GEORGIA POWER COMPANY
PLANT MCDONOUGH - ATKINSON
INACTIVE SURFACE IMPOUNDMENT
ASH PONDS NO. 2, 3 & 4 CLOSURE DRAWINGS
COBB COUNTY, GEORGIA
NOVEMBER 2020

LIST OF SHEETS

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4	ESTIMATED BOTTOM OF CCR PLAN	0	2018-NOV
5	PERMIT BOUNDARY AP-2, 3, 4	0	2020-NOV
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19	CHANNEL PROFILE 2 0F 3	0	2020-NOV
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24	NORTH PERIMETER CHANNEL DETAILS	0	2020-NOV
25	NORTH AND SOUTH DOWNSLOPE CHANNEL PLANS	0	2020-NOV
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27	NORTH DOWNSLOPE CHANNEL PROFILE	0	2020-NOV
28	CLOSURE DETAILS - SHEET 1 OF 2	0	2020-NOV
29	CLOSURE DETAILS - SHEET 2 OF 2	0	2020-NOV
30	SURFACE WATER MANAGEMENT DETAILS - SHEET 1 OF 5	0	2020-NOV
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32	SURFACE WATER MANAGEMENT DETAILS - SHEET 3 OF 5	0	2018-NOV
33	SURFACE WATER MANAGEMENT DETAILS - SHEET 4 OF 5	0	2018-NOV
34	SURFACE WATER MANAGEMENT DETAILS - SHEET 5 OF 5	0	2020-NOV
35	CONTACT WATER MANAGEMENT AND INSTRUMENTATION PLAN	0	2020-NOV
36A	POST CLOSURE SOLAR DEVELOPMENT	0	2020-NOV
36B	GENERAL ARRANGEMENT AND CABLE TRAY LAYOUT	0	2020-NOV
36C	SOLAR FACILITY SECTION AND DETAILS	0	2020-NOV
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38	EXISTING CONDITIONS - AP-2 CLOSURE	0	2018-NOV
39	POTENTIAL FUTURE DEVELOPMENT AP-2	0	2018-NOV
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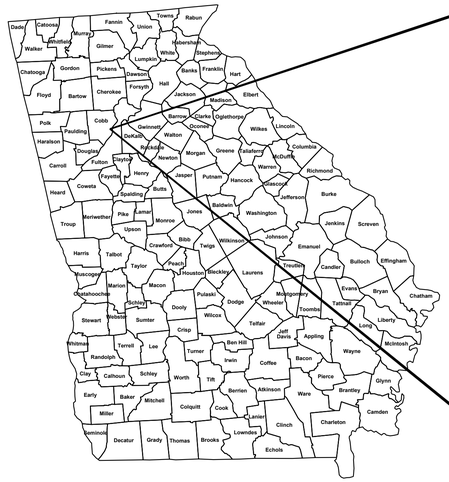
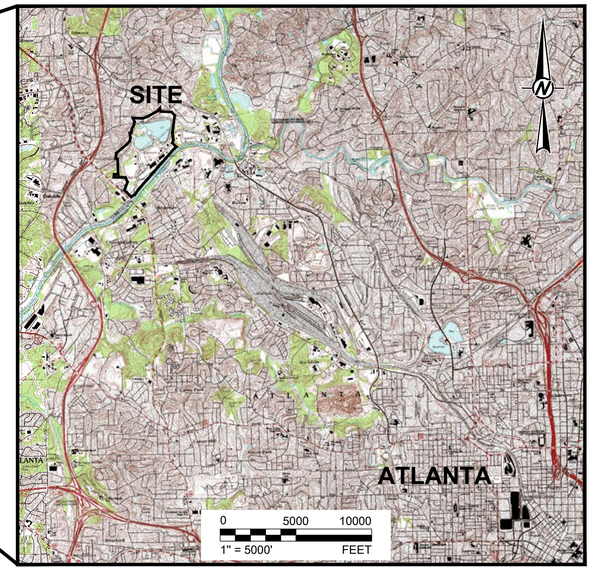
P470-5(2)	ASH POND 2, 3, AND 4 PERMIT BOUNDARY SURVEY (1 OF 2)	0	2018-JUN
P470-5(3)	ASH POND 2, 3, AND 4 PERMIT BOUNDARY SURVEY (2 OF 2)	0	2018-JUN
P281-4	BOUNDARY SURVEY FOR PLANT MCDONOUGH-ATKINSON (1 OF 2)	0	2018-JUN
P281-4	BOUNDARY SURVEY FOR PLANT MCDONOUGH-ATKINSON (2 OF 2)	0	2018-JUN



SITE VICINITY MAP



REF: USGS 7.5 MINUTE SERIES TOPOGRAPHIC QUADRANGLE:
MABLETON, GA 1992 & NORTHWEST ATLANTA, GA 1993

SITE LOCATION MAP

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

CONTACT INFORMATION

CONSULTANT

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TELEPHONE: 770-496-1893

PREPARED BY:

GOLDER

RESPONSIBLE OFFICIAL

GENERAL MANAGER
ENVIRONMENTAL AFFAIRS
GEORGIA POWER COMPANY
241 RALPH McGILL BLVD
BIN 10221
ATLANTA, GA 30308
TELEPHONE: 404-506-6505

PROPERTY OWNER

GEORGIA POWER COMPANY
241 RALPH McGILL BLVD
ATLANTA, GA 30308
TELEPHONE: 404-506-6505

PREPARED FOR:

Georgia Power

GEORGIA REGISTERED No. PE034749 PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
TITLE SHEET AND DRAWING INDEX

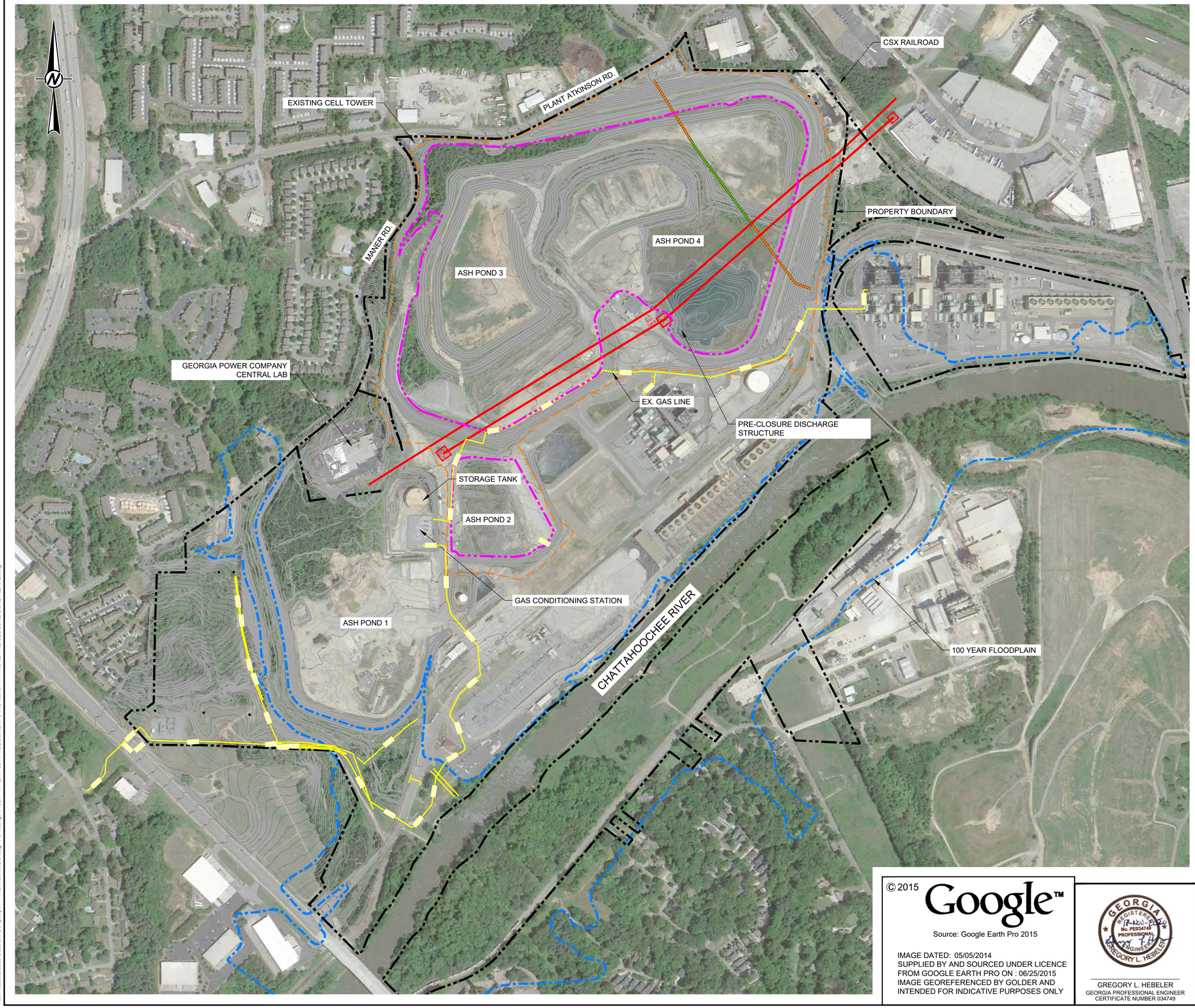
CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 1

0 1 in
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

Path: \\atlanta\cadd\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 01 TITLE SHEET.dwg



LEGEND

- PRE-CLOSURE CONTOURS
- PROPERTY BOUNDARY MARKERS/LIMITS
- EXISTING STREAM DIVERSION CULVERT UNDER EMBANKMENTS
- EXISTING STREAM DIVERSION CULVERT-CONCRETE ENCASED SECTION
- EXISTING OVERHEAD ELECTRIC LINES TO REMAIN & TO BE PROTECTED
- APPROXIMATE PRE-CLOSURE ASH LIMITS
- GAS — EXISTING GAS LINE
- PERMIT BOUNDARY AP-2, AP-3/4
- 100 YEAR FLOODPLAIN

REFERENCES

1. THE PRE-CLOSURE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA POWER LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."

2. REVISED PRE-CLOSURE TOPOGRAPHY & CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA POWER LAND DEPARTMENT. THE DATA SHOWN IS AN UPDATE TO THE PLANS DONE ON 10-16-2012 & THE ONSITE CHANGES SINCE THAT 2012 SURVEY. THE REVISED SURVEY WAS DONE ON 1-12-2016 & MERGED WITH THE DATA ON 10-16-2012. GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016 - LAND ENG. PROJECT # 20160020.

3. IMAGE TAKEN FROM GOOGLE EARTH PRO ON JUNE 25, 2015. IMAGE DATED MAY 05. 2014.

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

0 300 600
1" = 300' FEET

© 2015 Google™
Source: Google Earth Pro 2015
IMAGE DATED: 05/05/2014
SUPPLIED BY AND SOURCED UNDER LICENCE FROM GOOGLE EARTH PRO ON : 06/25/2015
IMAGE GEOREFERENCED BY GOLDER AND INTENDED FOR INDICATIVE PURPOSES ONLY

GEORGIA REGISTERED No. PE034744 PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
PRE-CLOSURE CONDITIONS SITE MAP

CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449
REV. 0
SHEET 2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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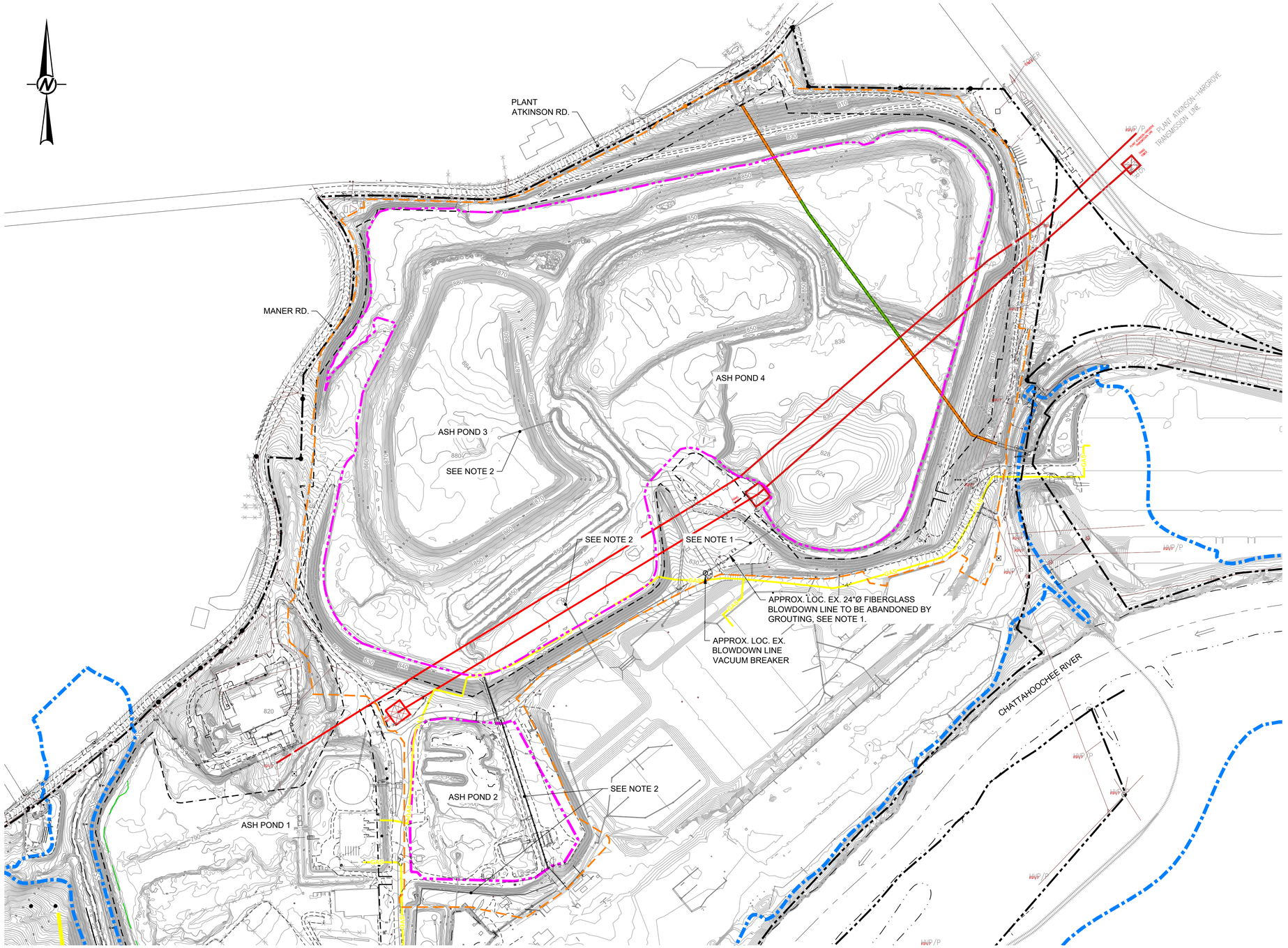

LEGEND

- PRE-CLOSURE CONTOURS
- PROPERTY BOUNDARY MARKERS/LIMITS
- EXISTING STREAM DIVERSION CULVERT UNDER EMBANKMENTS
- EXISTING STREAM DIVERSION CULVERT-CONCRETE ENCASED SECTION
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- APPROXIMATE PRE-CLOSURE ASH LIMITS
- EXISTING GAS LINE
- PERMIT BOUNDARY AP-2, AP-3/4
- 100 YEAR FLOODPLAIN

NOTES

1. AP-4 SPILLWAY OUTLET STRUCTURE TO BE DEMOLISHED AND COVERED WITH SOIL FILL 3 FEET MINIMUM BELOW CLOSURE COVER SYSTEM. EXISTING BLOWDOWN LINE TO BE ABANDONED BY GROUTING TO THE BLOWDOWN VACUUM BREAKER.

2. PIPES TO BE ABANDONED VIA A COMBINATION OF REMOVAL AND GROUTING OF REMAINING PORTIONS.

REFERENCES

1. THE PRE-CLOSURE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12.

2. REVISED PRE-CLOSURE TOPOGRAPHY & CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA POWER LAND DEPARTMENT. THE DATA SHOWN IS AN UPDATE TO THE PLANS DONE ON 10-16-2012 & THE ONSITE CHANGES SINCE THAT 2012 SURVEY. THE REVISED SURVEY WAS DONE ON 1-12-2016 & MERGED WITH THE DATA ON 10-16-2012. GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016.

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

0 200 400
1" = 200' FEET

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
PRE-CLOSURE CONDITIONS

GEORGIA REGISTERED PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CONSULTANT
GOLDER

YYYY-MMM	2018-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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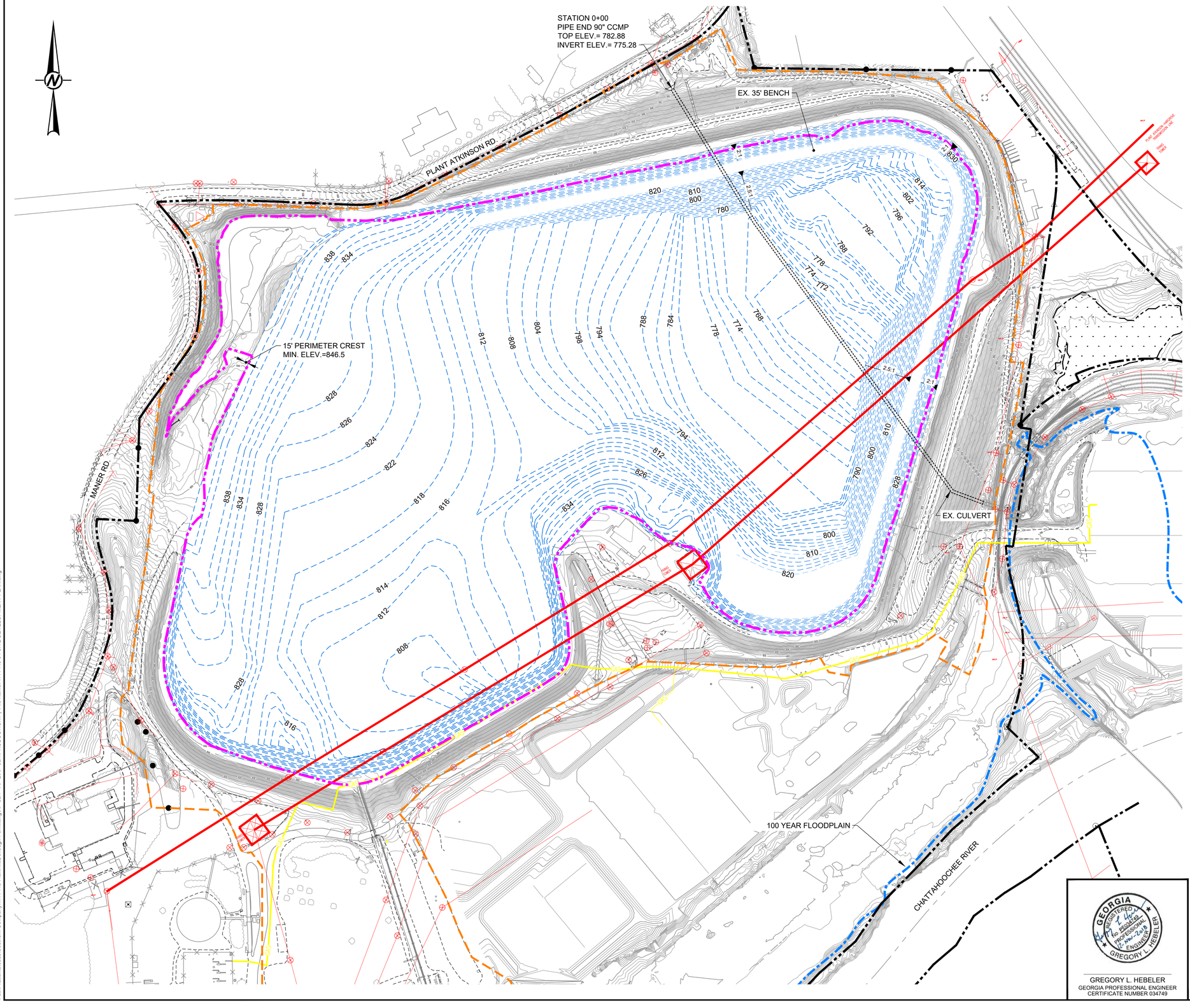

LEGEND

- PRE-CLOSURE CONTOURS
- PROPERTY BOUNDARY MARKERS/LIMITS
- ESTIMATED BOTTOM OF CCR CONTOURS
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- APPROXIMATE PRE-CLOSURE ASH LIMITS
- EXISTING GAS LINE
- PERMIT BOUNDARY AP-2, AP-3/4
- 100 YEAR FLOODPLAIN
- WETLANDS

NOTE

1. ESTIMATED BOTTOM OF CCR CONTOURS BASED ON A COMBINATION OF 1954 USGS TOPOGRAPHY (ACCOUNTING FOR ESTIMATED BORROW FROM WITHIN ASH POND LIMITS), AND GOLDER GEOTECHNICAL INVESTIGATION. DEPICTED INTERIOR DAM GRADING BELOW EXISTING EXPOSED LIMITS IS INFERRED FROM HISTORIC SOUTHERN COMPANY DAM DESIGN TYPICAL SECTIONS.

REFERENCES

1. THE PRE-CLOSURE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12.

2. REVISED PRE-CLOSURE TOPOGRAPHY & CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA POWER LAND DEPARTMENT. THE DATA SHOWN IS AN UPDATE TO THE PLANS DONE ON 10-16-2012 & THE ONSITE CHANGES SINCE THAT 2012 SURVEY. THE REVISED SURVEY WAS DONE ON 1-12-2016 & MERGED WITH THE DATA ON 10-16-2012. GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016.

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

0 150 300
1" = 150' FEET

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
ESTIMATED BOTTOM OF CCR PLAN

GEORGIA REGISTERED PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CONSULTANT
GOLDER

YYYY-MMM	2018-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 4

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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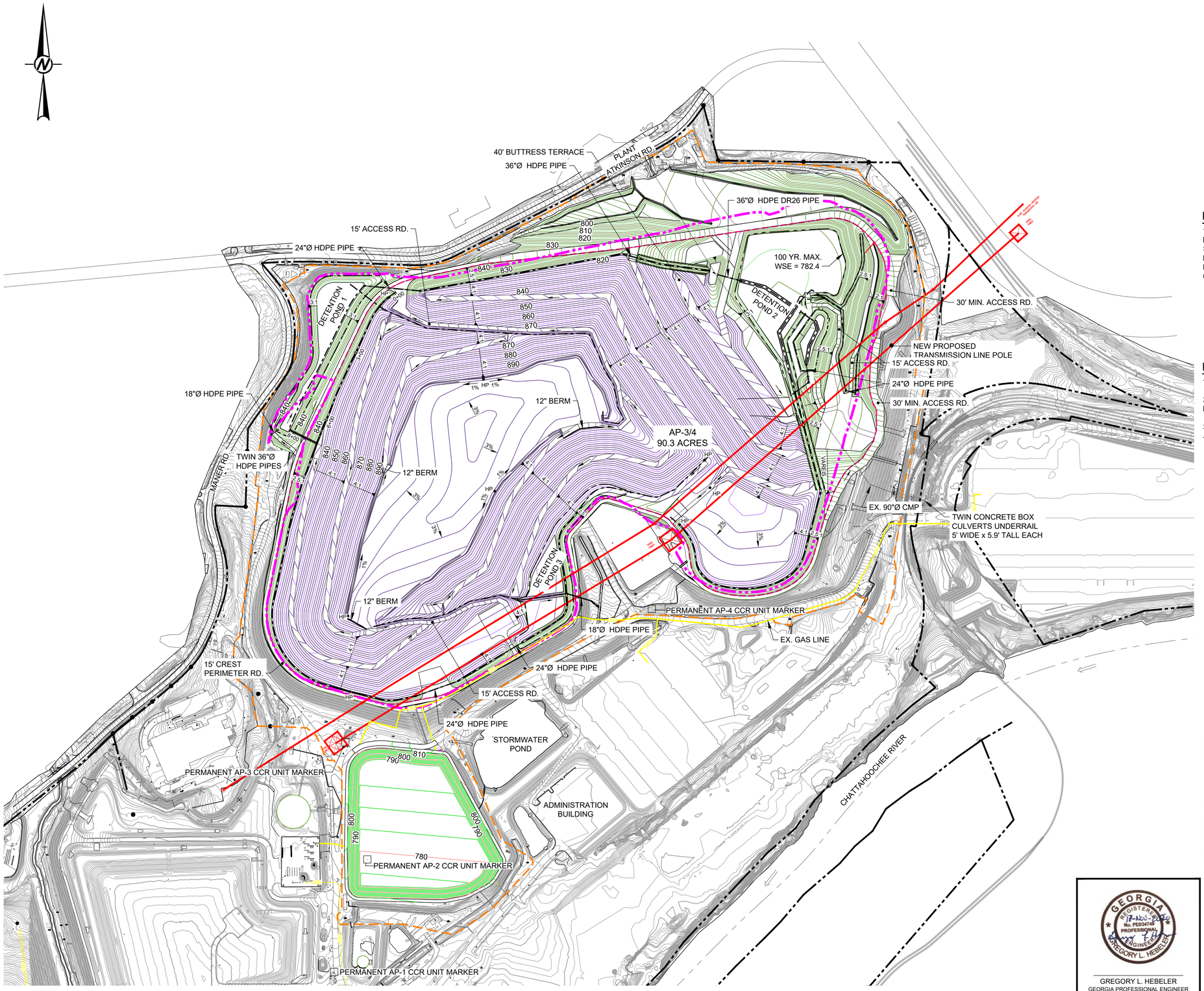

LEGEND

- EXISTING CONTOURS (MARCH 2018)
- PROPERTY BOUNDARY MARKERS/LIMITS
- 810 — FINAL CLOSURE CONTOURS (SEE NOTE 2)
- 810 — CLOSURE CONTOURS OUTSIDE LIMITS OF CCR
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 2, 3, & 4 AREA TO REMAIN & TO BE PROTECTED
- APPROXIMATE PRE-CLOSURE ASH LIMITS
- GAS — EXISTING GAS LINE
- PERMIT BOUNDARYAP-2, AP-3/4

REFERENCES

1. THE EXISTING TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 03-18-2018. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 03-18-2018.

NOTES

1. FINAL CLOSURE CONTOURS (PURPLE) DELINEATE FINAL LIMITS OF ASH.
2. CLOSURE CONTOURS OUTSIDE LIMITS OF CCR (GREEN) DELINEATE AREAS WHERE ANY EXISTING ASH IS TO BE COMPLETELY REMOVED.
3. PERMANENT MARKERS FOR EACH CCR UNIT WERE INSTALLED AT PLANT MCDONOUGH ON JULY 31, 2015.

0 200 400
1" = 200' FEET

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

CLIENT
GEORGIA POWER COMPANY

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
PERMIT BOUNDARY AP-2, AP-3/4

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	RMS
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REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 5

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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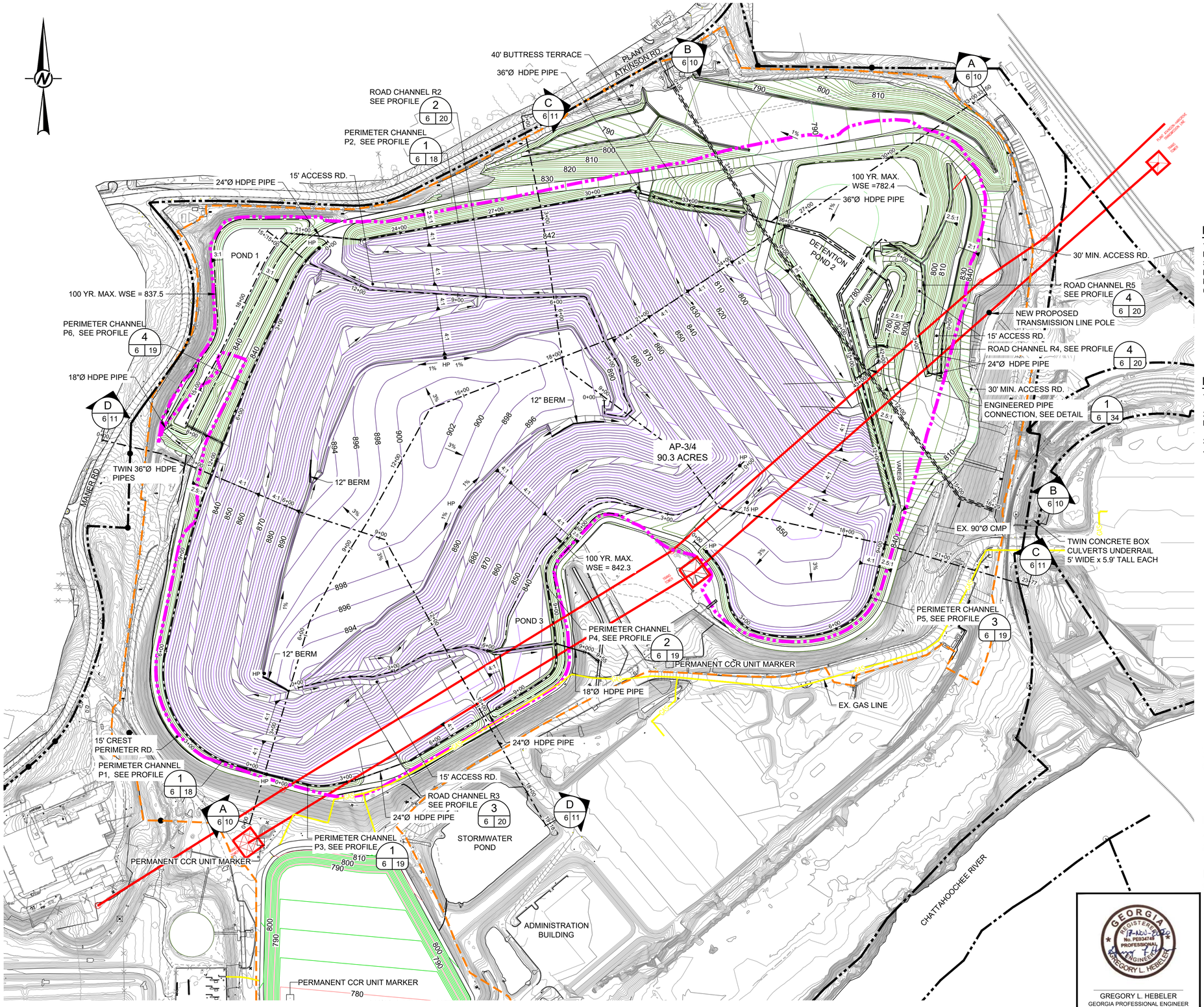

LEGEND

- EXISTING CONTOURS (MARCH 2018)
- PROPERTY BOUNDARY MARKERS/LIMITS
- 810 — FINAL CLOSURE CONTOURS (SEE NOTE 2)
- 810 — CLOSURE CONTOURS OUTSIDE LIMITS OF CCR
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 2, 3, & 4 AREA TO REMAIN & TO BE PROTECTED
- APPROXIMATE PRE-CLOSURE ASH LIMITS
- GAS — EXISTING GAS LINE
- PERMIT BOUNDARY AP-2, AP-3/4

REFERENCES

1. THE EXISTING TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 03-18-2018. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 03-18-2018.

NOTES

1. FINAL CLOSURE CONTOURS (PURPLE) DELINEATE FINAL LIMITS OF CCR.
2. CLOSURE CONTOURS OUTSIDE LIMITS OF CCR (GREEN) DELINEATE AREAS WHERE ANY EXISTING ASH IS TO BE COMPLETELY REMOVED.
3. PERMANENT MARKERS FOR EACH CCR UNIT WERE INSTALLED AT PLANT MCDONOUGH ON JULY 31, 2015.

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

0 150 300
1" = 150' FEET

GEORGIA REGISTERED No. PE034749 PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
FINAL COVER GRADING AND SURFACE WATER MANAGEMENT PLAN

CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	AVR
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 6

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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STATION 0+00
PIPE END 90" CCMP
TOP ELEV.= 782.88
INVERT ELEV.= 775.28

MATERIAL STORAGE AREA

40' BUTTRESS TERRACE

36"Ø HDPE PIPE

20' DRAINAGE TERRACE (TYP.), SEE DETAIL 4 | 7 | 29

15' ACCESS RD. (GEOCELL & CURBING), SEE DETAIL 2 | 7 | 29 11 | 7 | 29

NORTH GEOCELL & CURBING (TOE TERMINATION), SEE DETAIL 12 | 7 | 29

24"Ø HDPE PIPE

RISER STRUCTURE

30' ACCESS RD.

36"Ø HDPE PIPE

DETENTION POND 1

DETENTION POND 2

DETENTION POND 3

20' ACCESS RD.

EX. 35' BENCH

15' ACCESS RD.

CROSSOVER STRUCTURE

NEW PROPOSED TRANSMISSION LINE POLE

30' MIN. ACCESS RD.

15' ACCESS RD.

20' ACCESS RD.

MANEUVER RD

RIP RAP APRON

12' ACCESS RD.

18"Ø HDPE PIPE

15' ACCESS RD.

TWIN 36"Ø HDPE PIPES

12" BERM, SEE NOTE 4

12" BERM, SEE NOTE 4

12" BERM, SEE NOTE 4

24"Ø HDPE PIPE

RISER STRUCTURE

ENGINEERED PIPE CONNECTION

30' MIN. ACCESS RD.

TWIN CONCRETE BOX CULVERTS UNDER RAILROAD 5' WIDE x 5.9' TALL EACH

EX. 90"Ø CMP

PERIMETER CHANNEL TO ARTICULATED BLOCK TRANSITION, SEE DETAIL 3 | 7 | 28

15' ACCESS RD.

GEOCELL & CURBING (CREST TERMINATION) SEE DETAIL 12 | 7 | 29

18"Ø HDPE PIPE

CONCRETE FLUME TIE-IN

RIP RAP APRON

RISER STRUCTURE

15' PERIMETER CREST RD., SEE DETAIL 1 | 7 | 29

SOUTH GEOCELL & CURBING (TOE TERMINATION), SEE DETAIL 12 | 7 | 29

24"Ø HDPE PIPE

15' ACCESS RD. (GEOCELL & CURBING), SEE DETAIL 2 | 7 | 29 11 | 7 | 29

24"Ø HDPE PIPE

TYPE 3 RIP RAP ON CLOSURE TURF WITH NO INFILL (TYP.), SEE DETAIL 1 | 7 | 29

GEOCELL & CURBING (CREST TERMINATION), SEE DETAIL 12 | 7 | 29

STORMWATER POND

STORAGE AND WATER TREATMENT AREA

LIMITS OF CLOSURE TURF

EX. GAS LINE

LEGEND

- EXISTING CONTOURS (MARCH 2018)
- PROPERTY BOUNDARY MARKERS/LIMITS
- FINAL CLOSURE CONTOURS
- CLOSURE CONTOURS OUTSIDE FINAL LIMITS OF CCR
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- LIMITS OF CLOSURE TURF
- EXISTING GAS LINE
- PERMIT BOUNDARY AP-2, AP-3/4
- HYDRO TURF OVER SUPERGRIPNET
- TYPE 3 RIP-RAP
- NO.1 STONE OR TYPE 3 RIP-RAP
- NO.4 STONE BALLAST
- ARMORFLEX ON CLOSURE TURF OVER SUPERGRIPNET (NO SAND INFILL)
- TYPE 1 RIP-RAP
- CLOSURE TURF OVER SUPERGRIPNET (SEE NOTE 1)
- CLOSURE TURF OVER MICROSPIKE
- GEO-CELL ACCESS ROAD
- GRAVEL ROAD OVER CLOSURE TURF WITH EDGE CURB
- GRAVEL ROAD OUTSIDE OF CLOSURE TURF

NOTES

1. SUPERGRIPNET TO BE AGRU 50 MIL LLDPE OR AGRU 50 MIL LLDPE MICRODRAIN.
2. MICROSPIKE TO BE AGRU 40 MIL MINIMUM LLDPE GEOMEMBRANE LINER.
3. CLOSURE TURF TO CONTAIN SAND INFILL MINIMUM 1/2" THICKNESS UNLESS OTHERWISE INDICATED.
4. 12" BERM / CURB TO BE FIELD FORMED WITH CLOSURE TURF.
5. SEE SHEETS 28 AND 29 FOR ARMORING AND COVER DETAILS.

REFERENCES

1. THE EXISTING SITE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 03-18-2018. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 03-18-2018."

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

0 150 300
1" = 150' FEET

GEORGIA REGISTERED No. PE034749 PROFESSIONAL ENGINEER
GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP - 3/4 FINAL COVER ARMORING DELINEATION PLAN

CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	AVR
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 7

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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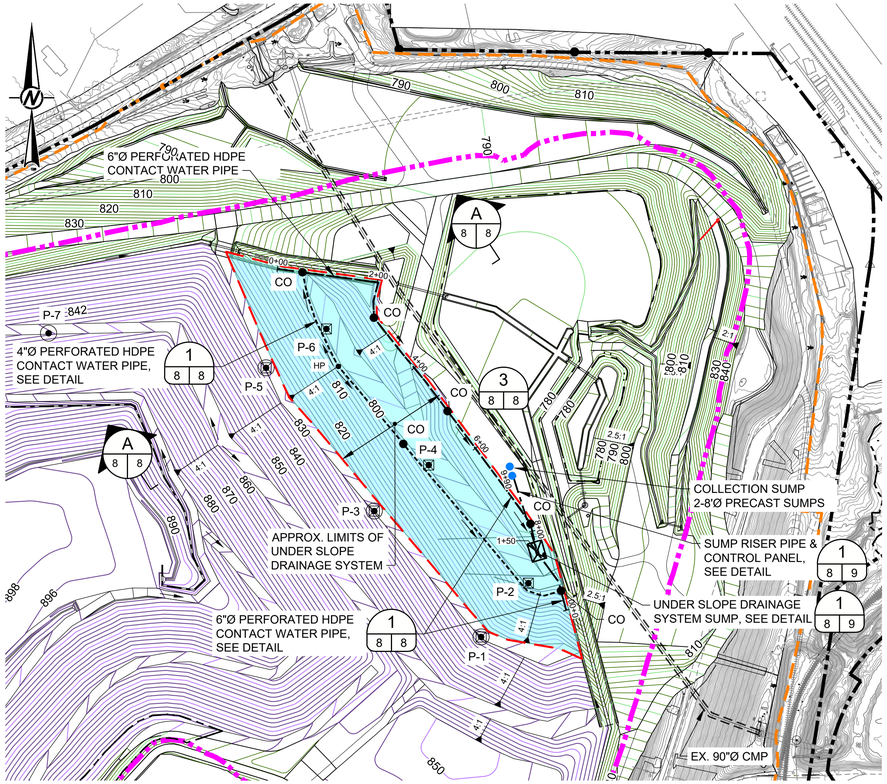
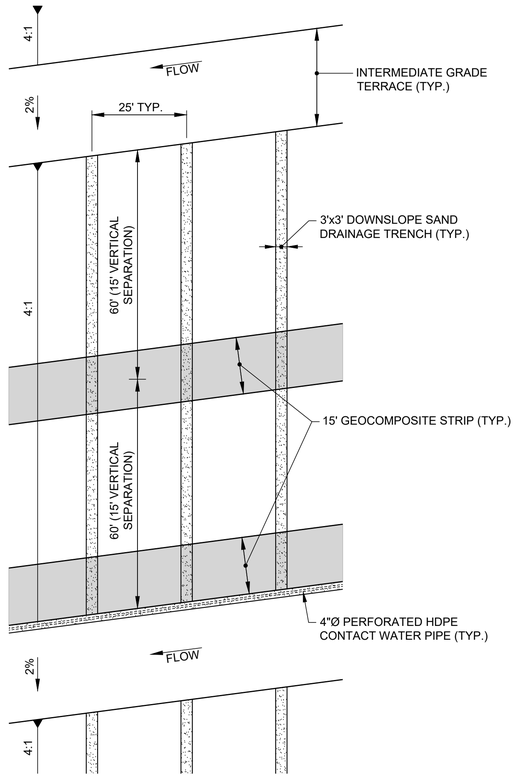


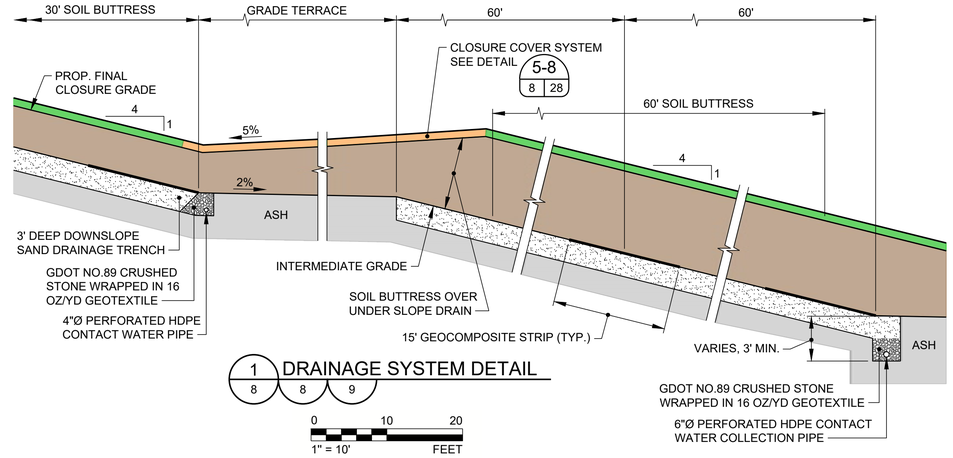
UNDER SLOPE DRAINAGE SYSTEM

0 150 300
1" = 150' FEET



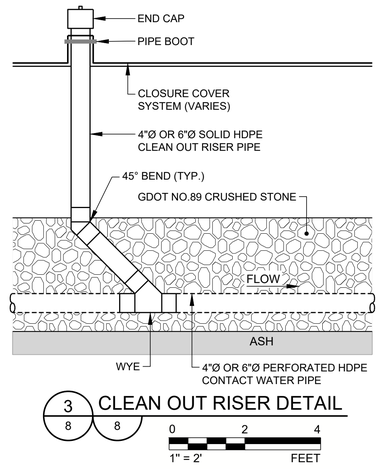
B DRAINAGE SYSTEM FRONT VIEW B-B

0 20 40
1" = 20' FEET



1 DRAINAGE SYSTEM DETAIL

0 10 20
1" = 10' FEET



3 CLEAN OUT RISER DETAIL

0 2 4
1" = 2' FEET

NOTES

1. THE PORTIONS OF THE MAIN EXCAVATION SLOPE BELOW THE BENCH AT MAXIMUM ELEVATION OF 860 FEET RECEIVE A STRUCTURAL FILL STABILITY BERM OF MINIMUM 30 FOOT HORIZONTAL WIDTH ON TOP OF THE FINISH ASH EXCAVATION SLOPE FOR ELEVATIONS ABOVE THE BOTTOM BENCH, AND MINIMUM 60 FOOT HORIZONTAL WIDTH BELOW THE BOTTOM BENCH AS SHOWN ON DRAWING SHEET 28.

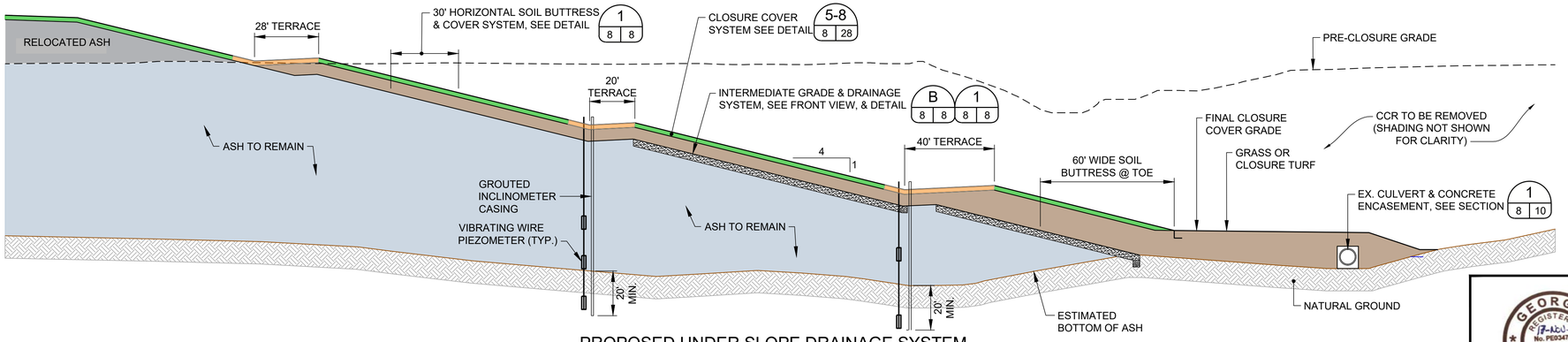
2. AN UNDER SLOPE DRAIN SYSTEM IS TO BE CONSTRUCTED ALONG THE FINISH ASH EXCAVATION SLOPE BENEATH THE SOIL BUTTRESS FOR ALL AREAS BELOW THE 2ND BENCH FROM THE BOTTOM AS PER THE DETAILS ON THIS SHEET.

LEGEND

P-2	DUAL LEVEL VW PIEZOMETER & INCLINOMETER
P-1	TRI LEVEL VW PIEZOMETER & INCLINOMETER
P-7	DUAL LEVEL VW PIEZOMETER
CO	CONTACT WATER PIPE CLEAN OUT

HATCH LEGEND

EXISTING ASH TO REMAIN	PROPOSED SOIL FILL
EXISTING EMBANKMENT FILL	HYDROTURF OVER SUPERGRIPNET
ASH/SOIL TO BE REMOVED	CLOSURE TURF OVER SUPERGRIPNET
PROPOSED ASH FILL	



A PROPOSED UNDER SLOPE DRAINAGE SYSTEM FOR EASTERN CLOSURE SYSTEM SLOPE

0 30 60
1" = 30' FEET

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

GEORGIA REGISTERED No. PE034749 PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
UNDER SLOPE DRAINAGE SYSTEM PLAN & DETAILS

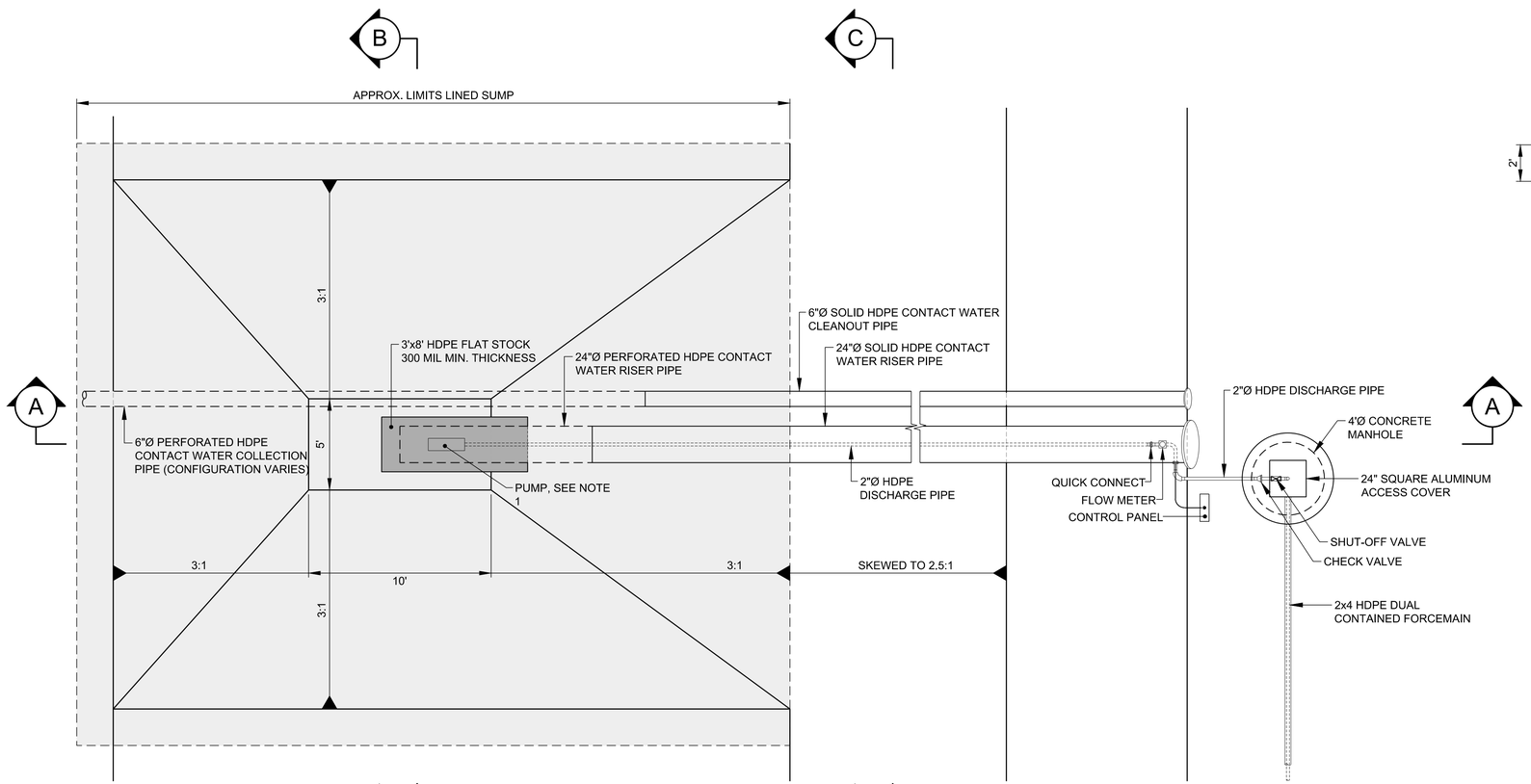
CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

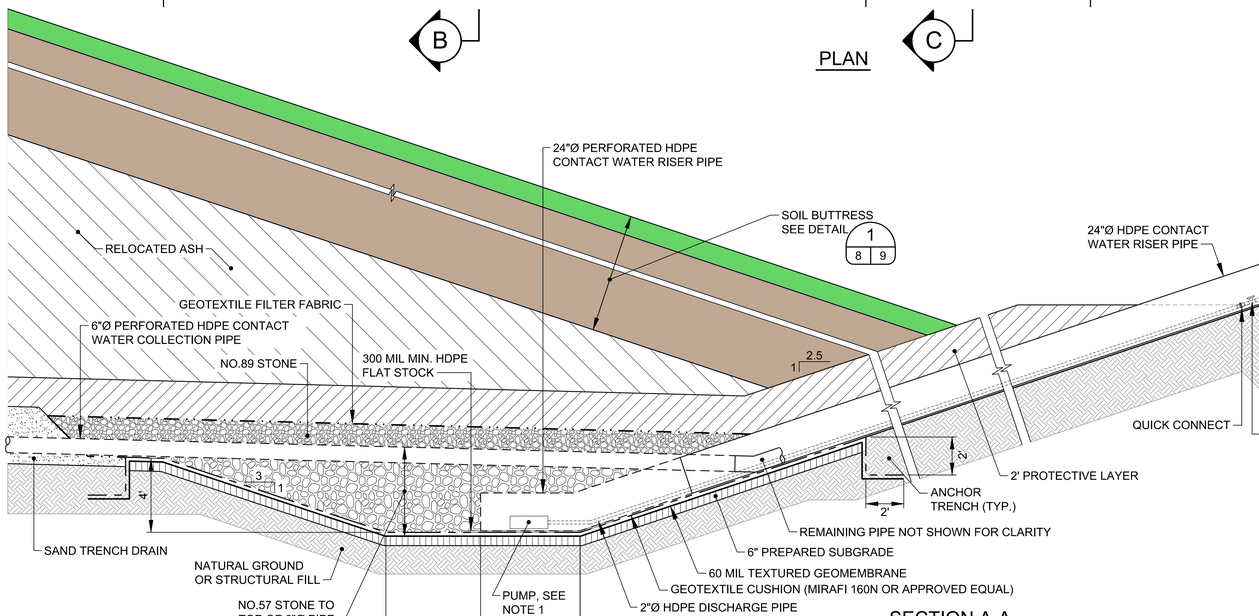
PROJECT NO. 1777449 | REV. 0 | SHEET 8

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

Path: \\atlanta\cad\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 06-ET-AL PLAN-SEC-DET.dwg



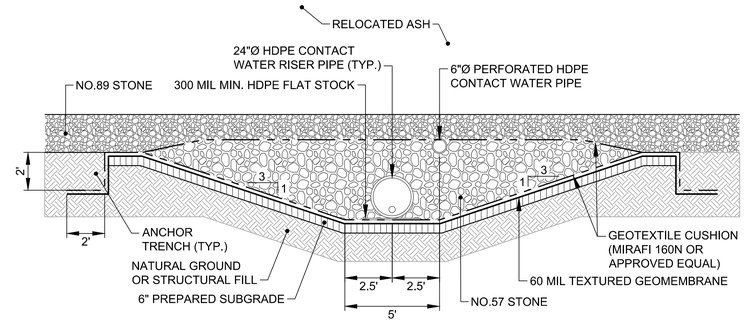
PLAN



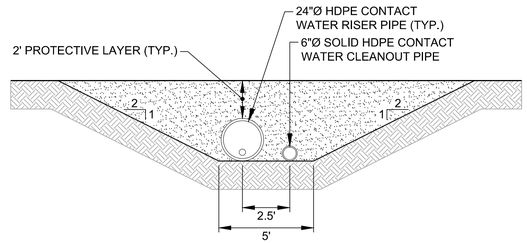
SECTION A-A

1 9 8 UNDER SLOPE DRAINAGE SYSTEM SUMP DETAIL

1" = 4' (0, 4, 8 FEET)



SECTION B-B



SECTION C-C

NOTE

1. UNDER SLOPE DRAINAGE SUMP PUMP TO BE 1.5 HP. 30 GPM, ABLE TO PUMP A DYNAMIC HEAD OF 90 VERTICAL FEET.

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
UNDER SLOPE DRAINAGE SYSTEM DETAILS

CONSULTANT
GOLDER

YYYY-MMM	2018-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 9

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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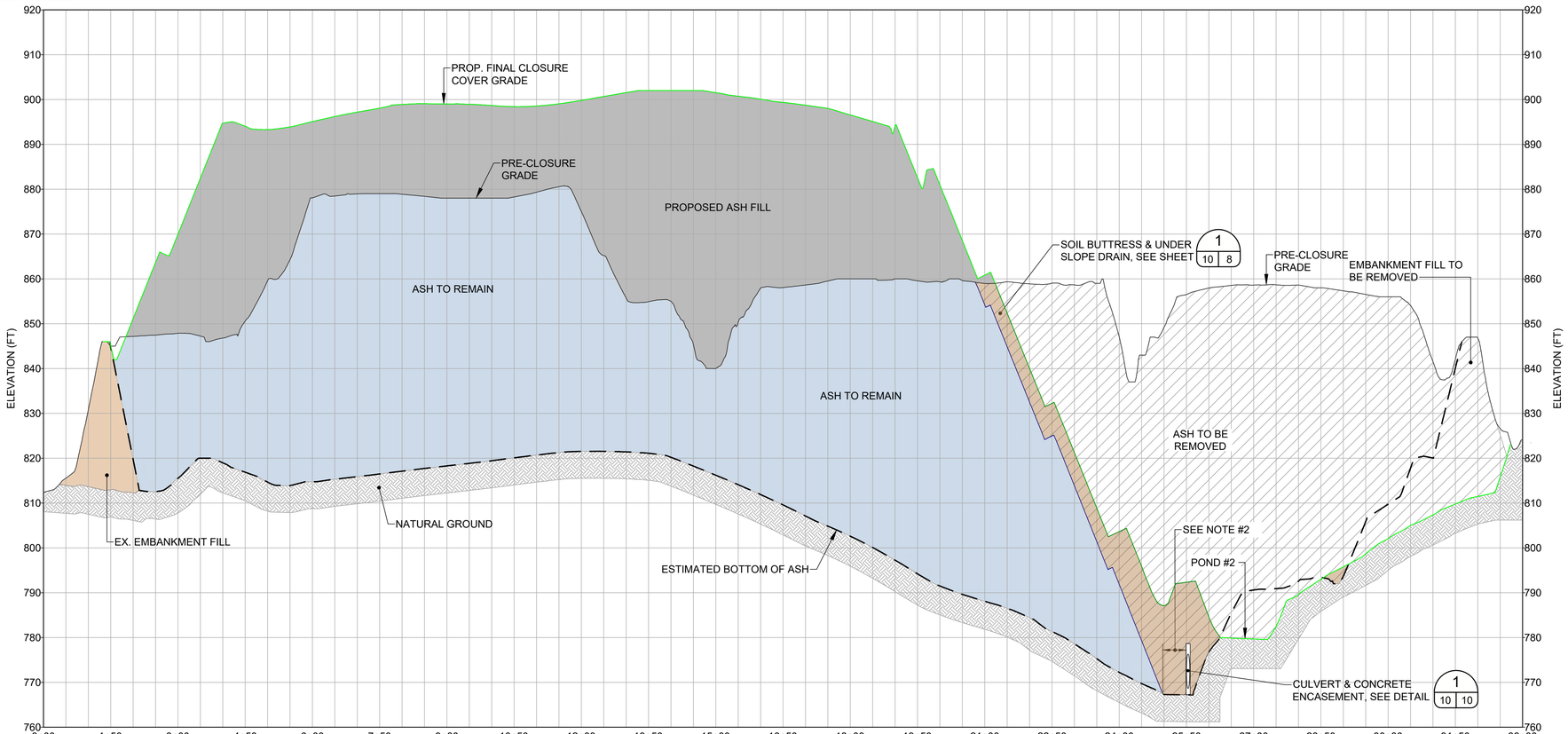
Path: \\atlanta\cadd\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 06-ET-AL PLAN-SEC-DET.dwg



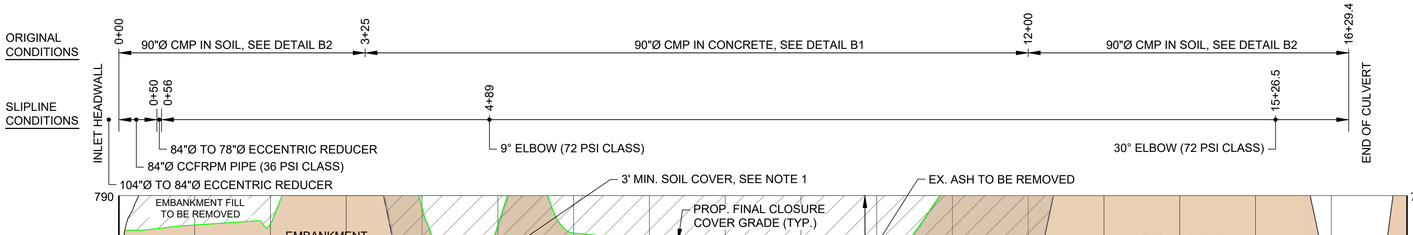
LEGEND

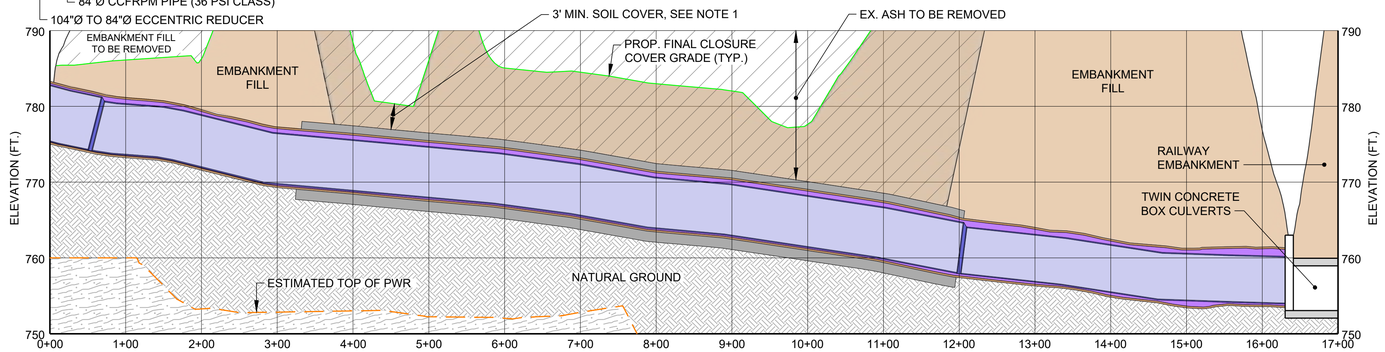
- ASH TO REMAIN
- EXISTING EMBANKMENT FILL
- ASH / SOIL TO BE REMOVED
- PROPOSED ASH FILL
- PROPOSED SOIL FILL

A 10 6 SECTION A-A

0 150 300
1" = 150' FEET

10X VERTICAL EXAGGERATION





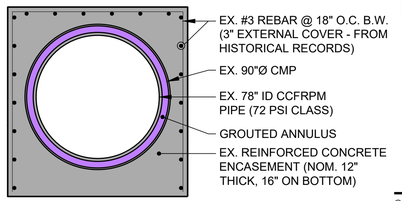
B 10 6 SECTION B-B

0 100 200
1" = 100' FEET

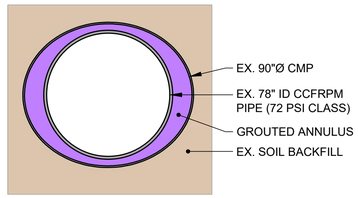
10X VERTICAL EXAGGERATION

NOTES

1. EXISTING ASH TO BE REMOVED FROM OVER AND AROUND EXISTING PIPE AND SOIL FILL TO BE PLACED BACK OVER PIPE.
2. MAINTAIN 50 FOOT BUFFER BETWEEN FINAL TOE OF ASH AND EXISTING EDGE OF CULVERT.
3. ESTIMATED BOTTOM OF ASH LIMITS ARE APPROXIMATE.

