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March 13, 2025

Emily Storm
Wisconsin Department of Natural Resources
2984 Shawano Avenue
Green Bay, WI 54313-6727

Re: Plan Modification – Filling Plan, Gas Extraction System Layout, and Beneficial Use Soils
Acceptance Criteria
Brown County South Landfill – License No. 3565

Dear Emily Storm:

On behalf of Brown County Port & Resource Recovery Department (BCPRRD), Foth Infrastructure & Environment, LLC (Foth) is submitting this Plan Modification to the Wisconsin Department of Natural Resources (WDNR) for review and approval. A review fee will be submitted by BCPRRD upon issuance of an invoice by WDNR.

This Plan Modification includes proposed changes to the Plan of Operation for the South Landfill (SLF) relating to the following design and operation elements:

- ◆ Filling Plan,
- ◆ Gas Extraction System Layout, and
- ◆ Beneficial Use Soils Acceptance Criteria.

BCPRRD owns and operates the SLF on BCPRRD owned property located in the E ½ of the SW ¼ of Section 18, T21N, R20E, town of Holland, Brown County, Wisconsin. The Plan of Operation for the SLF was submitted in April of 2019. The WDNR issued a conditional approval of the Plan of Operation dated January 16, 2020. Construction of Phase 1 of the SLF was completed in November of 2021, and the SLF began receiving waste in January of 2022.

Background information and proposed changes are described in the following sections.

1. Filling Plan

Initial placement of waste in Phase 1 began in 2022 with placement of the fluff layer and subsequent filling lifts. Waste is being placed according to Lift Sequence 1 which has a design capacity of 2.53 million cubic yards of airspace. A new haul road was constructed off the east slope for access to fill grades above the perimeter berm. Culverts were installed below the access road for storm water conveyance.

Filling is being completed in 15-foot total lifts. Daily filling activities consist of smaller flat surface lifts or upside slopes with multiple passes with the compactor and spreading equipment. A total

of 1.54 million cubic yards of airspace has been used since opening. It is projected that additional airspace may be required as early as 1.4 years or as late as 2.3 years based on designed capacity utilization rates (1,650 lbs./cy) and potential future annual airspace utilization rates (~2,000 lbs./cy).

BCPRRD is requesting to change the SLF filling plan to allow filling to a higher elevation in Phase 1 and delay the need for construction of Phase 2. The revised plan is based on projected average filling rates. Future adjustments to the plan may be required to reflect any changes in the filling rate. The revised plan is presented in the following sections.

Figure 1 shows the planned Phase 1 fill grades to approximately 758 feet mean sea level (msl). Figure 2 shows additional filling (referred to as Fill Sequence 1A) within Phase 1 footprint in accordance with permitted top of waste grades up to 793 feet msl. The additional 35 feet of fill is approximately 369,000 cubic yards (cy) of capacity (Figure 3). Figures 4 through 6 show the previously approved filling plan through Phase 2 and Phase 3 construction. The last fill sequence will be over Phases 1 through 3 and are decreased by the same volume as the additional fill over Phase 1. The total available airspace capacity remains at 9,303,000 cy.

Table 2-1 details the proposed airspace capacity summary changes based on a projected average annual tonnage acceptance rate of 425,000 tons and an airspace utilization rate of 1,650 lbs./cy. The addition of Phase 1A airspace is estimated to extend the Phase 1 fill sequence timeline by approximately 0.8 years. Waste filling densities obtained from the latest landfill airspace survey and future projections indicate airspace utilization rates up to 2,000 lbs./cy. With higher waste densities, additional capacity of Phase 2 may be needed anywhere between early 2027 and 2028. BCPRRD will continue to assess the need for additional capacity and construction sequences.

No changes to the final cover size and sequencing are proposed at this time. It is not anticipated that the increased fill height will alter the size of the first final cover sequence due a future haul road placement along the northern slope. At the time of final cover design, BCPRRD will reassess and update the final cover sequencing plan as necessary.

2. Gas Extraction System Layout

BCPRRD plans to install a landfill gas (LFG) extraction gas blower and flare system for active gas extraction. The equipment has recently been bid out for installation of their gas extraction equipment and piping and sized for handling up to 3,000 standard cubic feet per minute (scfm) of LFG. The LFG header piping and system layout is designed for additional equipment capacity for future expansion if necessary. This section serves to communicate the design of gas and condensate piping and their gas extraction equipment to WDNR. Bid drawings depicting the layout of the gas extraction system are provided in Attachment 2.

Future LFG extraction, flare, and beneficial use equipment will be installed once they are needed. An air construction permit for the installation of the flare and associated equipment was obtained on December 26, 2024, air permit nos. 24-MIN-189 and 40525155A-P10.

2.1 Gas Piping

The existing gas header piping consists of 18-inch diameter SDR 17 high-density polyethylene (HDPE) pipe along the west edge of Phase 1. A 24-inch diameter tee off the main header was

capped in 2021. The Landfill gas will be supplied to the gas extraction and flare system with a connection off of the existing header pipe in the southwest corner of Phase 1. A 24-inch SDR 17 HDPE gas pipe will supply LFG to the gas extraction system. Piping will be sloped for condensate management. The LFG piping will transition to stainless steel where it comes aboveground to connect to the skid. The gas header piping and equipment layout is shown on Drawing 6. Landfill gas piping details are provided in Drawing 11.

2.2 Condensate Management

The interior LFG header piping is sloped to two drip legs prior to the 24-inch tee for removal of any accumulated liquids towards the south side of the west perimeter berm of Phase 1. A 24-inch pipe connection to the existing tee will be sloped to a knockout lift station (KO-1) located at a low point to collect any additional condensate. Condensate from the gas extraction equipment will be gravity drained to KO-1 from additional sources on the LFG equipment skid and flare stack as depicted on Drawing 6 of Attachment 2. KO-1 will be a dual encased HDPE manhole with access ports on the cover lid. A pump and controls system will evacuate liquids to the existing leachate conveyance line adjacent to Phase 1 through dual contained conveyance line. Leachate and condensate are then gravity conveyed to the leachate tank. All leachate lines below ground and outside the limits of waste are dual contained HDPE pipe. Details for KO-1 are included on Drawing 10 of Attachment 2.

2.3 Blower/Flare Equipment

The LFG extraction and flare equipment is designed to handle 3,000 scfm at 50 inches water column. The gas extraction equipment will consist of two centrifugal blowers, sized for 1,500 scfm each. Space is available on the skid for a future 3rd blower also sized at 1,500 cfm. The system will be dual for dual redundancy with up to two running blowers to extract at the maximum rate. The 3rd blower would be installed in the future as additional redundancy with motor operation. The flare will be designed to handle 3,000 scfm of LFG. Equipment and piping layout is provided on Drawing 6.

3. Beneficial Use Soils Acceptance Criteria

BCPRRD currently is allowed to use contaminated soils for beneficial use as long as the soils are acceptable per the Special Waste Plan and the soils test below the industrial direct contact residual contaminant levels (RCLs). Contaminated soils above the industrial direct contact RCLs but within acceptable limits (totals limits) per the Special Waste Plan can be accepted for disposal or BCPRRD can request to use the material beneficially via a source-specific plan modification to WDNR.

BCPRRD is requesting to increase the blanket approval limits for contaminated soils from the industrial direct contact RCLs to a 10x factor on the industrial direct contact RCLs, revising paragraph 1 of page 7 of the January 16, 2020, Conditional Plan Mod Approval as follows (revision in red):

In accordance with the special waste plan, BCPRRD will analyze contaminated soils, other than untreated petroleum contaminated soils, intended for use as ADC or beneficial use for the contaminants of concern (e.g. total solids [mg/kg] analysis rather than TCLP analysis) and compare the results to the Ch. NR 720, Wis. Adm. Code, industrial direct contact residual contaminant levels (RCLs) with a factor of 10. BCPRRD will not beneficially use contaminated soils with impacts above 10x NR 720, Wis. Adm. Code, industrial direct contact RCLs within the landfill without prior written department approval.

This change addresses some of the differences between the allowable acceptable limits for totals concentrations and the lower industrial direct contact RCLs. No material is accepted at the landfill for beneficial use or otherwise above the totals limits published in the special waste plan. This change will only allow the county to accept select contaminated soils for use beneficially that are under the total acceptance limits.

NR 720.03 (5) lists exposure routes for direct contact human exposure of substances in soil through the following pathways: dermal absorption, incidental ingestion, and inhalation of particulate matter or soil vapors. Exposure to potential contaminants is specifically limited on the landfill site. This is due to the nature of managing this material and engineering controls.

Concerns for protecting groundwater and direct human contact are considered when determining allowable residual contaminant levels in soils. The South Landfill site collects all contact water and treats it as leachate, with the engineering control of the leachate management system. Beneficial use of contaminated soils is not permitted on exterior side slopes and all contact water will be collected and treated with the existing leachate collection system, thus protection of groundwater is maintained for material used beneficially in the landfill.

Worker protection includes vehicle cabins with air filters. Workers are typically within air cabins for the majority of the workday. The air filters function to reduce airborne particulate matter and reduce inhalation risk. Workers do not come into contact with any contaminated soils and dermal direct contact is considered minimal. Inhalation risks are mitigated by worker placement and travel routes. During initial placement of material there may be some exposure. Placement of material is typically completed within 15 or 30 minutes. Following placement, workers are attending to other areas of the open filling area and inhalation exposure is reduced. Material may be stockpiled in the working location.

Within interior fill areas, contaminated soils used as alternative daily cover, or for construction of berms and dikes, are in place for limited time periods before being scarified or removed prior to the next lift of waste placement or covered by additional materials. Workers and the public shall have limited exposure to the materials.

Plan modification certification is provided below.

If you have any questions or comments, please contact Dan Michiels at (920) 496-6865, dan.michiels@foth.com, or Sara Beine at (920) 496-6707, sara.beine@foth.com.

Sincerely,

Foth Infrastructure & Environment, LLC



Dan Michiels, P.E.
Lead Environmental Engineer
Licensed in WI



Sara Beine, P.E.
Project Environmental Engineer
Licensed in WI

cc: Ben Hintz, Brown County Port & Resource Recovery Department
Chad Doverspike, Brown County Port & Resource Recovery Department

Attachments:

Attachment 1	Filling Plan Figures and Tables Figures 1-7 Tables 2-1
Attachment 2	Gas Extraction System Bid Drawings 1-15

**Plan of Operation Modification Request of the
Filling Plan, Gas Extraction System Layout, and Beneficial Use Soils
Acceptance Criteria
Brown County South Landfill
WDNR Landfill License No. 3565**

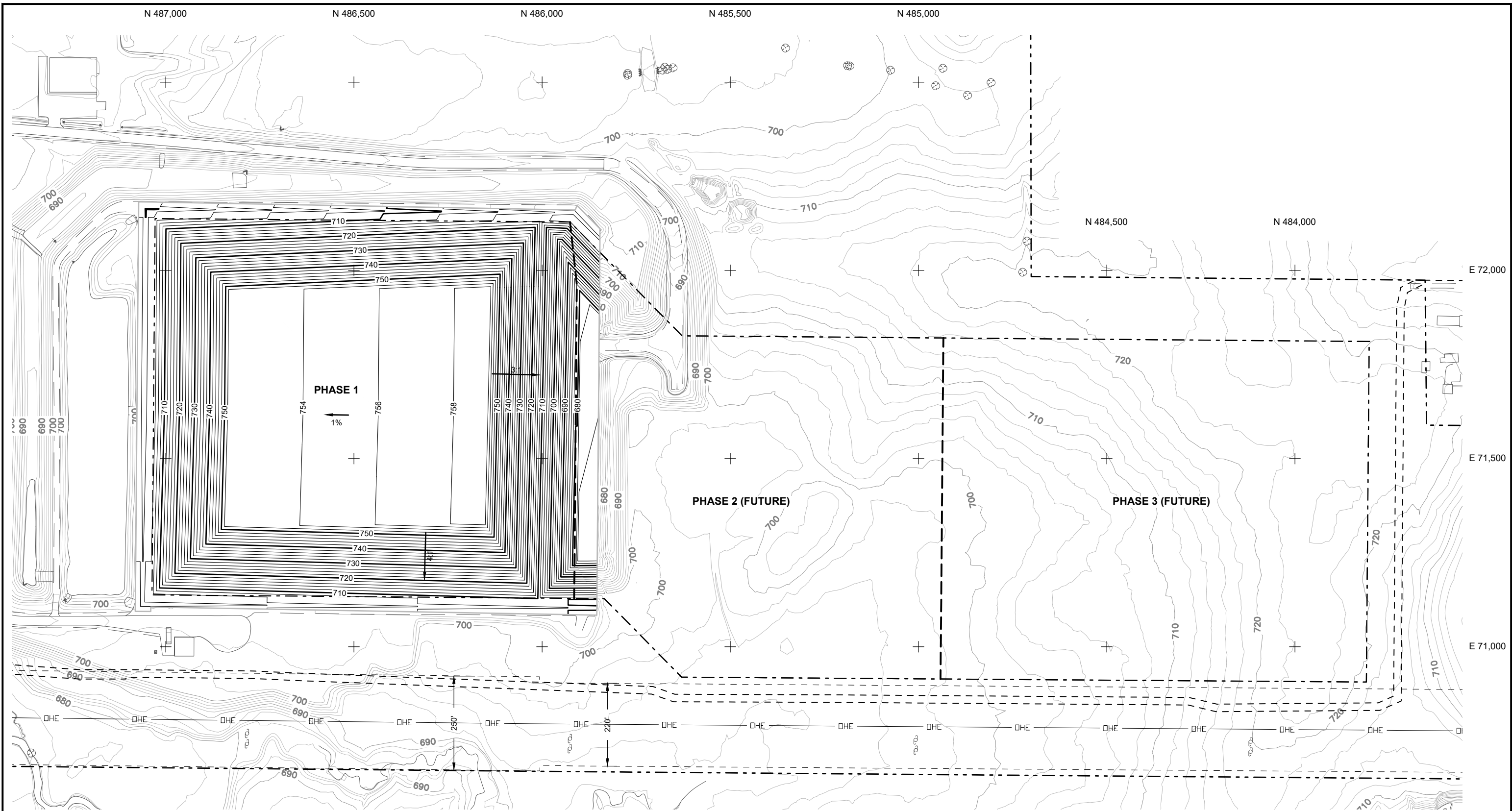
Certifications

"I, Daniel J. Michiels, hereby certify that I am a licensed professional engineer in the state of Wisconsin, registered in accordance with the requirements of Ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in Ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in Ch. NR 500 to 538, Wis. Adm. Code."

Daniel J. Michiels, P.E.
Lead Environmental Engineer
Foth Infrastructure & Environment, LLC



Attachment 1
Filling Plan Figures and Table

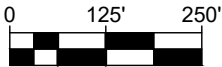


LEGEND

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|-----|--|-----|------------------------------------|
| --- | EXISTING UNPAVED ROAD | --- | APPROVED LIMITS OF WASTE PLACEMENT |
| == | EXISTING PAVED ROAD | --- | PROPOSED PHASE LIMITS |
| □ | EXISTING BUILDING | --- | PROPOSED TOP OF WASTE |
| 690 | EXISTING GROUND CONTOUR | | |
| --- | PROPERTY BOUNDARY | | |
| --- | EXISTING DIGESTER PIPING EASEMENT | | |
| --- | EXISTING ATC 138KV OVERHEAD ELECTRICAL | | |
| --- | UTILITY LINE AND EASEMENT | | |

NOTES:

- 1) APPROVED TOP OF WASTE GRADES PER PLAN OF OPERATION.
- 2) PHASE 1 FILL SEQUENCE 1 AIRSPACE VOLUME OF 2,531,000 CUBIC YARDS PER PLAN OF OPERATION.

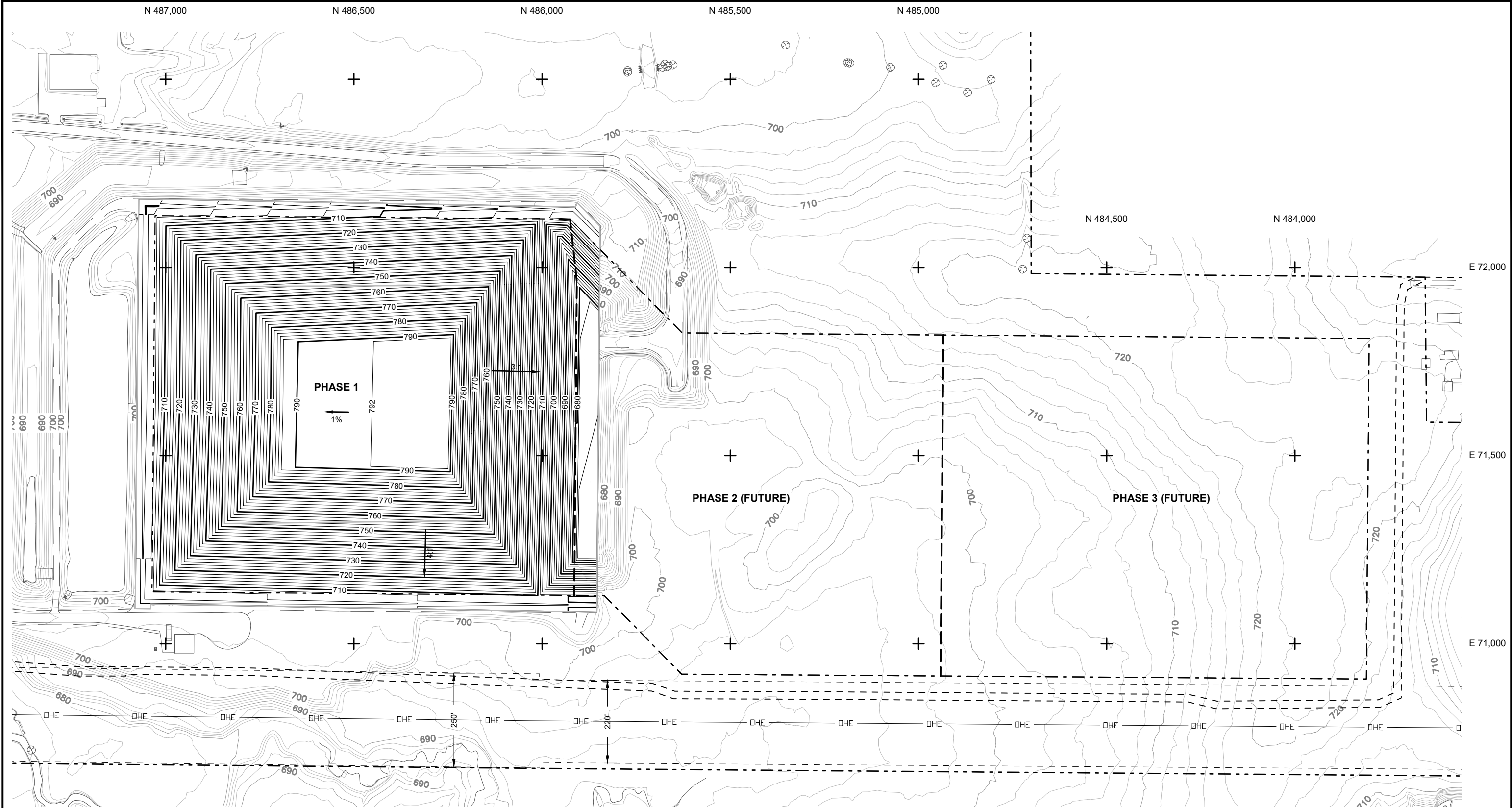


SCALE

BROWN COUNTY SOUTH LANDFILL

FIGURE 1
PHASE 1 TOP OF WASTE GRADES
FILL SEQUENCE 1

Date Completed: JANUARY 2025	Revision Date:
Drawn By: DJM4	Checked By: SMB
Project No: 25B027	



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| == | EXISTING PAVED ROAD | --- | PROPOSED PHASE LIMITS |
| □ | EXISTING BUILDING | --- | PROPOSED TOP OF WASTE |
| 690 | EXISTING GROUND CONTOUR | | |
| --- | PROPERTY BOUNDARY | | |
| --- | EXISTING DIGESTER PIPING EASEMENT | | |
| --- | EXISTING ATC 138KV OVERHEAD ELECTRICAL | | |
| --- | UTILITY LINE AND EASEMENT | | |

- NOTES:**
- 1) APPROVED TOP OF WASTE GRADES PER PLAN OF OPERATION.
 - 2) PHASE 1 LIFT SEQUENCE 1A PROPOSED TO ELEVATION 792.

