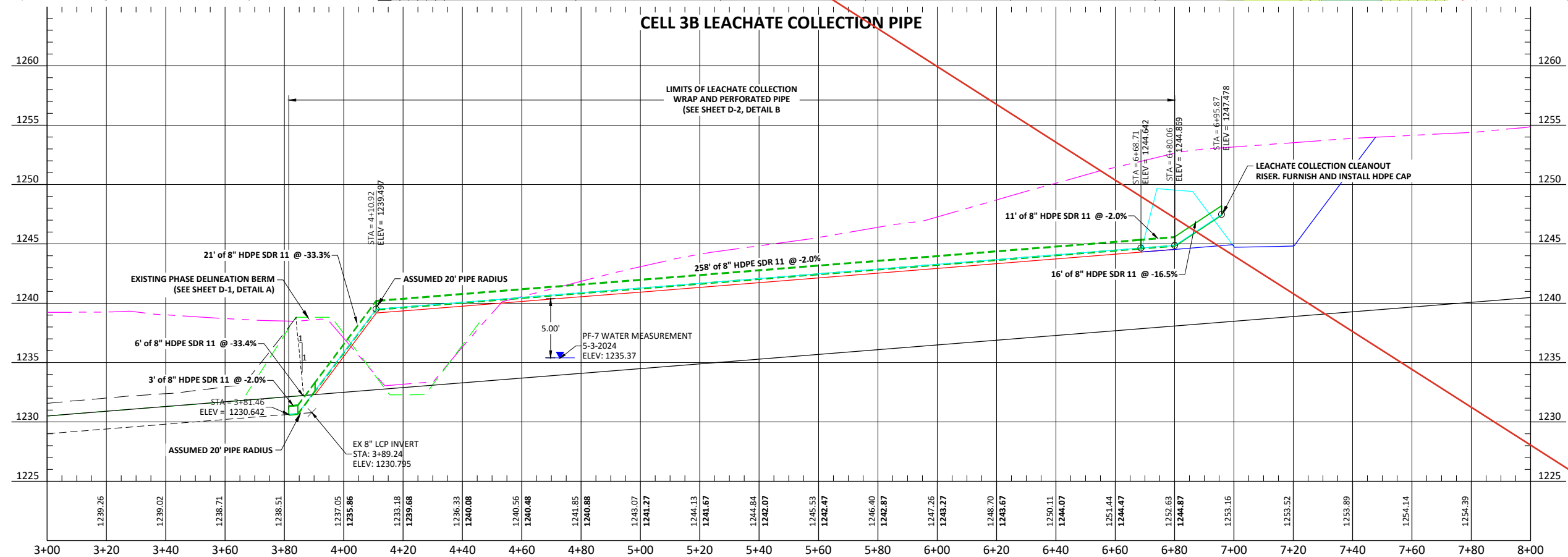


LEGEND

- UNDERDRAIN INVERT
- PERMITTED FINAL COVER
- CELL 3A DESIGN GRADES
- PROPOSED CELL 3B LINER
- PROPOSED CELL 3B PHASE DELINEATION BERM
- PROPOSED ACCESS ROAD
- EXISTING TOPO SURVEY 3-25-2024

No.		Revision	Date	By	I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota. Dennis D. McAlpine License No. 46827		12-20-2024 Date			Drawn by AMZ	Date 12-20-2024	FERGUS FALLS LANDFILL PHASE 3B EXPANSION CITY OF FERGUS FALLS P.O. BOX 868, FERGUS FALLS, MN 56538-0868		UNDERDRAIN EXTENSION PLAN & PROFILE PROJECT NO. 9774		SHEET C-8
										Checked by DDM	Scale AS SHOWN					

H:\JBN\0000\6018\6018_0014\CAD\Plans\0018-0014_Leachate Plan & Profile.dwg-C9 LEACHATE PLAN & PROFILE-12/20/2024 12:26 PM-(azigan)



LEGEND

PERMITTED GRADES

CELL 3A ASBUILT

CELL 3A DESIGN GRADES

PROPOSED CELL 3B LINER

PROPOSED CELL 3B PHASE
DELINEATION BERM

PROPOSED EXTERIOR
GRADING

EXISTING TOPO SURVEY
3-25-2024

PF-7 DATA

DATE	GROUNDWATER ELEVATION
10/9/2023	1233.03
3/21/2024	1232.25
5/3/2024	1235.37
9/26/2024	1232.82
10/21/2024	1233.54

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Dennis D. McAlpine
Dennis D. McAlpine
License No. 46827

12-20-2024
Date



Drawn by
AMZ

Checked by
DDM

Date
12-20-2024

Scale
AS SHOWN

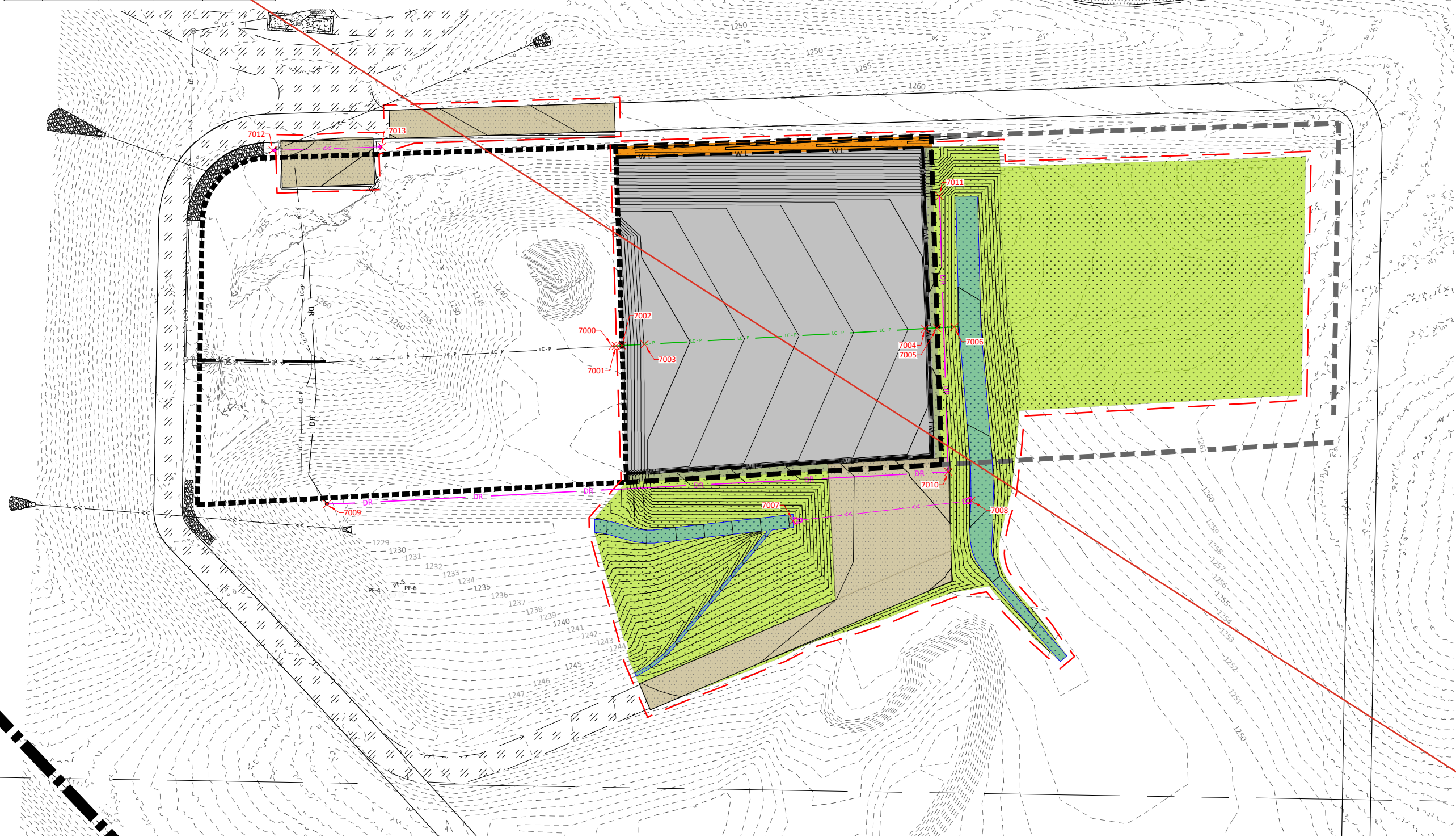
FERGUS FALLS LANDFILL PHASE 3B EXPANSION
CITY OF FERGUS FALLS
P.O. BOX 868, FERGUS FALLS, MN 56538-0868

LEACHATE PLAN & PROFILE
PROJECT NO. 9774

SHEET
C-9

POINT SCHEDULE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
7000	156998.2862	406530.2751	1230.64	LEACHATE INV
7001	156998.4546	406533.3603	1230.70	LEACHATE INV
7002	156998.7794	406539.1529	1232.64	LEACHATE INV
7003	156999.9311	406559.6892	1239.50	LEACHATE INV
7004	157014.3653	406817.0751	1244.64	LEACHATE INV
7005	157015.0006	406828.7044	1244.87	LEACHATE INV
7006	157015.8860	406844.1922	1247.48	LEACHATE INV
7007	156837.8206	406696.2729	1237.15	36" RCP FES INV
7008	156856.4577	406859.9501	1243.30	36" RCP FES INV
7009	156853.2210	406268.1820	1226.00	UNDERDRAIN INV

POINT SCHEDULE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
7010	156882.8489	406838.6667	1238.27	UNDERDRAIN INV
7011	157135.7359	406830.5043	1240.92	UNDERDRAIN INV
7012	157177.9502	406218.2434	1251.23	12" RCP FES INV
7013	157181.1883	406318.4544	1252.43	12" RCP FES INV



