



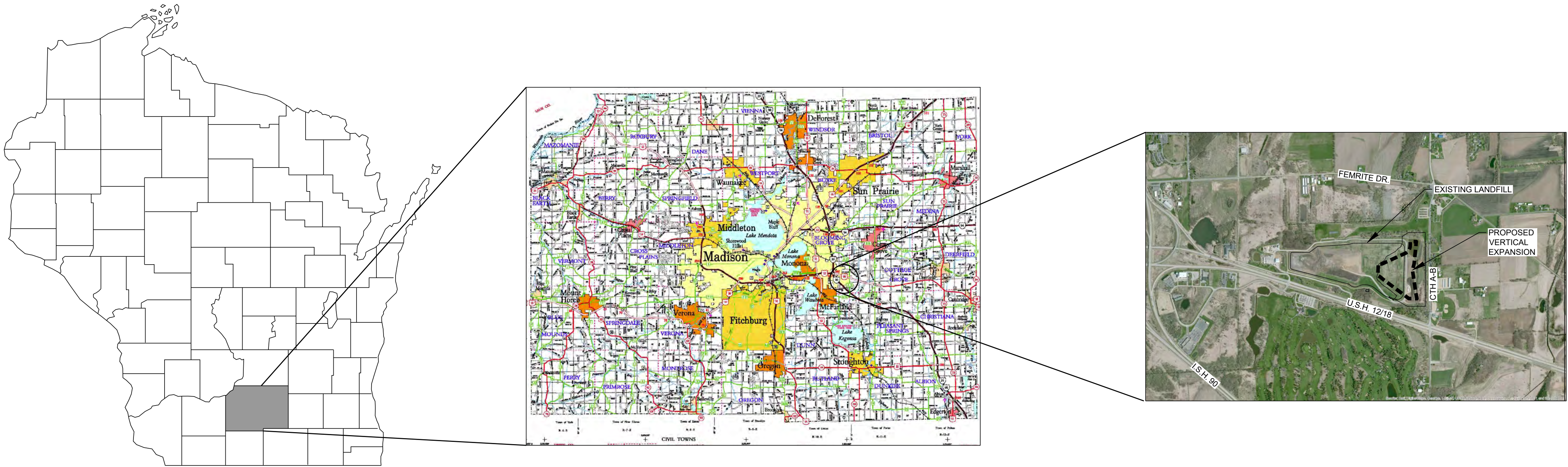
DANE COUNTY LANDFILL SITE NO. 2 (RODEFELD)

FEASIBILITY REPORT - EASTERN VERTICAL EXPANSION

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

PREPARED BY: SCS ENGINEERS
MADISON, WISCONSIN

DATE: MAY 2021



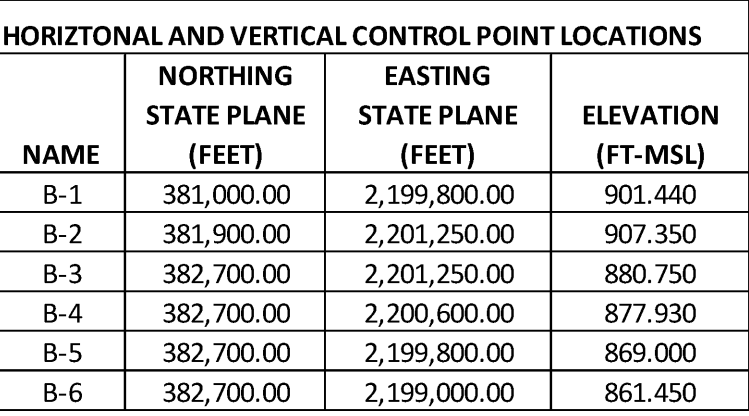
WISCONSIN

DANE COUNTY MAP

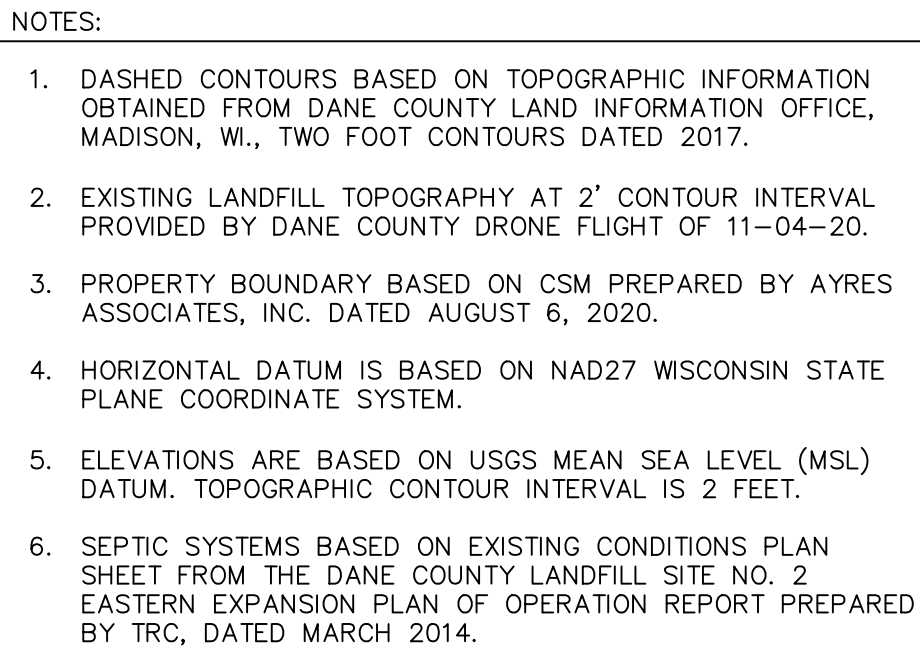
SITE LOCATOR

SHEET INDEX

SHEET NO.	DRAWING TITLE
1	COVER SHEET
2	EXISTING CONDITIONS
3	HIGH WATER TABLE MAP (JUNE 2008)
4	LOW WATER TABLE MAP (DECEMBER 2012)
5	GEOLOGIC CROSS SECTION B-B'
6	GEOLOGIC CROSS SECTION C-C'
7	GEOLOGIC CROSS SECTION C-C' (CONTINUED)
8	GEOLOGIC CROSS SECTION D-D'
9	GEOLOGIC CROSS SECTION D-D' (CONTINUED)
10	GEOLOGIC CROSS SECTION E-E'
11	GEOLOGIC CROSS SECTION F-F'
12	GEOLOGIC CROSS SECTION I-I'
13	GEOLOGIC CROSS SECTION J-J'
14	GEOLOGIC CROSS SECTION K-K'
15	APPROVED SUBBASE GRADES
16	APPROVED BASE GRADES-LEACHATE COLLECTION SYSTEM
17	FINAL COVER WITH CLOSURE PHASES

