



Municipal Solid Waste Sanitary Landfill Financial Assurance Report Form

SECTION 1: FACILITY INFORMATION

(please print or type)

Information Requested

Facility Name: Dubuque Metropolitan Area Solid Waste Agency Permit Number: 31-SDP-02-75
Permitted Agency/Entity: Dubuque Metropolitan Area Solid Waste Agency

SECTION 2: CLOSURE/POSTCLOSURE OR CORRECTIVE ACTION COST ESTIMATES

Information Requested	Cost Estimate	Date of Cost Estimate
Updated Closure Cost Estimate	\$ 5,498,558	3/24/2026
Updated Postclosure Cost Estimate	\$ 3,087,303	3/24/2026
Initial or Updated Corrective Action Cost Estimate	\$	

*Attach closure/postclosure cost estimate(s) signed and certified by an Iowa-licensed professional engineer. Cost estimates shall include, at a minimum, each of the cost line items defined in 113.14(3)"c" for closure and 113.14(4)"c" for postclosure. Please provide closure and/or postclosure site area acreage information with the estimates.

Provide a cost estimate for corrective action only if corrective action is required and a corrective action plan has been approved by the Department. Attach the corrective action cost estimate signed and certified by an Iowa-licensed professional engineer. The cost estimate shall account for total costs of the activities described in the approved corrective action plan for the corrective action period.

SECTION 3: FACILITY WASTE TONNAGE INFORMATION

Information Requested	Tons
Remaining permitted capacity as of the beginning of permit holder's current fiscal year	2,459,417
Amount of waste disposed of at the facility during the prior fiscal year	180,384

SECTION 4: PROOF OF COMPLIANCE

Publicly Owned Municipal Solid Waste Landfills

(ATTACH AUDIT REPORT)

Owner's Most Recent Annual Audit Report

Prepared by: Mauldin & Jenkins

For fiscal year ending: 6/30/2025

Privately Owned Municipal Solid Waste Landfills

(ATTACH AFFIDAVIT)

Attach owner/operator's affidavit indicating that an annual review has been performed by a certified public accountant to determine whether the privately owned landfill is in compliance with IAC 567 Chapter 113. The affidavit shall state the name of the certified public accountant, the dates and conclusions of the review, and the steps taken to rectify any deficiencies identified by the accountant.

SECTION 5: FINANCIAL ASSURANCE INSTRUMENT

Type and Value of Financial Assurance Instrument(s) (ATTACH INSTRUMENT(S))

Assurance Instrument	Establishment Date	Mechanism Covers	Instrument Value*
Trust Fund 567 IAC 113.14(6)“a”		Closure <input type="checkbox"/> Postclosure <input type="checkbox"/> Corrective Action <input type="checkbox"/>	\$
Surety Bond 567 IAC 113.14(6)“b”		Closure <input type="checkbox"/> Postclosure <input type="checkbox"/> Corrective Action <input type="checkbox"/>	\$
Letter of Credit 567 IAC 113.14(6)“c”		Closure <input type="checkbox"/> Postclosure <input type="checkbox"/> Corrective Action <input type="checkbox"/>	\$
Insurance 567 IAC 113.14(6)“d”		Closure <input type="checkbox"/> Postclosure <input type="checkbox"/> Corrective Action <input type="checkbox"/>	\$
Corporate Financial Test 567 IAC 113.14(6)“e”		Closure <input type="checkbox"/> Postclosure <input type="checkbox"/> Corrective Action <input type="checkbox"/>	\$
Local Gov’t. Financial Test 567 IAC 113.14(6)“f”		Closure <input type="checkbox"/> Postclosure <input type="checkbox"/> Corrective Action <input type="checkbox"/>	\$
Corporate Guarantee 567 IAC 113.14(6)“g”		Closure <input type="checkbox"/> Postclosure <input type="checkbox"/> Corrective Action <input type="checkbox"/>	\$
Local Gov’t Guarantee 567 IAC 113.14(6)“h”		Closure <input type="checkbox"/> Postclosure <input type="checkbox"/> Corrective Action <input type="checkbox"/>	\$
Local Gov’t. Dedicated Fund 567 IAC 113.14(6)“i”	12/15/1997	Closure <input checked="" type="checkbox"/> Postclosure <input checked="" type="checkbox"/> Corrective Action <input type="checkbox"/>	\$5,877,833.63

*Pursuant to IAC 567 113.14(9), if account(s) are restricted/reserved to pay for closure, postclosure or corrective action costs, then the amount of the financial assurance instrument may be reduced by the sum of the cash balance of the account(s) established to comply with subrule 113.14(8).

SECTION 6: INITIAL PROOF OF ESTABLISHMENT OF ACCOUNTS

Check Which Applies: New Mechanism Previously Submitted

Pursuant to IAC 567 Chapter 113.14(8)“f”, documentation of the establishment of accounts is to be submitted to the department by April 1, 2003 for currently permitted MSWLFs. Permit holders for MSWLFs permitted after April 1, 2003, shall submit documentation of the establishment of accounts prior to the MSWLF’s initial receipt of waste.

Please attach documentation indicating accounts/fund have been established for closure and postclosure care and if the account(s) are restricted/reserved for closure or postclosure care. Examples of documentation include bank statements for closure/postclosure accounts, letter signed by the chief financial officer, letter from certified public accountant, etc.

Accounts established pursuant to paragraph 113.14(6)“a” for trust funds or paragraph 113.14(6)“i” for local government dedicated funds also satisfies the requirements of this subrule, and the permit holder shall not be required to establish additional closure and postclosure accounts.

SECTION 7: CLOSURE AND POSTCLOSURE ACCOUNTS

Completion of the following closure and postclosure account information complies with the annual financial statement requirements of IAC 567 113.14(3)“a” and 113.14(4)“a” by indicating the current balance(s) of the closure/postclosure account(s) or dedicated/trust fund and the projected amount(s) to be deposited in the account(s).