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No.	Revision	Date	By

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12-20-2024
Date



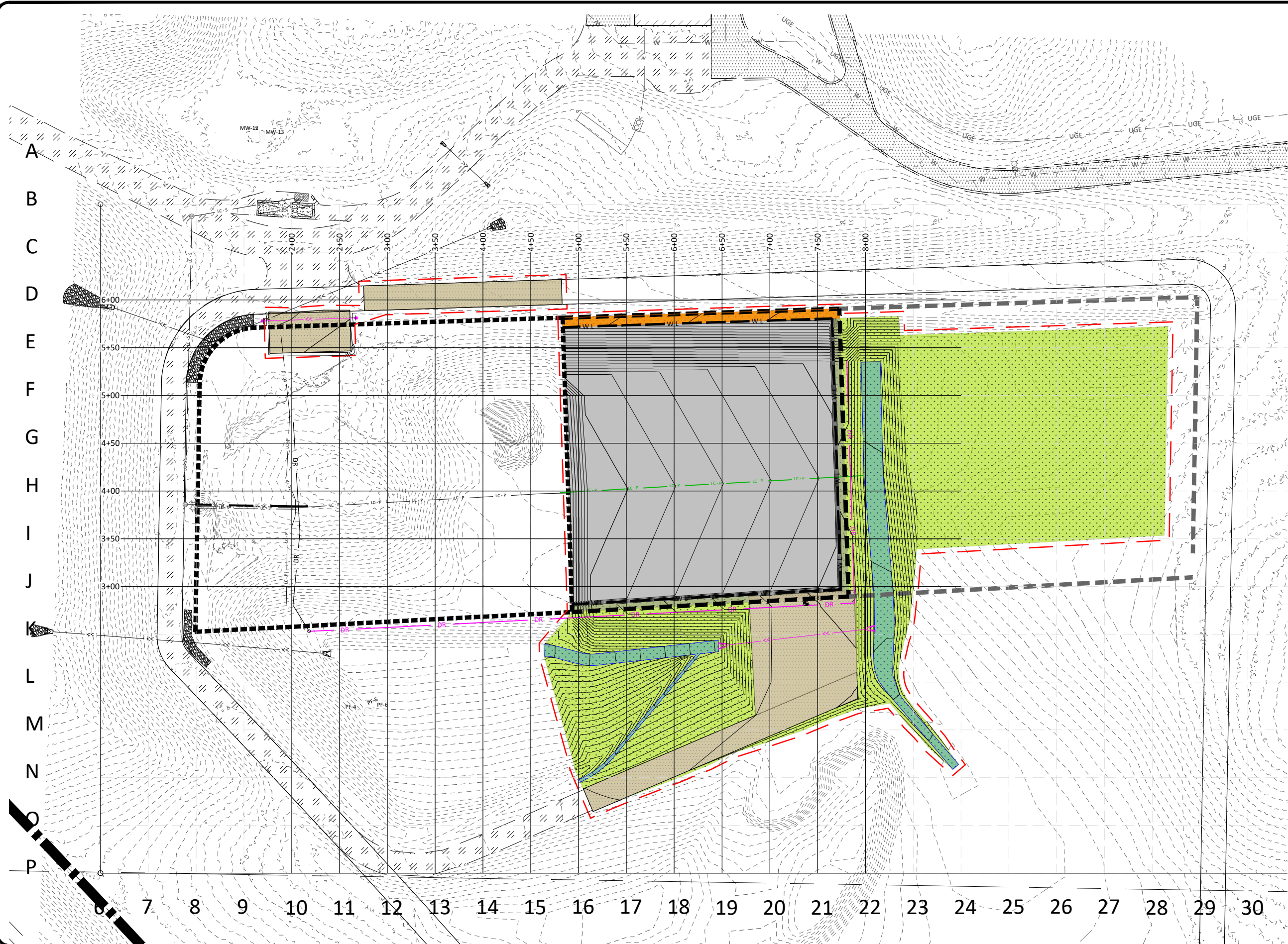
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AMZ	12-20-2024
Checked by	Scale
DDM	AS SHOWN

FERGUS FALLS LANDFILL PHASE 3B EXPANSION
CITY OF FERGUS FALLS
P.O. BOX 868, FERGUS FALLS, MN 56538-0868

POINT SCHEDULE
PROJECT NO. 9774

SHEET
C-10

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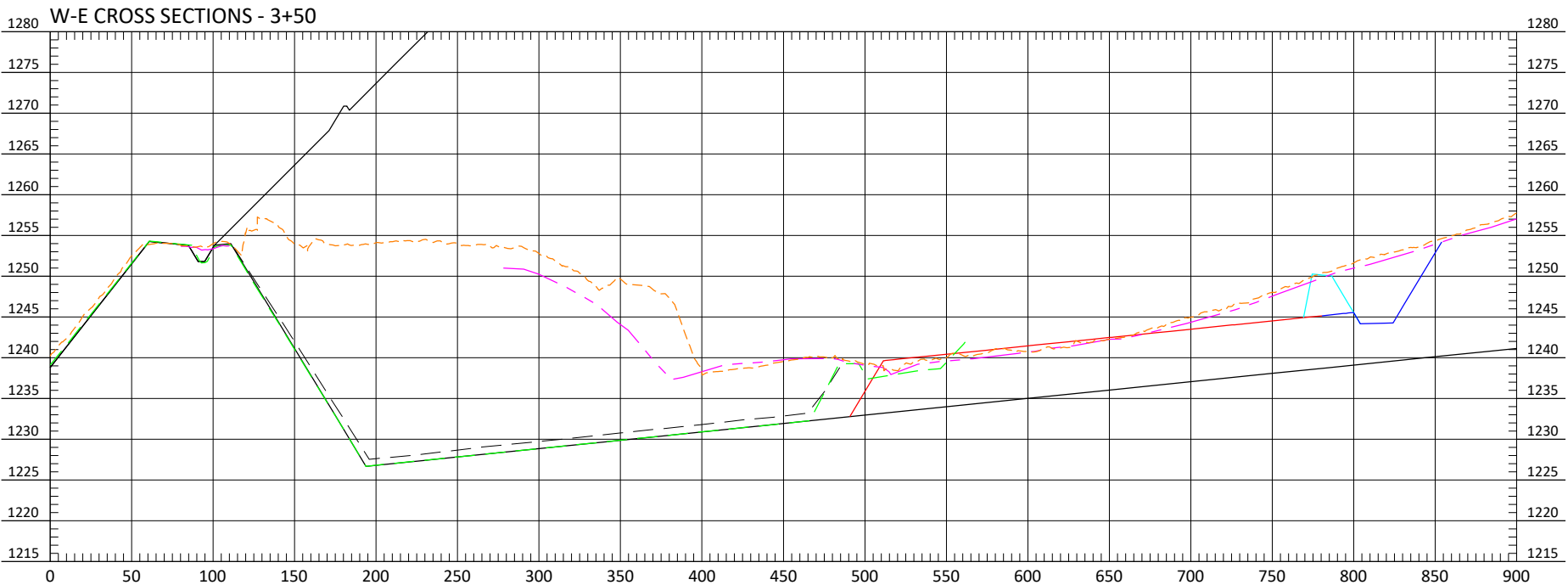
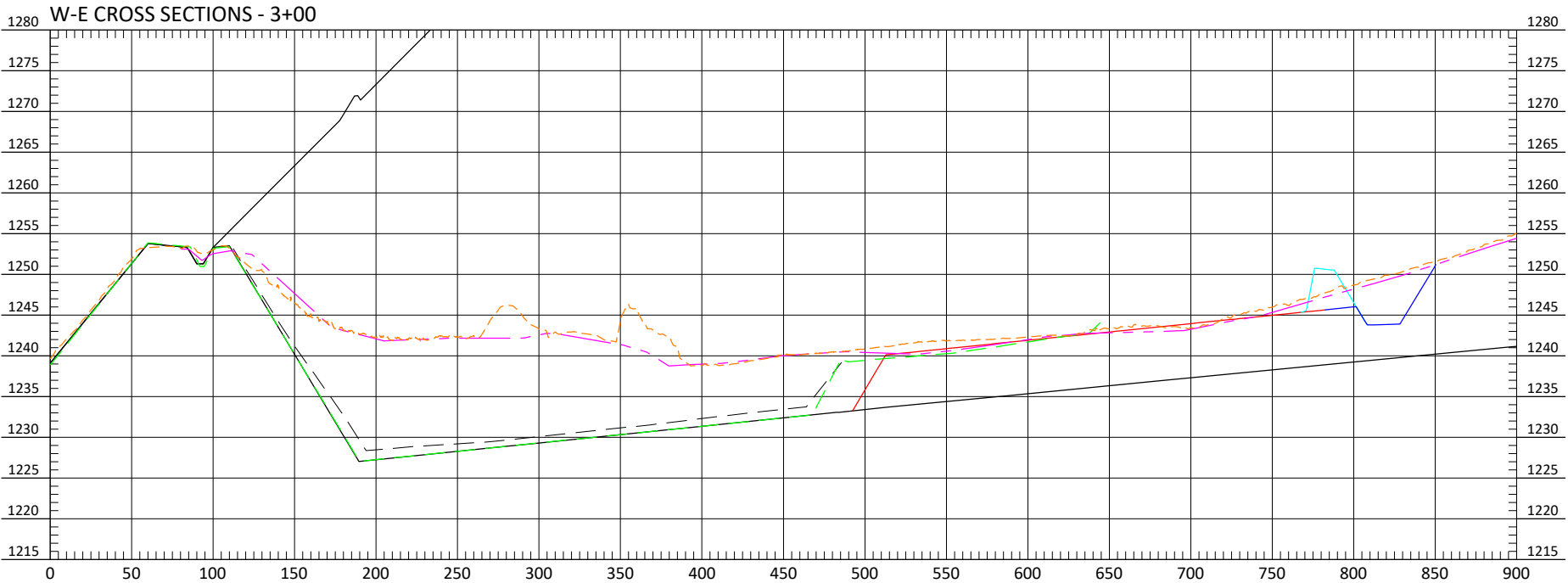


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LEGEND

- CELL LIMITS
- PERMITTED GRADES
- PERMITTED FINAL COVER
- CELL 3A ASBUILT
- CELL 3A DESIGN GRADES
- PROPOSED CELL 3B LINER
- PROPOSED CELL 3B PHASE DELINEATION BERM
- PROPOSED TURNAROUND PAD
- PROPOSED EXTERIOR GRADING
- EXISTING TOPO SURVEY 3-25-2024 & 10-29-2024
- ANNUAL UTILIZATION SURVEY 10-10-2024



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Checked by DDM	Scale AS SHOWN

