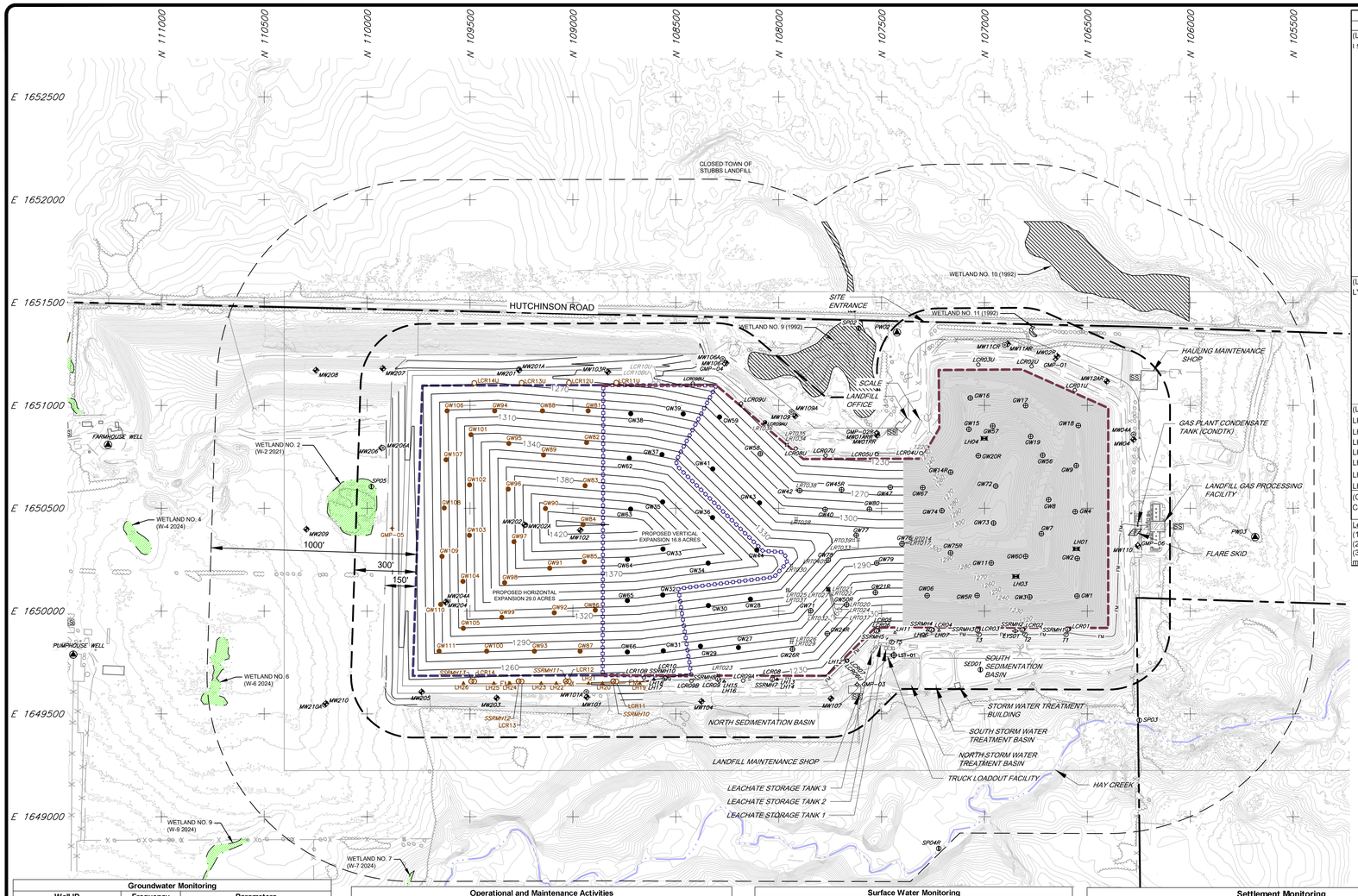

Groundwater Monitoring			
Well ID		**Frequency**	**Parameters**
(Detection Monitoring)		Semiannually (April, October)	00010 Field Temperature 00094 Field Conductivity @ 25°C 00400 Field pH 04189 Groundwater Elevation 00940 Chloride 22413 Total Hardness, filtered 39036 Total Alkalinity, filtered 00608 Ammonia Nitrogen, dissolved 00631 Nitrate + Nitrite (as N), dissolved 00946 Sulfate, dissolved
MW-01RR	MW-109A		
MW-01ARR	MW-110		
MW-04A	MW-201 (2)		
MW-11AR	MW-201A (2)		
MW-11CR	MW-205 (2)		
MW-12AR	MW-206 (2)		
MW-101 (3)	MW-206A (2)		
MW-101A	MW-207 (2)		
MW-103R	MW-208 (2)		
MW-104	MW-209 (2)		
MW-106	MW-210 (2)		
MW-106A	MW-210A (2)	Annually (October)	VOCs (Using EPA methods 8021 or 8260)
MW-107			
(Subtitle D Wells)		Semiannually (April, October)	04189 Groundwater Elevation 00010 Field Temperature 00094 Field Conductivity @ 25°C 00400 Field pH 00940 Chloride, total or dissolved 22413 Hardness, total, filtered 39036 Alkalinity, total, filtered 00608 Ammonia Nitrogen, dissolved 00631 Nitrate + Nitrite (as N), dissolved 00946 Sulfate, dissolved VOCs (Using EPA methods 8021 or 8260)
MW-02R			
MW-04			
MW-109			
MW-203 (2)			
MW-102 (1)(4)	MW-204 (1)(2)	Semiannually (April, October)	04189 Groundwater Elevation
MW-202 (1)(2)	MW-204A (1)(2)		
MW-202A (1)(2)			
(Potable Well)		Semiannually (April, October)	00010 Field Temperature 00094 Field Conductivity @ 25°C 00400 Field pH 00940 Chloride, total or dissolved 22413 Hardness, total, filtered 39036 Alkalinity, total, filtered 00608 Ammonia Nitrogen, dissolved 00630 Nitrate + Nitrite (as N), total 00945 Sulfate, total
PW-02			
		Quarterly (January, April, July, October)	VOCs (Using EPA methods 8021 or 8260)