Under “Beginning Balance”, please state the account/fund balance 30 days after the start of the previous fiscal year, for “Ending Balance”, indicate the account balance 30 days after the close of the previous fiscal year, and for “Projected Deposit”, indicate the amount to be deposited within 30 days of the close of the permit holder’s fiscal year.

Information Requested	Beginning Balance	Ending Balance	Projected Deposit
Closure Account Balance <i>(see formula below)</i>	\$	\$	\$
Postclosure Account Balance <i>(see formula below)</i>	\$	\$	\$
Or			
Dedicated Fund Balance <i>(see formula below)</i>	\$ 5,666,688.92	\$ 5,877,833.63	\$ 270,802.74
Trust Fund Balance <i>(see formula below)</i>	\$	\$	\$

Formula for Projected Deposits

Closure or Postclosure Account

$$\frac{CE - CB}{RPC} \times TR$$

Where “CE” is the closure or postclosure cost estimate, “CB” is the balance 30 days after close of the previous fiscal year, “RPC” is the remaining permitted capacity in tons, of the landfill from the beginning of the current fiscal year, and “TR” is the total number of tons of solid waste disposed in the prior year.

Dedicated/Trust Fund

$$\frac{CE - CB}{Y}$$

Where “CE” is the closure or postclosure cost estimate, “CB” is the balance 30 days after close of the previous fiscal year, and “Y” is number of years remaining in the pay-in period.

If needed, the space below can be used to show calculations for projected deposits

<p>Closure $(CE - CB)/Y = (\\$8,585,861 - \\$5,877,833.63)/10$ $= \\$270,802.74$</p>	<p>Postclosure</p>
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SECTION 8: PERMIT HOLDER ENDORSEMENT

Submittal of this completed and endorsed form along with all required documentation establishes Notification and Proof of Permit Holder Compliance with IAC 567 Chapter 113.

Name of Official: Kenneth Miller Title: Solid Waste Agency Administrator

Agency/Entity: Dubuque Metropolitan Area Solid Waste Agency

Address: 925 Kerper Court

City: Dubuque State: IA Zip: 52001

Telephone: 563-557-8220 ext 5 Fax: _____

Email Address: kmiller@cityofdubuque.org

Signature of Official: **Kenneth Miller** Digitally signed by Kenneth Miller
DN: cn=Kenneth Miller, c=US, o=City of Dubuque,
ou=DMASWA, email=kmiller@cityofdubuque.org
Date: 2026.03.31 08:17:37 -05'00' Date: 3/31/2026

Questions? Contact Chad Stobbe at (515) 201-8272 or Chadd.Stobbe@dnr.iowa.gov



March 24, 2026

Kenneth Miller, Solid Waste Agency Administrator
Dubuque Metropolitan Area Solid Waste Agency
925 Kerper Court
Dubuque, IA 52001

RE: Dubuque Metropolitan Sanitary Landfill
Permit No. 31-SDP-02-75
2025 Closure and Post-Closure Cost Estimates

Dear Mr. Miller,

We have updated the closure and post-closure cost estimates for the Dubuque Metropolitan Sanitary Landfill (MSWLF) for use in the financial assurance submittal required by Iowa Administrative Code (IAC) Chapter 567-113.14(3). The updates to the attached cost estimates reflect an increase based on the published IDNR inflation factor for 2025 (1.033), in addition to adjustments made to reflect current pricing for similar construction projects. The detailed cost estimates for the Landfill are included in the Attachments. The cost estimates are summarized in the table below.

Cost Estimate Item	Estimate
Dubuque Metropolitan Sanitary Landfill – Closure	\$ 5,498,558
Dubuque Metropolitan Sanitary Landfill – Post-Closure	\$ 3,087,303
Total	\$ 8,585,861

If you have any questions or comments regarding these cost estimates, please contact Will Nicholson at (402) 399-4876 (William.Nicholson@hdrinc.com) or Brendan Bunker at (402) 548-5089 (Brendan.Bunker@hdrinc.com).

Sincerely,
HDR ENGINEERING, INC.

Will Nicholson, P.E.
Project Manager

Brendan Bunker, P.E.
Environmental Engineer

Attachments: Cost Estimates



Project: Dubuque Metropolitan Sanitary Landfill Closure Cost Opinion
 Estimator: Brendan Bunker, P.E.
 Reviewed: Will Nicholson, P.E.
 Date: March 24, 2026
 Basis of Estimate: Permit Drawings
 Costs: 2026\$ (RS Means & projects);
 Remaining Closure Area: 81.6 Acres
 Facility Location: Dubuque, Iowa

Closure Cost Estimates Dubuque Metropolitan Sanitary Landfill

Closure Capital Cost Summary

Item	Quantity	Unit Price	Units	Total
1 Cap Construction - Cells 4 - 8				
a R&D Cap	30.7	\$31,500	AC	\$967,050
b Engineering/Permitting	1.0	\$96,705	LS	\$96,705
Item 1 Subtotal:				\$1,063,755
<i>Assumption(s):</i>				
Unit costs based on actual costs of similar projects.				
Item 1b:				
Based on estimated construction costs.	10.0%			
2 Cap Construction - Cell 9 & Abutment Liner Area				
a Grading Layer	51.9	\$1,330.00	AC	\$69,027
b Recompacted Clay Layer	51.9	\$8,800.00	AC	\$456,720
c 40-mil LLDPE Textured Geomembrane Liner	51.9	\$60,000.00	AC	\$3,114,000
d Rooting Layer	51.9	\$6,000.00	AC	\$311,400
e Vegetation Layer	51.9	\$3,000.00	AC	\$155,700
f Erosion Control/Seeding	51.9	\$2,250.00	AC	\$116,775
g Engineering/Permitting	1.0	\$211,181.10	LS	\$211,181
Item 4 Subtotal:				\$4,434,803
<i>Assumption(s):</i>				
Unit costs based on actual costs of similar projects.				
Item 2g:				
Based on estimated construction costs.	5.0%			
TOTAL CLOSURE COSTS				\$5,498,558

