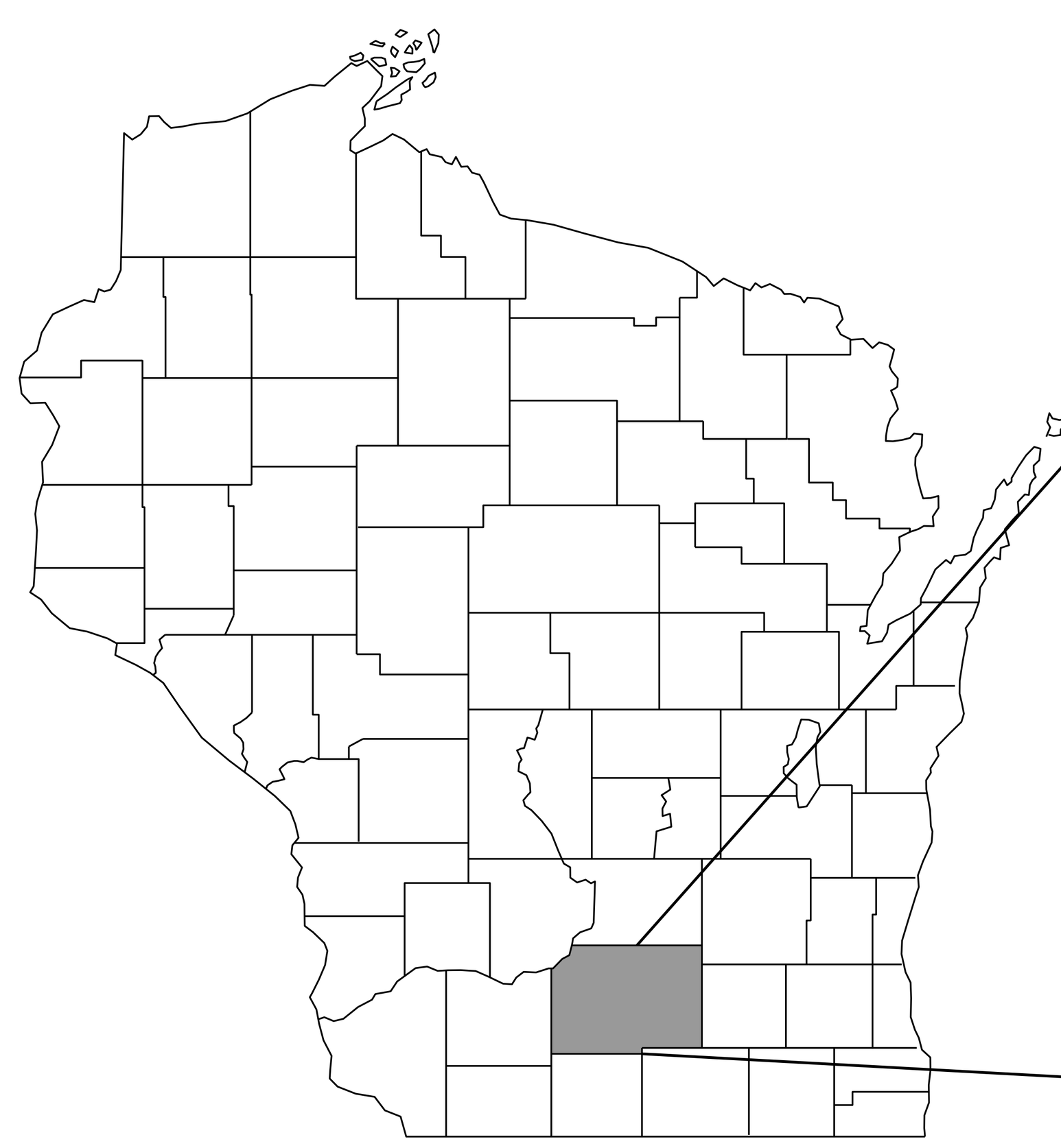
DANE COUNTY LANDFILL SITE NO. 3
FEASIBILITY REPORT - ADDENDUM NO. 1

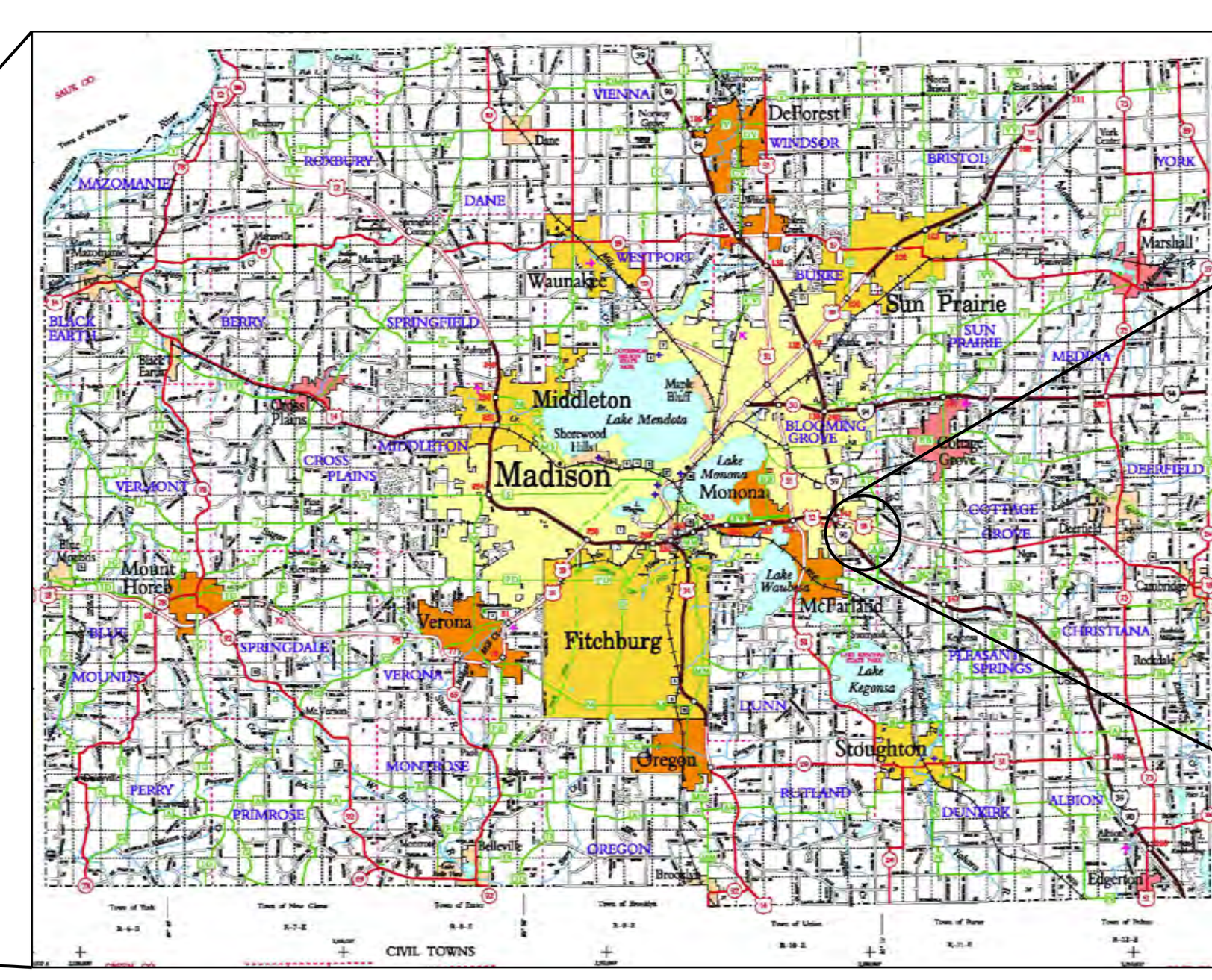
PREPARED FOR: DANE COUNTY DEPARTMENT OF WASTE & RENEWABLES
MADISON, WISCONSIN

PREPARED BY: SCS ENGINEERS
MADISON, WISCONSIN

DATE: FEBRUARY 2025



WISCONSIN



DANE COUNTY MAP

SITE LOCATOR

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BETSY L POWERS E-32933 MONONA PROFESSIONAL ENGINEER

BETTY J. SOCHA G-304 MADISON PROFESSIONAL GEOLOGIST 7 Mar 2025

REVISION 1 — TITLE: FEASIBILITY REPORT ADDENDUM NO. 1 — KP — DATE: 03/07/2025

PROJECT NO. 25222068.00 — DRAWN BY: KP
DRAWN: 03/24/2023 — CHECKED BY: MRH/BLP
REVISED: 01/31/2025 — APPROVED BY: BLP 03/07/2025

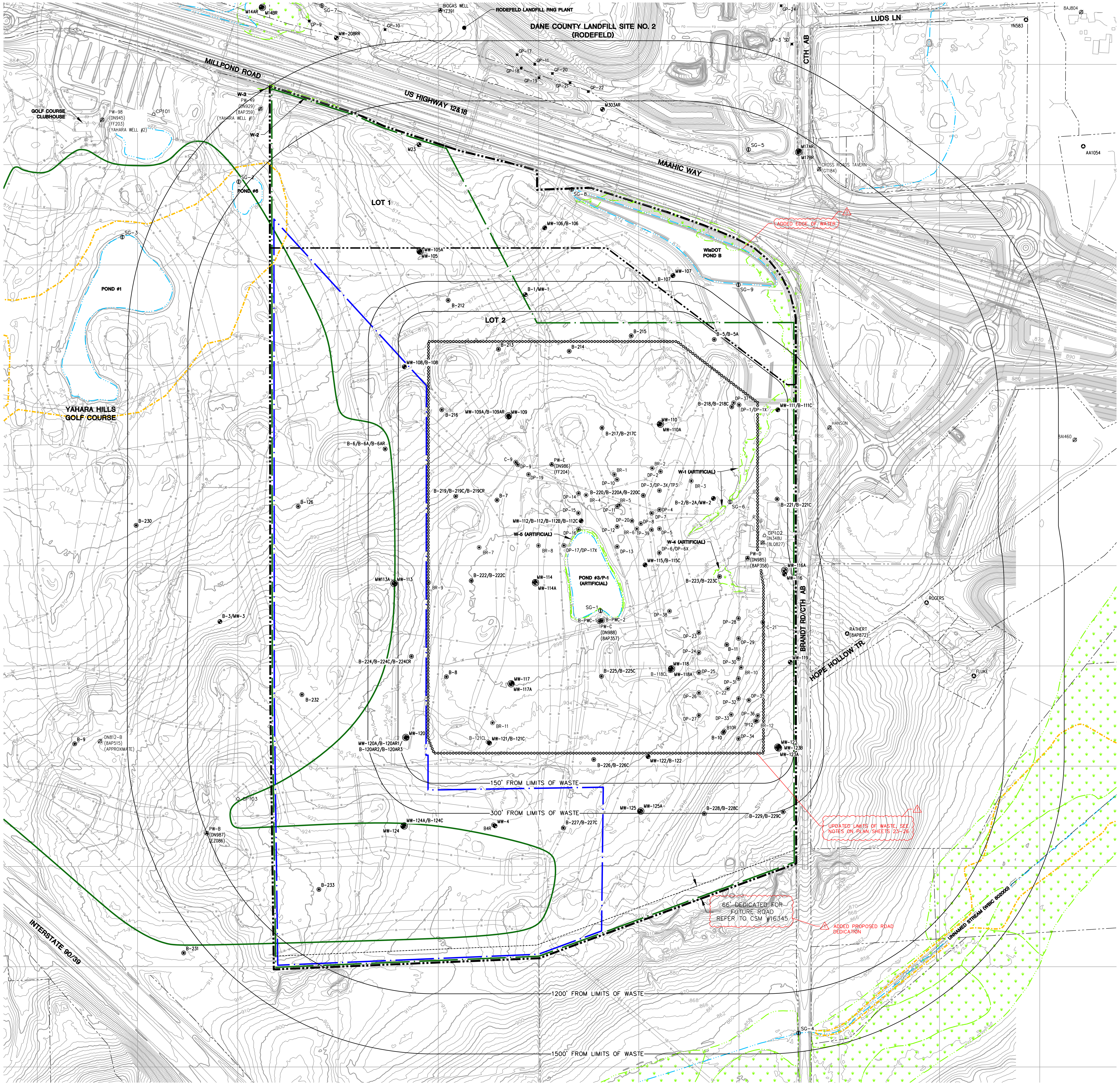
CLIENT: DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES, 1919 ALLIANT ENERGY CENTER WAY, MADISON, WI 53713

ENGINEER: SCS ENGINEERS, 2830 DAIRY DRIVE MADISON, WI 53718-6751, PHONE: (608) 224-2830

SITE: FEASIBILITY REPORT – ADDENDUM NO. 1, DANE COUNTY LANDFILL SITE NO. 3, 4402 BRANDT ROAD, MADISON, WISCONSIN

COVER SHEET

SHEET 1 of 28



LEGEND

- PROJECT PROPERTY LINE
- PROPERTY PARCEL LINE
- PROPOSED LIMITS OF WASTE (LOW)
- 18 HOLE GOLF COURSE LEASE LINE (SEE NOTE 9)
- 27 HOLE GOLF COURSE LEASE LINE (SEE NOTE 9)
- LIMITS OF PROPOSED 18-HOLE GOLF COURSE
- EXISTING GRADE (2' CONTOUR)
- EXISTING GRADE (10' CONTOUR)
- PAVED ROAD
- UNPAVED ROAD
- STREAM/EDGE OF WATER
- 100-YEAR FLOODPLAIN — ⚠1 ADDED 100-YEAR FLOODPLAIN
- WETLAND
- UE UNDERGROUND ELECTRIC
- G GAS MAIN
- OU OVERHEAD UTILITY
- SA SANITARY SEWER
- ST STORM SEWER
- T TELEPHONE LINE
- W WATER MAIN
- CULVERT
- ELECTRICAL PEDESTAL
- UTILITY POLE
- LIGHT POLE
- SANITARY MANHOLE
- STORM SEWER MANHOLE
- STORM SEWER INLET
- WATER VALVE
- (DN988) (8AP357) WATER SUPPLY WELL — WG+NHS GEOLOGIC LOG — WISCONSIN UNIQUE WELL NUMBER
- WATER SUPPLY WELL (APPROXIMATE LOCATION)
- WATER SUPPLY WELL (ASSUMED LOCATION)
- ABANDONED WATER SUPPLY WELL
- GP-15 GAS PROBE
- B-216 SOIL BORING
- MW-118 WATER TABLE MONITORING WELL
- MW-118A PIEZOMETER
- SG-8 STAFF GAUGE
- CP101 CONTROL POINT