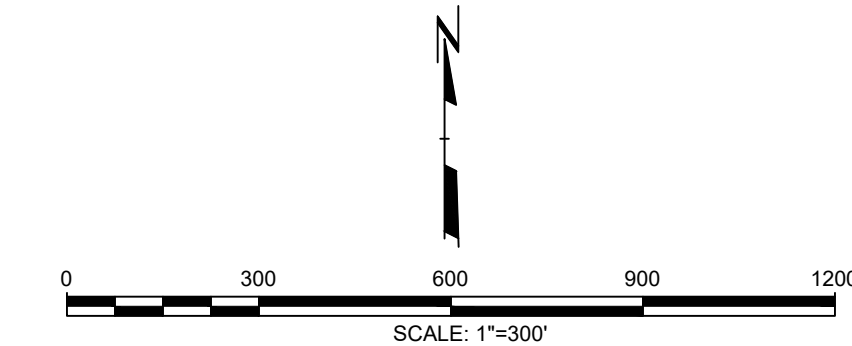


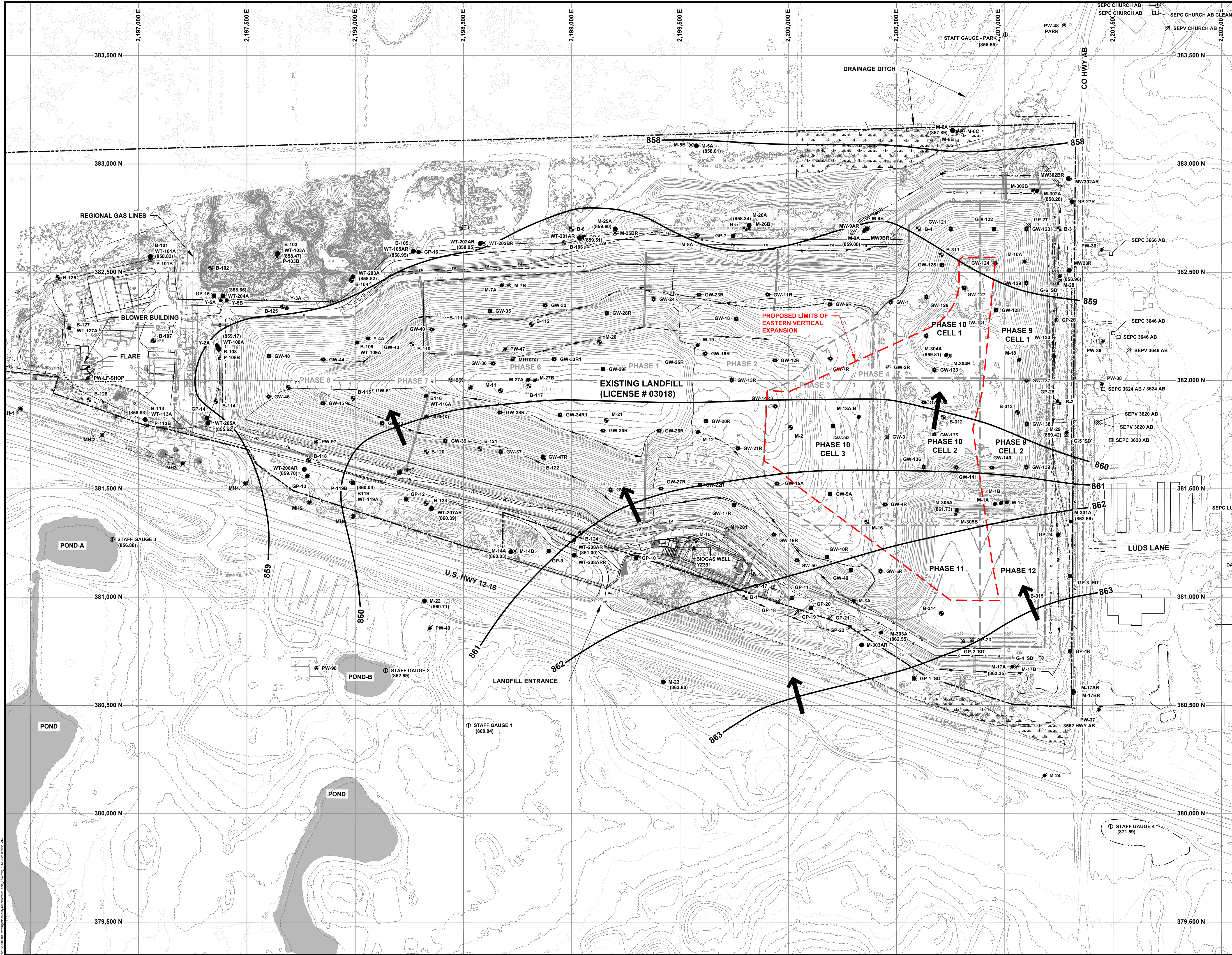
HORIZONTAL AND VERTICAL CONTROL POINT LOCATIONS			
	NORTHING STATE PLANE (FEET)	EASTING STATE PLANE (FEET)	ELEVATION (FT-MSL)
B-1	381,000.00	2,199,800.00	901.440
B-2	381,900.00	2,201,250.00	907.350
B-3	382,700.00	2,201,250.00	880.750
B-4	382,700.00	2,200,600.00	877.930
B-5	382,700.00	2,199,800.00	869.000
B-6	382,700.00	2,199,000.00	861.450



NOTES:

1. DASHED CONTOURS BASED ON TOPOGRAPHIC INFORMATION OBTAINED FROM DANE COUNTY LAND INFORMATION OFFICE, MADISON, WI., TWO FOOT CONTOURS DATED 2017.
2. EXISTING LANDFILL TOPOGRAPHY AT 2' CONTOUR INTERVAL PROVIDED BY DANE COUNTY DRONE FLIGHT OF 11-04-20.
3. PROPERTY BOUNDARY BASED ON CSM PREPARED BY AYRES ASSOCIATES, INC. DATED AUGUST 6, 2020.
4. HORIZONTAL DATUM IS BASED ON NAD27 WISCONSIN STATE PLANE COORDINATE SYSTEM.
5. ELEVATIONS ARE BASED ON USGS MEAN SEA LEVEL (MSL) DATUM. TOPOGRAPHIC CONTOUR INTERVAL IS 2 FEET.
6. SEPTIC SYSTEMS BASED ON EXISTING CONDITIONS PLAN SHEET FROM THE DANE COUNTY LANDFILL SITE NO. 2 EASTERN EXPANSION PLAN OF OPERATION REPORT PREPARED BY TRC, DATED MARCH 2014.



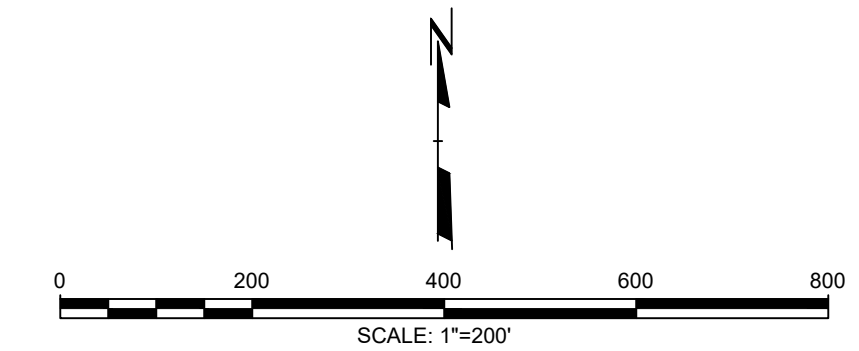


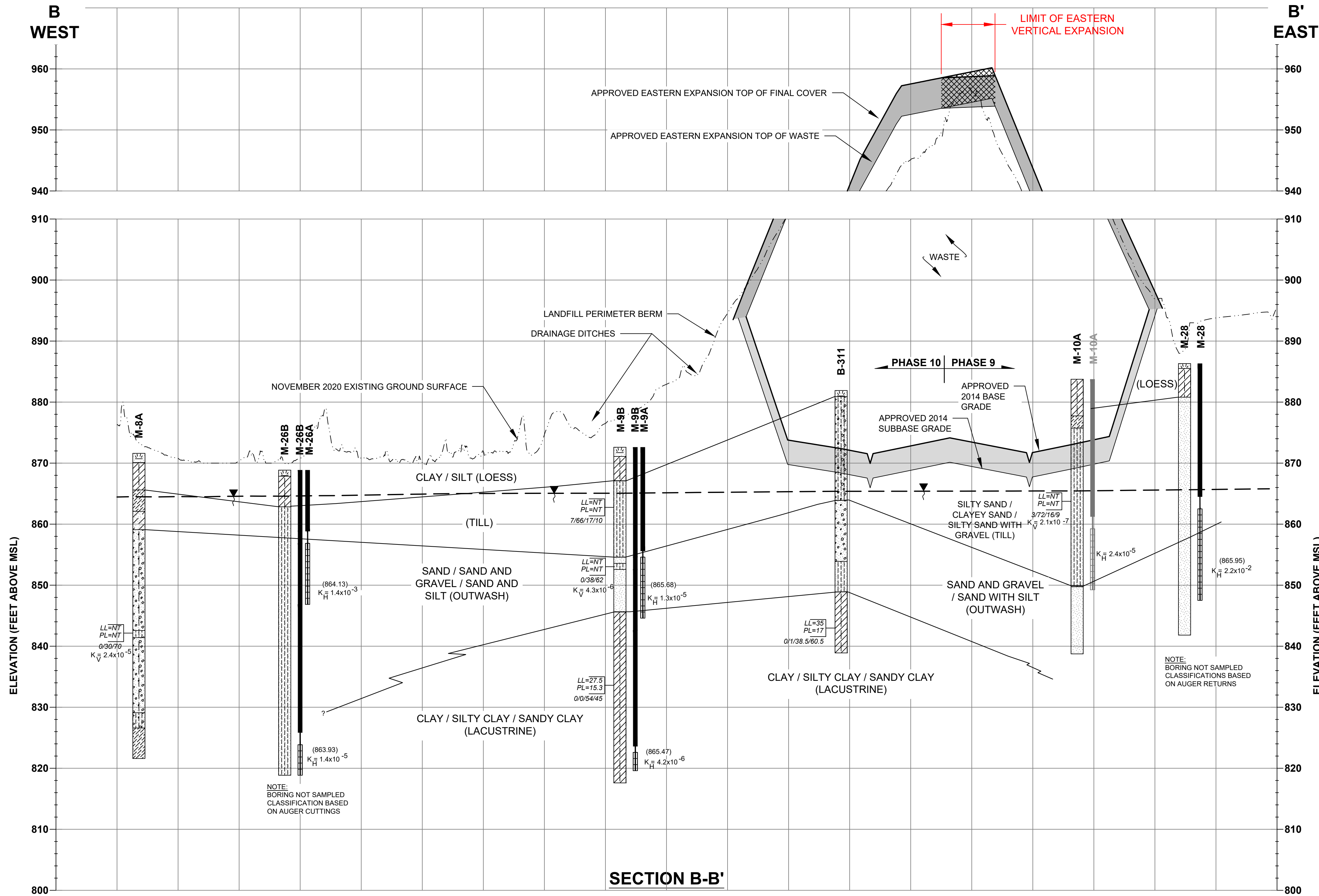
LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- EXISTING APPROVED LIMITS OF WASTE
- EASTERN EXPANSION PHASE LINE
- PROPOSED EASTERN VERTICAL EXPANSION LIMITS
- FM EXISTING LEACHATE FORCEMAIN LINE
- SAN EXISTING SANITARY SEWER LINE
- 863 GROUNDWATER CONTOUR LINE (1 FOOT INTERVAL, DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION
- (858.96) WATER TABLE ELEVATION (FT-MSL)
- M-9A EXISTING WATER TABLE WELL LOCATION
- M-26B EXISTING PIEZOMETER LOCATION
- M-13A ABANDONED MONITORING WELL LOCATION
- M-7B ABANDONED PIEZOMETER LOCATION
- B-313 EXISTING BORING LOCATION
- PW-37 EXISTING PRIVATE WELL LOCATION
- ① STAFF GAUGE 4 EXISTING STAFF GAUGE LOCATION