General Assumptions:

- Basis of cost opinion is the current IDNR Solid Waste Disposal Permit drawings.
- Contractor overhead and profit included in unit pricing.
- No unexpected site or subsurface conditions have negative impact on costs.
- Assumes project is competitively bid.
- Assumes construction to be during normal working hours and non-winter months.
- Construction costs are for budgeting and planning purposes only and shall not be used as an actual bid.
- Most quantities and unit prices rounded to 2 or 3 significant figures.
- **IDNR inflation factor for inflation over 2025 period = 1.033**



3/31/2026



Project: Dubuque Metropolitan Sanitary Landfill Post-Closure Cost Opinion
 Estimator: Brendan Bunker, P.E.
 Reviewed: Will Nicholson, P.E.
 Date: March 24, 2026
 Basis of Estimate: Permit Drawings
 Costs: 2026\$ (RS Means & projects);
 Current Final Cover Area: 115.4 acres
 Facility Location: Dubuque, Iowa

Post-Closure Cost Estimates Dubuque Metropolitan Sanitary Landfill

Post-Closure Capital Cost Summary

Item	Quantity	Unit Price	Units	Total
1 Cap and Vegetative Cover Maintenance				
a Final Cover Repair	1,024	\$3.50	CY	\$3,584
b Reseeding	1.2	\$2,000	AC	\$2,308
c Mowing	2	\$4,000	EVENT	\$8,000
d Weed and Tree Control	1	\$2,000	EVENT	\$2,000
Item 2 Subtotal:				\$15,892
<i>Assumption(s):</i>				
Final cover area:	115.4		AC	
<i>Item 2a:</i>				
Assume 10% shrinkage.				
Estimated repair depths:	1		FT	
Yearly estimated repairs:	0.5%		of final cover area	
<i>Item 2b:</i>				
Yearly estimated repairs:	1.0%		of final cover area	
<i>Item 2c:</i>				
Frequency:	2		times a year	
2 Drainage and Erosion Control System Maintenance				
a Ditch Cleaning	1	\$1,500	YR	\$1,500
b Culvert Cleaning and Repair	1	\$500	YR	\$500
c Terrace Repair	914	\$5.00	CY	\$4,572
Item 2 Subtotal:				\$6,572
<i>Assumption(s):</i>				
<i>Item 3c:</i>				
Volume per LF of terrace (includes 20% shrink):	3.73		CY	
Terrace length:	24,500		LF	
Yearly estimated repairs:	1.0%		of terraces per year	
3 Groundwater to Waste Separation Systems Maintenance				
a Underdrain Maintenance	1	\$2,438	YR	\$2,438
Item 3 Subtotal:				\$2,438
<i>Assumption(s):</i>				
<i>Item 3a:</i>				
Unit cost per LF:	\$0.75		LF	
Groundwater underdrain piping:	19,500		LF	
Jetting frequency:	5		times over 30 years	



Project: Dubuque Metropolitan Sanitary Landfill Post-Closure Cost Opinion
 Estimator: Brendan Bunker, P.E.
 Reviewed: Will Nicholson, P.E.
 Date: March 24, 2026
 Basis of Estimate: Permit Drawings
 Costs: 2026\$ (RS Means & projects);
 Current Final Cover Area: 115.4 acres
 Facility Location: Dubuque, Iowa

Post-Closure Cost Estimates Dubuque Metropolitan Sanitary Landfill

4 Groundwater and Surface Water Monitoring Systems Maintenance

a Groundwater Well Replacement/Repair	1	\$1,229	YR	\$1,229
Item 4 Subtotal:				\$1,229

Assumption(s):

Based on similar projects.

Item 4a:

No. of groundwater wells in monitoring network:	43	wells	
Total monitoring depth for abandonment:	1,360	FT	
Abandonment cost:	\$65	per FT	
Total well abandonment cost:	\$88,400	over 30 years	
<hr/>			
Total well depth for installation:	1,360	FT	
Installation cost:	\$80	per FT	
Total well installation cost:	\$108,800	over 30 years	
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Well protection removal cost:	\$380	per well	
Total well protection cost:	\$16,340	over 30 years	
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Well protection installation cost:	\$750	per well	
Total well protection installation cost:	\$32,250	over 30 years	
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Well replacement/repair:	0.50%	per year	

5 Groundwater and Surface Water Quality Monitoring and Reporting

a Groundwater Sampling	1	\$14,875	YR	\$14,875
b Analysis	1	\$25,000	YR	\$25,000
c Reporting	1	\$16,155	YR	\$16,155
Item 5 Subtotal:				\$56,030

Assumption(s):

Unit cost based on actual costs of similar projects.

Item 5a:

Estimated mobilization/equipment cost per sampling event:	\$3,500	per sampling event	
Frequency of mobilization:	2	times per year	
Total mobilization cost:	\$7,000	per year	
<hr/>			
Estimated cost per sampling point:	\$125	per sampling point	
No. of monitoring points with annual sampling:	3	points	
Frequency of monitoring:	1	times per year	
No. of monitoring points with semi-annual sampling:	30	points	
Frequency of monitoring:	2	time per year	
Total assessment monitoring sampling cost:	\$7,875	per year	

Item 5b:

Cost based on sampling listed above.

Item 5c:

Annual Water Quality Report:	\$8,500	per report	
Spring Sampling Notification:	\$7,400	per report	
Statistical program annual license fee:	\$255		
Frequency of reporting:	1	time per year	



Project: Dubuque Metropolitan Sanitary Landfill Post-Closure Cost Opinion
 Estimator: Brendan Bunker, P.E.
 Reviewed: Will Nicholson, P.E.
 Date: March 24, 2026
 Basis of Estimate: Permit Drawings
 Costs: 2026\$ (RS Means & projects);
 Current Final Cover Area: 115.4 acres
 Facility Location: Dubuque, Iowa

Post-Closure Cost Estimates Dubuque Metropolitan Sanitary Landfill

6 Leachate Control Systems Maintenance

a Leachate Line Cleaning	1	\$2,500	YR	\$2,500
b Pump Maintenance	1	\$7,500	YR	\$7,500
c Pump Replacement	1	\$1,500	YR	\$1,500

Item 6 Subtotal: **\$11,500**

Assumption(s):

Unit cost based on actual costs of similar projects.