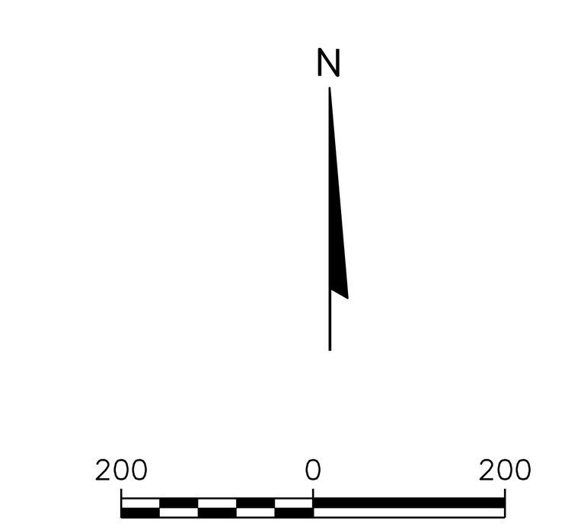
NOTES:

1. BASE MAP MODIFIED FROM TETRA TECH PROPOSED BORING AND MONITORING WELL LOCATION MAP DATED JULY 2022. TOPOGRAPHY FOR USH 12&18 AND CTH AB INTERCHANGE FROM WISDOT DESIGN DRAWINGS FOR PROJECT Nos. 3080-01-40, 3080-01-75, AND 3080-01-76 (APPROVED 1/31/2022).
2. CONTOUR DATA DOWNLOADED FROM DANE COUNTY WISCONSIN GIS SITE. CONTOURS DEVELOPED FROM SPRING 2017 LIDAR FLIGHT OF DANE COUNTY.
3. HORIZONTAL DATUM IS REFERENCED TO WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM (NAD 83), US SURVEY FEET.
4. VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM 1988. CONTOUR INTERVAL IS TWO FEET.
5. WETLANDS AS SHOWN ARE FROM TRC REPORT #275981.00004 DATED 12/08/2021. WISCONSIN DEPARTMENT OF NATURAL RESOURCES DETERMINED WETLANDS WERE ARTIFICIAL UNDER REVIEW FILE NO. EXE-SC-2023-13-00856 AND POND #3/P-1 WAS ALSO ARTIFICIAL IN NATURE. THEREFORE NO REGULATORY AUTHORITY REGARDING CHAPTER 30 OR 281 APPLIES TO THE WATER BODY OR WETLANDS. APPROVED AND IMPLEMENTED CHANGES TO WETLANDS AS PART OF THE USDOT US HIGHWAY 12 & 18 AND CTH AB INTERCHANGE PROJECT ARE NOT ACCOUNTED FOR.
6. WETLAND BOUNDARIES OUTSIDE OF TRC REPORT STUDY AREA (SEE NOTE 5) TAKEN FROM WISCONSIN DEPARTMENT OF NATURAL RESOURCES, BUREAU OF WATERSHED MANAGEMENT – WETLANDS SECTION, DATED JULY 28, 2021.
7. LAKES, PONDS, RIVERS, AND STREAM DATA FROM HTTPS://GIS-COUNTYOFDANE.OPENDATA.ARCGIS.COM.
8. 100-YEAR FLOODPLAIN EXPORTED FROM ESRI ARCGIS ON JUNE 7, 2024. ESRI LAYER DERIVED FROM NOVEMBER 20, 2023 NATIONAL FLOOD HAZARD LAYER PROVIDED BY FEMA. — ⚠1 ADDED FLOODPLAIN REFERENCE
9. SOIL BORINGS B-1 THROUGH B-11 AND MONITORING WELLS MW-1 THROUGH MW-4 WERE INSTALLED IN JANUARY AND FEBRUARY 2022 BY TETRA TECH.
10. IN LOCATIONS WHERE THE GOLF COURSE LEASE LINE FOLLOWS THE PROPERTY LINE OR PROPOSED LIMITS OF WASTE, THE LEASE LINE IS SHOWN OFFSET FOR CLARITY.
11. ADDED ADDITIONAL BORINGS INSTALLED IN NOVEMBER AND DECEMBER 2024.
12. DP-18, DP-21 AND DP-22 BORINGS WERE NOT PERFORMED.

⚠1 ADDED NOTES

HORIZONTAL AND VERTICAL CONTROL POINT LOCATIONS

POINT I.D.	NORTHING (FEET)	EASTING (FEET)	ELEVATION (FT-MSL)	DESCRIPTION
CP101	380,751.36	2,166,580.51	870.930	SCAMON
CP102	378,650.01	2,169,627.23	899.540	SCAMON
CP103	377,337.14	2,167,000.91	933.580	SCAMON



SCALE: 1" = 200'

REVISION	TITLE	DATE
1	FEASIBILITY REPORT ADDENDUM NO. 1	03/07/2025

PROJECT NO. 25222268.00 — DRAWN BY: KP
DRAWN: 03/24/2023 — CHECKED BY: MRH/BLP
REVISED: 02/20/2025 — APPROVED BY: BLP 03/07/2025

CLIENT: DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

ENGINEER: SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

SITE: FEASIBILITY REPORT – ADDENDUM NO. 1
DANE COUNTY LANDFILL SITE NO. 3
4402 BRANDT ROAD
MADISON, WISCONSIN

EXISTING CONDITIONS

SHEET 2 of 28

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LEGEND

━ · · ━ · · ━	PROJECT PROPERTY LINE
— - — - —	PROPERTY PARCEL LINE
·oooooooooooooooo·	PROPOSED LIMITS OF WASTE
──	EXISTING GRADE (2' CONTOUR)
──	EXISTING GRADE (10' CONTOUR)
═	EXISTING PAVED ROAD
- - - - -	EXISTING UNPAVED ROAD
— ·· — ·· —	EXISTING STREAM/EDGE OF WATER
- · - · - · -	100-YEAR FLOODPLAIN
🟩	EXISTING WETLAND
──	LIMITS OF PROPOSED 18-HOLE GOLF COURSE
▲	EXISTING WATER SUPPLY WELL
△	EXISTING WATER SUPPLY WELL (APPROXIMATE LOCATION)
⌀	ABANDONED WATER SUPPLY WELL
● MW-118	EXISTING WATER TABLE MONITORING WELL
◉ MW-118A	EXISTING PIEZOMETER
⦶ SG-8	EXISTING STAFF GAUGE
867.60	WATER TABLE ELEVATION
[894.85]	SURFACE WATER ELEVATION
NM	NOT MEASURED
──	WATER TABLE CONTOUR
──▶	APPROXIMATE GROUNDWATER FLOW DIRECTION

NOTES:

1. SEE SHEET 2, EXISTING CONDITIONS, FOR ADDITIONAL LEGEND ITEMS AND BASE MAP NOTES AND REVISIONS.
2. WATER LEVELS WERE MEASURED BY SCS ON MARCH 29, 2023.
3. STAFF GAUGES SG-8 AND SG-9 WERE NOT MEASURED BECAUSE THE WISDOT CONSTRUCTION WAS ONGOING AND THESE STAFF GAUGES WERE NOT YET IN PLACE.

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DRAWN:	03/24/2023	CHECKED BY:	MRH/BLP
REVISED:	01/30/2025	APPROVED BY:	BLP 03/07/2025

CLIENT

DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

ENGINEER

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

SITE

FEASIBILITY REPORT – ADDENDUM NO. 1
DANE COUNTY LANDFILL SITE NO. 3
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MADISON, WISCONSIN

HIGH WATER TABLE MAP – MARCH 29, 2023

SHEET

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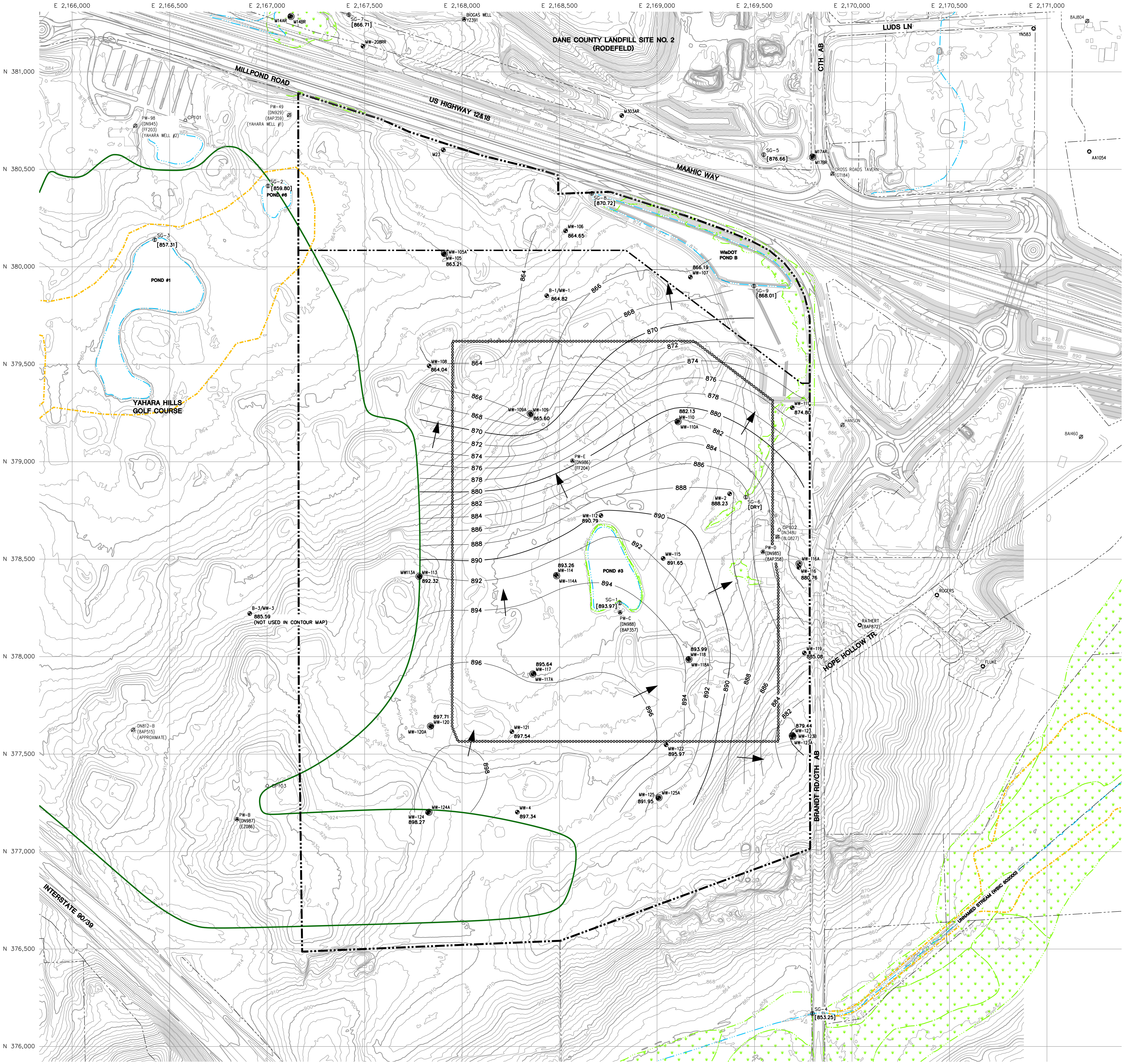

LEGEND

▬ ▪ ▪ ▬	PARCEL PROPERTY LINE
— - - —	PROPERTY PARCEL LINE
○○○○○○○○	PROPOSED LIMITS OF WASTE
—	EXISTING GRADE (2' CONTOUR)
—	EXISTING GRADE (10' CONTOUR)
═	EXISTING PAVED ROAD
- - - -	EXISTING UNPAVED ROAD
— ··· —	EXISTING STREAM/EDGE OF WATER
🟩	EXISTING WETLAND
—	LIMITS OF PROPOSED 18-HOLE GOLF COURSE
●	EXISTING WATER SUPPLY WELL
○	EXISTING WATER SUPPLY WELL (APPROXIMATE LOCATION)
⌀	ABANDONED WATER SUPPLY WELL
● MW-118	EXISTING WATER TABLE MONITORING WELL
◉ MW-118A	EXISTING PIEZOMETER
⦶ SG-8	EXISTING STAFF GAUGE
867.60	WATER TABLE ELEVATION
[877.12]	SURFACE WATER ELEVATION
—	WATER TABLE CONTOUR
➞	APPROXIMATE GROUNDWATER FLOW DIRECTION

NOTES:

1. SEE SHEET 2, EXISTING CONDITIONS, FOR ADDITIONAL LEGEND ITEMS AND BASE MAP NOTES AND REVISIONS.
2. WATER LEVELS WERE MEASURED BY SCS ON DECEMBER 4, 2023.