0125'250'

SCALE

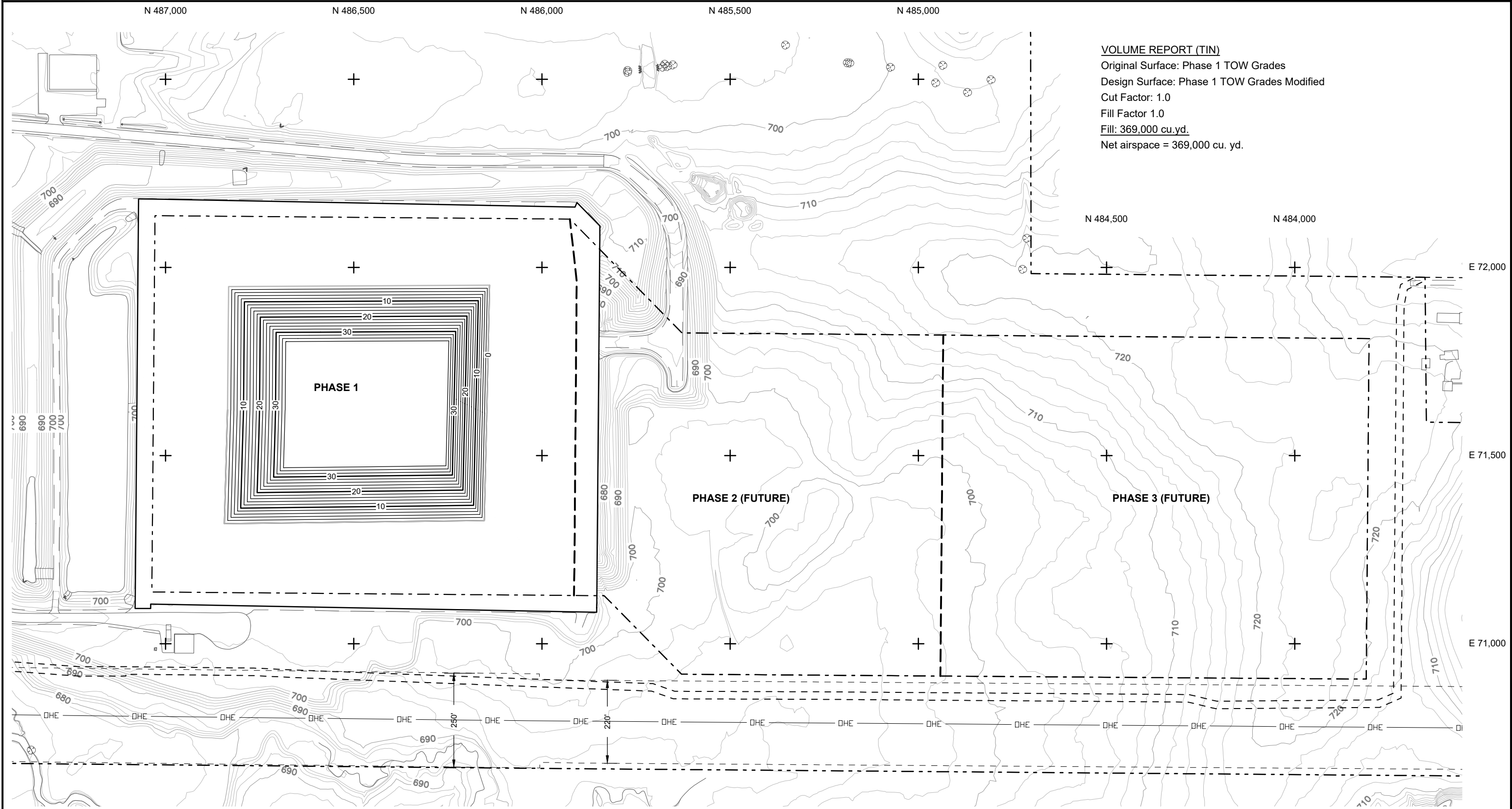
BROWN COUNTY SOUTH LANDFILL

FIGURE 2

PHASE 1 TOP OF WASTE GRADES

FILL SEQUENCE 1A - 792 FT EL.

Date Completed: JANUARY 2025	Revision Date:
Drawn By: DJM4	Checked By: SMB
Project No: 25B027	



VOLUME REPORT (TIN)
Original Surface: Phase 1 TOW Grades
Design Surface: Phase 1 TOW Grades Modified
Cut Factor: 1.0
Fill Factor 1.0
Fill: 369,000 cu.yd.
Net airspace = 369,000 cu. yd.

LEGEND

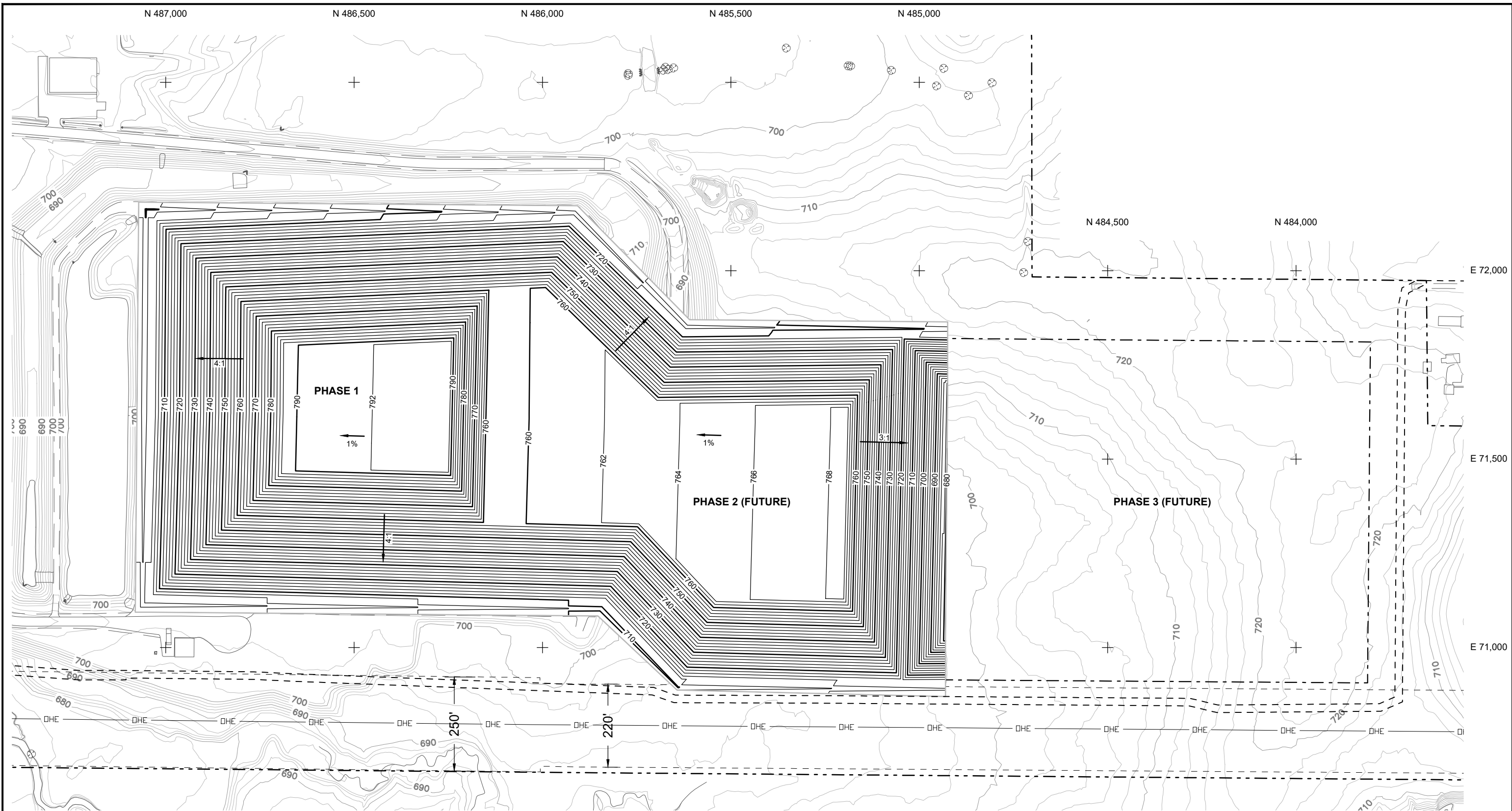
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|--|--|--|------------------------------------|
| | EXISTING UNPAVED ROAD | | APPROVED LIMITS OF WASTE PLACEMENT |
| | EXISTING PAVED ROAD | | PROPOSED PHASE LIMITS |
| | EXISTING BUILDING | | AIRSPACE THICKNESS (FT) |
| | EXISTING GROUND CONTOUR | | |
| | PROPERTY BOUNDARY | | |
| | EXISTING DIGESTER PIPING EASEMENT | | |
| | EXISTING ATC 138KV OVERHEAD ELECTRICAL | | |
| | UTILITY LINE AND EASEMENT | | |

- NOTES:**
- 1) APPROVED TOP OF WASTE GRADES PER PLAN OF OPERATION.
 - 2) CONTOURS WITHIN THE LIMITS OF WASTE REPRESENT THE DIFFERENCE IN FEET BETWEEN THE PROPOSED TOP OF FILL SEQUENCE 1 AND 1A (369,000 CY).

SCALE

BROWN COUNTY SOUTH LANDFILL		
FIGURE 3 PHASE 1 TOP OF WASTE GRADES FILL SEQUENCE 1A - 369,000 CY		
Date Completed: JANUARY 2025	Revision Date:	
Drawn By: DJM4	Checked By: SMB	Project No: 25B027

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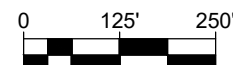


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| --- | EXISTING UNPAVED ROAD | --- | APPROVED LIMITS OF WASTE PLACEMENT |
| == | EXISTING PAVED ROAD | --- | PROPOSED PHASE LIMITS |
| □ | EXISTING BUILDING | --- | PROPOSED TOP OF WASTE |
| 690 | EXISTING GROUND CONTOUR | | |
| --- | PROPERTY BOUNDARY | | |
| --- | EXISTING DIGESTER PIPING EASEMENT | | |
| --- | EXISTING ATC 138KV OVERHEAD ELECTRICAL UTILITY LINE AND EASEMENT | | |

NOTES:

- 1) APPROVED TOP OF WASTE GRADES PER PLAN OF OPERATION.
- 2) PHASE 2 FILL SEQUENCE 2 AIRSPACE VOLUME OF 2,330,000 CUBIC YARDS PER PLAN OF OPERATION.



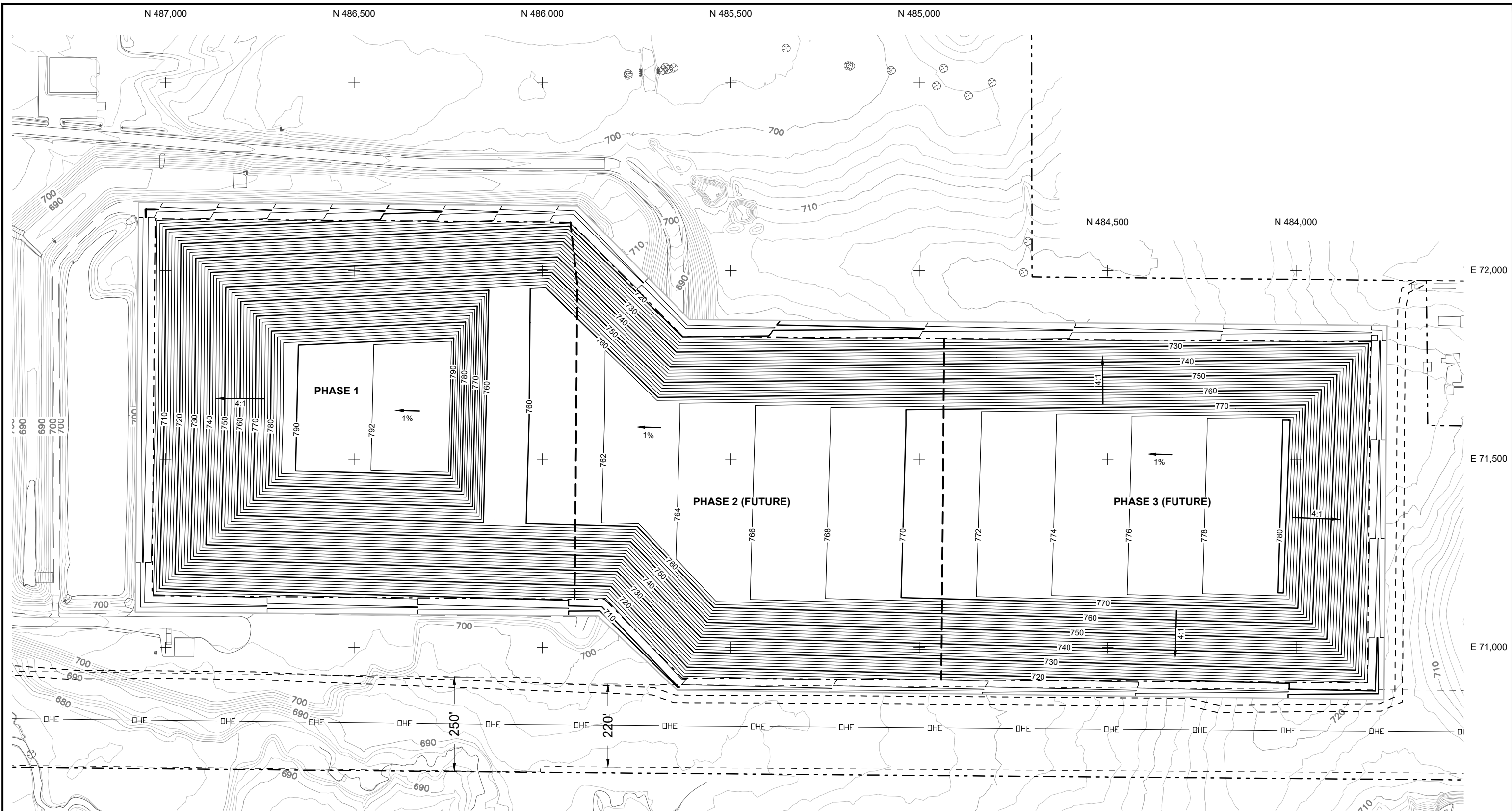
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BROWN COUNTY SOUTH LANDFILL

FIGURE 4 PHASE 2 TOP OF WASTE GRADES FILL SEQUENCE 2

Date Completed: JANUARY 2025	Revision Date:
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Project No: 25B027	

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	EXISTING UNPAVED ROAD		APPROVED LIMITS OF WASTE PLACEMENT
	EXISTING PAVED ROAD		PROPOSED PHASE LIMITS
	EXISTING BUILDING		PROPOSED TOP OF WASTE
	EXISTING GROUND CONTOUR		
	PROPERTY BOUNDARY		
	EXISTING DIGESTER PIPING EASEMENT		
	EXISTING ATC 138KV OVERHEAD ELECTRICAL UTILITY LINE AND EASEMENT		

NOTES:

- 1) APPROVED TOP OF WASTE GRADES PER PLAN OF OPERATION.
- 2) PHASE 3 FILL SEQUENCE 3 AIRSPACE VOLUME OF 2,981,000 CUBIC YARDS PER PLAN OF OPERATION.

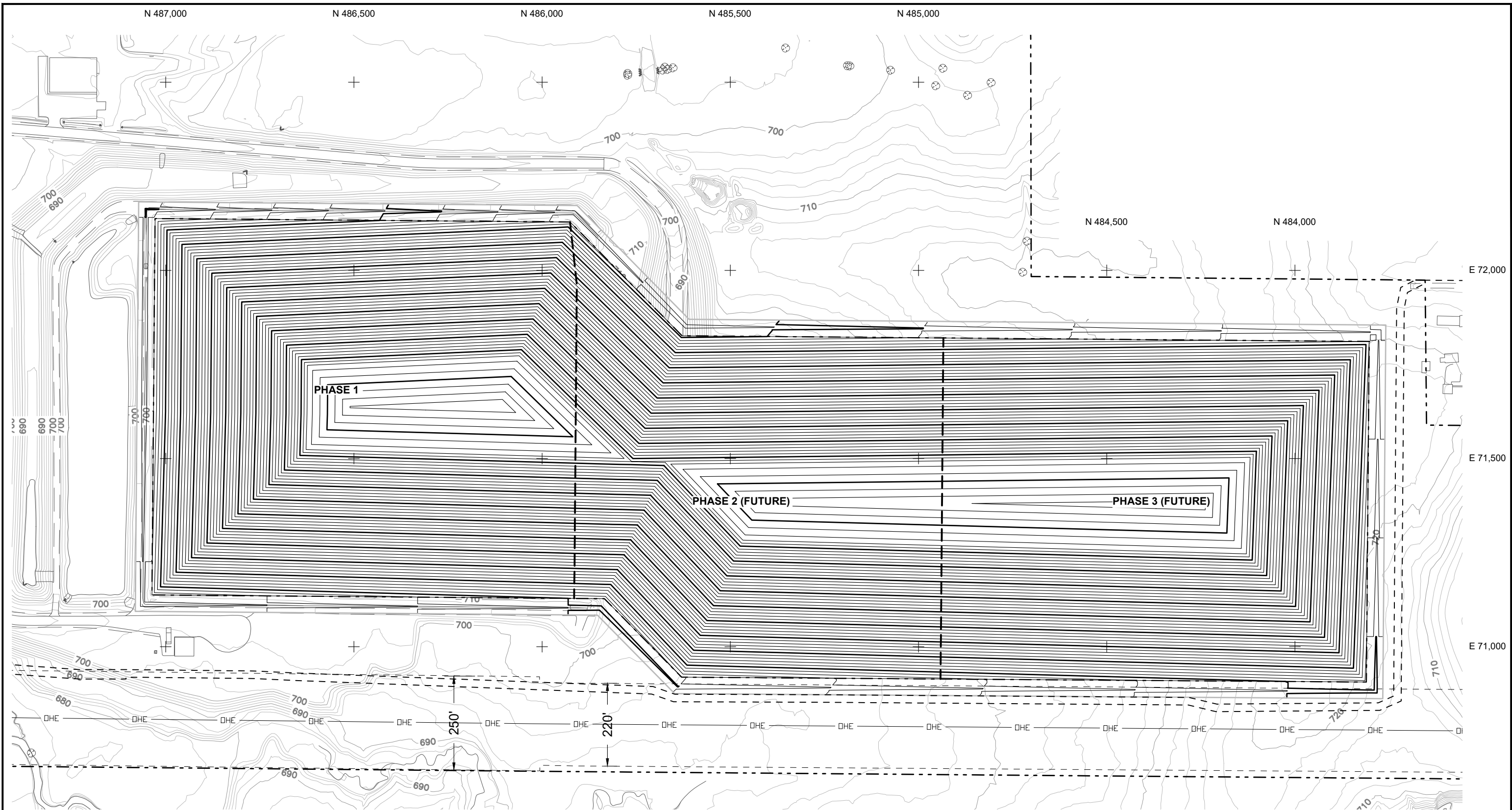


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BROWN COUNTY SOUTH LANDFILL

FIGURE 5
PHASE 3 TOP OF WASTE GRADES
FILL SEQUENCE 3

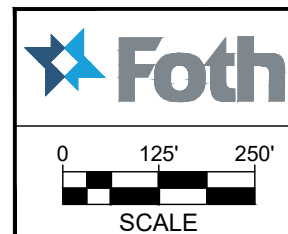
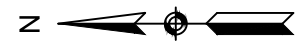
Date Completed: JANUARY 2025	Revision Date:
Drawn By: DJM4	Checked By: SMB
Project No: 25B027	



