

PRINT
DIST.

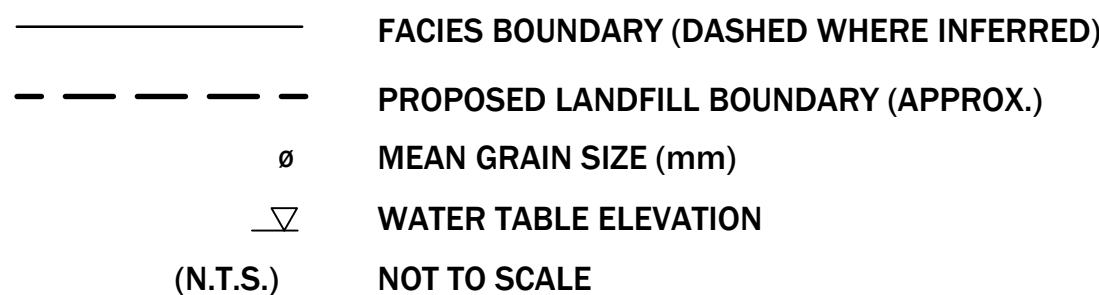
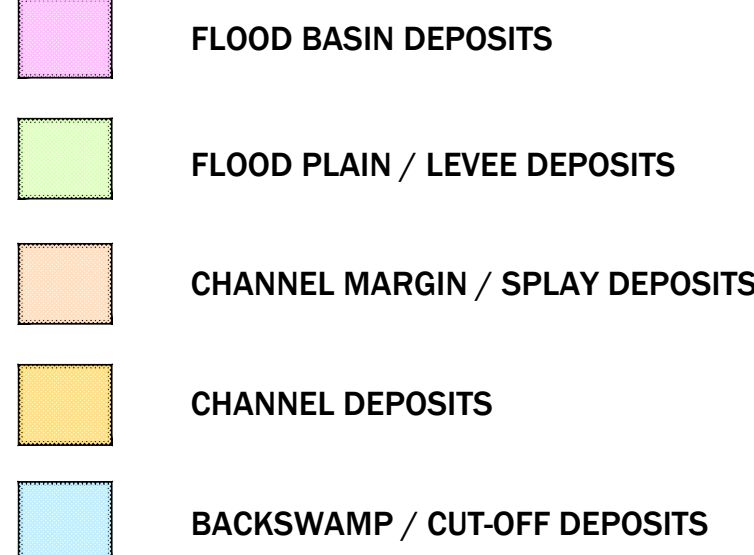
REVISIONS
REV. W.O.

LEGEND (SEE NOTE #7)

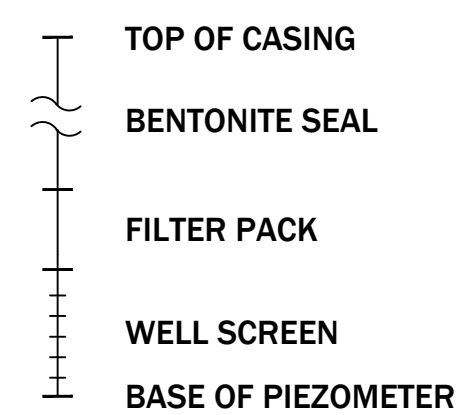
PREDOMINANT PARTICLE SIZE



FACIES ENVIRONMENTS

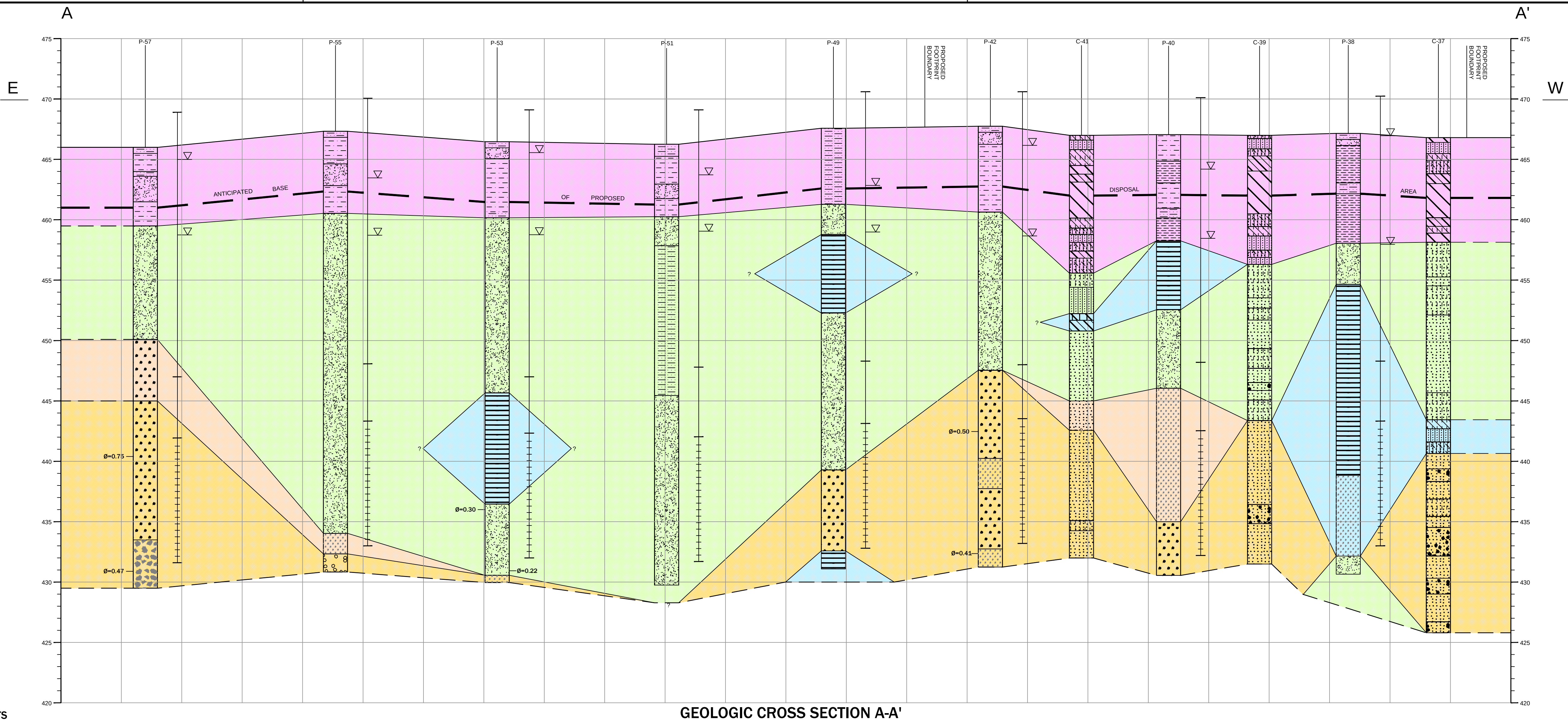


PIEZOMETER DETAIL



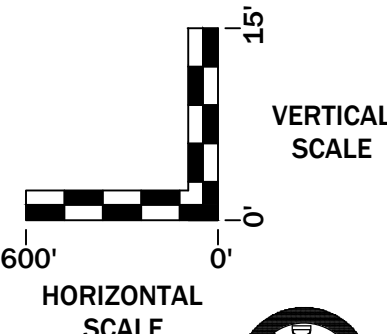
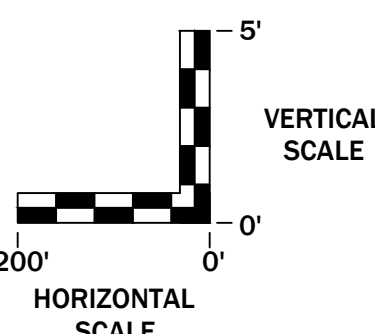
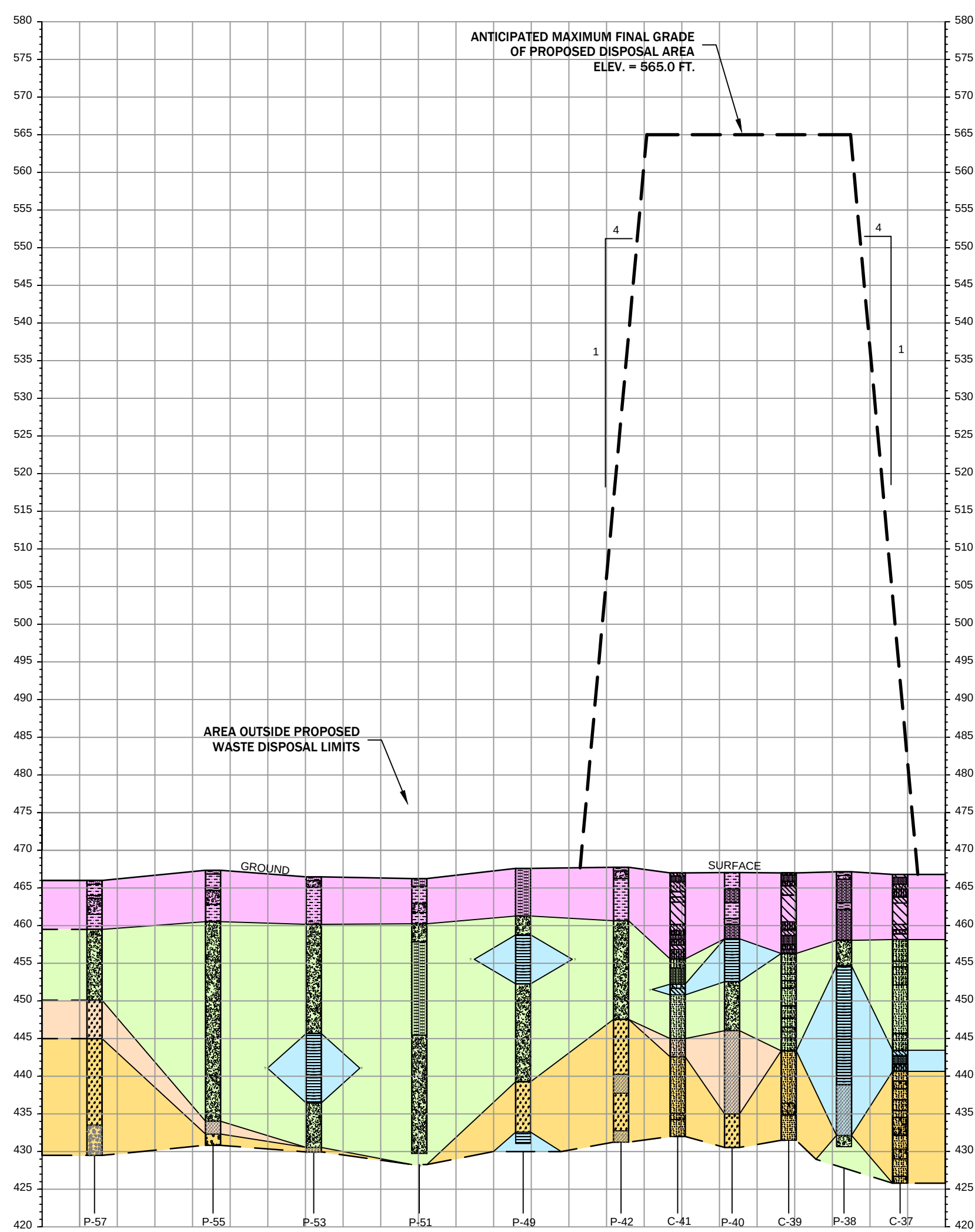
NOTES

1. SEE FIGURE 8 FOR CROSS - SECTION LOCATION.
2. ADDITIONAL BOREHOLE INFORMATION PRESENTED IN APPENDIX 2 AND 4.
3. ADDITIONAL PIEZOMETER INFORMATION PRESENTED IN APPENDIX 5.
4. WATER TABLE DATA REPRESENT MAXIMUM AND MINIMUM READINGS DURING 12-MONTH MONITORING PERIOD.
5. MEAN GRAIN SIZE DATA PRESENTED IN APPENDIX 2.
6. SEE SECTION 5.1 OF REPORT FOR ADDITIONAL DISCUSSION OF CROSS-SECTIONS.
7. FOR EXPLANATION OF SYMBOLS USED FOR TEMPORARY BORINGS AND CPTS, REFER TO APPENDIX 2.



GEOLOGIC CROSS SECTION A-A'

**SECTION A-A'
CONCEPTUAL DISPOSAL AREA FINAL GRADE**



BEFORE YOU
DIG - DRILL - BLAST
1-800-344-7483
(TOLL FREE)
MISSOURI ONE CALL SYSTEM, INC.

THE GEOLOGIST WHO REVIEWED AND APPROVED THIS REPORT ASSUMES RESPONSIBILITY ONLY FOR GEOLOGIC INTERPRETATIONS OF DATA APPEARING ON THE PAGE AND DISCLAIMS PURSUANT TO SECTION 236.456 RSMO ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT PREPARED UNDER THE SUPERVISION OF THE GEOLOGIST RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS FIGURE REFERS.		REITZ & JENS, INC. CONSULTING ENGINEERS 1055 CORPORATE SQUARE DRIVE ST. LOUIS, MISSOURI 63132 314.993.4132 (voice) 314.993.4177 (fax)		GRIEDEL Engineering Resources, Inc. ENVIRONMENTAL ENGINEERING LAND AIR WATER 1005 East High Street Jefferson City, Missouri 65101 Telephone (573) 639-9678 Facsimile (573) 639-9679	
DRAWN 020411 W.J.A. (GER) CHKD. M.C.C. (GER) SUPV. M.C.C. (GER) APPD. M.C.C. (GER)		FIGURE 12 DETAILED SITE INVESTIGATION PROPOSED UTILITY WASTE DISPOSAL AREA GEOLOGIC CROSS SECTION A-A'		CLASS 02010 REV.	
		ST. LOUIS, MISSOURI		FIG (12)(13)(14)(15)(16)(17).DWG	

PRINT
DIST.

REVISIONS
REV. W.O.