NOTES

1. REFER TO PLAN SHEET 2 FOR EXISTING LEGEND FEATURES AND COMPLETE BASE MAP NOTES.
2. LOW WATER TABLE MAP FROM SHEET 5 OF 25 OF THE DANE COUNTY LANDFILL SITES NO. 2 EASTERN EXPANSION FEASIBILITY REPORT PREPARED BY TRC DATED MAY 2013.
3. WATER TABLE CONTOURS FROM SHEET 5 OF 25 OF THE EASTERN EXPANSION FEASIBILITY REPORT.
4. THE WATER LEVELS USED TO CONSTRUCT THIS MAP WERE MEASURED ON DECEMBER 13, 2012.
5. MONITORING WELLS SHOWN ON THIS PLAN SHEET REFLECT THE WELLS IN PLACE DURING THE DECEMBER 2012 MONITORING EVENT. REFER TO PLAN SHEET 2 FOR CURRENT MONITORING WELLS IN PLACE AND ABANDONED.

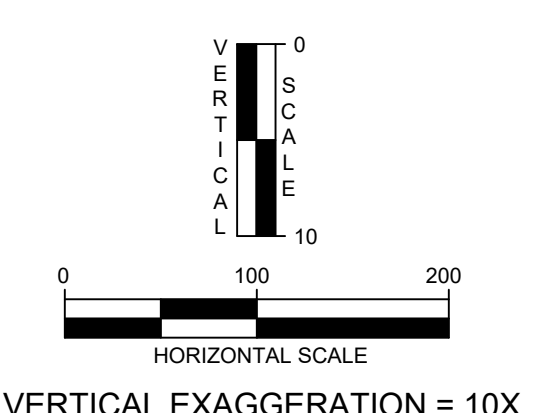




LEGEND	
	STRATIGRAPHIC BOUNDARY (DASHED WHERE INFERRED)
	UNCONFORMITY BOUNDARY
	WATER TABLE SURFACE
	NOV. 2020 EXISTING GROUND SURFACE
(865.47)	WATER ELEVATION IN WELL (FEET, MSL)
(NI)	NOT INSTALLED
LL=32	LIQUID LIMIT (NV=NON-VISCOUS, NP=NON-PLASTIC, NT=NOT TESTED)
PL=17	PLASTIC LIMIT (NP=NON-PLASTIC, NT=NOT TESTED)
$K_H = 4.5 \times 10^{-3}$	FIELD HORIZONTAL HYDRAULIC CONDUCTIVITY (CM/S)
$K_V = 9.3 \times 10^{-6}$	LABORATORY VERTICAL HYDRAULIC CONDUCTIVITY (CM/S)
9.2/73.8/10.7/6.3	GRAIN SIZE ANALYSIS RESULT (% GRAVEL/% SAND/ % SILT/ %CLAY) (NA=NOT AVAILABLE)
5.6/68.6/25.8	GRAIN SIZE ANALYSIS RESULT (% GRAVEL/% SAND/ % SILT & %CLAY)
	APPROVED FINAL COVER
	APPROVED COMPOSITE LINER
	PROPOSED EASTERN VERTICAL EXPANSION FINAL COVER
WELL CONSTRUCTION	
	WELL SEAL
	WELL CASING
	WELL SCREEN

SOIL CLASSIFICATION
REFER TO GEOLOGIC SYMBOLGY ON THIS SHEET.

- NOTES**
- THE CORRELATION LINES ARE BASED ON INTERPOLATION BETWEEN BORINGS AND MAY NOT REPRESENT ACTUAL SUBSURFACE CONDITIONS.
 - HORIZONTAL DISTANCES ARE MEASURED WITH RESPECT TO THE CENTER OF EACH SOIL BORING LOCATION. WELL CONSTRUCTION SCHEMATICS ARE OFFSET FOR CLARITY.
 - THE NOVEMBER 2020 EXISTING GROUND SURFACE/PROPOSED SUBBASE GRADES/PROPOSED BASE GRADES/FINAL GRADES ARE BASED ON THE INFORMATION PRESENTED ON PLAN SHEETS 2, 15, 16, AND 17; RESPECTIVELY.
 - ELEVATIONS ARE SHOWN IN REFERENCE TO USGS MEAN SEA LEVEL (MSL) DATUM.
 - THE GROUNDWATER ELEVATIONS ARE BASED ON MEASUREMENTS OBTAINED BY SCS, INC. ON JUNE 1, 2008.
 - REFER TO THE FEASIBILITY REPORT APPENDICES FOR DETAILED LITHOLOGICAL DESCRIPTIONS, MONITORING WELL CONSTRUCTION DETAILS, SOIL TESTING RESULTS AND FIELD HYDRAULIC CONDUCTIVITY TEST RESULTS.
 - INTERPRETATION OF THE WATER TABLE BETWEEN BORINGS WAS TAKEN FROM THE HIGH WATER TABLE MAP (PLAN SHEET 3).