Item 6a:

Cost per line cleaning:	\$7,500	
Frequency of line jet cleaning:	1	event every 3 years

Item 6b:

Pump Maintenance (includes labor, parts, and supplies):	\$7,500	
Maintenance frequency:	1	event per year

Item 6c:

Pump replacement:	\$15,000	
Replacement frequency:	1	event every 10 years

7 Leachate Management, Transportation, and Disposal

a Leachate Transportation and Disposal - Sanitary Sewer	1	\$3,500	YR	\$3,500
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Item 7 Subtotal: **\$3,500**

Assumption(s):

Unit costs based on actual costs of similar projects.

Item 8a:

Assume leachate continues to be sent to sanitary sewer.

8 Leachate Control Systems Performance Evaluations and Reports

a Leachate Control System Performance Evaluation Report	1	\$3,250	YR	\$3,250
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Item 8 Subtotal: **\$3,250**

Assumption(s):

Unit costs based on actual costs of similar projects.

9 Engineering and Technical Services

a Inspections	1	\$2,500	YR	\$2,500
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Item 9 Subtotal: **\$2,500**

Subtotal Items 1 - 9 - Annual Post-Closure Care Costs \$102,910

TOTAL 30-YEAR POST-CLOSURE COSTS **\$3,087,303**

General Assumptions:

- Basis of cost opinion is the current IDNR Solid Waste Disposal Permit drawings.
- Contractor overhead and profit included in unit pricing.
- No unexpected site or subsurface conditions have negative impact on costs.
- Assumes project is competitively bid.
- Assumes construction to be during normal working hours and non-winter months.
- Construction costs are for budgeting and planning purposes only and shall not be used as an actual bid.
- Most quantities and unit prices rounded to 2 or 3 significant figures.

- IDNR inflation factor for inflation over 2025 period = 1.033



Memo

Date: Thursday, January 15, 2026

Project: November 2024 - November 2025 Airspace Analysis

To: Dubuque Metropolitan Area Solid Waste Agency (DMASWA)
ATTN: Ken Miller, Joe Mayne

From: HDR Engineering, Inc.
Will Nicholson, P.E., Brendan Bunker, P.E.

Introduction

The November 2025 airspace analysis for the Dubuque Metropolitan Area Solid Waste Agency (agency or site) is comprised of tonnage and survey data spanning from November 7, 2024 to November 21, 2025 (period). The calculations provided below summarize the site's soil use, airspace utilization, and remaining site life as of November 21, 2025.

References/Assumptions

1. Aerial topographic map dated November 7, 2024 (2024 Topo Survey - Sheet C002).
2. Aerial topographic map dated November 21, 2025 (2025 Topo Survey - Sheet C003).
3. Landfill tonnages from November 7, 2024 to November 21, 2025.
4. Historic waste receipt and airspace utilization factors (Foth).
5. It is assumed that aerial topographic maps represent existing grades at the end of the day on the date flown.
6. Calculations for remaining life and remaining tonnages are based on the average 3-year waste acceptance and compaction.

Analysis

1. Site Areas

Total Permitted Area:	<u>115.4</u>	AC	(Cells 1-9 + Abutment Liner Phase I & Phase II)
Total Constructed Area:	<u>115.4</u>	AC	(Cells 1-9 + Abutment Liner Phase I & Phase II)
Total Capped Area:	<u>32.8</u>	AC	(Cells 1-3)
Cap Area Remaining:	<u>82.6</u>	AC	(Cells 3-9 + Abutment Liner Phase I & Phase II)

2. Soil Usage This Period

During normal operations at DMASWA, soil is borrowed from the existing soil borrow areas and used as daily cover on the active face of the MSW Landfill. The volume of soil borrowed during the current survey period was attained by comparing the current topography (as of the latest survey date) with the previous survey. This volume is used to estimate daily cover placement during the period. The 36% increase in soil usage can be attributed to intermediate cover placement along the west sideslope of Cell 9.

Cover Materials (Survey Analysis)	<u>55,980</u>	CY
Operational Cover Use ¹ :	<u>0.22</u>	CY/CY

¹(Cover CY / Airspace Consumed CY)

OPERATIONAL SOIL USE
INCREASED 36% COMPARED TO
LAST PERIOD. 

3. Operational Density

Operational density captures both compaction efforts and consolidation from settlement in the waste mass underneath the current active area. This report assesses areas of active waste placement during the analysis period and conservatively does not include inactive areas. Settlement occurs in inactive areas over time, which can increase the site's overall density, but these areas are excluded from this analysis in order to specifically assess the waste density achieved by operations.

The "active" area of the landfill is determined by identifying grade changes between surveys. Fill areas generally represent waste placement, and cut areas are identified as soil borrow operations. Soil for operations is currently sourced from the south soil borrow area and inner cell soil borrow stockpiles.