FERGUS FALLS LANDFILL PHASE 3B EXPANSION
CITY OF FERGUS FALLS
P.O. BOX 868, FERGUS FALLS, MN 56538-0868

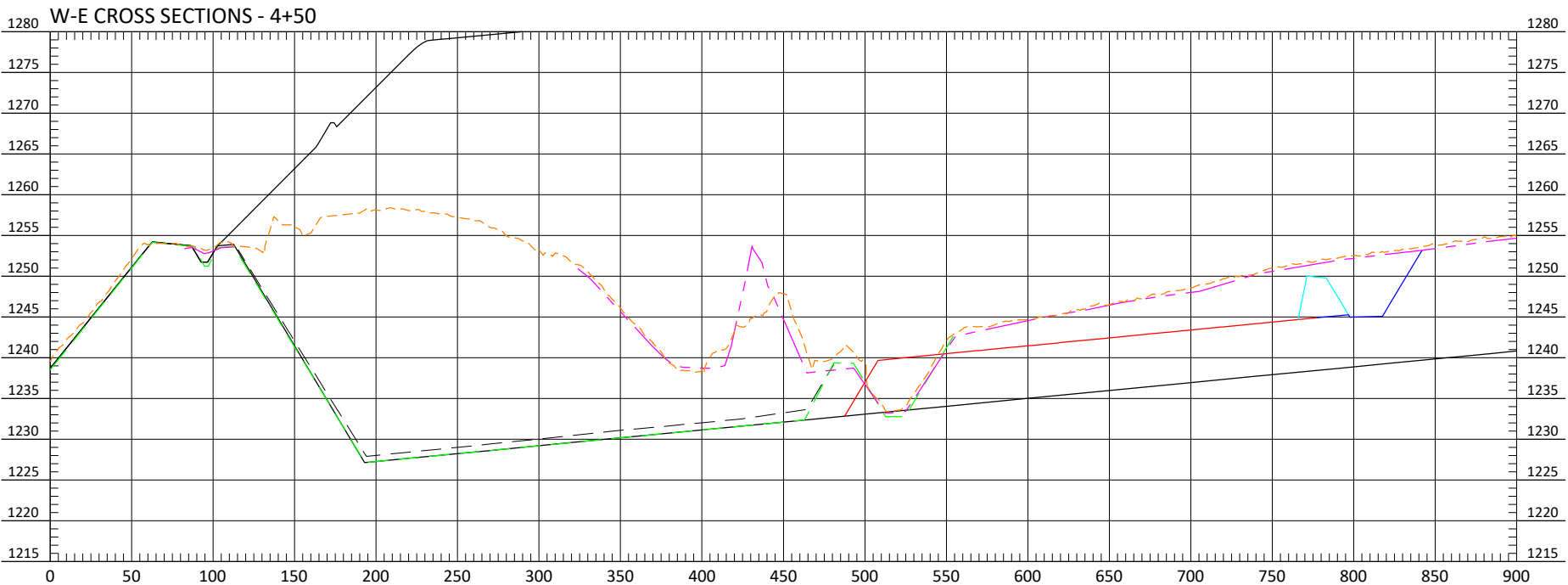
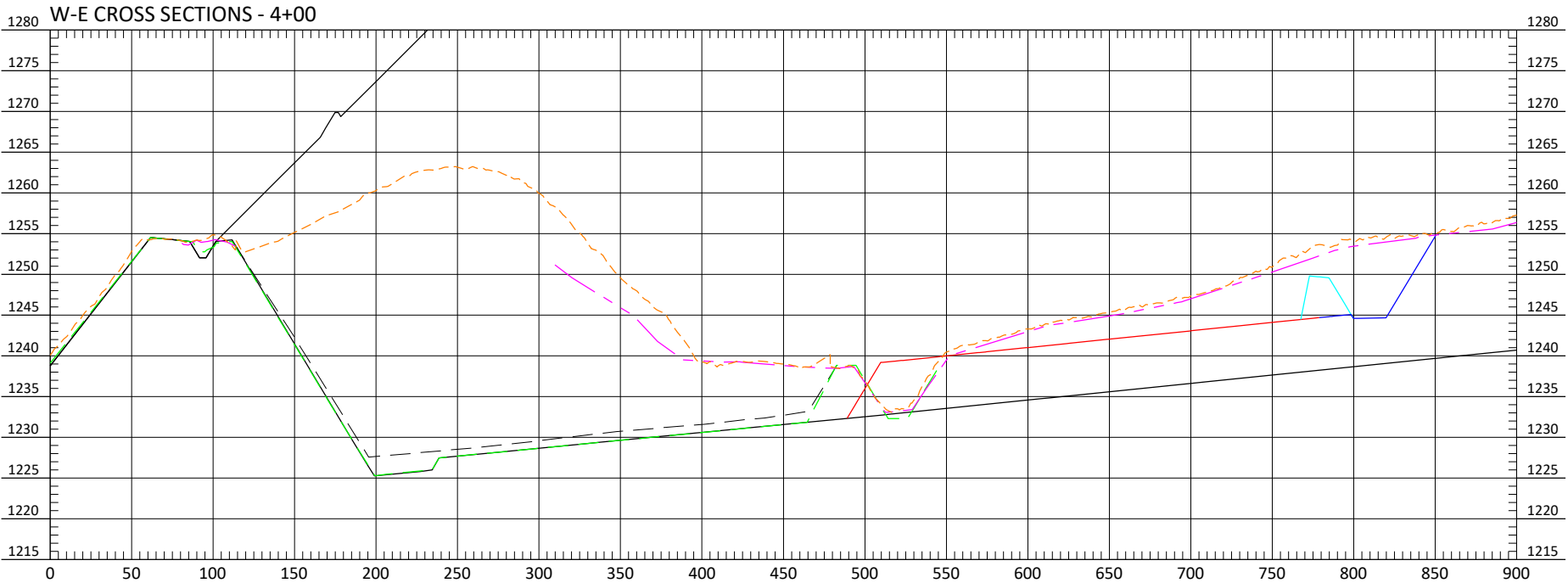
W-E CROSS SECTIONS
PROJECT NO. 9774

SHEET
C-12



LEGEND

- CELL LIMITS
- PERMITTED GRADES
- PERMITTED FINAL COVER
- CELL 3A ASBUILT
- CELL 3A DESIGN GRADES
- PROPOSED CELL 3B LINER
- PROPOSED CELL 3B PHASE DELINEATION BERM
- PROPOSED TURNAROUND PAD
- PROPOSED EXTERIOR GRADING
- EXISTING TOPO SURVEY 3-25-2024 & 10-29-2024
- ANNUAL UTILIZATION SURVEY 10-10-2024



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FERGUS FALLS LANDFILL PHASE 3B EXPANSION
CITY OF FERGUS FALLS
P.O. BOX 868, FERGUS FALLS, MN 56538-0868

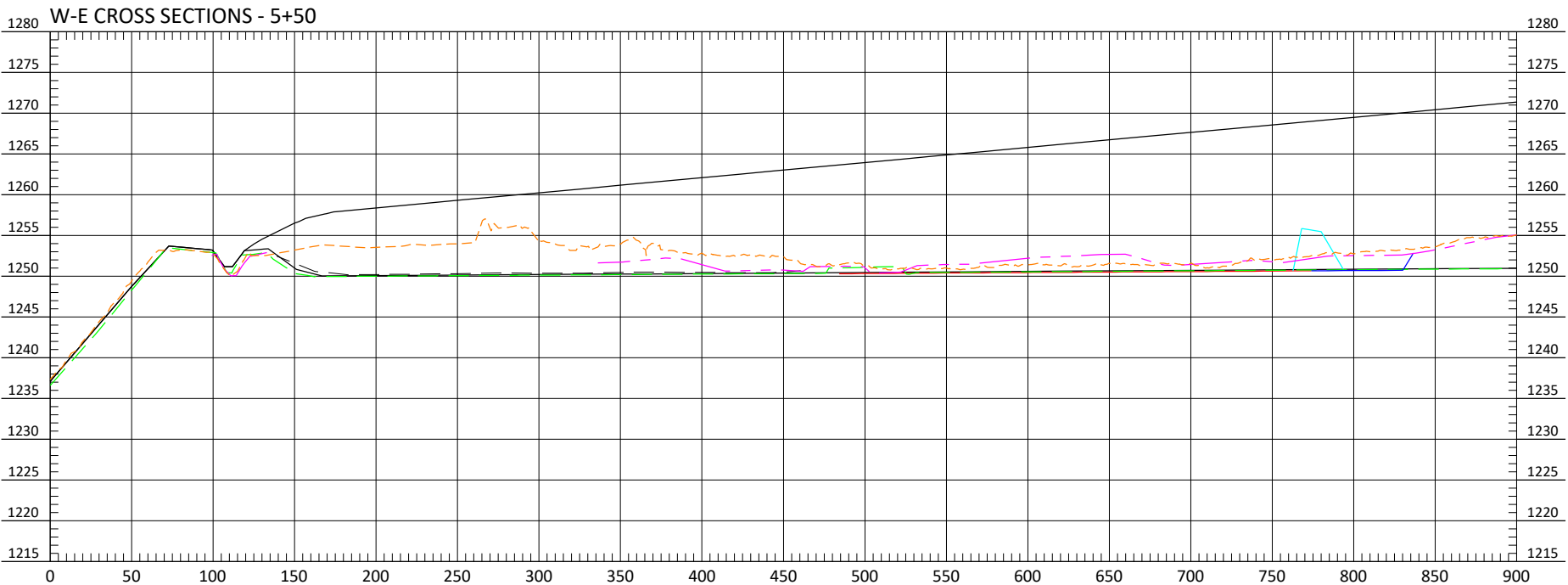
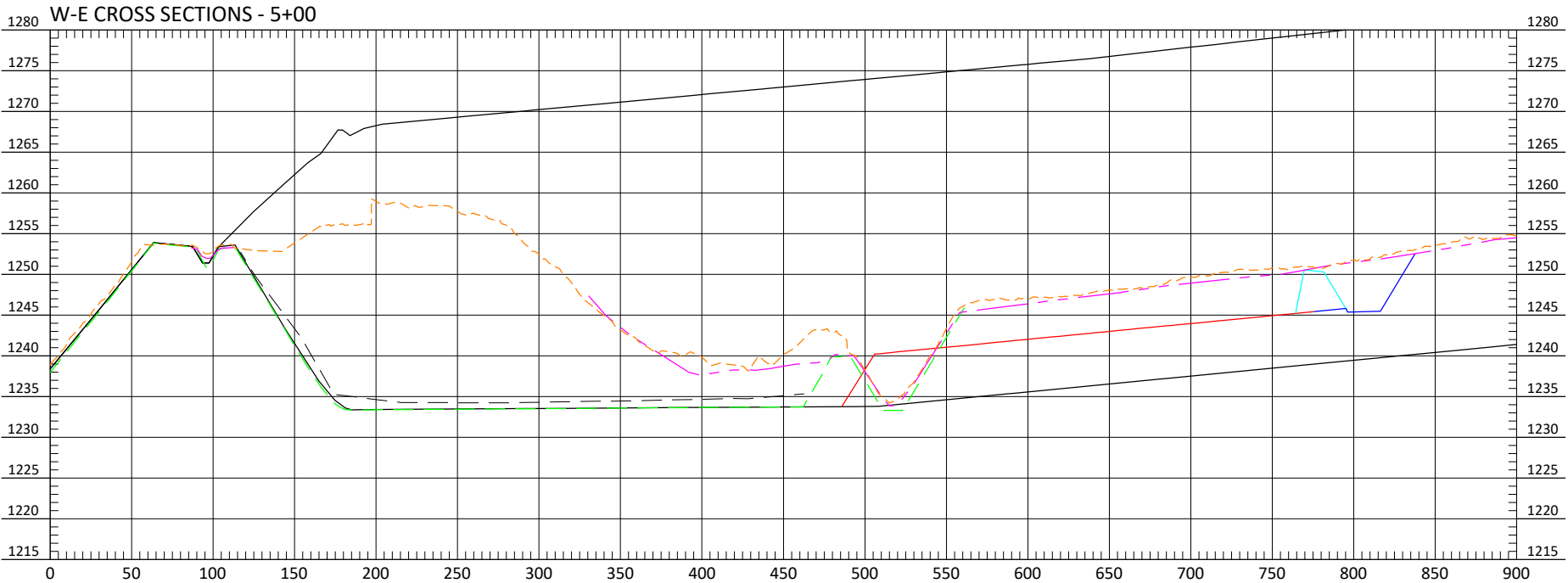
W-E CROSS SECTIONS
PROJECT NO. 9774

SHEET
C-13



LEGEND

- CELL LIMITS
- PERMITTED GRADES
- PERMITTED FINAL COVER
- CELL 3A ASBUILT
- CELL 3A DESIGN GRADES
- PROPOSED CELL 3B LINER
- PROPOSED CELL 3B PHASE DELINEATION BERM
- PROPOSED TURNAROUND PAD
- PROPOSED EXTERIOR GRADING
- EXISTING TOPO SURVEY 3-25-2024 & 10-29-2024
- ANNUAL UTILIZATION SURVEY 10-10-2024



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Drawn by	Date
AMZ	12-20-2024
Checked by	Scale
DDM	AS SHOWN