GEOLOGIC SYMBOLGY

CLAYS	SILTS AND ORGANICS	SANDS	GRAVELS
LEAN CLAY, WITH SAND/GRAVEL (CL)	SILT, WITH SAND/GRAVEL (ML)	WELL-GRADED/POORLY-GRADED SAND (SW OR SP)	WELL-GRADED/POORLY-GRADED GRAVEL (GW OR GP)
SANDY LEAN CLAY, WITH GRAVEL (CL)	SANDY SILT, WITH GRAVEL (ML)	WELL-GRADED/POORLY-GRADED SAND, WITH GRAVEL (SW OR SP)	WELL-GRADED/POORLY-GRADED GRAVEL, WITH SAND (GW OR GP)
GRAVELLY LEAN CLAY, WITH SAND (CL)	GRAVELLY SILT, WITH SAND/GRAVEL (ML)	SILTY SAND/SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL/SILTY GRAVEL, WITH SAND (GM)
FAT CLAY, WITH SAND/GRAVEL (CH)	ORGANIC SILT, WITH SAND/GRAVEL (OH)	WELL-GRADED/POORLY-GRADED SAND, WITH SILT (SW-SM OR SP-SM)	CLAYEY GRAVEL/CLAYEY GRAVEL, WITH SAND (GC)
SANDY FAT CLAY, WITH GRAVEL (CH)	SANDY ORGANIC SILT, WITH GRAVEL (OH)	WELL-GRADED/POORLY-GRADED SAND, WITH SILT/GRAVEL (SW-SM OR SP-SM)	WELL-GRADED/POORLY-GRADED GRAVEL, WITH SILT (GW-GM OR GP-GM)
GRAVELLY FAT CLAY, WITH SAND (CH)	GRAVELLY SILT, WITH SAND (OH)	WELL-GRADED/POORLY-GRADED SAND, WITH CLAY (SW-SC OR SP-SC)	WELL-GRADED/POORLY-GRADED GRAVEL, WITH SILT AND SAND (GW-GM OR GP-GM)
SILTY CLAY, WITH SAND/GRAVEL (CL-ML)	ORGANIC CLAY, WITH SAND/GRAVEL (OL)	WELL-GRADED/POORLY-GRADED SAND, WITH CLAY/GRAVEL (SW-SC OR SP-SC)	WELL-GRADED/POORLY-GRADED GRAVEL, WITH CLAY (GW-GC OR GP-GC)
SANDY SILTY CLAY, WITH GRAVEL (CL-ML)	SANDY ORGANIC CLAY, WITH GRAVEL (OL)	CLAYEY SAND, WITH GRAVEL (SC)	WELL-GRADED/POORLY-GRADED GRAVEL, WITH CLAY AND SAND (GW-GC OR GP-GC)
GRAVELLY SILTY CLAY, WITH SAND (CL-ML)	GRAVELLY ORGANIC CLAY, WITH GRAVEL (OL)		
BEDROCK			
CRYSTALLINE	PEAT		
DOLOSTONE	FILL, DEMOLITION DEBRIS		
SANDSTONE	TOPSOIL		
LIMESTONE	WASTE MATERIAL		
SHALE, MUDSTONE			

