

ASH POND CLOSURE AND SITE RESTORATION DESIGN

CRISP COUNTY POWER COMMISSION - PLANT CRISP

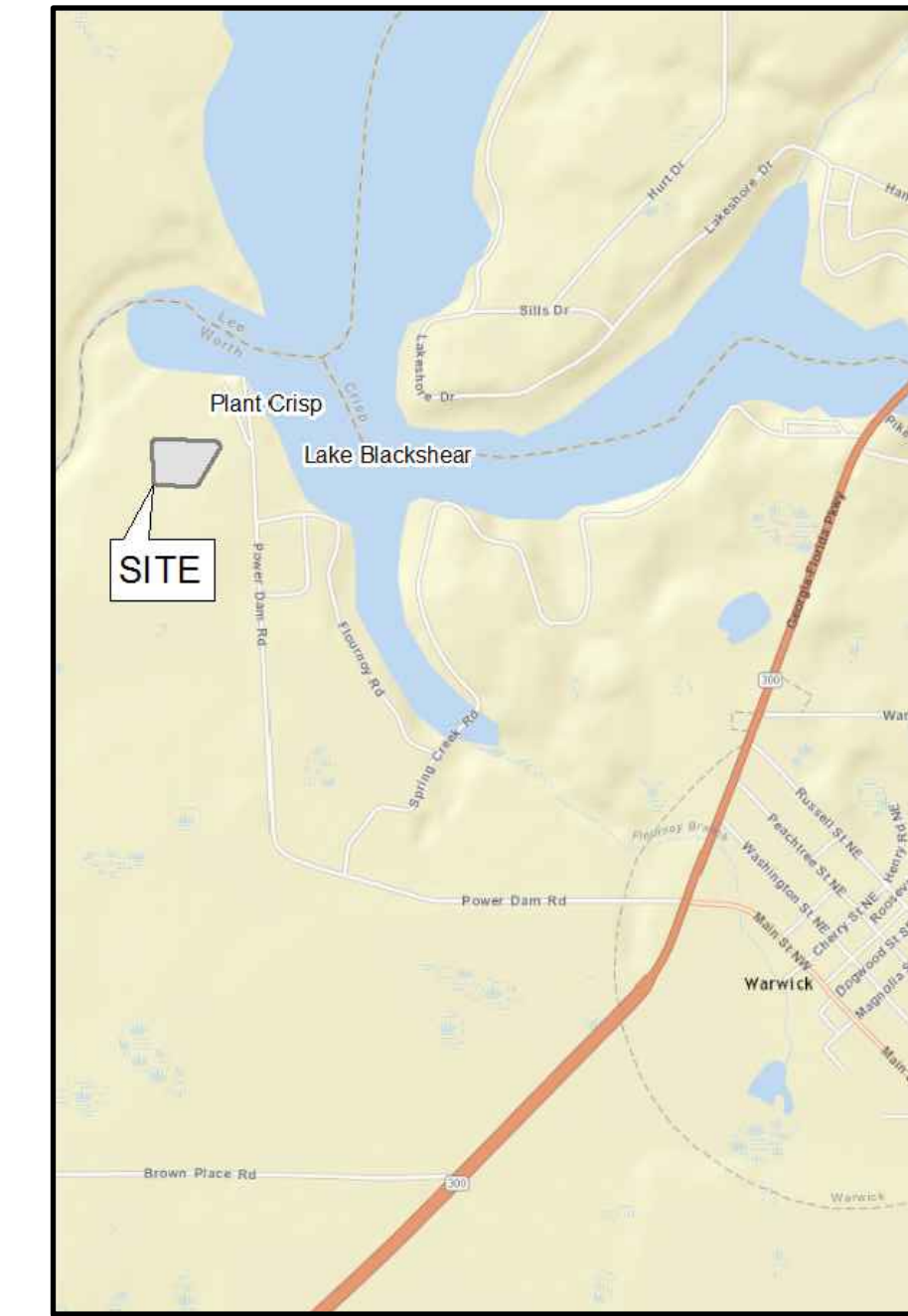
WARWICK, GEORGIA

APRIL 2020



SOURCE: ERSI BASE MAP STREET MAP SERIES 2014

VICINITY MAP
NOT TO SCALE



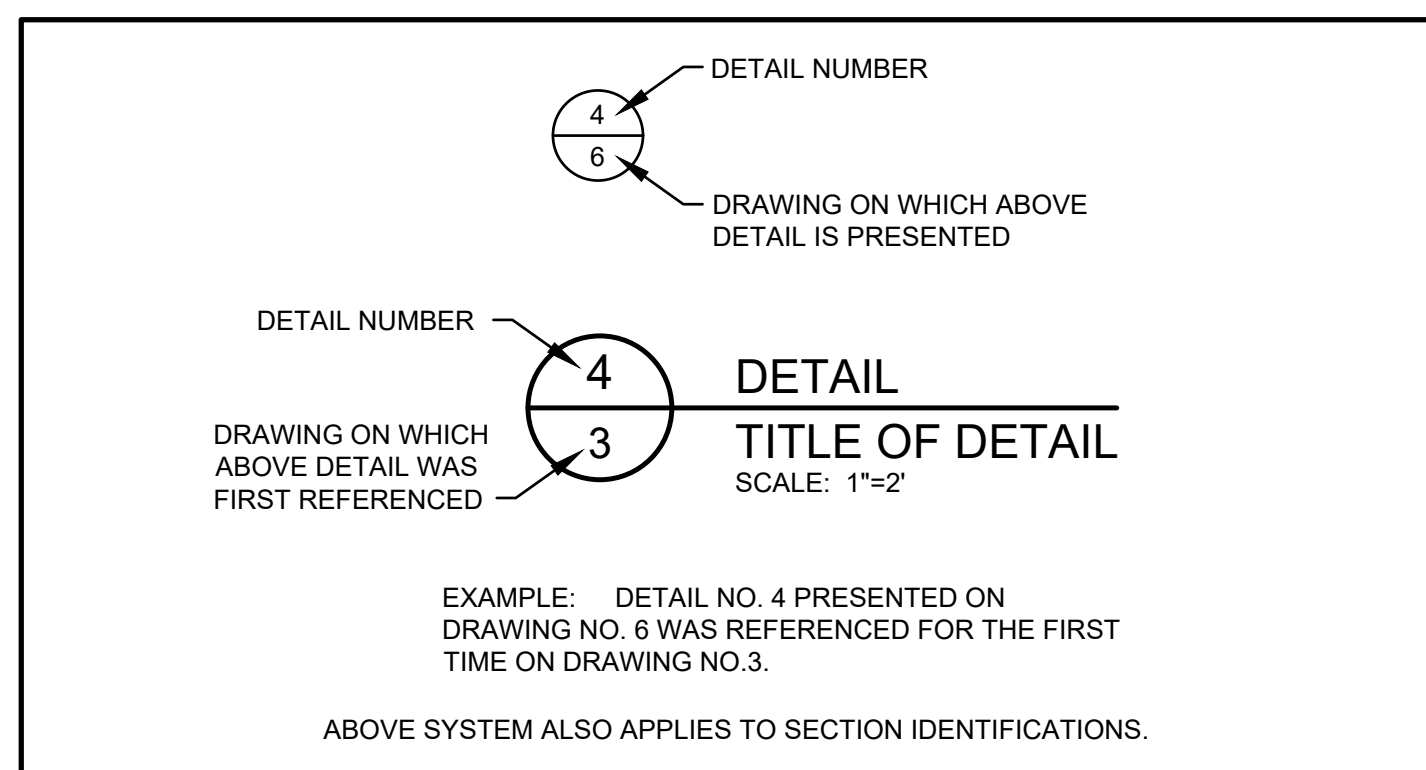
SOURCE: ERSI BASE MAP STREET MAP SERIES 2014

LOCATION MAP
NOT TO SCALE

LIST OF DRAWINGS	
DRAWING NO.	DESCRIPTION
1	COVER SHEET
2	PROPERTY BOUNDARY SURVEY AND LEGAL DESCRIPTION
3	EXISTING SITE CONDITIONS
4	ASH REMOVAL PLAN
5	POST-ASH REMOVAL SITE RESTORATION
6	FINAL RESTORATION GRADES
7	EROSION AND SEDIMENT CONTROL DETAILS I
8	EROSION AND SEDIMENT CONTROL DETAILS II
9	EROSION AND SEDIMENT CONTROL DETAILS III

PROJECT DESCRIPTION:

THE ASH POND AT PLANT CRISP, LOCATED IN WARWICK, GEORGIA, WAS CONSTRUCTED IN THE 1970'S AS A SIDE-HILL IMPOUNDMENT AND OPERATED AS AN UNLINED, WET POND. THE ASH POND RECEIVED ASH SLUDGE WATER WITH COAL COMBUSTION RESIDUALS (CCR) FROM THE COAL PLANT OPERATION, STORMWATER RUNOFF FROM THE COAL STOCKPILE, AND BLOWDOWN WATER FROM THE PLANT. THE CLOSURE OF THE ASH POND IS ASSOCIATED WITH THE REQUIREMENTS OF UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) 40 CFR 257, TITLED "DISPOSAL OF COAL COMBUSTION RESIDUALS FROM ELECTRIC UTILITIES" (USEPA CCR RULE) AND GEORGIA ENVIRONMENTAL PROTECTION DIVISION, SOLID WASTE MANAGEMENT, CHAPTER 391-3-4-.10 TITLED "COAL COMBUSTION RESIDUALS" (GA EPD CCR RULE). TO CLOSE THE ASH POND AND RESTORE THE SITE, THE PROJECT WILL INCLUDE: (I) REMOVAL OF CCR (I.E., ASH) AND A MINIMUM OF 6-INCH THICK LAYER OF NATIVE SOIL UNDERLYING THE ASH; (II) TRANSPORTATION AND DISPOSAL OF THE REMOVED MATERIAL TO A PROPERLY PERMITTED LANDFILL; AND (III) SITE RESTORATION, INCLUDING REGRADING TO PROMOTE POSITIVE DRAINAGE; SELECTIVELY LOWERING, BREACHING, OR REMOVING THE ASH POND CONTAINMENT DIKES; AND SEEDING OF AREA TO ESTABLISH VEGETATION. EROSION AND SEDIMENT CONTROLS WILL BE PUT IN-PLACE AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT TO ENHANCE STORMWATER CONVEYANCE AND TO MINIMIZE EROSION.



DETAIL IDENTIFICATION LEGEND

PREPARED FOR:



CRISP COUNTY POWER COMMISSION
 202 S. 7th STREET
 PO BOX 1218
 CORDELE, GA 31010
 OFFICE: 229.273.3811
 CONTACT PERSON: STEVE RENTFROW

PREPARED BY:



1255 ROBERTS BOULEVARD, SUITE 200
 KENNESAW, GEORGIA 30144
 TELEPHONE: 678.202.9500
 FAX: 678.202.9501
 CONTACT PERSON: MEHMET ISCIMEN, P.E.



**Know what's below.
Call before you dig.**

REV	DATE	DESCRIPTION	DRN	APP
3	04.30.20	REVISED FOR GEORGIA EPD SUBMITTAL	JHS	MI
2	11.27.19	REVISED PER GEORGIA EPD COMMENTS	JHS	MI
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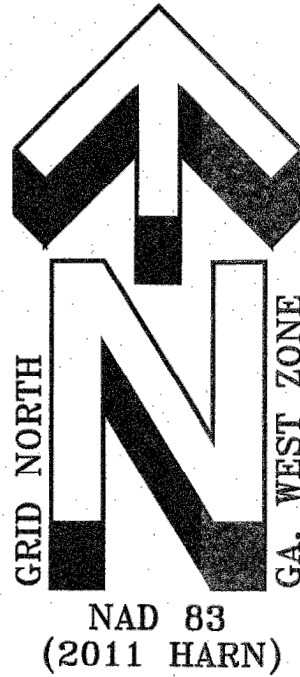


GEORGIA CERTIFICATION OF AUTHORIZATION
 (COA) NO. PEF000260, EXP. 06/30/2020
 1255 ROBERTS BOULEVARD, N.W., SUITE 200
 KENNESAW, GEORGIA 30144 USA
 PHONE: 678.202.9500

COVER SHEET				
PROJECT: CRISP COUNTY POWER COMMISSION ASH POND CLOSURE AND SITE RESTORATION				
SITE: PLANT CRISP WARWICK, GEORGIA				
THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.		SIGNATURE 04 / 30 / 2020 DATE		 DESIGN BY: MCS DRAWN BY: JHS CHECKED BY: JWE REVIEWED BY: CG APPROVED BY: MI
		DATE: APRIL 2020	PROJECT NO.: GW6152	FILE: 6152-001
		DRAWING NO.: 1	OF 9	

ISSUED FOR PERMIT

REFERENCE TO NORTH
BEARINGS SHOWN HEREON HAVE BEEN
CALCULATED FROM ANGLES TURNED AND ARE
BASED UPON GRID NORTH, GA. WEST ZONE.



TRACT B (PERMIT BOUNDARY) LEGAL DESCRIPTION	TRACT A LEGAL DESCRIPTION
All that tract or parcel of land lying in or being in Land Lots 39 and 92, 15th. Land District, Worth County, Georgia, and being more particularly described as follows: Beginning at the intersection of the South line Land Lot 39 and the West right of way of Power Dam Road (60' R/W), said intersection being marked by a 1/2" rebar found and having Grid North, Ga. West Zone coordinates of N. 669545.36, E. 2366449.03; Thence N 0257'36" W a distance of 1156.48' along the West right of way of a Private Road, to a 1/2" rebar set, having grid coordinates of N. 670700.30, E. 2366389.31, said rebar being the POINT OF BEGINNING; Thence N 02'50'32" W a distance of 180.22' along said right of way of said Private Road to a 1/2" rebar set, having grid coordinates of N. 670880.29, E. 2366380.37; Thence S 86'43'33" W a distance of 212.56' to a 1/2" rebar set; Thence N 00'04'22" E a distance of 432.21' to a 1/2" rebar set; Thence N 89'54'37" W a distance of 874.52' to a 1/2" rebar set on the West property line, having grid coordinates of N. 671301.74, E. 2365294.18; Thence S 00'06'23" E a distance of 743.44' along said West property line to a 1/2" rebar set, having grid coordinates of N. 670558.30, E. 2365295.56; Thence N 89'53'20" E a distance of 619.73' to a 1/2" rebar set; Thence N 00'05'13" E a distance of 140.10' to a 1/2" rebar set; Thence N 89'54'56" E a distance of 474.23' to a 1/2" rebar set, said rebar being the POINT OF BEGINNING. Said tract or parcel of land having an area of 14.930 Acres.	All that tract or parcel of land lying in or being in Land Lots 39 and 92, 15th. Land District, Worth County, Georgia, and being more particularly described as follows: Beginning at the intersection of the South line of Land Lot 39 and the West right of way of Power Dam Road (60' R/W), said intersection being marked by a 1/2" rebar found and having Grid North, Ga. West Zone coordinates of N. 669545.36, E. 2366449.03, and being the POINT OF BEGINNING; Thence N 89'54'24" E a distance of 60.08' along said Land Lot Line to a 1/2" open top pipe, located on the East right of way of Power Dam Road; Thence N 89'54'24" E a distance of 468.44' along said Land Lot Line to a 1" Square Bar, having grid coordinates of N. 669546.22, E. 2366977.55; Thence N 01'06'44" W a distance of 1089.56' to a point located on the Westerly shoreline of Lake Blackshear, having grid coordinates of N. 670635.58, E. 2366856.49; Thence N 25'59'39" W a distance of 47.07' along said shoreline to a point; Thence N 06'22'56" W a distance of 242.07' along said shoreline to a point; Thence N 24'50'27" W a distance of 40.49' along said shoreline to a point; Thence N 01'17'53" W a distance of 50.38' along said shoreline to a point; Thence N 23'14'46" W a distance of 63.15' along said shoreline to a point; Thence N 44'55'14" W a distance of 116.60' along said shoreline to a point; Thence N 65'09'16" W a distance of 54.29' along said shoreline to a point; Thence S 81'48'39" W a distance of 22.85' along said shoreline to a point; Thence S 08'07'34" W a distance of 18.06' along said shoreline to a point; Thence N 43'26'21" W a distance of 22.31' along said shoreline to a point; Thence N 76'10'51" W a distance of 131.4' along said shoreline to a point; Thence S 66'01'54" W a distance of 44.99' along said shoreline to a point; Thence N 24'07'25" W a distance of 62.67' along said shoreline to a point; Thence N 89'32'12" W a distance of 62.12' along said shoreline to a point; Thence N 04'35'21" W a distance of 157.21' along said shoreline to a point; Thence N 73'18'38" E a distance of 44.73' along said shoreline to a point; Thence S 29'12'28" E a distance of 133.67' along said shoreline to a point; Thence N 89'53'20" E a distance of 619.73' along said shoreline to a point; Thence N 00'05'13" E a distance of 140.10' to a 1/2" rebar set on the West right of way of a Private Road; Thence S 02'50'32" E a distance of 180.22' along said right of way of said Private Road; Thence S 89'54'56" E a distance of 474.23' to a 1/2" rebar set; Thence S 00'04'22" E a distance of 432.21' to a 1/2" rebar set; Thence N 89'54'37" W a distance of 874.52' to a 1/2" rebar set on the West right of way of a Private Road; Thence S 02'50'32" E a distance of 180.22' along said right of way of said Private Road; Thence S 89'54'56" E a distance of 474.23' to a 1/2" rebar set; Thence S 00'05'13" E a distance of 140.10' to a 1/2" rebar set on the West property line; Thence S 00'06'23" E a distance of 1014.82' along said property line to a concrete monument found, located on the South line of Land Lot 92 and having grid coordinates of N. 669543.48, E. 2365297.45; Thence N 89'54'24" E a distance of 1151.58' along said Land Lot Line to the POINT OF BEGINNING. Said tract or parcel of land having an area of 74.292 Acres.