REVISION	TITLE	DATE
1	FEASIBILITY REPORT ADDENDUM NO. 1	03/07/2025

PROJECT NO. 25222268.00 — DRAWN BY: KP
DRAWN: 03/24/2023 — CHECKED BY: MRH/BLP
REVISED: 01/30/2025 — APPROVED BY: BLP 03/07/2025

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PHONE: (608) 224-2830

SITE: FEASIBILITY REPORT – ADDENDUM NO. 1
DANE COUNTY LANDFILL SITE NO. 3
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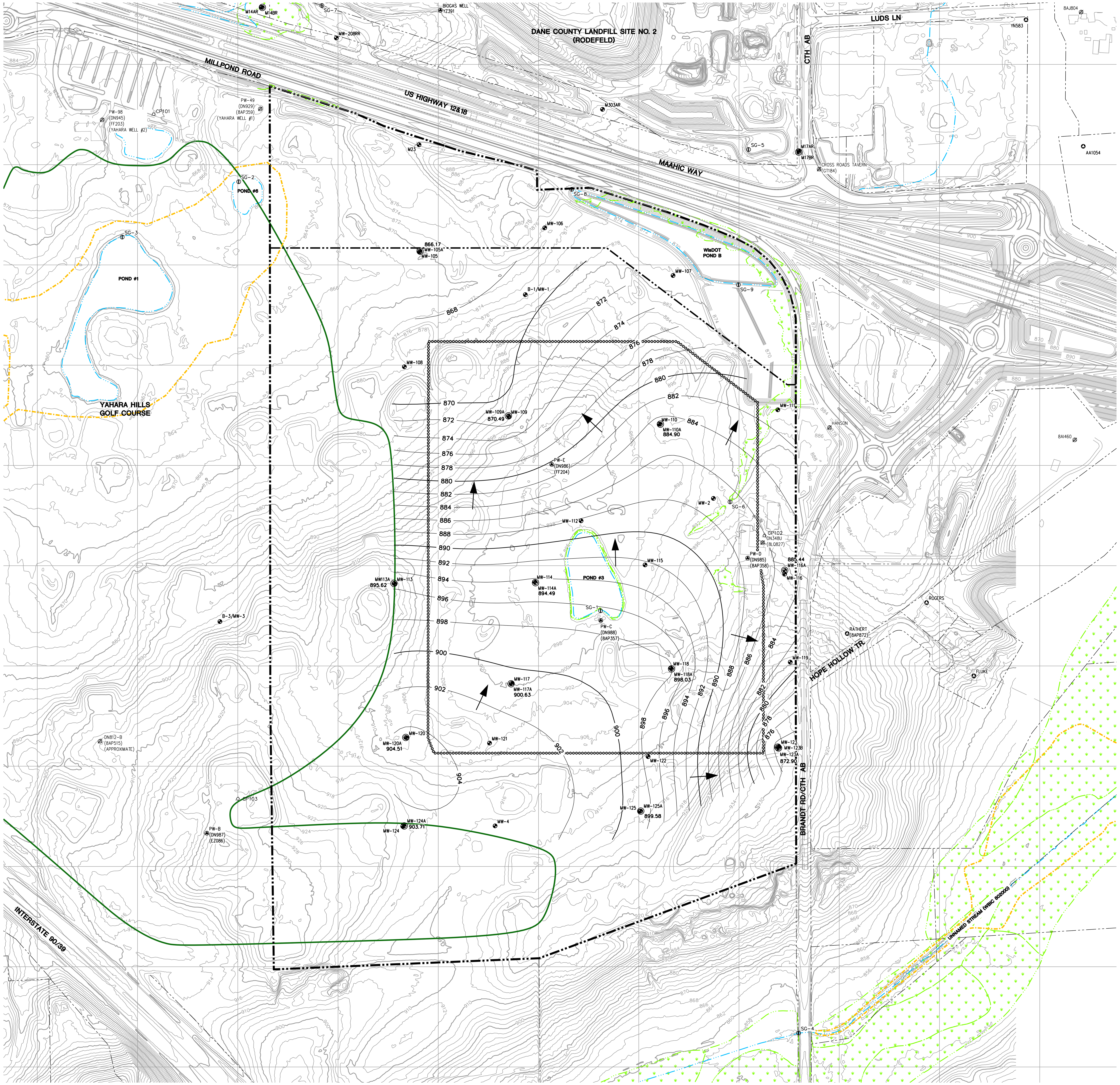
MADISON, WISCONSIN

LOW WATER TABLE MAP – DECEMBER 4 2023

SHEET 4 OF 28



LEGEND

▬ ▪ ▪ ▬	PROJECT PROPERTY LINE
— - — -	PROPERTY PARCEL LINE
ooooooooo	PROPOSED LIMITS OF WASTE
—	EXISTING GRADE (2' CONTOUR)
—	EXISTING GRADE (10' CONTOUR)
═	EXISTING PAVED ROAD
- - - -	EXISTING UNPAVED ROAD
— ··· —	EXISTING STREAM/EDGE OF WATER
— · — ·	100-YEAR FLOODPLAIN
🟩	EXISTING WETLAND
—	LIMITS OF PROPOSED 18-HOLE GOLF COURSE
▲	EXISTING WATER SUPPLY WELL
△	EXISTING WATER SUPPLY WELL (APPROXIMATE LOCATION)
⌀	ABANDONED WATER SUPPLY WELL
● MW-118	EXISTING WATER TABLE MONITORING WELL
◉ MW-118A	EXISTING PIEZOMETER
⦶ SG-8	EXISTING STAFF GAUGE
867.60	POTENTIOMETRIC SURFACE ELEVATION
—	POTENTIOMETRIC SURFACE CONTOUR
⟶	APPROXIMATE GROUNDWATER FLOW DIRECTION

NOTES:

1. SEE SHEET 2, EXISTING CONDITIONS, FOR ADDITIONAL LEGEND ITEMS AND BASE MAP NOTES AND REVISIONS.
2. WATER LEVELS WERE MEASURED BY SCS ON MARCH 29, 2023.

REVISION	TITLE	DATE
1	FEASIBILITY REPORT ADDENDUM NO. 1	03/07/2025

PROJECT NO. 25222268.00 DRAWN BY: KP
DRAWN: 03/24/2023 CHECKED BY: MRH/BLP
REVISED: 01/30/2025 APPROVED BY: BLP 03/07/2025

CLIENT
DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

ENGINEER
SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

SITE
FEASIBILITY REPORT – ADDENDUM NO. 1
DANE COUNTY LANDFILL SITE NO. 3
4402 BRANDT ROAD
MADISON, WISCONSIN

POTENTIOMETRIC SURACE MAP – MARCH 29, 2023

SHEET
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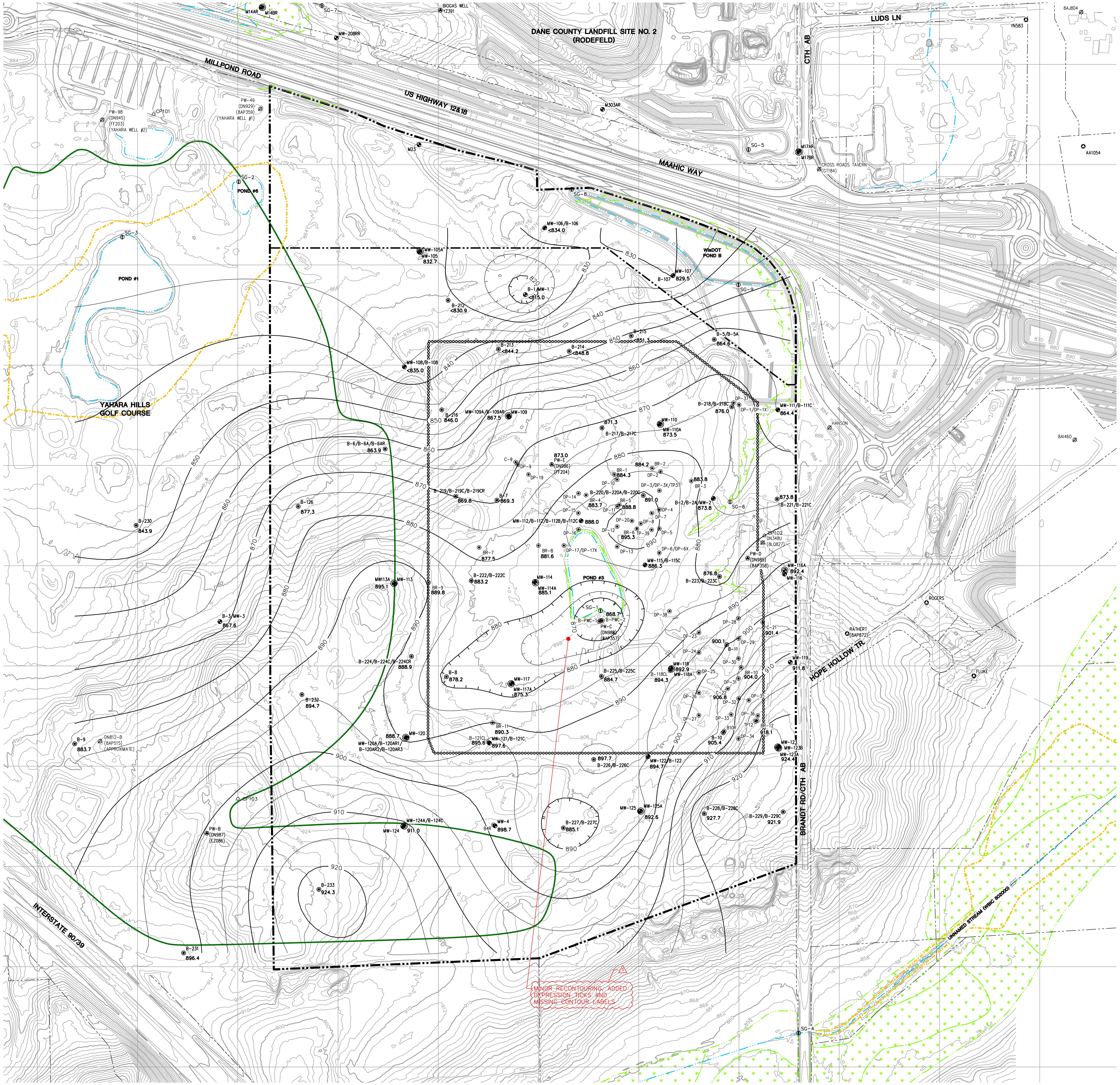

LEGEND

▬ · · ▬ · · ▬	PROJECT PROPERTY LINE
— - — - —	PROPERTY PARCEL LINE
ooooooooooooooooo	PROPOSED LIMITS OF WASTE
——	EXISTING GRADE (2' CONTOUR)
——	EXISTING GRADE (10' CONTOUR)
══	EXISTING PAVED ROAD
- - - - - -	EXISTING UNPAVED ROAD
— ··· — ··· —	EXISTING STREAM/EDGE OF WATER
— · — · —	100-YEAR FLOODPLAIN
🟩	EXISTING WETLAND
——	LIMITS OF PROPOSED 18-HOLE GOLF COURSE
▲	EXISTING WATER SUPPLY WELL
△	EXISTING WATER SUPPLY WELL (APPROXIMATE LOCATION)
⌀	ABANDONED WATER SUPPLY WELL
◉ B-216	EXISTING SOIL BORING
◕ MW-118	EXISTING WATER TABLE MONITORING WELL
◉ MW-118A	EXISTING PIEZOMETER
⦶ SG-8	EXISTING STAFF GAUGE
867.5	APPROXIMATE BEDROCK ELEVATION AT BORING LOCATION (FEET ABOVE MEAN SEA LEVEL)
——	TOP OF BEDROCK SURFACE CONTOUR

NOTES:

1. SEE SHEET 2, EXISTING CONDITIONS, FOR ADDITIONAL LEGEND ITEMS AND BASE MAP NOTES AND REVISIONS.
2. FOR LOCATIONS WITH MORE THAN ONE BORING, THE BEDROCK SURFACE ELEVATION IS BASED ON GEOLOGIC INFORMATION FROM ALL BORINGS AT THE DRILLING LOCATION.
3. THE BEDROCK SURFACE ELEVATION IS THE ELEVATION OF THE FIRST ENCOUNTERED ROCK FORMATION BENEATH THE GROUND SURFACE AND INCLUDES WEATHERED ROCK, BUT EXCLUDES UNCONSOLIDATED EARTH MATERIALS, SOIL, OR REGOLITH LYING AT OR NEAR THE EARTH SURFACE.
4. BEDROCK ELEVATIONS SHOWN WITH "<" SYMBOL INDICATE BEDROCK WAS NOT ENCOUNTERED IN THE BORING(S) AT THIS LOCATION. ELEVATION SHOWN IS THE BOTTOM OF THE DEEPEST BORING AT THE LOCATION.
5. PER NR 500.03 (199) AND (130), "ROCK" MEANS ALL LITHIFIED EARTH MATERIAL INCLUDING ALL NATURALLY OCCURRING AND NATURALLY FORMED AGGREGATES OR MASSES OF MINERALS OR SMALL PARTICLES OF OLDER ROCK THAT FORMED BY CRYSTALLIZATION OF MAGMA OR BY INDURATION OF LOOSE SEDIMENTS. "ROCK" DOES NOT INCLUDE UNCONSOLIDATED EARTH MATERIALS, SOIL, OR REGOLITH LYING AT OR NEAR THE EARTH SURFACE.
6. BEDROCK SURFACE CONTOURS REVISED BASED ON ADDITIONAL BORINGS INSTALLED FEB. 12–19, 2024. SEE ACCOMPANYING REPORT FOR BORING LOGS.
7. REFER TO ATTACHMENT T OF THE ACCOMPANYING REPORT FOR BEDROCK SURFACE CONTOURS REVISED BASED ON ADDITIONAL BORINGS INSTALLED IN NOVEMBER AND DECEMBER 2024.