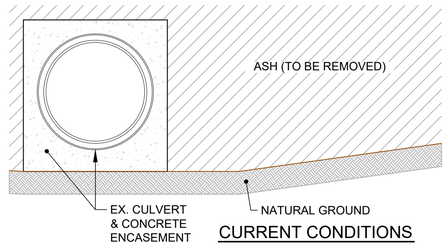


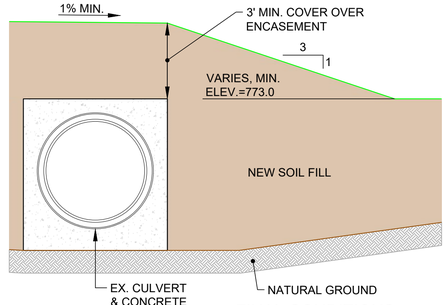
B1 10 CONCRETE ENCASED 90"Ø CMP SLIPLINED WITH CCFRPM PIPE



B2 10 90"Ø CMP IN SOIL SLIPLINED WITH CCFRPM PIPE

0 4 8
1" = 4' FEET





CONCEPTUAL CCR REMOVAL SEQUENCE AROUND EXISTING CULVERT

1 10 10 8

0 5 10
1" = 5' FEET

REFERENCES

1. THE PRE-CLOSURE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."

2. REVISED PRE-CLOSURE TOPOGRAPHY & CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA POWER LAND DEPARTMENT. THE DATA SHOWN IS AN UPDATE TO THE PLANS DONE ON 10-16-2012 & THE ONSITE CHANGES SINCE THAT 2012 SURVEY. THE REVISED SURVEY WAS DONE ON 1-12-2016 & MERGED WITH THE DATA ON 10-16-2012. GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016.

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

GEORGIA REGISTERED No. PE034749 PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
SITE SECTIONS - SHEET 1 OF 2

CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 10

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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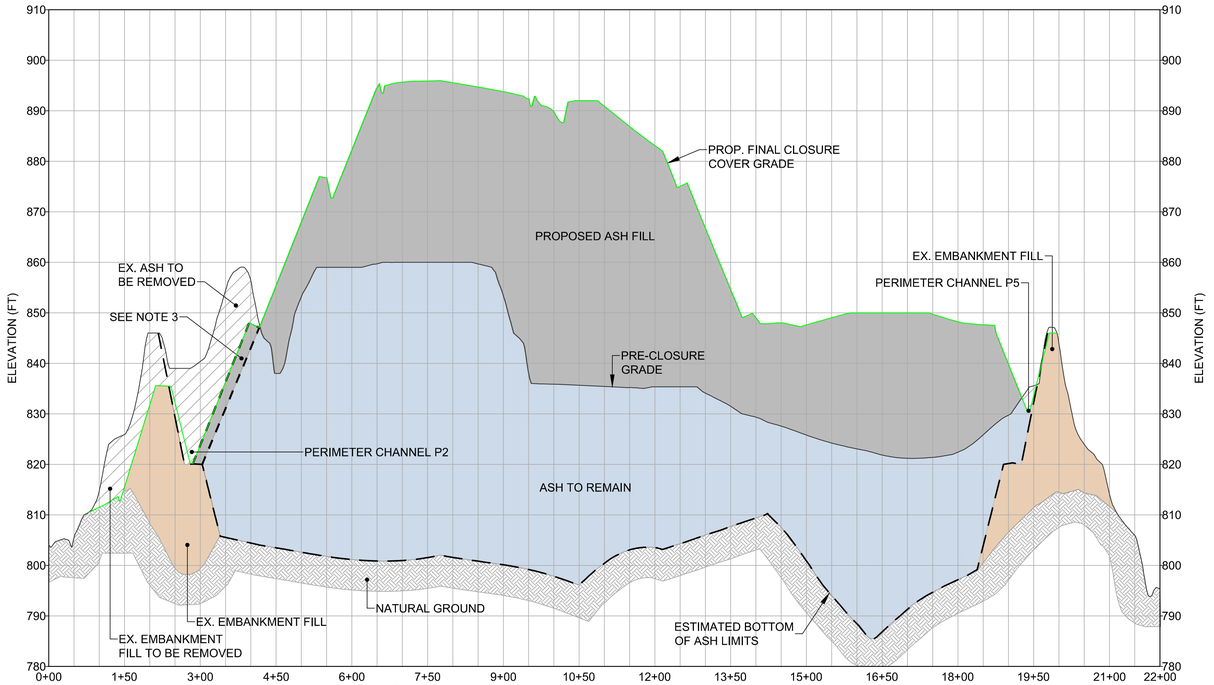
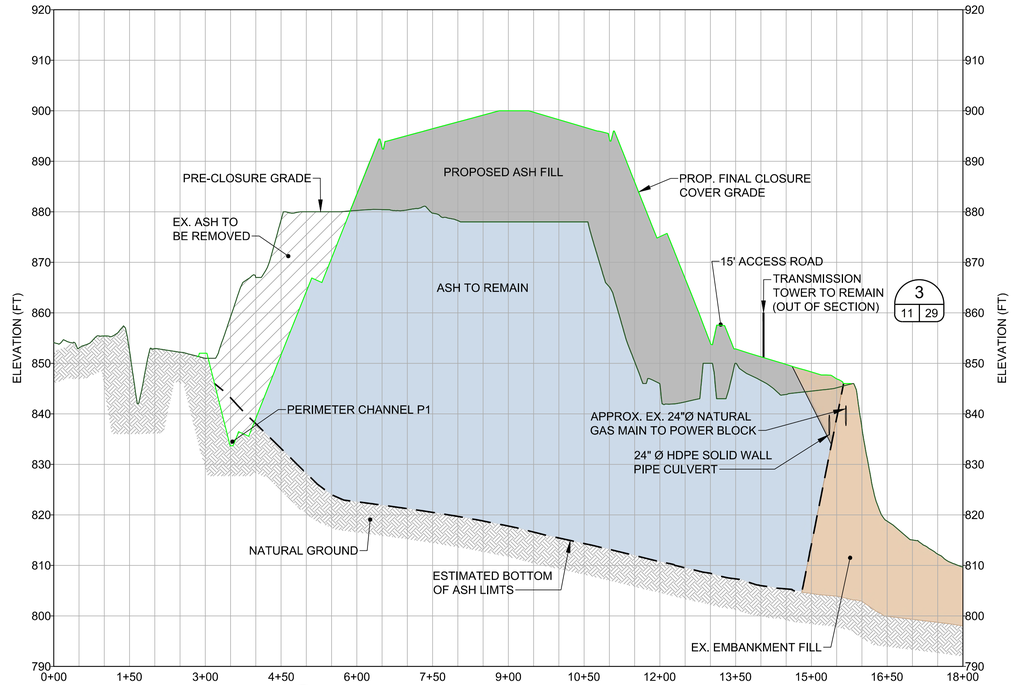


C 11 6 SECTION C-C

0 150 300
1" = 150' FEET

10X VERTICAL EXAGGERATION



D 11 6 SECTION D-D

0 150 300
1" = 150' FEET

10X VERTICAL EXAGGERATION

LEGEND

- ASH TO REMAIN
- EXISTING EMBANKMENT FILL
- ASH / SOIL TO BE REMOVED
- PROPOSED ASH FILL
- PROPOSED SOIL FILL

REFERENCES

1. THE PRE-CLOSURE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."

2. REVISED PRE-CLOSURE TOPOGRAPHY & CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA POWER LAND DEPARTMENT. THE DATA SHOWN IS AN UPDATE TO THE PLANS DONE ON 10-16-2012 & THE ONSITE CHANGES SINCE THAT 2012 SURVEY. THE REVISED SURVEY WAS DONE ON 1-12-2016 & MERGED WITH THE DATA ON 10-16-2012. GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016 - LAND ENG. PROJECT # 20160020.

NOTES

1. 24 INCH DIAMETER NATURAL GAS FEED FOR POWER PLANT RUNS WITHIN THE SOUTHERN PORTION OF EXISTING ASH POND 3 PERIMETER BERM.

2. ESTIMATED BOTTOM OF ASH LIMITS ARE APPROXIMATE.

3. OVER EXCAVATE AND RECOMPACT ASH FILL ALONG NORTHERN PERIMETER CHANNEL A MINIMUM OF 20 FEET HORIZONTALLY TO BOTTOM OF ASH AND OR A MINIMUM OF FIVE FEET BELOW FINAL CHANNEL BOTTOM IF STILL IN ASH.

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

CLIENT
GEORGIA POWER COMPANY

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
SITE SECTIONS - SHEET 2 OF 2

GEORGIA REGISTERED No. PE034749 PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

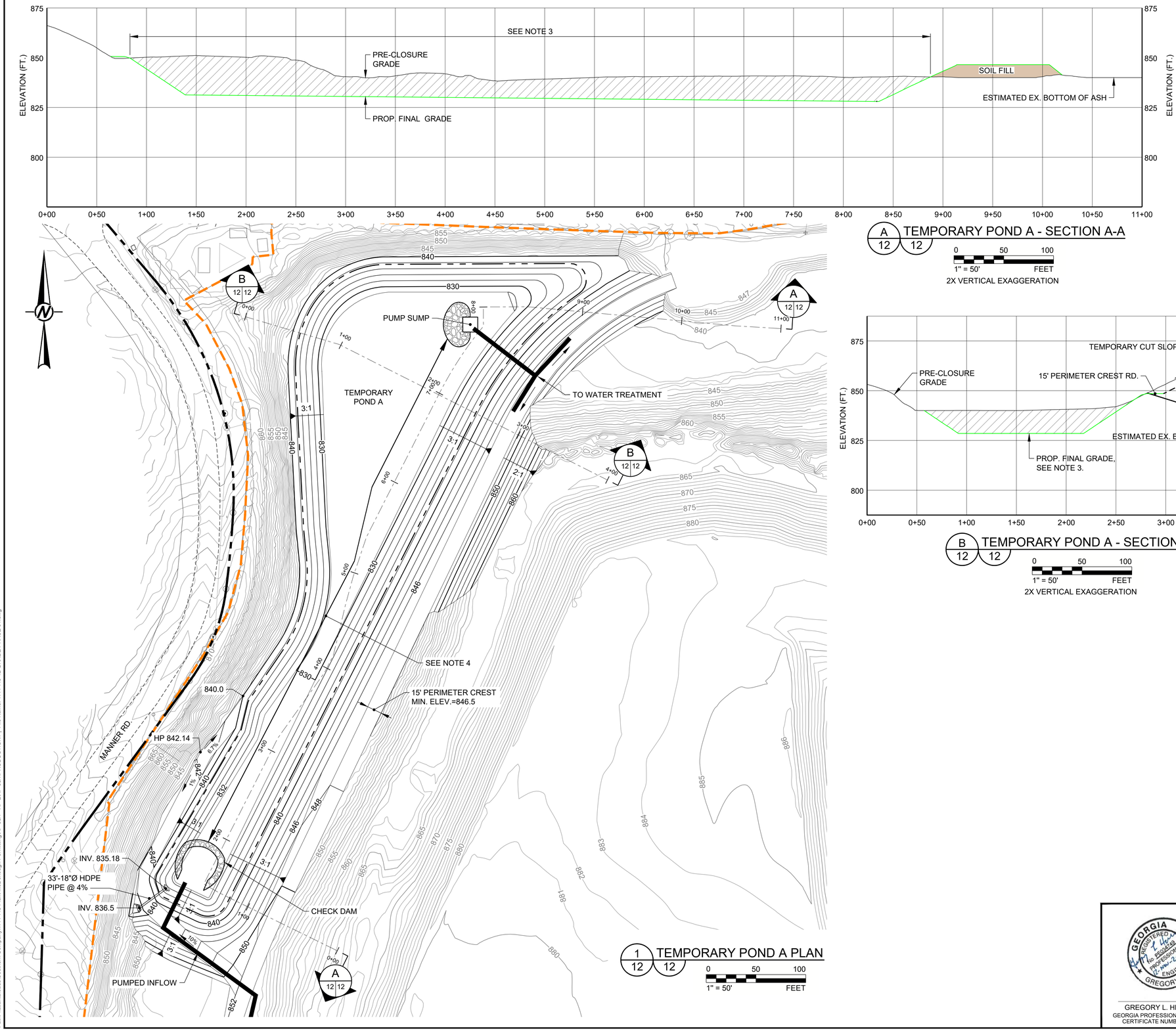
CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449
REV. 0
SHEET 11

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

Path: \\atlanta\cadd\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 10-11 SITE SECTIONS.dwg



1 / 12 / 12 TEMPORARY POND A PLAN

0 50 100

1" = 50' FEET

A / 12 / 12 TEMPORARY POND A - SECTION A-A

0 50 100

1" = 50' FEET

2X VERTICAL EXAGGERATION

B / 12 / 12 TEMPORARY POND A - SECTION B-B

0 50 100

1" = 50' FEET

2X VERTICAL EXAGGERATION

LEGEND

- PRE-CLOSURE CONTOURS
- PROPERTY BOUNDARY
- UNPAVED PLANT ROAD
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- 850 / 848 PROPOSED CONTOURS
- PERMIT BOUNDARY AP-2, AP-3/4

HATCH LEGEND

- ASH / SOIL TO BE REMOVED
- PROPOSED SOIL FILL

NOTES

1. THE FOCUS OF PHASE 1 IS TO REMOVE COAL ASH FROM THE NORTHWEST LIMITS OF THE PROJECT IN THE AREA THAT IS OUTSIDE THE FINAL LIMITS OF ASH POND 3. THE PROPOSED GRADING DEPICTED IS BASED ON THE BEST AVAILABLE INFORMATION OF THE LIMITS OF ASH. HOWEVER, FIELD VERIFICATION OF THE COMPLETE REMOVAL OF ASH IN THIS AREA WILL BE REQUIRED.

2. THE EXCAVATED AREA WILL SERVE AS TEMPORARY SEDIMENT POND A AND ULTIMATELY AS PERMANENT DETENTION POND 1, BOTH PROVIDING APPROXIMATELY 16.2 ACRE-FEET OF STORAGE FOR STORMWATER RUNOFF AND SEDIMENT CAPTURE. IN THIS PHASE, THE POND WILL NOT HAVE AN INLET OR OUTLET AS THE RECEIVING DITCHES HAVE NOT BEEN CONSTRUCTED. THEREFORE, WATER MANAGEMENT WILL REQUIRE PUMPS AND FORCEMAINS AS REQUIRED.

3. ADDITIONAL ASH MAY EXIST AND SHALL BE EXCAVATED AS PER REMOVAL PROTOCALS AND PLACED WITHIN FINAL LIMITS.

REFERENCES

1. THE PRE-CLOSURE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12.

2. REVISED PRE-CLOSURE TOPOGRAPHY & CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA POWER LAND DEPARTMENT. THE DATA SHOWN IS AN UPDATE TO THE PLANS DONE ON 10-16-2012 & THE ONSITE CHANGES SINCE THAT 2012 SURVEY. THE REVISED SURVEY WAS DONE ON 1-12-2016 & MERGED WITH THE DATA ON 10-16-2012. GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016.

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

CLIENT
GEORGIA POWER COMPANY

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP - 3/4 PHASE 1 DEVELOPMENT PLAN

GEORGIA REGISTERED PROFESSIONAL ENGINEER GREGORY L. HEBELER 12-NOV-2018

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CONSULTANT
GOLDER

YYYY-MMM	2018-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 12

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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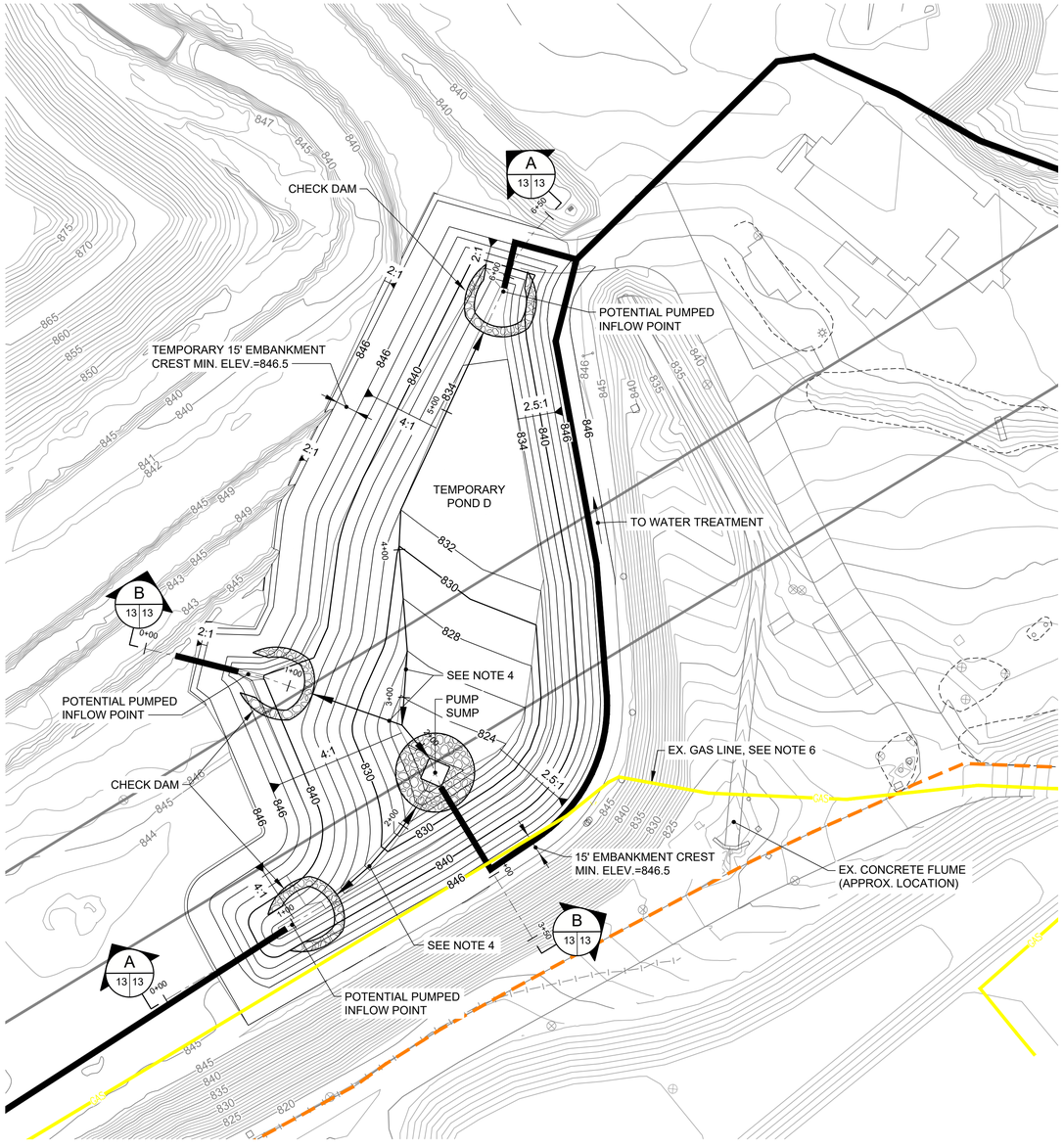
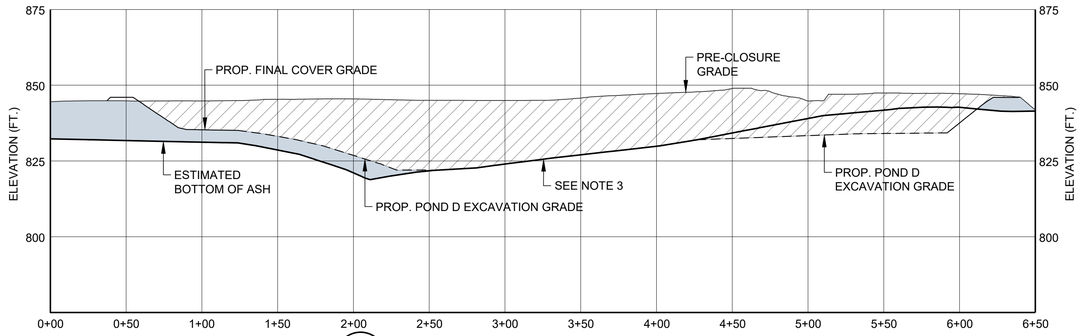


1 / 13 / 13 TEMPORARY POND D PLAN

0 50 100

1" = 50' FEET



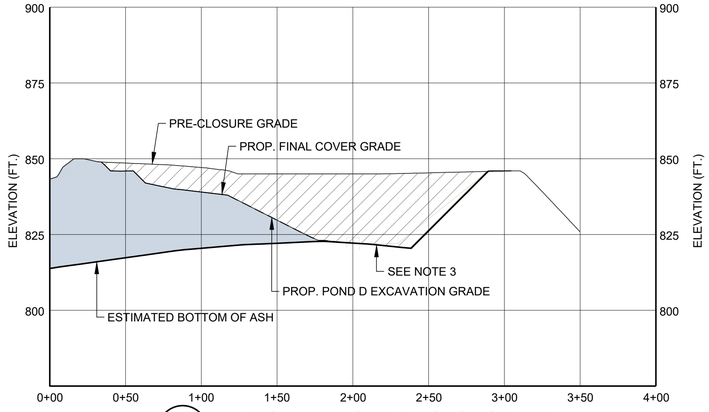


A / 13 / 13 TEMPORARY POND D - SECTION A-A

0 50 100

1" = 50' FEET

2X VERTICAL EXAGGERATION



B / 13 / 13 TEMPORARY POND D - SECTION B-B

0 50 100

1" = 50' FEET

2X VERTICAL EXAGGERATION

REFERENCES

1. THE PRE-CLOSURE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12.

2. REVISED PRE-CLOSURE TOPOGRAPHY & CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA POWER LAND DEPARTMENT. THE DATA SHOWN IS AN UPDATE TO THE PLANS DONE ON 10-16-2012 & THE ONSITE CHANGES SINCE THAT 2012 SURVEY. THE REVISED SURVEY WAS DONE ON 1-12-2016 & MERGED WITH THE DATA ON 10-16-2012. GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016.

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

LEGEND

- PRE-CLOSURE CONTOURS
- EXISTING FENCE
- UNPAVED PLANT ROAD
- EXISTING GAS LINE
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- PROPOSED CONTOURS
- PERMIT BOUNDARY AP-2, AP-3/4

HATCH LEGEND

- ASH / SOIL TO BE REMOVED
- PROPOSED SOIL FILL
- ASH TO REMAIN

NOTES

1. THE FOCUS OF PHASE 2 IS TO REMOVE COAL ASH FROM THE SOUTHEAST LIMITS OF ASH POND 3 IN PREPARATION FOR STORMWATER MANAGEMENT IN THIS AREA. THE GRADING DEPICTED IS BASED ON PROPOSED FINAL GRADES. HOWEVER, PLEASE REFER TO THE SECTIONS ON THIS SHEET FOR ADDITIONAL INFORMATION REGARDING OVER-EXCAVATING AND REPLACEMENT WITH CLEAN STRUCTURAL FILL IN THIS AREA.

2. THE EXCAVATED AREA WILL SERVE AS TEMPORARY SEDIMENT POND D AND ULTIMATELY AS PERMANENT DETENTION POND 3, PROVIDING APPROXIMATELY 15.3 ACRE-FEET OF STORAGE FOR STORMWATER RUNOFF AND SEDIMENT CAPTURE. IN THIS PHASE, THE POND WILL NOT HAVE AN INLET OR OUTLET AS THE RECEIVING DITCHES HAVE NOT BEEN CONSTRUCTED. THEREFORE, WATER MANAGEMENT WILL REQUIRE PUMPS AND FORCEMAINS AS REQUIRED.

3. IF ADDITIONAL ASH EXISTS BELOW LIMITS OF DETENTION POND, REPLACE WITH SOIL FILL BETWEEN LINES EXTENDING FROM INTERIOR DAM FACE AND FINAL CLOSURE SLOPE.

4. THE WORK SHALL BE COORDINATED WITH WATER TREATMENT CONSULTANT AND GPC TO INSTALL AND MAINTAIN CHECK DAMS, FLOCCULATION POINTS AND OTHER SEDIMENT CONTROL FEATURES AS NEEDED.

5. TOPOGRAPHY SHOWN WITHIN TEMPORARY POND ARE FINAL GRADES, FOR PERMANENT POND 3. CONTRACTOR IS GIVEN FLEXIBILITY TO MAKE MINOR ADJUSTMENT TO TEMPORARY POND GRADING AS NEEDED TO BEST MANAGE CONSTRUCTION, AS LONG AS THE MINIMUM STORAGE AND PERIMETER DAM ARE MAINTAINED.

6. 24 INCH DIAMETER NATURAL GAS FEED FOR POWER PLANT RUNS WITHIN SOUTHERN PORTION OF EXISTING ASH POND 3 PERIMETER BERM. NO WORK WITHIN 50 FEET OF THIS LINE WITHOUT NOTIFICATION OF AND APPROVAL OF OWNER.

GEORGIA REGISTERED PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP - 3/4 PHASE 2 DEVELOPMENT PLAN

CONSULTANT
GOLDER

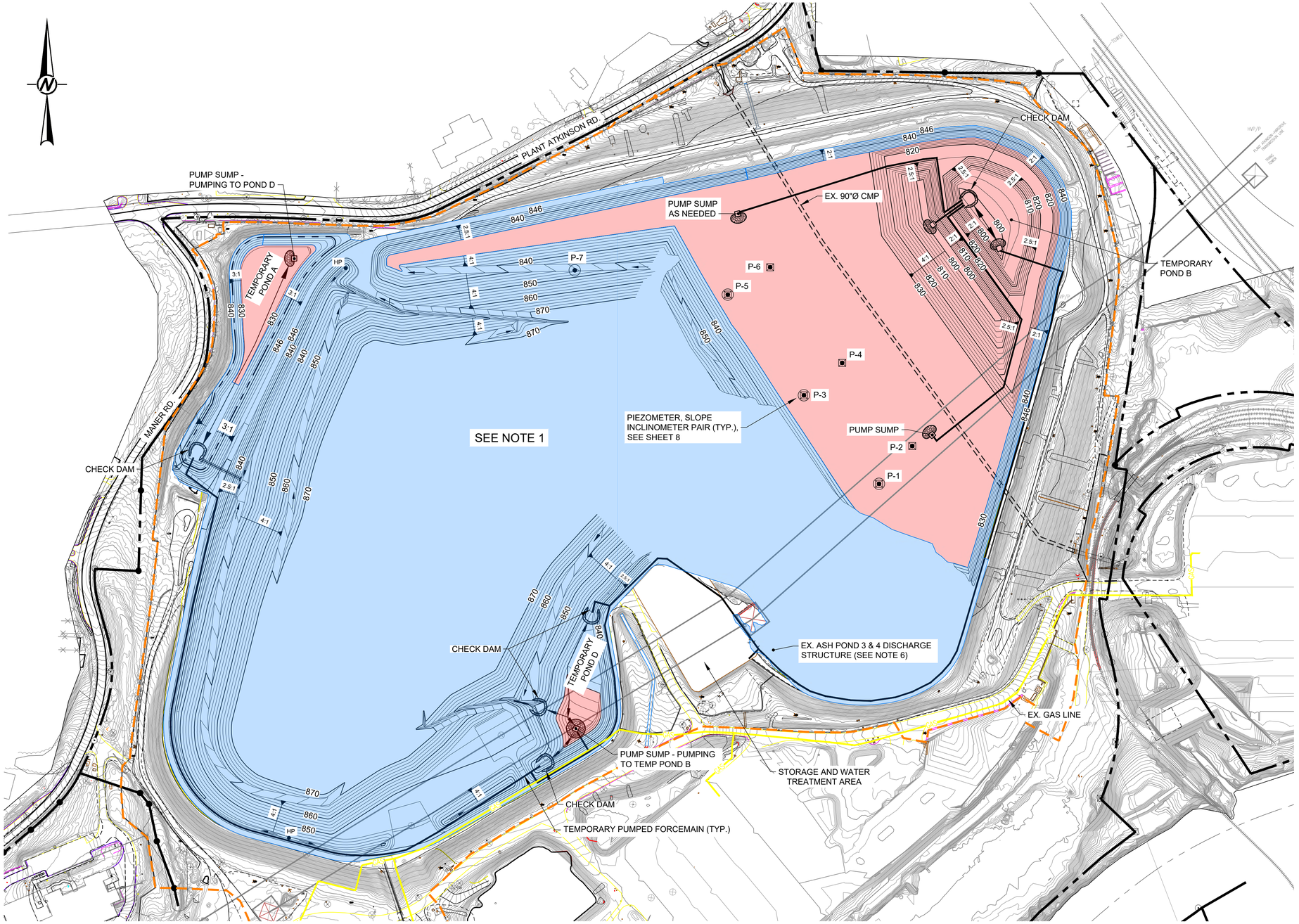
YYYY-MMM	2018-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 13

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1 in

Path: \\atlanta\cad\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 13 GRADE PHASE 02.dwg



NOTES

1. PHASE 3 BEGINS THE PROCESS OF EXCAVATING COAL ASH FROM THE EXISTING CONVEYANCE CULVERT CORRIDOR OF ASH POND 4 AND STACKING IT ON ASH POND 3. THIS PHASE INCLUDES EXCAVATIONS TO APPROXIMATELY ELEVATION 830 AND STACKED HEIGHTS UP TO APPROXIMATELY ELEVATION 870. NOTE THAT THE TOP OF THE STACK ON ASH POND 3 WILL BE LEFT OPEN AND MOVE UP OR DOWN AS NEEDED TO ACCOUNT FOR ACTUAL QUANTITIES OF PLACED, COMPACTED COAL ASH.
2. THE "OPEN WATER" AREA OF ASH POND 4 WILL BE DEWATERED.
3. TEMPORARY SEDIMENT POND A WILL HAVE ITS INLET AND OUTLET CONSTRUCTED IN THIS PHASE. HOWEVER, THE OUTLET WILL NOT BE MADE OPERATIONAL AND INSTEAD WILL SERVE AS A SUMP FOR PUMPING OPERATIONS. THE METHOD OF ACHIEVING THIS IS ENVISIONED TO BE A TEMPORARY PLUG INSERTED INTO THE OUTLET PIPE AT THE UPSTREAM END, BUT OTHER MEANS OF CLOSING THIS SYSTEM PROPOSED BY THE CONTRACTOR WILL BE CONSIDERED.
4. TEMPORARY SEDIMENT POND B WILL BE CONSTRUCTED IN THE EARLY STAGES OF THIS PHASE, AND WILL BE A LINED POND WITHOUT INLETS OR OUTLETS AND WILL PROVIDE APPROXIMATELY 17.0 ACRE-FEET OF STORAGE FOR STORMWATER RUNOFF AND SEDIMENT CAPTURE.
5. TEMPORARY SEDIMENT PONDS A, B, AND D WILL ALL BE OPERATIONAL IN THIS PHASE PROVIDING STORAGE FOR STORMWATER RUNOFF AND SEDIMENT CAPTURE. PUMPING SYSTEMS TO MOVE STORMWATER FROM ONE POND TO THE OTHER SHALL BE ESTABLISHED AS NEEDED AND COORDINATED WITH GPC.
6. THE EXISTING ASH POND 4 OUTLET STRUCTURE IS TO SERVE AS THE DISCHARGE POINT FOR THE TREATED WATER FROM THE DEWATERING TREATMENT SYSTEM. AS SUCH, MODIFICATIONS AND/OR OPERATION MAY BE REQUIRED TO PREVENT UNTREATED WATER FROM BEING DISCHARGED. AS THIS IS A CATEGORY I DAM REGULATED BY THE GEORGIA SAFE DAMS PROGRAM (GASDP), ANY MODIFICATIONS OR ATYPICAL OPERATIONS WILL REQUIRE THE PRIOR APPROVAL OF THE GASDP AND THE SOUTHERN COMPANY HYDRO GROUP.

REFERENCES

1. THE EXISTING SITE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SHEET IS 03-18-2018. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 03-18-2018."

LEGEND

- EXISTING CONTOURS (MARCH 2018)
- PROPERTY BOUNDARY MARKERS/LIMITS
- UNPAVED PLANT ROAD
- EXISTING GAS LINE
- PERMIT BOUNDARY AP-2, AP-3/4
- EXISTING STREAM DIVERSION CULVERT
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- 850 / 848 PROPOSED CONTOURS
- P-2 VW PIEZOMETER & INCLINOMETER
- P-1 DUAL LEVEL VW PIEZOMETER & INCLINOMETER
- P-7 DUAL LEVEL VW PIEZOMETER
- CUT ASH EXCAVATION
- FILL ASH AND COVER MATERIAL PLACEMENT

0 150 300
1" = 150' FEET

GEORGIA REGISTERED PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

CLIENT
GEORGIA POWER COMPANY

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP - 3/4 PHASE 3 DEVELOPMENT PLAN

CONSULTANT
GOLDER

YYYY-MMM	2018-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 14

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

Path: \\atlanta\cadd\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 14 GRADE PHASE 03.dwg

NOTES

1. PHASE 4 CONTINUES THE PROCESS OF EXCAVATING COAL ASH FROM THE EXISTING CONVEYANCE CULVERT CORRIDOR OF ASH POND 4 AND STACKING IT ON ASH POND 3. THIS PHASE INCLUDES ALL EXCAVATIONS TO APPROXIMATELY ELEVATION 800 AND STACKED HEIGHT UP TO ELEVATION 890. NOTE THAT THE TOP OF THE STACK ON ASH POND 3 WILL BE LEFT OPEN AND MOVE UP OR DOWN AS NEEDED TO ACCOUNT FOR ACTUAL QUANTITIES OF PLACED, COMPACTED COAL ASH.

2. TEMPORARY SEDIMENT PONDS A, B, AND D WILL ALL BE OPERATIONAL IN VARIOUS DURING THIS PHASE PROVIDING STORAGE FOR STORMWATER RUNOFF AND SEDIMENT CAPTURE. PUMPING SYSTEMS TO MOVE STORMWATER FROM ONE POND TO THE OTHER SHALL BE ESTABLISHED AS NEEDED AND COORDINATED WITH GPC.

3. THE EXISTING ASH POND 4 OUTLET STRUCTURE IS TO SERVE AS THE DISCHARGE POINT FOR THE TREATED WATER FROM THE DEWATERING TREATMENT SYSTEM. AS SUCH, MODIFICATIONS AND/OR OPERATION MAY BE REQUIRED TO PREVENT UNTREATED WATER FROM BEING DISCHARGED. AS THIS IS A CATEGORY I DAM REGULATED BY THE GEORGIA SAFE DAMS PROGRAM (GASDP), ANY MODIFICATIONS OR ATYPICAL OPERATIONS WILL REQUIRE THE PRIOR APPROVAL OF THE GASDP AND THE SOUTHERN COMPANY HYDRO GROUP.

PLANT ATKINSON RD
EX. 90"Ø CMP
PUMP SUMP
TEMPORARY POND A
MANER RD.
CHECK DAM
SEE NOTE 1
P-7
P-6
P-5
P-4
P-3
P-2
P-1
PIEZOMETER, SLOPE INCLINOMETER PAIR (TYP.), SEE SHEET 8
CHECK DAM
TEMPORARY POND B
EX. CULVERT CORRIDOR DEWATERING SYSTEM TO BE MAINTAINED & LOWERED AS WORK PROGRESSES
TEMPORARY POND D
CHECK DAM
PUMP SUMP - PUMPING TO TEMP POND B
STORAGE AND WATER TREATMENT AREA
EX. GAS LINE
TEMPORARY PUMPED FORCEMAIN (TYP.)

REFERENCES

1. THE EXISTING SITE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SHEET IS 03-18-2018. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 03-18-2018."

LEGEND

- EXISTING CONTOURS (MARCH 2018)
- PROPOSED CONTOURS
- PROPERTY BOUNDARY MARKERS/LIMITS
- EXISTING UNPAVED PLANT ROAD
- EXISTING STREAM DIVERSION CULVERT
- PERMIT BOUNDARY AP-2, AP-3/4
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- GAS — EXISTING GAS LINE
- P-2 — VW PIEZOMETER & INCLINOMETER
- P-1 — DUAL LEVEL VW PIEZOMETER & INCLINOMETER
- P-7 — DUAL LEVEL VW PIEZOMETER
- CUT ASH EXCAVATION
- FILL ASH AND COVER MATERIAL PLACEMENT

0 150 300
1" = 150' FEET

GEORGIA REGISTERED PROFESSIONAL ENGINEER GREGORY L. HEBELER
GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

CLIENT
GEORGIA POWER COMPANY

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP - 3/4 PHASE 4 DEVELOPMENT PLAN

CONSULTANT
GOLDER

YYYY-MMM	2018-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 15

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI D

Path: \\atlanta\cadd\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 15 GRADE PHASE 04.dwg

NOTES

1. PHASE 5 CONTINUES THE PROCESS OF EXCAVATING COAL ASH FROM THE EXISTING CONVEYANCE CULVERT CORRIDOR OF ASH POND 4 AND STACKING IT ON ASH POND 3. THIS PHASE INCLUDES ALL EXCAVATIONS TO ACHIEVE THE CLEAN CLOSURE OF THE EASTERN PORTIONS OF THE PROJECT AND STACKED HEIGHTS UP TO THE FINAL ELEVATION ESTIMATED TO BE APPROXIMATELY 898-902. NOTE THAT THE TOP OF THE STACK ON ASH POND 3 WILL BE LEFT OPEN AND MOVE UP OR DOWN AS NEEDED TO ACCOUNT FOR ACTUAL QUANTITIES OF PLACED, COMPACTED COAL ASH.
2. TEMPORARY SEDIMENT PONDS A, B, AND D WILL ALL BE OPERATIONAL IN VARIOUS DURING OF THIS PHASE PROVIDING STORAGE FOR STORMWATER RUNOFF AND SEDIMENT CAPTURE. PUMPING SYSTEMS TO MOVE STORMWATER FROM ONE POND TO THE OTHER SHALL BE ESTABLISHED AS NEEDED.
3. THE PORTIONS OF THE MAIN EXCAVATION SLOPE BELOW ELEVATION 860 FEET RECEIVE A SOIL FILL STABILITY BERM OF MINIMUM 30 FOOT WIDTH ON TOP OF THE FINISH ASH EXCAVATION SLOPE FOR ELEVATIONS ABOVE THE BOTTOM BENCH, AND MINIMUM 60 FOOT WIDTH BELOW THE BOTTOM BENCH AS SHOWN ON DRAWING 8.
4. AN UNDER SLOPE DRAIN SYSTEM IS TO BE CONSTRUCTED ALONG THE FINISH ASH EXCAVATION SLOPE BENEATH THE SOIL BUTTRESS FOR ALL AREAS BELOW THE 2ND BENCH FROM THE BOTTOM AS PER SHEET 8.
5. THE EXISTING ASH POND 4 OUTLET STRUCTURE IS TO SERVE AS THE DISCHARGE POINT FOR THE TREATED WATER FROM THE DEWATERING TREATMENT SYSTEM. AS SUCH, MODIFICATIONS AND/OR OPERATION MAY BE REQUIRED TO PREVENT UNTREATED WATER FROM BEING DISCHARGED. AS THIS IS A CATEGORY I DAM REGULATED BY THE GEORGIA SAFE DAMS PROGRAM (GASDP), ANY MODIFICATIONS OR ATYPICAL OPERATIONS WILL REQUIRE THE PRIOR APPROVAL OF THE GASDP AND THE SOUTHERN COMPANY HYDRO GROUP.

REFERENCES

1. THE EXISTING SITE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SHEET IS 03-18-2018. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 03-18-2018."

LEGEND

- EXISTING CONTOURS (MARCH 2018)
- PROPOSED CONTOURS
- PROPERTY BOUNDARY MARKERS/LIMITS
- EXISTING UNPAVED PLANT ROAD
- EXISTING STREAM DIVERSION CULVERT
- PERMIT BOUNDARY AP-2, AP-3/4
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- GAS — EXISTING GAS LINE
- P-2 — VW PIEZOMETER & INCLINOMETER
- P-1 — DUAL LEVEL VW PIEZOMETER & INCLINOMETER
- P-7 — DUAL LEVEL VW PIEZOMETER
- CUT ASH EXCAVATION
- FILL ASH AND COVER MATERIAL PLACEMENT

0 150 300
1" = 150' FEET

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP - 3/4 PHASE 5 DEVELOPMENT PLAN

CONSULTANT
GOLDER

YYYY-MMM	2018-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 16

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

Path: \\atlanta\cadd\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 16 GRADE PHASE 05.dwg

PERMANENT POND 2

PLANT ATKINSON RD

PUMP SUMP/
RISER STRUCTURE

TEMPORARY POND A/
PERMANENT POND 1

MANER RD

CHECK DAM

P-7

P-6

P-5

P-4

P-3

P-2

P-1

PUMP SUMP

EX. 90"Ø CMP

EX. GAS LINE

CHECK DAM

PUMP SUMP

TEMPORARY POND D/
PERMANENT POND 3

CHECK DAM

TEMPORARY PUMPED FORCEMAIN (TYP.)

STORAGE AND WATER
TREATMENT AREA

NOTES

1. PHASE 6 MARKS THE COMPLETION OF FINAL GRADES AND ACCESS ROUTES TO ALL PORTIONS OF THE SITE. THIS PHASE INCLUDES THE COMPLETION OF THE STRUCTURAL FILL STABILITY BERM AND THE COMPLETION OF THE CLOSURE TURF CAPPING SYSTEM.
2. DETENTION POND 2 WILL BE CONSTRUCTED AS THE FIRST STAGE OF THIS PHASE IN ORDER TO PROVIDE STORMWATER AND SEDIMENT STORAGE FOR THE SITE WORK INVOLVED IN THIS PHASE.
3. TEMPORARY SEDIMENT POND B WILL BE DEMOLISHED IN THE EARLY STAGES OF THIS PHASE TO ALLOW FOR THE SITE WORK TO BE COMPLETED EAST OF THE EXISTING CONVEYANCE CULVERT.
4. TEMPORARY SEDIMENT PONDS A, B, AND D AND DETENTION POND 2 WILL ALL BE OPERATIONAL IN VARIOUS STAGES OF THIS PHASE PROVIDING STORAGE FOR STORMWATER RUNOFF AND SEDIMENT CAPTURE. PUMPING SYSTEMS TO MOVE STORMWATER FROM ONE POND TO THE OTHER SHALL BE ESTABLISHED AS NEEDED AND COORDINATED WITH GPC.
5. THE EXISTING ASH POND 4 OUTLET STRUCTURE IS TO SERVE AS THE DISCHARGE POINT FOR THE TREATED WATER FROM THE DEWATERING TREATMENT SYSTEM. AS SUCH, MODIFICATIONS AND/OR OPERATION MAY BE REQUIRED TO PREVENT UNTREATED WATER FROM BEING DISCHARGED. AS THIS IS A CATEGORY I DAM REGULATED BY THE GEORGIA SAFE DAMS PROGRAM (GASDP), ANY MODIFICATIONS OR ATYPICAL OPERATIONS WILL REQUIRE THE PRIOR APPROVAL OF THE GASDP AND THE SOUTHERN COMPANY HYDRO GROUP.
6. DETENTION PONDS 1, 2, AND 3 WILL NOT BE CONVERTED TO PERMANENT STORMWATER MANAGEMENT PONDS UNTIL 1) ALL COAL ASH HAS BEEN CAPPED; 2) ALL STORMWATER CONTROLS HAVE BEEN CONSTRUCTED; 3) ALL NON-CAPPED PORTIONS OF DISTURBANCE HAVE BEEN PERMANENTLY STABILIZED; AND 4) ALL SEDIMENTS CAPTURED IN THE PONDS HAVE BEEN REMOVED AND ASH REMOVED AS PER REMOVAL PROTOCALS.
7. THE PORTIONS OF THE MAIN EXCAVATION SLOPE BELOW ELEVATION 860 FEET RECEIVE A STRUCTURAL FILL STABILITY BERM OF MINIMUM 30 FOOT HORIZONTAL WIDTH ON TOP OF THE FINISH ASH EXCAVATION SLOPE FOR ELEVATIONS ABOVE THE BOTTOM BENCH, AND MINIMUM 60 FOOT HORIZONTAL WIDTH BELOW THE BOTTOM BENCH AS SHOWN ON DRAWING 8.

REFERENCES

1. THE EXISTING SITE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SHEET IS 03-18-2018. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 03-18-2018."

LEGEND

- EXISTING CONTOURS (MARCH 2018)
- PROPOSED CONTOURS
- PROPERTY BOUNDARY MARKERS/LIMITS
- EXISTING UNPAVED PLANT ROAD
- EXISTING STREAM DIVERSION CULVERT
- PERMIT BOUNDARY AP-2, AP-3/4
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- GAS — EXISTING GAS LINE
- P-2 — VW PIEZOMETER & INCLINOMETER
- P-1 — DUAL LEVEL VW PIEZOMETER & INCLINOMETER
- P-7 — DUAL LEVEL VW PIEZOMETER
- CUT EXCAVATION
- FILL AND COVER MATERIAL PLACEMENT

0 150 300
1" = 150' FEET

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP - 3/4 PHASE 6 DEVELOPMENT PLAN

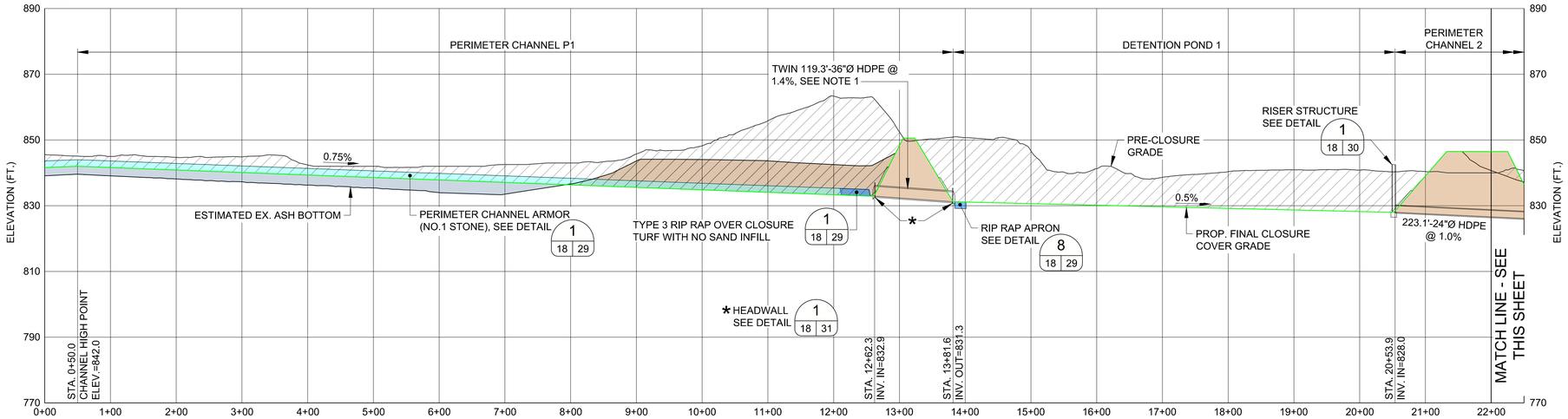
CONSULTANT
GOLDER

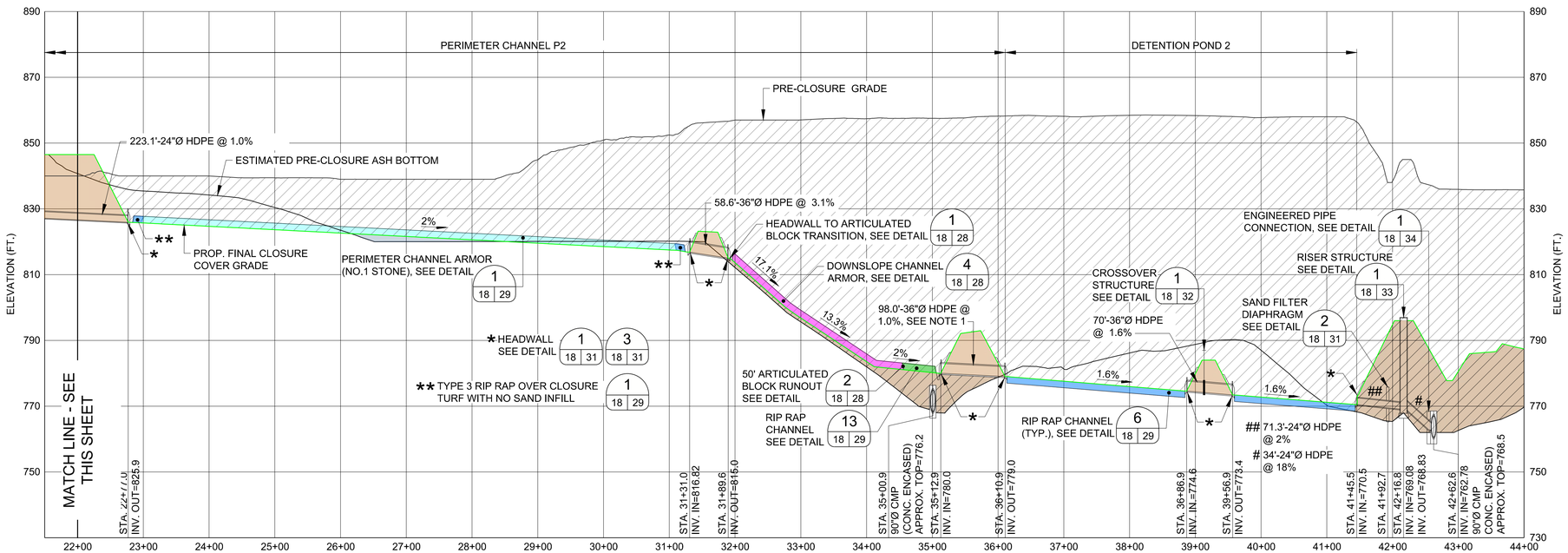
YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

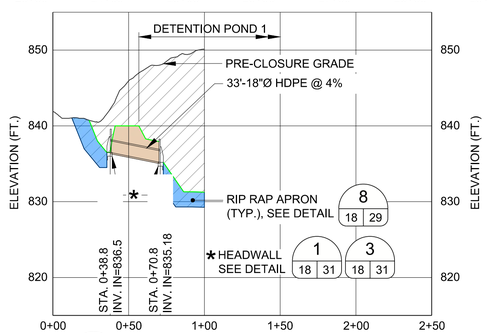
PROJECT NO. 1777449 | REV. 0 | SHEET 17

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI D

Path: \\atlanta\cadd\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 17 GRADE PHASE 06.dwg





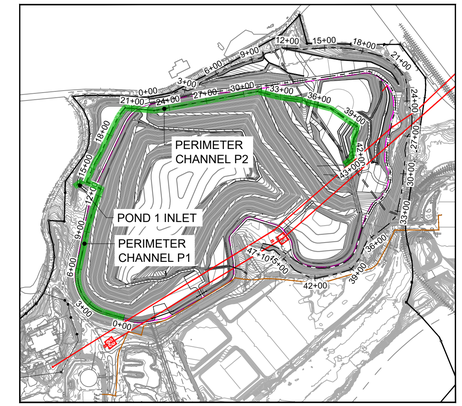


2 18 6 18"Ø POND 1 INLET

0 50 100
1" = 50' FEET
5X VERTICAL EXAGGERATION

1 18 6 PERIMETER CHANNELS P1 & P2

0 100 200
1" = 100' FEET
5X VERTICAL EXAGGERATION



KEY MAP

LEGEND

- EXISTING ASH TO REMAIN
- EXISTING EMBANKMENT FILL
- ASH / SOIL TO BE REMOVED
- ASH FILL
- SOIL FILL
- HYDRO TURF OVER SUPERGRIPNET
- ARMORFLEX ON CLOSURE TURF OVER SUPERGRIPNET (NO SAND INFILL)
- TYPE 1 RIP RAP
- TYPE 3 RIP RAP
- NO.1 STONE OR TYPE 3 RIP RAP

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

NOTES

1. CULVERT TO BE INSTALLED SO THAT NO ASH IS WITHIN 5 FOOT MINIMUM RADIAL DISTANCE AROUND PIPE.

REFERENCES

1. THE PRE-CLOSURE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."

2. REVISED PRE-CLOSURE TOPOGRAPHY & CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA POWER LAND DEPARTMENT. THE DATA SHOWN IS AN UPDATE TO THE PLANS DONE ON 10-16-2012 & THE ONSITE CHANGES SINCE THAT 2012 SURVEY. THE REVISED SURVEY WAS DONE ON 1-12-2016 & MERGED WITH THE DATA ON 10-16-2012. GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016 - LAND ENG. PROJECT # 20160020.

GEORGIA REGISTERED No. PE034749 PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Southern Company

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP - 3/4 CHANNEL PROFILES - SHEET 1 OF 3

CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	AVR
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 18

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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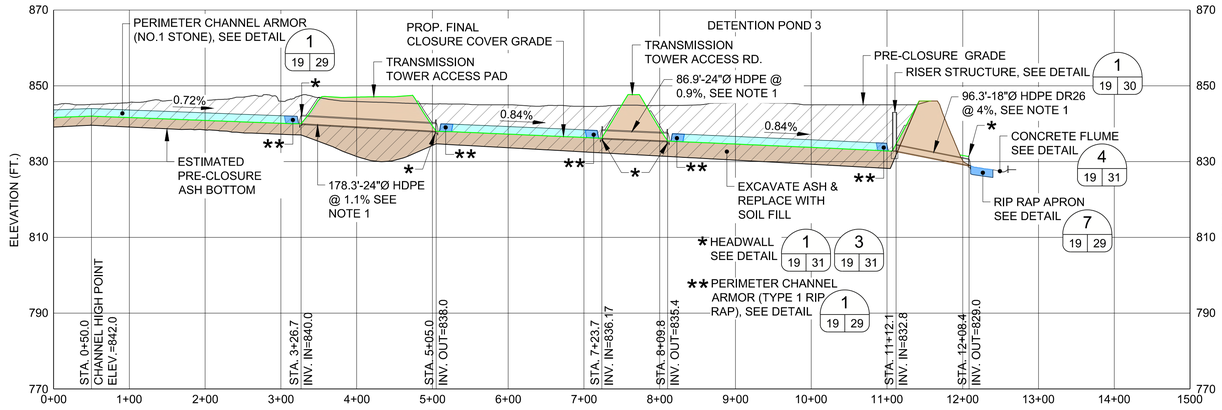
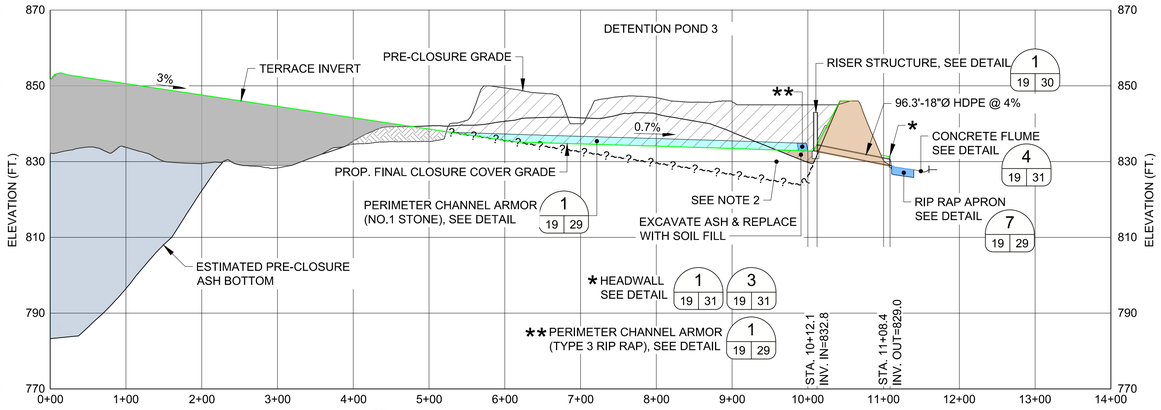
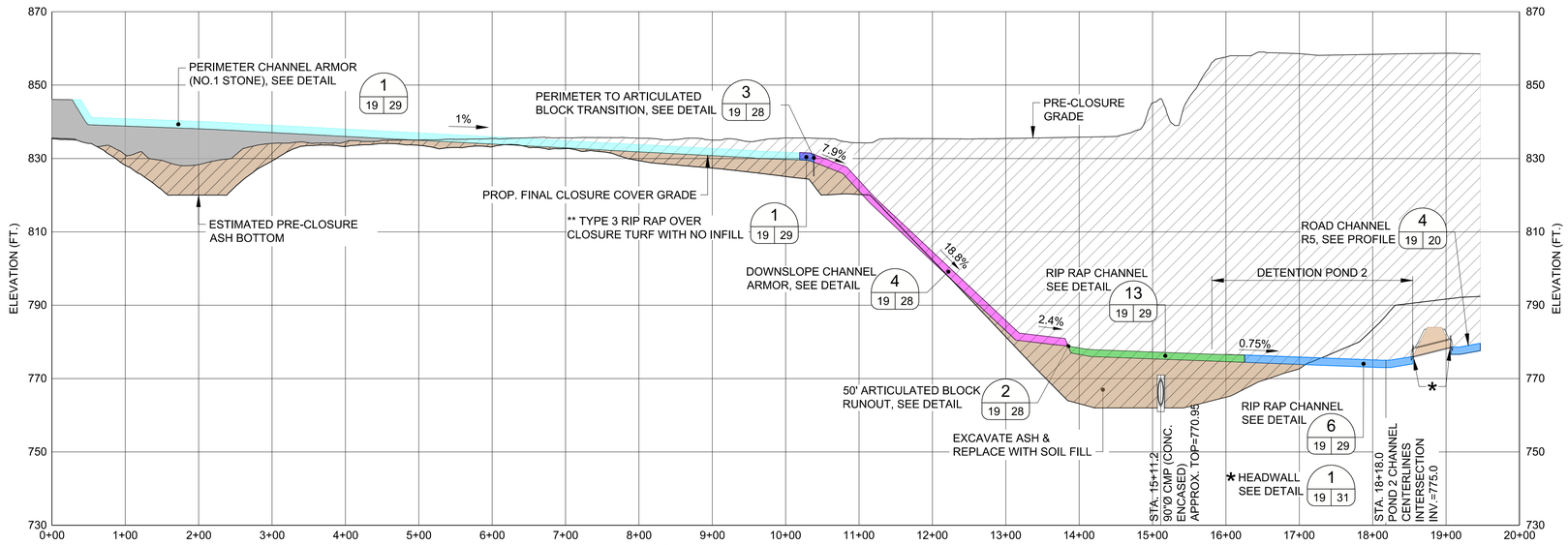
Path: \\atlanta\cadd\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 18-20 CHANNEL PROFILES.dwg



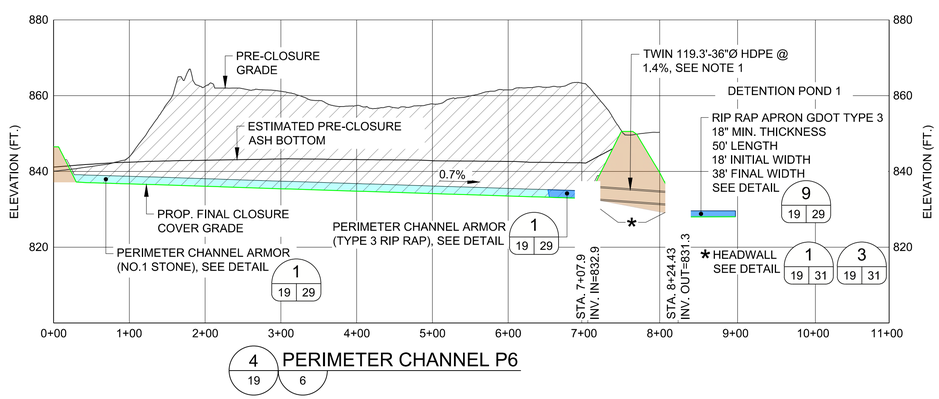
1 19 | 6 PERIMETER CHANNEL P3



2 19 | 6 PERIMETER CHANNEL P4



3 19 | 6 PERIMETER CHANNEL P5



4 19 | 6 PERIMETER CHANNEL P6

LEGEND

- EXISTING ASH TO REMAIN
- EXISTING EMBANKMENT FILL
- ASH / SOIL TO BE REMOVED
- ASH FILL
- SOIL FILL
- HYDRO TURF OVER SUPERGRIPNET
- ARMORFLEX ON CLOSURE TURF
- TYPE 1 RIP RAP
- TYPE 3 RIP RAP
- NO.1 STONE OR TYPE 3 RIP RAP

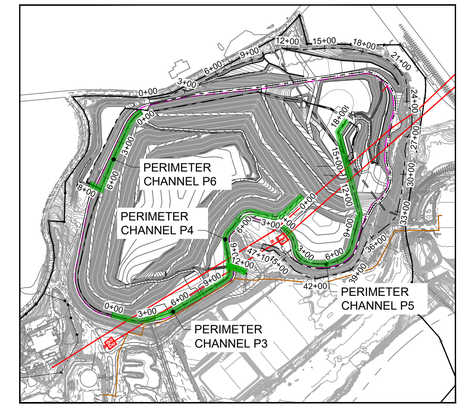
REFERENCES

1. THE PRE-CLOSURE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."

2. REVISED PRE-CLOSURE TOPOGRAPHY & CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA POWER LAND DEPARTMENT. THE DATA SHOWN IS AN UPDATE TO THE PLANS DONE ON 10-16-2012 & THE ONSITE CHANGES SINCE THAT 2012 SURVEY. THE REVISED SURVEY WAS DONE ON 1-12-2016 & MERGED WITH THE DATA ON 10-16-2012. GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016 - LAND ENG. PROJECT # 20160020.