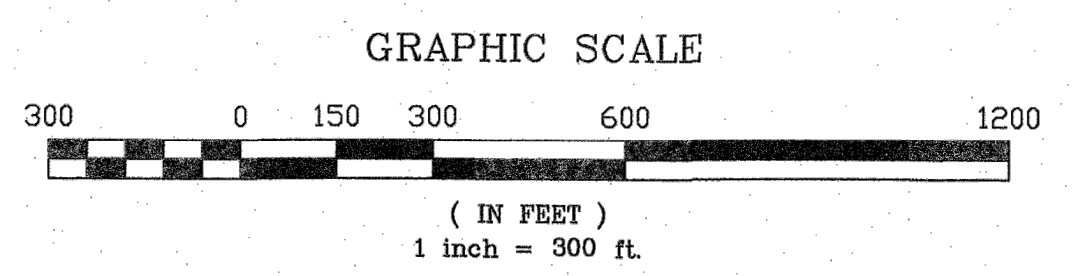
TRACT B		SHORELINE TRACT A	
LINE BEARING	DISTANCE	LINE BEARING	DISTANCE
L1 N 02'50'32" W	180.22'	1-2 N 25'59'39" W	47.07'
L2 S 86'43'33" W	212.56'	2-3 N 06'22'56" W	242.07'
L3 N 00'05'13" W	140.10'	3-4 N 24'50'27" W	40.49'
		4-5 N 01'17'53" W	50.38'
		5-6 N 23'14'46" W	63.15'
		6-7 N 44'55'14" W	116.60'
		7-8 N 65'09'16" W	54.29'
		8-9 S 81'48'39" W	22.85'
		9-10 S 08'07'34" W	18.06'
		10-11 S 43'26'21" W	22.31'
		11-12 N 76'10'51" W	131.4'
		12-13 S 66'01'54" W	44.99'
		13-14 N 24'07'25" W	62.67'
		14-15 N 89'32'12" W	62.12'
		15-16 N 04'35'21" W	157.21'
		16-17 N 73'18'38" E	44.73'
		17-18 S 29'12'28" E	133.67'
		18-19 S 89'53'20" E	619.73'
		19-20 N 00'05'13" E	140.10'
		20-21 N 02'50'32" E	180.22'
		21-22 N 89'54'56" E	474.23'
		22-23 N 00'04'22" E	432.21'
		23-24 N 89'54'37" W	874.52'
		24-25 N 02'50'32" E	180.22'
		25-26 N 89'54'56" E	474.23'
		26-27 N 00'05'13" E	140.10'
		27-28 N 00'06'23" E	1014.82'
		28-29 N 66'01'54" W	44.99'
		29-30 N 24'07'25" W	62.67'
		30-31 N 89'32'12" W	62.12'
		31-32 N 04'35'21" W	157.21'
		32-33 N 73'18'38" E	44.73'
		33-34 S 29'12'28" E	133.67'
		34-35 N 89'53'20" E	619.73'
		35-36 N 00'05'13" E	140.10'
		36-37 N 02'50'32" E	180.22'
		37-38 N 89'54'56" E	474.23'

NOTES

- THIS SURVEY IS SUBJECT TO MATTERS WHICH MAY BE DISCLOSED BY A FULL AND ACCURATE TITLE SEARCH, INCLUDING BUT NOT LIMITED TO, ANY EASEMENTS OR RIGHTS OF WAY NOT SHOWN HEREON BUT WHICH MAY AFFECT THE PROPERTY HERE PLATTED.
- THIS SURVEY COMPLIES WITH BOTH THE RULES OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND THE OFFICIAL CODE OF GEORGIA ANNOTATED (OCGA) 15-6-67 AS AMENDED BY HB 1004 (2016), IN THAT WHERE A CONFLICT EXISTS BETWEEN THOSE TWO SETS OF SPECIFICATIONS, THE REQUIREMENTS OF LAW PREVAIL.
- J.B. FAIRCLOTH, GA. RLS 2120, DECLARE THAT THIS MAP WAS PREPARED UNDER MY SUPERVISION FROM AN ACTUAL GPS SURVEY MADE UNDER MY SUPERVISION; THAT THIS SURVEY WAS PERFORMED TO A CATEGORY B RURAL CLASS SPECIFICATIONS; THAT I USED REAL-TIME KINEMATIC GPS FIELD PROCEDURES; AND COORDINATES WERE OBTAINED BY GPS SOLUTIONS USING CHAMPION 1K0 AND ALL COORDINATES ARE BASED UPON NAD 83 (2011) HARN DATUM, ELEVATIONS BASED UPON NAVD 88 DATUM.

LEGEND

- IRF - DENOTES 1/2" IRON REBAR FOUND
- IRS - DENOTES 1/2" IRON REBAR SET
- OTP - DENOTES 1/2" OPEN TOP IRON PIPE FOUND
- CTP - DENOTES CRIMP TOP IRON PIPE FOUND
- CMF - DENOTES CONCRETE MONUMENT FOUND
- LDL - DENOTES LAND DISTRICT LINE
- LL - DENOTES LAND LOT LINE
- POB - DENOTES POINT OF BEGINNING
- R/W - DENOTES RIGHT OF WAY
- X- - DENOTES FENCE LINE



**PROPERTY BOUNDARY SURVEY AND LEGAL DESCRIPTION
CRISP COUNTY POWER COMMISSION
ASH POND CLOSURE AND SITE RESTORATION - DRAWING 2 OF 9**

REFERENCE: DEED BOOK 45, PAGE 152

* SURVEY FOR *

CRISP COUNTY POWER COMMISSION

PART OF LAND LOTS 92 & 39, 15th. LAND DISTRICT, WORTH COUNTY, GEORGIA

SCALE: 1 INCH REPRESENTS 300 FEET DATE OF SURVEY: OCT. 15, 2018 THIS PLAT HAS BEEN CALCULATED FOR CLOSURE AND IS FOUND TO BE ACCURATE.

REVISIONS: APRIL 1, 2019 DATE OF PLAT: OCT. 25, 2018 LINEAR PRECISION - 1" IN 42,368.456'

THE FIELD DATA UPON WHICH THIS PLAT IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN FEET AND AN ANGULAR ERROR OF PER ANGLE POINT, AND WAS ADJUSTED USING THE SEE NOTE NO. 3

EQUIPMENT USED: SEE NOTE NO. 3

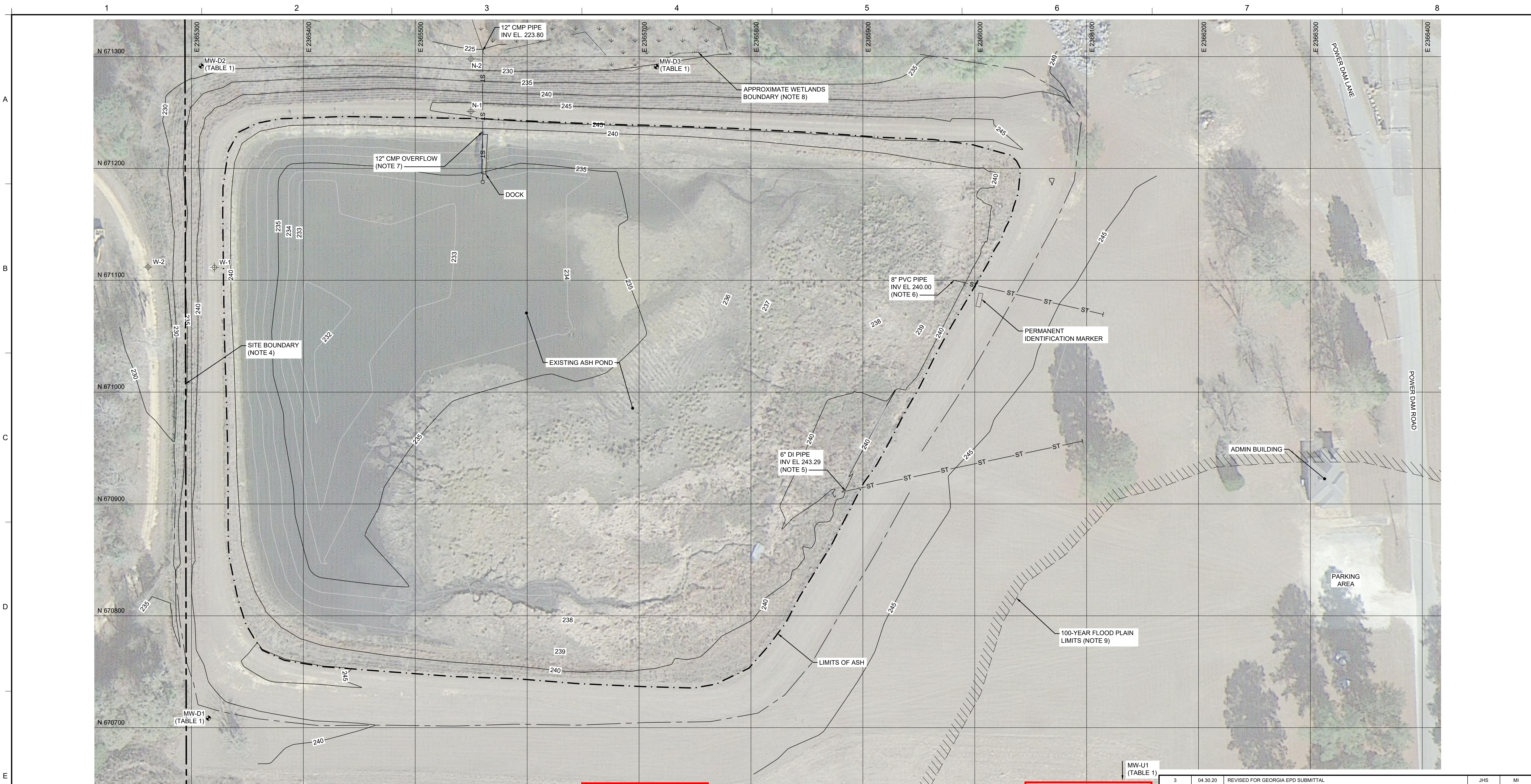
PROJECT: G:\CARLSON PROJECTS\2017\CCP Ash Pond\CCP Boundary Plat 2018.DWG

DRAWN BY: SMK FILE NO. 4137 PLAT NO. 1456 DATE OF ISSUANCE: 4-1-19

J.B. FAIRCLOTH & ASSOCIATES, P.C.
LAND SURVEYING, PLANNING AND MAPPING

FIRM CERTIFICATE OF AUTHORIZATION NO. LSF00031

1109 EAST 13th. AVE. PHONE (229)-273-1282
CORDELE, GEORGIA 31015 FAX (229)-273-2340



- NOTES:**
- GRID COORDINATES CORRESPOND TO NORTH AMERICAN DATUM (NAD) 1983 HIGH ACCURACY REFERENCE NETWORK (HARN) DATUM. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL, NORTH AMERICAN VERTICAL DATUM (NAVD) 1988.
 - AERIAL PHOTOGRAPH SHOWN IN THIS DRAWING WAS OBTAINED FROM GOOGLE EARTH PRO AND IS DATED 29 DECEMBER 2016.
 - TOPOGRAPHY AND EXISTING SITE FEATURES (I.E., BOREHOLES, DRAINAGE PIPES, ETC.) ARE APPROXIMATE AND BASED ON THE TOPOGRAPHIC SURVEY CONDUCTED BY J.B. FAIRCLOTH & ASSOCIATES P.C., DATED 20 MAY 2014 AND MAY NOT REFLECT CURRENT SITE CONDITIONS. BOREHOLES WERE ABANDONED WITH GROUT AND/OR BENTONITE CHIPS BY RIZZO ASSOCIATES, AS DESCRIBED IN "DAM SAFETY ASSESSMENT REPORT" DATED 16 JANUARY 2015.
 - SITE BOUNDARY LINE AND MONITORING WELLS SHOWN IN THIS DRAWING ARE BASED UPON A BOUNDARY SURVEY PERFORMED BY J.B. FAIRCLOTH AND ASSOCIATES ON 15 OCTOBER 2018 AND 26 NOVEMBER 2019, RESPECTIVELY.
 - 6-INCH DUCTILE IRON PIPE WAS USED AS CCR SLUICE LINE DURING COAL BURNING OPERATIONS.
 - 8-INCH PVC PIPE WAS USED TO CARRY MISCELLANEOUS RUNOFF AND PROCESS WATER FROM THE BAG HOUSE PUMP.
 - 12-INCH CMP WAS USED AS A SPILLWAY FOR THE IMPOUNDMENT.
 - WETLANDS BOUNDARY SHOWN IS APPROXIMATE AND BASED UPON THE WETLAND DELINEATIONS STUDY AND SITE VISIT COMPLETED BY GEOSYNTEC CONSULTANTS ON MARCH 22, 2019. NO WETLAND IMPACTS ARE ANTICIPATED AS PART OF THE PROJECT.
 - 100-YEAR FLOOD PLAIN LIMITS SHOWN ARE BASED UPON FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) PANEL NO. 13321C0030D. NO REDUCTIONS IN FLOODPLAIN VOLUME ARE ANTICIPATED AS A PART OF THIS PROJECT.



Approved By: _____

WELL ID	NORTHING (FT)	EASTING (FT)	GROUND SURFACE EL (FT MSL)	TOP OF CASING EL (FT MSL)
MW-D1	670708.47	2365315.12	238.10	241.77
MW-D2	671291.61	2365308.73	229.14	232.66
MW-D3	671291.07	2365715.53	229.77	233.78
MW-U1	669996.79	2366420.55	246.28	249.52

1
3 TABLE
MONITORING WELLS



- LEGEND**
- 230 — EXISTING GROUND ELEVATION (FT NAVD 88) (NOTE 3)
 - - - - - EXISTING DITCH
 - - - - - SITE BOUNDARY (NOTE 4)
 - ST — EXISTING PIPE
 - - - - - LIMITS OF ASH
 - WETLANDS (NOTE 8)
 - 100-YEAR FLOOD PLAIN LIMITS (NOTE 9)
 - ⊕ N-1 ABANDONED BOREHOLE (NOTE 2)
 - ⊕ MW-D1 EXISTING MONITORING WELL (NOTE 4)

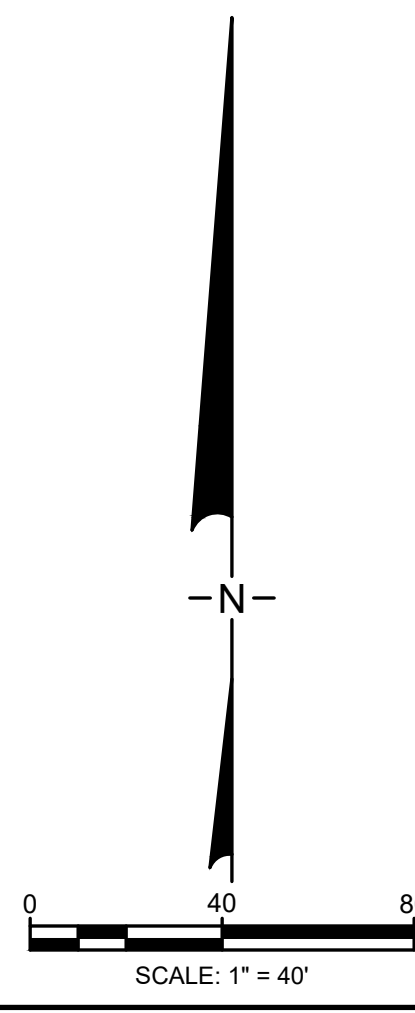
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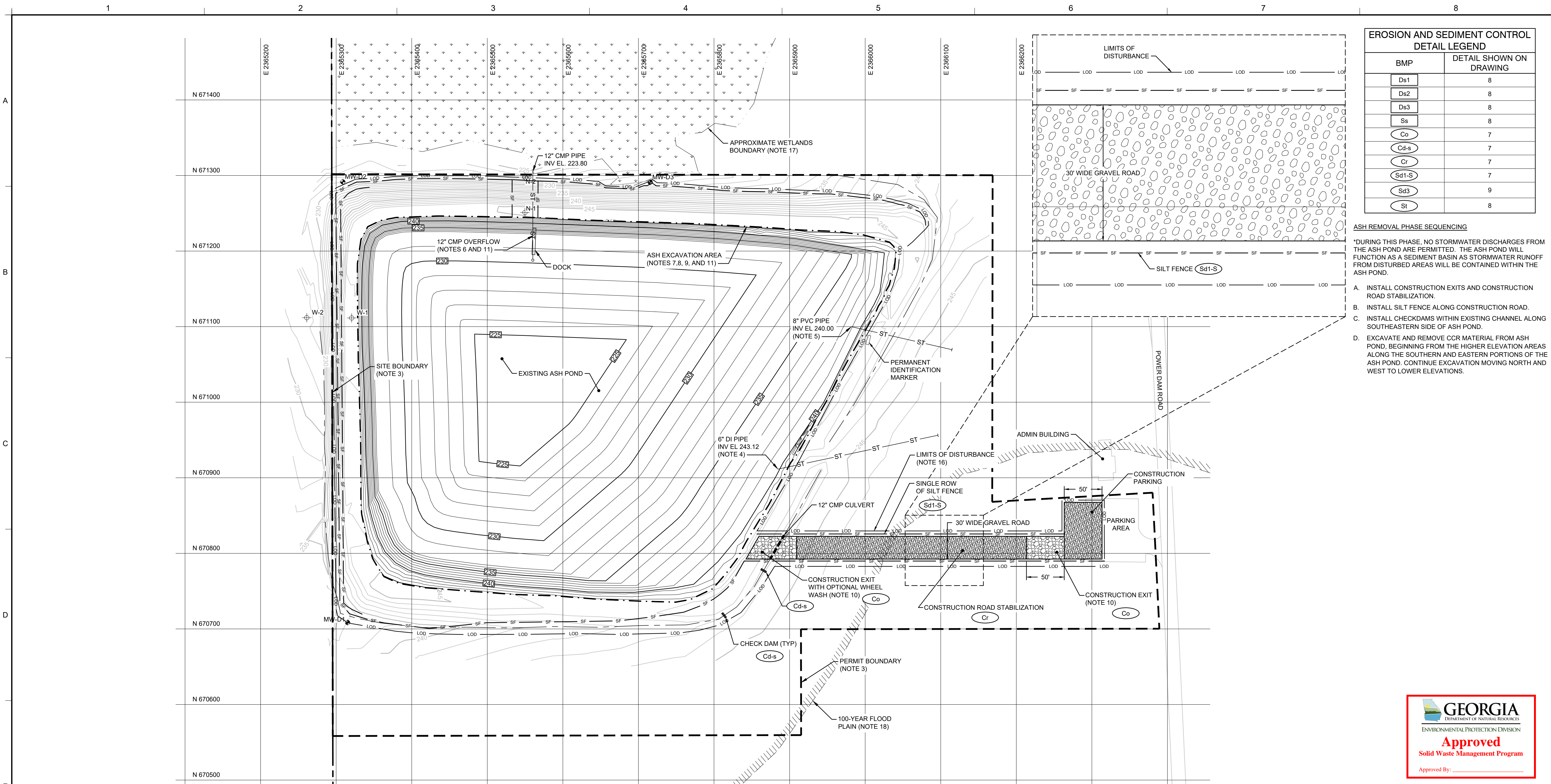


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(COA) NO. PEP000260, EXP. 06/30/2020
1255 ROBERTS BOULEVARD, N.W., SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.202.9500

TITLE: EXISTING SITE CONDITIONS			
PROJECT: CRISP COUNTY POWER COMMISSION ASH POND CLOSURE AND SITE RESTORATION			
SITE: PLANT CRISP WARWICK, GEORGIA			
THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.		SIGNATURE: _____ DATE: 04 / 30 / 2020	
DESIGN BY: MCS	DATE: APRIL 2020	CHECKED BY: JWWE	PROJECT NO.: GW6152
REVIEWED BY: CG	FILE: 6152-003	APPROVED BY: MI	DRAWING NO.: 3 OF 9



LOAD CRISP COUNTY DRAWINGS FOR PERMIT SET 15152-003



EROSION AND SEDIMENT CONTROL DETAIL LEGEND	
BMP	DETAIL SHOWN ON DRAWING
Ds1	8
Ds2	8
Ds3	8
Ss	8
Co	7
Cd-s	7
Cr	7
Sd1-S	7
Sd3	9
St	8

- ASH REMOVAL PHASE SEQUENCING**
- *DURING THIS PHASE, NO STORMWATER DISCHARGES FROM THE ASH POND ARE PERMITTED. THE ASH POND WILL FUNCTION AS A SEDIMENT BASIN AS STORMWATER RUNOFF FROM DISTURBED AREAS WILL BE CONTAINED WITHIN THE ASH POND.
- INSTALL CONSTRUCTION EXITS AND CONSTRUCTION ROAD STABILIZATION.
 - INSTALL SILT FENCE ALONG CONSTRUCTION ROAD.
 - INSTALL CHECKDAMS WITHIN EXISTING CHANNEL ALONG SOUTHEASTERN SIDE OF ASH POND.
 - EXCAVATE AND REMOVE CCR MATERIAL FROM ASH POND, BEGINNING FROM THE HIGHER ELEVATION AREAS ALONG THE SOUTHERN AND EASTERN PORTIONS OF THE ASH POND. CONTINUE EXCAVATION MOVING NORTH AND WEST TO LOWER ELEVATIONS.