FERGUS FALLS LANDFILL PHASE 3B EXPANSION
CITY OF FERGUS FALLS
P.O. BOX 868, FERGUS FALLS, MN 56538-0868

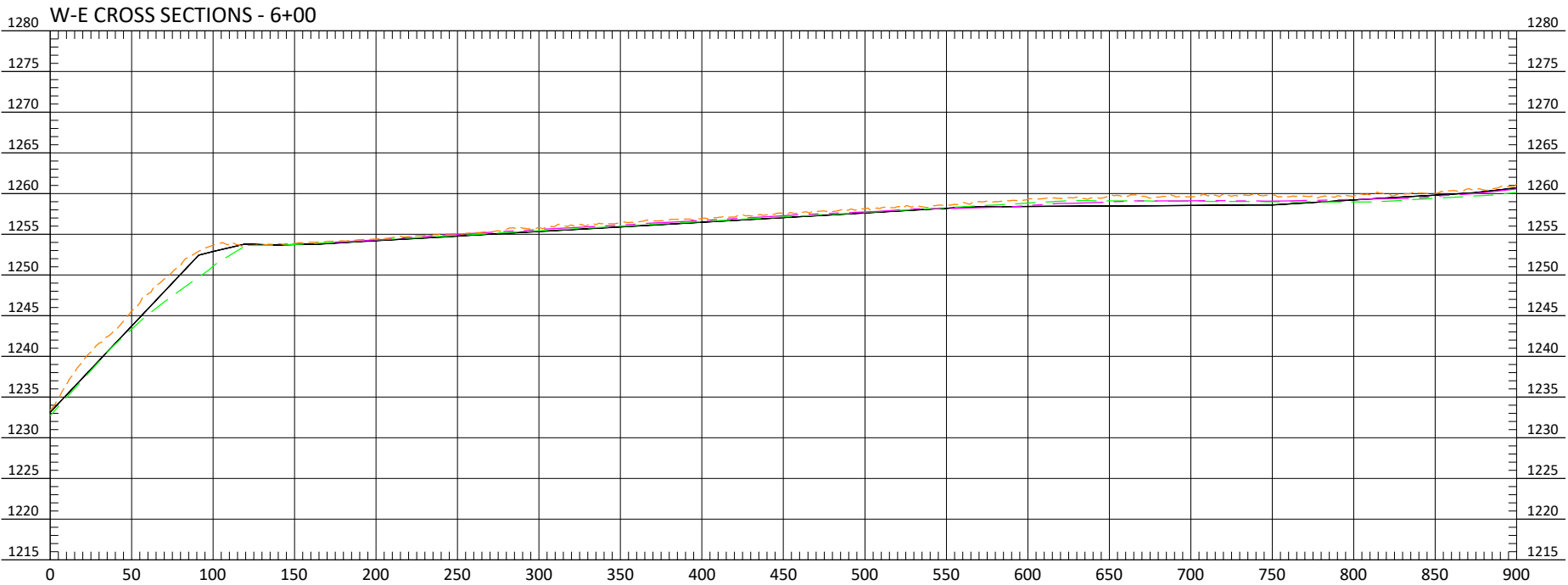
W-E CROSS SECTIONS
PROJECT NO. 9774

SHEET
C-14



LEGEND

- CELL LIMITS
- PERMITTED GRADES
- PERMITTED FINAL COVER
- CELL 3A ASBUILT
- CELL 3A DESIGN GRADES
- PROPOSED CELL 3B LINER
- PROPOSED CELL 3B PHASE DELINEATION BERM
- PROPOSED TURNAROUND PAD
- PROPOSED EXTERIOR GRADING
- EXISTING TOPO SURVEY 3-25-2024 & 10-29-2024
- ANNUAL UTILIZATION SURVEY 10-10-2024



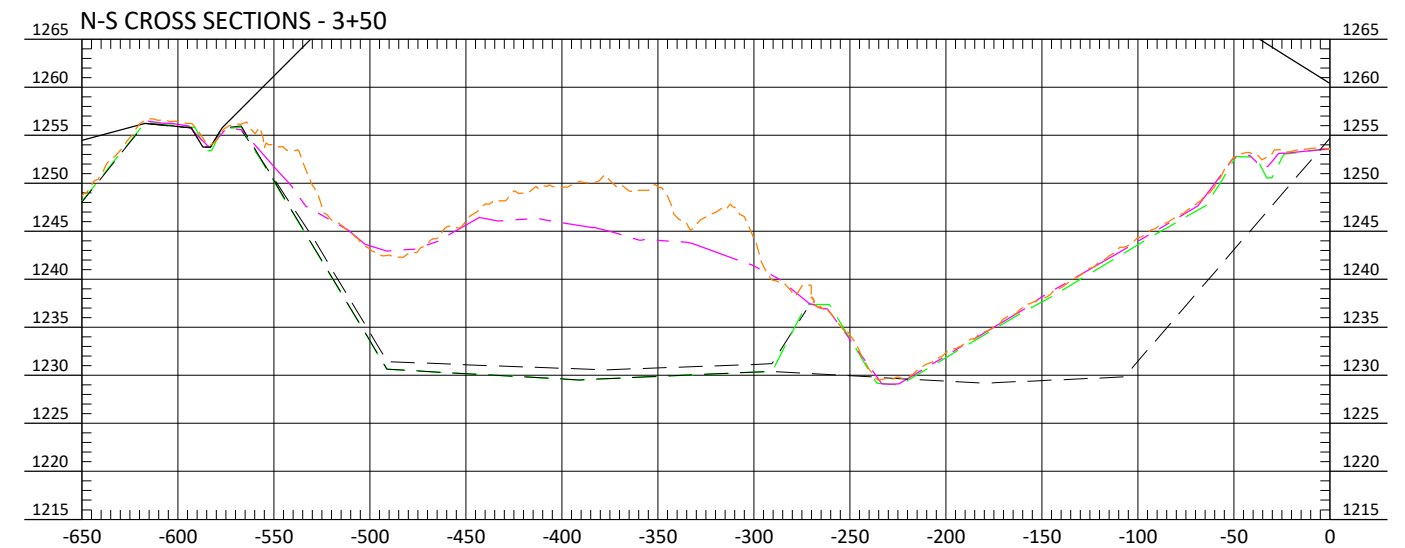
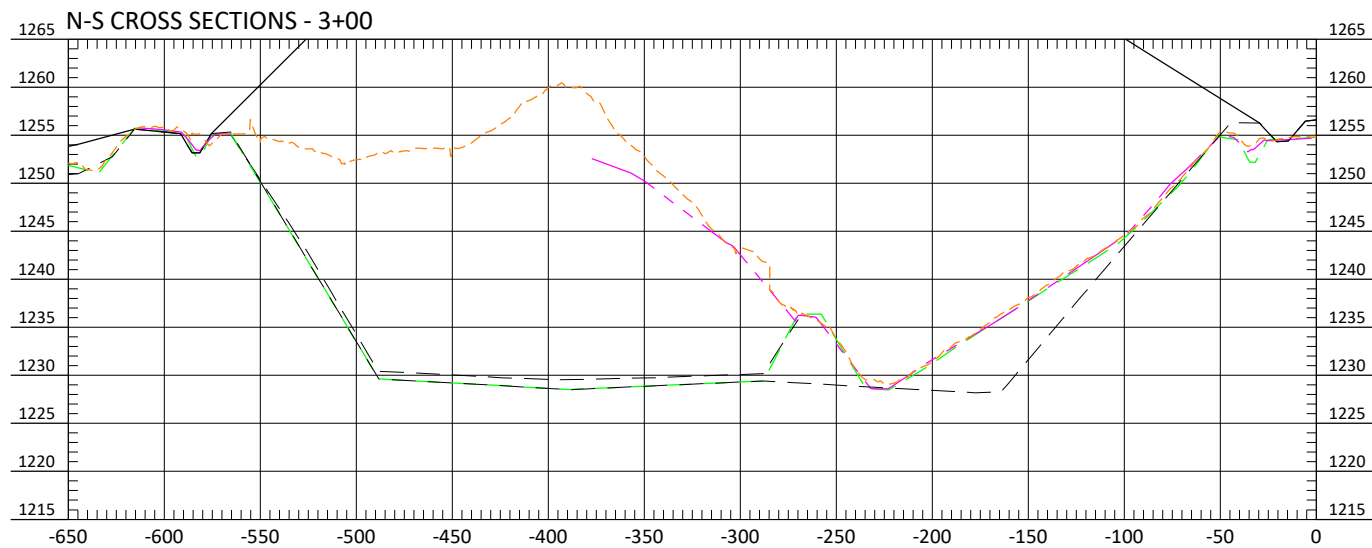
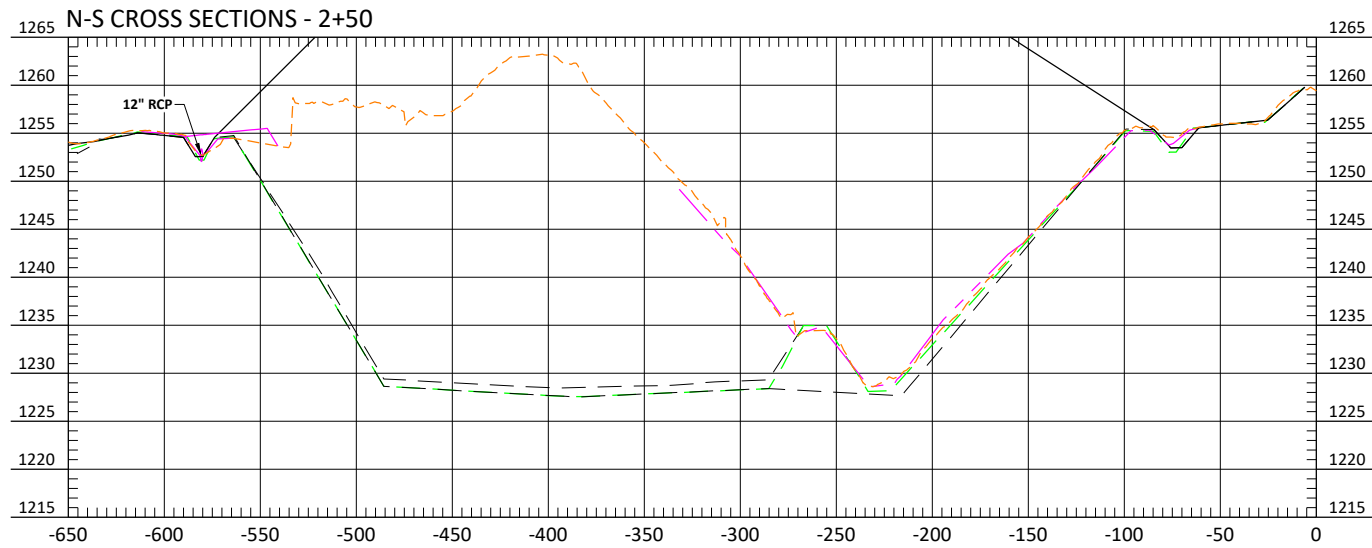
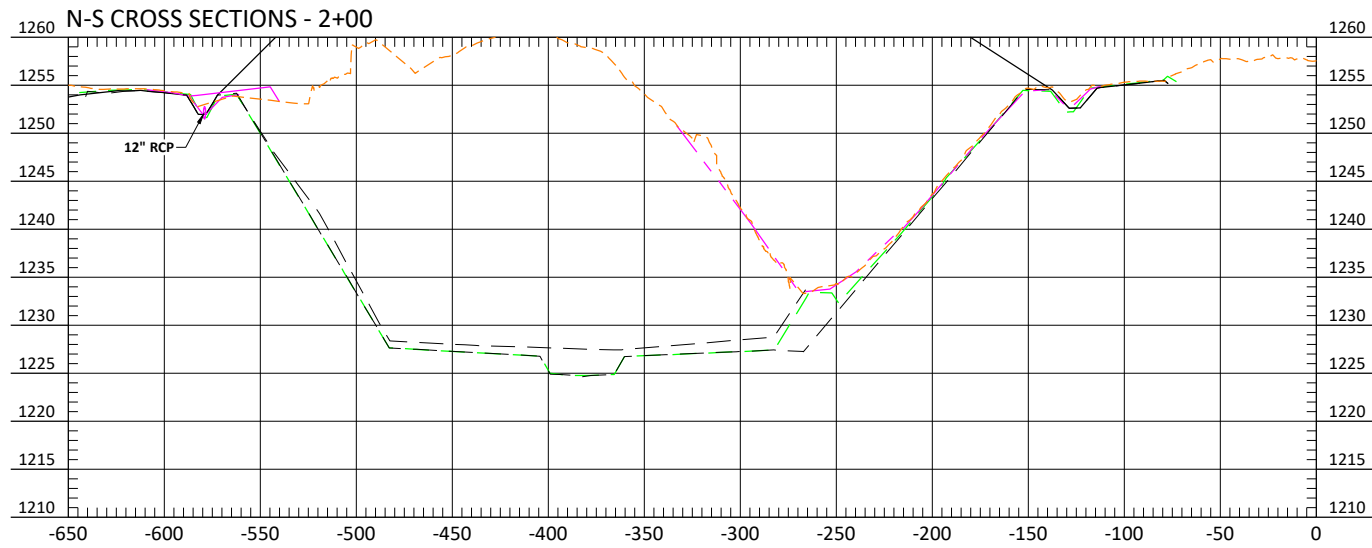
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				I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.			Drawn by	Date	FERGUS FALLS LANDFILL PHASE 3B EXPANSION CITY OF FERGUS FALLS P.O. BOX 868, FERGUS FALLS, MN 56538-0868		W-E CROSS SECTIONS
							AMZ	12-20-2024			
							Checked by	Scale			PROJECT NO. 9774
							DDM	AS SHOWN			