⚠1 ADDED NOTES

REVISION	TITLE	DATE
⚠1	FEASIBILITY REPORT ADDENDUM NO. 1	03/07/2025

PROJECT NO.	25222268.00	DRAWN BY:	KP
DRAWN:	03/24/2023	CHECKED BY:	MRH/BLP
REVISED:	02/20/2025	APPROVED BY:	BLP 03/07/2025

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BEDROCK SURFACE MAP

SHEET

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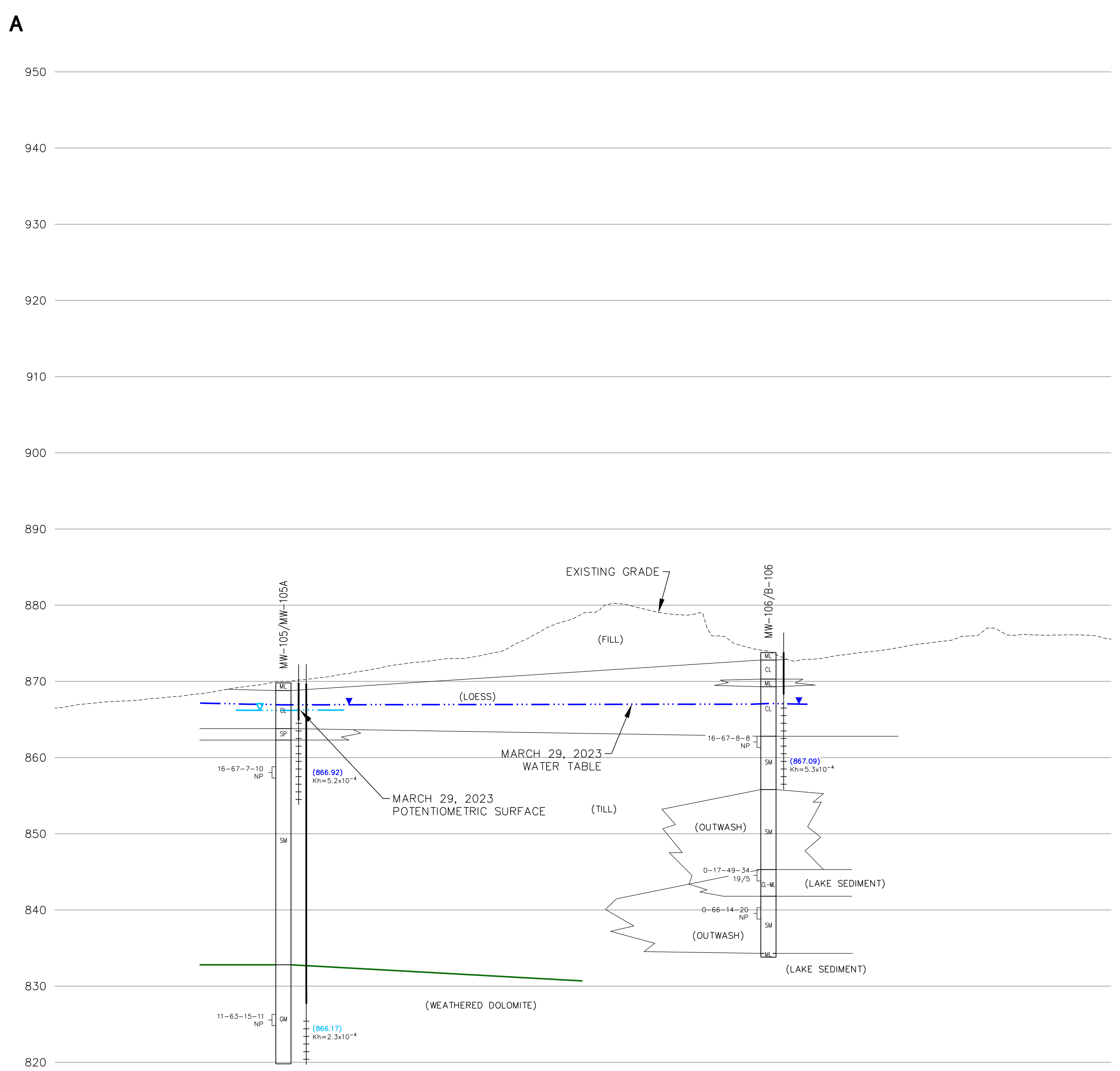
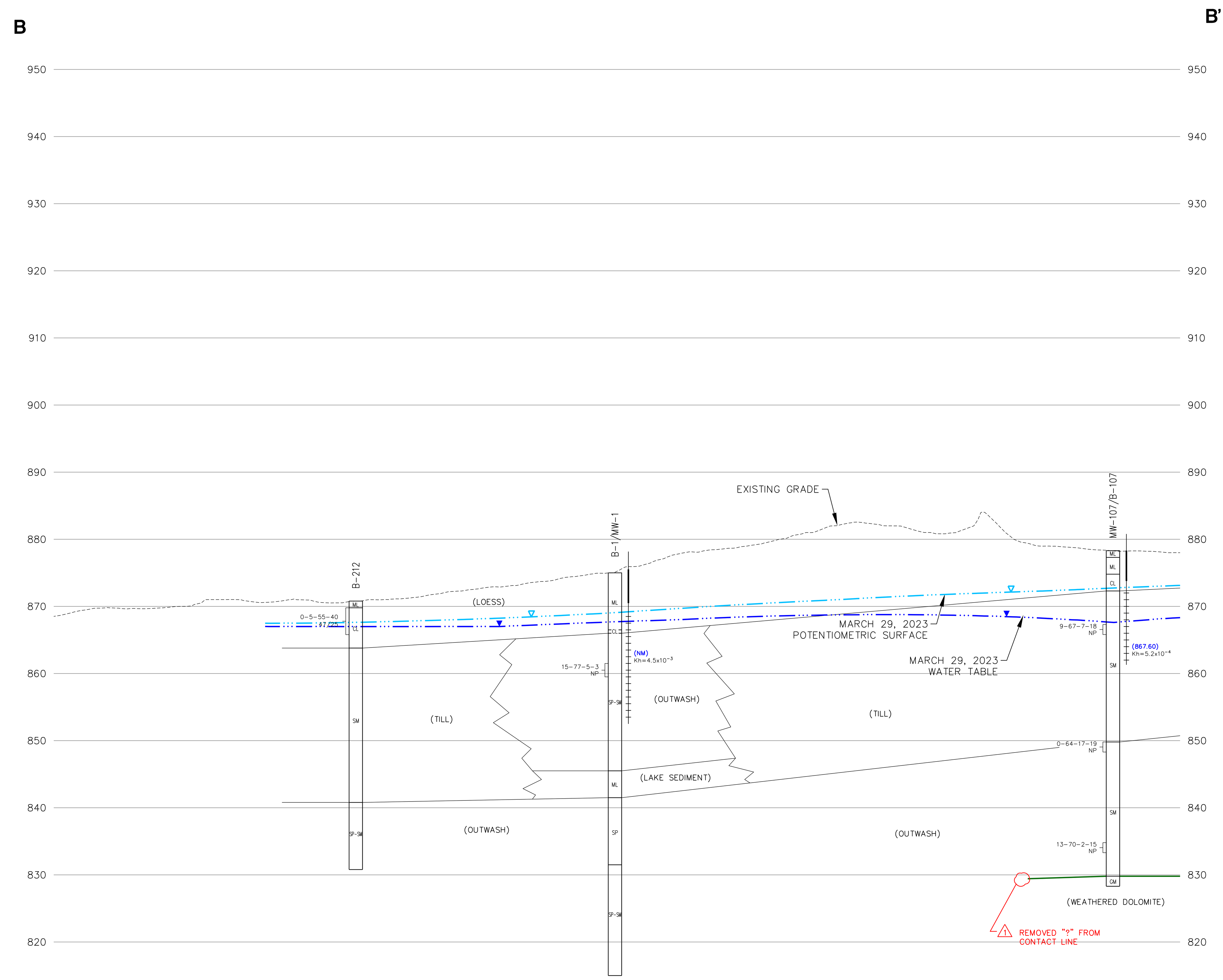




SYMBOLS AND TEST RESULTS

40.7/22.6	LIQUID LIMIT/PLASTICITY INDEX
NP	NON-PLASTIC
Kv	LABORATORY VERTICAL HYDRAULIC CONDUCTIVITY (cm/sec)
Kh	FIELD HORIZONTAL HYDRAULIC CONDUCTIVITY (cm/sec)
0-30-42-28	PERCENT GRAVEL, SAND, SILT, AND CLAY
0-87-13	PERCENT GRAVEL, SAND, AND SILT PLUS CLAY
72-5	PERCENT GRAVEL AND SAND
NS	NOT SAMPLED
(1,036.67)	GROUNDWATER ELEVATION ON 03/29/2024 (FEET ABOVE MEAN SEA LEVEL)
(NM)	NOT MEASURED
	WATER TABLE (SEE NOTE 8)
	POTENTIOMETRIC SURFACE (SEE NOTE 9)
	EXISTING GROUND (SPRING 2017)
	GEOLOGIC CONTACT
	UNCERTAIN GEOLOGIC CONTACT
	INFERRED GRADATIONAL GEOLOGIC CONTACT
	TOP OF BEDROCK (SEE NOTE 10)
	PROPOSED FINAL COVER SYSTEM
	PROPOSED COMPOSITE LINER SYSTEM

USCS CLASSES

CL	LEAN CLAY
CL-ML	SILTY CLAY
CH	FAT CLAY
GP	POORLY-GRADED GRAVEL
GP-GM	POORLY-GRADED GRAVEL WITH SILT
GM	SILTY GRAVEL
GW	WELL-GRADED GRAVEL
GW-GM	WELL-GRADED GRAVEL WITH SILT
ML	SILT
SC	CLAYEY SAND
SM	SILTY SAND
SP	POORLY-GRADED SAND
SP-SM	POORLY-GRADED SAND WITH SILT

BEDROCK STRATIGRAPHIC UNITS

SINNIPEE GROUP

DL1 – GALENA FORMATION

SH – DECORAH FORMATION

DL2 – PLATTEVILLE FORMATION

DL6 – SINNIPEE GROUP, UNDIFFERENTIATED

ANCELL GROUP

SS1 – GLENWOOD FORMATION

SS2 – ST. PETER FORMATION, TONTI MEMBER

SS3 – ST. PETER FORMATION, READSTOWN MEMBER

SS4 – ANCELL GROUP, UNDIFFERENTIATED

PRAIRIE DU CHIEN GROUP

DL3 – SHAKOPEE FORMATION

DL4 – ONEOTA FORMATION

DL5 – PRAIRIE DU CHIEN GROUP UNDIFFERENTIATED

UNDIFFERENTIATED

DOL – DOLOMITE

SS – SANDSTONE

GENERAL DESCRIPTION OF MAJOR GEOLOGIC UNITS

PLEISTOCENE SEDIMENTS

LOESS – GRAYISH BROWN, OR YELLOWISH BROWN, MOSTLY SILT WITH SOME CLAY AND FINE SAND, LEAN CLAY (CL), UNIFORM, MASSIVE. DEPOSITED PRIMARILY BY WIND DURING DEGLACIATION. CONTAINS THE MODERN SOIL PROFILE.

TILL – HORICON MEMBER OF THE HOLY HILL FORMATION – BROWN, OR YELLOWISH RED, MOSTLY FINE SAND WITH MEDIUM AND COARSE SAND, AND GRAVEL. SILTY SAND (SM) MATRIX, UNIFORM, WITH SOME COBBLES AND BOULDERS. DEPOSITED BY OR FROM GLACIAL ICE.

OUTWASH – HORICON MEMBER OF THE HOLY HILL FORMATION – BROWN OR YELLOWISH BROWN, FINE TO COARSE SAND AND SOME GRAVEL, GENERALLY POORLY-GRADED SAND WITH SILT (SP-SM), OR SILTY SAND (SM), MASSIVE TO STRATIFIED, DEPOSITED BY FLUVIAL PROCESSES NEAR GLACIAL ICE.

DRIFT (NOT A MAJOR GEOLOGIC UNIT) – UNDIFFERENTIATED PLEISTOCENE SEDIMENTS, LOESS, TILL, AND/OR OUTWASH.

ORDOVICIAN BEDROCK UNITS

SINNIPEE GROUP – DOLOMITE AND SHALY DOLOMITE, YELLOW BROWN TO LIGHT BROWNISH YELLOW AND GRAY; MASSIVE OR MEDIUM TO THICK BEDDED, BEDDING IS WAVY OR MOTTLED WITH SHALY LAYERS, MINOR WHITE CHERT, FOSSILIFEROUS.

GALENA FORMATION – DOLOMITE TO CHERTY DOLOMITE, GRAY TO BEIGE, AND YELLOW BROWN TO LIGHT BROWNISH YELLOW, MASSIVE TO MEDIUM-BEDDED WITH DISTINCTIVE MOTTLED WEATHERING PATTERN, BASE IS LIGHT GRAY AND SHALY, FOSSILIFEROUS. BIOGENIC CARBONATES.

DECORAH FORMATION – SHALY AND SILTY DOLOMITE. DARK GRAY, THIN BEDDED, MINOR CHERT AND PYRITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

PLATTEVILLE FORMATION – DOLOMITE TO SHALY DOLOMITE, YELLOW, BEIGE, AND GRAY TO LIGHT BROWNISH YELLOW. GRAY WEATHERING IS TYPICAL OF SHALY INTERVALS. MASSIVE, PLANAR-LAMINATED, OR MEDIUM TO THICK BEDDED, INTERBEDDED WITH THIN, WAVY BEDDED SHALE/SILT LAMINATIONS, MINOR CHERT, FOSSILIFEROUS. BIOGENIC CARBONATES.

ANCELL GROUP – MARINE AND AEOLIAN SANDSTONES, SHALES, RESIDUUM. HIGH-RELIEF UNCONFORMABLE CONTACT WITH THE UNDERLYING PRAIRIE DU CHIEN GROUP.

GLENWOOD FORMATION – SANDSTONE, DOLOMITIC (CARBONATE-CEMENTED), SILTY, AND/OR SHALY, POORLY SORTED, YELLOW-BROWN TO GREEN, WITH BLUE-GREEN SHALE OR SANDY DOLOMITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

ST. PETER FORMATION, TONTI MEMBER – SANDSTONE, LIGHT BROWNISH YELLOW, WHITE, RED, GRAY, ORANGE, OR BROWN (IF CEMENTED BY IRON OXIDES), MEDIUM TO COARSE GRAINED, WELL ROUNDED AND WELL SORTED, POORLY CEMENTED, LOW TO HIGH ANGLED CROSS-BEDDING OR MASSIVE, POORLY CEMENTED BY DOLOMITE, LOCALIZED SULFIDE MINERALIZATION DISSEMINATED THROUGH THE MATRIX AND CONCENTRATED ALONG BEDDING PLANES AND FRACTURES, LOCALIZED THIN LAYERS OF PALE GREEN SHALE/SILT. MARINE AND AEOLIAN QUARTZ SANDSTONE.

ST. PETER FORMATION, READSTOWN MEMBER – SANDSTONE, SILTY SANDSTONE, CLAYEY SANDSTONE, GRAY, RED, PURPLE, GREEN SHALY LAYERS, INTERBEDDED WITH CLAY AND OR SILT, CONTAINS CLASTS OF CHERT OR DOLOMITE. PARTIALLY REWORKED RESIDUUM ON THE PRAIRIE DU CHIEN EROSIONAL SURFACE.

PRAIRIE DU CHIEN GROUP – DOLOMITE AND SANDY DOLOMITE, YELLOW, LIGHT BROWN, AND GRAY. MASSIVE TO MEDIUM BEDDED, SANDY, CHERTY, VUGGY, AND OOLITHIC.

SHAKOPEE FORMATION – DOLOMITE AND SANDY DOLOMITE, GRAY, BEIGE, AND RED (SANDY DOLOMITE IS PREDOMINANTLY RED), INTERBEDDED WITH COARSE GRAINED WELL ROUNDED SANDSTONE, AND/OR GREEN TO GRAY SILTSTONE OR CLAY. MASSIVE, PLANAR, OR LOW-ANGEL CROSS-BEDDING; OOLITHIC, VUGGY, CHERTY, AND GLAUCONITIC. BIOGENIC CARBONATES.