0 100 200
1" = 100' FEET

5X VERTICAL EXAGGERATION



KEY MAP

NOTES

1. CULVERT TO BE INSTALLED SO THAT NO ASH IS WITHIN 5 FOOT MINIMUM RADIAL DISTANCE AROUND PIPE.

2. IF ADDITIONAL ASH EXISTS BELOW LIMITS OF DETENTION POND EXCAVATE PER REMOVAL PROTOCOLS AND REPLACE WITH SOIL FILL BETWEEN LINES EXTENDING FROM INTERIOR DAM FACE AND FINAL CLOSURE SLOPE.

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

GEORGIA REGISTERED No. PE034744 PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Southern Company

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP - 3/4 CHANNEL PROFILES - SHEET 2 OF 3

CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	AVR
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 19

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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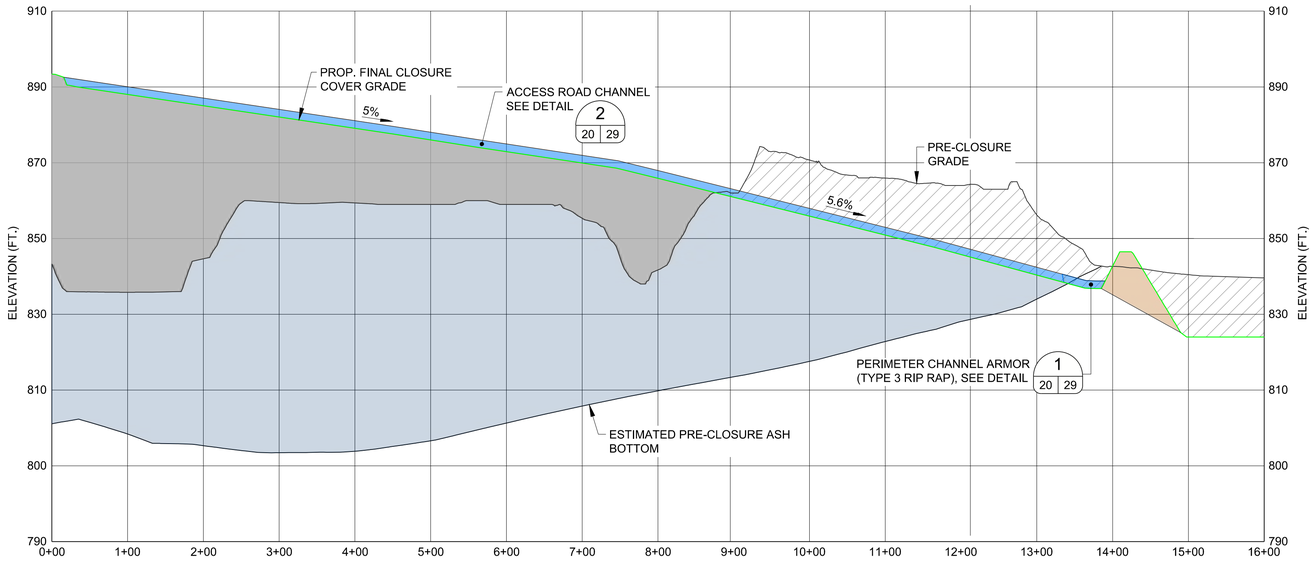
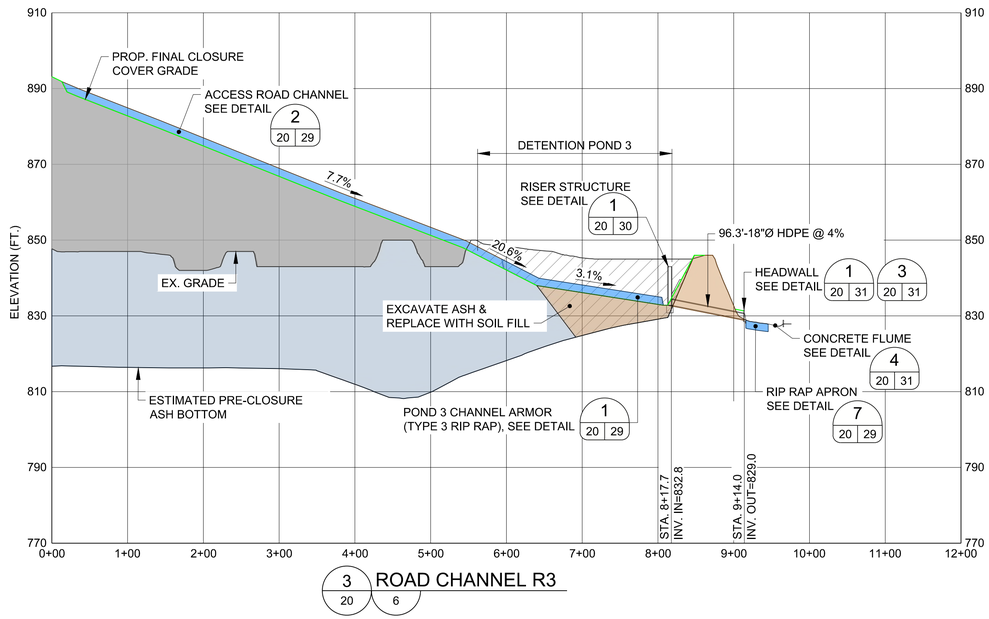
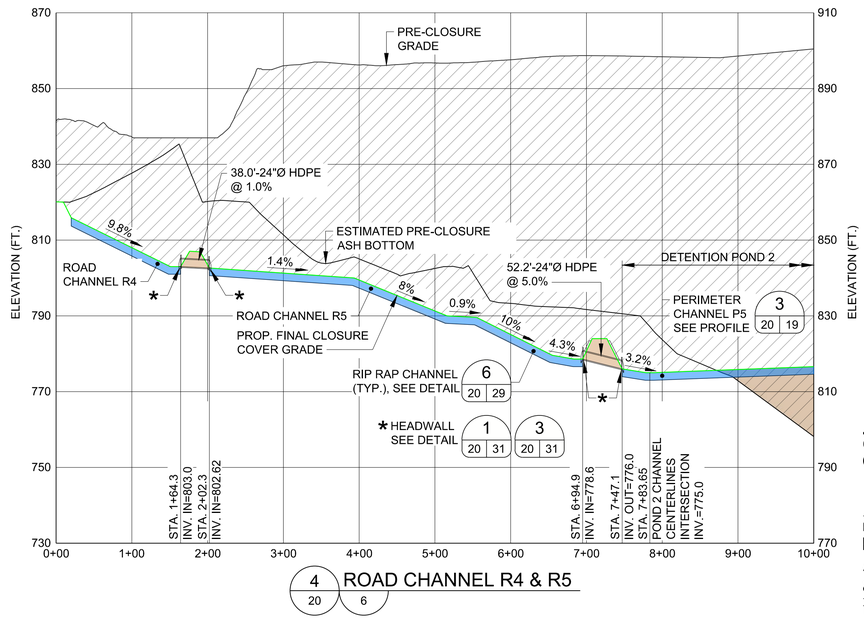


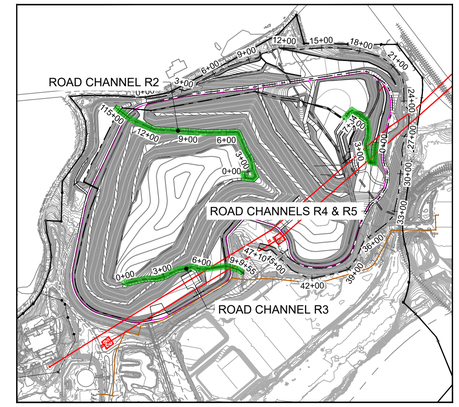
2 (20 | 6) ROAD CHANNEL R2



3 (20 | 6) ROAD CHANNEL R3



4 (20 | 6) ROAD CHANNEL R4 & R5



KEY MAP

LEGEND

- PROPOSED ASH FILL
- ASH TO REMAIN
- ASH TO BE REMOVED
- EMBANKMENT FILL
- SOIL FILL
- HYDRO TURF OVER SUPERGRIPNET
- ARMORFLEX ON CLOSURE TURF OVER SUPERGRIPNET (NO SAND INFILL)
- TYPE 1 RIP RAP
- TYPE 3 RIP RAP
- NO.1 STONE OR TYPE 3 RIP RAP

REFERENCES

1. THE PRE-CLOSURE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."

2. REVISED PRE-CLOSURE TOPOGRAPHY & CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA POWER LAND DEPARTMENT. THE DATA SHOWN IS AN UPDATE TO THE PLANS DONE ON 10-16-2012 & THE ONSITE CHANGES SINCE THAT 2012 SURVEY. THE REVISED SURVEY WAS DONE ON 1-12-2016 & MERGED WITH THE DATA ON 10-16-2012. GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016 - LAND ENG. PROJECT # 20160020.

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

0 100 200
1" = 100' FEET
5X VERTICAL EXAGGERATION

GEORGIA REGISTERED No. PE034745 PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Southern Company

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP - 3/4 CHANNEL PROFILES - SHEET 3 OF 3

CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	AVR
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449
REV. 0
SHEET 20

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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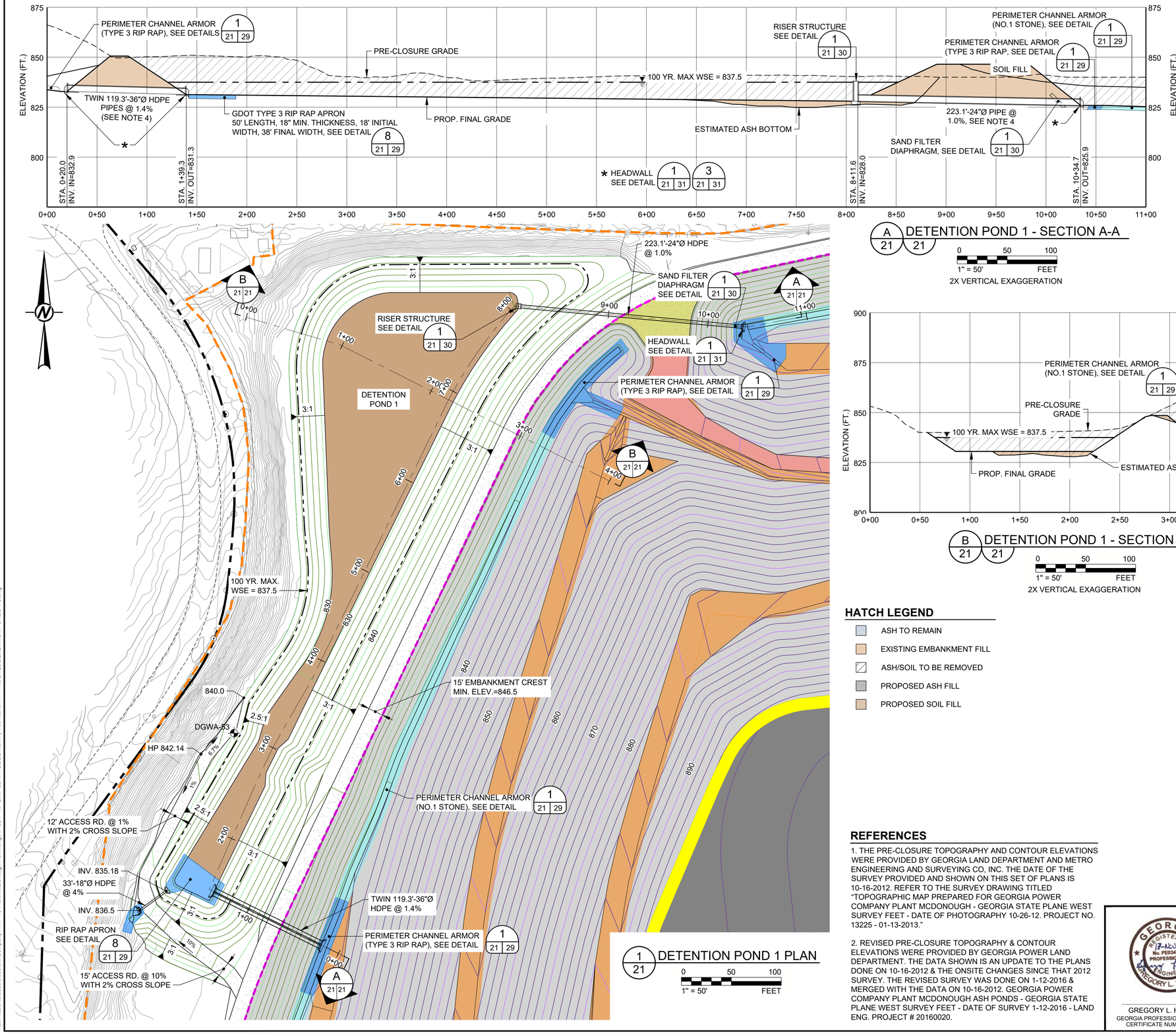

A 21 21 DETENTION POND 1 - SECTION A-A

0 50 100
1" = 50' FEET
2X VERTICAL EXAGGERATION

1 21 DETENTION POND 1 PLAN

0 50 100
1" = 50' FEET

B 21 21 DETENTION POND 1 - SECTION B-B

0 50 100
1" = 50' FEET
2X VERTICAL EXAGGERATION

HATCH LEGEND

- ASH TO REMAIN
- EXISTING EMBANKMENT FILL
- ASH/SOIL TO BE REMOVED
- PROPOSED ASH FILL
- PROPOSED SOIL FILL

LEGEND

- PRE-CLOSURE CONTOURS
- UNPAVED PLANT ROAD
- PROPERTY BOUNDARY MARKERS/LIMITS
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- 850 / 848 PROPOSED CONTOURS
- LIMITS OF CLOSURE
- PERMIT BOUNDARY AP-2, AP-3/4
- HYDRO TURF OVER SUPERGRIPNET
- TYPE 3 RIP-RAP
- NO.1 STONE OR TYPE 3 RIP-RAP
- NO.4 STONE BALLAST
- ARMORFLEX ON CLOSURE TURF OVER SUPERGRIPNET (NO SAND INFILL)
- TOP OF SLOPE DIVERSION WITH ROCK FILL
- CLOSURE TURF OVER SUPERGRIPNET (SEE NOTE 1)
- CLOSURE TURF OVER MICROSPIKE
- GEO-CELL ACCESS ROAD
- GRAVEL ROAD OVER CLOSURE TURF WITH EDGE CURB
- GRAVEL ROAD OUTSIDE OF CLOSURE TURF

NOTES

1. SUPERGRIPNET TO BE AGRU 50 MIL LLDPE.
2. MICROSPIKE TO BE AGRU 40 MIL (MIN.) LLDPE GEOMEMBRANE LINER.
3. CLOSURE TURF TO CONTAIN SAND INFILL MINIMUM 1/2" THICKNESS UNLESS OTHERWISE INDICATED.
4. CULVERT TO BE INSTALLED IN 5' MIN. RADIAL ZONE OF SOIL FILL.
5. DETENTION POND 1 SERVES AS TEMPORARY SEDIMENT POND A DURING ALL PHASES OF CONSTRUCTION PROVIDING STORAGE FOR STORMWATER RUNOFF AND SEDIMENT CAPTURE.
6. HYDROLOGIC AND HYDRAULIC PARAMETERS (PROJECT COMPLETION CONDITIONS):
   A. APPROXIMATELY 12.5 ACRE-FEET UP TO ELEVATION 840 OF STORAGE CAPACITY.
   B. DRAINAGE AREA APPROXIMATELY 29 ACRES IN FINAL CONDITION.
   C. 100-YEAR, 24 HOUR STORM MAXIMUM WATER SURFACE ELEVATION: 837.5 FT-MSL
   D. 100-YEAR, 24-HOUR STORM MINIMUM FREEBOARD PROVIDED: 2.5 FT
   E. MAXIMUM 100-YEAR, 24 HOUR STORM INFLOW TO POND: 106 CFS
   F. MAXIMUM 100-YEAR, 24 HOUR STORM OUTFLOW FROM POND: 12 CFS

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

REFERENCES

1. THE PRE-CLOSURE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."

2. REVISED PRE-CLOSURE TOPOGRAPHY & CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA POWER LAND DEPARTMENT. THE DATA SHOWN IS AN UPDATE TO THE PLANS DONE ON 10-16-2012 & THE ONSITE CHANGES SINCE THAT 2012 SURVEY. THE REVISED SURVEY WAS DONE ON 1-12-2016 & MERGED WITH THE DATA ON 10-16-2012. GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016 - LAND ENG. PROJECT # 20160020.

GEORGIA REGISTERED No. PE034744 PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP - 3/4 DETENTION POND 1 DETAILS

CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 21

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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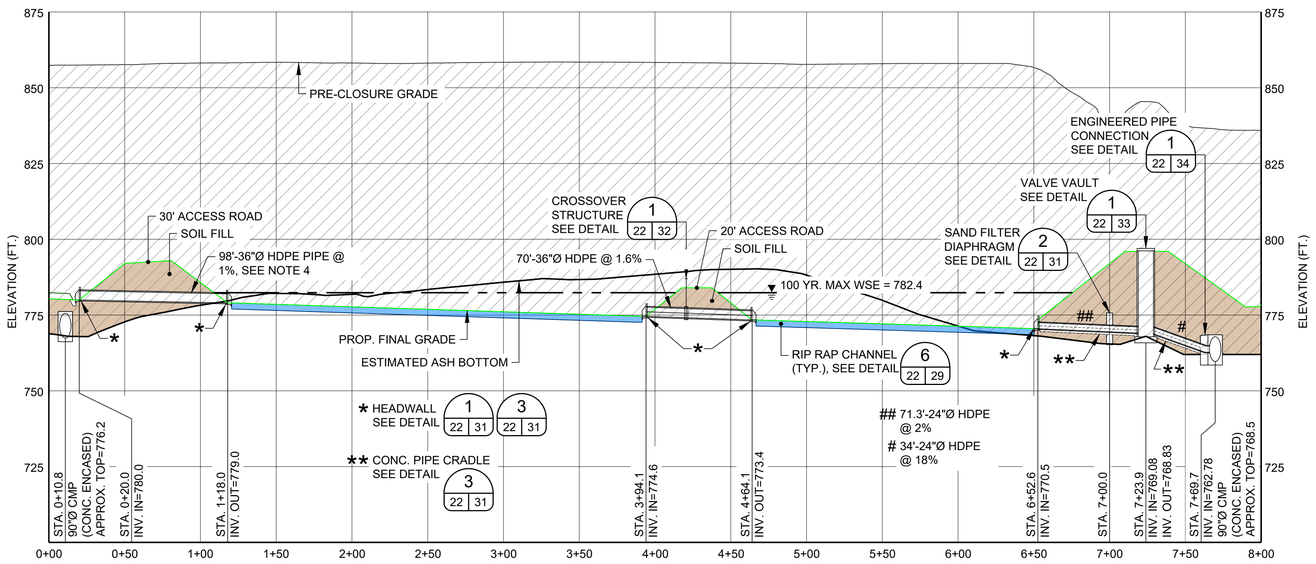
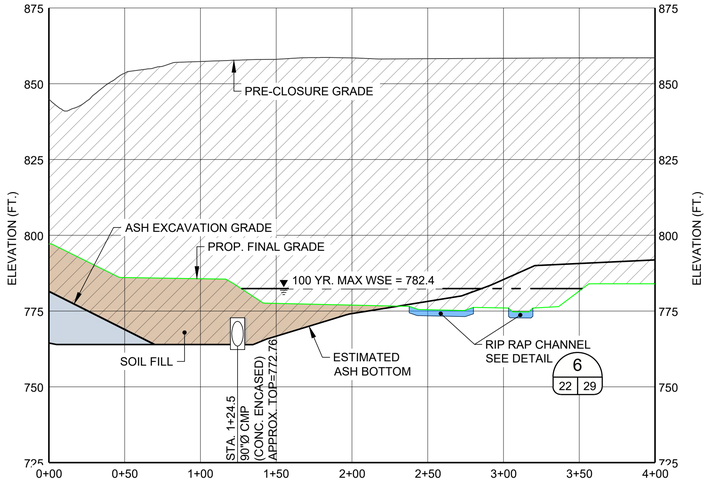


A 22 22 DETENTION POND 2 - SECTION A-A

0 50 100
1" = 50' FEET

2X VERTICAL EXAGGERATION



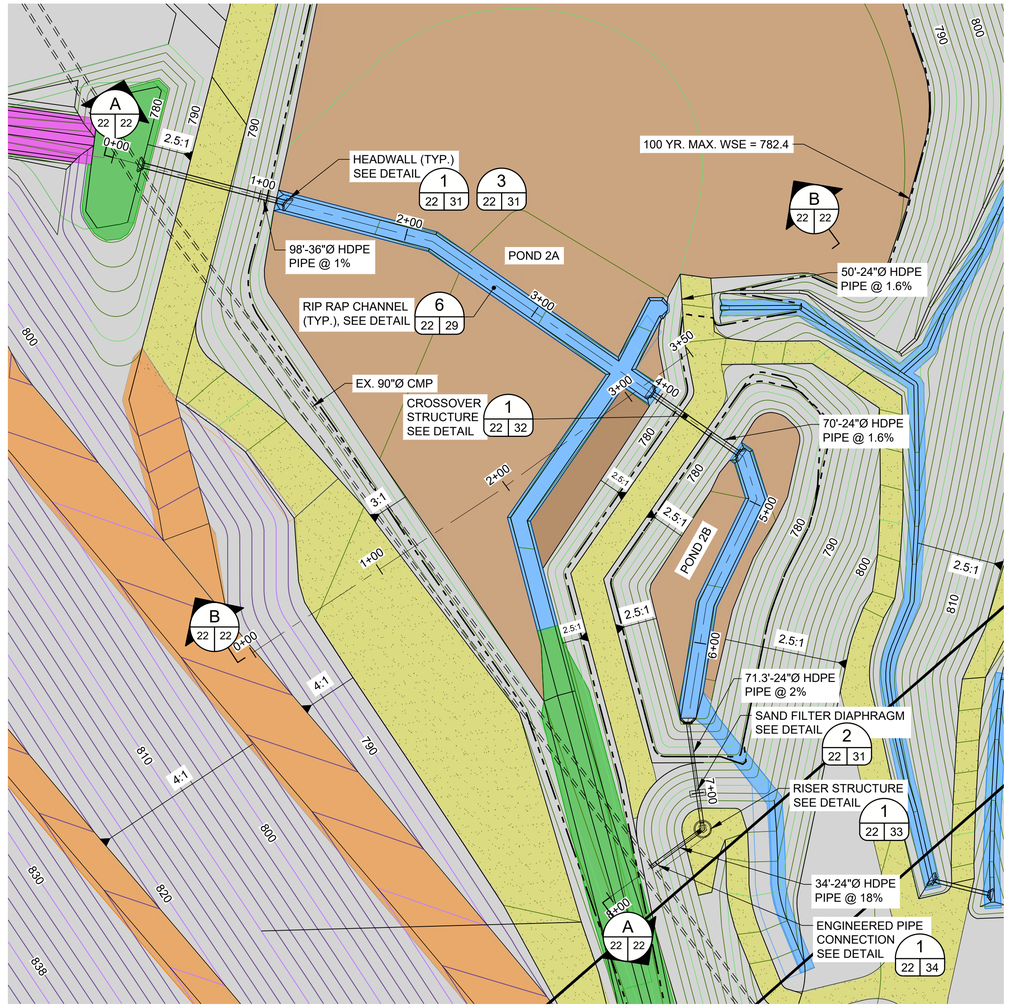
B 22 22 DETENTION POND 2 - SECTION B-B

0 50 100
1" = 50' FEET

2X VERTICAL EXAGGERATION

LEGEND

- PRE-CLOSURE CONTOURS
- UNPAVED PLANT ROAD
- EXISTING GAS LINE
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- 850 / 848 PROPOSED CONTOURS
- LIMITS OF CLOSURE
- HYDRO TURF OVER SUPERGRIPNET
- TYPE 3 RIP-RAP
- NO.1 STONE OR TYPE 3 RIP-RAP
- NO.4 STONE BALLAST
- ARMORFLEX ON CLOSURE TURF OVER SUPERGRIPNET (NO SAND INFILL)
- TYPE 1 RIP RAP
- CLOSURE TURF OVER SUPERGRIPNET (SEE NOTE 1)
- CLOSURE TURF OVER MICROSPIKE
- GEO-CELL ACCESS ROAD
- GRAVEL ROAD OVER CLOSURE TURF WITH EDGE CURB
- GRAVEL ROAD OUTSIDE OF CLOSURE TURF



1 22 22 DETENTION POND 2 PLAN

0 50 100
1" = 50' FEET

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

HATCH LEGEND

- ASH TO REMAIN
- EXISTING EMBANKMENT FILL
- ASH/SOIL TO BE REMOVED
- PROPOSED ASH FILL
- PROPOSED SOIL FILL

REFERENCES

1. THE PRE-CLOSURE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."

2. REVISED PRE-CLOSURE TOPOGRAPHY & CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA POWER LAND DEPARTMENT. THE DATA SHOWN IS AN UPDATE TO THE PLANS DONE ON 10-16-2012 & THE ONSITE CHANGES SINCE THAT 2012 SURVEY. THE REVISED SURVEY WAS DONE ON 1-12-2016 & MERGED WITH THE DATA ON 10-16-2012. GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016 - LAND ENG. PROJECT # 20160020.

NOTES

1. SUPERGRIPNET TO BE AGRU 50 MIL LLDPE OR AGRU 50 MIL LLDPE MICRODRAIN.

2. MICROSPIKE TO BE AGRU 40 MIL (MIN.) LLDPE GEOMEMBRANE LINER.

3. CLOSURE TURF TO CONTAIN SAND INFILL MINIMUM 1/2" THICKNESS UNLESS OTHERWISE INDICATED.

4. CULVERT TO BE INSTALLED IN 5' MIN. RADIAL ZONE OF SOIL FILL.

5. DETENTION POND 2 WILL SERVE TEMPORARILY AS A SEDIMENT POND DURING THE FINAL PHASE OF CONSTRUCTION.

6. OUTFLOWS FROM THE POND 2 OUTLET STRUCTURE ARE NOT PERMITTED UNTIL 100% SITE STABILIZATION OF AREAS DRAINING TO POND 2 HAS BEEN ACHIEVED AND ALL SEDIMENTS FROM THE POND REMOVED.

7. HYDROLOGIC AND HYDRAULIC PARAMETERS (PROJECT COMPLETION CONDITIONS):

A. APPROXIMATELY 10.2 ACRE-FEET IN PART A, 3.9 ACRE-FEET IN PART B OF STORAGE CAPACITY.
B. DRAINAGE AREA APPROXIMATELY 34 ACRES IN FINAL CONDITION (EXCLUDING AREA DRAINING TO DETENTION POND 1).
C. 100-YEAR, 24 HOUR STORM MAXIMUM WATER SURFACE ELEVATION: 782.1 FT-MSL
D. 100-YEAR, 24-HOUR STORM MINIMUM FREEBOARD PROVIDED: 1.6 FT
E. MAXIMUM 100-YEAR, 24 HOUR STORM INFLOW TO POND: 58 CFS INTO PART B
F. MAXIMUM 100-YEAR, 24 HOUR STORM OUTFLOW FROM POND: 31 CFS

GEORGIA REGISTERED No. PE034749 PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP - 3/4 DETENTION POND 2 DETAILS

CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449
REV. 0
SHEET 22

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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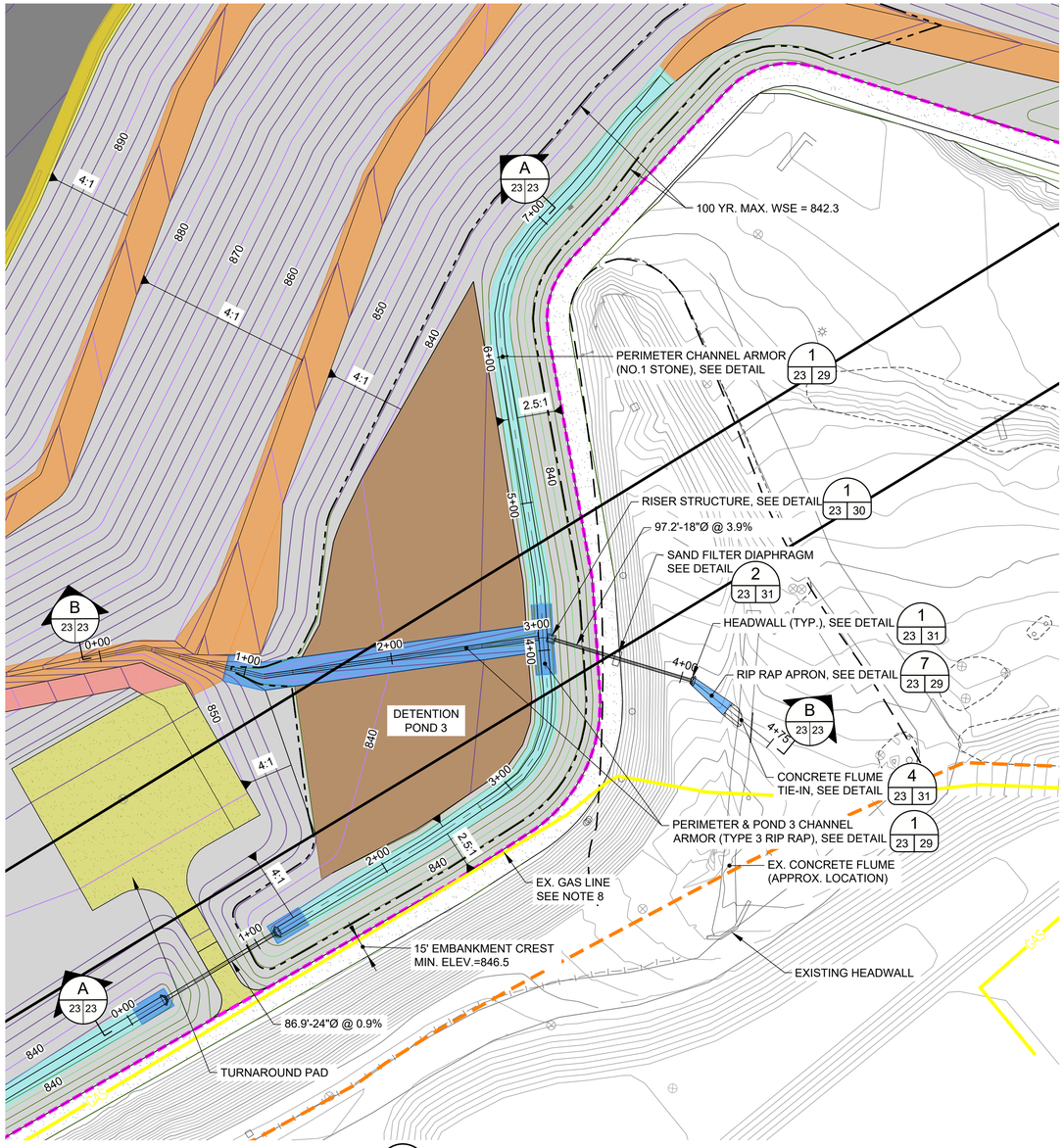
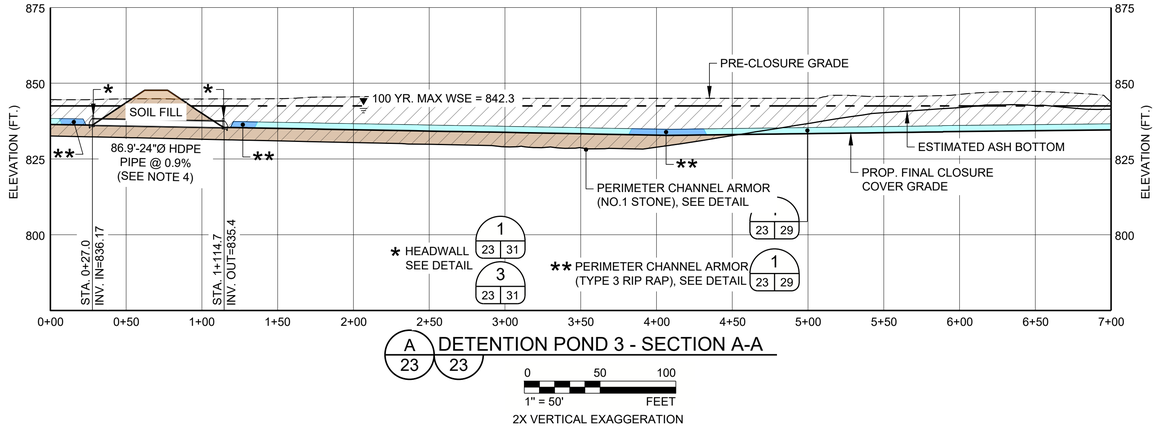


1 / 23 / 23 DETENTION POND 3 PLAN

0 50 100

1" = 50' FEET

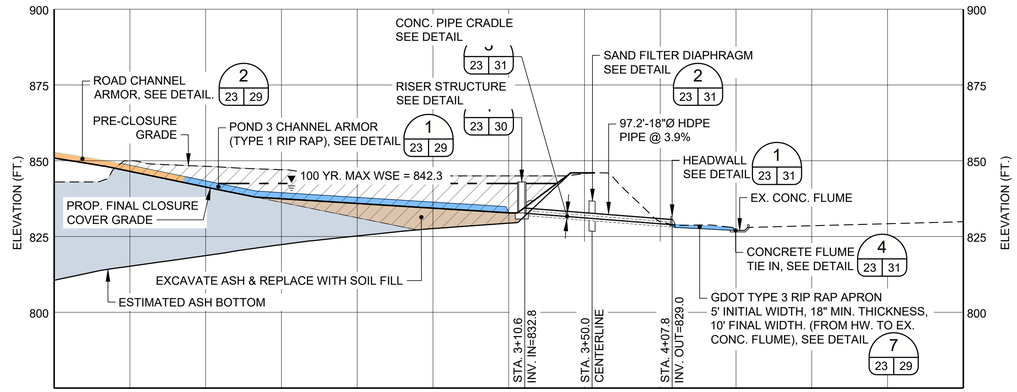


A / 23 / 23 DETENTION POND 3 - SECTION A-A

0 50 100

1" = 50' FEET

2X VERTICAL EXAGGERATION



B / 23 / 23 DETENTION POND 3 - SECTION B-B

0 50 100

1" = 50' FEET

2X VERTICAL EXAGGERATION

LEGEND

- PRE-CLOSURE CONTOURS
- UNPAVED PLANT ROAD
- EXISTING GAS LINE
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- PROPOSED CONTOURS
- LIMITS OF CLOSURE TURF
- PERMIT BOUNDARY AP-2, AP-3/4
- HYDRO TURF OVER SUPERGRIPNET
- TYPE 3 RIP RAP APRON
- NO.1 STONE OR TYPE 3 RIP RAP
- ARMORFLEX ON HYDRO TURF OVER SUPERRIPNET
- GRAVEL ROAD OVER CLOSURE TURF WITH EDGE CURB
- CLOSURE TURF OVER SUPERGRIPNET
- CLOSURE TURF OVER MICROSPIKE

HATCH LEGEND

- ASH TO REMAIN
- EXISTING EMBANKMENT FILL
- ASH/SOIL TO BE REMOVED
- PROPOSED ASH FILL
- PROPOSED SOIL FILL

NOTES

1. SUPERGRIPNET TO BE AGRU 50 MIL LLDPE.

2. MICROSPIKE TO BE AGRU 40 MIL (MIN.) LLDPE GEOMEMBRANE LINER.

3. CLOSURE TURF TO CONTAIN SAND INFILL MINIMUM 1/2" THICKNESS UNLESS OTHERWISE INDICATED.

4. CULVERT TO BE INSTALLED IN 5' MIN. RADIAL ZONE OF SOIL FILL.

5. DETENTION POND 3 WILL SERVE TEMPORARILY AS SEDIMENT POND D DURING PHASES 2 THROUGH 5 OF CONSTRUCTION. SEE SHEET 13.

6. OUTFLOWS FROM THE OUTLET STRUCTURE ARE NOT PERMITTED UNTIL 100% SITE STABILIZATION HAS BEEN ACHIEVED IN CONTRIBUTING AREAS AND ALL SEDIMENTS FROM THE POND REMOVED.

7. HYDROLOGIC AND HYDRAULIC PARAMETERS (PROJECT COMPLETION CONDITIONS):

   A. APPROXIMATELY 10.5 ACRE-FEET OF STORAGE CAPACITY.
   B. DRAINAGE AREA APPROXIMATELY 20 ACRES IN FINAL CONDITION.
   C. 100-YEAR, 24 HOUR STORM MAXIMUM WATER SURFACE ELEVATION: 842.3 FT-MSL
   D. 100-YEAR, 24-HOUR STORM MINIMUM FREEBOARD PROVIDED: 3.7 FT
   E. MAXIMUM 100-YEAR, 24 HOUR STORM INFLOW TO POND: 122 CFS
   F. MAXIMUM 100-YEAR, 24 HOUR STORM OUTFLOW FROM POND: 9 CFS

8. 24 INCH DIAMETER NATURAL GAS FEED FOR POWER PLANT RUNS WITHIN SOUTHERN PORTION OF EXISTING ASH POND 3 PERIMETER BERM. NO WORK WITHIN 50 FEET OF THIS LINE WITHOUT NOTIFICATION OF AND APPROVAL OF OWNER.

REFERENCES

1. THE PRE-CLOSURE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."

2. REVISED PRE-CLOSURE TOPOGRAPHY & CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA POWER LAND DEPARTMENT. THE DATA SHOWN IS AN UPDATE TO THE PLANS DONE ON 10-16-2012 & THE ONSITE CHANGES SINCE THAT 2012 SURVEY. THE REVISED SURVEY WAS DONE ON 1-12-2016 & MERGED WITH THE DATA ON 10-16-2012. GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016 - LAND ENG. PROJECT # 20160020.

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP - 3/4 DETENTION POND 3 DETAILS

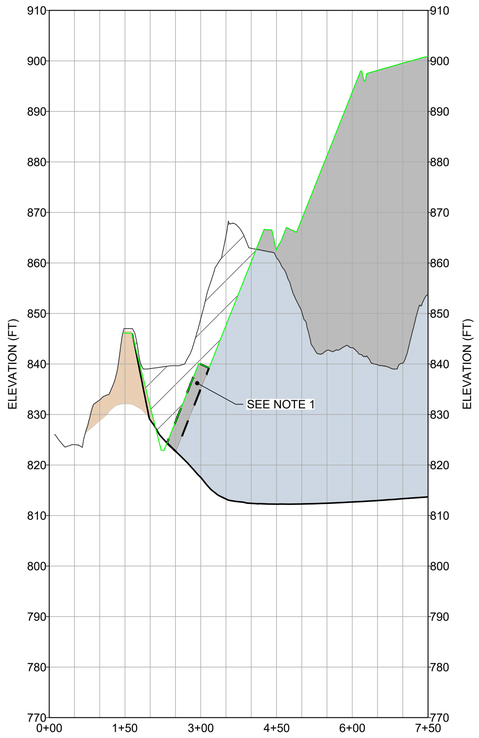
CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

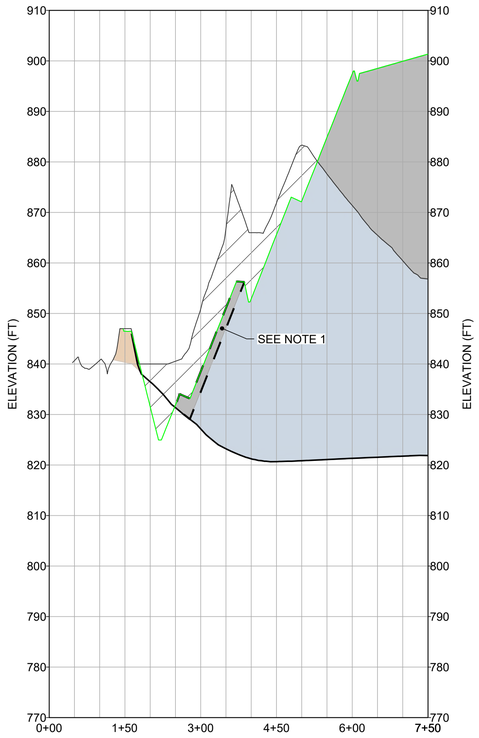
PROJECT NO. 1777449 | REV. 0 | SHEET 23

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

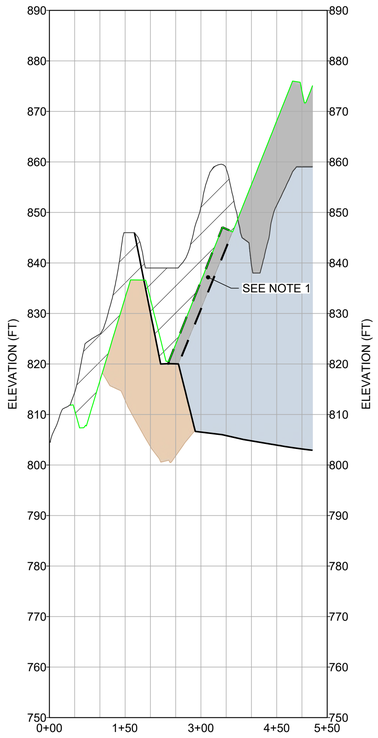
Path: \\atlanta\cadd\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 21-23 DETENTION PONDS 1-3.dwg



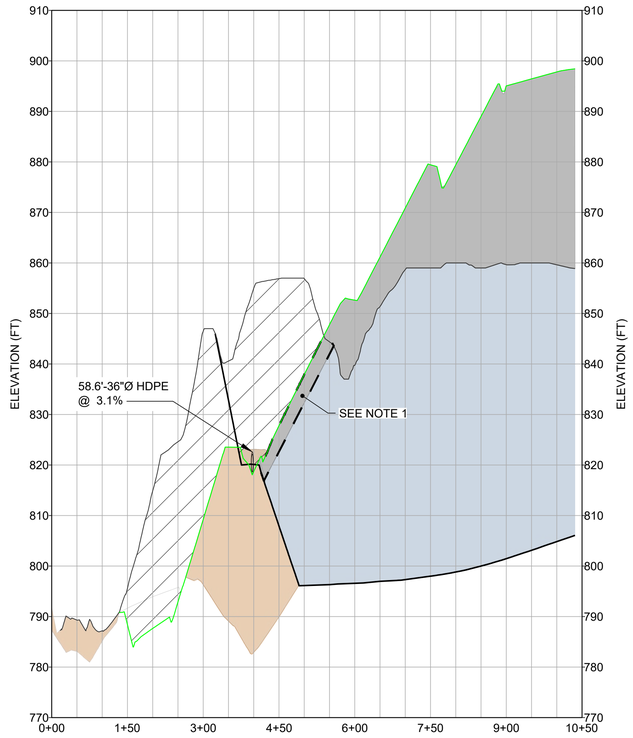
A SECTION A-A
24 24



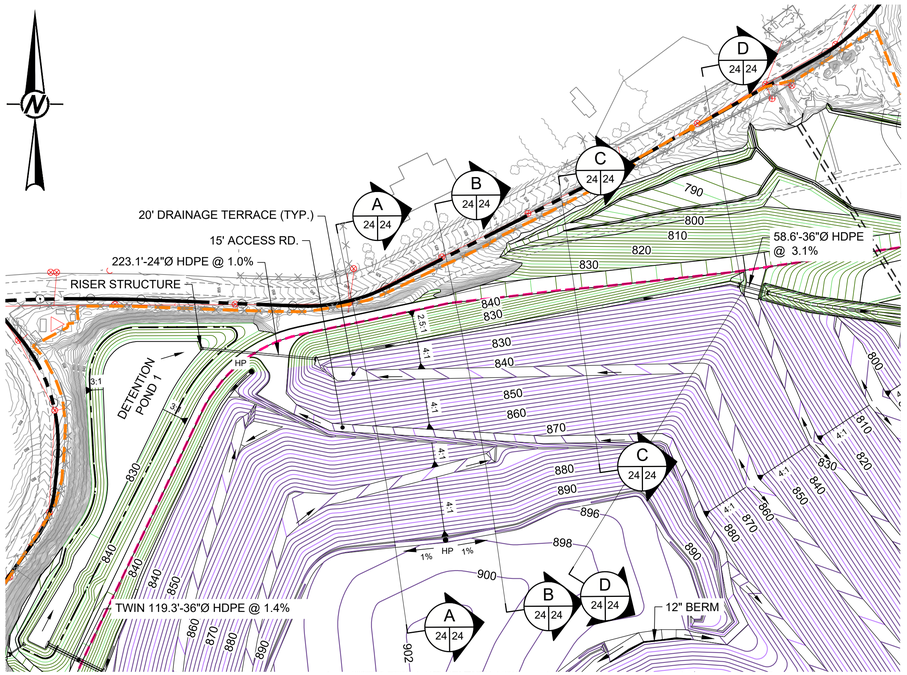
B SECTION B-B
24 24



C SECTION C-C
24 24



D SECTION D-D
24 24



1 NORTH PERIMETER CHANNEL PLAN
24 24

NOTES

1. OVER EXCAVATE AND RECOMPACT ASH FILL ALONG NORTHERN PERIMETER CHANNEL A MINIMUM OF 20 FEET HORIZONTALLY TO BOTTOM OF ASH AND OR A MINIMUM OF FIVE FEET BELOW FINAL CHANNEL BOTTOM IF STILL IN ASH.

2. ALL TEMPORARY AND PERMANENT EXCAVATIONS BELOW ELEVATION 830 FEET (THE NOMINAL PRE CONSTRUCTION WATER LEVEL WITHIN ASH PONDS 3 AND 4) REQUIRE SUBMITTAL OF CONFIRMATION WATER LEVEL TESTING INDICATING SUFFICIENT DEWATERING TO MAINTAIN STABILITY PRIOR TO EXCAVATION. THE FOLLOWING CRITERIA APPLY TO ALL ASH EXCAVATIONS:
   A. TEMPORARY ASH EXCAVATION SLOPES SHALL BE 4H:1V OR SHALLOWER UNLESS OTHERWISE APPROVED BY THE ENGINEER.
   B. WATER LEVELS WITHIN THE ASH BEHIND CUT SLOPES SHALL BE MAINTAINED A MINIMUM OF 50 HORIZONTAL FEET BEHIND (12.5 VERTICAL FEET BELOW) ALL PORTIONS OF ASH EXCAVATION CUT SLOPES AT ALL TIMES. IT IS ANTICIPATED THAT MEETING THIS CRITERIA WILL REQUIRE ACTIVE DEWATERING AND MONITORING.
   C. ASH EXCAVATIONS BELOW ELEVATION 800 FEET SHALL ADDITIONALLY REQUIRE WATER LEVELS WITHIN 400 FEET OF THE TOE OF THE EXCAVATION SLOPE TO BE LOWERED TO AT LEAST ELEVATION 810 FEET.
   D. SEE SHEET 27 FOR MINIMUM WATER LEVEL MONITORING REQUIREMENTS. DURING CONSTRUCTION.

REFERENCES

1. THE PRE-CLOSURE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."

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LEGEND

- PRE-CLOSURE CONTOURS
- PROPERTY BOUNDARY MARKERS/LIMITS
- COMPLIANCE BOUNDARY AP-2, AP-3/4 (PROPOSED)
- REVISED FINAL CLOSURE CONTOURS
- CLEAN CLOSURE CONTOURS

LINE WORK LEGEND

- PRE-CLOSURE GRADES
- CLOSURE COVER GRADES
- ESTIMATED BOTTOM OF ASH

HATCH LEGEND

- ASH TO REMAIN
- EXISTING EMBANKMENT FILL
- ASH/SOIL TO BE REMOVED
- PROPOSED ASH FILL
- PROPOSED SOIL FILL

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

0 150 300
1" = 150' FEET
10X VERTICAL EXAGGERATION

GEORGIA REGISTERED No. PE034744 PROFESSIONAL ENGINEER GREGORY L. HEBELER
17-NOV-2020

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP - 3/4 NORTH PERIMETER CHANNEL DETAILS

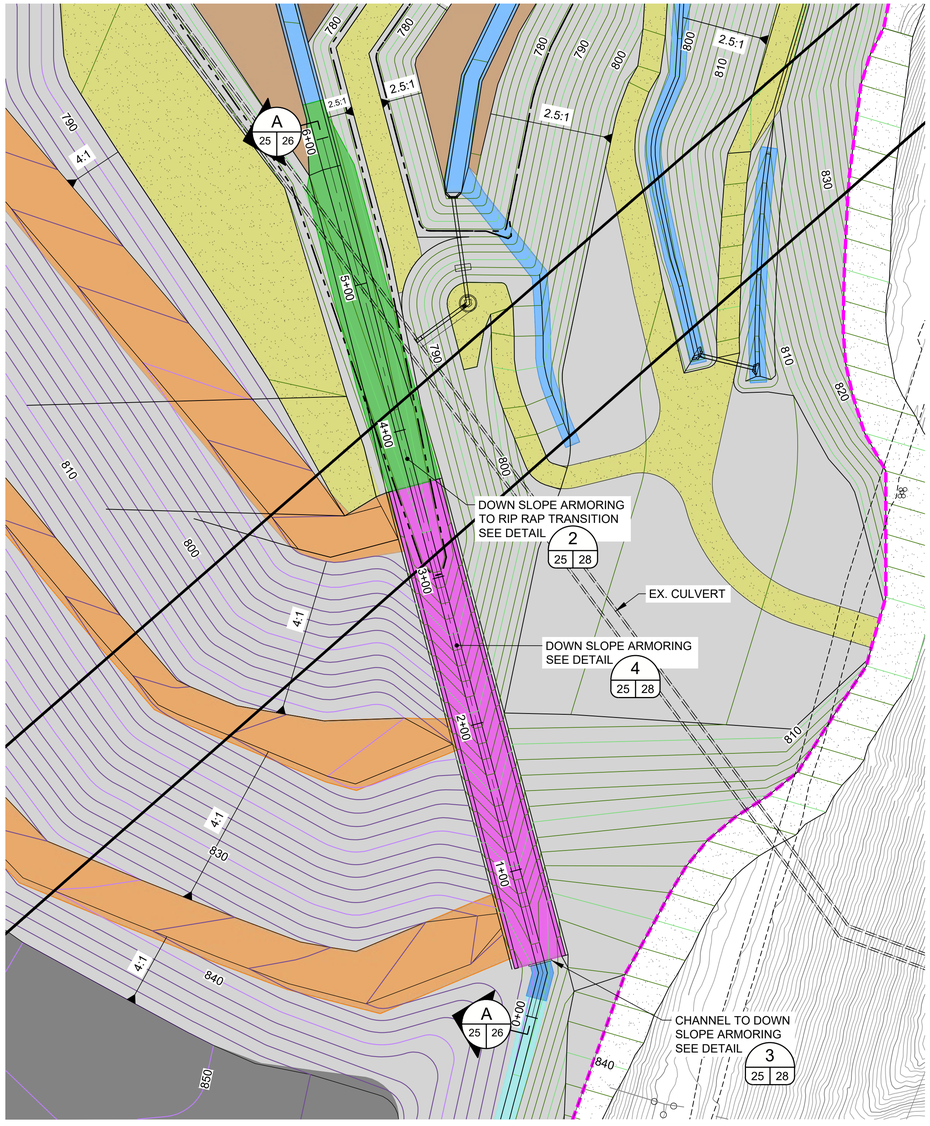
CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 24

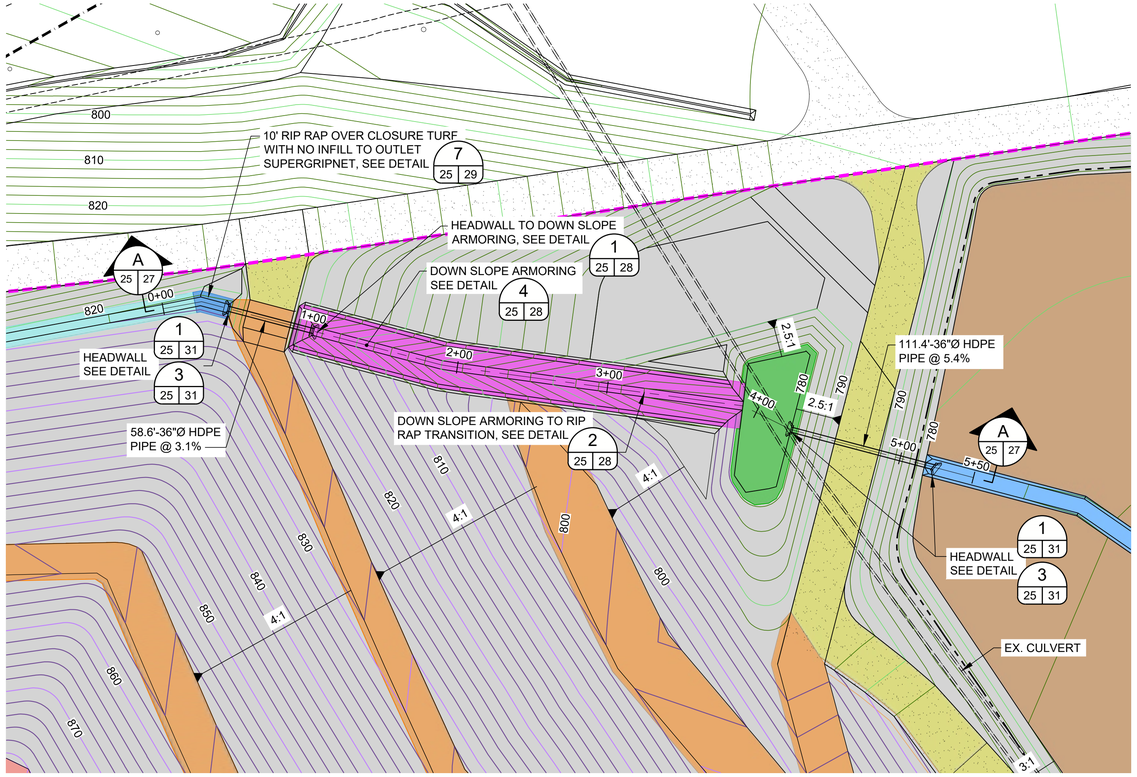
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI D
0 1in

Path: \\atlanta\cadd\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 24 NORTH PERIMETER CHANNEL PLAN-SECTIONS.dwg



SOUTH DOWNSLOPE CHANNEL PLAN
(PERIMETER CHANNEL P5)

1
25



NORTH DOWNSLOPE CHANNEL PLAN
(PERIMETER CHANNEL P2)

2
25

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

LEGEND

- PRE-CLOSURE CONTOURS
- UNPAVED PLANT ROAD
- GAS — EXISTING GAS LINE
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- 850 / 848 — PROPOSED CONTOURS
- LIMITS OF CLOSURE TURF
- HYDRO TURF
- TYPE 3 RIP RAP
- NO.1 STONE OR TYPE 3 RIP RAP
- ARMORFLEX ON CLOSURE TURF
- TYPE 1 RIP RAP
- CLOSURE TURF OVER SUPERGRIPNET
- CLOSURE TURF OVER MICROSPIKE
- NO.4 STONE BALLAST
- GRAVEL ROAD OVER CLOSURE TURF WITH EDGE CURB

REFERENCES

1. THE PRE-CLOSURE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."

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NOTES

1. SUPERGRIPNET TO BE AGRU 50 MIL LLDPE OR AGRU 50 MIL LLDPE MICRODRAIN.

2. MICROSPIKE TO BE AGRU 40 MIL LLDPE GEOMEMBRANE LINER.

3. CLOSURE TURF TO CONTAIN SAND INFILL MINIMUM 1/2" THICKNESS UNLESS OTHERWISE INDICATED.

4. SEE SHEETS 28 AND 29 FOR ARMORING AND CLOSURE COVER DETAILS.

0 50 100
1" = 50' FEET

GEORGIA REGISTERED No. PE034749 PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP - 3/4 NORTH & SOUTH DOWNSLOPE CHANNEL PLANS

CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	AVR
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 25

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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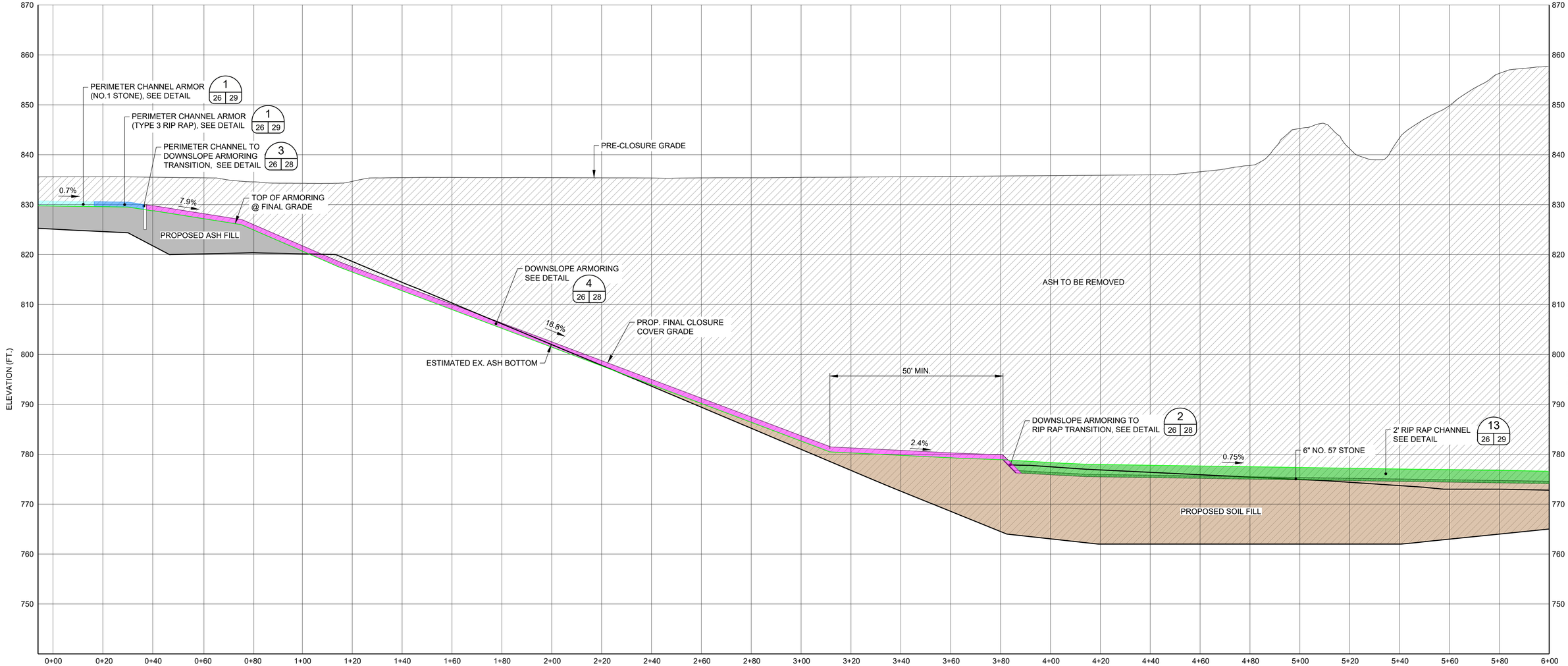

SOUTH DOWNSLOPE CHANNEL PROFILE (PERIMETER CHANNEL P5)

A 26 25

0 20 40

1" = 20' FEET

2X VERTICAL EXAGGERATION

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

HATCH LEGEND

- ASH TO REMAIN
- EXISTING EMBANKMENT FILL
- ASH/SOIL TO BE REMOVED
- PROPOSED ASH FILL
- PROPOSED SOIL FILL
- ARMORFLEX ON CLOSURE TURF
- TYPE I RIP RAP

REFERENCES

1. THE PRE-CLOSURE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."

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GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016 - LAND ENG. PROJECT # 20160020.