LEGEND

- CELL LIMITS
- PERMITTED GRADES
- PERMITTED FINAL COVER
- CELL 3A ASBUILT
- CELL 3A DESIGN GRADES
- PROPOSED CELL 3B LINER
- PROPOSED CELL 3B PHASE DELINEATION BERM
- PROPOSED TURNAROUND PAD
- PROPOSED EXTERIOR GRADING
- EXISTING TOPO SURVEY 3-25-2024 & 10-29-2024
- ANNUAL UTILIZATION SURVEY 10-10-2024



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Checked by	Scale
DDM	AS SHOWN

FERGUS FALLS LANDFILL PHASE 3B EXPANSION
CITY OF FERGUS FALLS
P.O. BOX 868, FERGUS FALLS, MN 56538-0868

N-S CROSS SECTIONS
PROJECT NO. 9774

SHEET
C-16



LEGEND

CELL LIMITS

PERMITTED GRADES

PERMITTED FINAL COVER

CELL 3A ASBUILT

CELL 3A DESIGN GRADES

PROPOSED CELL 3B LINER

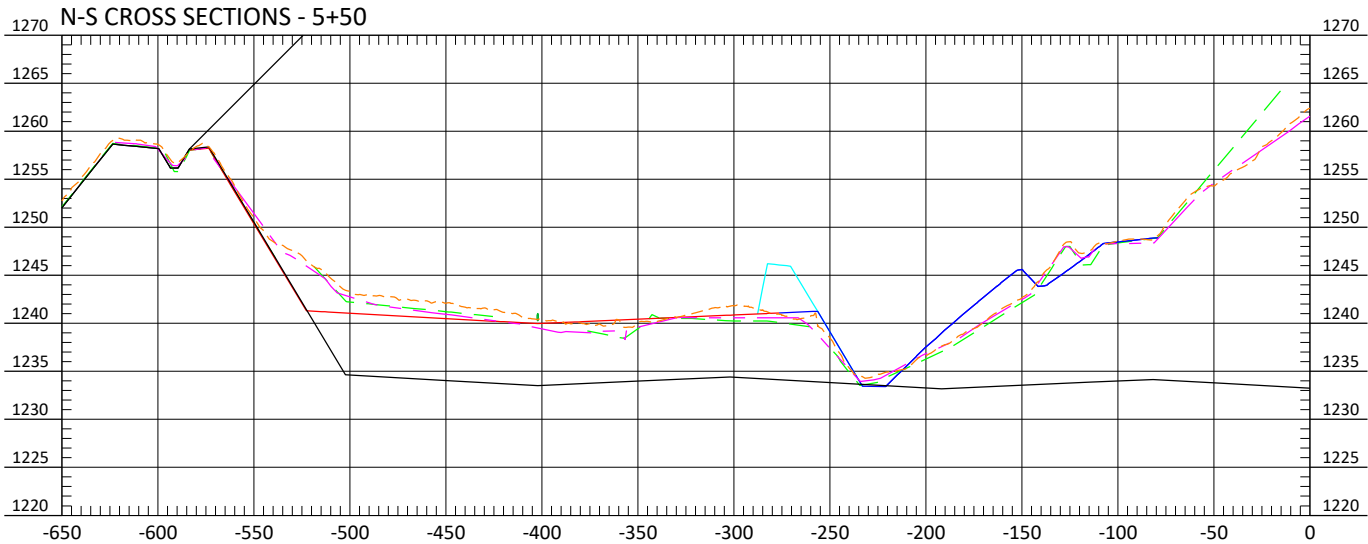
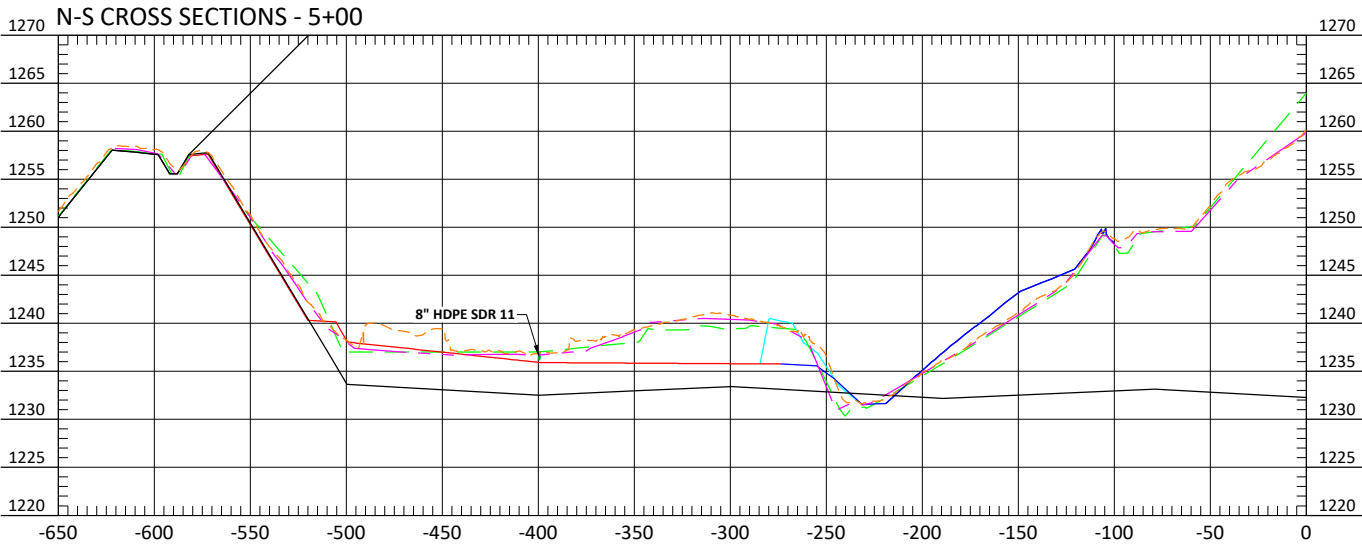
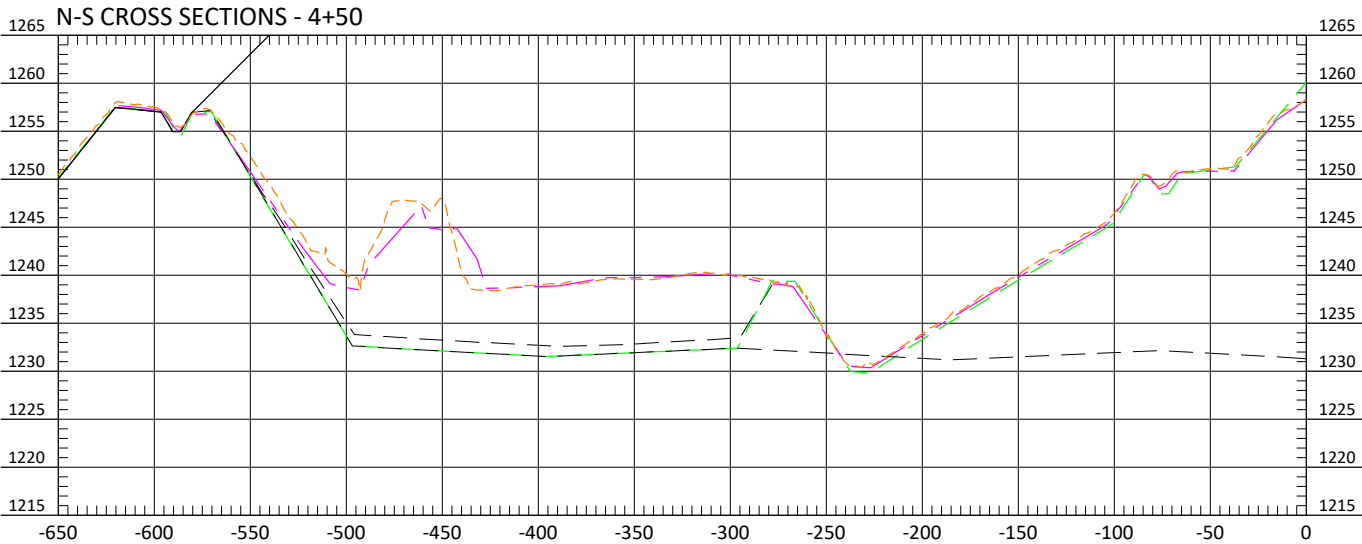
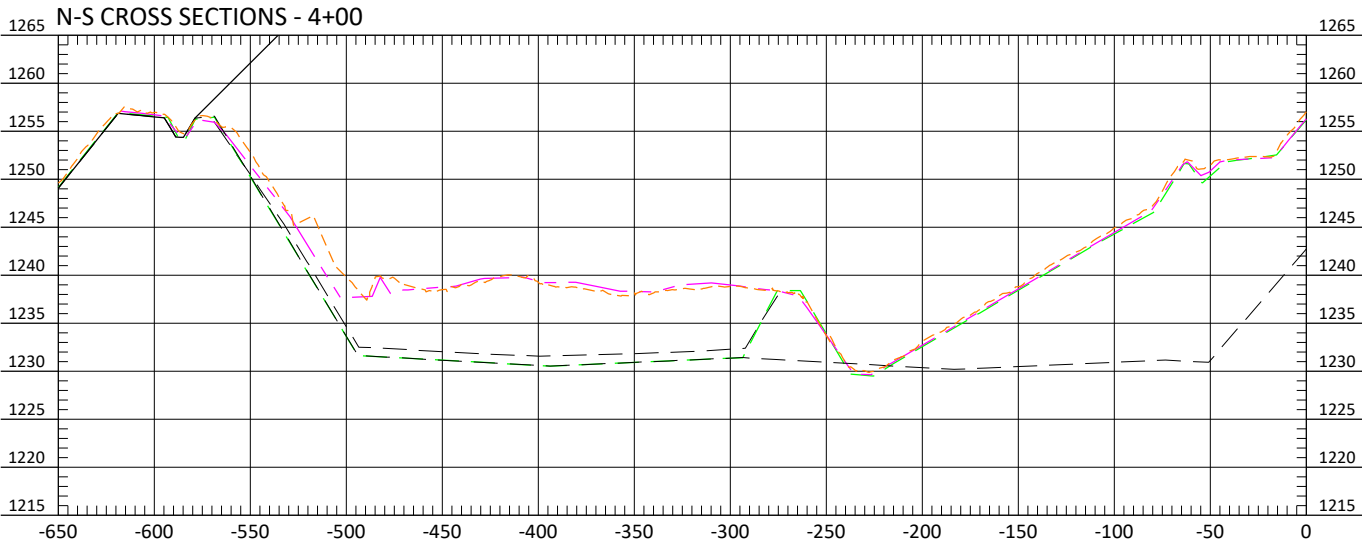
PROPOSED CELL 3B PHASE
DELINEATION BERM

PROPOSED TURNAROUND
PAD

PROPOSED EXTERIOR
GRADING

EXISTING TOPO SURVEY
3-25-2024 & 10-29-2024

ANNUAL UTILIZATION
SURVEY 10-10-2024



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FERGUS FALLS LANDFILL PHASE 3B EXPANSION
CITY OF FERGUS FALLS
P.O. BOX 868, FERGUS FALLS, MN 56538-0868