WILLOW RIVER MEMBER – SANDY, GLAUCONITIC DOLOMITE, GRAY, LIGHT GRAY. BIOGENIC CARBONATES.

NEW RICHMOND MEMBER – SANDSTONE, DOLOMITIC SANDSTONE. YELLOW AND LIGHT GRAY, FINE TO COARSE SAND, MASSIVE TO BEDDED, CHERT AND GLAUCONITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

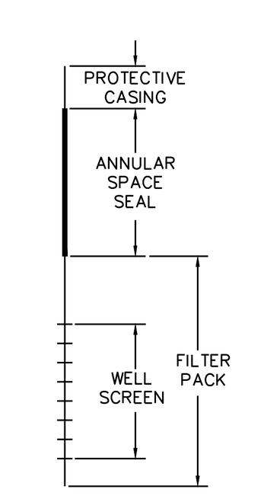
ONEOTA FORMATION – DOLOMITE AND SANDY DOLOMITE, GRAY TO BEIGE, MASSIVE, PLANAR, AND WAVY-LAMINATED BEDDING, OOLITHIC, VUGGY, CHERTY, AND GLAUCONITIC. BIOGENIC CARBONATES.

DOLOMITE – UNDIFFERENTIATED CARBONATE ROCK. LITTLE OR NO SAMPLE RECOVERED. LIKELY WEATHERED AND/OR POORLY INDURATED.

SANDSTONE – UNDIFFERENTIATED SILICLASTIC ROCK. LITTLE OR NO SAMPLE RECOVERED. LIKELY POORLY INDURATED.

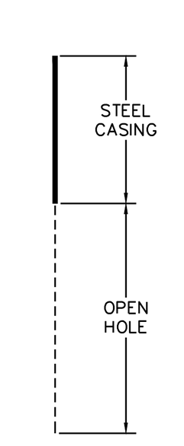
NOTE: FILL IS UNCONSOLIDATED SEDIMENT, INCLUDING MIXTURES OF SAND, SILT, CLAY, GRAVEL, AND POSSIBLY BEDROCK FRAGMENTS OF VARIOUS SIZES, THAT HAS BEEN RELOCATED ON THE SITE OR HAS BEEN BROUGHT TO THE SITE FROM OFFSITE SOURCES. FILL IS NOT A GEOLOGIC UNIT.

1 ADDED NOTE



MONITORING WELL DETAIL

NOT TO SCALE



SUPPLY WELL DETAIL

NOT TO SCALE

0 100

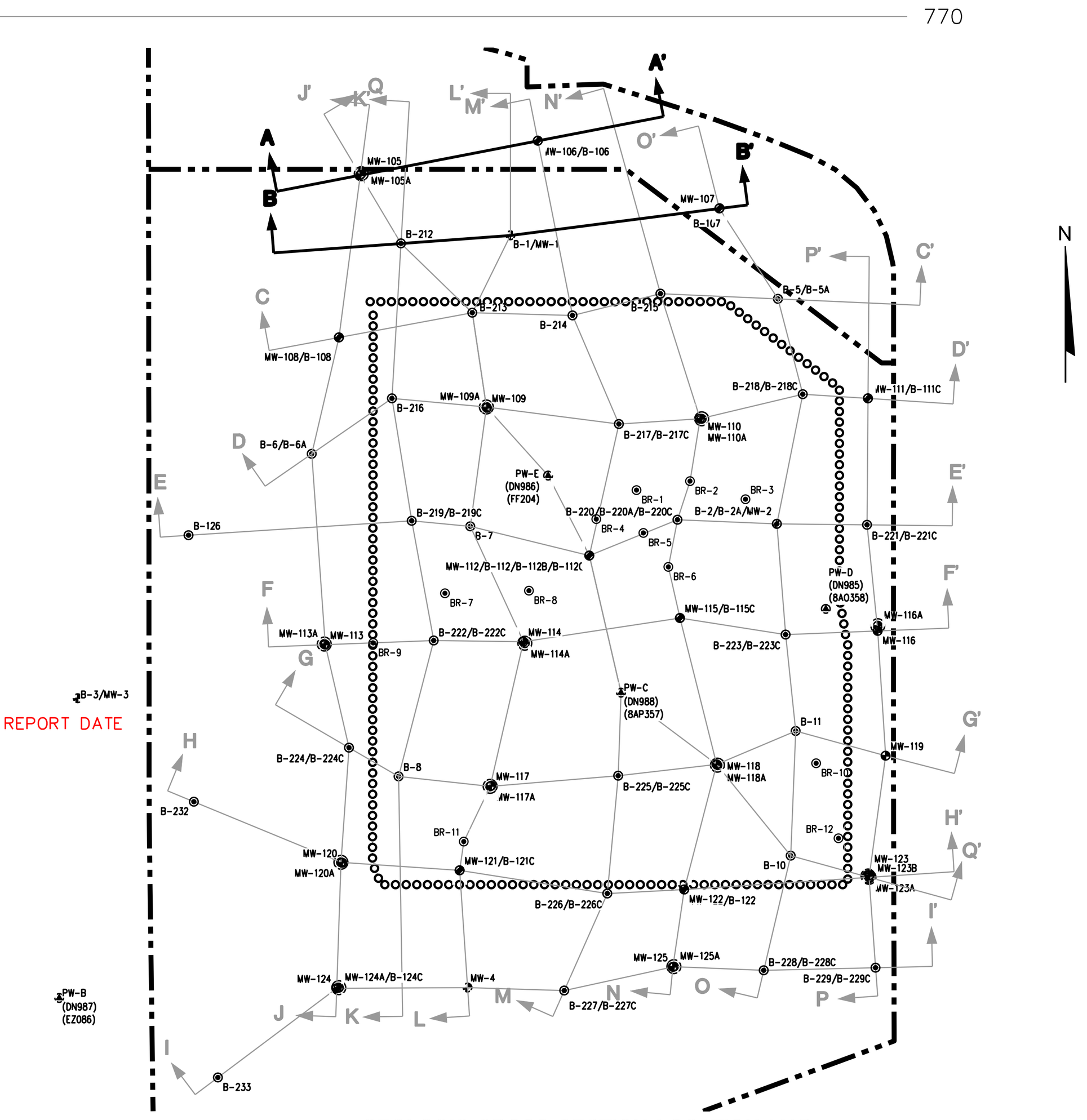
HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 10'
VERTICAL EXAGGERATION = 10X

NOTES

1. HORIZONTAL DISTANCES ARE MEASURED WITH RESPECT TO THE CENTER OF EACH BORING LOCATION.
2. FOR WELL NESTS, THE GEOLOGIC LOG IS POSTED AT THE LOCATION OF THE WATER TABLE WELL AND INCLUDES GEOLOGIC INFORMATION FROM ALL BORINGS AT THE NEST LOCATION.
3. FOR LOCATIONS WITH MORE THAN ONE BORING, THE GEOLOGIC LOG IS POSTED AT THE LOCATION OF THE SHALLOWEST BORING AND INCLUDES GEOLOGIC INFORMATION FROM ALL BORINGS AT THE DRILLING LOCATION.
4. REFER TO BORING LOGS IN APPENDIX F OF THE FEASIBILITY REPORT FOR DETAILED DESCRIPTIONS OF GEOLOGIC CONDITIONS AT INDIVIDUAL BORING LOCATIONS.
5. REFER TO APPENDIX F (OF 02/13/2024 FEASIBILITY REPORT) FOR MONITORING WELL CONSTRUCTION DETAILS.
6. EXISTING GROUND SURFACE WAS TAKEN FROM SHEET NUMBER 2.
7. ELEVATIONS ARE REFERENCED TO USGS DATUM.
8. THE POSITION OF THE WATER TABLE BETWEEN WELLS IS BASED ON THE WATER TABLE CONTOUR MAP, SHEET NUMBER 3.
9. THE POSITION OF THE POTENTIOMETRIC SURFACE BETWEEN WELLS IS BASED ON THE POTENTIOMETRIC SURFACE CONTOUR MAP, SHEET NUMBER 5.
10. THE BEDROCK SURFACE SHOWN BETWEEN BORINGS ON THE CROSS-SECTION IS THE STRAIGHT-LINE CONNECTION OF THE UPPERMOST ROCK SURFACES OBSERVED AT THE DRILLING LOCATIONS OR IS BASED ON GEOLOGIC INTERPRETATION OF AN EROSIONAL SURFACE BETWEEN BORING LOCATIONS. THE BEDROCK SURFACE CONTOURS SHOWN BETWEEN BORINGS ON PLAN SHEET 6, BEDROCK SURFACE MAP, ARE BASED ON INTERPOLATION USING KRIGING WITH THE PROGRAM "SURFER".
11. BORINGS WITH DESIGNATION "BR" WERE DRILLED 02/12-13/2024 AND ADDED TO THE FEASIBILITY REPORT CROSS SECTION. SEE FEASIBILITY REPORT-ADDENDUM NO. 1 FOR BORING LOGS.

1 ADDED REPORT DATE

1 ADDED NOTE



GEOLOGIC CROSS SECTION LOCATION MAP

SCALE: 1" = 500'

REVISION	TITLE	DATE
1	FEASIBILITY REPORT ADDENDUM NO. 1	03/07/2025

PROJECT NO. 25222268.00 DRAWN BY: KP

DRAWN: 04/11/2023 CHECKED BY: MRH/BLP

REVISED: 08/21/2024 APPROVED BY: BLP 03/07/2025

CLIENT: DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES, 1919 ALLIANT ENERGY CENTER WAY, MADISON, WI 53713

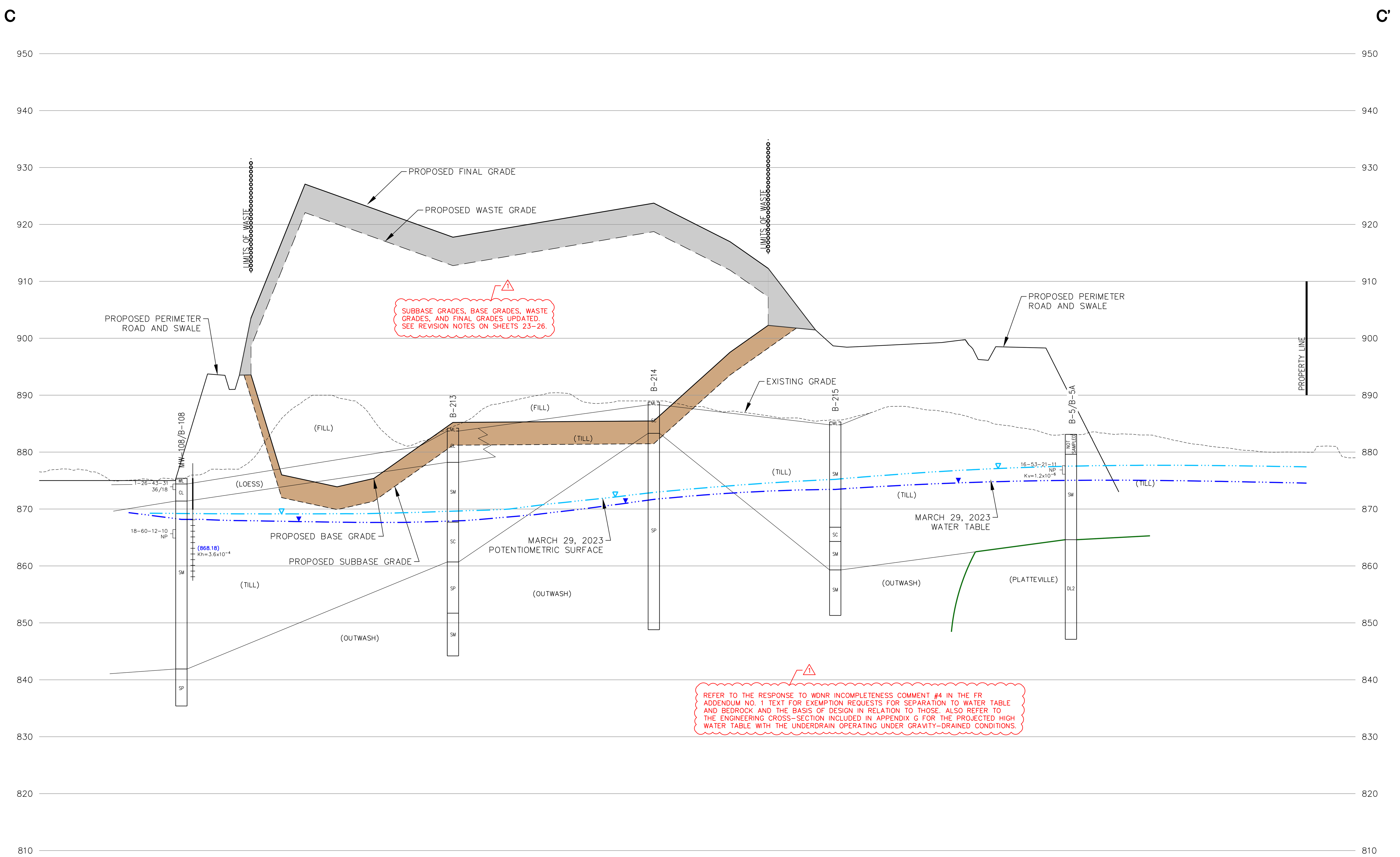
ENGINEER: SCS ENGINEERS, 2830 DAIRY DRIVE MADISON, WI 53718-6751, PHONE: (608) 224-2830

SITE: FEASIBILITY REPORT – ADDENDUM NO. 1, DANE COUNTY LANDFILL SITE NO. 3, 4402 BRANDT ROAD, MADISON, WISCONSIN

GEOLOGIC CROSS SECTIONS A-A' AND B-B'

SHEET 7 OF 28

I:\25222268.00\Drawings\07-22_GEOLOGIC CROSS SECTIONS.dwg, 3/7/2025 10:22:26 AM



C
C'
950
940
930
920
910
900
890
880
870
860
850
840
830
820
810
PROPOSED FINAL GRADE
PROPOSED WASTE GRADE
LIMITS OF WASTE
LIMITS OF WASTE
SUBBASE GRADES, BASE GRADES, WASTE GRADES, AND FINAL GRADES UPDATED. SEE REVISION NOTES ON SHEETS 23-26.
PROPOSED PERIMETER ROAD AND SWALE
PROPOSED PERIMETER ROAD AND SWALE
EXISTING GRADE
PROPERTY LINE
MW-108/B-108
B-213
B-214
B-215
B-5/B-5A
1-26-43-31
36/18
18-60-12-10
NP
(868.18)
Kh=3.6x10⁻⁴
16-53-21-11
NP
Kv=1.2x10⁻⁶
NOT SAMPLED
ML
CL
SM
SC
SP
DL2
(FILL)
(FILL)
(LOESS)
(TILL)
(TILL)
(TILL)
(TILL)
(TILL)
(OUTWASH)
(OUTWASH)
(OUTWASH)
(PLATTEVILLE)
PROPOSED BASE GRADE
PROPOSED SUBBASE GRADE
MARCH 29, 2023
POTENTIOMETRIC SURFACE
MARCH 29, 2023
WATER TABLE
REFER TO THE RESPONSE TO WDNR INCOMPLETENESS COMMENT #4 IN THE FR ADDENDUM NO. 1 TEXT FOR EXEMPTION REQUESTS FOR SEPARATION TO WATER TABLE AND BEDROCK AND THE BASIS OF DESIGN IN RELATION TO THOSE. ALSO REFER TO THE ENGINEERING CROSS-SECTION INCLUDED IN APPENDIX G FOR THE PROJECTED HIGH WATER TABLE WITH THE UNDERDRAIN OPERATING UNDER GRAVITY-DRAINED CONDITIONS.