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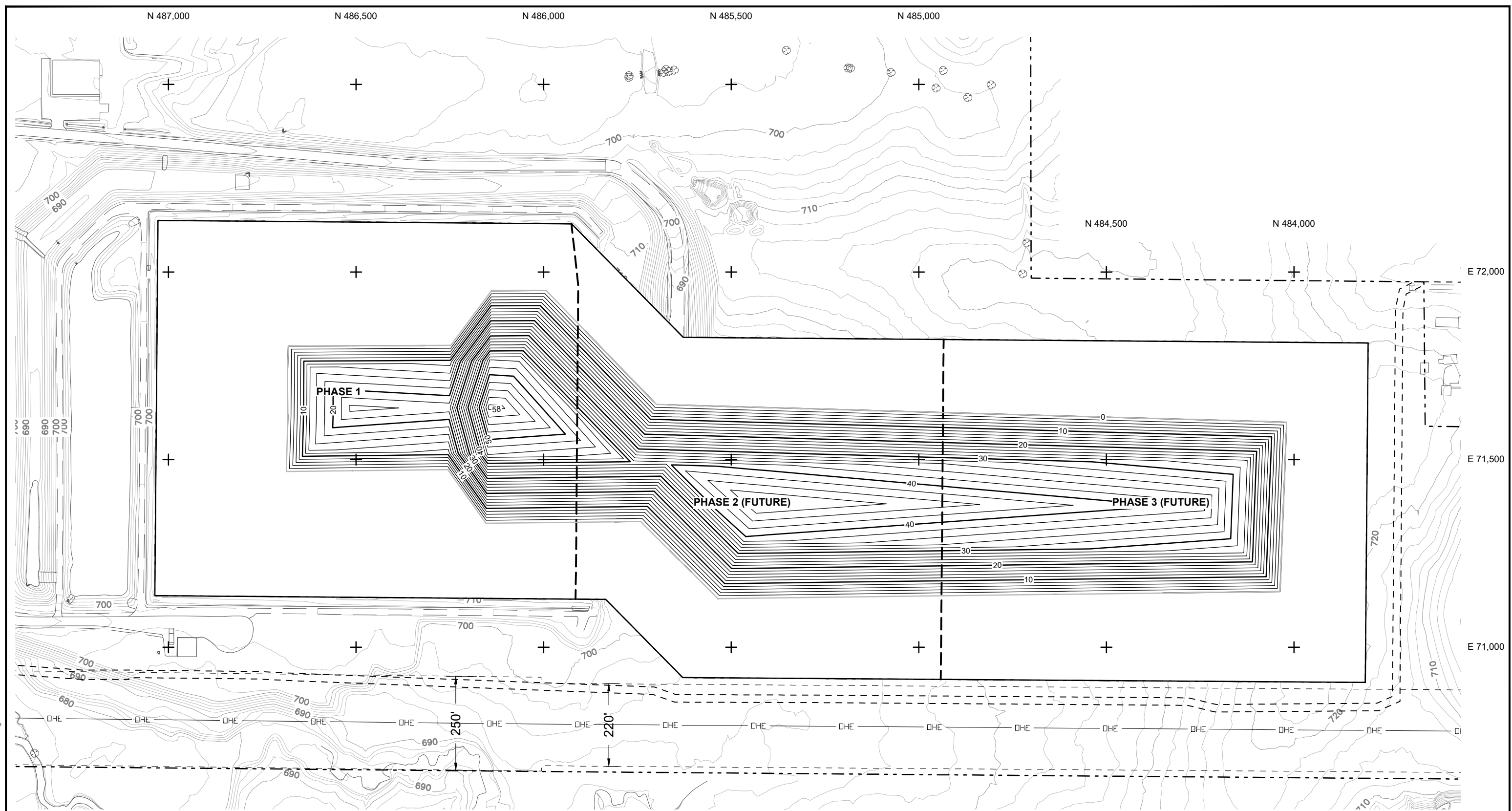
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|--|--|--|------------------------------------|
| | EXISTING UNPAVED ROAD | | APPROVED LIMITS OF WASTE PLACEMENT |
| | EXISTING PAVED ROAD | | PROPOSED PHASE LIMITS |
| | EXISTING BUILDING | | PROPOSED TOP OF WASTE |
| | EXISTING GROUND CONTOUR | | |
| | PROPERTY BOUNDARY | | |
| | EXISTING DIGESTER PIPING EASEMENT | | |
| | EXISTING ATC 138KV OVERHEAD ELECTRICAL UTILITY LINE AND EASEMENT | | |

NOTES:
1) APPROVED TOP OF WASTE GRADES PER PLAN OF OPERATION.



BROWN COUNTY SOUTH LANDFILL		
FIGURE 6 PHASE 4 TOP OF WASTE GRADES FILL SEQUENCE 4		
Date Completed: JANUARY 2025	Revision Date:	
Drawn By: DJM4	Checked By: SMB	Project No: 25B027

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	EXISTING UNPAVED ROAD		APPROVED LIMITS OF WASTE PLACEMENT
	EXISTING PAVED ROAD		PROPOSED PHASE LIMITS
	EXISTING BUILDING		AIRSPACE THICKNESS (FT)
	EXISTING GROUND CONTOUR		
	PROPERTY BOUNDARY		
	EXISTING DIGESTER PIPING EASEMENT		
	EXISTING ATC 138KV OVERHEAD ELECTRICAL UTILITY LINE AND EASEMENT		

NOTES:

- 1) APPROVED TOP OF WASTE GRADES PER PLAN OF OPERATION.
- 2) CONTOURS WITHIN THE LIMITS OF WASTE REPRESENT THE DIFFERENCE IN FEET BETWEEN THE PROPOSED TOP OF FILL SEQUENCE 4 AND FILL SEQUENCE 3.



SCALE

BROWN COUNTY SOUTH LANDFILL

FIGURE 7 PHASE 4 TOP OF WASTE GRADES FILL SEQUENCE 4 - 1,092,000 CY

Date Completed: JANUARY 2025	Revision Date:
Drawn By: DJM4	Checked By: SMB
Project No: 25B027	

Table 2-1
Airspace Capacity Summary (March 2025 Update)

Phase	Area (acres)	Total Airspace Capacity (cubic yards)⁽¹⁾	10% Daily/Intermediate Cover (cubic yards)	Net MSW Airspace (cubic yards)	Net Airspace Used - As of 1/1/2025 (cubic yards)	Net Airspace Remaining - As of 1/1/2025 (cubic yards)	Net MSW Airspace (tons)⁽²⁾	Remaining Phase Life (years)⁽³⁾
1	25.7	2,531,000	253,000	2,278,000	1,544,046	733,954	606,000	1.4
1A ⁽⁴⁾	--	369,000	37,000	332,000	-	332,000	274,000	0.6
2	20.4	2,330,000	233,000	2,097,000	-	2,097,000	1,730,000	4.1
3 and 4 ⁽⁵⁾	23.5	4,073,000	407,000	3,666,000	-	3,666,000	3,024,000	7.1
Totals	69.6	9,303,000	930,000	8,373,000	1,544,046	6,828,954	5,634,000	13.3

Notes:

⁽¹⁾ Volumes represent in-place cubic yards.

⁽²⁾ Assumes a MSW density of 1,650 lb/cubic yard, rounded for presentation purposes.

⁽³⁾ Phase life based on an average annual tonnage of 425,000 tons.

⁽⁴⁾ Phase 1A Airspace Capacity includes 369,000 cubic yards of filling within Phase 1 footprint.

⁽⁵⁾ Phase 4 airspace is vertical filling in Phases 1-3 created by Phase 3 construction. Phase 4 Airspace Capacity reduced by 369,000 cubic yards (Phase 1A).

MSW = Municipal Solid Waste

Prepared by: DJM4

Checked by: SMB2

Attachment 2
Gas Extraction System Bid Drawings 1-15



ISSUED FOR BIDDING

PROJECT 2701

LANDFILL GAS EXTRACTION SKID AND FLARE INSTALLATION

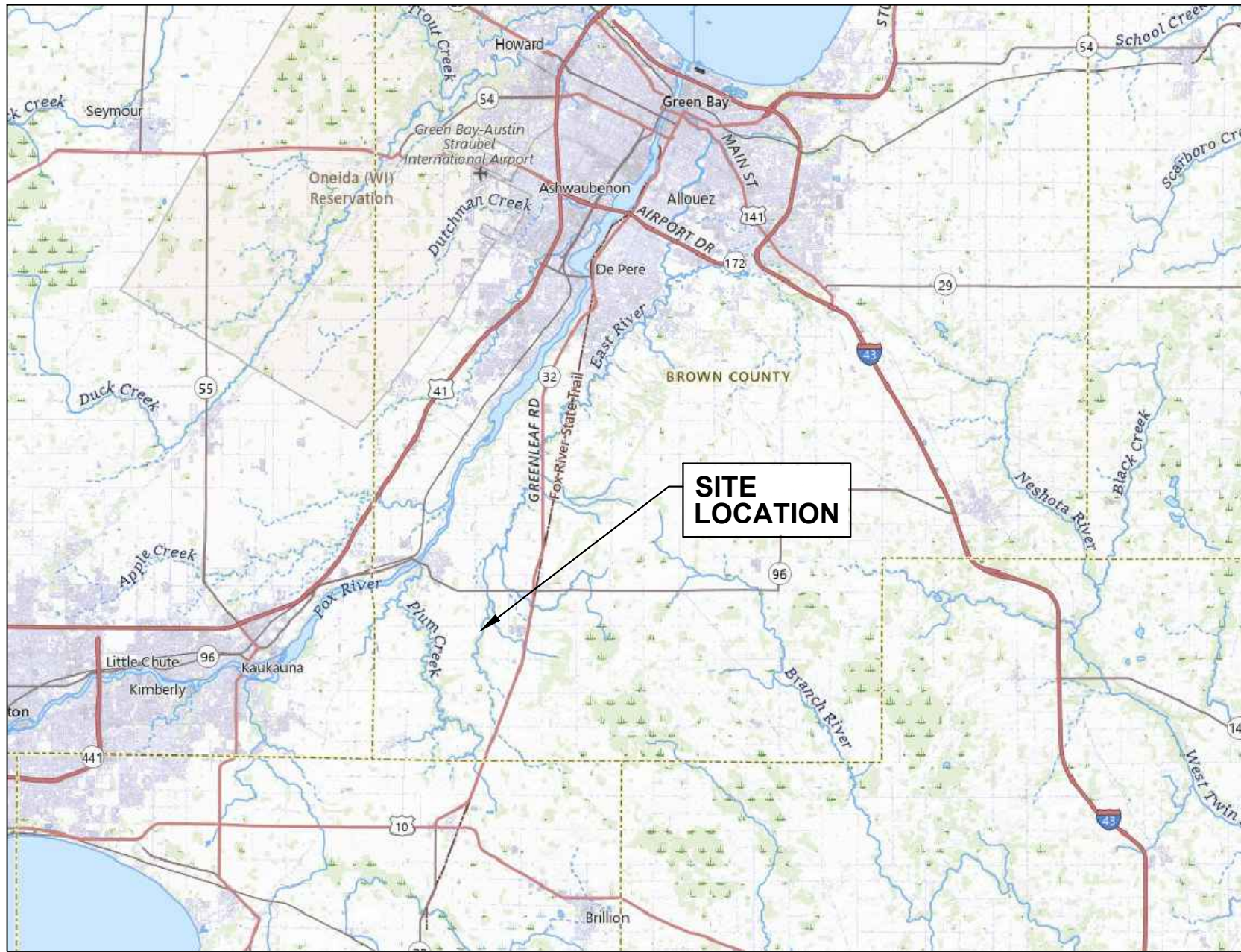
BROWN COUNTY SOUTH LANDFILL
TOWN OF HOLLAND, WI
BROWN COUNTY WISCONSIN
NOVEMBER 2024

Prepared by:
Foth Infrastructure & Environment, LLC



24B027.10

CONTACT INFORMATION	
SITE OWNER	CIVIL ENGINEER
BROWN COUNTY PORT & RESOURCE RECOVERY DEPARTMENT DEAN HAEN TEL. 920-492-4953 2561 S. BROADWAY ST GREEN BAY, WI 54304	FOTH INFRASTRUCTURE & ENVIRONMENT, LLC DAN MICHELIS, P.E. TEL. 920-496-6865 2121 INNOVATION CT DE PERE, WI 54115



SITE LOCATION MAP



VICINITY MAP

DRAWING INDEX	
SHEET NUMBER	TITLE
1	COVER SHEET
2	SITE VICINITY MAP
3	PROPOSED SITE LAYOUT AND UTILITY SERVICE
4	GRADING PLAN - SUBGRADES
5	GRADING PLAN - FINISHED GRADES
6	EQUIPMENT LAYOUT
7	ELECTRICAL LAYOUT
8	DETAILS
9	DETAILS
10	DETAILS
11	DETAILS
12	ELECTRICAL DETAILS
13	ELECTRICAL ONE LINE DIAGRAM
14	ELECTRICAL DETAILS
15	STRUCTURAL DETAILS

SHEET TITLE	
COVER SHEET	
SHEET NUMBER	
1	

REVIEWS	NO	BY	DATE	DESCRIPTION
	△			
	△			
	△			
	△			
	△			
DATE OF PREPARATION				
BY		DATE		
SURVEYED				
DRAWN		JRB2	6-18-2024	
DESIGNED		DJM4	6-18-2024	
CHECKED		SMB2	6-20-2024	

SHEET TITLE:

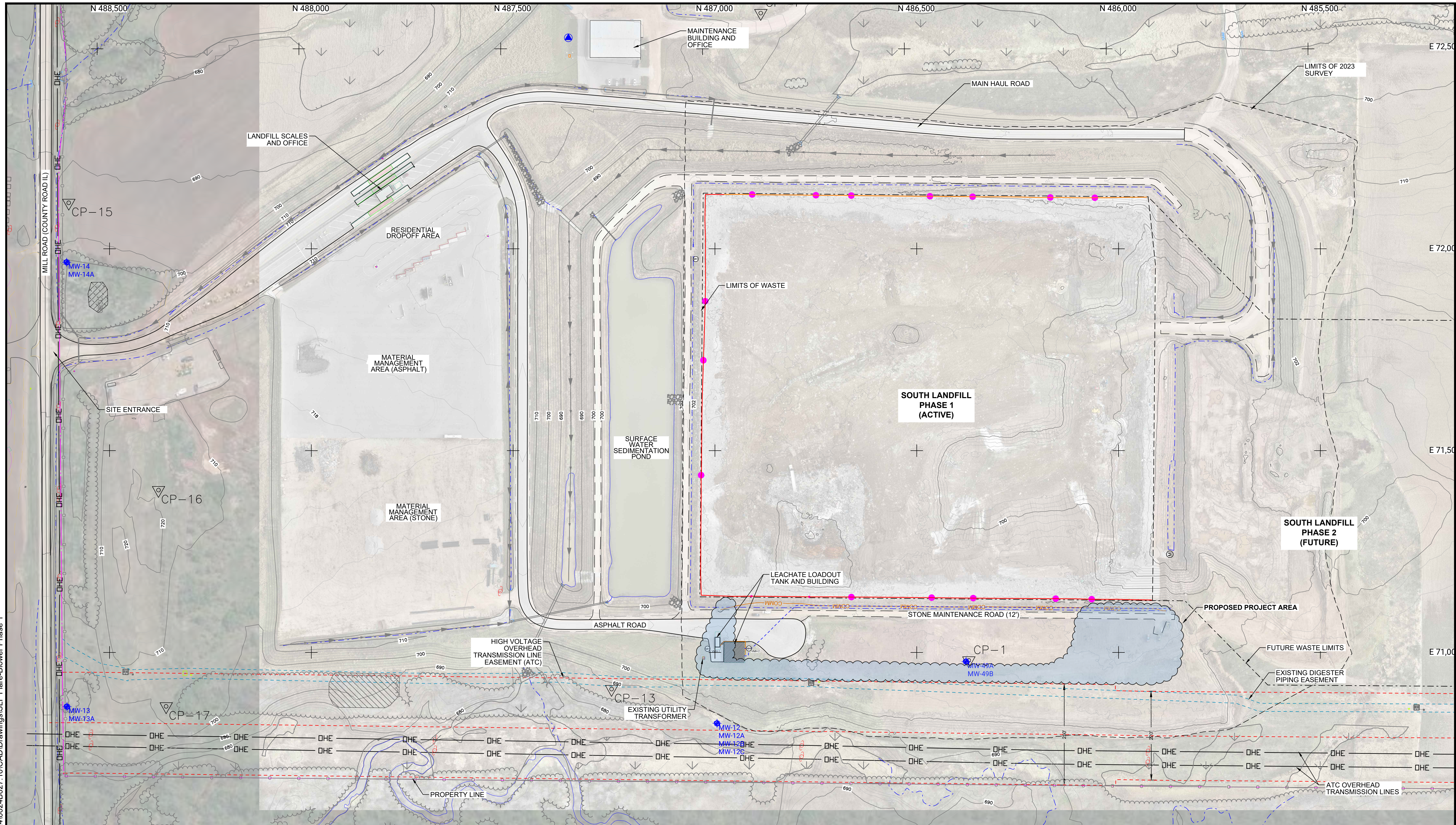
SITE VICINITY MAP

**ISSUED FOR
BIDDING**

PROJECT NO: 24B027.10

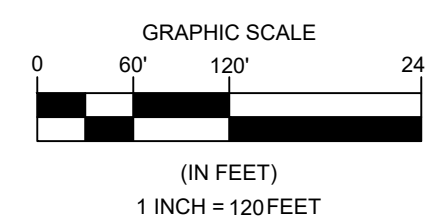
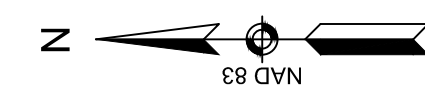
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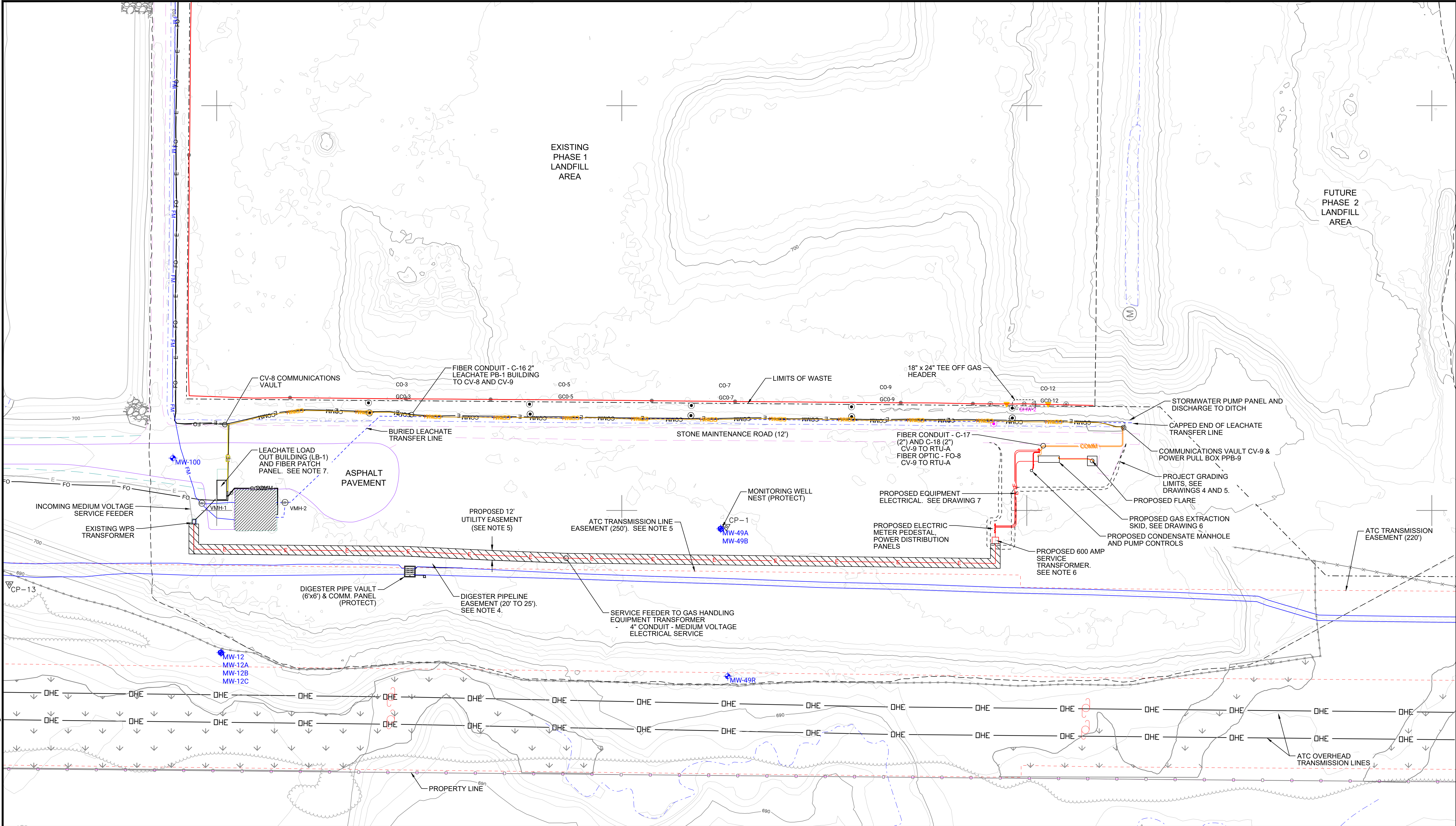
2