N-S CROSS SECTIONS
PROJECT NO. 9774

SHEET
C-17



LEGEND

CELL LIMITS

PERMITTED GRADES

PERMITTED FINAL COVER

CELL 3A ASBUILT

CELL 3A DESIGN GRADES

PROPOSED CELL 3B LINER

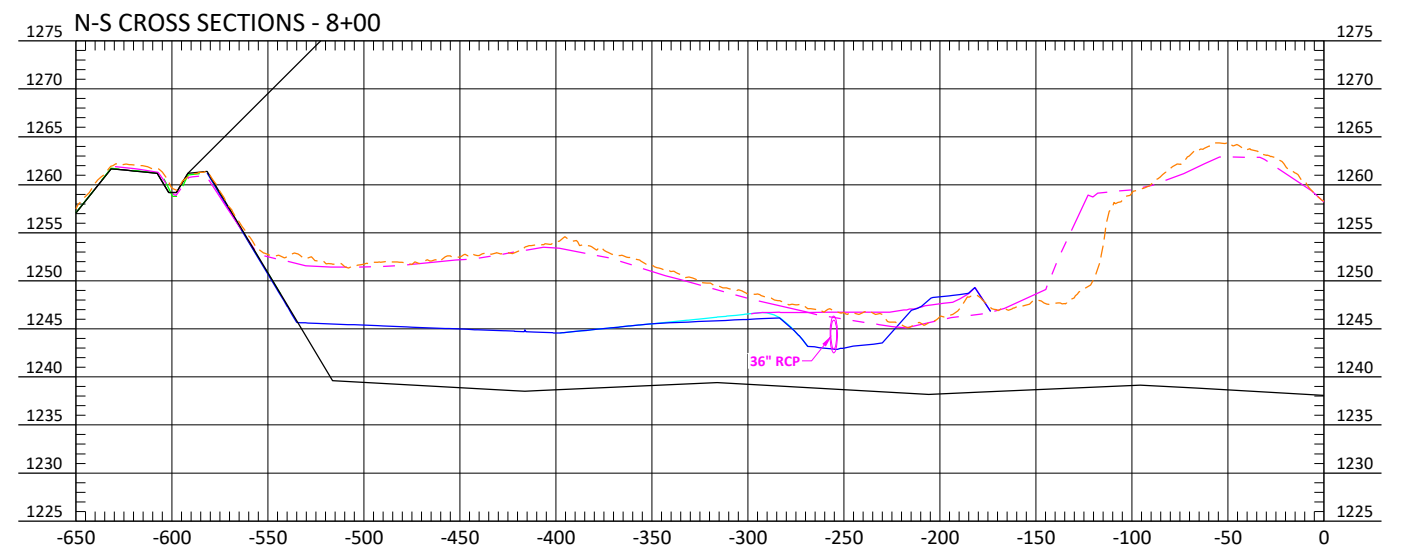
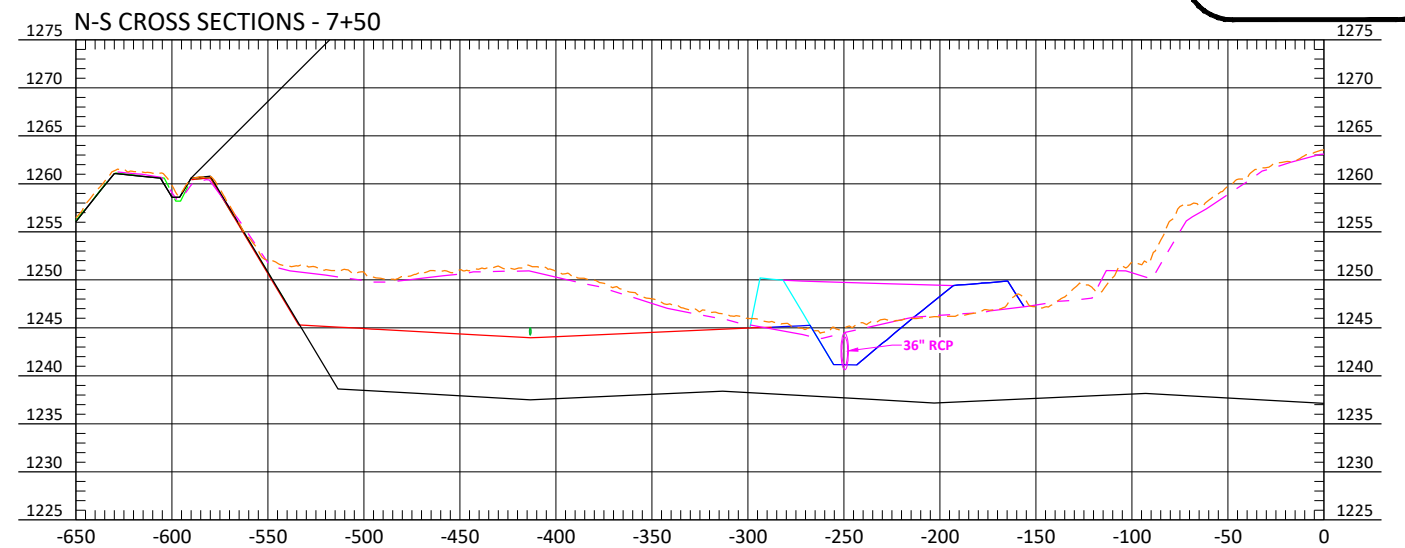
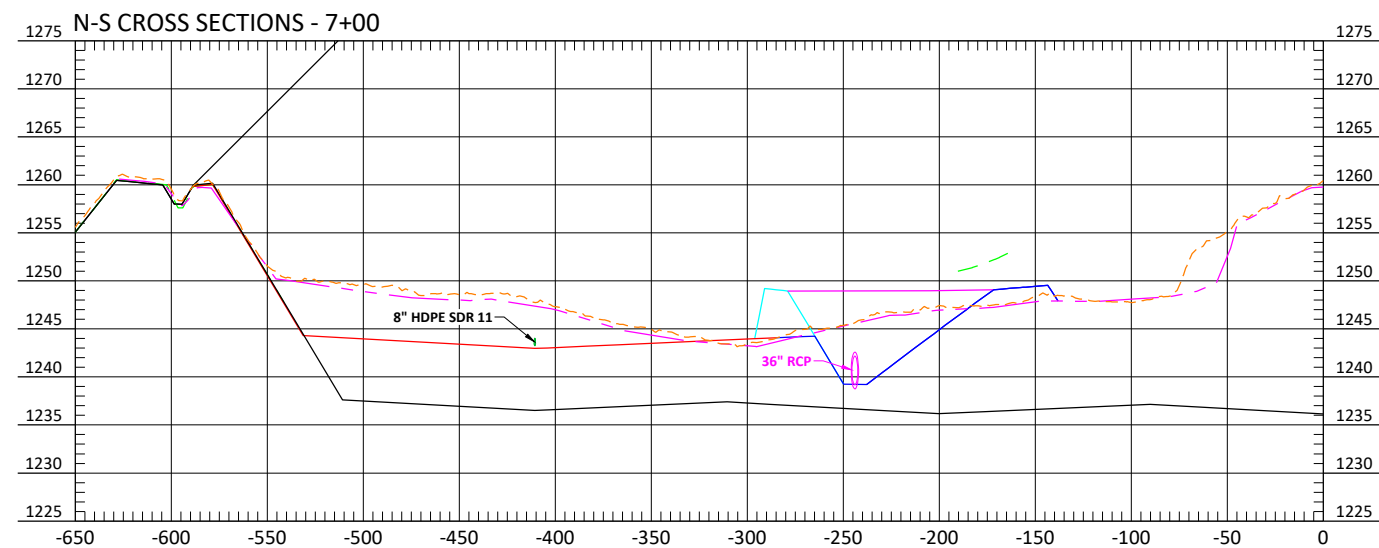
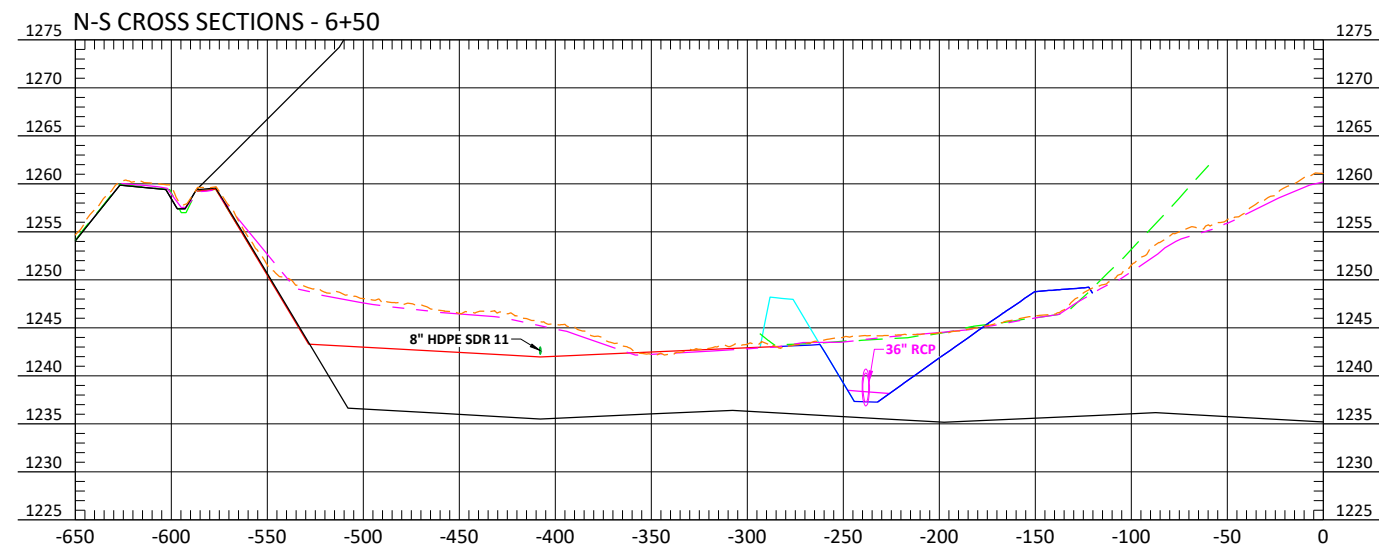
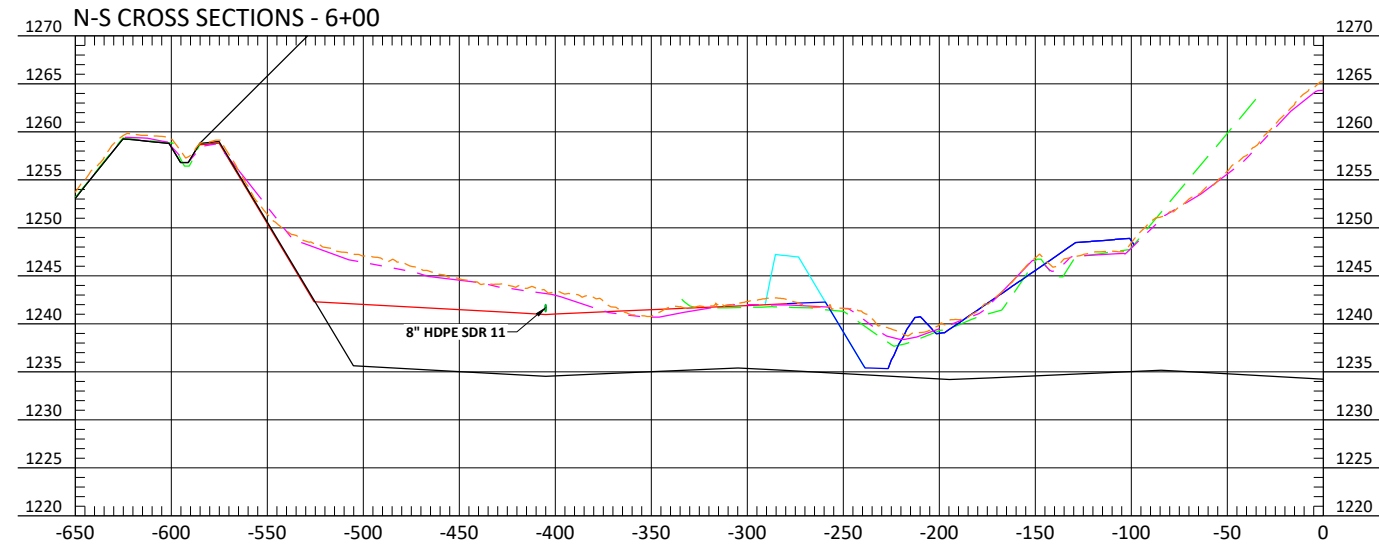
PROPOSED CELL 3B PHASE
DELINEATION BERM