SYMBOLS AND TEST RESULTS

40.7/22.6	LIQUID LIMIT/PLASTICITY INDEX
NP	NON-PLASTIC
Kv	LABORATORY VERTICAL HYDRAULIC CONDUCTIVITY (cm/sec)
Kh	FIELD HORIZONTAL HYDRAULIC CONDUCTIVITY (cm/sec)
0-30-42-28	PERCENT GRAVEL, SAND, SILT, AND CLAY
0-87-13	PERCENT GRAVEL, SAND, AND SILT PLUS CLAY
72-5	PERCENT GRAVEL AND SAND
NS	NOT SAMPLED
(1,036.67)	GROUNDWATER ELEVATION ON 03/29/2024 (FEET ABOVE MEAN SEA LEVEL)
(NM)	NOT MEASURED
▼	WATER TABLE (SEE NOTE 8)
▽	POTENTIOMETRIC SURFACE (SEE NOTE 9)
- - - -	EXISTING GROUND (SPRING 2017)
—	GEOLOGIC CONTACT
— —	UNCERTAIN GEOLOGIC CONTACT
⌇	INFERRED GRADATIONAL GEOLOGIC CONTACT
—	TOP OF BEDROCK (SEE NOTE 10)
▨	PROPOSED FINAL COVER SYSTEM
▨	PROPOSED COMPOSITE LINER SYSTEM

USCS CLASSES

CL	LEAN CLAY
CL-ML	SILTY CLAY
CH	FAT CLAY
GP	POORLY-GRADED GRAVEL
GP-GM	POORLY-GRADED GRAVEL WITH SILT
GM	SILTY GRAVEL
GW	WELL-GRADED GRAVEL
GW-GM	WELL-GRADED GRAVEL WITH SILT
ML	SILT
SC	CLAYEY SAND
SM	SILTY SAND
SP	POORLY-GRADED SAND
SP-SM	POORLY-GRADED SAND WITH SILT

BEDROCK STRATIGRAPHIC UNITS

SINNIPEE GROUP

DL1 – GALENA FORMATION

SH – DECORAH FORMATION

DL2 – PLATTEVILLE FORMATION

DL6 – SINNIPEE GROUP, UNDIFFERENTIATED

ANCELL GROUP

SS1 – GLENWOOD FORMATION

SS2 – ST. PETER FORMATION, TONTI MEMBER

SS3 – ST. PETER FORMATION, READSTOWN MEMBER

SS4 – ANCELL GROUP, UNDIFFERENTIATED

PRAIRIE DU CHIEN GROUP

DL3 – SHAKOPEE FORMATION

DL4 – ONEOTA FORMATION

DL5 – PRAIRIE DU CHIEN GROUP UNDIFFERENTIATED

UNDIFFERENTIATED

DOL – DOLOMITE

SS – SANDSTONE

GENERAL DESCRIPTION OF MAJOR GEOLOGIC UNITS

PLEISTOCENE SEDIMENTS

LOESS – GRAYISH BROWN, OR YELLOWISH BROWN, MOSTLY SILT WITH SOME CLAY AND FINE SAND, LEAN CLAY (CL), UNIFORM, MASSIVE. DEPOSITED PRIMARILY BY WIND DURING DEGLACIATION. CONTAINS THE MODERN SOIL PROFILE.

TILL – HORICON MEMBER OF THE HOLY HILL FORMATION – BROWN, OR YELLOWISH RED, MOSTLY FINE SAND WITH MEDIUM AND COARSE SAND, AND GRAVEL. SILTY SAND (SM) MATRIX, UNIFORM, WITH SOME COBBLES AND BOULDERS. DEPOSITED BY OR FROM GLACIAL ICE.

OUTWASH – HORICON MEMBER OF THE HOLY HILL FORMATION – BROWN OR YELLOWISH BROWN, FINE TO COARSE SAND AND SOME GRAVEL, GENERALLY POORLY-GRADED SAND WITH SILT (SP-SM), OR SILTY SAND (SM), MASSIVE TO STRATIFIED, DEPOSITED BY FLUVIAL PROCESSES NEAR GLACIAL ICE.

DRIFT (NOT A MAJOR GEOLOGIC UNIT) – UNDIFFERENTIATED PLEISTOCENE SEDIMENTS, LOESS, TILL, AND/OR OUTWASH.

ORDOVICIAN BEDROCK UNITS

SINNIPEE GROUP – DOLOMITE AND SHALY DOLOMITE, YELLOW BROWN TO LIGHT BROWNISH YELLOW AND GRAY; MASSIVE OR MEDIUM TO THICK BEDDED, BEDDING IS WAVY OR MOTTLED WITH SHALY LAYERS, MINOR WHITE CHERT, FOSSILIFEROUS.

GALENA FORMATION – DOLOMITE TO CHERTY DOLOMITE, GRAY TO BEIGE, AND YELLOW BROWN TO LIGHT BROWNISH YELLOW, MASSIVE TO MEDIUM-BEDDED WITH DISTINCTIVE MOTTLED WEATHERING PATTERN, BASE IS LIGHT GRAY AND SHALY, FOSSILIFEROUS. BIOGENIC CARBONATES.

DECORAH FORMATION – SHALY AND SILTY DOLOMITE. DARK GRAY, THIN BEDDED, MINOR CHERT AND PYRITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

PLATTEVILLE FORMATION – DOLOMITE TO SHALY DOLOMITE, YELLOW, BEIGE, AND GRAY TO LIGHT BROWNISH YELLOW. GRAY WEATHERING IS TYPICAL OF SHALY INTERVALS. MASSIVE, PLANAR-LAMINATED, OR MEDIUM TO THICK BEDDED, INTERBEDDED WITH THIN, WAVY BEDDED SHALE/SILT LAMINATIONS, MINOR CHERT, FOSSILIFEROUS. BIOGENIC CARBONATES.

ANCELL GROUP – MARINE AND AEOLIAN SANDSTONES, SHALES, RESIDUUM. HIGH-RELIEF UNCONFORMABLE CONTACT WITH THE UNDERLYING PRAIRIE DU CHIEN GROUP.

GLENWOOD FORMATION – SANDSTONE, DOLOMITIC (CARBONATE-CEMENTED), SILTY, AND/OR SHALY, POORLY SORTED, YELLOW-BROWN TO GREEN, WITH BLUE-GREEN SHALE OR SANDY DOLOMITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

ST. PETER FORMATION, TONTI MEMBER – SANDSTONE, LIGHT BROWNISH YELLOW, WHITE, RED, GRAY, ORANGE, OR BROWN (IF CEMENTED BY IRON OXIDES), MEDIUM TO COARSE GRAINED, WELL ROUNDED AND WELL SORTED, POORLY CEMENTED, LOW TO HIGH ANGLED CROSS-BEDDING OR MASSIVE, POORLY CEMENTED BY DOLOMITE, LOCALIZED SULFIDE MINERALIZATION DISSEMINATED THROUGH THE MATRIX AND CONCENTRATED ALONG BEDDING PLANES AND FRACTURES, LOCALIZED THIN LAYERS OF PALE GREEN SHALE/SILT. MARINE AND AEOLIAN QUARTZ SANDSTONE.

ST. PETER FORMATION, READSTOWN MEMBER – SANDSTONE, SILTY SANDSTONE, CLAYEY SANDSTONE, GRAY, RED, PURPLE, GREEN SHALY LAYERS, INTERBEDDED WITH CLAY AND OR SILT, CONTAINS CLASTS OF CHERT OR DOLOMITE. PARTIALLY REWORKED RESIDUUM ON THE PRAIRIE DU CHIEN EROSIONAL SURFACE.

PRAIRIE DU CHIEN GROUP – DOLOMITE AND SANDY DOLOMITE, YELLOW, LIGHT BROWN, AND GRAY. MASSIVE TO MEDIUM BEDDED, SANDY, CHERTY, VUGGY, AND OOLITHIC.

SHAKOPEE FORMATION – DOLOMITE AND SANDY DOLOMITE, GRAY, BEIGE, AND RED (SANDY DOLOMITE IS PREDOMINANTLY RED), INTERBEDDED WITH COARSE GRAINED WELL ROUNDED SANDSTONE, AND/OR GREEN TO GRAY SILTSTONE OR CLAY. MASSIVE, PLANAR, OR LOW-ANGEL CROSS-BEDDING; OOLITHIC, VUGGY, CHERTY, AND GLAUCONITIC. BIOGENIC CARBONATES.

WILLOW RIVER MEMBER – SANDY, GLAUCONITIC DOLOMITE, GRAY, LIGHT GRAY. BIOGENIC CARBONATES.

NEW RICHMOND MEMBER – SANDSTONE, DOLOMITIC SANDSTONE. YELLOW AND LIGHT GRAY, FINE TO COARSE SAND, MASSIVE TO BEDDED, CHERT AND GLAUCONITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

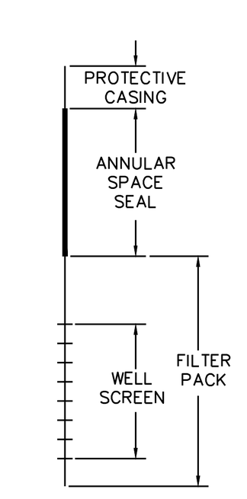
ONEOTA FORMATION – DOLOMITE AND SANDY DOLOMITE, GRAY TO BEIGE, MASSIVE, PLANAR, AND WAVY-LAMINATED BEDDING, OOLITHIC, VUGGY, CHERTY, AND GLAUCONITIC. BIOGENIC CARBONATES.

DOLOMITE – UNDIFFERENTIATED CARBONATE ROCK. LITTLE OR NO SAMPLE RECOVERED. LIKELY WEATHERED AND/OR POORLY INDURATED.

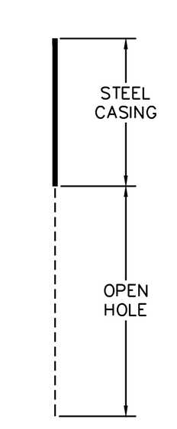
SANDSTONE – UNDIFFERENTIATED SILICLASTIC ROCK. LITTLE OR NO SAMPLE RECOVERED. LIKELY POORLY INDURATED.

NOTE: FILL IS UNCONSOLIDATED SEDIMENT, INCLUDING MIXTURES OF SAND, SILT, CLAY, GRAVEL, AND POSSIBLY BEDROCK FRAGMENTS OF VARIOUS SIZES, THAT HAS BEEN RELOCATED ON THE SITE OR HAS BEEN BROUGHT TO THE SITE FROM OFFSITE SOURCES. FILL IS NOT A GEOLOGIC UNIT.

1 ADDED NOTE



MONITORING WELL DETAIL
NOT TO SCALE



SUPPLY WELL DETAIL
NOT TO SCALE

0 100

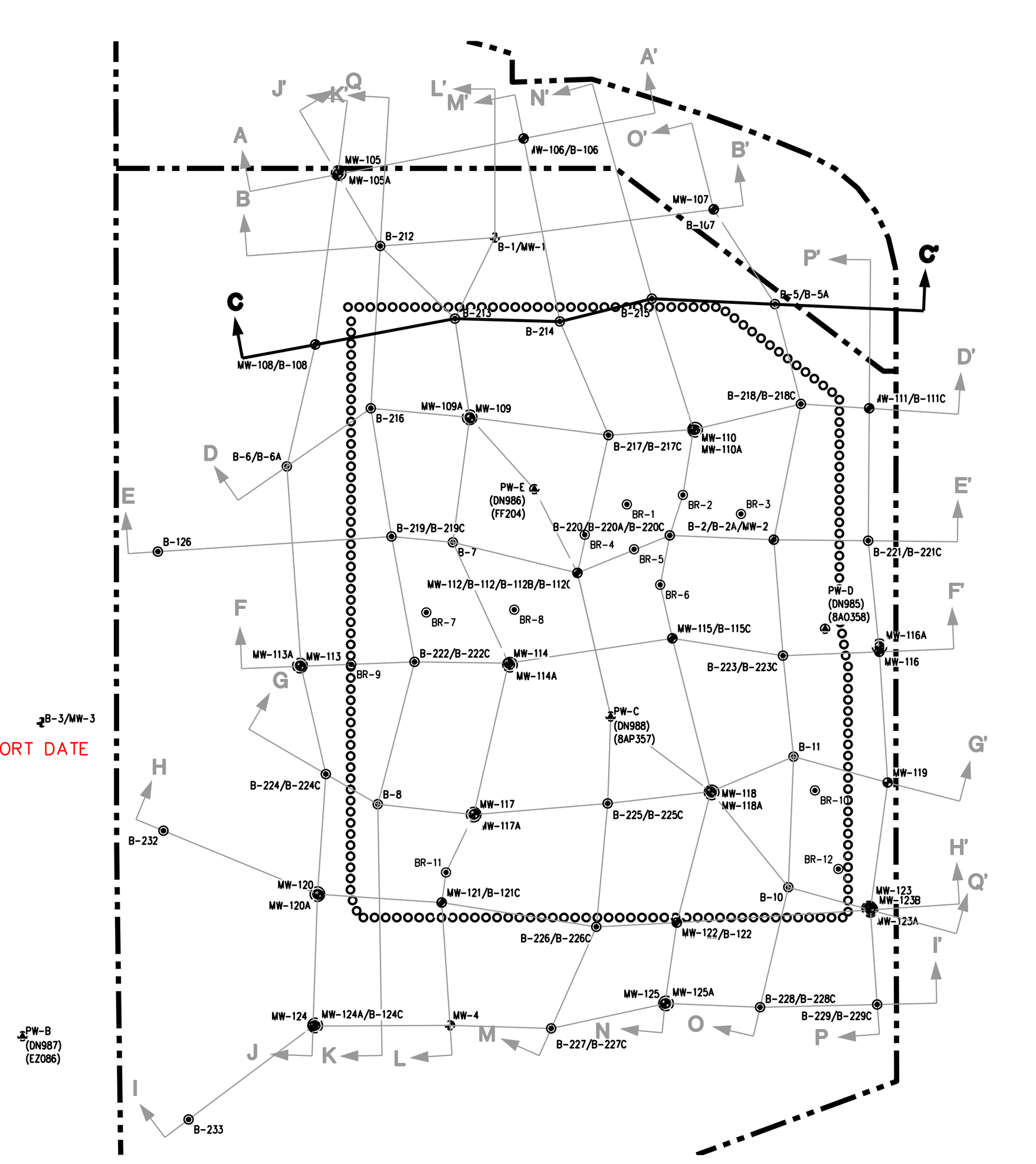
HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 10'
VERTICAL EXAGGERATION = 10X