Note sample odor (00001), color (00002), and turbidity (00003) at time of sampling.

Groundwater Monitoring Footnotes:
(1) Wells to be abandoned during Northern Expansion No. 2 construction.
(2) Monitoring point installed as part of the Northern Expansion No. 2.
(3) Monitoring well MW-101 is currently included in Subtitle D Wells as the upgradient monitoring point but is proposed to be moved to Detection Monitoring (Non-Subtitle D) upon approval of the proposed Northern Expansion No. 2.
(4) Monitoring well MW-102 is currently included in Detection Monitoring but is proposed to be moved to Groundwater Elevation monitoring only until it is abandoned.

Operational and Maintenance Activities		
ITEM	**FREQUENCY**	**DESCRIPTION/LOCATION**
Land Surface Care	Annually	Inspect Surface Water Management System (per NR 216.28), Final Cover Integrity, Slopes, Entrance Roads, and General Facility Conditions
	As Needed	Reseed and Repair Erosion Damage Regrade Final Cover Maintenance/Repair of Downslope of Flumes & Diversion Berms Mow Vegetation Plow Snow
Sedimentation Water Basins	Annually (or as needed)	Inspect Sediment Level and Remove from Storm Water Basins
Leachate Collection System	Quarterly	Visually Inspect for Liquids in the Leachate Transfer Manholes, Perimeter Access Manholes
	Annually	Jet Leachate Collection Lines Monitor Interstitial Space of the Leachate Collection Tanks and Condensate Tank (1) Inspect/Repair/Replace Pumps, Transducers, etc.
	Every 5 years	Leachate Collection Lines Televising

Operational and Maintenance Activities Footnote:
(1) Leachate Tanks and Condensate Tank are equipped with leak detectors in their respective interstitial spaces which provides continuous monitoring.