LEGEND (SEE NOTE #7)

PREDOMINANT PARTICLE SIZE

- CLAY
- SILT
- SILTY CLAY
- "GLEY" - COLORED SEQUENCES (EXCEPT FOR INTERVALS OF MEDIUM TO COARSE SAND)
- VERY FINE TO FINE SAND
- MEDIUM SAND
- COARSE TO VERY COARSE SAND
- GRAVELLY SAND
- SANDY GRAVEL

FACIES ENVIRONMENTS

- FLOOD BASIN DEPOSITS
- FLOOD PLAIN / LEVEE DEPOSITS
- CHANNEL MARGIN / SPLAY DEPOSITS
- CHANNEL DEPOSITS
- BACKSWAMP / CUT-OFF DEPOSITS

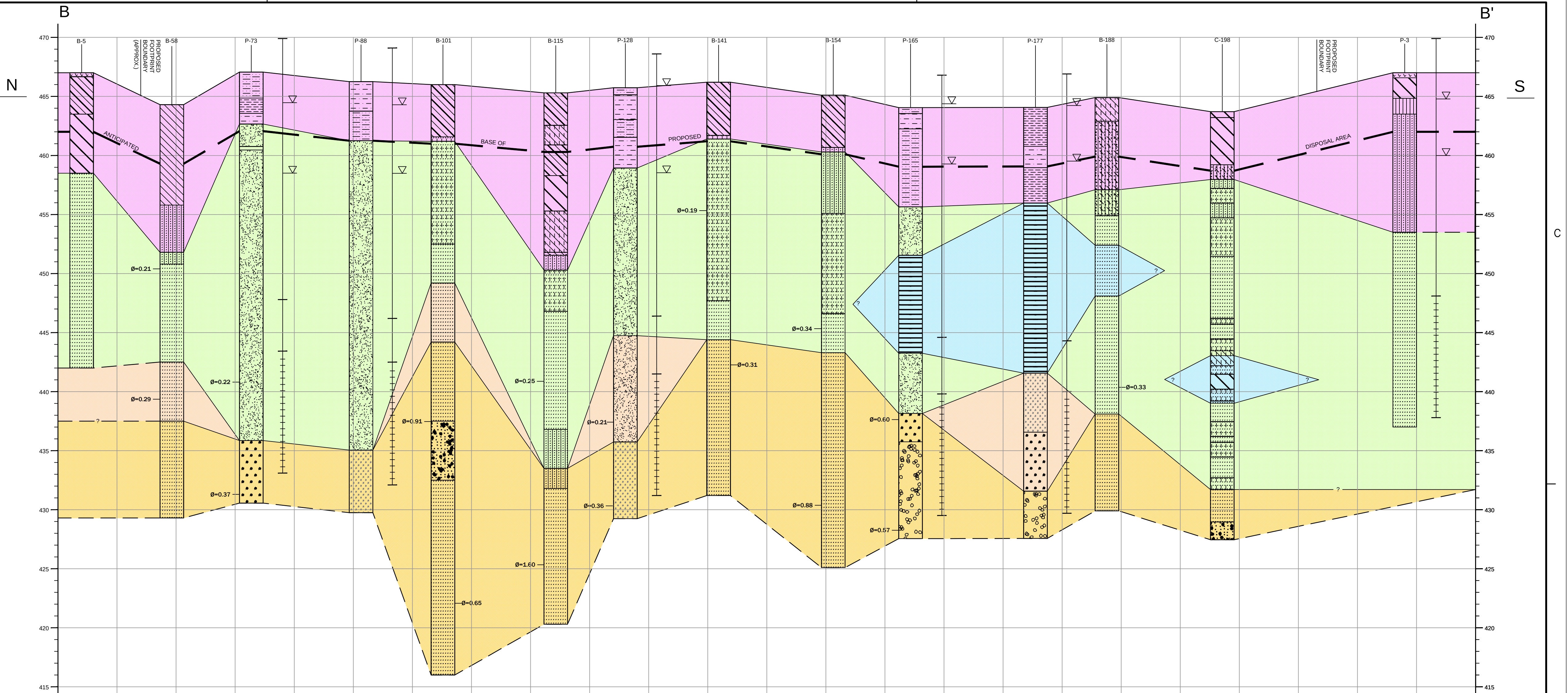
- FACIES BOUNDARY (DASHED WHERE INFERRED)
- PROPOSED LANDFILL BOUNDARY (APPROX.)
- MEAN GRAIN SIZE (mm)
- WATER TABLE ELEVATION
- (N.T.S.) NOT TO SCALE

PIEZOMETER DETAIL

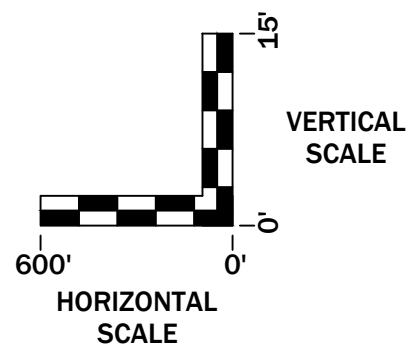
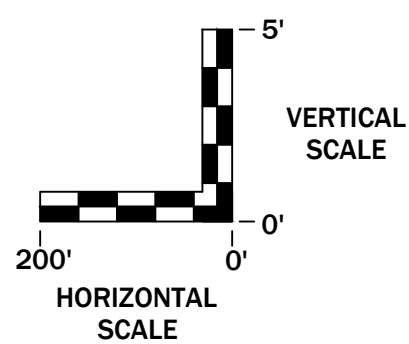
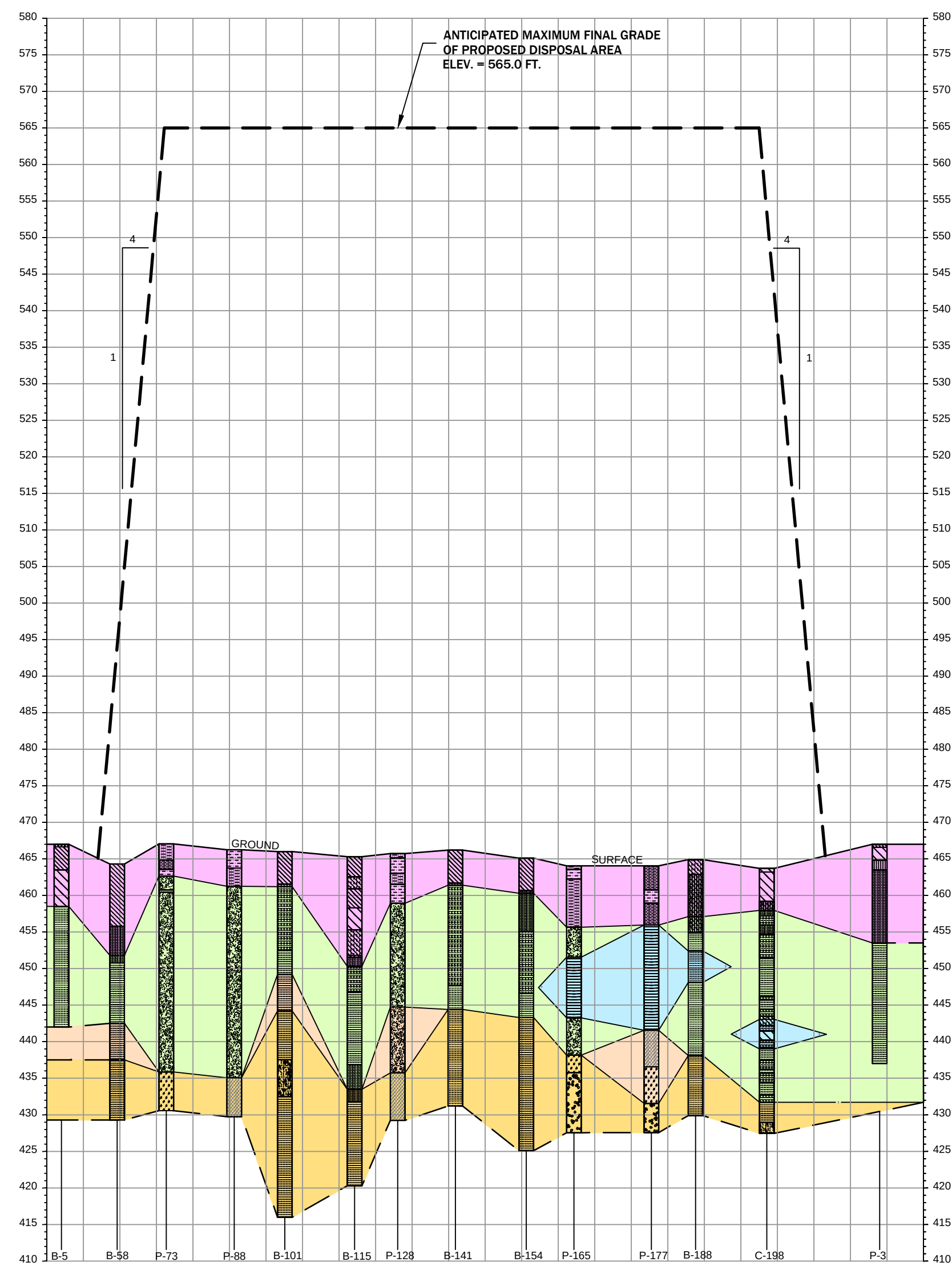
- TOP OF CASING
- BENTONITE SEAL
- FILTER PACK
- WELL SCREEN
- BASE OF PIEZOMETER

NOTES

- SEE FIGURE 8 FOR CROSS - SECTION LOCATION.
- ADDITIONAL BOREHOLE INFORMATION PRESENTED IN APPENDIX 2 AND 4.
- ADDITIONAL PIEZOMETER INFORMATION PRESENTED IN APPENDIX 5.
- WATER TABLE DATA REPRESENT MAXIMUM AND MINIMUM READINGS DURING 12-MONTH MONITORING PERIOD.
- MEAN GRAIN SIZE DATA PRESENTED IN APPENDIX 2.
- SEE SECTION 5.1 OF REPORT FOR ADDITIONAL DISCUSSION OF CROSS-SECTIONS.
- FOR EXPLANATION OF SYMBOLS USED FOR TEMPORARY BORINGS AND CPT'S, REFER TO APPENDIX 2.



SECTION B-B' GEOLOGIC CROSS SECTION B-B'
CONCEPTUAL DISPOSAL AREA FINAL GRADE



BEFORE YOU
DIG - DRILL - BLAST
1-800-344-7483
(TOLL FREE)
MISSOURI ONE CALL SYSTEM, INC.

THE GEOLOGIST WHO REVIEWED AND APPROVED THIS REPORT ASSUMES RESPONSIBILITY ONLY FOR GEOLOGIC INTERPRETATIONS OF DATA APPEARING ON THE PAGE AND DISCLAIMS PURSUANT TO SECTION 236.456 RSMO ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT PREPARED UNDER THE SUPERVISION OF THE GEOLOGIST RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS FIGURE REFERS.		REITZ & JENS, INC. CONSULTING ENGINEERS 1055 CORPORATE SQUARE DRIVE ST. LOUIS, MISSOURI 63132 314.993.4132 (voice) 314.993.4177 (fax)		GRIEDEL Engineering Resources, Inc. ENVIRONMENTAL ENGINEERING LAND AIR WATER 1005 East High Street Jefferson City, Missouri 65101 Telephone (573) 639-9678 Facsimile (573) 639-9679	
DRAWN 020411 W.J.A. (GER) CHKD. M.C.C. (GER) SUPV. M.C.C. (GER) APPD. M.C.C. (GER)		FIGURE 13 DETAILED SITE INVESTIGATION PROPOSED UTILITY WASTE DISPOSAL AREA GEOLOGIC CROSS SECTION B-B'		CLASS 02010 REV.	
		ST. LOUIS, MISSOURI		FIG (12)(13)(14)(15)(16)(17).DWG	

PRINT
DIST.

REVISIONS

REV. W.O.

LEGEND (SEE NOTE #7)

PREDOMINANT PARTICLE SIZE

- CLAY
- SILT
- SILTY CLAY
- "GLEY" - COLORED SEQUENCES (EXCEPT FOR INTERVALS OF MEDIUM TO COARSE SAND)
- VERY FINE TO FINE SAND
- MEDIUM SAND
- COARSE TO VERY COARSE SAND
- GRAVELLY SAND
- SANDY GRAVEL

FACIES ENVIRONMENTS

- FLOOD BASIN DEPOSITS
- FLOOD PLAIN / LEVEE DEPOSITS
- CHANNEL MARGIN / SPLAY DEPOSITS
- CHANNEL DEPOSITS
- BACKSWAMP / CUT-OFF DEPOSITS

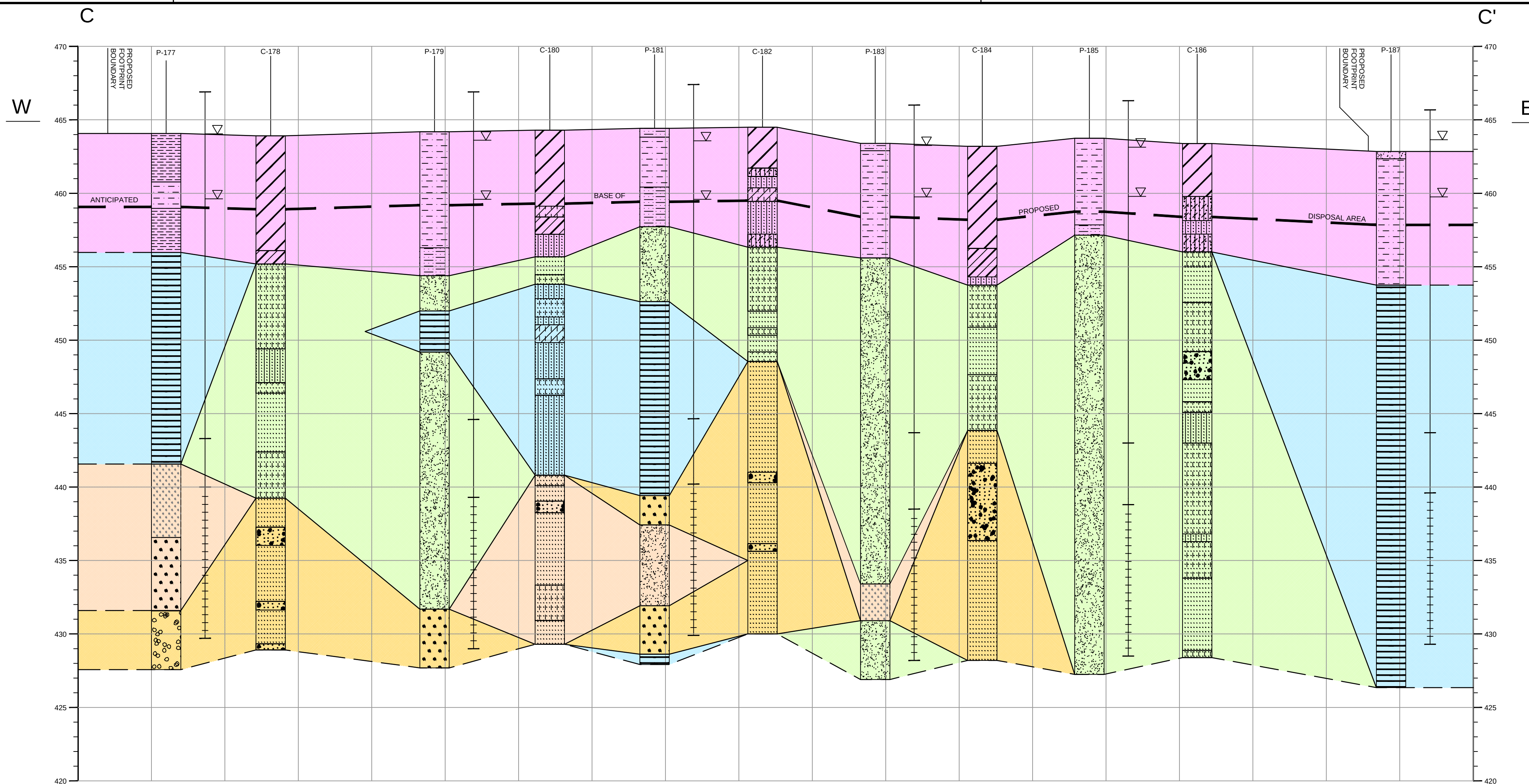
- FACIES BOUNDARY (DASHED WHERE INFERRED)
- PROPOSED LANDFILL BOUNDARY (APPROX.)
- MEAN GRAIN SIZE (mm)
- WATER TABLE ELEVATION
- (N.T.S.) NOT TO SCALE