GEORGIA REGISTERED No. PE034749 PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP - 3/4 SOUTH DOWNSLOPE CHANNEL PROFILE

CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	AVR
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 26

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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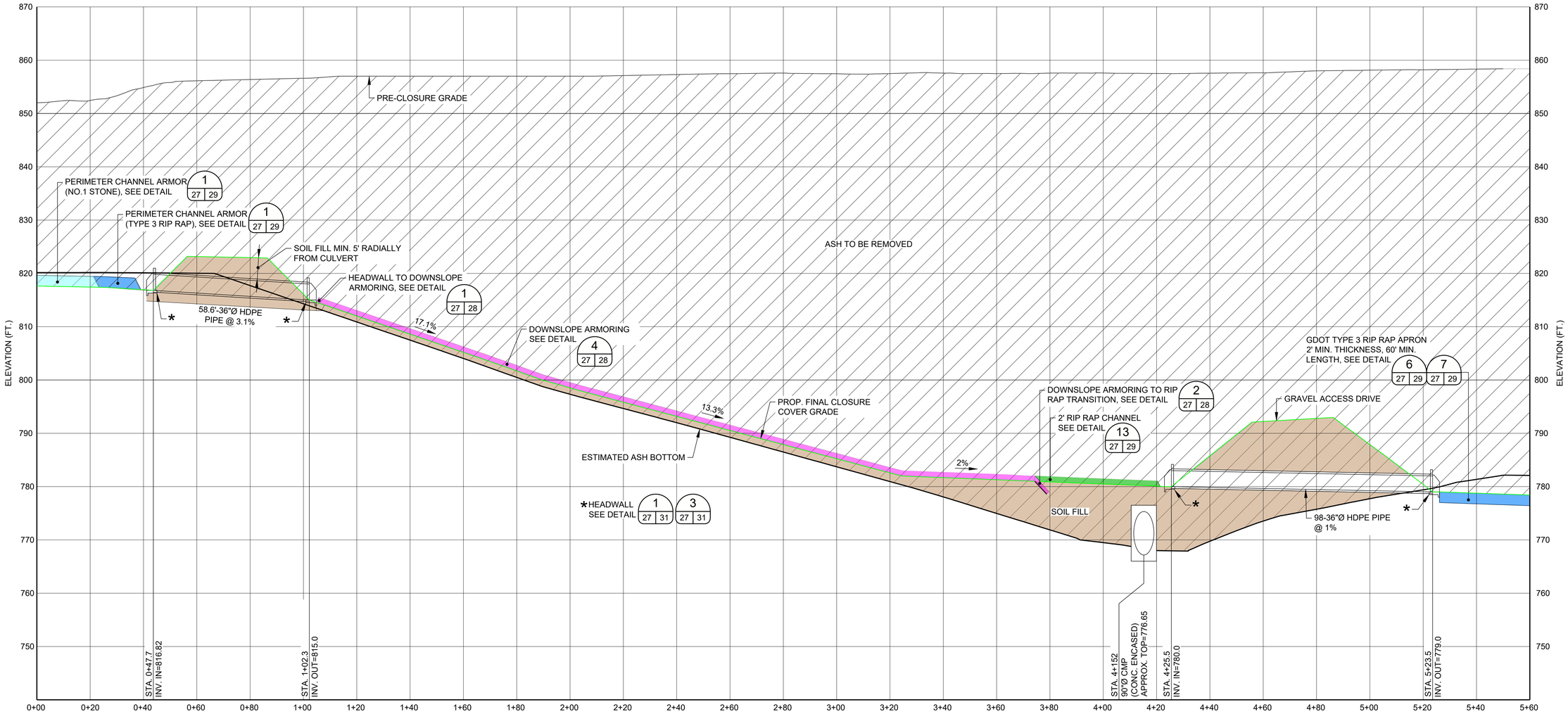

NORTH DOWNSLOPE CHANNEL PROFILE (PERIMETER CHANNEL P2)

A 27 25

0 20 40

1" = 20' FEET

2X VERTICAL EXAGGERATION

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

HATCH LEGEND

- ASH TO REMAIN
- EXISTING EMBANKMENT FILL
- ASH/SOIL TO BE REMOVED
- PROPOSED ASH FILL
- PROPOSED SOIL FILL
- ARMORFLEX ON CLOSURE TURF
- TYPE I RIP RAP
- HYDROTURF OVER TYPE 3 RIP RAP APRON
- NO.1 STONE OR TYPE 3 RIP RAP

REFERENCES

1. THE PRE-CLOSURE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."

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GEORGIA REGISTERED No. PE034749 PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP - 3/4 NORTH DOWNSLOPE CHANNEL PROFILE

CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 27

0 1 in

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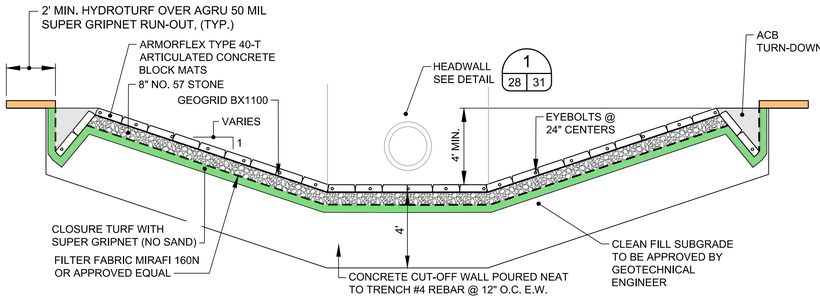
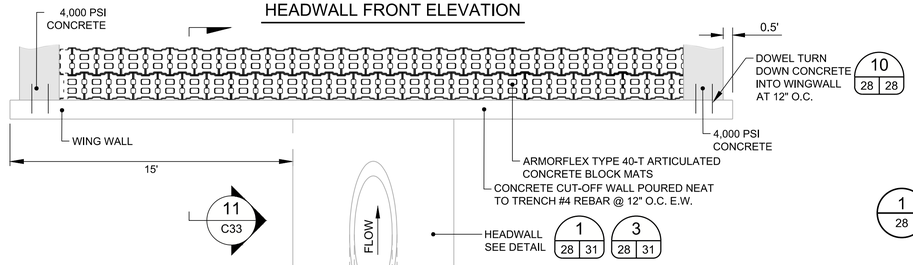
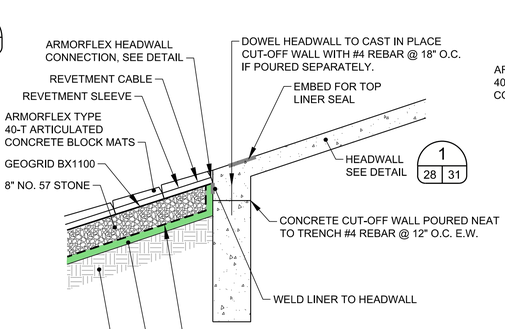


HEADWALL FRONT ELEVATION



HEADWALL PLAN

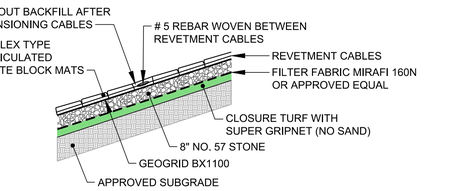


HEADWALL SIDE ELEVATION

NOTE: INSTALL THICKER END OF THE TAPERED 40-T BLOCKS TOWARD DOWNSTREAM

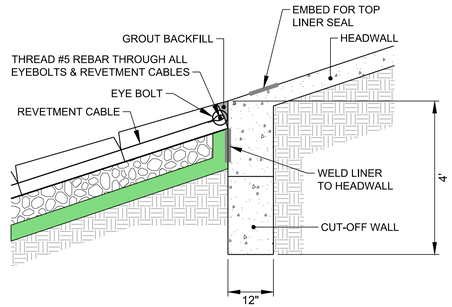
1 28 ARMORFLEX ANCHORING DETAILS 25 27

0 4 8
1" = 4' FEET



MAT JOINT DETAIL

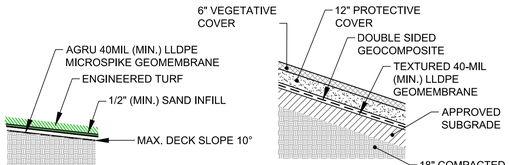
NTS



ARMORFLEX HEADWALL CONNECTION DETAIL

NTS

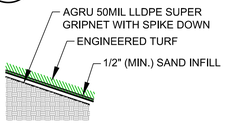
0 2 4
1" = 2' FEET



ALTERNATE

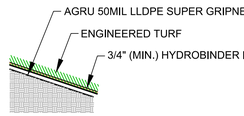
CLOSURETURF FINAL COVER WITH MICROSPIKE DETAIL

5 28 8 25 NTS



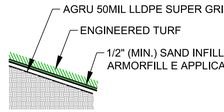
CLOSURETURF FINAL COVER WITH SUPER GRIPNET DETAIL

6 28 8 NTS



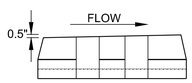
HYDROTURF FINAL COVER DETAIL

7 28 8 NTS



CLOSURETURF FINAL COVER WITH ARMORFILL E APPLICATION

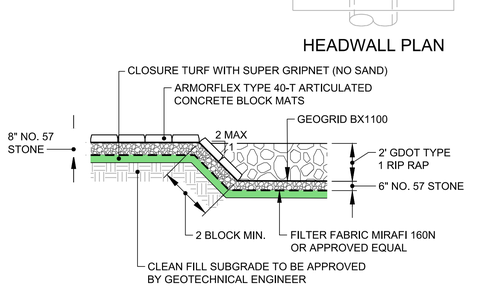
8 28 8 NTS



TAPERED ARTICULATED BLOCKS TO BE PLACED WITH RAISED END AT DOWNSTREAM

9 28 ARTICULATED BLOCK ORIENTATION

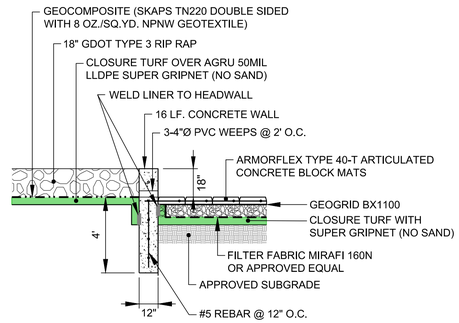
0 4 8
1" = 4' FEET



TRANSITION DETAIL ARTICULATED BLOCK TO RIP RAP

2 28 7 25 26 27

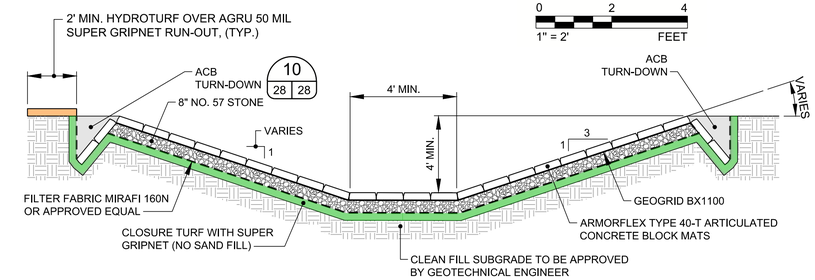
0 4 8
1" = 4' FEET



PERIMETER CHANNEL TO ARTICULATED BLOCK

3 28 7 25 26

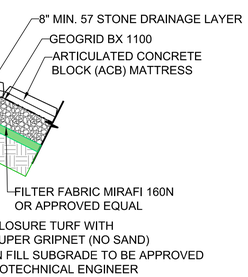
0 4 8
1" = 4' FEET



DOWNSLOPE CHANNEL TYPICAL ARMORING SECTION

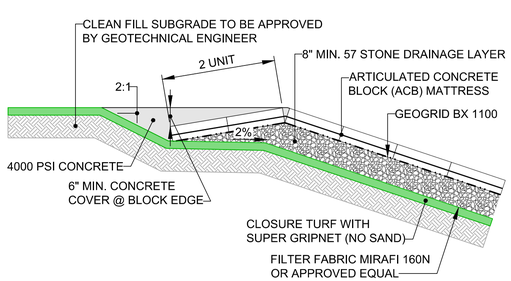
4 28 25 26 27

0 4 8
1" = 4' FEET



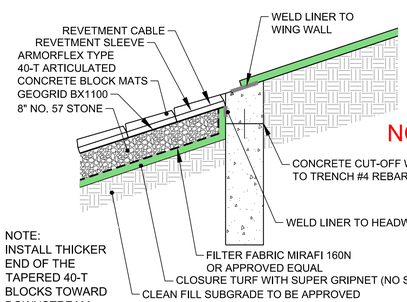
10 C28 ACB TURN-DOWN DETAIL

0 4 8
1" = 4' FEET



11 C28 ALTERNATIVE ACB TURN-DOWN DETAIL

0 2 4
1" = 2' FEET



NOTE: INSTALL THICKER END OF THE TAPERED 40-T BLOCKS TOWARD DOWNSTREAM

12 C33 WINGWALL SIDE ELEVATION

0 2 4
1" = 2' FEET

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP - 3/4 CLOSURE DETAILS - SHEET 1 OF 2

CONSULTANT
GOLDER

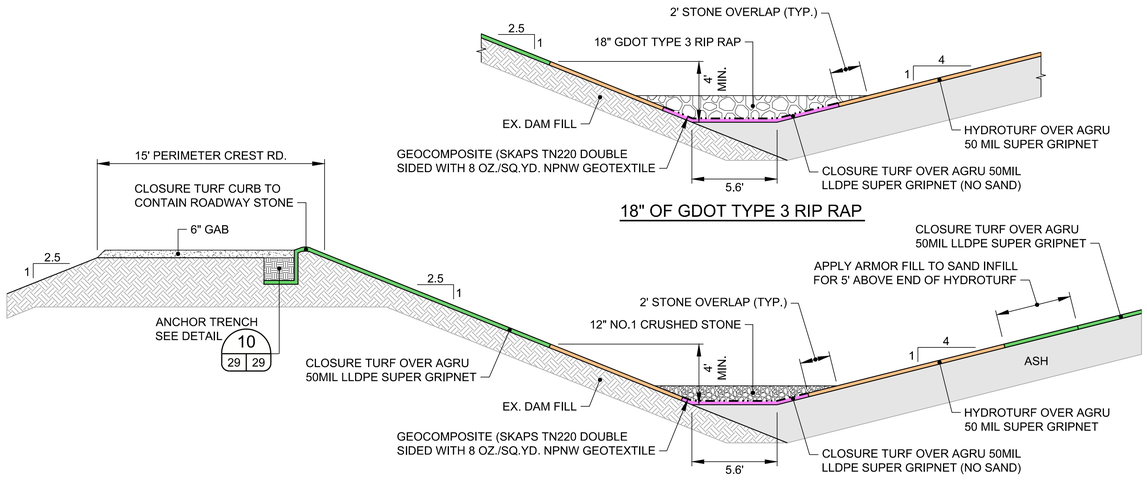
YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	AVR
CHECKED	LS
REVIEWED / APPROVED	GLH

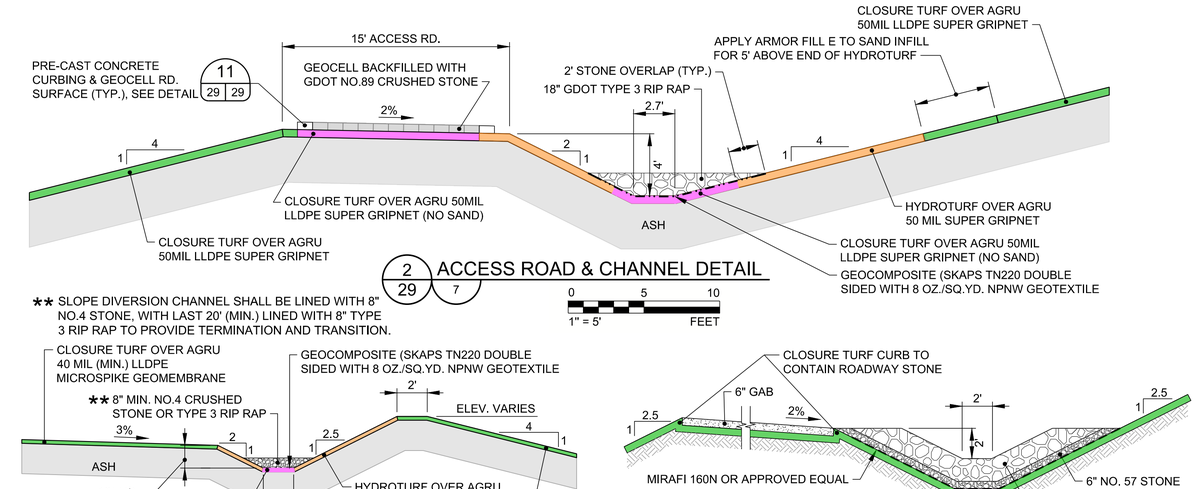
PROJECT NO. 1777449
REV. 0
SHEET 28

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

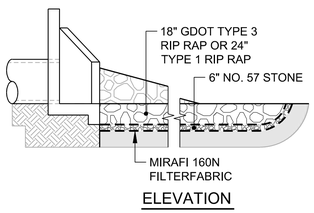
0 1" 1 in

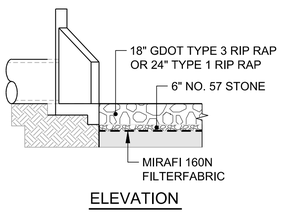
Path: \\atlanta\cadd\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 06-ET-AL PLAN-SEC-DET.dwg

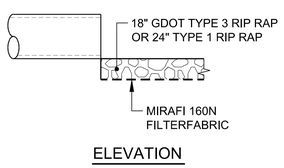


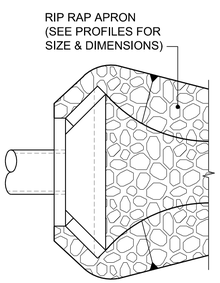


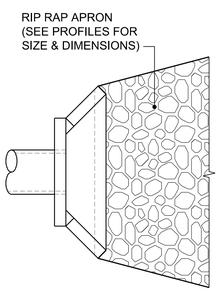
** SLOPE DIVERSION CHANNEL SHALL BE LINED WITH 8" NO.4 STONE, WITH LAST 20' (MIN.) LINED WITH 8" TYPE 3 RIP RAP TO PROVIDE TERMINATION AND TRANSITION.

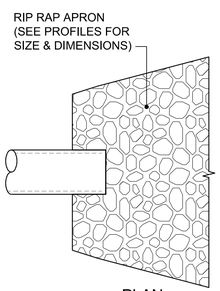








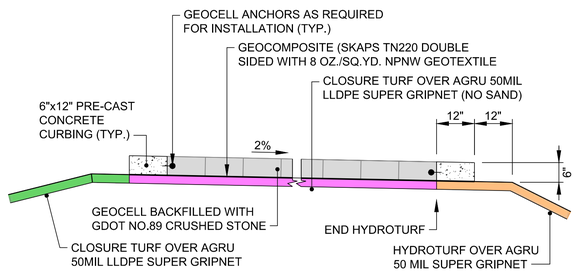


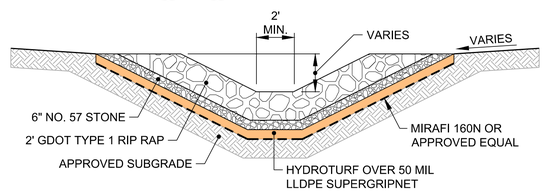


PIPE OUTLET TO WELL DEFINED CHANNEL
7 / 29 / 23 25 27 NTS

PIPE OUTLET TO FLAT AREA NO WELL DEFINED CHANNEL
8 / 29 / 21 NTS

PIPE OUTLET NO HEADWALL TO FLAT AREA NO WELL DEFINED CHANNEL
9 / 29 NTS





FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

CLIENT
GEORGIA POWER COMPANY

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP - 3/4 CLOSURE DETAILS - SHEET 2 OF 2

GEORGIA REGISTERED No. PE034749 PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CONSULTANT
GOLDER

YYYY-MM-DD	2020-NOV
DESIGNED	GLH
PREPARED	AVR
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449
REV. 0
SHEET 29

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1 in

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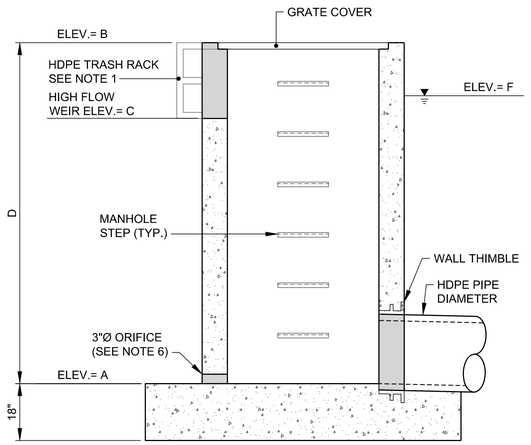
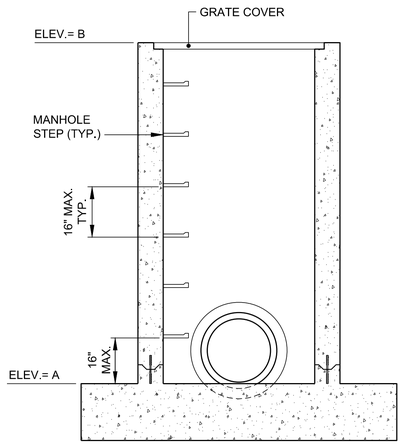
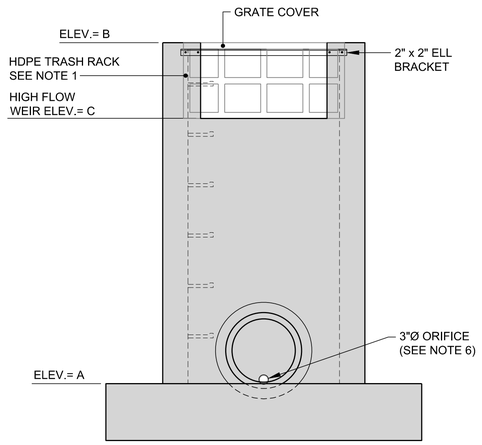


SECTION A-A

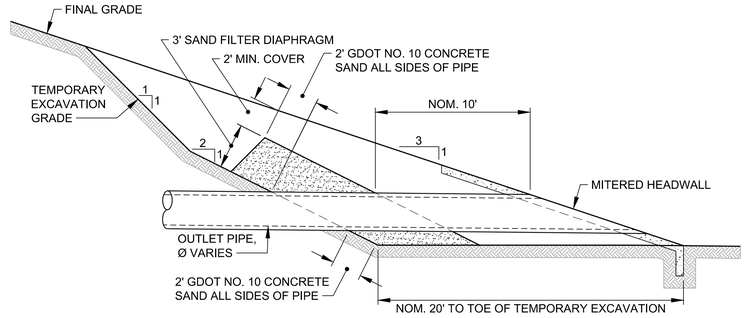


SECTION B-B

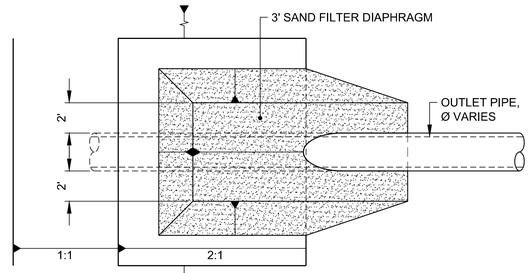


SECTION C-C

SPILL WAY STRUCTURE SCHEDULE		
	POND #1	POND #3
A - INVERT ELEV.	828.0	832.0
B - TOP ELEV.	838.0	843.0
C - WEIR ELEV.	836.0	841.0
D - HEIGHT	10'	8.2'
E - PIPE DIAMETER	24"	18"
F - 100 YR PEAK WSE	837.5	842.3



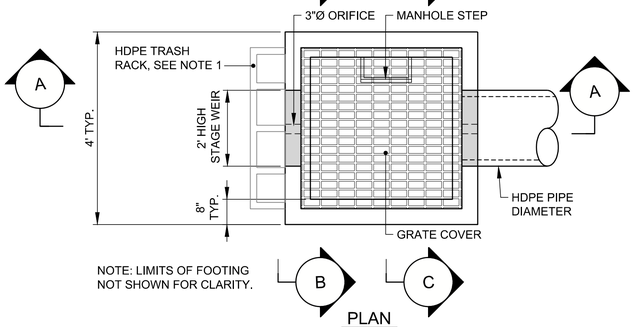
LONGITUDINAL SECTION



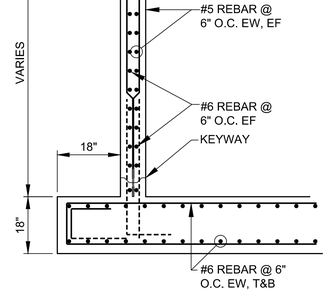
PLAN

2 21 30 SAND FILTER DIAPHRAGM COLLAR AT JACK AND BORE EXIT

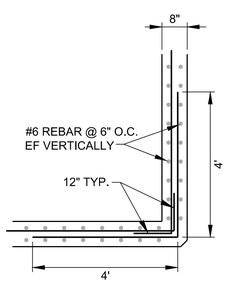
0 5 10
1" = 5' FEET



PLAN



TYPICAL REINFORCEMENT SECTION



TYPICAL WALL CORNER REINFORCEMENT - PLAN

1 30 RISER STRUCTURE DETAIL 21 23

0 2 4
1" = 2' FEET

NOTES

1. HDPE TRASH RACK AS SPECIFIED BY "PLASTIC SOLUTIONS INC.", OR APPROVED EQUIVALENT.
2. ALL CONCRETE TO BE CLASS 4000. ALL REINFORCEMENT SHALL BE GRADE 60.
3. ALL EXPOSED EDGES SHALL HAVE A MINIMUM ONE INCH CHAMFER.
4. REBAR SHALL HAVE A 3 INCH CONCRETE COVER WHEN POURED AGAINST GROUND SURFACE AND A 2 INCH CONCRETE COVER WHEN POURED AGAINST FORMS.
5. ON UNEXPOSED JOINTS CLOSED CELL ROUND BUTYL CORD 1/4 INCH LARGER THAN THE JOINT AS MEASURED IN THE FIELD, SHALL BE INSTALLED.
6. DETENTION POND 3 OUTLET STRUCTURE TO RECEIVE SIX 3" DIAMETER LOW LEVEL OUTLET ORIFICES.

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP-3/4 SURFACE WATER MANAGEMENT DETAILS - SHEET 1 OF 5

GEORGIA REGISTERED No. PE034749 PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CONSULTANT
GOLDER

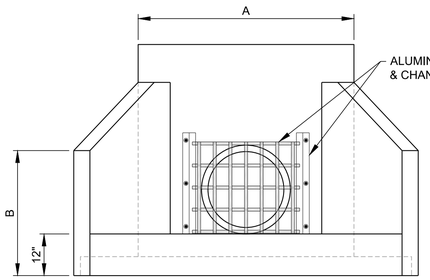
YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	AVR
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 30

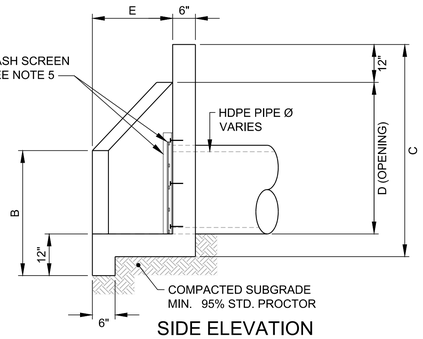
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1 in

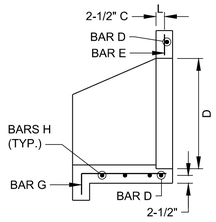
Path: \\atlanta\caddd\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 06-ET-AL PLAN-SEC-DET.dwg



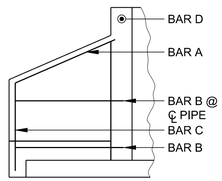
FRONT ELEVATION



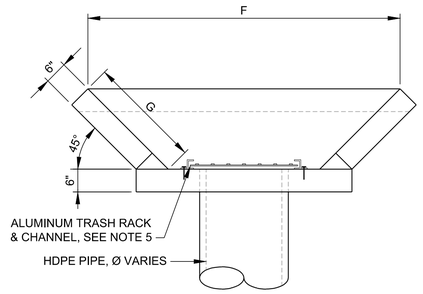
SIDE ELEVATION



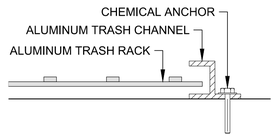
BASE & WALL SECTION



WING SECTION



PLAN



ALUMINUM CHANNEL DETAIL
SEE NOTE 5

NOTES

1. ALL CONCRETE SHALL BE 4000 PSI.

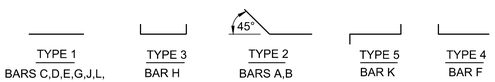
2. REINFORCING STEEL SHALL BE #4 BARS (MIN.), GRADE 60, @ 12" O.C. MAX. SPACING.

3. PLACE REINFORCING 2" CLEAR MIN.

4. CHAMFER ALL EXPOSED EDGES 1".

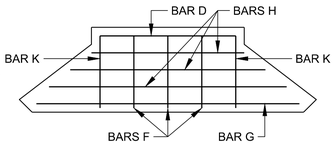
5. ALUMINUM TRASH SCREEN TO BE INSTALLED ON HEADWALL AT POND 2 OUTLET PIPE AND AT THE UPSTREAM END OF THE CROSSOVER STRUCTURE ONLY. ALUMINUM TRASH SCREEN SHALL BE 1" WIDE BY 3/8" THICK AND HAVE 4"x6" NOMINAL OPENINGS. TRASH SCREEN SHALL BE INSERTED IN 2"x3" ALUMINUM CHANNELS IN A MANNER WHICH FACILITATES REMOVAL FOR SERVICING LOW LEVEL OUTLET PIPE. ALUMINUM CHANNELS SHALL BE ATTACHED TO HEADWALL USING CHEMICAL ANCHORS AS APPROVED BY ENGINEER.

BAR REINFORCING DETAILS

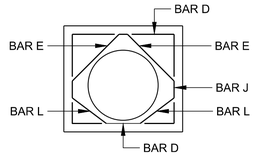


VARIABLE DIMENSIONS (HDPE DR26 PIPE)										
OUTSIDE DIA, PIPE	A	B	C	D	E	F	G	WT. LBS.	BASE AREA	CU. YDS. CONC.
18"	3'-5"	2'-4"	3'-4 1/2"	2'-0"	1'-5"	4'-10"	2'-0"	1783	8.30	0.43
24"	4'-0"	2'-9"	3'-11"	2'-7"	1'-8"	5'-11"	2'-4 1/2"	2063	11.90	0.51
36"	4'-8"	3'-5"	5'-0"	3'-8"	2'-4"	7'-11"	3'-3 1/2"	4060	19.60	1.00

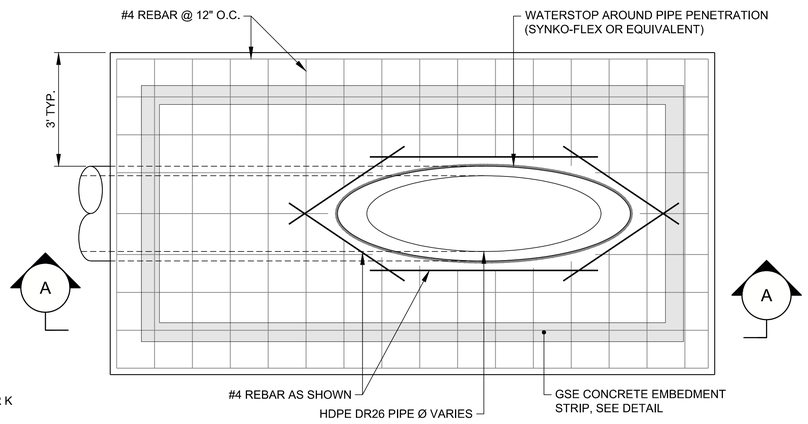
VERTICAL HEADWALL DETAIL



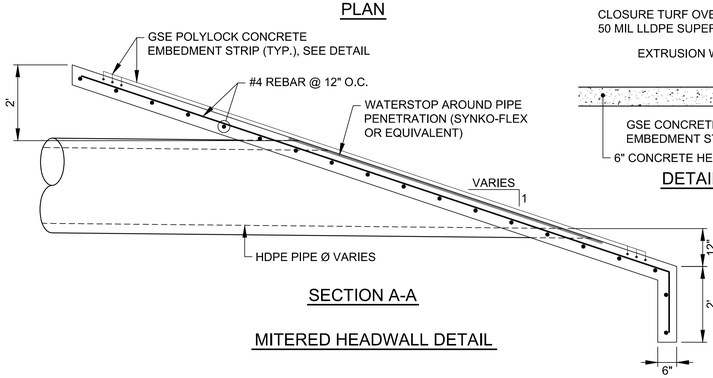
BASE SECTION



WALL SECTION



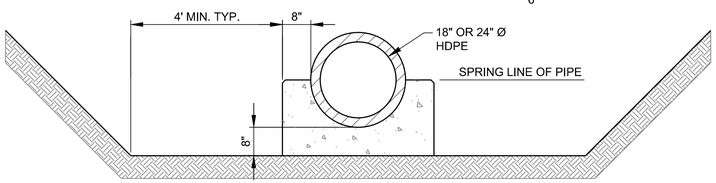
PLAN



SECTION A-A

MITERED HEADWALL DETAIL

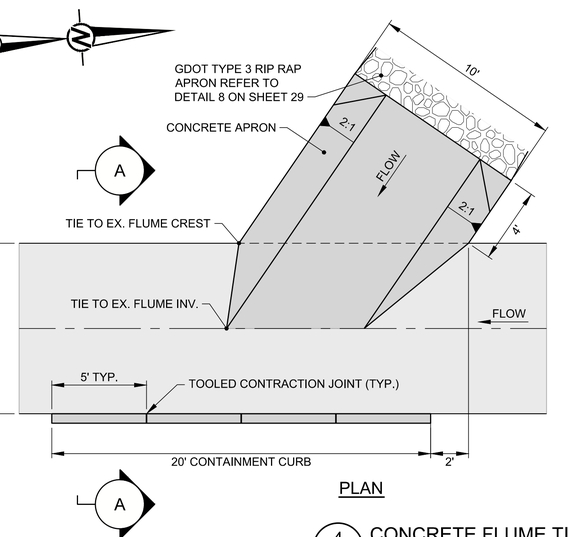
DETAIL



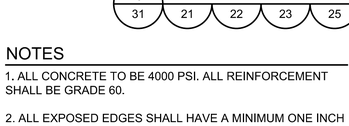
3 | 31 | 22 | 23 | 33 | 34 CONCRETE PIPE CRADLE DETAIL

0 2 4
1" = 2' FEET

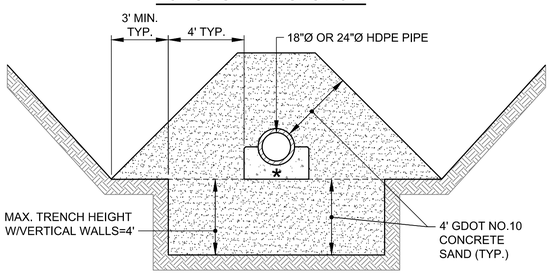
FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION



PLAN



LONGITUDINAL SECTION



LATERAL SECTION @ DIAPHRAGM

2 | 31 | 22 | 23 SAND FILTER DIAPHRAGM COLLAR AT EXPOSED INSTALLATIONS

0 4 8
1" = 4' FEET

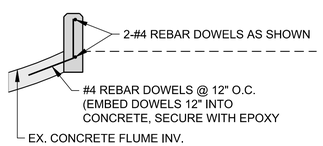
NOTES

1. ALL CONCRETE TO BE 4000 PSI. ALL REINFORCEMENT SHALL BE GRADE 60.

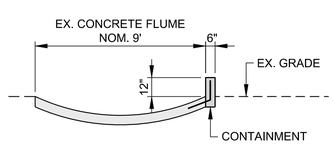
2. ALL EXPOSED EDGES SHALL HAVE A MINIMUM ONE INCH CHAMFER.

3. REBAR SHALL HAVE A 3 INCH CONCRETE COVER WHEN POURED AGAINST GROUND SURFACE AND A 2 INCH CONCRETE COVER WHEN POURED AGAINST FORMS.

4. ON UNEXPOSED JOINTS CLOSED CELL ROUND BUTYL CORD 1/4 INCH LARGER THAN THE JOINT AS MEASURED IN THE FIELD, SHALL BE INSTALLED.



CURB DETAIL
NTS



SECTION A-A

4 | 31 | 23 CONCRETE FLUME TIE-IN DETAIL

0 4 8
1" = 4' FEET

1 | 31 | 21 | 22 | 23 | 25 | 27 | 28 | 32 HEADWALLS DETAIL NTS

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

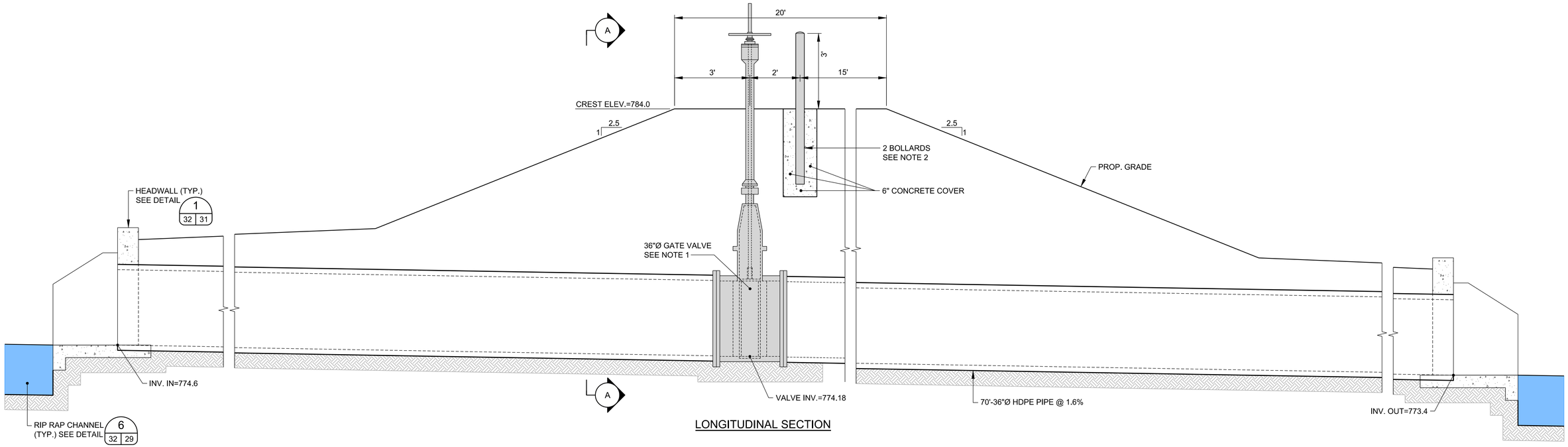
TITLE
AP-3/4 SURFACE WATER MANAGEMENT DETAILS - SHEET 2 OF 5

CONSULTANT
GOLDER

YYYY-MMM	2018-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 31

Path: \\atlanta\cadd\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 06-ET-AL PLAN-SEC-DET.dwg
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D



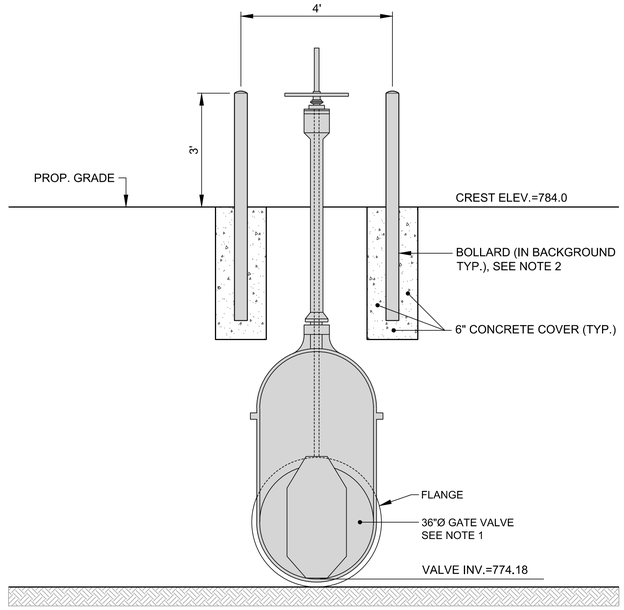
LONGITUDINAL SECTION

NOTE

1. GATE VALVE SHALL BE A MUELLER CO. A-2361 D.I. RESILIENT WEDGE GATE VALVES - FL. X FL. OR EQUIVALENT MEETING ALL ANSI/AWWA C515 STANDARDS. INSTALLED VALVE TO BE PRESSURE TESTED IN CLOSED POSITION IN CONJUNCTION WITH TESTING OF HDPE PIPES PER THE PIPE TESTING REQUIREMENTS.

2. TWO BOLLARDS SPACED AT 4 FEET. EACH SHALL BE A 6 FOOT LONG, 4 INCH DIAMETER STAINLESS STEEL PIPE, FILLED WITH CONCRETE, AND BURIED 3 FEET IN CONCRETE, WITH A 6 INCH COVER.

3. THE ENTIRETY OF THE 36-INCH HDPE PIPING SYSTEM WILL BE PRESSURE TESTED AND SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM F 2164, FIELD LEAK TESTING OF POLYETHYLENE PRESSURE PIPING SYSTEMS USING HYDROSTATIC PRESSURE. THE HDPE PIPE SHALL BE FILLED WITH WATER, RAISED TO TEST PRESSURE AND ALLOWED TO STABILIZE. THE TEST PRESSURE SHALL BE 5 PSI WHICH IS 1.5 TIMES THE MAXIMUM OPERATING PRESSURE AT THE LOWEST POINT IN THE SYSTEM. THE PIPE SHALL PASS IF THE FINAL PRESSURE IS WITH 5% OF THE TEST PRESSURE FOR 1 HOUR. FOR SAFETY REASONS, HYDROSTATIC TESTING ONLY WILL BE USED.



ELEVATION-SECTION A-A

1 / 32 / 22 CROSSOVER STRUCTURE DETAIL

0 2 4
1" = 2' FEET

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP-3/4 SURFACE WATER MANAGEMENT DETAILS - SHEET 3 OF 5

CONSULTANT
GOLDER

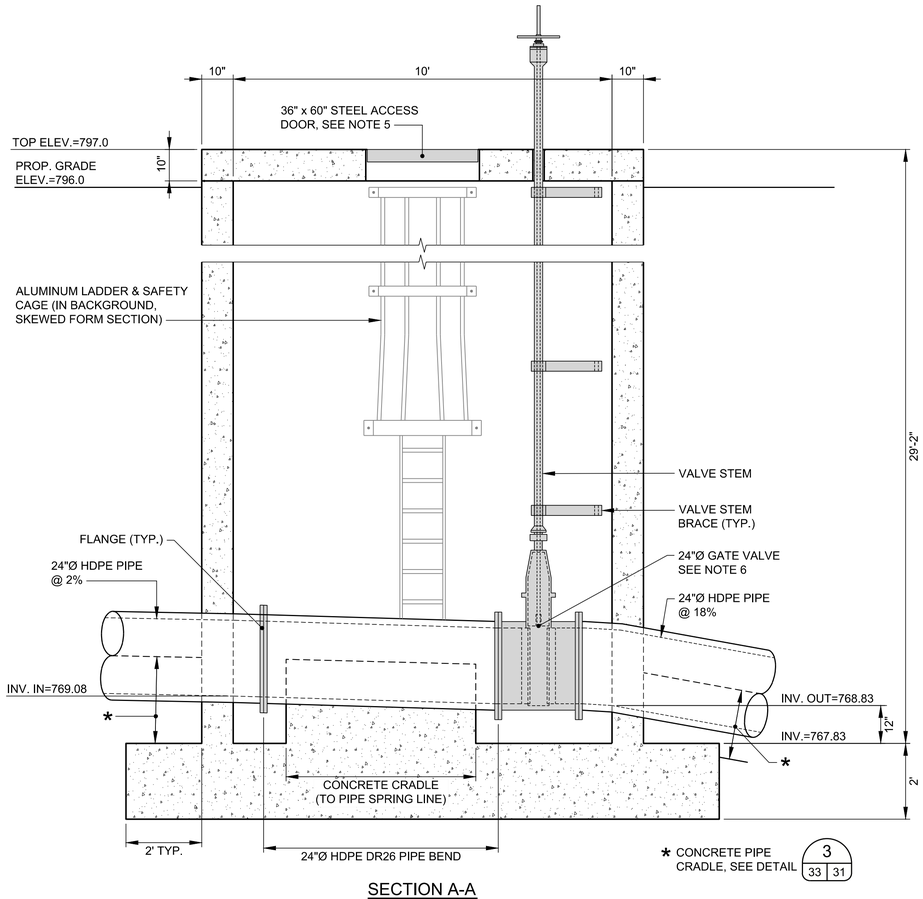
YYYY-MMM	2018-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 32

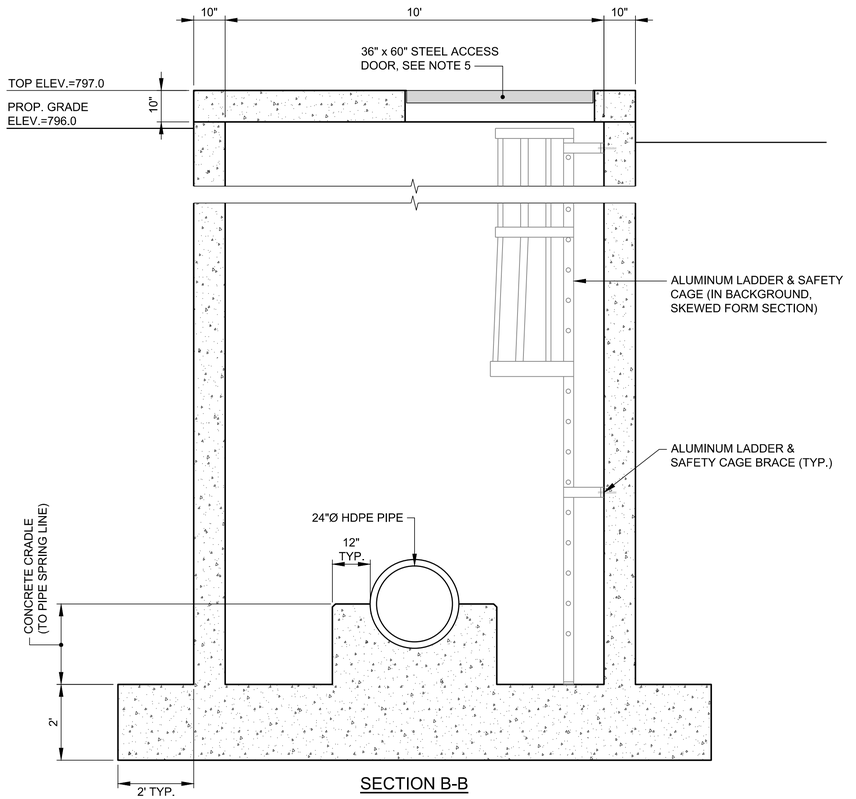
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1 in

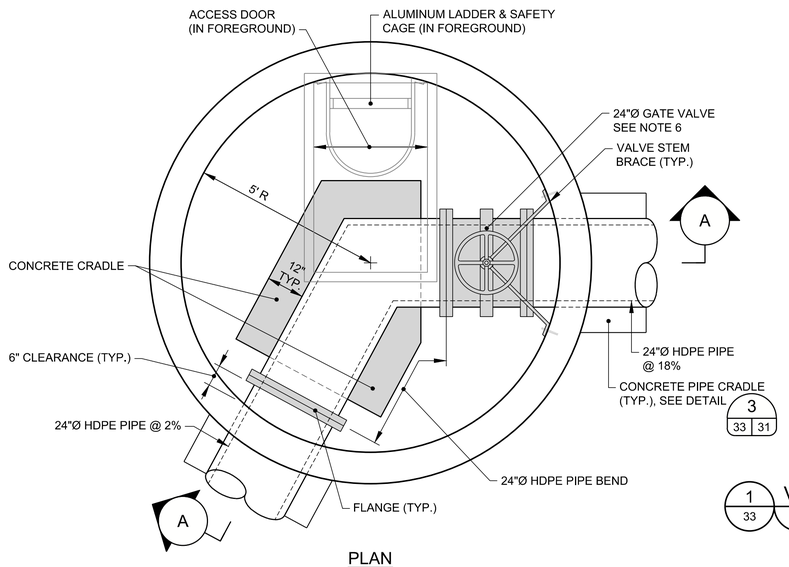
Path: \\atlanta\cad\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 06-ET-AL PLAN-SEC-DET.dwg



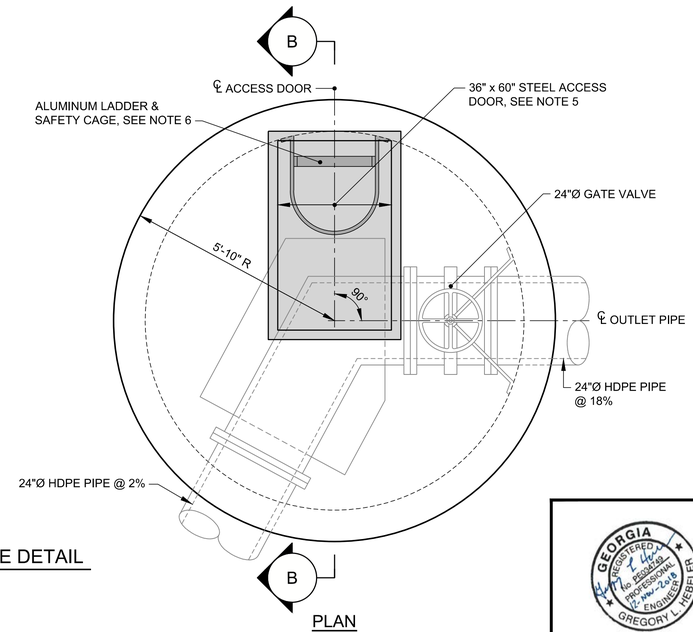
SECTION A-A



SECTION B-B



PLAN
SHOWING INVERT DETAIL



PLAN
SHOWING COVER DETAIL

1/33/22 VALVE VAULT STRUCTURE DETAIL

0 2 4
1" = 2' FEET

NOTES

1. ALL CONCRETE TO BE 4000 PSI. ALL REINFORCEMENT SHALL BE GRADE 60.

2. ALL EXPOSED EDGES SHALL HAVE A MINIMUM ONE INCH CHAMFER.

3. REBAR SHALL HAVE A 3 INCH CONCRETE COVER WHEN POURED AGAINST GROUND SURFACE AND A 2 INCH CONCRETE COVER WHEN POURED AGAINST FORMS.

4. ON UNEXPOSED JOINTS CLOSED CELL ROUND BUTYL CORD 1/4 INCH LARGER THAN THE JOINT AS MEASURED IN THE FIELD, SHALL BE INSTALLED.

5. STEEL ACCESS DOOR AS SPECIFIED BY "HALLIDAY PRODUCTS", MODEL S1S3660 (36"x60"), OR APPROVED EQUIVALENT.

6. GATE VALVE SHALL BE A MUELLER CO. A-2361 D.I. RESILIENT WEDGE GATE VALVES - FL. X FL. OR EQUIVALENT MEETING ALL ANSI/AWWA C515 STANDARDS. INSTALLED VALVE TO BE PRESSURE TESTED IN CLOSED POSITION IN CONJUNCTION WITH TESTING OF HDPE PIPES PER THE PIPE TESTING REQUIREMENTS.

7. THE ENTIRETY OF THE 24-INCH HDPE PIPING SYSTEM WILL BE PRESSURE TESTED AND SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM F 2164, FIELD LEAK TESTING OF POLYETHYLENE PRESSURE PIPING SYSTEMS USING HYDROSTATIC PRESSURE. THE HDPE PIPE SHALL BE FILLED WITH WATER, RAISED TO TEST PRESSURE AND ALLOWED TO STABILIZE. THE TEST PRESSURE SHALL BE 14 PSI WHICH IS 1.5 TIMES THE MAXIMUM OPERATING PRESSURE AT THE LOWEST POINT IN THE SYSTEM. THE PIPE SHALL PASS IF THE FINAL PRESSURE IS WITH 5% OF THE TEST PRESSURE FOR 1 HOUR. FOR SAFETY REASONS, HYDROSTATIC TESTING ONLY WILL BE USED.

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

GEORGIA REGISTERED PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP-3/4 SURFACE WATER MANAGEMENT DETAILS - SHEET 4 OF 5

CONSULTANT
GOLDER

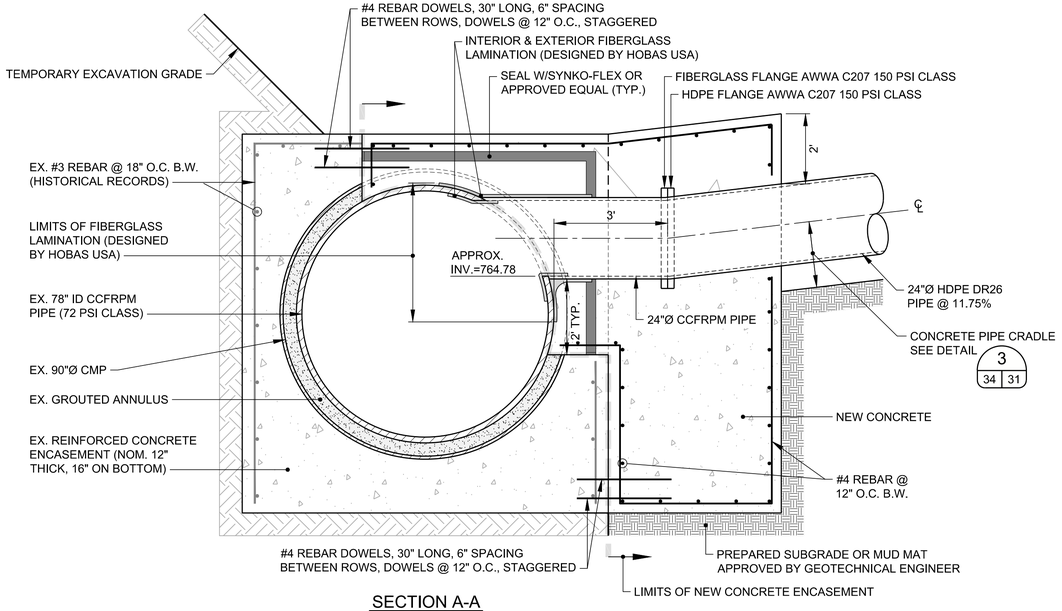
YYYY-MMM	2018-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 33

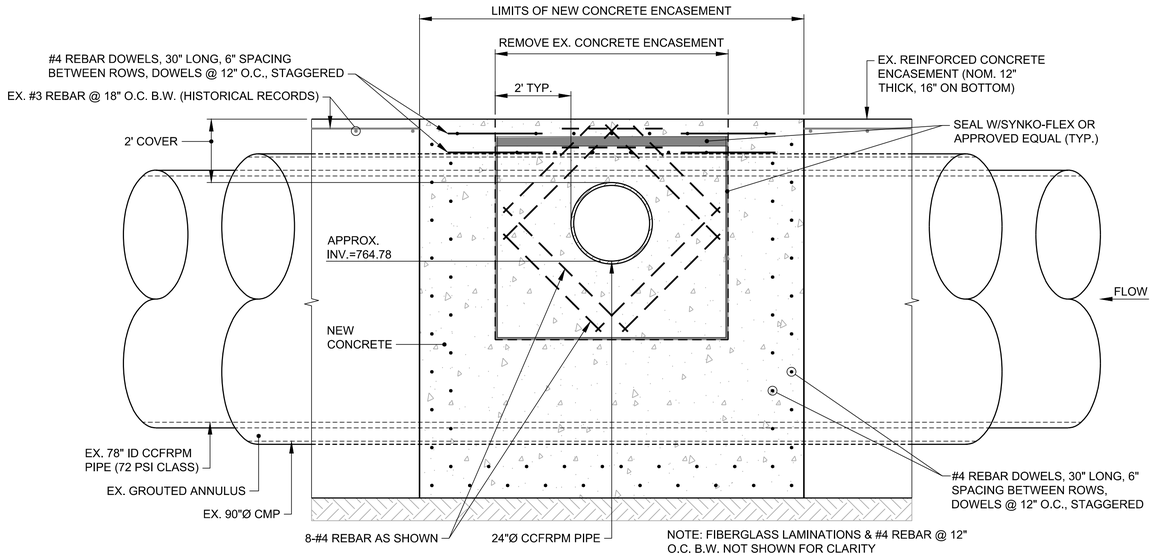
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1 in

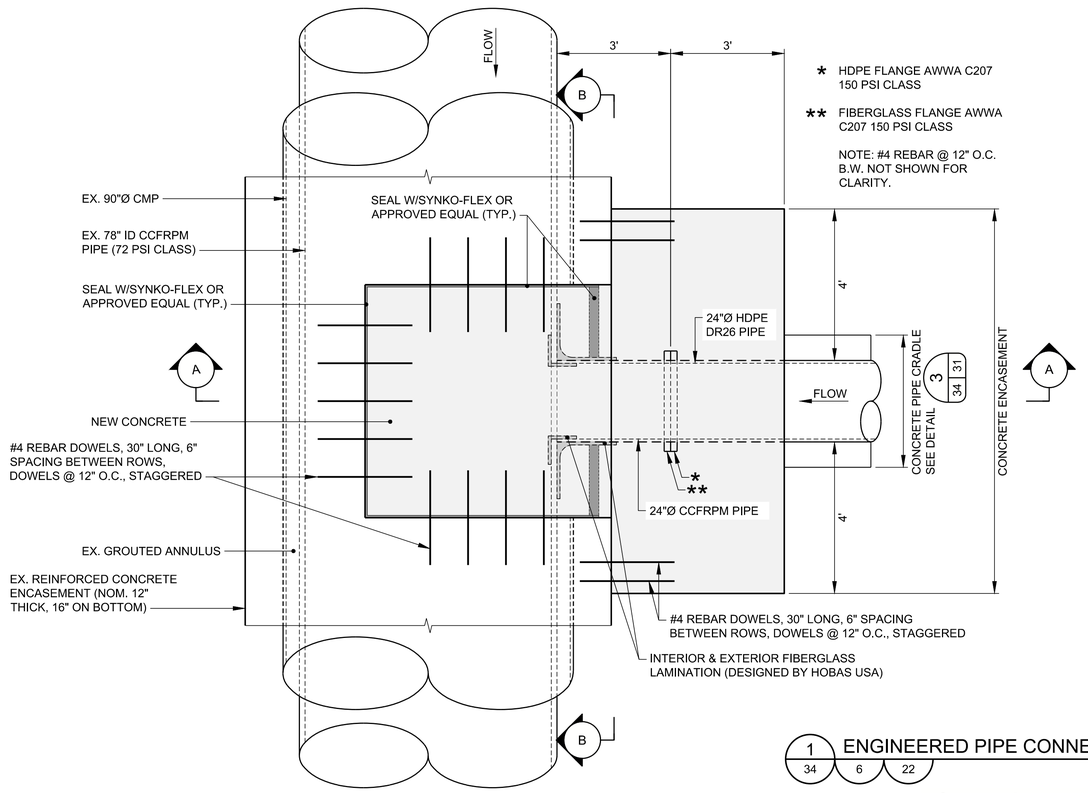
Path: \\atlanta\cad\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 06-ET-AL PLAN-SEC-DET.dwg



SECTION A-A



SECTION/ELEVATION B-B



PLAN

1 34 ENGINEERED PIPE CONNECTION DETAIL 6 22

0 2 4
1" = 2' FEET

NOTES

1. ALL CONCRETE TO BE 4000 PSI. ALL REINFORCEMENT SHALL BE GRADE 60.

2. REBAR SHALL HAVE A 3 INCH CONCRETE COVER WHEN POURED AGAINST GROUND SURFACE AND A 2 INCH CONCRETE COVER WHEN POURED AGAINST FORMS.