4. Waste Acceptance and Compaction

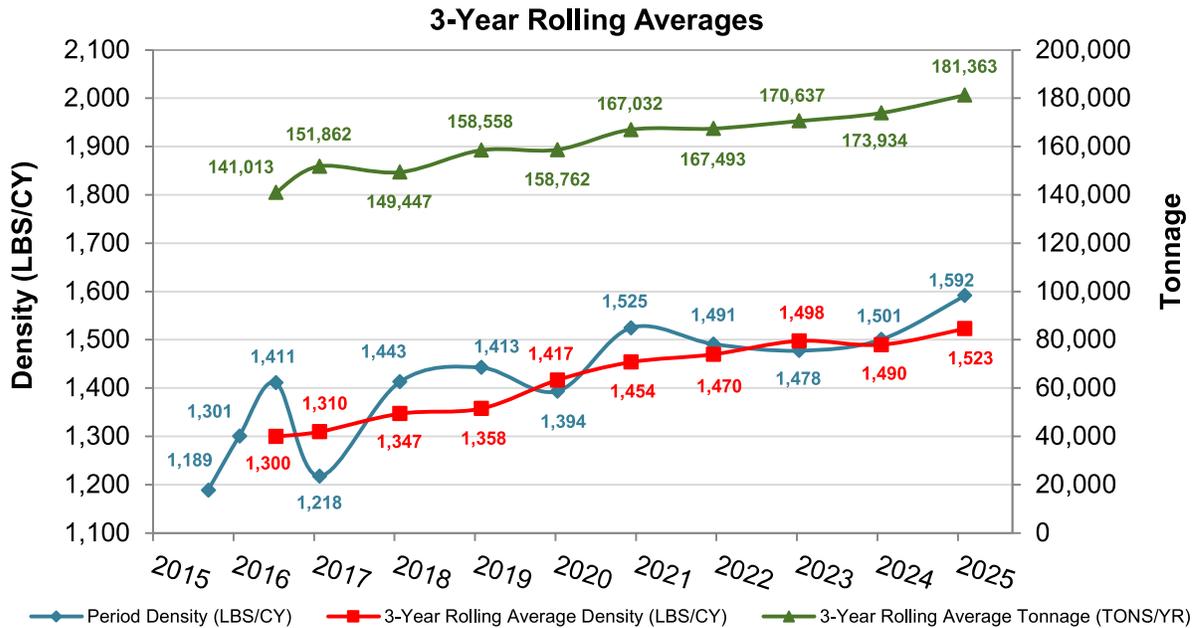
Historic waste acceptance and period densities appear below along with this period's waste acceptance and density. Waste acceptance for this period showed an increase of 12.0%, and compaction showed an increase of 5.7%, likely due to a heightened waste column and consistent compactor usage. In general, filling and compaction efforts are working very effectively based on recent data. It is recommended that the Site continue to prioritize optimal fill practices to maximize compaction.

Survey Period	Waste Acceptance (TONS)	Period Volume Consumed (CY)	Period Density (LBS/CY)
01/07/2016 to 06/29/2016	63,009	106,000	1,189
06/30/2016 to 11/17/2016	56,914	87,510	1,301
11/18/2016 to 05/02/2017	65,491	92,826	1,411
05/03/2017 to 11/15/2017	88,484	145,322	1,218
11/16/2017 to 11/15/2018	140,091	198,253	1,413
11/16/2018 to 11/19/2019	173,193	240,067	1,443
11/20/2019 to 10/30/2020	155,988	223,825	1,394
10/31/2020 to 09/29/2021	150,880	197,887	1,525
09/30/2021 to 10/08/2022	176,957	237,328	1,491
10/09/2022 to 11/01/2023	185,419	250,947	1,478
11/02/2023 to 11/07/2024	178,118	237,389	1,501
11/08/2024 to 11/21/2025	202,448	254,400	1,592

5. 3-Year Rolling Averages

3-year rolling averages are calculated with each airspace analysis to look for trends and for use in long-term planning. The 3-year rolling averages for this period are shown below, and trends in tonnages and densities for each period are shown in the chart below:

3-Year Average Compaction: $\frac{1,523}{1,523}$ LBS/CY
 3-Year Average Annual Tonnage: $\frac{181,363}{181,363}$ TONS/YR





6. Remaining Site Life

In 2024, the remaining airspace for the MSW footprint was evaluated in two (2) ways, which are both defined below:

- **Remaining Constructed Airspace**
Remaining constructed airspace is the volume of waste that can be placed within the constructed waste footprint given current topography and remaining projected fill. This volume is used to project when the next cell construction will be required or when achievable and operationally limiting grades are achieved.
- **Remaining Permitted Airspace**
Remaining permitted airspace is calculated from the permitted top of waste (top of intermediate cover) grades compared to existing topography and future permitted cell top of clay (or GCL) grades per the current permit. This incorporates all potential waste that can be disposed within the current waste limits.

At the end of 2024, Cell 9 Abutment Liner Phase I - Area II represented the final portion of unconstructed airspace that existed within the currently permitted waste footprint. As Cell 9 Abutment Liner Phase I - Area II was constructed in 2025, the entire permitted waste footprint has now been constructed. **Therefore, for this analysis, the remaining constructed airspace and the remaining permitted airspace are identical.**

Scenario	Remaining Airspace (CY)	Remaining Tonnage (TONS) ²	Remaining Life (Years & Months) ²	Life End Date
Rem. Constructed & Permitted Airspace	3,229,700	2,459,417	13 Years, 7 Months	June 2039

²The remaining site life and tonnages above were calculated using the 3-year rolling averages for density and tonnage, both shown on the previous page.

Please feel free to contact us with any questions and/or comments on any information presented within this report.

Drawings For
**DMASWA
Sanitary Landfill**
2025 Airspace Analysis

Project No.
10437101

Dubuque, Iowa
January 2026



INDEX OF DRAWINGS

- SHEETS**
- 001 SITE PLAN
 - 002 2025 SITE AERIAL
 - 003 2024 TOPOGRAPHIC SURVEY
 - 004 2024 PHOTOGRAPHIC SURVEY
 - 005 CELL 1 PERMITS CONSIDERED AIRSPACE
 - 006 REMAINING PERMITTED AND CONSTRUCTED AIRSPACE



NOTES
 1. SITE AERIAL FLOWN BY GOR INC. DATED NOVEMBER 23, 2024.