PROPOSED TURNAROUND
PAD

PROPOSED EXTERIOR
GRADING

EXISTING TOPO SURVEY
3-25-2024 & 10-29-2024

ANNUAL UTILIZATION
SURVEY 10-10-2024



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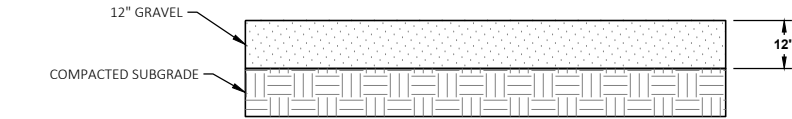


Drawn by AMZ	Date 12-20-2024
Checked by DDM	Scale AS SHOWN

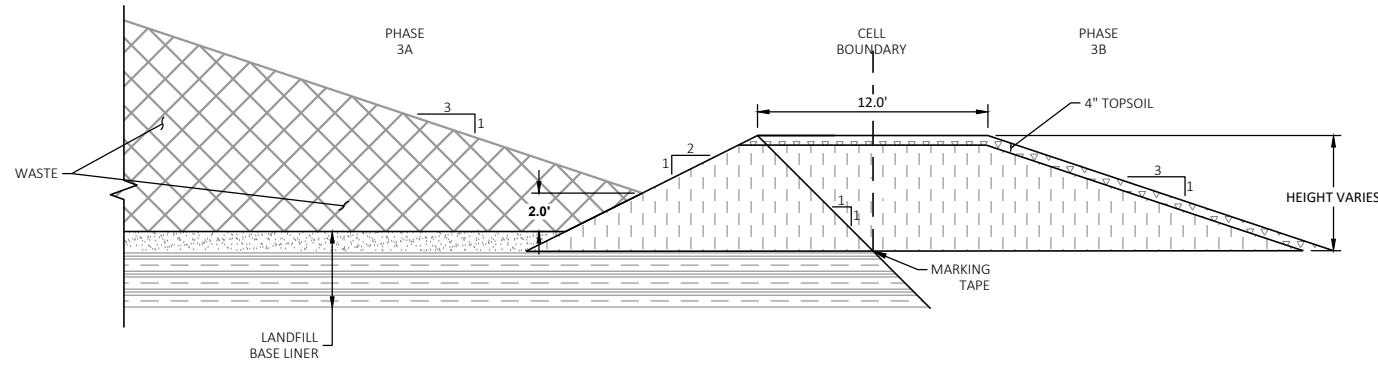
FERGUS FALLS LANDFILL PHASE 3B EXPANSION
CITY OF FERGUS FALLS
P.O. BOX 868, FERGUS FALLS, MN 56538-0868

N-S CROSS SECTIONS
PROJECT NO. 9774

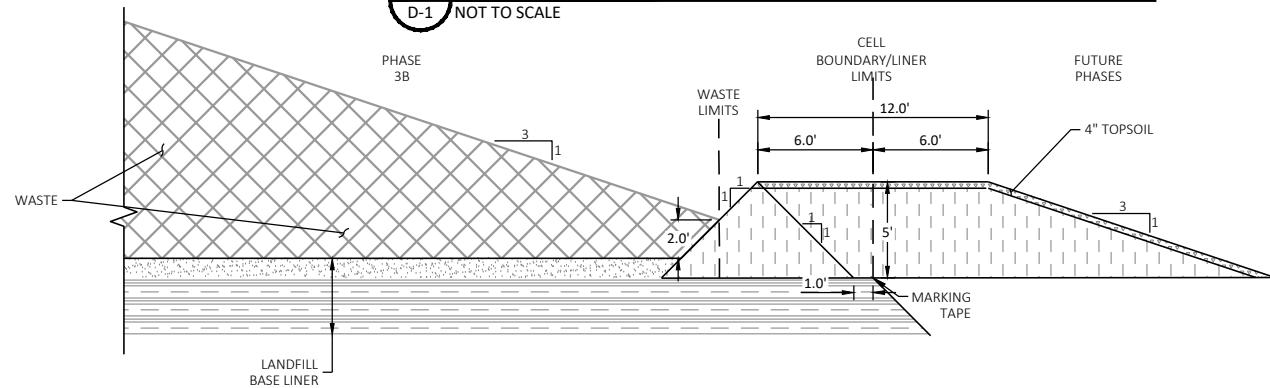
SHEET
C-18



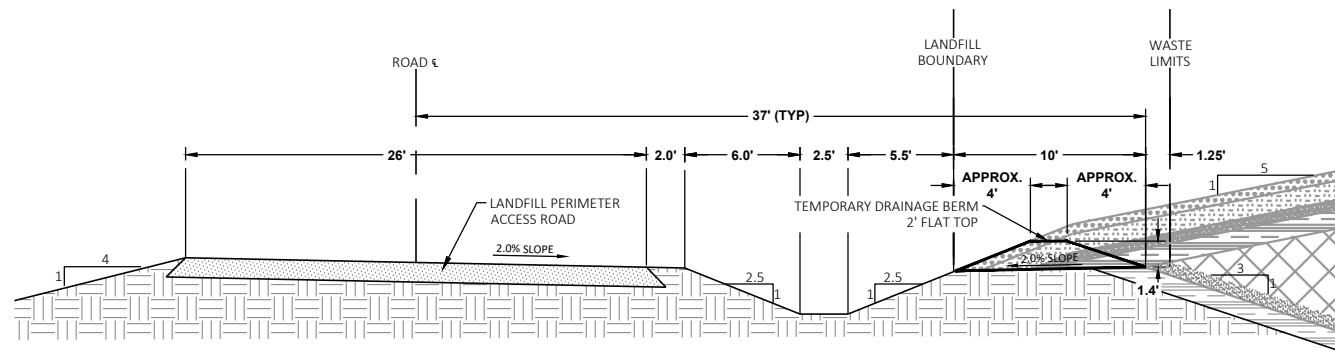
D LANDFILL PERIMETER ACCESS ROAD PAVEMENT SECTION
D-1 NOT TO SCALE



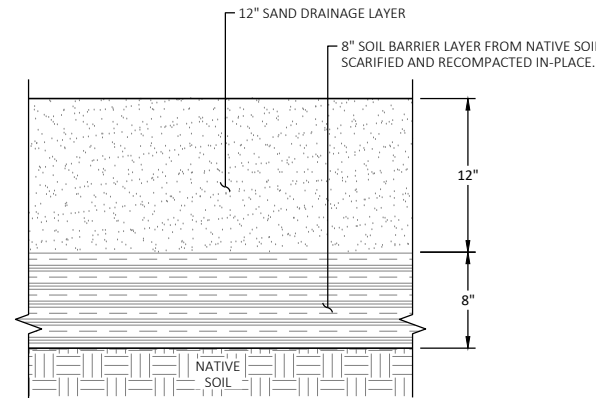
A EXISTING WEST PHASE DELINEATION BERM
D-1 NOT TO SCALE



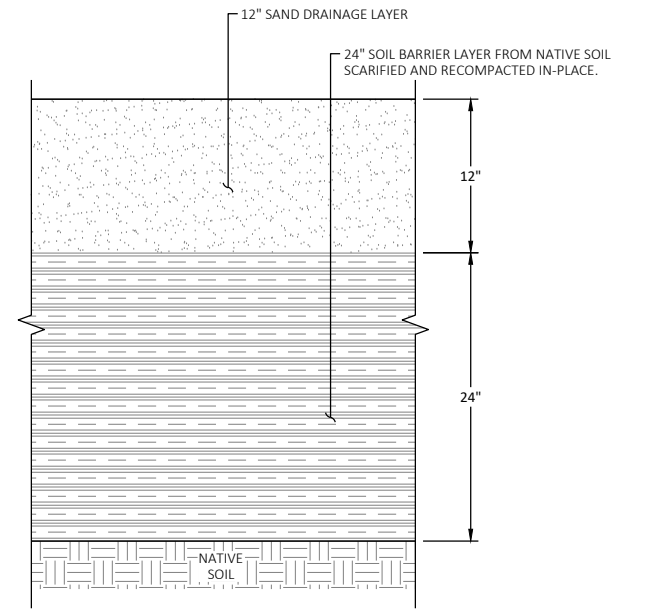
B SOUTH AND EAST PHASE DELINEATION BERM
D-1 NOT TO SCALE



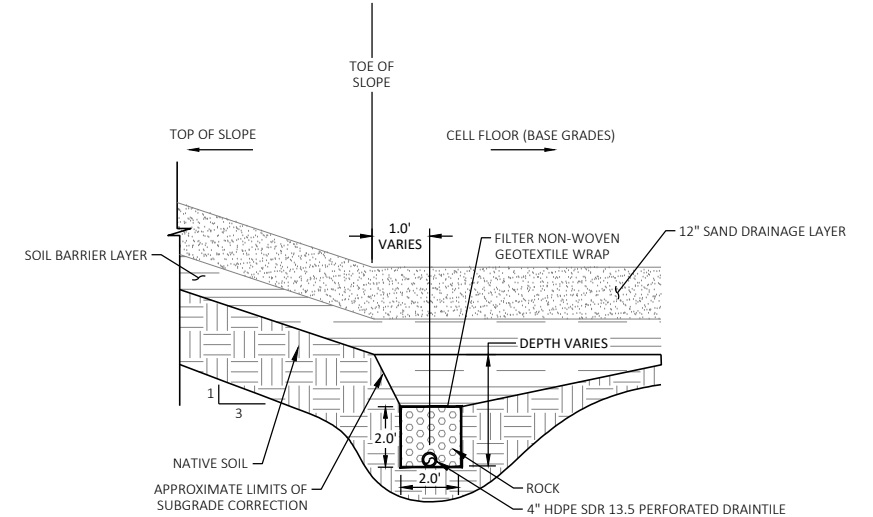
C TYPICAL PERIMETER ROAD SECTION
D-1 NOT TO SCALE



E BASE LINER SECTION
D-1 NOT TO SCALE



F BASE LINER SUBCORRECTION SECTION
D-1 NOT TO SCALE



G DEWATERING TRENCH DETAIL (TYP.)
D-1 NOT TO SCALE

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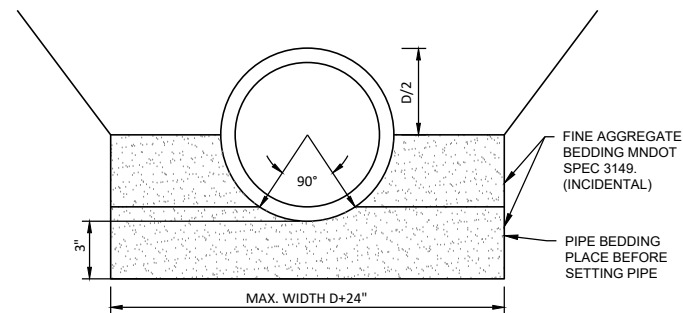