3. ON UNEXPOSED JOINTS CLOSED CELL ROUND BUTYL CORD 1/4 INCH LARGER THAN THE JOINT AS MEASURED IN THE FIELD, SHALL BE INSTALLED.

4. 24 INCH DIAMETER CCFRPM (72 PSI CLASS) PIPE BY HOBAS USA TO MATCH EXISTING PIPE SYSTEM. ONE END TO BE RADIUSED TO MATCH THE OUTSIDE DIAMETER OF THE EXISTING 78 INCH DIAMETER CCFRPM (72 PSI CLASS) AND LAMINATED TO THE OUTSIDE PRIOR TO PENETRATING. THE OTHER END IS TO BE FLANGED TO MEET AWWA C207 AND 150 PSI CLASS.

5. THE ENTIRETY OF THE 24 INCH HDPE PIPING SYSTEM WILL BE PRESSURE TESTED AND SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM F 2164, FIELD LEAK TESTING OF POLYETHYLENE PRESSURE PIPING SYSTEMS USING HYDROSTATIC PRESSURE. THE HDPE PIPE SHALL BE FILLED WITH WATER, RAISED TO TEST PRESSURE AND ALLOWED TO STABILIZE. THE TEST PRESSURE SHALL BE 14 PSI WHICH IS 1.5 TIMES THE MAXIMUM OPERATING PRESSURE AT THE LOWEST POINT IN THE SYSTEM. IN ACCORDANCE WITH SECTION 9.8, THE PIPE SHALL PASS IF THE FINAL PRESSURE IS WITH 5% OF THE TEST PRESSURE FOR 1 HOUR. FOR SAFETY REASONS, HYDROSTATIC TESTING ONLY WILL BE USED.

6. CONNECTION LOCATION TO BE FIELD ADJUSTED TO AVOID PIPE JOINTS AS REQUIRED.

7. AFTER 24 INCH DIAMETER CCFRPM CONNECTION HAS BEEN MADE THE EXISTING 78 INCH CCFRPM WILL BE CUT TO MATCH INSIDE DIAMETER OF THE 24 INCH CCFRPM FROM THE INSIDE TO CONNECT. INTERIOR LAMINATION TO BE COMPLETED FOR NEAT FINISH AND SMOOTH TRANSITION.

8. LAMINATION DETAILS, SPECIFICATIONS AND SHOP DRAWINGS TO BE SUPPLIED BY HOBAS USA.

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

GEORGIA REGISTERED No. PE034749 PROFESSIONAL ENGINEER GREGORY L. HEBELER
17-NOV-2020

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP-3/4 SURFACE WATER MANAGEMENT DETAILS - SHEET 5 OF 5

CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 34

0 1in
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

Path: \\atlanta\cadd\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 06-ET-AL PLAN-SEC-DET.dwg



LEGEND

- PRE-CLOSURE CONTOURS (MARCH 2018)
- PROPERTY BOUNDARY MARKERS/LIMITS
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 2 & 3/4 AREA TO REMAIN & TO BE PROTECTED
- 900 — FINAL CLOSURE CONTOURS
- 800 — CLOSURE CONTOURS OUTSIDE LIMITS OF CCR
- PERMIT BOUNDARYAP-2, AP-3/4
- P-2 — VW PIEZOMETER & INCLINOMETER
- P-1 — DUAL LEVEL VW PIEZOMETER & INCLINOMETER
- P-7 — DUAL LEVEL VW PIEZOMETER
- AP-1 — EXISTING AP4 DAM PIEZOMETER
- AE-1 — TEMPORARY DEWATERING WELL
- CONTACT WATER CONVEYANCE PIPING SEE NOTE 4

REFERENCES

1. THE EXISTING SITE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 03-18-2018. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 03-18-2018."

NOTES

1. ELEVATIONS SHOWN OUTSIDE OF CLOSURE LIMITS ARE BASED ON MARCH 2018 TOPOGRAPHY AND MAY NOT REPRESENT CURRENT CONDITIONS.

2. INSTRUMENTATION, DEWATERING WELLS AND EXISTING PIEZOMETERS AND TOE DRAINS WITHIN EXCAVATION AREAS TO BE MAINTAINED, PROTECTED AND LOWERED AS NECESSARY THROUGHOUT CONSTRUCTION. IF DAMAGED THEY SHALL BE REPLACED IN KIND UNLESS OTHERWISE APPROVED BY THE ENGINEER.

3. NO INSTRUMENTATION OR CONTACT WATER MANAGEMENT INFRASTRUCTURE IN AP-2.

4. CONTACT WATER PIPING IS DUAL CONTAINED WHEN OUTSIDE LIMITS OF CCR.

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

0 150 300
1" = 150' FEET

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
POST-CLOSURE CONTACT WATER MANAGEMENT AND INSTRUMENTATION PLAN

CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

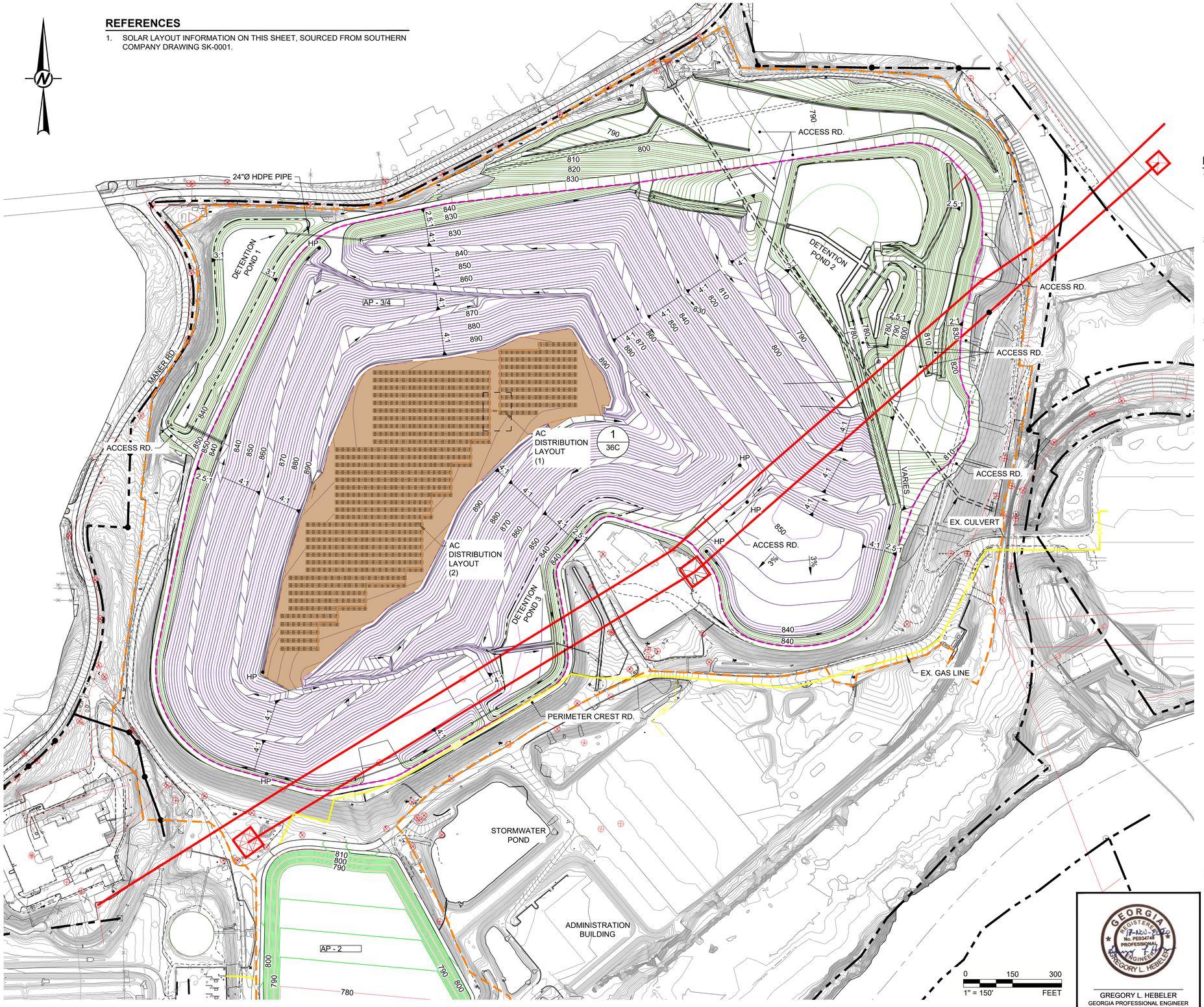
PROJECT NO. 1777449 | REV. 0 | SHEET 35

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

Path: \\atlanta\cadd\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 35 ADVANCED ENGINEERING PLAN.dwg

REFERENCES

1. SOLAR LAYOUT INFORMATION ON THIS SHEET, SOURCED FROM SOUTHERN COMPANY DRAWING SK-0001.



LEGEND

- EXISTING CONTOURS (MARCH 2018)
- PROPERTY BOUNDARY MARKERS/LIMITS
- FINAL CLOSURE CONTOURS
- CLOSURE CONTOURS OUTSIDE LIMITS OF CCR
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- GAS — EXISTING GAS LINE
- PERMIT BOUNDARY AP-2, AP-3/4

NOTES

1. THE EXISTING SITE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 03-18-2018. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 03-18-2018."
2. PLANT OPERATIONS AND MAINTENANCE WILL OCCUR WITHIN THE PERMIT BOUNDARY BUT OUTSIDE THE LIMITS OF THE CCR CONSOLIDATION AREA (E.G. OUTSIDE THE FINAL CCR BOUNDARY AND FINAL COVER SYSTEM). ACTIVITIES NOT DIRECTLY AFFECTING THE CCR CONSOLIDATION OR FINAL COVER SYSTEM, SUCH AS THOSE NEEDED TO CONSTRUCT, MAINTAIN, REPLACE OR REPAIR SYSTEMS FOR ELECTRIC POWER GENERATION OR ITS DELIVERY (SUCH AS SUBSURFACE PIPING, ELECTRICAL APPURTENANCES, TRANSMISSION STRUCTURES, ETC.) MAY BE CONDUCTED AT THE PERMITTEE'S DISCRETION.
3. FINAL CLOSURE CONTOURS (PURPLE) DELINEATE FINAL LIMITS OF ASH.
4. CLOSURE CONTOURS OUTSIDE LIMITS OF CCR (GREEN) DELINEATE AREAS WHERE ANY EXISTING ASH IS TO BE COMPLETELY REMOVED.

SYSTEM SUMMARY	
PROJECT LOCATION	ATLANTA, GA
LATITUDE, LONGITUDE	33.85, -84.45
GRID VOLTAGE	XX KV
DC VOLTAGE	1000VDC
MODULE TYPE/WATTAGE	REC 315W
MODULE QTY.	8,424
MODULES PER STRING	18
STRING QTY.	468
INVERTER QTY.	39
MINIMUM DESIGN TEMP.	-10°C
INVERTER	SMA TRIPOWER 50KW
AC CAPACITY	2.00 MW (40°C, 1 PF)
DC CAPACITY	2.6535
DC/AC RATIO	1.3267
ARRAY ORIENTATION - FIXED TILT	
PITCH (ROW SPACING)	23 FT
TILT	19°
AZIMUTH	0°

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
POST CLOSURE SOLAR DEVELOPMENT
GENERAL ARRANGEMENT 2.00 MWAC / 2.65 MWDC

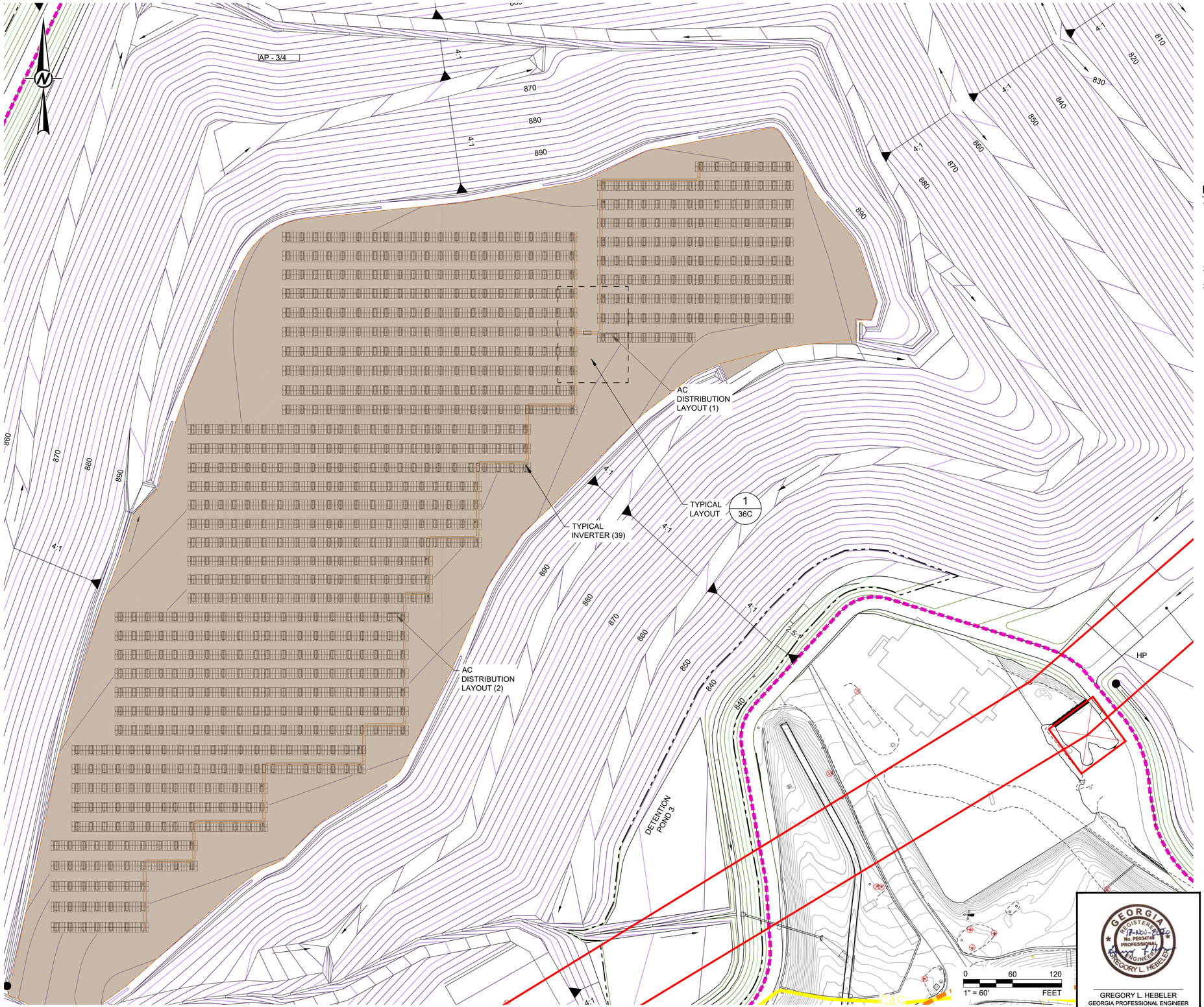
CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	AVR
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 36A

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

Path: \\atlanta\cad\Southern Company\1777449 Plant McDonough Permitting\Solar Permitting\Production\ | File Name: 1777449 36A FUTURE SITE DEVELOPMENT PLAN.dwg



LEGEND

- EXISTING CONTOURS (MARCH 2018)
- PROPERTY BOUNDARY MARKERS/LIMITS
- FINAL CLOSURE CONTOURS
- CLOSURE CONTOURS OUTSIDE LIMITS OF CCR
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- EXISTING GAS LINE
- PERMIT BOUNDARY AP-2, AP-3/4

NOTES

1. THE EXISTING SITE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 03-18-2018. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 03-18-2018."
2. FINAL CLOSURE CONTOURS (PURPLE) DELINEATE FINAL LIMITS OF ASH.
3. CLOSURE CONTOURS OUTSIDE LIMITS OF CCR (GREEN) DELINEATE AREAS WHERE ANY EXISTING ASH IS TO BE COMPLETELY REMOVED.

REFERENCES

1. SOLAR LAYOUT INFORMATION ON THIS SHEET, SOURCED FROM SOUTHERN COMPANY DRAWING SK-0001 AND SK-0002

SYSTEM SUMMARY	
PROJECT LOCATION	ATLANTA, GA
LATITUDE, LONGITUDE	33.85, -84.45
GRID VOLTAGE	XX KV
DC VOLTAGE	1000VDC
MODULE TYPE/WATTAGE	REC 315W
MODULE QTY.	8,424
MODULES PER STRING	18
STRING QTY.	468
INVERTER QTY.	39
MINIMUM DESIGN TEMP.	-10°C
INVERTER	SMA TRIPOWER 50KW
AC CAPACITY	2.00 MW (40°C, 1 PF)
DC CAPACITY	2.6535
DC/AC RATIO	1.3267
ARRAY ORIENTATION - FIXED TILT	
PITCH (ROW SPACING)	23 FT
TILT	19°
AZIMUTH	0°

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

GEORGIA REGISTERED No. PE034749 PROFESSIONAL ENGINEER
GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
POST CLOSURE SOLAR DEVELOPMENT
GENERAL ARRANGEMENT AND CABLE TRAY LAYOUT

CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	AVR
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449
REV. 0
SHEET 36B

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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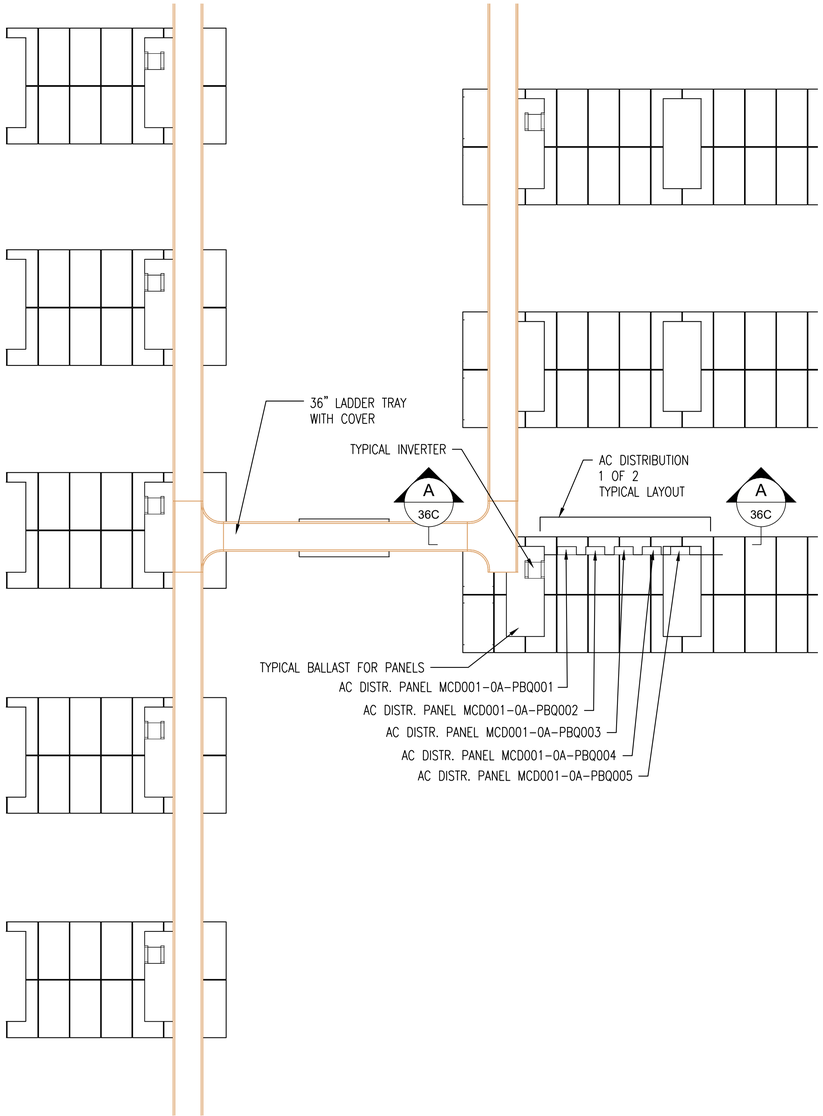
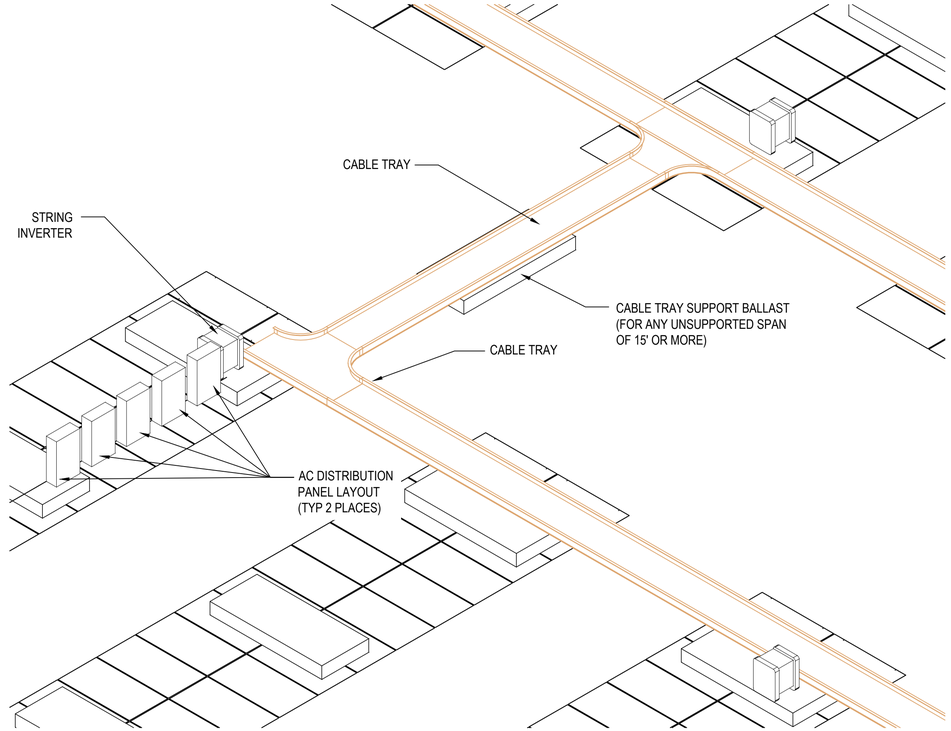


N.T.S. 1 36C TYPICAL AC DISTRIBUTION LAYOUT

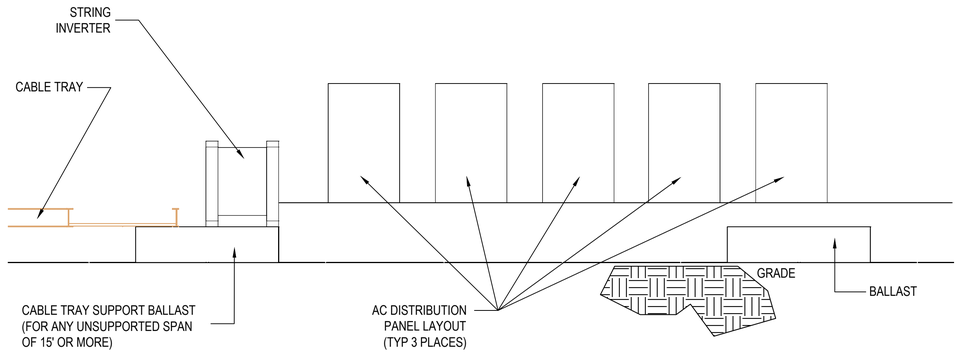


N.T.S. 2 36C ISO OF TYPICAL AC DISTRIBUTION LAYOUT (TYPICAL 2 PLACES ON SITE)

SYSTEM SUMMARY	
PROJECT LOCATION	ATLANTA, GA
LATITUDE, LONGITUDE	33.85, -84.45
GRID VOLTAGE	XX KV
DC VOLTAGE	1000VDC
MODULE TYPE/WATTAGE	REC 315W
MODULE QTY.	8,424
MODULES PER STRING	18
STRING QTY.	468
INVERTER QTY.	39
MINIMUM DESIGN TEMP.	-10°C
INVERTER	SMA TRIPOWER 50KW
AC CAPACITY	2.00 MW (40°C, 1 PF)
DC CAPACITY	2.6535
DC/AC RATIO	1.3267
ARRAY ORIENTATION - FIXED TILT	
PITCH (ROW SPACING)	23 FT
TILT	19°
AZIMUTH	0°

REFERENCES

1. SOLAR LAYOUT INFORMATION ON THIS SHEET, SOURCED FROM SOUTHERN COMPANY DRAWING SK-0003



N.T.S. A 36C SECTION A

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

GEORGIA REGISTERED No. PE034744 PROFESSIONAL ENGINEER GREGORY L. HEBELER
17-NOV-2020

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
POST CLOSURE SOLAR DEVELOPMENT
SECTIONS AND DETAILS

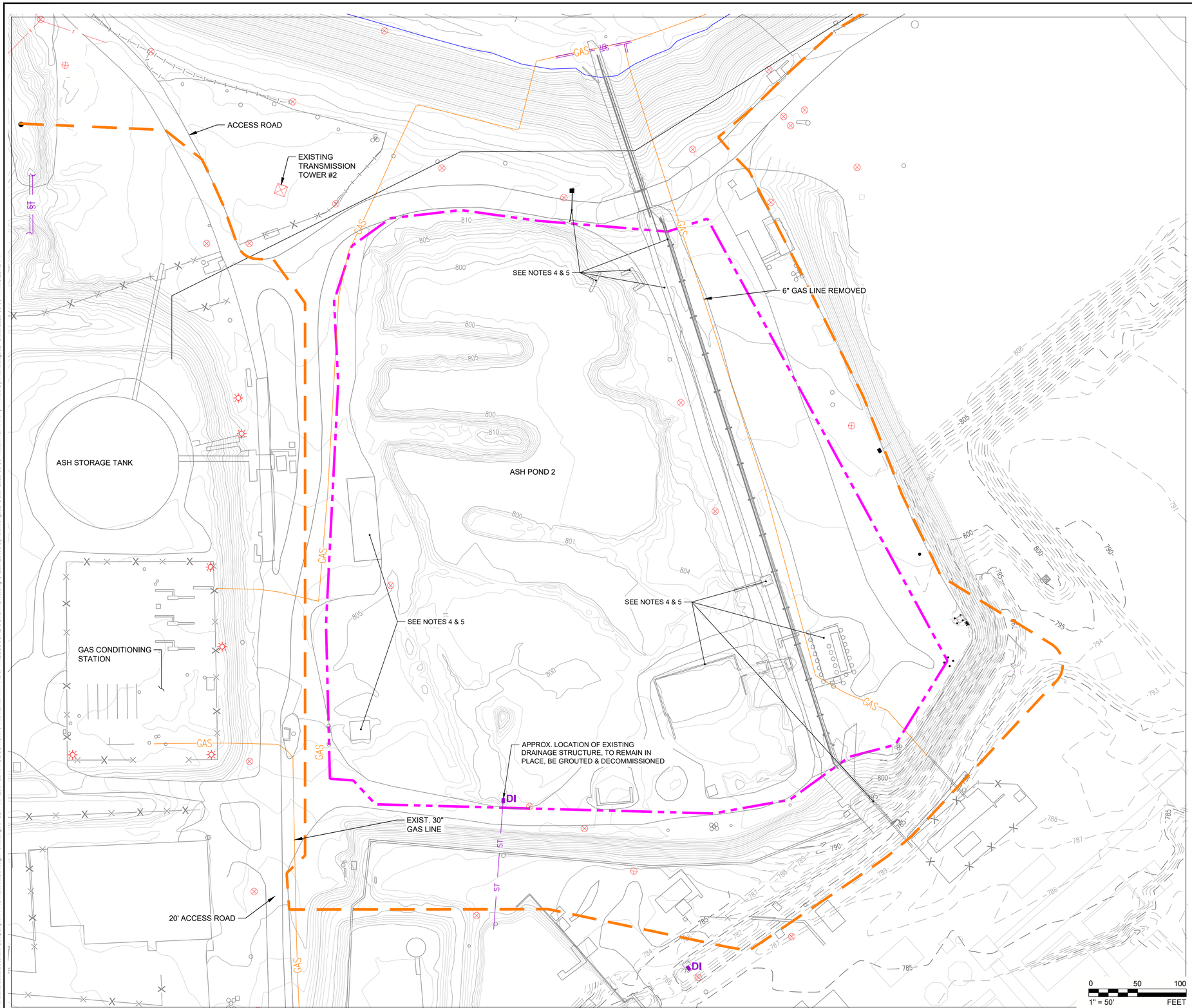
CONSULTANT
GOLDER

YYYY-MMM	2020-NOV
DESIGNED	GLH
PREPARED	AVR
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 36C

0 1in
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

Path: \\atlanta\cadd\Southern Company\1777449 Plant McDonough Permitting\Solar Permitting\Production\ | File Name: 1777449 36C FUTURE SITE DEVELOPMENT details.dwg



LEGEND

- PROPERTY LINE
- PERMIT BOUNDARY AP2, AP-3/4
- APPROXIMATE ASH LIMITS (PRE-CLOSURE)
- 25' STREAM BUFFER
- FLOODPLAIN (APPROXIMATE) (100 YR)
- PRE-CLOSURE CONTOURS
- EXISTING FENCELINE
- EXISTING LIGHT POLE
- EXISTING GAS LINE
- EXISTING ELECTRICAL
- EXISTING TRANSMISSION STRUCTURE

NOTES

1. COORDINATE SYSTEM IS GEORGIA STATE PLANE NAD 83 (1994), WEST ZONE.
2. EXISTING CONTOURS SHOWN ON THIS PLAN ARE AT 1' INTERVALS.
3. SEE SHEET 1 FOR DRAWING INDEX.
4. ALL MISCELLANEOUS EXISTING STRUCTURES REMOVED BY OTHERS.
5. PIPES TO BE ABANDONED VIA A COMBINATION OF REMOVAL AND GROUTING OF REMAINING PORTIONS.

REFERENCES

1. THE PRE-CLOSURE SITE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."
2. REVISED PRE-CLOSURE TOPOGRAPHY & CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA POWER LAND DEPARTMENT. THE DATA SHOWN IS AN UPDATE TO THE PLANS DONE ON 10-16-2012 & THE ONSITE CHANGES SINCE THAT 2012 SURVEY. THE REVISED SURVEY WAS DONE ON 1-12-2016 & MERGED WITH THE DATA ON 10-16-2012. GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016.

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. PE034749 12-Nov-2018 GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
PRE-CLOSURE CONDITIONS - AP-2

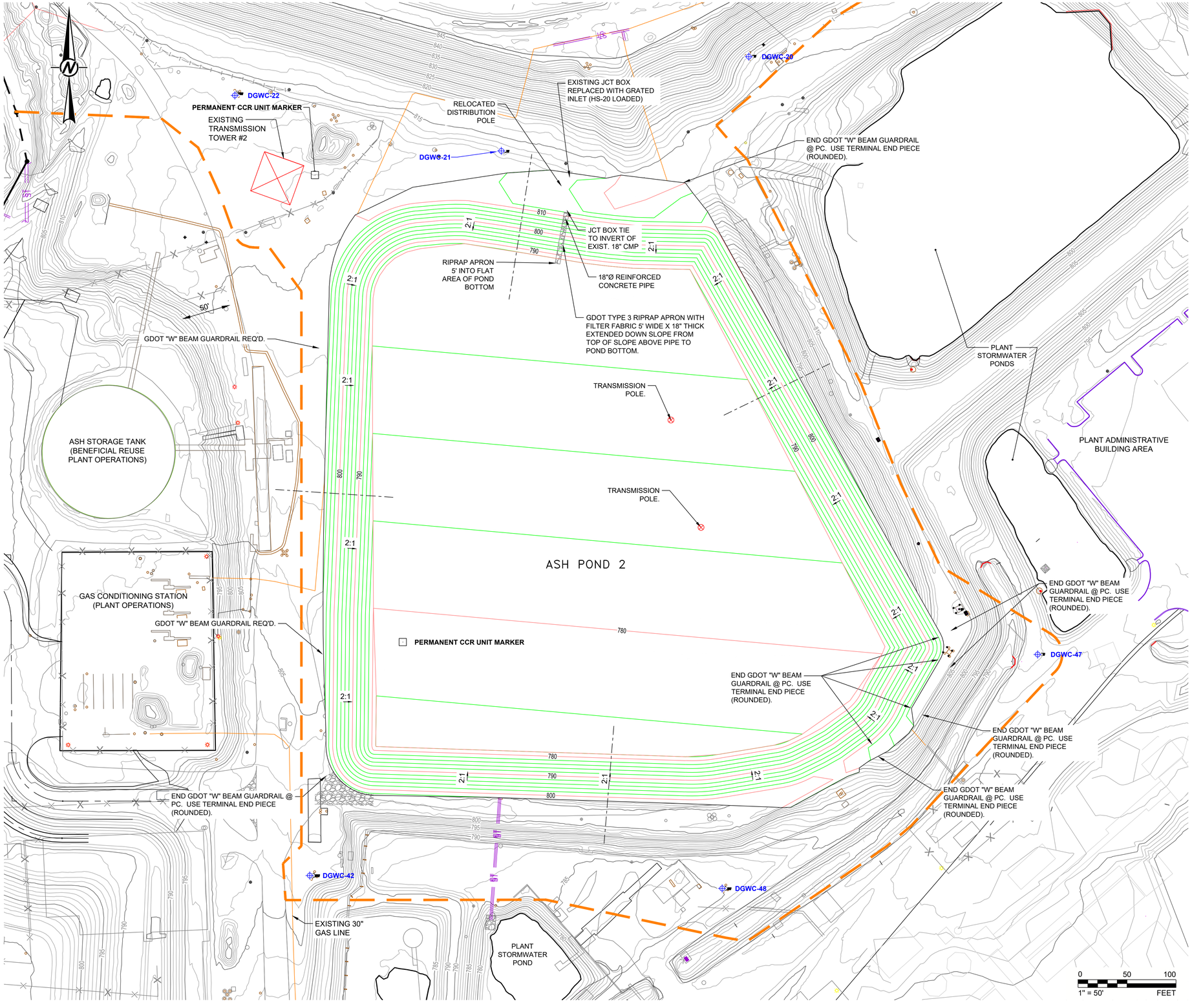
CONSULTANT
GOLDER

YYYY-MMM	2018-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO.	REV.	SHEET
1777449	0	37

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

Path: \\Atlanta\cad\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 38 FINAL GRADING SURFACE MANAGEMENT PLAN.dwg | Last Edited By: aleroddriguez Date: 2020-08-19 Time:8:46:44 AM | Printed By: AleRodriguez Date: 2020-09-30 Time:5:29:32 PM



LEGEND

- PROPERTY LINE
- PERMIT BOUNDARY AP2, AP-3/4
- EXISTING CONTOURS (MARCH 2018)
- 700 — FINAL CLOSURE CONTOURS
- EXISTING FENCELINE
- EXISTING LIGHT POLE
- DGWC-9 — EXISTING GROUNDWATER MONITORING WELL
- SS — EXISTING SANITARY SEWER
- GAS — EXISTING GAS LINE
- ST — EXISTING STORM LINE
- E — EXISTING ELECTRICAL
- EXISTING TRANSMISSION STRUCTURE

NOTES

1. PLANT OPERATIONS AND MAINTENANCE WILL OCCUR WITHIN THE PERMIT BOUNDARY BUT OUTSIDE THE LIMITS OF THE CCR CONSOLIDATION AREA (E.G. OUTSIDE THE FINAL CCR BOUNDARY AND FINAL COVER SYSTEM). ACTIVITIES NOT DIRECTLY AFFECTING THE CCR CONSOLIDATION OR FINAL COVER SYSTEM, SUCH AS THOSE NEEDED TO CONSTRUCT, MAINTAIN, REPLACE OR REPAIR SYSTEMS FOR ELECTRIC POWER GENERATION OR ITS DELIVERY (SUCH AS SUBSURFACE PIPING, ELECTRICAL APPURTENANCES, TRANSMISSION STRUCTURES, ETC.) MAY BE CONDUCTED AT THE PERMITTEE'S DISCRETION.
2. PERMANENT MARKERS FOR EACH CCR UNIT WERE INSTALLED AT PLANT MCDONOUGH ON JULY 31, 2015.
3. GRADES SHOWN WITHIN LIMITS OF AP-2 ARE DESIGN GRADES FOLLOWING CCR REMOVAL. THESE DESIGN GRADES MAY VARY FROM EXISTING CONDITIONS.

REFERENCES

1. THE EXISTING SITE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 03-18-2018. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 03-18-2018."

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

GEORGIA REGISTERED PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
EXISTING CONDITIONS - AP-2 CLOSURE

CONSULTANT
Southern Company
GOLDER

YYYY-MM-DD	2018-NOV
DESIGNED	GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 38

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D
0 1 in

REPLACE EXISTING ROADWAY IN KIND IF NEEDED. REFER TO THE HEAVY DUTY ASPHALT TYPICAL SECTION FOR BUILDUP DETAILS AND SPECS IF THE AREA DISTURBED IS AN EXISTING PAVED AREA. IF THE AREA IS NOT PAVED IT SHALL RECEIVE 8" OF GRADED AGGREGATE BASE.

EXISTING CORRUGATED PLASTIC PIPE TO BE GROUTED AND ABANDONED IN PLACE

TRANSMISSION STRUCTURES (SEE NOTE NO. 4)

REPLACE EXISTING ROADWAY IN KIND IF NEEDED. REFER TO THE HEAVY DUTY ASPHALT TYPICAL SECTION FOR BUILDUP DETAILS AND SPECS IF THE AREA DISTURBED IS AN EXISTING PAVED AREA. IF THE AREA IS NOT PAVED IT SHALL RECEIVE 8" OF GRADED AGGREGATE BASE.

MATCH ROAD GRADE TO PROPOSED GRADING. ROAD TO RECEIVE 8" OF G.A.B. PER GDOT SPEC. 815, CL. A, GRP I.

SILT FENCE (TYP.)

TRANSMISSION STRUCTURES (SEE NOTE NO. 3)

GRADE FROM CENTERLINE OF SWELL UP AT 5.0% SLOPE TO 1' OF DEPTH

SINGLE ROW COMPOST FILTER SOCK

SILT FENCE (TYP.)

EXISTING DRAINAGE STRUCTURE AND PIPE TO BE GROUTED CLOSED AND ABANDONED.

HEADWALL
Q_{25}= 48.4 cfs
V_{25}= 9.94 ft/sec

TYPE 3 RIPRAP

' OF 2' TALL X 2' WIDE BERM W/ 3:1 SIDE SLOPES

4' FLAT BOTTOM OUTLET CHANNEL TO BE LINED WITH VMAX SC250 TURF REINFORCEMENT MAT OR APPROVED EQUAL TO A MINIMUM DEPTH OF 2'

SILT FENCE (TYP.)

LEGEND

- EXISTING CONTOURS
- PROPERTY BOUNDARY MARKERS/LIMITS
- EXISTING STREAM DIVERSION CULVERT UNDER EMBANKMENTS
- EXISTING STREAM DIVERSION CULVERT-CONCRETE ENCASED SECTION
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- APPROXIMATE PRE-CLOSURE ASH LIMITS
- EXISTING GAS LINE
- PERMIT BOUNDARY AP-2, AP-3/4

EROSION CONTROL LEGEND

- Sd1-S — SILT FENCE SENSITIVE
- Sd1-CFS — COMPOSITE FILTER SOCK
- Co — CONSTRUCTION EXIT
- Tp — TOPSOILING
- Ds1 — DISTURBED AREA STABILIZATION (WITH MULCH ONLY)
- Ds2 — DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)
- Ds3 — DISTURBED AREA (PERMANENT VEGETATION)
- Du — DUST CONTROL
- Tac — TACKIFIER
- Ch-2 — CHANNEL STABILIZATION
- St — STORM DRAIN OUTLET PROTECTION

NOTES

1. FIELD LOCATE ALL STORMWATER INLETS AND PROVIDE INLET PROTECTION (COMPOSITE FILTER SOCK RING INLET PROTECTION OR OTHER SEDIMENT TRAP) IF NOT SPECIFICALLY SHOWN ON THE DRAWING. IF PROVIDING AN ALTERNATIVE SEDIMENT TRAP, SUBMIT THE ALTERNATIVE TO THE ENGINEER AND PCM FOR APPROVAL PRIOR TO INSTALLATION.
2. USE SILT BAGS FOR DEWATERING OF EXCAVATED AREAS. THE SILT BAG SHALL BE PLACED ON 6" OF #57 STONE IN AN AREA THAT WILL DRAIN AWAY FROM THE WORK AREA. REPLACE BAG WHEN 3/4 FULL OF SEDIMENT. SUBMIT SILT BAG MANUFACTURER TO PCM FOR APPROVAL PRIOR TO PLACEMENT AND USE.
3. CONSULT WITH PURCHASER AS TO THE EXACT LIMITS OF PAVEMENT REMOVAL. CONTRACTOR TO MINIMIZE, TO THE EXTENT PRACTICAL, SOIL DISRUPTION WHEN REMOVING PAVEMENT AND PAVEMENT BASE COURSE, IF ANY.
4. CONSULT WITH PURCHASER AND GEORGIA POWER TRANSMISSION PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES AND MAINTAIN ALL OPERATIONAL CLEARANCES AND SAFETY GUIDELINES AROUND TRANSMISSION STRUCTURES.

REFERENCES

1. THE EXISTING SITE TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 03-18-2018. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 03-18-2018."

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

CLIENT
GEORGIA POWER COMPANY

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
POTENTIAL FUTURE DEVELOPMENT PLAN

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CONSULTANT
GOLDER

YYYY-MMM	2018-NOV
DESIGNED	JWM / GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449 | REV. 0 | SHEET 39

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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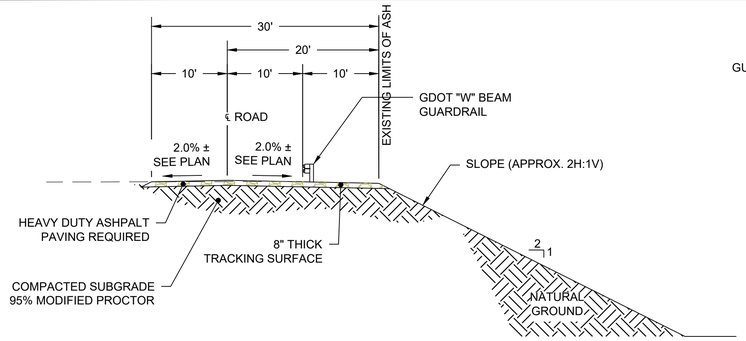
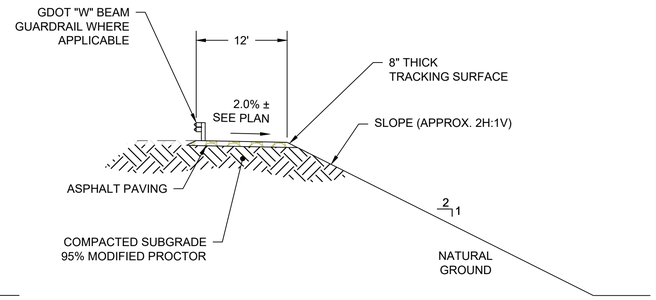
Path: \\Atlanta\cadd\Southern Company\1777449 Plant McDonough Permitting\AP-3&4 - AP-2\AP-3&4\PRODUCTION\ | File Name: 1777449 39-40 POTENTIAL FUTURE DEVELOPMENT.dwg



SECTION X-X AP- 2

N.T.S.



SECTION G-G AP-2

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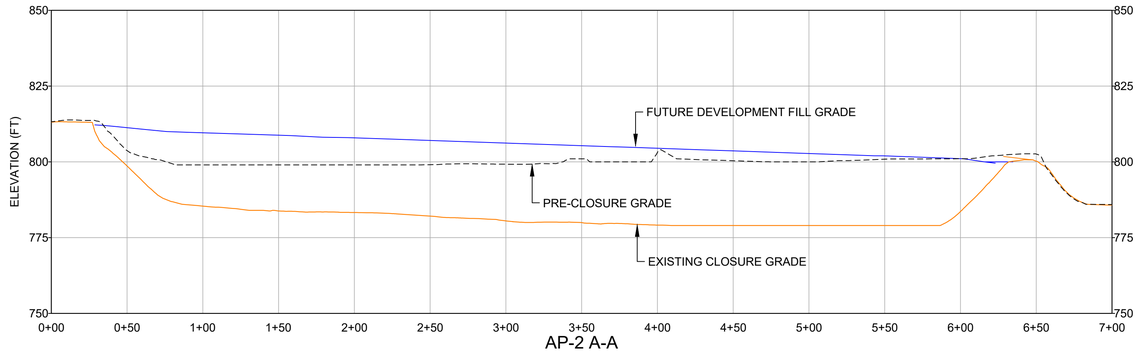
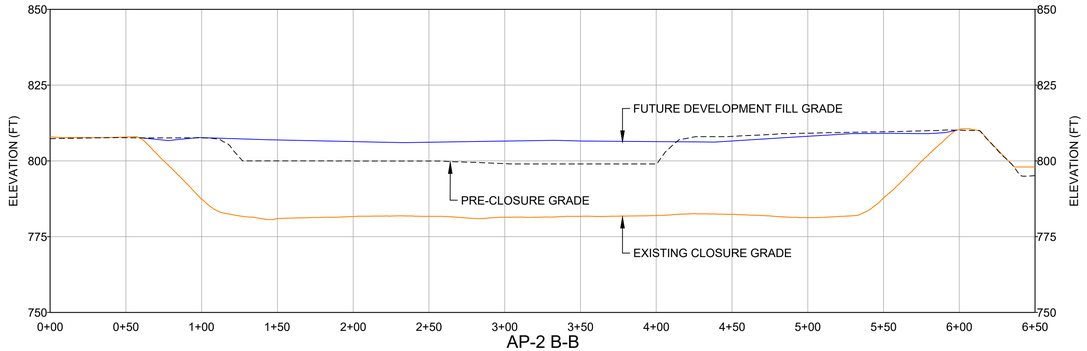
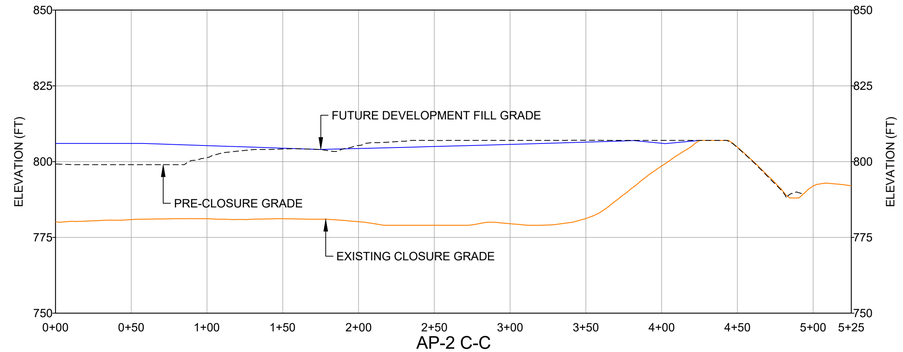


AP-2 A-A



AP-2 B-B



AP-2 C-C

FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

CLIENT
GEORGIA POWER COMPANY

Georgia Power

PROJECT
PLANT MCDONOUGH - ATKINSON
ASH POND 3 AND ASH POND 4 (AP-3/4) CLOSURE
& ASH POND 2 (AP-2) CLOSURE

TITLE
AP-2 DETAILS AND SECTIONS

GEORGIA REGISTERED No. 034749 PROFESSIONAL ENGINEER GREGORY L. HEBELER

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

CONSULTANT
GOLDER

YYYY-MMM	2018-NOV
DESIGNED	JWM / GLH
PREPARED	RMS
CHECKED	LS
REVIEWED / APPROVED	GLH

PROJECT NO. 1777449
REV. 0
SHEET 40

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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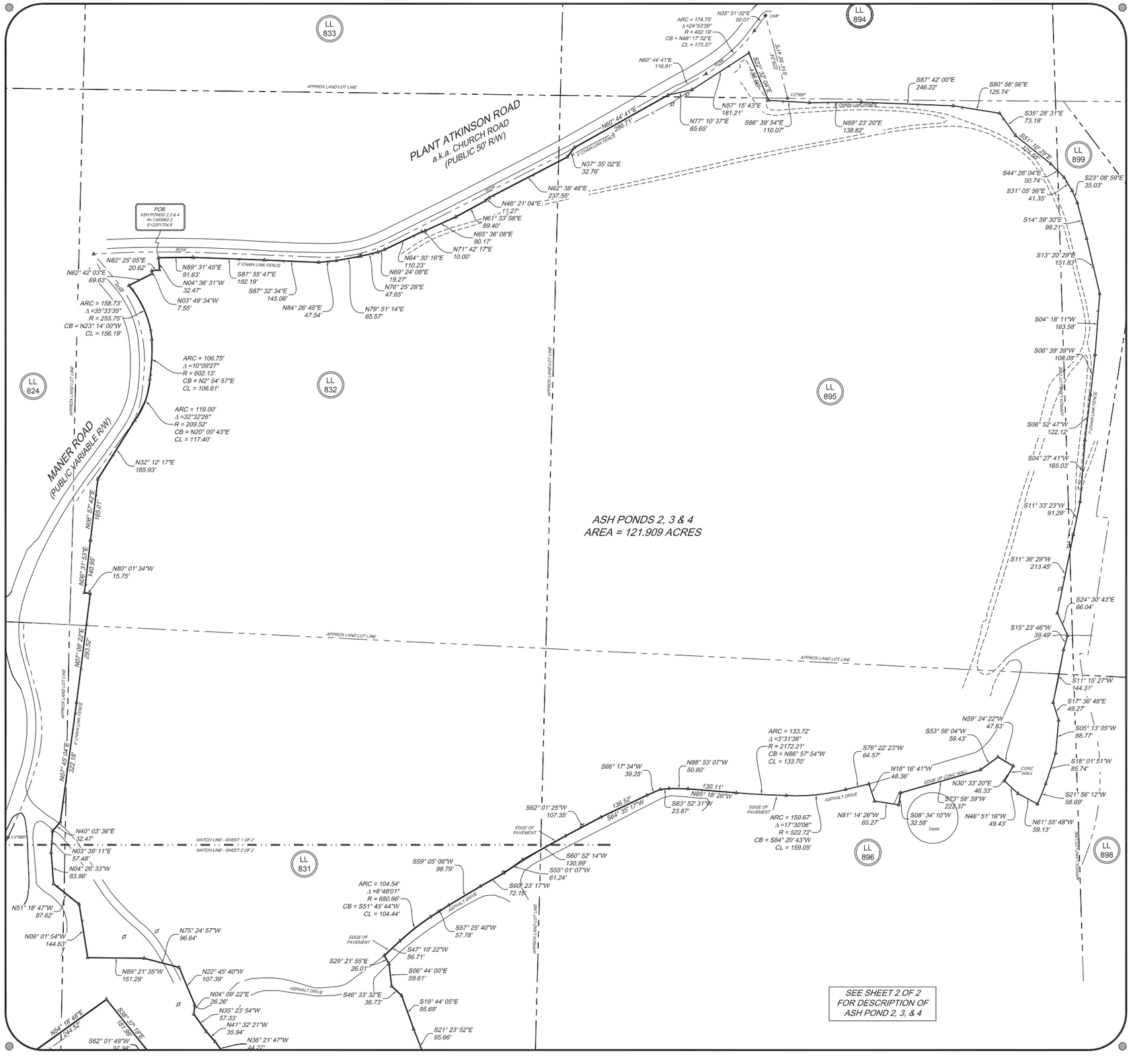
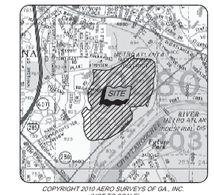


LOCATION MAP



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(NOT TO SCALE)

SURVEYORS NOTES

CLOSURE STATEMENT

- THE FIELD DATA UPON WHICH THIS MAP OR PLAT IS BASED HAS A CLOSURE PRECISION OF 1 FOOT IN 28,426 FEET AND AN ANGULAR ERROR OF 1 SECONDS PER ANGLE POINT, AND WAS ADJUSTED USING THE LEAST SQUARE METHOD.
- THIS PLAT HAS BEEN CALCULATED FOR CLOSURE AND ITS ACCURACY IS 1 FOOT IN 169,237 FEET.

EQUIPMENT AND FIELD SURVEY STATEMENT

- LINEAR MEASUREMENTS AND ANGULAR MEASUREMENTS OBTAINED USING TOPAL 1105 PLUS.
- FIELD SURVEY COMPLETED ON 02-20-18.

HORIZONTAL & VERTICAL DATUM

- HORIZONTAL AND VERTICAL DATUM WAS ESTABLISHED USING RTK GPS METHODS WITH CORRECTIONS FROM THE eGPS NETWORK. HORIZONTAL DATUM IS GEORGIA STATE PLANE, WEST ZONE, NAD83 AND THE VERTICAL DATUM IS NAVD88.

UTILITIES

- OVERHEAD AND UNDERGROUND UTILITIES THAT ARE SHOWN HEREON ARE BASED UPON FIELD SURFACE OBSERVATIONS AND AVAILABLE INFORMATION ON HAND AT THE TIME OF THE SURVEY. ONLY UTILITIES THAT WERE VISIBLE AND ACCESSIBLE WERE MEASURED. SITE EXCAVATION WAS NOT PERFORMED IN ANY WAY TO MEASURE ANY SUBSURFACE UTILITY OR FEATURE OF ANY TYPE. NOTICE IS HEREBY GIVEN THAT "KNOW WHAT'S BELOW. CALL BEFORE YOU DIG." UTILITY LOCATION SERVICE (811) SHOULD BE NOTIFIED PRIOR TO ANY EXCAVATION OF THE SITE.

STREAMS, BODIES OF WATER, & WETLANDS

- ALL STREAMS, BODIES OF WATER, AND WETLANDS MAY BE SUBJECT TO STATE, COUNTY, AND LOCAL BUFFERS OR RESTRICTIONS. SURVEYOR MAKES NO INTERPRETATION REGARDING THESE BUFFERS OR RESTRICTIONS. USER OF THIS MAP IS CAUTIONED TO CONSULT WITH THE APPROPRIATE GOVERNING AUTHORITIES CONCERNING POSSIBLE BUFFERS OR RESTRICTIONS.

ARCHEOLOGICAL & HISTORIC

- UNLESS SHOWN HEREON, NO CEMETERIES, ARCHEOLOGICAL, OR ARCHITECTURAL LANDMARKS ARE KNOWN TO EXIST ON THIS SITE. HOWEVER, SURVEYOR HAS NOT EXCAVATED THE SITE OR CONSULTED WITH A QUALIFIED PROFESSIONAL IN THIS FIELD FOR ABSOLUTE CONFORMATION.