PIEZOMETER DETAIL

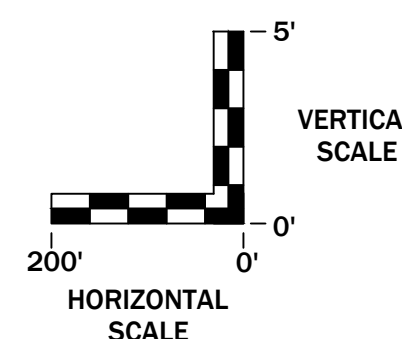
- TOP OF CASING
- BENTONITE SEAL
- FILTER PACK
- WELL SCREEN
- BASE OF PIEZOMETER

NOTES

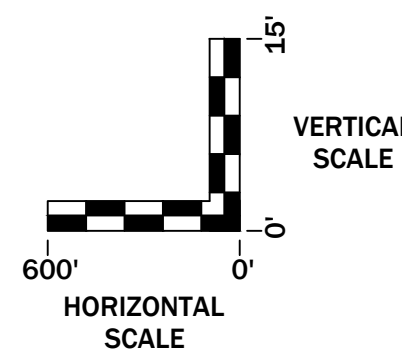
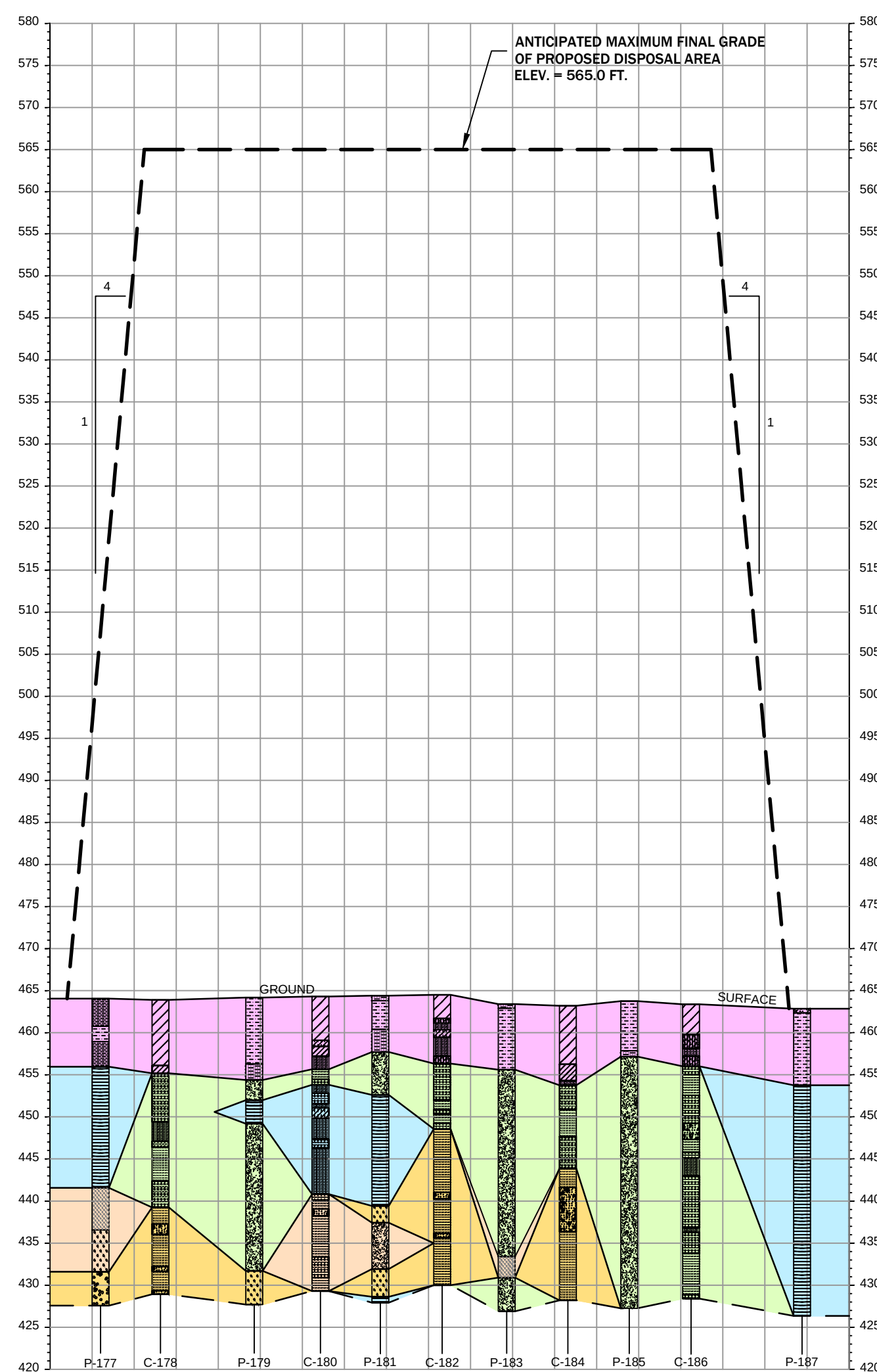
- SEE FIGURE 8 FOR CROSS - SECTION LOCATION.
- ADDITIONAL BOREHOLE INFORMATION PRESENTED IN APPENDIX 2 AND 4.
- ADDITIONAL PIEZOMETER INFORMATION PRESENTED IN APPENDIX 5.
- WATER TABLE DATA REPRESENT MAXIMUM AND MINIMUM READINGS DURING 12-MONTH MONITORING PERIOD.
- MEAN GRAIN SIZE DATA PRESENTED IN APPENDIX 2.
- SEE SECTION 5.1 OF REPORT FOR ADDITIONAL DISCUSSION OF CROSS-SECTIONS.
- FOR EXPLANATION OF SYMBOLS USED FOR TEMPORARY BORINGS AND CPT'S, REFER TO APPENDIX 2.



GEOLOGIC CROSS SECTION C-C'



SECTION C-C' CONCEPTUAL DISPOSAL AREA FINAL GRADE



BEFORE YOU
DIG - DRILL - BLAST
1-800-344-7483
(TOLL FREE)
MISSOURI ONE CALL SYSTEM, INC.

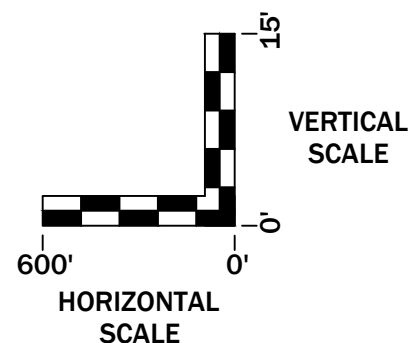
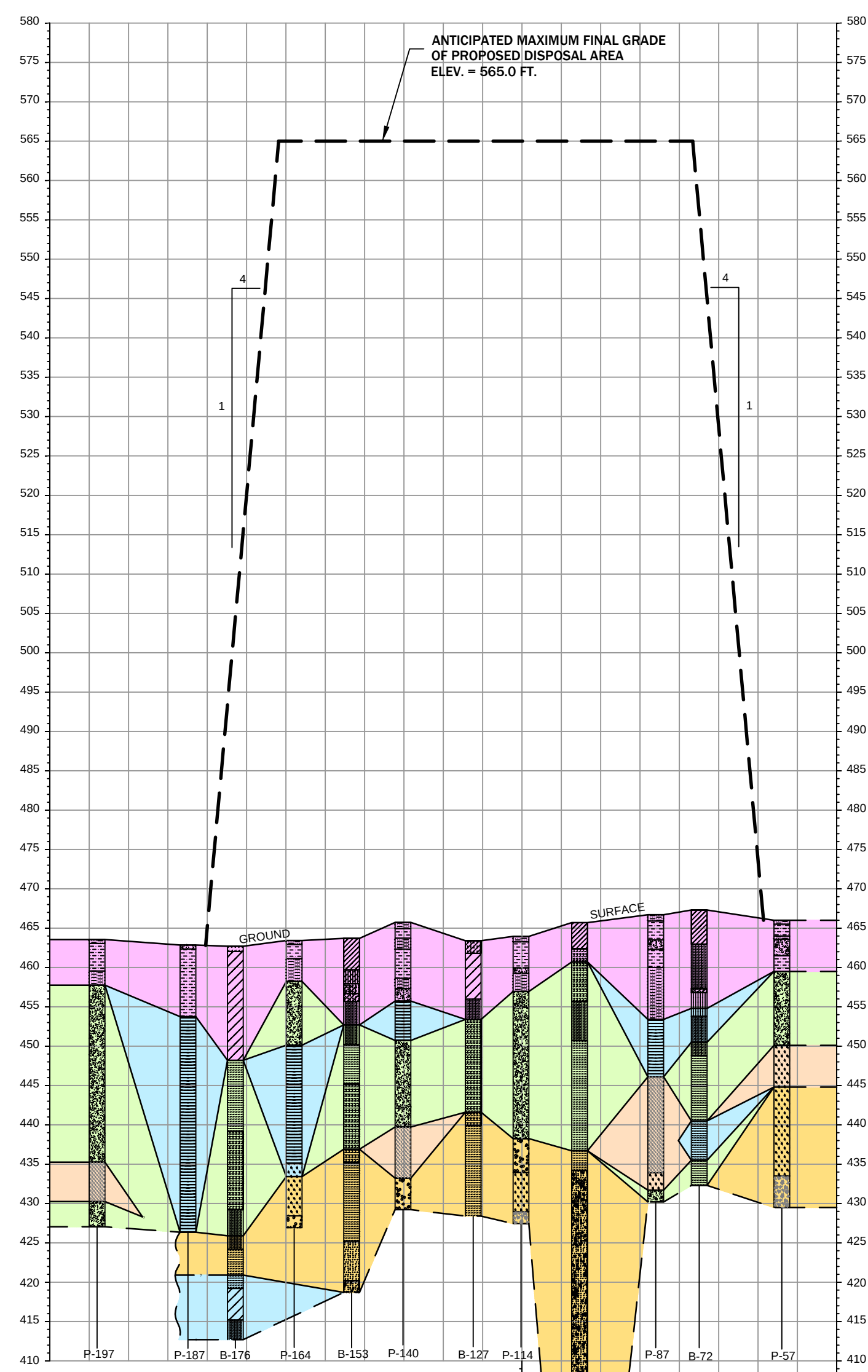
THE GEOLOGIST WHO REVIEWED AND APPROVED THIS REPORT ASSUMES RESPONSIBILITY ONLY FOR GEOLOGIC INTERPRETATIONS OF DATA APPEARING ON THE PAGE AND DISCLAIMS PURSUANT TO SECTION 236.456 RSMO ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT PREPARED UNDER THE SUPERVISION OF THE GEOLOGIST RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS FIGURE REFERS.		REITZ & JENS, INC. CONSULTING ENGINEERS 1055 CORPORATE SQUARE DRIVE ST. LOUIS, MISSOURI 63132 314.993.4132 (voice) 314.993.4177 (fax)		GRIEDEL Engineering Resources, Inc. ENVIRONMENTAL ENGINEERING LAND AIR WATER 1005 East 44th Street Jefferson City, Missouri 65111 Telephone (573) 639-9678 Facsimile (573) 639-9679	
DRAWN 020411 W.J.A. (GER) CHKD. M.C.C. (GER) SUPV. M.C.C. (GER) APPD. M.C.C. (GER)		FIGURE 14 DETAILED SITE INVESTIGATION PROPOSED UTILITY WASTE DISPOSAL AREA GEOLOGIC CROSS SECTION C-C'		CLASS 02010 REV.	
		ST. LOUIS, MISSOURI		FIG (12)(13)(14)(15)(16)(17).DWG	

PRINT
DIST.