- NOTES:**
- GRID COORDINATES CORRESPOND TO NORTH AMERICAN DATUM (NAD) 1983 HIGH ACCURACY REFERENCE NETWORK (HARN) DATUM. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL, NORTH AMERICAN VERTICAL DATUM (NAVD) 1988.
 - TOPOGRAPHY AND EXISTING SITE FEATURES (I.E., BOREHOLES, DRAINAGE PIPES, ETC.) ARE APPROXIMATE AND BASED ON THE TOPOGRAPHIC SURVEY CONDUCTED BY J.B. FAIRCLOTH & ASSOCIATES P.C., DATED 20 MAY 2014 AND MAY NOT REFLECT CURRENT SITE CONDITIONS. BOREHOLES WERE ABANDONED WITH GROUT AND/OR BENTONITE CHIPS BY RIZZO ASSOCIATES, AS DESCRIBED IN "DAM SAFETY ASSESSMENT REPORT" DATED 16 JANUARY 2015.
 - SITE BOUNDARY LINE, PERMIT BOUNDARY, AND MONITORING WELLS SHOWN IN THIS DRAWING ARE BASED UPON A BOUNDARY SURVEY PERFORMED BY J.B. FAIRCLOTH AND ASSOCIATES ON 15 OCTOBER 2018.
 - 6-INCH DUCTILE IRON PIPE WAS USED AS CCR SLUICE LINE DURING COAL BURNING OPERATIONS, PIPE TO BE PLUGGED VIA A BLIND FLANGE OR BY OTHER ENGINEER-APPROVED MEANS UPON COMPLETION OF ASH REMOVAL.
 - 8-INCH PVC PIPE WAS USED TO CARRY MISCELLANEOUS RUNOFF AND PROCESS WATER FROM THE BAG HOUSE PUMP. PIPE TO BE PLUGGED VIA A BLIND FLANGE OR BY OTHER ENGINEER-APPROVED MEANS UPON COMPLETION OF ASH REMOVAL.
 - 12-INCH CMP WAS USED AS A SPILLWAY FOR THE IMPOUNDMENT, PIPE AND DOCK TO BE REMOVED DURING CONSTRUCTION OF TEMPORARY SEDIMENT BASINS PRINCIPAL SPILLWAY PIPE. SEE STAGE II SEQUENCING NOTE E ON DRAWING 5.
 - ASH EXCAVATION AREA DEFINES THE EXTENT OF MATERIAL REMOVAL WITHIN THE ASH POND. WITHIN THE ASH EXCAVATION AREA THE CONTRACTOR WILL REMOVE CCR AND MINIMUM 6-INCHES OF UNDERLYING NATIVE SOIL. THE BOTTOM OF THE CCR WILL BE VISUALLY VERIFIED BY CCR'S DISTINCT COLOR FROM THE NATURAL SOILS OBSERVED AT THE SITE. AN APPROXIMATE VOLUME OF 51,100 CY OF CCR AND AN APPROXIMATE VOLUME OF 5,150 CY OF 6-INCHES OF UNDERLYING NATIVE SOIL ARE EXPECTED TO BE REMOVED FROM WITHIN THE ASH EXCAVATION AREA.

- VOLUME ESTIMATES ARE BASED ON A LIMITED FIELD INVESTIGATION COMPLETED BY GEOSYNTEC ON 8 MARCH 2017 AND ARE EXPECTED TO CHANGE BASED ON FIELD OBSERVATIONS AND CONDITIONS.
- CONTOURS SHOWN WITHIN THE ASH EXCAVATION AREA REPRESENT SURFACE WITHIN THE ASH POND AFTER REMOVAL OF CCR AND 6 INCHES OF UNDERLYING NATIVE SOIL; THEY ARE APPROXIMATE AND BASED UPON LIMITED INFORMATION. ACTUAL DEPTHS TO BOTTOM OF CCR MATERIAL MAY VARY. CONTRACTOR WILL VISUALLY VERIFY THAT ALL CCR MATERIAL HAS BEEN REMOVED.
 - CONSTRUCTION IS ASSUMED TO BE COMPLETED IN THE DRY SEASON AND ANY STANDING WATER IN THE ASH POND IS ASSUMED TO EVAPORATE PRIOR TO EXCAVATION ACTIVITIES. MOISTURE CONDITIONING OF THE REMOVED CCR AND UNDERLYING SOIL MAY BE WARRANTED (E.G., WINDROWING) PRIOR TO LOADING TRUCKS FOR TRANSPORTATION TO OFF-SITE LANDFILL. THESE ACTIVITIES WILL BE PERFORMED WITHIN THE LIMITS OF THE ASH EXCAVATION AREA. THE MATERIAL REMOVED FROM THE POND WILL BE ABLE TO PASS A PAINT FILTER TEST. IF DEWATERING IS NEEDED AT THE SITE, THE REMOVED WATER WILL BE EITHER TRANSPORTED TO THE CITY OF CORDELE PUBLICLY OWNED TREATMENT WORKS (POTW) OR TREATED ON SITE WITH A TREATMENT UNIT AND DISCHARGED WITH AN NPDES PERMIT.
 - CONSTRUCTION VEHICLES WILL ENTER AND EXIT THE SITE VIA THE CONSTRUCTION EXIT. TRUCKS WILL BE PROPERLY DECONTAMINATED (E.G., TIRE INSPECTION) PRIOR TO LEAVING THE SITE AND TRUCK BEDS WILL BE COVERED WITH A CANOPY FOR DUST MITIGATION PRIOR TO LEAVING THE SITE.
 - CONTRACTOR WILL REMOVE CCR AND 6-INCHES OF UNDERLYING NATIVE SOIL IN SUCH A MANNER AS TO NOT DISTURB THE INLET PIPES OR OUTLET PIPE AND STRUCTURE.
 - DUST WILL BE MITIGATED IN ACCORDANCE WITH THE FUGITIVE DUST CONTROL PLAN ISSUED BY CCPC, DATED SEPTEMBER 2016 AND PREPARED BY GEOSYNTEC CONSULTANTS, AND ANY SUBSEQUENT AMENDMENT OF THE PLAN.

- ACCEPTABLE MATERIAL FROM BERM DECONSTRUCTION WILL BE PLACED IN LIFTS NOT MORE THAN EIGHT (8) INCHES IN LOOSE THICKNESS. EACH LAYER WILL BE TRACKED WITH A DOZER OR LOADED DUMP TRUCK UNTIL THE SURFACE IS FIRM AND UNYIELDING UNDER THE LOADING. THE SURFACE WILL BE FREE OF DEBRIS, LARGE ROCKS, PLANT MATERIALS, OR OTHER DELETERIOUS MATERIALS PRIOR TO THE PLACEMENT OF AN ADDITIONAL LAYER.
- SURVEYS WILL BE COMPLETED BY A LAND SURVEYOR REGISTERED IN THE STATE OF GEORGIA FOR THE PURPOSE OF DEFINING THE REMOVAL GRADES AND VOLUME OF REMOVAL. IN ADDITION, PHOTOGRAPHIC DOCUMENTATION AND DOCUMENTING THE EXTENT OF REMOVAL ACTION WILL BE COMPLETED AT THE SITE. ONE SURVEY IS TO BE COMPLETED PRIOR TO CCR AND 6-INCHES OF UNDERLYING NATIVE SOIL REMOVAL, ANOTHER SURVEY FOLLOWING REMOVAL OF CCR, A THIRD SURVEY FOLLOWING REMOVAL OF 6-INCHES OF UNDERLYING NATIVE SOIL, AND A FINAL SURVEY WILL BE PERFORMED ONCE THE SITE RESTORATION IS COMPLETE.
- CONTRACTOR WILL PROCURE ALL PERMITS, LICENSES, INSPECTIONS, CERTIFICATES AND AUTHORIZATIONS, OF ANY DESCRIPTION, THAT MAY BE NECESSARY FOR THE PERFORMANCE AND COMPLETION OF THE WORK.
- LIMITS OF DISTURBANCE DEFINES THE EXTENT OF THE CONSTRUCTION AREA. NO CONSTRUCTION RELATED TASKS ARE TO OCCUR OUTSIDE OF THE LIMIT OF DISTURBANCE.
- WETLANDS BOUNDARY SHOWN IS APPROXIMATE AND BASED UPON THE WETLAND DELINEATIONS STUDY AND SITE VISIT COMPLETED BY GEOSYNTEC CONSULTANTS ON MARCH 22, 2019. NO WETLAND IMPACTS ARE ANTICIPATED AS PART OF THE PROJECT.
- 100-YEAR FLOOD PLAIN LIMITS SHOWN ARE BASED UPON FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) PANEL NO. 13321C0030D. NO REDUCTIONS IN FLOODPLAIN VOLUME ARE ANTICIPATED AS A PART OF THIS PROJECT.

LEGEND

	EXISTING GROUND ELEVATION (FT NAVD 88) (NOTE 2)
	PROPOSED EXCAVATION GRADES (NOTE 8)
	EXISTING DITCH
	SITE BOUNDARY (NOTE 3)
	EXISTING PIPE
	SILT FENCE
	LIMITS OF DISTURBANCE (NOTE 16)
	ASH EXCAVATION AREA (NOTE 7)
	APPROXIMATE WETLANDS BOUNDARY (NOTE 17)
	100-YEAR FLOOD PLAIN LIMITS (NOTE 18)
	PERMIT BOUNDARY (NOTE 3)
	ABANDONED BOREHOLE (NOTE 2)
	EXISTING MONITORING WELL (NOTE 3)



REV	DATE	DESCRIPTION	DRN	APP
3	04.30.20	REVISED FOR GEORGIA EPD SUBMITTAL	JHS	MI
2	11.27.19	REVISED PER GEORGIA EPD COMMENTS	JHS	MI
1	06.14.19	REVISED PER GEORGIA EPD COMMENTS	JHS	MI
0	11.16.18	ISSUED FOR PERMIT	JHS	MI

Geosyntec consultants

GEORGIA CERTIFICATION OF AUTHORIZATION (COA) NO. PEF000260, EXP. 06/30/2020
1255 ROBERTS BOULEVARD, N.W., SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.202.9500

TITLE: ASH REMOVAL PLAN

PROJECT: CRISP COUNTY POWER COMMISSION ASH POND CLOSURE AND SITE RESTORATION

SITE: PLANT CRISP WARWICK, GEORGIA

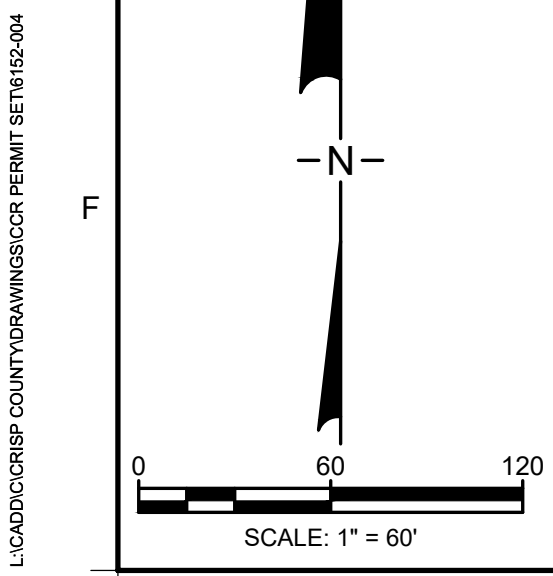
DESIGN BY: MCS	DATE: APRIL 2020
DRAWN BY: JHS	PROJECT NO.: GW6152
CHECKED BY: JWE	FILE: 6152-004
REVIEWED BY: CG	DRAWING NO.: 4 OF 9
APPROVED BY: MI	

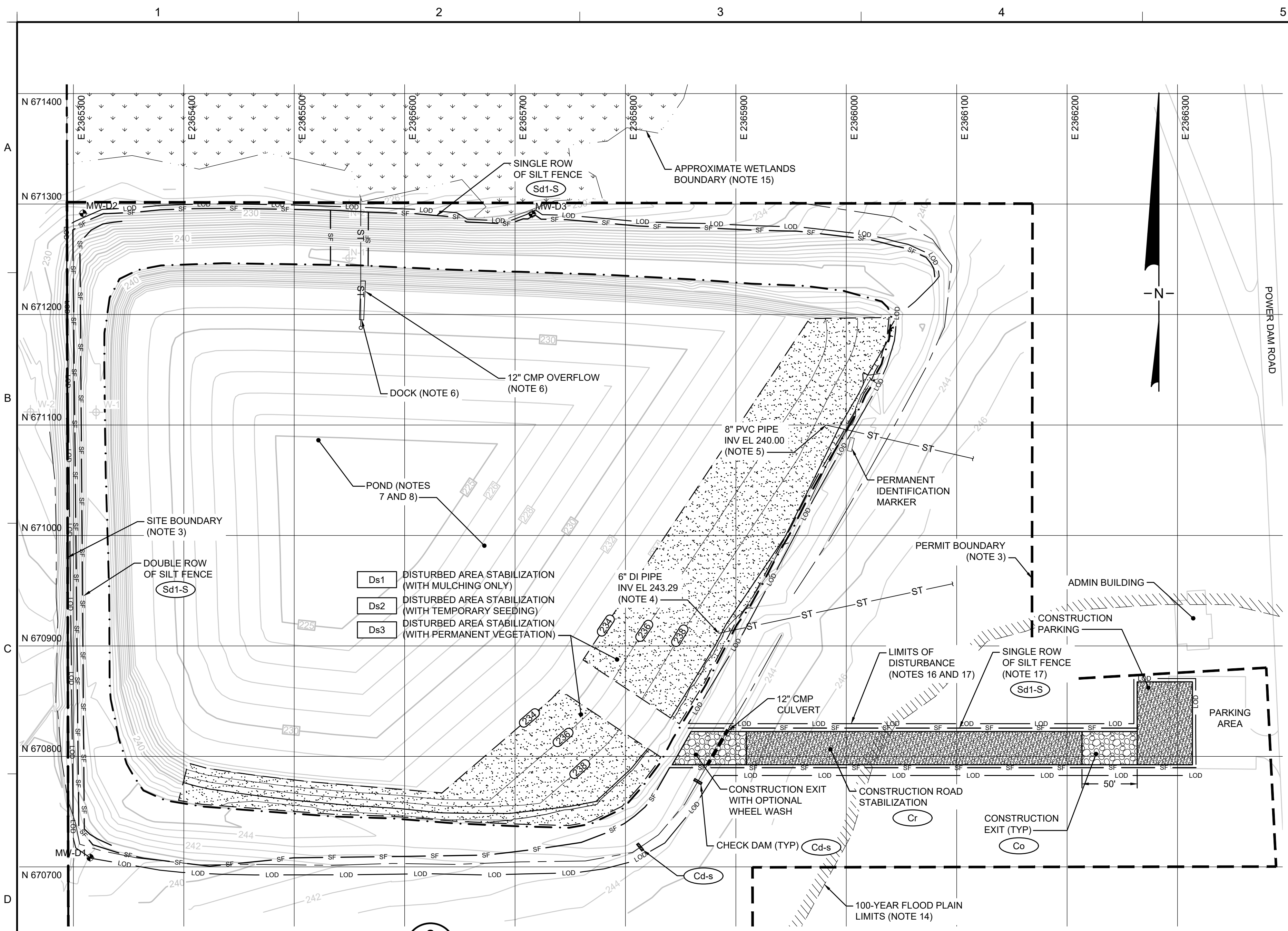
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GEORGIA REGISTERED PROFESSIONAL ENGINEER
No. 034194
MEHMET ISCIEN

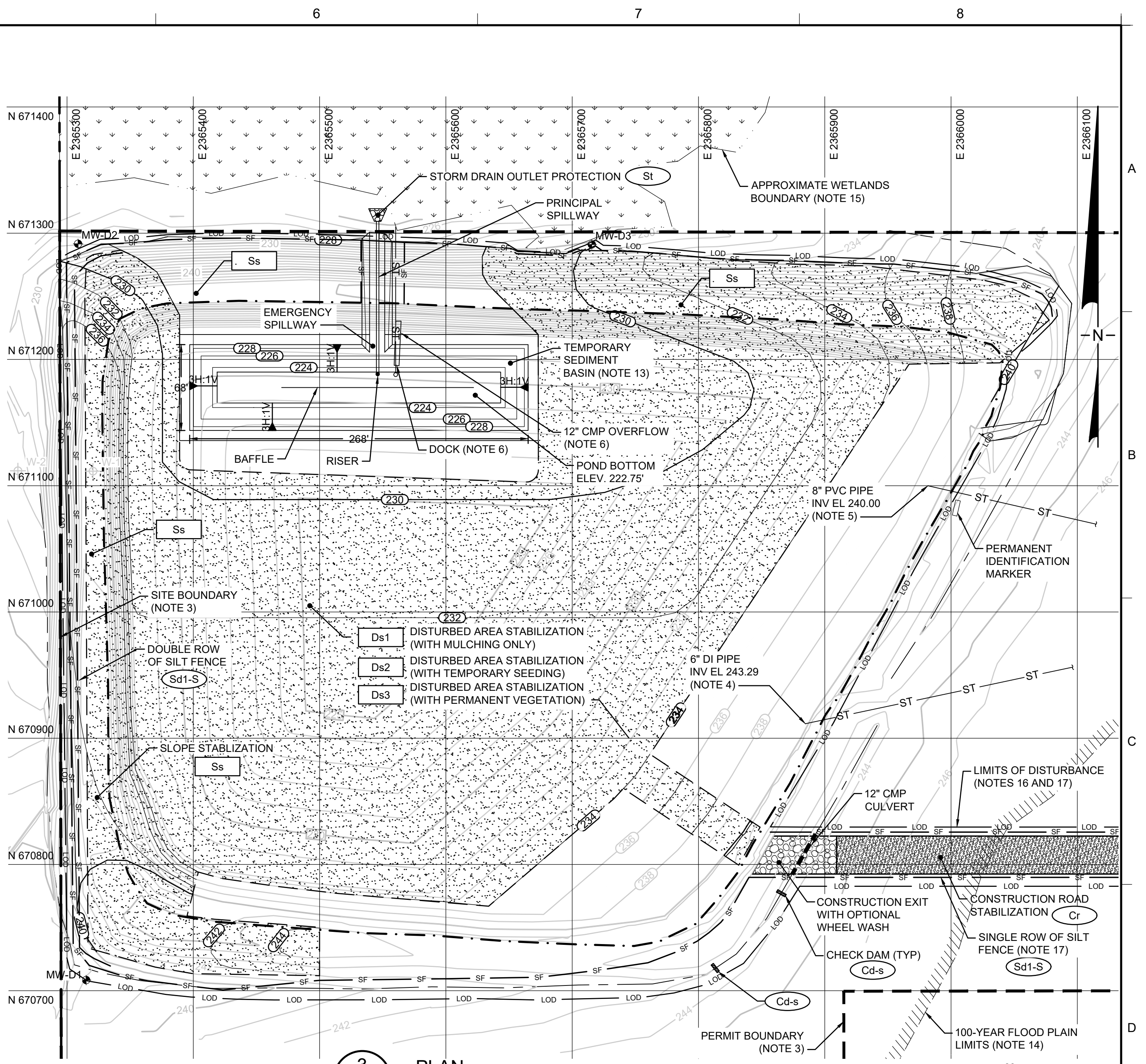
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DATE: 04 / 30 / 2020

