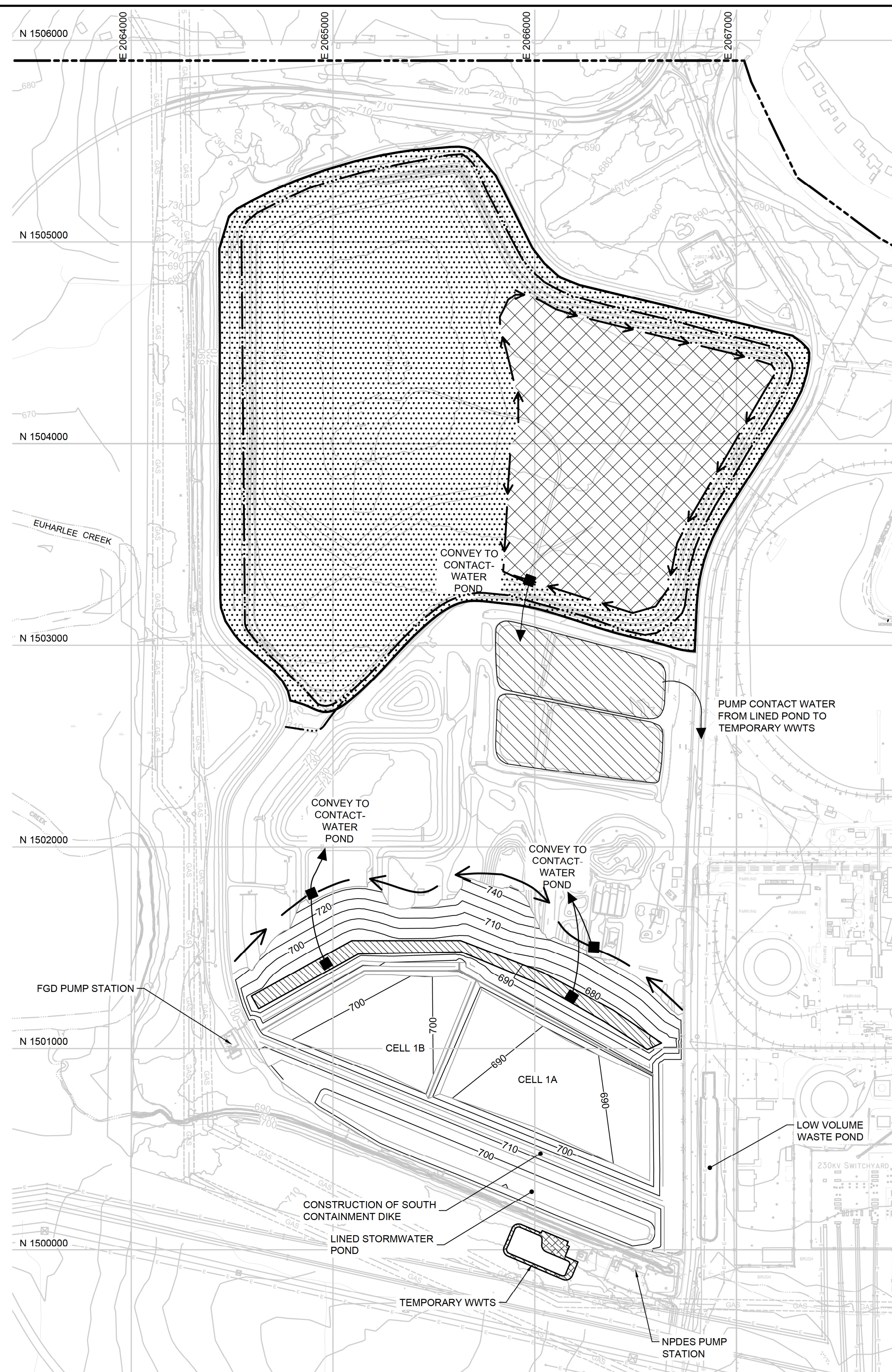


**PHASE 1
INITIAL CCR EXCAVATION**

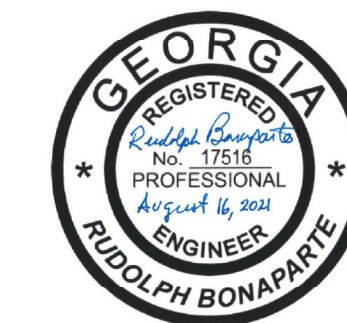
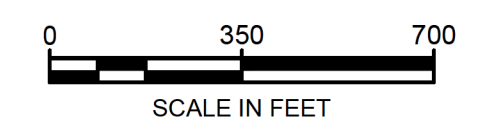


**PHASE 2
CELL 1 CONSTRUCTION**

LEGEND

- COVERED CCR (NON-CONTACT WATER)
- TEMPORARY CCR STOCKPILE AREA (NOTE 6)
- CONTACT-WATER COLLECTION / MANAGEMENT AREA (NOTE 7)
- LINED CONTACT-WATER POND
- TEMPORARY WWTS PAD
- CONTACT-WATER DIVERSION
- STORMWATER (NON-CONTACT WATER) DIVERSION

- NOTES:**
- PHASING APPROACH IS CONCEPTUAL, AND WILL BE REFINED DURING DETAILED DESIGN. IN ADDITION, CONTRACTOR WILL HAVE DISCRETION TO ADJUST PHASE BOUNDARIES AND SEQUENCE, STOCKPILE LOCATION(S), AND CONTACT-WATER COLLECTION / MANAGEMENT AREAS, BASED ON FIELD CONDITIONS ENCOUNTERED AND TO FACILITATE CONSTRUCTION, AS APPROVED BY GEORGIA POWER COMPANY, WITH REQUIREMENT THAT DESIGN CRITERIA INCLUDING THOSE RELATED TO STORMWATER AND CONTACT WATER MANAGEMENT, ARE MET.
 - STORMWATER AND CONTACT-WATER MANAGEMENT WILL BE CONDUCTED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN THE "CLOSURE PLAN" (PART A, SECTION 7 OF THIS PERMIT APPLICATION). DESIGN CRITERIA AND EVALUATION OF CASES RELATED TO THE CLOSURE PHASES PRESENTED HEREIN ARE PROVIDED IN A CALCULATION PACKAGE FOR INTERIM STORMWATER MANAGEMENT CONDITIONS, INCLUDED IN THE "ENGINEERING REPORT" (PART B, SECTION 3 OF THIS PERMIT APPLICATION).
 - DURING CLOSURE CONSTRUCTION, CONTACT WATER WILL BE PUMPED OR CONVEYED BY GRAVITY TO LINED CONTACT-WATER PONDS WITHIN AP-1, WHERE IT WILL BE TEMPORARILY STORED AND THEN PUMPED TO AN ON-SITE TEMPORARY WASTEWATER TREATMENT SYSTEM (WWTS) OR OTHERWISE PROPERLY MANAGED IN ACCORDANCE WITH THE PLANT'S NPDES PERMIT REQUIREMENTS. NON-CONTACT STORMWATER WILL BE MANAGED IN ACCORDANCE WITH APPLICABLE EROSION AND SEDIMENT CONTROL FEATURES AND REQUIREMENTS PROVIDED IN THIS SET OF CLOSURE DRAWINGS, AND THEN DISCHARGED THROUGH EXISTING OR NEW STORMWATER PONDS TO RECEIVING WATER BODIES WITHOUT TREATMENT.
 - CONTRACTOR WILL BE REQUIRED TO TAKE REASONABLE MEASURES TO MINIMIZE STORMWATER RUN-ON INTO THE CONTACT-WATER COLLECTION / MANAGEMENT AREAS. MINIMIZATION TECHNIQUES MAY INCLUDE THE CONSTRUCTION OF TEMPORARY DIVERSION BERMS OR CHANNELS TO DIVERT STORMWATER AWAY FROM THE COLLECTION / MANAGEMENT AREAS.
 - COVER SYSTEM WILL BE TEMPORARILY TERMINATED AT CLOSURE INCREMENT PHASE BOUNDARIES AS SHOWN IN DETAILS 12 AND 13 ON DRAWING 29 FOR FINAL COVER SYSTEM (SOIL-GEOSYNTHETIC COMPOSITE COVER) AND ALTERNATIVE COVER SYSTEM (CLOSURETURF® COVER), RESPECTIVELY. CLOSURE INCREMENTS ARE APPROXIMATE FOR ILLUSTRATIVE PURPOSES, AND MAY BE ADJUSTED DURING CLOSURE.
 - TEMPORARY CCR STOCKPILE AREA(S) SHOWN ARE CONCEPTUAL AND THEIR LOCATIONS AND SIZES WILL BE REFINED DURING DETAILED DESIGN.
 - CONTACT-WATER COLLECTION / MANAGEMENT AREAS SHOWN ON THIS DRAWING MAY BE ADJUSTED OR SUPPLEMENTED DURING CONSTRUCTION AS NEEDED. CONTACT WATER WILL BE PROMPTLY TRANSFERRED TO THE LINED CONTACT-WATER POND TO MINIMIZE DURATION OF PONDING WITHIN AP-1 EXCAVATIONS.
 - TEMPORARY LINED STORMWATER PONDS (NON-CONTACT WATER) MAY BE UTILIZED DURING CONSTRUCTION AS NEEDED.
 - FOR PHASES WHERE COVERED CCR SHADING ENCLOSES ACTIVE CCR PLACEMENT, THIS INDICATES WHERE A TEMPORARY OR FINAL COVER SYSTEM INCREMENT MAY BE INSTALLED ONCE FINISHED WASTE GRADES ARE ACHIEVED FOR THAT PHASE.



**PERMIT DRAWING
NOT FOR CONSTRUCTION**

REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

CLOSURE PHASING PLANS I

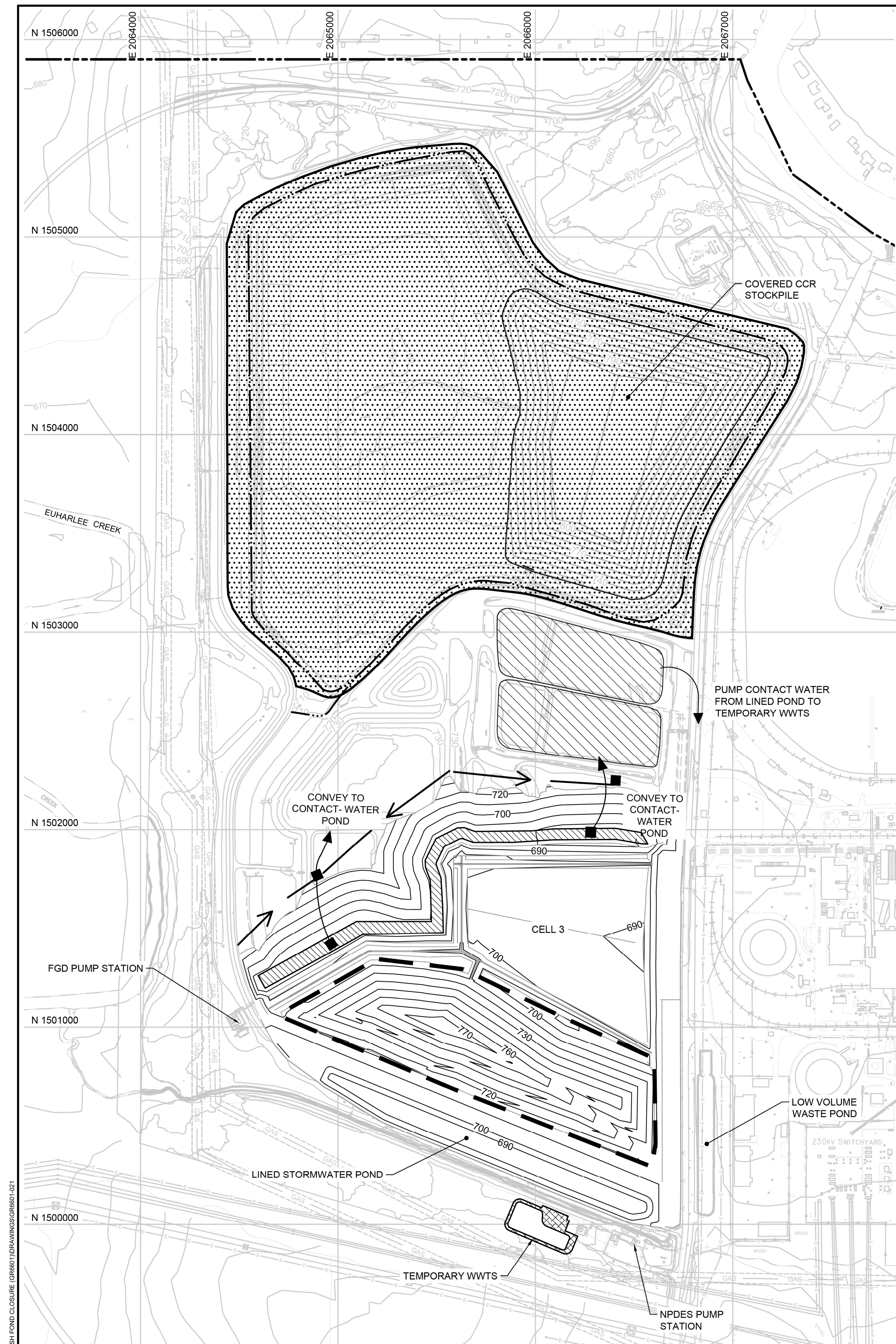
**PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA**

Geosyntec
consultants

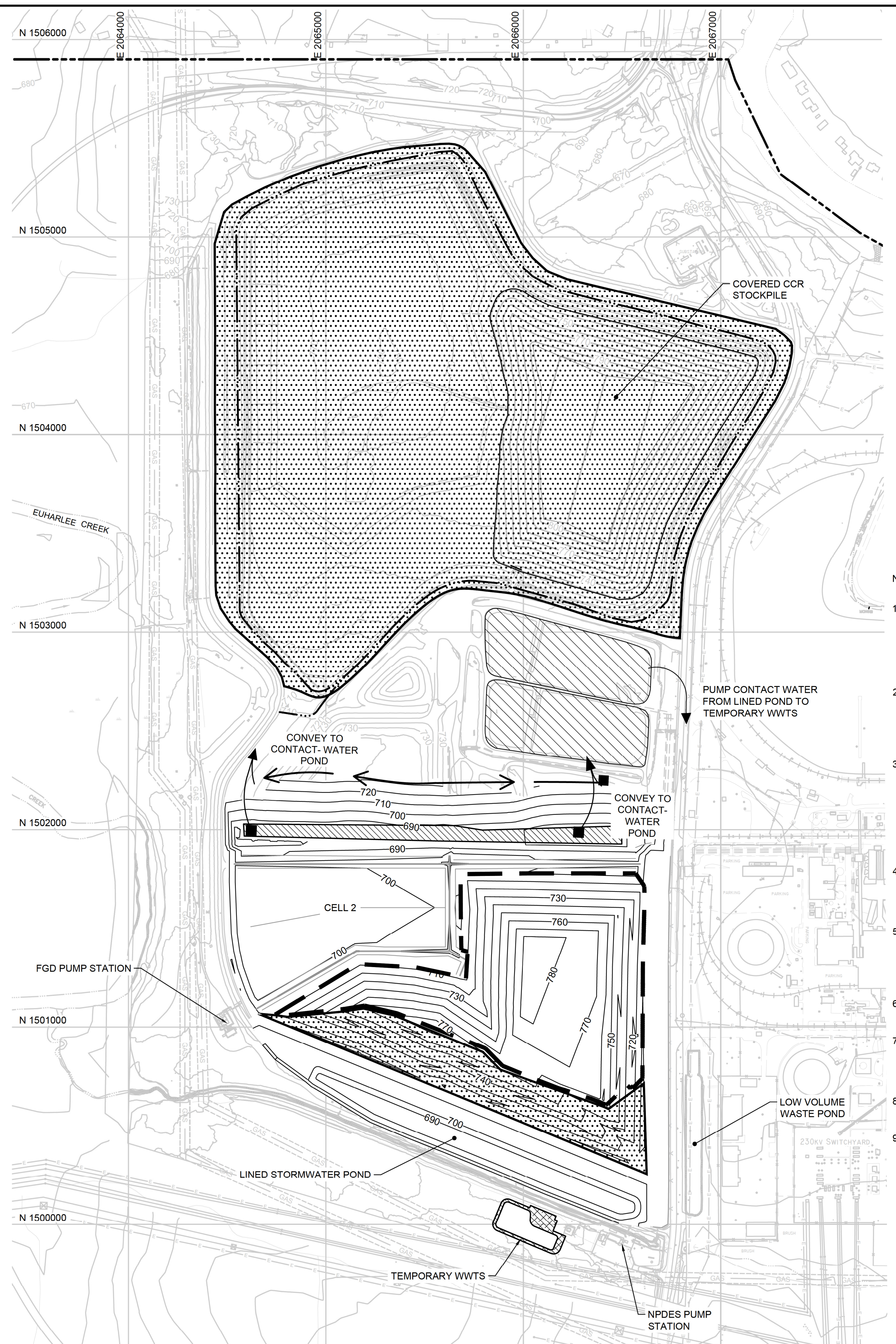
1255 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.202.9500
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-020	EDIT	8/16/21
SCALE	1" = 350'	DRAWING 20 OF 50			
DATE	AUGUST 2021				

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**PHASE 3
CELL 3 CONSTRUCTION AND
CELL 1 FILLING**

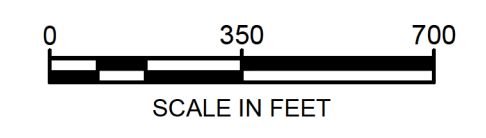


**PHASE 4
CELL 2 CONSTRUCTION AND
CELLS 1 & 3 FILLING**

LEGEND

- COVERED CCR (NON-CONTACT WATER)
- ACTIVE CCR PLACEMENT IN LINED CLOSURE AREA (NOTE 9)
- CONTACT-WATER COLLECTION / MANAGEMENT AREA (NOTE 7)
- LINED CONTACT-WATER POND
- TEMPORARY WWTS PAD
- CONTACT WATER DIVERSION
- STORMWATER (NON-CONTACT WATER) DIVERSION

- NOTES:**
- THIS PHASING APPROACH IS CONCEPTUAL, AND WILL BE REFINED DURING DETAILED DESIGN. IN ADDITION, CONTRACTOR WILL HAVE DISCRETION TO ADJUST PHASE BOUNDARIES AND SEQUENCE, STOCKPILE LOCATION(S), AND CONTACT-WATER COLLECTION / MANAGEMENT AREAS, BASED ON FIELD CONDITIONS ENCOUNTERED AND TO FACILITATE CONSTRUCTION, AS APPROVED BY GEORGIA POWER COMPANY, WITH REQUIREMENT THAT DESIGN CRITERIA INCLUDING THOSE RELATED TO STORMWATER AND CONTACT WATER MANAGEMENT, ARE MET.
 - STORMWATER AND CONTACT-WATER MANAGEMENT WILL BE CONDUCTED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN THE "CLOSURE PLAN" (PART A, SECTION 7 OF THIS PERMIT APPLICATION). DESIGN CRITERIA AND EVALUATION OF CASES RELATED TO THE CLOSURE PHASES PRESENTED HEREIN ARE PROVIDED IN A CALCULATION PACKAGE FOR INTERIM STORMWATER MANAGEMENT CONDITIONS, INCLUDED IN THE "ENGINEERING REPORT" (PART B, SECTION 3 OF THIS PERMIT APPLICATION).
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 - CONTRACTOR WILL BE REQUIRED TO TAKE REASONABLE MEASURES TO MINIMIZE STORMWATER RUN-ON INTO THE CONTACT-WATER COLLECTION / MANAGEMENT AREAS. MINIMIZATION TECHNIQUES MAY INCLUDE THE CONSTRUCTION OF TEMPORARY DIVERSION BERMS OR CHANNELS TO DIVERT STORMWATER AWAY FROM THE COLLECTION / MANAGEMENT AREAS.
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 - TEMPORARY LINED STORMWATER PONDS (NON-CONTACT WATER) MAY BE UTILIZED DURING CONSTRUCTION AS NEEDED.
 - FOR PHASES WHERE COVERED CCR SHADING ENCLOSES ACTIVE CCR PLACEMENT, THIS INDICATES WHERE A TEMPORARY OR FINAL COVER SYSTEM INCREMENT MAY BE INSTALLED ONCE FINISHED WASTE GRADES ARE ACHIEVED FOR THAT PHASE.



REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

CLOSURE PHASING PLANS 2

PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec
consultants

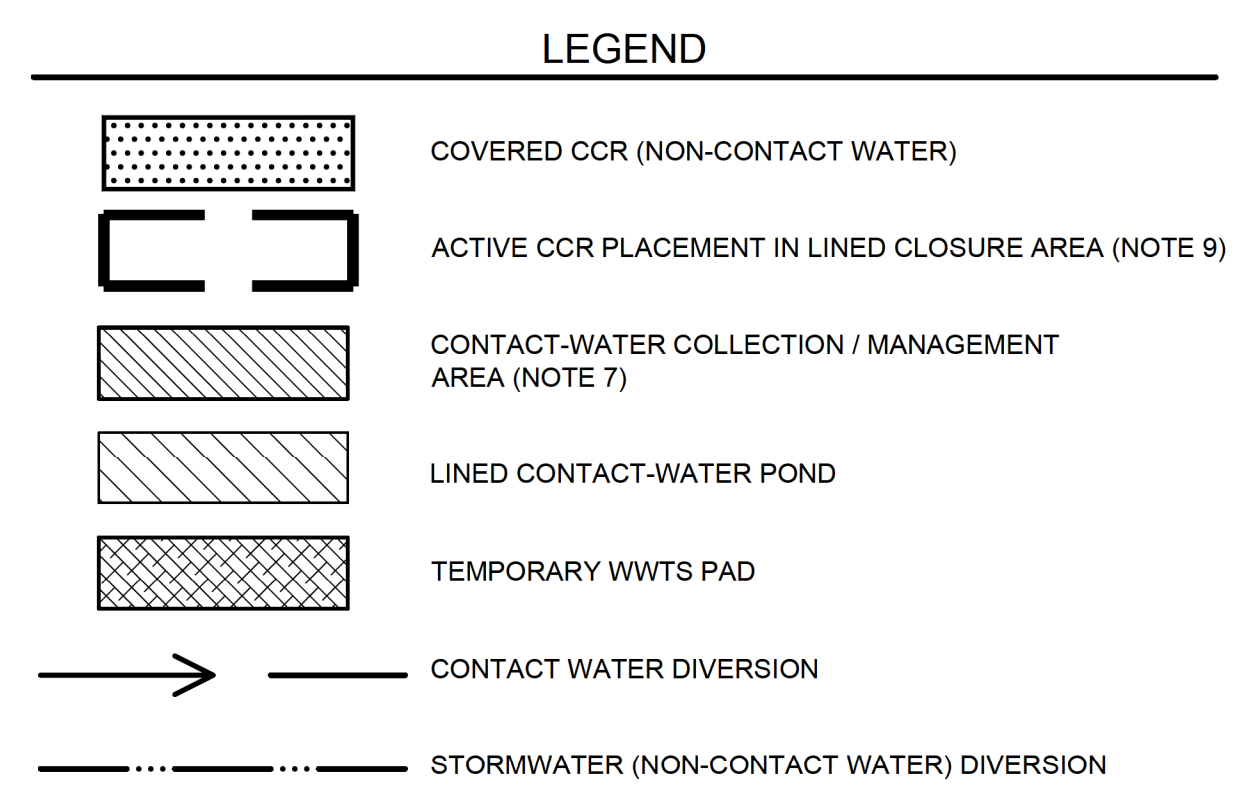
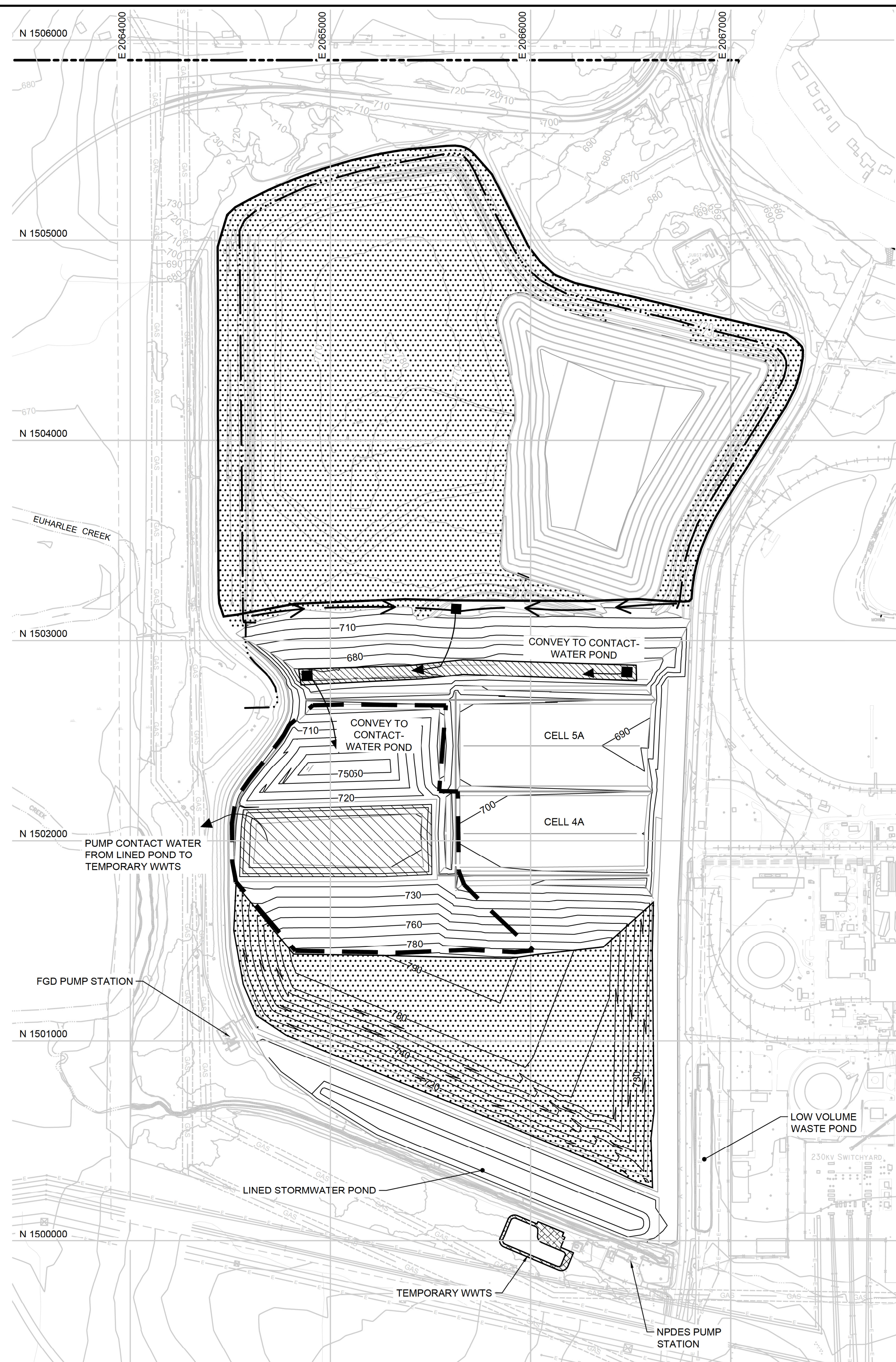
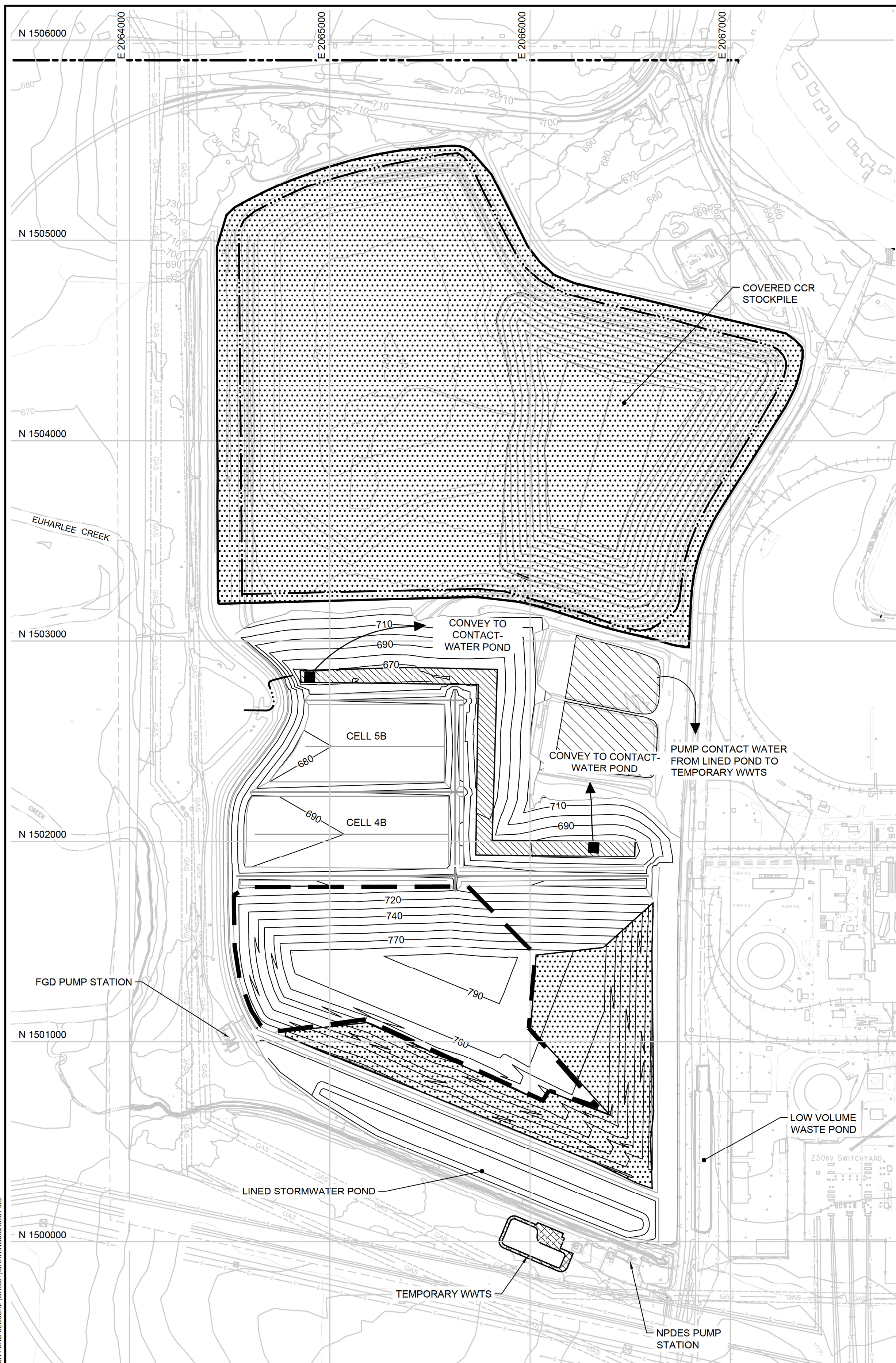
1255 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.202.9500
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-021	EDIT	8/16/21
SCALE	1" = 350'				
DATE	AUGUST 2021				

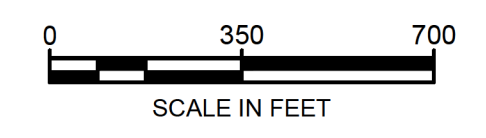


**PERMIT DRAWING
NOT FOR CONSTRUCTION**

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- NOTES:**
- THIS PHASING APPROACH IS CONCEPTUAL, AND WILL BE REFINED DURING DETAILED DESIGN. IN ADDITION, CONTRACTOR WILL HAVE DISCRETION TO ADJUST PHASE BOUNDARIES AND SEQUENCE, STOCKPILE LOCATION(S), AND CONTACT-WATER COLLECTION / MANAGEMENT AREAS, BASED ON FIELD CONDITIONS ENCOUNTERED AND TO FACILITATE CONSTRUCTION, AS APPROVED BY GEORGIA POWER COMPANY, WITH REQUIREMENT THAT DESIGN CRITERIA INCLUDING THOSE RELATED TO STORMWATER AND CONTACT WATER MANAGEMENT, ARE MET.
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 - FOR PHASES WHERE COVERED CCR SHADING ENCLOSES ACTIVE CCR PLACEMENT, THIS INDICATES WHERE A TEMPORARY OR FINAL COVER SYSTEM INCREMENT MAY BE INSTALLED ONCE FINISHED WASTE GRADES ARE ACHIEVED FOR THAT PHASE.



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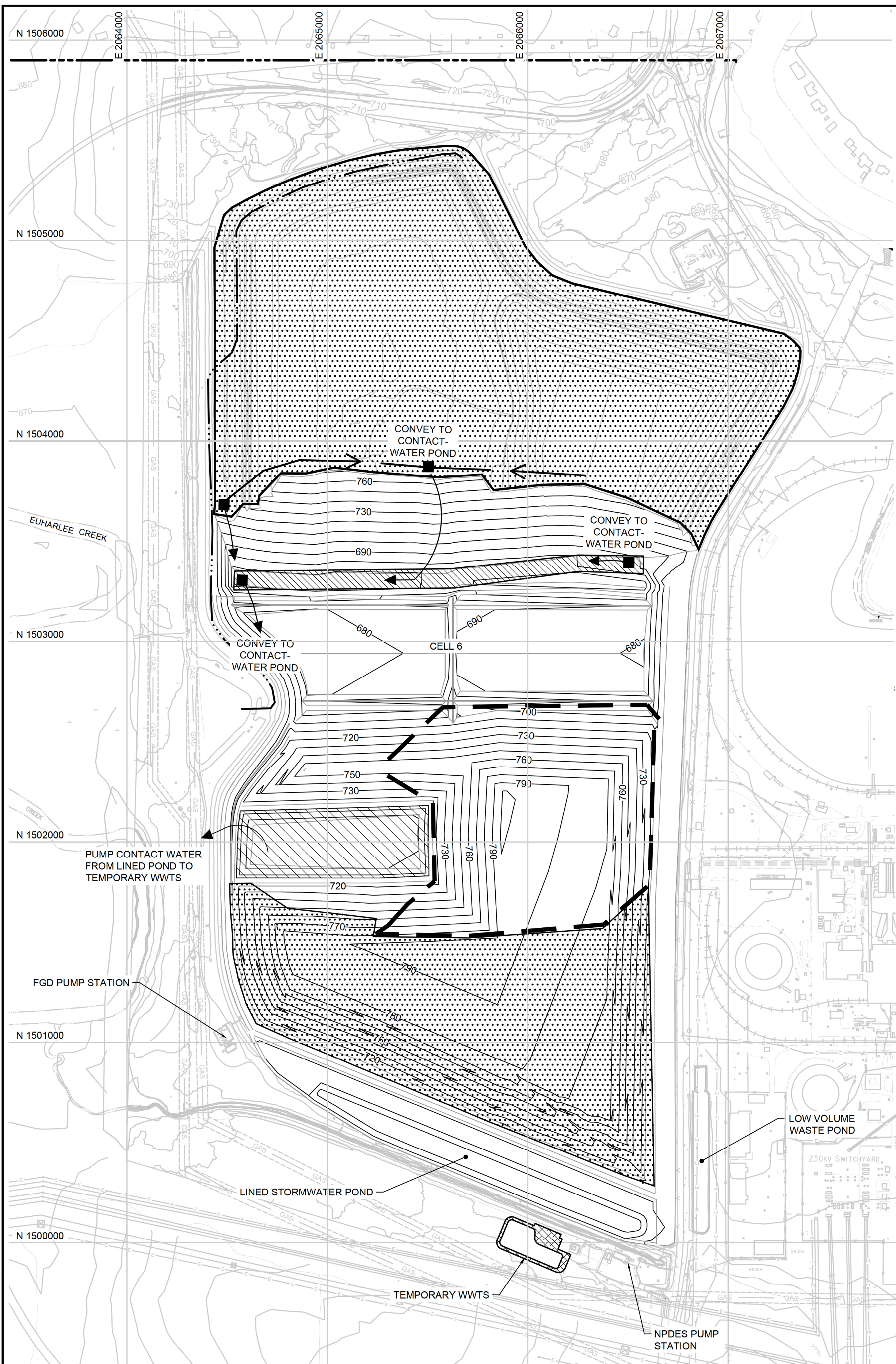
Georgia Power
PERMIT DRAWING
NOT FOR CONSTRUCTION

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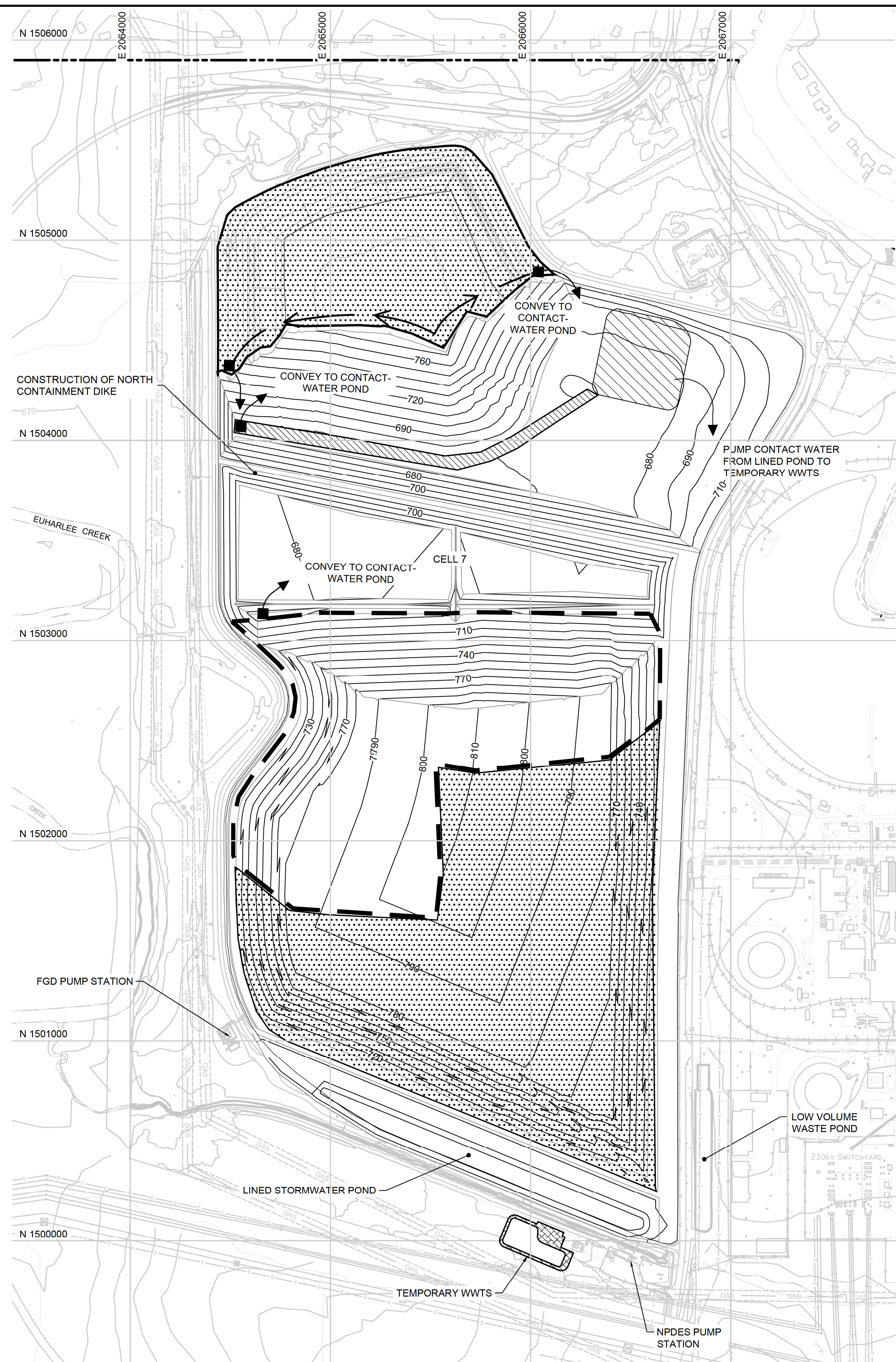
CLOSURE PHASING PLANS 3

PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec consultants		PHONE: 678.202.9500 WWW.GEOSYNTEC.COM	
PROJ. NO.	GR6601	DWG.	GR6601-022
SCALE	1" = 350'	EDIT	8/16/21
DATE	AUGUST 2021	DRAWING 22 OF 50	



PHASE 7
CELL 6 CONSTRUCTION AND CELL
4A & 5A FILLING

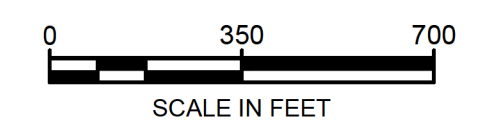


PHASE 8
CELL 7 CONSTRUCTION AND CELL
6 FILLING

LEGEND

- COVERED CCR (NON-CONTACT WATER)
- ACTIVE CCR PLACEMENT IN LINED CLOSURE AREA (NOTE 9)
- CONTACT-WATER COLLECTION / MANAGEMENT AREA (NOTE 7)
- LINED CONTACT-WATER POND
- TEMPORARY WWTS PAD
- CONTACT WATER DIVERSION
- STORMWATER (NON-CONTACT WATER) DIVERSION

- NOTES:**
1. THIS PHASING APPROACH IS CONCEPTUAL, AND WILL BE REFINED DURING DETAILED DESIGN. IN ADDITION, CONTRACTOR WILL HAVE DISCRETION TO ADJUST PHASE BOUNDARIES AND SEQUENCE, STOCKPILE LOCATION(S), AND CONTACT-WATER COLLECTION / MANAGEMENT AREAS, BASED ON FIELD CONDITIONS ENCOUNTERED AND TO FACILITATE CONSTRUCTION, AS APPROVED BY GEORGIA POWER COMPANY, WITH REQUIREMENT THAT DESIGN CRITERIA INCLUDING THOSE RELATED TO STORMWATER AND CONTACT-WATER MANAGEMENT, ARE MET.
 2. STORMWATER AND CONTACT-WATER MANAGEMENT WILL BE CONDUCTED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN THE "CLOSURE PLAN" (PART A, SECTION 7 OF THIS PERMIT APPLICATION). DESIGN CRITERIA AND EVALUATION OF CASES RELATED TO THE CLOSURE PHASES PRESENTED HEREIN ARE PROVIDED IN A CALCULATION PACKAGE FOR INTERIM STORMWATER MANAGEMENT CONDITIONS, INCLUDED IN THE "ENGINEERING REPORT" (PART B, SECTION 3 OF THIS PERMIT APPLICATION).
 3. DURING CLOSURE CONSTRUCTION, CONTACT WATER WILL BE PUMPED OR CONVEYED BY GRAVITY TO LINED CONTACT-WATER PONDS WITHIN AP-1, WHERE IT WILL BE TEMPORARILY STORED AND THEN PUMPED TO AN ON-SITE TEMPORARY WASTEWATER TREATMENT SYSTEM (WWTS) OR OTHERWISE PROPERLY MANAGED IN ACCORDANCE WITH THE PLANT'S NPDES PERMIT REQUIREMENTS. NON-CONTACT STORMWATER WILL BE MANAGED IN ACCORDANCE WITH APPLICABLE EROSION AND SEDIMENT CONTROL FEATURES AND REQUIREMENTS PROVIDED IN THIS SET OF CLOSURE DRAWINGS, AND THEN DISCHARGED THROUGH EXISTING OR NEW STORMWATER PONDS TO RECEIVING WATER BODIES WITHOUT TREATMENT.
 4. CONTRACTOR WILL BE REQUIRED TO TAKE REASONABLE MEASURES TO MINIMIZE STORMWATER RUN-ON INTO THE CONTACT-WATER COLLECTION / MANAGEMENT AREAS. MINIMIZATION TECHNIQUES MAY INCLUDE THE CONSTRUCTION OF TEMPORARY DIVERSION BERMS OR CHANNELS TO DIVERT STORMWATER AWAY FROM THE COLLECTION / MANAGEMENT AREAS.
 5. COVER SYSTEM WILL BE TEMPORARILY TERMINATED AT CLOSURE INCREMENT PHASE BOUNDARIES AS SHOWN IN DETAILS 12 AND 13 ON DRAWING 29 FOR FINAL COVER SYSTEM (SOIL-GEOSYNTHETIC COMPOSITE COVER) AND ALTERNATIVE COVER SYSTEM (CLOSURETURF® COVER), RESPECTIVELY. CLOSURE INCREMENTS ARE APPROXIMATE FOR ILLUSTRATIVE PURPOSES, AND MAY BE ADJUSTED DURING CLOSURE.
 6. CONTACT-WATER COLLECTION / MANAGEMENT AREAS SHOWN ON THIS DRAWING MAY BE ADJUSTED OR SUPPLEMENTED DURING CONSTRUCTION AS NEEDED. CONTACT WATER WILL BE PROMPTLY TRANSFERRED TO THE LINED CONTACT-WATER POND TO MINIMIZE DURATION OF PONDING WITHIN AP-1 EXCAVATIONS.
 7. TEMPORARY LINED STORMWATER PONDS (NON-CONTACT WATER) MAY BE UTILIZED DURING CONSTRUCTION AS NEEDED.
 8. FOR PHASES WHERE COVERED CCR SHADING ENCLOSES ON ACTIVE CCR PLACEMENT, THIS INDICATES WHERE A TEMPORARY OR FINAL COVER SYSTEM INCREMENT MAY BE INSTALLED ONCE FINISHED WASTE GRADES ARE ACHIEVED FOR THAT PHASE.



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PERMIT DRAWING
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	DRN	APP
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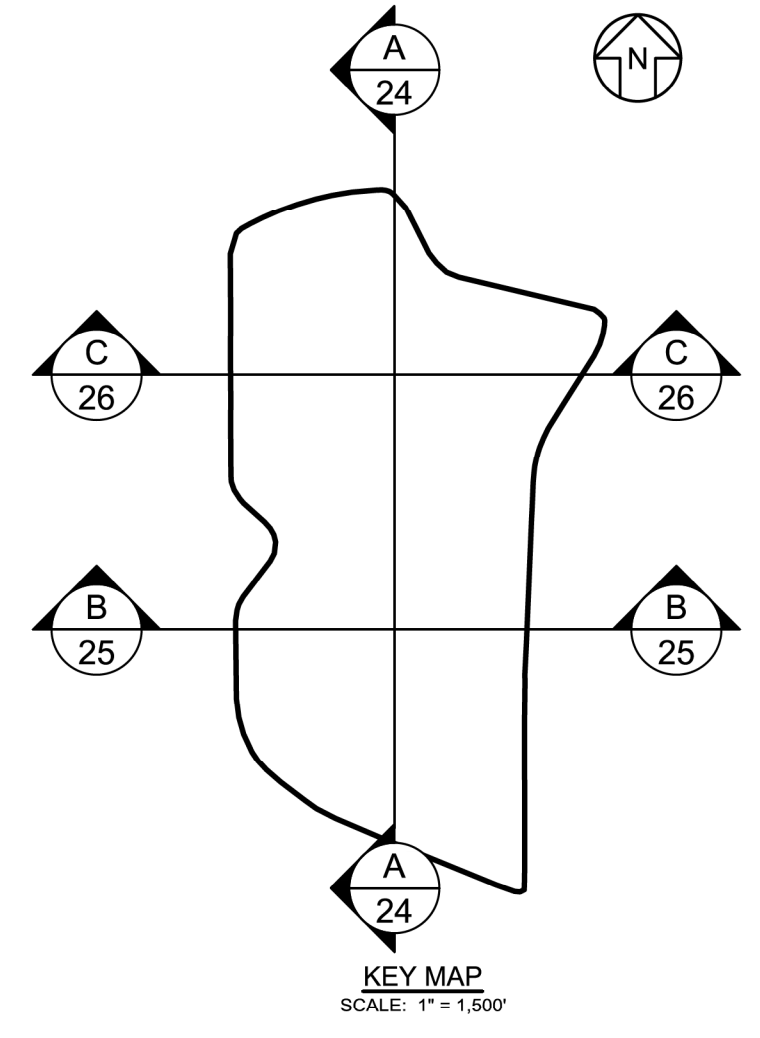
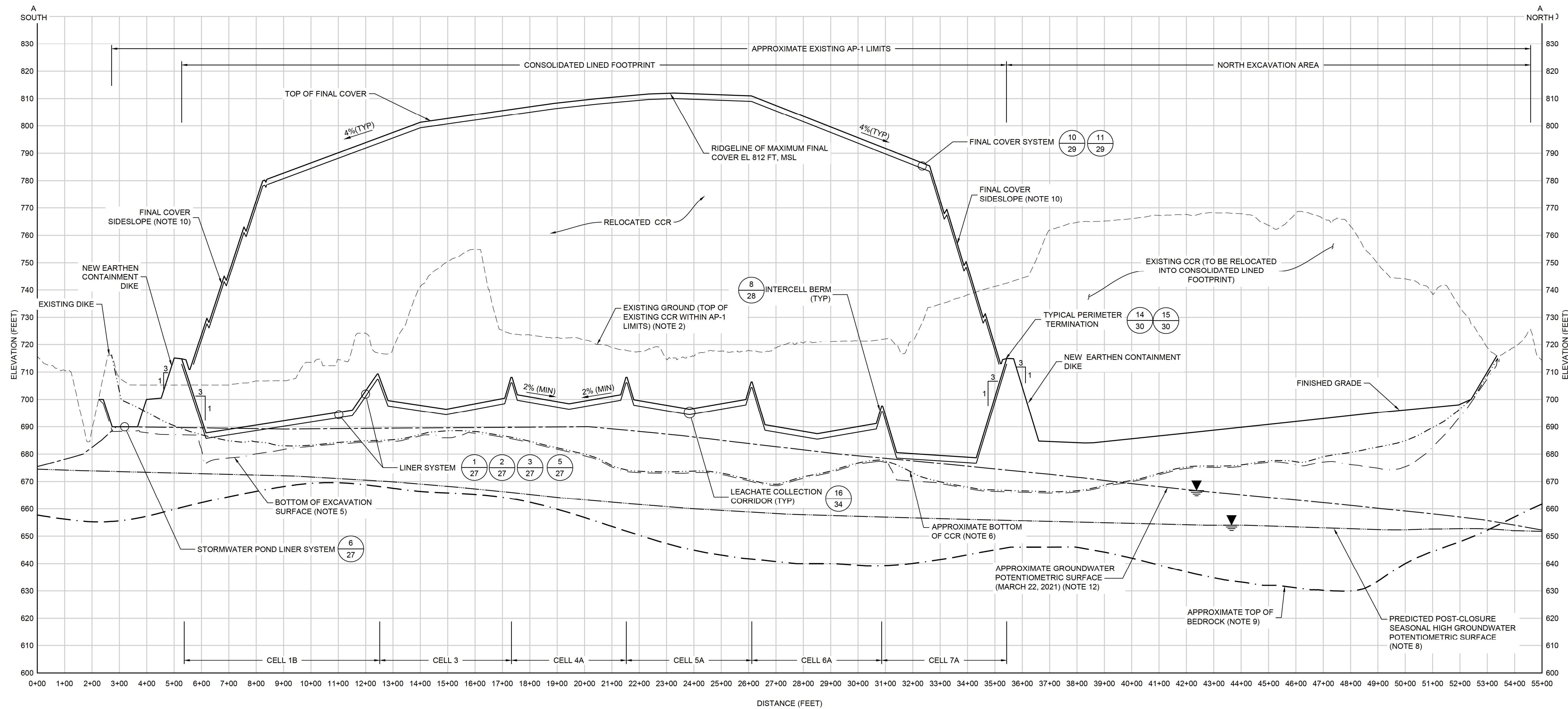
CLOSURE PHASING PLANS 4

PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec
consultants

1255 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.202.9500
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-022A	EDIT	8/16/21
SCALE	1" = 350'	DRAWING 23 OF 50			
DATE	AUGUST 2021				



- NOTES:
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - EXISTING GROUND SHOWN ON THIS DRAWING IS TAKEN FROM THE TOPOGRAPHIC BASE MAP SHOWN ON DRAWING 4.
 - TOP OF LINER (GEOMEMBRANE COMPONENT OF THE LINER SYSTEM) SHOWN ON THIS DRAWING IS TAKEN FROM DRAWING 11.
 - TOP OF FINAL COVER AND FINISHED GRADES BEYOND THE CONSOLIDATED LINED FOOTPRINT LIMITS SHOWN ON THIS DRAWING ARE TAKEN FROM DRAWING 17.
 - EXCAVATION SURFACE ELEVATION REPRESENTS A MINIMUM EXCAVATION DEPTH, IS APPROXIMATE, AND IS TAKEN FROM DRAWING 8.
 - APPROXIMATE BOTTOM OF CCR SHOWN ON THIS DRAWING IS TAKEN FROM DRAWING 6.
 - TOP OF FINAL COVER SURFACE (AND MAXIMUM ELEVATION) IS BASED ON THE SOIL-GEOSYNTHETIC COVER SYSTEM ALTERNATIVE.
 - PREDICTED POST-CLOSURE SEASONAL HIGH GROUNDWATER POTENTIOMETRIC SURFACE SHOWN ON THIS DRAWING OBTAINED FROM GROUNDWATER FLOW MODELING RESULTS AS DOCUMENTED IN THE "HYDROGEOLOGIC ASSESSMENT REPORT (REVISION 3)" INCLUDED WITH THIS PERMIT APPLICATION AND SHOWN ON DRAWINGS 11 THROUGH 13.
 - TOP OF BEDROCK SURFACE IS APPROXIMATE AND WAS DEVELOPED BY GEOSYNTEC CONSULTANTS USING AVAILABLE SUBSURFACE INFORMATION FROM PREVIOUS SITE INVESTIGATIONS.
 - TOP OF FINAL COVER DESIGN GRADES ARE SLOPED AT NO STEEPER THAN 3H:1V ON LANDFILL SIDESLOPES BETWEEN DRAINAGE BENCHES, AND AT A MINIMUM OF FOUR (4) PERCENT ON THE LANDFILL TOP AREAS. SLOPES AND FINAL COVER SYSTEM LAYER THICKNESS MAY APPEAR DISTORTED ON THESE CROSS SECTIONS DUE TO THE EXAGGERATED VERTICAL SCALE AND SKEWED ANGLE AT WHICH THESE SECTIONS WERE CUT COMPARED TO THE THREE-DIMENSIONAL TRUE SLOPE DIRECTIONS.
 - LINER DESIGN GRADES ARE SLOPED AT NO STEEPER THAN 3H:1V ON DIKE AND INTERCELL BERM LINER SIDESLOPES, AND AT A MINIMUM OF TWO (2) PERCENT TOWARDS THE LEACHATE COLLECTION CORRIDORS ON THE CELL FLOOR AREAS. LEACHATE COLLECTION CORRIDORS ARE SLOPED AT A MINIMUM OF ONE (1) PERCENT TOWARDS THE SUMPS. SLOPES AND LAYER THICKNESS MAY APPEAR DISTORTED ON THESE CROSS SECTIONS DUE TO THE EXAGGERATED VERTICAL SCALE AND SKEWED ANGLE AT WHICH THESE SECTIONS WERE CUT COMPARED TO THE THREE-DIMENSIONAL TRUE SLOPE DIRECTIONS.
 - APPROXIMATE GROUNDWATER POTENTIOMETRIC SURFACE IS FROM WATER LEVEL MEASUREMENTS DATED 22 MARCH 2021 IN WELLS/PIEZOMETERS SCREENED IN BEDROCK AS PRESENTED IN THE "HYDROGEOLOGIC ASSESSMENT REPORT (REVISION 3)" INCLUDED WITH THIS PERMIT APPLICATION. THE MARCH 2021 POTENTIOMETRIC SURFACE IS HIGHER THAN THAT ASSOCIATED WITH THE DEWATERED AND CLOSED CONDITION WITHIN AP-1, AS REFLECTED IN NOTE 8.