REVISIONS

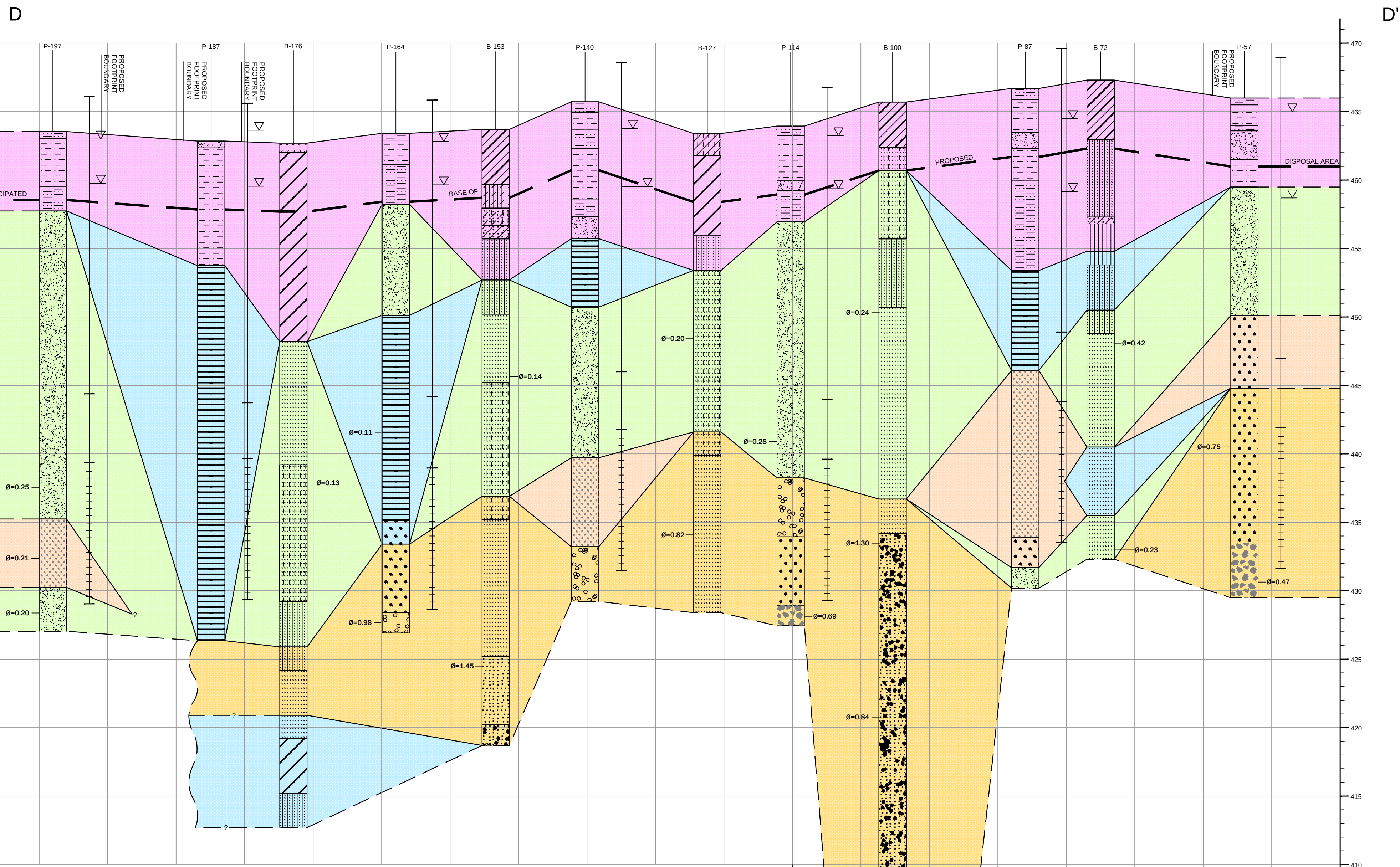
REV. W.O.

SECTION D-D'
CONCEPTUAL DISPOSAL AREA FINAL GRADE



NOTES

1. SEE FIGURE 8 FOR CROSS - SECTION LOCATION.
2. ADDITIONAL BOREHOLE INFORMATION PRESENTED IN APPENDIX 2 AND 4.
3. ADDITIONAL PIEZOMETER INFORMATION PRESENTED IN APPENDIX 5.
4. WATER TABLE DATA REPRESENT MAXIMUM AND MINIMUM READINGS DURING 12-MONTH MONITORING PERIOD.
5. MEAN GRAIN SIZE DATA PRESENTED IN APPENDIX 2.
6. SEE SECTION 5.1 OF REPORT FOR ADDITIONAL DISCUSSION OF CROSS-SECTIONS.
7. FOR EXPLANATION OF SYMBOLS USED FOR TEMPORARY BORINGS AND CPT'S, REFER TO APPENDIX 2.



GEOLOGIC CROSS SECTION D-D'

LEGEND (SEE NOTE #7)

PREDOMINANT PARTICLE SIZE

- CLAY
- SILT
- SILTY CLAY
- "GLEY" - COLORED SEQUENCES (EXCEPT FOR INTERVALS OF MEDIUM TO COARSE SAND)
- VERY FINE TO FINE SAND
- MEDIUM SAND
- COARSE TO VERY COARSE SAND
- GRAVELLY SAND
- SANDY GRAVEL

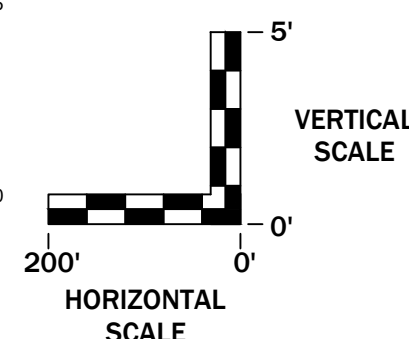
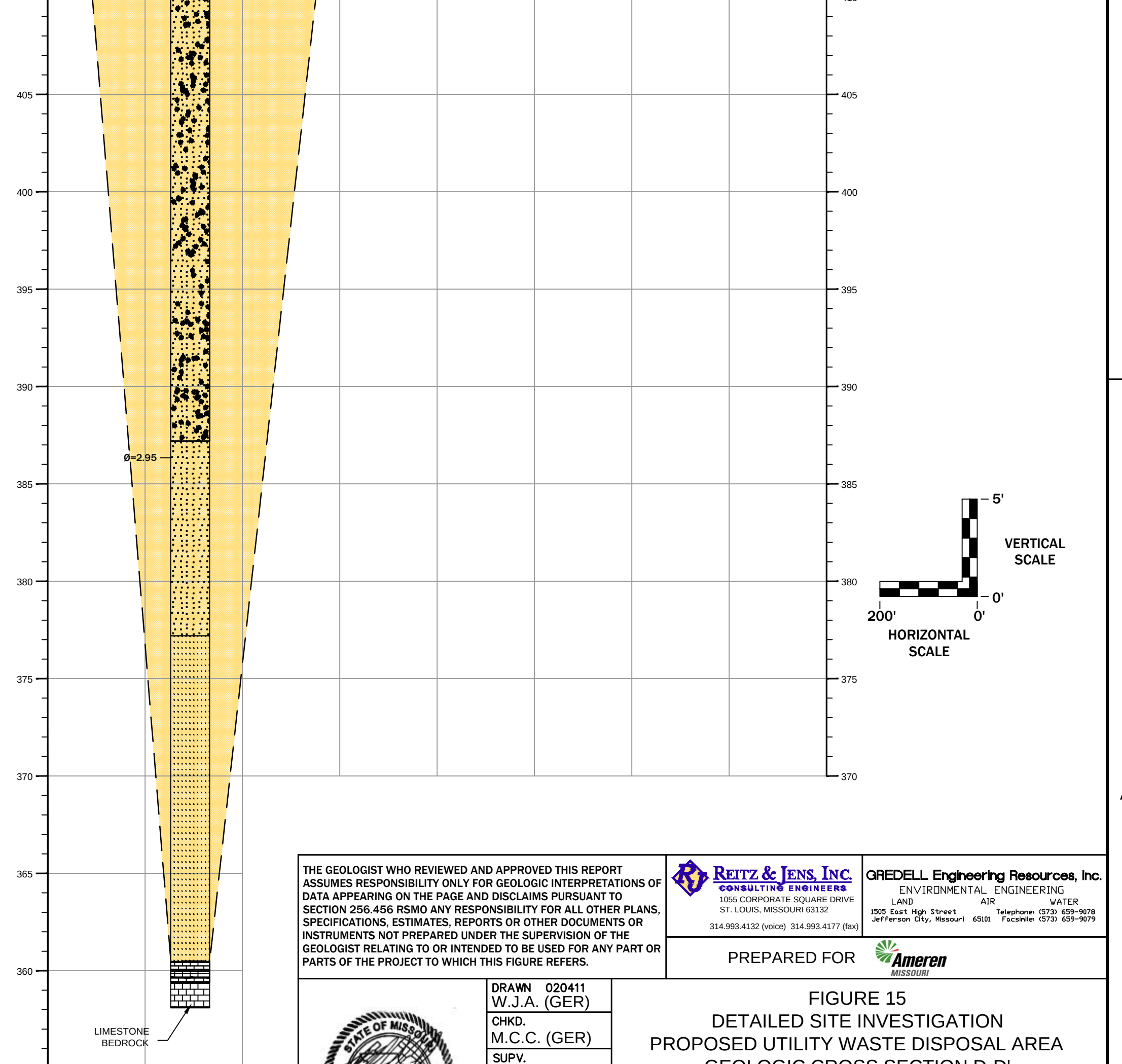
FACIES ENVIRONMENTS

- FLOOD BASIN DEPOSITS
- FLOOD PLAIN / LEVEE DEPOSITS
- CHANNEL MARGIN / SPLAY DEPOSITS
- CHANNEL DEPOSITS
- BACKSWAMP / CUT-OFF DEPOSITS

- FACIES BOUNDARY (DASHED WHERE INFERRED)
- PROPOSED LANDFILL BOUNDARY (APPROX.)
- MEAN GRAIN SIZE (mm)
- WATER TABLE ELEVATION
- (N.T.S.) NOT TO SCALE

PIEZOMETER DETAIL

- TOP OF CASING
- BENTONITE SEAL
- FILTER PACK
- WELL SCREEN
- BASE OF PIEZOMETER



THE GEOLOGIST WHO REVIEWED AND APPROVED THIS REPORT ASSUMES RESPONSIBILITY ONLY FOR GEOLOGIC INTERPRETATIONS OF DATA APPEARING ON THE PAGE AND DISCLAIMS PURSUANT TO SECTION 236.456 RSMO ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT PREPARED UNDER THE SUPERVISION OF THE GEOLOGIST RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS FIGURE REFERS.

REITZ & JENS, INC.
CONSULTING ENGINEERS
1055 CORPORATE SQUARE DRIVE
ST. LOUIS, MISSOURI 63132
314.993.4132 (voice) 314.993.4177 (fax)

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
LAND AIR WATER
1055 Cash Ridge Street
Jefferson City, Missouri 65101 Telephone (573) 639-9678 Facsimile (573) 639-9679

PREPARED FOR
Ameren
Missouri

FIGURE 15
DETAILED SITE INVESTIGATION
PROPOSED UTILITY WASTE DISPOSAL AREA
GEOLOGIC CROSS SECTION D-D'

DRAWN: W.J.A. (GER)
CHKD: M.C.C. (GER)
SUPV: M.C.C. (GER)
APPD: M.C.C. (GER)

LOCATION: 001004
LABADIE PLANT
ST. LOUIS, MISSOURI

CLASS: 02010
REV.

FIG (12)(13)(14)(15)(16)(17).DWG

MISSOURI ONE CALL SYSTEM, INC.

PRINT
DIST.

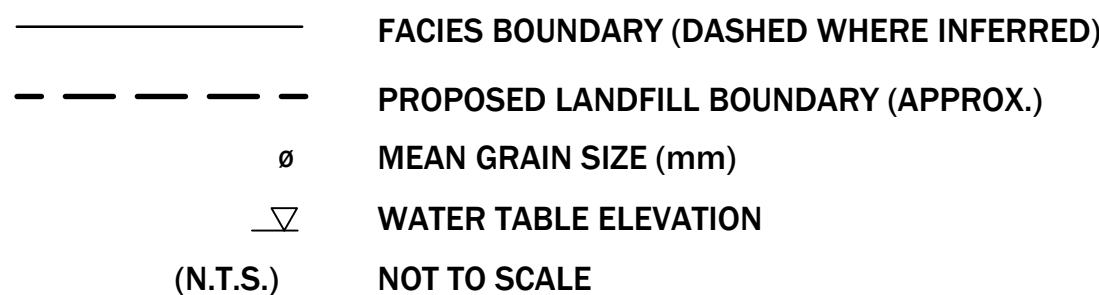
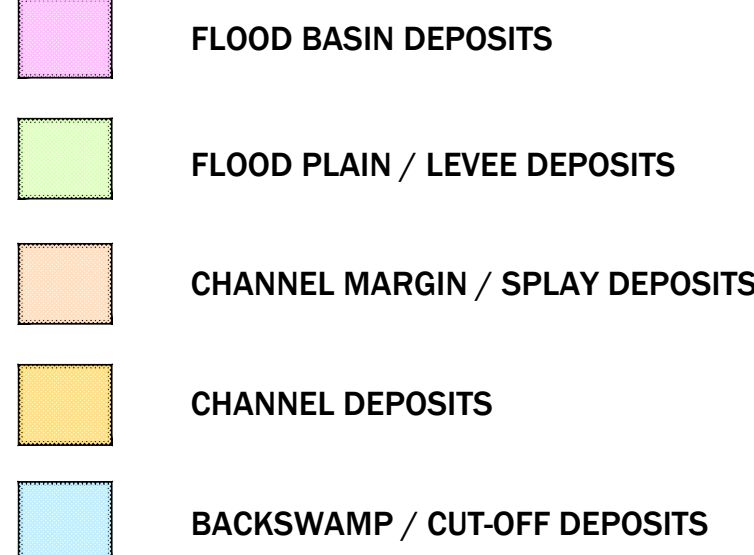
REVISIONS
REV. W.O.