Surface Water Monitoring		
Monitoring Point	**Frequency**	**Parameters**
(Surface Water Quality) SED-01 (500) (Stormwater treatment basin discharge - no surface water elevation) SP-03 Downstream Hay Creek SP-04R Upstream Hay Creek	Annually	00010 Field Temperature 00094 Field Conductivity @ 25°C 00150 Total Suspended Solids 00400 Field pH 00410 Total Alkalinity, unfiltered 00900 Total Hardness, unfiltered 00940 Chloride 00310 BOD_5 99520 Surface Water Elevation Note sample odor (00001), color (00002), and turbidity (00003), if present
Monitor in accordance with WPDES permit requirements (refer to SWPPP)		

Settlement Monitoring		
Sample Point	**Frequency**	**Parameters**
Settlement Monitoring via Survey on 100 ft. grid coordinates	Annually	99422 Elevation in feet MSL

Settlement Monitoring Note:
1. Existing settlement monitoring hubs will be discontinued.

Leachate Monitoring		
Sampling Point	**Frequency**	**Parameters**
(Leachate Tanks) LST-01 (1)	Monthly (reported semiannually April, October)	00032 Leachate Volume Pumped (x1000 gal)
	Semiannually (April, October)	00094 Field Conductivity @ 25°C 00400 Field pH 00410 Alkalinity, total 00900 Hardness, total 01027 Cadmium, total 01055 Manganese, total 00150 Suspended Solids, total 00310 BOD_5 00940 Chloride, total or dissolved 00945 Sulfate, total 01051 Lead, total 00625 Nitrogen, Kjeldahl, total 00929 Sodium, total 74010 Iron, total 00610 Nitrogen, Ammonia, total 71900 Mercury, total 00340 COD VOCs (Using EPA methods 8021 or 8260) Note sample odor (00001), color (00002), and turbidity (00003), if present
	Annually (April)	Base/Neutral Extractable Compounds Acid Extractable Compounds
(Lysimeter) LYS-01 (1)	Semiannually (April, October)	00094 Field Conductivity @ 25°C 00400 Field pH 00410 Alkalinity, total 00900 Hardness, total 00940 Chloride, total or dissolved 00945 Sulfate, total 00625 Nitrogen, Kjeldahl, total 00929 Sodium, total 74064 Discharge (gal) Note sample odor (00001), color (00002), and turbidity (00003), if present
	Annually (April)	VOCs (Using EPA methods 8021 or 8260)
(Leachate Head Wells) LH-01 LH-13 LH-20 (2) LH-03 LH-14 LH-21 (2) LH-04 LH-15 LH-22 (2) LH-06 LH-16 LH-23 (2) LH-07 LH-17 LH-24 (2) LH-11 LH-18 LH-25 (2) LH-12 LH-19 (2) LH-26 (2)	Quarterly, or monthly where recirculation occurring (submitted semi-annually April, October)	99423 Elevation, Leachate (ft above MSL) 00031 Leachate depth (feet)
(Condensate Tank) CONDTK (3)	Quarterly (submitted semiannually)	99527 Liquid depth in secondary containment (feet)

Leachate Monitoring Footnotes:
(1) Leachate samples shall not be filtered.
(2) Monitoring point to be installed as part of the Northern Expansion No. 2.
(3) Condensate Tank is equipped with a leak detector in the interstitial space which provides continuous monitoring.