Drawn by AMZ	Date 12-20-2024
Checked by DDM	Scale AS SHOWN

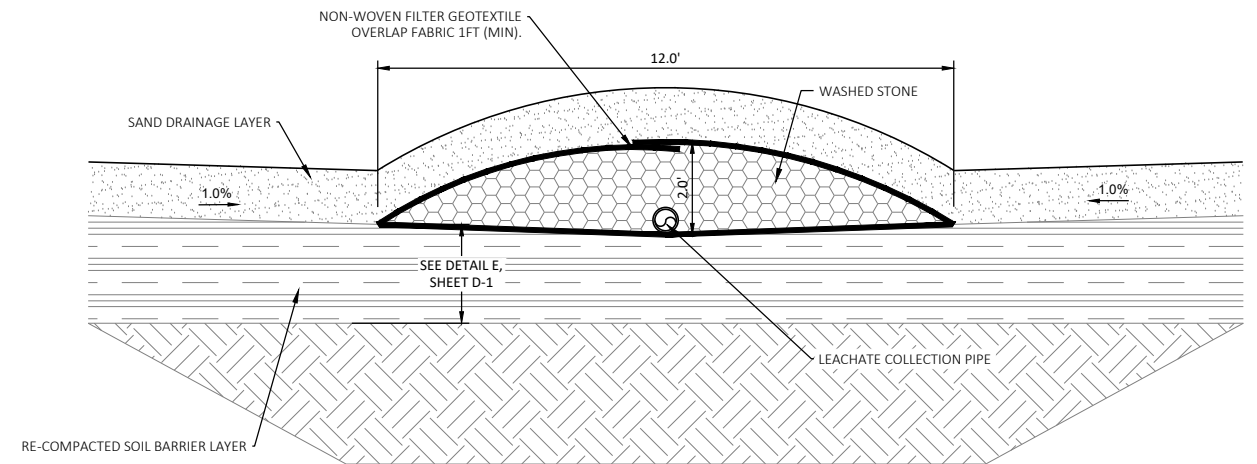
FERGUS FALLS LANDFILL PHASE 3B EXPANSION
CITY OF FERGUS FALLS
P.O. BOX 868, FERGUS FALLS, MN 56538-0868

DETAILS
PROJECT NO. 9774

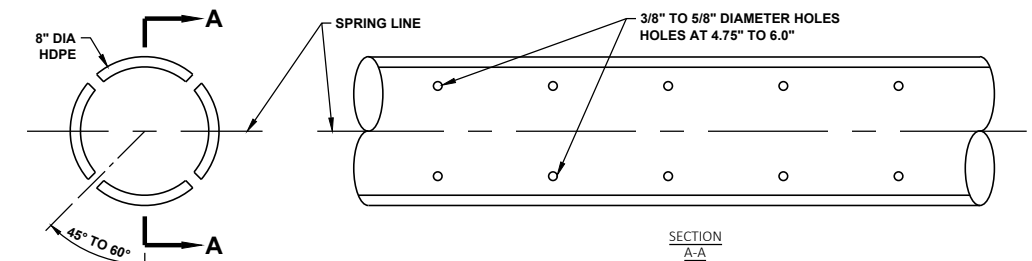
SHEET
D-1



A
D-2 **TYPICAL RCP PIPE BEDDING**
NOT TO SCALE



B
D-2 **LEACHATE COLLECTION WRAP**
NOT TO SCALE



C
D-2 **LEACHATE COLLECTION PIPE**
NOT TO SCALE

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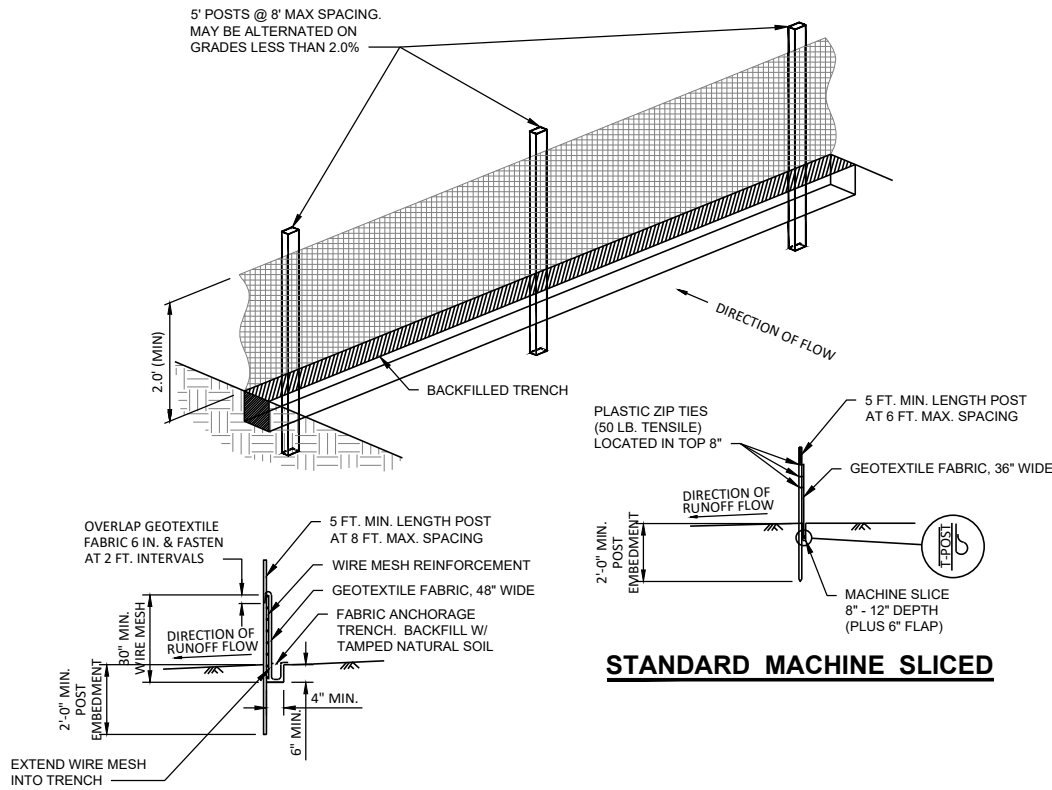


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Checked by DDM	Scale AS SHOWN

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DETAILS
PROJECT NO. 9774

SHEET
D-2

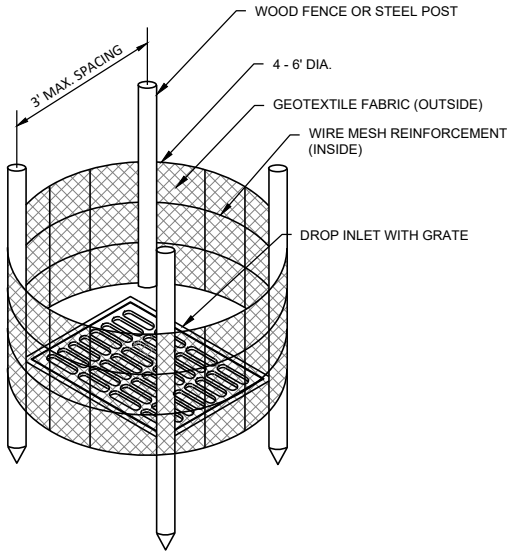


STANDARD MACHINE SLICED

HEAVY DUTY

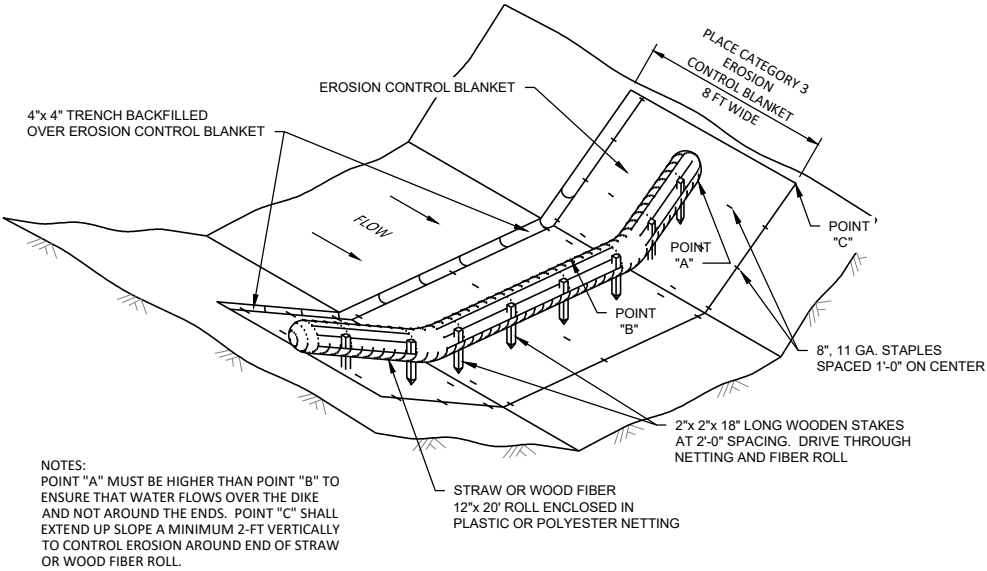
NOTE:
SILT FENCE TO BE STANDARD UNLESS ACTUAL SITE CONDITIONS REQUIRE HEAVY DUTY FENCE PER BMP'S OR INDICATED ON PLANS.

SILT FENCE
NOT TO SCALE

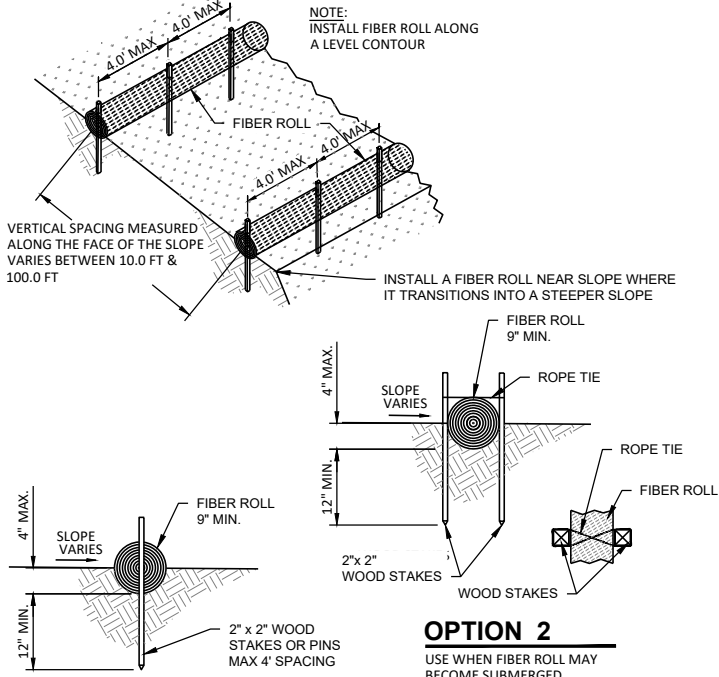


- NOTES
1. INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.
 2. MANUFACTURED ALTERNATIVES MAY BE SUBSTITUTED, SUBJECT TO THE ENGINEER'S APPROVAL.
 3. WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.
 4. ANCHOR FABRIC PER SILT FENCE DETAIL.

INLET PROTECTION - TYPE A
NOT TO SCALE



TEMPORARY DITCH CHECK
NOT TO SCALE



OPTION 1

OPTION 2
USE WHEN FIBER ROLL MAY BECOME SUBMERGED

FIBER ROLL INSTALLATION
NOT TO SCALE

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DETAILS
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SHEET
D-3