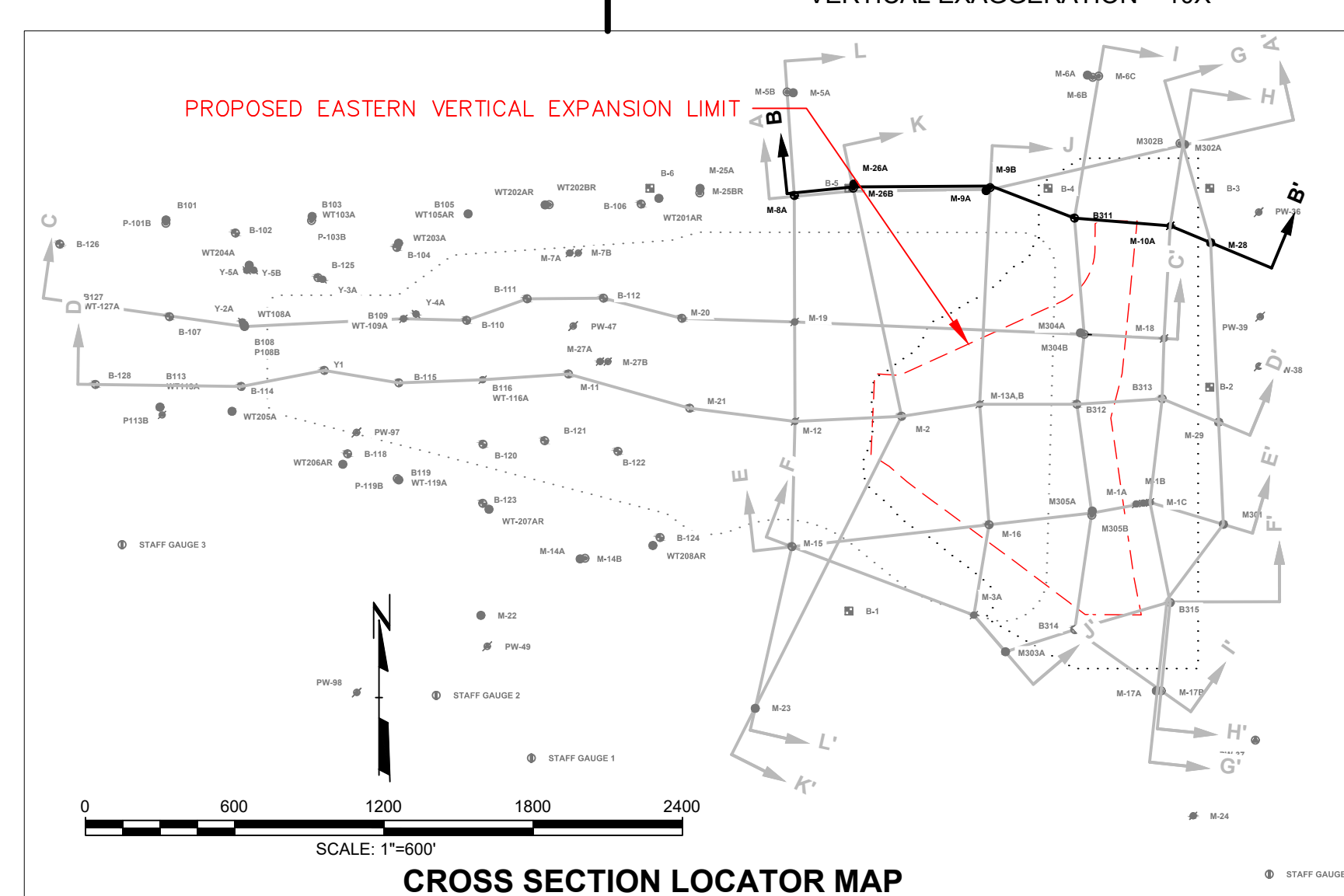
UNIT DESCRIPTIONS

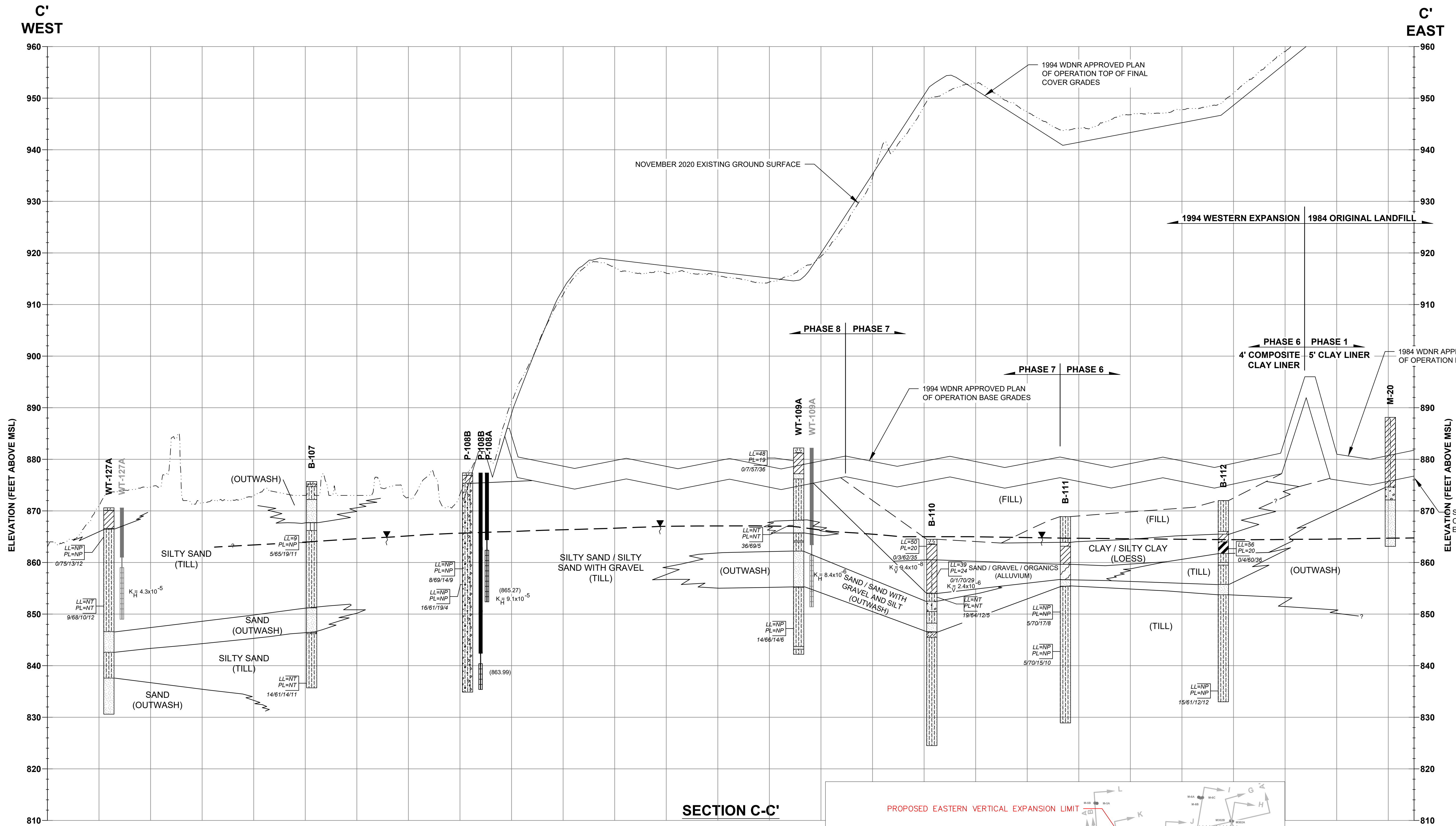
LOESS
DARK YELLOWISH BROWN, REDDISH BROWN, OR BROWN SILT (ML) WITH SAND AND GRAVEL, SILTY CLAY OR CLAY (CL), OR SANDY CLAY (CL)

HORICON FORMATION (TILL)
YELLOWISH RED, LIGHT YELLOWISH BROWN, RED, REDDISH BROWN, BROWN, OR LIGHT BROWN, SILTY SAND (SM), SILTY SAND WITH GRAVEL (SM), OR CLAYEY SAND (SC)

HORICON FORMATION (OUTWASH)
BROWN, LIGHT BROWN, PALE BROWN, BROWNISH YELLOW, YELLOWISH BROWN, LIGHT YELLOWISH BROWN, OR YELLOWISH RED POORLY GRADED SAND (SP), SAND WITH GRAVEL (SP), SAND WITH SILT (SP-SM), OR WELL GRADED SAND (SW)

HORICON FORMATION (GLACIOLACUSTRINE)
BROWN, GREY, OR BROWNISH GREY SILTY LEAN CLAY (CL-ML), OR LEAN CLAY (CL)





SECTION C-C'

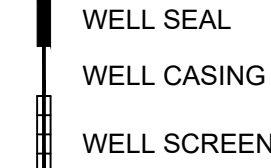
LEGEND

	STRATIGRAPHIC BOUNDARY (DASHED WHERE INFERRED)	GRAIN SIZE ANALYSIS RESULT (% GRAVEL/% SAND/ % SILT/ %CLAY) (NA=NOT AVAILABLE)
	UNCONFORMITY BOUNDARY	GRAIN SIZE ANALYSIS RESULT (% GRAVEL/% SAND/ % SILT & %CLAY)
	WATER TABLE SURFACE	APPROVED FINAL COVER
	NOV. 2020 EXISTING GROUND SURFACE	APPROVED COMPOSITE LINER
	WATER ELEVATION IN WELL (FEET, MSL) (NI) NOT INSTALLED	PROPOSED EASTERN VERTICAL EXPANSION FINAL COVER
	LIQUID LIMIT (NV=NON-VISCOUS, NP=NON-PLASTIC, NT=NOT TESTED)	
	PLASTIC LIMIT (NP=NON-PLASTIC, NT=NOT TESTED)	
	FIELD HORIZONTAL HYDRAULIC CONDUCTIVITY (CM/S)	
	LABORATORY VERTICAL HYDRAULIC CONDUCTIVITY (CM/S)	