REFERENCES

- BOUNDARY SURVEY FOR PLANT McDONOUGH-ATKINSON PREPARED BY WATTS AND BROWNING ENGINEERS, INC., LAST REVISED 01-15-18. GPC DRAWING NUMBER P281-4

LEGEND

P.O.B.	POINT OF BEGINNING
ROW	RIGHT-OF-WAY
CTF	CRIMP TOP PIPE FOUND
OTF	OPEN TOP PIPE FOUND
RBF	REBAR FOUND
LL	LAND LOT
	LIGHT POLE
	POWER POLE
S	SANITARY SEWER MANHOLE

GRID NORTH
GA WEST NAD83

100 0 100 200 300
SCALE IN FEET

GEORGIA POWER CO., ATLANTA, GA.
Land Department

Plant McDonough
Ash Pond 2, 3 & 4
Permit Boundary Survey

Land Lots 825,830, 831, 894, 895, 896 and 899, 17th District, Cobb County, Georgia

REVISION BLOCK / APPROVALS	DR. JCS	TR.	Checked JRG
	SCALE 1" = 100'		DATE 10/12/18
	MAP FILE NUMBER P470-5(2)		

T:\Working2\Ash\McDonough\20180160\3 Plant McDonough-Ash Pond Permitted Boundary\Survey\

FOR THE FIRM
METRO ENGINEERING & SURVEYING CO., INC.
GA. L.S.F. #000538

GEORGIA REGISTERED No. 2543 PROFESSIONAL LAND SURVEYOR JAMES R. GREEN

11-13-18

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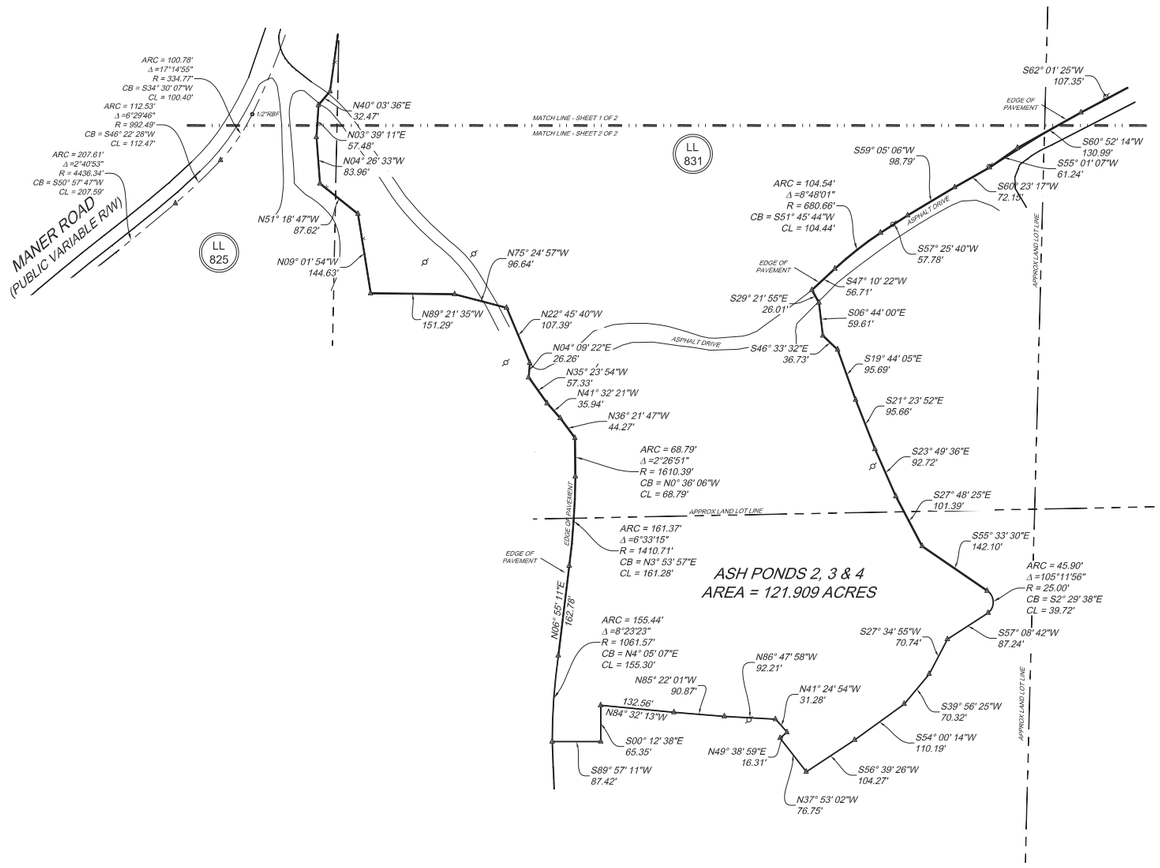
www.metro-engineering.com



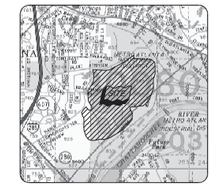
Ash Ponds 2, 3 & 4

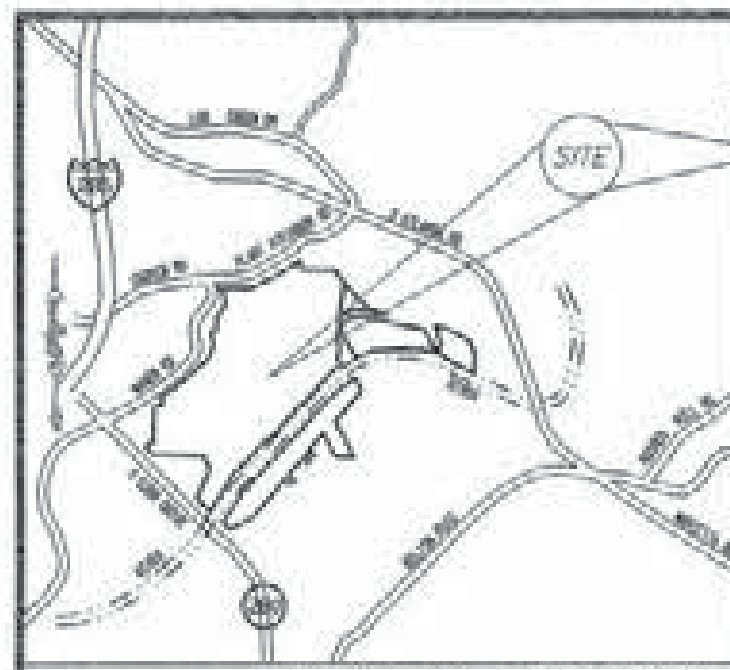
All of that tract or parcel of land lying and being in Land Lots 825,830, 831, 894, 895, 896 and 899, 17th District, Cobb County, Georgia and being more particularly described as follows:

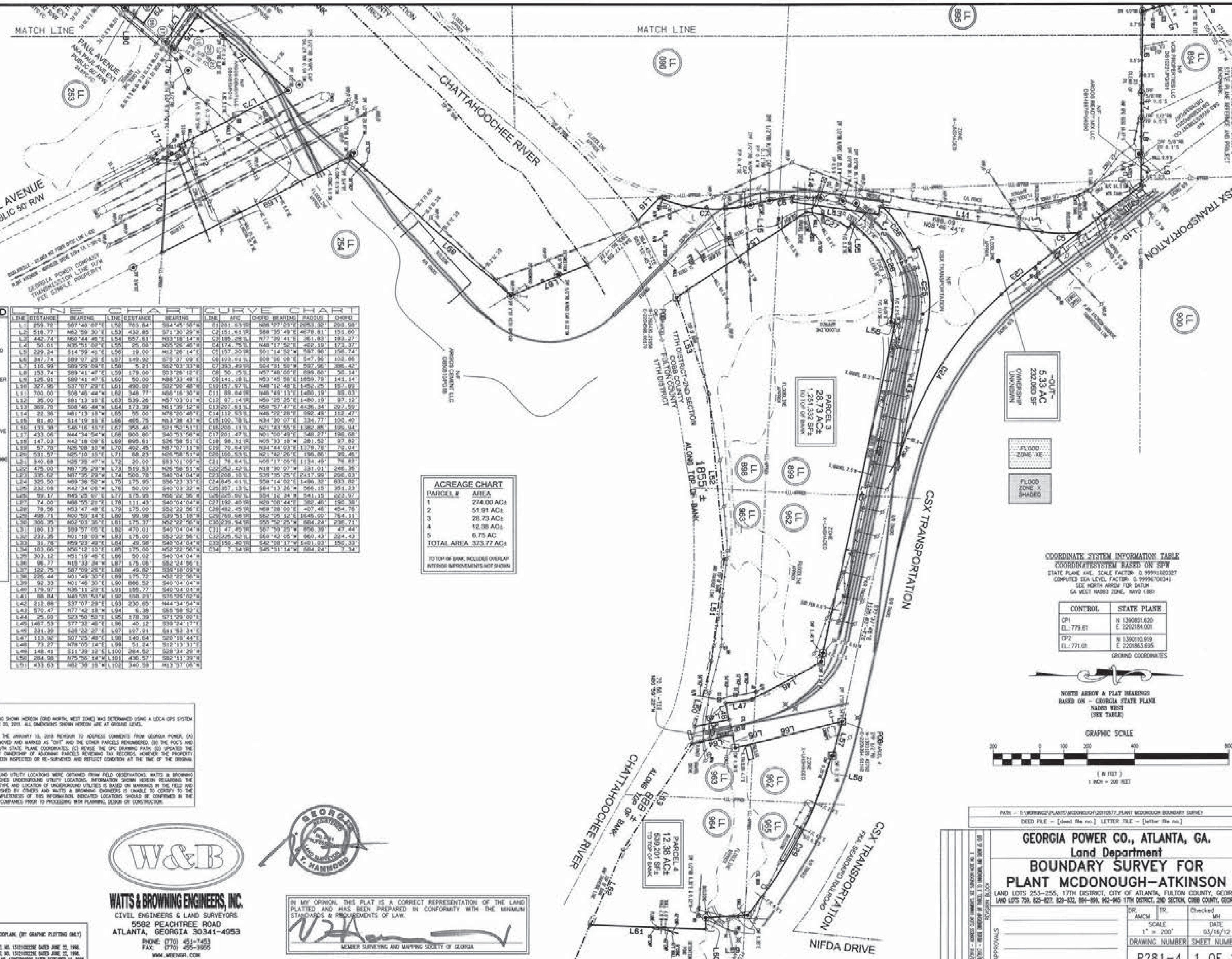
BEGINNING at a fence corner having State Plane Grid Values of North 1,393,982.3 and East 2,201,704.8 (Georgia West Zone, NAD83), thence from said fence corner following the meanderings of a 6 foot chain link fence the following metes and bounds: North 89°31'45" East, a distance of 91.63 feet; South 87°55'47" East, a distance of 192.19 feet; South 87°32'34" East, a distance of 145.06 feet; North 84°26'45" East, a distance of 47.54 feet; North 79°51'14" East, a distance of 65.57 feet; North 76°23'28" East, a distance of 47.65 feet; North 69°24'08" East, a distance of 19.27 feet; North 64°30'16" East, a distance of 110.23 feet; North 71°42'17" East, a distance of 10.00 feet; North 65°36'08" East, a distance of 90.17 feet; North 61°33'59" East, a distance of 89.40 feet; North 46°21'04" East, a distance of 11.27 feet; North 62°38'48" East, a distance of 237.55 feet; thence leaving said chain link fence, North 37°35'02" East, a distance of 32.76 feet to a point on the southeasterly right-of-way line of Plant Atkinson Road (a.k.a. Church Road having a 50 foot right-of-way); thence along said right-of-way line, North 60°44'41" East, a distance of 286.71 feet; thence leaving said right-of-way line of Plant Atkinson Road, North 77°10'37" East, a distance of 65.65 feet to 6 foot chain link fence; thence following said 6 foot chain link fence the following metes and bounds: North 57°15'43" East, a distance of 185.21 feet; South 22°32'04" East, a distance of 136.96 feet; South 86°39'54" East, a distance of 110.07 feet; North 89°23'20" East, a distance of 138.82 feet; South 87°42'00" East, a distance of 246.22 feet; South 80°56'56" East, a distance of 125.74 feet; South 35°28'31" East, a distance of 73.19 feet; South 51°10'29" East, a distance of 121.55 feet; South 44°28'04" East, a distance of 50.74 feet; South 31°05'56" East, a distance of 41.35 feet; South 23°08'59" East, a distance of 35.03 feet; South 14°39'00" East, a distance of 98.21 feet; South 13°20'29" East, a distance of 151.83 feet; South 04°18'11" West, a distance of 163.58 feet; South 06°39'39" West, a distance of 108.09 feet; South 06°52'47" West, a distance of 122.12 feet; South 04°27'41" West, a distance of 165.03 feet; South 11°33'23" West, a distance of 91.29 feet; South 11°36'29" West, a distance of 213.45 feet; thence leaving said chain link fence the following metes and bounds: South 24°30'43" East, a distance of 66.04 feet; South 15°23'46" West, a distance of 39.49 feet; South 11°15'23" West, a distance of 144.31 feet; South 17°36'48" East, a distance of 49.27 feet; South 05°13'05" West, a distance of 88.77 feet; South 18°01'51" West, a distance of 85.74 feet; South 21°56'12" West, a distance of 58.69 feet; North 61°50'46" West, a distance of 59.13 feet; North 46°51'16" West, a distance of 49.43 feet; North 30°33'20" East, a distance of 46.33 feet; North 59°24'22" West, a distance of 47.83 feet; South 53°59'04" West, a distance of 58.43 feet; South 73°58'38" West, a distance of 222.37 feet; South 08°34'10" West, a distance of 32.08 feet; North 81°14'26" West, a distance of 65.27 feet; North 18°16'41" West, a distance of 48.36 feet; South 76°22'23" West, a distance of 64.57 feet; run southwesterly along the arc of a curve 159.67 feet, concave to the north, having a central angle of 17°37'06" and a radius of 522.72 feet and being subtended by a chord which bears North 84°20'43" West, a distance of 159.05 feet; run southwesterly along the arc of a curve 133.72 feet, concave to the north, having a central angle of 03°31'38" and a radius of 2172.21 feet and being subtended by a chord which bears North 86°57'54" West, a distance of 133.70 feet; North 85°18'26" West, a distance of 130.11 feet; North 88°53'07" West, a distance of 50.80 feet; South 83°32'31" West, a distance of 23.87 feet; South 66°17'34" West, a distance of 39.25 feet; South 64°35'17" West, a distance of 136.52 feet; South 62°01'25" West, a distance of 107.35 feet; South 60°52'14" West, a distance of 130.99 feet; South 55°01'07" West, a distance of 61.24 feet; South 60°23'17" West, a distance of 72.15 feet; South 59°05'06" West, a distance of 98.79 feet; South 57°25'40" West, a distance of 57.78 feet; run southwesterly along the arc of a curve 104.54 feet, concave to the southeast, having a central angle of 08°48'01" and a radius of 680.66 feet and being subtended by a chord which bears South 51°45'44" West, a distance of 104.44 feet; South 47°10'22" West, a distance of 56.71 feet; South 29°21'55" East, a distance of 26.01 feet; South 06°44'00" East, a distance of 59.61 feet; South 46°33'32" East, a distance of 36.73 feet; South 19°44'05" East, a distance of 95.69 feet; South 21°23'52" East, a distance of 95.66 feet; South 23°49'36" East, a distance of 92.72 feet; South 27°48'25" East, a distance of 101.39 feet; South 55°33'30" East, a distance of 142.10 feet; run south along the arc of a curve 45.90 feet, concave to the west, having a central angle of 105°11'56" and a radius of 25.00 feet and being subtended by a chord which bears South 02°29'38" East, a distance of 39.72 feet; South 57°08'42" West, a distance of 87.24 feet; South 27°34'55" West, a distance of 70.74 feet; South 39°56'25" West, a distance of 70.32 feet; South 54°00'14" West, a distance of 110.19 feet; South 56°39'26" West, a distance of 104.27 feet; North 37°53'02" West, a distance of 76.75 feet; North 49°38'59" East, a distance of 16.31 feet; North 41°24'54" West, a distance of 31.28 feet; North 86°47'58" West, a distance of 92.21 feet; North 85°22'01" West, a distance of 90.87 feet; North 84°32'13" West, a distance of 132.56 feet; South 00°12'38" East, a distance of 65.35 feet; South 89°57'11" West, a distance of 87.42 feet; run northerly along the arc of a curve 155.44 feet, concave to the east, having a central angle of 08°23'23" and a radius of 1061.57 feet and being subtended by a chord which bears North 04°05'07" East, a distance of 155.30 feet; North 08°55'11" East, a distance of 162.78 feet; run northerly along the arc of a curve 161.37 feet, concave to the west, having a central angle of 06°33'15" and a radius of 1410.71 feet and being subtended by a chord which bears North 03°53'57" West, a distance of 161.28 feet; run northerly along the arc of a curve 68.79 feet, concave to the west, having a central angle of 02°26'51" and a radius of 1610.39 feet and being subtended by a chord which bears North 00°36'06" West, a distance of 68.79 feet; North 36°21'47" West, a distance of 44.27 feet; North 41°32'21" West, a distance of 35.94 feet; North 35°23'54" West, a distance of 57.33 feet; North 04°09'22" East, a distance of 26.26 feet; North 22°45'40" West, a distance of 107.39 feet; North 75°24'57" West, a distance of 96.64 feet; North 89°21'35" West, a distance of 151.29 feet; thence following the meanderings of a 6 foot chain link fence the following metes and bounds: North 09°01'54" West, a distance of 144.63 feet; North 51°18'47" West, a distance of 87.62 feet; North 04°26'33" West, a distance of 83.96 feet; North 03°39'11" East, a distance of 57.48 feet; North 40°03'36" East, a distance of 32.47 feet; North 01°40'04" East, a distance of 322.18 feet; North 07°09'22" East, a distance of 293.52 feet; North 80°01'34" West, a distance of 15.75 feet; North 06°31'53" East, a distance of 140.95 feet; North 06°57'42" East, a distance of 165.01 feet; North 32°12'17" East, a distance of 185.93 feet; run northeasterly along the arc of a curve 119.00 feet, concave to the northwest, having a central angle of 32°32'26" and a radius of 209.52 feet and being subtended by a chord which bears North 20°00'43" East, a distance of 117.40 feet; run northerly along the arc of a curve 106.75 feet, concave to the west, having a central angle of 10°09'27" and a radius of 602.13 feet and being subtended by a chord which bears North 02°54'57" East, a distance of 106.61 feet; run northwesterly along the arc of a curve 158.73 feet, concave to the southeast, having a central angle of 35°33'35" and a radius of 255.75 feet and being subtended by a chord which bears North 23°14'00" West, a distance of 156.81 feet; North 62°42'03" East, a distance of 69.63 feet; North 03°49'34" West, a distance of 7.35 feet; North 82°25'55" East, a distance of 20.62 feet; North 04°36'31" West, a distance of 32.47 feet to the **POINT OF BEGINNING**.

Said Ash Ponds 2, 3 and 4 containing 121.909 acres.

LOCATION MAP


N.A.
PLANT ATKINSON
RIVER
ALTO ATLAS
MCDONOUGH DIS
ASH POND 2
ASH POND 3
ASH POND 4
PLANT MCDONOUGH
ASH POND 1
ASH POND 5
ASH POND 6
CHURCH RD
ATKINSON RD
ATKINSON RD
ATKINSON





MONUMENTATION LEGEND

- Iron Pin Placed
- Iron Pin Found
- Monument Set
- Monument Found
- Computed Point
- Control or Traverse Point
- Geodetic Control Point
- Benchmark or Temporary Benchmark (TBM)

LEGEND

[illegible]

SYMBOL LEGEND

- A/C AIR CONDITIONING UNIT
- BPM BLUE PAINT MARK (WATER)
- BOLL BOLLARD
- BSO BSO BOX
- BSOMH BSO MANHOLE
- CMF CONCRETE MONUMENT FOUND
- CO CLEANOUT
- CTV CABLE TV BOX
- FDC FIRE DEPT CONNECTION
- FH FIRE HYDRANT
- FOCM FIBRE OPTIC CABLE MARKER
- FP FENCE POST
- GLMP GAS LINE MARKER POST
- GM GAS METER
- GP GATE POST
- GV GAS VALVE
- GT GREASE TRAP
- GUY GUYPOLE
- GW GUYWIRE
- ICV IRRIGATION CONTROL VALVE
- IPF IRON PIN FOUND
- L/P LAMP POST/LIGHT POLE
- M/B MAIL BOX/KIOSK
- MW MONITORING WELL
- OPM ORANGE PAINT MARK (TELE/COMM)
- P/B POWER/ELEC BOX
- P/P POWER POLE
- P/M POWER METER
- RPM RED PAINT MARK (POWER)
- SIGN SIGN
- T/B TRAFFIC SIGNAL BOX
- TP TRAFFIC POLE
- T/S TRAFFIC SIGNAL
- TRANS TRANSFORMER
- UB UTILITY BOX
- UP UTILITY POLE
- VMP VALVE MARKER POST
- WLMP WATER LINE MARKER POST
- WM WATER METER
- WMH WATER MANHOLE
- WV WATER VALVE
- YPM YELLOW PAINT MARK (GAS)
- FENCE LINE
- POWER LINE
- GAS LINE
- WATER LINE

LINE CHART

LINE	DISTANCE	BEARING	LINE	DISTANCE	BEARING
L1	259.72'	S87°40'07"E	L52	703.84'	S84°45'58"W
L2	518.77'	N62°59'30"E	L53	432.85'	S71°30'29"W
L3	442.74'	N60°44'41"E	L54	657.61'	N33°18'14"W
L4	50.01'	N35°51'02"E	L55	25.09'	N55°26'46"W
L5	229.24'	S14°39'41"E	L56	19.00'	N12°26'14"E
L6	347.74'	S89°07'25"E	L57	149.92'	S75°37'09"E
L7	110.99'	S89°29'09"E	L58	5.21'	S52°03'33"W
L8	153.74'	S89°41'47"E	L59	179.00'	S07°26'12"E
L9	125.91'	S89°41'47"E	L60	50.00'	N88°33'49"E
L10	327.96'	S37°07'29"E	L61	490.00'	S02°00'48"W
L11	700.00'	S06°46'44"W	L62	348.77'	N56°16'30"W
L12	35.00'	S81°13'16"E	L63	539.26'	N57°03'01"W
L13	369.70'	S06°46'44"W	L64	173.39'	N11°39'12"W
L14	22.98'	N81°13'16"W	L65	75.00'	N78°20'48"E
L15	81.40'	S14°19'16"E	L66	465.75'	N13°38'43"W
L16	133.38'	S46°16'10"E	L67	350.40'	S21°52'51"E
L17	433.06'	N44°34'54"W	L68	955.80'	S40°51'56"W
L18	147.03'	N42°18'09"E	L69	895.61'	S26°58'51"E
L19	57.70'	N26°58'10"W	L70	462.45'	N87°07'11"W
L20	531.57'	N25°10'10"E	L71	88.23'	N26°58'51"W
L21	340.68'	N25°35'47"W	L72	20.00'	S63°01'09"W
L22	475.00'	N87°35'29"W	L73	519.53'	N26°58'51"W
L23	335.60'	N87°35'29"W	L74	500.78'	S40°04'04"W
L24	325.50'	N89°36'52"W	L75	175.95'	S56°23'33"E
L25	232.08'	N42°34'06"W	L76	50.00'	S40°03'32"W
L26	59.17'	N45°25'07"E	L77	175.95'	N56°22'56"W
L27	74.00'	N88°55'21"E	L78	111.43'	S40°04'04"W
L28	79.56'	N53°47'48"E	L79	175.00'	S52°22'56"E
L29	498.71'	N02°59'14"E	L80	99.98'	S29°51'18"W
L30	305.35'	N02°03'35"E	L81	175.37'	N52°22'56"W
L31	190.13'	S89°57'05"E	L82	470.01'	S40°04'04"W
L32	232.26'	N01°18'03"W	L83	175.00'	S52°22'56"E
L33	31.78'	N59°23'49"E	L84	49.98'	S40°04'04"W
L34	103.66'	N56°12'10"E	L85	175.00'	N52°22'56"W
L35	303.12'	N51°19'46"E	L86	50.02'	S40°04'04"W
L36	96.77'	N18°32'24"W	L87	175.08'	S52°24'56"E
L37	122.75'	S87°09'26"E	L88	49.89'	S38°18'09"W
L38	225.44'	N01°49'30"E	L89	175.73'	N52°22'56"W
L39	92.33'	N01°46'30"E	L90	666.52'	S40°04'04"W
L40	175.97'	N36°11'23"E	L91	185.77'	S40°04'04"W
L41	88.84'	N40°20'53"W	L92	108.23'	S75°29'02"W
L42	213.88'	S37°07'29"E	L93	230.65'	N44°34'54"W
L43	570.47'	N77°42'18"W	L94	6.38'	S65°58'52"E
L44	25.00'	S23°50'50"E	L95	178.39'	S71°29'00"E
L45	1467.53'	S77°32'46"E	L96	45.12'	S38°24'17"E
L46	331.39'	S28°22'27"E	L97	107.01'	S11°53'34"E
L47	113.92'	S07°25'48"E	L98	140.64'	S20°18'44"E
L48	73.27'	N78°05'14"E	L99	51.24'	S12°13'31"E
L49	148.41'	S11°28'12"E	L100	284.52'	S28°24'29"W
L50	284.98'	N75°56'14"W	L101	436.57'	S82°11'39"W
L51	433.63'	N82°38'18"W	L102	340.59'	N13°57'06"W

CURVE CHART

LINE	ARC	CHORD BEARING	RADIUS	CHORD
C1	201.65'R	N86°27'23"E	2053.32'	200.98'
C2	151.61'R	S88°35'49"E	4678.61'	151.60'
C3	185.29'L	N77°29'41"E	361.83'	183.27'
C4	174.75'L	N46°17'52"E	462.19'	173.37'
C5	157.20'R	S01°14'52"W	587.96'	156.74'
C6	103.01'L	S09°56'08"E	547.96'	102.86'
C7	393.49'R	S04°31'58"W	587.96'	386.42'
C8	50.15'L	N87°48'05"E	896.66'	50.14'
C9	141.18'L	N53°45'56"E	1659.79'	141.14'
C10	157.97'L	N48°12'48"E	1452.25'	157.89'
C11	88.04'R	N46°49'13"E	1480.19'	88.03'
C12	97.14'R	N50°25'25"E	1480.19'	97.12'
C13	207.61'L	N50°57'47"E	4436.34'	207.59'
C14	112.53'L	N46°29'28"E	992.48'	112.47'
C15	100.78'L	N34°30'07"E	334.77'	100.40'
C16	200.11'L	N21°43'55"E	1382.85'	199.94'
C17	201.27'L	N01°50'49"E	340.27'	198.08'
C18	98.31'R	N05°33'18"W	281.52'	97.82'
C19	79.04'R	N34°44'03"E	1178.78'	79.04'
C20	100.53'L	N21°42'26"E	198.86'	99.46'
C21	78.84'L	N05°17'05"E	1134.49'	78.82'
C22	252.42'L	N18°30'07"W	331.01'	246.35'
C23	208.10'L	S39°35'25"E	2417.99'	208.03'
C24	845.01'L	S58°14'02"E	1496.32'	833.82'
C25	357.13'L	S84°13'26"W	566.15'	351.23'
C26	225.60'L	S54°12'24"W	541.15'	223.97'
C27	192.40'R	N20°00'44"E	382.40'	190.38'
C28	482.45'R	N68°28'00"E	407.46'	454.75'
C29	760.66'R	S82°05'12"E	1845.02'	754.11'
C30	239.94'R	S55°50'25"W	684.24'	238.71'
C31	47.45'R	S67°59'25"W	656.39'	47.44'
C32	225.52'L	S60°42'05"W	960.43'	224.43'
C33	150.40'R	S42°08'17"W	1401.03'	150.33'
C34	7.34'R	S45°31'14"W	684.24'	7.34'

ACREAGE CHART

PARCEL #	AREA
1	274.00 AC±
2	51.91 AC±
3	28.73 AC±
4	12.38 AC±
5	6.75 AC
TOTAL AREA	373.77 AC±

TO TOP OF BANK, INCLUDES OVERLAP
INTERIOR IMPROVEMENTS NOT SHOWN

REFERENCE MATERIAL:

1. PLAT: GEORGIA POWER CO. LAND DEPARTMENT PLANT MCDONOUGH, APAC SOUTHEAST INC. PROPERTY, LOCATED IN LAND LOTS 898, 899, 962, 963, 964 & 965, 17TH DISTRICT, 2ND SECTION, COBB COUNTY, GEORGIA, DATED JULY 11, 2003, LAST REVISED 12/07/2005, DRAWING NUMBER H-815-3.

2. PLAT: GEORGIA POWER CO. LAND DEPARTMENT, COMPOSITE MAP OF PLANT MCDONOUGH-ATKINSON, LOCATED IN CITY OF ATLANTA, 17TH DISTRICT, FULTON COUNTY & 17TH DISTRICT, 2ND SECTION, COBB COUNTY, GEORGIA, DATED 3/22/1993, DRAWING NUMBER H–155–11.

3. PLAT: GEORGIA POWER CO. LAND DEPARTMENT, PLANT MCDONOUGH, ADDITIONAL PROPERTY REBECCA A. MORRIS PROPERTY, LOCATED IN LAND LOT 826, 17TH DISTRICT, 2ND SECTION, COBB COUNTY, GEORGIA, DATED 8/22/2005, LAST REVISED 8/31/2005, PREPARED BY BETSERTON SURVEYING & DESIGN, INC., DRAWING NUMBER H-880-12.

4. PLAT: GEORGIA POWER CO., ATLANTA, GA. ENGINEERING DEPARTMENT, PLANT ATKINSON-UNIT NO. 3, ATLAS MAPS OF AREA SURROUNDING PRESENT PROPERTY, LAST REVISED 5/30/1985, MAP LOCATION W-37-7. (SHEET 1 OF 3)

5. PLAT: MAP OF DAHL FLORAL COMPANY PROPERTY, LOCATED IN LAND LOTS 830, 831, 832, 894, 895, 896, 897, 898, 899 & 900, 17TH DISTRICT, 2ND SECTION, COBB COUNTY, GEORGIA PREPARED FOR GEORGIA POWER COMPANY, BY W.H. MCCULLOCH, CIVIL ENGINEER.

6. PLAT: ALTA/ACSM LAND TITLE SURVEY FOR THE TRUST FOR PUBLIC LAND & THE CITY OF ATLANTA, GEORGIA, LOCATED IN LAND LOTS 253, 254 & 255, 17TH DISTRICT, CITY OF ATLANTA, FULTON COUNTY, GEORGIA (45.0500 ACRES) DATED 3/15/2000, LAST REVISED 6/28/2001, PREPARED BY HANNON, MEEKS & BAGWELL, SURVEYORS & ENGINEERS, INC., FILE NO. A-8-7 (SHEETS 1, 2 & 3)

7. PLAT: GEORGIA POWER CO. LAND DEPARTMENT, PLANT MCDONOUGH – PLANT ATKINSON TOPOGRAPHIC MAP, CITY OF ATLANTA, 17TH DISTRICT, FULTON COUNTY, GEORGIA & 17TH DISTRICT, COBB COUNTY, GEORGIA, DATED 05/31/2001, DRAWING NUMBER H-155-11.

8. RIGHT-OF-WAY PLANS: DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA RIGHT-OF-WAY OF PROPOSED BRIDGE REPLACEMENT ON S.R. 280 OVER CHATTAHOOCHEE RIVER – FULTON & COBB COUNTIES, PROJECT NO. BRM-9000(31), PREPARED BY HEATH & LINEBACK ENGINEERS, INC., PLANS COMPLETED 3/07/2006, LAST REVISED 10/15/2007. (SHEETS 1-6)

9. PLAT: SURVEY OF PROPERTY OF MRS. J.S. HAND EXTENSION OF BLOCK 8, LOCATED IN LAND LOTS 253, 254 & 255, 17TH DISTRICT, FULTON COUNTY, GEORGIA PREPARED BY J. W. BURFITT C.E., DATED JUNE 8, 1945, RECORDED IN PLAT BOOK 26, PAGE 59, FULTON COUNTY RECORDS.

NOTE: THIS SURVEY IS PREPARED FOR THE EXCLUSIVE USE OF THE ENTITIES NAMED IN THE CERTIFICATION HEREON. SAID CERTIFICATION DOES NOT EXTEND TO ANY UNNAMED ENTITIES WITHOUT AN EXPRESSED RECERTIFICATION BY THE SURVEYOR NAMING SAID ENTITIES.

SURVEYORS NOTES:

1. BASIS OF BEARING SHOWN HEREON (GRID NORTH, WEST ZONE) WAS DETERMINED USING A LEICA GPS SYSTEM 500 ON SEPTEMBER 20, 2011. ALL DIMENSIONS SHOWN HEREON ARE AT GROUND LEVEL.

2. PERTAINING TO THE JANUARY 15, 2018 REVISION TO ADDRESS COMMENTS FROM GEORGIA POWER, (A) PARCEL 3 WAS REMOVED AND MARKED AS "OUT" AND THE OTHER PARCELS RENUMBERED, (B) THE POC'S AND POB'S LABELED WITH STATE PLANE COORDINATES, (C) REVISE THE GPC DRAWING PATH, (D) UPDATED THE NOW OR FORMERLY OWNERSHIP OF ADJOINING PARCELS REVIEWING TAX RECORDS, HOWEVER THE PROPERTY LINES HAVE NOT BEEN INSPECTED OR RE-SURVEYED AND REFLECT CONDITION AT THE TIME OF THE ORIGINAL SURVEY.

NOTE: ABOVE GROUND UTILITY LOCATIONS WERE OBTAINED FROM FIELD OBSERVATIONS. WATTS & BROWNING HAS NOT RESEARCHED UNDERGROUND UTILITY LOCATIONS. INFORMATION SHOWN HEREON REGARDING THE EXISTENCE, SIZE, TYPE, AND LOCATION OF UNDERGROUND UTILITIES IS BASED ON MARKINGS IN THE FIELD AND INFORMATION FURNISHED BY OTHERS AND WATTS & BROWNING ENGINEERS IS UNABLE TO CERTIFY TO THE ACCURACY OF COMPLETENESS OF THIS INFORMATION. INDICATED LOCATIONS SHOULD BE CONFIRMED IN THE FIELD WITH UTILITY COMPANIES PRIOR TO PROCEEDING WITH PLANNING, DESIGN OR CONSTRUCTION.

SURVEY CLOSURE STATEMENT

The Field Data upon which this plat is based has a closure precision of one foot in 24,990 feet, and an angular error of 0.2" per angle point, and was Least Squares adjusted.

This plat has been calculated for closure and is found to be accurate within one foot in 1,618,878 feet.

Linear Measurement obtained using Leica TCR 403
Angular Measurement obtained using Leica TCR 403
Field Work completed 10/24/2011

F.I.R.M. FLOOD NOTE:
THIS PROPERTY IS LOCATED IN A 100 YR. F.I.R.M. FLOODPLAIN, (BY GRAPHIC PLOTTING ONLY) ACCORDING TO:
F.I.R.M. FLOOD MAP OF FULTON COUNTY, GA. COMMUNITY-PANEL NO. 13121C0229E DATED JUNE 22, 1998.
F.I.R.M. FLOOD MAP OF FULTON COUNTY, GA. COMMUNITY-PANEL NO. 13121C0228E DATED JUNE 22, 1998.
F.I.R.M. FLOOD MAP OF COBB COUNTY, GA. COMMUNITY-PANEL NO. 13067C0229G DATED DECEMBER 16, 2008.
F.I.R.M. FLOOD MAP OF COBB COUNTY, GA. COMMUNITY-PANEL NO. 13067C0226G DATED DECEMBER 16, 2008.

W&B

WATTS & BROWNING ENGINEERS, INC.
CIVIL ENGINEERS & LAND SURVEYORS
5582 PEACHTREE ROAD
ATLANTA, GEORGIA 30341-4953
PHONE (770) 451-7453
FAX (770) 455-3955
WWW.WBENGR.COM
W&B REF 110220

GEORGIA REGISTERED LAND SURVEYOR T. HAMMOND

IN MY OPINION, THIS PLAT IS A CORRECT REPRESENTATION OF THE LAND PLATTED AND HAS BEEN PREPARED IN CONFORMITY WITH THE MINIMUM STANDARDS & REQUIREMENTS OF LAW.

MEMBER SURVEYING AND MAPPING SOCIETY OF GEORGIA

COORDINATE SYSTEM INFORMATION TABLE

COORDINATESYSTEM BASED ON SPW
STATE PLANE AVE. SCALE FACTOR: 0.99991020327
COMPUTED SEA LEVEL FACTOR: 0.99996700341
SEE NORTH ARROW FOR DATUM
GA WEST NAD83 ZONE, NAVD 1.88)

CONTROL	STATE PLANE
CP1 EL: 779.61	N 1390831.620 E 2202184.001
CP2 EL: 771.01	N 1390110.959 E 2201863.695

GROUND COORDINATES

NORTH ARROW & PLAT BEARINGS BASED ON – GEORGIA STATE PLANE NAD83 WEST (SEE TABLE)

GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 INCH = 200 FEET

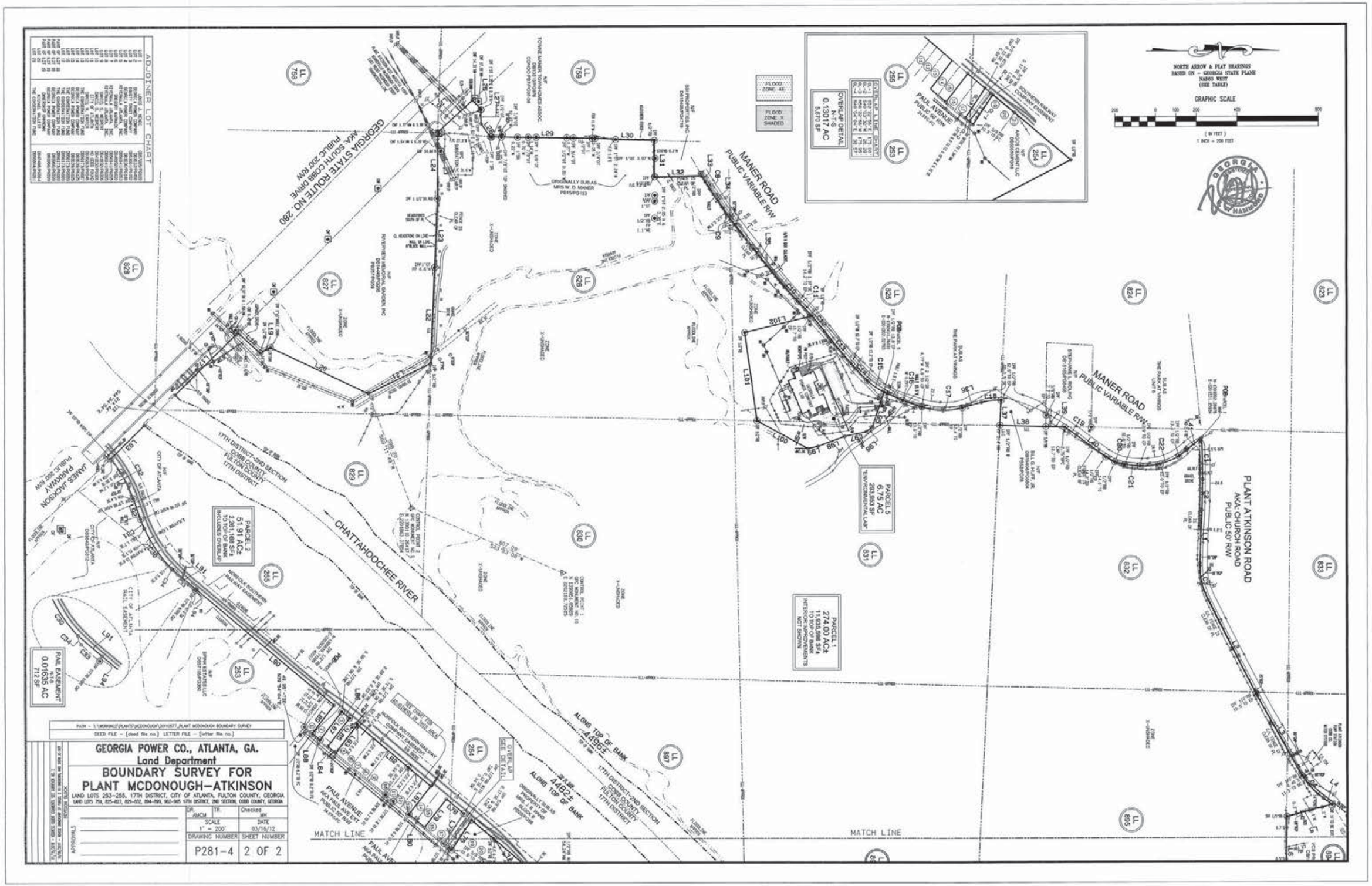
PATH – T:\WORKING2\PLANTS\MCDONOUGH\20110577_PLANT MCDONOUGH BOUNDARY SURVEY
DEED FILE – [deed file no.] LETTER FILE – [letter file no.]

GEORGIA POWER CO., ATLANTA, GA.
Land Department
BOUNDARY SURVEY FOR PLANT MCDONOUGH–ATKINSON

LAND LOTS 253–255, 17TH DISTRICT, CITY OF ATLANTA, FULTON COUNTY, GEORGIA
LAND LOTS 759, 825–827, 829–832, 894–899, 962–965 17TH DISTRICT, 2ND SECTION, COBB COUNTY, GEORGIA

DR. AMCM	TR.	Checked MH
SCALE 1" = 200'		DATE 03/16/12
DRAWING NUMBER		SHEET NUMBER
P281-4		1 OF 2

APPROVALS



GEORGIA POWER CO., ATLANTA, GA.
Land Department
BOUNDARY SURVEY FOR
PLANT MCDONOUGH-ATKINSON
LAND LOTS 253-255, 17TH DISTRICT, CITY OF ATLANTA, FULTON COUNTY, GEORGIA
LAND LOTS 759, 825-827, 829-832, 894-899, 962-965 17TH DISTRICT, 2ND SECTION, COBB COUNTY, GEORGIA
DR. AMCM
TR.
Checked MH
SCALE 1" = 200'
DATE 03/16/12
DRAWING NUMBER P281-4
SHEET NUMBER 2 OF 2
ADJOINER LOT CHART
GEORGIA STATE ROUTE NO. 280
AKA: SOUTH COBB DRIVE
PUBLIC 200' R/W
MANER ROAD
PUBLIC VARIABLE R/W
PLANT ATKINSON ROAD
AKA: CHURCH ROAD
PUBLIC 50' R/W
CHATTAHOOCHEE RIVER
JAMES JACKSON PARKWAY
PUBLIC 200' R/W
PAUL AVENUE
PUBLIC 50' R/W
PARCEL 1
274.00 AC±
11,935,596 SF±
TO TOP OF BANK
INTERIOR IMPROVEMENTS NOT SHOWN
PARCEL 2
51.91 AC±
2,261,168 SF±
TO TOP OF BANK
INCLUDES OVERLAP
PARCEL 5
6.75 AC
293,953 SF
"ENVIRONMENTAL LAB"
OVERLAP DETAIL
N-T-S
0.13017 AC
5,670 SF
RAIL EASEMENT
N-T-S
0.01635 AC
712 SF
OVERLAP SEE DETAIL
ALONG TOP OF BANK
4496±
4482±
MATCH LINE
NORTH ARROW & PLAT BEARINGS BASED ON - GEORGIA STATE PLANE NAD83 WEST (SEE TABLE)
GRAPHIC SCALE
(IN FEET)
1 INCH = 200 FEET

GEORGIA POWER COMPANY
PLANT MCDONOUGH
ASH POND NO. 3 & 4 CLOSURE
EROSION, SEDIMENT & POLLUTION CONTROL PLAN
COBB COUNTY, GEORGIA
SEPTEMBER 2017

INDEX OF SHEETS

SHEET	SHEET TITLE
EROSION SEDIMENT & POLLUTION CONTROL	
ES0	EROSION, SEDIMENT & POLLUTION CONTROL TITLE SHEET
ES1	EROSION, SEDIMENT & POLLUTION CONTROL PLAN - PHASE 1
ES2	EROSION, SEDIMENT & POLLUTION CONTROL PLAN - PHASE 2A
ES3	EROSION, SEDIMENT & POLLUTION CONTROL PLAN - PHASE 2B **REMOVED FROM CONTRACT**
ES4	EROSION, SEDIMENT & POLLUTION CONTROL PLAN - PHASE 2C
ES5	EROSION, SEDIMENT & POLLUTION CONTROL PLAN - PHASE 2D
ES6	EROSION, SEDIMENT & POLLUTION CONTROL PLAN - PHASE 3
ES7	EROSION, SEDIMENT & POLLUTION CONTROL NOTES - SHEET 1 OF 4
ES8	EROSION, SEDIMENT & POLLUTION CONTROL NOTES - SHEET 2 OF 4
ES9	EROSION, SEDIMENT & POLLUTION CONTROL NOTES - SHEET 3 OF 4
ES10	EROSION, SEDIMENT & POLLUTION CONTROL NOTES - SHEET 4 OF 4
ES11	EROSION, SEDIMENT & POLLUTION CONTROL DETAILS - SHEET 1 OF 7
ES12	EROSION, SEDIMENT & POLLUTION CONTROL DETAILS - SHEET 2 OF 7
ES13	EROSION, SEDIMENT & POLLUTION CONTROL DETAILS - SHEET 3 OF 7
ES14	EROSION, SEDIMENT & POLLUTION CONTROL DETAILS - SHEET 4 OF 7
ES15	EROSION, SEDIMENT & POLLUTION CONTROL DETAILS - SHEET 5 OF 7
ES16	EROSION, SEDIMENT & POLLUTION CONTROL DETAILS - SHEET 6 OF 7
ES17	EROSION, SEDIMENT & POLLUTION CONTROL DETAILS - SHEET 7 OF 7

CONTACT INFORMATION

ENGINEER

MICHAEL CHILSON, P.E.
GOLDER ASSOCIATES INC.
3730 CHAMBLEE TUCKER ROAD
ATLANTA, GA 30341
TELEPHONE: 770-496-1893

OWNER

BURNS WETHERINGTON, P.E.
GEORGIA POWER COMPANY
241 RALPH MCGILL BOULEVARD
ATLANTA, GA 30308
TELEPHONE: 404-506-2533

OPERATOR

MITCH SAUNDERS
SOUTHERN COMPANY SERVICES
5551 SOUTH COBB DRIVE
SMYRNA, GA 30080
TELEPHONE: 404-367-1832

24 HOUR CONTACT

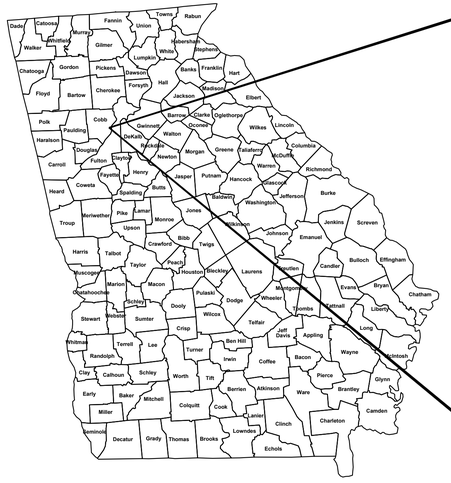
MITCH SAUNDERS
SOUTHERN COMPANY SERVICES
5551 SOUTH COBB DRIVE
SMYRNA, GA 30080
TELEPHONE: 404-367-1832

PREPARED BY:

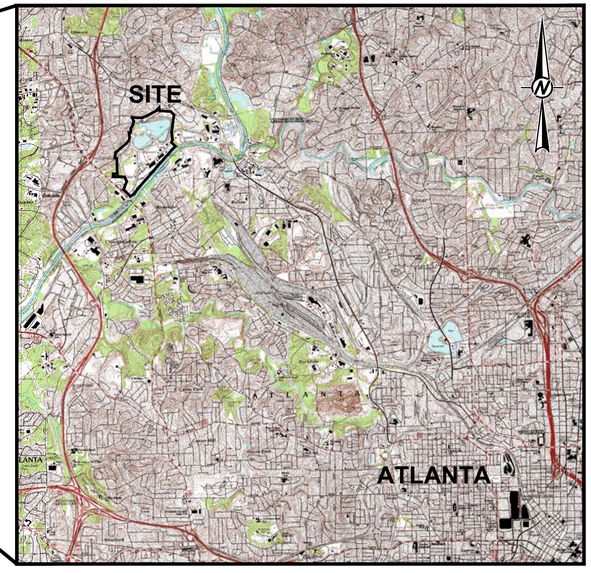
Golder Associates

PREPARED FOR:

Southern Company



SITE VICINITY MAP



REF: USGS 7.5 MINUTE SERIES TOPOGRAPHIC QUADRANGLE:
MABLETON, GA 1992 & NORTHWEST ATLANTA, GA 1993

SITE LOCATION MAP

0 5000 10000
1" = 5000' FEET

SEPTEMBER 2017 - ISSUED FOR APPROVAL & CONSTRUCTION

CONSTRUCTION SCHEDULE OF MAJOR ACTIVITIES

CONSTRUCTION ACTIVITY	2016												2017												2018				
	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY
PHASE 1 EROSION CONTROL																												
CLEARING & GRUBBING																												
PHASE 2A EROSION CONTROL																												
PHASED GRADING *																												
PHASE 2B-2D EROSION CONTROL																												
EROSION CONTROL MAINTENANCE																												
PHASE 3 EROSION CONTROL																												

* INCLUDES MASS GRADING AND FINAL COVER

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
1	01/2017	MTC	REMOVE ES3	RMS	GLH	MTC
2	07/1916	MTC	CHANGE LEVEL II DESIGN PROFESSIONAL	RMS	GLH	MTC

CLIENT
GEORGIA POWER COMPANY /
SOUTHERN COMPANY SERVICES

Southern Company

PROJECT
PLANT MCDONOUGH
ASH POND NO. 3 & 4 CLOSURE PLAN

TITLE
EROSION, SEDIMENT & POLLUTION CONTROL TITLE SHEET

GEORGIA SAFE DAMS PROGRAM

GSWCC GEORGIA SOIL AND WATER CONSERVATION COMMISSION

MICHAEL T. CHILSON
LEVEL II DESIGN PROFESSIONAL
CERTIFICATION NUMBER 0000072142
ISSUED: 08/29/2014 EXPIRES: 08/29/2017

GEORGIA REGISTERED PROFESSIONAL ENGINEER MICHAEL THOMAS CHILSON

MICHAEL T. CHILSON
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 036075

CONSULTANT
GOLDER

YYYY-MM-DD	2017-02-17
DESIGNED	GLH
PREPARED	RMS
REVIEWED	WRS
APPROVED	MTC

PROJECT NO.	PROJECT ID	REV.	SHEET
1539180	MCD15017	1	ES0

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

Path: \\atlanta\cadd\Southern Company\1525193 2015 Plant McDonough\PRODUCTION\DESIGN \ | File Name: 1525193 01 ES TITLE SHEET REV-01.dwg

NORTHEAST CONTROL POINT TABLE		
CONTROL NO.	LATITUDE	LONGITUDE
CP-1	33.831787	-84.478770
CP-2	33.831760	-84.477881
CP-3	33.831621	-84.477812
CP-4	33.831419	-84.478172
CP-5	33.829524	-84.479273
CP-6	33.829662	-84.479721
CP-7	33.829897	-84.479711
CP-8	33.830566	-84.479171
CP-9	33.831106	-84.479091
CP-10	33.821473	-84.479222

SOUTHWEST CONTROL POINT TABLE		
CP-20	33.82651	-84.4795
CP-21	33.8269	-84.4795
CP-22	33.82743	-84.48
CP-23	33.82819	-84.4799
CP-24	33.82872	-84.4797
CP-25	33.82903	-84.4794
CP-26	33.82877	-84.4795
CP-27	33.82835	-84.4797
CP-28	33.82744	-84.4798
CP-29	33.82705	-84.4795
CP-30	33.82675	-84.479
CP-31	33.82643	-84.4789
CP-33	33.82639	-84.4794

SOUTHEAST CONTROL POINT TABLE		
CONTROL NO.	LATITUDE	LONGITUDE
CP-11	33.82708638	-84.4217202
CP-12	33.82699203	-84.42162041
CP-13	33.826806	-84.42155802
CP-14	33.82651824	-84.42144825
CP-15	33.82614062	-84.42135166
CP-16	33.82619069	-84.42159956
CP-17	33.82619722	-84.4217057
CP-18	33.82648657	-84.42171464
CP-19	33.82696237	-84.42178486

LEGEND

- EXISTING CONTOURS
- PROPERTY BOUNDARY MARKERS/LIMITS
- UNPAVED PLANT ROAD
- STREAM BUFFER
- STREAMS
- EXISTING LIMITS OF ASH PONDS 3 & 4 (LIMITS OF DISTURBANCE)
- LIMITS OF DISTURBANCE OUTSIDE OF ASH PONDS 3 & 4
- EXISTING GAS LINE
- WETLANDS
- EXISTING STREAM DIVERSION CULVERT
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- Toc — SOILS BOUNDARY & TYPE
- MONITORING LOCATION

EROSION, SEDIMENT & POLLUTION CONTROL LEGEND

KEY	SYMBOL	DESCRIPTION
Co		CONSTRUCTION EXIT
SD1 S		SEDIMENT BARRIER (TYPE SENSITIVE)
Du		DUST CONTROL ON DISTURBED AREAS
Tac-1		TYPE 1 TACKIFIERS
Sd3		TEMPORARY SEDIMENT BASIN
Tr		ORANGE BARRIER FENCE
Di		DIVERSION BERM

REFERENCES

1. THE EXISTING TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."

2. THE REVISED TOPOGRAPHY & CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA POWER LAND DEPARTMENT. THE DATA SHOWN IS AN UPDATE TO THE PLANS DONE ON 10-16-2012 & THE ONSITE CHANGES SINCE THAT 2012 SURVEY. THE REVISED SURVEY WAS DONE ON 1-12-2016 & MERGED WITH THE DATA ON 10-16-2012. GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016 - LAND ENG. PROJECT # 20160020.

NOTES

1. REFER TO DRAWINGS ES7 TO ES16 FOR EROSION, SEDIMENT, AND POLLUTION CONTROL PLAN DETAILS AND NOTES.

2. E&S CONTROLS PRESENTED ON THIS DRAWING ARE THE MINIMUM PERIMETER CONTROLS TO BE ESTABLISHED PRIOR TO LAND DISTURBANCE ACTIVITIES. QUANTITIES OF OTHER E&S BMPS WILL BE FINALIZED IN THE FORTHCOMING DETAILED ASH POND 3 AND 4 CLOSURE DRAWINGS.

3. EROSION, SEDIMENT, AND POLLUTION CONTROL MEASURES ARE SHOWN INSIDE AND OUTSIDE OF EXISTING ASH POND 3 AND 4 LIMITS. ACTIVITIES WITHIN ASH PONDS 3 AND 4 ARE COVERED BY NPDES DISCHARGE PERMIT GA0001431. ACTIVITIES OUTSIDE OF ASH PONDS 3 AND 4 ARE COVERED BY THIS EROSION, SEDIMENT & POLLUTION CONTROL PLAN.

4. DISCHARGE FROM THE ACTIVITIES OUTSIDE OF ASH PONDS 3 AND 4, WITH THE EXCEPTION OF THE AREA DRAINING TO MONITORING POINT AP3/4-3 AND AP3/4-4, ARE TO BE CONVEYED TO THE AREAS WITHIN ASH PONDS 3 AND 4. DISCHARGE FROM THE AREAS WITHIN ASH PONDS 3 AND 4 IS TO BE TREATED TO THE EFFLUENT LIMITS OF, AND SUBSEQUENTLY DISCHARGED FROM, OUTFALL 03 AS LISTED IN NPDES DISCHARGE PERMIT GA0001431. DISCHARGE FROM THE AREA DRAINING TO MONITORING POINT AP3/4-3 IS TO BE COVERED BY THE SAMPLING AND MONITORING REQUIREMENTS LISTED IN THIS EROSION, SEDIMENT & POLLUTION CONTROL PLAN.

0 150 300
1" = 150' FEET

GSWCC GEORGIA SOIL AND WATER CONSERVATION COMMISSION

MICHAEL T. CHILSON
LEVEL II DESIGN PROFESSIONAL
CERTIFICATION NUMBER 0000072142
ISSUED: 08/29/2014 EXPIRES: 08/29/2017

GEORGIA SAFE DAMS PROGRAM

GEORGIA REGISTERED No. 036075 PROFESSIONAL ENGINEER MICHAEL THOMAS CHILSON

MICHAEL T. CHILSON
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 036075

SEPTEMBER 2017 - ISSUED FOR APPROVAL & CONSTRUCTION

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
4	08/09/16	MTC	REMOVE Fr, REV. NW DISTURBED AREA, CONTROL & Tr, ADD SW DISTURBED AREA, CONTROL, Sf, Di & Co	RMS	GLH	MTC
3	07/1916	MTC	REV. SILT FENCE, REMOVE/MOVE CONSTRUCTION EXITS, ADD Tr & Fr, CHANGE LEVEL II DESIGN PROFESSIONAL	RMS	GLH	MTC
2	04/0816	MTC	REV. SILT FENCE, REMOVE CONSTRUCTION EXITS	RMS	GLH	MTC
1	02/19/16	SSH	REV. LIMITS OF DISTURBANCE, MODIFY SILT FENCE	RMS	GLH	SSH

CLIENT
GEORGIA POWER COMPANY /
SOUTHERN COMPANY SERVICES

Southern Company

PROJECT
PLANT MCDONOUGH
ASH POND NO. 3 & 4 CLOSURE PLAN

TITLE
EROSION, SEDIMENT & POLLUTION CONTROL PLAN - PHASE 1

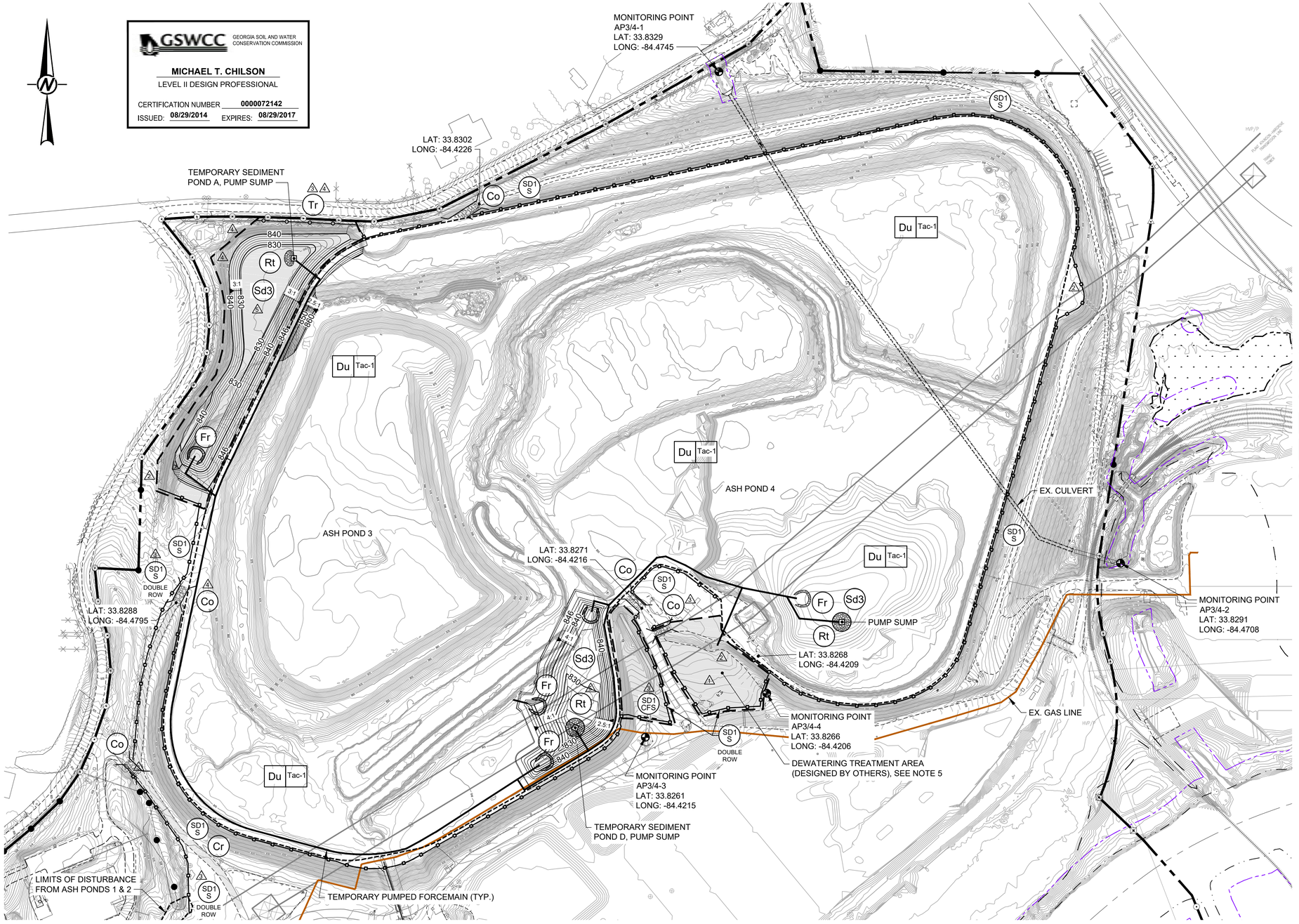
CONSULTANT
GOLDER

YYYY-MM-DD	2017-02-17
DESIGNED	GLH
PREPARED	RMS
REVIEWED	WRS
APPROVED	MTC

PROJECT NO. 1539180 | PROJECT ID MCD15017 | REV. 4 | SHEET ES1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

Path: \\atlanta\Cadd\Southern Company\1525193 2015 Plant McDonough\PRODUCTION\DESIGN\ | File Name: 1525193 ES-01 PH-1.dwg



0 150 300
1" = 150' FEET

LEGEND

- EXISTING CONTOURS (850 / 849)
- PROPERTY BOUNDARY MARKERS/LIMITS
- UNPAVED PLANT ROAD
- STREAM BUFFER
- STREAMS
- EXISTING LIMITS OF ASH PONDS 3 & 4 (LIMITS OF DISTURBANCE)
- LIMITS OF DISTURBANCE OUTSIDE OF ASH PONDS 3 & 4
- EXISTING GAS LINE
- WETLANDS
- EXISTING STREAM DIVERSION CULVERT
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- PROPOSED CONTOURS (850 / 848)
- MONITORING LOCATION

EROSION, SEDIMENT & POLLUTION CONTROL LEGEND

KEY	DESCRIPTION	KEY	DESCRIPTION
Co	CONSTRUCTION EXIT	Rt	RETROFIT
SD1 S	SEDIMENT BARRIER (TYPE SENSITIVE)	Fr	FILTER RING
Du	DUST CONTROL ON DISTURBED AREAS	Tr	ORANGE BARRIER FENCE
Tac-1	TYPE 1 TACKIFIERS	SD1 CFS	COMPOSITE FILTER SOCK
Sd3	TEMPORARY SEDIMENT BASIN	Cr	CONSTRUCTION ROAD

REFERENCES

1. THE EXISTING TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."

2. THE REVISED TOPOGRAPHY & CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA POWER LAND DEPARTMENT. THE DATA SHOWN IS AN UPDATE TO THE PLANS DONE ON 10-16-2012 & THE ONSITE CHANGES SINCE THAT 2012 SURVEY. THE REVISED SURVEY WAS DONE ON 1-12-2016 & MERGED WITH THE DATA ON 10-16-2012.
GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016 - LAND ENG. PROJECT # 20160020.