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2 PLAN
5 POST-ASH REMOVAL SITE RESTORATION - STAGE I
 SCALE: 1" = 60'



3 PLAN
5 POST-ASH REMOVAL SITE RESTORATION - STAGE II
 SCALE: 1" = 60'

- NOTES:**
- GRID COORDINATES CORRESPOND TO NORTH AMERICAN DATUM (NAD) 1983 HIGH ACCURACY REFERENCE NETWORK (HARN) DATUM. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL, NORTH AMERICAN VERTICAL DATUM (NAVD) 1988.
 - TOPOGRAPHY AND EXISTING SITE FEATURES (I.E., BOREHOLES, DRAINAGE PIPES, ETC.) ARE APPROXIMATE AND BASED ON THE TOPOGRAPHIC SURVEY CONDUCTED BY J.B. FAIRCLOTH & ASSOCIATES P.C., DATED 20 MAY 2014 AND MAY NOT REFLECT CURRENT SITE CONDITIONS. BOREHOLES WERE ABANDONED WITH GROUT AND/OR BENTONITE CHIPS BY RIZZO ASSOCIATES, AS DESCRIBED IN 'DAM SAFETY ASSESSMENT REPORT' DATED 16 JANUARY 2015.
 - SITE BOUNDARY LINE, PERMIT BOUNDARY, AND MONITORING WELLS SHOWN IN THIS DRAWING ARE BASED UPON A BOUNDARY SURVEY PERFORMED BY J.B. FAIRCLOTH AND ASSOCIATED ON 15 OCTOBER 2018.
 - 6-INCH DUCTILE IRON PIPE WAS USED AS CCR SLUICE LINE DURING COAL BURNING OPERATIONS. PIPE TO BE PLUGGED VIA A BLIND FLANGE OR BY OTHER ENGINEER-APPROVED MEANS UPON COMPLETION OF ASH REMOVAL.
 - 8-INCH PVC PIPE WAS USED TO CARRY MISCELLANEOUS RUNOFF AND PROCESS WATER FROM THE BAG HOUSE PUMP. PIPE TO BE PLUGGED VIA A BLIND FLANGE OR BY OTHER ENGINEER-APPROVED MEANS UPON COMPLETION OF ASH REMOVAL.
 - 12-INCH CMP WAS USED AS A SPILLWAY FOR THE IMPOUNDMENT. PIPE AND DOCK TO BE REMOVED DURING CONSTRUCTION OF TEMPORARY SEDIMENT BASIN'S PRINCIPAL SPILLWAY PIPE.
 - ASH POND OPERATES AND WILL CONTINUE TO OPERATE UNDER ZERO DISCHARGE DURING THE POST-ASH REMOVAL SITE RESTORATION STAGE I AND BEGINNING OF STAGE II UNTIL CONSTRUCTION OF THE TEMPORARY SEDIMENT BASIN.
 - EXISTING BOTTOM OF EXCAVATION CONTOURS SHOWN WITHIN THE ASH EXCAVATION AREA REPRESENT THE BOTTOM OF EXCAVATION GRADES WITHIN THE POND AFTER REMOVAL OF CCR AND 6 INCHES OF UNDERLYING NATIVE SOIL. THEY ARE APPROXIMATE AND BASED UPON A LIMITED FIELD INVESTIGATION COMPLETED BY GEOSYNTEC ON 8 MARCH 2017. ACTUAL DEPTHS TO BOTTOM OF CCR MAY VARY AND WILL BE VERIFIED DURING CONSTRUCTION.
 - DUST WILL BE MITIGATED IN ACCORDANCE WITH THE FUGITIVE DUST CONTROL PLAN ISSUED BY CQPC, DATED SEPTEMBER 2016 AND PREPARED BY GEOSYNTEC CONSULTANTS, AND ANY SUBSEQUENT AMENDMENT OF THE PLAN.
 - WHEN DECONSTRUCTING OR LOWERING THE BERMS, VEGETATION WILL BE STRIPPED AND SEPARATELY DISPOSED ALONG WITH ANY DEBRIS, LARGE ROCKS, PLANT MATERIALS, OR OTHER DELETERIOUS MATERIALS IN THE EXCAVATED MATERIAL.
 - ACCEPTABLE MATERIAL FROM BERM DECONSTRUCTION WILL BE PLACED IN LIFTS NOT MORE THAN EIGHT (8) INCHES IN LOOSE THICKNESS. EACH LAYER WILL BE TRACKED WITH A DOZER OR LOADED DUMP TRUCK UNTIL THE SURFACE IS FIRM AND UNYIELDING UNDER THE LOADING. THE SURFACE WILL BE FREE OF DEBRIS, LARGE ROCKS, PLANT MATERIALS, OR OTHER DELETERIOUS MATERIALS PRIOR TO THE PLACEMENT OF AN ADDITIONAL LAYER.
 - CONTRACTOR WILL PROCURE ALL PERMITS, LICENSES, INSPECTIONS, CERTIFICATES AND AUTHORIZATIONS, OF ANY DESCRIPTION, THAT MAY BE NECESSARY FOR THE PERFORMANCE AND COMPLETION OF THE WORK.
 - TOTAL DISTURBED AREA IS 9.44 ACRES. DISTURBED AREA DRAINING TO THE TEMPORARY SEDIMENT BASIN IS 7.38 ACRES. OUTBOARD SLOPES OF THE POND BERMS AND THE CONSTRUCTION ROAD DO NOT DRAIN INTO THE TEMPORARY SEDIMENT BASIN AND WILL BE STABILIZED AS SOON AS PRACTICABLE. WHEN DISTURBED, SEDIMENT STORAGE FOR THESE AREAS IS PROVIDED BY THE PERIMETER SILT FENCE.
 - 100-YEAR FLOOD PLAIN LIMITS SHOWN ARE BASED UPON FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) PANEL NO. 13321C0030D. NO REDUCTIONS IN FLOODPLAIN VOLUME ARE ANTICIPATED AS A PART OF THIS PROJECT.

- WETLANDS BOUNDARY SHOWN IS APPROXIMATE AND BASED UPON THE WETLAND DELINEATIONS STUDY AND SITE VISIT COMPLETED BY GEOSYNTEC CONSULTANTS ON MARCH 22, 2019. NO WETLAND IMPACTS ARE ANTICIPATED AS PART OF THE PROJECT.
 - LIMIT OF DISTURBANCE DEFINES THE EXTENTS OF THE CONSTRUCTION AREA. NO CONSTRUCTION RELATED TASKS ARE TO OCCUR OUTSIDE OF THE LIMIT OF DISTURBANCE.
 - LIMIT OF DISTURBANCE AND SILT FENCE ARE SHOWN OFFSET OF THE SITE BOUNDARY ON THE WESTERN PORTION OF THE SITE FOR CLARITY PURPOSES ONLY.
- STAGE I SEQUENCING**
- *DURING THIS PHASE, NO STORMWATER DISCHARGES FROM THE POND ARE PERMITTED. THE POND WILL FUNCTION AS A SEDIMENT BASIN TO CONTAIN STORMWATER RUNOFF FROM DISTURBED AREAS WITHIN THE POND.
- INSTALL SILT FENCE AROUND POND AS SHOWN. INSTALL DOUBLE ROW OF SILT FENCE ALONG WESTERN EDGE OF POND ADJACENT TO PROPERTY LINE.
 - INSTALL CHECK DAMS WITHIN EXISTING CHANNELS ALONG SOUTHERN AND NORTHERN SIDES OF POND.
 - STABILIZE WITH MULCHING, TEMPORARY SEEDING, AND PERMANENT SEEDING ON THE EASTERN AND SOUTHERN PORTIONS OF THE POND WHICH HAVE ACHIEVED FINAL GRADE AS PART OF THE ASH REMOVAL ACTIVITIES.
- STAGE II SEQUENCING**
- *DURING THE BEGINNING OF THIS PHASE, NO STORMWATER DISCHARGES FROM THE POND ARE PERMITTED. THE POND WILL FUNCTION AS A SEDIMENT BASIN TO CONTAIN STORMWATER RUNOFF FROM DISTURBED AREAS WITHIN THE POND.
- LOWER WESTERN AND NORTHERN BERMS TO THE GRADES SHOWN, BUT NO LOWER THAN ELEVATION 236 FEET ABOVE MEAN SEA LEVEL (FT MSL).
 - PLACE MATERIAL EXCAVATED FROM BERMS AS FILL WITHIN THE LOW AREAS OF THE POND.
 - STABILIZE WESTERN AND NORTHEASTERN BERMS WHICH HAVE ACHIEVED FINAL GRADE WITH SLOPE STABILIZATION (I.E., MATTING BLANKETS), TEMPORARY SEEDING, AND PERMANENT SEEDING.
 - EXCAVATE TEMPORARY SEDIMENT BASIN WITHIN THE POND WHILE THE NORTHERN BERM REMAINS IN PLACE AT ELEVATION 236 FT MSL.
 - ONCE TEMPORARY SEDIMENT BASIN HAS BEEN EXCAVATED, BREACH NORTHERN BERM FOR INSTALLATION OF THE PRINCIPAL AND EMERGENCY SPILLWAY FROM THE TEMPORARY SEDIMENT BASIN AND REMOVAL OF THE EXISTING DOCK, RISER, AND OVERFLOW PIPE. BREAK PERIMETER SILT FENCE AND WRAP AROUND EACH SIDE OF THE EMERGENCY SPILLWAY.
 - CONTINUE REMOVAL OF NORTHERN BERM TO THE GRADES SHOWN.
 - PLACE MATERIAL FROM BERMS AS FILL WITHIN THE LOW AREAS TO THE GRADES SHOWN.
 - STABILIZE NORTHERN BERM (EXCEPT FOR AS SHOWN IN PLAN 3 ON DRAWING 5) WHICH HAS ACHIEVED FINAL GRADE WITH SLOPE STABILIZATION (I.E., MATTING BLANKETS), TEMPORARY SEEDING, AND PERMANENT SEEDING. STABILIZE CENTRAL PORTIONS OF THE POND WHICH HAVE ACHIEVED FINAL GRADE WITH MULCHING, TEMPORARY SEEDING, AND PERMANENT SEEDING.

LEGEND

	EXISTING GROUND ELEVATION (FT NAVD 88) (NOTE 2)
	EXISTING BOTTOM OF EXCAVATION GRADES
	PROPOSED RESTORATION GRADES
	EXISTING DITCH
	SITE BOUNDARY (NOTE 3)
	EXISTING PIPE
	SILT FENCE
	LIMITS OF DISTURBANCE (NOTES 16 AND 17)
	APPROXIMATE WETLANDS BOUNDARY (NOTE 15)
	ASH EXCAVATION AREA
	100-YEAR FLOOD PLAIN LIMITS (NOTE 14)
	AREA TO BE STABILIZED
	ABANDONED BOREHOLE (NOTE 2)
	EXISTING MONITORING WELL (NOTE 3)

EROSION AND SEDIMENT CONTROL DETAIL LEGEND

BMP	DETAIL SHOWN ON DRAWING	BMP	DETAIL SHOWN ON DRAWING
Ds1	8	Cd-s	7
Ds2	8	Cr	7
Ds3	8	Sd1-S	7
Ss	8	Sd3	9
Co	7	St	8

REV	DATE	DESCRIPTION	DRN	APP
3	04.30.20	REVISED FOR GEORGIA EPD SUBMITTAL	JHS	MI
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1	06.14.19	REVISED PER GEORGIA EPD COMMENTS	JHS	MI
0	11.16.18	ISSUED FOR PERMIT	JHS	MI

Geosyntec consultants

GEORGIA CERTIFICATION OF AUTHORIZATION (COA) NO. PEF000260, EXP. 06/30/2020
 1255 ROBERTS BOULEVARD, N.W., SUITE 200
 KENNESAW, GEORGIA 30144 USA
 PHONE: 678.202.9500

TITLE: POST-ASH REMOVAL SITE RESTORATION

PROJECT: CRISP COUNTY POWER COMMISSION ASH POND CLOSURE AND SITE RESTORATION

SITE: PLANT CRISP WARWICK, GEORGIA

DESIGN BY: MCS	DATE: APRIL 2020
DRAWN BY: JHS	PROJECT NO.: GW6152
CHECKED BY: JWE	FILE: 6152-005
REVIEWED BY: CG	DRAWING NO.: 5 OF 9
APPROVED BY: MI	

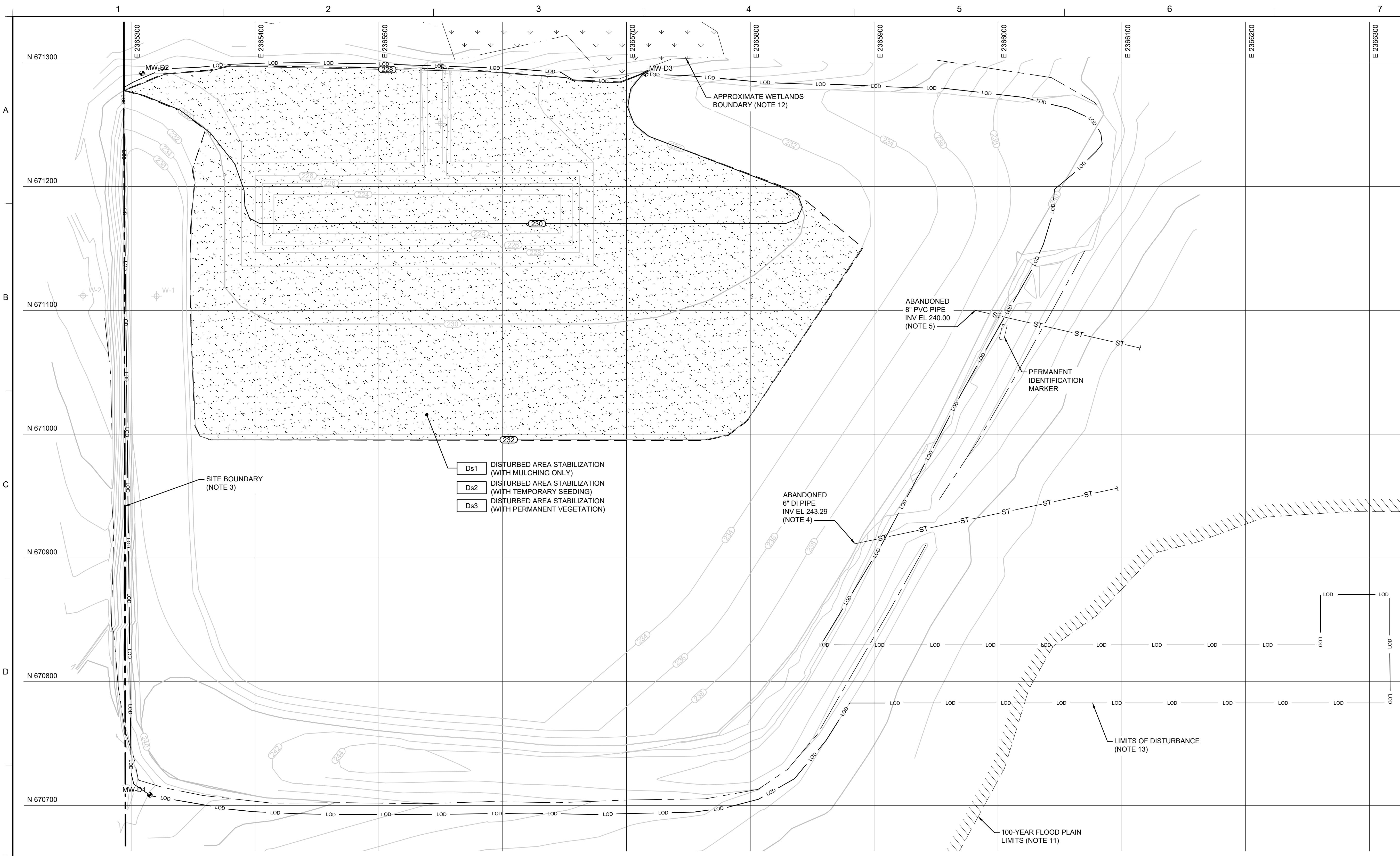
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SIGNATURE: _____ DATE: 04 / 30 / 2020

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EROSION AND SEDIMENT CONTROL DETAIL LEGEND	
BMP	DETAIL SHOWN ON DRAWING
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Ds2	8
Ds3	8
Ss	8
Co	7
Cd-s	7
Cr	7
Sd1-S	7
Sd3	9
St	8

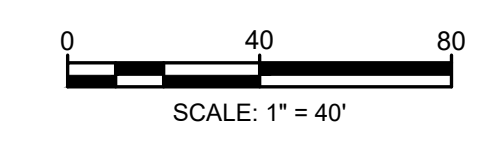
- FINAL RESTORATION SEQUENCING**
- UPON STABILIZATION OF ALL DISTURBED AREAS WITHIN THE POND, CLEAN OUT TEMPORARY SEDIMENT BASIN AND FILL IN TEMPORARY SEDIMENT BASIN WITH SOIL. STABILIZE FORMER TEMPORARY SEDIMENT BASIN AREA WITH MULCHING, TEMPORARY SEEDING, AND PERMANENT SEEDING.
 - REMOVE ALL OTHER EROSION CONTROL MEASURES.

LEGEND

	EXISTING GROUND ELEVATION (FT NAVD 88) (NOTE 2)
	EXISTING RESTORATION GRADES
	PROPOSED RESTORATION GRADES
	EXISTING DITCH
	SITE BOUNDARY (NOTE 3)
	EXISTING PIPE
	SILT FENCE
	LIMITS OF DISTURBANCE (NOTE 13)
	APPROXIMATE WETLANDS BOUNDARY (NOTE 12)
	100-YEAR FLOOD PLAIN LIMITS (NOTE 11)
	AREA TO BE STABILIZED
	ABANDONED BOREHOLE (NOTE 2)
	EXISTING MONITORING WELL (NOTE 3)

4 PLAN
6 FINAL RESTORATION GRADES
SCALE: 1" = 40'

- NOTES:**
- GRID COORDINATES CORRESPOND TO NORTH AMERICAN DATUM (NAD) 1983 HIGH ACCURACY REFERENCE NETWORK (HARN) DATUM. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL, NORTH AMERICAN VERTICAL DATUM (NAVD) 1988.
 - TOPOGRAPHY AND EXISTING SITE FEATURES (I.E., BOREHOLES, DRAINAGE PIPES, ETC.) ARE APPROXIMATE AND BASED ON THE TOPOGRAPHIC SURVEY CONDUCTED BY J.B. FAIRCLOTH & ASSOCIATES P.C., DATED 20 MAY 2014 AND MAY NOT REFLECT CURRENT SITE CONDITIONS. BOREHOLES WERE ABANDONED WITH GROUT AND/OR BENTONITE CHIPS BY RIZZO ASSOCIATES, AS DESCRIBED IN "DAM SAFETY ASSESSMENT REPORT" DATED 16 JANUARY 2015.
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 - 8-INCH PVC PIPE WAS USED TO CARRY MISCELLANEOUS RUNOFF AND PROCESS WATER FROM THE BAG HOUSE PUMP. PIPE TO BE PLUGGED VIA A BLIND FLANGE OR BY OTHER ENGINEER-APPROVED MEANS UPON COMPLETION OF ASH REMOVAL.
 - EXISTING CONTOURS SHOWN WITHIN THE ASH EXCAVATION AREA REPRESENT PROPOSED RESTORATION GRADES FROM POST-ASH REMOVAL SITE RESTORATION - STAGE II AS SHOWN IN PLAN 3 ON DRAWING 5.
 - DUST WILL BE MITIGATED IN ACCORDANCE WITH THE FUGITIVE DUST CONTROL PLAN ISSUED BY CCPC, DATED SEPTEMBER 2016 AND PREPARED BY GEOSYNTEC CONSULTANTS, AND ANY SUBSEQUENT AMENDMENT OF THIS PLAN.
 - WHEN DECONSTRUCTING OR LOWERING THE BERMS, VEGETATION WILL BE STRIPPED AND SEPARATELY DISPOSED ALONG WITH ANY DEBRIS, LARGE ROCKS, PLANT MATERIALS, OR OTHER DELETERIOUS MATERIALS IN THE EXCAVATED MATERIAL.
 - ACCEPTABLE MATERIAL FROM BERM DECONSTRUCTION WILL BE PLACED IN LIFTS NOT MORE THAN EIGHT (8) INCHES IN LOOSE THICKNESS. EACH LAYER WILL BE TRACKED WITH A DOZER OR LOADED DUMP TRUCK UNTIL THE SURFACE IS FIRM AND UNYIELDING UNDER THE LOADING. THE SURFACE WILL BE FREE OF DEBRIS, LARGE ROCKS, PLANT MATERIALS, OR OTHER DELETERIOUS MATERIALS PRIOR TO THE PLACEMENT OF AN ADDITIONAL LAYER.
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 - WETLANDS BOUNDARY SHOWN IS APPROXIMATE AND BASED UPON THE WETLAND DELINEATIONS STUDY AND SITE VISIT COMPLETED BY GEOSYNTEC CONSULTANTS ON MARCH 22, 2019. NO WETLAND IMPACTS ARE ANTICIPATED AS PART OF THE PROJECT.
 - LIMIT OF DISTURBANCE DEFINES THE EXTENTS OF THE CONSTRUCTION AREA. NO CONSTRUCTION RELATED TASKS ARE TO OCCUR OUTSIDE OF THE LIMIT OF DISTURBANCE.