NOTES

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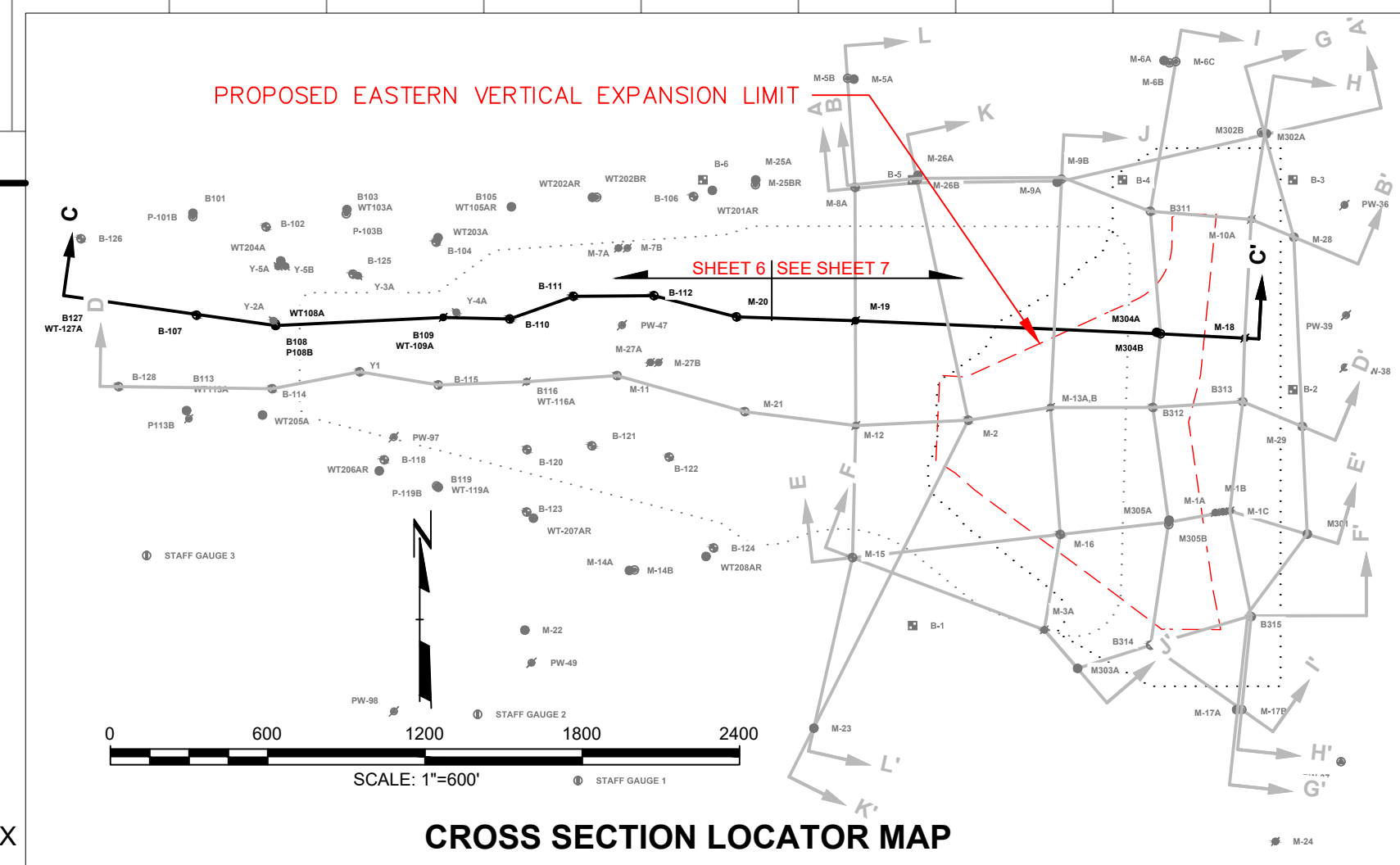
WELL CONSTRUCTION