NOTES

1. HORIZONTAL DISTANCES ARE MEASURED WITH RESPECT TO THE CENTER OF EACH BORING LOCATION.
2. FOR WELL NESTS, THE GEOLOGIC LOG IS POSTED AT THE LOCATION OF THE WATER TABLE WELL AND INCLUDES GEOLOGIC INFORMATION FROM ALL BORINGS AT THE NEST LOCATION.
3. FOR LOCATIONS WITH MORE THAN ONE BORING, THE GEOLOGIC LOG IS POSTED AT THE LOCATION OF THE SHALLOWEST BORING AND INCLUDES GEOLOGIC INFORMATION FROM ALL BORINGS AT THE DRILLING LOCATION.
4. REFER TO BORING LOGS IN APPENDIX F OF THE FEASIBILITY REPORT FOR DETAILED DESCRIPTIONS OF GEOLOGIC CONDITIONS AT INDIVIDUAL BORING LOCATIONS.
5. REFER TO APPENDIX F (OF 02/13/2024 FEASIBILITY REPORT) FOR MONITORING WELL CONSTRUCTION DETAILS.
6. EXISTING GROUND SURFACE WAS TAKEN FROM SHEET NUMBER 2.
7. ELEVATIONS ARE REFERENCED TO USGS DATUM.
8. THE POSITION OF THE WATER TABLE BETWEEN WELLS IS BASED ON THE WATER TABLE CONTOUR MAP, SHEET NUMBER 3.
9. THE POSITION OF THE POTENTIOMETRIC SURFACE BETWEEN WELLS IS BASED ON THE POTENTIOMETRIC SURFACE CONTOUR MAP, SHEET NUMBER 5.
10. THE BEDROCK SURFACE SHOWN BETWEEN BORINGS ON THE CROSS-SECTION IS THE STRAIGHT-LINE CONNECTION OF THE UPPERMOST ROCK SURFACES OBSERVED AT THE DRILLING LOCATIONS OR IS BASED ON GEOLOGIC INTERPRETATION OF AN EROSIONAL SURFACE BETWEEN BORING LOCATIONS. THE BEDROCK SURFACE CONTOURS SHOWN BETWEEN BORINGS ON PLAN SHEET 6, BEDROCK SURFACE MAP, ARE BASED ON INTERPOLATION USING KRIGING WITH THE PROGRAM "SURFER".
11. BORINGS WITH DESIGNATION "BR" WERE DRILLED 02/12-13/2024 AND ADDED TO THE FEASIBILITY REPORT CROSS SECTION. SEE FEASIBILITY REPORT-ADDENDUM NO. 1 FOR BORING LOGS.

1 ADDED REPORT DATE

1 ADDED NOTE



C
C'
N
MW-108/B-108
B-213
B-214
B-215
B-5/B-5A
MW-105
MW-105A
MW-106/B-106
MW-107
B-107
B-212
B-1/MW-1
B-216
MW-109A
MW-109
B-217/B-217C
MW-110
MW-110A
B-218/B-218C
MW-111/B-111C
B-6/B-6A
B-126
B-219/B-219C
B-7
B-2/B-2A/MW-2
B-221/B-221C
MW-113A
MW-113
BR-9
B-222/B-222C
MW-114
MW-114A
MW-115/B-115C
B-223/B-223C
MW-116A
MW-116
B-224/B-224C
B-8
MW-117
MW-117A
B-225/B-225C
MW-118
MW-118A
B-11
MW-119
B-232
MW-120
MW-120A
MW-121/B-121C
B-226/B-226C
MW-122/B-122
B-10
MW-123
MW-123B
MW-123A
MW-124
MW-124A/B-124C
MW-4
B-227/B-227C
MW-125
MW-125A
B-228/B-228C
B-229/B-229C
B-233
B-3/MW-3

GEOLOGIC CROSS SECTION LOCATION MAP
SCALE: 1" = 500'

REVISION | TITLE | DATE
1 | FEASIBILITY REPORT ADDENDUM NO. 1 | 03/07/2025

PROJECT NO. 25222268.00 DRAWN BY: KP
DRAWN: 04/11/2023 CHECKED BY: MRH/BLP
REVISED: 08/21/2024 APPROVED BY: BLP 03/07/2025

DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

CLIENT

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

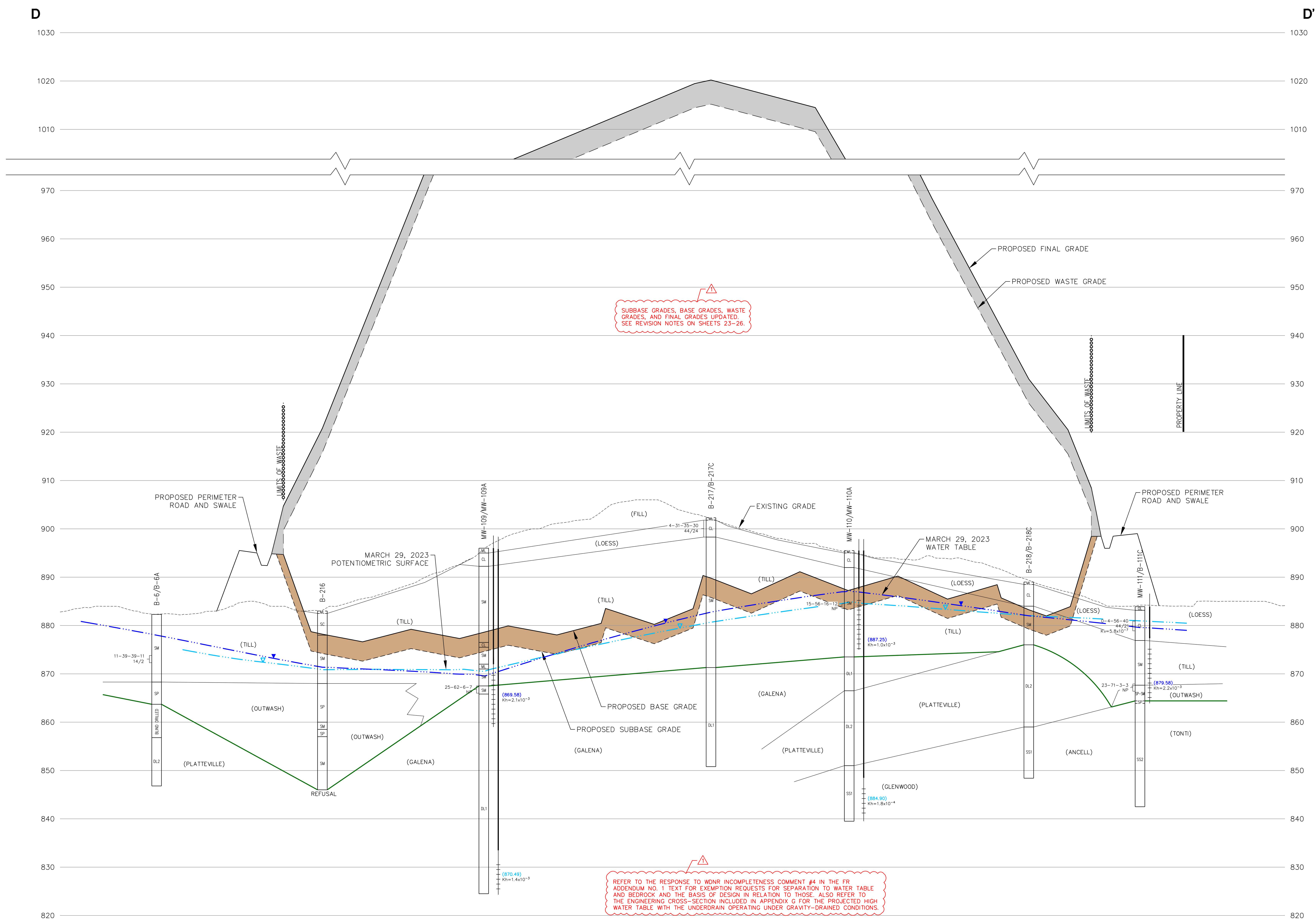
ENGINEER

FEASIBILITY REPORT – ADDENDUM NO. 1
DANE COUNTY LANDFILL SITE NO. 3
4402 BRANDT ROAD
MADISON, WISCONSIN

SITE

GEOLOGIC CROSS SECTION C-C'

SHEET
8 OF 28



SYMBOLS AND TEST RESULTS

40.7/22.6	LIQUID LIMIT/PLASTICITY INDEX
NP	NON-PLASTIC
Kv	LABORATORY VERTICAL HYDRAULIC CONDUCTIVITY (cm/sec)
Kh	FIELD HORIZONTAL HYDRAULIC CONDUCTIVITY (cm/sec)
0-30-42-28	PERCENT GRAVEL, SAND, SILT, AND CLAY
0-87-13	PERCENT GRAVEL, SAND, AND SILT PLUS CLAY
72-5	PERCENT GRAVEL AND SAND
NS	NOT SAMPLED
(1,036.67)	GROUNDWATER ELEVATION ON 03/29/2024 (FEET ABOVE MEAN SEA LEVEL)
(NM)	NOT MEASURED
	WATER TABLE (SEE NOTE 8)
	POTENTIOMETRIC SURFACE (SEE NOTE 9)
	EXISTING GROUND (SPRING 2017)
	GEOLOGIC CONTACT
	UNCERTAIN GEOLOGIC CONTACT
	INFERRED GRADATIONAL GEOLOGIC CONTACT
	TOP OF BEDROCK (SEE NOTE 10)
	PROPOSED FINAL COVER SYSTEM
	PROPOSED COMPOSITE LINER SYSTEM

USCS CLASSES

CL	LEAN CLAY
CL-ML	SILTY CLAY
CH	FAT CLAY
GP	POORLY-GRADED GRAVEL
GP-GM	POORLY-GRADED GRAVEL WITH SILT
GM	SILTY GRAVEL
GW	WELL-GRADED GRAVEL
GW-GM	WELL-GRADED GRAVEL WITH SILT
ML	SILT
SC	CLAYEY SAND
SM	SILTY SAND
SP	POORLY-GRADED SAND
SP-SM	POORLY-GRADED SAND WITH SILT

BEDROCK STRATIGRAPHIC UNITS

SINNIPEE GROUP

DL1 – GALENA FORMATION

SH – DECORAH FORMATION

DL2 – PLATTEVILLE FORMATION

DL6 – SINNIPEE GROUP, UNDIFFERENTIATED

ANCELL GROUP

SS1 – GLENWOOD FORMATION

SS2 – ST. PETER FORMATION, TONTI MEMBER

SS3 – ST. PETER FORMATION, READSTOWN MEMBER

SS4 – ANCELL GROUP, UNDIFFERENTIATED

PRAIRIE DU CHIEN GROUP

DL3 – SHAKOPEE FORMATION

DL4 – ONEOTA FORMATION

DL5 – PRAIRIE DU CHIEN GROUP UNDIFFERENTIATED

UNDIFFERENTIATED

DOL – DOLOMITE

SS – SANDSTONE

GENERAL DESCRIPTION OF MAJOR GEOLOGIC UNITS

PLEISTOCENE SEDIMENTS

LOESS – GRAYISH BROWN, OR YELLOWISH BROWN, MOSTLY SILT WITH SOME CLAY AND FINE SAND, LEAN CLAY (CL), UNIFORM, MASSIVE. DEPOSITED PRIMARILY BY WIND DURING DEGLACIATION. CONTAINS THE MODERN SOIL PROFILE.

TILL – HORICON MEMBER OF THE HOLY HILL FORMATION – BROWN, OR YELLOWISH RED, MOSTLY FINE SAND WITH MEDIUM AND COARSE SAND, AND GRAVEL. SILTY SAND (SM) MATRIX, UNIFORM, WITH SOME COBBLES AND BOULDERS. DEPOSITED BY OR FROM GLACIAL ICE.

OUTWASH – HORICON MEMBER OF THE HOLY HILL FORMATION – BROWN OR YELLOWISH BROWN, FINE TO COARSE SAND AND SOME GRAVEL, GENERALLY POORLY-GRADED SAND WITH SILT (SP-SM), OR SILTY SAND (SM), MASSIVE TO STRATIFIED, DEPOSITED BY FLUVIAL PROCESSES NEAR GLACIAL ICE.

DRIFT (NOT A MAJOR GEOLOGIC UNIT) – UNDIFFERENTIATED PLEISTOCENE SEDIMENTS, LOESS, TILL, AND/OR OUTWASH.