REV	DATE	DESCRIPTION	DRN	APP
3	04.30.20	REVISED FOR GEORGIA EPD SUBMITTAL	JHS	MI
2	11.27.19	REVISED PER GEORGIA EPD COMMENTS	JHS	MI
1	06.14.19	REVISED PER GEORGIA EPD COMMENTS	JHS	MI
0	11.16.18	ISSUED FOR PERMIT	JHS	MI

Geosyntec consultants

GEORGIA CERTIFICATION OF AUTHORIZATION
(COA) NO. PEF00260, EXP. 06/30/2020
1255 ROBERTS BOULEVARD, N.W., SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.202.9500

FINAL RESTORATION GRADES

PROJECT: CRISP COUNTY POWER COMMISSION
ASH POND CLOSURE AND SITE RESTORATION

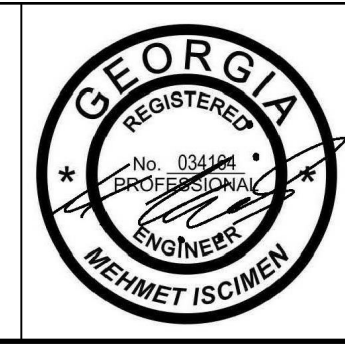
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WARWICK, GEORGIA

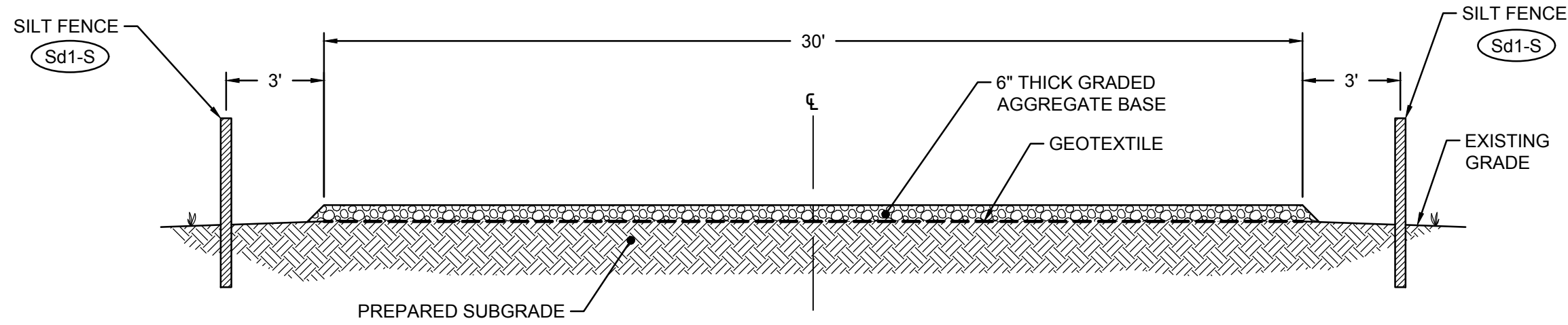
DESIGN BY: MCS DATE: APRIL 2020
DRAWN BY: JHS PROJECT NO.: GW6152
CHECKED BY: JWE FILE: 6152-006
REVIEWED BY: CG DRAWING NO.:
APPROVED BY: MI **6** OF **9**

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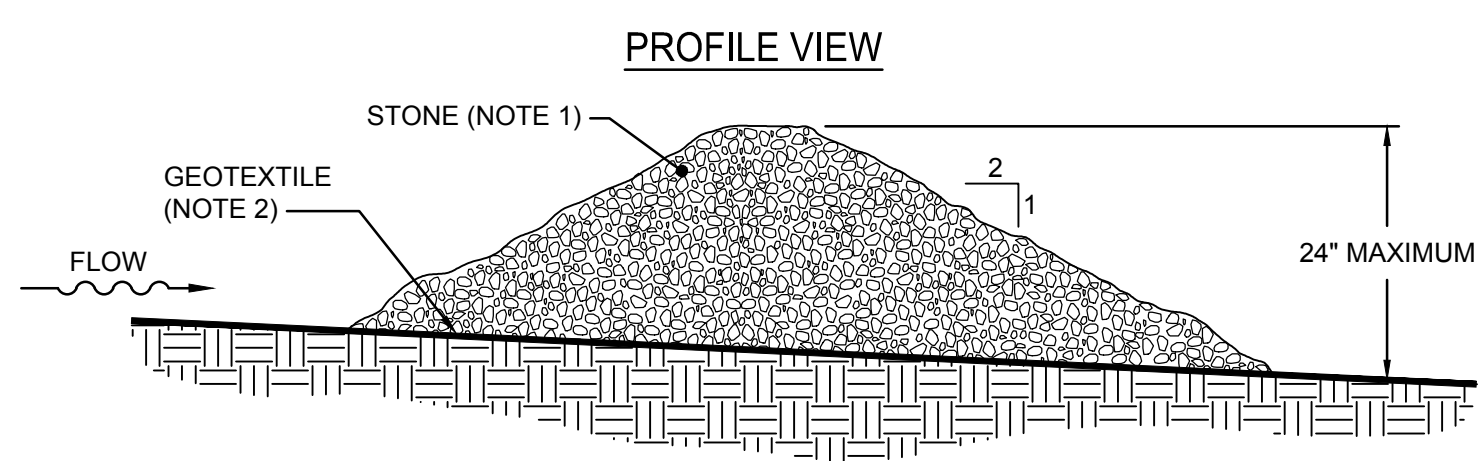
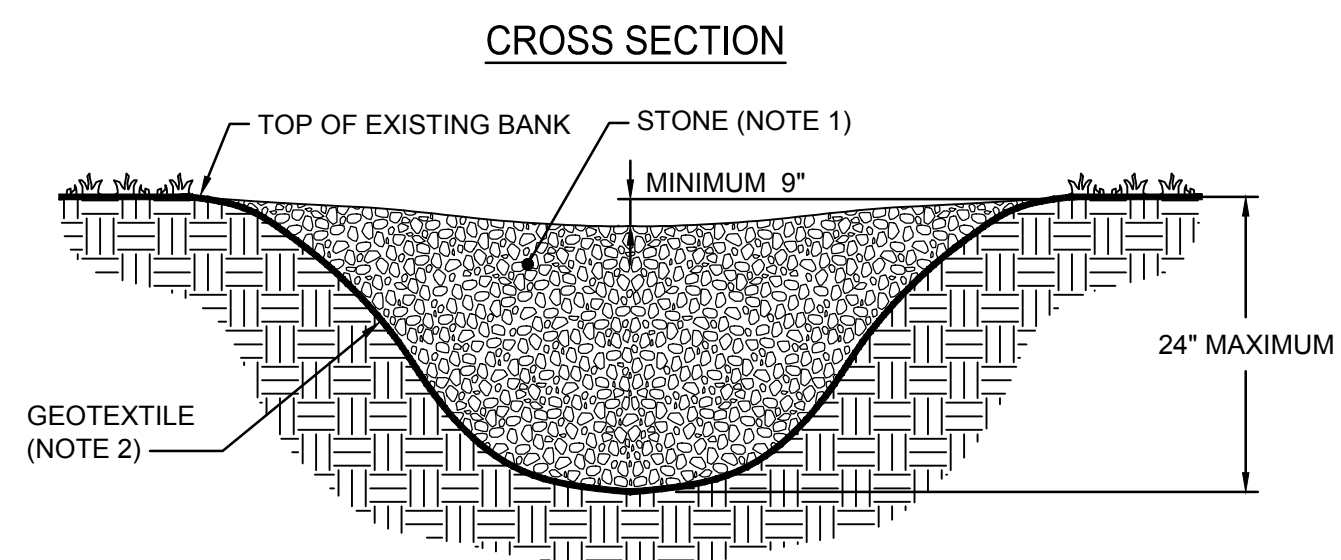
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DATE: 04 / 30 / 2020

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Cr **DETAIL CONSTRUCTION ROAD STABILIZATION**
SCALE: NTS



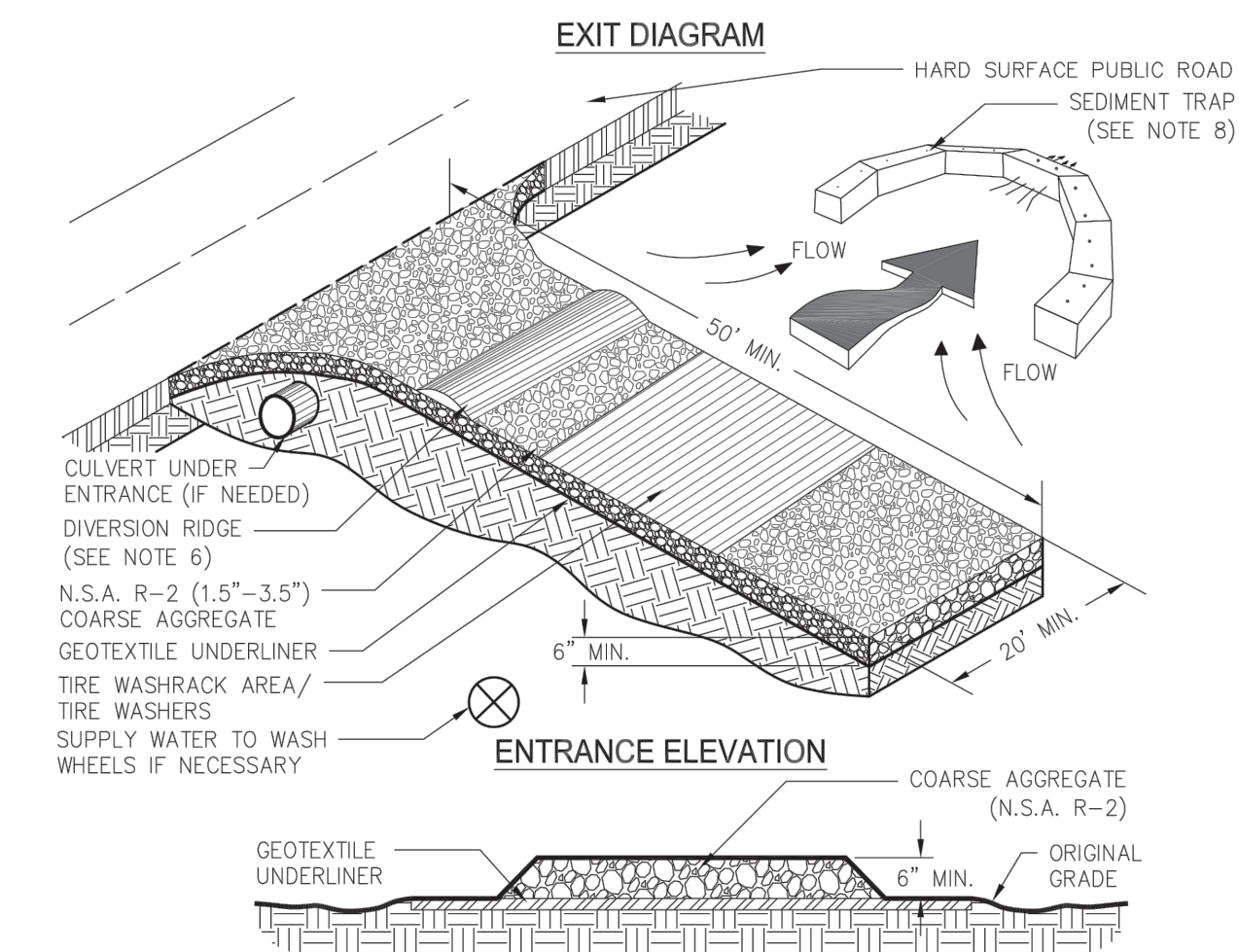
- NOTES:
- STONE CHECK DAM SHALL BE CONSTRUCTED OF GRADED SIZE 2-10 INCH STONE.
 - GEOTEXTILE SHALL BE SELECTED IN ACCORDANCE WITH AASHTO M288-96 SECTION 7.3, SEPARATION REQUIREMENTS, TABLE 3, AND SHALL BE PLACED IMMEDIATELY ONTO THE SUBGRADE WITHOUT ANY VOIDS AND EXTEND FIVE FEET BEYOND THE DOWNSTREAM TOE OF THE DAM.

Cd-S **DETAIL STONE CHECK DAM**
SCALE: NTS
SOURCE: GEORGIA SOIL AND WATER CONSERVATION COMMISSION

MAINTENANCE
The exit shall be maintained in a condition that will prevent tracking or flow of mud onto public rights-of-way. This may require periodic top dressing with 1.5-3.5 inch stone, as conditions demand, and repair and/or cleanout of any structures to trap sediment. All materials spilled,

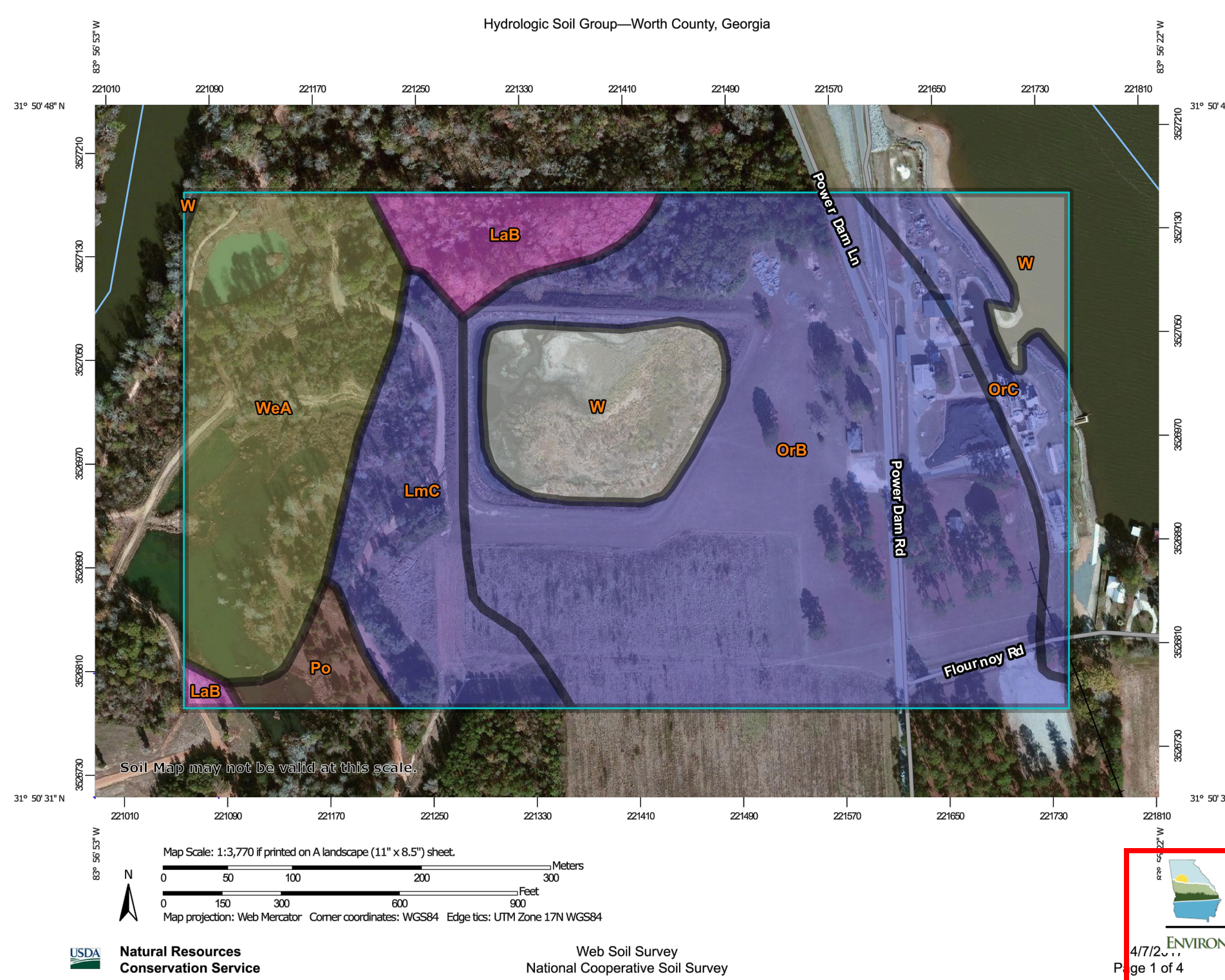
dropped, washed, or tracked from vehicles or site onto roadways or into storm drains must be removed immediately.