- LEGEND**
- PROP. PROPERTY BOUNDARY
 - EXISTING PROPERTY LINE
 - WASTE LIMITS OF WASTE
 - CELL BOUNDARY
 - EXISTING CLOSURE LIMITS

2025 AERIAL
 FILENAME: C001.dwg
 SCALE: 1" = 200'



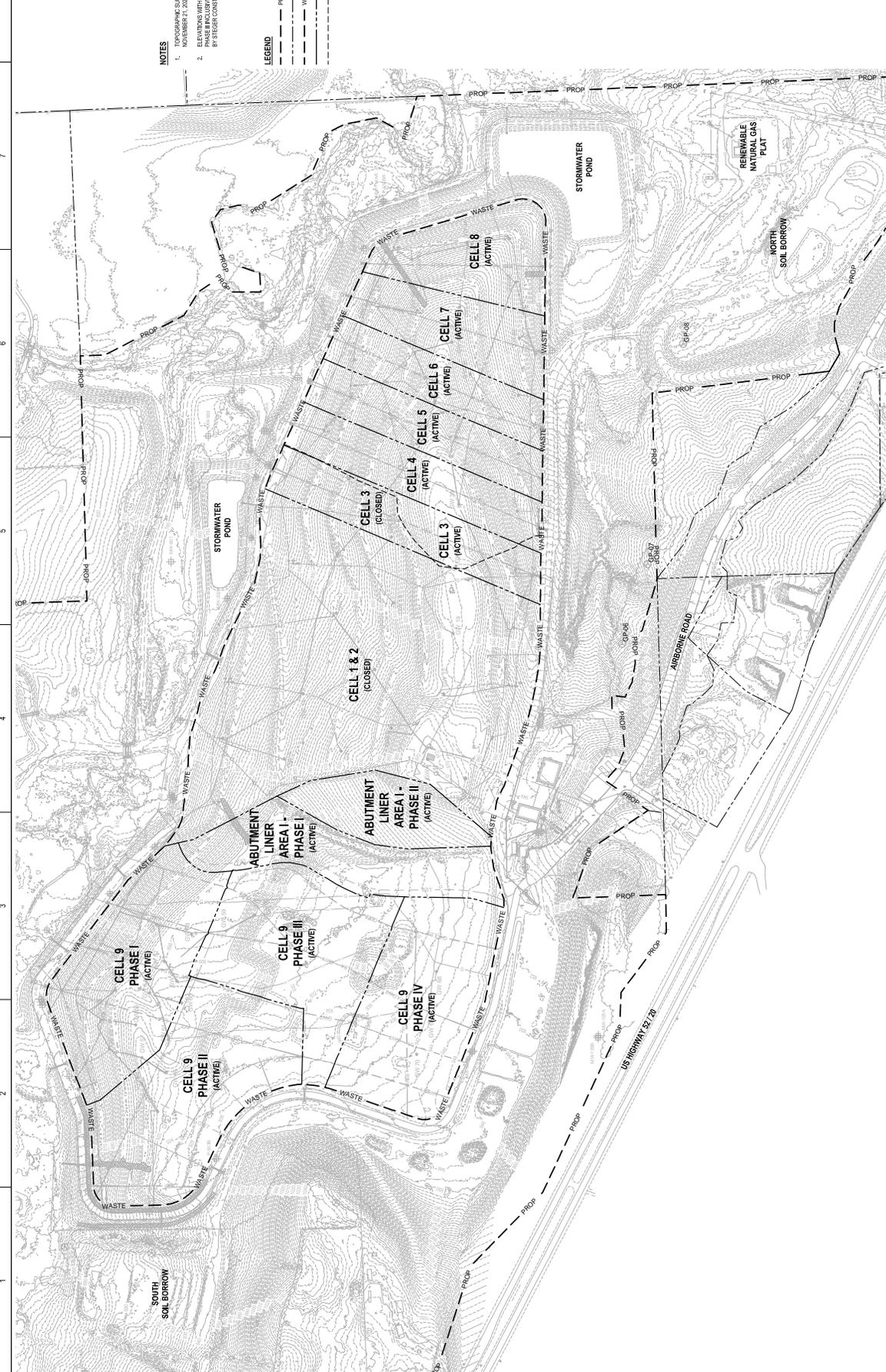
DMASWA
 DUBUQUE METROPOLITAN AREA
 SOLID WASTE AGENCY

**DMASWA SANITARY LANDFILL
 2025 ANNUAL AIRSPACE ANALYSIS**

**FOR INFORMATIONAL
 PURPOSES ONLY
 NOT FOR CONSTRUCTION**

PROJECT NUMBER: 105701		
ISSUE: 0	DATE: 01/07/2025	ISSUED FOR CLIENT USE
PROJECT MANAGER: W. NICHOLSON	CHECKED: M. WILSH	DRAWN BY: M. WILSH
		CC BY: M. BINGFORD

HDR



NOTES

1. TOPOGRAPHIC SURVEY FLOWN BY HDR INC. DATED NOVEMBER 21, 2025.
2. ELEVATIONS WITH IN ABUTMENT LINER AREA 1 - PHASE I AND ABUTMENT LINER AREA 2 - PHASE II BY STEER CONSTRUCTION DATED JANUARY 2026.