LEGEND (SEE NOTE #7)

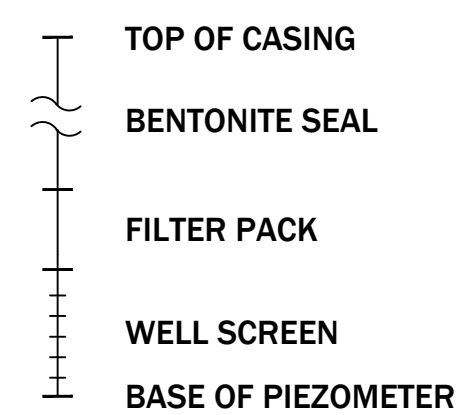
PREDOMINANT PARTICLE SIZE



FACIES ENVIRONMENTS

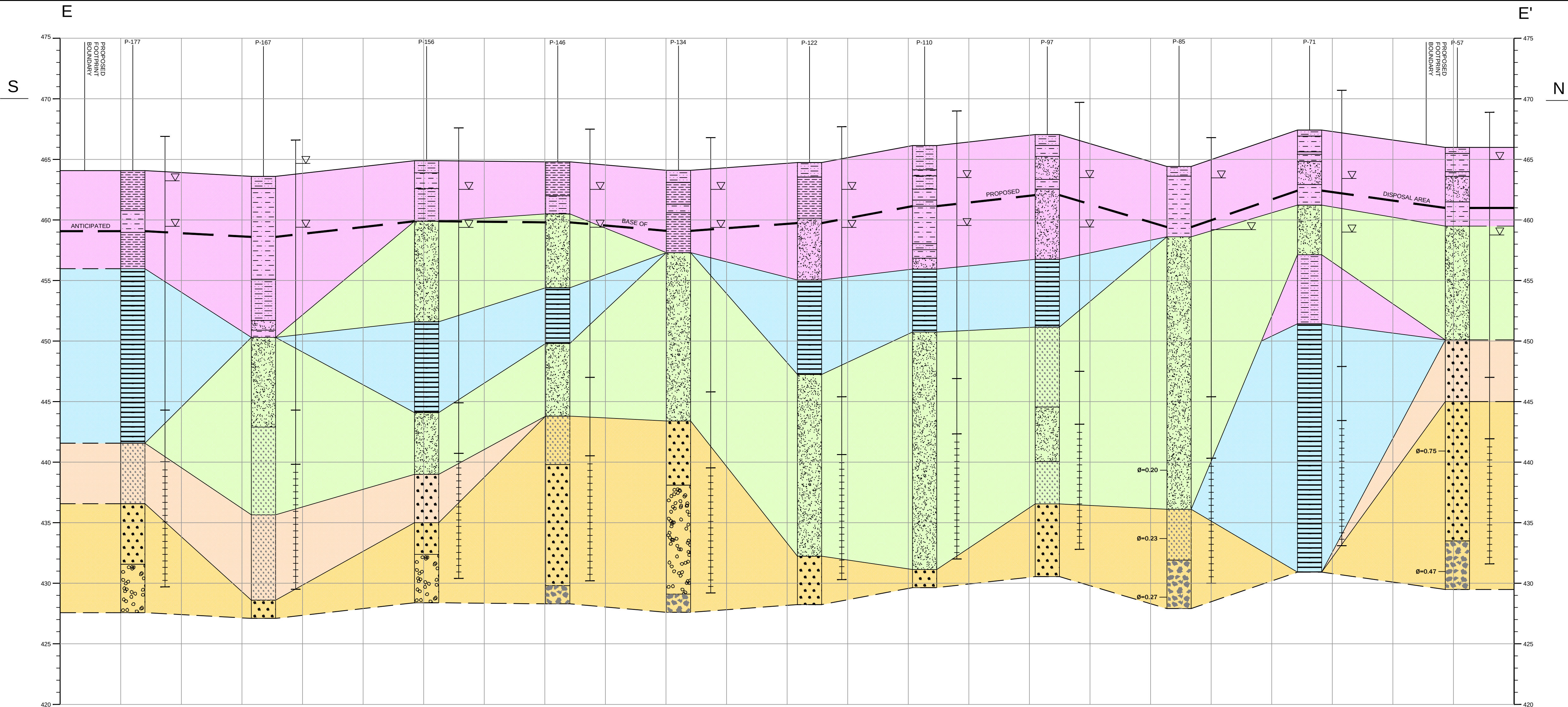


PIEZOMETER DETAIL



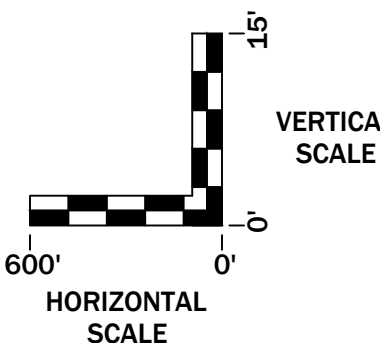
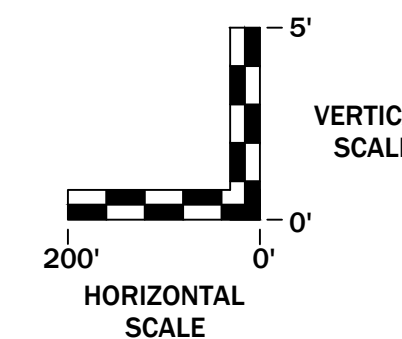
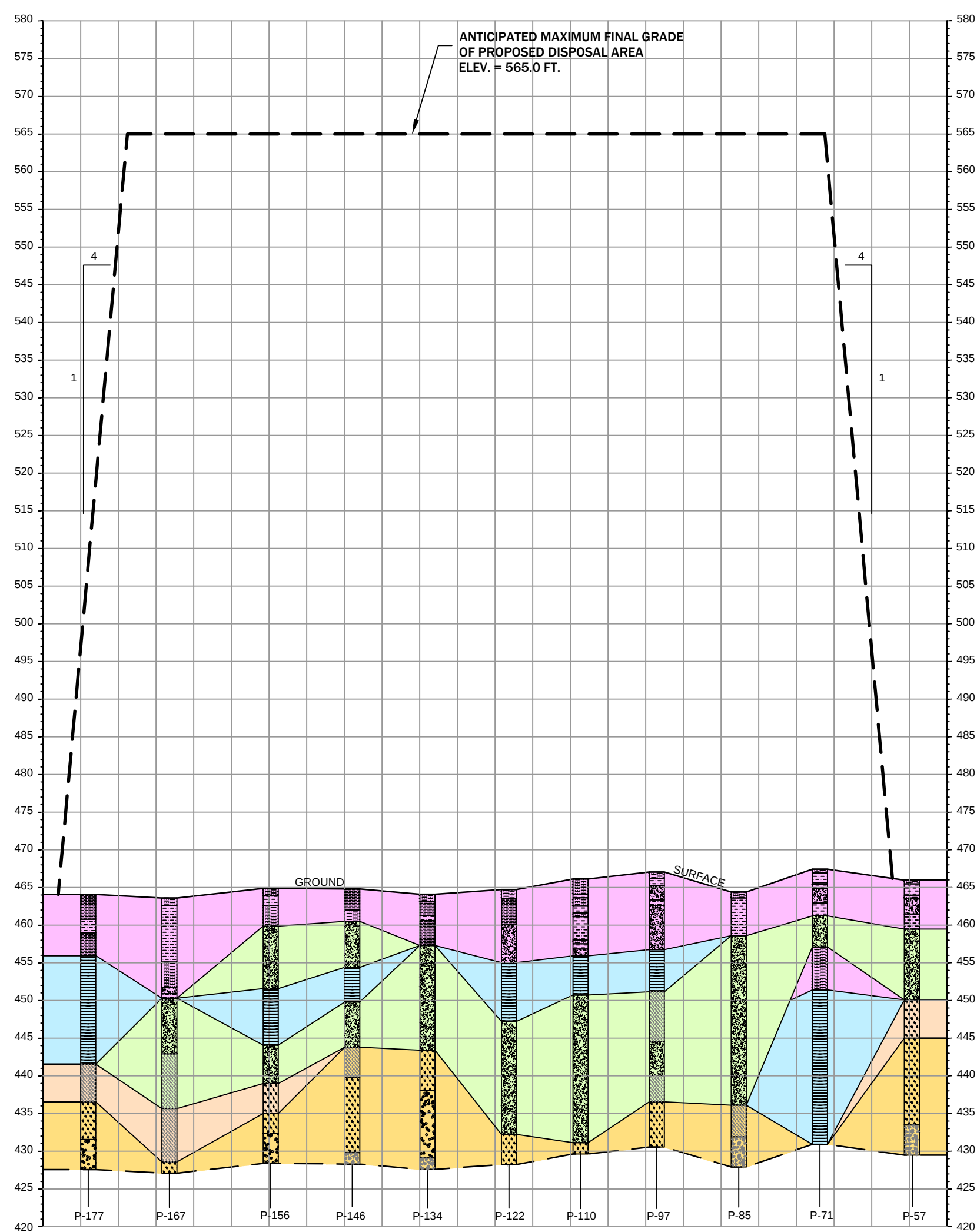
NOTES

- SEE FIGURE 8 FOR CROSS - SECTION LOCATION.
- ADDITIONAL BOREHOLE INFORMATION PRESENTED IN APPENDIX 2 AND 4.
- ADDITIONAL PIEZOMETER INFORMATION PRESENTED IN APPENDIX 5.
- WATER TABLE DATA REPRESENT MAXIMUM AND MINIMUM READINGS DURING 12-MONTH MONITORING PERIOD.
- MEAN GRAIN SIZE DATA PRESENTED IN APPENDIX 2.
- SEE SECTION 5.1 OF REPORT FOR ADDITIONAL DISCUSSION OF CROSS-SECTIONS.
- FOR EXPLANATION OF SYMBOLS USED FOR TEMPORARY BORINGS AND CPT'S, REFER TO APPENDIX 2.
- CHANNEL DEPOSITS DEPICTED ON FIGURE 10 BETWEEN P-122 AND P-134 AND BETWEEN P-146 AND P-156 NOT REPRESENTED ON CROSS-SECTION.



GEOLOGIC CROSS SECTION E-E'

**SECTION E-E'
CONCEPTUAL DISPOSAL AREA FINAL GRADE**



BEFORE YOU
DIG - DRILL - BLAST
1-800-344-7483
(TOLL FREE)
MISSOURI ONE CALL SYSTEM, INC.

THE GEOLOGIST WHO REVIEWED AND APPROVED THIS REPORT ASSUMES RESPONSIBILITY ONLY FOR GEOLOGIC INTERPRETATIONS OF DATA APPEARING ON THE PAGE AND DISCLAIMS PURSUANT TO SECTION 236.456 RSMO ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT PREPARED UNDER THE SUPERVISION OF THE GEOLOGIST RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS FIGURE REFERS.		REITZ & JENS, INC. CONSULTING ENGINEERS 1055 CORPORATE SQUARE DRIVE ST. LOUIS, MISSOURI 63132 314.993.4132 (voice) 314.993.4177 (fax)		GRIEDEL Engineering Resources, Inc. ENVIRONMENTAL ENGINEERING LAND AIR WATER 1005 East High Street Jefferson City, Missouri 65101 Telephone (573) 639-9678 Facsimile (573) 639-9679	
DRAWN 020411 W.J.A. (GER) CHKD. M.C.C. (GER) SUPV. M.C.C. (GER) APPD. M.C.C. (GER)		FIGURE 16 DETAILED SITE INVESTIGATION PROPOSED UTILITY SITE WASTE DISPOSAL AREA GEOLOGIC CROSS SECTION E-E'		CLASS 02010 REV.	
ST. LOUIS, MISSOURI		LABADIE PLANT		FIG (12)(13)(14)(15)(16)(17).DWG	

PRINT
DIST.

REVISIONS
REV. W.O.

LEGEND (SEE NOTE #7)

PREDOMINANT PARTICLE SIZE

- CLAY
- SILT
- SILTY CLAY
- "GLEY" - COLORED SEQUENCES (EXCEPT FOR INTERVALS OF MEDIUM TO COARSE SAND)
- VERY FINE TO FINE SAND
- MEDIUM SAND
- COARSE TO VERY COARSE SAND
- GRAVELLY SAND
- SANDY GRAVEL

FACIES ENVIRONMENTS

- FLOOD BASIN DEPOSITS
- FLOOD PLAIN / LEVEE DEPOSITS
- CHANNEL MARGIN / SPLAY DEPOSITS
- CHANNEL DEPOSITS
- BACKSWAMP / CUT-OFF DEPOSITS

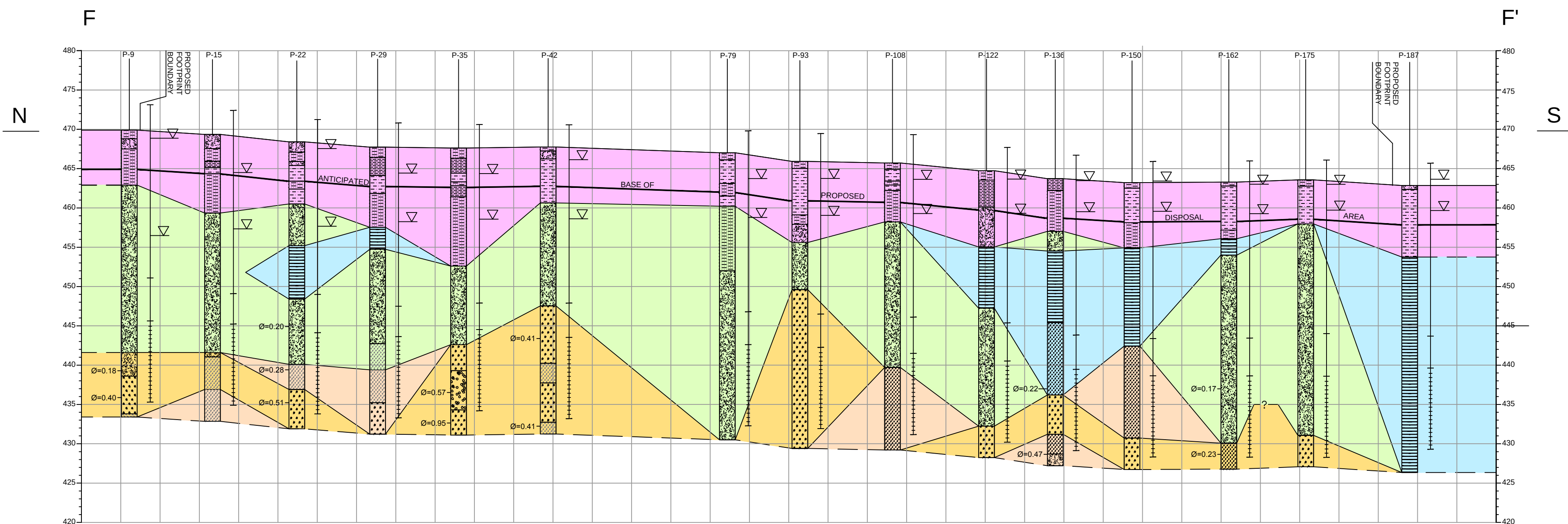
- FACIES BOUNDARY (DASHED WHERE INFERRED)
- PROPOSED LANDFILL BOUNDARY (APPROX.)
- MEAN GRAIN SIZE (mm)
- WATER TABLE ELEVATION
- (N.T.S.) NOT TO SCALE