Landfill Gas Monitoring			
Monitoring Point			**Frequency**	**Parameters**
(Gas Extraction Wells)			Monthly (reported semi-annually April, October)	85547 Percent Methane 85550 Percent Oxygen 85544 Percent Carbon Dioxide 99848 Percent Balance Gas 46385 Well Head Vacuum (inches of water) 46382 Header Pressure (inches of water) 46388 Gas Temperature
GW-01	GW-50R	GW-99*		
GW-02	GW-56	GW-100*		
GW-03	GW-57	GW-101*		
GW-04	GW-58	GW-102*		
GW-05R	GW-59*	GW-103*		
GW-06	GW-60	GW-104*		
GW-07	GW-62*	GW-105*	Annually	00031 Leachate depth (feet)
GW-08	GW-63*	GW-106*		
GW-09	GW-64*	GW-107*		
GW-11	GW-65*	GW-108*		
GW-14R	GW-66*	GW-109*		
GW-15	GW-67	GW-110*		
GW-16	GW-71	GW-111*		
GW-17	GW-72	LCR-01U		
GW-18	GW-73	LCR-02U		
GW-19	GW-74	LCR-04U		
GW-20R	GW-75R	LCR-05		
GW-21R	GW-76	LCR-07U		
GW-24R	GW-77	LCR-08U		
GW-26R	GW-78	LCR-09		
GW-27*	GW-79	LCR-09A		
GW-28*	GW-80	LCR-09B		
GW-29*	GW-81*	LCR-09U		
GW-30*	GW-82*	LCR-09AU		
GW-31*	GW-83*	LCR-09BU		
GW-32*	GW-84*	LCR-10		
GW-33*	GW-85*	LCR-10B		
GW-34*	GW-86*	LCR-10U*		
GW-35*	GW-87*	LCR-11*		
GW-36*	GW-88*	LCR-11U*		
GW-37*	GW-89*	LCR-12*		
GW-38*	GW-90*	LCR-12U*		
GW-39*	GW-91*	LCR-13*		
GW-40	GW-92*	LCR-13U*		
GW-41*	GW-93*	LCR-14*		
GW-42	GW-94*	LCR-14U*		
GW-43*	GW-95*			
GW-44*	GW-96*			
GW-45R	GW-97*			
GW-47	GW-98*			
(Leachate Recirculation Gas Wellheads) (3) (a.k.a., Horizontal Gas Extraction Wells)			Monthly (reported semi-annually April, October)	85547 Percent Methane 85550 Percent Oxygen 85544 Percent Carbon Dioxide 99848 Percent Balance Gas 46385 Well Head Vacuum (inches of water) 46382 Header Pressure (inches of water) 46388 Gas Temperature
LRT-014	LRT-029	LRT-040		
LRT-017	LRT-030	LRT-041*		
LRT-018*	LRT-031	LRT-042*		
LRT-020	LRT-032	LRT-043*		
LRT-021	LRT-033	LRT-044*		
LRT-022	LRT-034	LRT-045*		
LRT-023	LRT-035	LRT-046*		
LRT-024	LRT-036	LRT-047*		
LRT-025	LRT-037	LRT-048*		
LRT-026	LRT-038	LRT-049*		
LRT-027	LRT-039	LRT-050*		
LRT-028				
(Gas Probes) GMP-01 GMP-02R GMP-03 GMP-04 GMP-05 (2) GMP-06			Quarterly (reported semi-annually April, October)	85547 Percent Methane 85550 Percent Oxygen 00021 Ambient Air Temperature (°F) 46382 Well Pressure (inches of water) 00025 Barometric Pressure (mm of Hg) 46381 Barometric Pressure Trend (<0,0,>0) Ground Conditions
Site Conditions			Quarterly (reported semiannually April, October)	00021 Ambient Air Temperature (°F) 00025 Barometric Pressure (mm of Hg) 46381 Barometric Pressure Trend (<0,0,>0) Ground Conditions
Blower (600) (1) Gas Compressor (690)			Monthly (reported semiannually April, October)	85547 Percent Methane 85550 Percent Oxygen 85544 Percent Carbon Dioxide 99848 Percent Balance Gas 46382 Well Pressure (inches of water) 46382 Header Pressure (inches of water) 46388 Gas Temperature
			Annually	99243 Sulfur, total reduced VOCs (using EPA Method TO-14)

Landfill Gas Monitoring Footnotes:
(1) When operated continuously for 30 days or more
(2) Install gas probe only if there is no future expansion planned north of Northern Expansion No. 2.
(3) Additional Leachate Recirculation Gas Wellheads may be added as part of the Plan of Operation for the proposed Northern Expansion No. 2 area.
* = To be installed