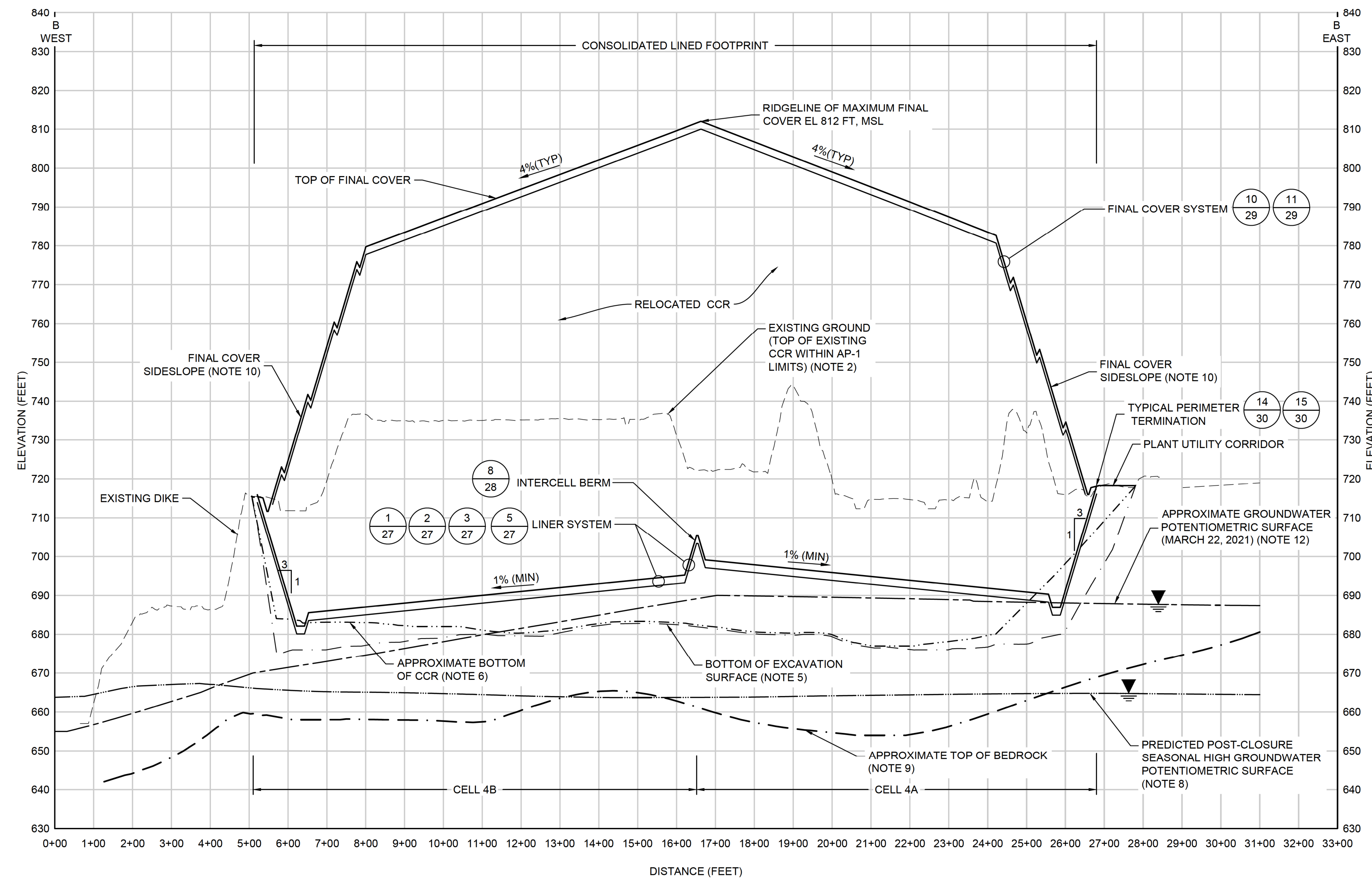
A
11 SECTION
NORTH-SOUTH CROSS SECTION
SCALE: 1"=200' (HORIZONTAL); 1"=20' (VERTICAL)

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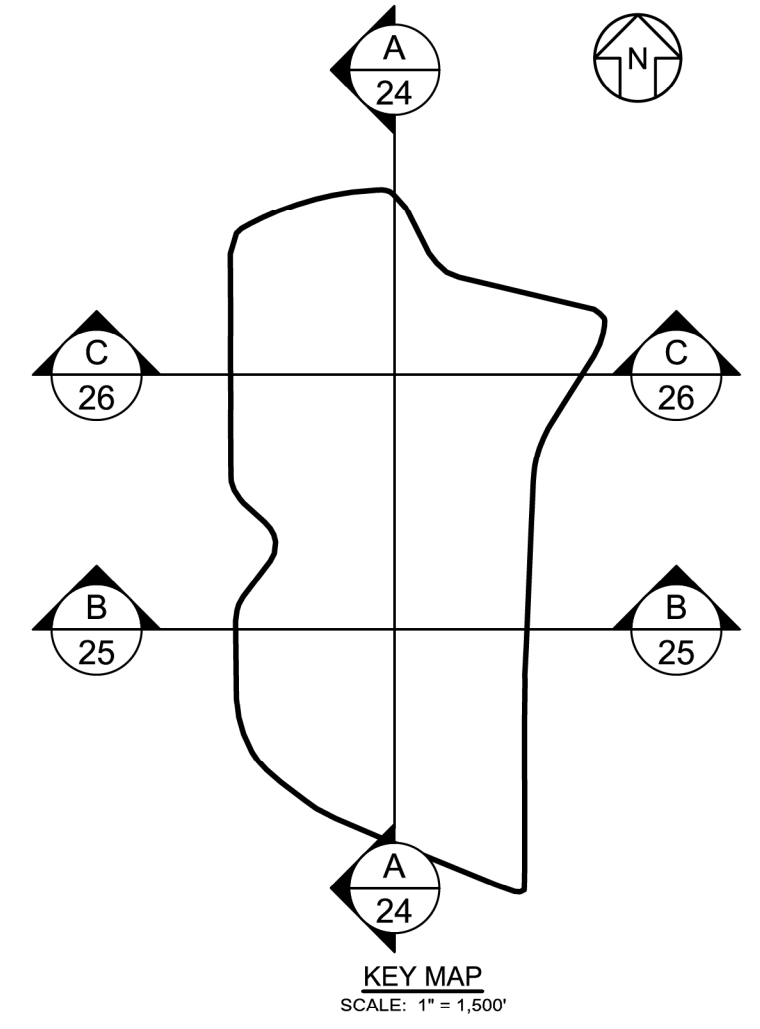
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REV	DATE	DESCRIPTION	DRN	APP	
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PLANT BOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS BARTOW COUNTY, GEORGIA					
Geosyntec consultants					
1255 ROBERTS BOULEVARD, NW, SUITE 200 KENNESAW, GEORGIA 30144 USA					
PHONE: 678.202.9500 WWW.GEOSYNTEC.COM					
PROJ. NO.	GR6601	DWG.	GR6601-023	EDIT	8/16/21
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DATE	AUGUST 2021				
DRAWING 24 OF 50					



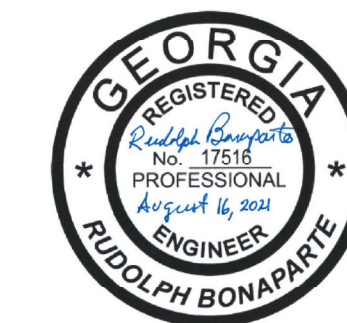
B
11 SECTION
EAST-WEST CROSS SECTION
SCALE: 1"=200' (HORIZONTAL); 1"=20' (VERTICAL)

NOTES:

- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
- EXISTING GROUND SHOWN ON THIS DRAWING IS TAKEN FROM THE TOPOGRAPHIC BASE MAP SHOWN ON DRAWING 4.
- TOP OF LINER (GEOMEMBRANE COMPONENT OF THE LINER SYSTEM) SHOWN ON THIS DRAWING IS TAKEN FROM DRAWING 11.
- TOP OF FINAL COVER AND FINISHED GRADES BEYOND THE CONSOLIDATED LINED FOOTPRINT LIMITS SHOWN ON THIS DRAWING ARE TAKEN FROM DRAWING 17.
- EXCAVATION SURFACE ELEVATION REPRESENTS A MINIMUM EXCAVATION DEPTH, IS APPROXIMATE, AND IS TAKEN FROM DRAWING 8.
- APPROXIMATE BOTTOM OF CCR SHOWN ON THIS DRAWING IS TAKEN FROM DRAWING 6.
- TOP OF FINAL COVER SURFACE (AND MAXIMUM ELEVATION) IS BASED ON THE SOIL-GEOSYNTHETIC COVER SYSTEM ALTERNATIVE.
- PREDICTED POST-CLOSURE SEASONAL HIGH GROUNDWATER POTENTIOMETRIC SURFACE SHOWN ON THIS DRAWING OBTAINED FROM GROUNDWATER FLOW MODELING RESULTS AS DOCUMENTED IN THE "HYDROGEOLOGIC ASSESSMENT REPORT (REVISION 3)" INCLUDED WITH THIS PERMIT APPLICATION AND SHOWN ON DRAWINGS 11 THROUGH 13.
- TOP OF BEDROCK SURFACE IS APPROXIMATE AND WAS DEVELOPED BY GEOSYNTEC CONSULTANTS USING AVAILABLE SUBSURFACE INFORMATION FROM PREVIOUS SITE INVESTIGATIONS.
- TOP OF FINAL COVER DESIGN GRADES ARE SLOPED AT NO STEEPER THAN 3H:1V ON LANDFILL SIDESLOPES BETWEEN DRAINAGE BENCHES, AND AT A MINIMUM OF FOUR (4) PERCENT TOWARDS THE LEACHATE COLLECTION CORRIDORS ON THE CELL FLOOR AREAS. LEACHATE COLLECTION CORRIDORS ARE SLOPED AT A MINIMUM OF ONE (1) PERCENT TOWARDS THE SUMPS. SLOPES AND LAYER THICKNESS MAY APPEAR DISTORTED ON THESE CROSS SECTIONS DUE TO THE EXAGGERATED VERTICAL SCALE AND SKEWED ANGLE AT WHICH THESE SECTIONS WERE CUT COMPARED TO THE THREE-DIMENSIONAL TRUE SLOPE DIRECTIONS.
- LINER DESIGN GRADES ARE SLOPED AT NO STEEPER THAN 3H:1V ON DIKE AND INTERCELL BERM LINER SIDESLOPES, AND AT A MINIMUM OF TWO (2) PERCENT TOWARDS THE LEACHATE COLLECTION CORRIDORS ON THE CELL FLOOR AREAS. LEACHATE COLLECTION CORRIDORS ARE SLOPED AT A MINIMUM OF ONE (1) PERCENT TOWARDS THE SUMPS. SLOPES AND LAYER THICKNESS MAY APPEAR DISTORTED ON THESE CROSS SECTIONS DUE TO THE EXAGGERATED VERTICAL SCALE AND SKEWED ANGLE AT WHICH THESE SECTIONS WERE CUT COMPARED TO THE THREE-DIMENSIONAL TRUE SLOPE DIRECTIONS.
- APPROXIMATE GROUNDWATER POTENTIOMETRIC SURFACE IS FROM WATER LEVEL MEASUREMENTS DATED 22 MARCH 2021 IN WELLS/PIEZOMETERS SCREENED IN BEDROCK AS PRESENTED IN THE "HYDROGEOLOGIC ASSESSMENT REPORT (REVISION 3)" INCLUDED WITH THIS PERMIT APPLICATION. THE MARCH 2021 POTENTIOMETRIC SURFACE IS HIGHER THAN THAT ASSOCIATED WITH THE DEWATERED AND CLOSED CONDITION WITHIN AP-1, AS REFLECTED IN NOTE 8.



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PERMIT DRAWING
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	DRN	APP
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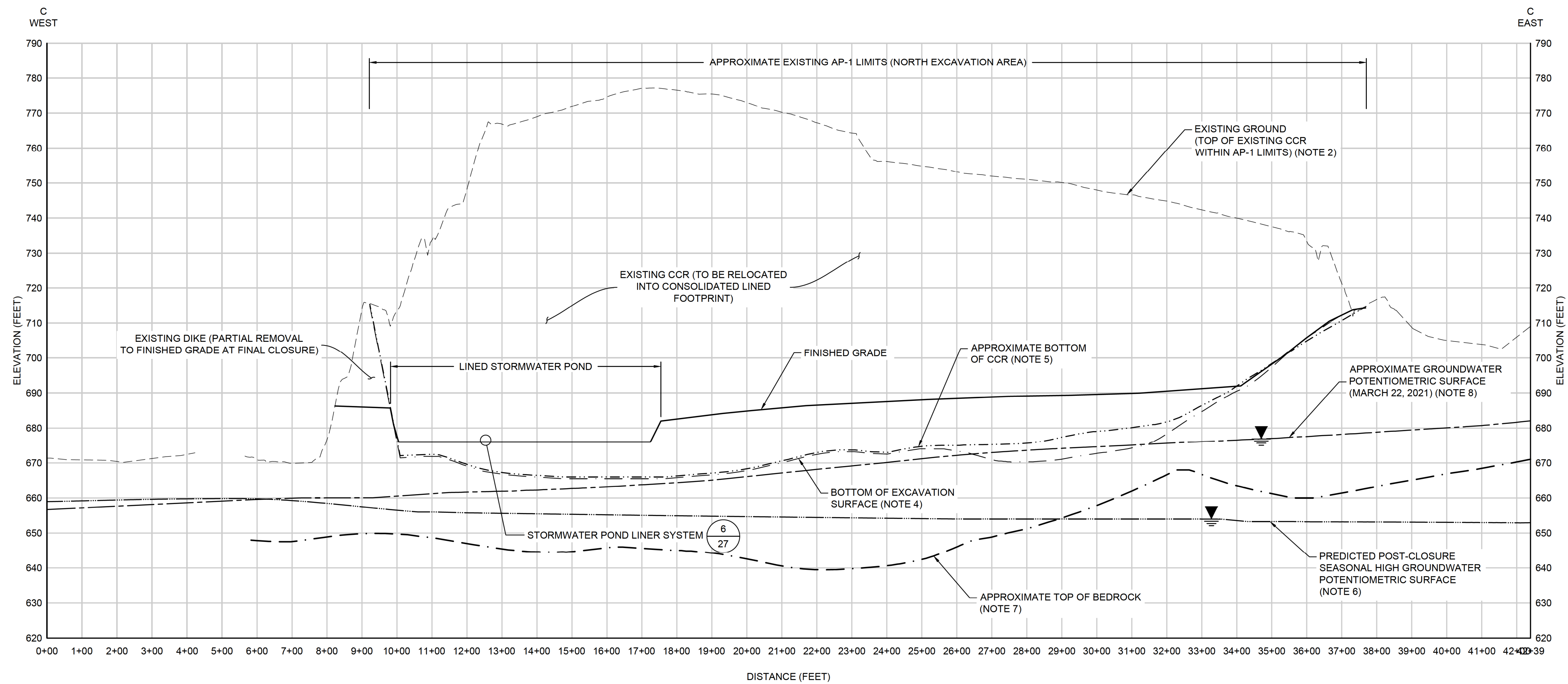
SITE CROSS SECTIONS II

**PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA**

Geosyntec
consultants

1255 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.202.9500
WWW.GEOSYNTEC.COM

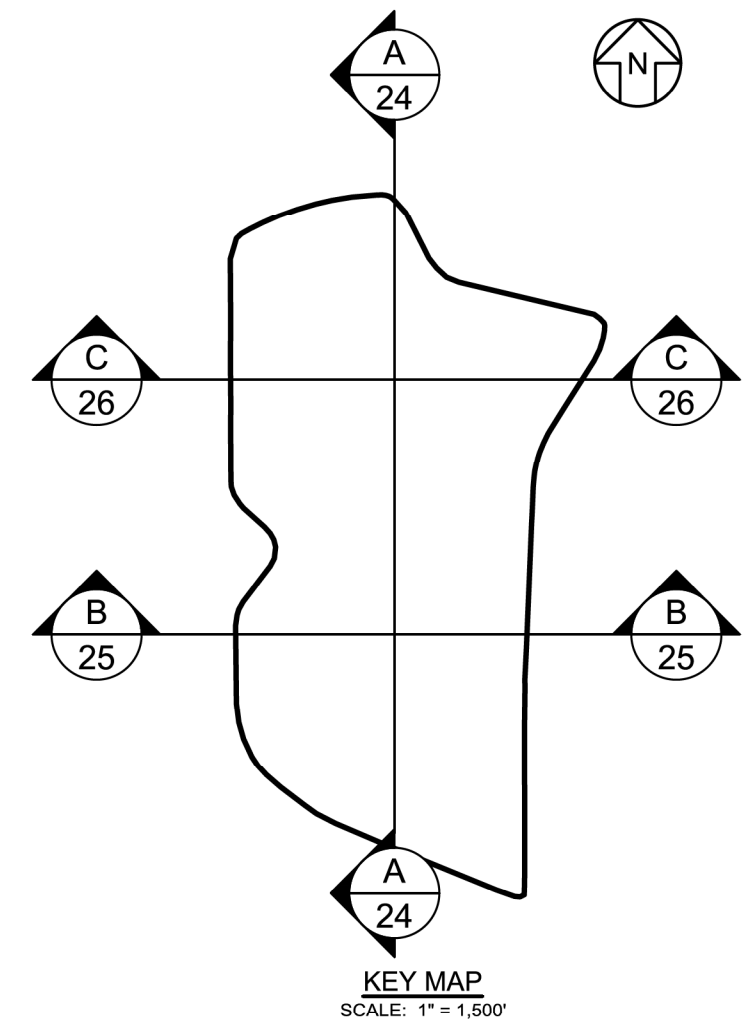
PROJ. NO.	GR6601	DWG.	GR6601-024	EDIT	8/16/21
SCALE	AS SHOWN	DRAWING 25 OF 50			
DATE	AUGUST 2021				



C
11 SECTION
EAST-WEST CROSS SECTION
SCALE: 1"=200' (HORIZONTAL); 1"=20' (VERTICAL)

NOTES:

1. SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
2. EXISTING GROUND SHOWN ON THIS DRAWING IS TAKEN FROM THE TOPOGRAPHIC BASE MAP SHOWN ON DRAWING 4.
3. THE CONSOLIDATED LINED FOOTPRINT LIMITS SHOWN ON THIS DRAWING ARE TAKEN FROM DRAWING 17.
4. EXCAVATION SURFACE ELEVATION REPRESENTS A MINIMUM EXCAVATION DEPTH, IS APPROXIMATE, AND IS TAKEN FROM DRAWING 8.
5. APPROXIMATE BOTTOM OF CCR SHOWN ON THIS DRAWING IS TAKEN FROM DRAWING 6.
6. PREDICTED POST-CLOSURE SEASONAL HIGH GROUNDWATER POTENTIOMETRIC SURFACE SHOWN ON THIS DRAWING OBTAINED FROM GROUNDWATER FLOW MODELING RESULTS AS DOCUMENTED IN THE "HYDROGEOLOGIC ASSESSMENT REPORT (REVISION 3)" INCLUDED WITH THIS PERMIT APPLICATION AND SHOWN ON DRAWINGS 11 THROUGH 13.
7. TOP OF BEDROCK SURFACE IS APPROXIMATE AND WAS DEVELOPED BY GEOSYNTEC CONSULTANTS USING AVAILABLE SUBSURFACE INFORMATION FROM PREVIOUS SITE INVESTIGATIONS.
8. APPROXIMATE GROUNDWATER POTENTIOMETRIC SURFACE IS FROM WATER LEVEL MEASUREMENTS DATED 22 MARCH 2021 IN WELLS/PIEZOMETERS SCREENED IN BEDROCK AS PRESENTED IN THE "HYDROGEOLOGIC ASSESSMENT REPORT (REVISION 3)" INCLUDED WITH THIS PERMIT APPLICATION. THE MARCH 2021 POTENTIOMETRIC SURFACE IS HIGHER THAN THAT ASSOCIATED WITH THE DEWATERED AND CLOSED CONDITION WITHIN AP-1, AS REFLECTED IN NOTE 6.



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PERMIT DRAWING
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REV	DATE	DESCRIPTION	DRN	APP
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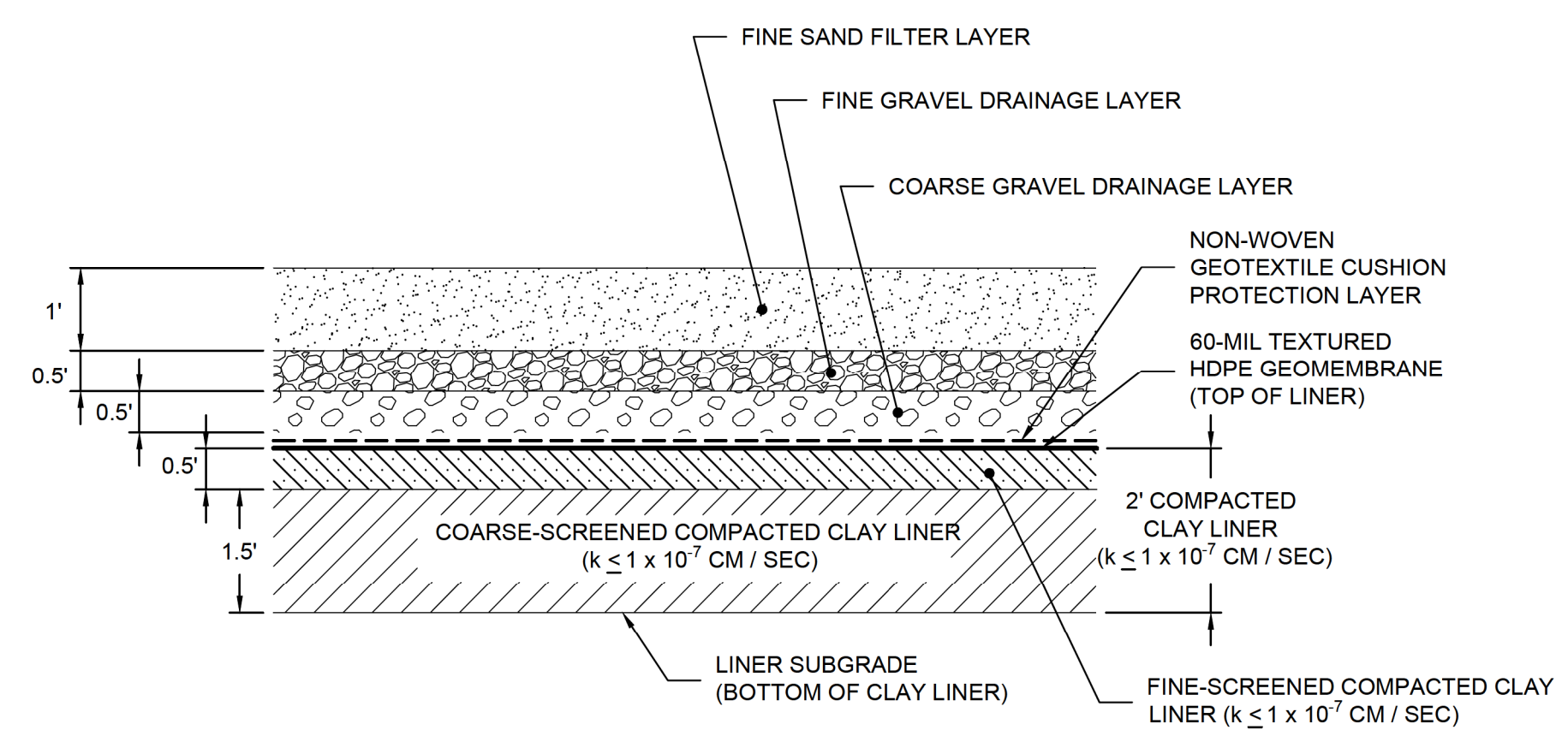
SITE CROSS SECTIONS III

**PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA**

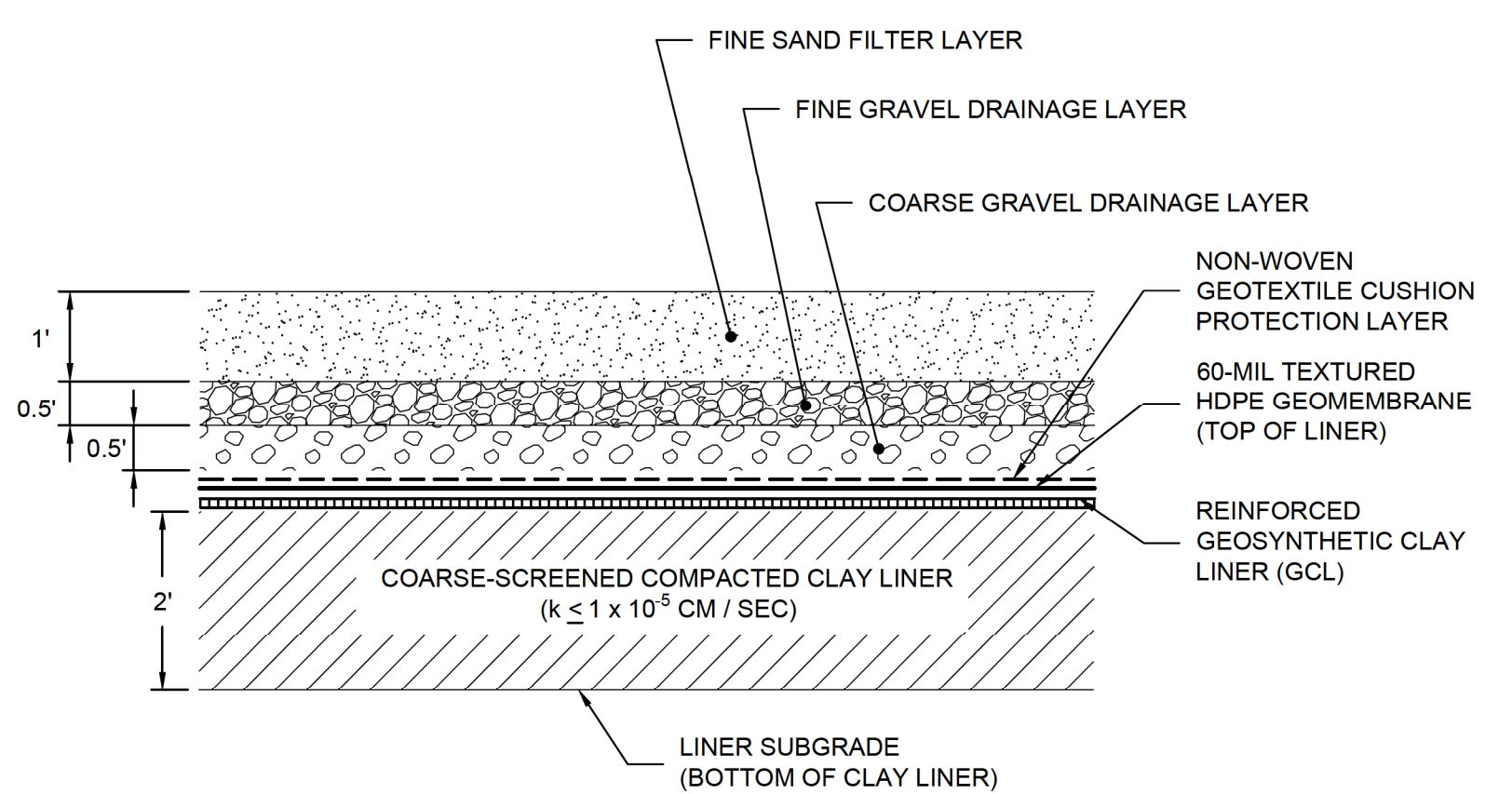
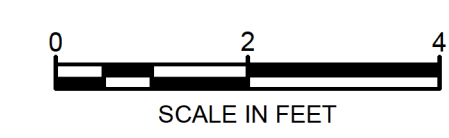
Geosyntec
consultants

1255 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.202.9500
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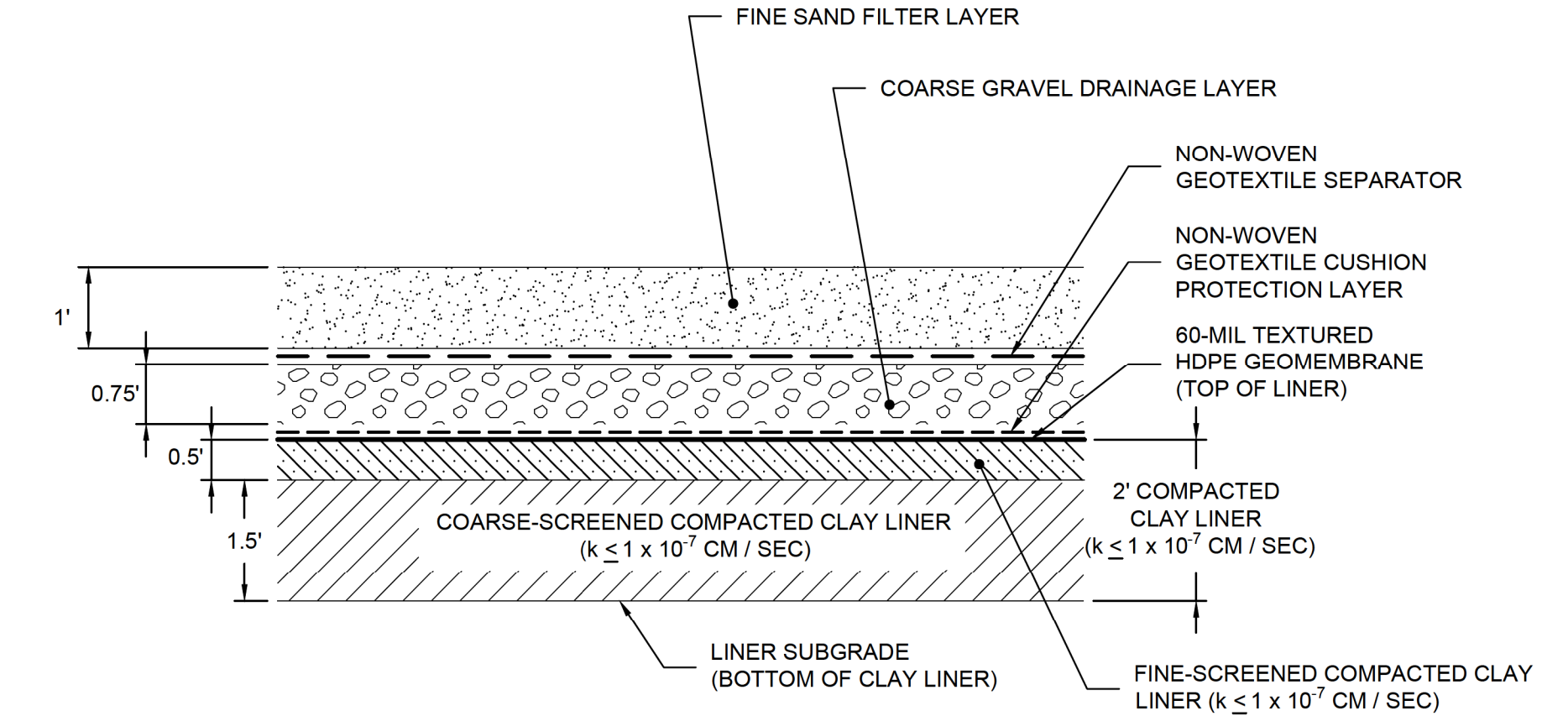
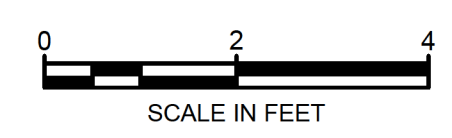
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SCALE	AS SHOWN	DRAWING 26 OF 50			
DATE	AUGUST 2021				



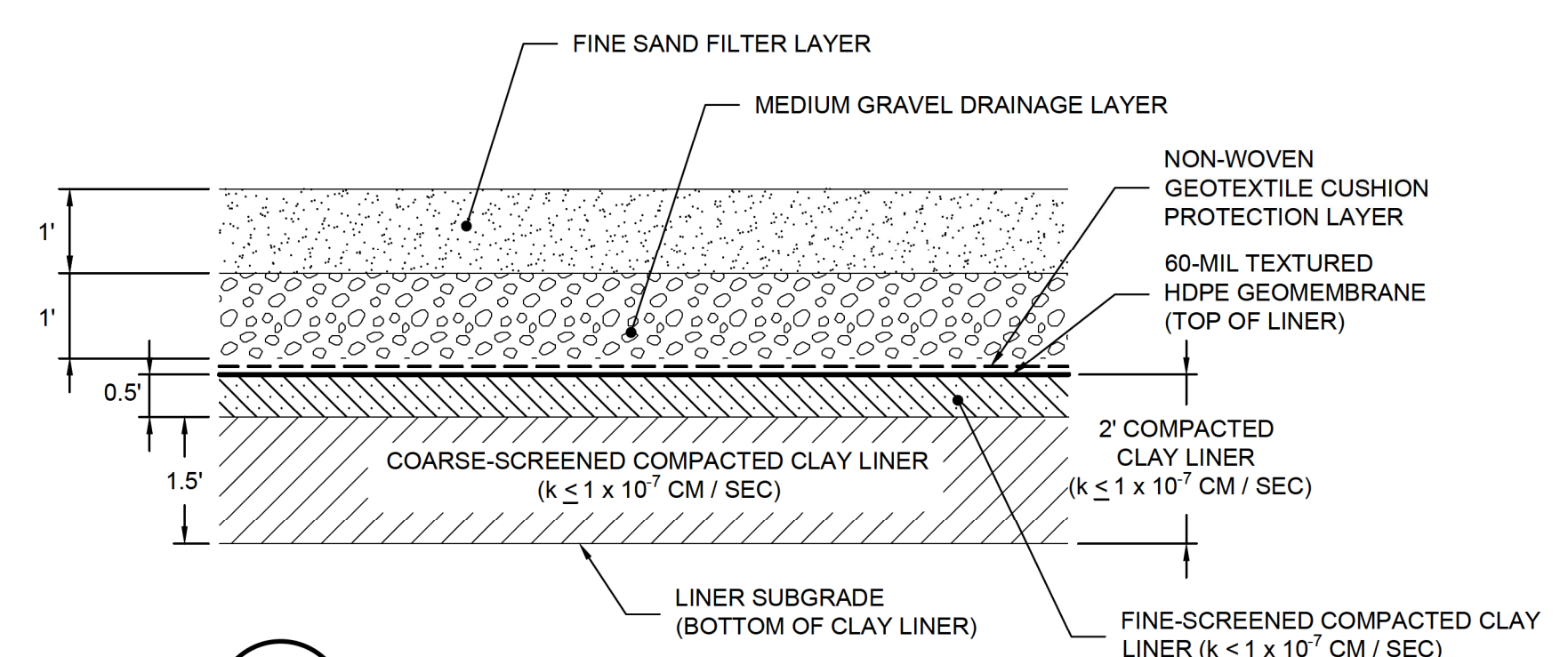
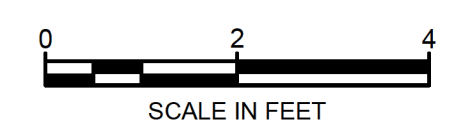
1 **24** **DETAIL**
LINER SYSTEM OPTION L1 D1



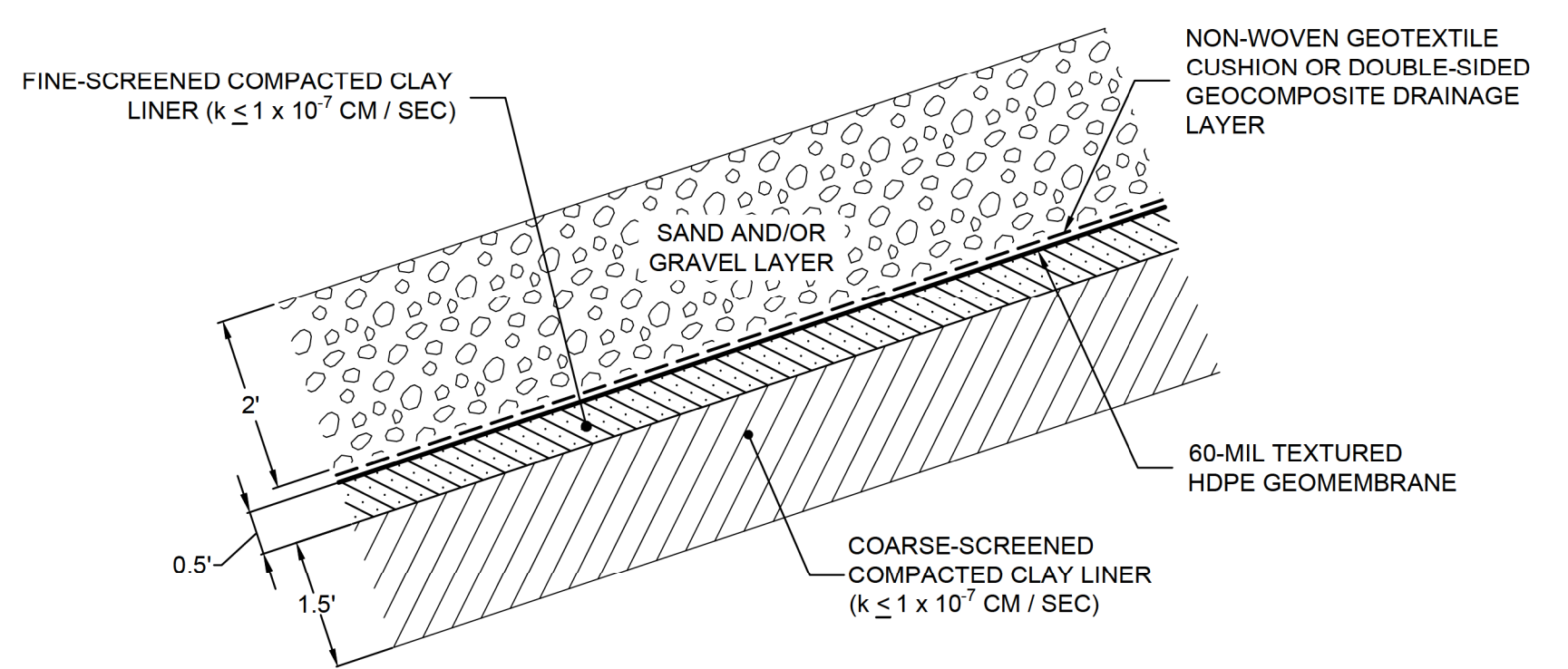
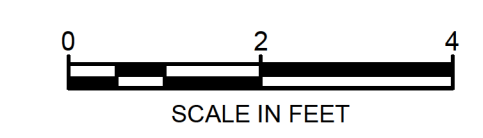
2 **24** **DETAIL**
LINER SYSTEM OPTION L2



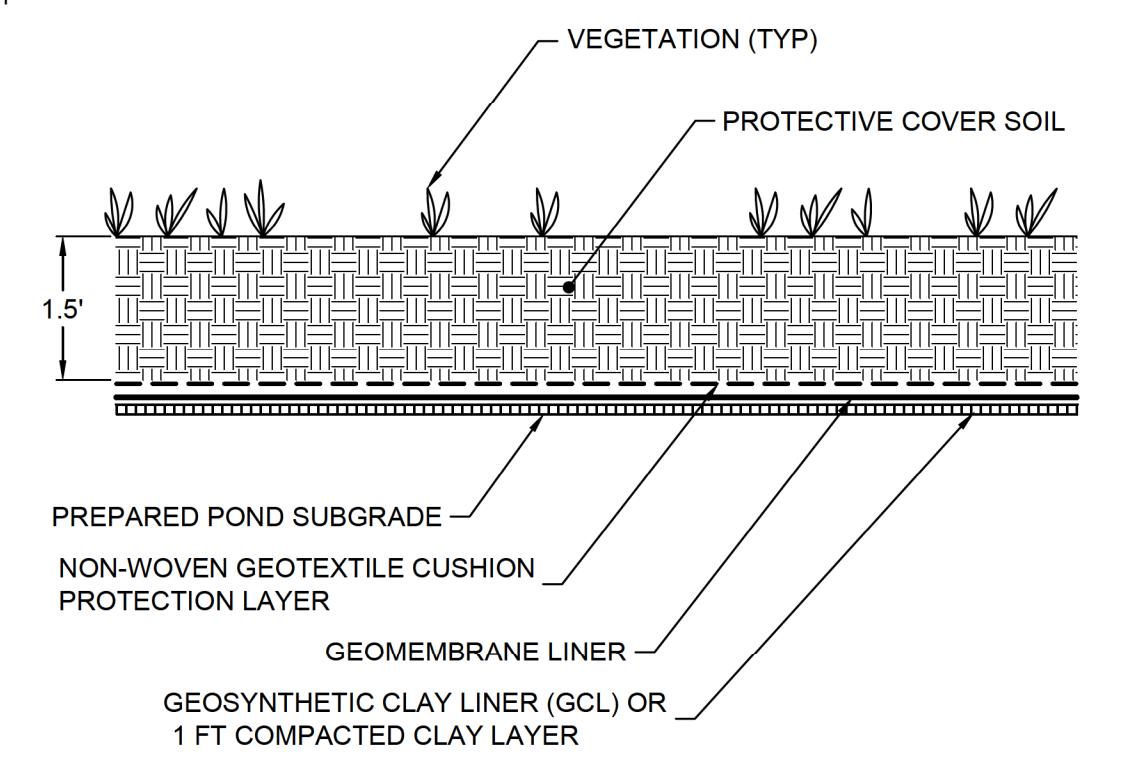
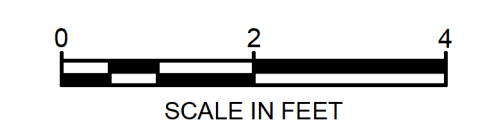
3 **24** **DETAIL**
DRAINAGE SYSTEM OPTION D2



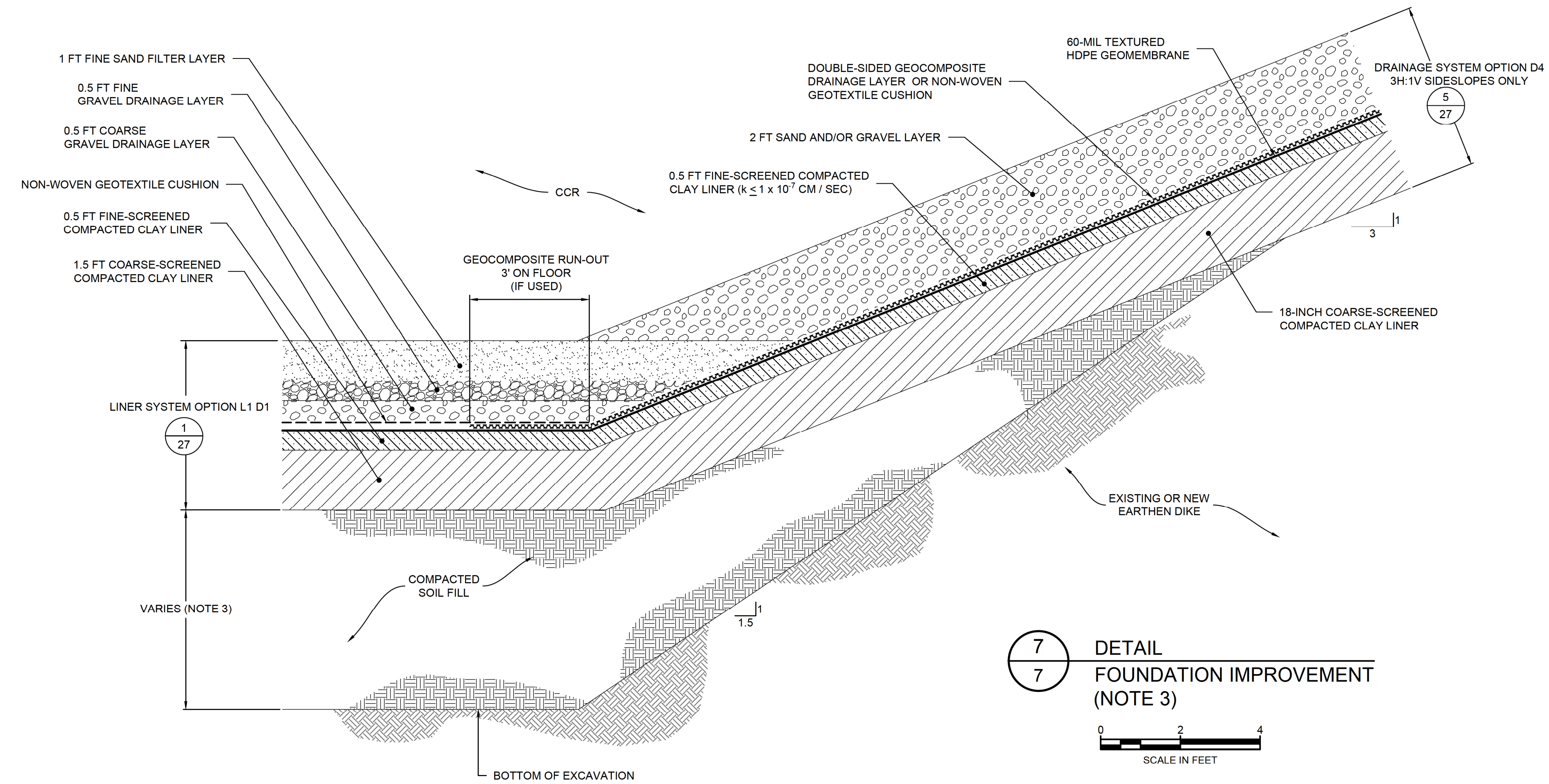
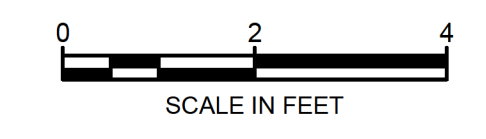
4 **27** **DETAIL**
DRAINAGE SYSTEM OPTION D3



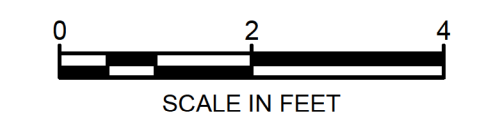
5 **24** **DETAIL**
**DRAINAGE SYSTEM OPTION D4
3H:1V SIDESLOPES ONLY**



6 **24** **DETAIL**
STORMWATER POND LINER SYSTEM



7 **7** **DETAIL**
**FOUNDATION IMPROVEMENT
(NOTE 3)**



- NOTES:
1. GEOSYNTHETIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
 2. ADDITIONAL ACCEPTABLE LINER SYSTEMS WOULD COMBINE THE OPTION L2 (DETAIL 2) COMPOSITE LINER WITH THE OPTION D2 (DETAIL 3) OR D3 (DETAIL 4) LEACHATE COLLECTION SYSTEMS.
 3. FOUNDATION IMPROVEMENT FOR CONSOLIDATED LINED AREAS WILL BE PERFORMED IN ACCORDANCE WITH THE "FOUNDATION IMPROVEMENT PLAN" INCLUDED WITH THIS PERMIT APPLICATION. THICKNESS OF COMPACTED SOIL FILL ZONE BENEATH FLOOR LINER AREAS IS A MINIMUM OF 8 FT THICK AND VARIES AS NEEDED TO FILL BETWEEN THE BOTTOM EXCAVATION (DRAWING 8) AND THE LINER SUBGRADE.
 4. GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.
 5. FOUNDATION IMPROVEMENT DETAIL SHOWN ON THIS DRAWING REFLECTS LINER SYSTEM OPTIONS AS INDICATED. IF OTHER LINER SYSTEM OPTIONS ARE USED, THE DESIGN APPROACH WILL REMAIN CONSISTENT WITH THIS DRAWING.

REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

LINER SYSTEM DETAILS I
PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec
consultants

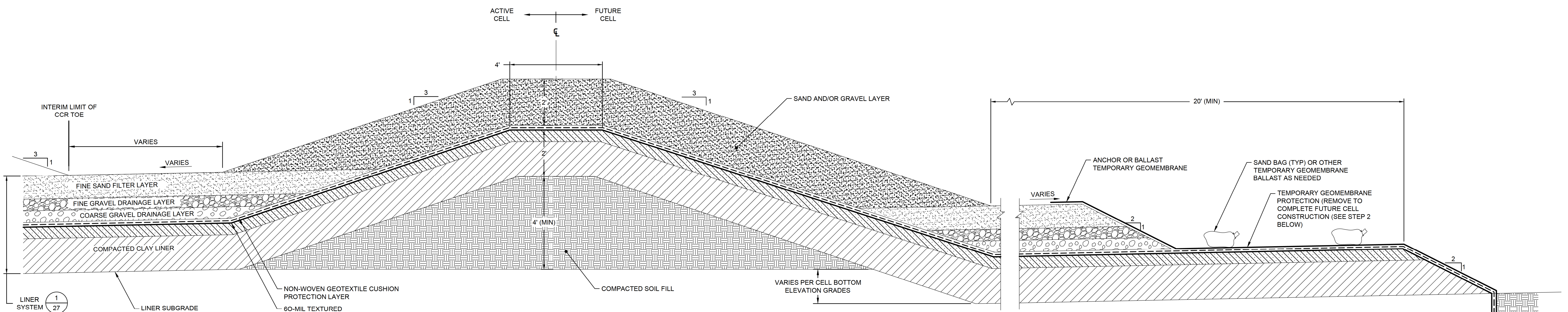
1255 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.202.9500
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PROJ. NO.	GR6601	DWG.	GR6601-028	EDIT	08.16.21
SCALE	AS SHOWN	DRAWING 27 OF 50			
DATE	AUGUST 2021				

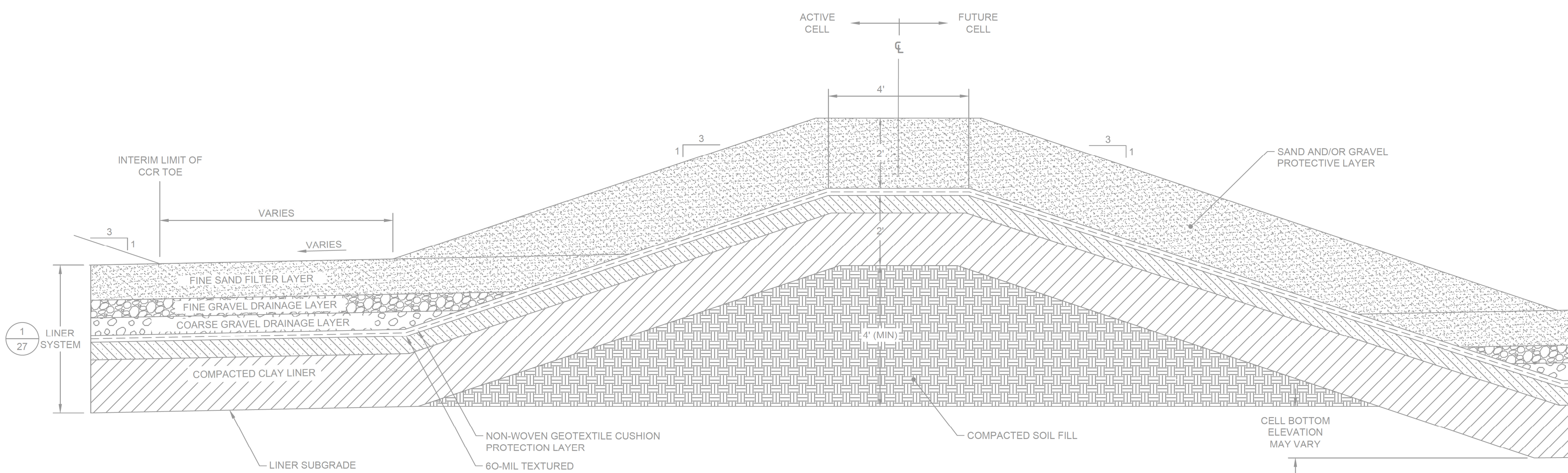


PERMIT DRAWING
NOT FOR CONSTRUCTION

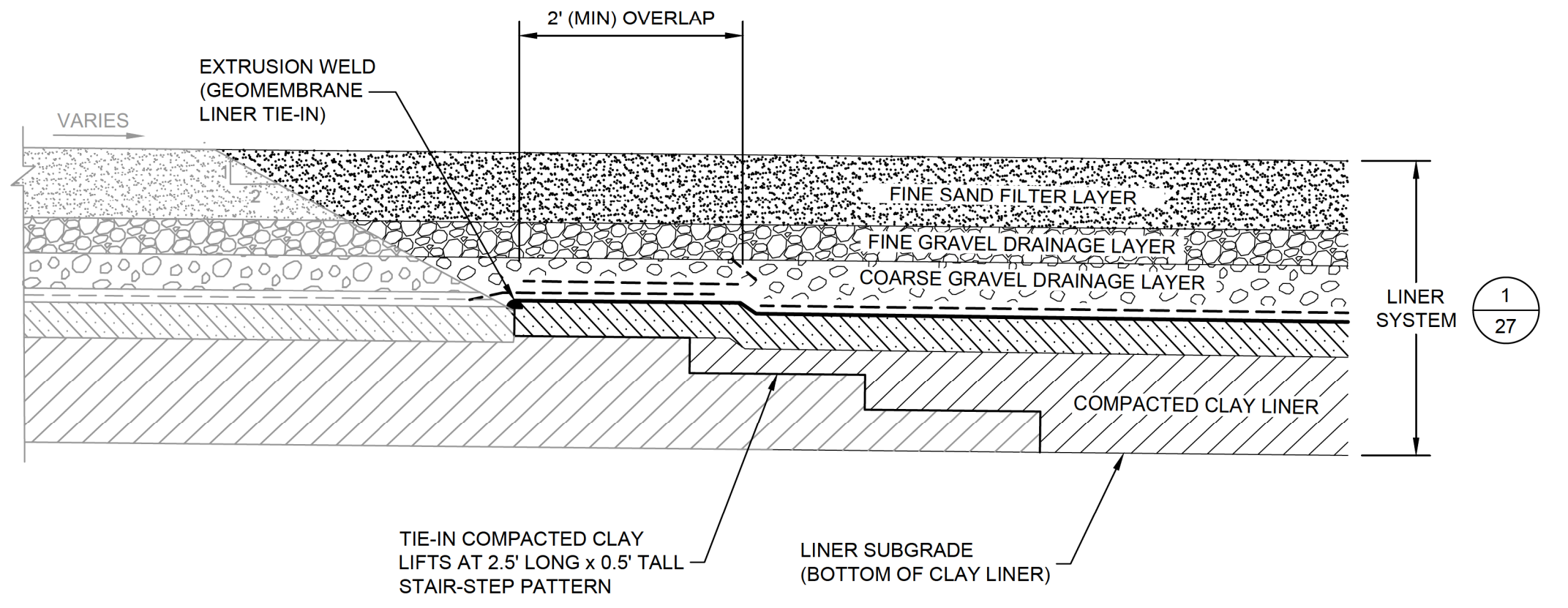
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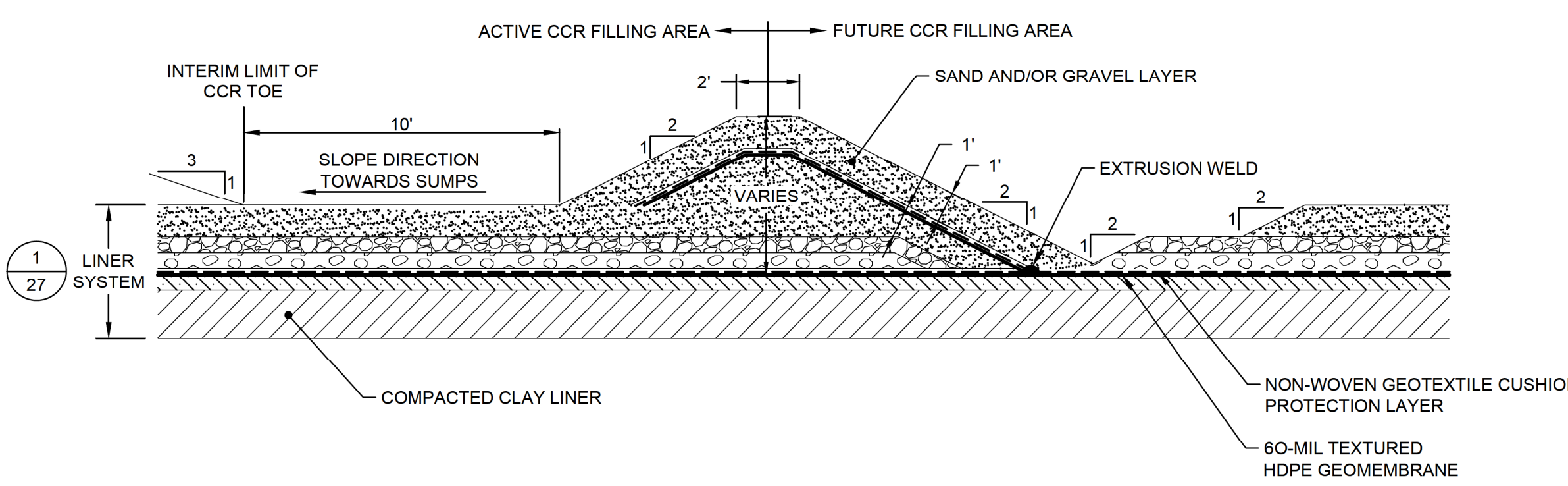
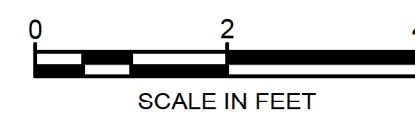
STEP 1



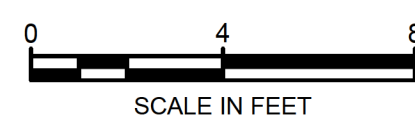
STEP 2



8 DETAIL INTERCELL BERM



9 DETAIL RAIN FLAP (NOTE 2)



- NOTES:
1. GEOSYNTHETIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
 2. RAIN FLAP BERMS CAN BE USED TO LIMIT THE SIZE OF THE ACTIVE AREA DURING INITIAL STAGE OF FILLING. RAIN FLAP BERM LOCATIONS WILL BE SELECTED BASED ON ACTUAL CONDITIONS.
 3. DETAILS ON THIS DRAWING ARE SHOWN BASED ON LINER SYSTEM OPTION L1D1 (DETAIL 1 ON DRAWING 27). IF OTHER LINER SYSTEMS ARE USED, THE DESIGN APPROACH WILL REMAIN CONSISTENT WITH THE INFORMATION PRESENTED ON THIS DRAWING.
 4. GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.

REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

LINER SYSTEM DETAILS II

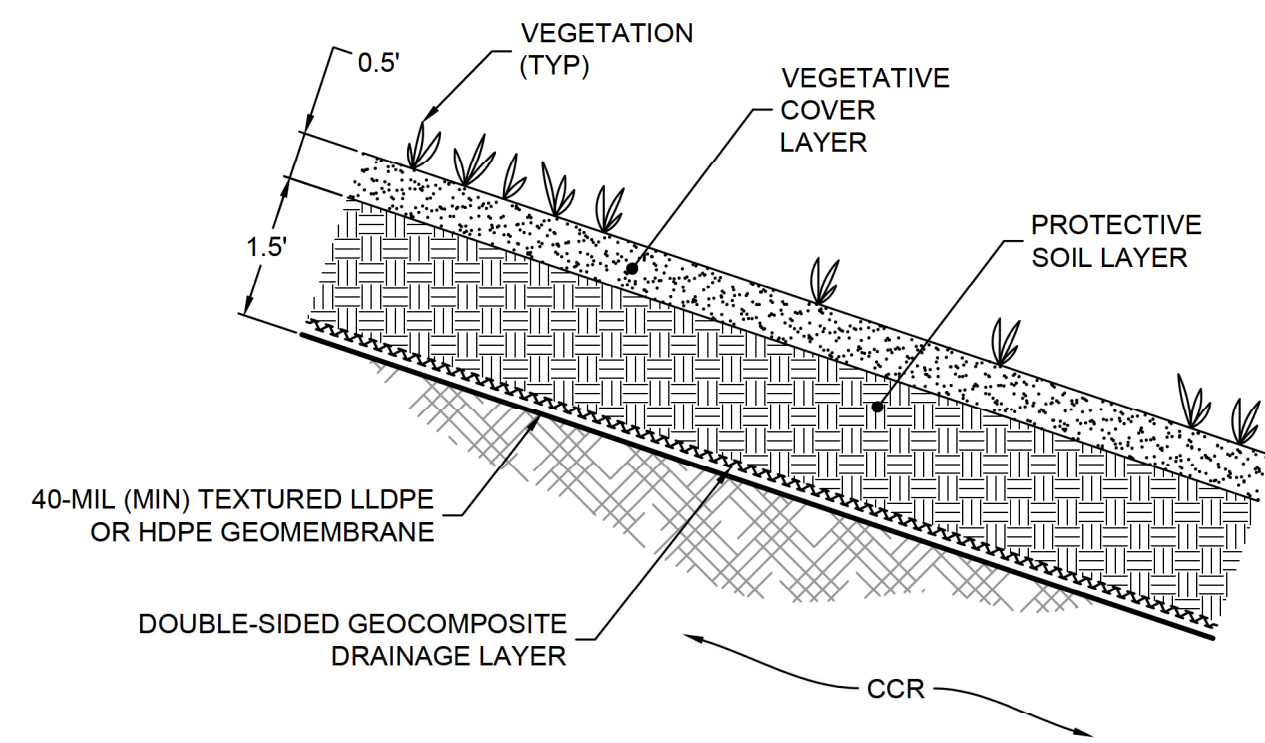
PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

		PHONE: 678.202.9500 WWW.GEOSYNTEC.COM			
PROJ. NO.	GR6601	DWG.	GR6601-031	EDIT	08.16.21
SCALE	AS SHOWN	DRAWING 28 OF 50			
DATE	AUGUST 2021				

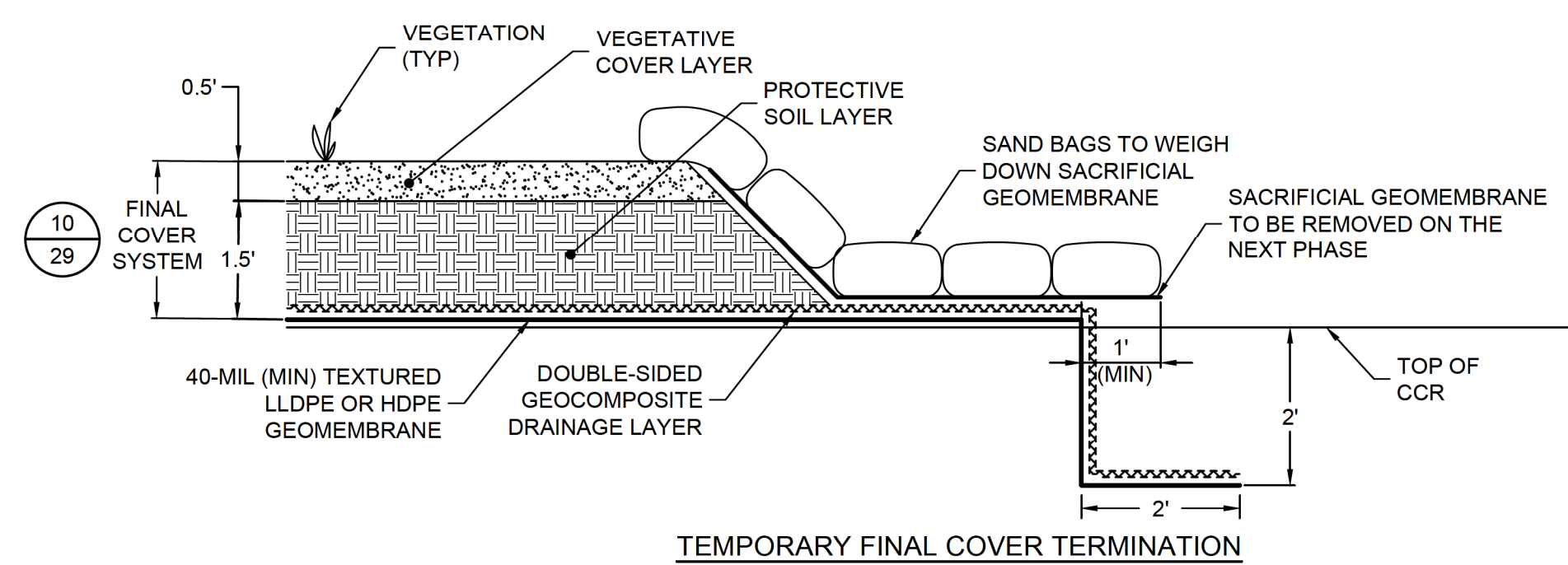
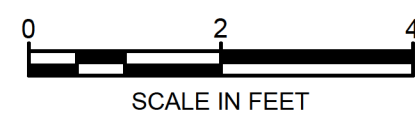


PERMIT DRAWING
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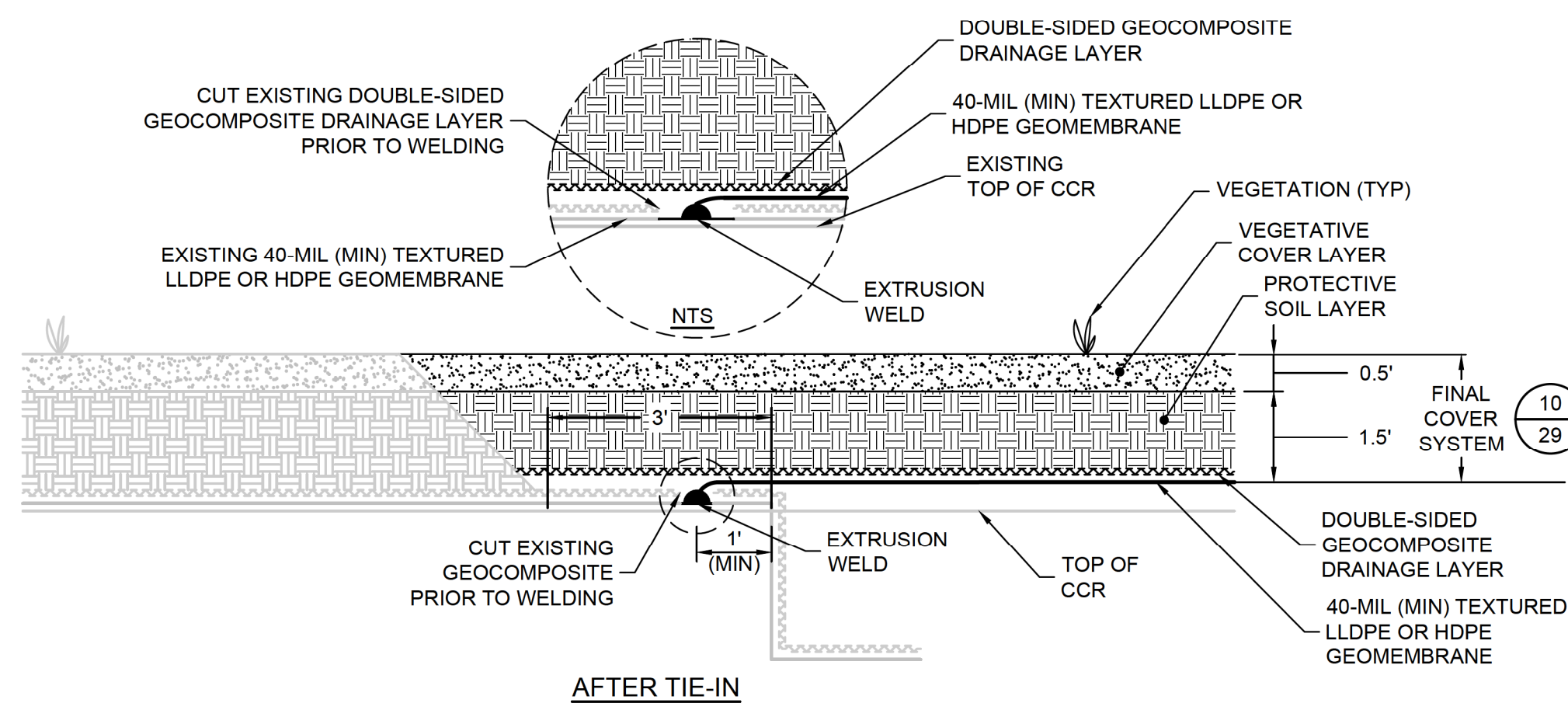
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10
24
DETAIL
FINAL COVER SYSTEM (SOIL-GEOSYNTHETIC COMPOSITE COVER OPTION)

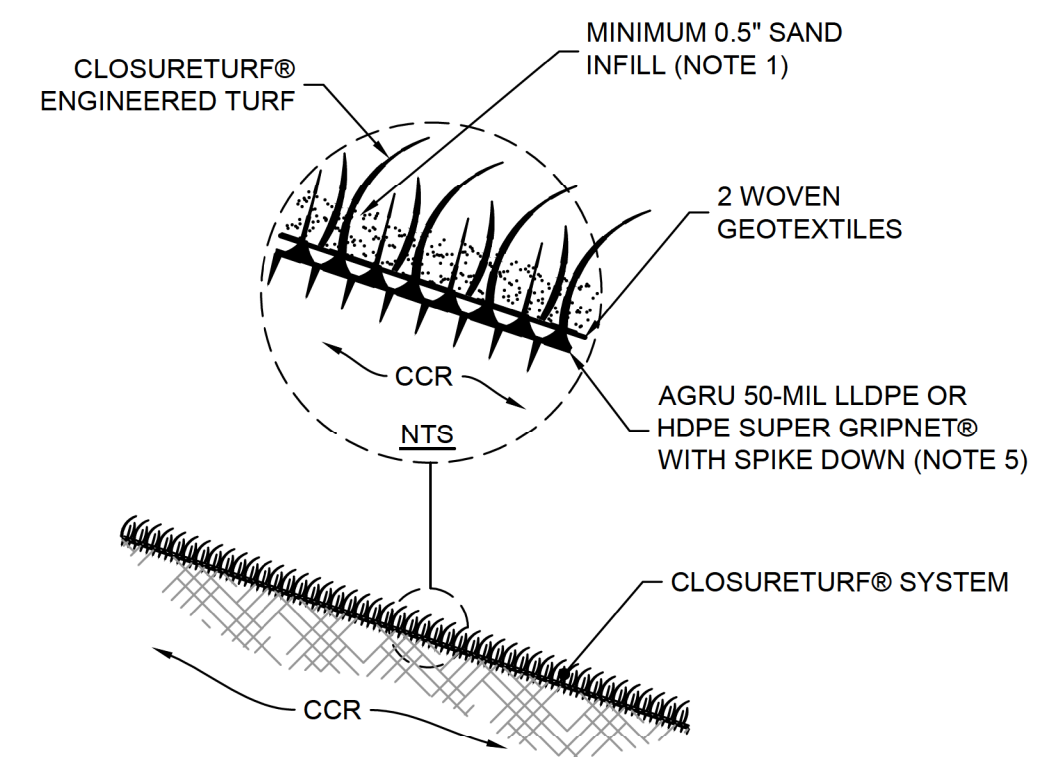
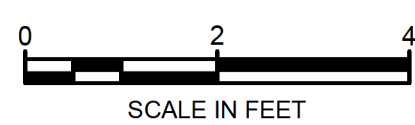


TEMPORARY FINAL COVER TERMINATION

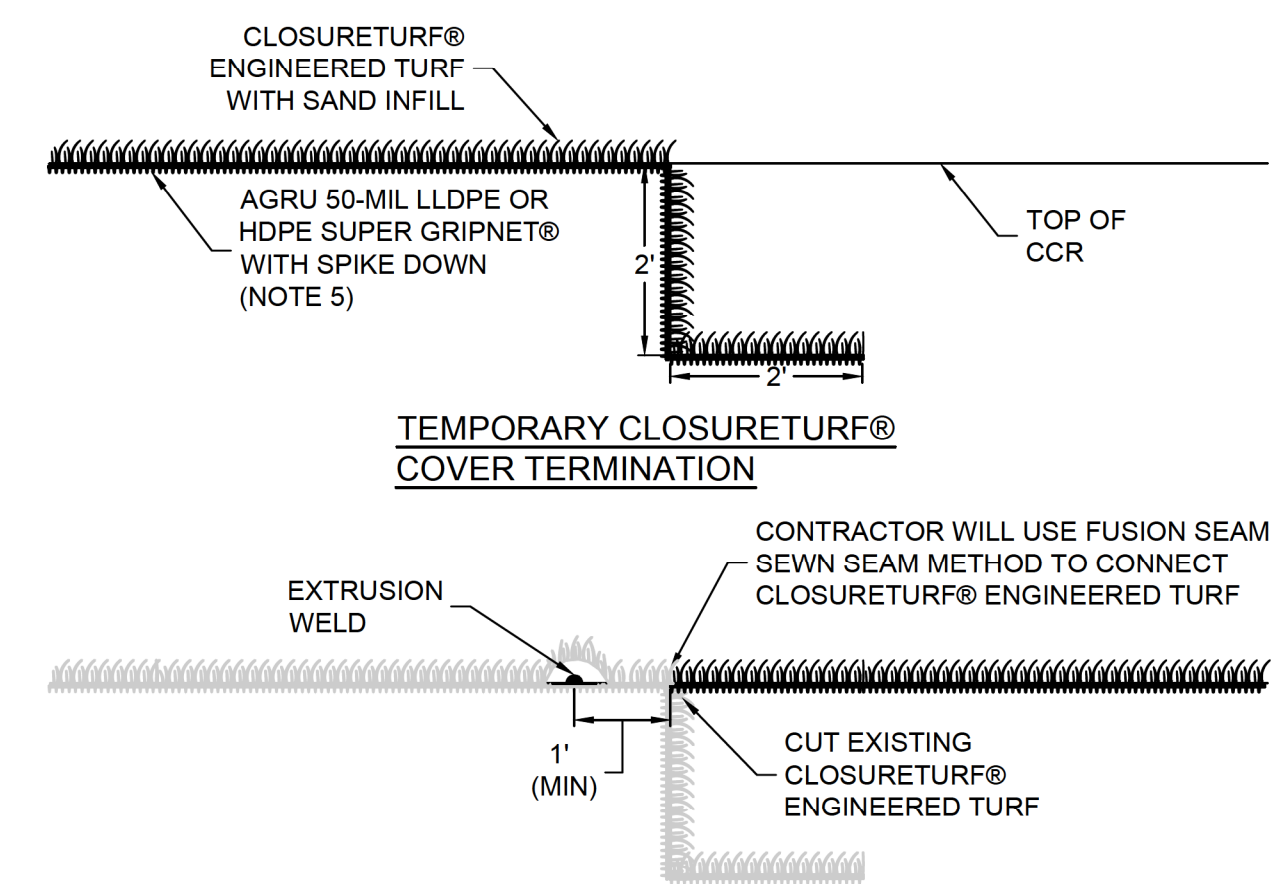


AFTER TIE-IN

12
-
DETAIL
FINAL COVER TIE-IN AT PHASE BOUNDARY

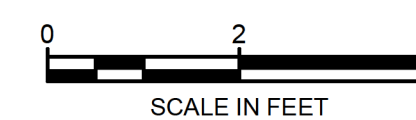


11
24
DETAIL
FINAL COVER SYSTEM (CLOSURETURF® COVER OPTION)
SCALE: NOT TO SCALE



TEMPORARY CLOSURETURF® COVER TERMINATION

13
-
DETAIL
ALTERNATIVE COVER TIE-IN AT PHASE BOUNDARY



NOTES:

- SAND INFILL IS TO BE USED WITH CLOSURETURF® ENGINEERED TURF IN ALL LOCATIONS EXCEPT WITHIN DRAINAGE FEATURES, WHICH WILL USE HYDROBINDER AND/OR RIPRAP AS SPECIFIED ON THE STORMWATER MANAGEMENT SYSTEM DETAILS.
- GEOSYNETHIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
- SUBGRADE PREPARATION IN AREAS WHERE GEOMEMBRANE LINER WILL BE INSTALLED WILL CONSIST OF MOISTURE CONDITIONING, COMPACTION, AND SMOOTH ROLLING AS NEEDED.
- GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.
- CLOSURETURF® DETAILS SHOWN WITH SUPER GRIPNET® GEOMEMBRANE OPTION. OTHER CLOSURETURF® GEOMEMBRANE OPTIONS (E.G. MICRODRAIN® OR MICROSPIKE®) MAY BE CONSIDERED AS PART OF THE DETAILED DESIGN.

REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

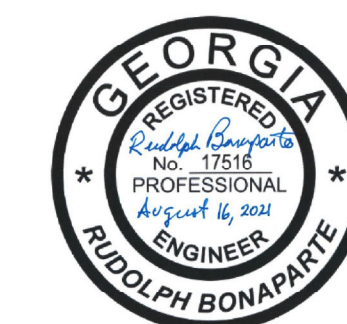
FINAL COVER SYSTEM DETAILS

PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

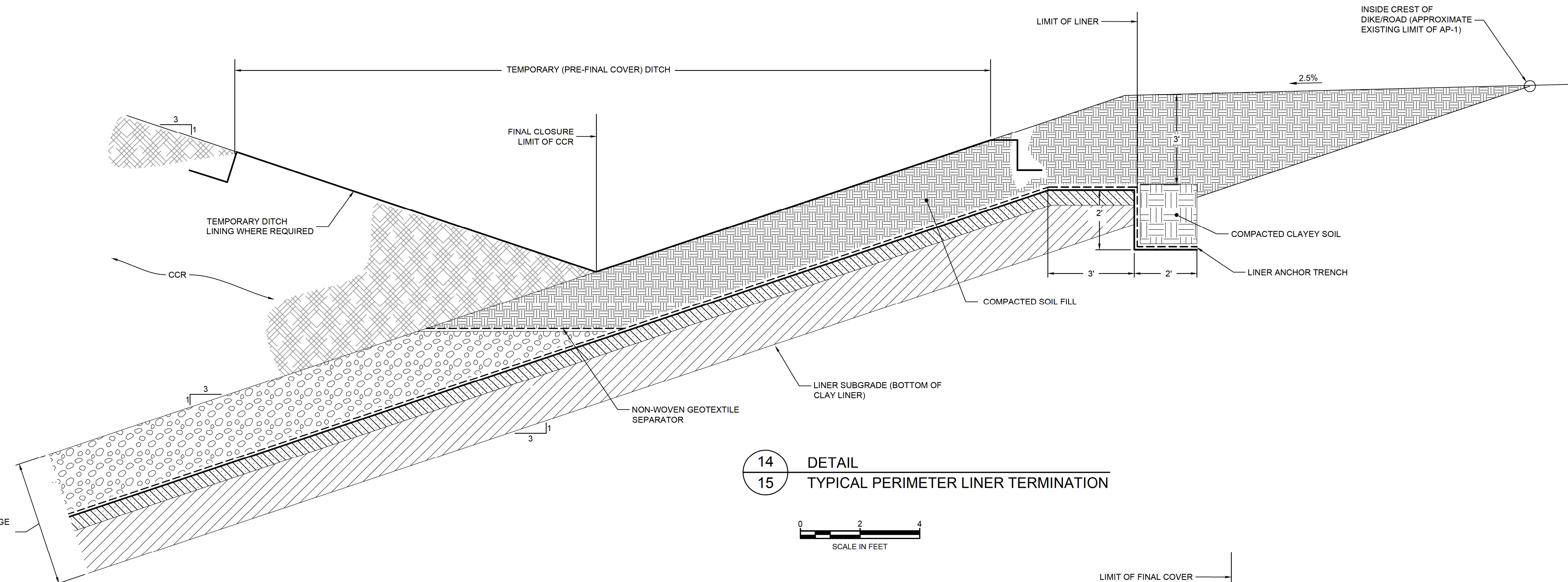
Geosyntec
consultants

1255 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.202.9500
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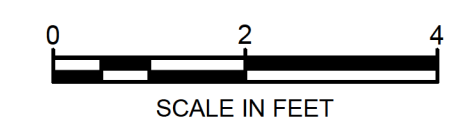
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SCALE	AS SHOWN	DRAWING 29 OF 50			
DATE	AUGUST 2021				



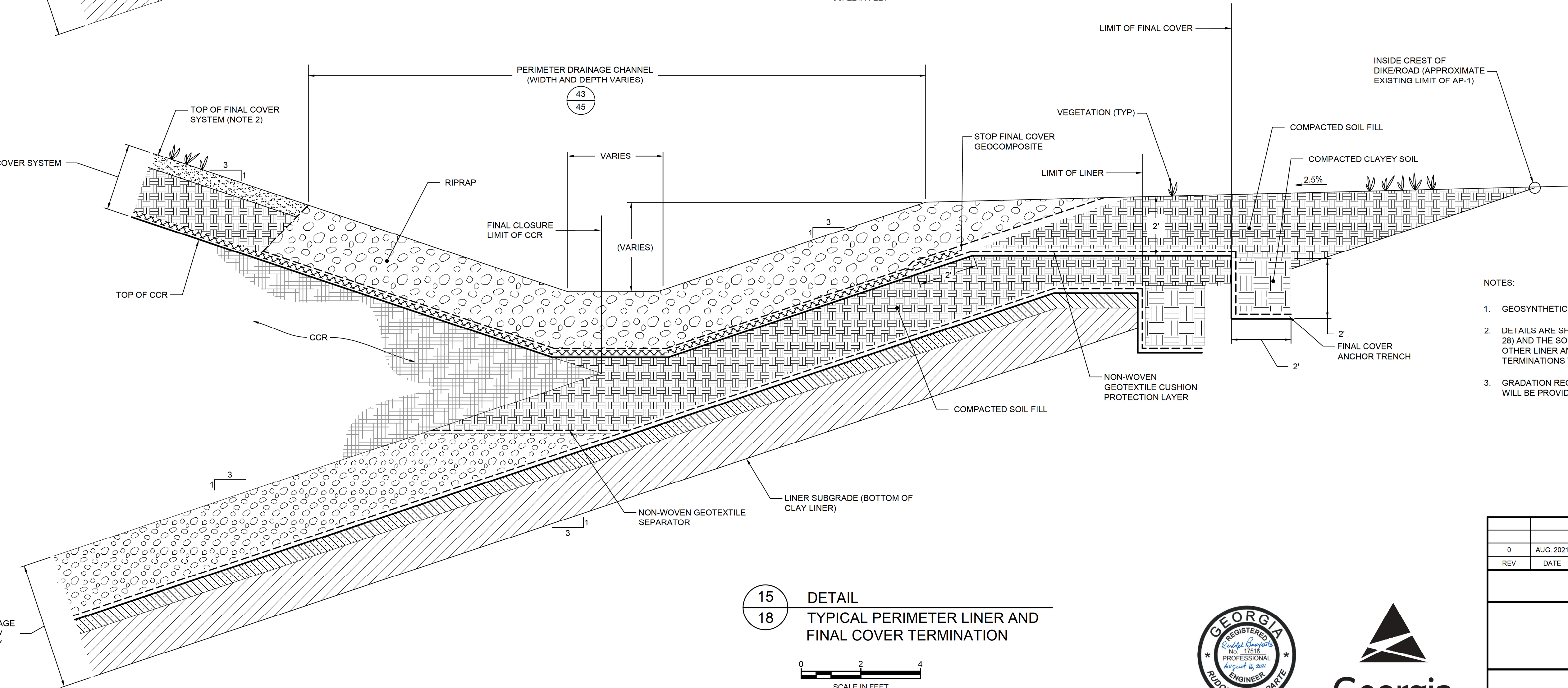
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NOT FOR CONSTRUCTION



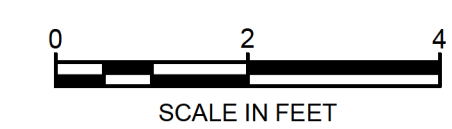
14 DETAIL
15 TYPICAL PERIMETER LINER TERMINATION



ALTERNATIVE DRAINAGE SYSTEM (D4) 3H:1V SIDESLOPES ONLY
5/27



15 DETAIL
18 TYPICAL PERIMETER LINER AND FINAL COVER TERMINATION



ALTERNATIVE DRAINAGE SYSTEM (D4) 3H:1V SIDESLOPES ONLY
5/27

- NOTES:
1. GEOSYNTHETIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
 2. DETAILS ARE SHOWN FOR LINER SYSTEM COMPONENTS "L1" AND "D4" (SEE DRAWING 28) AND THE SOIL GEOSYNTHETIC FINAL COVER SYSTEM OPTION (SEE DRAWING 30). IF OTHER LINER AND/OR FINAL COVER SYSTEM OPTIONS ARE USED, THEIR TERMINATIONS WILL BE CONSISTENT WITH THESE SHOWN HERE.
 3. GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.

REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

PERIMETER DETAILS

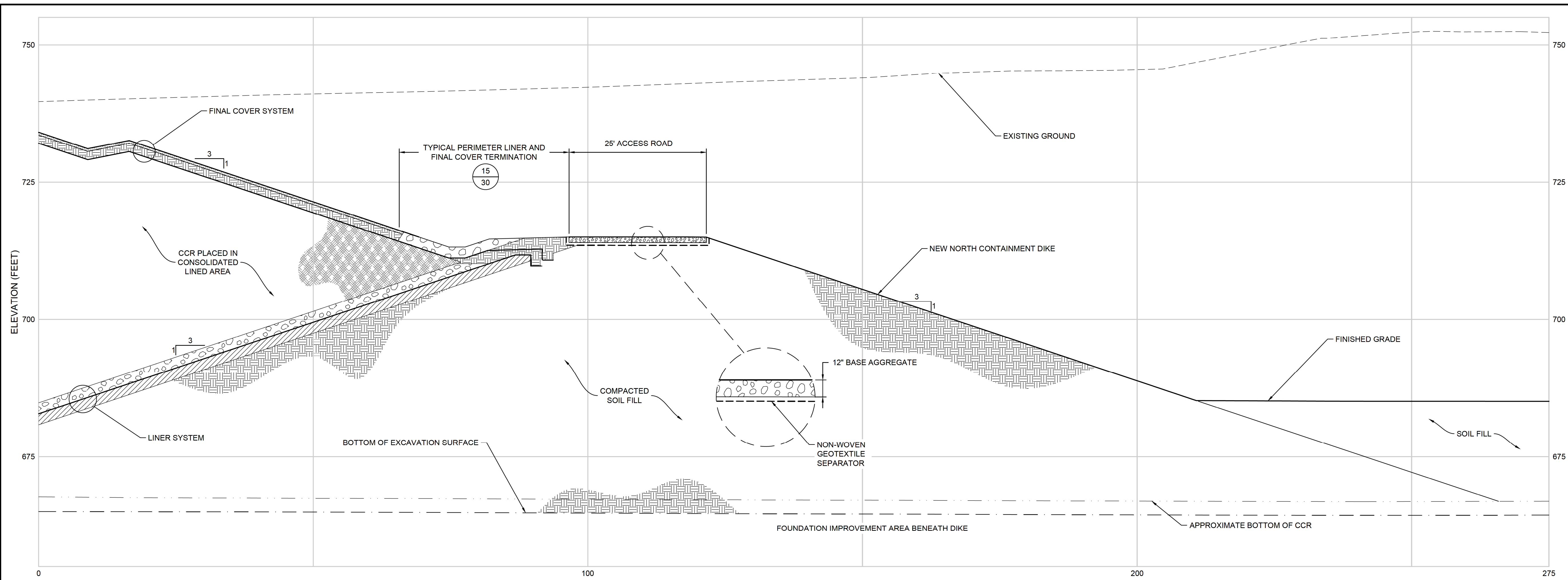
PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

		PHONE: 678.202.9500 WWW.GEOSYNTEC.COM	
PROJ. NO.	GR6601	DWG.	GR6601-030
SCALE	AS SHOWN	EDIT	08.16.21
DATE	AUGUST 2021	DRAWING 30 OF 50	

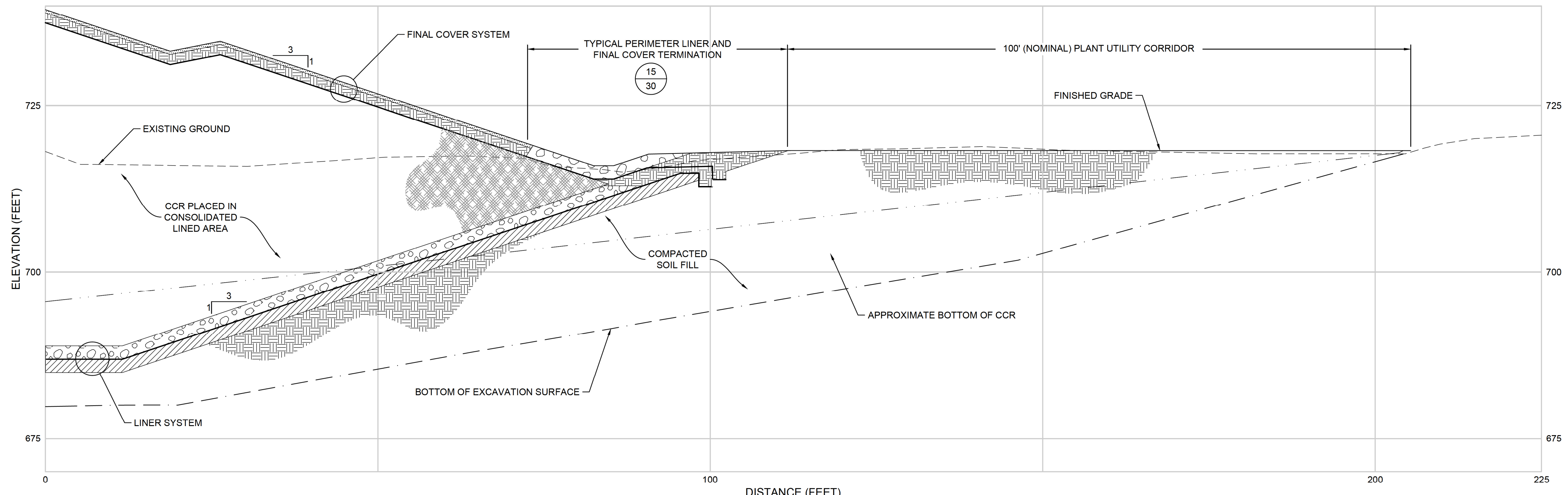
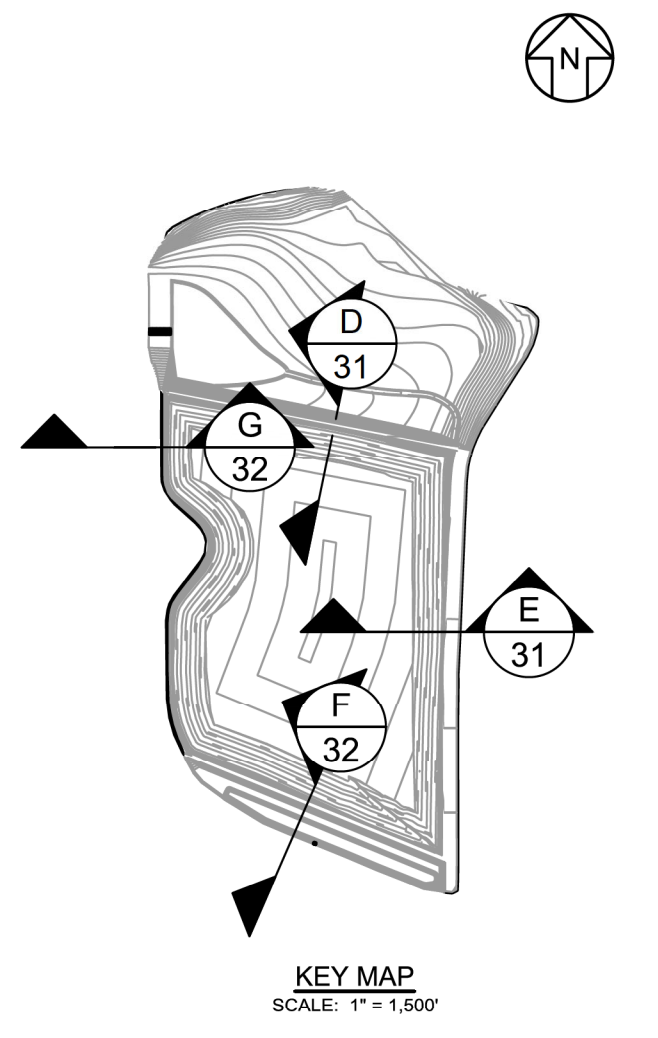


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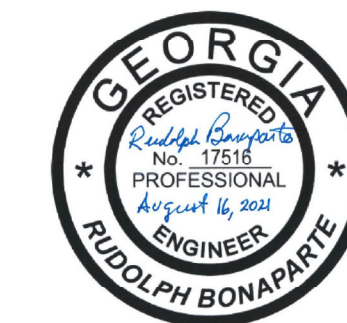
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D
SECTION
31
NORTH PERIMETER
SCALE: 1" = 10'



E
SECTION
31
EAST PERIMETER
SCALE: 1" = 10'



PERMIT DRAWING
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

PERIMETER SECTIONS I

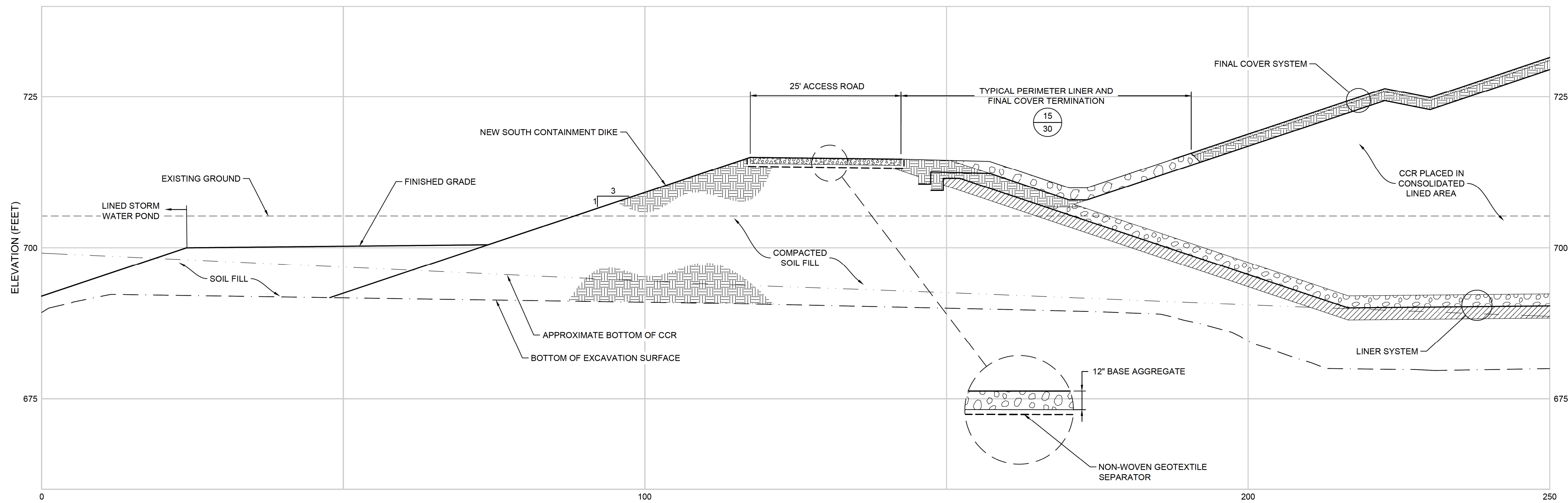
PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec
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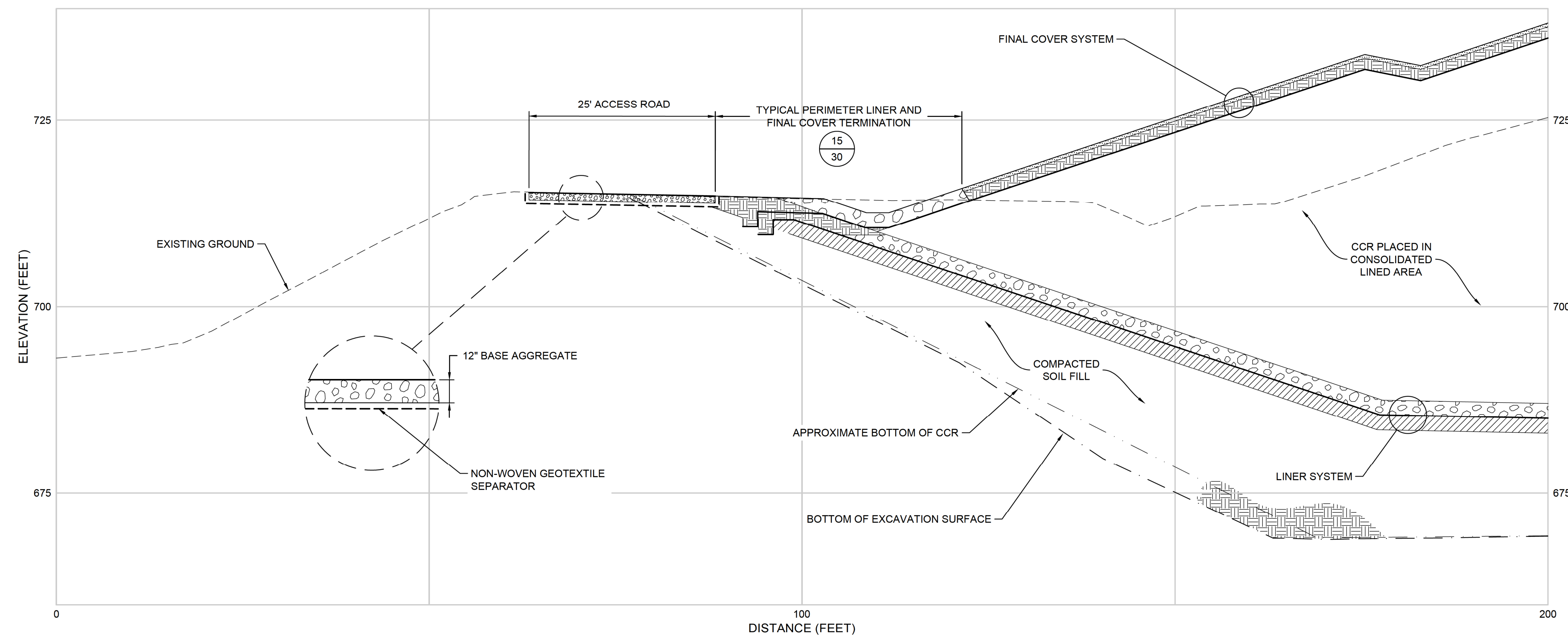
1255 ROBERTS BOULEVARD, NW, SUITE 200
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PHONE: 678.202.9500
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PROJ. NO.	GR6601	DWG.	GR6601-032	EDIT	08.16.21
SCALE	AS SHOWN	DRAWING 31 OF 50			
DATE	AUGUST 2021				