LEGEND

- PROP --- PROPERTY BOUNDARY
- EXISTING PROPERTY LINE ---
- WASTE ---
- CELL BOUNDARY ---
- EXISTING CLOSURE LIMITS ---



2025 TOPO SURVEY
 FILENAME: C003.dwg
 SCALE: 1" = 20'

DMASWA
 DUBUQUE METROPOLITAN AREA
 SOLID WASTE AGENCY

DMASWA SANITARY LANDFILL
 2025 ANNUAL AIRSPACE ANALYSIS

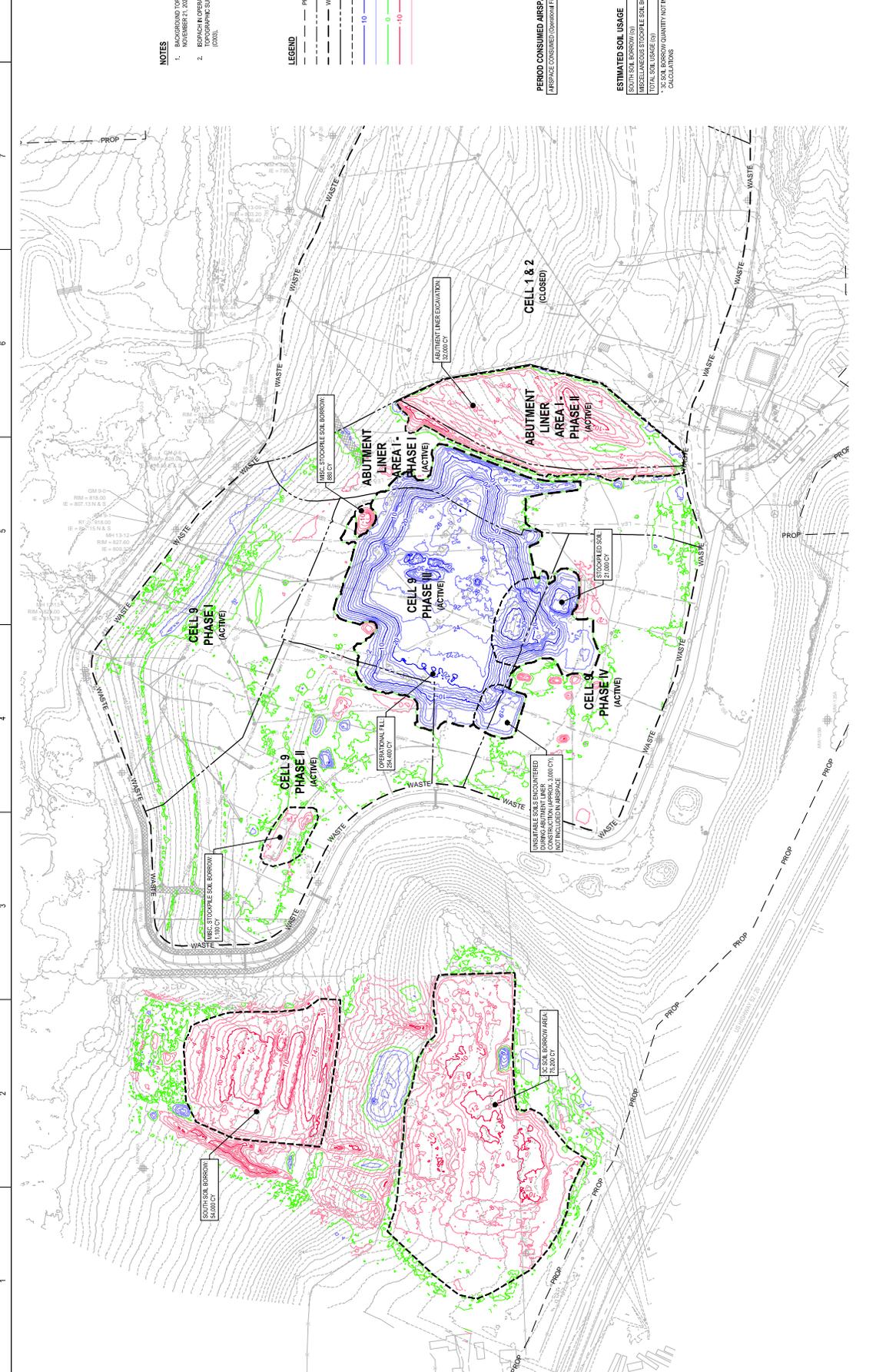
FOR INFORMATIONAL PURPOSES ONLY
NOT FOR CONSTRUCTION

PROJECT MANAGER: W. NICHOLSON	PROJECT NUMBER: 103701
CHIEF: M. NICHOLSON	
DRAWN BY: M. WELSH	
QC BY: M. BINGFORD	

ISSUE	DATE	DESCRIPTION
0	11/27/2025	ISSUED FOR CLIENT USE

HDR

SHEET **C003**



NOTES
 1. BACKGROUND TOPO PROCESSED BY NMR INC DATED NOVEMBER 21, 2025.
 2. REPORTED OPERATIONAL FILL AREAS COMPARE 2024 TOPOGRAPHIC SURVEY (CADD) TO 2023 TOPOGRAPHIC SURVEY (CADD).

LEGEND
 - - - - - PROP
 - - - - - PROPERTY BOUNDARY
 - - - - - EXISTING PROPERTY LINE
 - - - - - WASTE
 - - - - - CELL BOUNDARY
 - - - - - EXISTING CONTOUR LIMITS
 - - - - - 10' MINS FILL CONTOUR
 - - - - - 0' MINS FILL CONTOUR
 - - - - - 10' MINS CUT CONTOUR
 - - - - - 10' MINS CUT CONTOUR

PERIOD CONSUMED AIRSPACE
 AIRSPACE CONSUMED (DOWNWIND FT²) 254,600

ESTIMATED SOIL USAGE
 EXC'D SOIL BORROW (CY) 54,000
 MISCELLANEOUS STOCKPILE SOIL BORROW (CY) 1,980
 TOTAL SOIL USAGE (CY) 55,980
 * SOIL BORROW QUANTITY NOT INCLUDED IN OPERATIONAL SOIL USAGE CALCULATIONS