690	EXISTING CONTOUR	---	EXISTING LEACHATE TRANSFER PIPE
----	EXISTING PAVED ROAD	=====	EXISTING GAS HEADER PIPE
----	EXISTING UNPAVED ROAD	----	PROPERTY LINE
----	EXISTING SILT FENCE LOCATION	----	EXISTING / FUTURE WASTE LIMITS
----	EXISTING CREEK / STREAM	⬇ MW-49R	EXISTING MONITORING WELL
CDMM	EXISTING COMMUNICATION LINE	⬇ MW-12A	EXISTING MONITORING WELL NEST
FD	EXISTING FIBER OPTIC LINE	⬇ MW-12B	
E	EXISTING ELECTRIC LINE	⊗	EXISTING MANHOLE LOCATION
FM	EXISTING LEACHATE FORCEMAIN	●	EXISTING GAS HEADER STUB-OUT
----	DIGESTER PIPELINE EASEMENT	⊗	EXISTING GAS HEADER VALVE
----	EXISTING OVERHEAD ELECTRIC	▶	EXISTING GAS HEADER DRIPLEG
----	EXISTING POWER POLE LOCATION	⊙	EXISTING GAS HEADER CLEANOUT
----	POWER TRANSMISSION EASEMENT		

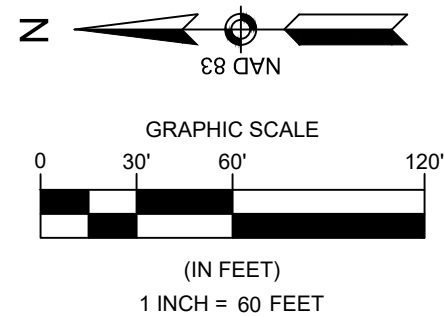
1. THE BROWN COUNTY SOUTH LANDFILL PROPERTY IS LOCATED IN SECTION 18, T21N, R20E, TOWN OF HOLLAND, BROWN COUNTY, WISCONSIN. SITE ADDRESS IS 1258 MILL ROAD, GREENLEAF, WI 54126
2. TOPOGRAPHIC BASE MAP PREPARED FROM AERIAL SURVEY BY FOTH ON NOVEMBER 20, 2023. DATE OF AERIAL PHOTOGRAPHY IS SAME DAY.
3. OPERATION HOURS OF FACILITY ARE AS FOLLOWS:
 - a. MONDAY - FRIDAY 7:30 AM - 4:00 PM
 - b. SATURDAY 7:30 AM - 12:30 PM
4. SITE GRID SYSTEM IS THE BROWN COUNTY COORDINATE SYSTEM.
5. VERTICAL DATUM IS REFERENCED TO USGS MEAN SEA LEVEL (MSL) DATUM (NAVD 1988 ADJUSTMENT).





LEGEND	
	EXISTING CONTOUR
	EXISTING PAVED ROAD
	EXISTING UNPAVED ROAD
	EXISTING SILT FENCE LOCATION
	EXISTING CREEK / STREAM
	EXISTING COMMUNICATION LINE
	PROPOSED COMMUNICATION LINE
	EXISTING FIBER OPTIC LINE
	EXISTING LEACHATE TRANSFER PIPE
	PROPOSED ELECTRIC LINE
	EXISTING LEACHATE FORCEMAIN
	DIGESTER PIPELINE EASEMENT
	EXISTING GAS FORCEMAIN
	PROPERTY LINE
	EXISTING / FUTURE WASTE LIMITS
	EXISTING OVERHEAD ELECTRIC
	EXISTING MANHOLE LOCATION
	EXISTING GAS HEADER STUB-OUT
	EXISTING GAS HEADER VALVE
	EXISTING GAS HEADER DRIPLEG
	EXISTING GAS HEADER CLEANOUT
	EXISTING POWER POLE LOCATION

	MW-49R	EXISTING MONITORING WELL
	MW-12A	EXISTING MONITORING WELL NEST
	MW-12B	EXISTING MONITORING WELL NEST
		PROPOSED ELECTRIC SERVICE FEEDER EASEMENT



NOTES:

1. THE BROWN COUNTY SOUTH LANDFILL PROPERTY IS LOCATED IN SECTION 18, T21N, R20E, TOWN OF HOLLAND, BROWN COUNTY, WISCONSIN.
2. TOPOGRAPHIC BASE MAP PREPARED FROM AERIAL SURVEY BY FOTH ON NOVEMBER 20, 2023. DATE OF AERIAL PHOTOGRAPHY IS SAME DAY.
3. SITE IS WITHIN 1-2' OF PROPOSED FINAL GRADES.
4. DIGESTER PIPELINE EASEMENT PER DOCUMENTS DATED 3/1/2024 (RUEKERT MIELKE). NO WORK SHALL BE COMPLETED WITHIN AREAS OF LISTED EASEMENT WITHOUT PRIOR APPROVAL FROM OWNER.
5. NO WORK SHALL BE COMPLETED WITHIN ATC EASEMENT.
6. CONTRACTOR SHALL GRADE TRANSFORMER PAD AREA UTILITY TRANSFORMER REQUIREMENTS. COORDINATE PAD GRADING AND COMPACTION REQUIREMENTS WITH UTILITY (WISCONSIN PUBLIC SERVICE).
7. TERMINATE FIBER OPTIC LINES WITHIN EXISTING PATCH PANEL WITHIN LEACHATE PUMP BUILDING. FURNISH AND INSTALL ALL NECESSARY FITTINGS AND ACCESSORIES. TEST ALL CONNECTIONS IN ACCORDANCE WITH SPECIFICATIONS.

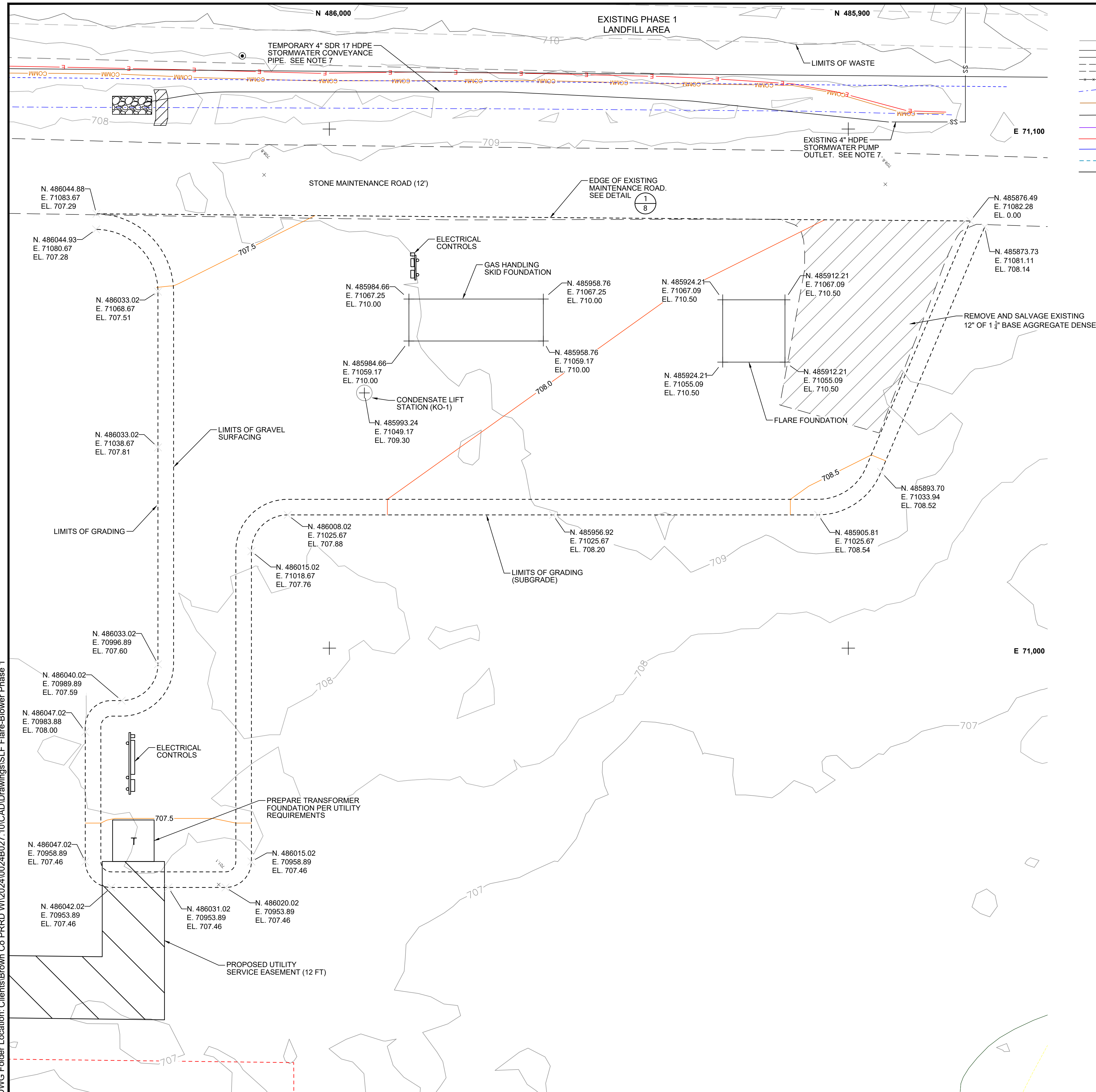


ISSUED FOR BIDDING
PROJECT 2701 LANDFILL GAS EXTRACTION
SKID AND FLARE INSTALLATION

BROWN COUNTY SOUTH LANDFILL
TOWN OF HOLLAND, WISCONSIN

REVISIONS		DATE OF PREPARATION	
NO.	DESCRIPTION	BY	DATE
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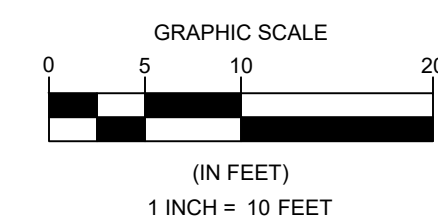
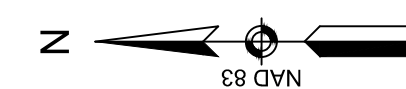
SHEET TITLE:		
PROPOSED SITE LAYOUT AND UTILITY SERVICE		
ISSUED FOR BIDDING		
PROJECT NO:	24B027.10	
SHEET NUMBER	3	



- ### LEGEND
- | | | | |
|---|------------------------------|--|---|
|  | 690 |  | EXISTING LEACHATE TRANSFER PIPE |
|  | EXISTING PAVED ROAD |  | PROPERTY LINE |
|  | EXISTING UNPAVED ROAD |  | EXISTING / FUTURE WASTE LIMITS |
|  | EXISTING SILT FENCE LOCATION |  MW-49R | EXISTING MONITORING WELL |
|  | EXISTING CREEK / STREAM |  MW-12A | EXISTING MONITORING WELL NEST |
|  | EXISTING COMMUNICATION LINE |  MW-12B | |
|  | PROPOSED COMMUNICATION LINE |  | PROPOSED ELECTRIC SERVICE FEEDER EASEMENT |
|  | EXISTING FIBER OPTIC LINE | | |
|  | ELECTRIC LINE | | |
|  | EXISTING LEACHATE FORCEMAIN | | |
|  | DIGESTER PIPELINE EASEMENT | | |
|  | EXISTING OVERHEAD ELECTRIC | | |

- NOTES:**

1. THE BROWN COUNTY SOUTH LANDFILL PROPERTY IS LOCATED IN SECTION 18, T21N, R20E, TOWN OF HOLLAND, BROWN COUNTY, WISCONSIN.
2. TOPOGRAPHIC BASE MAP PREPARED FROM AERIAL SURVEY BY FOTH ON NOVEMBER 20, 2023. DATE OF AERIAL PHOTOGRAPHY IS SAME DAY.
3. CONTRACTOR TO LOCATE AND PROTECT ALL EXISTING UTILITIES.
4. CONTRACTOR TO COORDINATE ELECTRICAL SERVICE AND TRANSFORMER INSTALLATION WITH WISCONSIN PUBLIC SERVICE (WPS). SIZING OF TRANSFORMER PAD SHALL BE COMMUNICATED FROM WPS.
5. PROPOSED GRADES FOR PAD REPRESENT BOTTOM OF STONE SURFACING.
6. CONTRACTOR SHALL LOAD AND HAUL ANY EXCESS FILL TO OWNER SPECIFIED LOCATION ONSITE. APPROXIMATELY 362 CY OF EXCESS CUT IS ESTIMATED FOR GRADES SHOWN AND MAY VARY.
7. EXISTING STORMWATER PUMP ON SOUTH END OF PHASE 1 DISCHARGES TO PERIMETER DITCH (~300 GPM) WITH AUTOMATIC OPERATION BASED ON FLOAT CONTROLS. CONTRACTOR SHALL MAINTAIN BYPASS PIPE TO BE WELDED TO EXISTING OUTLET AND DISCHARGE WEST OF SITE WORK. OWNER SHALL PROVIDE PIPING AND WELD PIPE AT BEGINNING OF WORK. CONTRACTOR SHALL MAINTAIN THROUGHOUT PROJECT AND PROVIDE OUTLET RIPRAP SPILLWAY.



ISSUED FOR BIDDING

**PROJECT 2701 LANDFILL GAS EXTRACTION
SKID AND FLARE INSTALLATION**

**BROWN COUNTY SOUTH LANDFILL
TOWN OF HOLLAND, WISCONSIN**

[illegible]

DATE OF PREPARATION

	BY	DATE
SURVEYED		
DRAWN	DJM4	08/29/2011
DESIGNED	DJM4	08/29/2011
CHECKED	SMB2	08/29/2011

SHEET TITLE:

GRADING PLAN - SUBGRADE

**ISSUED FOR
BIDDING**

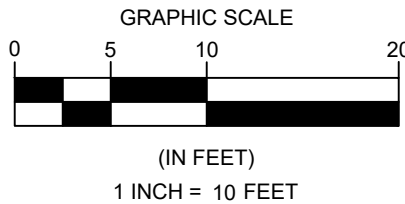
PROJECT NO:	24B027.10
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SHEET NUMBER

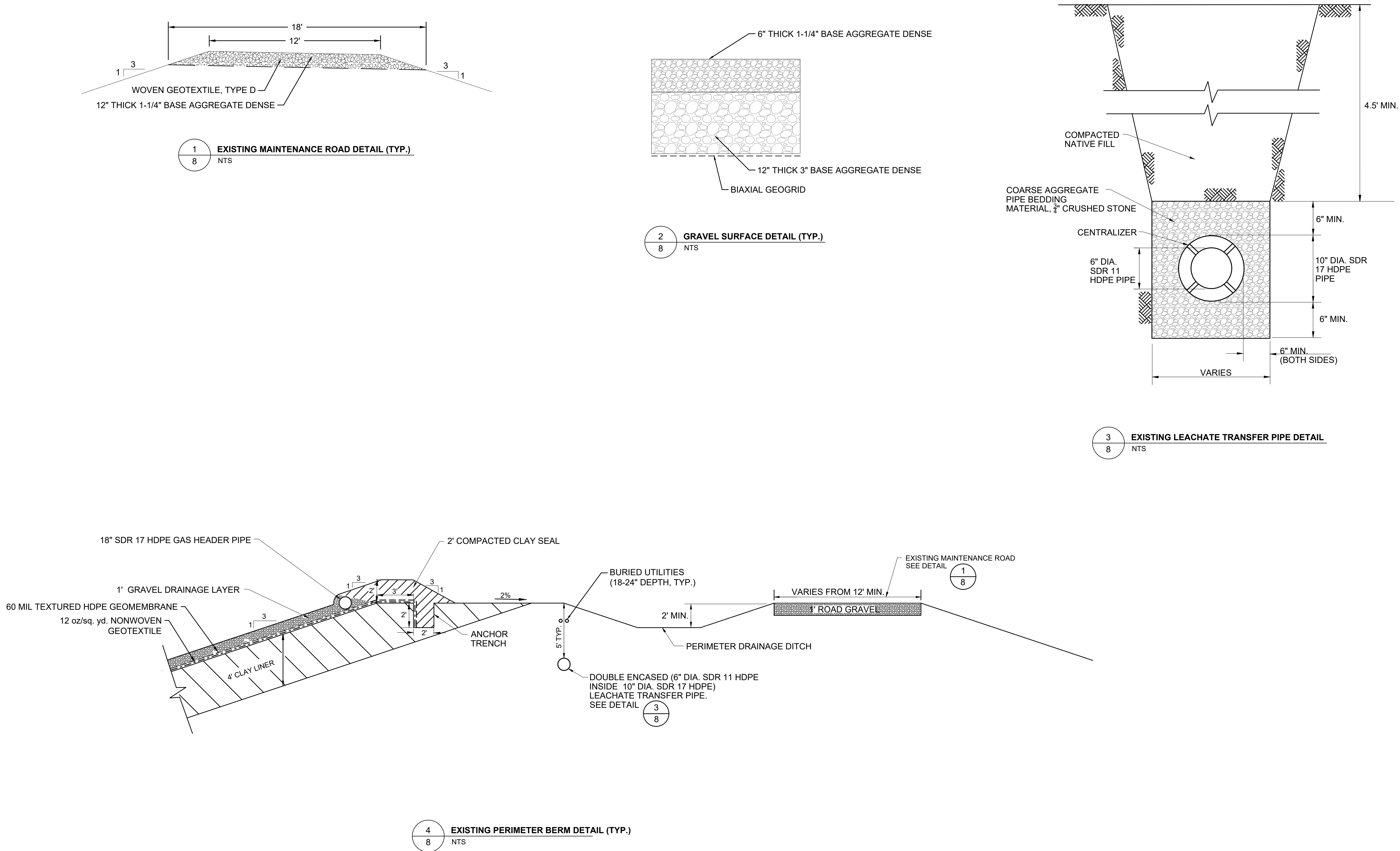
4

ELECTRICAL LAYOUT	
ISSUED FOR BIDDING	

7



Thursday, November 7, 2024 11:19:57 AM
DWG Filename: drawing 8-11 details.dwg Layout: drawing 8
DWG Folder Location: Clients\Brown Co PRRD WI\2024\0024B027.10\CAD\Drawings\LFG Extraction and Flare Skid



ISSUED FOR BIDDING

PROJECT 2701 LANDFILL GAS EXTRACTION
SKID AND FLARE INSTALLATION

BROWN COUNTY SOUTH LANDFILL
TOWN OF HOLLAND, WISCONSIN

REVISIONS		DESCRIPTION		DATE		BY	
NO.	BY	DATE	DESCRIPTION	NO.	BY	DATE	DESCRIPTION
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SHEET TITLE:

DETAILS

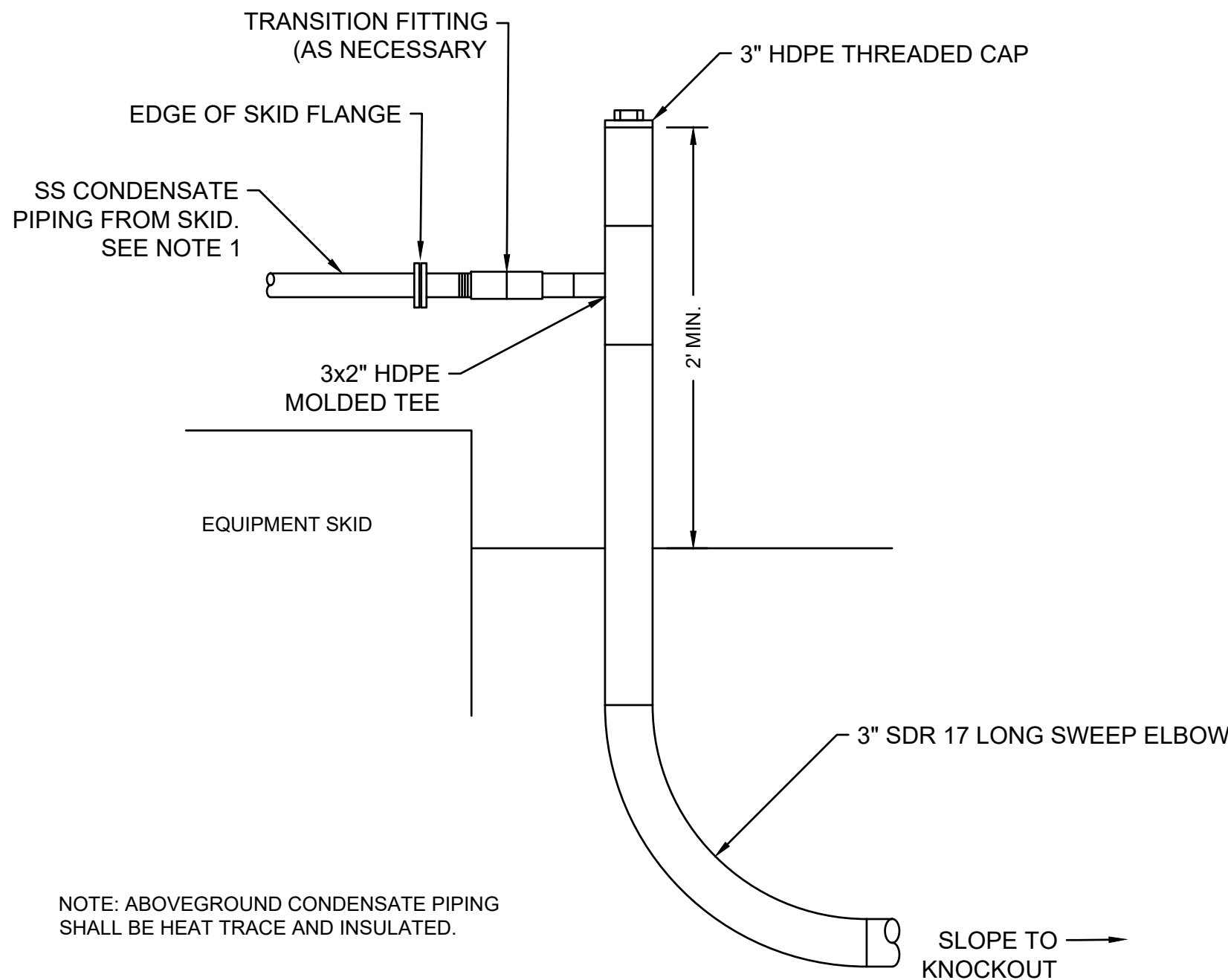
ISSUED FOR BIDDING

PROJECT NO: 24B027.10

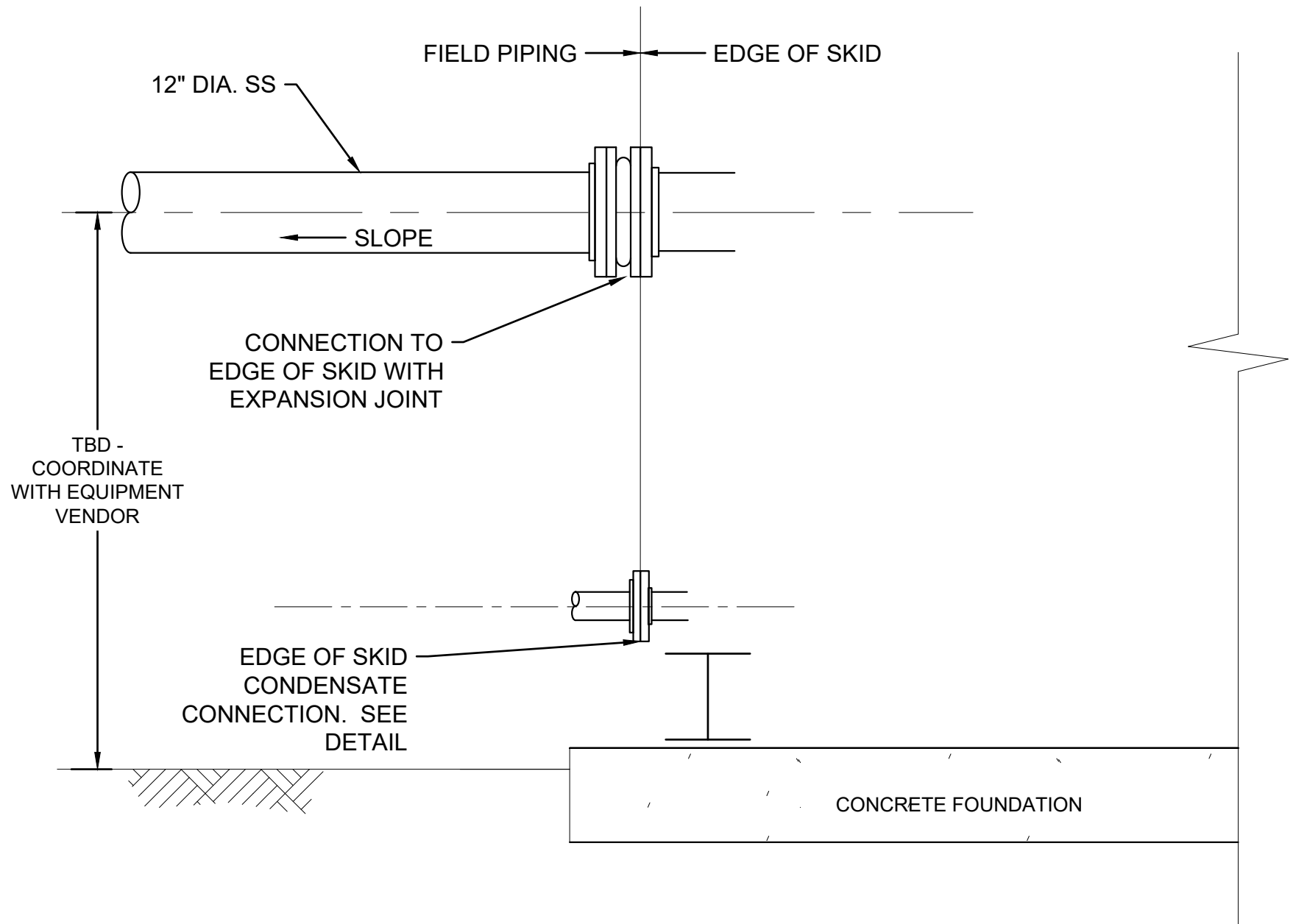
SHEET NUMBER

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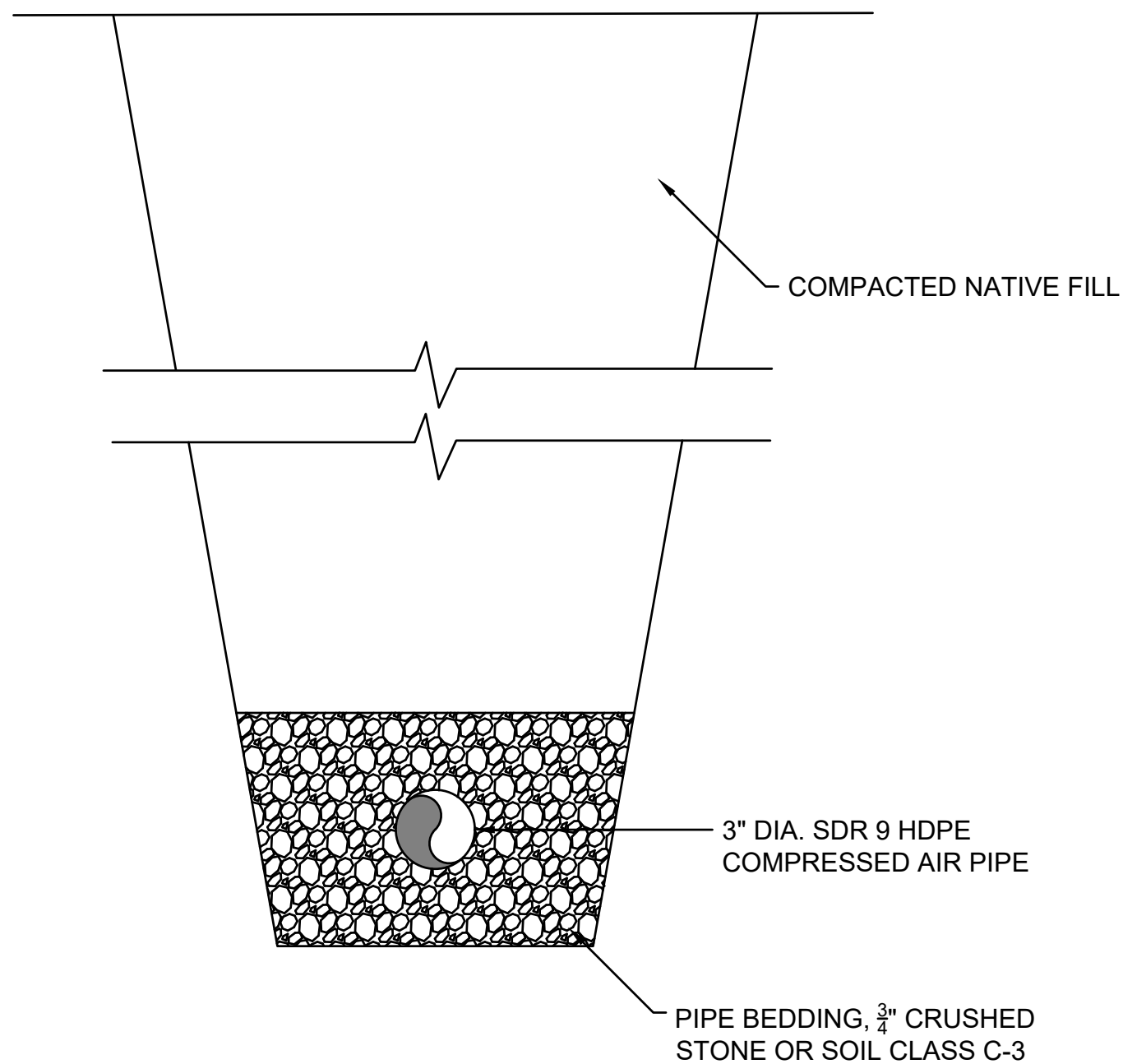


1
9
CONDENSATE CLEANOUT DETAIL
NTS

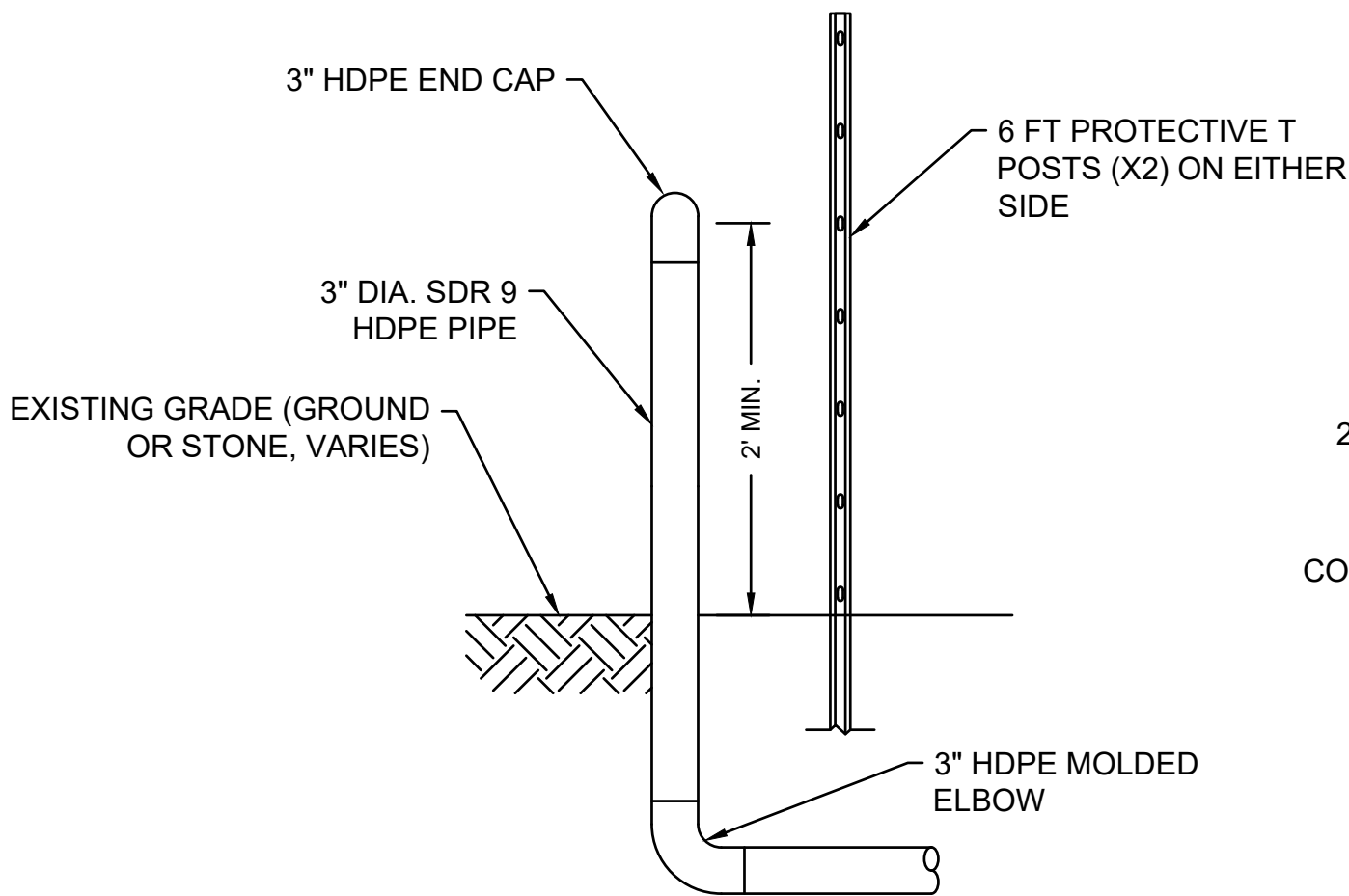


2
9
GAS PIPING TO SKID CONNECTION
NTS

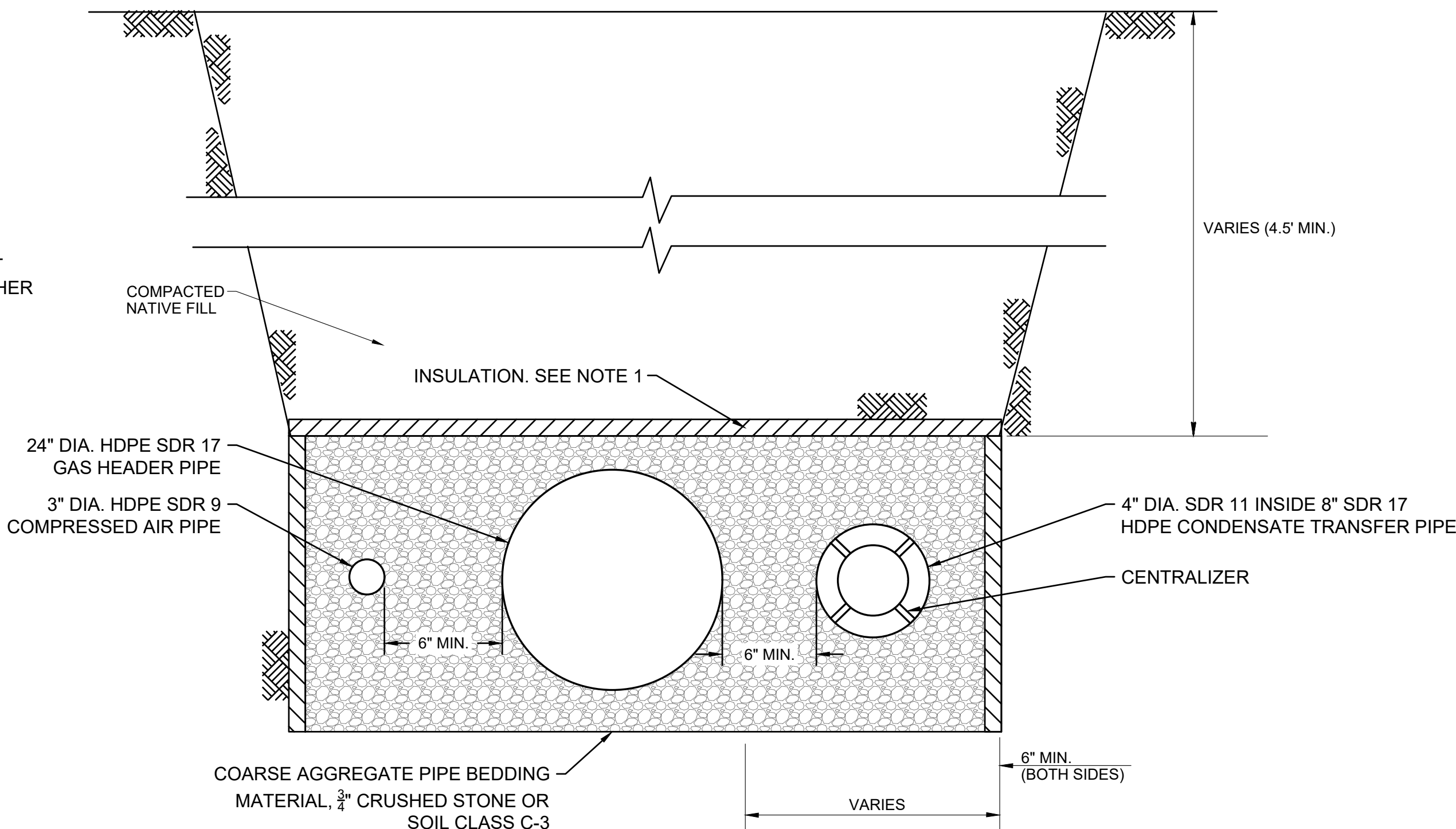
- NOTES:
1. CONTRACTOR SHALL COORDINATE WITH LFG EXTRACTION AND FLARE SKID MANUFACTURER FOR INSTALLATION OF ANY LOOSE SHIPPED ITEMS. INSTALL PER MANUFACTURER RECOMMENDATIONS.
 2. ALL ABOVEGROUND PIPING AND FITTINGS SHALL BE SCH. 10 304L STAINLESS STEEL (UNLESS NOTED OTHERWISE).
 3. PIPING, VALVES, AND EQUIPMENT SHALL BE HEAT TRACED AND INSULATED PER SPECIFICATIONS.
 4. CONTRACTOR SHALL COORDINATE CONDENSATE PIPING HOOKUP LOCATION WITH SKID VENDOR IN GENERAL CONFORMITY WITH THE LAYOUT AS SHOWN ON DRAWING 6.