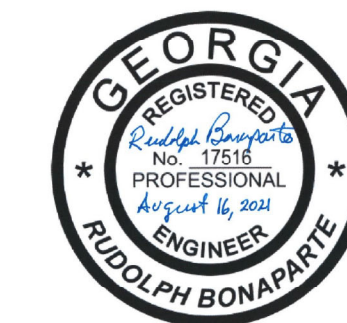
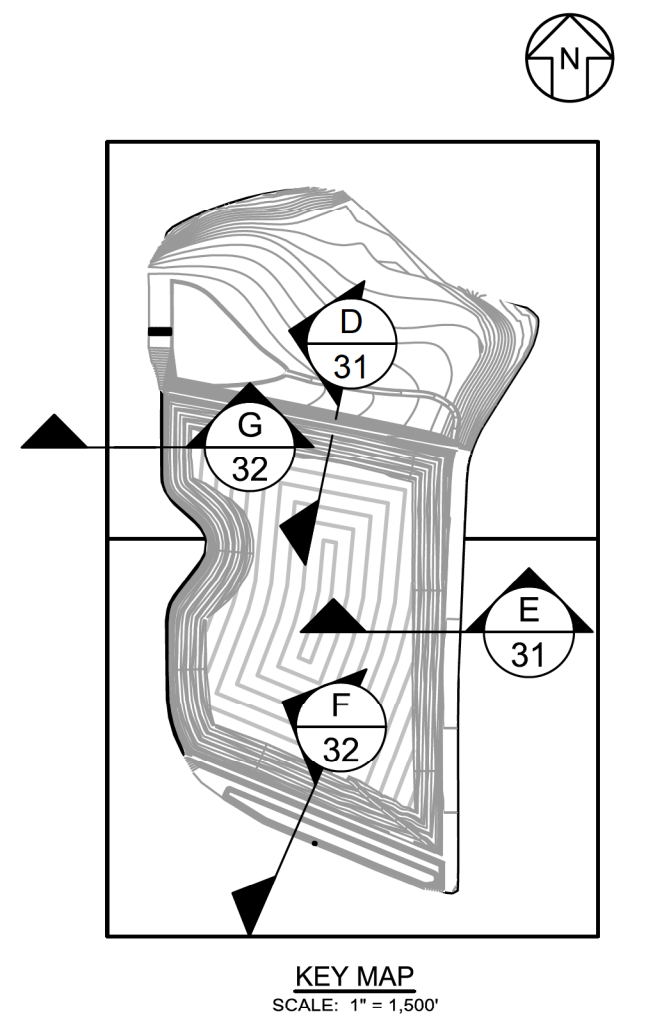
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F
32 SECTION
SOUTH PERIMETER
SCALE: 1" = 10'



G
32 SECTION
WEST PERIMETER
SCALE: 1" = 10'



PERMIT DRAWING
NOT FOR CONSTRUCTION

0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB	
REV	DATE	DESCRIPTION	DRN	APP	
PERIMETER SECTIONS II					
PLANT BOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS BARTOW COUNTY, GEORGIA					
Geosyntec consultants					
<small>1255 ROBERTS BOULEVARD, NW, SUITE 200 KENNESAW, GEORGIA 30144 USA</small>					
<small>PHONE: 678.202.9500 WWW.GEOSYNTEC.COM</small>					
PROJ. NO.	GR6601	DWG.	GR6601-033	EDIT	08.16.21
SCALE	AS SHOWN				
DATE	AUGUST 2021	DRAWING			32 OF 50

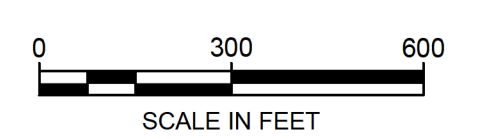
P:\CAD\PROJECTS\GEORGIA POWER\BOWEN POWER PLANT\PERMIT\ASH POND CLOSURE (GR6601)\DRAWINGS\GR6601-033



LEGEND

	EXCAVATION SURFACE ELEVATION (FEET)
	TOP OF LINER SYSTEM ELEVATION (FEET)
	EXISTING LIMIT OF AP-1
	LEACHATE COLLECTION CORRIDOR
	LEACHATE FORCEMAIN
	LEACHATE FORCEMAIN
	PERMIT BOUNDARY
	LEACHATE FORCEMAIN AIR RELEASE MANHOLE
	LEACHATE FORCEMAIN CLEANOUT MANHOLE
	LEACHATE FORCEMAIN JUNCTION MANHOLE
	LEACHATE RISER PAD
	TEMPORARY WWTs PAD

- NOTES:**
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - TOP OF LINER GRADES SHOWN ON THIS DRAWING REPRESENT THE TOP OF THE GEOMEMBRANE COMPONENT OF THE LINER SYSTEM WITHIN THE CONSOLIDATED LINED FOOTPRINT AREA. WITHIN THE REMAINDER OF AP-1 (OUTSIDE THE CONSOLIDATED LINED FOOTPRINT AREA), GRADES REPRESENT EXTERIOR NORTH AND SOUTH CONTAINMENT DIKE SLOPES, WHICH TIE-IN TO THE ESTIMATED BOTTOM OF EXCAVATION GRADES. CONTOURS SHOWN ON THIS DRAWING BEYOND LIMITS OF AP-1 ARE EXISTING GROUND TOPOGRAPHY.
 - A TEMPORARY WWTs WILL BE ESTABLISHED AT THE APPROXIMATE LOCATION SHOWN FOR TREATMENT OF LEACHATE AND CONTACT WATER GENERATED DURING CLOSURE CONSTRUCTION. AT THE COMPLETION OF CLOSURE CONSTRUCTION, LEACHATE WILL BE ROUTED TO A PERMANENT ON-SITE WWTs LOCATED OUTSIDE THE AP-1 PERMIT BOUNDARY, ON THE PLANT BOWEN PROPERTY.



REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

LEACHATE MANAGEMENT PLAN

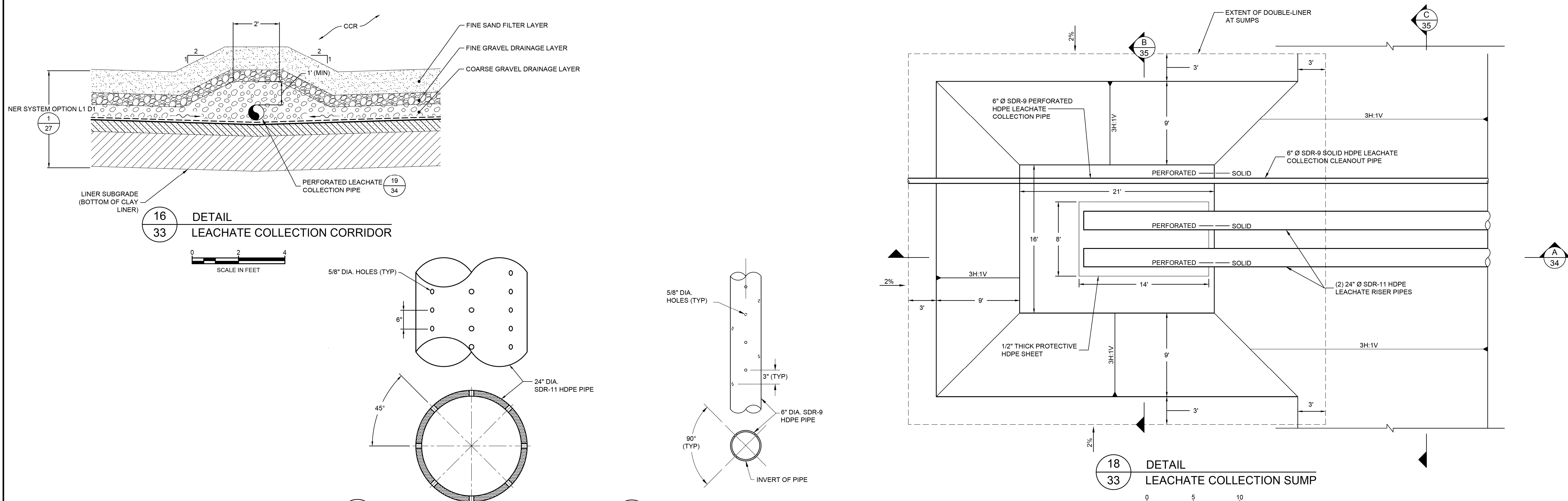
PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec consultants		PHONE: 678.202.9500 WWW.GEOSYNTEC.COM
PROJ. NO. GR6601	DWG. GR6601-034	EDIT 8/16/21
SCALE 1" = 300'	DRAWING 33 OF 50	
DATE AUGUST 2021		



PERMIT DRAWING
NOT FOR CONSTRUCTION

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16 DETAIL
33 LEACHATE COLLECTION CORRIDOR

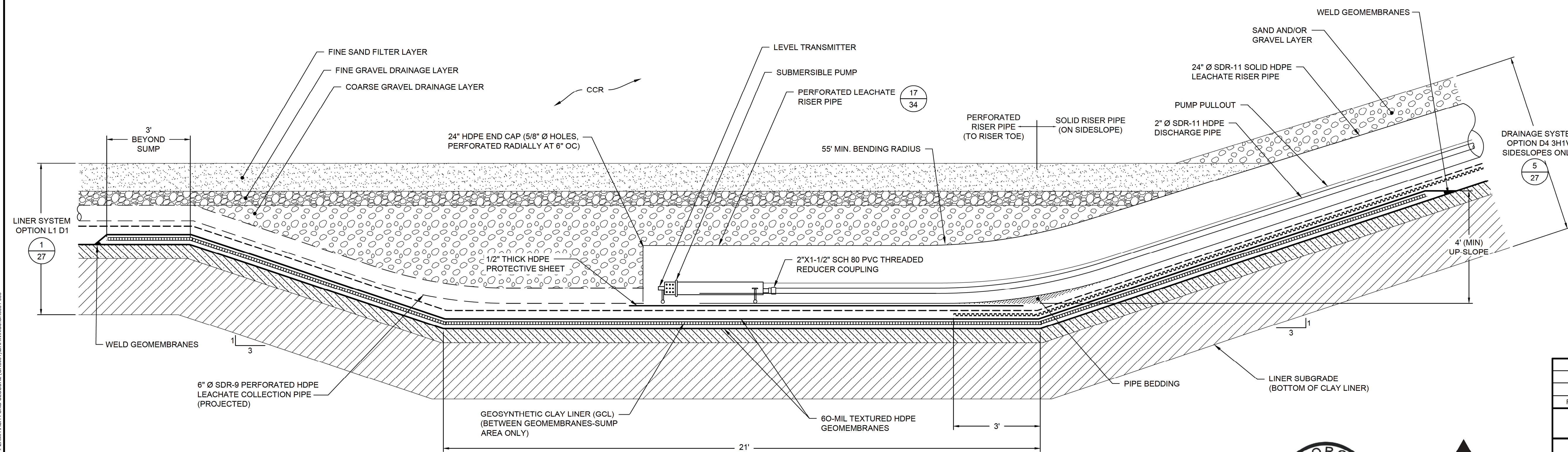
SCALE IN FEET

17 DETAIL
34 PERFORATED LEACHATE RISER PIPE
SCALE: NOT TO SCALE

19 DETAIL
34 PERFORATED LEACHATE COLLECTION PIPE
SCALE: NOT TO SCALE

18 DETAIL
33 LEACHATE COLLECTION SUMP

SCALE IN FEET



A SECTION
34 LEACHATE COLLECTION RISER TOE

SCALE IN FEET

- NOTES:
1. GEOSYNTHETIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
 2. SUBGRADE PREPARATION IN AREAS WHERE GEOMEMBRANE LINER WILL BE INSTALLED WILL CONSIST OF MOISTURE CONDITIONING, COMPACTION, AND SMOOTH ROLLING AS NEEDED.
 3. TWO RISER PIPES ARE PROVIDED: A PRIMARY RISER AND A BACKUP/REDUNDANT RISER - EACH WITH A SUBMERSIBLE PUMP.
 4. GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.
 5. DETAILS SHOWN ON THIS DRAWING REFLECT LINER SYSTEM OPTIONS AS INDICATED. IF OTHER LINER SYSTEM OPTIONS ARE USED, THE DESIGN APPROACH WILL REMAIN CONSISTENT WITH THIS DRAWING.



PERMIT DRAWING
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

LEACHATE COLLECTION SYSTEM DETAILS I

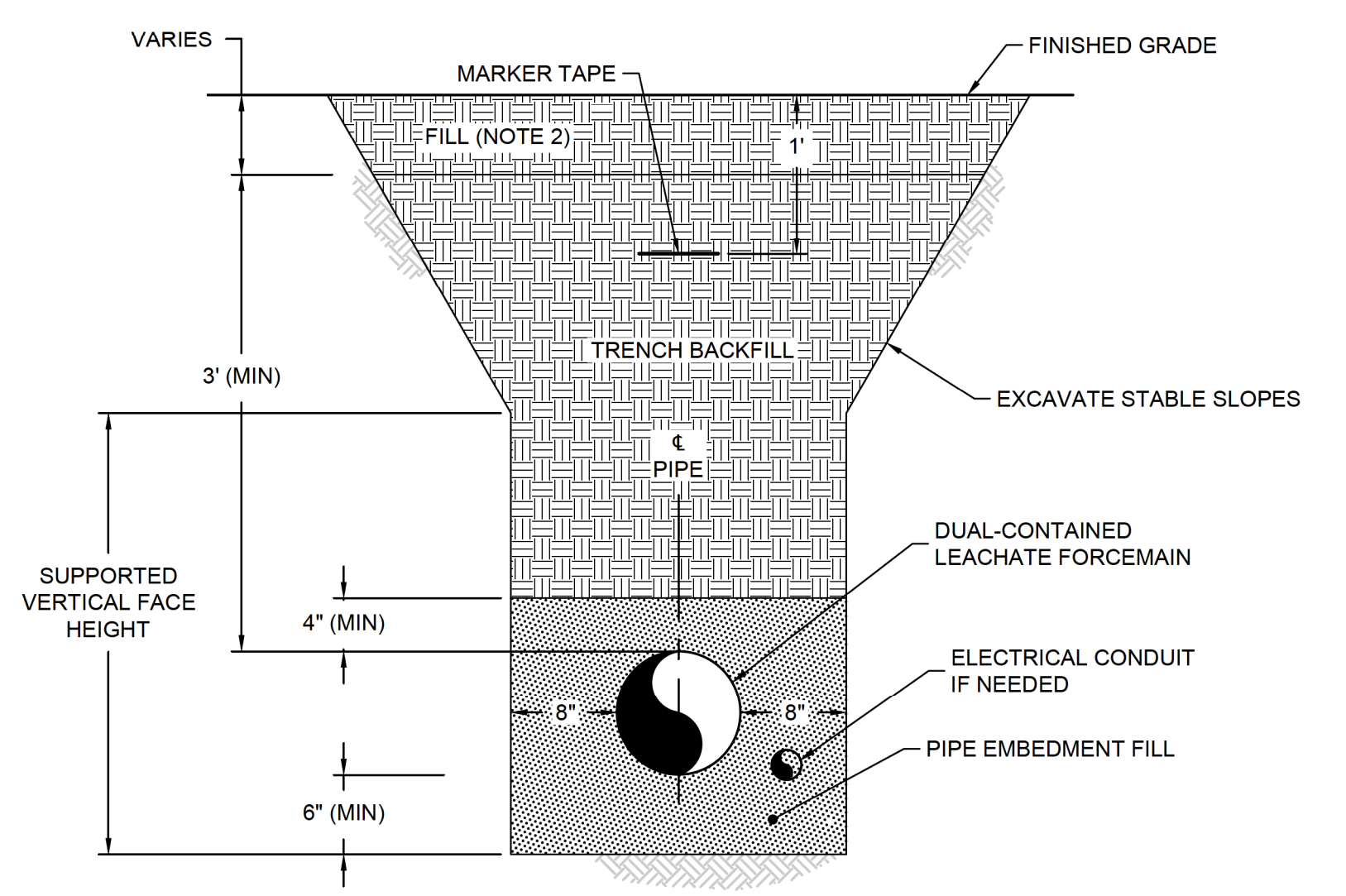
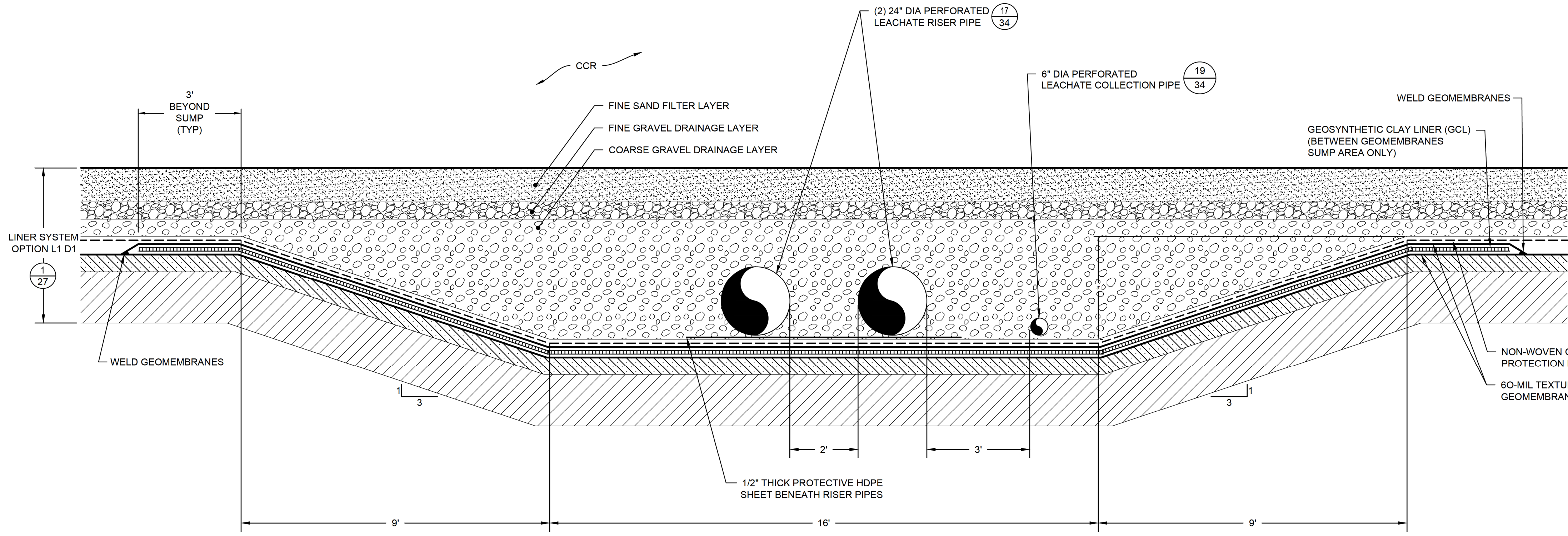
PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec
consultants

1255 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.202.9500
WWW.GEOSYNTEC.COM

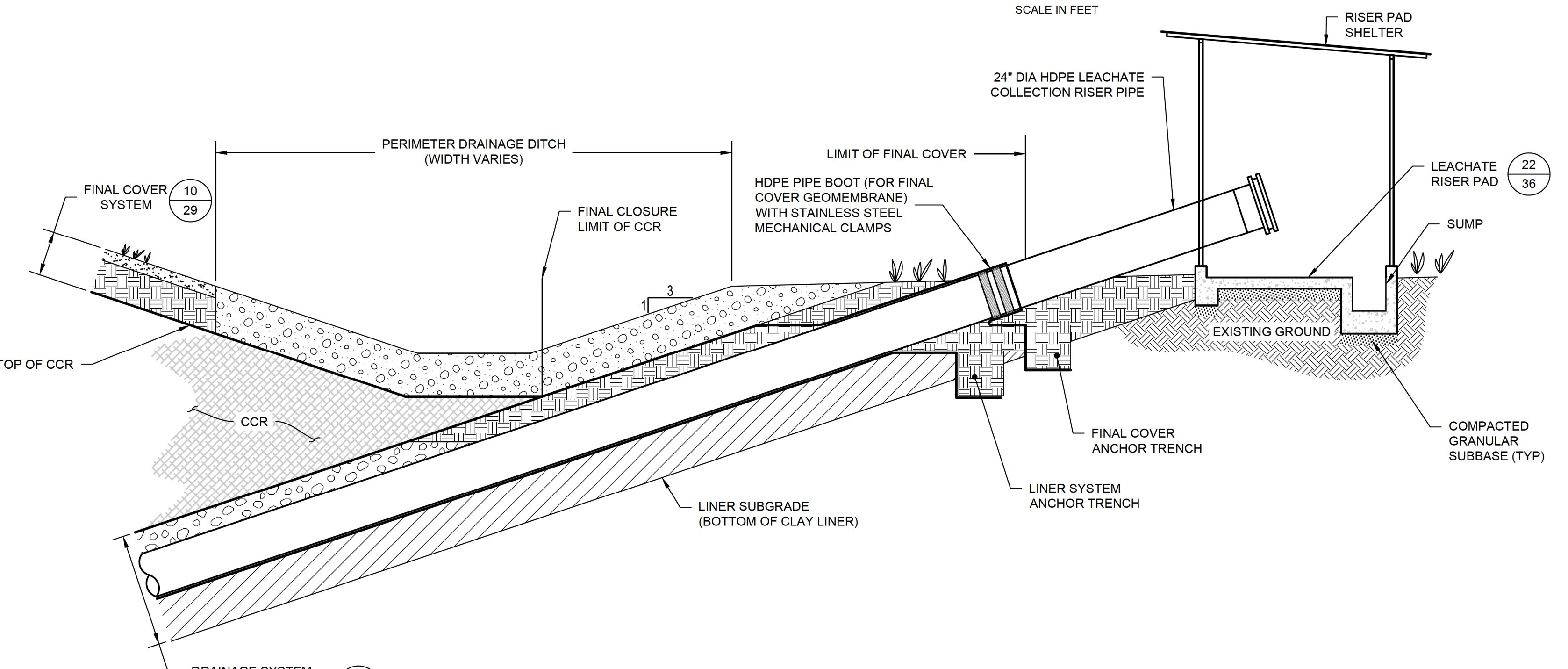
PROJ. NO.	GR6601	DWG.	GR6601-036	EDIT	08.16.21
SCALE	AS SHOWN				
DATE	AUGUST 2021	DRAWING 34 OF 50			

P:\CADD\PROJECTS\GEORGIA POWER\BOWEN POWER PLANT\TERRACE POND CLOSURE (DRW) (DRAWINGS)\GR6601-036

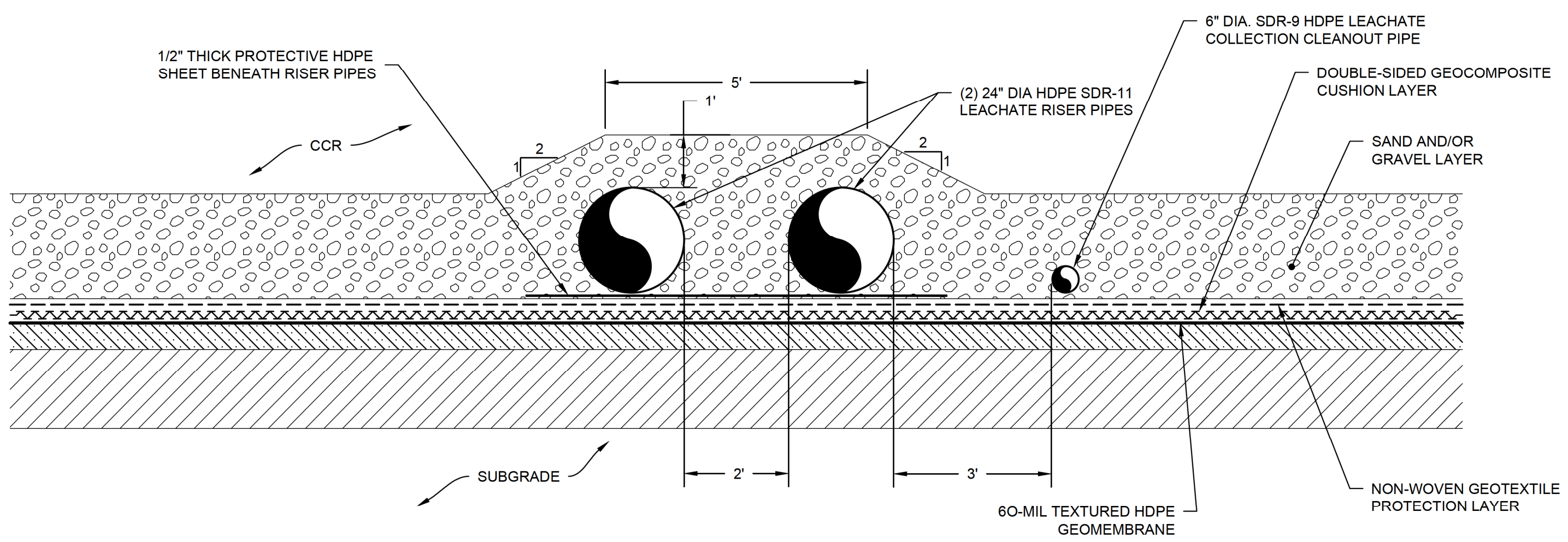


20 DETAIL
33 LEACHATE FORCEMAIN PIPE EMBEDMENT
 SCALE: 1" = 1'
 0 1 2
 SCALE IN FEET

B SECTION
34 LEACHATE COLLECTION SUMP
 SCALE: 1" = 2'
 0 2 4
 SCALE IN FEET



21 DETAIL
21 LEACHATE COLLECTION RISER PIPE TERMINATION
 SCALE: 1" = 4'
 0 4 8
 SCALE IN FEET



C SECTION
34 SIDESLOPE LEACHATE RISER SYSTEM
 SCALE: 1" = 2'
 0 2 4
 SCALE IN FEET

- NOTES:
1. GEOSYNTHETIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
 2. GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.
 3. DETAILS SHOWN ON THIS DRAWING REFLECT LINER SYSTEM OPTIONS AS INDICATED. IF ALTERNATIVE LINER SYSTEMS ARE USED, THE DESIGN APPROACH WILL REMAIN CONSISTENT WITH THIS DRAWING.



PERMIT DRAWING
 NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

LEACHATE COLLECTION SYSTEM DETAILS II

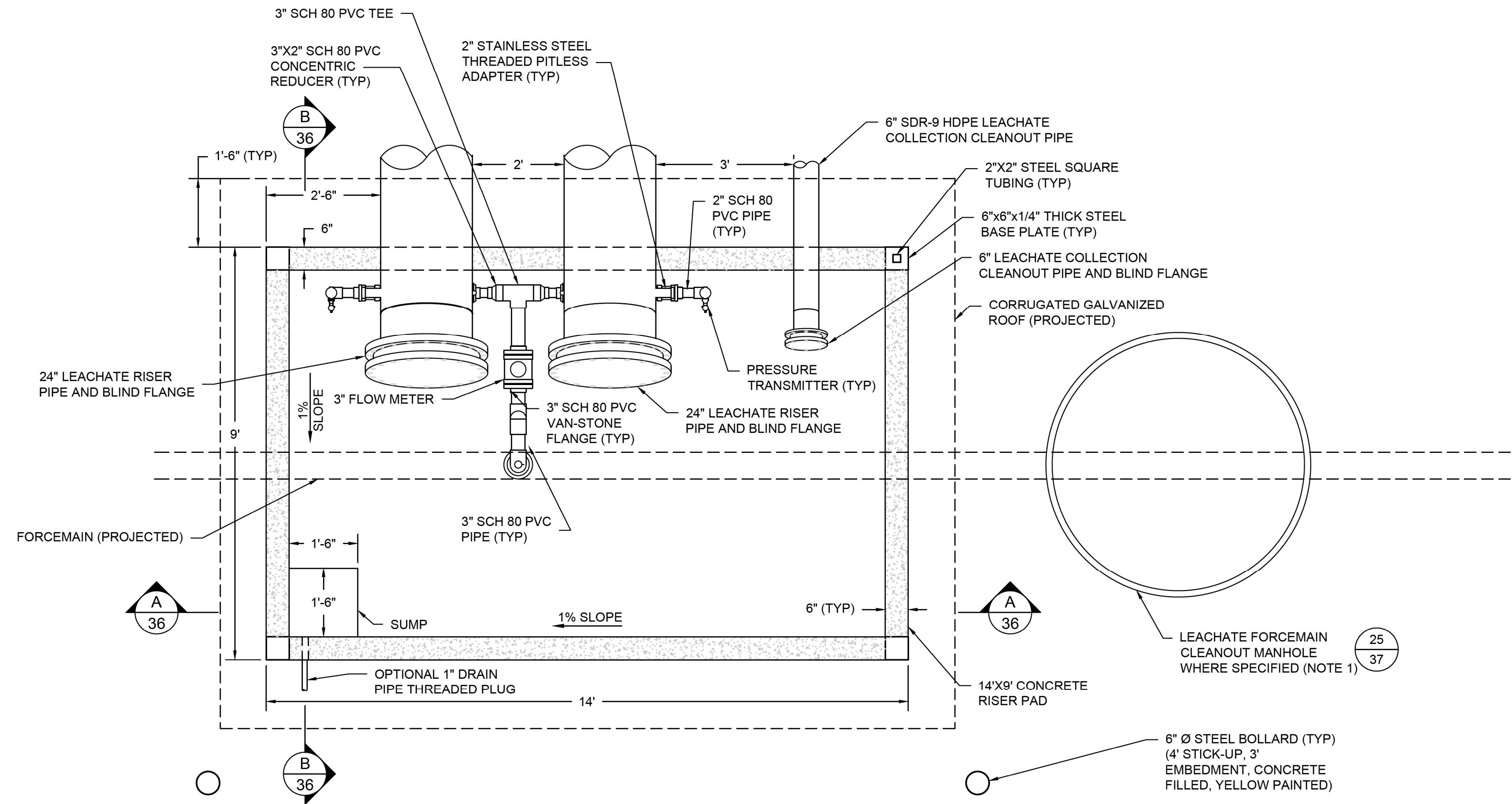
PLANT BOWEN ASH POND 1 (AP-1)
 CLOSURE DRAWINGS
 BARTOW COUNTY, GEORGIA

Geosyntec
 consultants

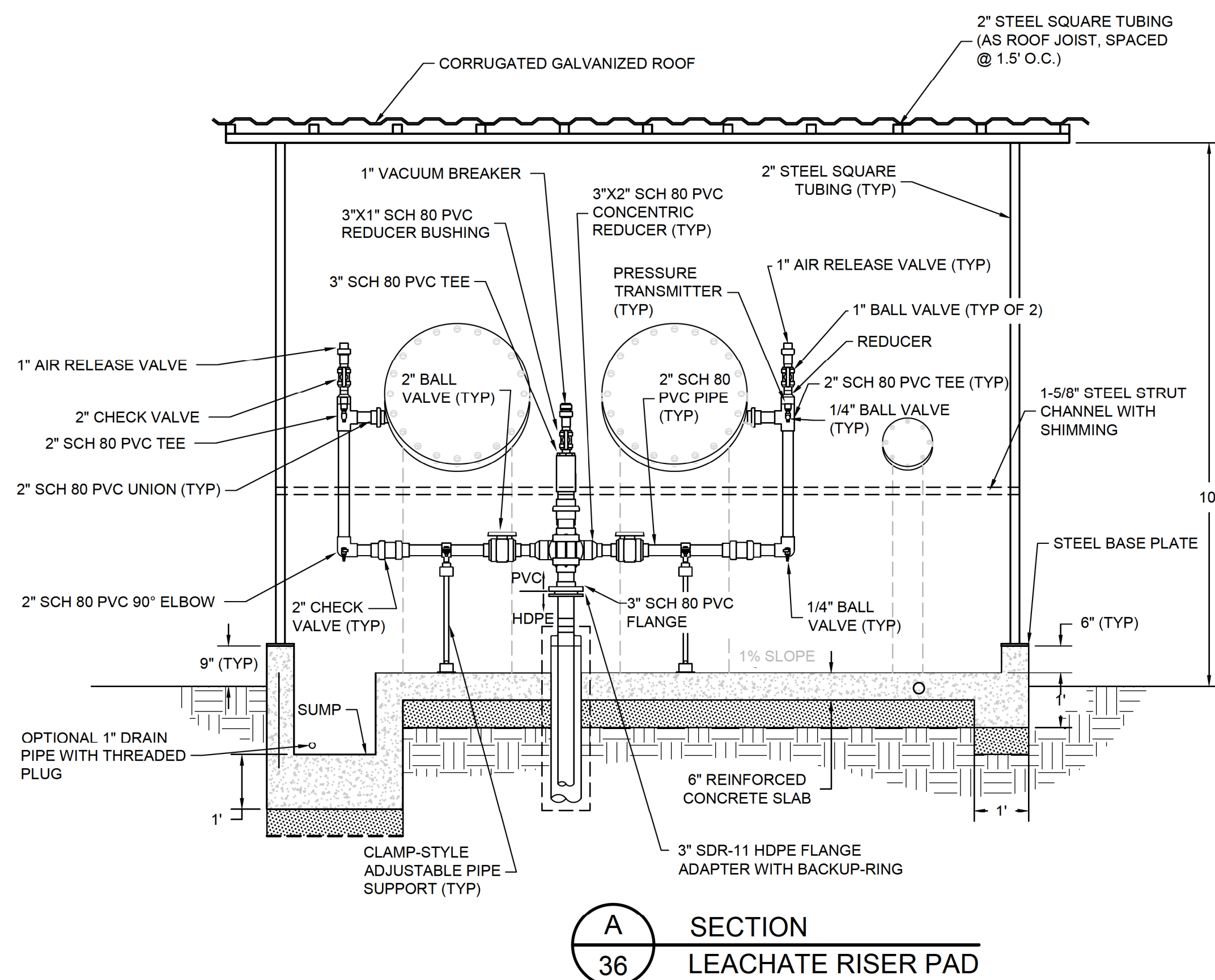
1255 ROBERTS BOULEVARD, NW, SUITE 200
 KENNESAW, GEORGIA 30144 USA
 PHONE: 678.202.9500
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PROJ. NO.	GR6601	DWG.	GR6601-037	EDIT	08.16.21
SCALE	AS SHOWN				
DATE	AUGUST 2021	DRAWING 35 OF 50			

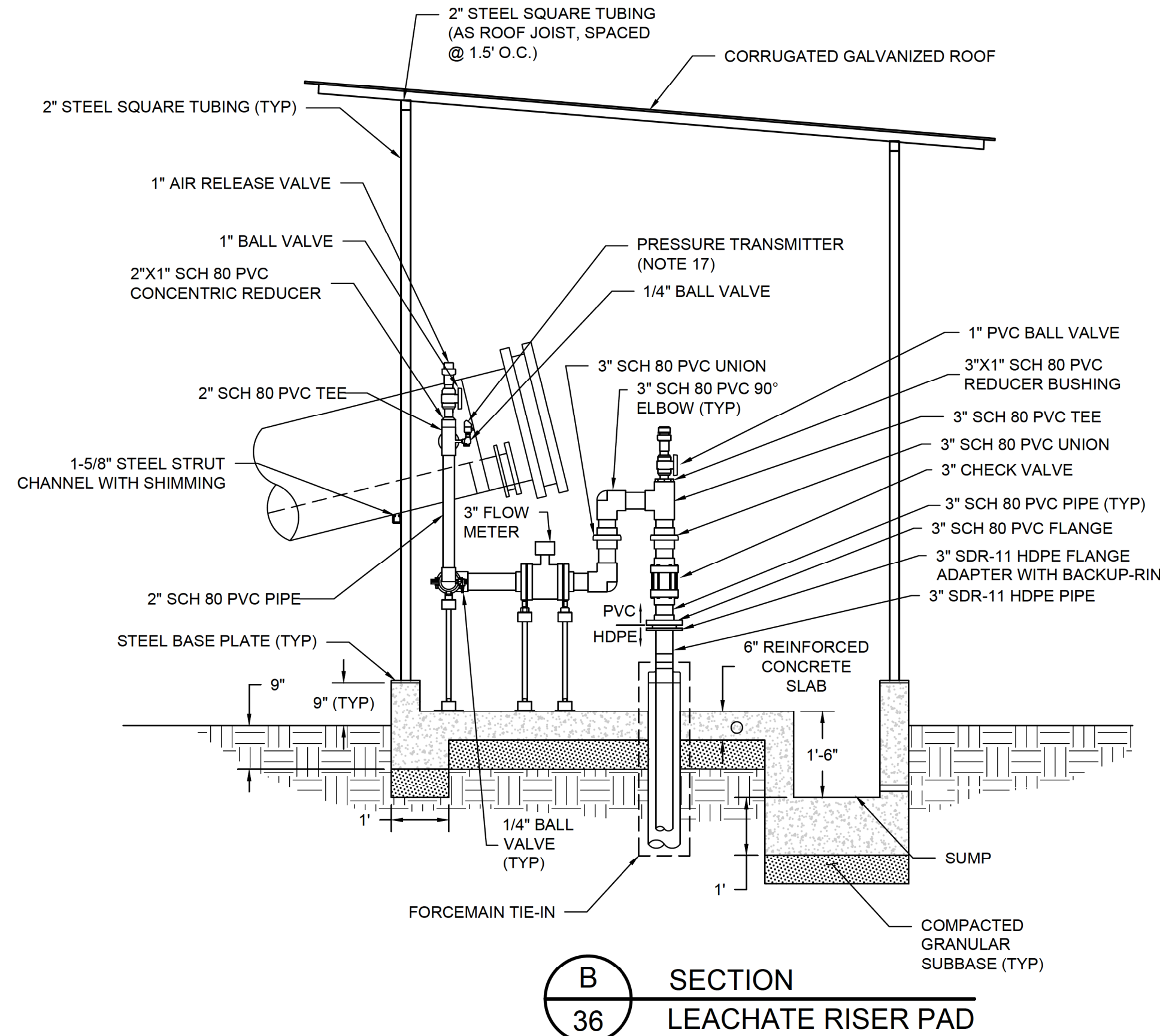
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PLAN VIEW



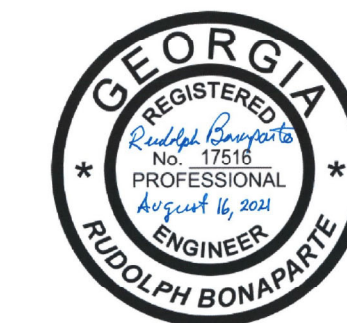
A SECTION
36 LEACHATE RISER PAD



B SECTION
36 LEACHATE RISER PAD

- NOTE:
- CLEANOUT MANHOLES WILL BE USED AT RISER PAD AREA OF CELLS 1A, 4A, 4B, AND 7A. ADDITIONAL CLEANOUTS MAY BE ADDED AS NEEDED. CLEANOUT MANHOLES MAY BE INSTALLED WITHIN RISER PADS, OR NEXT TO RISER PADS AS SHOWN.
 - PIPING AND VALVES ARE CONCEPTUAL TO ILLUSTRATE INTENDED FUNCTIONALITY AND MAY BE REVISED DURING DETAILED DESIGN.

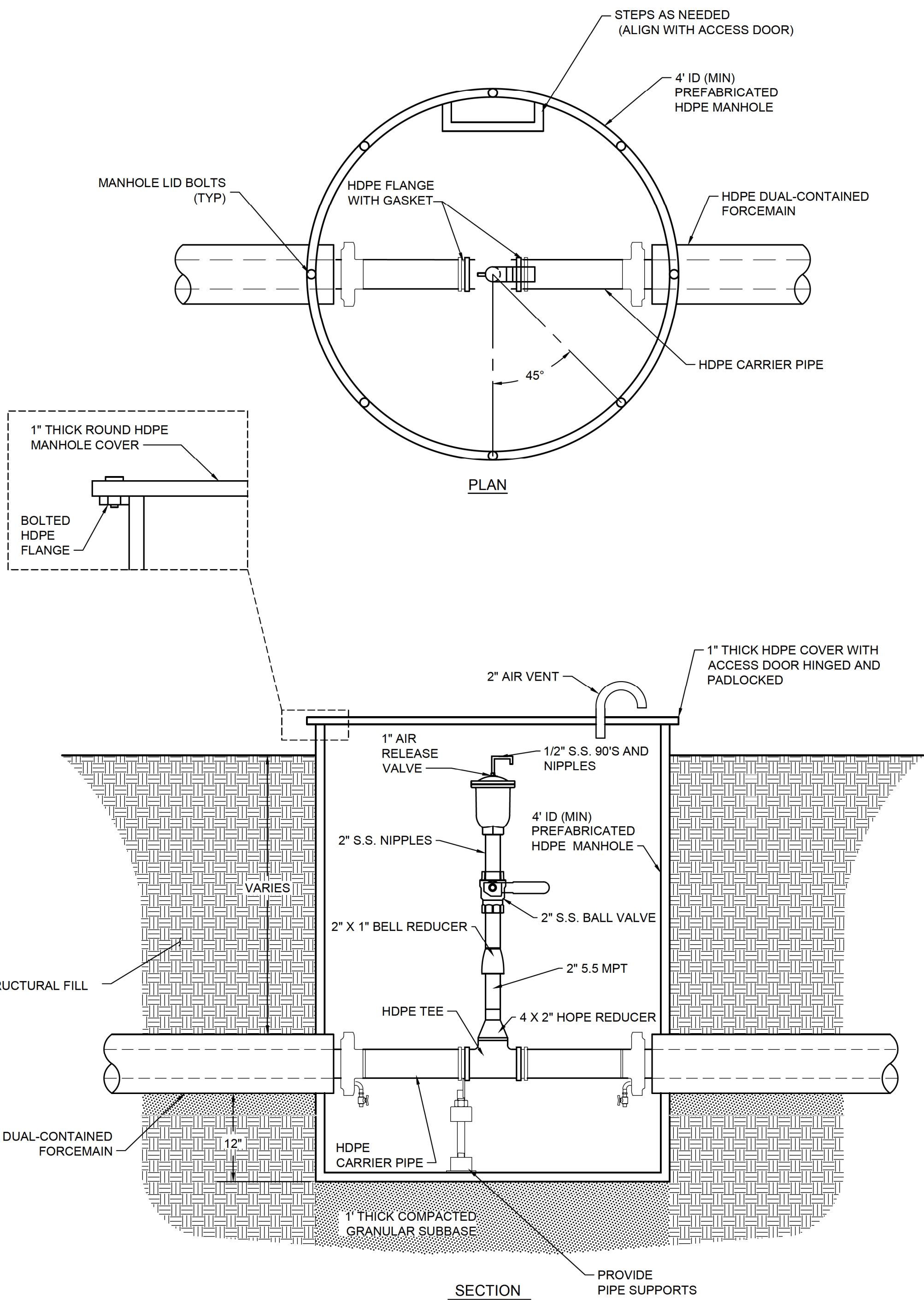
22 DETAIL
33 LEACHATE RISER PAD
SCALE: NOT TO SCALE



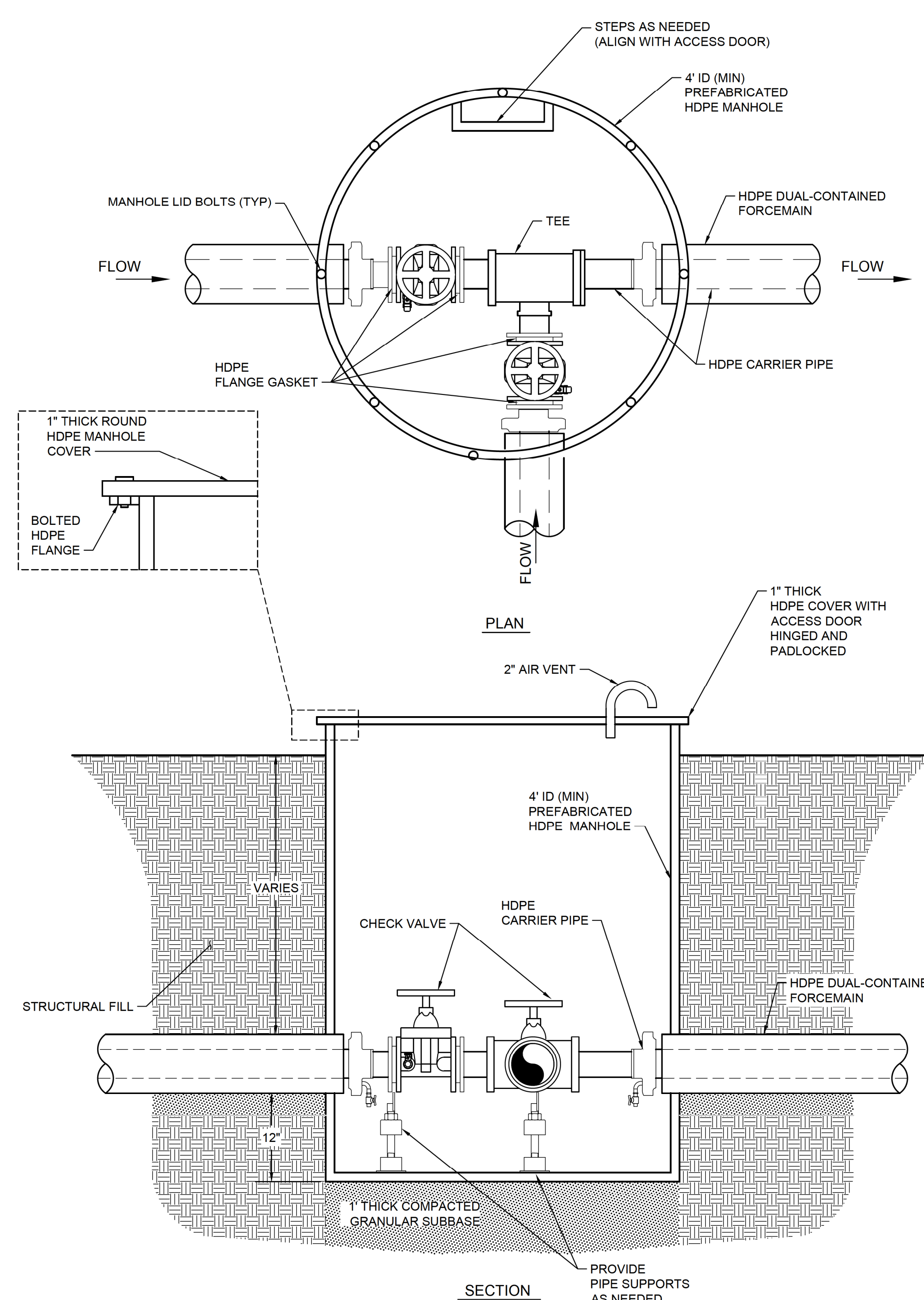
PERMIT DRAWING
NOT FOR CONSTRUCTION

0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB
REV	DATE	DESCRIPTION	DRN	APP
LEACHATE COLLECTION SYSTEM DETAILS III				
PLANT BOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS BARTOW COUNTY, GEORGIA				
Geosyntec consultants				
1255 ROBERTS BOULEVARD, NW, SUITE 200 KENNESAW, GEORGIA 30144 USA PHONE: 678.202.9500 WWW.GEOSYNTEC.COM				
PROJ. NO.	GR6601	DWG.	GR6601-038	EDIT 08.16.21
SCALE	AS SHOWN	DRAWING 36 OF 50		
DATE	AUGUST 2021			

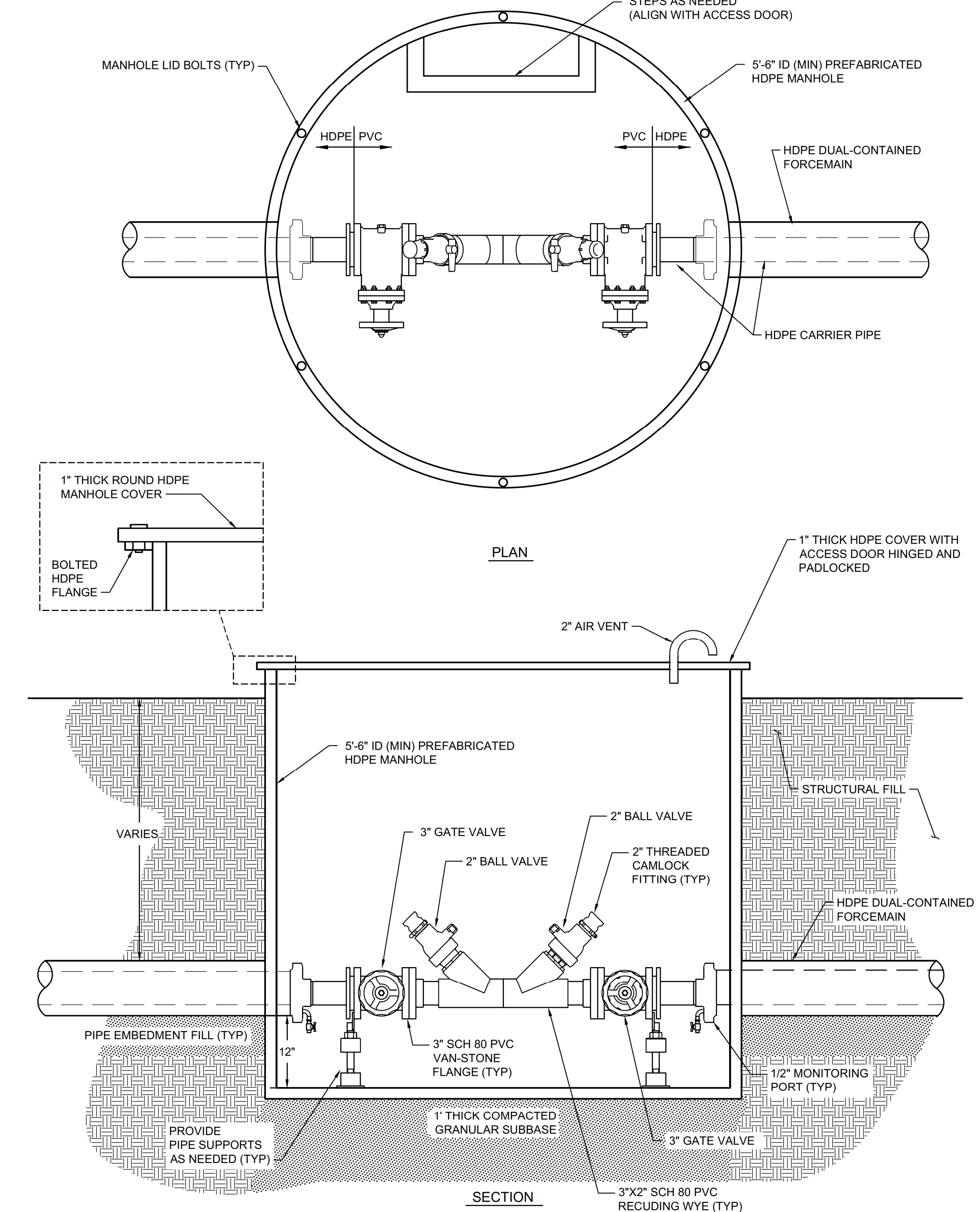
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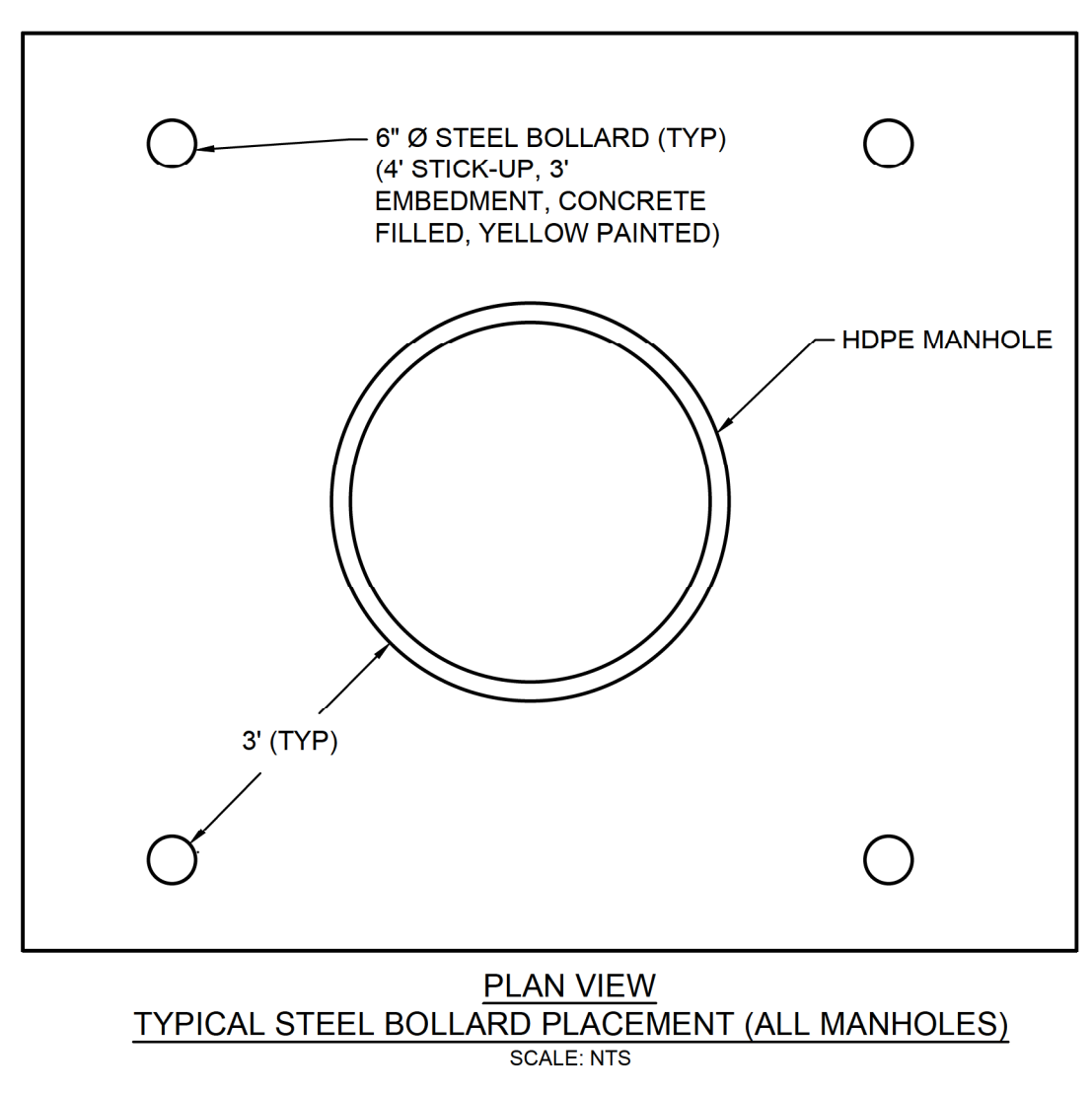
23 **DETAIL**
33 **LEACHATE FORCEMAIN AIR RELEASE MANHOLE**
SCALE: NTS



24 **DETAIL**
33 **LEACHATE FORCEMAIN JUNCTION MANHOLE**
SCALE: NTS



25 **DETAIL**
36 **LEACHATE FORCEMAIN CLEANOUT MANHOLE**
SCALE: NTS



TYPICAL STEEL BOLLARD PLACEMENT (ALL MANHOLES)
SCALE: NTS

NOTE:
1. PIPING AND VALVES ARE CONCEPTUAL TO ILLUSTRATE INTENDED FUNCTIONALITY AND MAY BE REVISED DURING DETAILED DESIGN.

REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JJ/VKH	RB

LEACHATE COLLECTION SYSTEM DETAILS IV

**PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA**

Geosyntec
consultants

1255 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.202.9500
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-039	EDIT	08.16.21
SCALE	AS SHOWN	DRAWING 37 OF 50			
DATE	AUGUST 2021				



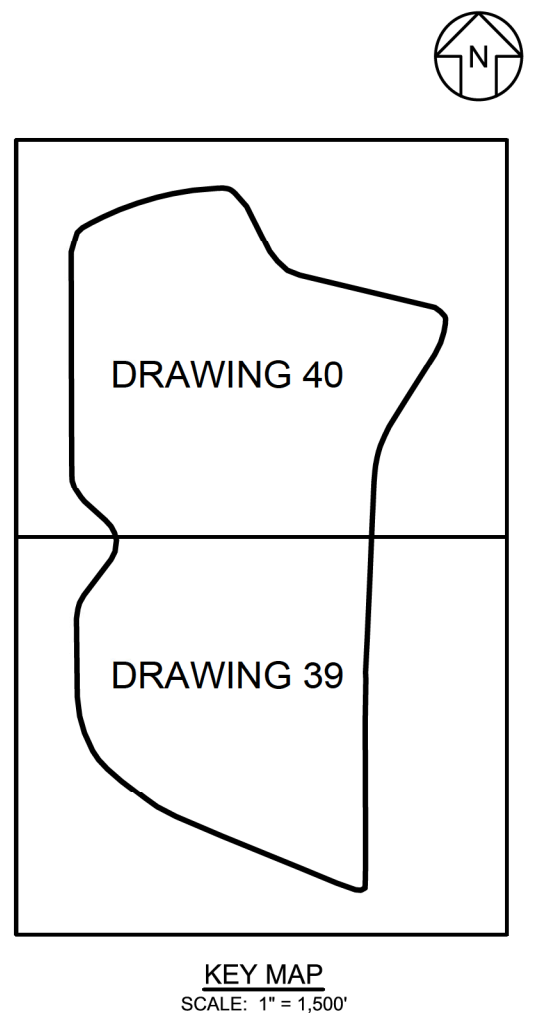
**PERMIT DRAWING
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LEGEND

	710	FINISHED GROUND ELEVATION (FEET) (NOTE 1)
		FINAL COVER TOP DECK DIVERSION BERM
		FINAL COVER TOP DECK LET-DOWN CHANNEL
	DC	FINAL COVER DOWNCHUTE CHANNEL
		FINAL COVER SIDESLOPE DRAINAGE BENCH
		STORMWATER CHANNEL
		LINED STORMWATER POND



- NOTES:**
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - FINAL CLOSURE GRADES SHOWN ON THIS DRAWING REPRESENT THE TOP OF THE FINAL COVER SYSTEM (SOIL-GEOSYNTHETIC COMPOSITE COVER) WITHIN THE FINAL COVER LIMITS. BEYOND THE FINAL COVER LIMITS, PROPOSED FINISHED GRADES ARE SHOWN, WHICH TIE-IN TO EXISTING GROUND TOPOGRAPHY AT THE LIMIT OF DISTURBANCE. SEE DRAWING 2, GENERAL SITE NOTE 19.
 - IN ADDITION TO PERMANENT STORMWATER PONDS SHOWN, TEMPORARY LINED STORMWATER PONDS WILL BE UTILIZED DURING CONSTRUCTION AS NEEDED.



REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

STORMWATER MANAGEMENT SYSTEM - OVERVIEW

PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA



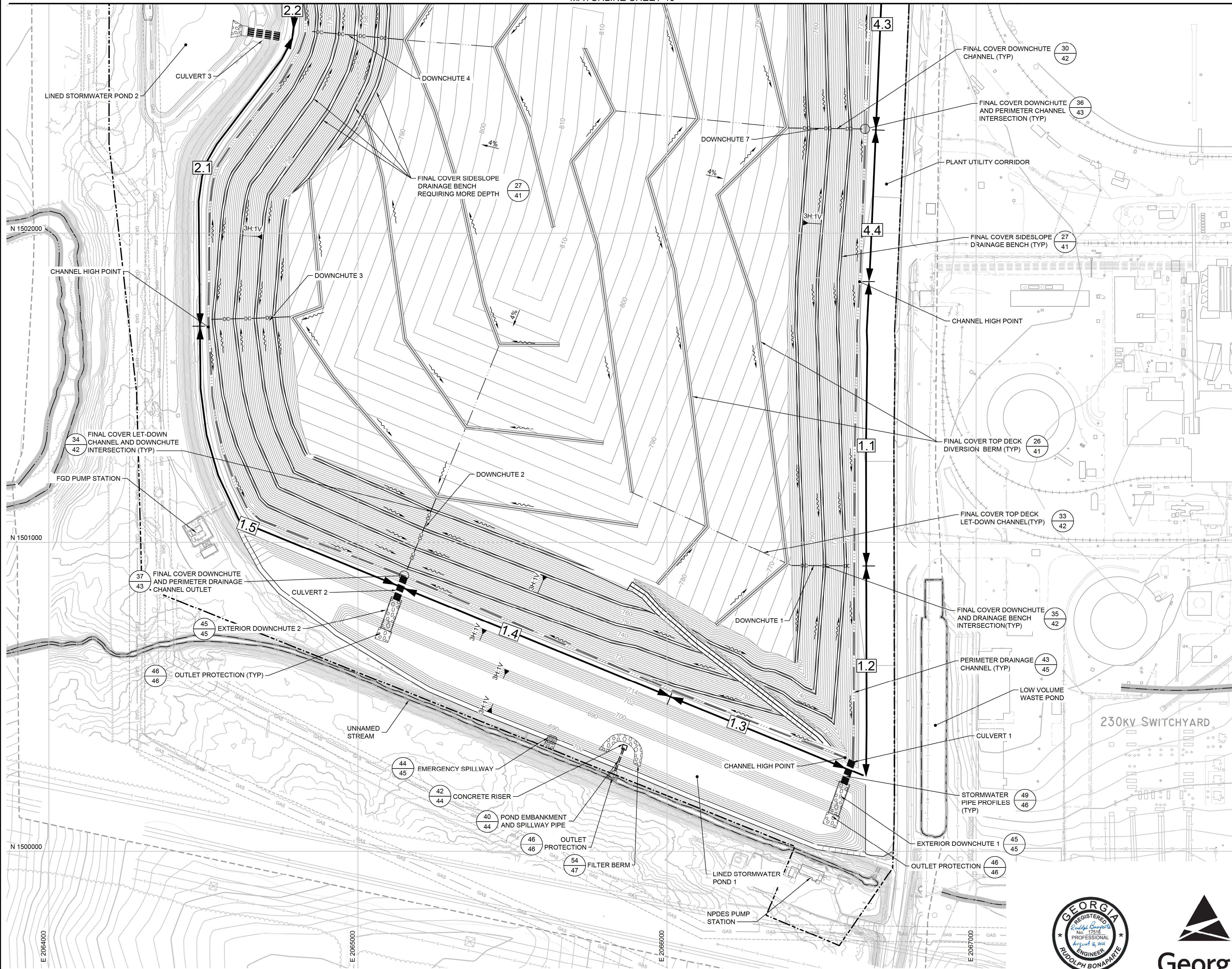
1255 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.202.9500
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-040	EDIT	8/16/21
SCALE	1" = 300'	DRAWING 38 OF 50			
DATE	AUGUST 2021				



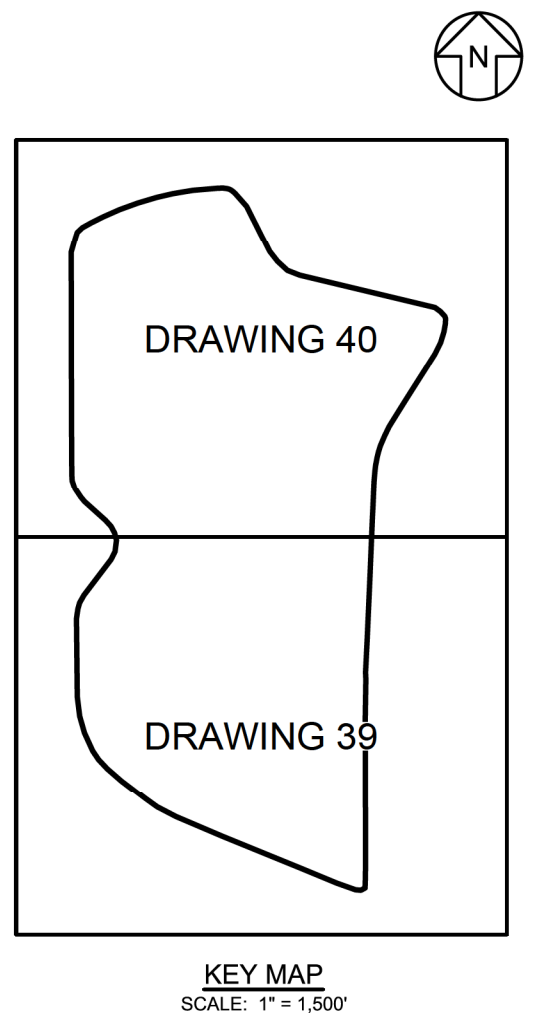
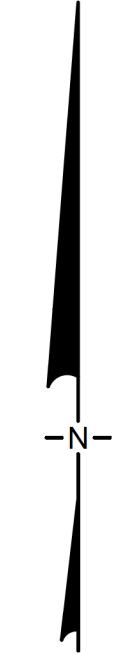
PERMIT DRAWING
NOT FOR CONSTRUCTION

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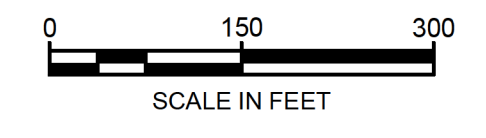


LEGEND

	710	FINISHED GROUND ELEVATION (FEET) (NOTE 1)
		FINAL COVER TOP DECK DIVERSION BERM
		FINAL COVER TOP DECK LET-DOWN CHANNEL
	DC	FINAL COVER DOWNCHUTE CHANNEL
		FINAL COVER SIDESLOPE DRAINAGE BENCH
		STORMWATER CHANNEL
	4.4	STORMWATER CHANNEL DELINEATION



- NOTES:**
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - FINAL CLOSURE GRADES SHOWN ON THIS DRAWING REPRESENT THE TOP OF THE FINAL COVER SYSTEM (SOIL-GEOSYNTHETIC COMPOSITE COVER) WITHIN THE FINAL COVER LIMITS. BEYOND THE FINAL COVER LIMITS, PROPOSED FINISHED GRADES ARE SHOWN, WHICH TIE-IN TO EXISTING GROUND TOPOGRAPHY AT THE LIMIT OF DISTURBANCE. SEE DRAWING 2, GENERAL SITE NOTE 19.
 - IN ADDITION TO PERMANENT STORMWATER PONDS SHOWN, TEMPORARY LINED STORMWATER PONDS WILL BE UTILIZED DURING CONSTRUCTION AS NEEDED.



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NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

STORMWATER MANAGEMENT SYSTEM - SOUTH AP-1

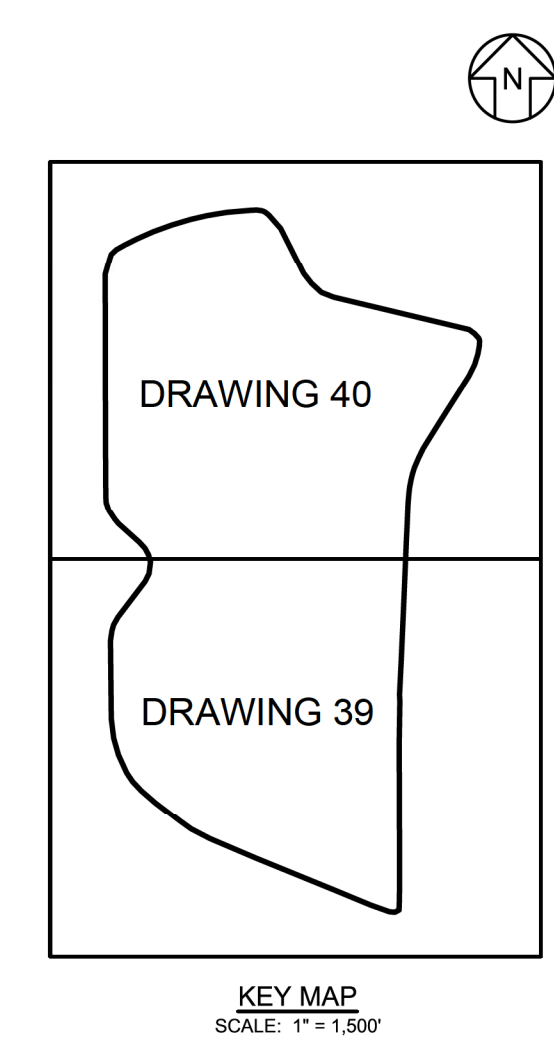
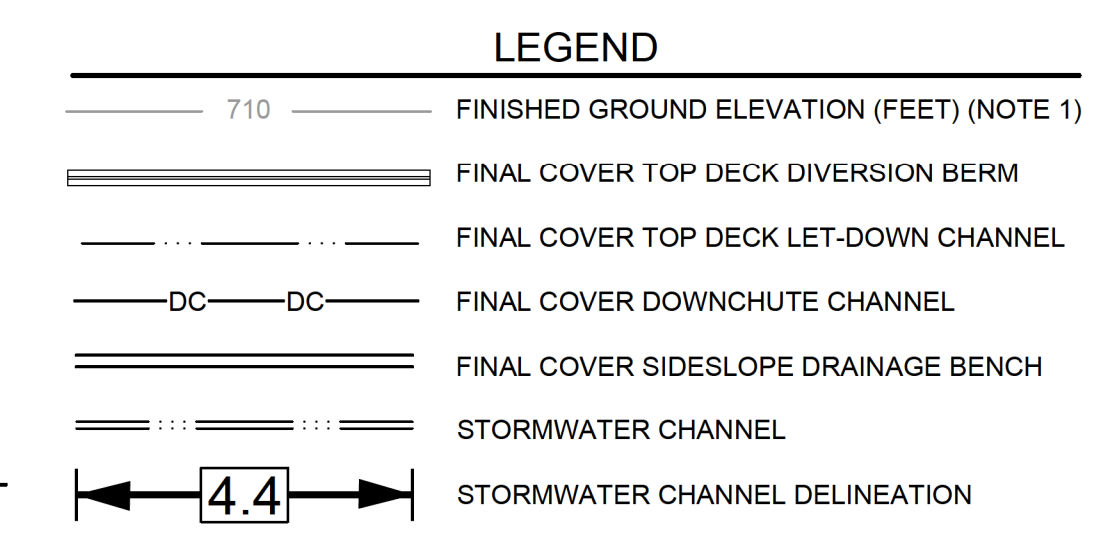
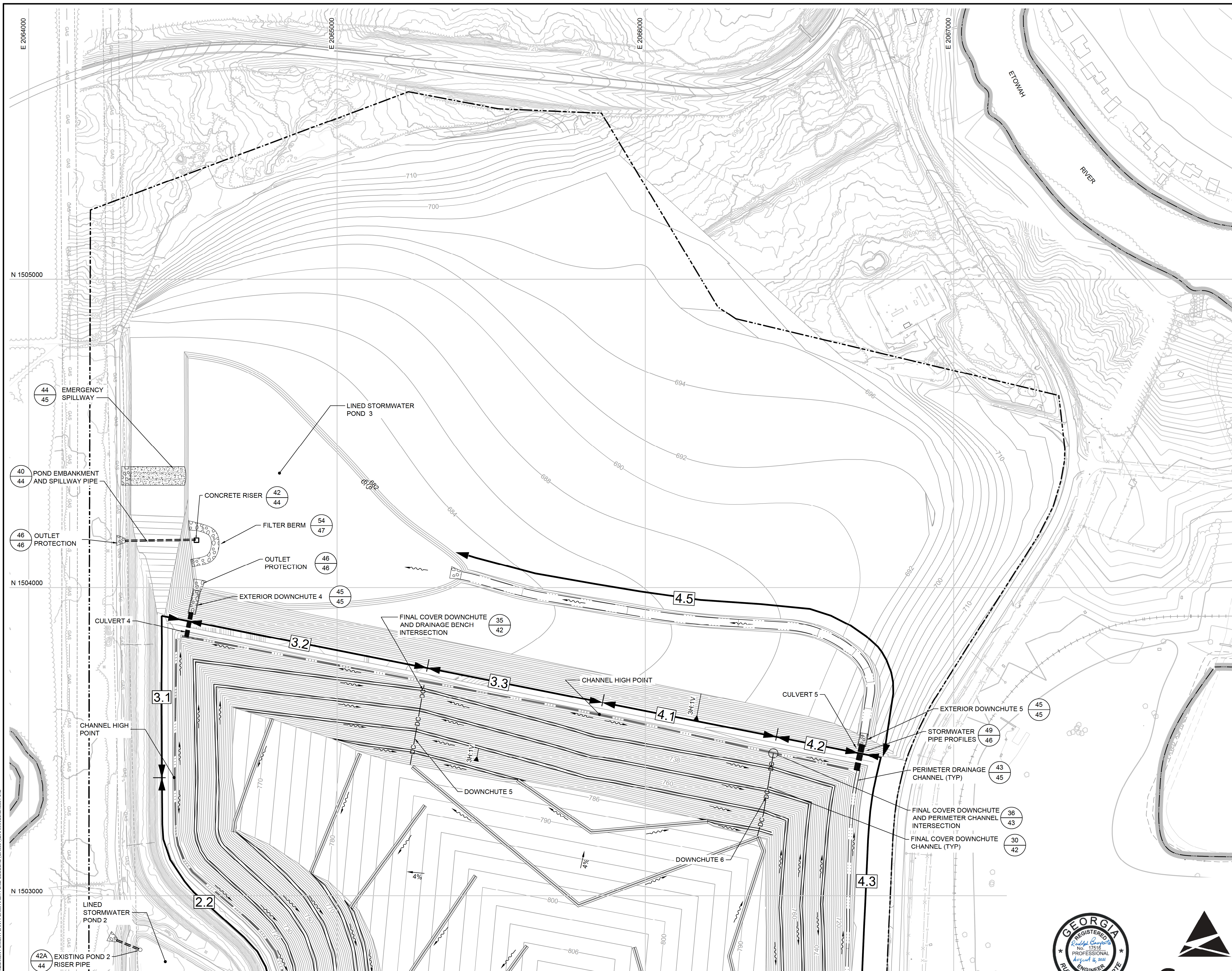
**PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA**

Geosyntec
consultants

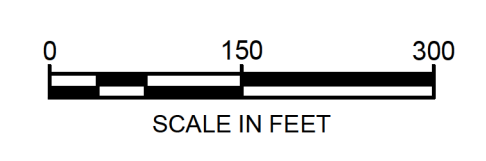
1255 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.202.9600
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-041	EDIT	8/16/21
SCALE	1" = 150'	DRAWING 39 OF 50			
DATE	AUGUST 2021				

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- NOTES:**
- SEE DRAWING 2 FOR LEGENDS, ABBREVIATIONS, AND GENERAL SITE NOTES.
 - FINAL CLOSURE GRADES SHOWN ON THIS DRAWING REPRESENT THE TOP OF THE FINAL COVER SYSTEM (SOIL-GEOSYNTHETIC COMPOSITE COVER) WITHIN THE FINAL COVER LIMITS. BEYOND THE FINAL COVER LIMITS, PROPOSED FINISHED GRADES ARE SHOWN, WHICH TIE-IN TO EXISTING GROUND TOPOGRAPHY AT THE LIMIT OF DISTURBANCE. SEE DRAWING 2, GENERAL SITE NOTE 19.
 - IN ADDITION TO PERMANENT STORMWATER PONDS SHOWN, TEMPORARY LINED STORMWATER PONDS WILL BE UTILIZED DURING CONSTRUCTION AS NEEDED.



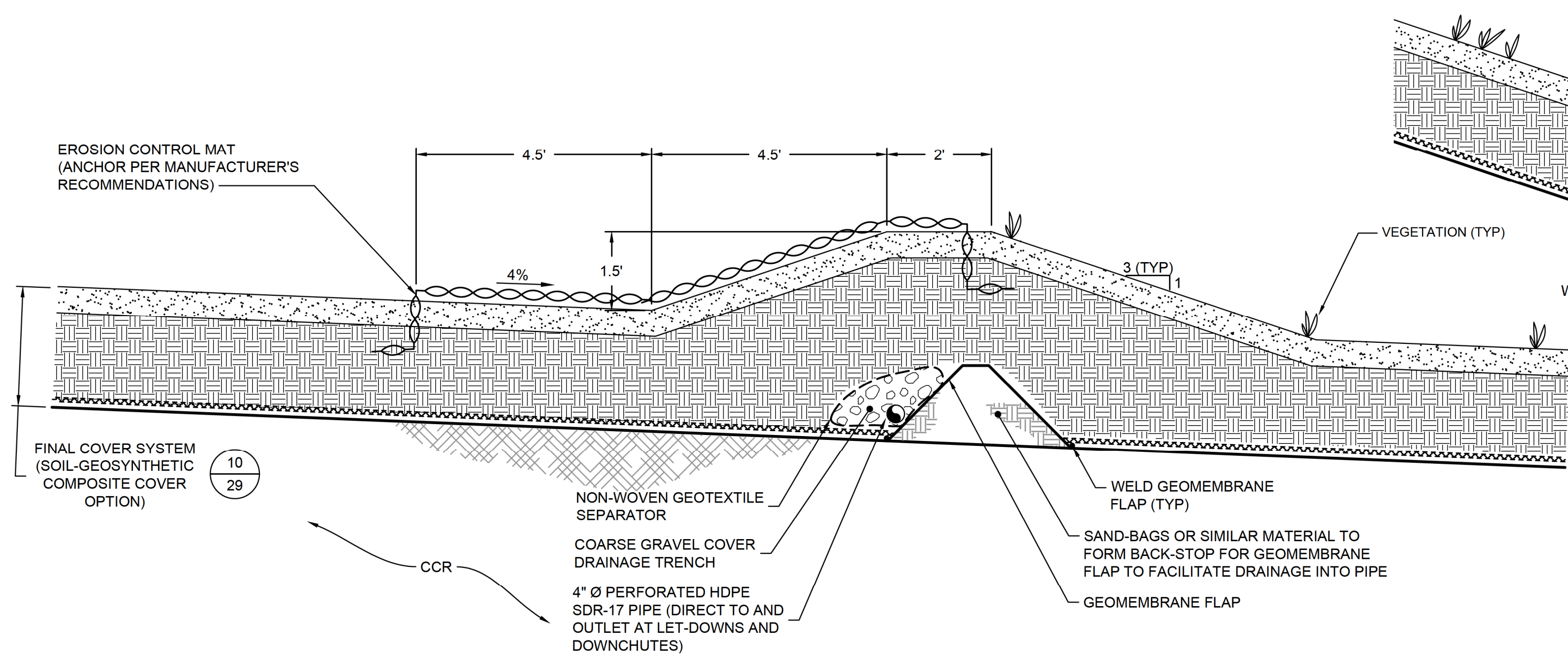
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB	
REV	DATE	DESCRIPTION	DRN	APP	
STORMWATER MANAGEMENT SYSTEM - NORTH AP-1					
PLANT BOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS BARTOW COUNTY, GEORGIA					
Geosyntec consultants					
<small>1255 ROBERTS BOULEVARD, NW, SUITE 200 KENNESAW, GEORGIA 30144 USA</small>					
PROJ. NO.	GR6601	DWG.	GR6601-042	EDIT	8/16/21
SCALE	1" = 150'				
DATE	AUGUST 2021				
			DRAWING 40 OF 50		



Georgia Power
PERMIT DRAWING
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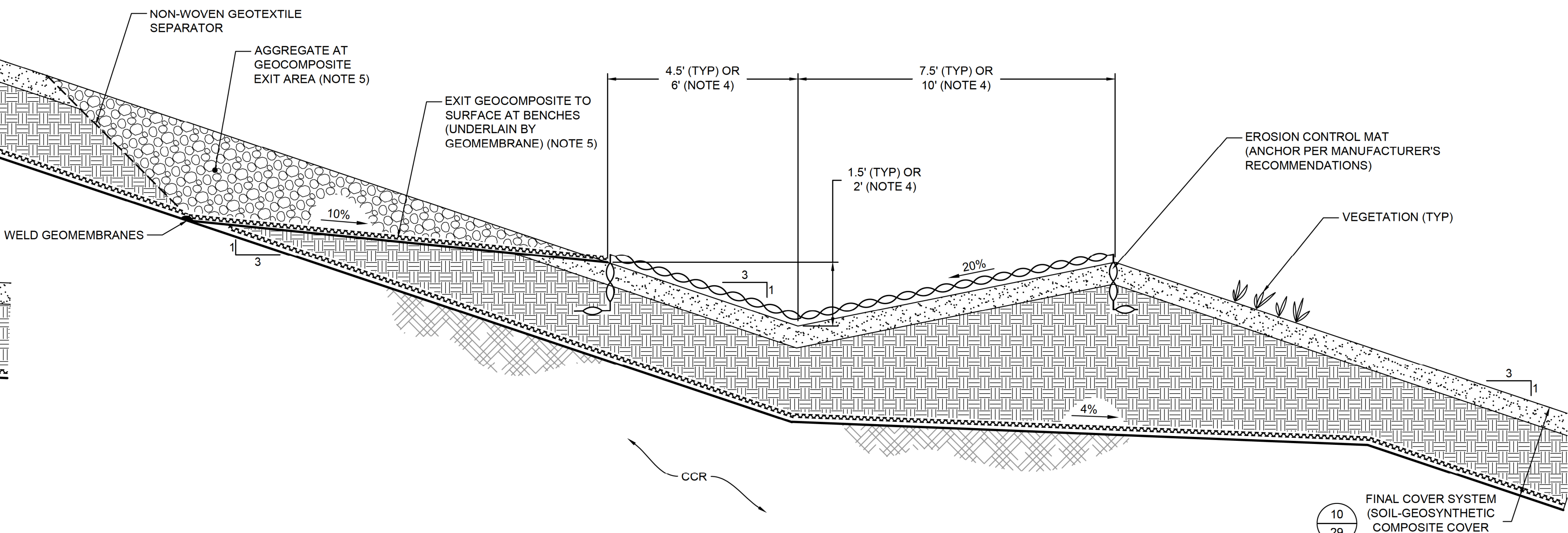
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MATCHLINE SHEET 39



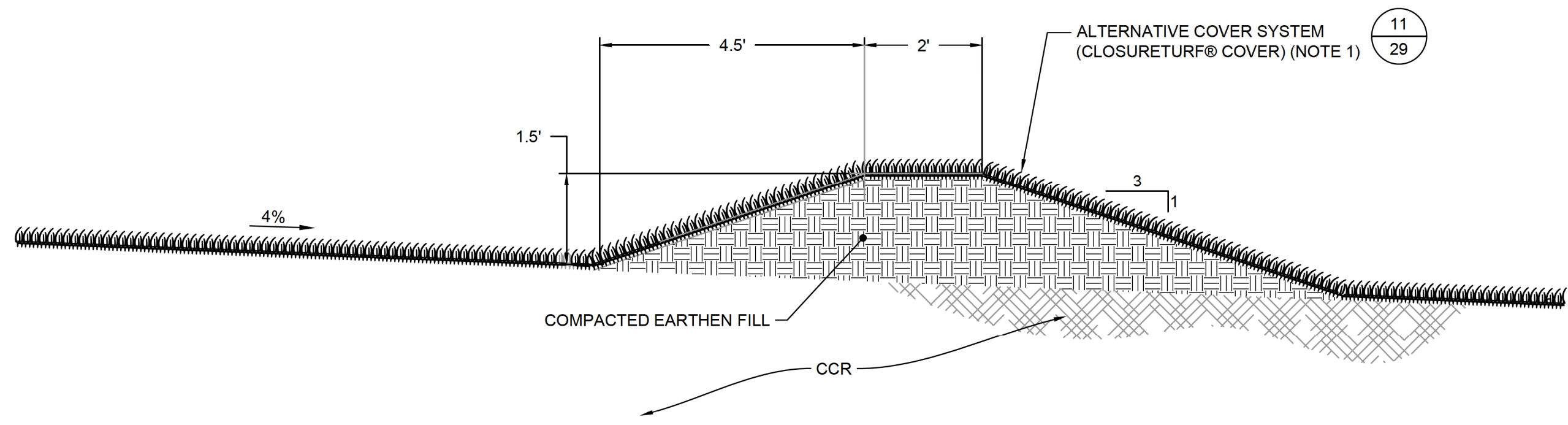
26 DETAIL
38 FINAL COVER TOP DECK DIVERSION BERM

0 2 4
SCALE IN FEET



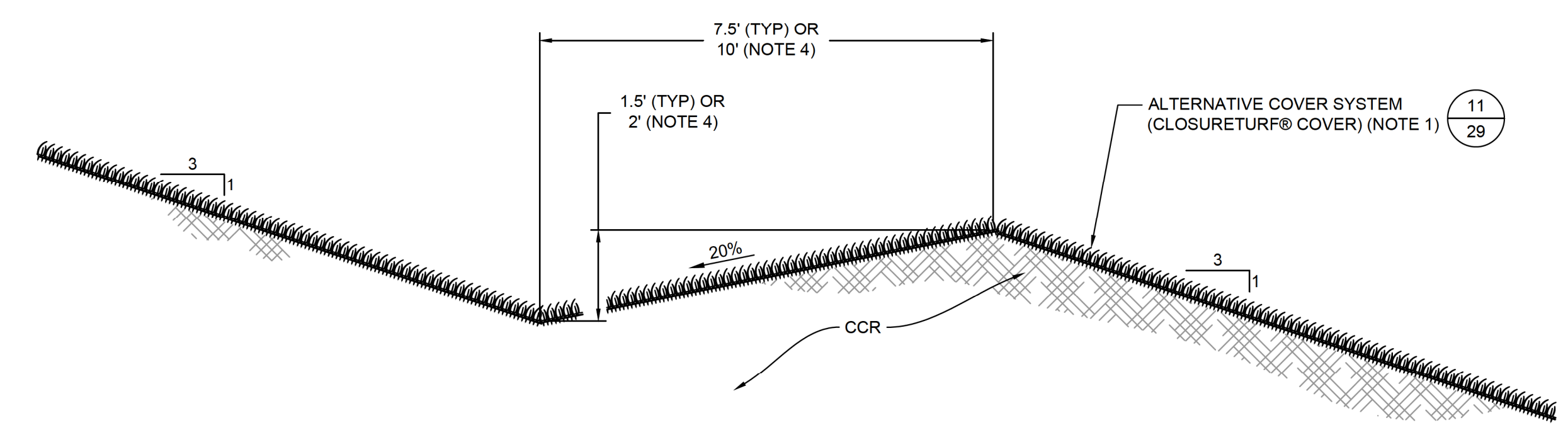
27 DETAIL
38 FINAL COVER SIDESLOPE DRAINAGE BENCH

0 2 4
SCALE IN FEET



28 DETAIL
- FINAL COVER TOP DECK DIVERSION BERM (CLOSURETURF® OPTION)

0 2 4
SCALE IN FEET



29 DETAIL
- FINAL COVER SIDESLOPE DRAINAGE BENCH (CLOSURETURF® OPTION)

0 2 4
SCALE IN FEET

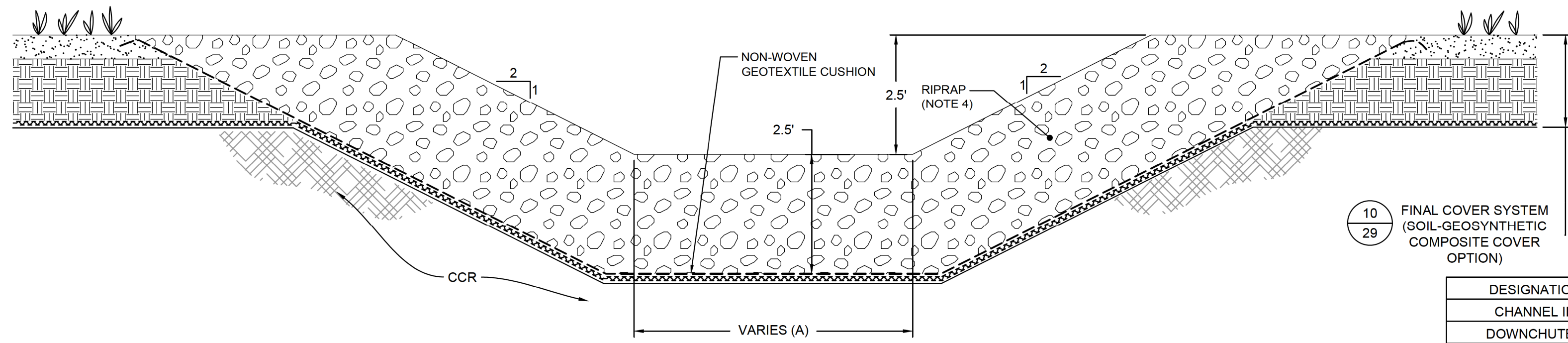
- NOTES:
- IF THE CLOSURETURF® FINAL COVER SYSTEM OPTION IS SELECTED, SAND INFILL IS TO BE USED WITH CLOSURETURF® ENGINEERED TURF IN ALL LOCATIONS. WITHIN THE FINAL COVER SIDESLOPE DRAINAGE BENCHES AND TOP DECK DIVERSION BERM, GRANULAR LINING MATERIALS THAT SUPPLEMENT THE SAND INFILL WILL BE EVALUATED DURING DETAILED DESIGN AND SPECIFIED AS APPROPRIATE.
 - GEOSYNTHETIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
 - GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.
 - SIDESLOPE DRAINAGE BENCH DIMENSIONS ARE MINIMUM AND TYPICAL. SEE DRAWINGS 39 AND 40 FOR THE LOCATIONS OF THE LARGER SIDESLOPE DRAINAGE BENCHES.
 - IN LIEU OF GEOCOMPOSITE EXIT DESIGN AT SIDESLOPE BENCHES, AN ALTERNATIVE DRAINAGE LAYER EXIT SYSTEM USING PERIODICALLY-SPACED OUTLET PIPES WILL BE EVALUATED DURING DETAILED DESIGN AND MAY BE USED UPON APPROVAL BY THE DESIGN ENGINEER AND AUTHORIZATION BY GPC.
 - IN LIEU OF GEOCOMPOSITE EXIT DESIGN AT SIDESLOPE BENCHES, AN ALTERNATIVE DRAINAGE LAYER EXIT SYSTEM USING PERIODICALLY-SPACED OUTLET PIPES WILL BE EVALUATED DURING DETAILED DESIGN AND MAY BE USED UPON APPROVAL BY THE DESIGN ENGINEER AND AUTHORIZATION BY GPC.



PERMIT DRAWING
NOT FOR CONSTRUCTION

0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB	
REV	DATE	DESCRIPTION	DRN	APP	
STORMWATER MANAGEMENT SYSTEM DETAILS I					
PLANT BOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS BARTOW COUNTY, GEORGIA					
Geosyntec consultants					
<small>1255 ROBERTS BOULEVARD, NW, SUITE 200 KENNESAW, GEORGIA 30144 USA</small>					
<small>PHONE: 678.202.9500 WWW.GEOSYNTEC.COM</small>					
PROJ. NO.	GR6601	DWG.	GR6601-043	EDIT	08.16.21
SCALE	AS SHOWN				
DATE	AUGUST 2021	DRAWING			41 OF 50

P:\CADD\PROJECTS\GEORGIA POWER\BOWEN ASH POND CLOSURE (GR6601)\DRAWINGS\GR6601-043

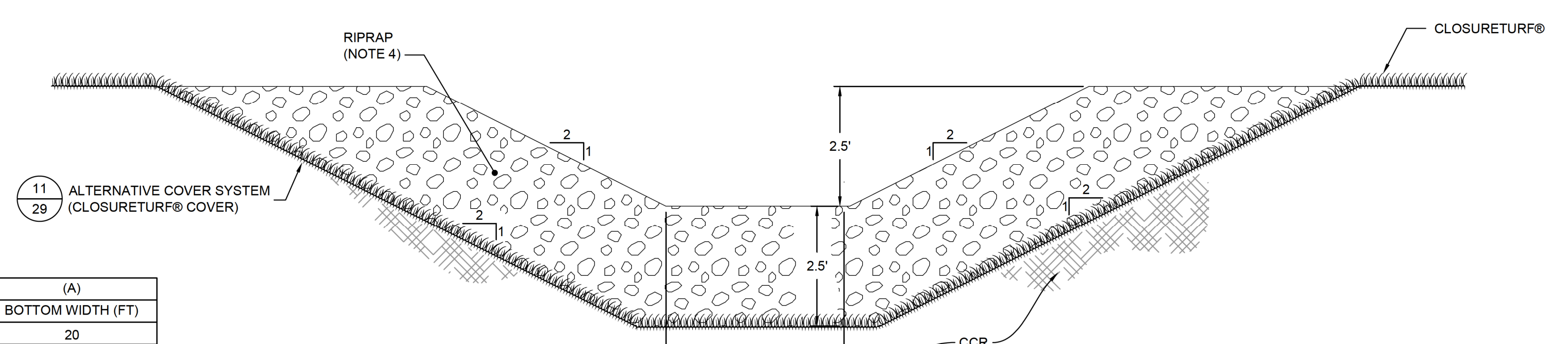


10
29 FINAL COVER SYSTEM (SOIL-GEOSYNTHETIC COMPOSITE COVER OPTION)

DESIGNATION	(A)
CHANNEL ID	BOTTOM WIDTH (FT)
DOWNCHUTE 1	20
DOWNCHUTE 2	15
DOWNCHUTE 3	5
DOWNCHUTE 4	30
DOWNCHUTE 5	10
DOWNCHUTE 6	5
DOWNCHUTE 7	15

30
38 DETAIL
FINAL COVER DOWNCHUTE CHANNEL

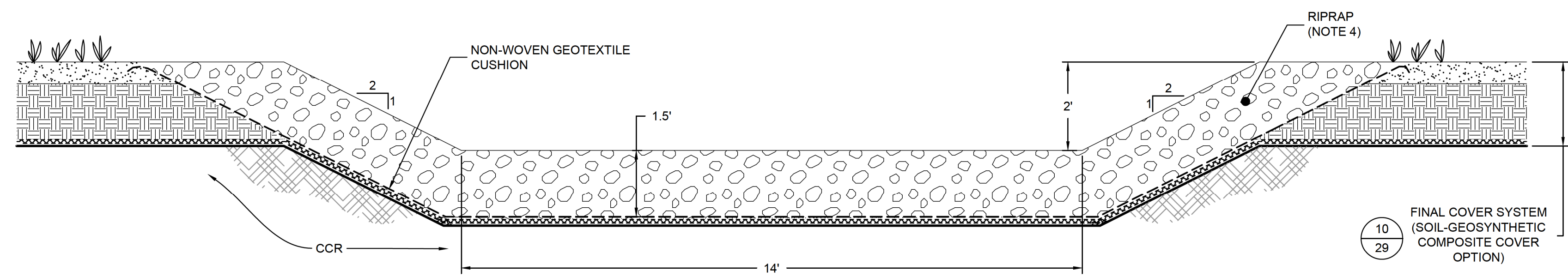
0 2 4
SCALE IN FEET



11
29 ALTERNATIVE COVER SYSTEM (CLOSURETURF® COVER)

31
- DETAIL
FINAL COVER DOWNCHUTE CHANNEL (CLOSURETURF® OPTION)

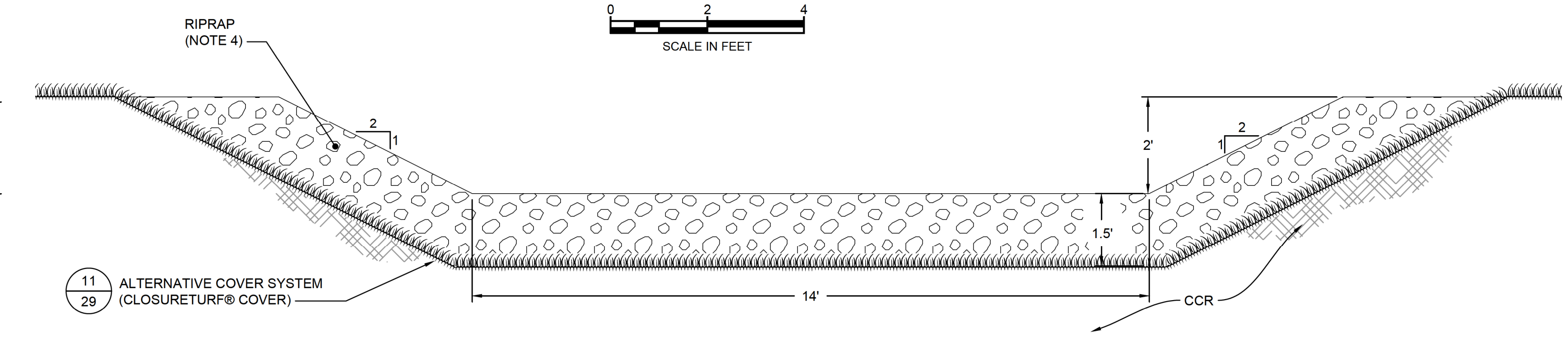
0 2 4
SCALE IN FEET



10
29 FINAL COVER SYSTEM (SOIL-GEOSYNTHETIC COMPOSITE COVER OPTION)

33
39 DETAIL
FINAL COVER TOP DECK LET-DOWN CHANNEL

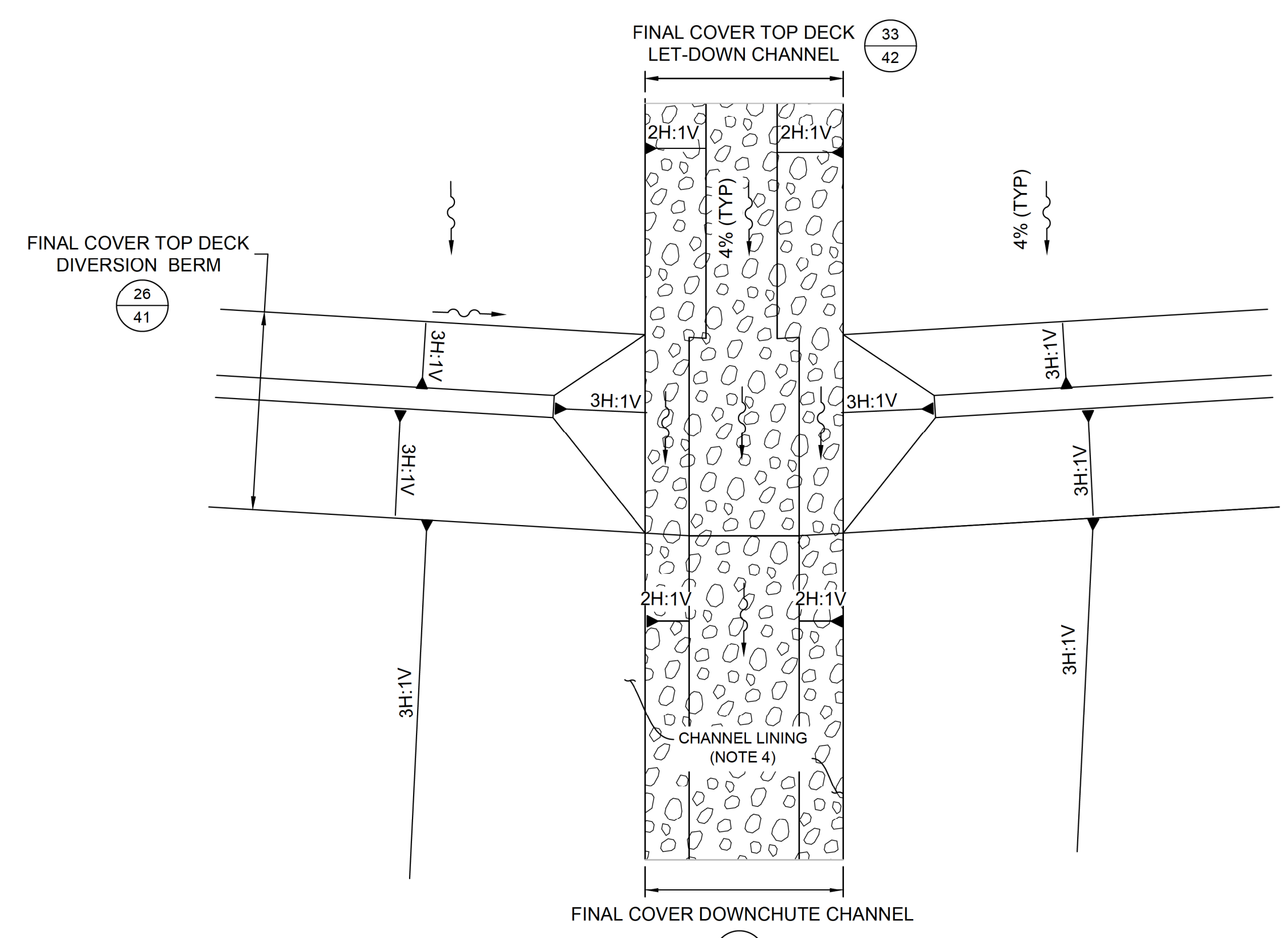
0 2 4
SCALE IN FEET



11
29 ALTERNATIVE COVER SYSTEM (CLOSURETURF® COVER)

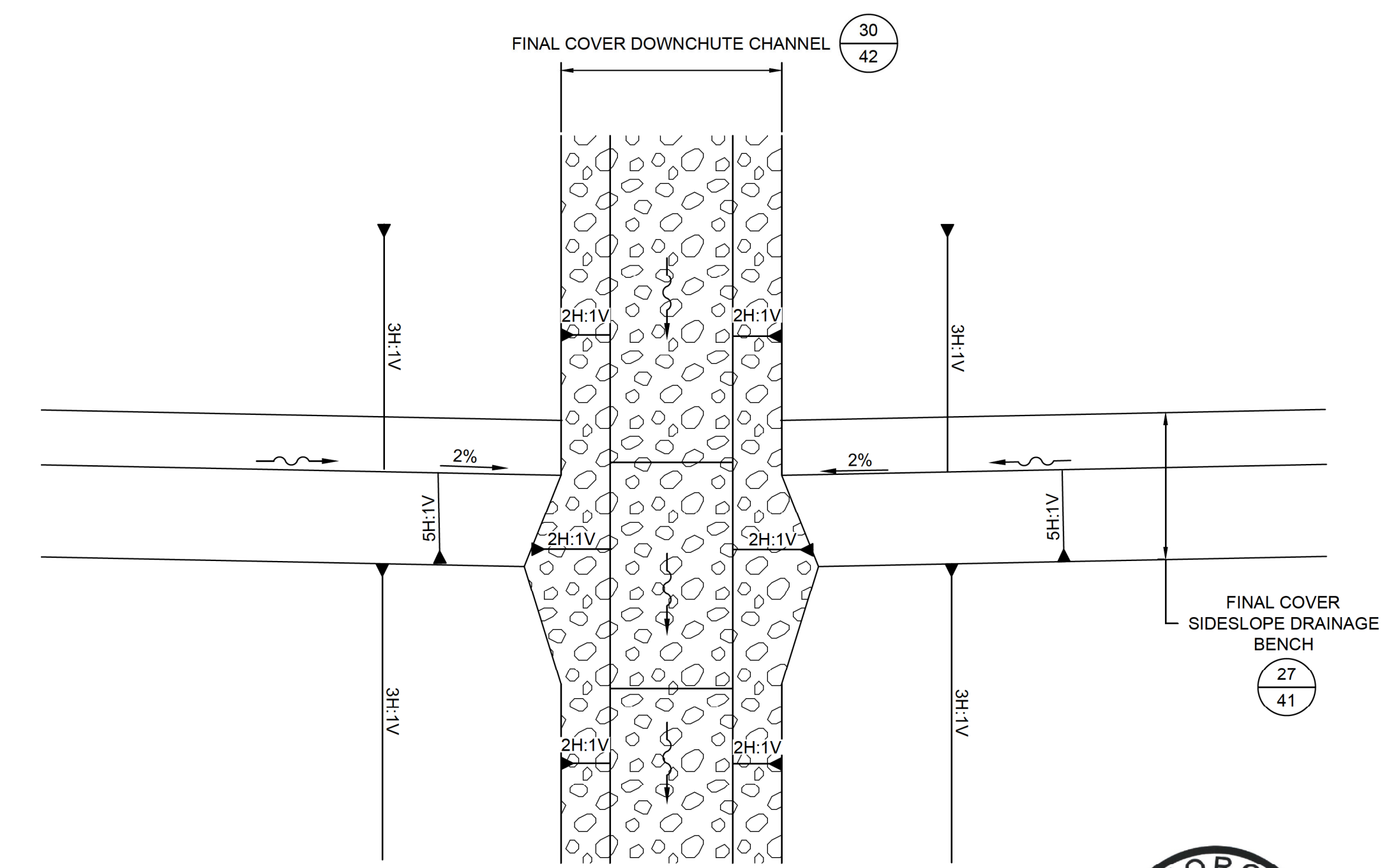
33
- DETAIL
FINAL COVER TOP DECK LET-DOWN CHANNEL (CLOSURETURF® OPTION)

0 2 4
SCALE IN FEET



34
39 DETAIL
FINAL COVER LET-DOWN CHANNEL AND DOWNCHUTE INTERSECTION

0 10 20
SCALE IN FEET

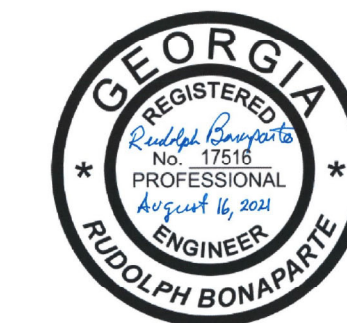


35
39 DETAIL
FINAL COVER DOWNCHUTE AND DRAINAGE BENCH INTERSECTION

0 10 20
SCALE IN FEET

- NOTES:
- SAND INFILL IS TO BE USED WITH CLOSURETURF® ENGINEERED TURF IN ALL LOCATIONS.
 - GEOSYNTHETIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
 - OTHER CHANNEL DIMENSIONS AND LINING SYSTEMS WILL BE ASSESSED DURING THE DETAILED DESIGN BY FOLLOWING THE CHANNEL SIZING PROCEDURES IN THE "FINAL COVER STORMWATER MANAGEMENT SYSTEM DESIGN AND ANALYSIS" AND UTILIZING SUFFICIENT ENERGY DISSIPATION TECHNIQUES WITHIN FHWA CIRCULAR NUMBER 14 (HEC 14).
 - DOWNCHUTE CHANNELS WILL USE NATIONAL STONE ASSOCIATION (N.S.A) NO. R-5 GRADED RIPRAP WITH N.S.A. NO. FS-2 FILTER STONE AS PRESENTED IN TABLE C-1 OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL" (GREEN BOOK).
 - GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.
 - IN LIEU OF RIPRAP LINING AT THE FINAL COVER DOWNCHUTES AND TOP DECK LET-DOWN CHANNELS, AN ALTERNATIVE LINING SYSTEM USING CLOSURETURF® WITH HYDROBINDER® WILL BE EVALUATED DURING DETAILED DESIGN AND SPECIFIED AS APPROPRIATE.