LEGEND

- PROPERTY BOUNDARY
- EXISTING SOLID WASTE BOUNDARY
- HORIZONTAL EXPANSION AREA BOUNDARY
- VERTICAL EXPANSION BOUNDARY
- 150' DESIGN MANAGEMENT ZONE
- 300' OFFSET FROM WASTE BOUNDARY
- 1000' OFFSET FROM WASTE BOUNDARY
- EXISTING FINAL COVER (CLOSED)
- EXISTING DELINEATED WETLANDS (APPLIED ECOLOGICAL SERVICES)
- EXISTING DELINEATED WETLANDS (HEARTLAND ECOLOGICAL GROUP INC.)
- EXISTING SURFACE WATER STREAM
- EXISTING CULVERT
- EXISTING BUILDING
- EXISTING TREE LINE
- EXISTING FENCE
- EXISTING OVERHEAD UTILITY AND POLE
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING WATER SUPPLY WELL
- EXISTING GAS PROBE
- EXISTING WATER TABLE WELL
- EXISTING PIEZOMETER
- EXISTING STAFF GAUGE
- EXISTING LYSIMETER
- EXISTING LEACHATE MANHOLE
- EXISTING LEACHATE TRANSFER MANHOLE
- EXISTING LEACHATE HEADWELL (ACCESS)
- EXISTING VERTICAL LEACHATE HEADWELL
- EXISTING LEACHATE FORCE MAIN
- EXISTING LEACHATE CLEANOUT
- EXISTING SEPTIC TANK
- EXISTING UNDERGROUND LEACHATE TANK
- EXISTING GAS EXTRACTION WELL
- EXISTING BLOWER
- EXISTING COMPRESSOR
- EXISTING FLARE
- APPROVED GAS EXTRACTION WELL
- APPROVED LEACHATE CLEANOUT
- PROPOSED 10' CONTOUR
- PROPOSED GAS EXTRACTION WELL
- PROPOSED GAS PROBE
- PROPOSED LEACHATE HEADWELL
- PROPOSED LEACHATE FORCE MAIN
- PROPOSED LEACHATE MANHOLE
- PROPOSED LEACHATE CLEANOUT
- ACTIVE HORIZONTAL GAS EXTRACTION WELL
- LEACHATE MONITORING LOCATION

NOTES:

1. EXISTING TOPOGRAPHIC FEATURES AND PROPERTY BOUNDARY INFORMATION IS NOTED ON SHEET NO. 2.
2. SEE SHEET NO. 2 FOR ADDITIONAL LEGEND AND GENERAL NOTE INFORMATION.
3. EXISTING MONITORING DEVICE LOCATIONS WERE OBTAINED FROM THE NORTHERN EXPANSION NO.1 PLAN OF OPERATIONS (JUNE 2001) AND ADDENDUM (OCTOBER 2001) PREPARED BY RMT. UPDATES AND ADDITIONAL MONITORING DEVICE LOCATIONS WERE OBTAINED FROM:
   - SITE STAFF
   - RECORD DATA (CONSTRUCTION DOCUMENTATION REPORTS)

N

0 300 600
SCALE IN FEET

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DATE OF ISSUE AUG. 2025
DRAWN BY LC\JB
DESIGNED BY CLD\SRC
CHECKED BY TD\LRS
APPROVED BY LRS

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WASTE MANAGEMENT OF WISCONSIN, INC.
TIMBERLINE TRAIL RDF
TOWNSHIP OF STUBBS, RUSK COUNTY, WISCONSIN
FEASIBILITY REPORT NORTHERN EXPANSION NO. 2
ENVIRONMENTAL MONITORING AND LONG TERM CARE PLAN

SHEET NO. 25
PROJECT NO. 4251388

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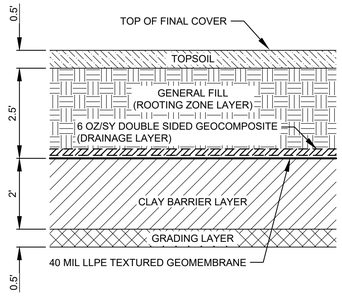
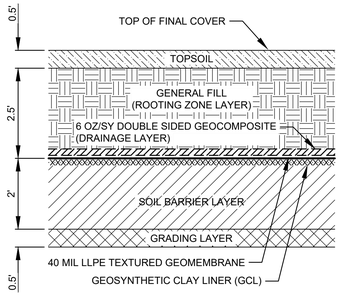