CRUSHED STONE CONSTRUCTION EXIT

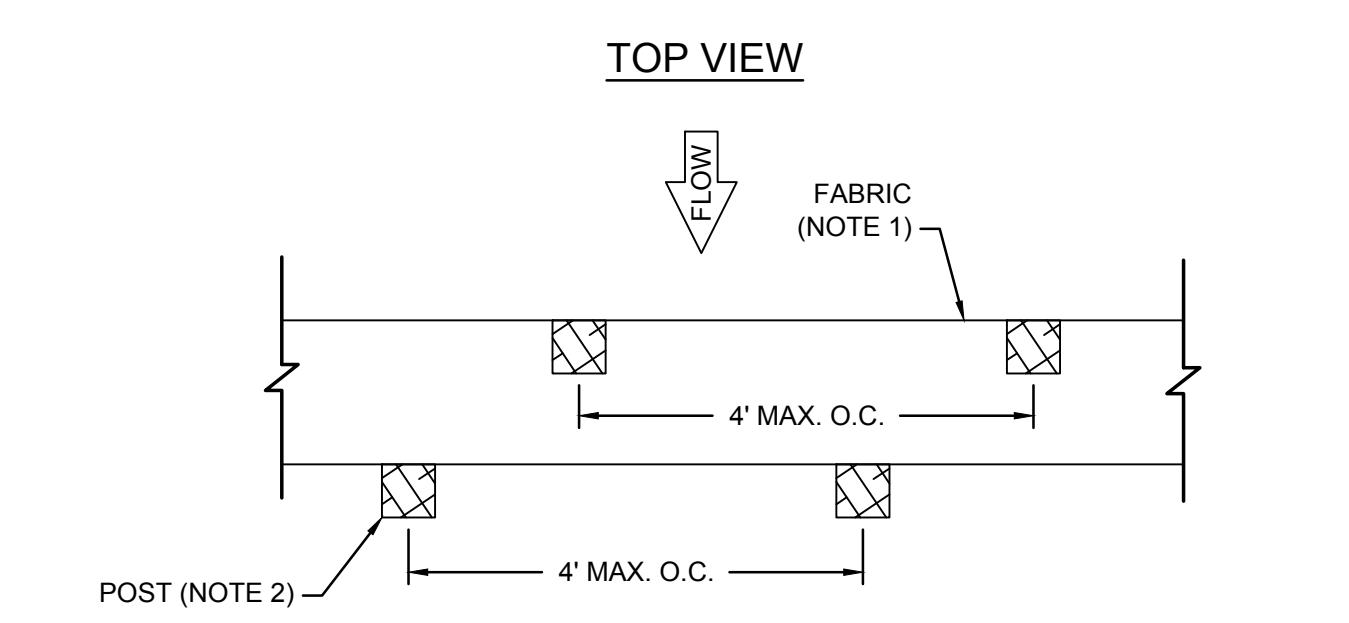
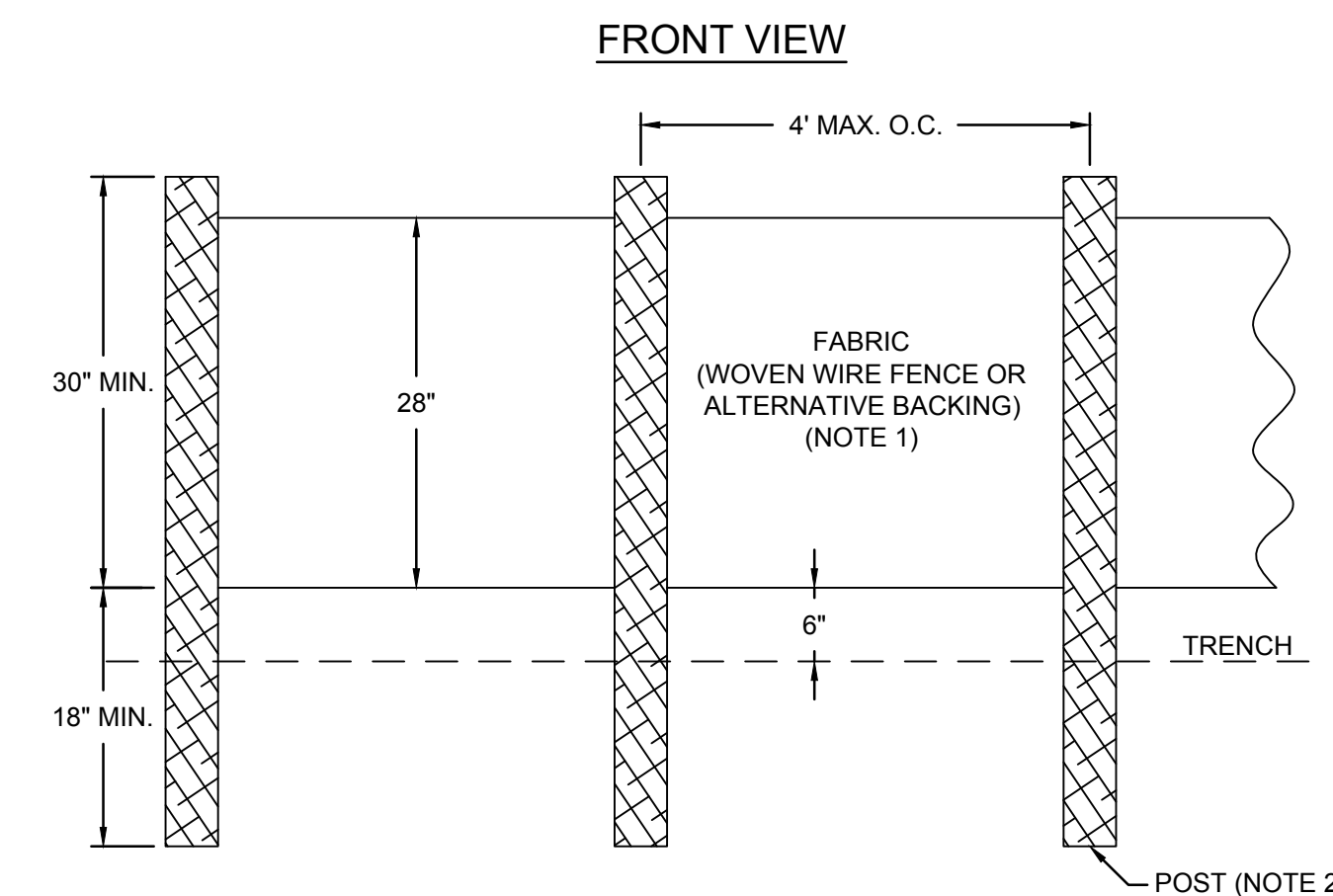
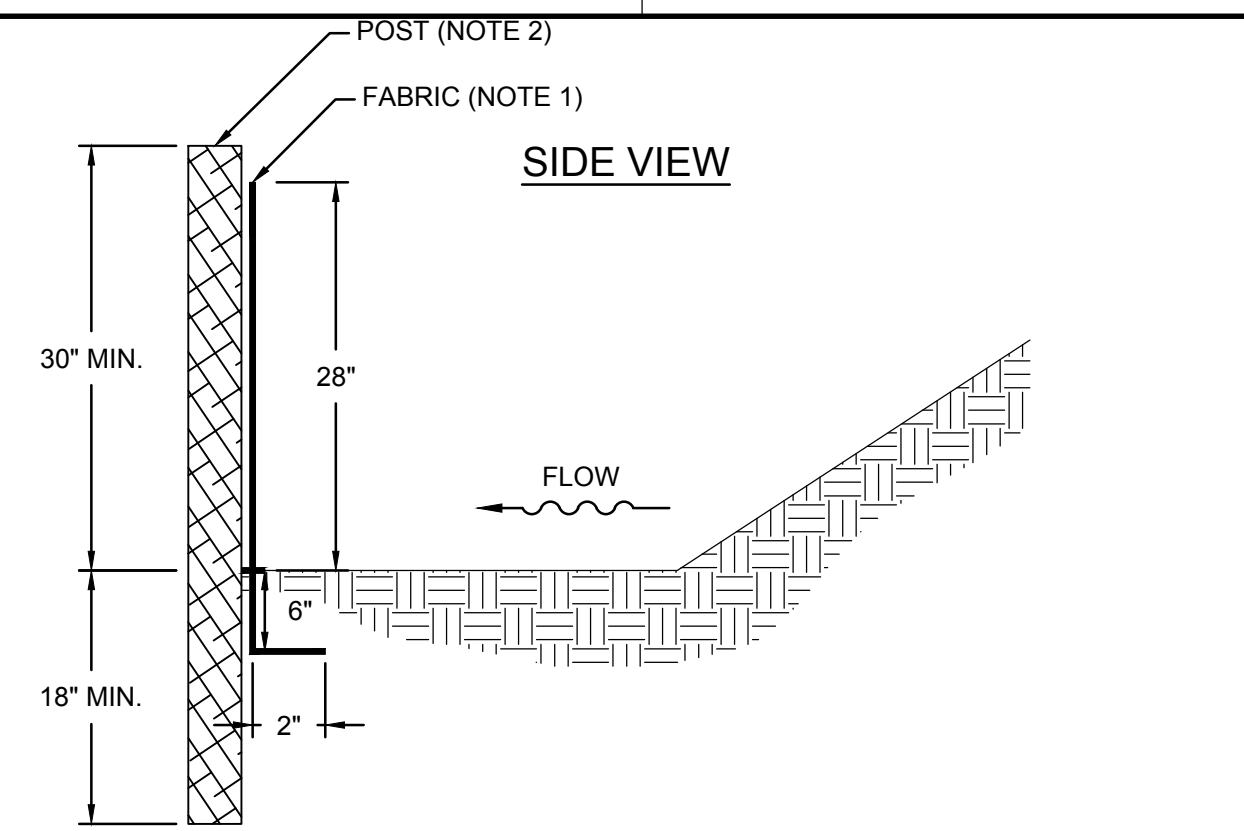


- NOTES:
- AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
 - REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
 - AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
 - GRAVEL PAD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

Co **DETAIL CONSTRUCTION EXIT**
SCALE: NTS



SOIL SURVEY MAP
SCALE: AS SHOWN



- NOTES:
- SILT FENCE FABRIC SHALL BE APPROVED FABRIC OR ALTERNATE TECHNOLOGY LISTED ON THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION APPROVED PRODUCT LIST. PRIOR TO ISSUANCE OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION APPROVED PRODUCTS LIST, SILT FENCE FABRIC SHALL BE APPROVED FABRIC OR ALTERNATE TECHNOLOGY LISTED ON THE GEORGIA DEPARTMENT OF TRANSPORTATION QUALIFIED PRODUCTS LIST #36 (QPL-36) FOR TYPE C SILT FENCE.
 - USE STEEL POSTS ONLY, WITH POST SIZE 1.3 LB/FT MINIMUM.
 - THE FABRIC AND WIRE SHALL BE SECURELY FASTENED TO POSTS AND FABRIC ENDS MUST BE OVERLAPPED A MINIMUM OF 18" OR WRAPPED AROUND A POST TO PROVIDE A CONTINUOUS FABRIC BARRIER.

Sd1-S **DETAIL SILT FENCE (SENSITIVE) - TYPE C**
SCALE: NTS
SOURCE: GEORGIA SOIL AND WATER CONSERVATION COMMISSION

REV	DATE	DESCRIPTION	DRN	APP
3	04.30.20	REVISED FOR GEORGIA EPD SUBMITTAL	JHS	MI
2	11.27.19	REVISED PER GEORGIA EPD COMMENTS	JHS	MI
1	06.14.19	REVISED PER GEORGIA EPD COMMENTS	JHS	MI
0	11.16.18	ISSUED FOR PERMIT	JHS	MI

Geosyntec consultants

GEORGIA CERTIFICATION OF AUTHORIZATION
(COA) NO. PEF00260, EXP. 06/30/2020
1255 ROBERTS BOULEVARD, N.W., SUITE 200
KENNESAW, GEORGIA 30144 USA
PHONE: 678.202.9500

EROSION AND SEDIMENT CONTROL DETAILS I

PROJECT: CRISP COUNTY POWER COMMISSION
ASH POND CLOSURE AND SITE RESTORATION

SITE: PLANT CRISP
WARWICK, GEORGIA

DESIGN BY: MCS	DATE: APRIL 2020
DRAWN BY: JHS	PROJECT NO.: GW6152
CHECKED BY: JWE	FILE: 6152-007
REVIEWED BY: CG	DRAWING NO.: 7 OF 9
APPROVED BY: MI	

THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.

SIGNATURE: MEHMET ISCIMEN
DATE: 04 / 30 / 2020

LOADING CRISP COUNTY DRAWINGS FOR PERMIT SET 1525007

UNIFORMLY SPREAD ORGANIC MULCHES BY HAND OR WITH A MULCH BLOWER AT A RATE WHICH PROVIDES ABOUT 75% GROUND COVER. WHEN SPREADING STRAW MULCH BY HAND, DIVIDE THE AREA TO BE MULCHED INTO SECTIONS OF APPROXIMATELY 1000 SQUARE FT. AND PLACE 70-90 POUNDS OF STRAW (1 1/2 TO BALES) IN EACH SECTION TO FACILITATE UNIFORM DISTRIBUTION. THIS WILL BE 1 1/2 TO 2 TONS OF STRAW PER ACRE. IN HYDROSEEDING OPERATIONS A GREEN DYE MAY BE ADDED TO THE SLURRY, TO ASSURE A UNIFORM APPLICATION.

WHEN STRAW MULCH IS SUBJECT TO BE BLOWN AWAY BY WIND, IT MUST BE ANCHORED IMMEDIATELY AFTER SPREADING. IT CAN BE ANCHORED WITH A MULCH ANCHORING TOOL OR A REGULAR FARM DISK, BY SETTING THE DISK TO RUN STRAIGHT AND ADDING WEIGHT TO THE DISK. THE DISK SHOULD NOT BE SHARP ENOUGH TO CUT THE STRAW. DISKS CAN GENERALLY NOT BE USED ON LAND WITH STEEP SLOPES.

Material	Rate Per Acre and (Per 1000 ft. ²)	Notes
Straw with Seed	1 1/2-2 tons (70 lbs-90 lbs)	Spread by hand or machine; anchor when subject to blowing.
Straw Alone (no seed)	2 1/2-3 tons (115 lbs-160 lbs)	Spread by hand or machine; anchor when subject to blowing.
Wood Chips	5-6 tons (225 lbs-270 lbs)	Treat with 12 lbs. nitrogen/ton.

WOOD FIBER REFERS TO SHORT CELLULOSE FIBERS APPLIED AS A SLURRY IN HYDROSEEDING OPERATIONS. WOOD FIBER HYDROSEEDER SLURRIES MAY BE USED TO TACK STRAW MULCH ON STEEP SLOPES, CRITICAL AREAS, AND WHERE HARSH CLIMATIC CONDITIONS EXIST.

Ds1 DETAIL
DISTURBED AREA STABILIZATION (MULCHING ONLY)

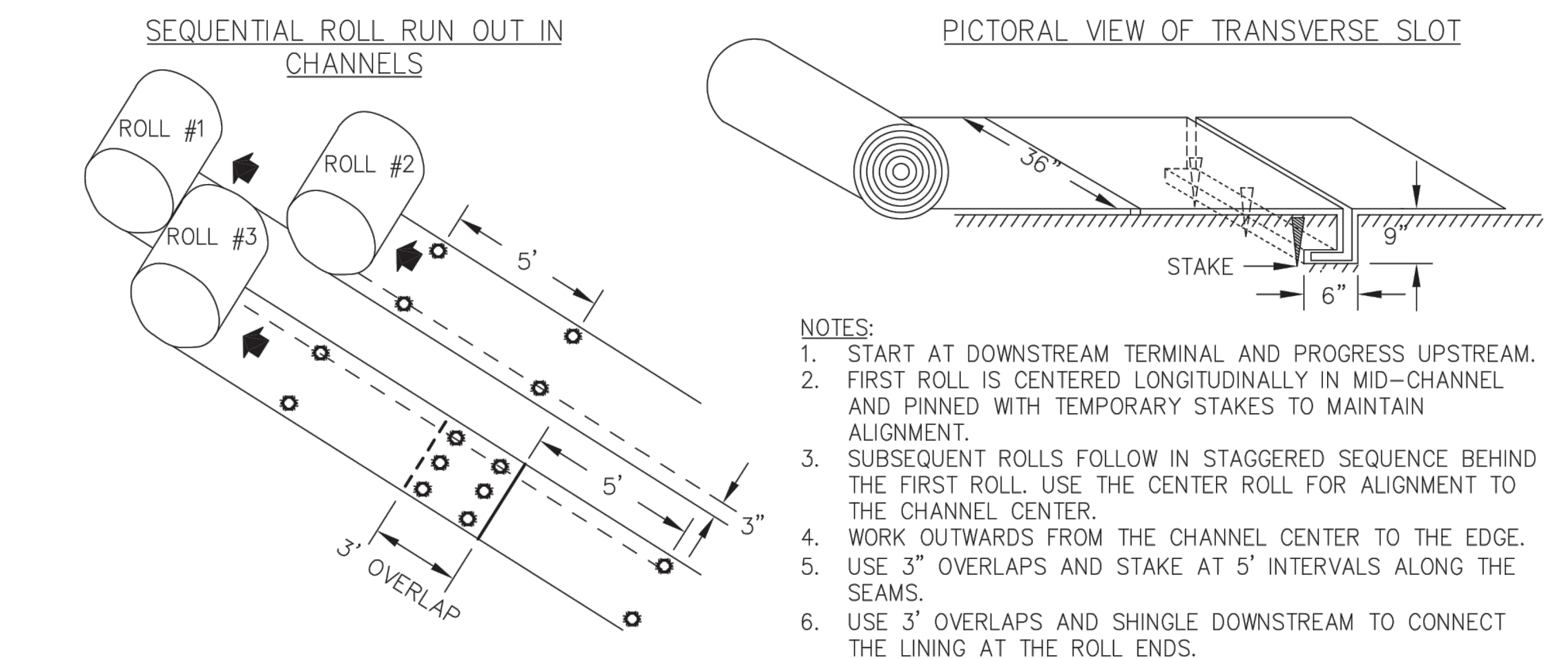
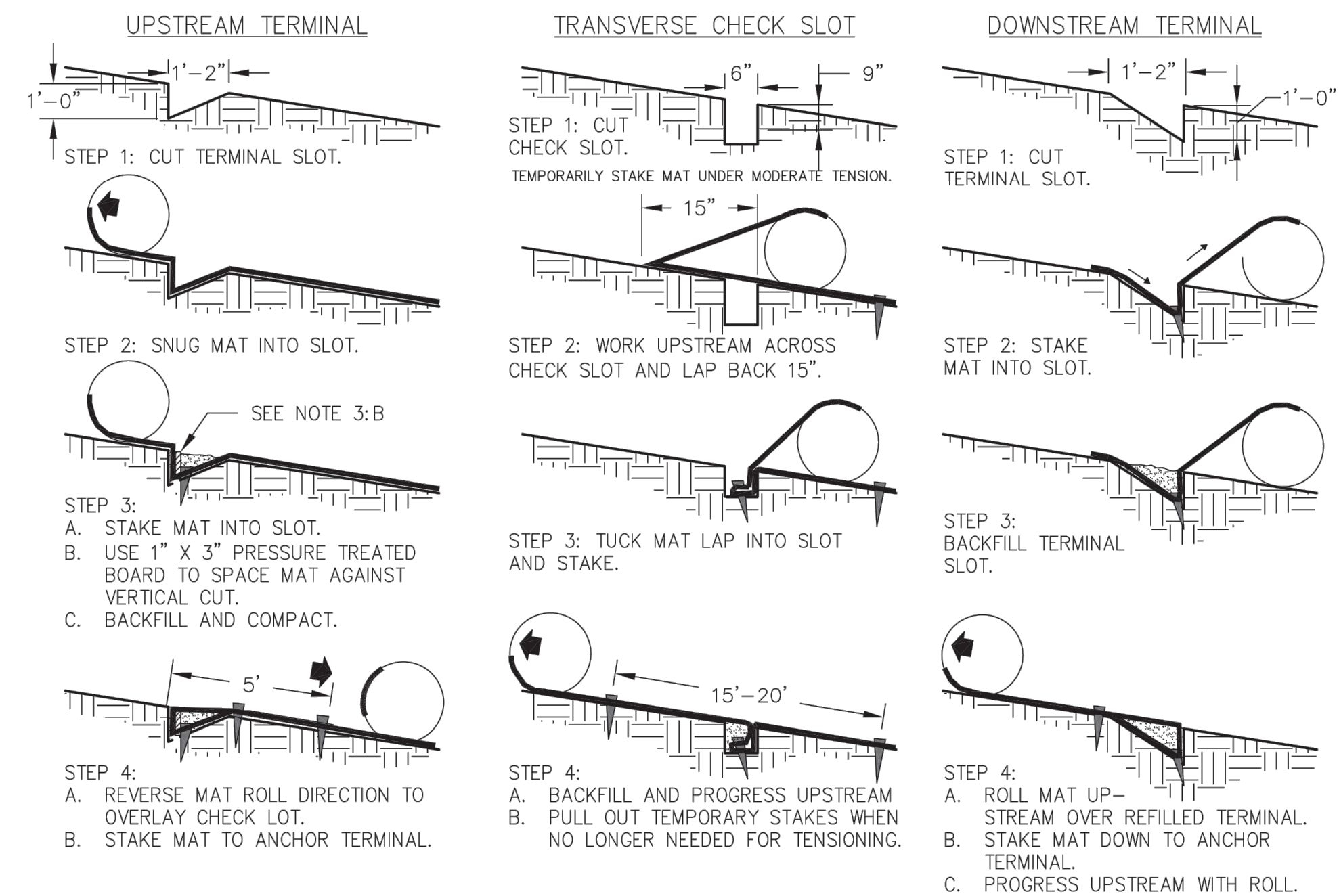
Species	Broadcast Rates		Resource Area	Planting Dates by Resource Area												Remarks
	Rate Per Acre	Pure Live Seed (PLS) Per 1000 sqft		J	F	M	A	M	J	J	A	S	O	N	D	
LESPEDEZA, ANNUAL <i>Lespedeza striata</i>	alone 40 lbs	0.9 lb	M-L													200,000 seed per pound. May volunteer for several years. Use inoculant EL.
	in mixture 10 lbs	0.2 lb	P C													
LOVEGRASS, WEEPING <i>Eragrostis curvula</i>	alone 4 lbs	0.1 lb	M-L													1,500,000 seed per pound. May last for several years. Mix with <i>Sericea lespedeza</i> .
	in mixture 2 lbs	0.05 lb	P C													
MILLET, PEARL <i>Pennisetum glaucum</i>	alone 50 lbs	1.1 lbs	M-L P C													88,000 seed per pound. Quick dense cover. May reach 5 feet in height. Not recommended for mixtures.
RYEGRASS, ANNUAL <i>Lolium temulentum</i>	alone 40 lbs	0.9 lb	M-L P C													227,000 seed per pound. Dense cover. Very competitive and is not to be used in mixtures.