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PERMIT DRAWING
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	DRN	APP
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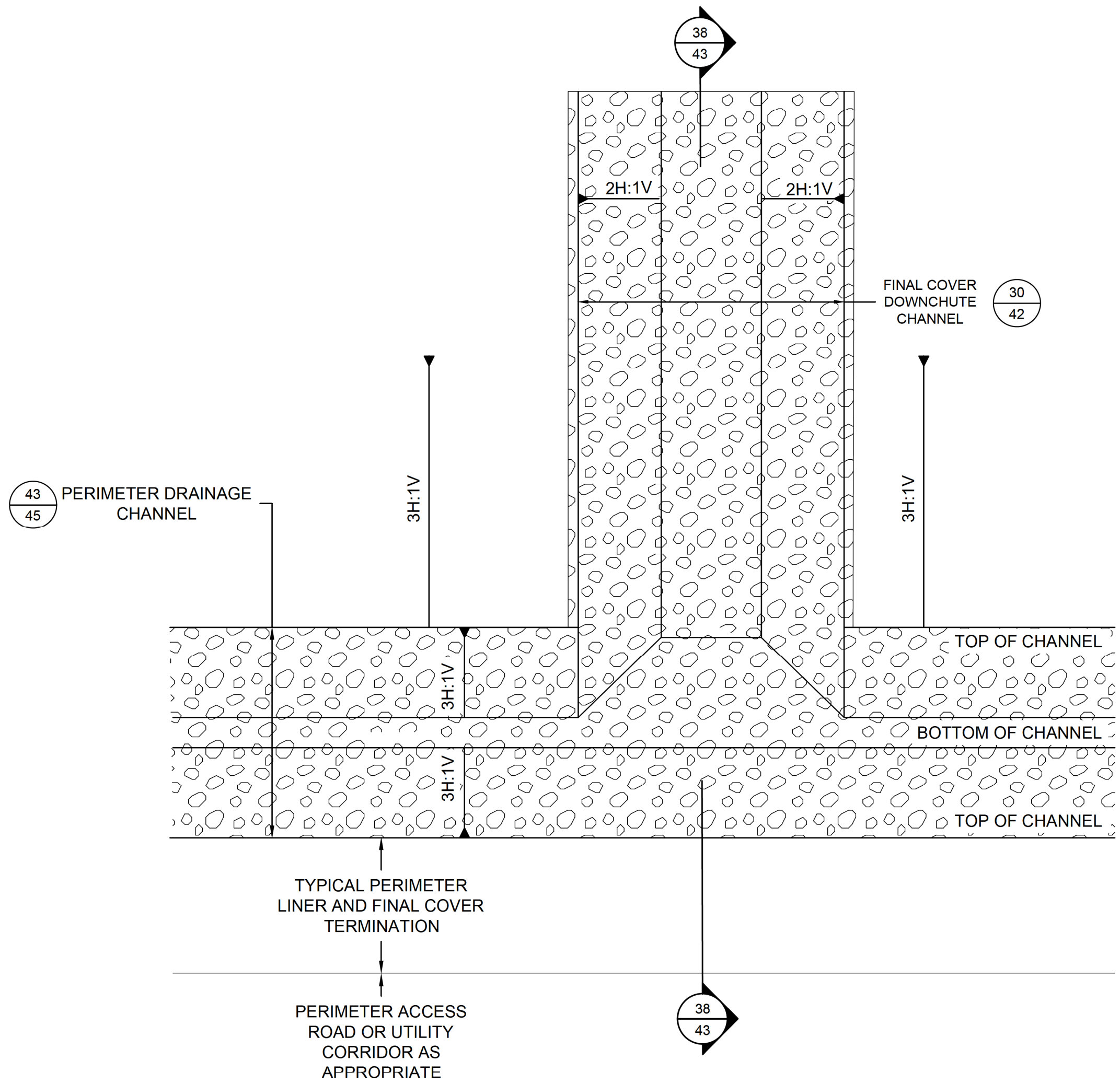
STORMWATER MANAGEMENT SYSTEM DETAILS II

**PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA**

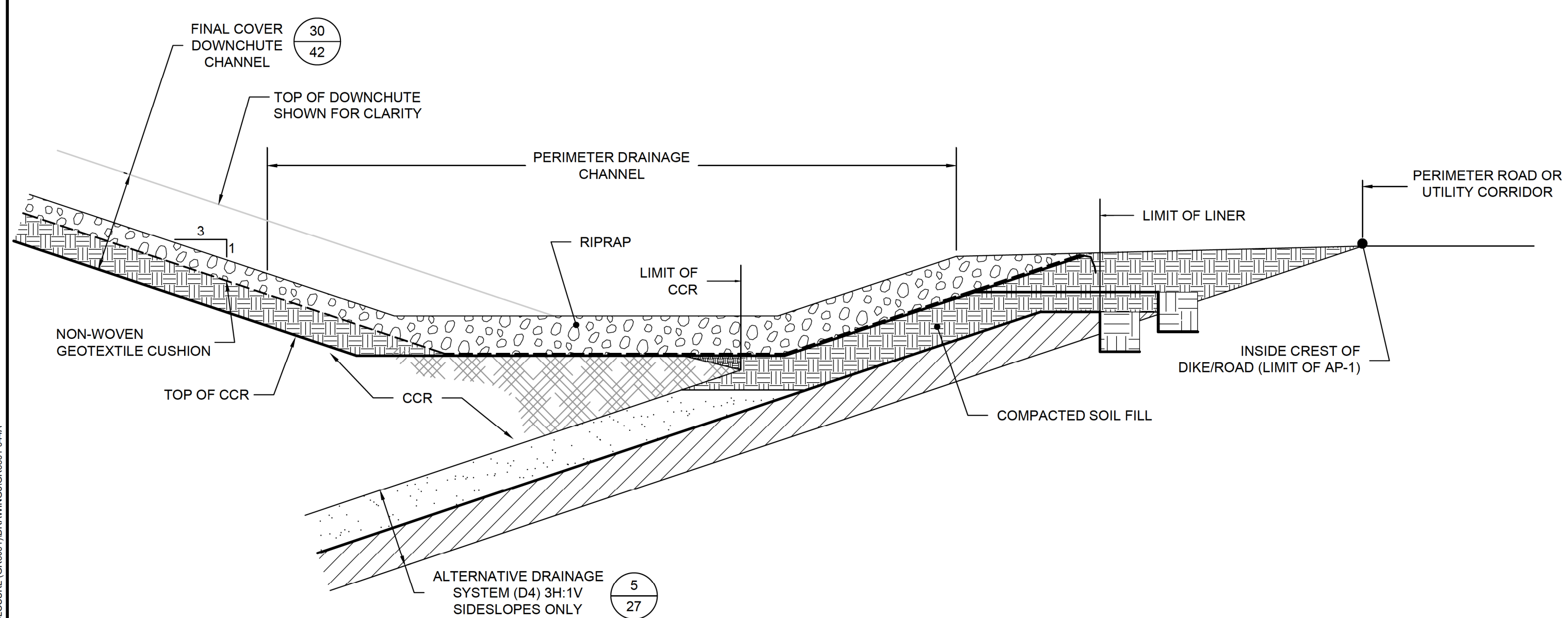
Geosyntec
consultants

1255 ROBERTS BOULEVARD, NW, SUITE 200 KENNESAW, GEORGIA 30144 USA PHONE: 678.202.9500 WWW.GEOSYNTEC.COM

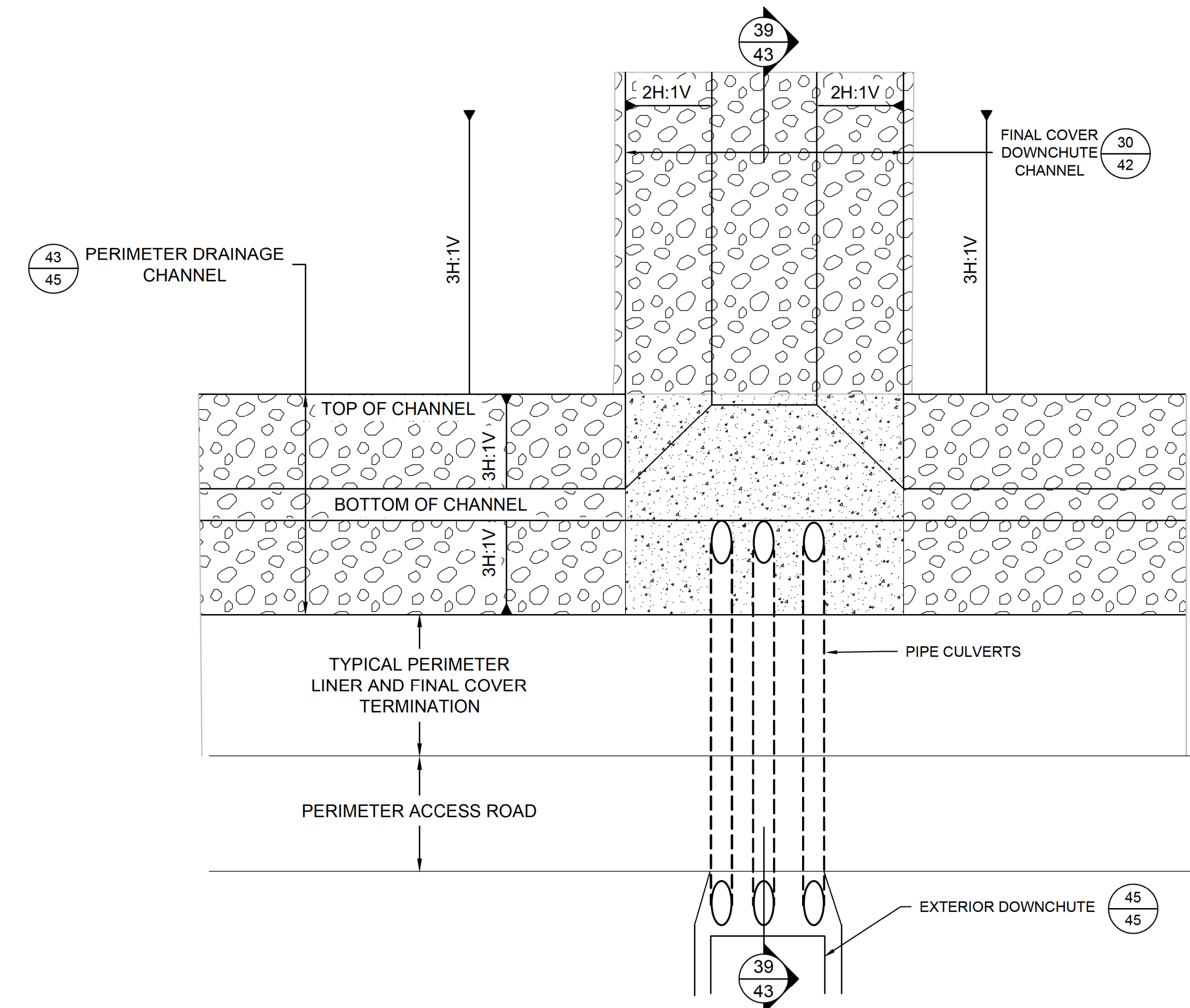
PROJ. NO.	GR6601	DWG.	GR6601-044	EDIT	08.16.21
SCALE	AS SHOWN	DRAWING 42 OF 50			
DATE	AUGUST 2021				



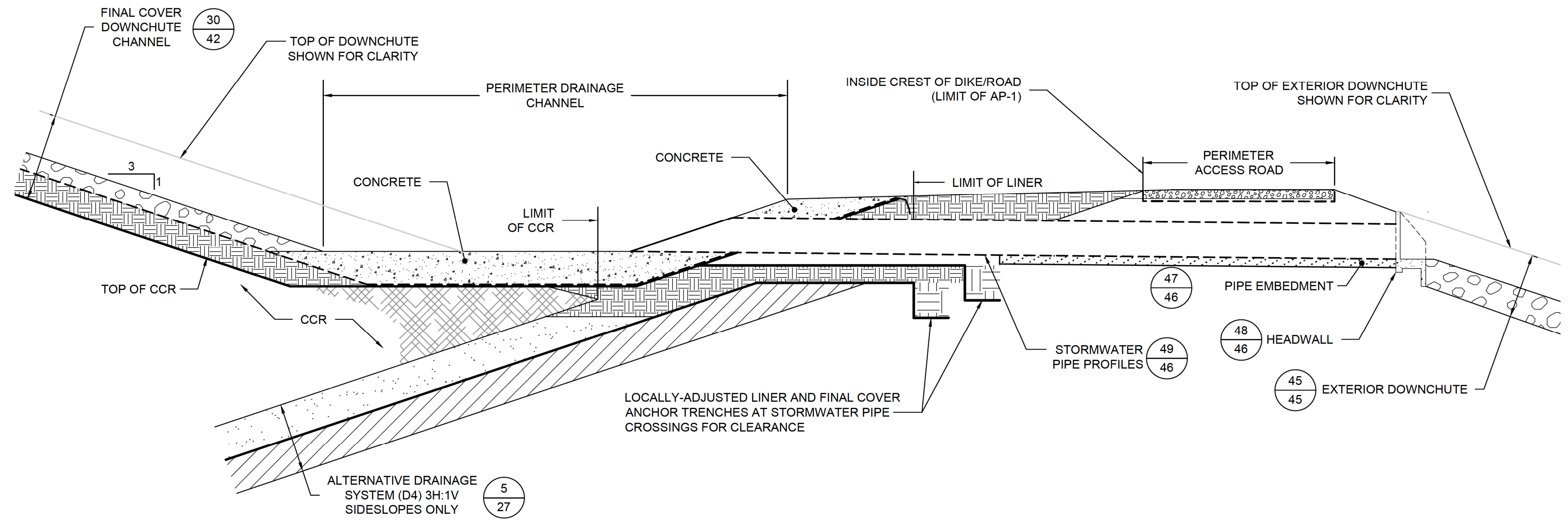
36 DETAIL
38 FINAL COVER DOWNCHUTE AND PERIMETER CHANNEL INTERSECTION
SCALE: NTS



38 SECTION
43 FINAL COVER DOWNCHUTE AND PERIMETER CHANNEL SECTION
SCALE: NTS

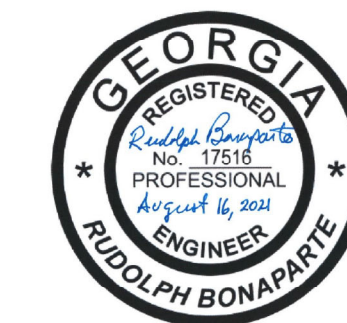


37 DETAIL
39 FINAL COVER DOWNCHUTE AND PERIMETER DRAINAGE CHANNEL OUTLET
SCALE: NTS



39 SECTION
43 DOWNCHUTE AND PERIMETER DRAINAGE CHANNEL OUTLET
SCALE: NTS

- NOTES:
- SAND INFILL IS TO BE USED WITH CLOSURETURF® ENGINEERED TURF IN ALL LOCATIONS.
 - GEOSYNTHETIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
 - GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.
 - IF THE CLOSURETURF® OPTION IS SELECTED, THE FINAL COVER DOWNCHUTE AND PERIMETER CHANNEL WILL BE INSTALLED TO MAINTAIN THE SAME LIMIT OF CCR MINIMUM CHANNEL DIMENSIONS, AND DEGREE OF SEPARATION BETWEEN THE RIPRAP LINING AND CCR.



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STORMWATER MANAGEMENT SYSTEM DETAILS III

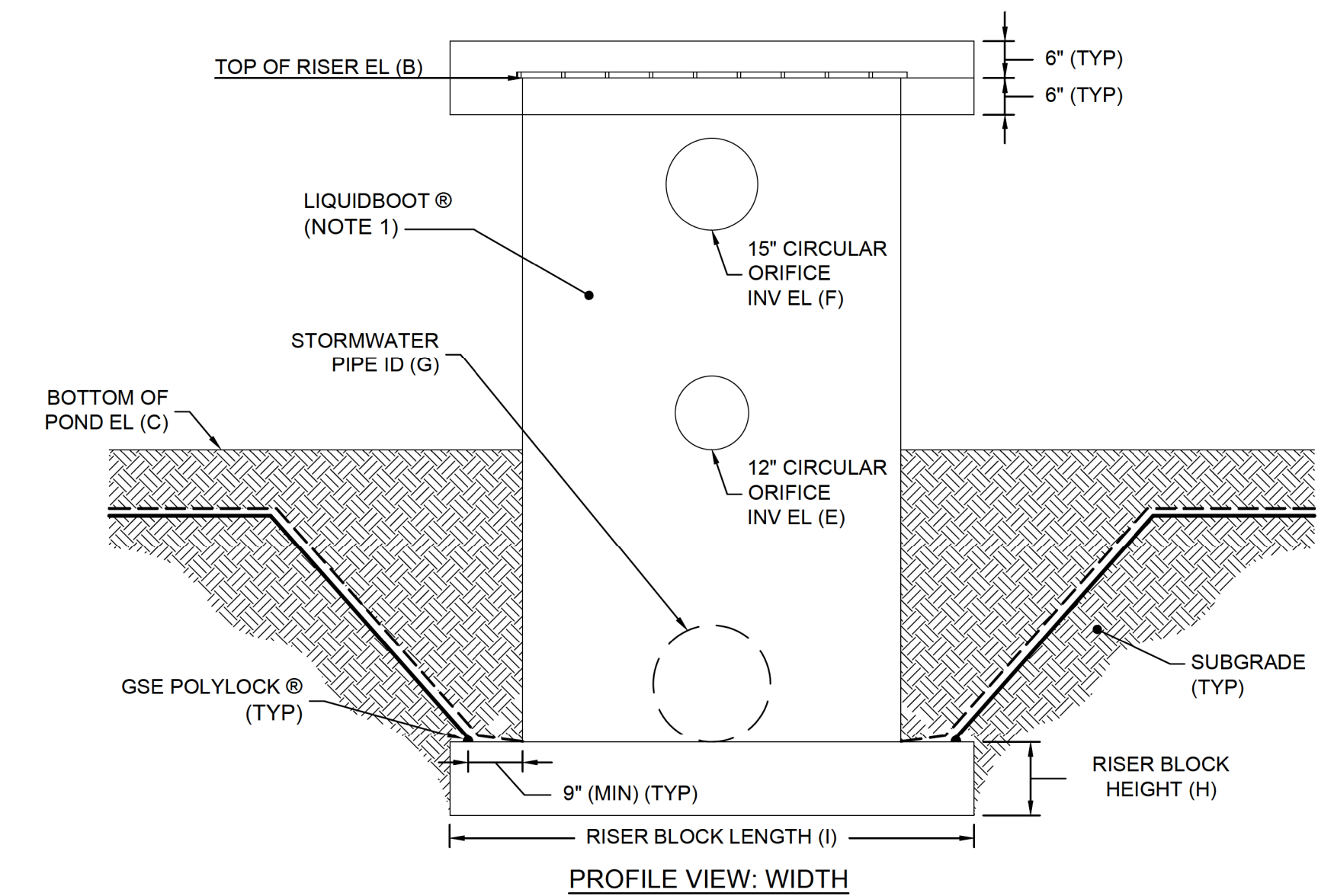
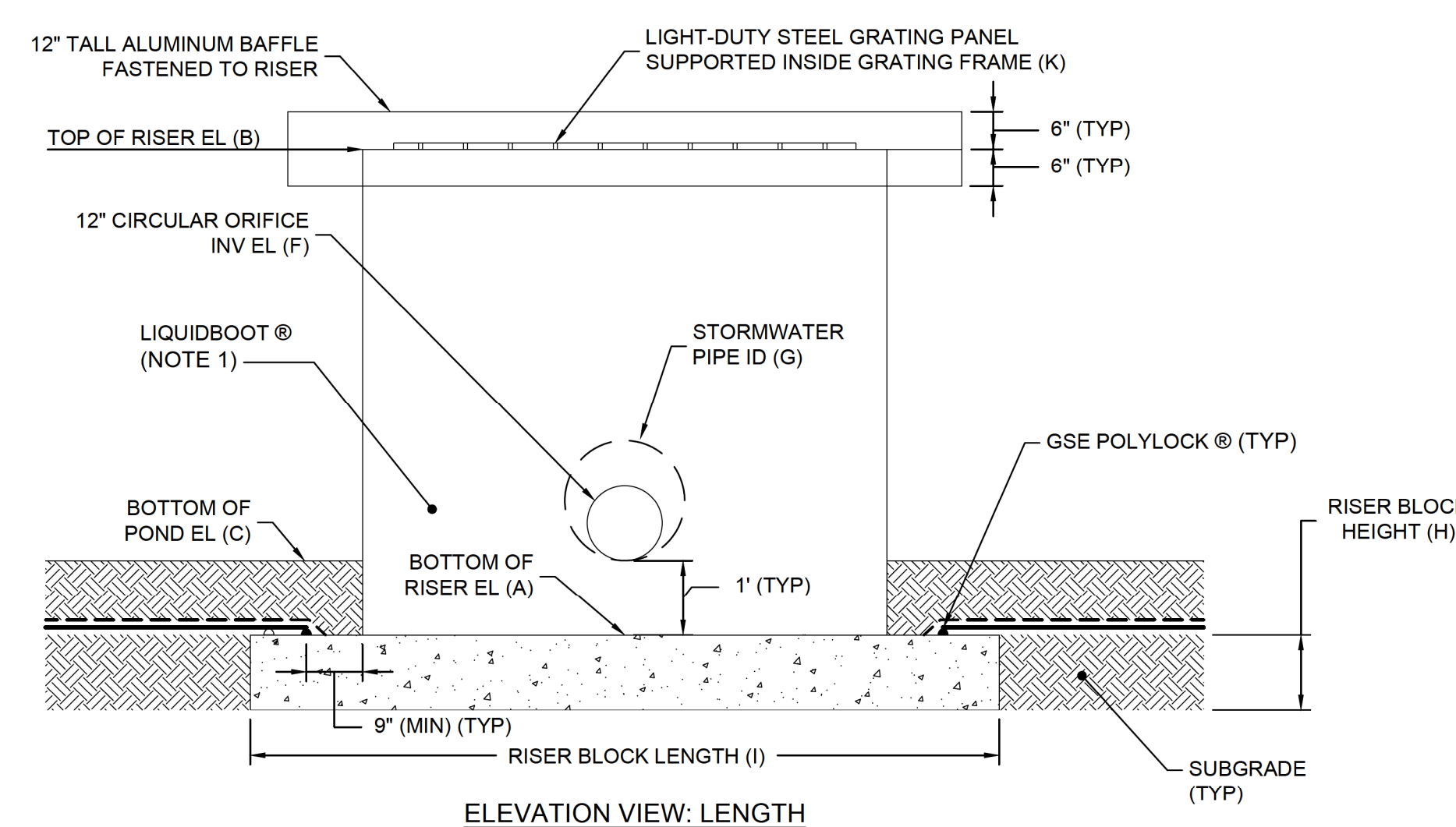
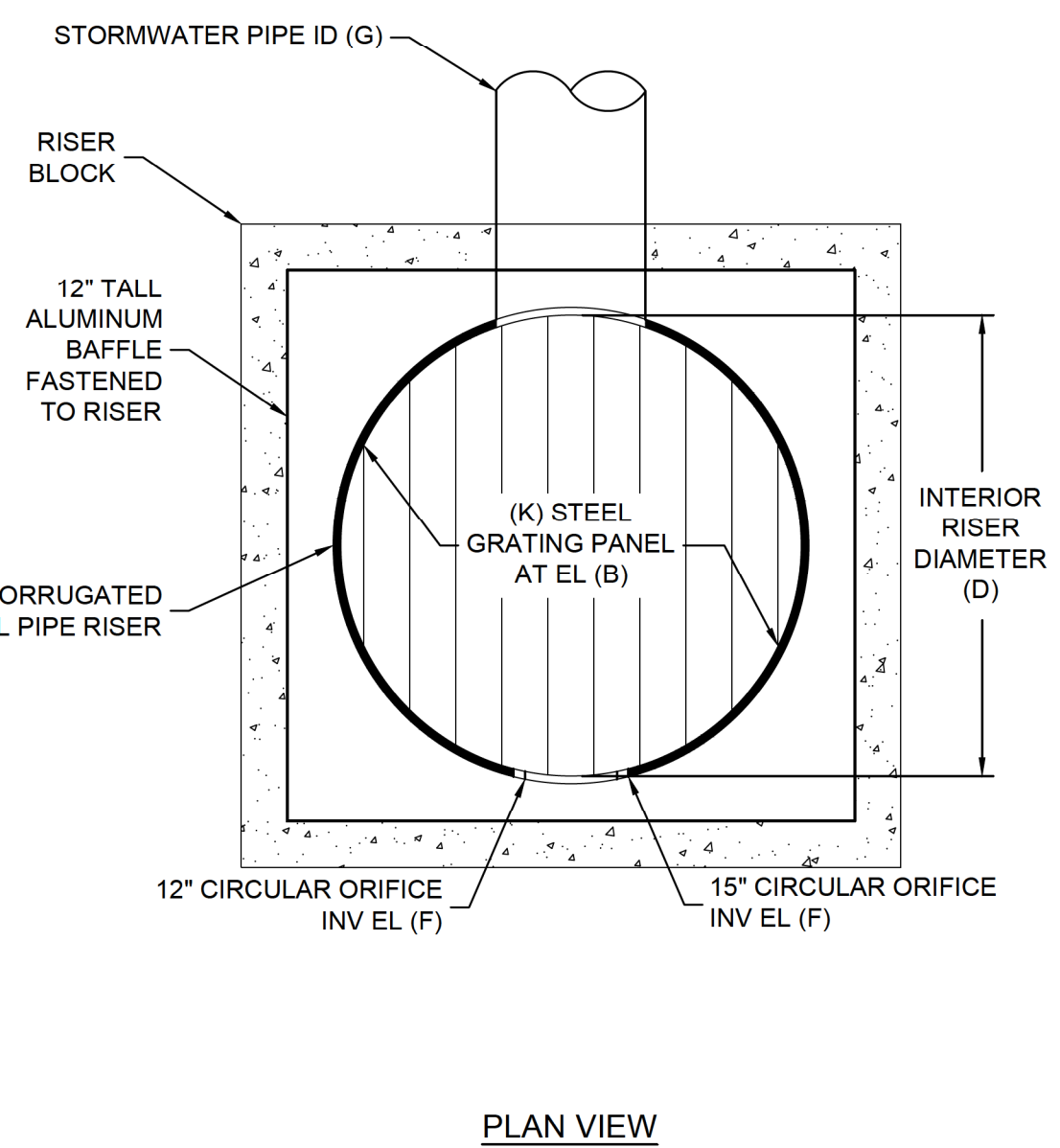
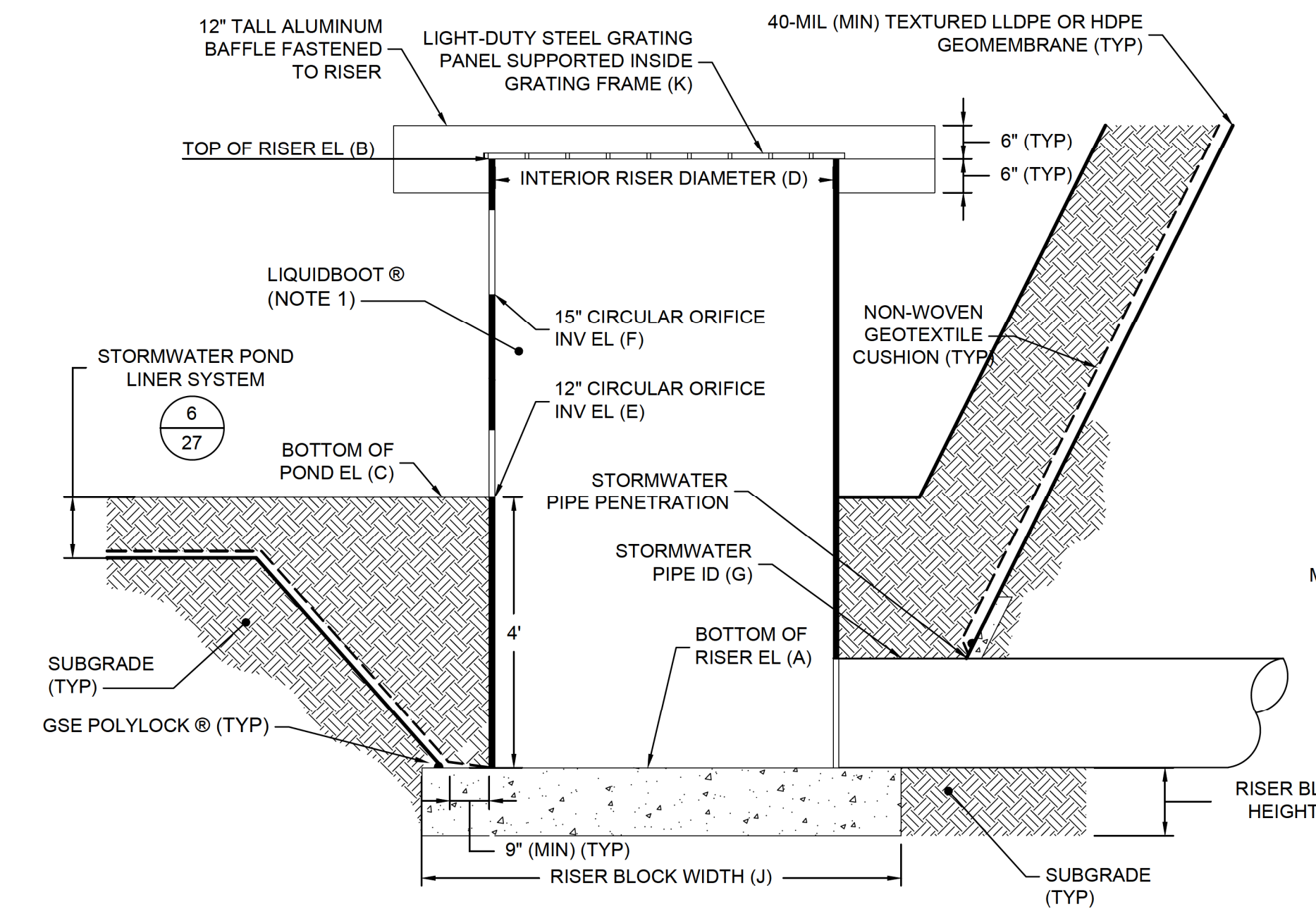
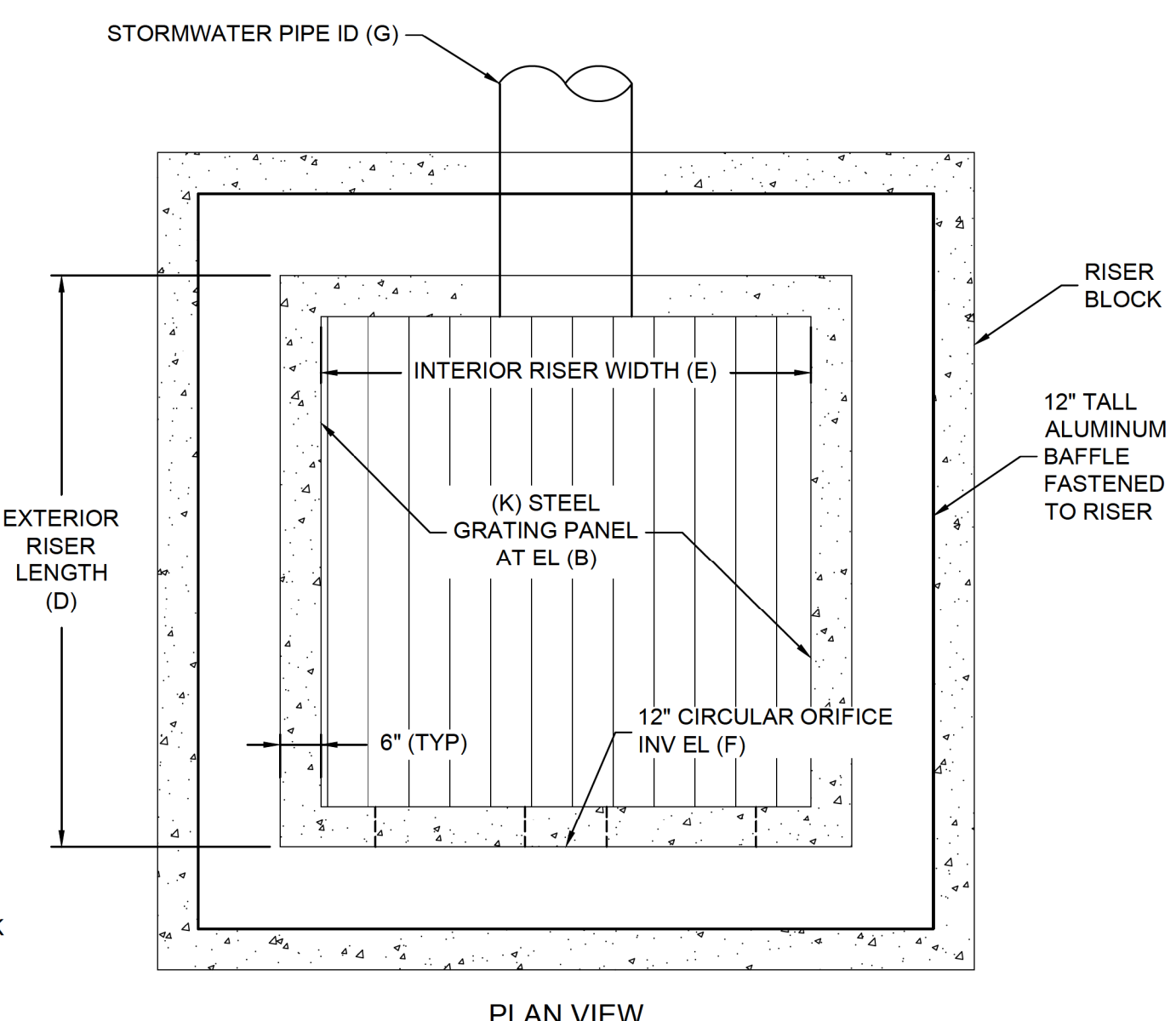
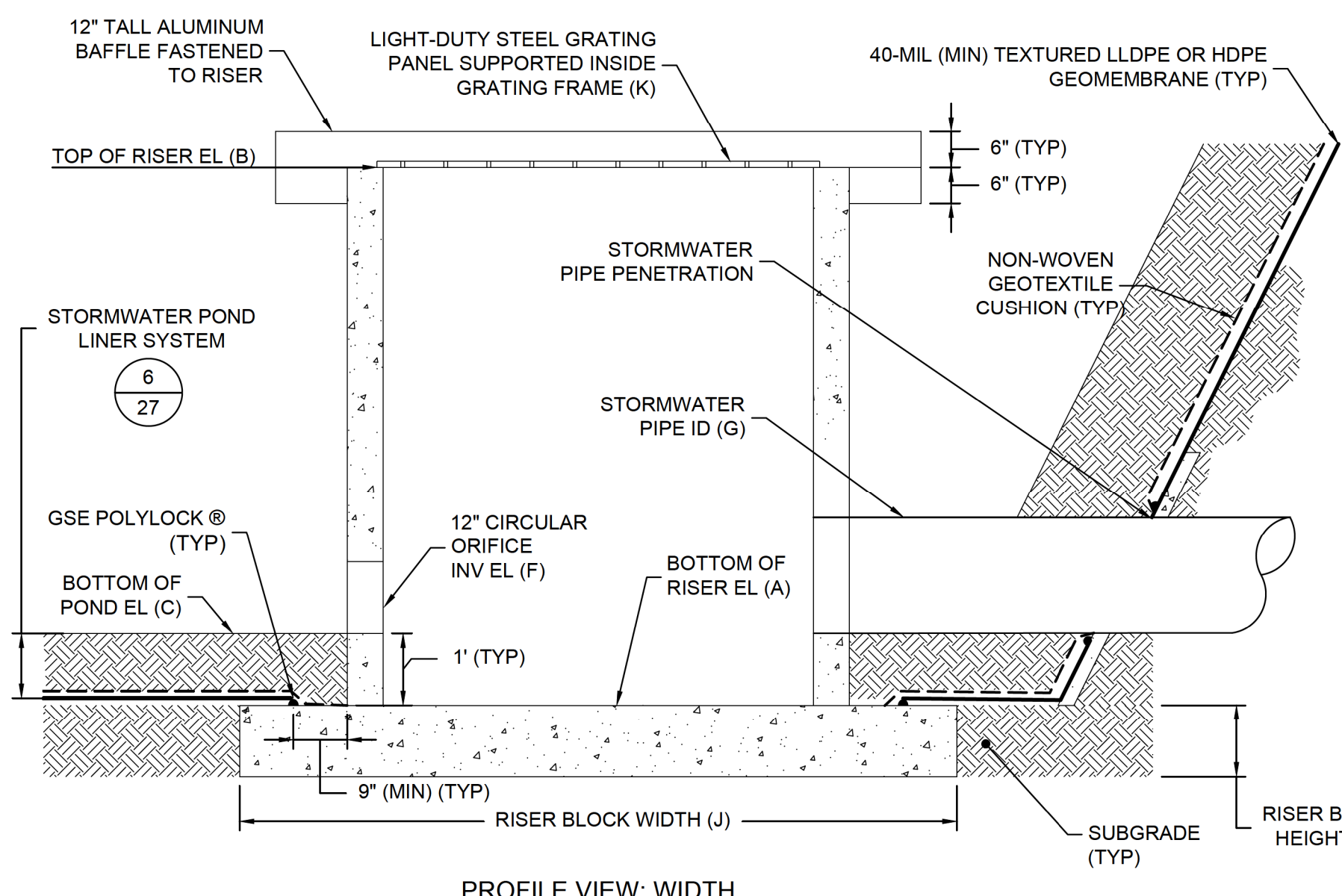
PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec
consultants

1255 ROBERTS BOULEVARD, NW, SUITE 200
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PROJ. NO.	GR6601	DWG.	GR6601-044A	EDIT	08.16.21
SCALE	AS SHOWN	DRAWING 43 OF 50			
DATE	AUGUST 2021				

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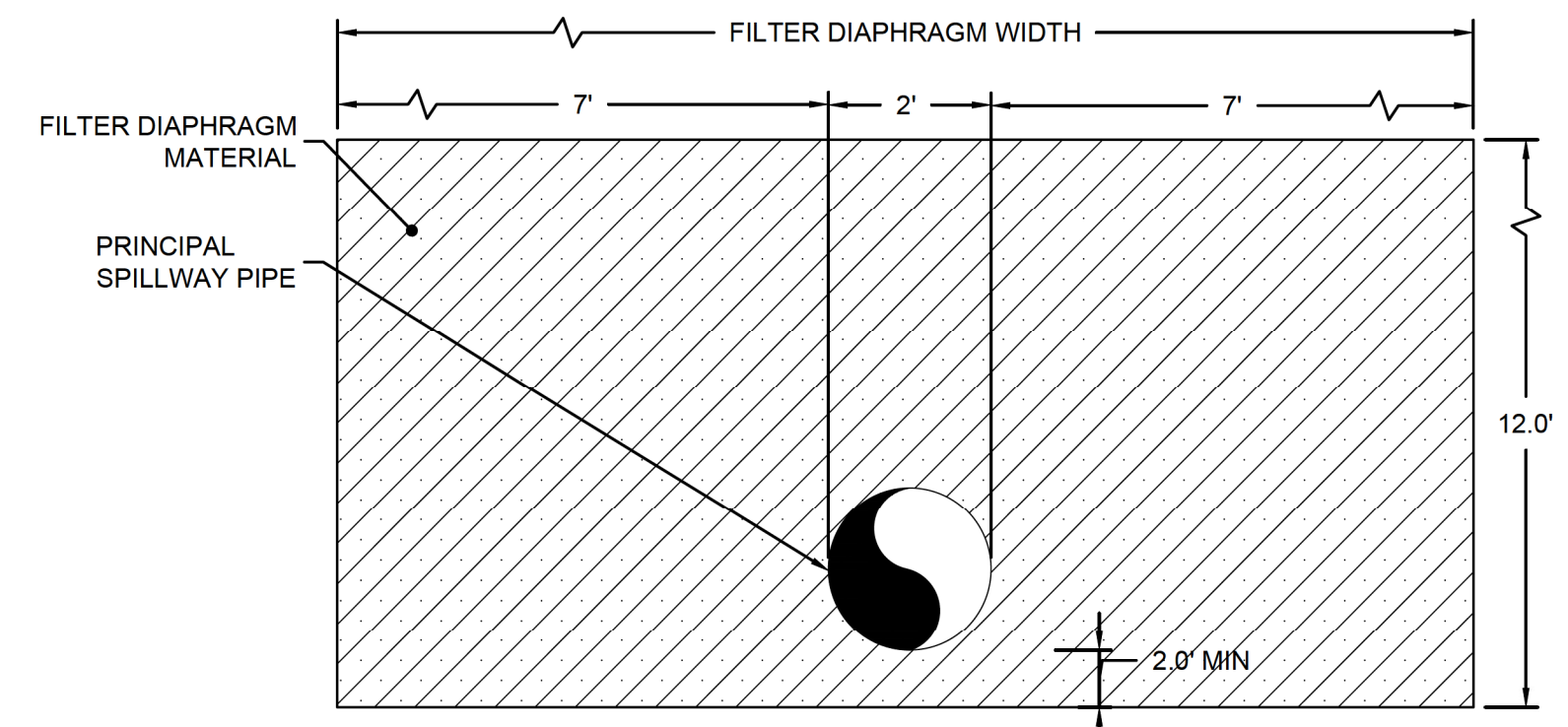
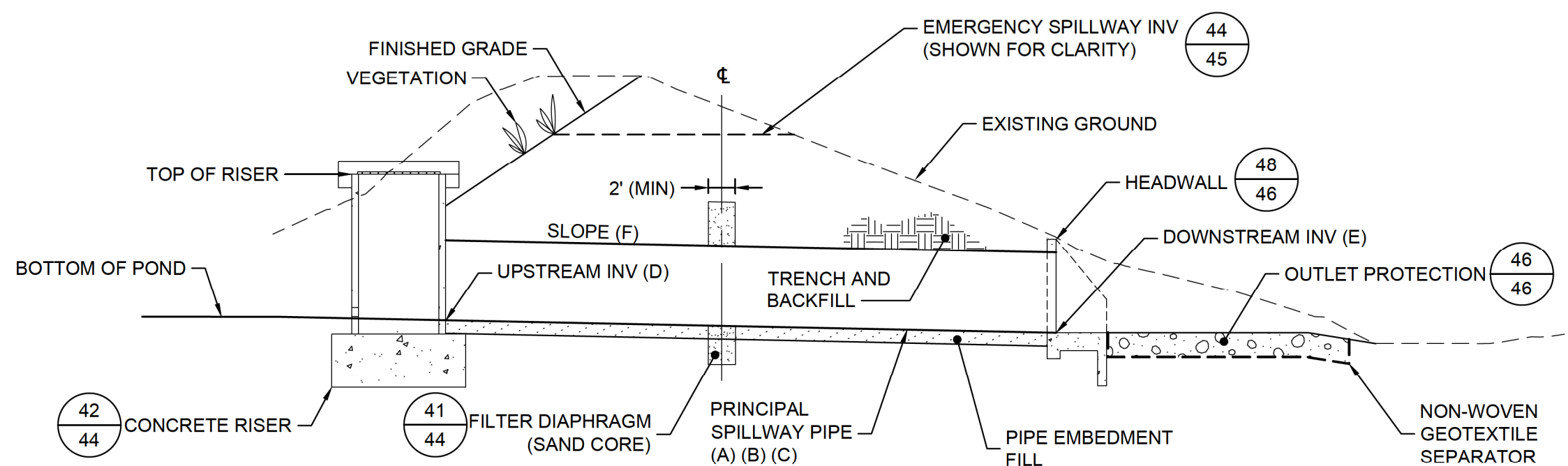
DESIGNATION	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
POND ID	BOTTOM OF RISER EL (FT)	TOP OF RISER EL (FT)	BOTTOM OF POND EL (FT)	EXTERIOR RISER LENGTH (FT)	INTERIOR RISER WIDTH (FT)	ORIFICE INV EL (FT)	STORMWATER PIPE ID	RISER BLOCK HEIGHT (FT)	RISER BLOCK LENGTH (FT)	RISER BLOCK WIDTH (FT)	PANEL LENGTH (in), X WIDTH (in)
POND 1	689.0	695.5	690.0	5	4	690.0	POND 1 PRINCIPAL SPILLWAY PIPE	2	6	6	50
POND 3	675.0	679.0	676.0	5	4	676.0	POND 3 PRINCIPAL SPILLWAY PIPE	2	6	6	50

DESIGNATION	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
POND ID	BOTTOM OF RISER EL (FT)	TOP OF RISER EL (FT)	BOTTOM OF POND EL (FT)	INTERIOR RISER DIAMETER (FT)	12" CIRCULAR ORIFICE INV EL (FT)	15" CIRCULAR ORIFICE INV EL (FT)	STORMWATER PIPE ID	RISER BLOCK HEIGHT (FT)	RISER BLOCK LENGTH (FT)	RISER BLOCK WIDTH (FT)	PANEL DIAMETER (in)
POND 2	673.5	683.0	677.5	5	677.5	680.5	POND 2 PRINCIPAL SPILLWAY PIPE	2	7.2	7.2	60

42 DETAIL
39 CONCRETE RISER
SCALE: NTS

42A DETAIL
39 EXISTING POND 2 RISER PIPE
SCALE: NTS

- NOTES:
- LIQUIDBOOT® WILL BE APPLIED TO EXPOSED SURFACES OF RISER STRUCTURES.
 - SUBGRADE PREPARATION IN AREAS WHERE GEOMEMBRANE LINER WILL BE INSTALLED WILL CONSIST OF MOISTURE CONDITIONING, COMPACTION, AND SMOOTH ROLLING AS NEEDED.
 - GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.
 - TRASH RACK WILL BE INSTALLED OVER DRAWDOWN ORIFICES TO PREVENT CLOGGING.