PIEZOMETER DETAIL

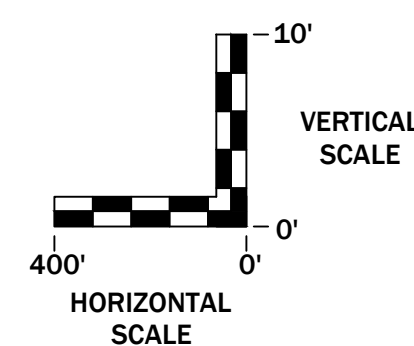
- TOP OF CASING
- BENTONITE SEAL
- FILTER PACK
- WELL SCREEN
- BASE OF PIEZOMETER

NOTES

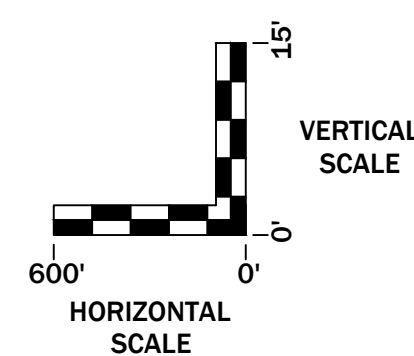
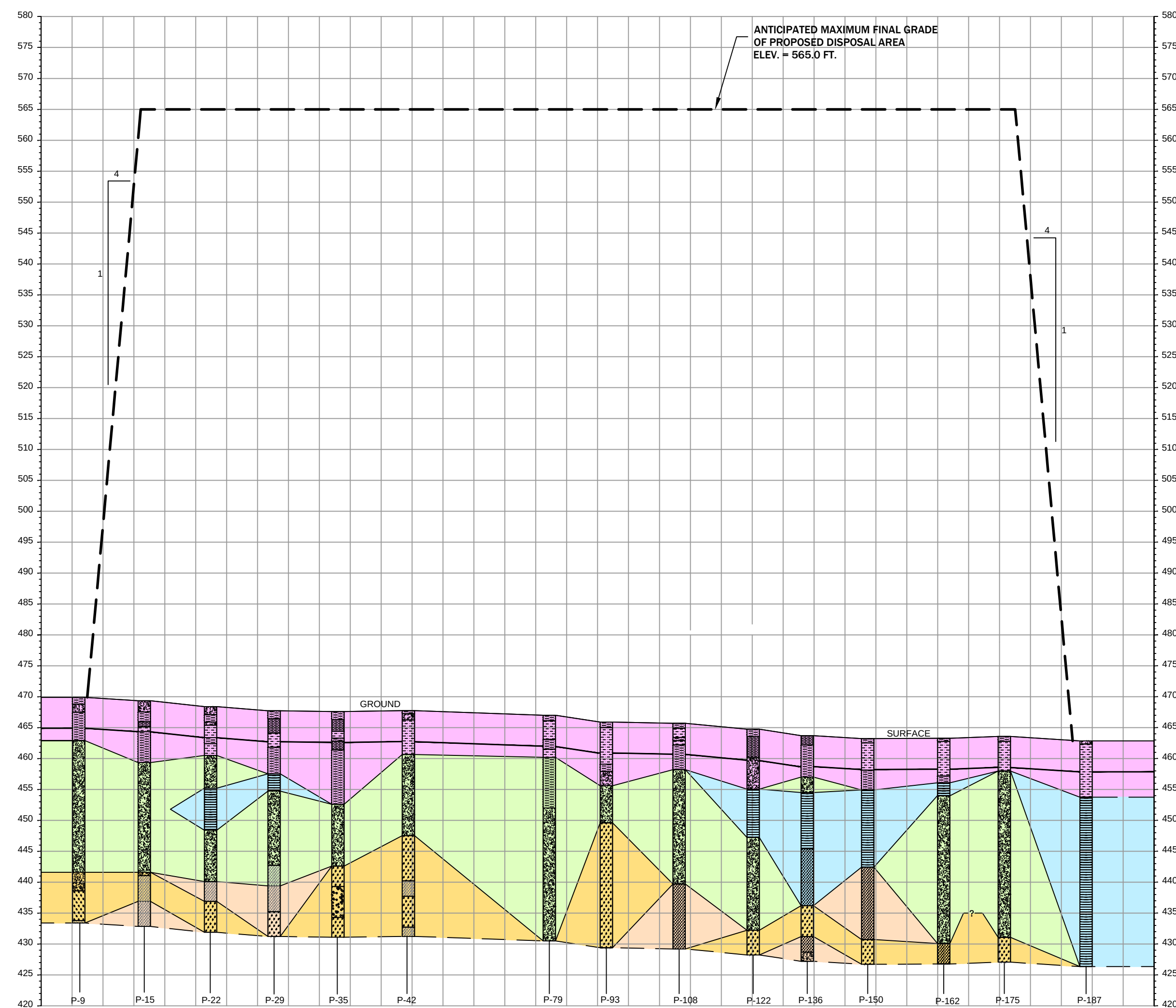
- SEE FIGURE 8 FOR CROSS - SECTION LOCATION.
- ADDITIONAL BOREHOLE INFORMATION PRESENTED IN APPENDIX 2 AND 4.
- ADDITIONAL PIEZOMETER INFORMATION PRESENTED IN APPENDIX 5.
- WATER TABLE DATA REPRESENT MAXIMUM AND MINIMUM READINGS DURING 12-MONTH MONITORING PERIOD.
- MEAN GRAIN SIZE DATA PRESENTED IN APPENDIX 2.
- SEE SECTION 5.1 OF REPORT FOR ADDITIONAL DISCUSSION OF CROSS-SECTIONS.
- FOR EXPLANATION OF SYMBOLS USED FOR TEMPORARY BORINGS AND CPT'S, REFER TO APPENDIX 2.
- CHANNEL DEPOSITS DEPICTED ON FIGURE 10 BETWEEN P-22 AND P-29 AND BETWEEN P-122 AND P-136 NOT REPRESENTED ON CROSS-SECTION.
- SCALE DIFFERS FROM OTHER CROSS-SECTIONS DUE TO LENGTH OF SECTION F-F' AND FOR EASE OF PRESENTATION.



GEOLOGIC CROSS SECTION F-F'



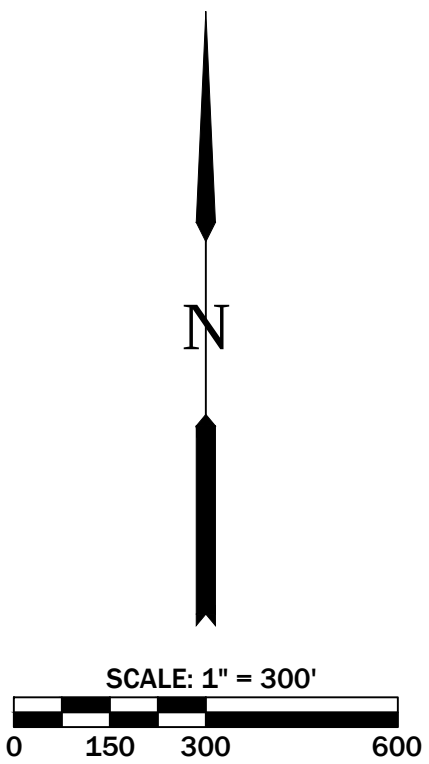
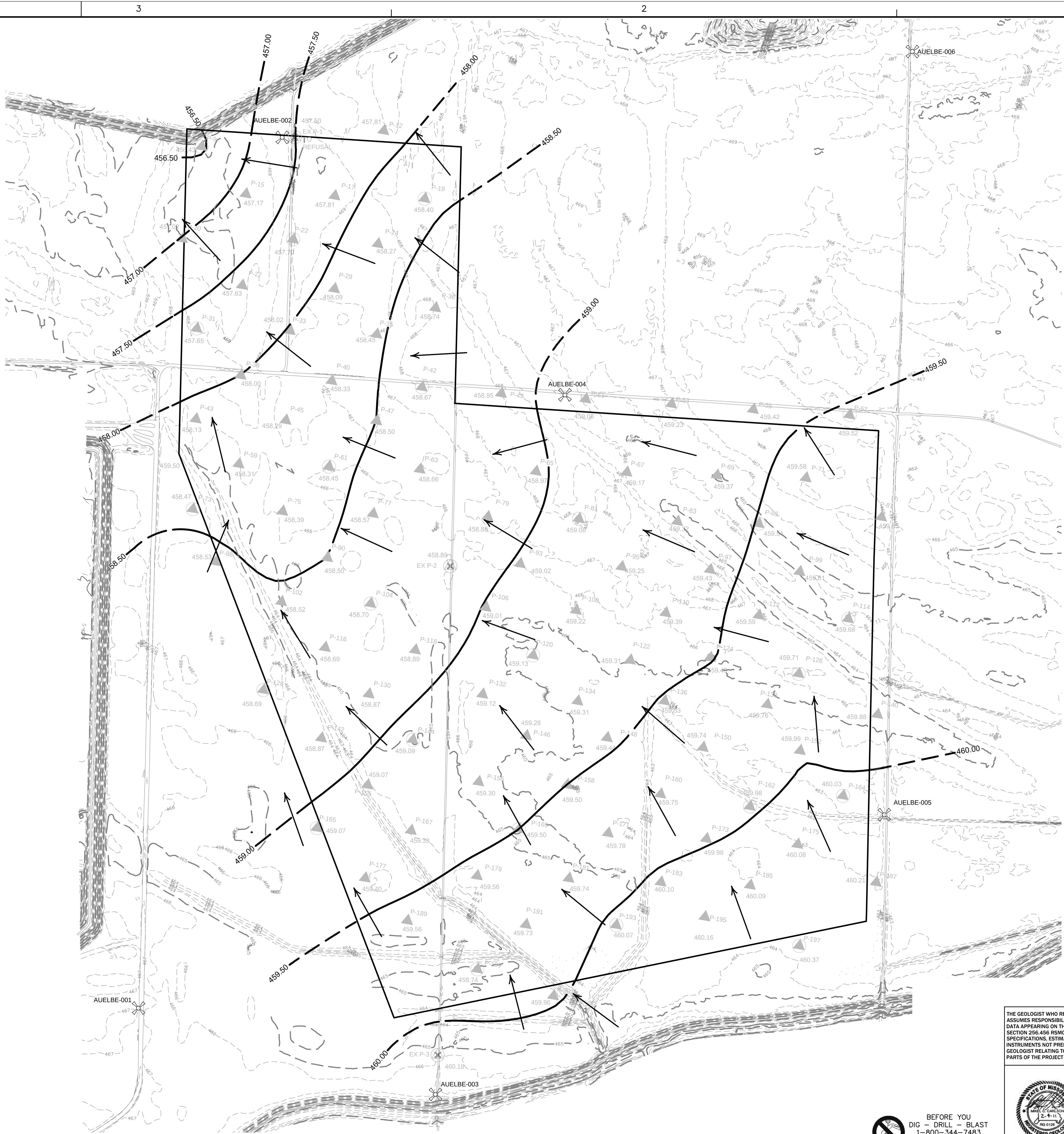
SECTION F-F' CONCEPTUAL DISPOSAL AREA FINAL GRADE



THE GEOLOGIST WHO REVIEWED AND APPROVED THIS REPORT ASSUMES RESPONSIBILITY ONLY FOR GEOLOGIC INTERPRETATIONS OF DATA APPEARING ON THE PAGE AND DISCLAIMS PURSUANT TO SECTION 236.456 RSMO ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT PREPARED UNDER THE SUPERVISION OF THE GEOLOGIST RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS FIGURE REFERS.		REITZ & JENS, INC. CONSULTING ENGINEERS 1055 CORPORATE SQUARE DRIVE ST. LOUIS, MISSOURI 63132 314.993.4132 (voice) 314.993.4177 (fax)		GRIEDEL Engineering Resources, Inc. ENVIRONMENTAL ENGINEERING LAND AIR WATER 1005 East High Street Jefferson City, Missouri 65101 Telephone (573) 639-9678 Facsimile (573) 639-9679	
DRAWN 020411 W.J.A. (GER)		FIGURE 17 DETAILED SITE INVESTIGATION PROPOSED UTILITY WASTE DISPOSAL AREA GEOLOGIC CROSS SECTION F-F'		CLASS 02010	
CHKD. M.C.C. (GER)		LOCATION 001004		LABADIE PLANT	
SUPV. M.C.C. (GER)		ST. LOUIS, MISSOURI		REV.	
APPD. M.C.C. (GER)		FIG (12)(13)(14)(15)(16)(17).DWG			

BEFORE YOU
DIG - DRILL - BLAST
1-800-344-7483
(TOLL FREE)
MISSOURI ONE CALL SYSTEM, INC.

PRINT DIST.	
REVISIONS	
REV.	W.O.



MISSOURI RIVER ELEVATION:
December 21, 2009
451.3 ft Ameren Missouri - Labadie Power Plant Gauging Station

LEGEND

- 2007 PIEZOMETER
- 2" PIEZOMETER
- 4" PIEZOMETER
- SURVEY MONUMENT
- 459.23 GROUNDWATER ELEVATION (FT.)
- GROUNDWATER FLOW DIRECTION
- EXISTING GROUND CONTOURS (C.I. = 1 FT.)
- GROUNDWATER CONTOUR
NOTE: CONTOUR INTERVAL
(C.I.) = 0.5 FT. (DASHED WHERE INFERRED)
- PROPOSED UTILITY WASTE DISPOSAL
AREA FOOTPRINT

NOTES

- MAP DEVELOPED BASED ON CONTOURS GENERATED BY SURFER® SOFTWARE.
- GROUNDWATER DATA NOT AVAILABLE FOR TEMPORARY AND CPT BORINGS.
- MEASUREMENTS RECORDED BY GREDELL ENGINEERING RESOURCES FIELD PERSONNEL.
- MAP REPRESENTATIVE OF GROUNDWATER CONDITIONS OCCURRING ON DATE OF MEASUREMENT.
- USE OF SMALL CONTOUR INTERVAL (0.5 FT.) EXAGGERATES APPARENT "SLOPE" OF WATER TABLE SURFACE.
- RANGE OF GROUNDWATER FLOW GRADIENT AS DETERMINED BY SURFER® SOFTWARE 0.00006161 FT./FT. TO 0.001912 FT./FT.
- MISSOURI RIVER GAUGE ELEVATION = 451.3 FT. ON DATE OF WATER LEVEL MONITORING AS MEASURED AT LABADIE POWER PLANT. THIS REPRESENTS AN APPROXIMATE 14.5 FT. DECREASE IN RIVER ELEVATION BEGINNING ON NOVEMBER 20, 2009.