4
9
COMPRESSED AIR PIPE TRENCH DETAIL
NTS



5
9
COMPRESSED AIR PIPE STUBOUT DETAIL
NTS



- NOTE:
1. INSTALL 3" XPS FOAM BOARD ALONG TOP AND SIDES OF PIPE TRENCH BELOW ROADWAYS AND DITCHES.

6
9
PIPE TRENCH MULTIPLE DETAIL (TYP.)
NTS

ISSUED FOR BIDDING
PROJECT 2701 LANDFILL GAS EXTRACTION
SKID AND FLARE INSTALLATION

BROWN COUNTY SOUTH LANDFILL
TOWN OF HOLLAND, WISCONSIN

REV/SIONS		DESCRIPTION		DATE		BY		NO.	
DATE OF PREPARATION									
		BY		DATE					
SURVEYED		DJM4		08/29/24					
DRAWN		DJM4		08/29/24					
DESIGNED		DJM4		08/29/24					
CHECKED		SMB2		08/29/24					

SHEET TITLE:

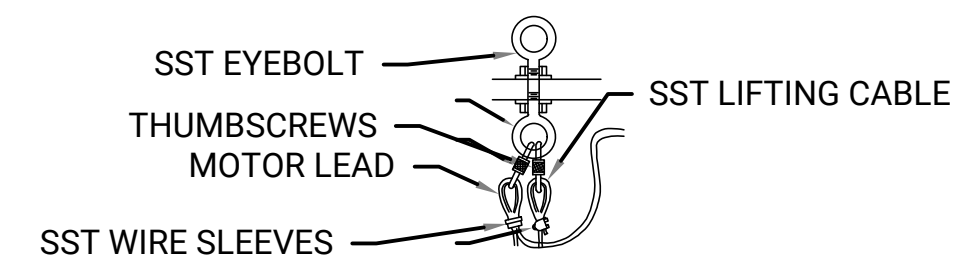
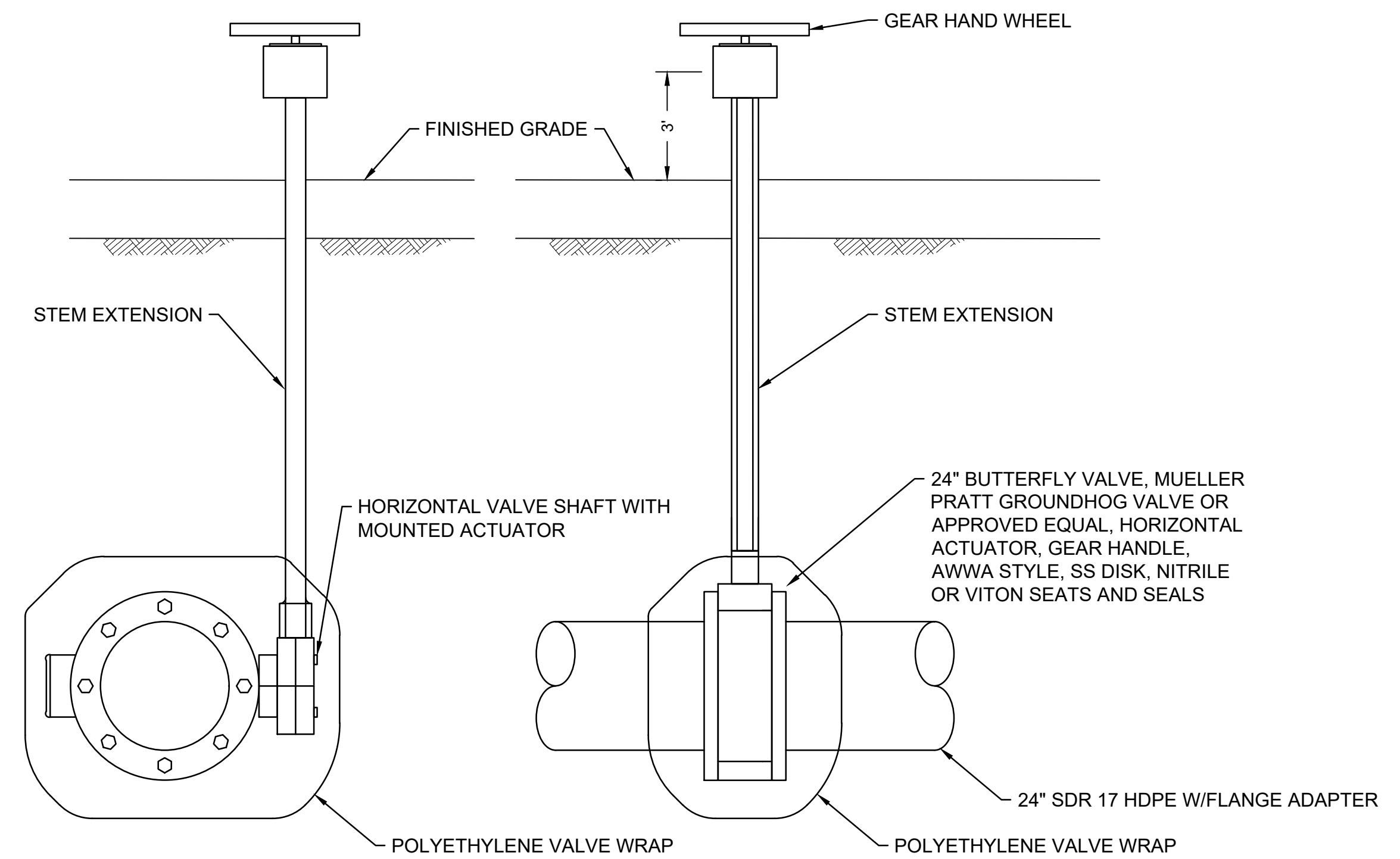
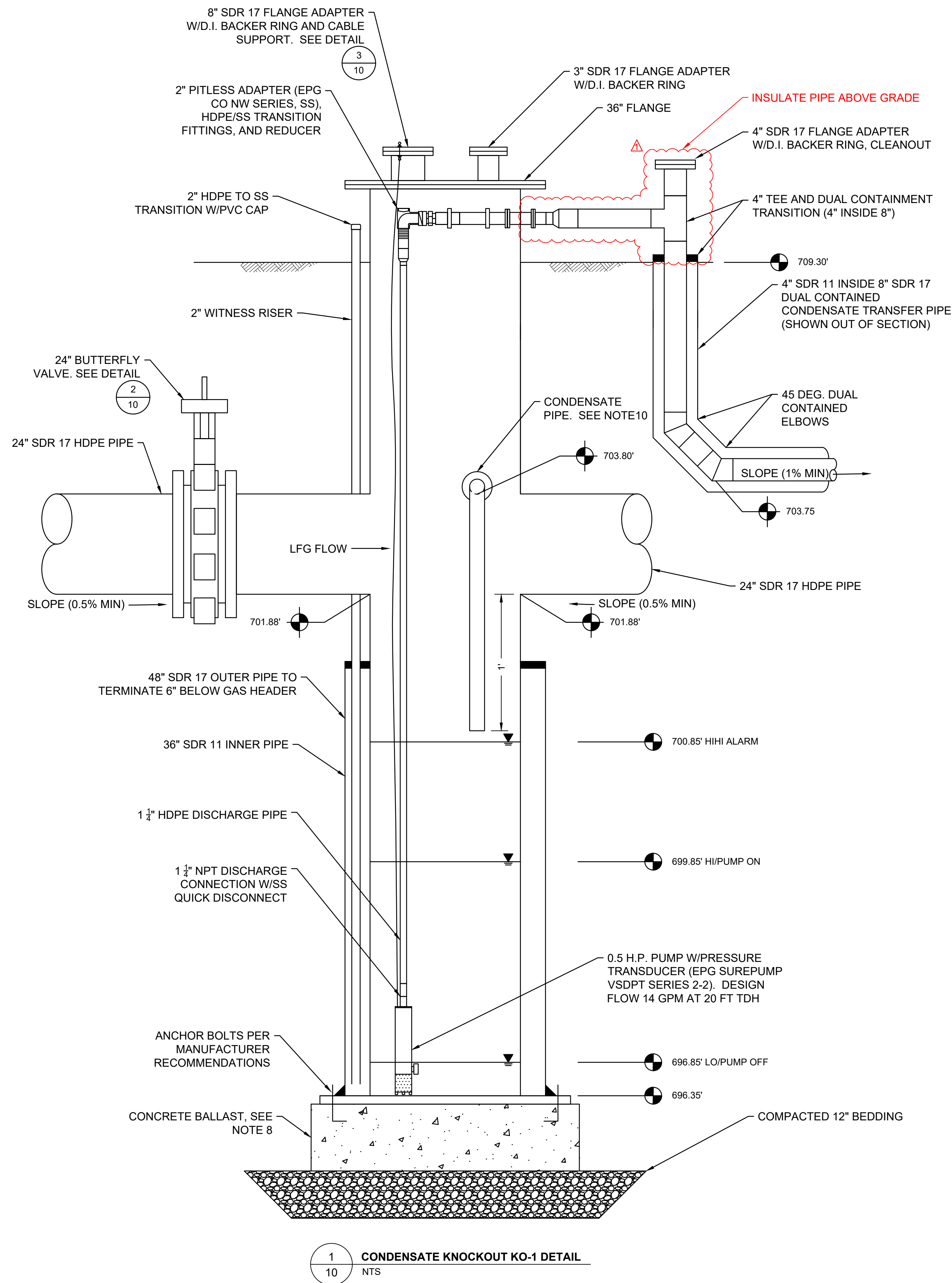
DETAILS

ISSUED FOR
BIDDING

PROJECT NO: 24B027.10

SHEET NUMBER





NOTES:

1. DUAL CONTAINED HDPE, PRE-FABRICATED MANHOLE SHALL CONFORM WITH ASTM F1759, STANDARD PRACTICE FOR DESIGN OF HIGH DENSITY POLYETHYLENE (HDPE) MANHOLES FOR SUBSURFACE APPLICATIONS.
2. COVER SHALL BE MANUFACTURED FROM HDPE SHEETSTOCK.
3. MANUFACTURER TO REINFORCE MANHOLE FOR APPLICATION.
4. INLET AND OUTLET HDPE PIPING CONNECTIONS SHALL BE PRE-FABRICATED HDPE MANHOLE SHALL BE REINFORCED WITH TWO OR MORE GUSSETS (1" MIN. SHEETSTOCK).
5. DESIGN OF HDPE MANHOLE SHALL INCLUDE LUGS DESIGNED FOR LIFT OPERATIONS.
6. BASE MANHOLE TO BE CONSTRUCTED OF 2" SHEETSTOCK (MIN.).
7. MANHOLE SHALL BE PRE-PIPED WITH HDPE WITH ALL NECESSARY FITTINGS TO THE EXTENT POSSIBLE TO LIMIT FIELD INSTALLATION. MANUFACTURER TO INCLUDE PIPE SUPPORTS FOR INTERIOR HDPE PIPING. SUPPORTS SHALL NOT BE AFFIXED TO LOWER SIDE OF COVER.
8. CONTRACTOR SHALL INSTALL COMPACTED FINES AND GENERAL FILL. CONTRACTOR SHALL INSTALL BALLAST OF SIZE AND THICKNESS (12" MIN.) WITH BOLT PATTERN AS RECOMMENDED BY MANUFACTURER. BOLTS SHALL BE 1/2 INCH GALVANIZED ANCHORS. BALLAST BLOCK MAY BE PRECAST OR POURED SEPARATELY. FOR CAST IN PLACE PAD, ALLOW FOR MINIMUM 48 HOURS OF CURE TIME PRIOR TO MANHOLE PLACEMENT.
9. CONTRACTOR SHALL INSTALL AND BACKFILL HDPE MANHOLE IN ACCORDANCE WITH MANUFACTURER REQUIREMENTS.
10. EXTEND CONDENSATE PIPE WITH DROP PIPE TO 1 FOOT BELOW GAS HEADER PIPE INVERT.

PUMP NOTES:

1. CONDENSATE PUMP SHALL BE EPG VSDPT2-2 MODEL WITH PRESSURE TRANSDUCER AND CHECK VALVE (BORED). PUMP AND ASSOCIATED ALARM AND HARDWARE TO BE INSTALLED PER MANUFACTURER RECOMMENDATIONS.
 2. PUMP SHALL BE CONNECTED TO 1½" RISER DISCHARGE WITH A STAINLESS STEEL QUICK DISCONNECT.
 3. PUMP SHALL BE SUSPENDED USING ¾" STAINLESS STEEL CABLE AND CONNECTORS.
 4. CONTRACTOR SHALL PROVIDE 36" STAINLESS STEEL ACCESS ROD LOOSE. ACCESS ROD TO BE THREADED INTO PITLESS ADAPTER FOR EASY PUMP REMOVAL AND RESETING.
 5. EPG PUMPMASTER CONTROL PANEL TO BE A LEVEL MASTER CONTROL METER WITH SIMULATOR, ELAPSED TIME METER, AND MANUAL TESTING.
 - HI/PUMP ON: 3.5 FT
 - LO/PUMP OFF: 0.5 FT
 - HIHI ALARM: 4.5 FT
- ALARMS:
- HIGH LEVEL OUTPUT TO RTU CONTROLLER
 - OVERLOADS
 - EXTERIOR COMMON ALARM LIGHT
6. JUNCTION BOX TO BE LEAK TIGHT AT 100 INCHES WATER COLUMN AND INCLUDE SURE SEAL CONNECTORS ¾" AND 1" MYERS HUB TRANSDUCER CABLE CLAMP, DESICCANT DRYER, AND BELLOWES.
 7. ALL ENCLOSURES TO BE NEMA 4X

REVISIONS				DATE OF PREPARATION	
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△	DJM4	12/2/25	ADDED INSULATION		
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SURVEYED					
DRAWN			DJM4	08/29/24	
DESIGNED			DJM4	08/29/24	
CHECKED			SMB2	08/29/24	

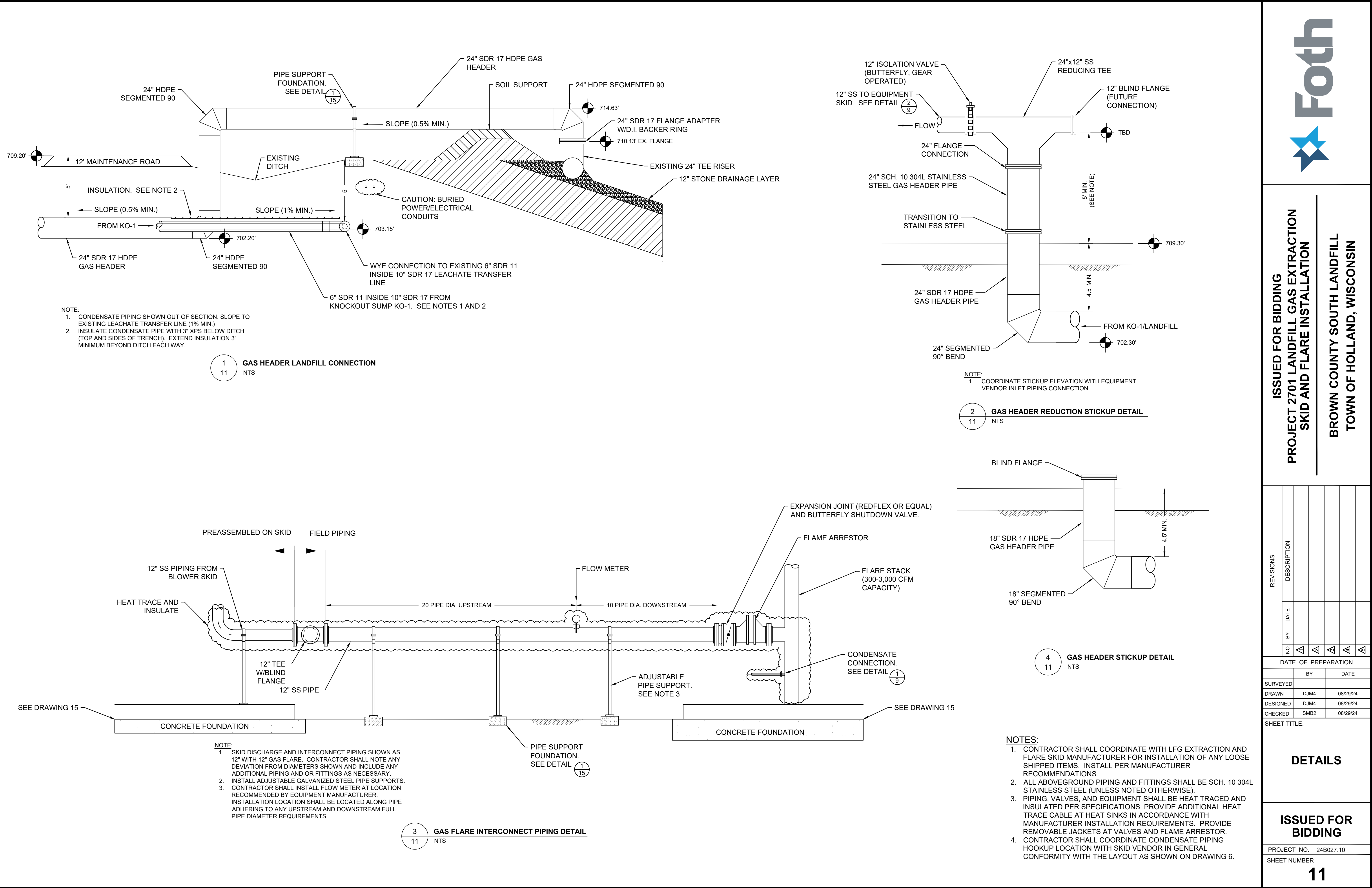
SHEET TITLE:

DETAILS

**ISSUED FOR
BIDDING**

PROJECT NO: 24B027.10

SHEET NUMBER





ISSUED FOR BIDDING

**PROJECT 2701 LANDFILL GAS EXTRACTION
SKID AND FLARE INSTALLATION**

**BROWN COUNTY SOUTH LANDFILL
TOWN OF HOLLAND, WISCONSIN**

REV/SIONS		DATE OF PREPARATION	
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BY	DATE
SURVEYED	
DRAWN	DJM4 08/29/24
DESIGNED	DJM4 08/29/24
CHECKED	SMB2 08/29/24

SHEET TITLE:

DETAILS

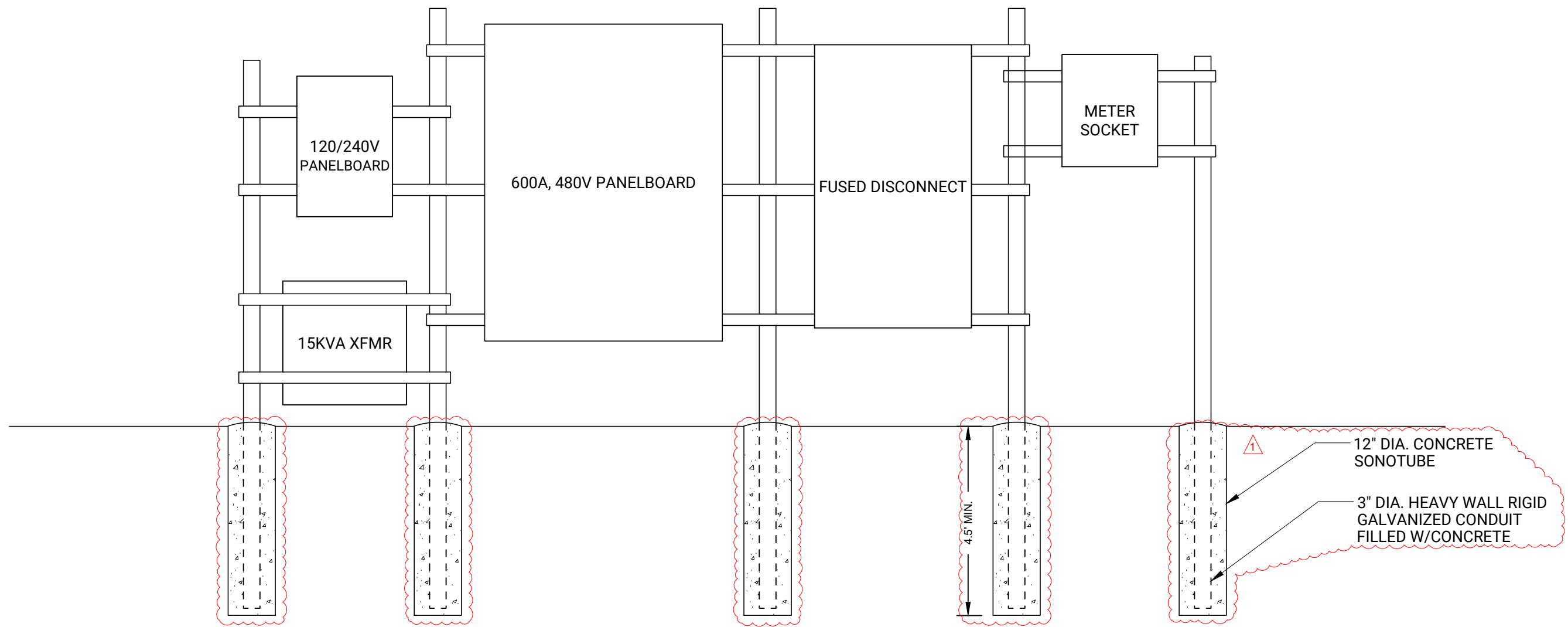
ISSUED FOR BIDDING

PROJECT NO: 24B027.10

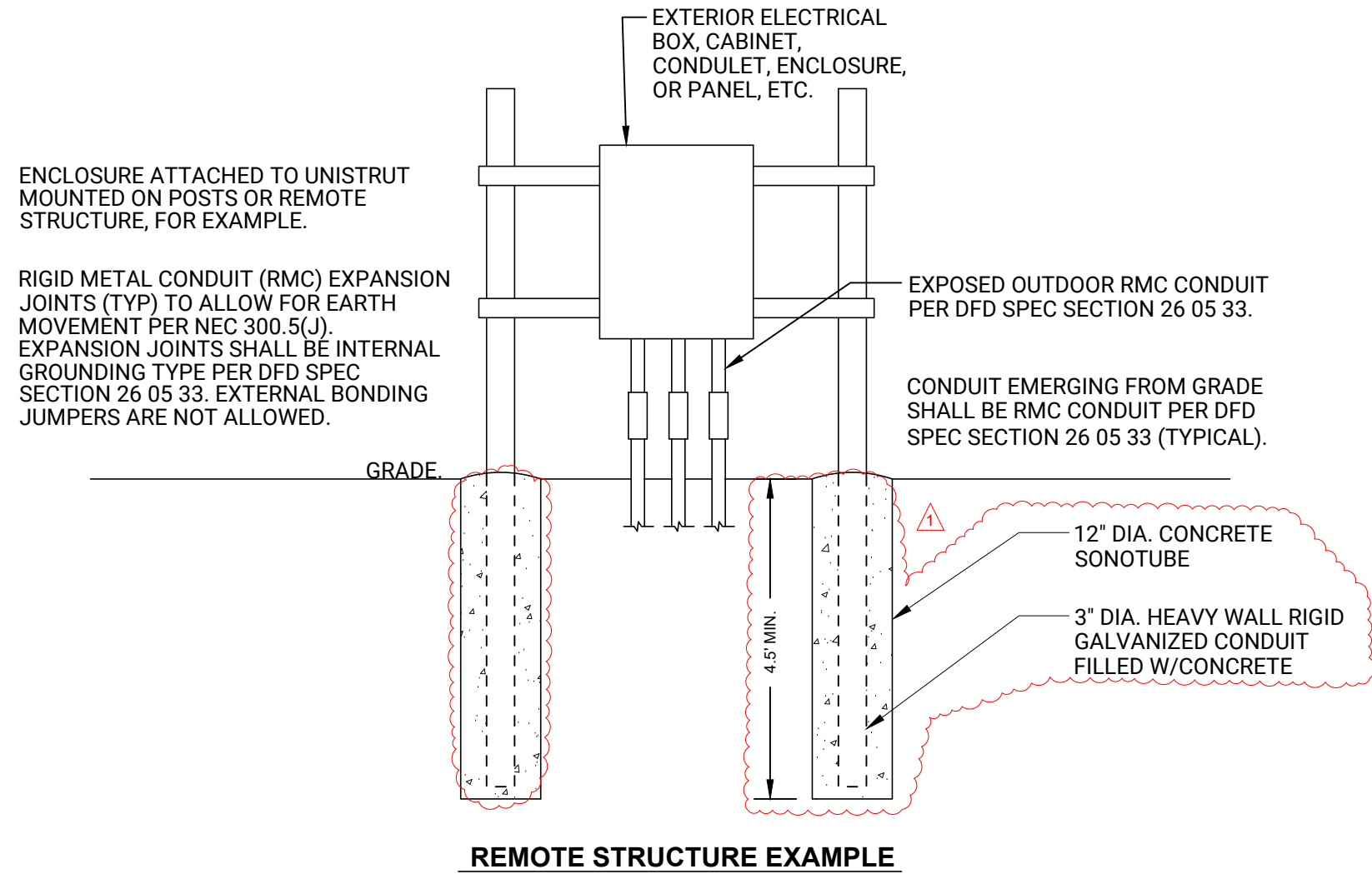
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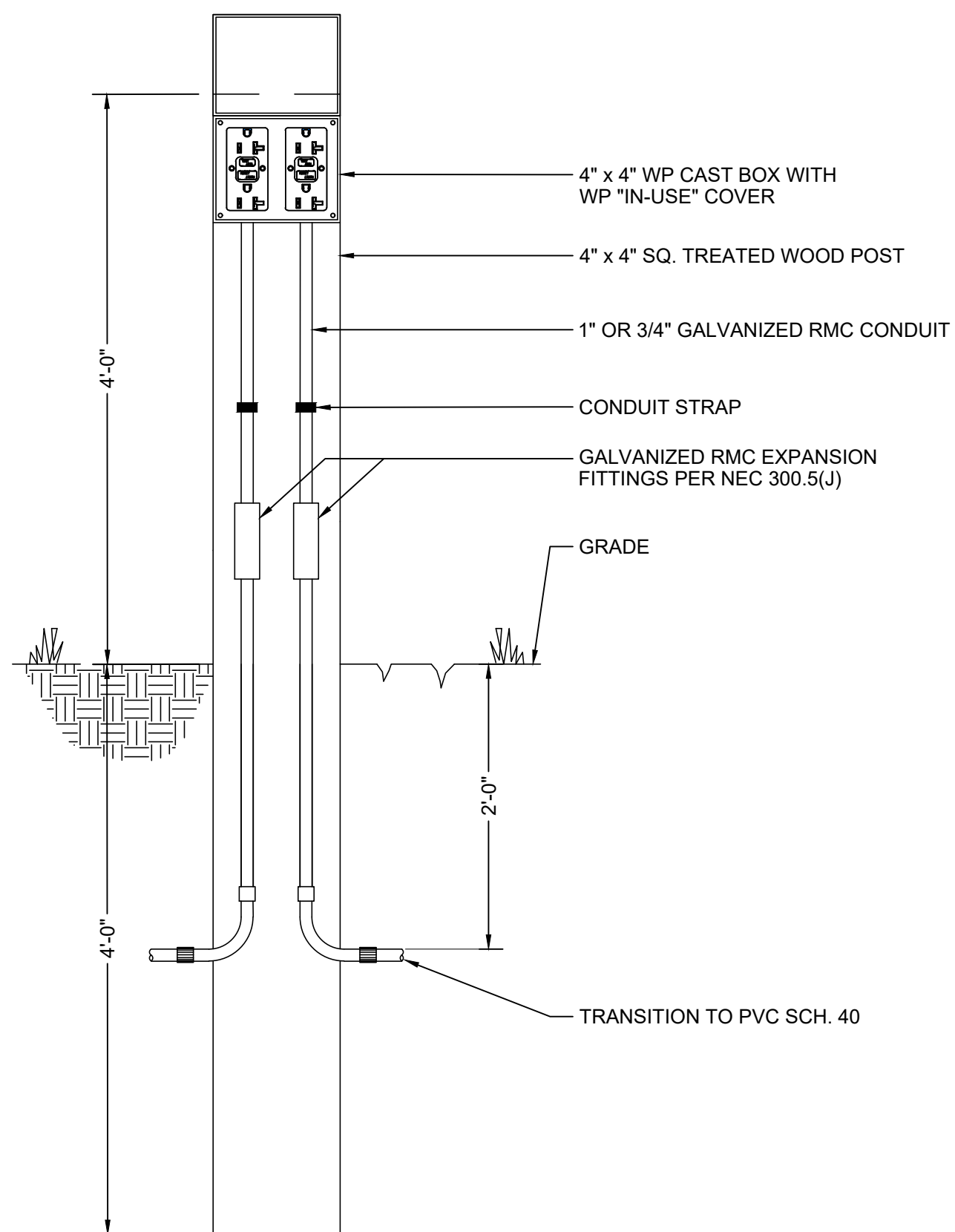
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DWG Folder Location: Clients\Brown Co PRRD WI\2024\0024B027.10\CAD\Drawings\SLF Flare-Blower Phase 1



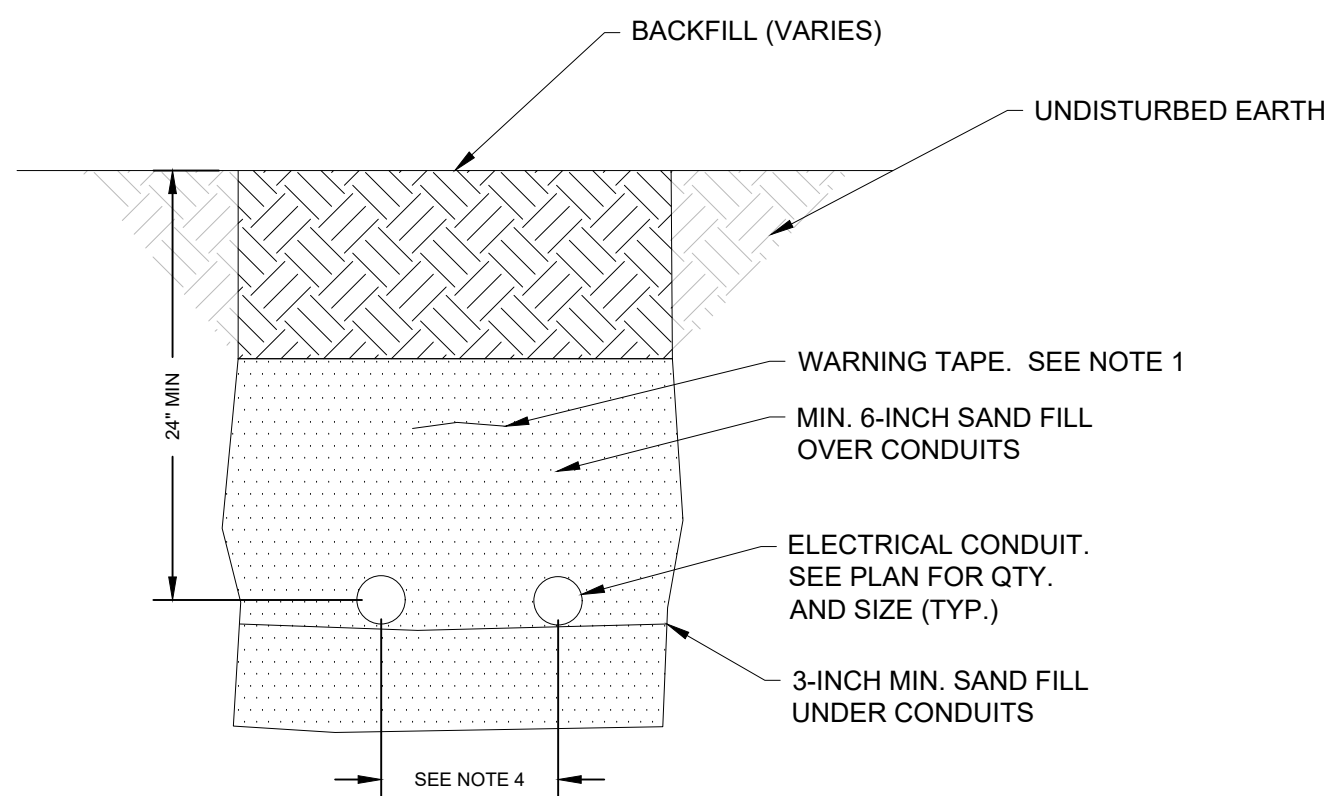
1
12 POWER DISTRIBUTION RACK DETAIL
SCALE: 1" = 20'



2
12 CONDUIT EMERGING FROM GRADE WITH EXPANSION JOINT DETAIL
SCALE: 1" = 2'



3
12 TYPICAL AUTO POST PLUG-IN DETAIL
SCALE: 1" = 20'



- NOTES:**
1. INSTALL WARNING TAPE 12" BELOW FINISHED GRADE OVER ALL DUCTBANKS. FOR DUCTBANKS >24" WIDE, INSTALL MULTIPLE RUNS OF WARNING TAPE NO MORE FARTHER THAN 18" APART. THE WARNING TAPE SHALL NOT BE FARTHER THAN 12" FROM THE DUCTBANK EDGE.
 2. ADJUST TRENCH DEPTH AND WIDTH FOR CONDUITS SCHEDULE.
 3. COORDINATE ROUTING TO AVOID CONFLICTS.
 4. CONDUIT SPACING
3" MIN. - CONDUITS OF SAME VOLTAGE
6" MIN. - CONDUITS OF DIFFERING VOLTAGE OR PARALLEL POWER FEEDS

4
12 UNDERGROUND, DIRECT BURIED CONDUIT DETAIL (TYP.)
SCALE: 1" = 20'

- NOTES:**
1. PVC SCH. 80 CONDUIT ACCEPTABLE AS ALTERNATE TO ABOVE GROUND RMC CONDUIT. METER SOCKET CAN BE INCORPORATED INTO THE PANELBOARD OR INSTALLED AS A SEPARATE UNIT.
 2. ENSURE PANELBOARD WORKING SPACE IS PRESERVED WHEN INSTALLING TRANSFORMER



ISSUED FOR BIDDING
PROJECT 2701 LANDFILL GAS EXTRACTION
SKID AND FLARE INSTALLATION
BROWN COUNTY SOUTH LANDFILL
TOWN OF HOLLAND, WISCONSIN

REV/SIONS		DESCRIPTION	DATE		NO.	
NO.	BY	DATE	NO.	BY	DATE	NO.
1	DJM4	1/20/25	1	DJM4	1/20/25	1
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4			4			4
5			5			5

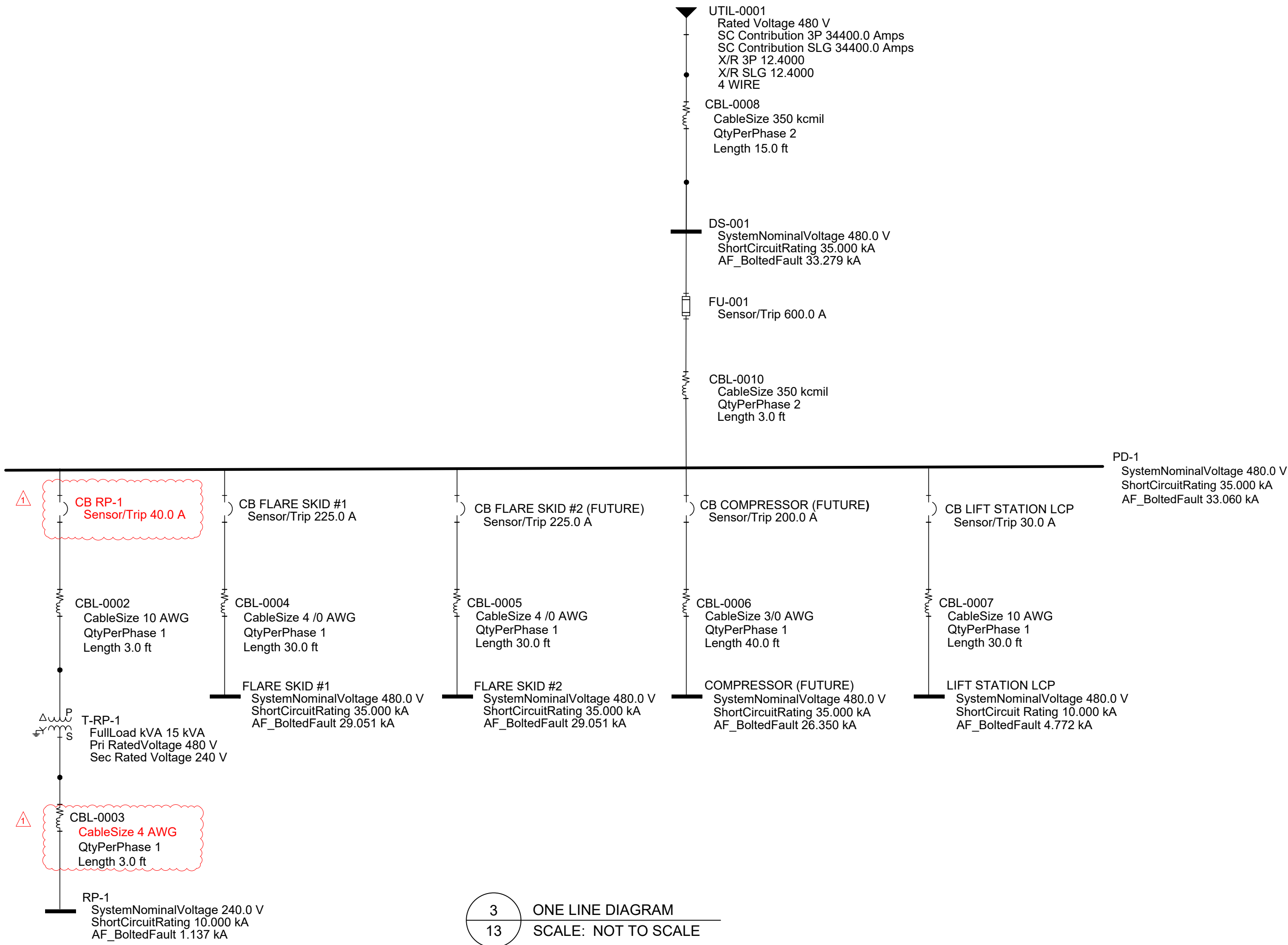
DATE OF PREPARATION	
BY	DATE
DJM4	09-19-24
KJZ	09-19-24
PTM	09-20-24

SHEET TITLE:

ELECTRICAL
DETAILS

ISSUED FOR
BIDDING

PROJECT NO: 24B027.10
SHEET NUMBER



- NOTES:**
1. UTILITY AVAILABLE FAULT CURRENT AND X/R VALUES ARE WORST CASE AS INDICATED BY THE UTILITY (WISCONSIN PUBLIC SERVICE).
 2. SHORT CIRCUIT RATINGS SHOWN ARE MINIMUM REQUIRED VALUES.