40 DETAIL
39 POND EMBANKMENT AND SPILLWAY PIPE
SCALE: NTS

41 DETAIL
44 FILTER DIAPHRAGM (SAND CORE)
SCALE: 1" = 5'

NOTE:
1. THE HEIGHT OF THE FILTER DIAPHRAGM WILL BE AT LEAST 2 FEET BELOW THE EMBANKMENT SURFACE AND EXTEND UPWARD AT LEAST 3 TIMES THE OUTSIDE PIPE DIAMETER WHERE POSSIBLE.

DESIGNATION	(A)	(B)	(C)	(D)	(E)	(F)
OUTLET ID	MATERIAL TYPE	(NUMBER OF SURFACE WATER PIPE) - DIAMETER	LENGTH (FT)	INLET INV EL (FT)	OUTLET INV EL (FT)	SLOPE (FT/FT)
POND 1 PRINCIPAL SPILLWAY PIPE	RCP	(1) - 2.0'	100	690.0	689.5	0.0050
POND 2 PRINCIPAL SPILLWAY PIPE	HDPE	(1) - 1.5'	76	673.5	672.5	0.0130
POND 3 PRINCIPAL SPILLWAY PIPE	RCP	(1) - 2.5'	230	676.0	674.0	0.0090



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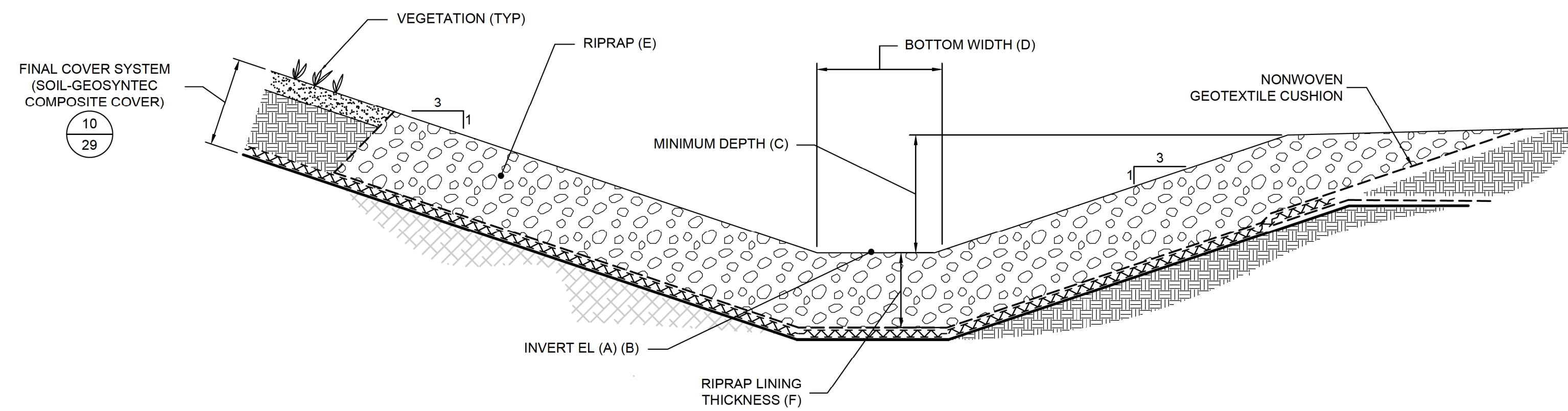
STORMWATER MANAGEMENT SYSTEM DETAILS IV

PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec
consultants

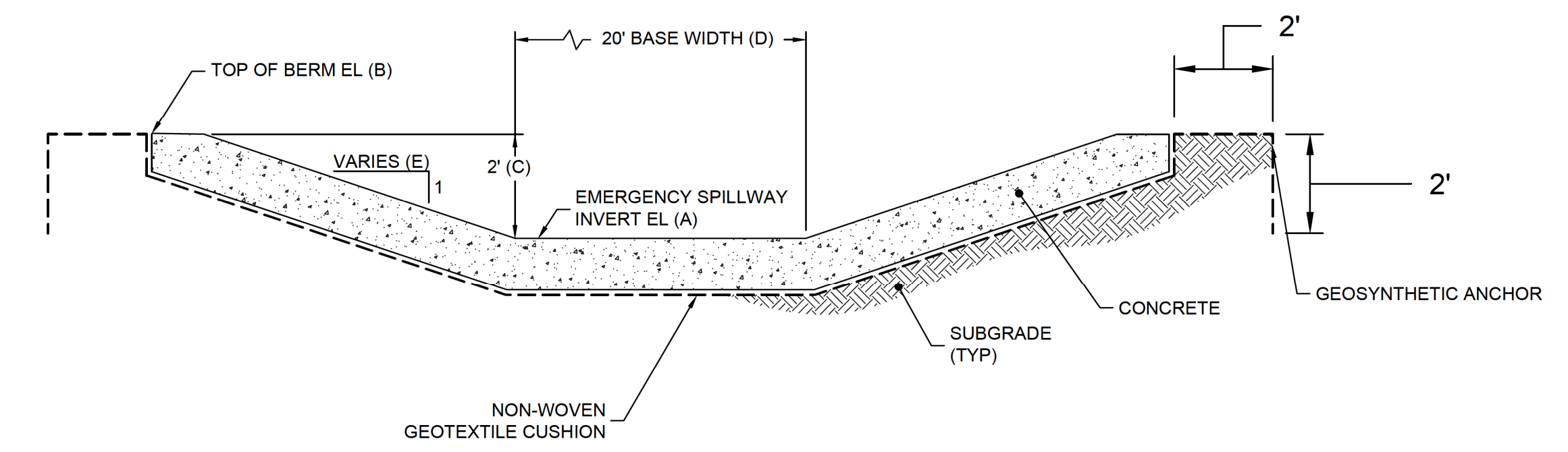
1255 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.202.9500
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-045	EDIT	08.16.21
SCALE	AS SHOWN				
DATE	AUGUST 2021	DRAWING 44 OF 50			



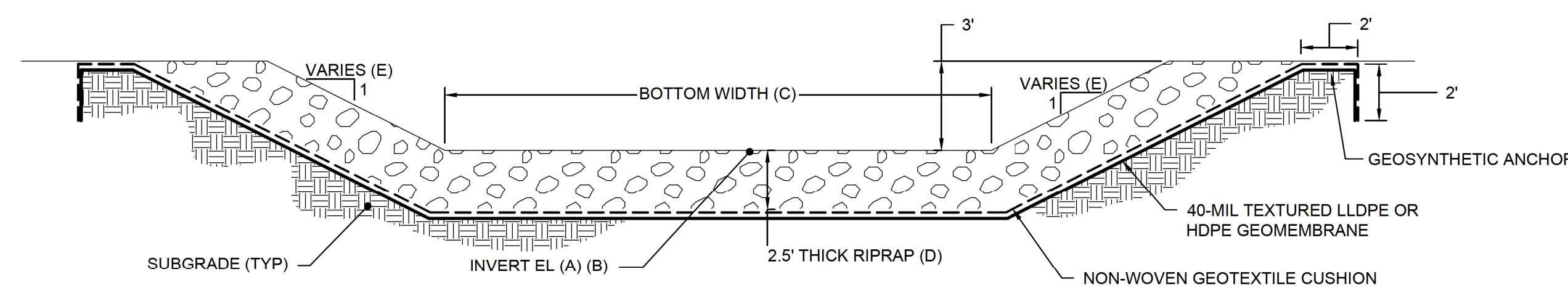
DESIGNATION			(A)	(B)	(C)	(D)	(E)	(F)
PERIMETER CHANNEL ID	LENGTH (FT)	SLOPE (FT/FT)	UPSTREAM INVERT EL (FT)	DOWNSTREAM INVERT EL (FT)	MIN DEPTH (FT)	BOTTOM WIDTH (FT)	RIPRAP STONE GRADE (FILTER STONE GRADE) (NOTE 2)	RIPRAP LINING THICKNESS
1.1	934	0.005	716.86	712.19	2.5	3	N.S.A. No. R-4 (FS-2)	1.5
1.2	675	0.005	712.19	708.81	4	3	N.S.A. No. R-4 (FS-2)	1.5
1.3	674	0.005	713.00	709.62	2	3	N.S.A. No. R-4 (FS-2)	1.5
1.4	927	0.006	713.00	707.17	2.5	3	N.S.A. No. R-4 (FS-2)	1.5
1.5	1226	0.005	713.30	707.17	2.5	3	N.S.A. No. R-4 (FS-2)	1.5
2.1	1031	0.005	713.30	708.14	3	3	N.S.A. No. R-4 (FS-2)	1.5
2.2	872	0.005	712.92	708.14	2	3	N.S.A. No. R-4 (FS-2)	1.5
3.1	490	0.005	712.92	710.47	2	3	N.S.A. No. R-4 (FS-2)	1.5
3.2	807	0.005	710.97	706.93	3	3	N.S.A. No. R-4 (FS-2)	1.5
3.3	580	0.005	713.70	710.97	2	3	N.S.A. No. R-4 (FS-2)	1.5
4.1	575	0.005	713.70	710.60	2	3	N.S.A. No. R-4 (FS-2)	1.5
4.2	315	0.005	710.60	708.91	3	3	N.S.A. No. R-4 (FS-2)	1.5
4.3	1110	0.005	714.46	708.91	3	9	N.S.A. No. R-4 (FS-2)	1.5
4.4	480	0.005	716.86	714.46	2.5	3	N.S.A. No. R-4 (FS-2)	1.5
4.5	1815	0.010	695.49	676.83	3	20	N.S.A. No. R-5 (FS-2)	2.5

43
30 DETAIL PERIMETER DRAINAGE CHANNEL
SCALE: NTS



DESIGNATION	(A)	(B)	(C)	(D)	(E)
POND ID	SPILLWAY INV EL (FT)	TOP OF BERM EL (FT)	DEPTH (FT)	BASE WIDTH (FT)	SIDE SLOPE (H:V)
POND 1 EMERGENCY SPILLWAY	698	700	2	20	3:1
POND 2 EMERGENCY SPILLWAY (EXISTING)	685	687	2	20	10:1
POND 3 EMERGENCY SPILLWAY	680	682	2	20	10:1

44
39 DETAIL EMERGENCY SPILLWAY
SCALE: NTS



DESIGNATION			(A)	(B)	(C)	(D)	(E)
EXTERIOR DOWNCHUTE ID	LENGTH (FT)	SLOPE (FT/FT)	UPSTREAM INVERT EL (FT)	DOWNSTREAM INVERT EL (FT)	BOTTOM WIDTH (FT)	RIPRAP STONE GRADE (FILTER STONE GRADE) (NOTE 2)	SIDE SLOPE (H:V)
ED-1	110	0.33 (NOTE 7)	709.0	790.0	15	N.S.A. No. R-5 (FS-2)	2:1
ED-2	110	0.33 (NOTE 7)	706.8	790.0	10	N.S.A. No. R-5 (FS-2)	2:1
ED-4	100	0.33	706.6	682.0	5	N.S.A. No. R-5 (FS-2)	2:1
ED-5	100	0.33	708.7	699.9	10	N.S.A. No. R-5 (FS-2)	3:1

45
38 DETAIL EXTERIOR DOWNCHUTE
SCALE: NTS

NOTES:

- GEOSYNTHETIC LAYER THICKNESSES EXAGGERATED FOR CLARITY.
- N.S.A. No. REFERS TO NATIONAL STONE ASSOCIATION RIPRAP AND FILTER STONE GRADATIONS AS PRESENTED IN TABLE C-1 OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL" (GREEN BOOK).
- OTHER CHANNEL DIMENSIONS AND LINING SYSTEMS WILL BE ASSESSED DURING THE DETAILED DESIGN BY FOLLOWING THE CHANNEL SIZING PROCEDURES IN THE "FINAL COVER STORMWATER MANAGEMENT SYSTEM DESIGN AND ANALYSIS" AND UTILIZING SUFFICIENT ENERGY DISSIPATION TECHNIQUES WITHIN FHWA CIRCULAR NUMBER 14 (HEC 14).
- GRADATION REQUIREMENTS AND OTHER MATERIAL PROPERTIES FOR SOIL LAYERS WILL BE PROVIDED IN TECHNICAL SPECIFICATIONS DEVELOPED FOR DETAILED DESIGN.
- SUBGRADE PREPARATION IN AREAS WHERE GEOMEMBRANE LINER WILL BE INSTALLED WILL CONSIST OF MOISTURE CONDITIONING, COMPACTION, AND SMOOTH ROLLING AS NEEDED.
- PERIMETER DRAINAGE CHANNEL 4.5 IS CONSTRUCTED OUTSIDE OF THE NEW EARTHEN CONTAINMENT DIKE, AS SHOWN ON DWG 40, AND WILL BE CONSTRUCTED FOLLOWING THE EXTERIOR DOWNCHUTE DETAIL.
- EXTERIOR DOWNCHUTE 1 AND EXTERIOR DOWNCHUTE 2 WILL BE CONSTRUCTED AT A MINIMUM SLOPE OF 1 PERCENT ALONG THE CORRIDOR BETWEEN THE NEW EARTHEN CONTAINMENT DIKE AND POND 1.

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0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

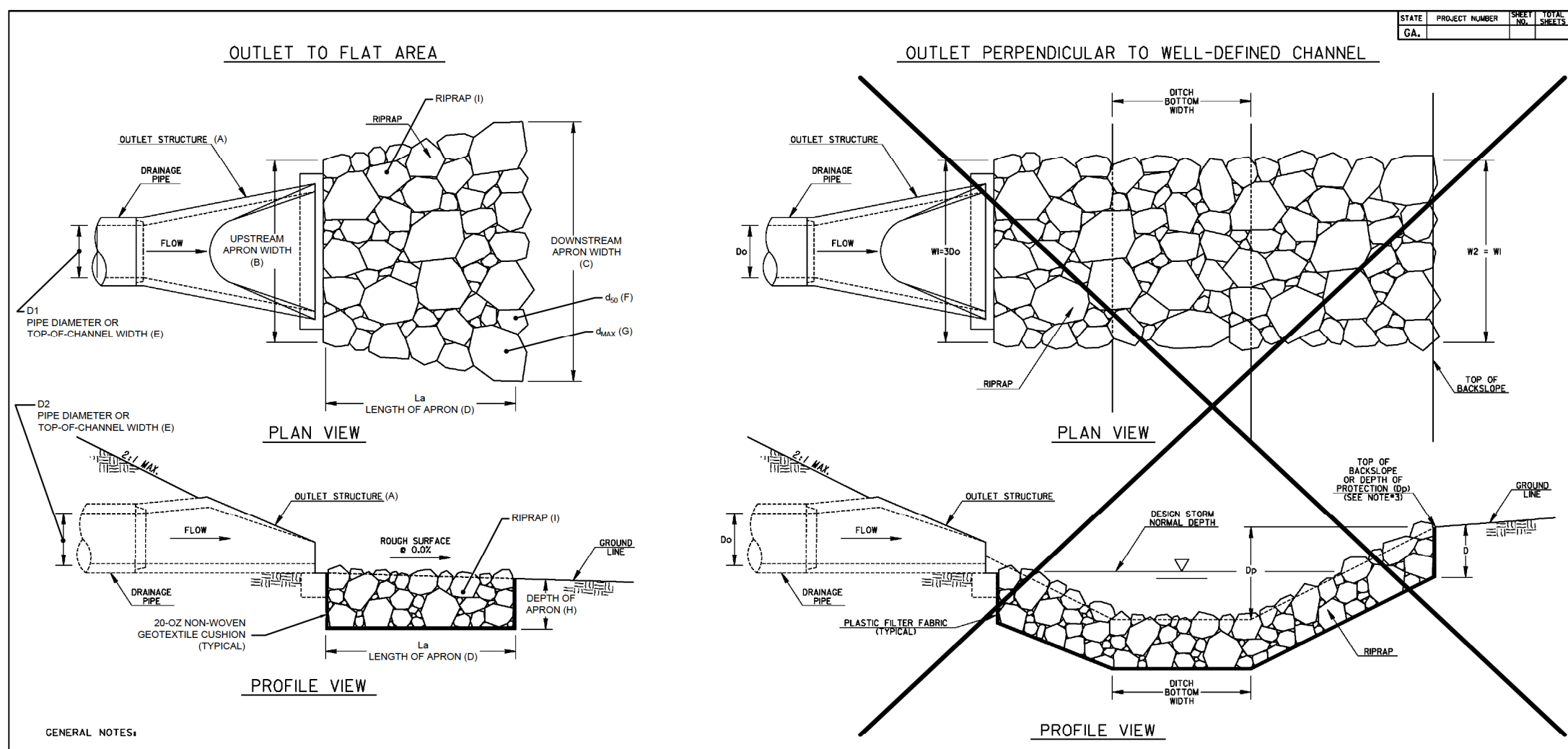
STORMWATER MANAGEMENT SYSTEM DETAILS V

PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec
consultants

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PROJ. NO.	GR6601	DWG.	GR6601-046	EDIT	08.16.21
SCALE	AS SHOWN	DRAWING 45 OF 50			
DATE	AUGUST 2021				



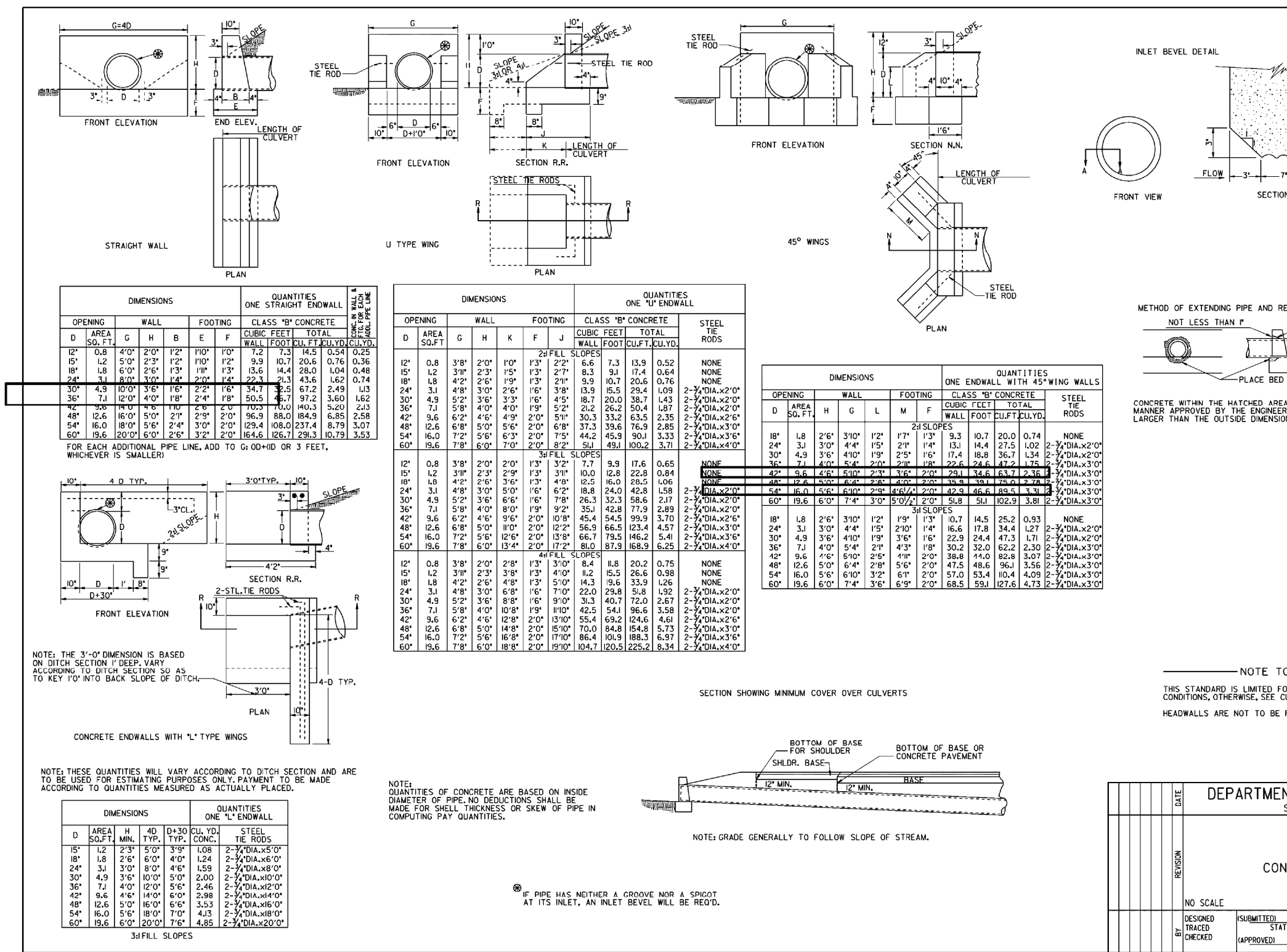
GENERAL NOTES:

- RIPRAP OUTLET PROTECTION SHOULD BE USED TO REDUCE A DRAINAGE STRUCTURE'S DISCHARGE VELOCITY.
- RIPRAP OUTLET PROTECTION IS SHOWN FOR CONCRETE STRUCTURES ONLY. IT IS NOT APPLICABLE FOR OTHER DRAINAGE OUTLET STRUCTURES.
- THE DESIGNER SHALL PROVIDE THE FOLLOWING IN THE PLANS: CHANNEL DIMENSIONS, OUTLET STRUCTURE DIMENSIONS, CHANNEL TYPE, APRON LENGTH & APRON WIDTH AT DRAINAGE STRUCTURE, RIPRAP MOUNTING DIMENSIONS (APPROXIMATE STORE DIAMETER), INSTALLATION DEPTH (INCLUDE TYPE OF RIPRAP WITH QUANTITIES).
- THE MINIMUM DESIGN FOR RIPRAP OUTLET PROTECTION SHALL BE THE 25-YEAR STORM EVENT, BUT LARGER STORMS ARE RECOMMENDED.
- THE APRON WIDTH SHALL BE THE SAME WHEN THE DRAINAGE STRUCTURE DISCHARGES PERPENDICULAR TO A WELL-DEFINED CHANNEL.
- THE CHANNEL'S DESIGN STORM FREQUENCY IS 25-YEAR. THE CHANNEL BACKSLOPE OR FRONT SLOPE SHALL BE THE NORMAL SLOPE OF THE CHANNEL.
- IF THE OUTLET STRUCTURE REQUIRES A 40-MIL TEXTURED LLDPE OR HDPE GEOMEMBRANE CUSHION, THE DESIGNER SHALL PROVIDE THE DEPTH OF PROTECTION (DO) IF THE APRON DOES NOT EXTEND TO THE TOP OF THE BACKSLOPE.
- IF THE OUTLET STRUCTURE REQUIRES A 40-MIL TEXTURED LLDPE OR HDPE GEOMEMBRANE CUSHION, THE DESIGNER SHALL PROVIDE A SPECIAL DETAIL FOR APPROPRIATE OUTLET PROTECTION.
- PLASTIC FILTER FABRIC IS REQUIRED UNDERNEATH RIPRAP APRON.
- PAYMENT FOR RIPRAP SHALL BE MEASURED IN SQUARE YARDS FOR SPECIFIED INSTALLATION QUANTITY. PAYMENT FOR PLASTIC FILTER FABRIC SHALL BE MEASURED IN SQUARE YARDS CORRELATED WITH RIPRAP QUANTITY AND PAID FOR SEPARATELY.

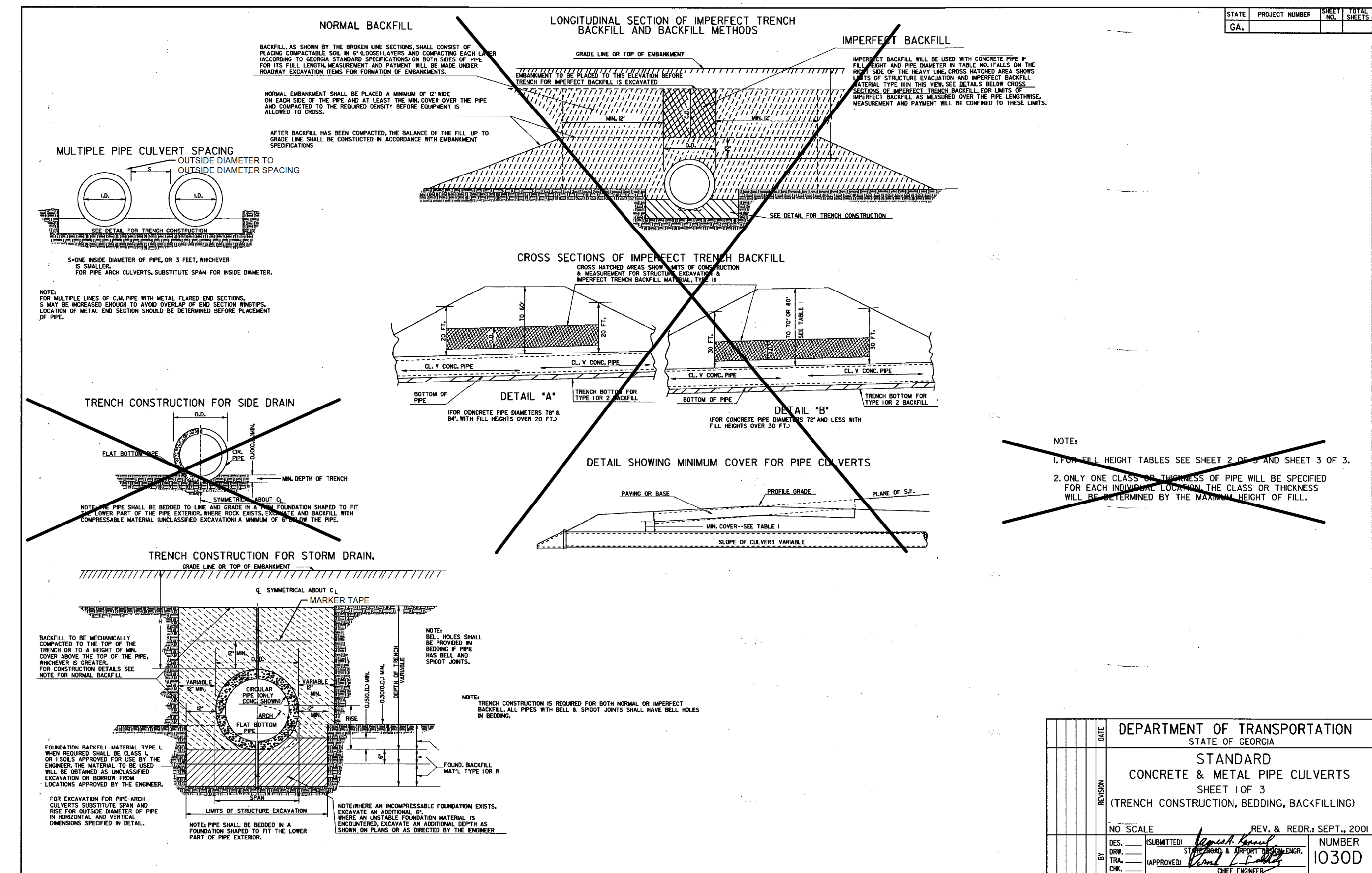
DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
CONSTRUCTION DETAILS
RIPRAP OUTLET PROTECTION (SHEET 1 OF 2)
NO SCALE 4-22-2016
NUMBER 1001-B

DESIGNATION	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
OUTLET ID	OUTLET TYPE	UPSTREAM APRON WIDTH (FT)	DOWNSTREAM APRON WIDTH (FT)	LENGTH OF APRON (FT)	PIPE DIAMETER OR (TOP-OF-CHANNEL WIDTH x DEPTH) (FT)	d50 (in.)	dmax (in.)	DEPTH OF APRON (FT)	RIPRAP STONE GRADE (FILTER STONE GRADE) (NOTE 3)
POND 1 PRINCIPAL SPILLWAY PIPE	RCP	6	20	15	2.0	6	12	1.5	N.S.A. No. R-4 (FS-2)
POND 3 PRINCIPAL SPILLWAY PIPE	RCP	7.5	20	20	2.5	6	12	1.5	N.S.A. No. R-4 (FS-2)
POND 1 EMERGENCY SPILLWAY	CONCRETE TRAPEZOIDAL CHANNEL	32	32	25	(32 x 2)	9	18	2.5	N.S.A. No. R-5 (FS-2)
POND 3 EMERGENCY SPILLWAY	CONCRETE TRAPEZOIDAL CHANNEL	60	60	25	(60 x 2)	9	18	2.5	N.S.A. No. R-5 (FS-2)
PERIMETER CHANNEL 4.5	RIPRAP-LINED TRAPEZOIDAL CHANNEL	40	45	35	(38 x 3)	9	18	2.5	N.S.A. No. R-5 (FS-2)
EXTERIOR DOWNCHUTE 1	RIPRAP-LINED TRAPEZOIDAL CHANNEL	30	40	35	(27 x 3)	9	18	2.5	N.S.A. No. R-5 (FS-2)
EXTERIOR DOWNCHUTE 2	RIPRAP-LINED TRAPEZOIDAL CHANNEL	25	40	35	(22 x 3)	9	18	2.5	N.S.A. No. R-5 (FS-2)
EXTERIOR DOWNCHUTE 4	RIPRAP-LINED TRAPEZOIDAL CHANNEL	20	40	35	(17 x 3)	9	18	2.5	N.S.A. No. R-5 (FS-2)
EXTERIOR DOWNCHUTE 5	RIPRAP-LINED TRAPEZOIDAL CHANNEL	25	40	35	(22 x 3)	9	18	2.5	N.S.A. No. R-5 (FS-2)

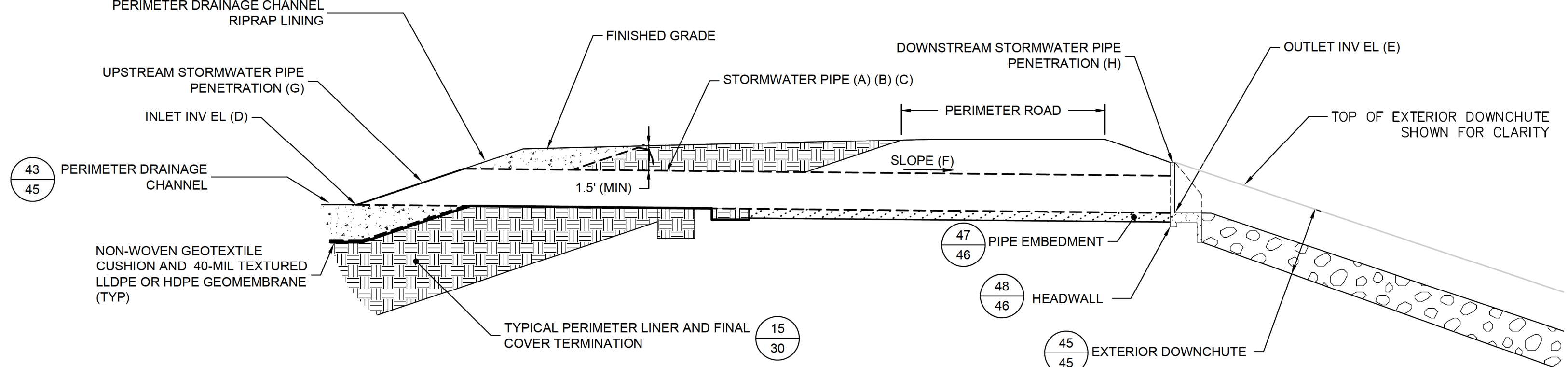
46
38
DETAIL
OUTLET PROTECTION
SCALE: NTS
SOURCE: GDOT



48
43
DETAIL
HEADWALL
SCALE: NTS
SOURCE: GDOT



47
43
SECTION
PIPE EMBEDMENT
SCALE: NTS
SOURCE: GDOT



DESIGNATION	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
CULVERT ID	MATERIAL TYPE	(NUMBER OF SURFACE WATER PIPE) - DIAMETER	LENGTH (FT)	INLET INV EL (FT)	OUTLET INV EL (FT)	SLOPE (FT/FT)	UPSTREAM PIPE PENETRATION	DOWNSTREAM PIPE PENETRATION
C-1	RCP	(5) - 3.0'	75	709.5	709.0	0.0067	PERIMETER CHANNEL	EXTERIOR DOWNCHUTE CHANNEL TO POND 1
C-2	RCP	(3) - 3.0'	80	707.2	706.8	0.0050	PERIMETER CHANNEL	EXTERIOR DOWNCHUTE CHANNEL TO POND 1
C-4	RCP	(2) - 3.0'	75	707.1	706.6	0.0067	PERIMETER CHANNEL	EXTERIOR DOWNCHUTE CHANNEL TO POND 3
C-5	RCP	(4) - 3.0'	85	709.1	708.7	0.0058	PERIMETER CHANNEL	EXTERIOR DOWNCHUTE CHANNEL TO POND 3

49
39
DETAIL
STORMWATER PIPE PROFILES
SCALE: NTS

NUMBER OF PIPES	NOMINAL PIPE DIAMETER (FT)	MINIMUM TRENCH WIDTH (FT)	OUTSIDE DIAMETER TO OUTSIDE DIAMETER SPACING (FT)
1	3	6	3
2	3	13	3
3	3	20	3
4	3	26	3
5	3	33	3

- NOTES:**
- RIPRAP OUTLET PROTECTION WILL BE LINED WITH A 40-MIL (MIN) TEXTURED LLDPE OR HDPE GEOMEMBRANE OVERLAIN WITH A GEOTEXTILE CUSHION.
 - SUBGRADE PREPARATION IN AREAS WHERE GEOMEMBRANE LINER WILL BE INSTALLED WILL CONSIST OF MOISTURE CONDITIONING, COMPACTION, AND SMOOTH ROLLING AS NEEDED.
 - N.S.A. No. REFERS TO NATIONAL STONE ASSOCIATION RIPRAP AND FILTER STONE GRADATIONS AS PRESENTED IN TABLE C-1 OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL" (GREEN BOOK).

0 AUG. 2021 SUBMITTAL TO GA EPD JVV/KH RB

REV DATE DESCRIPTION DRN APP

STORMWATER MANAGEMENT SYSTEM DETAILS VI

PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

Geosyntec
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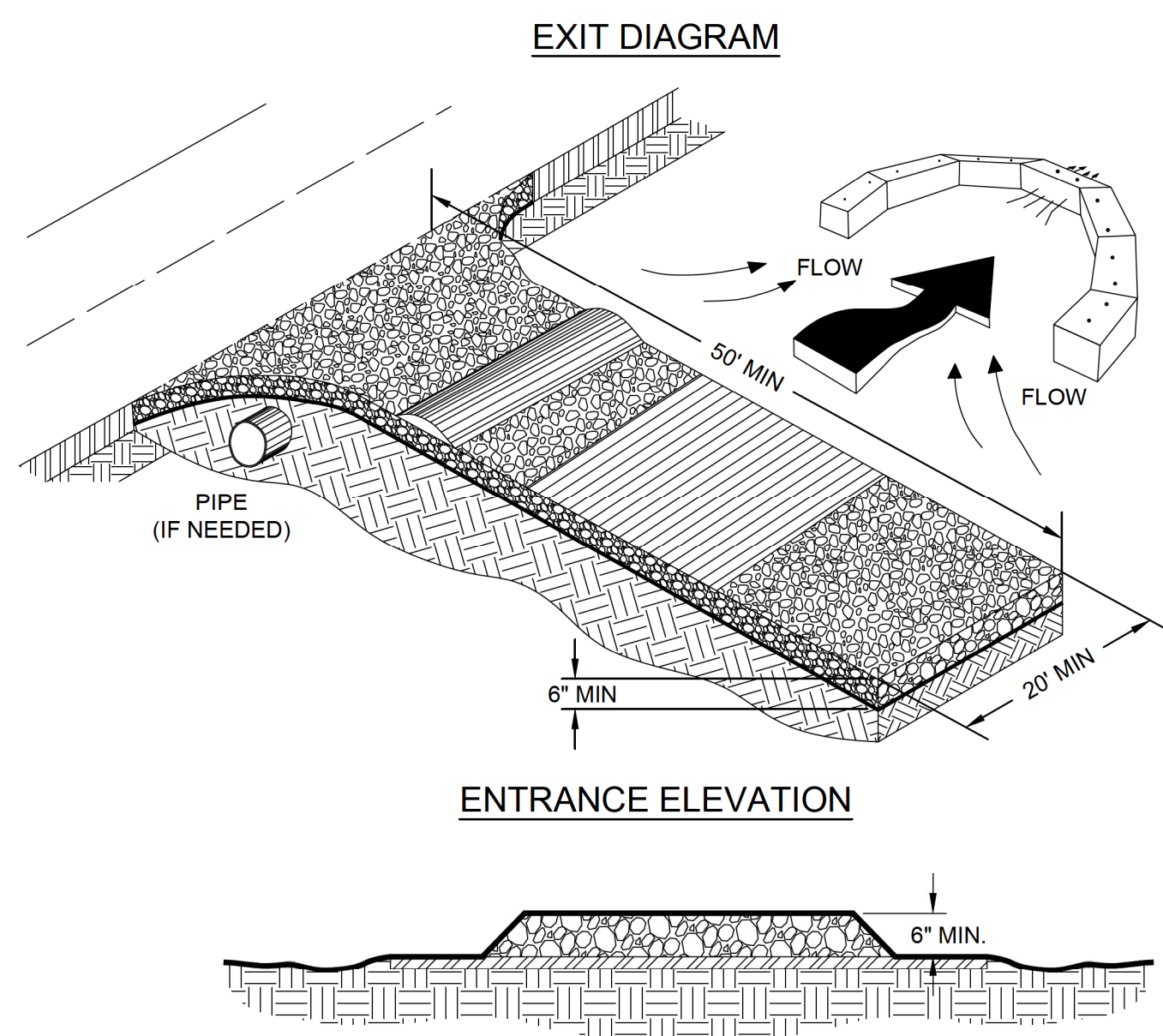
PROJ. NO. GR6601 DWG. GR6601-048 EDIT 08.16.21

SCALE AS SHOWN DRAWING 46 OF 50

DATE AUGUST 2021

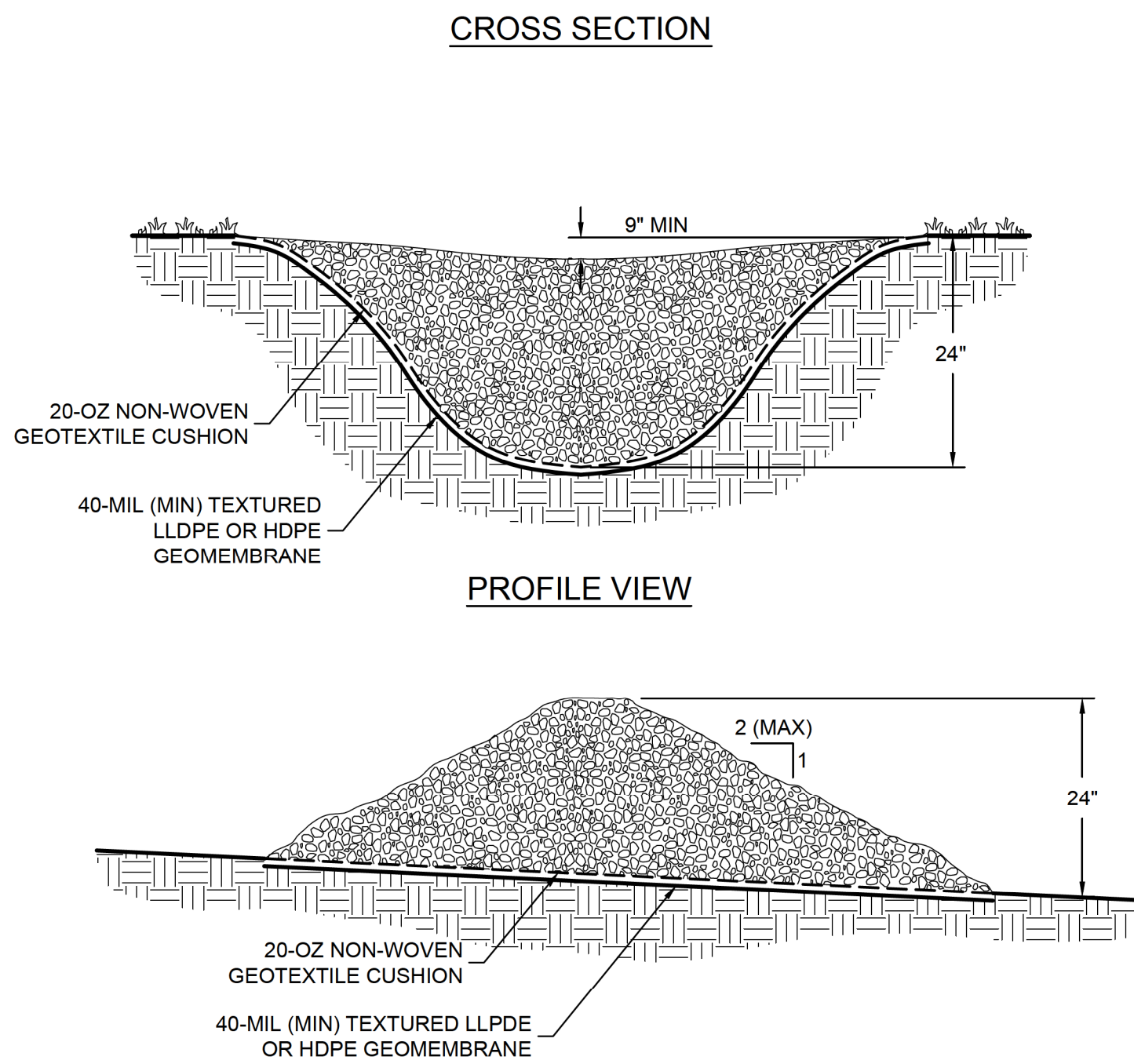


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- NOTES:**
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
 2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
 3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
 4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
 5. PAD WIDTH SHALL EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
 6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
 7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
 8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
 9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVES MUD AND DIRT.
 10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

Co **50** **DETAIL**
CONSTRUCTION EXIT
SCALE: NTS
SOURCE: GSWCC



- NOTES:**
1. CHECK DAMS ARE TO BE USED ONLY IN SMALL OPEN CHANNELS (THEY ARE NOT TO BE USED IN LIVE STREAMS).
 2. THE DRAINAGE AREA FOR STONE CHECK DAMS SHALL NOT EXCEED TWO ACRES.
 3. THE CENTER OF THE CHECK DAM MUST BE AT LEAST 9 INCHES LOWER THAN THE OUTER EDGES.
 4. THE DAM HEIGHT SHOULD BE A MAXIMUM OF 2 FEET FROM CENTER TO RIM EDGE.
 5. THE SIDE SLOPES OF THE CHECK DAM SHALL NOT EXCEED A 2:1 SLOPE.
 6. GEOTEXTILE SHALL BE USED TO PREVENT THE MITIGATION OF SUBGRADE SOIL PARTICLES INTO THE STONES (REFER TO AASHTO M288-96, SECTION 7.3, TABLE 3).
 7. CHECK DAMS SHALL BE SPACED 250 FT APART.

Cd **53** **DETAIL**
STONE CHECK DAM
SCALE: NTS
SOURCE: GSWCC

CONDITIONS
THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO SURFACE AND AIR MOVEMENT OF DUST WHERE ON AND OFF-SITE DAMAGE MAY OCCUR WITHOUT TREATMENT.

METHODS AND MATERIALS
A. TEMPORARY METHODS

MULCHES. SEE SPECIFICATION Ds1 - DISTURBED AREA STABILIZATION (WITH MULCHING ONLY).

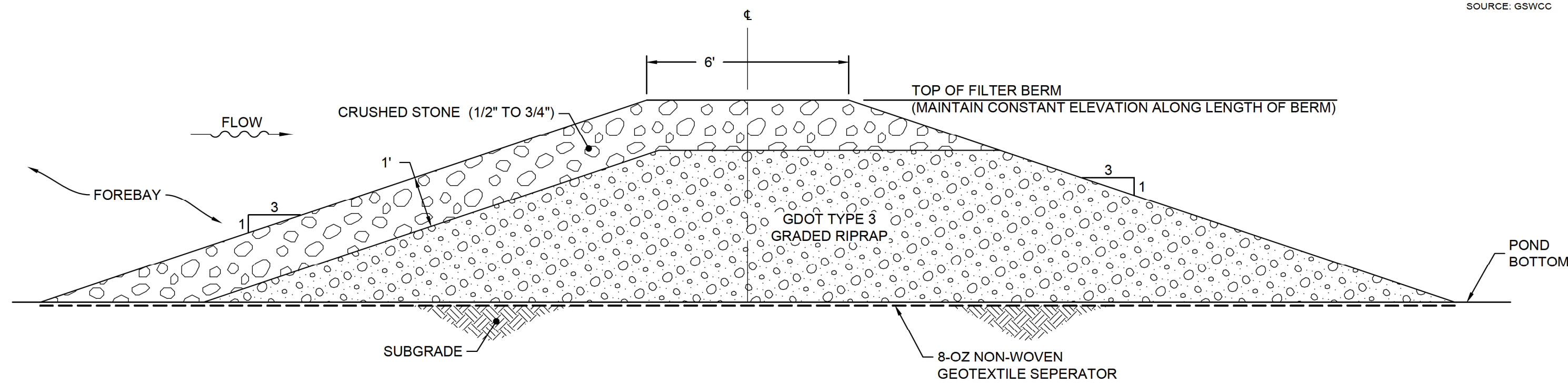
VEGETATIVE COVER. SEE SPECIFICATION Ds2 - DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING).

B. PERMANENT METHODS

PERMANENT VEGETATION. SEE SPECIFICATION Ds3 - DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION). EXISTING TREES AND LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.

TOPSOILING. SEE SPECIFICATION Tp - TOPSOILING.