OPTION A



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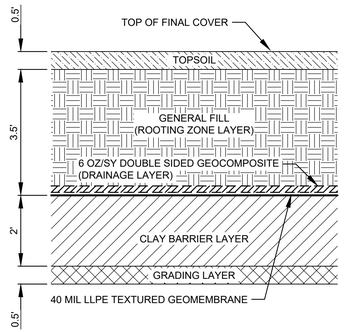

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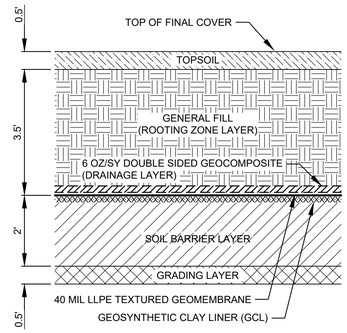

OPTION D

FINAL COVER

DETAIL
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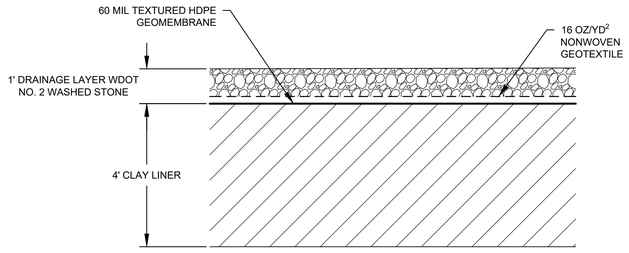
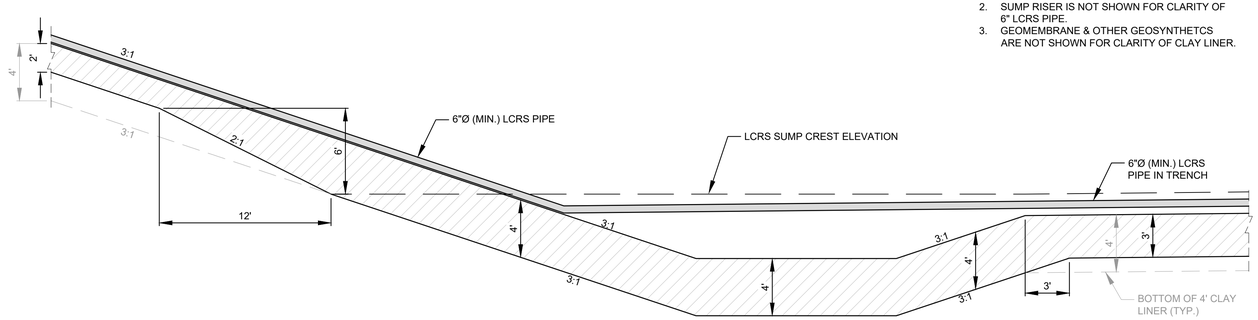


LINER DETAIL

DETAIL
SCALE: NOT TO SCALE — 2 / 26

NOTES:
1. DRAINAGE LAYER IS NOT SHOWN FOR CLARITY OF CLAY LINER SYSTEM.
2. SUMP RISER IS NOT SHOWN FOR CLARITY OF 6" LCRS PIPE.
3. GEOMEMBRANE & OTHER GEOSYNTHETCS ARE NOT SHOWN FOR CLARITY OF CLAY LINER.



ALTERNATE CLAY LINER
AND 6" LCRS PIPE AT LCRS SUMP

DETAIL
SCALE: NOT TO SCALE — 3 / 26

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE: AUG. 2025
DRAWN BY: LC\JB
DESIGNED BY: CLD\SRC
CHECKED BY: TD
APPROVED BY: CLD

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WASTE MANAGEMENT OF WISCONSIN, INC.
TIMBERLINE TRAIL RDF
TOWNSHIP OF STUBBS, RUSK COUNTY, WISCONSIN
FEASIBILITY REPORT NORTHERN EXPANSION NO. 2

DETAILS

SHEET NO. **26**
PROJECT NO. 4251388

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