ORDOVICIAN BEDROCK UNITS

SINNIPEE GROUP – DOLOMITE AND SHALY DOLOMITE, YELLOW BROWN TO LIGHT BROWNISH YELLOW AND GRAY; MASSIVE OR MEDIUM TO THICK BEDDED, BEDDING IS WAVY OR MOTTLED WITH SHALY LAYERS, MINOR WHITE CHERT, FOSSILIFEROUS.

GALENA FORMATION – DOLOMITE TO CHERTY DOLOMITE, GRAY TO BEIGE, AND YELLOW BROWN TO LIGHT BROWNISH YELLOW, MASSIVE TO MEDIUM-BEDDED WITH DISTINCTIVE MOTTLED WEATHERING PATTERN, BASE IS LIGHT GRAY AND SHALY, FOSSILIFEROUS. BIOGENIC CARBONATES.

DECORAH FORMATION – SHALY AND SILTY DOLOMITE. DARK GRAY, THIN BEDDED, MINOR CHERT AND PYRITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

PLATTEVILLE FORMATION – DOLOMITE TO SHALY DOLOMITE, YELLOW, BEIGE, AND GRAY TO LIGHT BROWNISH YELLOW. GRAY WEATHERING IS TYPICAL OF SHALY INTERVALS. MASSIVE, PLANAR-LAMINATED, OR MEDIUM TO THICK BEDDED, INTERBEDDED WITH THIN, WAVY BEDDED SHALE/SILT LAMINATIONS, MINOR CHERT, FOSSILIFEROUS. BIOGENIC CARBONATES.

ANCELL GROUP – MARINE AND AEOLIAN SANDSTONES, SHALES, RESIDUUM. HIGH-RELIEF UNCONFORMABLE CONTACT WITH THE UNDERLYING PRAIRIE DU CHIEN GROUP.

GLENWOOD FORMATION – SANDSTONE, DOLOMITIC (CARBONATE-CEMENTED), SILTY, AND/OR SHALY, POORLY SORTED, YELLOW-BROWN TO GREEN, WITH BLUE-GREEN SHALE OR SANDY DOLOMITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

ST. PETER FORMATION, TONTI MEMBER – SANDSTONE, LIGHT BROWNISH YELLOW, WHITE, RED, GRAY, ORANGE, OR BROWN (IF CEMENTED BY IRON OXIDES), MEDIUM TO COARSE GRAINED, WELL ROUNDED AND WELL SORTED, POORLY CEMENTED, LOW TO HIGH ANGLED CROSS-BEDDING OR MASSIVE, POORLY CEMENTED BY DOLOMITE, LOCALIZED SULFIDE MINERALIZATION DISSEMINATED THROUGH THE MATRIX AND CONCENTRATED ALONG BEDDING PLANES AND FRACTURES, LOCALIZED THIN LAYERS OF PALE GREEN SHALE/SILT. MARINE AND AEOLIAN QUARTZ SANDSTONE.

ST. PETER FORMATION, READSTOWN MEMBER – SANDSTONE, SILTY SANDSTONE, CLAYEY SANDSTONE, GRAY, RED, PURPLE, GREEN SHALY LAYERS, INTERBEDDED WITH CLAY AND OR SILT, CONTAINS CLASTS OF CHERT OR DOLOMITE. PARTIALLY REWORKED RESIDUUM ON THE PRAIRIE DU CHIEN EROSIONAL SURFACE.

PRAIRIE DU CHIEN GROUP – DOLOMITE AND SANDY DOLOMITE, YELLOW, LIGHT BROWN, AND GRAY. MASSIVE TO MEDIUM BEDDED, SANDY, CHERTY, VUGGY, AND OOLITHIC.

SHAKOPEE FORMATION – DOLOMITE AND SANDY DOLOMITE, GRAY, BEIGE, AND RED (SANDY DOLOMITE IS PREDOMINANTLY RED), INTERBEDDED WITH COARSE GRAINED WELL ROUNDED SANDSTONE, AND/OR GREEN TO GRAY SILTSTONE OR CLAY. MASSIVE, PLANAR, OR LOW-ANGEL CROSS-BEDDING; OOLITHIC, VUGGY, CHERTY, AND GLAUCONITIC. BIOGENIC CARBONATES.

WILLOW RIVER MEMBER – SANDY, GLAUCONITIC DOLOMITE, GRAY, LIGHT GRAY. BIOGENIC CARBONATES.

NEW RICHMOND MEMBER – SANDSTONE, DOLOMITIC SANDSTONE. YELLOW AND LIGHT GRAY, FINE TO COARSE SAND, MASSIVE TO BEDDED, CHERT AND GLAUCONITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

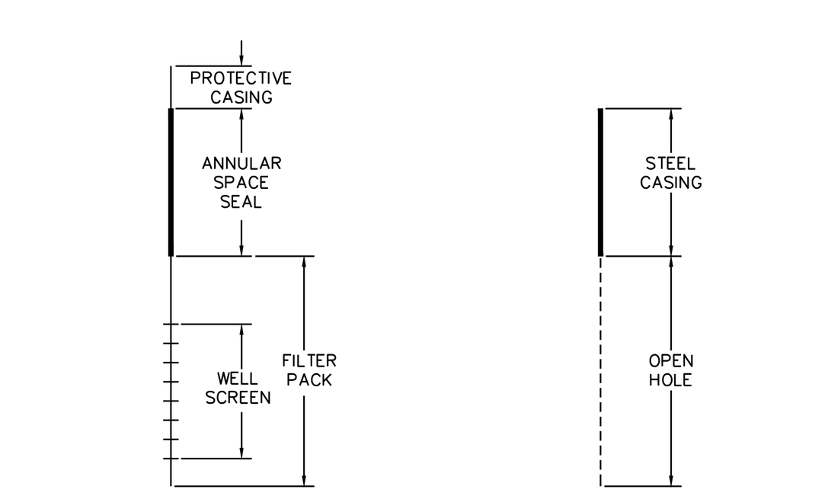
ONEOTA FORMATION – DOLOMITE AND SANDY DOLOMITE, GRAY TO BEIGE, MASSIVE, PLANAR, AND WAVY-LAMINATED BEDDING, OOLITHIC, VUGGY, CHERTY, AND GLAUCONITIC. BIOGENIC CARBONATES.

DOLOMITE – UNDIFFERENTIATED CARBONATE ROCK. LITTLE OR NO SAMPLE RECOVERED. LIKELY WEATHERED AND/OR POORLY INDURATED.

SANDSTONE – UNDIFFERENTIATED SILICLASTIC ROCK. LITTLE OR NO SAMPLE RECOVERED. LIKELY POORLY INDURATED.

NOTE: FILL IS UNCONSOLIDATED SEDIMENT, INCLUDING MIXTURES OF SAND, SILT, CLAY, GRAVEL, AND POSSIBLY BEDROCK FRAGMENTS OF VARIOUS SIZES, THAT HAS BEEN RELOCATED ON THE SITE OR HAS BEEN BROUGHT TO THE SITE FROM OFFSITE SOURCES. FILL IS NOT A GEOLOGIC UNIT.

1 ADDED NOTE



MONITORING WELL DETAIL
NOT TO SCALE

SUPPLY WELL DETAIL
NOT TO SCALE

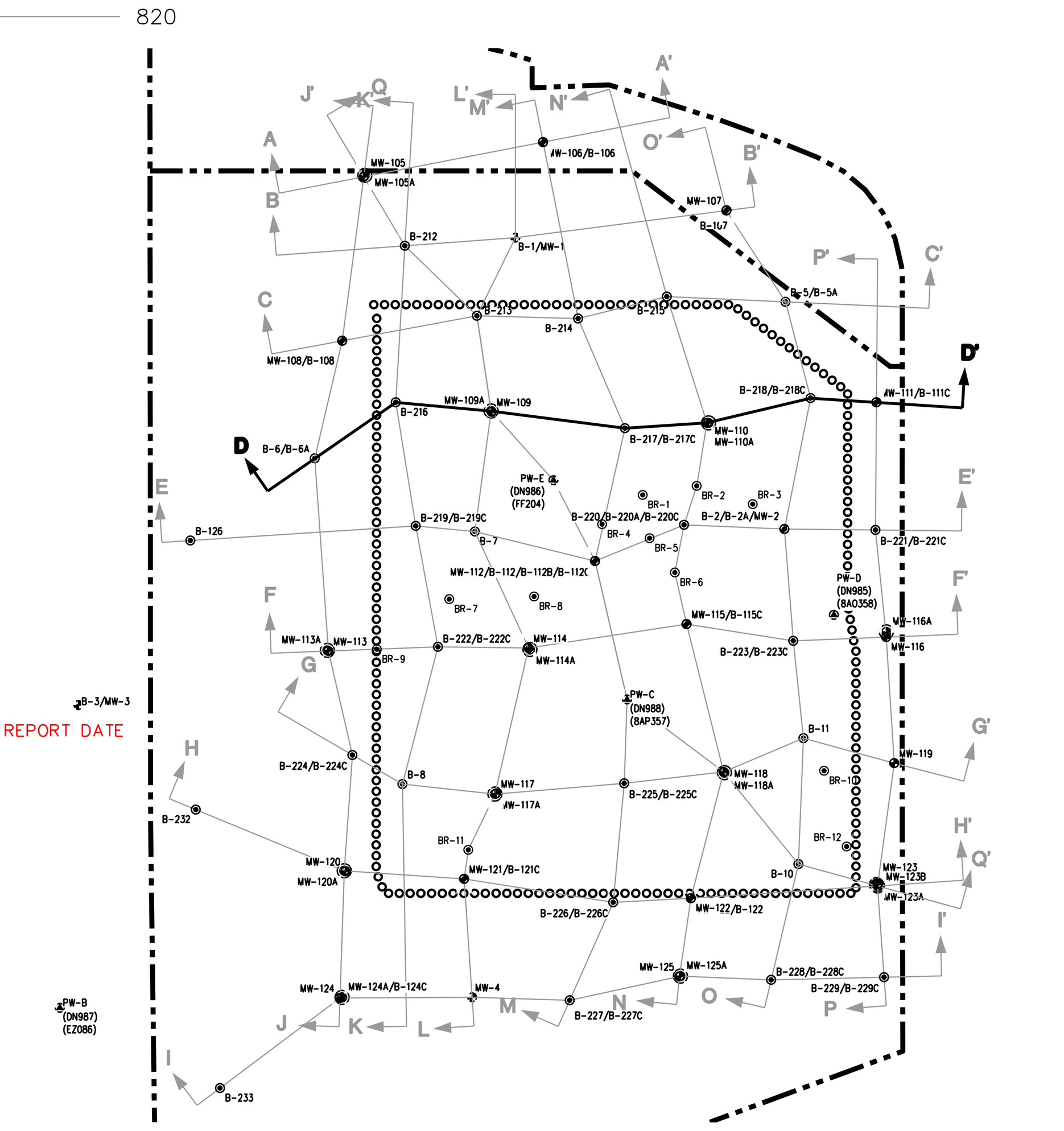
HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 10'
VERTICAL EXAGGERATION = 10X

NOTES

1. HORIZONTAL DISTANCES ARE MEASURED WITH RESPECT TO THE CENTER OF EACH BORING LOCATION.
2. FOR WELL NESTS, THE GEOLOGIC LOG IS POSTED AT THE LOCATION OF THE WATER TABLE WELL AND INCLUDES GEOLOGIC INFORMATION FROM ALL BORINGS AT THE NEST LOCATION.
3. FOR LOCATIONS WITH MORE THAN ONE BORING, THE GEOLOGIC LOG IS POSTED AT THE LOCATION OF THE SHALLOWEST BORING AND INCLUDES GEOLOGIC INFORMATION FROM ALL BORINGS AT THE DRILLING LOCATION.
4. REFER TO BORING LOGS IN APPENDIX F OF THE FEASIBILITY REPORT FOR DETAILED DESCRIPTIONS OF GEOLOGIC CONDITIONS AT INDIVIDUAL BORING LOCATIONS.
5. REFER TO APPENDIX F (OF 02/13/2024 FEASIBILITY REPORT) FOR MONITORING WELL CONSTRUCTION DETAILS.
6. EXISTING GROUND SURFACE WAS TAKEN FROM SHEET NUMBER 2.
7. ELEVATIONS ARE REFERENCED TO USGS DATUM.
8. THE POSITION OF THE WATER TABLE BETWEEN WELLS IS BASED ON THE WATER TABLE CONTOUR MAP, SHEET NUMBER 3.
9. THE POSITION OF THE POTENTIOMETRIC SURFACE BETWEEN WELLS IS BASED ON THE POTENTIOMETRIC SURFACE CONTOUR MAP, SHEET NUMBER 5.
10. THE BEDROCK SURFACE SHOWN BETWEEN BORINGS ON THE CROSS-SECTION IS THE STRAIGHT-LINE CONNECTION OF THE UPPERMOST ROCK SURFACES OBSERVED AT THE DRILLING LOCATIONS OR IS BASED ON GEOLOGIC INTERPRETATION OF AN EROSIONAL SURFACE BETWEEN BORING LOCATIONS. THE BEDROCK SURFACE CONTOURS SHOWN BETWEEN BORINGS ON PLAN SHEET 6, BEDROCK SURFACE MAP, ARE BASED ON INTERPOLATION USING KRIGING WITH THE PROGRAM "SURFER".
11. BORINGS WITH DESIGNATION "BR" WERE DRILLED 02/12-13/2024 AND ADDED TO THE FEASIBILITY REPORT CROSS SECTION. SEE FEASIBILITY REPORT-ADDENDUM NO. 1 FOR BORING LOGS.

1 ADDED REPORT DATE

1 ADDED NOTE



GEOLOGIC CROSS SECTION LOCATION MAP

REVISION	TITLE	DATE
1	FEASIBILITY REPORT ADDENDUM NO. 1	03/07/2025

PROJECT NO.	25222268.00	DRAWN BY:	KP
DRAWN:	04/11/2023	CHECKED BY:	MRH/BLP
REVISED:	08/21/2024	APPROVED BY:	BLP 03/07/2025

CLIENT
DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES
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MADISON, WI 53713

ENGINEER
SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

SITE
FEASIBILITY REPORT – ADDENDUM NO. 1
DANE COUNTY LANDFILL SITE NO. 3
4402 BRANDT ROAD
MADISON, WISCONSIN

GEOLOGIC CROSS SECTION D-D'

SHEET
9 OF 28

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