NOTES

1. REFER TO DRAWINGS ES7 TO ES16 FOR EROSION, SEDIMENT, AND POLLUTION CONTROL PLAN DETAILS AND NOTES.

2. E&S CONTROLS PRESENTED ON THIS DRAWING ARE THE MINIMUM PERIMETER CONTROLS TO BE ESTABLISHED PRIOR TO LAND DISTURBANCE ACTIVITIES. QUANTITIES OF OTHER E&S BMPS WILL BE FINALIZED IN THE FORTHCOMING DETAILED ASH POND 3 AND 4 CLOSURE DRAWINGS.

3. EROSION, SEDIMENT, AND POLLUTION CONTROL MEASURES ARE SHOWN INSIDE AND OUTSIDE OF EXISTING ASH POND 3 AND 4 LIMITS. ACTIVITIES WITHIN ASH PONDS 3 AND 4 ARE COVERED BY NPDES DISCHARGE PERMIT GA0001431. ACTIVITIES OUTSIDE OF ASH PONDS 3 AND 4 ARE COVERED BY THIS EROSION, SEDIMENT & POLLUTION CONTROL PLAN.

4. DISCHARGE FROM THE ACTIVITIES OUTSIDE OF ASH PONDS 3 AND 4, WITH THE EXCEPTION OF THE AREA DRAINING TO MONITORING POINT AP3/4-3 AND AP3/4-4, ARE TO BE CONVEYED TO THE AREAS WITHIN ASH PONDS 3 AND 4. DISCHARGE FROM THE AREAS WITHIN ASH PONDS 3 AND 4 IS TO BE TREATED TO THE EFFLUENT LIMITS OF, AND SUBSEQUENTLY DISCHARGED FROM, OUTFALL 03 AS LISTED IN NPDES DISCHARGE PERMIT GA0001431. DISCHARGE FROM THE AREA DRAINING TO MONITORING POINT AP3/4-3 IS TO BE COVERED BY THE SAMPLING AND MONITORING REQUIREMENTS LISTED IN THIS EROSION, SEDIMENT & POLLUTION CONTROL PLAN.

5. DISCHARGE FROM THE ACTIVITIES OUTSIDE OF ASH PONDS 3 AND 4, WITH THE EXCEPTION OF THE AREA DRAINING TO MONITORING POINT AP3/4-3 AND AP3/4-4, ARE TO BE CONVEYED TO THE AREAS WITHIN ASH PONDS 3 AND 4. DISCHARGE FROM THE AREAS WITHIN ASH PONDS 3 AND 4 IS TO BE TREATED TO THE EFFLUENT LIMITS OF, AND SUBSEQUENTLY DISCHARGED FROM, OUTFALL 03 AS LISTED IN NPDES DISCHARGE PERMIT GA0001431. DISCHARGE FROM THE AREA DRAINING TO MONITORING POINT AP3/4-3 IS TO BE COVERED BY THE SAMPLING AND MONITORING REQUIREMENTS LISTED IN THIS EROSION, SEDIMENT & POLLUTION CONTROL PLAN.

GSWCC GEORGIA SOIL AND WATER CONSERVATION COMMISSION
MICHAEL T. CHILSON
LEVEL II DESIGN PROFESSIONAL
CERTIFICATION NUMBER 0000072142
ISSUED: 08/29/2014 EXPIRES: 08/29/2017

GEORGIA SAFE DAMS PROGRAM

GEORGIA REGISTERED PROFESSIONAL ENGINEER MICHAEL THOMAS CHILSON
MICHAEL T. CHILSON
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 036075

SEPTEMBER 2017 - ISSUED FOR APPROVAL & CONSTRUCTION

6	01/2017	MTC	REV. PONDS A & D	RMS	GLH	GLH
5	08/09/16	MTC	REMOVE Fr, REV. NW DISTURBED AREA, CONTROL & Tr, ADD Co, ADD Cr	RMS/SEP	GLH	MTC
4	07/1916	MTC	REV. SILT FENCE, REMOVE/MOVE CONSTRUCTION EXITS, ADD Tr, Fr & SD1-CFS, CHANGE LEVEL II DESIGN PROFESSIONAL	RMS	GLH	MTC
3	04/0816	MTC	REV. SILT FENCE, REMOVE CONSTRUCTION EXITS	RMS	GLH	MTC
2	02/19/16	SSH	REV. LIMITS OF DISTURBANCE, REMOVE DOUBLE SILT FENCE	RMS	GLH	SSH
REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW

CLIENT
GEORGIA POWER COMPANY /
SOUTHERN COMPANY SERVICES

Southern Company

PROJECT
PLANT MCDONOUGH
ASH POND NO. 3 & 4 CLOSURE PLAN

TITLE
EROSION, SEDIMENT & POLLUTION CONTROL PLAN - PHASE 2A

CONSULTANT
GOLDER

YYYY-MM-DD	2017-02-17
DESIGNED	GLH
PREPARED	RMS
REVIEWED	WRS
APPROVED	MTC

PROJECT NO.	PROJECT ID	REV.	SHEET
1539180	MCD15017	5	ES2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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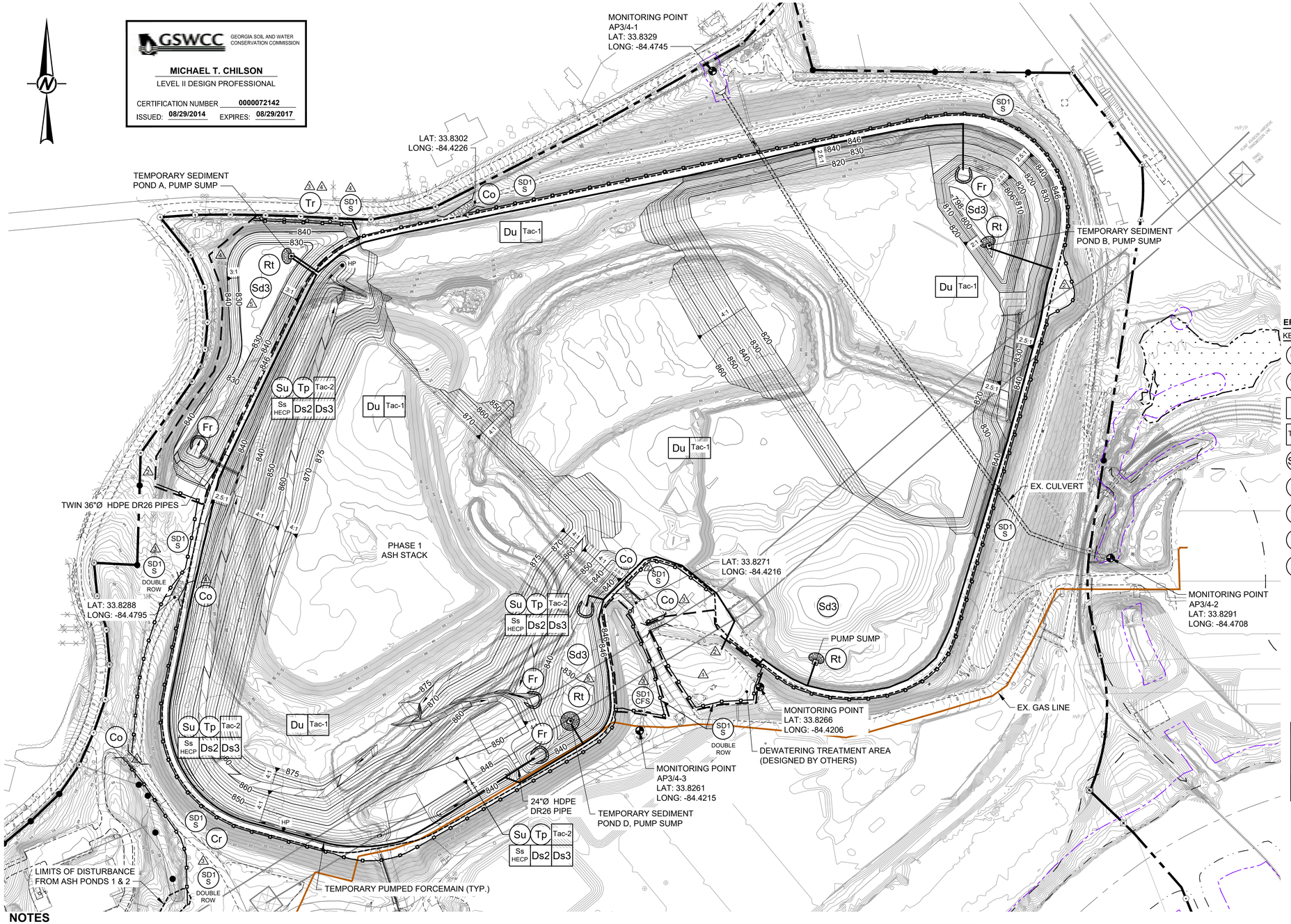

GSWCC GEORGIA SOIL AND WATER CONSERVATION COMMISSION

MICHAEL T. CHILSON
LEVEL II DESIGN PROFESSIONAL

CERTIFICATION NUMBER **0000072142**
ISSUED: **08/29/2014** EXPIRES: **08/29/2017**

LEGEND

- 850 / 849 — EXISTING CONTOURS
- PROPERTY BOUNDARY MARKERS/LIMITS
- UNPAVED PLANT ROAD
- STREAM BUFFER
- STREAMS
- EXISTING LIMITS OF ASH PONDS 3 & 4 (LIMITS OF DISTURBANCE)
- LIMITS OF DISTURBANCE OUTSIDE OF ASH PONDS 3 & 4
- EXISTING GAS LINE
- WETLANDS
- EXISTING STREAM DIVERSION CULVERT
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- 850 / 848 — PROPOSED CONTOURS
- MONITORING LOCATION

EROSION, SEDIMENT & POLLUTION CONTROL LEGEND

KEY	SYMBOL	DESCRIPTION	KEY	SYMBOL	DESCRIPTION
Co		CONSTRUCTION EXIT	Tac-2		TYPE 2 TACKIFIERS
SD1 S		SEDIMENT BARRIER (TYPE SENSITIVE)	Ss HECP		SLOPE STABILIZATION
Du		DUST CONTROL ON DISTURBED AREAS	Ds2		DISTURBED AREA STABILIZATION (TEMPORARY SEEDING)
Tac-1		TYPE 1 TACKIFIERS	Ds3		DISTURBED AREA STABILIZATION (PERMANENT SEEDING)
Sd3		TEMPORARY SEDIMENT BASIN	Tr		ORANGE BARRIER FENCE
Rt		RETROFIT	SD1 CFS		COMPOSITE FILTER SOCK
Fr		FILTER RING	Cr		CONSTRUCTION ROAD
Su		SURFACE ROUGHING			
Tp		TOPSOILING			

NOTES

1. REFER TO DRAWINGS ES7 TO ES16 FOR EROSION, SEDIMENT, AND POLLUTION CONTROL PLAN DETAILS AND NOTES.
2. E&S CONTROLS PRESENTED ON THIS DRAWING ARE THE MINIMUM PERIMETER CONTROLS TO BE ESTABLISHED PRIOR TO LAND DISTURBANCE ACTIVITIES. QUANTITIES OF OTHER E&S BMPS WILL BE FINALIZED IN THE FORTHCOMING DETAILED ASH POND 3 AND 4 CLOSURE DRAWINGS.
3. TEMPORARY SEDIMENT POND C TO BE LINED TO LIMIT INFILTRATION INTO BOTTOM AND SIDES OF POND TO PROTECT AGAINST SEEPAGE INTO WORK AREAS.
4. EROSION, SEDIMENT, AND POLLUTION CONTROL MEASURES ARE SHOWN INSIDE AND OUTSIDE OF EXISTING ASH POND 3 AND 4 LIMITS. ACTIVITIES WITHIN ASH PONDS 3 AND 4 ARE COVERED BY NPDES DISCHARGE PERMIT GA0001431. ACTIVITIES OUTSIDE OF ASH PONDS 3 AND 4 ARE COVERED BY THIS EROSION, SEDIMENT & POLLUTION CONTROL PLAN.
5. DISCHARGE FROM THE ACTIVITIES OUTSIDE OF ASH PONDS 3 AND 4, WITH THE EXCEPTION OF THE AREA DRAINING TO MONITORING POINT AP3/4-3 AND AP3/4-4, ARE TO BE CONVEYED TO THE AREAS WITHIN ASH PONDS 3 AND 4. DISCHARGE FROM THE AREAS WITHIN ASH PONDS 3 AND 4 IS TO BE TREATED TO THE EFFLUENT LIMITS OF, AND SUBSEQUENTLY DISCHARGED FROM, OUTFALL 03 AS LISTED IN NPDES DISCHARGE PERMIT GA0001431. DISCHARGE FROM THE AREA DRAINING TO MONITORING POINT AP3/4-3 IS TO BE COVERED BY THE SAMPLING AND MONITORING REQUIREMENTS LISTED IN THIS EROSION, SEDIMENT & POLLUTION CONTROL PLAN.

REFERENCES

THE EXISTING TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."

2. THE REVISED TOPOGRAPHY & CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA POWER LAND DEPARTMENT. THE DATA SHOWN IS AN UPDATE TO THE PLANS DONE ON 10-16-2012 & THE ONSITE CHANGES SINCE THAT 2012 SURVEY. THE REVISED SURVEY WAS DONE ON 1-12-2016 & MERGED WITH THE DATA ON 10-16-2012.
GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016 - LAND ENG. PROJECT # 20160020.

0 150 300
1" = 150' FEET

SEPTEMBER 2017 - ISSUED FOR APPROVAL & CONSTRUCTION

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
7	01/2017	MTC	REV. PONDS A & D, REMOVE POND C	RMS	GLH	GLH
6	08/09/16	MTC	REMOVE Fr, REV. NW DISTURBED AREA, CONTROL & Tr, Sf, ADD Co, ADD Cr	RMS/SEP	GLH	MTC
5	07/1916	MTC	REV. SILT FENCE, REMOVE/MOVE CONSTRUCTION EXITS, ADD Tr, SD1-CFS, CHANGE LEVEL II DESIGN PROFESSIONAL	RMS	GLH	MTC
4	04/0816	MTC	REV. SILT FENCE, REMOVE CONSTRUCTION EXITS	RMS	GLH	MTC
3	02/19/16	SSH	REV. LIMITS OF DISTURBANCE, REMOVE DOUBLE SILT FENCE	RMS	GLH	SSH

CLIENT
GEORGIA POWER COMPANY /
SOUTHERN COMPANY SERVICES

Southern Company

PROJECT
PLANT MCDONOUGH
ASH POND NO. 3 & 4 CLOSURE PLAN

TITLE
EROSION, SEDIMENT & POLLUTION CONTROL PLAN - PHASE 2C

GEORGIA SAFE DAMS PROGRAM

GEORGIA REGISTERED PROFESSIONAL ENGINEER MICHAEL THOMAS CHILSON No. 036075

MICHAEL T. CHILSON
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 036075

CONSULTANT
GOLDER

YYYY-MM-DD	2017-02-17
DESIGNED	GLH
PREPARED	RMS
REVIEWED	WRS
APPROVED	MTC

PROJECT NO.	PROJECT ID	REV.	SHEET
1539180	MCD15017	5	ES4

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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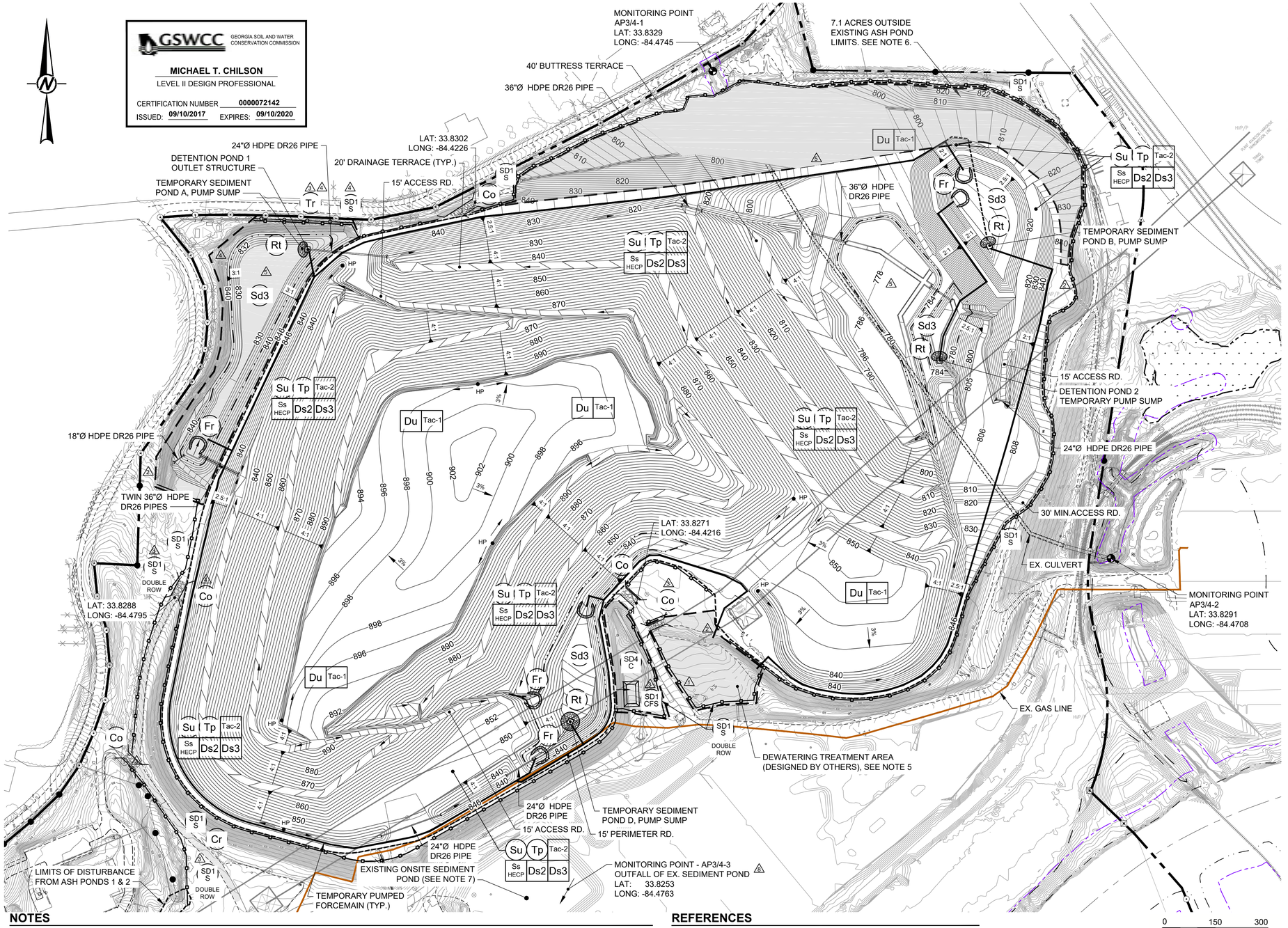

LEGEND

- EXISTING CONTOURS (850 / 849)
- PROPERTY BOUNDARY MARKERS/LIMITS
- UNPAVED PLANT ROAD
- STREAM BUFFER
- STREAMS
- EXISTING LIMITS OF ASH PONDS 3 & 4 (LIMITS OF DISTURBANCE)
- LIMITS OF DISTURBANCE OUTSIDE OF ASH PONDS 3 & 4
- EXISTING GAS LINE
- WETLANDS
- EXISTING STREAM DIVERSION CULVERT
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- PROPOSED CONTOURS (850 / 848)
- MONITORING LOCATION

EROSION, SEDIMENT & POLLUTION CONTROL LEGEND

KEY	SYMBOL	DESCRIPTION	KEY	SYMBOL	DESCRIPTION
Co		CONSTRUCTION EXIT	SD4 C		TEMPORARY SEDIMENT TRAP
SD1 S		SEDIMENT BARRIER (TYPE SENSITIVE)	Tr		ORANGE BARRIER FENCE
Du		DUST CONTROL ON DISTURBED AREAS	SD1 CFS		COMPOSITE FILTER SOCK
Tac-1		TYPE 1 TACKIFIERS	Dn1		TEMPORARY DOWNDRAIN STRUCTURE
Tp		TOPSOILING	Sd3		TEMPORARY SEDIMENT BASIN
Tac-2		TYPE 2 TACKIFIERS	Cr		CONSTRUCTION ROAD
Ss HECP		SLOPE STABILIZATION	Rt		RETROFIT
Ds2		DISTURBED AREA STABILIZATION (TEMPORARY SEEDING)	Fr		FILTER RING
Ds3		DISTURBED AREA STABILIZATION (PERMANENT SEEDING)	Su		SURFACE ROUGHING

NOTES

1. REFER TO DRAWINGS ES7 TO ES16 FOR EROSION, SEDIMENT, AND POLLUTION CONTROL PLAN DETAILS AND NOTES.

2. E&S CONTROLS PRESENTED ON THIS DRAWING ARE THE MINIMUM PERIMETER CONTROLS TO BE ESTABLISHED PRIOR TO LAND DISTURBANCE ACTIVITIES. QUANTITIES OF OTHER E&S BMPS WILL BE FINALIZED IN THE FORTHCOMING DETAILED ASH POND 3 AND 4 CLOSURE DRAWINGS.

3. TEMPORARY SEDIMENT POND B TO BE LINED TO LIMIT INFILTRATION INTO BOTTOM AND SIDES OF POND TO PROTECT AGAINST SEEPAGE INTO WORK AREAS.

4. EROSION, SEDIMENT, AND POLLUTION CONTROL MEASURES ARE SHOWN INSIDE AND OUTSIDE OF EXISTING ASH POND 3 AND 4 LIMITS. ACTIVITIES WITHIN ASH PONDS 3 AND 4 ARE COVERED BY NPDES DISCHARGE PERMIT GA0001431. ACTIVITIES OUTSIDE OF ASH PONDS 3 AND 4 ARE COVERED BY THIS EROSION, SEDIMENT & POLLUTION CONTROL PLAN.

5. DISCHARGE FROM THE ACTIVITIES OUTSIDE OF ASH PONDS 3 AND 4, WITH THE EXCEPTION OF THE AREA DRAINING TO MONITORING POINT AP3/4-3, IS TO BE CONVEYED TO THE AREAS WITHIN ASH PONDS 3 AND 4. DISCHARGE FROM THE AREAS WITHIN ASH PONDS 3 AND 4 IS TO BE TREATED TO THE EFFLUENT LIMITS OF, AND SUBSEQUENTLY DISCHARGED FROM, OUTFALL 03 AS LISTED IN NPDES DISCHARGE PERMIT GA0001431. DISCHARGE FROM THE AREA DRAINING TO OR DIRECTED TO MONITORING POINT AP3/4-3 IS TO BE COVERED BY THE SAMPLING AND MONITORING REQUIREMENTS LISTED IN THIS EROSION, SEDIMENT & POLLUTION CONTROL PLAN.

6. DAM LOWERING TO OCCUR FROM INSIDE OUT TO ENSURE THAT DRAINAGE FROM DISTURBED AREAS IS CONVEYED TOWARD THE ASH POND UNTIL ELEVATION 795 IS REACHED. EXCAVATIONS BELOW ELEVATION 795 WILL REQUIRE DRAINAGE TO THE OUTSIDE OF THE ASH POND AND ADDITIONAL EROSION CONTROLS SHOWN IN PHASE 2E WILL BE REQUIRED.

7. AREAS OF NON-CCR CONTACT WATER MAY START TO BE DIRECTED TO THE EXISTING ON-SITE SEDIMENTATION POND SOUTH OF AP-3 AND MONITORED WITH POINT AP3/4-3 IN THIS PHASE AS APPROVED BY THE ENGINEER AND CONSTRUCTION MANAGER

REFERENCES

1. THE EXISTING TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."

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GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016 - LAND ENG. PROJECT # 20160020.

GSWCC GEORGIA SOIL AND WATER CONSERVATION COMMISSION

MICHAEL T. CHILSON
LEVEL II DESIGN PROFESSIONAL
CERTIFICATION NUMBER 0000072142
ISSUED: 09/10/2017 EXPIRES: 09/10/2020

GEORGIA SAFE DAMS PROGRAM

GEORGIA REGISTERED PROFESSIONAL ENGINEER MICHAEL THOMAS CHILSON

MICHAEL T. CHILSON
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 036075

NOVEMBER 2018 - ISSUED FOR PERMITTING & CONSTRUCTION

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
8	11/2018	MTC	MOVE MONITORING POINT - AP3/4-3, REMOVE MONITORING POINT - AP3/4-4, REV. NOTES	RMS	GLH	MTC
7	03/2018	JKM	NORTHERN DAM LIMITS OF DISTURBANCE REV.	VPM	JKM	GLH
6	09/2017	GLH	LOWER DAM & TOP DECK, REV. SILT FENCE	RMS	JKM	GLH
5	01/2017	MTC	LOWER DAM, REV. PONDS 1, 2, & D, REV. SILT FENCE	RMS	GLH	GLH
4	08/09/16	MTC	REMOVE Fr, REV. NW DISTURBED AREA, CONTROL & Tr, Sf, ADD Co, ADD Cr	RMS/SEP	GLH	MTC
3	07/1916	MTC	REV. SILT FENCE, REMOVE/MOVE CONSTRUCTION EXITS, ADD Tr, SD1-CFS, CHANGE LEVEL II DESIGN PROFESSIONAL	RMS	GLH	MTC
2	04/0816	MTC	REV. SILT FENCE, REMOVE CONSTRUCTION EXITS	RMS	GLH	MTC
1	02/19/16	SSH	REV. LIMITS OF DISTURBANCE, REMOVE DOUBLE SILT FENCE	RMS	GLH	SSH

CLIENT
GEORGIA POWER COMPANY /
SOUTHERN COMPANY SERVICES

Southern Company

PROJECT
PLANT MCDONOUGH
ASH POND NO. 3 & 4 CLOSURE PLAN

TITLE
EROSION, SEDIMENT & POLLUTION CONTROL PLAN - PHASE 2D

CONSULTANT
GOLDER

YYYY-MM-DD	2017-02-17
DESIGNED	GLH
PREPARED	RMS
REVIEWED	WRS
APPROVED	MTC

PROJECT NO. 1539180 | PROJECT ID MCD15017 | REV. 8 | SHEET ES5

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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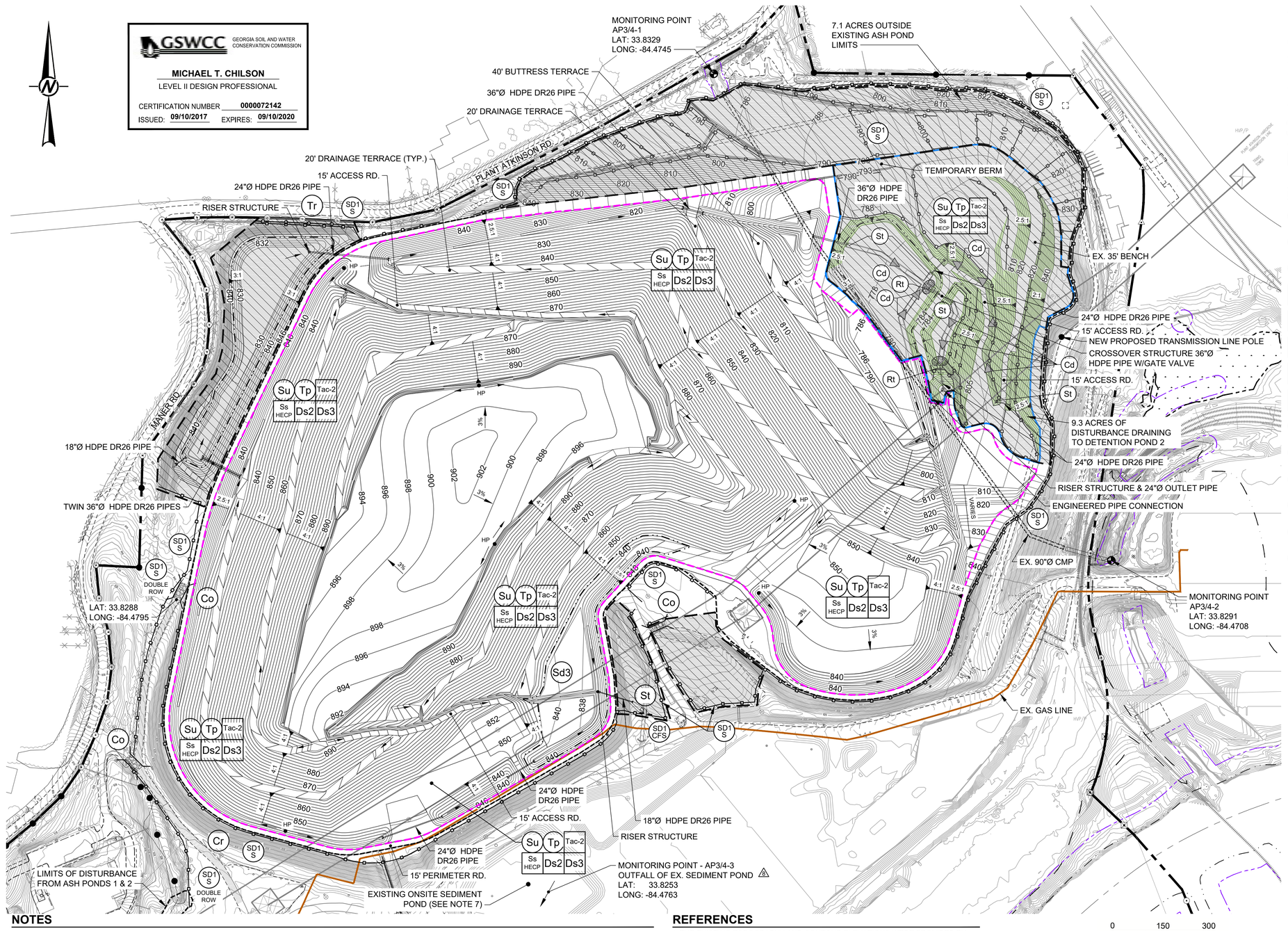
GSWCC GEORGIA SOIL AND WATER CONSERVATION COMMISSION

MICHAEL T. CHILSON
LEVEL II DESIGN PROFESSIONAL

CERTIFICATION NUMBER **0000072142**
ISSUED: **09/10/2017** EXPIRES: **09/10/2020**



0 150 300
1" = 150' FEET

LEGEND

- EXISTING CONTOURS
- PROPERTY BOUNDARY MARKERS/LIMITS
- UNPAVED PLANT ROAD
- STREAM BUFFER
- STREAMS
- EXISTING LIMITS OF ASH PONDS 3 & 4 (LIMITS OF DISTURBANCE)
- LIMITS OF DISTURBANCE OUTSIDE OF ASH PONDS 3 & 4
- EXISTING GAS LINE
- WETLANDS
- EXISTING STREAM DIVERSION CULVERT
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- PROPOSED CONTOURS
- MONITORING LOCATION
- LIMITS OF POST CLOSURE CCR
- LIMITS OF DISTURBED AREA DRAINING TO POND 2

EROSION, SEDIMENT & POLLUTION CONTROL LEGEND

KEY	SYMBOL	DESCRIPTION
SD1 S		SEDIMENT BARRIER (TYPE SENSITIVE)
Su		SURFACE ROUGHING
Tp		TOPSOILING
Tac-2		TYPE 2 TACKIFIERS
Ss HECP		SLOPE STABILIZATION
Ds2		DISTURBED AREA STABILIZATION (TEMPORARY SEEDING)
Ds3		DISTURBED AREA STABILIZATION (PERMANENT SEEDING)
Ds4		DISTURBED AREA STABILIZATION (WITH SODDING ON 2.5:1 & 2:1 SLOPES)
St		RIP RAP OUTLET PROTECTION
Cd		CHECK DAM
Rt		RETROFIT
Tr		ORANGE BARRIER FENCE
SD1 CFS		COMPOSITE FILTER SOCK
Cr		CONSTRUCTION ROAD

NOTES

1. REFER TO DRAWINGS ES7 TO ES16 FOR EROSION, SEDIMENT, AND POLLUTION CONTROL PLAN DETAILS AND NOTES.
2. E&S CONTROLS PRESENTED ON THIS DRAWING ARE THE MINIMUM PERIMETER CONTROLS TO BE ESTABLISHED PRIOR TO LAND DISTURBANCE ACTIVITIES. QUANTITIES OF OTHER E&S BMPS WILL BE FINALIZED IN THE FORTHCOMING DETAILED ASH POND 3 AND 4 CLOSURE DRAWINGS.
3. TEMPORARY SEDIMENT POND B TO BE LINED TO LIMIT INFILTRATION INTO BOTTOM AND SIDES OF POND TO PROTECT AGAINST SEEPAGE INTO WORK AREAS.
4. EROSION, SEDIMENT, AND POLLUTION CONTROL MEASURES ARE SHOWN INSIDE AND OUTSIDE OF EXISTING ASH POND 3 AND 4 LIMITS. ACTIVITIES WITHIN ASH PONDS 3 AND 4 ARE COVERED BY NPDES DISCHARGE PERMIT GA0001431. ACTIVITIES OUTSIDE OF ASH PONDS 3 AND 4 ARE COVERED BY THIS EROSION, SEDIMENT & POLLUTION CONTROL PLAN.
5. DISCHARGE FROM THE ACTIVITIES OUTSIDE OF ASH PONDS 3 AND 4, WITH THE EXCEPTION OF THE AREA DRAINING TO MONITORING POINT AP3/4-3, IS TO BE CONVEYED TO THE AREAS WITHIN ASH PONDS 3 AND 4. DISCHARGE FROM THE AREAS WITHIN ASH PONDS 3 AND 4 IS TO BE TREATED TO THE EFFLUENT LIMITS OF, AND SUBSEQUENTLY DISCHARGED FROM, OUTFALL 03 AS LISTED IN NPDES DISCHARGE PERMIT GA0001431. DISCHARGE FROM THE AREA DRAINING TO OR DIRECTED TO MONITORING POINT AP3/4-3 IS TO BE COVERED BY THE SAMPLING AND MONITORING REQUIREMENTS LISTED IN THIS EROSION, SEDIMENT & POLLUTION CONTROL PLAN.
6. DAM LOWERING TO OCCUR FROM INSIDE OUT TO ENSURE THAT DRAINAGE FROM DISTURBED AREAS IS CONVEYED TOWARD THE ASH POND UNTIL ELEVATION 795 IS REACHED. EXCAVATIONS BELOW ELEVATION 795 WILL REQUIRE DRAINAGE TO THE OUTSIDE OF THE ASH POND AND ADDITIONAL EROSION CONTROLS SHOWN IN PHASE 2E WILL BE REQUIRED.
7. AREAS OF NON-CCR CONTACT WATER MAY BE DIRECTED TO THE EXISTING ON-SITE SEDIMENTATION POND SOUTH OF AP-3 AND MONITORED WITH POINT AP3/4-3 IN THIS PHASE AS APPROVED BY THE ENGINEER AND CONSTRUCTION MANAGER

REFERENCES

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GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016 - LAND ENG. PROJECT # 20160020.

GEORGIA SAFE DAMS PROGRAM

GEORGIA REGISTERED 36675 PROFESSIONAL ENGINEER MICHAEL THOMAS CHILSON

MICHAEL T. CHILSON
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 036075

NOVEMBER 2018 - ISSUED FOR PERMITTING & CONSTRUCTION

4	11/2018	MTC	REV. NOTES	RMS	GLH	MTC
3	08/2018	MTC	MOVE MONITORING POINT - AP3/4-3, REMOVE MONITORING POINT - AP3/4-4	RMS	GLH	MTC
2	03/02/2018	JKM	ADD THIS SHEET	RMS	JKM	GLH
REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW

CLIENT
GEORGIA POWER COMPANY /
SOUTHERN COMPANY SERVICES

Southern Company

PROJECT
PLANT MCDONOUGH
ASH POND NO. 3 & 4 CLOSURE PLAN

TITLE
EROSION, SEDIMENT & POLLUTION CONTROL PLAN - PHASE 2E

CONSULTANT
GOLDER

YYYY-MM-DD	2017-02-17
DESIGNED	GLH
PREPARED	RMS
REVIEWED	WRS
APPROVED	MTC

PROJECT NO.	PROJECT ID	REV.	SHEET
1539180	MCD15017	9	ES5A

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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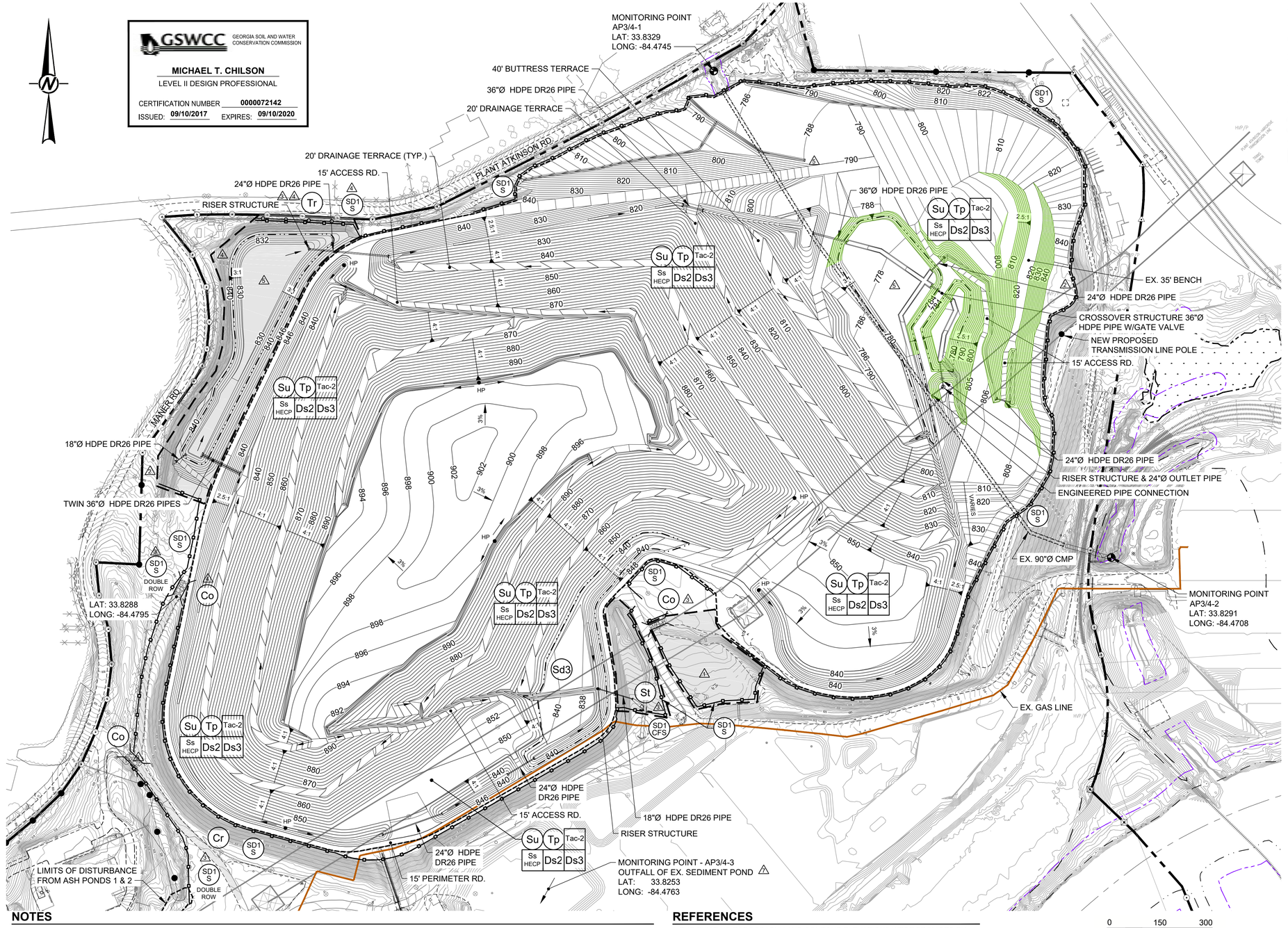
GSWCC GEORGIA SOIL AND WATER CONSERVATION COMMISSION

MICHAEL T. CHILSON
LEVEL II DESIGN PROFESSIONAL

CERTIFICATION NUMBER **0000072142**
ISSUED: **09/10/2017** EXPIRES: **09/10/2020**



LEGEND

- EXISTING CONTOURS
- PROPERTY BOUNDARY MARKERS/LIMITS
- UNPAVED PLANT ROAD
- STREAM BUFFER
- STREAMS
- EXISTING LIMITS OF ASH PONDS 3 & 4 (LIMITS OF DISTURBANCE)
- LIMITS OF DISTURBANCE OUTSIDE OF ASH PONDS 3 & 4
- EXISTING GAS LINE
- WETLANDS
- EXISTING STREAM DIVERSION CULVERT
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED
- PROPOSED CONTOURS
- MONITORING LOCATION

EROSION, SEDIMENT & POLLUTION CONTROL LEGEND

KEY	SYMBOL	DESCRIPTION
SD1 S		SEDIMENT BARRIER (TYPE SENSITIVE)
Su		SURFACE ROUGHING
Tp		TOPSOILING
Tac-2		TYPE 2 TACKIFIERS
Ss HECP		SLOPE STABILIZATION
Ds2		DISTURBED AREA STABILIZATION (TEMPORARY SEEDING)
Ds3		DISTURBED AREA STABILIZATION (PERMANENT SEEDING)
Ds4		DISTURBED AREA STABILIZATION (WITH SODDING ON 2.5:1 & 2:1 SLOPES)
St		RIP RAP OUTLET PORTECTION
Tr		ORANGE BARRIER FENCE
SD1 CFS		COMPOSITE FILTER SOCK
Cr		CONSTRUCTION ROAD

NOTES

1. REFER TO DRAWINGS ES7 TO ES16 FOR EROSION, SEDIMENT, AND POLLUTION CONTROL PLAN DETAILS AND NOTES.

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4. DISCHARGE FROM THE ACTIVITIES OUTSIDE OF ASH PONDS 3 AND 4, WITH THE EXCEPTION OF THE AREA DRAINING TO MONITORING POINT AP3/4-3, IS TO BE CONVEYED TO THE AREAS WITHIN ASH PONDS 3 AND 4. DISCHARGE FROM THE AREAS WITHIN ASH PONDS 3 AND 4 IS TO BE TREATED TO THE EFFLUENT LIMITS OF, AND SUBSEQUENTLY DISCHARGED FROM, OUTFALL 03 AS LISTED IN NPDES DISCHARGE PERMIT GA0001431. DISCHARGE FROM THE AREA DRAINING TO OR DIRECTED TO MONITORING POINT AP3/4-3 IS TO BE COVERED BY THE SAMPLING AND MONITORING REQUIREMENTS LISTED IN THIS EROSION, SEDIMENT & POLLUTION CONTROL PLAN.

5. DAM LOWERING TO OCCUR FROM INSIDE OUT TO ENSURE THAT DRAINAGE FROM DISTURBED AREAS IS CONVEYED TOWARD THE ASH POND UNTIL ELEVATION 795 IS REACHED. EXCAVATIONS BELOW ELEVATION 795 WILL REQUIRE DRAINAGE TO THE OUTSIDE OF THE ASH POND AND ADDITIONAL EROSION CONTROLS SHOWN IN PHASE 2E WILL BE REQUIRED.

6. AREAS OF NON-CCR CONTACT WATER MAY BE DIRECTED TO THE EXISTING ON-SITE SEDIMENTATION POND SOUTH OF AP-3 AND MONITORED WITH POINT AP3/4-3 IN THIS PHASE AS APPROVED BY THE ENGINEER AND CONSTRUCTION MANAGER.

REFERENCES

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GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016 - LAND ENG. PROJECT # 20160020.

0 150 300
1" = 150' FEET

GEORGIA SAFE DAMS PROGRAM

GEORGIA REGISTERED PROFESSIONAL ENGINEER MICHAEL THOMAS CHILSON

MICHAEL T. CHILSON
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 036075

NOVEMBER 2018 - ISSUED FOR PERMITTING & CONSTRUCTION

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
6	11/2018	MTC	REV. NOTES, ADD DS4	RMS	GLH	MTC
5	08/2018	MTC	MOVE MONITORING POINT - AP3/4-3, REMOVE MONITORING POINT - AP3/4-4	RMS	GLH	MTC
4	09/2017	GLH	LOWER DAM & TOP DECK, REV. SILT FENCE	RMS	JKM	GLH
3	01/2017	MTC	LOWER DAM, REV. PONDS 1 & 2, REV. SILT FENCE	RMS	GLH	GLH
2	08/09/16	MTC	REMOVE Fr, REV. NW DISTURBED AREA, CONTROL & Tr, Sf, ADD Co, ADD Cr	RMS/SEP	GLH	MTC
1	07/1916	MTC	REV. SILT FENCE, REMOVE/MOVE CONSTRUCTION EXITS, ADD Tr & SD1-CFS, CHANGE LEVEL II DESIGN PROFESSIONAL	RMS	GLH	MTC
A	04/0816	MTC	REV. SILT FENCE	RMS	GLH	MTC
0	02/19/16	SSH	REV. LIMITS OF DISTURBANCE, REMOVE DOUBLE SILT FENCE	RMS	GLH	SSH

CLIENT
GEORGIA POWER COMPANY /
SOUTHERN COMPANY SERVICES

Southern Company

PROJECT
PLANT MCDONOUGH
ASH POND NO. 3 & 4 CLOSURE PLAN

TITLE
EROSION, SEDIMENT & POLLUTION CONTROL PLAN - PHASE 3

CONSULTANT
GOLDER

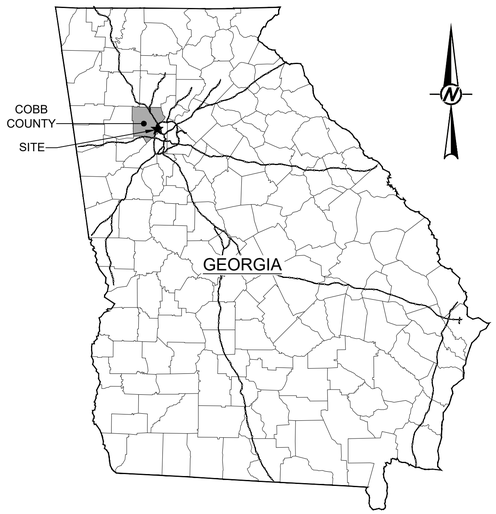
YYYY-MM-DD	2017-02-17
DESIGNED	GLH
PREPARED	RMS
REVIEWED	WRS
APPROVED	MTC

PROJECT NO.	PROJECT ID	REV.	SHEET
1539180	MCD15017	9	ES6

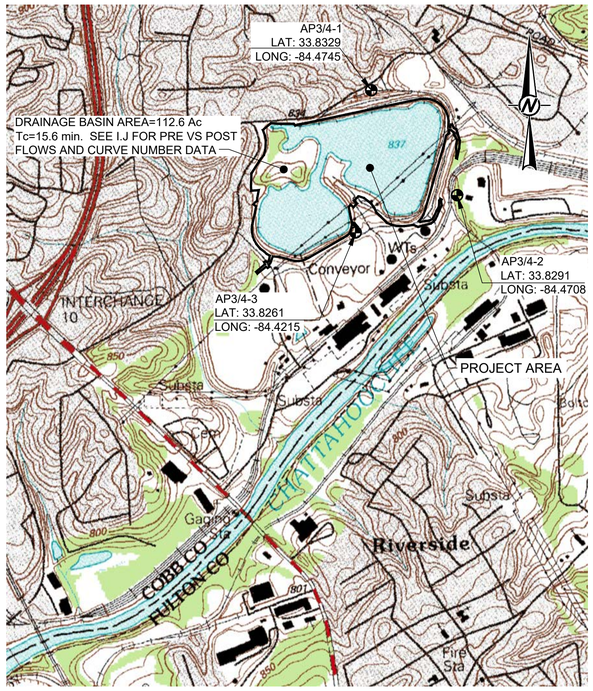
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

Path: \\atlanta\acad\Southern Company\15251\93 2015 Plant McDonough\PRODUCTION\DESIGN\ | File Name: 15251\93 ES-06 PH-3.dwg

PLANT MCDONOUGH
ASH POND NO. 3 AND ASH POND NO. 4 CLOSURE
EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN (ES&PCP)



VICINITY MAP



REF: USGS 7.5 MINUTE SERIES TOPOGRAPHIC QUADRANGLE:
MABLETON, GA 1992 & NORTHWEST ATLANTA, GA 1993

LOCATION MAP

0 1000 2000
1" = 1000' FEET

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN (ESPCP)

GENERAL NOTE: ALL MEASURES OUTLINED IN THIS PLAN ARE TO BE IN ACCORDANCE WITH THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" LATEST EDITION.

PROJECT NAME: ASH POND NO.3 AND ASH POND NO.4 CLOSURE
LOCATION: GEORGIA POWER COMPANY LAND DEPARTMENT TOPOGRAPHIC MAP P-306-4
DATED 11/23/12
COBB COUNTY, GA
2ND SECTION 17 DISTRICT LAND LOTS: 825, 826, 830, 831, 832, 895 & 896
LATTITUDE: N 33.8264°
LONGITUDE: W 84.4781°

I. NARRATIVE NOTES AND OTHER INFORMATION

A. PROJECT DESCRIPTION:
PLANT MCDONOUGH UNITS 1 AND 2 HAVE BEEN DECOMMISSIONED. UNDER SUBTITLE D STANDARDS AND GEORGIA EPD SOLID WASTE MANAGEMENT RULES, THE FOUR ASH PONDS WILL REQUIRE CLOSURE. CLOSURE PROCEDURES WILL BEGIN WITH ASH PONDS 1 & 2 AND CONTINUE WITH ASH PONDS 3 & 4.

CONSTRUCTION ACTIVITIES WILL CONSIST OF CLEARING, GRUBBING, EXCAVATION, BACKFILLING, AND GRADING OPERATIONS, STORMWATER PIPE INSTALLATION AND CONSTRUCTION OF DITCHES AND ASSOCIATED STRUCTURES.

B. OWNER / PRIMARY PERMITTEE INFORMATION
GEORGIA POWER COMPANY (GPC)
241 RALPH McGILL BLVD.
BIM 10221
ATLANTA, GA 30308
CONTACT: BURNS WETHERINGTON, P.E.
(404) 506-2533

OPERATOR INFORMATION
SOUTHERN COMPANY SERVICES (SCS)
5551 SOUTH COBB DRIVE
SMYRNA, GA 30080
CONTACT: MITCH SAUNDERS
(404) 367-1832 (jmsaunde@southernco.com)

C. 24-HOUR LOCAL EROSION & SEDIMENTATION CONTROL CONTACT
NAME: MITCH SAUNDERS
(404) 367-1832 (jmsaunde@southernco.com)

D. TOTAL ACREAGE / DISTURBED ACREAGE
TOTAL SITE ACREAGE: ~90.3 ACRES
LIMITS OF DISTURBANCE OUTSIDE OF ASH PONDS 3 AND 4: ~5.6 ACRES ⚠

50-FOOT CHATTAHOOCHEE RIVER CORRIDOR STREAM BUFFER:
THERE IS NO STREAM BUFFER IMPACTED AREA

THERE IS NO STREAM BUFFER IMPACTED LENGTH

E. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION & SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES. EXCEPT AS REQUIRED TO INSTALL THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPS AS DESCRIBED IN PART IV.D.3, THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPS MUST BE INSTALLED AND IMPLEMENTED PRIOR TO CONDUCTING ANY OTHER CONSTRUCTION ACTIVITIES (E.G. CLEARING, GRUBBING AND GRADING) WITHIN THE CONSTRUCTION SITE OR WHEN APPLICABLE, WITHIN PHASE SUB-PARTS OR SEGMENTS OF THE CONSTRUCTION SITE.

F. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION CONTROL & SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

G. ANY DISTURBED AREA OUTSIDE OF THE LIMITS OF WASTE AS SHOWN ON DRAWINGS ES7 THROUGH ES16 LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

H. THE PRIMARY PERMITTEE MUST RETAIN THE DESIGN PROFESSIONAL WHO PREPARED THE EROSION, SEDIMENTATION AND POLUTION CONTROL PLAN, EXCEPT WHEN THE PRIMARY PERMITTEE HAS REQUESTED IN WRITING AND EPD HAS AGREED TO AN ALTERNATE DESIGN PROFESSIONAL TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPS, WHICH THE DESIGN PROFESSIONAL DESIGNED, WITHIN SEVEN (7) DAYS AFTER INSTALLATION. THE DESIGN PROFESSIONAL SHALL DETERMINE IF THESE BMPS HAVE BEEN INSTALLED AND ARE BEING MAINTAINED AS DESIGNED. THE DESIGN PROFESSIONAL SHALL REPORT THE RESULTS OF THE INSPECTION TO THE PRIMATRY PERMITTEE WITHIN SEVEN (7) DAYS AND THE PERMITTEE MUST CORRECT ALL DEFICIENCIES WITHIN TWO (2) BUSINESS DAYS OF RECEIPT OF THE INSPECTION REPORT FROM THE DESIGN PROFESSIONAL UNLESS WEATHER RELATED SITE CONDITIONS ARE SUCH THAT ADDITIONAL TIME IS REQUIRED.

I. AMENDMENTS/REVISIONS TO THE ESPCP PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMPS WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.

J. HYDROLOGIC SUMMARY OF PEAK DISCHARGE FLOWS FROM THE SITE PRIOR TO AND AFTER CONSTRUCTION.

STUDY POINT 1 - EXISTING ASH POND 4 OUTLET STRUCTURE

CONDITIONS	25-YR	50-YR	100-YR
EXISTING*	29 CFS	29 CFS	29 CFS
PROPOSED	0 CFS	0 CFS	0 CFS

*FLOWS PROVIDED BY SOUTHERN COMPANY

STUDY POINT 2 - PROPOSED DETENTION POND 3 OUTLET STRUCTURE

CONDITIONS	25-YR	50-YR	100-YR
EXISTING	36 CFS	41.3 CFS	46.1 CFS
PROPOSED	5.5 CFS	8.3 CFS	11.8 CFS

STUDY POINT 3 - PROPOSED DETENTION POND 2 OUTLET STRUCTURE

CONDITIONS	25-YR	50-YR	100-YR
EXISTING	0 CFS	0 CFS	0 CFS
PROPOSED	26.9 CFS	34.3 CFS	41.6 CFS

NET ASH POND 3 & 4 PEAK FLOW CHANGE PRIOR TO AND AFTER CONSTRUCTION.

CONDITIONS	25-YR	50-YR	100-YR
EXISTING	65 CFS	70.3 CFS	75.1 CFS
PROPOSED	32.4 CFS	42.6 CFS	53.4 CFS

K. UPSTREAM CONDITIONS
UPSTREAM IS A MIXED RESIDENTIAL AND INDUSTRIAL USE. CHURCH ROAD RUNS PARALLEL TO ASH POND 3 AND 4 ON THE NORTH. RUNOFF FROM NORTH OF CHURCH ROAD AND THE NORTH SIDE OF THE ASH POND 3 AND 4 DIKES MOSTLY FLOWS TO THE EXISTING 90" Ø PIPE CULVERT THAT RUNS BENEATH ASH POND 3 AND 4 AND THEN DISCHARGES TO AN UNNAMED TRIBUTARY THAT DRAINS TO THE CHATTAHOOCHEE RIVER. RUNOFF FROM THE INTERIOR OF THE ASH PONDS DRAINS TO AN EXISTING POND IN ASH POND 4 AND IS CONTROLLED BY AN OVERFLOW STRUCTURE IN ASH POND 4. THE OVERFLOW STRUCTURE DRAINS TO THE ASH POND 2 SETTLING POND AND THEN TO A TEMPORARY RUNOFF POND THAT DISCHARGES TO THE CHATTAHOOCHEE RIVER.

L. DOWNSTREAM CONDITIONS
A PORTION OF ASH PONDS 3 & 4 WILL DRAIN TO THE SOUTH ALONG AN EXISTING STORMWATER CONVEYANCE SYSTEM CONSISTING OF A PAVED DITCH, AND VARIOUS CULVERT STRUCTURES DISCHARGING FIRST INTO A SERIES OF TWO PONDS AND THEN ULTIMATELY TO THE CHATTAHOOCHEE RIVER. THE REMAINING AREA, WHICH IS THE MAJORITY OF ASH PONDS 3 & 4, WILL DRAIN INTO A NEW CONNECTION TO THE CONVEYANCE CULVERT THAT CURRENTLY EXISTS BENEATH ASH POND 4. THIS CULVERT DISCHARGES INTO AN UNNAMED TRIBUTARY THAT DRAINS TO THE CHATTAHOOCHEE RIVER.

M. NAME OF RECEIVING WATERS
UNNAMED TRIBUTARY, CHATTAHOOCHEE RIVER
NO TROUT STREAMS
NO "BIO F" (IMPAIRED FISH COMMUNITY) OR "BIOM" (IMPAIRED MACROINVERTEBRATE COMMUNITY)
IMPAIRED STREAM SEGMENT

N. EXTENT OF WETLANDS ACREAGE (WETLAND DELINEATION PROVIDED BY GEORGIA POWER)
NO WETLANDS WILL BE IMPACTED BY THE CONSTRUCTION OF THIS PROJECT.

O. SOIL DESCRIPTION OR QUALITY OF ANY DISCHARGE FROM THE SITE. BASED ON THE USDA SOILS SURVEY, THE SOILS ARE:

SYMBOL	NAME
MgC2	MADISON SANDY LOAM, 6 TO 10 % SLOPES
MsD3	MADISON & PACOLET SOILS, 10 TO 15 % SLOPES
MDC3	MADISON CLAY LOAM, 6 TO 10 % SLOPES, SEVERELY ERODED
AmC	APPLING SANDY LOAM, 6 TO 10 % SLOPES
CYC2	CECIL SANDY LOAM, 6 TO 10 % SLOPES, ERODED
MsE2	MADISON AND PACOLET SOILS, 15 TO 25 % SLOPES, SEVERELY ERODED
MgB2	MADISON SANDY LOAM, 2 TO 6 % SLOPES, ERODED
W	WATER
LNF	LOUISA SOILS, 25 TO 60 % SLOPES
Toc	TOCCOA SOILS
LnE	LOUISEBURG SANDY LOAM, 10 TO 25 % SLOPES
Cah	CARTECAY SOILS

NOTE: SOIL CHARACTERISTICS SIGNIFICANTLY CHANGED BY DIKE CONSTRUCTION AND PLACEMENT OF SLUICED AND STACKED ASH AND VEGETATED COVERS.