Ds2 DETAIL
DISTURBED AREA STABILIZATION (TEMPORARY SEEDING)

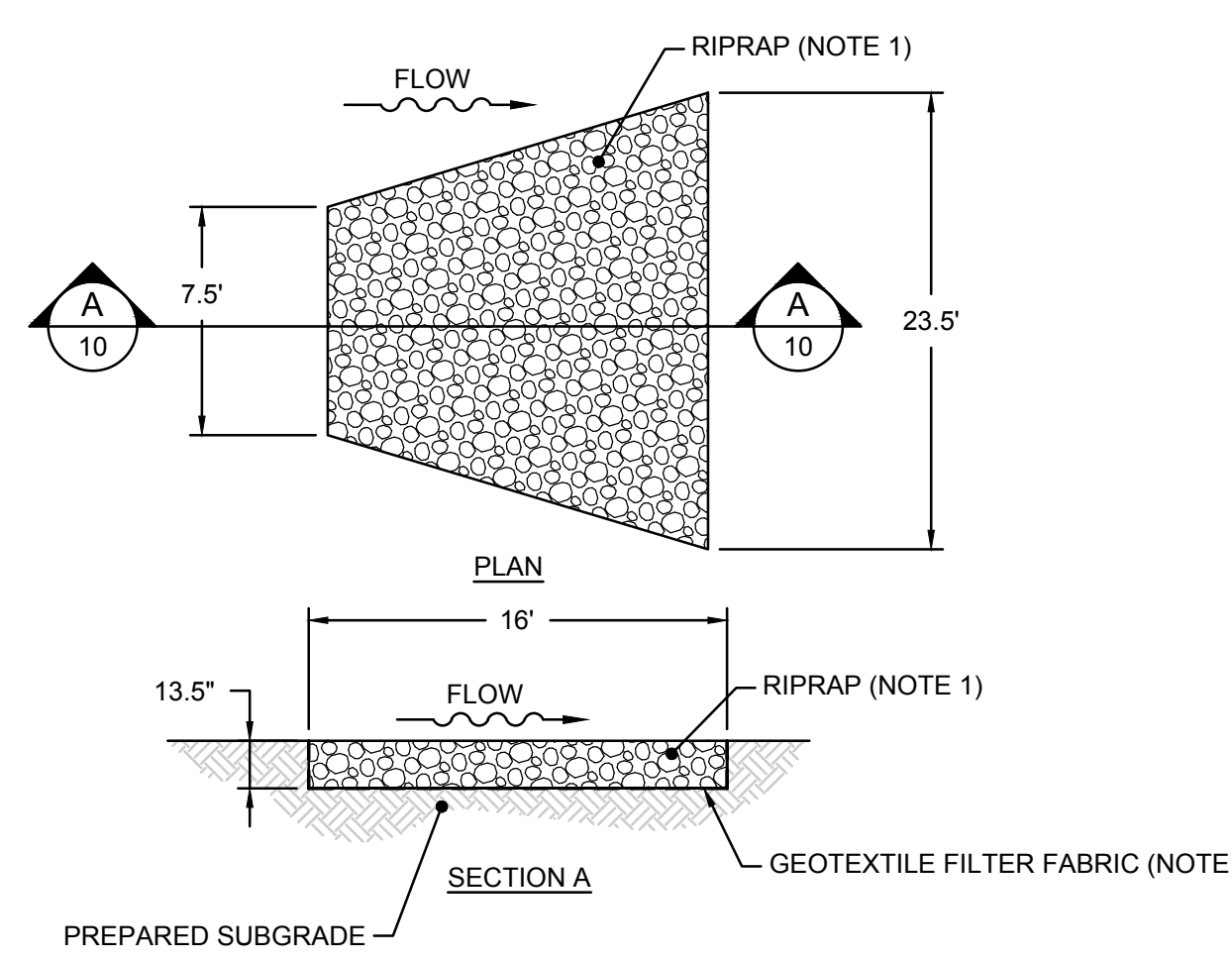
Species	Broadcast Rates		Resource Area	Planting Dates by Resource Area												Remarks
	Rate Per Acre	Pure Live Seed (PLS) Per 1000 sqft		J	F	M	A	M	J	J	A	S	O	N	D	
BERMUDA, COMMON <i>Cynodon dactylon</i>	alone 10 lbs	0.2 lb	P C													1,787,000 seed per pound. Quick cover. Low growing and sod forming. Full sun. Good for athletic fields.
	with other perennials 6 lbs	0.7 lb														
BERMUDA, COMMON <i>Cynodon dactylon</i>	Unhulled seed 10 lbs	0.2 lb	P													Plant with winter annuals.
	with other perennials 6 lbs	0.1 lb	C													Plant with Tall Fescue
LESPEDEZA <i>Ambro virgata</i> <i>Lespedeza virgata</i> DC or <i>Appaloo</i> <i>Lespedeza cuneata</i> (Dumont) G. Don	scanfied 60 lbs	1.4 lb	M-L P C													300,000 seed per pound. Height of growth is 18 to 24 inches. Advantageous in urban areas. Spreading-type growth. New growth has bronze coloration. Mix with weeping lovegrass, common bermuda, bahia, tall fescue or winter annuals. Do not mix with <i>Sericea lespedeza</i> . Slow to develop solid stands. Inoculate seed with EL inoculant.
	unscanfied 75 lbs	1.7 lb	M-L P C													
LESPEDEZA <i>Ambro virgata</i> <i>Lespedeza virgata</i> DC or <i>Appaloo</i> <i>Lespedeza cuneata</i> (Dumont) G. Don	scanfied 60 lbs	1.4 lb	M-L P C													300,000 seed per pound. Height of growth is 18 to 24 inches. Advantageous in urban areas. Spreading-type growth. New growth has bronze coloration. Mix with weeping lovegrass, common bermuda, bahia, tall fescue or winter annuals. Do not mix with <i>Sericea lespedeza</i> . Slow to develop solid stands. Inoculate seed with EL inoculant.
	unscanfied 75 lbs	1.7 lb	M-L P C													
LOVEGRASS, WEEPING <i>Eragrostis curvula</i>	alone 4 lbs	0.1 lb	M-L													1,500,000 seed per pound. Quick cover. Drought tolerant. Grows well with <i>Sericea lespedeza</i> on roadbanks.
	with other perennials 2 lbs	0.05 lb	P C													

Ds3 DETAIL
DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)

TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE
1. Cool season grasses	First	6-12-12	1500 lbs./ac.	50-100 lbs./ac. 1/2
	Second	6-12-12	1000 lbs./ac.	30
	Maintenance	10-10-10	400 lbs./ac.	30
2. Cool season grasses and legumes	First	6-12-12	1500 lbs./ac.	0-50 lbs./ac. 1/
	Second	0-10-10	1000 lbs./ac.	---
	Maintenance	0-10-10	400 lbs./ac.	---
3. Ground covers	First	10-10-10	1300 lbs./ac. 3/	---
	Second	10-10-10	1300 lbs./ac. 3/	---
	Maintenance	10-10-10	1100 lbs./ac.	---
4. Pine seedlings	First	20-10-5	one 21-gram pellet per seedling placed in the closing hole	---
5. Shrub Lespedeza	First	0-10-10	700 lbs./ac.	---
	Maintenance	0-10-10	700 lbs./ac. 4/	---
6. Temporary cover crops seeded alone	First	10-10-10	500 lbs./ac.	30 lbs./ac. 5/
7. Warm season grasses	First	6-12-12	1500 lbs./ac.	50-100 lbs./ac. 2/8
	Second	6-12-12	800 lbs./ac.	50-100 lbs./ac. 2/
	Maintenance	10-10-10	400 lbs./ac.	30 lbs./ac.
8. Warm season grasses and legumes	First	6-12-12	1500 lbs./ac.	50 lbs./ac./6/
	Second	0-10-10	1000 lbs./ac.	---
	Maintenance	0-10-10	400 lbs./ac.	---



Ss DETAIL
SLOPE STABILIZATION
SCALE: NTS



- NOTES:**
- RIPRAP SHALL HAVE AN AVERAGE DIAMETER OF 6-INCHES AND A MAXIMUM DIAMETER OF 9-INCHES.
 - GEOTEXTILE SHALL BE IN ACCORDANCE WITH AASHTO M288-96 SECTION 7.3, SEPARATION REQUIREMENTS, TABLE 3.

St DETAIL
STORM DRAIN OUTLET PROTECTION
SCALE: NTS



REV	DATE	DESCRIPTION	DRN	APP
3	04.30.20	REVISED FOR GEORGIA EPD SUBMITTAL	JHS	MI
2	11.27.19	REVISED PER GEORGIA EPD COMMENTS	JHS	MI
1	06.14.19	REVISED PER GEORGIA EPD COMMENTS	JHS	MI
0	11.16.18	ISSUED FOR PERMIT	JHS	MI

Geosyntec consultants

GEORGIA CERTIFICATION OF AUTHORIZATION (GOA) NO. PEF00260, EXP. 06/30/2020
1255 ROBERTS BOULEVARD, N.W., SUITE 200 KENNESAW, GEORGIA 30144 USA
PHONE: 678.202.9500

TITLE: EROSION AND SEDIMENT CONTROL DETAILS II

PROJECT: CRISP COUNTY POWER COMMISSION ASH POND CLOSURE AND SITE RESTORATION

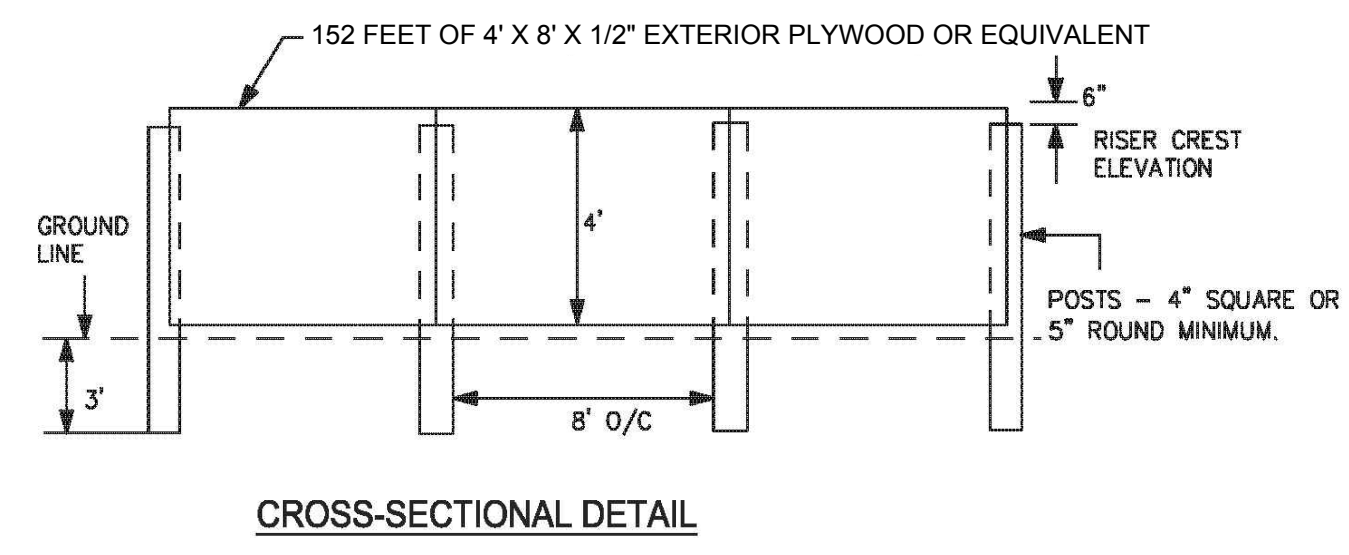
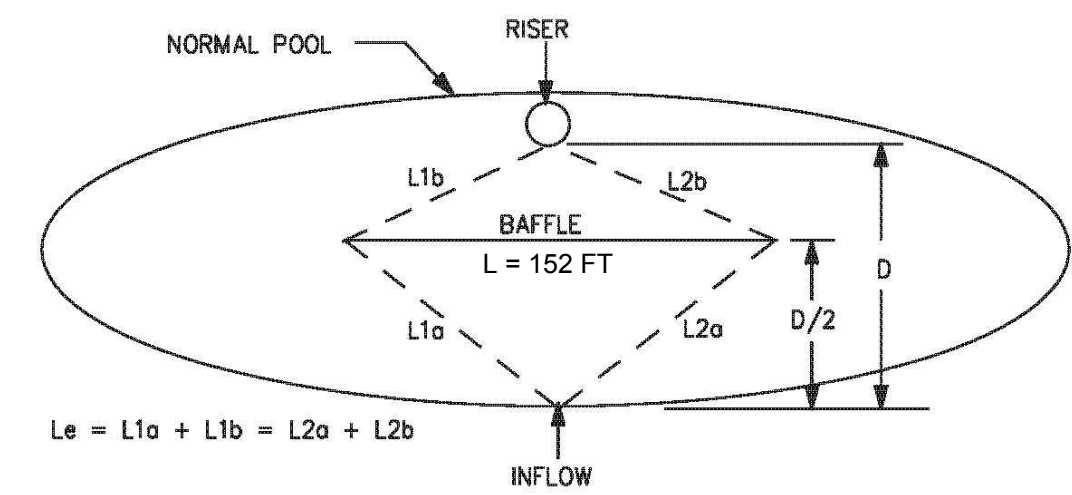
SITE: PLANT CRISP WARWICK, GEORGIA

THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.