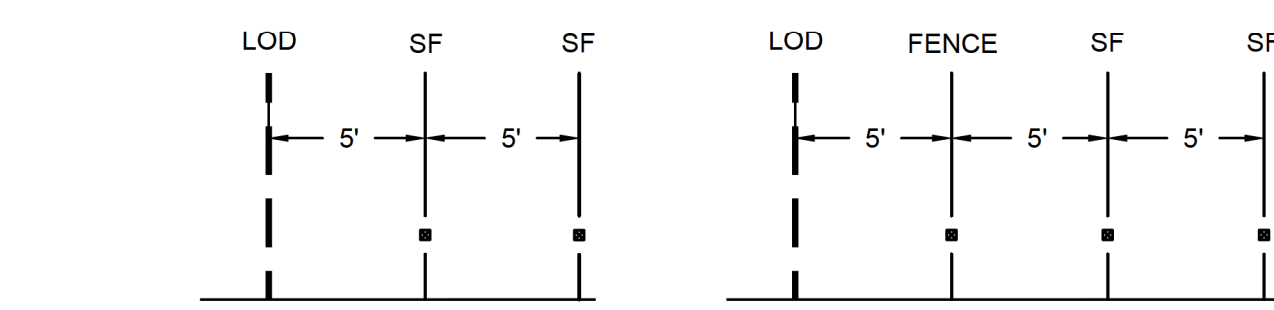
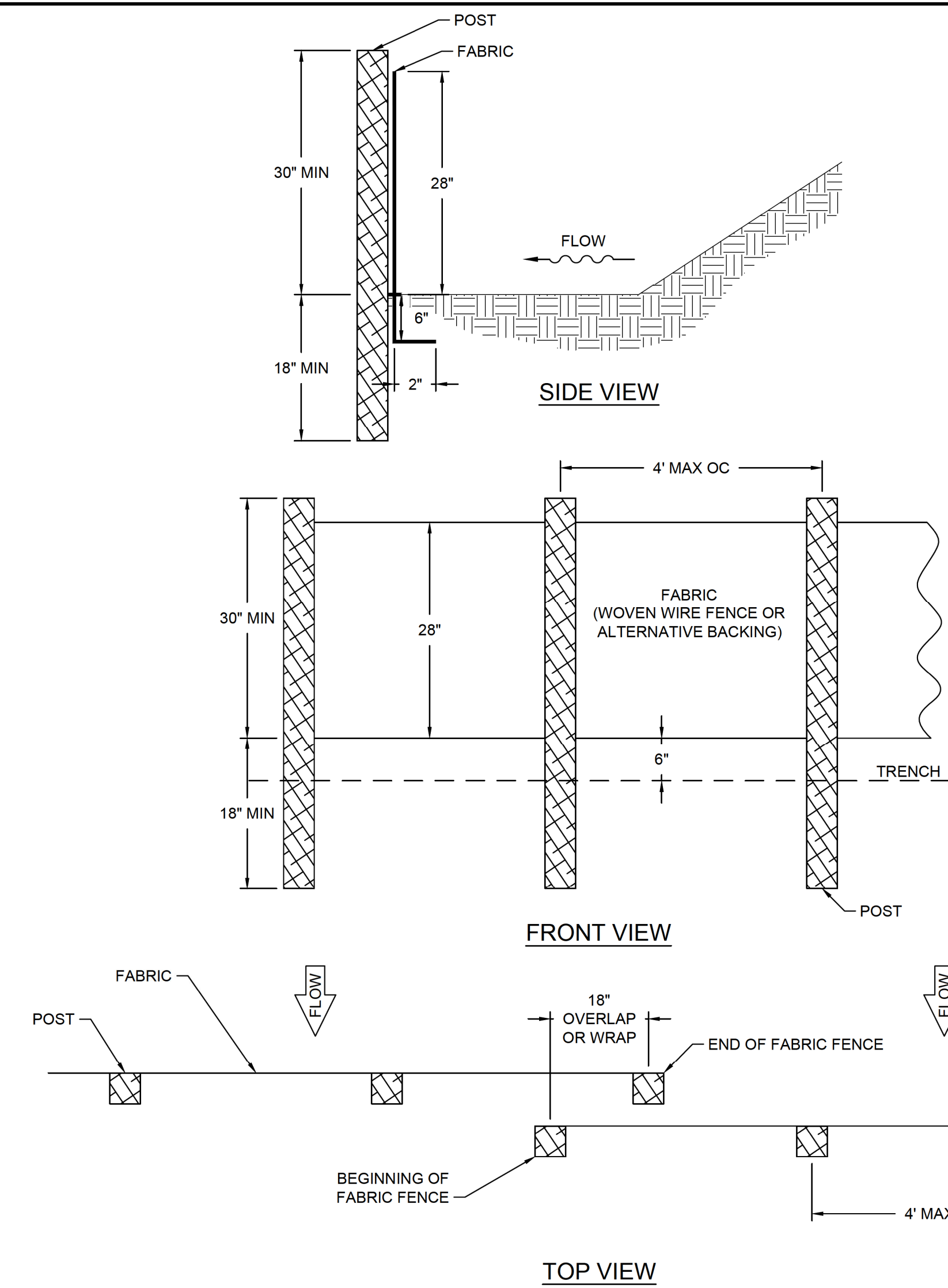
Du **51** **DETAIL**
DUST CONTROL ON DISTURBED AREAS
SCALE: NTS
SOURCE: GSWCC



54 **DETAIL**
39 **FILTER BERM**
SCALE: NTS

GENERAL EROSION AND SEDIMENT CONTROL NOTES

1. ALL EROSION CONTROL MEASURES SHALL BE IN CONFORMANCE WITH THE CURRENT EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA." STORMWATER CONTROLS AND BEST MANAGEMENT PRACTICES SHALL BE DESIGNED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE APPLICABLE NPDES CONSTRUCTION STORMWATER DISCHARGE GENERAL PERMIT, NPDES INDUSTRIAL STORMWATER DISCHARGE GENERAL PERMIT AND/OR THE FACILITY'S NPDES INDUSTRIAL WASTEWATER DISCHARGE INDIVIDUAL PERMIT.
2. STORM WATER DISCHARGES ASSOCIATED WITH ASH POND CLOSURE ACTIVITIES WILL BE COVERED UNDER THE APPLICABLE NPDES CONSTRUCTION STORMWATER DISCHARGE GENERAL PERMIT, NPDES INDUSTRIAL STORMWATER DISCHARGE GENERAL PERMIT AND/OR THE FACILITY'S NPDES INDUSTRIAL WASTEWATER DISCHARGE INDIVIDUAL PERMIT.
3. STATE WATERS BUFFERS SHALL REMAIN UNDISTURBED, EXCEPT WHERE ENCROACHMENT IS REQUIRED TO FACILITATE ASH POND CLOSURE ACTIVITIES. UNLESS OTHERWISE EXEMPTED BY THE APPROPRIATE NPDES CONSTRUCTION STORMWATER DISCHARGE GENERAL PERMIT, A STATE WATERS BUFFER VARIANCE SHALL BE OBTAINED FROM GEORGIA EPD'S WATERSHED PROTECTION BRANCH PRIOR TO BUFFER ENCROACHMENT. GEORGIA EPD'S SOLID WASTE MANAGEMENT BRANCH SHALL BE NOTIFIED WHEN GPC ENVIRONMENTAL AFFAIRS APPLIES FOR A STATE WATERS BUFFER VARIANCE. CONTACT GPC ENVIRONMENTAL AFFAIRS FOR ASSISTANCE.
4. PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES FOR THIS PROJECT, THE PERMITTED BOUNDARY, THE LIMITS OF DISTURBANCE AND ALL WETLANDS AND STATE WATERS BUFFERS WITHIN 200 FEET OF THE LIMITS OF DISTURBANCE OR WITHIN THE PROPERTY BOUNDARY (WHICHEVER IS CLOSER) SHALL BE CLEARLY FLAGGED AND STAKED. THESE MARKINGS SHALL BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION / CLOSURE ACTIVITIES. SHOULD ANY OF THE MARKINGS BE DISTURBED, THE CONTRACTOR SHALL NOTIFY GEORGIA POWER COMPANY IMMEDIATELY. ALL CONSTRUCTION PERSONNEL SHALL BE SHOWN THE LOCATION OF THE LIMITS OF DISTURBANCE, STATE WATER BUFFERS, STATE WATERS AND WETLANDS OUTSIDE THE LIMITS OF DISTURBANCE TO PREVENT HEAVY EQUIPMENT ENCROACHMENT INTO THESE AREAS.



CRITERIA FOR SILT FENCE PLACEMENT	
LAND SLOPE (PERCENT)	MAXIMUM LENGTH OF SLOPE ABOVE FENCE (FEET)
<2	100
2 TO 5	75
5 TO 10	50
10 TO 20	25
>20	15

SILT FENCE NOTES:

1. ALL SILT FENCE SHOWN ON THE PLANS IS TO BE DOUBLE ROW TYPE "C" BARRIER. CONTRACTOR SHALL MAINTAIN FENCE AT THESE LOCATIONS DURING CONSTRUCTION UNTIL FINAL SURFACE TREATMENTS HAVE BEEN APPLIED AND A SUFFICIENT STAND OF GRASS HAS BEEN ESTABLISHED AS DETERMINED BY THE SITE ENGINEER.
2. ADDITIONAL SILT FENCE SHALL BE REQUIRED IN AREAS WHICH ARE CLEARED OR GRADED AND DO NOT HAVE STORMWATER RUNOFF DIVERTED TO SEDIMENT BASINS MEETING THE CRITERIA LISTED IN THE TABLES. THE DRAINAGE AREA SHALL NOT EXCEED 1/4 ACRE FOR EVERY 100 FEET OF SILT FENCE.

INSTALLATION:

1. WHERE NO SEDIMENT TRAP/STORMWATER DISPOSAL SYSTEM IS PRESENT, MAXIMUM SLOPE LENGTH SHALL NOT EXCEED THAT IN THE TABLE. ALSO, THE DRAINAGE AREA IS NOT TO EXCEED 1/4 ACRE PER 100 FEET OF SILT FENCE.
2. INSTALL ALONG CONTOURS WITH ENDS POINTING UPHILL.
3. DO NOT PLACE IN WATERWAYS OR AREAS OF CONCENTRATED FLOW.
4. PROVIDE A RIPRAP SPLASH PAD OR OTHER OUTLET PROTECTION DEVICE FOR ANY POINT WHERE FLOW MAY TOP THE SEDIMENT FENCE. ENSURE THAT THE MAXIMUM HEIGHT OF THE FENCE AT A PROTECTED, REINFORCED OUTLET DOES NOT EXCEED 1 FT AND THAT SUPPORT POST SPACING DOES NOT EXCEED 4 FT FOR TYPE C.
5. SAFETY CAPS ARE REQUIRED FOR ALL STEEL POSTS.
6. POSTS SHALL BE STEEL AND HAVE A MINIMUM LENGTH OF 4 FEET. POSTS SHALL BE "U", "T", OR "C" SHAPED AND HAVE A MINIMUM WEIGHT OF 1.3 POUNDS PER FOOT. THE POSTS SHALL HAVE PROJECTIONS FOR FASTENING THE WOVEN WIRE AND FILTER FABRIC. MAXIMUM POSTS SPACING SHALL BE 4 FEET FOR TYPE C.
7. A WOVEN WIRE SUPPORT FENCE SHALL BE USED WITH TYPE "C" FENCE. THE WIRE FENCE FABRIC SHALL BE AT LEAST 36 INCHES HIGH AND SHALL HAVE AT LEAST 6 HORIZONTAL WIRES. VERTICAL WIRES SHALL HAVE A MAXIMUM SPACING OF 12 INCHES. THE TOP AND BOTTOM WIRES SHALL BE AT LEAST 1 1/2 GAUGE.
8. APPROVED SILT FENCE FABRICS ARE LISTED IN THE GEORGIA DEPARTMENT OF TRANSPORTATION QUALIFIED PRODUCTS LIST #36 (QPL-36).

Sd1-S **52** **DETAIL**
SILT FENCE - TYPE C
SCALE: NTS
SOURCE: GSWCC



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REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

EROSION AND SEDIMENT CONTROL DETAILS I

PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

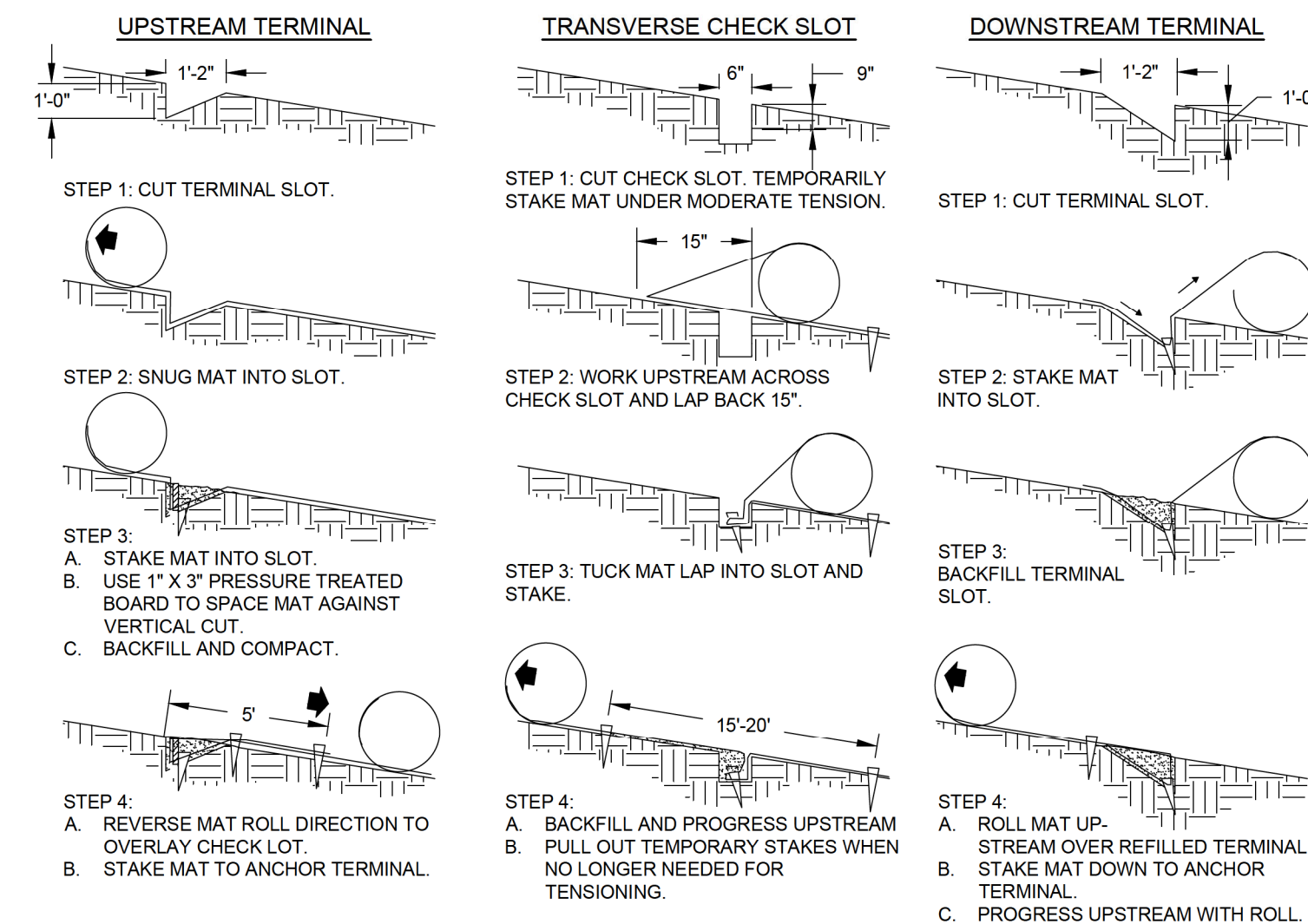
Geosyntec consultants

1255 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.202.9500
WWW.GEOSYNTEC.COM

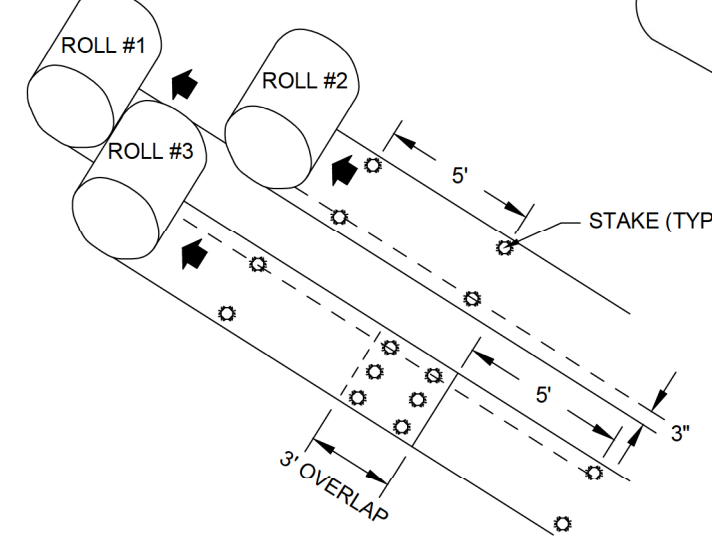
PROJ. NO.	GR6601	DWG.	GR6601-049	EDIT	08.16.21
SCALE	AS SHOWN	DRAWING 47 OF 50			
DATE	AUGUST 2021				

TYPICAL INSTALLATION GUIDELINES FOR ROLLED EROSION CONTROL PRODUCTS (RECP)

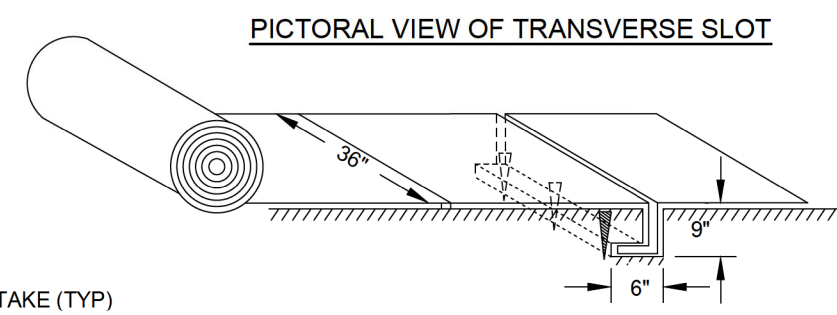
BLANKET AND MATTING CROSS-SECTIONS



SEQUENTIAL ROLL RUN OUT IN CHANNELS

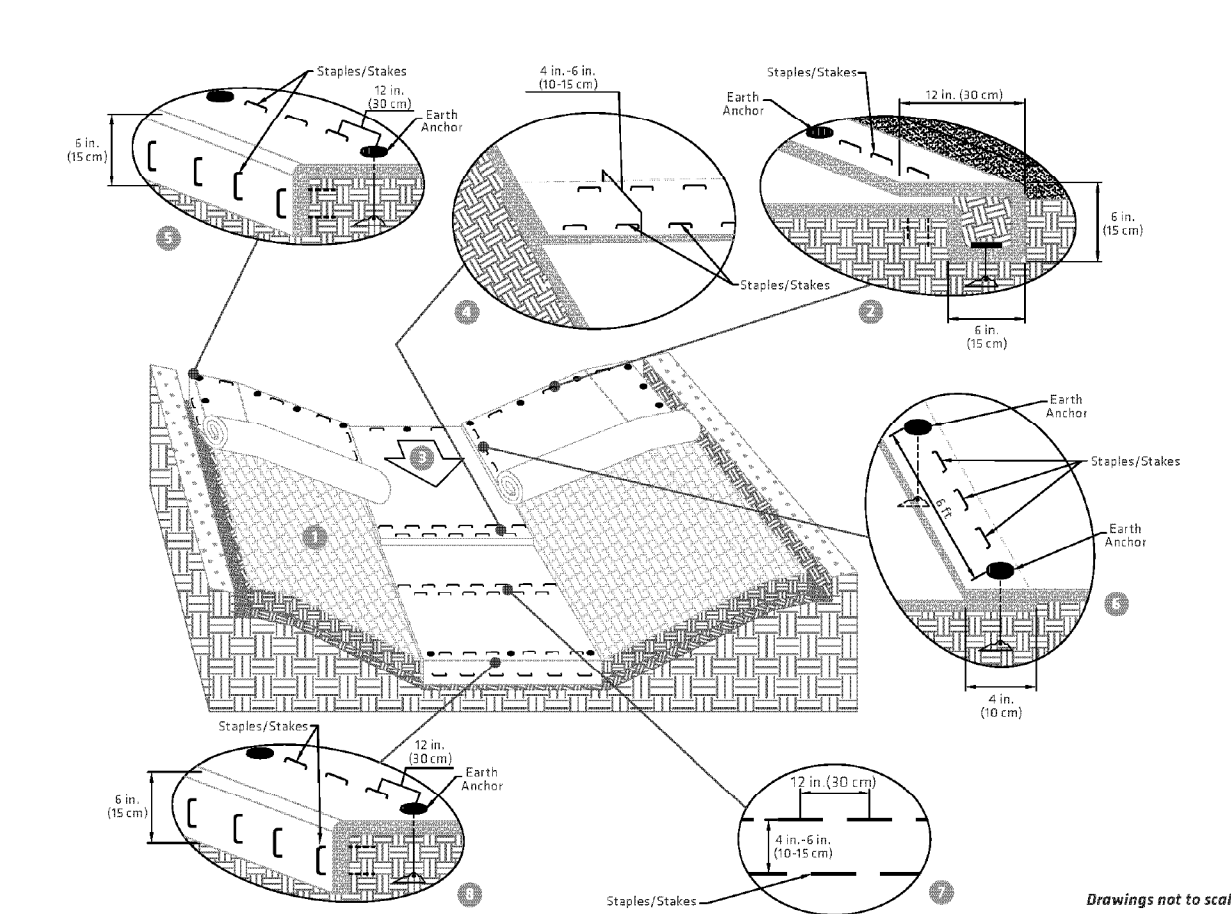


PICTORIAL VIEW OF TRANSVERSE SLOT



55 DETAIL
SLOPE STABILIZATION
SCALE: NTS
SOURCE: GWSCC

Channel Installation Detail



GENERAL INSTALLATION

- Prepare soil before installing the HPTRM, including any necessary application of soil amendments such as lime or fertilizer. See seeding and vegetating section for details regarding presowing, overseeding or use with sod.
- Begin at the top of the channel by anchoring the HPTRM in a 6 in. (15 cm) deep x 6 in. (15 cm) wide trench with approximately 12 in. (30 cm) of HPTRM extended beyond the upslope portion of the trench. Anchor the HPTRM with a row of anchors/staples/stakes spaced approximately 12 in. (30 cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Compact soil and fold remaining 12 in. (30 cm) portion of HPTRM back over compacted soil. Secure HPTRM over soil with a row of anchors/staples/stakes spaced approximately 12 in. (30 cm) across the width of the HPTRM.
- Roll center HPTRM in direction of water flow in bottom of channel. HPTRM will unroll with appropriate side against the soil surface. All HPTRM's must be securely fastened to soil surface by placing anchors/staples/stakes in appropriate locations as shown in the anchoring detail.

- Place consecutive HPTRM's end over end (single staple) with a 4 in. x 6 in. (10 cm x 15 cm) overlap. Use a double row of staples/stakes staggered 12 in. (30 cm) apart and 12 in. (30 cm) on center to secure HPTRM's.
- Full length edge of HPTRM's at top of side slopes must be anchored with a row of staples/stakes approximately 12 in. (30 cm) apart in a 6 in. (15 cm) deep x 6 in. (15 cm) wide trench. Backfill and compact the trench after stapling.
- In high flow channel applications, a staple/stake check slot is recommended at 30 ft to 40 ft (9 m-12 m) intervals. Use a double row of staples/stakes staggered 4 in. (10 cm) apart and 12 in. (30 cm) on center over entire width of the channel.
- The terminal end of the HPTRM's must be anchored with a row of staples/stakes approximately 12 in. (30 cm) apart in a 6 in. (15 cm) deep x 6 in. (15 cm) wide trench. Backfill and compact the trench after stapling.

57 DETAIL
TURF REINFORCEMENT MATTING
SCALE: NTS
SOURCE: NORTH AMERICAN GREEN

NOTES

CONDITIONS
SLOPE STABILIZATION CAN BE APPLIED TO FLAT AREAS OR SLOPES WHERE THE EROSION HAZARD IS HIGH AND SLOPE PROTECTION IS NEEDED DURING THE ESTABLISHMENT OF VEGETATION.

PLANNING CONSIDERATIONS
CARE MUST BE TAKEN TO CHOOSE THE TYPE OF SLOPE STABILIZATION PRODUCT WHICH IS MOST APPROPRIATE FOR THE SPECIFIC NEEDS OF A PROJECT. TWO GENERAL TYPES OF SLOPE STABILIZATION PRODUCTS ARE DISCUSSED WITHIN THIS SPECIFICATION.

ROLLED EROSION CONTROL PRODUCTS (RECP)
A NATURAL FIBER BLANKET WITH SINGLE OR DOUBLE PHOTODEGRADABLE OR BIODEGRADABLE NETS.

HYDRAULIC EROSION CONTROL PRODUCTS (HECP)
HECP SHALL UTILIZE STRAW, COTTON, WOOD OR OTHER NATURAL BASED FIBERS HELD TOGETHER BY A SOIL BINDING AGENT WHICH WORKS TO STABILIZE SOIL PARTICLES. PAPER MULCH SHOULD NOT BE USED FOR EROSION CONTROL.

CRITERIA
ROLLED EROSION CONTROL PRODUCTS (RECPS) AND HYDRAULIC EROSION CONTROL PRODUCTS (HECPS):

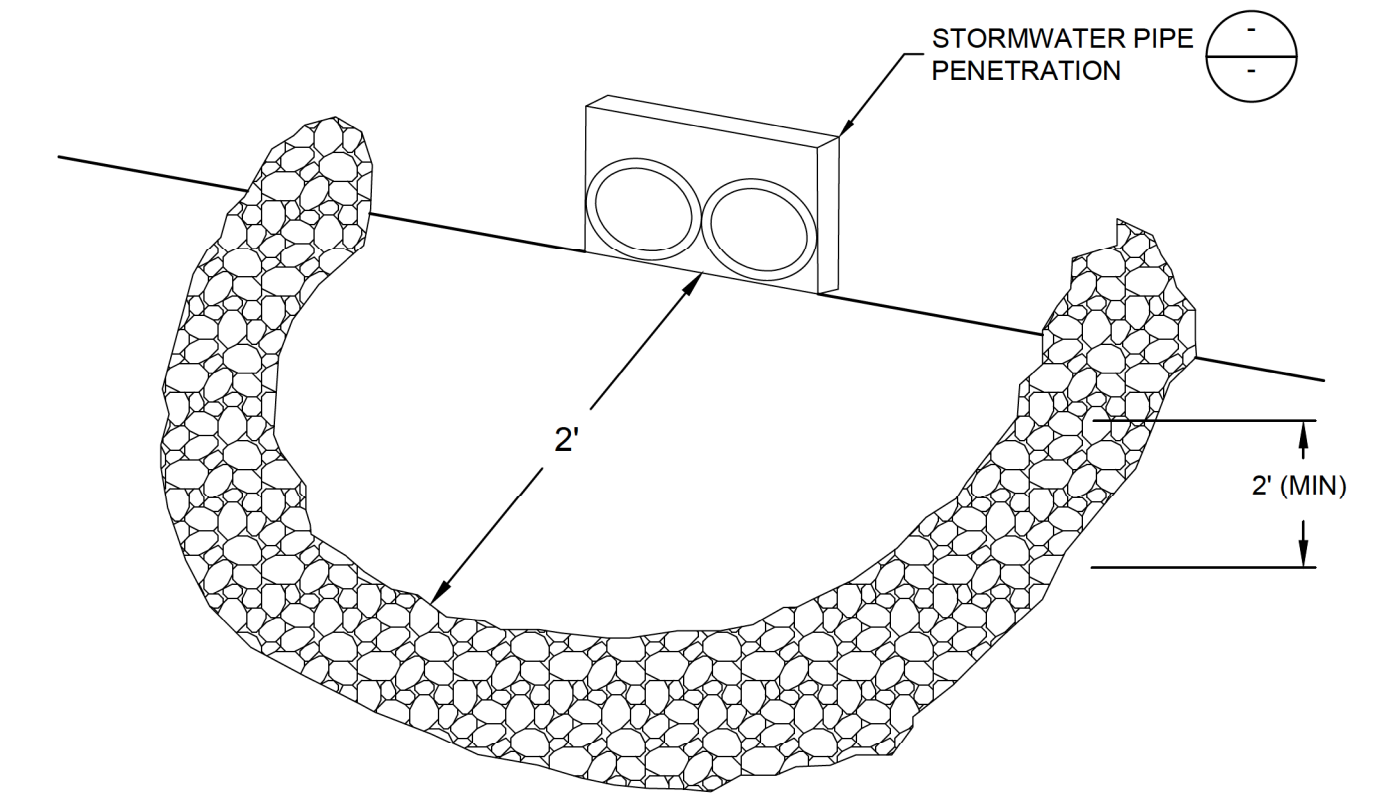
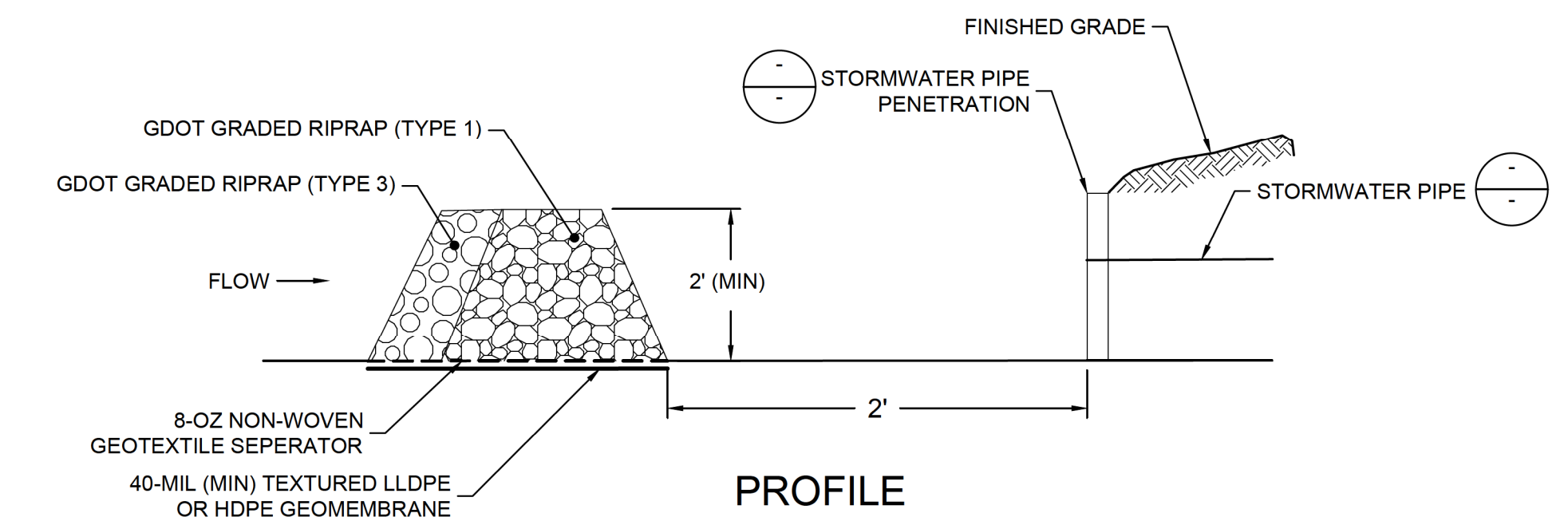
- INSTALLATION AND STAPLING OF RECPS AND APPLICATION RATES FOR THE HECPS SHALL CONFORM TO MANUFACTURER'S GUIDELINES FOR APPLICATION
- PRODUCTS SHALL HAVE A MAXIMUM C-FACTOR (ASTM D6459) FOR THE FOLLOWING GRADE:

SLOPE (H:V)	C-FACTOR (MAX)
3:1 OR GREATER	0.080

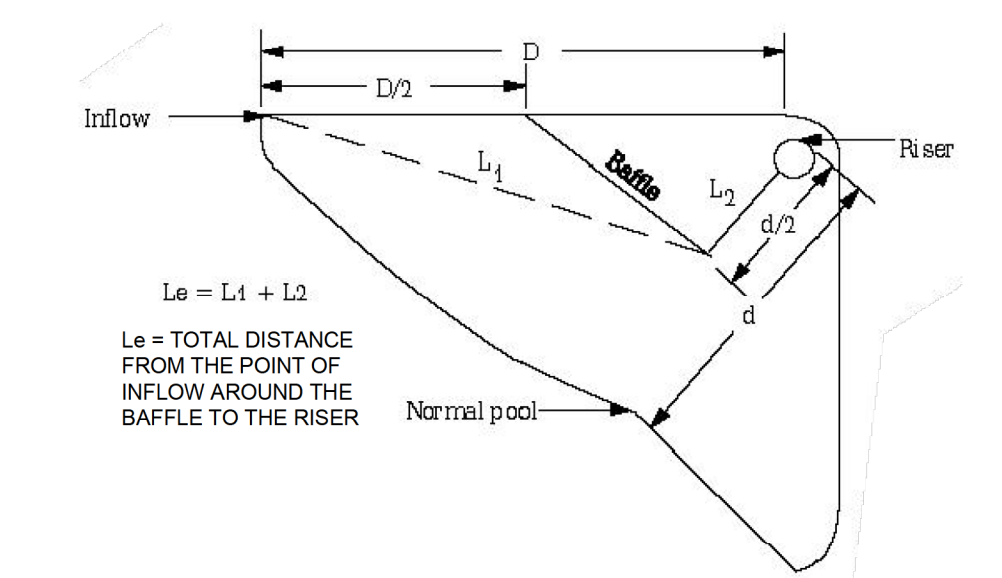
PERFORMANCE EVALUATION
FOR A PRODUCT OR PRACTICE TO BE APPROVED AS SLOPE STABILIZATION, THAT PRODUCT OR PRACTICE MUST HAVE A DOCUMENTED C-FACTOR OF 0.080, AS SPECIFIED BY GSWCC. FOR COMPLETE TEST PROCEDURES AND APPROVED PRODUCTS LIST PLEASE VISIT WWW.GASWCC.GEORGIA.GOV.

SITE PREPARATION
AFTER THE SITE HAS BEEN SHAPED AND GRADED TO THE APPROVED DESIGN, PREPARE A FRIABLE SEEDBED RELATIVELY FREE FROM CLOUDS AND ROCKS MORE THAN ONE INCH IN DIAMETER, AND ANY FOREIGN MATERIAL THAT WILL PREVENT CONTACT OF THE SOIL STABILIZATION MAT WITH THE SOIL SURFACE. SURFACE MUST BE SMOOTH TO ENSURE PROPER CONTACT OF BLANKETS OR MATTING TO THE SOIL SURFACE. IF NECESSARY, REDIRECT ANY RUNOFF FROM THE DITCH OR SLOPE DURING INSTALLATION.

- START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.
- FIRST ROLL IS CENTERED LONGITUDINALLY IN MID-CHANNEL AND PINNED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT.
- SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND THE FIRST ROLL. USE THE CENTER ROLL FOR ALIGNMENT TO THE CHANNEL CENTER.
- WORK OUTWARDS FROM THE CHANNEL CENTER TO THE EDGE. USE 3" OVERLAPS AND STAKE AT 5' INTERVALS ALONG THE SEAMS.
- USE 3" OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT THE LINING AT THE ROLL ENDS.
- IT IS THE INTENTION OF THIS SECTION TO ALLOW INTERCHANGEABLE USE OF RECPS AND HECPS FOR EROSION PROTECTION ON SLOPES. THE PROJECT ENGINEER SHOULD SELECT THE TYPE OF EROSION CONTROL PRODUCT THAT BEST FITS THE NEED OF THE PARTICULAR SITE.



56 DETAIL
FILTER RING
SCALE: NTS



59 DETAIL
STORMWATER BAFFLE
SCALE: NTS
SOURCE: GWSCC

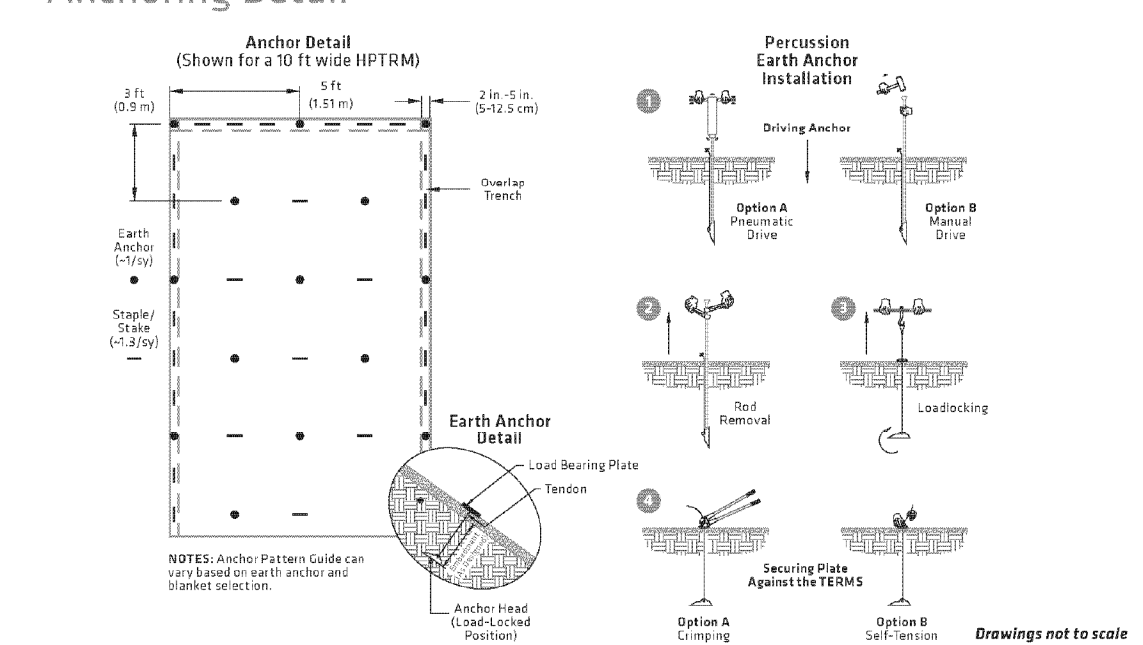
DEFINITION
TACKIFIERS ARE USED AS A TIE-DOWN FOR SOIL, COMPOST, SEED, STRAW, HAY OR MULCH. TACKIFIERS HYDRATE IN WATER AND READILY BLEND WITH OTHER SLURRY MATERIALS TO FORM A HOMOGENOUS SLURRY.

PURPOSE
TO REDUCE SOIL EROSION FROM WIND AND WATER ON CONSTRUCTION SITES. OTHER BENEFITS INCLUDE SOIL INFILTRATION, SOIL FERTILITY, ENHANCED SEED GERMINATION, INCREASED SOIL COHESION, ENHANCED SOIL STABILIZATION, REDUCED STORMWATER RUNOFF TURBIDITY AND REDUCTION IN LESS OF TOPSOIL.

CONDITIONS
THIS PRACTICE IS INTENDED FOR DIRECT SOIL SURFACE APPLICATION TO SITES WHERE THE TIMELY ESTABLISHMENT OF VEGETATION MAY NOT BE FEASIBLE OR WHERE VEGETATION COVER IS ABSENT OR INADEQUATE. SUCH AREAS INCLUDE CONSTRUCTION AREAS, WHERE PLANT RESIDUES ARE INADEQUATE TO PROTECT THE SOIL SURFACE AND WHERE LAND DISTURBING ACTIVITIES PREVENT THE ESTABLISHMENT OR MAINTENANCE OF A VEGETATIVE COVER.

58 DETAIL
TACKIFIER
SCALE: NTS
SOURCE: GWSCC

Anchoring Detail



ANCHORING DETAIL

The performance of ground anchoring devices is highly dependent on numerous site/project specific variables. It is the sole responsibility of the project engineer/contractor to select the appropriate anchor type and length. Anchoring shall be selected to hold the mat in intimate contact with the soil subgrade and resist pullout in accordance with the project's design intent.

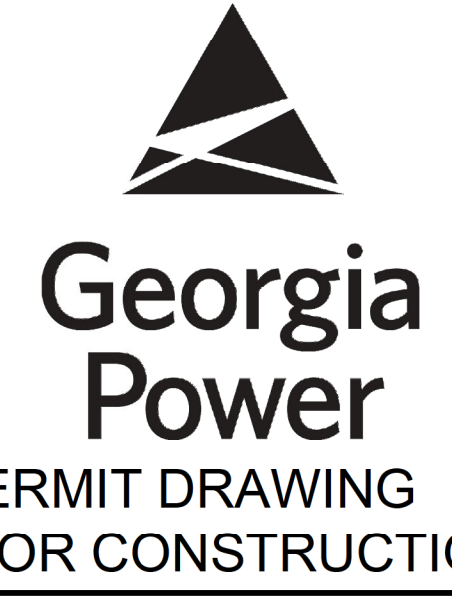
- Staples and/or stakes should be at least 6 in. (15 cm) in length and with sufficient ground penetration to resist pullout. Longer staples and/or stakes may be needed in looser soils.
- The percussion earth anchor assembly consists of an anchor head, a tendon, a faceplate, and an end piece device. See North American Green Earth Anchor specification for detailed information on assembly components and associated pull-out strength.

PERCUSSION EARTH ANCHOR INSTALLATION

- Insert the drive rod into the assembly's anchor head then use either a sledge hammer or vibratory hammer to drive the anchor to their desired depth.
- After the desired anchor depth is achieved, retract the drive rod.
- Lock the anchor assembly by swiftly pulling the cable upwards until the anchor head rotates as signaled by sudden resistance to pulling. A hooves setting tool may be used to aid in this step.
- Secure the faceplate to the high-performance Turf Reinforcement Mat (HPTRM) surface by locking the end-piece. If using a copper or aluminum stop, crimp the tendon to secure. If using a self-tensioning end-piece (rip or wedge grip) set by simply tightening the end-piece against the faceplate. If desired, cut the remaining cable assembly, remove end-piece, to desired length.

SEEDING AND VEGETATING

- When using a Composite Turf Reinforcement Mat (CTRM) with fiber components:**
- Pre-seed prepared soils prior to the installation of the CTRM. Install matting as directed. CTRM does not require soil infill or a top dressing of seed. Overseeding may be done as a secondary form of seeding.
 - Soil may be installed in place of seeding in high-flow conditions. Sodded areas should be irrigated until rooting through the mat and into subgrade occurs.
- When using a woven HPTRM:**
- Install the HPTRM as directed prior to seed and soil filling.
 - Place seed into the installed HPTRM. After seeding, spread a layer of fine soil into the mat. Using the flat side of a rake, broom or other tool completely fill the voids. Smooth soil-fill in order to just expose the top of the HPTRM matrix. Do not place excessive soil above the mat.
 - Additional seed, hydraulic mulching or the use of a temporary Erosion Control Blanket (ECB) can be applied over the soil-filled mat for increased protection.
 - Soil may be installed in place of seeding. Install HPTRM, and sod-fill as outlined above. Place sod directly onto the soil-filled HPTRM. Additional staking of soil is recommended in high-flow conditions. Sodded areas should be irrigated until rooting through the mat and into subgrade occurs.
 - Consult with a manufacturer's technical representative for installation assistance if unique conditions apply.



REV	DATE	DESCRIPTION	DRN	APP
0	AUG. 2021	SUBMITTAL TO GA EPD	JV/KH	RB

EROSION AND SEDIMENT CONTROL DETAILS II

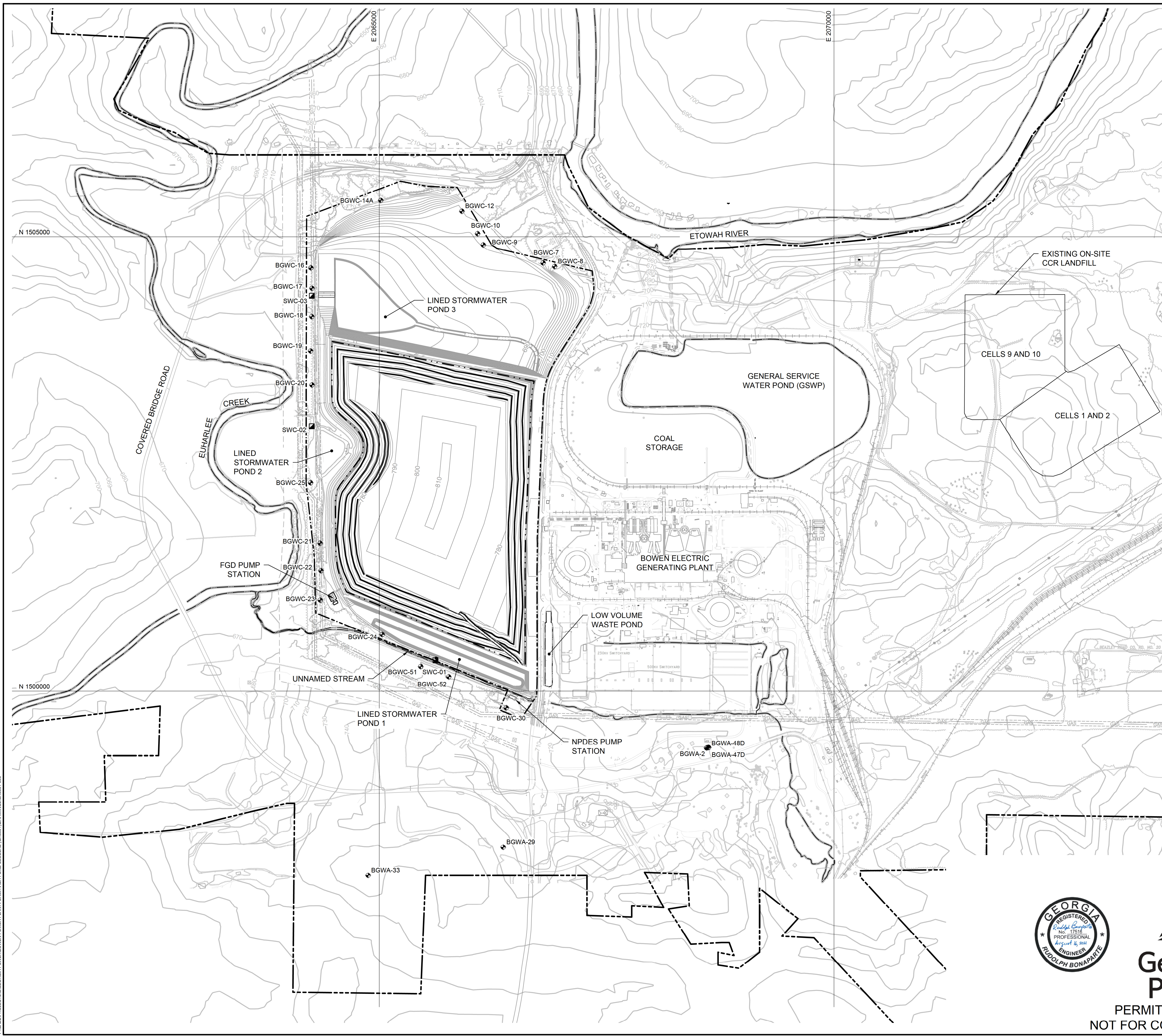
**PLANT BOWEN ASH POND 1 (AP-1)
CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA**

Geosyntec
consultants

1255 ROBERTS BOULEVARD, NW, SUITE 200
KENNESAW, GEORGIA 30144 USA

PHONE: 678.202.8600
WWW.GEOSYNTEC.COM

PROJ. NO.	GR6601	DWG.	GR6601-050	EDIT	08.16.21
SCALE	AS SHOWN				
DATE	AUGUST 2021	DRAWING 48 OF 50			



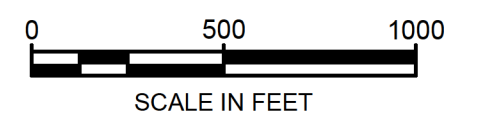
LEGEND

- PROPERTY BOUNDARY
- PERMIT BOUNDARY
- FINAL LIMIT OF CCR (CONSOLIDATED FOOTPRINT)
- BGWA-7 CURRENT GROUNDWATER MONITORING WELL (NOTE 3)
- SWC-01 SURFACE WATER MONITORING POINT (NOTE 4)

COMPLIANCE MONITORING NETWORK (NOTE 3)

MONITORING WELL ID	MONITORING PURPOSE	NORTHING	EASTING	GROUND SURFACE ELEVATION	SCREEN ELEVATIONS (TOP TO BOTTOM) (FT)	
					TO	TO
BGWA-2	BACKGROUND	1499374.18	2068599.59	727.00	650.5	640.5
BGWA-29	BACKGROUND	1498283.04	2066362.32	718.84	632.9	622.9
BGWA-33	BACKGROUND	1497972.13	2064876.80	740.50	661.2	651.2
BGWA-47D	BACKGROUND	1499377.79	2068612.48	726.93	585.9	575.9
BGWA-48D	BACKGROUND	1499380.09	2068623.31	726.64	545.0	535.0
BGWC-7	DOWNGRADIENT	1504711.59	2066801.40	702.49	625.2	615.2
BGWC-8	DOWNGRADIENT	1504671.82	2066929.46	703.71	636.8	628.8
BGWC-9	DOWNGRADIENT	1504909.12	2066143.27	689.18	638.3	628.3
BGWC-10	DOWNGRADIENT	1505033.22	2066081.09	683.39	633.7	623.7
BGWC-12	DOWNGRADIENT	1505279.88	2065908.56	691.71	626.0	616.0
BGWC-14A	DOWNGRADIENT	1505398.54	2065015.98	715.57	629.6	619.6
BGWC-16	DOWNGRADIENT	1504656.42	2064247.67	671.65	635.3	625.3
BGWC-17	DOWNGRADIENT	1504432.00	2064259.38	671.25	615.4	605.4
BGWC-18	DOWNGRADIENT	1504118.73	2064257.00	670.32	645.1	635.1
BGWC-19	DOWNGRADIENT	1503742.25	2064244.66	671.04	628.9	618.9
BGWC-20	DOWNGRADIENT	1503367.73	2064259.55	672.29	635.1	625.1
BGWC-21	DOWNGRADIENT	1501627.51	2064348.09	688.53	648.8	638.8
BGWC-22	DOWNGRADIENT	1501323.76	2064358.05	692.64	662.6	652.6
BGWC-23	DOWNGRADIENT	1501000.57	2064350.17	693.16	654.3	644.3
BGWC-24	DOWNGRADIENT	1500621.22	2065032.84	699.46	646.3	636.3
BGWC-25	DOWNGRADIENT	1502292.73	2064244.10	677.60	632.9	622.9
BGWC-30	DOWNGRADIENT	1499815.93	2066395.86	698.39	651.6	641.6
BGWC-51	DOWNGRADIENT	1500270.09	2065455.80	708.99	654.6	644.6
BGWC-52	DOWNGRADIENT	1500156.97	2065764.13	707.77	638.9	628.9

- NOTES:**
- GRADING SHOWN IN AND AROUND THE AP-1 AREA REPRESENTS FINAL CONDITIONS UPON COMPLETION OF CLOSURE.
 - MONITORING WELL COORDINATES, GROUND SURFACE ELEVATIONS, AND SCREEN ELEVATIONS WERE OBTAINED FROM THE "SEPTEMBER 2020 WELL INSTALLATION ADDENDUM MEMORANDUM" DATED 29 SEPTEMBER 2020, PREPARED BY GEOSYNTEC CONSULTANTS, INC. DATA FOR MONITORING WELLS BGWC-51 AND BGWC-52 WERE OBTAINED FROM THE "ASH POND MONITORING WELL CERTIFICATION REPORT - ADDENDUM NO. 4" DATED 24 MARCH 2021, PREPARED BY GEOSYNTEC CONSULTANTS, INC.
 - GROUNDWATER MONITORING WELLS SHOWN AND TABULATED ON THIS DRAWING ARE THOSE USED TO BOTH MEASURE GROUNDWATER LEVELS AND COLLECT GROUNDWATER SAMPLES FOR ANALYSIS. REFER TO THE GROUNDWATER MONITORING PLAN FOR THE LOCATION AND PURPOSE OF OTHER ON-SITE PIEZOMETERS AND WELLS.
 - THE COORDINATES OF THE SURFACE WATER MONITORING POINTS ARE AS FOLLOWS:
 - SWC-01: 34° 7' 19.40" N, 84° 55' 47.42" W (IN NAD 83: NORTHING: 1500339.06, EASTING: 2065618.14).
 - SWC-02: 34° 7' 44.78" N, 84° 56' 3.85" W (IN NAD 83: NORTHING: 1502914.64, EASTING: 2064256.49).
 - SWC-03: 34° 7' 58.98" N, 84° 56' 3.96" W (IN NAD 83: NORTHING: 1504349.80, EASTING: 2064257.83).



PERMIT DRAWING
NOT FOR CONSTRUCTION

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COMPLIANCE MONITORING NETWORK

PLANT BOWEN ASH POND 1 (AP-1) CLOSURE DRAWINGS
BARTOW COUNTY, GEORGIA

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KENNESAW, GEORGIA 30144 USA

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PROJ. NO.	GR6601	DWG.	GR6601-053	EDIT	8/16/21
SCALE	1" = 500'	DRAWING 50 OF 50			
DATE	AUGUST 2021				

P:\CAD\PROJECTS\GEORGIA POWER\BOWEN POWER PLANT\AP-1 ASH POND CLOSURE (GR6601)\DRAWINGS\DRW01-053