SURVEY MONUMENTS

MONUMENT ID	NORTHING	EASTING	ELEVATION
AUELBE-001	990484.82	726569.81	467.19
AUELBE-002	996166.50	727588.30	470.70
AUELBE-003	989921.39	728508.32	467.59
AUELBE-004	994487.78	729353.29	467.02
AUELBE-005	991746.97	731438.29	462.78
AUELBE-006	996728.98	731621.69	467.67

Missouri State Plane Coordinate System Datum:
Horizontal Datum NAD 1983;
Vertical Datum NAVD 1988

THE GEOLOGIST WHO REVIEWED AND APPROVED THIS REPORT ASSUMES RESPONSIBILITY ONLY FOR GEOLOGIC INTERPRETATIONS OF DATA APPEARING ON THE PAGE AND DISCLAIMS PURSUANT TO SECTION 236.456 RSMO ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT PREPARED UNDER THE SUPERVISION OF THE GEOLOGIST RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS FIGURE REFERS.

REITZ & JENS, INC.
CONSULTING ENGINEERS
1055 CORPORATE SQUARE DRIVE
ST. LOUIS, MISSOURI 63132
314.993.4132 (voice) 314.993.4177 (fax)

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
LAND AIR WATER
1055 East High Street
Jefferson City, Missouri 65101 Telephone (573) 639-9678 Facsimile (573) 639-9679

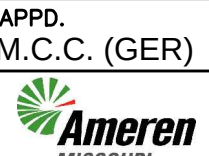
PREPARED FOR



BEFORE YOU
DIG - DRILL - BLAST
1-800-344-7483
(TOLL FREE)
MISSOURI ONE CALL SYSTEM, INC.

DRAWN 020411
W.J.A. (GER)
CHKD.
M.C.C. (GER)
SUPV.
M.C.C. (GER)
APPD.
M.C.C. (GER)

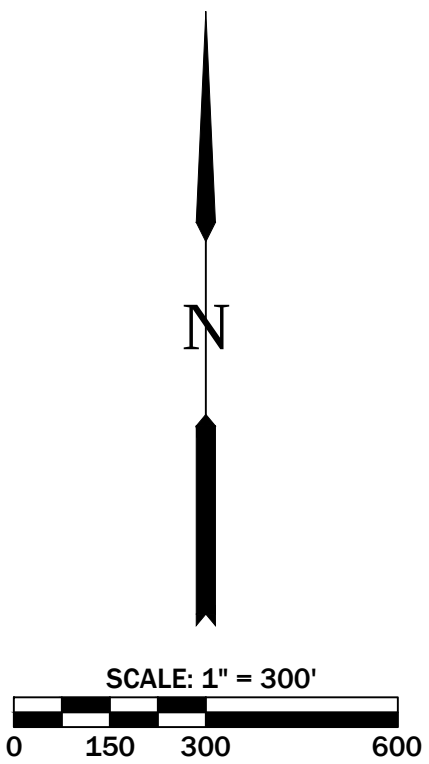
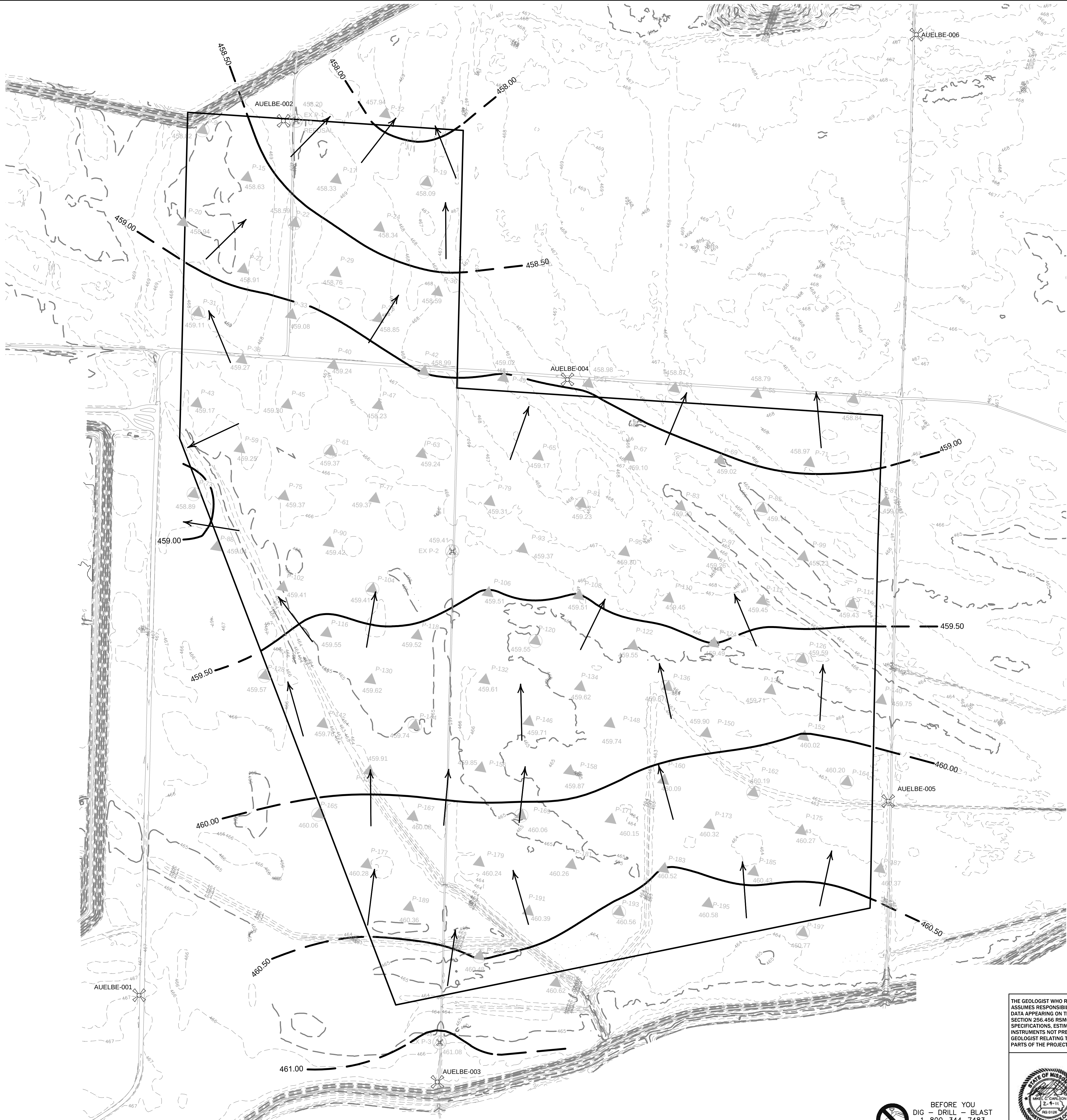
FIGURE 18
DETAILED SITE INVESTIGATION
PROPOSED UTILITY WASTE DISPOSAL AREA
WATER TABLE SURFACE MAP - DECEMBER 21, 2009



LOCATION 001004
LABADIE PLANT
CLASS 02010
REV.

FIGS (18) THRU (29)(33).DWG

PRINT	
DIST.	
REVISIONS	
REV.	W.O.



MISSOURI RIVER ELEVATION:
January 25, 2010
465.9 ft Ameren Missouri - Labadie Power Plant Gauging Station

LEGEND

- 2007 PIEZOMETER
- 2" PIEZOMETER
- 4" PIEZOMETER
- SURVEY MONUMENT

459.23 GROUNDWATER ELEVATION (FT.)

GROUNDWATER FLOW DIRECTION

EXISTING GROUND CONTOURS (C.I. = 1 FT.)

GROUNDWATER CONTOUR
NOTE: CONTOUR INTERVAL
(C.I.) = 0.5 FT. (DASHED WHERE INFERRED)

PROPOSED UTILITY WASTE DISPOSAL
AREA FOOTPRINT

NOTES

- MAP DEVELOPED BASED ON CONTOURS GENERATED BY SURFER® SOFTWARE.
- GROUNDWATER DATA NOT AVAILABLE FOR TEMPORARY AND CPT BORINGS.
- MEASUREMENTS RECORDED BY GREDELL ENGINEERING RESOURCES AND REITZ AND JENS FIELD PERSONNEL.
- MAP REPRESENTATIVE OF GROUNDWATER CONDITIONS OCCURRING ON DATE OF MEASUREMENT.
- USE OF SMALL CONTOUR INTERVAL (0.5 FT.) EXAGGERATES APPARENT "SLOPE" OF WATER TABLE SURFACE.
- RANGE OF GROUNDWATER FLOW GRADIENT AS DETERMINED BY SURFER® SOFTWARE 0.00004573 FT./FT. TO 0.00106 FT./FT.
- MISSOURI RIVER GAUGE ELEVATION = 465.9 FT. ON DATE OF WATER LEVEL MONITORING AS MEASURED AT LABADIE POWER PLANT. THIS REPRESENTS AN APPROXIMATE 13.5 FT. RISE IN RIVER ELEVATION BEGINNING ON JANUARY 18, 2010.

SURVEY MONUMENTS

MONUMENT ID	NORTHING	EASTING	ELEVATION
AUELBE-001	990484.82	726569.81	467.19
AUELBE-002	996166.50	727588.30	470.70
AUELBE-003	989921.39	728508.32	467.59
AUELBE-004	994487.78	729353.29	467.02
AUELBE-005	991746.97	731438.29	462.78
AUELBE-006	996728.98	731621.69	467.67

Missouri State Plane Coordinate System Datum:
Horizontal Datum NAD 1983;
Vertical Datum NAVD 1988

THE GEOLOGIST WHO REVIEWED AND APPROVED THIS REPORT ASSUMES RESPONSIBILITY ONLY FOR GEOLOGIC INTERPRETATIONS OF DATA APPEARING ON THE PAGE AND DISCLAIMS PURSUANT TO SECTION 236.456 RSMO ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT PREPARED UNDER THE SUPERVISION OF THE GEOLOGIST RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS FIGURE REFERS.

REITZ & JENS, INC.
CONSULTING ENGINEERS
1055 CORPORATE SQUARE DRIVE
ST. LOUIS, MISSOURI 63132
314.993.4132 (voice) 314.993.4177 (fax)

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL, ENGINEERING,
LAND AIR WATER
1055 East High Street
Jefferson City, Missouri 65101 Telephone (573) 639-9678 Facsimile (573) 639-9679

PREPARED FOR



DRAWN 020411
W.J.A. (GER)
CHKD.
M.C.C. (GER)
SUPV.
M.C.C. (GER)
APPD.
M.C.C. (GER)

FIGURE 19
DETAILED SITE INVESTIGATION
PROPOSED UTILITY WASTE DISPOSAL AREA
WATER TABLE SURFACE MAP - JANUARY 25, 2010

LOCATION	LABADIE PLANT	CLASS
001004		02010
REV.		



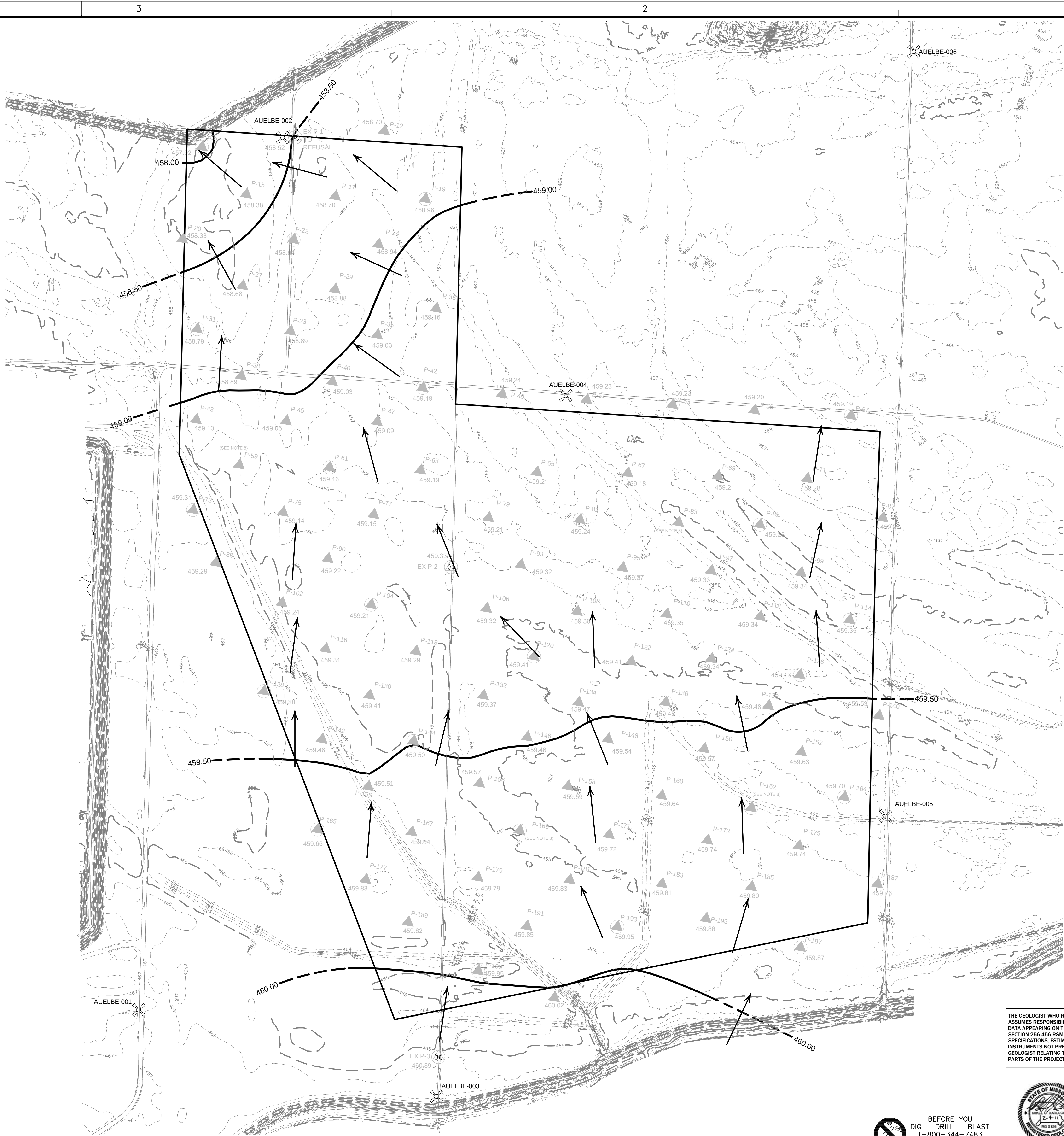
ST. LOUIS, MISSOURI

FIGS (18) THRU (29)(33).DWG



BEFORE YOU
DIG - DRILL - BLAST
1-800-344-7483
(TOLL FREE)
MISSOURI ONE CALL SYSTEM, INC.