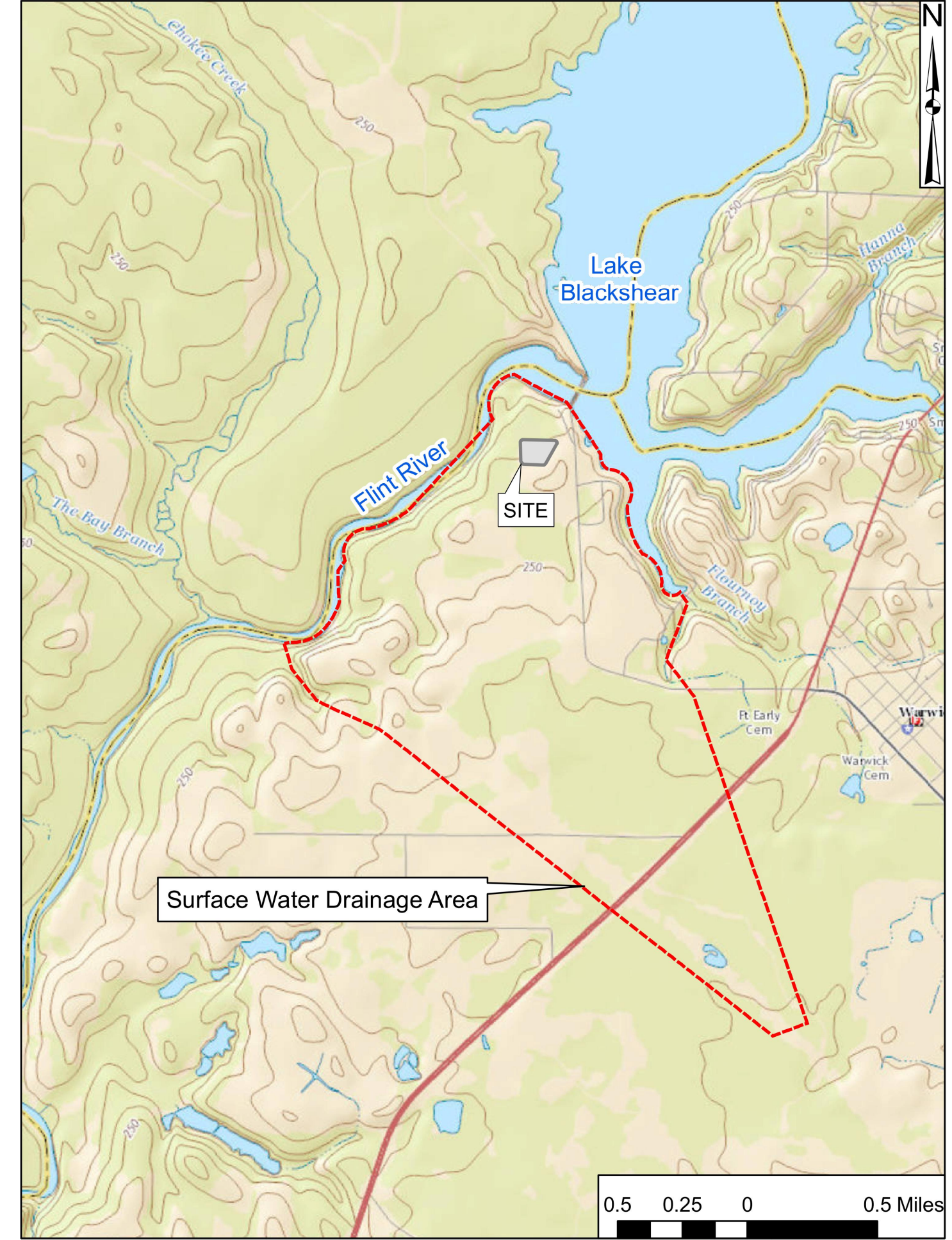
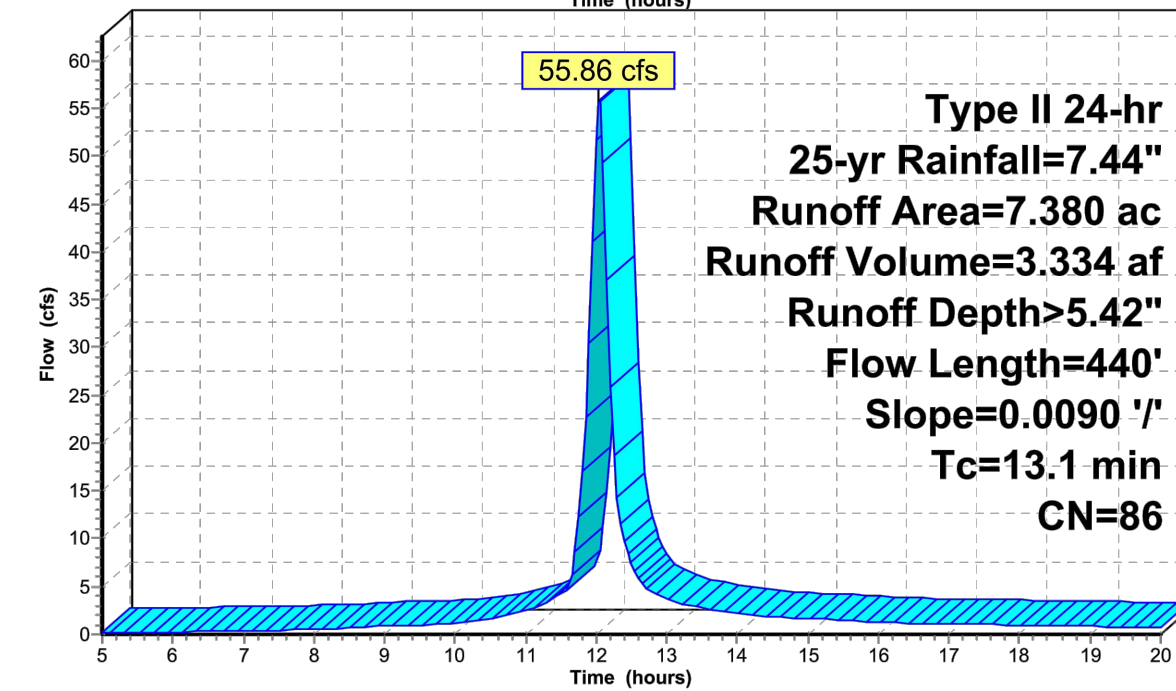
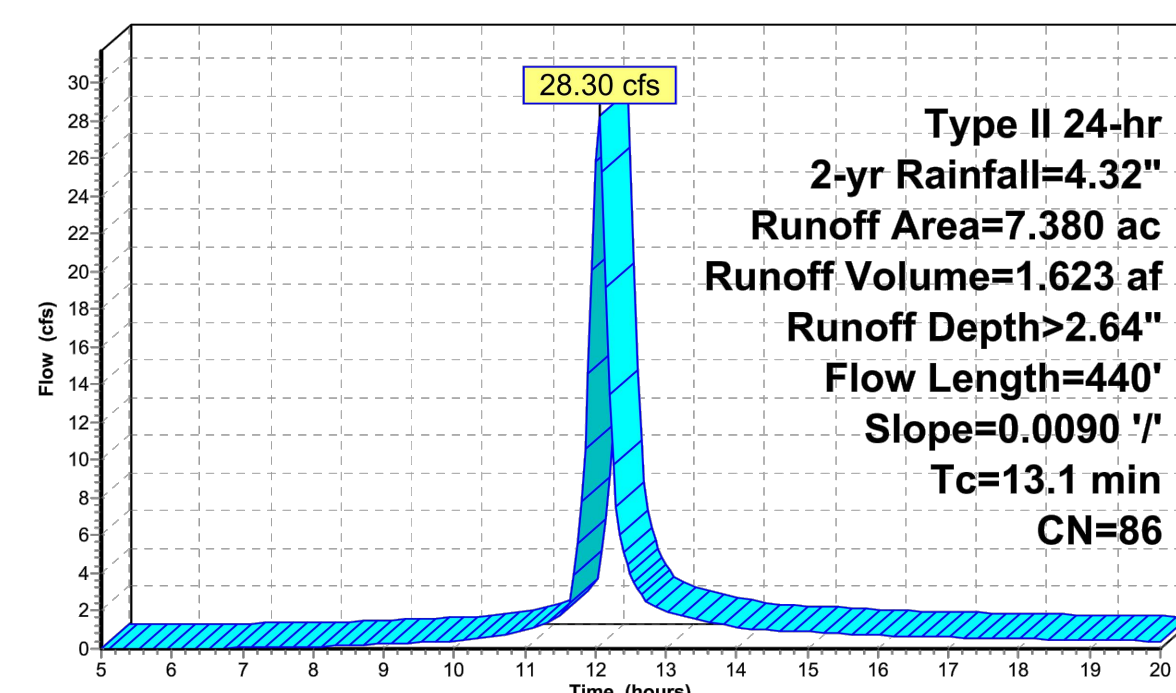
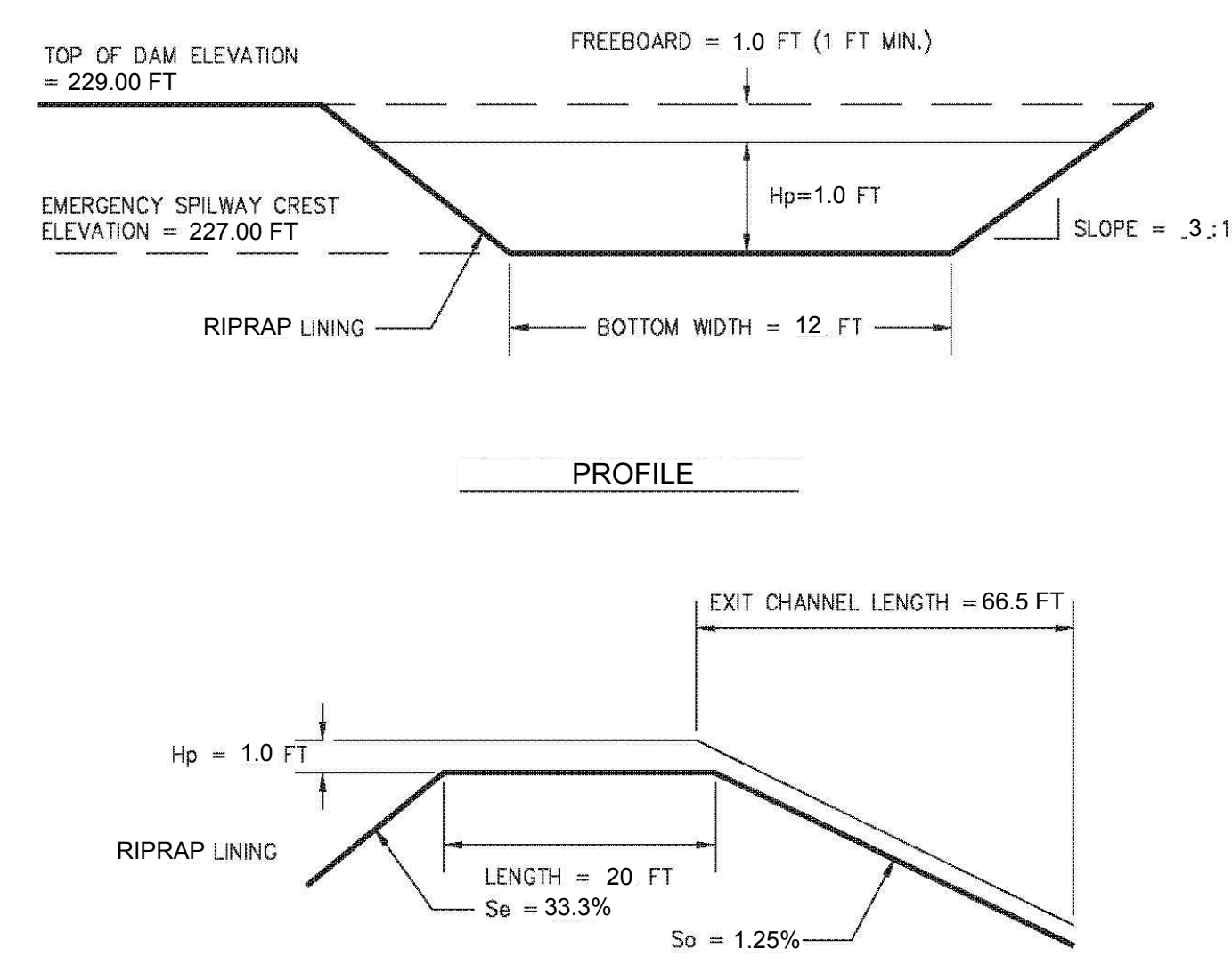
DATE: 04 / 30 / 2020

DESIGN BY: MCS DATE: APRIL 2020
DRAWN BY: JHS PROJECT NO.: GW6152
CHECKED BY: JWE FILE: 6152-008
REVIEWED BY: CG DRAWING NO.: 8 OF 9
APPROVED BY: MI

ISSUED FOR PERMIT



CROSS-SECTIONAL DETAIL OF EMERGENCY SPILLWAY



DRAINAGE AREA MAP
SCALE: AS SHOWN

TEMPORARY SEDIMENT BASIN DESIGN SHEET

Project Name Crisp County
 Basin No. 1
 Total area draining to basin = 7.38 acres
 Disturbed area draining to basin = 7.38 acres

- Volume**
1. Compute minimum required storage volume (V_s).
 $V_s = 67 \text{ cy/ac} \times 7.38 \text{ acres} = 494.5 \text{ cy}$
 2. Compute volume of basin at clean-out (V_c).
 $V_c = 22 \text{ cy/ac} \times 7.38 \text{ acres} = 162.4 \text{ cy}$
 3. Determine elevation corresponding to minimum required storage volume, V_s .
 Minimum riser crest elevation = 226.00 ft (determined by stage/storage relationship)
 4. Determine elevation corresponding to clean-out volume, V_c .
 Clean-out elevation = 223.50 ft (determined by stage/storage relationship)
 Note: Clean-out elevation shall be clearly marked on the riser or marked by a post near the riser.
 5. Compute length of riser.
 Riser length = Minimum elevation of riser crest - Lowest elevation of pipe at riser
 Riser length = 226.00 ft - 222.75 ft
 Riser length = 3.25 ft
- Stormwater Runoff**
6. Compute peak discharge from a 2-yr, 24-hr storm event.
 $Q_p = 28.30$ cfs (Attach runoff computation sheet.)
 7. Compute peak discharge from a 25-yr, 24-hr storm event.
 $Q_{25} = 55.86$ cfs (Attach runoff computation sheet.)

- Surface Area/Configuration Design**
8. Compute minimum basin surface area (SA_{min}).
 $SA_{min} = 0.01 \text{ ac/cfs} \times Q_p = 0.28 \text{ ac}$
 $SA_{min} = 0.01 \text{ ac/cfs} \times Q_{25} = 0.56 \text{ ac}$
 $SA_{min} = 0.28 \text{ ac} + 0.28 \text{ ac} = 0.56 \text{ ac}$
 9. Check available area at elevation of riser crest.
 Available area = 12,500 sf (determined by stage/storage relationship)
 Available area SA_{min} ? Yes No
 10. Compute required length to achieve 2:1 L:W ratio.
 Average width = 80 ft
 Required length = 2 average width
 Required length = 160 ft
 Available length = 50 ft
 2:1 L:W ratio satisfied? Yes No
 If "no", refer to Figure 6-29.2 for baffle designs. Note any required baffles on E&S Plan and include calculations and details for baffle(s).

- Principal Spillway (ps)**
11. Determine maximum principal spillway capacity.
 $Q_p = Q_p = 28.30$ cfs
 12. Compute the vertical distance between the centerline of the outlet pipe and the emergency spillway crest (H).
 $H = 3$ ft
 13. Compute the total pipe length of the principal spillway, L, using Figure 6-29.3.
 $L = [A \cdot (B+C)/2] [Z_u + Z_d] + T + E = [229.00 \cdot (222.75 + 221.75)/2] [3 + 3] + 8 + 51.5$
 $L = 100$ ft

TEMPORARY SEDIMENT BASIN DESIGN SHEET

Project Name Crisp County
 Page 2

14. Determine diameter of principal spillway (D_p) and flow through the principal spillway (Q) from Table 6-29.1 using H and Q_p .
 $D_p = 30$ in. $Q = 32.6$ cfs (value directly from table)
15. Compute actual flow through the principal spillway, using Table 6-29.1 to determine the correction factor for pipe length, L.
 $Q_a = Q \cdot \text{correction factor} = 32.6 \text{ cfs} \cdot 0.90$
 $Q_a = 29.34$ cfs
16. Compute riser diameter (D_r).
 $D_r = 1.5 \cdot D_p$
 $D_r = 1.5 \cdot 30$ in.
 $D_r = 45$ in.
 $D_r = 48$ in.
17. Compute trash rack diameter (D_t).
 $D_t = 1.4 \cdot D_r$
 $D_t = 1.4 \cdot 48$ in.
 $D_t = 67.2$ in.
 $D_t = 72$ in.
18. Determine the minimum distance between the riser crest and the emergency spillway crest, h, using Table 6-29.2
 D_p and Q_a .
 $h = 10$ ft

- Concrete Riser Base Design**
19. Determine the volume of concrete per vertical foot of riser height needed, from Table 6-29.3 to prevent flotation.
 Required volume of concrete per vertical foot = 10.98 cf/v.f.
 20. Compute total volume of concrete required.
 Total required volume of concrete = Required volume per vertical foot * Riser length
 Total required volume of concrete = 10.98 cf/v.f. * 3.25 ft
 Total volume of concrete required = 35.7 cf
 21. Assume base thickness, B (usually 18").
 $B = 18$ in = 1.5 ft
 22. Compute required surface area.
 Required surface area = Total volume required / B
 Required surface area = 35.7 cf / 1.5 ft
 Required surface area = 23.8 sf
 23. Compute riser base length (l) and width (w) (assume square base).
 $l = w = (\text{required surface area})^{1/2}$
 $l = w = (23.8 \text{ sf})^{1/2}$
 $l = w = 4.87$ ft = 12 in/ft * 4.87 ft = 585 in

- Anti-Seep Collar Design**
24. Determine if anti-seep collar is required. If yes, to any of the following conditions, a collar is required:
 The settled height of the dam is greater than 15 feet.
 The principal spillway diameter (D_p) is smooth pipe larger than 8".
 The principal spillway diameter (D_p) is corrugated metal pipe larger than 12".
 25. Determine size of anti-seep collar required.
 18-inch projection (for heads (H) less than or equal to 10 feet).
 24-inch projection (for heads (H) greater than 10 feet).

- Emergency Spillway (es)**
26. Compute minimum capacity of emergency spillway (Q_{es})
 $Q_{es} = Q_{25} - Q_p = 55.86 \text{ cfs} - 28.34 \text{ cfs}$
 $Q_{es} = 26.52 \text{ cfs}$

TEMPORARY SEDIMENT BASIN DESIGN SHEET

Project Name Crisp County
 Page 3

27. Determine stage (H_p), bottom width (b), velocity (V) and minimum exit slope (S) using Table 6-29.4 and Q_{es} .
 $H_p = 1.0$ ft $b = 12$ ft $V = 4.0$ fps $S = 3.0$ %
28. Actual entrance channel slope, $S_e = 33.3$ %
29. Actual exit channel slope, $S_e = 1.25$ %
 Note: If S_e is steeper than S (from Table 6-29.4), then the velocity in the exit channel will increase.
- a.) Calculate new exit velocity (V_e)
 $V_e = V (S_e/S)^{0.5} = 4.0 \text{ fps} \cdot (1.25 / 3.0)^{0.5}$
 $V_e = 3.08$ fps
 Note: Refer to Channel Stabilization (Ch) to determine the proper lining for the emergency spillway.
 Grass Rip-rap Concrete

- Design Elevations**
30. Riser crest elevation = 226.00 ft
 31. Compute minimum emergency spillway crest elevation.
 Minimum emergency spillway crest elevation = Riser crest elevation + h
 Minimum emergency spillway crest elevation = 226.00 ft + 1.0 ft
 Minimum emergency spillway crest elevation = 227.00 ft
 32. Determine design high water elevation
 Design high water elevation = Minimum emergency spillway crest elevation + Stage elevation (H_p)
 Design high water elevation = 227.00 ft + 1.0 ft
 Design high water elevation = 228.00 ft
 33. Determine elevation of top of dam
 Elevation of top of dam = Design high water elevation + 1 ft freeboard
 Elevation of top of dam = 228.00 ft + 1 ft
 Elevation of top of dam = 229.00 ft

PLEASE NOTE THAT DESIGN VALUES DETERMINED BY THIS SHEET REPRESENT THE MINIMUM REQUIREMENTS FOR A TEMPORARY SEDIMENT BASIN.

NOTE:

1. TOTAL DISTURBED AREA IS 9.44 ACRES. DISTURBED AREA DRAINING TO THE TEMPORARY SEDIMENT BASIN IS 7.38 ACRES. OUTBOARD SLOPES OF THE POND BERMS AND THE CONSTRUCTION ROAD DO NOT DRAIN INTO THE TEMPORARY SEDIMENT BASIN AND WILL BE STABILIZED AS SOON AS PRACTICABLE. WHEN DISTURBED, SEDIMENT STORAGE FOR THESE AREAS IS PROVIDED BY THE PERIMETER SILT FENCE.

REV	DATE	DESCRIPTION	DRN	APP
3	04.30.20	REVISED FOR GEORGIA EPD SUBMITTAL	JHS	MI
2	11.27.19	REVISED PER GEORGIA EPD COMMENTS	JHS	MI
1	06.14.19	REVISED PER GEORGIA EPD COMMENTS	JHS	MI
0	11.16.18	ISSUED FOR PERMIT	JHS	MI

Geosyntec consultants

GEORGIA CERTIFICATION OF AUTHORIZATION
 (COA) NO. PEF00260, EXP. 06/30/2020
 1255 ROBERTS BOULEVARD, N.W., SUITE 200
 KENNESAW, GEORGIA 30144 USA
 PHONE: 678.202.9500

TITLE: **EROSION AND SEDIMENT CONTROL DETAILS III**

PROJECT: **CRISP COUNTY POWER COMMISSION ASH POND CLOSURE AND SITE RESTORATION**

SITE: **PLANT CRISP WARWICK, GEORGIA**

DESIGN BY: MCS	DATE: APRIL 2020
DRAWN BY: JHS	PROJECT NO.: GW6152
CHECKED BY: JWE	FILE: 6152-009
REVIEWED BY: CG	DRAWING NO.: 9 OF 9
APPROVED BY: MI	

GEORGIA
 DEPARTMENT OF NATURAL RESOURCES
 ENVIRONMENTAL PROTECTION DIVISION

Approved
 Solid Waste Management Program

Approved By: _____

ISSUED FOR PERMIT

Sd3

DETAIL
TEMPORARY SEDIMENT BASIN
 SCALE: NTS

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