ISSUED FOR BIDDING

PROJECT 2701 LANDFILL GAS EXTRACTION
SKID AND FLARE INSTALLATION

BROWN COUNTY SOUTH LANDFILL
TOWN OF HOLLAND, WISCONSIN

REV/SIONS		DESCRIPTION	
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1	DJM4	1/21/25	CB RP-1 SIZING
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DATE OF PREPARATION	
SURVEYED	DATE
DJM4	09-19-24
KJZ	09-19-24
PTM	09-20-24

SHEET TITLE:

ONE LINE
DIAGRAM

ISSUED FOR
BIDDING

PROJECT NO: 24B027.10

SHEET NUMBER

13

PANELBOARD SCHEDULE																		
PANEL ID: PD-1		BUS AMPS: 600		MAIN CB AMPS: MLO						FAULT CURRENT AT PANEL (CALCULATED): __kA								
VOLTAGE: 480Y		PHASE/WIRE: 3P 4W								PANEL AIC RATING: 35 kA								
TYPE: -		MOUNT: -																
CIRC NO.	AMPS	POLE	LOAD SERVED	LTG.	RECP.	MECH.	OTHER	CIRC NO.	AMPS	POLE	LOAD SERVED	LTG.	RECP.	MECH.	OTHER			
1	225	3	FLARE SKID #1	-	-	-	-	2	-	-	FLARE SKID #2 (FUTURE)	-	-	-	-			
3				-	-	-	-	4				-	-	-	-			
5								6				-	-	-	-			
7	-	-	COMPRESSOR (FUTURE)	-	-	-	-	8	40	2	T-RP	-	-	-	-			
9				-	-	-	-	10				-	-	-	-			
11				-	-	-	-	12			BLANK	-	-	-	-			
13	30	3	LIFT STATION LCP	-	-	-	-	14			SPACE	-	-	-	-			
15				-	-	-	-	16				-	-	-	-			
17				-	-	-	-	18				-	-	-	-			
A/E NOTE: PANELBOARD "TYPE" WILL BE EITHER BRANCH, DISTRIBUTION, OR COORDINATION TYPE PER DFD SPEC SECTION 26 24 16. EDIT VOLTAGE, PHASE/WIRE, MOUNTING, ETC., FOR EACH PANELBOARD.								TOTAL LOAD BY TYPE:								-	-	-
TOTAL CONNECTED LOAD (KVA):								-	TOTAL CALCULATED LOAD (KVA):								-	
TOTAL CONNECTED LOAD (AMPS):								-	TOTAL CALCULATED LOAD (AMPS):								-	

PANELBOARD SCHEDULE																	
PANEL ID: RP-1		BUS AMPS: 60A		MAIN CB AMPS: 60A		FAULT CURRENT AT PANEL (CALCULATED): __kA											
VOLTAGE: 240Y/120V		PHASE/WIRE: 1P 3W		PANEL AIC RATING: 10 KA													
TYPE: -		MOUNT: -															
CIRC NO.	AMPS	POLE	LOAD SERVED	LTG.	RECP.	MECH.	OTHER	A C		CIRC NO.	AMPS	POLE	LOAD SERVED	LTG.	RECP.	MECH.	OTHER
1	20	1	NETWORK PANEL (RTU)	-	-	-	-	A C		2	20	1	CONVENIENCE RECEPTACLES	-	-	-	-
3	20	1	SPARE	-	-	-	-	A C		4	20	1	SPARE	-	-	-	-
5	20	1	SPARE	-	-	-	-	A C		6	20	1	SPARE	-	-	-	-
7	20	1	SPARE	-	-	-	-	A C		8	20	1	SPARE	-	-	-	-
9	-	-	SPACE	-	-	-	-	A C		10	-	-	SPACE	-	-	-	-
11	-	-	SPACE	-	-	-	-	A C		12	-	-	SPACE	-	-	-	-
13	-	-	SPACE	-	-	-	-	A C		14	-	-	SPACE	-	-	-	-
15	-	-	SPACE	-	-	-	-	A C		16	-	-	SPACE	-	-	-	-
17	-	-	SPACE	-	-	-	-	A C		18	-	-	SPACE	-	-	-	-
A/E NOTE: PANELBOARD "TYPE" WILL BE EITHER BRANCH, DISTRIBUTION, OR COORDINATION TYPE PER DFD SPEC SECTION 26 24 16. EDIT VOLTAGE, PHASE/WIRE, MOUNTING, ETC., FOR EACH PANELBOARD.										TOTAL LOAD BY TYPE:			-	-	-	-	
								TOTAL CONNECTED LOAD (KVA):		-	TOTAL CALCULATED LOAD (KVA):			-			
								TOTAL CONNECTED LOAD (AMPS):		-	TOTAL CALCULATED LOAD (AMPS):			-			

TRANSFORMER SCHEDULE						
TRANSFORMER	EQUIPMENT DESCRIPTION	LOCATION	KVA	PRIMARY	SECONDARY	NOTES
T-PD	UTILITY TRANSFORMER	FIELD	500	24.9kV	480Y/277	
T-RP	RP PANEL TRANSFORMER	FIELD	15	480V DELTA	120/240Y	

BURIED CONDUIT SCHEDULE													
#	FROM	TO	VOLTAGE	AMPS	PHASE	CURRENT CARRYING CONDUCTORS	CONDUCTORS PER PHASE	TOTAL AMPACITY @ 75 DEG C	GROUND CONDUIT	# OF CONDUITS	CONDUIT TYPE	CONDUIT SIZE	TYPE
1	NEW UTILITY TRANSFORMER	POWER DISTRIBUTION EQUIPMENT	480	600	3	4-350 MCM	2	620	1-#2 AWG	2	PVC	4"	POWER, 4-WIRE
2	POWER DISTRIBUTION EQUIPMENT	FLARE SKID #1	480	225	3	3-4/0 AWG	1	230	1-#4 AWG	1	PVC	3"	POWER
3	POWER DISTRIBUTION EQUIPMENT	CONDENSATE LIFT STATION CONTROL PANEL	480	30	3	3-#10 AWG	1	30	1-#10 AWG	1	PVC	1"	POWER
4	POWER DISTRIBUTION EQUIPMENT	NETWORKING PANEL (RTU)	120	20	1	2-#12 AWG	1	20	1-#12 AWG	1	PVC	1"	POWER
5	POWER DISTRIBUTION EQUIPMENT	CONVENIENCE RECEPTACLE	120	20	1	2-#12 AWG	1	20	1-#12 AWG	1	PVC	1"	POWER
6	POWER DISTRIBUTION EQUIPMENT	CONVENIENCE RECEPTACLE	120	20	1	2-#12 AWG	1	20	1-#12 AWG	1	PVC	1"	POWER
7	COMMUNICATIONS VAULT CV-9	NETWORKING PANEL (RTU)				1-12 FIBER SO2				1	PVC	2"	COMMUNICATION
7A	COMMUNICATIONS VAULT CV-9	NETWORKING PANEL (RTU)				(FUTURE)				1	PVC	2"	COMMUNICATION
8	NETWORKING PANEL (RTU)	FLARE SKID #1				2-CAT6				1	PVC	2"	COMMUNICATION
9	NETWORKING PANEL (RTU)	CONDENSATE LIFT STATION CONTROL PANEL	120			8-#14 AWG				1	PVC	1"	CONTROL
9	NETWORKING PANEL (RTU)	CONDENSATE LIFT STATION CONTROL PANEL	24			3-4/C#18SH				1	PVC	1"	CONTROL
10	CONDENSATE LIFT STATION CONTROL PANEL	CONDENSATE LIFT STATION MOTOR	480	4	3	3-#12 AWG	1	20	1-#12 AWG	1	PVC	1"	MOTOR
11	CONDENSATE LIFT STATION CONTROL PANEL	CONDENSATE LIFT STATION FLOW SENSOR				1-4/C#18SH				1	PVC	1"	INTRINSICALLY SAFE
12	CONDENSATE LIFT STATION CONTROL PANEL	CONDENSATE LIFT STATION LEVEL SWITCH				3-#14 AWG			1-#14 AWG	1	PVC	1"	INTRINSICALLY SAFE
13	CONDENSATE LIFT STATION CONTROL PANEL	CONDENSATE LIFT STATION LEVEL SENSOR				1-4/C#18SH				1	PVC	1"	INTRINSICALLY SAFE

MOTOR AND EQUIPMENT SCHEDULE																									
EQUIP.DESIG.	EQUIPMENT DESCRIPTION	LOCATION	LOAD KW	HP	AMPS	EQUIPMENT VOLTS	PHASE	FED FROM PANEL	CKT	BREAKER SIZE	POLE	BRANCH WIRING NO.	SIZE	GROUND	CONDUIT	CONDUIT	STARTER TYPE	SIZE	BY	DISCONNECT TYPE	SIZE	FUSE	BY	NOTES	
	FLARE SKID #1	FIELD	148		177.5	480	3	PD-1	1,3,5	225	3			4/0	4	3" PVC									
	FLARE SKID #2 (FUTURE)	FIELD	148		177.5	480	3	PD-1	2,4,6	SPACE	3														ESTIMATED LOAD
	AIR COMPRESSOR SKID (FUTURE)	FIELD	125		150	480	3	PD-1	7,9,11	SPACE	3														ESTIMATED LOAD
	LIFT STATION LCP	FIELD	8		10	480	3	PD-1	13, 15, 17	30	3			10	10	1" PVC	3/4" RMC								
	NETWORK PANEL RTU	FIELD				120	1	RP-1	1	20	1			12	12	1" PVC	3/4" RMC								



ISSUED FOR BIDDING

PROJECT 2701 LANDFILL GAS EXTRACTION SKID AND FLARE INSTALLATION

BROWN COUNTY SOUTH LANDFILL TOWN OF HOLLAND, WISCONSIN

REV/SIONS		DESCRIPTION		DATE		BY		DATE		BY	
		DESCRIPTION		DATE		BY		DATE		BY	
		PANELBOARD BREAKER ADDED/REMOVED		1/21/25		DJM4					
DATE OF PREPARATION											
						BY		DATE			
SURVEYED						DJM4		09-19-24			
DRAWN						KJZ		09-19-24			
DESIGNED						PTM		09/20/24			
CHECKED											

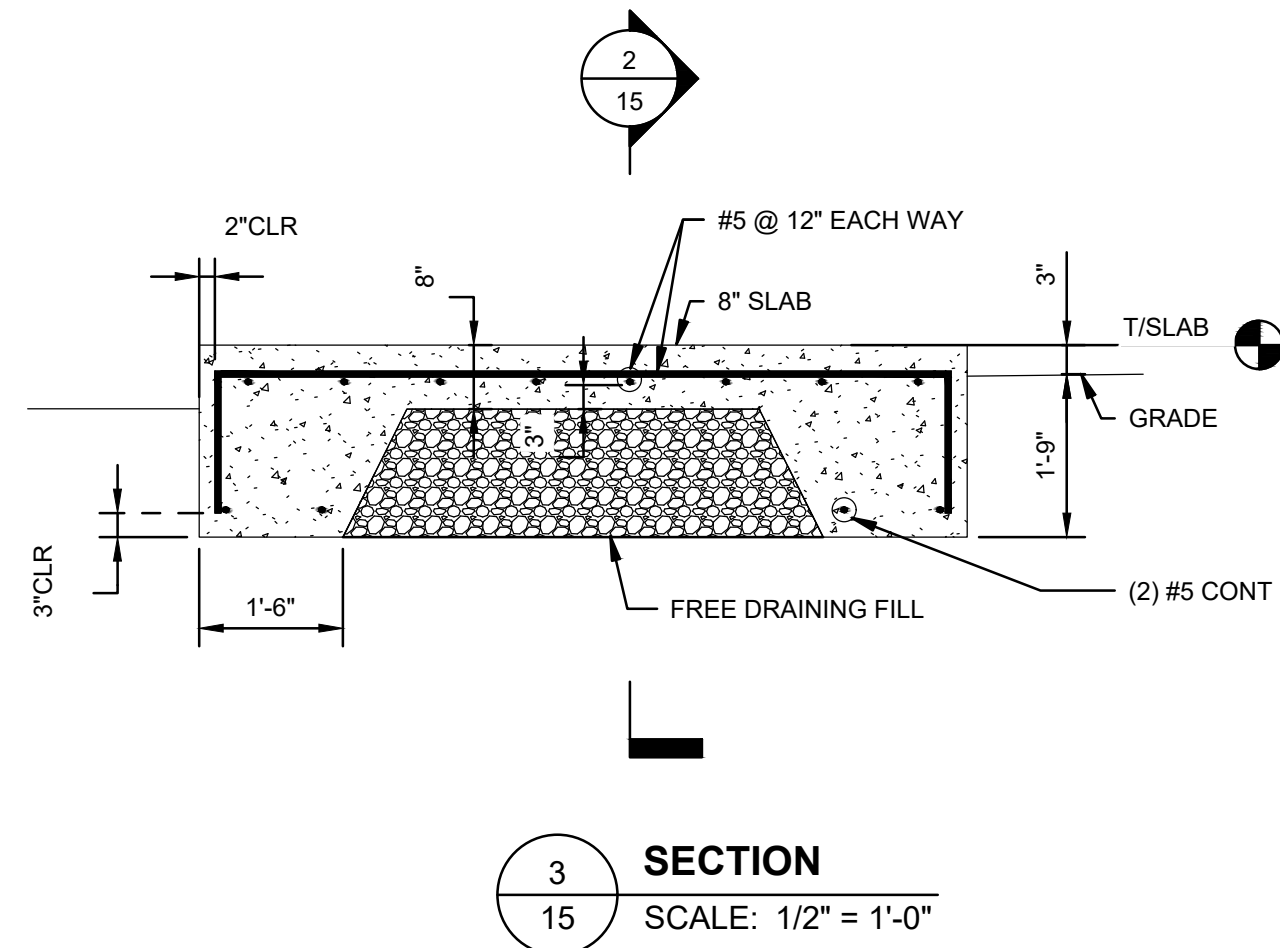
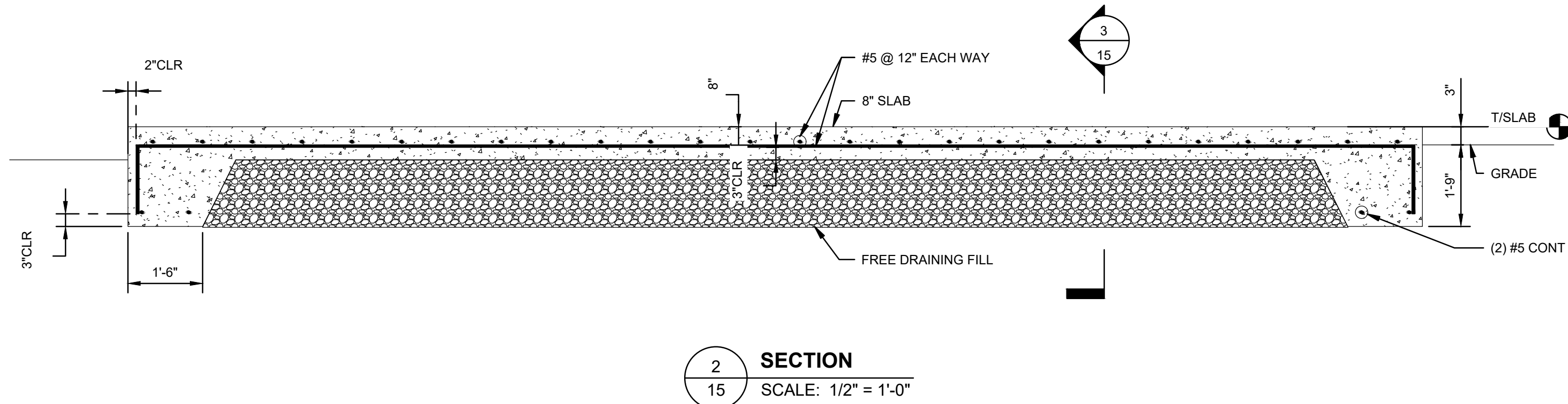
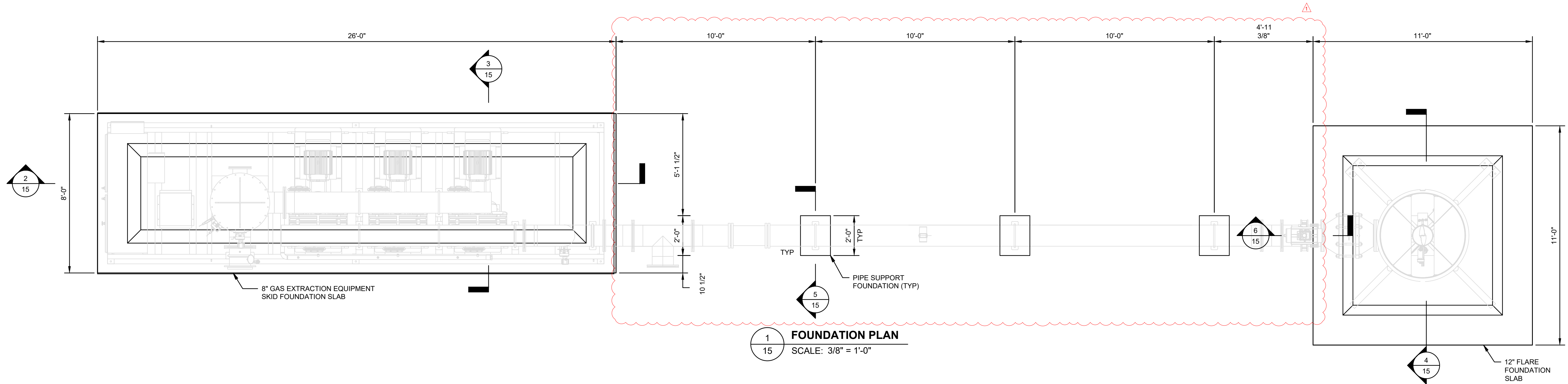
ELECTRICAL DETAILS

ISSUED FOR BIDDING

PROJECT NO: 24B027.10

SHEET NUMBER

14



GENERAL STRUCTURAL NOTES

DESIGN CRITERIA				INTERNATIONAL BUILDING CODE 2015			
1. BUILDING CODE							
2. SUPERIMPOSED DESIGN LOADS							
A. GENERAL							
BUILDING RISK CATEGORY				II			
B. WIND LOAD							
BASIC WIND SPEED:				115 MPH			
WIND EXPOSURE CATEGORY				D			
INTERNAL PRESSURE COEFFICIENT				+/-0.018			
COMPONENTS & CLADDING							
C. SNOW LOAD							
GROUND SNOW LOAD				Pg = 40 PSF			
FLAT ROOF SNOW LOAD				Pf = 28 PSF			
SNOW EXPOSURE FACTOR				Ce = 1.0			
SNOW ROOF SLOPE FACTOR				Cs = 1.0			
SNOW IMPORTANCE FACTOR				Is = 1.0			
THERMAL FACTOR				Ci = 1.0			
DRIFT SURCHARGE				Pd = XXX PSF			
D. GAS EXTRACTION EQUIPMENT SKID				20,000 LBS			
E. FLARE EQUIPMENT				6,000 LBS			
F. PIPE SUPPORT LOAD				1,000 LBS			
G. FLARE OVERTURNING MOMENT				40,535 FT-LBS			
3. REQUIRED SOIL BEARING CAPACITY				2,000 PSF			
CONCRETE							
1. CAST-IN-PLACE CONCRETE				F'c = 4000 PSI			
2. CONCRETE EXPOSURE				CLASSES F1, S0, W0, C1			
3. REINFORCING BARS				ASTM A615, GRADE 60			
4. WELDED WIRE REINFORCEMENT				ASTM A1064			
5. PROVIDE THE FOLLOWING COVER FOR REINFORCEMENT:							
A. CAST AGAINST EARTH				3"			
B. EXPOSED TO EARTH, WEATHER OR WATER				NO. 6 THROUGH NO. 18 BARS 2"; NO. 5 BAR, W31 OR D31 WIRE AND SMALLER 1 1/2"			

CONSTRUCTION
1. FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS CRITICAL TO THE DEMOLITION, FABRICATION AND INSTALLATION ASSOCIATED WITH THIS PROJECT PRIOR TO FABRICATION OF FRAMING.
2. METHODS, PROCEDURES, AND SEQUENCE OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.

ISSUED FOR BIDDING

PROJECT 2701 LANDFILL GAS EXTRACTION
SKID AND FLARE INSTALLATION

BROWN COUNTY SOUTH LANDFILL
TOWN OF HOLLAND, WISCONSIN

REVISONS					DATE	DESCRIPTION
NO	BY	DATE	PIPE SUPPORT SPACING			
△	DJMM	1/21/25				
△						
△						
△						
△						
△						
DATE OF PREPARATION						
BY		DATE				
SURVEYED						
DRAWN		MJB7		6-18-2024		
DESIGNED		DKM		6-18-2024		
CHECKED		DKM		6-20-2024		