PRINT DIST.	
REVISIONS	
REV.	W.O.



MISSOURI RIVER ELEVATION:
February 16, 2010
454.0 ft Ameren Missouri - Labadie Power Plant Gauging Station

LEGEND

- 2007 PIEZOMETER
- 2" PIEZOMETER
- 4" PIEZOMETER
- SURVEY MONUMENT

459.23 GROUNDWATER ELEVATION (FT.)

GROUNDWATER FLOW DIRECTION

EXISTING GROUND CONTOURS (C.I. = 1 FT.)

GROUNDWATER CONTOUR
NOTE: CONTOUR INTERVAL
(C.I.) = 0.5 FT. (DASHED WHERE INFERRED)

PROPOSED UTILITY WASTE DISPOSAL
AREA FOOTPRINT

NOTES

- MAP DEVELOPED BASED ON CONTOURS GENERATED BY SURFER® SOFTWARE.
- GROUNDWATER DATA NOT AVAILABLE FOR TEMPORARY AND CPT BORINGS.
- MEASUREMENTS RECORDED BY GREDELL ENGINEERING RESOURCES AND REITZ AND JENS FIELD PERSONNEL.
- MAP REPRESENTATIVE OF GROUNDWATER CONDITIONS OCCURRING ON DATE OF MEASUREMENT.
- USE OF SMALL CONTOUR INTERVAL (0.5 FT.) EXAGGERATES APPARENT "SLOPE" OF WATER TABLE SURFACE.
- RANGE OF GROUNDWATER FLOW GRADIENT AS DETERMINED BY SURFER® SOFTWARE 0.000003049 FT./FT. TO 0.005547 FT./FT.
- MISSOURI RIVER GAUGE ELEVATION = 454.0 FT. ON DATE OF WATER LEVEL MONITORING AS MEASURED AT LABADIE POWER PLANT. THIS REPRESENTS AN APPROXIMATE 4.2 FT. DECREASE IN RIVER ELEVATION BEGINNING ON FEBRUARY 11, 2010.
- GROUNDWATER ELEVATION READINGS FOR P-59, P-83, P-162, AND P-169 ARE SUSPECTED MEASUREMENT ERRORS. VALUES NOT CONSIDERED REPRESENTATIVE OF TRUE GROUNDWATER CONDITIONS (SEE TABLE 3).

SURVEY MONUMENTS

MONUMENT ID	NORTHING	EASTING	ELEVATION
AUELBE-001	990484.82	726569.81	467.19
AUELBE-002	996166.50	727588.30	470.70
AUELBE-003	989921.39	728508.32	467.59
AUELBE-004	994487.78	729353.29	467.02
AUELBE-005	991746.97	731438.29	462.78
AUELBE-006	996728.98	731621.69	467.67

Missouri State Plane Coordinate System Datum:
Horizontal Datum NAD 1983;
Vertical Datum NAVD 1988

THE GEOLOGIST WHO REVIEWED AND APPROVED THIS REPORT ASSUMES RESPONSIBILITY ONLY FOR GEOLOGIC INTERPRETATIONS OF DATA APPEARING ON THE PAGE AND DISCLAIMS PURSUANT TO SECTION 236.456 RSMO ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT PREPARED UNDER THE SUPERVISION OF THE GEOLOGIST RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS FIGURE REFERS.

REITZ & JENS, INC.
CONSULTING ENGINEERS
1055 CORPORATE SQUARE DRIVE
ST. LOUIS, MISSOURI 63132
314.993.4132 (voice) 314.993.4177 (fax)

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
LAND AIR WATER
1055 East High Street
Jefferson City, Missouri 65101 Telephone (573) 639-9678 Facsimile (573) 639-9679

PREPARED FOR

Ameren
MISSOURI



DRAWN 020411
W.J.A. (GER)
CHKD.
M.C.C. (GER)
SUPV.
M.C.C. (GER)
APPD.
M.C.C. (GER)

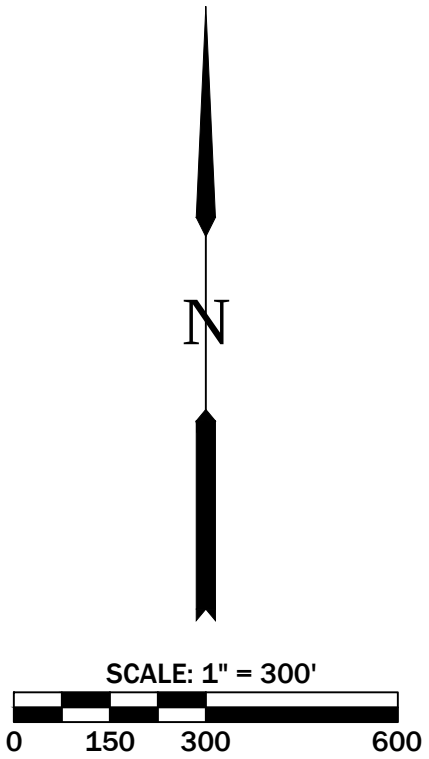
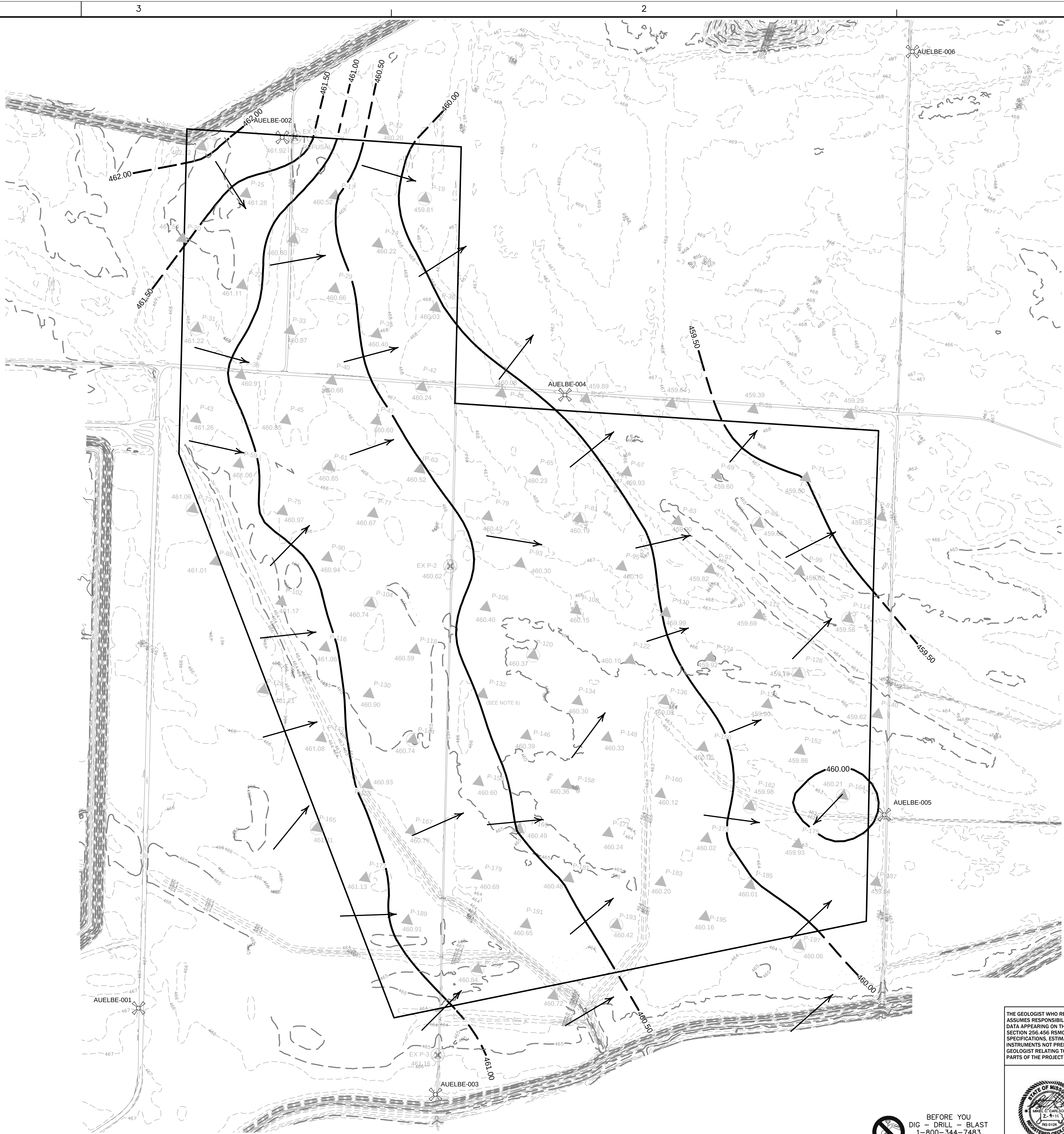
FIGURE 20
DETAILED SITE INVESTIGATION
PROPOSED UTILITY WASTE DISPOSAL AREA
WATER TABLE SURFACE MAP - FEBRUARY 16, 2010

LOCATION 001004 LABADIE PLANT CLASS 02010
ST. LOUIS, MISSOURI FIGS (18) THRU (29)(33) DWG REV.



BEFORE YOU
DIG - DRILL - BLAST
1-800-344-7483
(TOLL FREE)
MISSOURI ONE CALL SYSTEM, INC.

PRINT	
DIST.	
REVISIONS	
REV.	W.O.



MISSOURI RIVER ELEVATION:
March 16, 2010
468.2 ft Ameren Missouri - Labadie Power Plant Gauging Station

LEGEND

- 2007 PIEZOMETER
- 2" PIEZOMETER
- 4" PIEZOMETER
- SURVEY MONUMENT
- 459.23 GROUNDWATER ELEVATION (FT.)
- GROUNDWATER FLOW DIRECTION
- EXISTING GROUND CONTOURS (C.I. = 1 FT.)
- GROUNDWATER CONTOUR
NOTE: CONTOUR INTERVAL
(C.I.) = 0.5 FT. (DASHED WHERE INFERRED)
- PROPOSED UTILITY WASTE DISPOSAL
AREA FOOTPRINT

NOTES

- MAP DEVELOPED BASED ON CONTOURS GENERATED BY SURFER® SOFTWARE.
- GROUNDWATER DATA NOT AVAILABLE FOR TEMPORARY AND CPT BORINGS.
- MEASUREMENTS RECORDED BY GREDELL ENGINEERING RESOURCES AND REITZ AND JENS FIELD PERSONNEL.
- MAP REPRESENTATIVE OF GROUNDWATER CONDITIONS OCCURRING ON DATE OF MEASUREMENT.
- USE OF SMALL CONTOUR INTERVAL (0.5 FT.) EXAGGERATES APPARENT "SLOPE" OF WATER TABLE SURFACE.
- RANGE OF GROUNDWATER FLOW GRADIENT AS DETERMINED BY SURFER® SOFTWARE 0.000006952 FT./FT. TO 0.003517 FT./FT.
- MISSOURI RIVER GAUGE ELEVATION = 468.2 FT. ON DATE OF WATER LEVEL MONITORING AS MEASURED AT LABADIE POWER PLANT. THIS REPRESENTS AN APPROXIMATE 13.5 FT. RISE IN RIVER ELEVATION BEGINNING ON MARCH 8, 2010.
- GROUNDWATER ELEVATION READING FOR P-132 IS SUSPECTED MEASUREMENT ERROR. VALUE NOT CONSIDERED REPRESENTATIVE OF TRUE GROUNDWATER CONDITIONS (SEE TABLE 3).

SURVEY MONUMENTS

MONUMENT ID	NORTHING	EASTING	ELEVATION
AUELBE-001	990484.82	726569.81	467.19
AUELBE-002	996166.50	727588.30	470.70
AUELBE-003	989921.39	728508.32	467.59
AUELBE-004	994487.78	729353.29	467.02
AUELBE-005	991746.97	731438.29	462.78
AUELBE-006	996728.98	731621.69	467.67

Missouri State Plane Coordinate System Datum:
Horizontal Datum NAD 1983;
Vertical Datum NAVD 1988

THE GEOLOGIST WHO REVIEWED AND APPROVED THIS REPORT ASSUMES RESPONSIBILITY ONLY FOR GEOLOGIC INTERPRETATIONS OF DATA APPEARING ON THE PAGE AND DISCLAIMS PURSUANT TO SECTION 236.456 RSMO ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT PREPARED UNDER THE SUPERVISION OF THE GEOLOGIST RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS FIGURE REFERS.

REITZ & JENS, INC.
CONSULTING ENGINEERS
1055 CORPORATE SQUARE DRIVE
ST. LOUIS, MISSOURI 63132
314.993.4132 (voice) 314.993.4177 (fax)

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
LAND AIR WATER
1055 East High Street
Jefferson City, Missouri 65101 Telephone (573) 639-9678 Facsimile (573) 639-9679

PREPARED FOR **Ameren**



DRAWN 020411
W.J.A. (GER)
CHKD.
M.C.C. (GER)
SUPV.
M.C.C. (GER)
APPD.
M.C.C. (GER)

FIGURE 21
DETAILED SITE INVESTIGATION
PROPOSED UTILITY WASTE DISPOSAL AREA
WATER TABLE SURFACE MAP - MARCH 16, 2010

LOCATION	LABADIE PLANT	CLASS
001004		02010
REV.		

FIGS (18) THRU (29)(33).DWG

BEFORE YOU
DIG - DRILL - BLAST
1-800-344-7483
(TOLL FREE)
MISSOURI ONE CALL SYSTEM, INC.