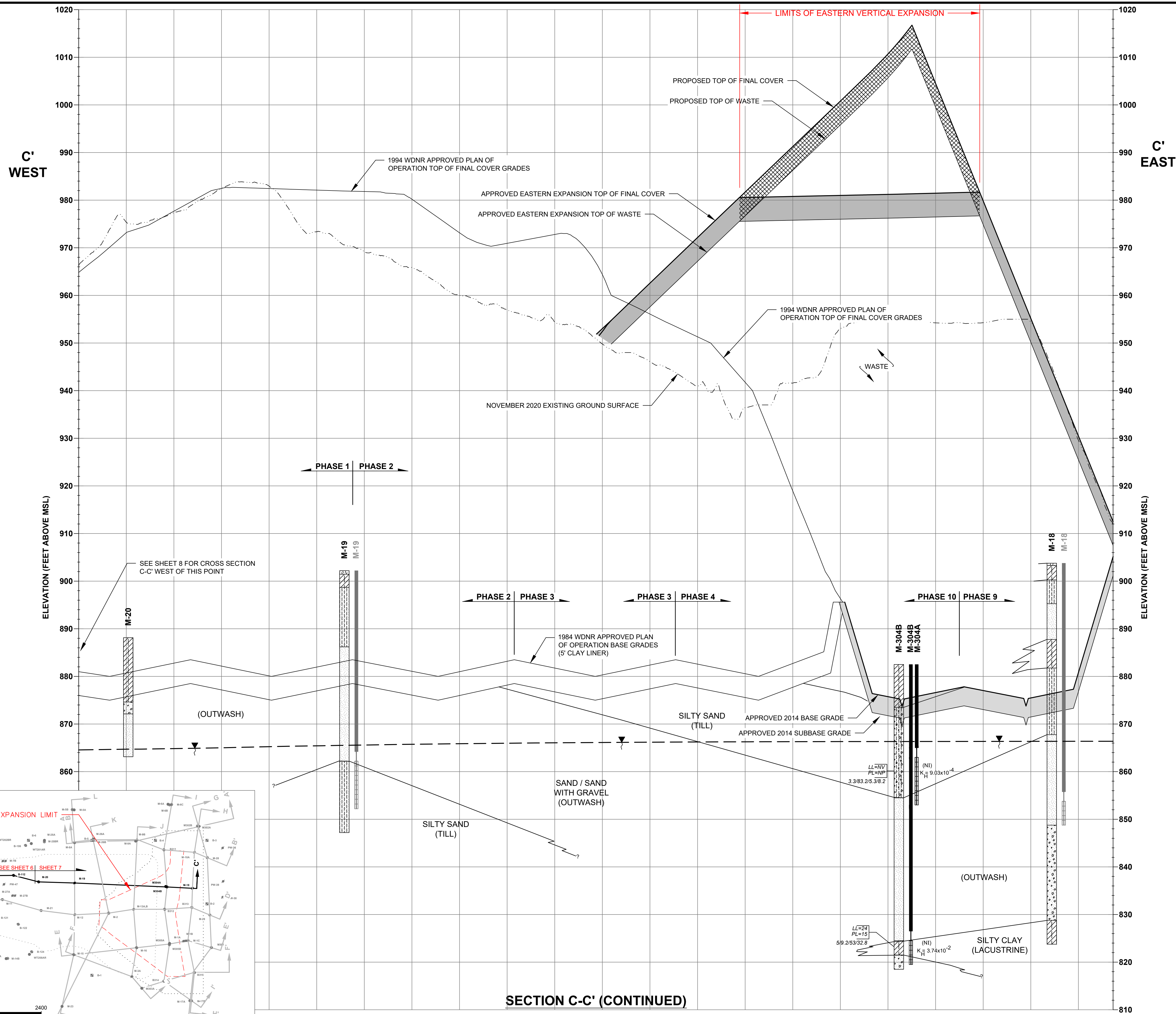


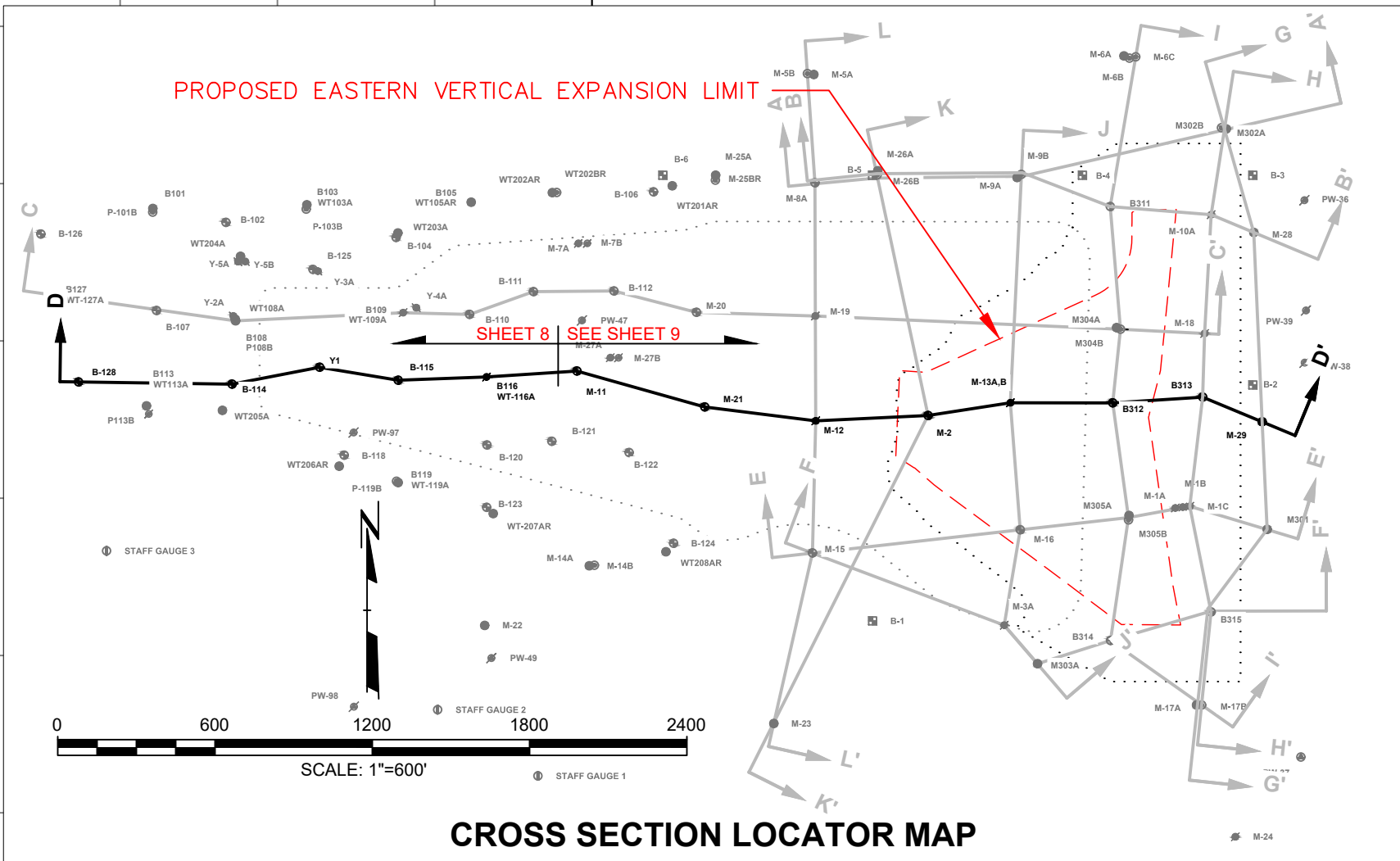
VERTICAL SCALE

HORIZONTAL SCALE

VERTICAL EXAGGERATION = 10X







VERTICAL EXAGGERATION = 10X

SHEET
8 OF 17