CELL 9 PERIOD CONSUMED AIRSPACE
 FILE NAME C004.JMG
 SCALE 1" = 150'
 SHEET C004

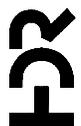


DMASWA SANITARY LANDFILL 2025 ANNUAL AIRSPACE ANALYSIS

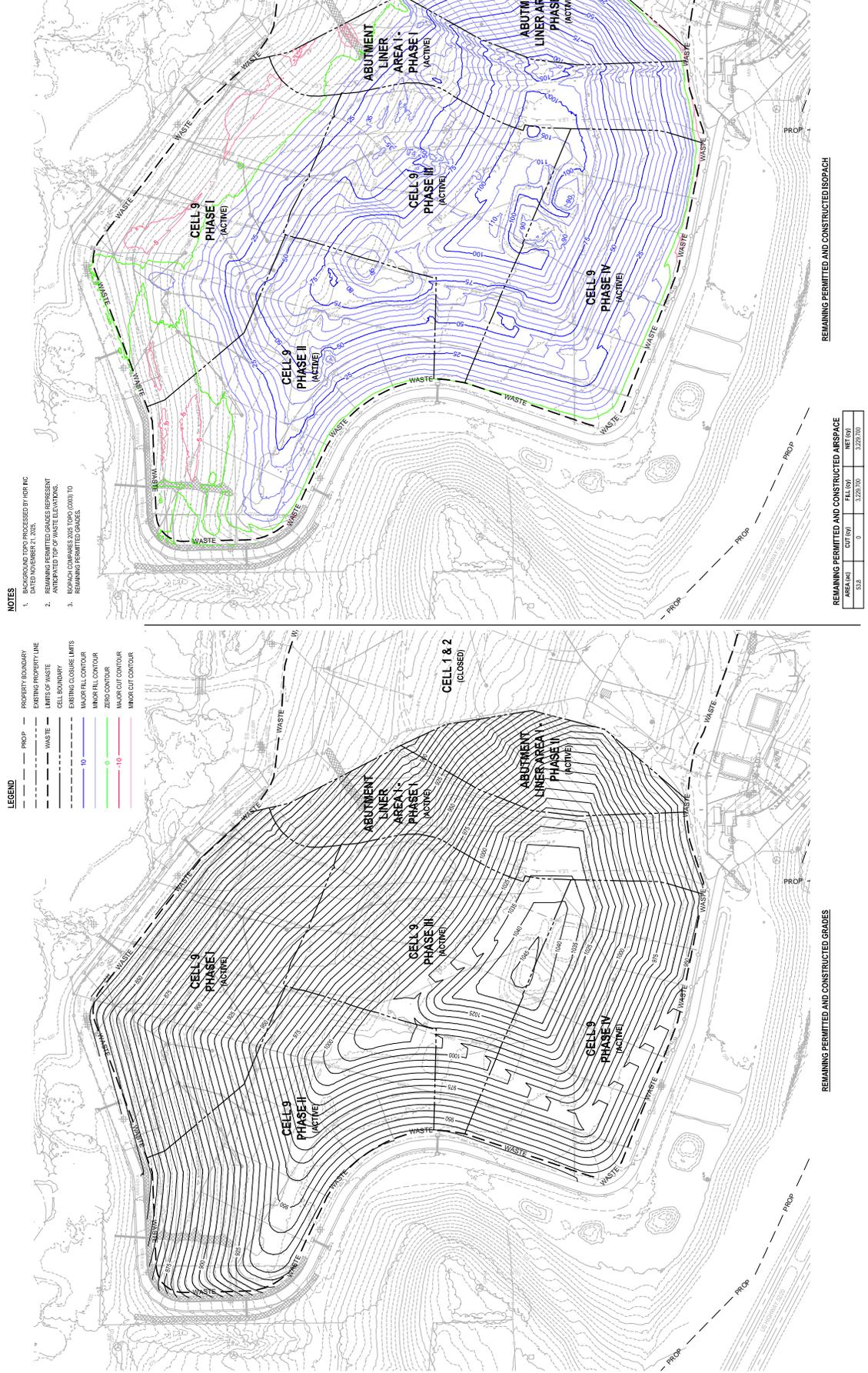
FOR INFORMATIONAL PURPOSES ONLY NOT FOR CONSTRUCTION

PROJECT MANAGER: W. NICHOLSON	PROJECT NUMBER: 1037101
DRAWN BY: M. WELSH	
DATE: 11/20/2025	
ISSUE: 0	

ISSUE	DATE	DESCRIPTION
0	11/20/2025	ISSUED FOR CLIENT USE



1 2 3 4 5 6 7 8



- LEGEND**
- PROP. BOUNDARY
 - EXISTING PROPERTY LINE
 - LIMITS OF WASTE
 - CELL BOUNDARY
 - EXISTING CLOSURE LIMITS
 - MAJOR FILL CONTOUR
 - MINOR FILL CONTOUR
 - ZERO CONTOUR
 - MAJOR CUT CONTOUR
 - MINOR CUT CONTOUR

NOTES

1. BACKGROUND TOPO PROCESSED BY HDR INC. DATED NOVEMBER 21, 2025.
2. REMAINING PERMITTED GRADES REPRESENT ANTICIPATED TOP OF WASTE ELEVATIONS.
3. BOUNDARY COMPARES 2002 TOPO (CON) TO REMAINING PERMITTED GRADES.

REMAINING PERMITTED AND CONSTRUCTED (ISSPACH)

AREA/CELL	EST. VOL.	EST. COST	NET COST
SSB	0	0	0
CELL 9	3,225,700	3,225,700	3,225,700

REMAINING PERMITTED AND CONSTRUCTED GRADES

PROJECT MANAGER	W. NICHOLSON
CHECKED BY	M. WELSH
DRAWN BY	M. WELSH
DATE	11/11/2025

ISSUE	DATE	DESCRIPTION
0	11/07/2025	ISSUED FOR CLIENT USE

PROJECT NUMBER	(103710)
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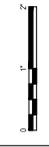


DMASWA
DUBUQUE METROPOLITAN AREA
SOLID WASTE AGENCY

**DMASWA SANITARY LANDFILL
2025 ANNUAL AIRSPACE ANALYSIS**

**FOR INFORMATIONAL
PURPOSES ONLY
NOT FOR CONSTRUCTION**

REMAINING PERMITTED AND CONSTRUCTED AIRSPACE



FILENAME: C005.dwg
SCALE: 1" = 150'

SHEET
C005