P. THE ESTIMATED DISTURBED AREA FOR THE ENTIRE PROJECT IS 90.3 ACRES. FOR THE POND CLOSURE PORTION, THE TEMPORARY SEDIMENT POND, PERIMETER DITCHES AND EXISTING POND IN ASH POND NO.4 WILL PROVIDE THE REQUIRED STORAGE AND CONTAIN THE 25 YEAR 24 HOUR DESIGN STORM. RUNOFF FROM ASH POND NO.3 AND ASH POND NO.4 WILL NOT DISCHARGE UN CONTROLLED OFFSITE TO THE WATERS OF THE STATE UNTIL CONSTRUCTION IS COMPLETED AND THE SITE HAS REACHED FINAL STABILIZATION.

Q. WITH THE EXCEPTION OF A MINOR DISTURBED AREA ASSOCIATED WITH THE CONSTRUCTION OF THE OUTLET FROM DETENTION POND 3 (DESCRIBED LATER IN THIS PARAGRAPH) THE ENTIRETY OF THE REMAINING AREA OF DISTURBANCE DRAINS BY A SYSTEM OF DITCHES, ALL CONTAINED WITHIN THE LIMITS OF ASH PONDS 3 & 4, TO VARIOUS PONDS:

- TEMPORARY SEDIMENT POND A (BECOMES DETENTION POND 1) - LOCATED AT THE NORTHWEST CORNER OF ASH POND 3 AND PROVIDES APPROXIMATELY 20,167 CY OF STORAGE TO FREEBOARD LIMIT.
- TEMPORARY SEDIMENT POND B - LOCATED AT THE EASTERN CORNER OF ASH POND 4 AND PROVIDES APPROXIMTELY 27,427 CY OF STORAGE TO FREEBOARD LIMIT.
- TEMPORARY SEDIMENT POND C - LOCATED AT THE SOUTHWESTERN CORNER OF ASH POND 4 AND PROVIDES APPROXIMATELY 42,108 CY OF STORAGE TO FREEBOARD LIMIT.
- TEMPORARY SEDIMENT POND D (BECOMES DETENTION POND 3) - LOCATED AT THE SOUTHEAST CORNER OF ASH POND 3 AND PROVIDES APPROXIMATELY 19,844 CY OF STORAGE TO FREEBOARD LIMIT.
- DETENTION POND 2 - LOCATED ADJACENT TO THE CONVEYANCE CULVERT UNDER ASH POND 4 AND PROVIDES APPROXIMATELY 14,681 CY OF STORAGE TO FREEBOARD LIMIT.
  PLEASE NOTE THAT THE REQUIRED SEDIMENT STORAGE VOLUME FOR THE ENTIRE PROJECT AREA OF 90.3 ACRES IS 5997 CY AND THAT ANY ONE OF THE TEMPORARY OR PERMANENT PONDS PROVIDES STORAGE CAPACITY IN EXCESS OF THIS REQUIREMENT. FLOWS WILL BE PUMPED FROM ONE POND TO ANOTHER AND THEN ULTIMATELY TO A WATER TREATMENT SYSTEM UNTIL SUCH TIME AS THE ENTIRE SITE HAS BEEN PERMANENTLY STABILIZED. THE WATER TREATMENT SYSTEM WILL BE DESIGNED AND MONITORED TO VERIFY THAT THE WATER QUALITY LIMITS OF THE NPDES DISCHARGE PERMIT FOR OUTFALL 3 ARE ACHIEVED. ONLY AFTER THE ENTIRE SITE HAS BEEN PERMANENTLY STABILIZED WILL THE TWO DISCHARGE LOCATIONS BE CONSTRUCTED AND MADE OPERATIONAL. THE ESTIMATED DISTURBED AREA FOR THE CONSTRUCTION OF THE CULVERT DISCHARGE FROM DETENTION POND 3 IS APPROXIMATELY 0.8 ACRES. FOR THIS PORTION OF THE PROJECT SEDIMENT STORAGE WILL BE PROVIDED BY A TEMPORARY SEDIMENT TRAP. THE ESTIMATED DISTURBED AREA FOR THE WATER TREATMENT AREA IS APPROXIMATELY 1.1 ACRES. FOR THIS PORTION OF THE PROJECT SEDIMENT STORAGE WILL BE PROVIDED BY SEDIMENT BARRIERS.

DUE TO THE OUTFALL 3 NPDES PERMIT EFFLUENT LIMITS, THE WATER TREATMENT SYSTEM THAT WILL TREAT RUNOFF FROM THE DISTURBED AREAS IS EXPECTED TO BE AS EFFECTIVE OR MORE EFFECTIVE THAN THE REQUIREMENTS FOR SEDIMENT BASIN SURFACE WITHDRAWAL (ESPC STAND ALONE CHECKLIST ITEM NO. 46) AND OTHER SEDIMENT TREATMENT METHODS (E.G. SEEP BERMS, SAND FILTERS, ACTIVE OR PASSIVE ANIONIC PAM TREATMENT, ETC).

THIS SEQUENCE MAY VARY ACCORDING TO THE CONTRACTOR, HOWEVER THE SEQUENCE OF EVENTS SHOULD NOT BE ALTERED. MORE SPECIFICALLY, THE SEQUENCE OF SEDIMENT AND EROSION CONTROL AND GRASSING SCHEDULES.

R. SITEWORK CONSTRUCTION SEQUENCE FOR THE CLOSURE PORTION:
1. INSTALL PERIMETER SEDIMENT AND LIMITS OF DISTURBANCE BARRIERS AS SHOWN ON DRAWINGS ES1 THROUGH ES3.
2. INSTALL ALL CONSTRUCTION EXITS AS SHOWN ON DRAWINGS ES1 THROUGH ES3.
3. COMMENCE WITH DEWATERING ALONG CONVEYANCE CULVERT CORRIDOR AND THE OPEN WATER; BOTH IN ASH POND 4 AND DISCHARGE EFFLUENT TO THE WATER TREATMENT SYSTEM.
4. INSTALL TEMPORARY SEDIMENT PONDS A AND D AND PERIMETER DITCHES ALONG THE LIMITS OF THE PROJECT BETWEEN THESE TWO PONDS AND TO THE SOUTHWEST.
5. CLEAR AND GRUB AND HAUL OFF ALL ORGANICS IN A PHASED SEQUENCE AS REQUIRED BY ACTIVE PORTIONS OF THE SITE.
6. INSTALL TEMPORARY SEDIMENT POND C.
7. CONTINUE DEWATERING AND WATER TREATMENT ACTIVITIES AS REQUIRED.
8. BEGIN PHASED GRADING OPERATIONS.
9. BEGIN FINAL CLOSURE OPERATIONS FOR PHASED AREAS.
10. INSTALL TEMPORARY SEDIMENT POND B AND PERIMETER DITCHES ALONG THE REMAINING LIMITS OF THE PROJECT.
11. CONTINUE DEWATERING AND WATER TREATMENT ACTIVITIES AS REQUIRED.
12. CONTINUE PHASED GRADING OPERATIONS.
13. CONTINUE FINAL CLOSURE OPERATIONS FOR PHASED AREAS.
14. DECOMMISION TEMPORARY SEDIMENT POND C.
15. CONTINUE PHASED GRADING OPERATIONS.
16. CONTINUE FINAL CLOSURE OPERATIONS.
17. INSTALL DETENTION POND 2.
18. CONTINUE FINAL CLOSURE OPERATIONS.
19. COMPLETE FINAL VEGETATIVE AND STABILIZATION MEASURES FOR PHASED AREAS.
20. "MOP-UP" BY REMOVING ALL ASH IMPACTED SOILS FROM TEMPORARY SEDIMENT PONDS A, B, AND D, DETENTION POND 2, AND ANY IMPACTED DITCHES, BERMS, AND/OR CULVERTS.
21. COMPLETE ALL STORMWATER CONVEYANCE CONSTRUCTION.
22. DECOMMISION TEMPORARY SEDIMENT POND B.
23. FINAL COMPLETION OF VEGETATIVE AND STABILIZATION MEASURES FOR ALL CLOSURE AREAS.
24. INSTALL OUTLETS AT DETENTION PONDS 2 AND 3 AND PROVIDE PERMANENT VEGITATION AS REQUIRED.
25. MAINTAIN BMPS DURING ALL CONSTRUCTION ACTIVITIES.
26. REMOVE PERIMETER BMPS AND OTHER TEMPORARY BMPS ONLY AFTER FINAL STABILIZATION HAS BEEN ESTABLISHED AND APPROVED BY THE PCM AND ENGINEER.

ANTICIPATED START DATE: FEBRUARY 2016.

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION & SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES. EXCEPT AS REQUIRED TO INSTALL THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPS AS DESCRIBED IN PART IV.D.3, THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPS MUST BE INSTALLED AND IMPLEMENTED PRIOR TO CONDUCTING ANY OTHER CONSTRUCTION ACTIVITIES (E.G. CLEARING, GRUBBING AND GRADING) WITHIN THE CONSTRUCTION SITE OR WHEN APPLICABLE, WITHIN PHASE SUB-PARTS OR SEGMENTS OF THE CONSTRUCTION SITE.

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION & SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

ANY DISTURBED AREA OUTSIDE OF THE LIMITS OF WASTE AS SHOWN ON DRAWINGS ES7 TO ES16 LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

GSWCC GEORGIA SOIL AND WATER CONSERVATION COMMISSION

MICHAEL T. CHILSON
LEVEL II DESIGN PROFESSIONAL

CERTIFICATION NUMBER 0000072142
ISSUED: 08/29/2014 EXPIRES: 08/29/2017

GEORGIA SAFE DAMS PROGRAM

GEORGIA REGISTERED PROFESSIONAL ENGINEER MICHAEL THOMAS CHILSON

MICHAEL T. CHILSON
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 036075

SEPTEMBER 2017 - ISSUED FOR APPROVAL & CONSTRUCTION

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
⚠	07/1916	MTC	CHANGE LEVEL II DESIGN PROFESSIONAL	RMS	GLH	MTC
⚠	02/19/16	SSH	REV. LIMITS OF DISTURBANCE, REMOVE DOUBLE SILT FENCE	RMS	GLH	SSH

CLIENT
GEORGIA POWER COMPANY /
SOUTHERN COMPANY SERVICES

Southern Company

PROJECT
PLANT MCDONOUGH
ASH POND NO. 3 & 4 CLOSURE PLAN

TITLE
EROSION, SEDIMENT & POLLUTION CONTROL NOTES - SHEET 1 OF 4

CONSULTANT
GOLDER

YYYY-MM-DD	2017-02-17
DESIGNED	GLH
PREPARED	RMS
REVIEWED	WRS
APPROVED	MTC

PROJECT NO.	PROJECT ID	REV.	SHEET
1539180	MCD15017	3	ES7

0 1" IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

Path: \\atlanta\cad\Southern Company\1525193 2015 Plant McDonough\PRODUCTION\DESIGN\ | File Name: 1525193 ES-07-16 NOTE-DETAILS.dwg

II. POLLUTION CONTROLS

A. CUT AND FILL
1. OPERATIONS SHALL BE KEPT TO A MINIMUM, PHASE IF POSSIBLE.
2. SHALL NOT ENDANGER ADJOINING PROPERTIES.
3. FILLS SHALL NOT ENCROACH UPON NATURAL WATERCOURSES. CHANNELS SHALL NOT BE CONSTRUCTED IN A MANNER SO AS TO ADVERSELY AFFECT OTHER PROPERTY OWNERS.
4. MINIMIZE DAMAGE FROM SURFACE WATER TO THE CUT FACE OF EXCAVATIONS OR THE SLOPING SURFACES OF FILLS.

B. STATE WATER BUFFERS
1. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25 FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

C. STABILIZATION PRACTICES
1. VEHICLE AREAS - FILL IN RILL ERODED AREAS WHEN FOUND.
2. TEMPORARY MULCHING - WHEN AN AREA WILL BE LEFT OPEN MORE THAN 14 DAYS WITH NO CONSTRUCTION.
3. SOD STABILIZATION - USED IN HIGHER VELOCITY CHANNEL FLOWS. SEE PLAN SHEETS FOR SPECIFIC DESIGN REQUIREMENTS.
4. PERMANENT VEGETATION - THIS IS TO BE ESTABLISHED ONCE FINAL GRADE IS ACHIEVED.
5. SURFACE ROUGHENING: TEXTURING OF SOIL SURFACES TO REDUCE SHEET FLOW AND IMPROVE SURFACE WATER IMPOUNDMENT.
6. SEDIMENT BASINS - SHALL BE INSPECTED TO INSURE STABLE SIDE SLOPES.
7. WHERE MATTING IS IDENTIFIED ON THE DRAWINGS THE AREA IS TO BE HYDROSEEDED AND COVERED WITH GEORGIA DOT APPROVED WHEAT STRAW, WOOD FIBER MATTING OR COCONUT FIBER MATTING. IF NOT HYDROSEEDED, GEORGIA DOT APPROVED MATTING THAT HAS BEEN INCORPORATED WITH SEED AND FERTILIZER MUST BE USED. FINAL GRADED SLOPES MUST BE PROPERLY PROTECTED UNTIL A PERMANENT VEGETATIVE STAND IS ESTABLISHED.

D. STRUCTURAL CONTROLS TO BE USED - SILT FENCE, CHECK DAMS, WATER TREATMENT, TEMPORARY SEDIMENT BASINS AND RIPRAP. (NO ALTERNATIVE OR HIGH PERFORMANCE BMP'S PROVIDED ON THIS PROJECT.)

E. SCHEDULE OF EROSION AND SEDIMENT CONTROL - SEE SCHEDULE OF MAJOR CONSTRUCTION ACTIVITIES, THIS SHEET.

F. DEVELOPMENT PLANS ARE TO CONFORM TO TOPOGRAPHY AND SOIL TYPE.

G. OTHER CONTROLS
1. OFF-SITE VEHICLE TRACKING
STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREETS ADJACENT TO THE SITE WILL BE SWEPT AND SCRAPED REGULARLY TO REMOVE ANY EXCESS MUD, DIRT, OR ROCK TRACKED FROM THE CONSTRUCTION AREA. A SOURCE OF FRESH WATER FOR WASHING SEDIMENT FROM TRUCKS, ESPECIALLY DURING PERIODS OF WET WEATHER, MAY BE PROVIDED IN ORDER TO MINIMIZE THE AMOUNT OF STREET SWEEPING AND SCRAPING REQUIRED. ANY WASTEWATER RESULTING FROM THIS OPERATION WILL BE DIRECTED INTO A SEDIMENT TRAP.
2. WASTE MATERIALS
ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE HAULED TO AN APPROVED LANDFILL. NO CONSTRUCTION WASTE MATERIAL WILL BE BURIED ON-SITE. ALL PERSONNEL WILL RECEIVE INSTRUCTIONS REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES DESCRIBING THESE PRACTICES WILL BE POSTED IN THE CONSTRUCTION OFFICE. THE SITE SUPERINTENDENT WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED. EMPLOYEE WASTE AND OTHER LOOSE MATERIALS WILL BE COLLECTED SO AS TO PREVENT THE RELEASE OF "FLOATABLES" DURING RUNOFF EVENTS. WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
3. HAZARDOUS WASTE
NO HAZARDOUS WASTE IS EXPECTED TO BE GENERATED OR ENCOUNTERED IN THIS PROJECT. IN THE EVENT THAT HAZARDOUS WASTE IS ENCOUNTERED, ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. THE SITE SUPERINTENDENT WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.
4. SANITARY WASTE-THE ESPCP SHALL INCORPORATE AND ADHERE TO ALL COUNTY AND STATE WASTE DISPOSAL AND SANITARY SEWER SYSTEM REGULATIONS. ANY PORTABLE SANITARY UNITS SHALL BE LOCATED AWAY FROM STORM DRAIN INLETS. A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR WILL REGULARLY COLLECT ALL SANITARY WASTE FROM THE UNITS.
5. DUST CONTROL-DURING GRADING OPERATIONS:
PERIODICALLY APPLY MOISTURE SPRAY TO LARGE AREAS FOR DUST CONTROL.
6. LIQUID WASTE AND NON-STORM WATER DISCHARGES: NON-STORM WATER DISCHARGES FROM FIRE HYDRANT FLUSHING; POTABLE WATER SOURCES INCLUDING WATER LINE FLUSHING; IRRIGATION DRAINAGE; AIR CONDITIONING CONDENSATE; SPRINGS; UNCONTAMINATED GROUND WATER; AND FOUNDATION OR FOOTING DRAINS MAY BE DISCHARGED ONSITE ONLY IF THEY ARE NOT CONTAMINATED WITH PROCESS MATERIALS OR POLLUTANTS. CARE SHALL BE TAKEN TO DISCHARGE SO THAT EROSION AND OR DAMAGE TO ADJACENT PROPERTY DOES NOT OCCUR DUE TO THE DISCHARGE. ALL OTHER LIQUID WASTES SHALL BE COLLECTED AND TRANSPORTED OFF-SITE AND DISPOSED OF PROPERLY. IF AN UNDOCUMENTED SPRING OR STREAM IS ENCOUNTERED BEFORE OR DURING CONSTRUCTION, WORK SHALL CEASE WITHIN 100 FEET OF THE WATER SOURCE AND THE DESIGN PROFESSIONAL SHALL BE CONTACTED IMMEDIATELY.
7. DEWATERING TRENCHES AND EXCAVATIONS:
THE DISCHARGE OF POLLUTANTS FROM DEWATERING TRENCHES WILL BE MINIMIZED AND ARE PROHIBITED UNLESS MANAGED BY APPROPRIATE CONTROLS. SOME CONTROLS INCLUDE:
A. DIVERTING SURFACE WATER AWAY FROM TRENCHES WITH DAMS, CHANNELS, SUMPS, FLUMES, AND TEMPORARY DIVERSIONS;
B. AVOIDING PUMPING DIRECTLY ONTO SLOPES WHICH COULD ERODE THE SLOPES;
C. PUMPING DIRECTLY INTO WOODED BUFFERS, IF AVAILABLE;
D. USING OIL/WATER SEPARATOR IF DISCHARGE WATER BECOMES CONTAMINATED WITH OIL, GREASE, OR CHEMICAL PRODUCTS;
E. USING STABLE CHANNELS WITH GRASS-LINED SLOPES, LIMITING VELOCITIES AS NECESSARY TO PREVENT EROSION VIA CHECK DAMS OR OTHER METHODS.

III. MATERIALS AND SAFETY

NOTE: THIS SECTION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. ALL MATERIAL SAFETY AND SPILL PREVENTION CONTROL CONTINGENCY (SPCC) PLANS ARE TO BE IN ACCORDANCE WITH POLICIES AND PROCEDURES ALREADY IN PLACE.

A. SIGNIFICANT MATERIALS EXPECTED AT SITE INVENTORY:
LIME, CONCRETE MIX, STEEL REINFORCING BARS AND RELATED MATERIALS, LUMBER, DIESEL FUEL AND LUBRICATING OILS, HDPE PIPE, CORRUGATED METAL PIPE, DUCTILE IRON PIPE, STEEL PIPE, PAINTS, FERTILIZERS, CRUSHED AGGREGATE, HDPE LINER AND GEOTEXTILES, AND RIP RAP.

B. SPILL PREVENTION AND RESPONSE PROCEDURES-SPILL PREVENTION AND RESPONSE INCLUDES "GOOD HOUSEKEEPING" AS WELL AS SPECIFIC PRACTICES FOR CERTAIN PRODUCTS AND ESTABLISHED PROCEDURES FOR RESPONDING TO SPILLS WHICH DO OCCUR.

C. PRACTICES FOR PRODUCTS, "GOOD HOUSEKEEPING"
1. MATERIALS - AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH MATERIAL REQUIRED TO DO THE JOB.
2. STORAGE - ALL MATERIALS STORED ON-SITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND STORED IN A COVERED AREA. IF STORAGE IN A COVERED AREA IS NOT POSSIBLE THE MATERIALS WILL BE COVERED WITH POLYETHYLENE OR POLYPROPYLENE SHEETING TO PROTECT THEM FROM THE ELEMENTS.
3. MIXING - SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
4. LABELING - PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL AFFIXED TO EACH CONTAINER.
5. DISPOSAL - WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED BEFORE DISPOSING OF THE CONTAINER. MANUFACTURER RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.
9. INSPECTIONS - THE SITE SUPERINTENDENT WILL INSPECT THE SITE REGULARLY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ON-SITE.
7. SPOIL MATERIALS - ANY EXCAVATED EARTH THAT WILL NOT BE USED FOR FILL OR TOPSOIL MATERIAL AND ALL DEMOLISHED PAVEMENT WILL BE HAULED OFF SITE IMMEDIATELY AND DISPOSED OF PROPERLY.

D. SPECIFIC PRODUCT PRACTICES
1. PETROLEUM PRODUCTS - ALL ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. IF PETROLEUM PRODUCTS WILL BE PRESENT AT THE SITE, THEY WILL BE STORED IN TIGHTLY SEALED CONTAINERS, WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ON-SITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER RECOMMENDATIONS.
2. CONCRETE TRUCKS - CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT DISCHARGE SURPLUS CONCRETE DRUM WASH WATER AT THE SITE.
3. PAINTS - ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE POURED INTO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.
4. FERTILIZERS - FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. THE FERTILIZER WILL BE STORED IN A COVERED AREA AND ANY PARTIALLY USED BAGS WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

E. SPILL CONTROL AND RESPONSE PRACTICES THE OWNER OR THE SITE SUPERINTENDENT WILL DESIGNATE A SPILL PREVENTION AND RESPONSE TEAM. IN ADDITION, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL CLEANUP.
1. INFORMATION - MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED, AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
2. EQUIPMENT - MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE PRESENT ON THE SITE AT ALL TIMES. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, SHOVELS, RAGS, GLOVES, GOGGLES, ABSORBENT MATERIALS (SAND, SAWDUST, ETC.) AND PLASTIC OR METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE. THE MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE DEPENDENT UPON THE NATURE AND QUANTITY OF THE MATERIAL STORED ON-SITE.
3. RESPONSE - CARE SHALL BE TAKEN TO PREVENT AND CONTAIN ANY PETROLEUM SPILLS. IN THE EVENT OF A SPILL, APPROPRIATE REMEDIATION MEASURES SHALL BE IMMEDIATELY UNDERTAKEN. THOSE MEASURES SHALL INCLUDE REMOVAL OF THE CONTAMINATED SOIL, REPLACEMENT OF SAID SOIL, PLACING OF PETROLEUM TANKS ON ABOVE GROUND PAD WITH SURROUNDING BERMS TO PROVIDE SECONDARY CONTAINMENT TO PREVENT LEAKAGE INTO ANY STORM WATER SYSTEM.
4. SAFETY - THE SPILL AREA WILL BE KEPT WELL VENTILATED, AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
5. REPORTING - SPILLS OF TOXIC HAZARDOUS MATERIAL (IF PRESENT ON SITE) WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE.
6. RECORD KEEPING - THE SPILL PREVENTION PLAN WILL BE MODIFIED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AS WELL AS IMPROVED METHODS FOR CLEANING UP FUTURE SPILLS SHOULD THEY OCCUR. A DESCRIPTION OF EACH SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES USED WILL BE MAINTAINED WITH THE PLAN.

IV. THE FOLLOWING SAMPLE METHODS ARE PERMITTED

A. ALL SAMPLING SHALL BE COLLECTED BY "GRAB SAMPLES" AND THE ANALYSIS OF THESE SAMPLES MUST BE CONDUCTED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 (UNLESS OTHER TEST PROCEDURES HAVE BEEN APPROVED); THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-92-001" AND GUIDANCE DOCUMENTS THAT MAY BE PREPARED BY THE EPD.
1. SAMPLE CONTAINERS SHOULD BE LABELED PRIOR TO COLLECTING THE SAMPLES.
2. SAMPLES SHOULD BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER.
3. LARGE MOUTH, WELL CLEANED AND RINSED GLASS OR PLASTIC JARS SHOULD BE USED FOR COLLECTING SAMPLES. THE JARS SHOULD BE CLEANED THOROUGHLY TO AVOID CONTAMINATION.
4. MANUAL, AUTOMATIC OR RISING STAGE SAMPLING MAY BE UTILIZED. SAMPLES REQUIRED BY THIS PERMIT SHOULD BE ANALYZED IMMEDIATELY, BUT IN NO CASE LATER THAN 48 HOURS AFTER COLLECTION. HOWEVER, SAMPLES FROM AUTOMATIC SAMPLERS MUST BE COLLECTED NO LATER THAN THE NEXT BUSINESS DAY AFTER THEIR ACCUMULATION, UNLESS FLOW THROUGH AUTOMATED ANALYSIS IS UTILIZED. IF AUTOMATIC SAMPLING IS UTILIZED AND THE AUTOMATIC SAMPLER IS NOT ACTIVATED DURING THE QUALIFYING EVENT, THE PERMITTEE MUST UTILIZE MANUAL SAMPLING OR RISING STAGE SAMPLING DURING THE NEXT QUALIFYING EVENT. DILUTION OF SAMPLES IS NOT REQUIRED. SAMPLES MAY BE ANALYZED DIRECTLY WITH A PROPERLY CALIBRATED TURBIDIMETER. SAMPLES ARE NOT REQUIRED TO BE COOLED.
5. SAMPLING AND ANALYSIS OF THE RECEIVING WATER(S) OR OUTFALLS BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED TO EPD AS SPECIFIED IN PART IV.E OF THE PERMIT.

V. STORMWATER SAMPLING POINTS

A. STORMWATER SAMPLING SHALL BE CONDUCTED AT THE POINTS AS INDICATED WITHIN THIS ESPCP.

B. IDEALLY THE SAMPLES SHOULD BE TAKEN FROM THE HORIZONTAL AND VERTICAL CENTER OF THE RECEIVING WATER(S) OR THE STORM WATER OUTFALL CHANNEL(S).

C. CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN THE OUTFALL STORM WATER CHANNEL.

D. THE SAMPLING CONTAINER SHOULD BE HELD SO THAT THE OPENING FACES UPSTREAM.

E. THE SAMPLES SHOULD BE KEPT FREE FROM FLOATING DEBRIS.

F. PERMITTEES DO NOT HAVE TO SAMPLE SHEETFLOW THAT FLOWS ONTO UNDISTURBED NATURAL AREAS OR AREAS STABILIZED BY THE PROJECT. FOR PURPOSES OF THIS SECTION, STABILIZED SHALL MEAN, FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES AND AREAS LOCATED OUTSIDE THE WASTE DISPOSAL LIMITS OF A LANDFILL CELL THAT HAS BEEN CERTIFIED BY EPD FOR WASTE DISPOSAL, 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER, OR LANDSCAPED ACCORDING TO THE PLAN (UNIFORMLY COVERED WITH LANDSCAPING MATERIALS IN PLANNED LANDSCAPED AREAS), OR EQUIVALENT PERMANENT STABILIZATION MEASURES AS DEFINED IN THE MANUAL (EXCLUDING A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET CROP PERENNIALS APPROPRIATE FOR THE REGION).

G. ALL SAMPLING PURSUANT TO THIS PERMIT MUST BE DONE IN SUCH A WAY (INCLUDING GENERALLY ACCEPTED SAMPLING METHODS, LOCATIONS, TIMING, AND FREQUENCY) AS TO ACCURATELY REFLECT WHETHER STORM WATER RUNOFF FROM THE CONSTRUCTION SITE IS IN COMPLIANCE WITH THE STANDARD SET FORTH IN PARTS III.D.3. OR III.D.4., WHICHEVER IS APPLICABLE.

VI. SAMPLING FREQUENCY (TO BE COMPLETED BY PRIMARY PERMITTEE)

A. THE PRIMARY PERMITTEE MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW. FOR A QUALIFYING EVENT, THE PERMITTEE SHALL SAMPLE AT THE BEGINNING OF ANY STORM WATER DISCHARGE TO A MONITORED RECEIVING WATER AND/OR FROM A MONITORED OUTFALL LOCATION WITHIN FORTY-FIVE (45) MINUTES OR AS SOON AS POSSIBLE.

B. HOWEVER, WHERE MANUAL AND AUTOMATIC SAMPLING ARE IMPOSSIBLE (AS DEFINED IN THIS PERMIT), OR ARE BEYOND THE PERMITTEE'S CONTROL, THE PERMITTEE SHALL TAKE SAMPLES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN TWELVE (12) HOURS AFTER THE BEGINNING OF THE STORM WATER DISCHARGE.

C. SAMPLING BY THE PERMITTEE SHALL OCCUR FOR THE FOLLOWING EVENTS:
1. FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORM WATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS* AS DEFINED IN THIS PERMIT AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO COMPLETION OF MASS GRADING OPERATIONS, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION;
2. IN ADDITION TO (1) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORM WATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS* AS DEFINED IN THE PERMIT EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO SUBMITTAL OF A N.O.T., IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE REPRESENTATIVE SAMPLING LOCATION, WHICHEVER COMES FIRST;
3. AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (1) AND (2) ABOVE, IF BMPS IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL ARE NOT PROPERLY DESIGNED, INSTALLED AND MAINTAINED, CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN 2 BUSINESS DAYS, AND TURBIDITY SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS* UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMPS ARE PROPERLY DESIGNED, INSTALLED AND MAINTAINED;
4. WHERE SAMPLING PURSUANT TO (1), (2), OR (3) ABOVE IS REQUIRED BUT NOT POSSIBLE (OR NOT REQUIRED BECAUSE THERE WAS NO DISCHARGE), THE PERMITTEE, IN ACCORDANCE WITH PART IV.D.4.a(6), MUST INCLUDE A WRITTEN JUSTIFICATION IN THE INSPECTION REPORT OF WHY SAMPLING WAS NOT PERFORMED. PROVIDING THIS JUSTIFICATION DOES NOT RELIEVE THE PERMITTEE OF ANY SUBSEQUENT SAMPLING OBLIGATION UNDER (1), (2), OR (3) ABOVE: AND
5. EXISTING CONSTRUCTION ACTIVITIES, I.E., THOSE THAT ARE OCCURRING ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT, THAT HAVE MET THE SAMPLING REQUIRED BY (1) ABOVE SHALL SAMPLE IN ACCORDANCE WITH (2). THOSE EXISTING CONSTRUCTION ACTIVITIES THAT HAVE MET THE SAMPLING REQUIRED BY (2) ABOVE SHALL NOT BE REQUIRED TO CONDUCT ADDITIONAL SAMPLING OTHER THAN AS REQUIRED BY (3) ABOVE.

*NOTE THAT THE PERMITTEE MAY CHOOSE TO MEET THE REQUIREMENTS OF (1) AND (2) ABOVE BY COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR SAMPLING AT ANY TIME OF THE DAY OR WEEK.

CONSTRUCTION SCHEDULE OF MAJOR ACTIVITIES

CONSTRUCTION ACTIVITY	2016											2017												2018				
	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY.
PHASE 1 EROSION CONTROL																												
CLEARING & GRUBBING																												
PHASE 2A EROSION CONTROL																												
PHASED GRADING ✱																												
PHASE 2B-2D EROSION CONTROL																												
EROSION CONTROL MAINTENANCE																												
PHASE 3 EROSION CONTROL																												

✱ INCLUDES MASS GRADING AND FINAL COVER

SEPTEMBER 2017 - ISSUED FOR APPROVAL & CONSTRUCTION

GSWCC GEORGIA SOIL AND WATER CONSERVATION COMMISSION

MICHAEL T. CHILSON
LEVEL II DESIGN PROFESSIONAL
CERTIFICATION NUMBER 0000072142
ISSUED: 08/29/2014 EXPIRES: 08/29/2017

GEORGIA SAFE DAMS PROGRAM

GEORGIA REGISTERED PROFESSIONAL ENGINEER MICHAEL THOMAS CHILSON

MICHAEL T. CHILSON
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 036075

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
1	07/1916	MTC	CHANGE LEVEL II DESIGN PROFESSIONAL	RMS	GLH	MTC

CLIENT
GEORGIA POWER COMPANY /
SOUTHERN COMPANY SERVICES

Southern Company

PROJECT
PLANT MCDONOUGH
ASH POND NO. 3 & 4 CLOSURE PLAN

TITLE
EROSION, SEDIMENT & POLLUTION CONTROL NOTES - SHEET 2 OF 4

CONSULTANT
GOLDER

YYYY-MM-DD	2017-02-17
DESIGNED	GLH
PREPARED	RMS
REVIEWED	WRS
APPROVED	MTC

PROJECT NO.	PROJECT ID	REV.	SHEET
1539180	MCD15017	3	ES8

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

Path: \\atlanta\acad\Southern Company\1525193 2015 Plant McDonough\PRODUCTION\DESIGN\ | File Name: 1525193 ES-07-16 NOTE-DETAILS.dwg

VII. REPORTING (TO BE COMPLETED BY OWNER OR OPERATOR OR BOTH)

A. THE APPLICABLE PERMITTEES ARE REQUIRED TO SUBMIT THE SAMPLING RESULTS TO THE EPD AT THE ADDRESS SHOWN IN PART II.C. BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD. REPORTING PERIODS ARE MONTHS DURING WHICH SAMPLES ARE TAKEN IN ACCORDANCE WITH THIS PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, EPD MAY REQUIRE THE APPLICABLE PERMITTEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORM WATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A NOTICE IS SUBMITTED IN ACCORDANCE WITH PART VI.

B. ALL SAMPLING REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:
1. THE DATE, EXACT PLACE, AND TIME OF SAMPLING OR MEASUREMENTS;
2. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS;
3. THE DATE(S) ANALYSES WERE PERFORMED;
4. THE TIME(S) ANALYSES WERE INITIATED;
5. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES;
6. REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;
7. THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS.
8. RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU." AND
9. CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.

C. ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THIS PERMIT. THE PERMITTEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A N.O.T. IS SUBMITTED IN ACCORDANCE WITH PART VI. IF AN ELECTRONIC SUBMITTAL IS PROVIDED BY EPD THEN THE WRITTEN CORRESPONDENCE MAY BE SUBMITTED ELECTRONICALLY; IF REQUIRED, A PAPER COPY MUST ALSO BE SUBMITTED BY REUTRN RECEIPT CERTIFIED MAIL, OR SIMILAR SERVICE.

VIII. RETENTION OF RECORDS

A. THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A N.O.T. IS SUBMITTED IN ACCORDANCE WITH PART VI:
1. A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;
2. A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT;
3. THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5. OF THIS PERMIT;
4. A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;
5. A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A. OF THIS PERMIT;
6. A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT; AND
7. DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(2) OF THIS PERMIT.

B. COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING REPORTS, (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION) OR OTHER REPORTS REQUESTED BY THE EPD, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT AND ALL OTHER RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED BY THE PERMITTEE WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE N.O.T. IS SUBMITTED IN ACCORDANCE WITH PART VI OF THIS PERMIT. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS OR AT A DESIGNATED ALTERNATIVE LOCATION ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

C. REPORT SUBMITTAL (TO BE COMPLETED BY PRIMARY PERMITTEE)
1. ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD.

D. INSPECTIONS (TO BE COMPLETED BY PRIMARY PERMITTEE)
1. PERMITTEE REQUIREMENTS.
(A). EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT: (A) ALL AREAS AT THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT; AND (B) ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT FROM THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING; THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.
(B). MEASURE RAINFALL ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY UNTIL A NOTICE OF TERMINATION IS SUBMITTED. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION.
(C). CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY OR ANY NON-WORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST):
(1). DISTURBED AREAS OF THE PRIMARY PERMITTEE'S CONSTRUCTION SITE.
(2). AREAS USED BY THE PRIMARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION; AND
(3). STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST COMPLY WITH PART IV.D.4a(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.

(D). CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION IS RECEIVED BY EPD) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S).

(E). BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION.

(F). A REPORT OF EACH INSPECTION THAT INCLUDES THE NAME(S) OF CERTIFIED PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (INITIAL, INTERMEDIATE, OR FINAL) MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.A.(5). OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY THE END OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AND SHALL IDENTIFY ALL INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN. WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS, THE INSPECTION REPORT SHALL CONTAIN A CERTIFICATION THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN AND THIS PERMIT. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G.2 OF THIS PERMIT.

IX. NOTICE OF TERMINATION ELIGIBILITY

A. NOTICE OF TERMINATION SIGNED IN ACCORDANCE WITH PART V.G.1 OF THE PERMIT MUST BE SUBMITTED:
1. FOR CONSTRUCTION ACTIVITIES, BY THE PERMITTEE WHERE THE ENTIRE STAND ALONE DEVELOPMENT HAS UNDERGONE FINAL STABILIZATION, ALL STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY THAT ARE AUTHORIZED BY THIS PERMIT HAVE CEASED, THE SITE IS IN COMPLIANCE WITH THIS PERMIT AND ALL TEMPORARY BMPS HAVE BEEN REMOVED. FOR CONSTRUCTION ACTIVITIES WHERE THE PRIMARY PERMITTEE HAS ELECTED TO SUBMIT NOIs FOR SEPARATE PHASES OF THE STAND ALONE DEVELOPMENT, THE PHASE OR PHASES OF THE STAND ALONE DEVELOPMENT OF HTE NOT SHALL CORRESPOND TO THE PHASE OR PHASES OF THE NOI.
2. BY THE OWNER OR OPERATOR WHEN THE OWNER OR OPERATOR OR BOTH OF THE SITE CHANGES. WHERE STORM WATER DISCHARGES WILL CONTINUE AFTER THE IDENTITY OF THE OWNER OR OPERATOR CHANGES, THE PERMITTEE MUST, PRIOR TO FILING THE NOTICE OF TERMINATION, NOTIFY ANY SUBSEQUENT OWNER OR OPERATOR OF THE PERMITTED SITE AS TO THE REQUIREMENTS OF THIS PERMIT.

B. THE NOTICE OF TERMINATION SHALL BE SUBMITTED BY THE FOLLOWING PROCEDURE (TO BE COMPLETED BY PRIMARY PERMITTEE). ALL NOTICES OF TERMINATION BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD (ACCORDING TO THE SCHEDULE IN APPENDIX A OF THE PERMIT). IF AN ELECTRONIC SUBMITTAL SERVICE IS PROVIDED BY THE EPD THEN THE NOTICE OF TERMINATION MAY BE SUBMITTED ELECTRONICALLY; IF REQUIRED, A PAPER COPY MUST ALSO BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL OR SIMILAR SERVICE.

X. DESIGNER CERTIFICATION

"I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GEORGIA NPDES PERMIT NO. GAR 100001."

"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION."

SIGNATURE: _____
MICHAEL T. CHILSON
GSWCC LEVEL II DESIGN PROFESSIONAL #0000072142

DATE: _____

XI. 7-DAY BMP INSPECTION BY DESIGN PROFESSIONAL

A. THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPS WITHIN 7 DAYS AFTER THE INSTALLATION.

B. THE BELOW STATEMENT IS TO BE SIGNED BY THE DESIGN PROFESSIONAL AFTER CONSTRUCTION HAS BEGUN AND INITIAL SEDIMENT STORAGE AND PERIMETER CONTROL BMPS HAVE BEEN INSTALLED AND INSPECTED.

C. THE DESIGN PROFESSIONAL WAS NOTIFIED ON _____ THAT LAND DISTURBANCE ACTIVITIES HAD BEGUN ON THE SUBJECT PROJECT. AS REQUIRED BY THE GEORGIA NPDES PERMIT NO. GAR 100001, AN INSPECTION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPS WAS CONDUCTED BY THE DESIGN PROFESSIONAL ON _____. A COPY OF THE INSPECTION LETTER CAN BE OBTAINED FROM THE OWNER OR DESIGN PROFESSIONAL.

SIGNATURE: _____

DATE: _____

GSWCC GEORGIA SOIL AND WATER CONSERVATION COMMISSION
MICHAEL T. CHILSON
LEVEL II DESIGN PROFESSIONAL
CERTIFICATION NUMBER 0000072142
ISSUED: 09/10/2017 EXPIRES: 09/10/2020

GEORGIA SAFE DAMS PROGRAM

GEORGIA REGISTERED PROFESSIONAL ENGINEER MICHAEL THOMAS CHILSON
MICHAEL T. CHILSON
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 036075

NOVEMBER 2018 - ISSUED FOR PERMITTING & CONSTRUCTION

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
2	11/2018	MTC	REV. SHEET FOR LATEST REVISION	RMS	GLH	MTC
1	07/1916	MTC	CHANGE LEVEL II DESIGN PROFESSIONAL	RMS	GLH	MTC

CLIENT
GEORGIA POWER COMPANY /
SOUTHERN COMPANY SERVICES

Southern Company

PROJECT
PLANT MCDONOUGH
ASH POND NO. 3 & 4 CLOSURE PLAN

TITLE
EROSION, SEDIMENT & POLLUTION CONTROL NOTES - SHEET 3 OF 4

CONSULTANT
GOLDER

YYYY-MM-DD	2017-02-17
DESIGNED	GLH
PREPARED	RMS
REVIEWED	WRS
APPROVED	MTC

PROJECT NO.	PROJECT ID	REV.	SHEET
1539180	MCD15017	4	ES9

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EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
STAND ALONE CONSTRUCTION PROJECTS

SWCD: Cobb County (Region 1)

Project Name: Pland McDonough Ash Pond No. 3 & 4 Closure Plan **Address:** South Cobb Drive

City/County: Cobb County **Date on Plans: February 1, 2016**

TO BE SHOWN ON ES&PC PLAN

Plan Page #	Included Y/N	
ES10	Y	1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted. (The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed)
ES0-ES17	Y	2 Level II certification number issued by the Commission, signature and seal of the certified design professional. (Signature, seal and Level II number must be on each sheet pertaining to ES&PC plan or the Plan will not be reviewed)
N/A	N	3 Limits of disturbance shall be no greater than 50 acres at any one time without prior written authorization from the EPD District Office. If EPD approves the request to disturb 50 acres or more at any one time, the plan must include at least 4 of the BMPs listed in Appendix 1 of this checklist.* (A copy of the written approval by EPD must be attached to the plan for the plan to be reviewed.)
ES0, ES7	Y	4 The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls.
ES7	Y	5 Provide the name, address and phone number of primary permittee.
ES7	Y	6 Note total and disturbed acreage of the project or phase under construction.
ES1 - ES5	Y	7 Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.
ALL	Y	8 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
ES7	Y	9 Description of the nature of construction activity.
ES0 - ES7	Y	10 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
ES7	Y	11 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
ES9	Y	12 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on page 15 of the permit.
ES9	Y	13 Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on page 15 of the permit.*
ES7, ES9	Y	14 Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation."*
ES8	Y	15 Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25 feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."*
N/A	N	16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
ES7	Y	17 Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional."*
ES8	Y	18 Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a section 404 permit."*
ES7	Y	19 Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."
ES7	Y	20 Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
ES7	Y	21 Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
N/A	N	22 Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of an Biota Impaired Stream Segment must comply with Part III. C. of the Permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment.*
N/A	N	23 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site specific conditions or requirements included in the TMDL Implementation Plan.*
ES11, ES8	Y	24 BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited.*
ES8	Y	25 Provide BMPs for the remediation of all petroleum spills and leaks.
ES7	Y	26 Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed.*

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
STAND ALONE CONSTRUCTION PROJECTS

SWCD: Cobb County (Region 1)

Project Name: Pland McDonough Ash Pond No. 3 & 4 Closure Plan **Address:** South Cobb Drive

City/County: Cobb County **Date on Plans: February 1, 2016**

TO BE SHOWN ON ES&PC PLAN

Plan Page #	Included Y/N	
ES7	Y	27 Description of the practices that will be used to reduce the pollutants in storm water discharges.*
ES7, ES8	Y	28 Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).
ES9	Y	29 Provide complete requirements of inspections and record keeping by the primary permittee.*
ES8, ES9	Y	30 Provide complete requirements of sampling frequency and reporting of sampling results.*
ES9	Y	31 Provide complete details for retention of records as per Part IV.F. of the permit.*
ES8	Y	32 Description of analytical methods to be used to collect and analyze the samples from each location.*
N/A	N	33 Appendix B rationale for NTU values at all outfall sampling points where applicable.*
ES1 to ES7	Y	34 Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged.*
ES7	Y	35 A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the plan may combine all of the BMPs into a single phase.*
ES0 - ES7	Y	36 Graphic scale and North arrow.
ES1 - ES6	Y	37 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

Map Scale	Ground Slope	Contour Intervals, ft
1 inch = 100ft or larger scale	Flat 0 - 2%	0.5 or 1
	Rolling 2 - 8%	1 or 2
	Steep 8% +	2,5 or 10

Plan Page #	Included Y/N	
N/A	N	38 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.org.
N/A	N	39 Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition.*
ES1 - ES6	Y	40 Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to state waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.
ES1 - ES6	Y	41 Delineation of on site wetlands and all state waters located on and within 200 feet of the project site.
ES7	Y	42 Delineation and acreage of contributing drainage basins on the project site.
ES7	Y	43 Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions.*
ES7	Y	44 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
ES13	Y	45 Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
ES1, ES7	Y	46 Soil series for the project site and their delineation.
ES1 - ES6	Y	47 The limits of disturbance for each phase of construction.
ES1 - ES5, ES7, ES17	Y	48 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual included for structural BMP's and all calculations used by the storage design professional to obtain the required sediment when using equivalent controls. When discharging from sediment basins and impoundments, permitees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasable, a written justification explaining this decision must be included in the plan.
ES1 - ES6	Y	49 Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
STAND ALONE CONSTRUCTION PROJECTS

SWCD: Cobb County (Region 1)

Project Name: Pland McDonough Ash Pond No. 3 & 4 Closure Plan **Address:** South Cobb Drive

City/County: Cobb County **Date on Plans: February 1, 2016**

TO BE SHOWN ON ES&PC PLAN

Plan Page #	Included Y/N	
[illegible]	Y	[illegible]
[illegible]	Y	[illegible]

[illegible] Effective January 1, 2016

GSWCC GEORGIA SOIL AND WATER CONSERVATION COMMISSION

MICHAEL T. CHILSON
LEVEL II DESIGN PROFESSIONAL

CERTIFICATION NUMBER **0000072142**
ISSUED: **08/29/2014** EXPIRES: **08/29/2017**

GEORGIA SAFE DAMS PROGRAM

GEORGIA REGISTERED No. 036075 PROFESSIONAL ENGINEER MICHAEL THOMAS CHILSON

MICHAEL T. CHILSON
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 036075

SEPTEMBER 2017 - ISSUED FOR APPROVAL & CONSTRUCTION

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
3	07/1916	MTC	CHANGE LEVEL II DESIGN PROFESSIONAL	RMS	GLH	MTC

CLIENT
GEORGIA POWER COMPANY / SOUTHERN COMPANY SERVICES

Southern Company

PROJECT
PLANT MCDONOUGH
ASH POND NO. 3 & 4 CLOSURE PLAN

TITLE
EROSION, SEDIMENT & POLLUTION CONTROL NOTES - SHEET 4 OF 4

CONSULTANT
GOLDER

YYYY-MM-DD	2017-02-17
DESIGNED	GLH
PREPARED	RMS
REVIEWED	WRS
APPROVED	MTC

PROJECT NO. 1539180 PROJECT ID MCD15017 REV. 3 SHEET ES10

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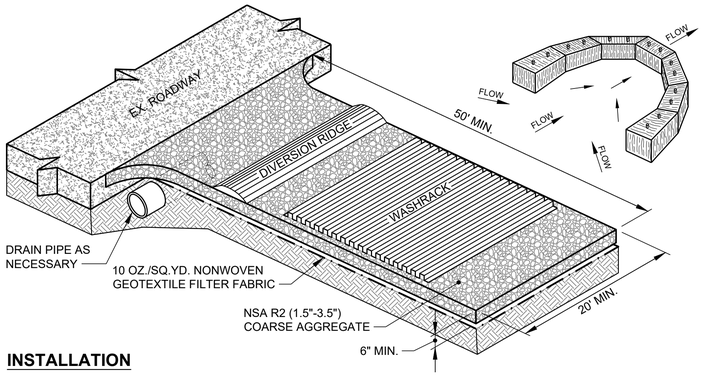


INSTALLATION

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 BE 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.

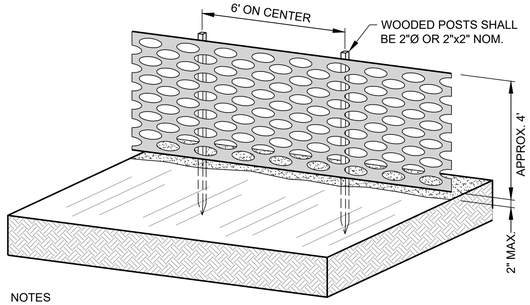
MAINTENANCE AND INSPECTION

1. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSTED 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).

2. WASHRACKS AND/OR TIRE WASHER MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCES. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVES MUD AND DIRT.

3. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW FOR MUD ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

Co / ES11 — CONSTRUCTION EXIT
NTS



NOTES

1. DISTANCE OF FENCING FROM CENTER OF TREE IS INDICATED ON PROJECT TREE PRESERVATION PLAN. WHERE APPLICABLE, OFFSET 4'-6' FROM TREE.

2. TREE PROTECTION SHALL BE BRIGHT ORANGE POLYETHYLENE FENCE FABRIC.

3. JOINTS SHALL OVERLAP A MINIMUM OF 12 INCHES.

4. DRIVE 6 FOOT (72") POSTS 12"-18" INTO SOIL.

5. BARRIER SHALL BE KEPT IN GOOD CONDITION FOR THE DURATION OF THE PROJECT AND IS TO REMAIN IN PLACE UNTIL THE NOTICE OF TERMINATION.

Tr / ES11 — ORANGE BARRIER FENCE
NTS

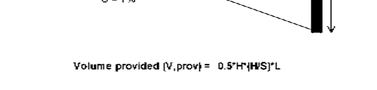
CALCULATION OF PROVIDED SEDIMENT STORAGE BY SD1-S

For Area Draining to Monitoring Point AP-3/4-4

Total Disturbed Area (DA):	1.1	acres
Required Storage Volume (Vol) =	1,990	cubic feet
Required Sediment Storage:	73.7	cubic yards

Vol = 67 cubic yds (*.809 cubic ft)/acre

Sediment storage provided behind sediment barriers.

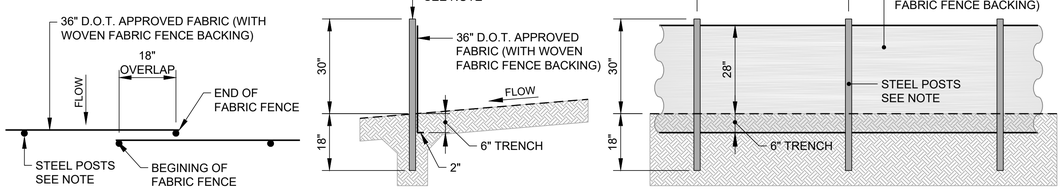


Volume provided (V,prov) = 0.5*H*(H/S)*L

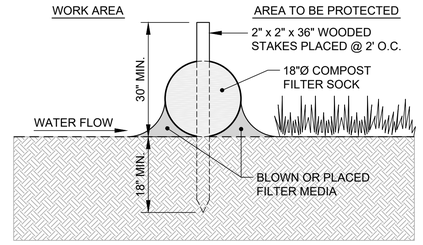
Silt Fence Cross Section Height, H =	1.5	ft
Maximum Slope, S =	0.07	ft/ft
Silt Fence Planview Length, L =	250	ft/ft
V, prov =	4018	cubic feet = 149 cubic yards V,prov > Vs

NOTE

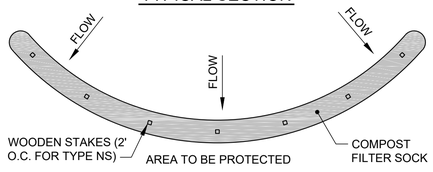
POSTS SHALL BE STEEL OR AS SPECIFIED ON EROSION, SEDIMENT & POLLUTION CONTROL PLAN.



SD1-S / ES11 — SEDIMENT BARRIER TYPE SENSITIVE
NTS



TYPICAL SECTION



PLAN

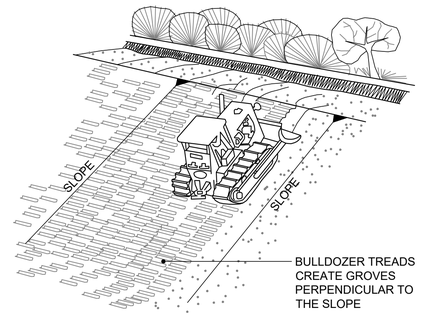
SD1-CFS / ES11 — COMPOST FILTER SOCK △1
NTS

SEDIMENT BARRIER NOTES

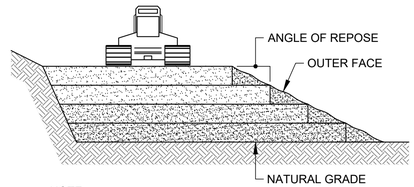
1. SEDIMENT SHALL BE REMOVED ONCE IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER.

2. SEDIMENT BARRIERS SHALL BE REPLACED WHENEVER THEY HAVE DETERIORATED TO SUCH AN EXTENT THAT THE EFFECTIVENESS OF THE PRODUCT IS REDUCED (APPROXIMATELY SIX MONTHS) OR THE HEIGHT OF THE PRODUCT IS NOT MAINTAINING 80% OF ITS PROPERLY INSTALLED HEIGHT.

3. TEMPORARY SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. ALL SEDIMENT ACCUMULATED AT THE BARRIER SHALL BE REMOVED AND PROPERLY DISPOSED OF BEFORE THE BARRIER IS REMOVED.



TRACKING

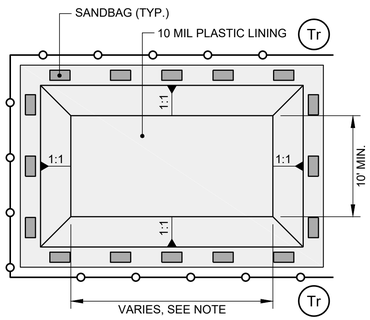


NOTE

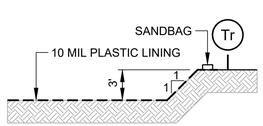
EACH LIFT OF THE FILL IS COMPACTED, BUT THE OUTER FACE OF THE SLOPE IS ALLOWED TO REMAIN LOOSE SO THAT THE ROCK, CLODS, ETC. REACH THE NATURAL ANGLE OF REPOSE.

SLOPE FILL TREATMENT

Su / ES11 — SURFACE ROUGHING
NTS



PLAN



TYPICAL SECTION

WASHOUT PROCEDURES

1. A SIGN SHALL BE INSTALLED WITHIN 30 FEET OF EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES. WASHOUT FACILITY SHALL BE BOUND ON THREE SIDES WITH ORANGE TREE PROTECTION FENCE TO MARK LOCATION.

2. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.

3. TEMPORARY WASHOUT FACILITIES SHALL HAVE A TEMPORARY PIT OR BERMED AREA OF SUFFICIENT VOLUME TO COMPLETELY CONTAIN ALL LIQUID AND WASTE CONCRETE MATERIALS GENERATED DURING WASHOUT PROCEDURES.

4. PERFORM WASHOUT OF CONCRETE MIXERS, DELIVERY TRUCKS, AND OTHER DELIVERY SYSTEMS IN DESIGNATED AREAS ONLY.

5. WASH CONCRETE ONLY FROM MIXER CHUTES INTO APPROVED CONCRETE WASHOUT FACILITY. WASHOUT MAY BE COLLECTED IN AN IMPERMEABLE BAG OR OTHER IMPERMEABLE CONTAINMENT DEVICES FOR DISPOSAL.

6. PUMP EXCESS IN CONCRETE PUMP BIN BACK INTO CONCRETE MIXER TRUCK.

7. CONCRETE WASHOUT FROM CONCRETE PUMPER BINS CAN BE WASHED INTO CONCRETE PUMPER TRUCKS AND DISCHARGED INTO DESIGNATED WASHOUT AREA OR PROPERLY DISPOSED OFFSITE.

8. ONCE CONCRETE WASTES ARE WASHED INTO THE DESIGNATED AREA AND ALLOWED TO HARDEN, THE CONCRETE SHALL BE BROKEN UP, REMOVED, AND DISPOSED OF IN AN APPROVED INERT LANDFILL.

9. PLASTIC LINING MATERIAL SHALL BE A MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND SHALL BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL. LINER SEAMS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.

10. THE SOIL BASE SHALL BE PREPARED FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE PLASTIC LINING MATERIAL.

MAINTENANCE AND INSPECTION

1. TEMPORARY WASHOUT FACILITIES SHALL BE MAINTAINED TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM FREEBOARD OF 12 INCHES. MAINTAINING TEMPORARY CONCRETE WASHOUT FACILITIES SHALL INCLUDE REMOVING AND DISPOSING OF HARDENED CONCRETE AND RETURNING THE FACILITIES TO A FUNCTIONAL CONDITION. HARDENED CONCRETE MATERIALS SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED INERT LANDFILL.

2. EXISTING FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75% FULL.

3. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE INSPECTED FOR DAMAGE (I.E. TEARS IN POLYETHYLENE, MISSING SANDBAGS, ETC.). DAMAGED FACILITIES SHALL BE REPAIRED.

CWM / ES11 — CONCRETE WASTE MANAGEMENT
NTS

SEPTEMBER 2017 - ISSUED FOR APPROVAL & CONSTRUCTION

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
△1	07/1916	MTC	REV. SD1-CFS, CHANGE LEVEL II DESIGN PROFESSIONAL	RMS	GLH	MTC

CLIENT
GEORGIA POWER COMPANY / SOUTHERN COMPANY SERVICES

Southern Company

PROJECT
PLANT MCDONOUGH
ASH POND NO. 3 & 4 CLOSURE PLAN

TITLE
EROSION, SEDIMENT & POLLUTION CONTROL DETAILS - SHEET 1 OF 7

GEORGIA SAFE DAMS PROGRAM

GSWCC GEORGIA SOIL AND WATER CONSERVATION COMMISSION
MICHAEL T. CHILSON
LEVEL II DESIGN PROFESSIONAL
CERTIFICATION NUMBER 0000072142
ISSUED: 08/29/2014 EXPIRES: 08/29/2017

GEORGIA REGISTERED No. 036075 PROFESSIONAL ENGINEER MICHAEL THOMAS CHILSON
MICHAEL T. CHILSON
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 036075

CONSULTANT
GOLDER

YYYY-MM-DD	2017-02-17
DESIGNED	GLH
PREPARED	RMS
REVIEWED	WRS
APPROVED	MTC

PROJECT NO.	PROJECT ID	REV.	SHEET
1539180	MCD15017	3	ES11

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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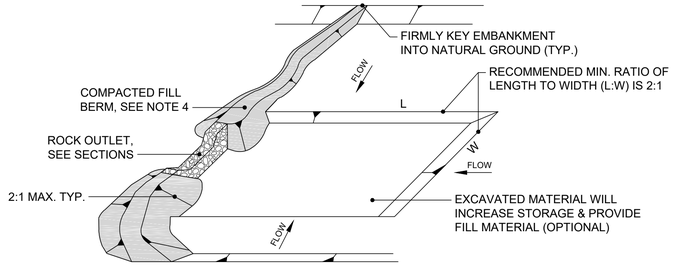

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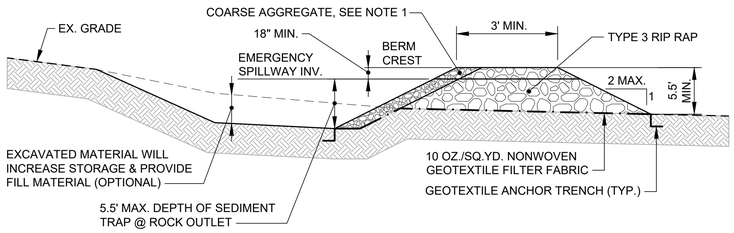
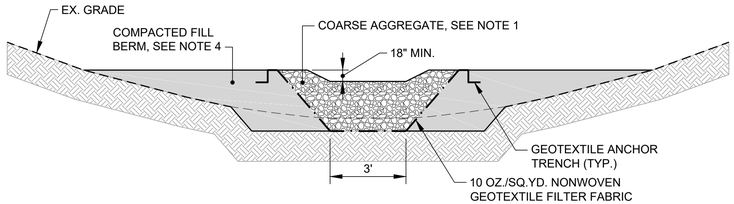


LONGITUDINAL SECTION



LATERAL SECTION

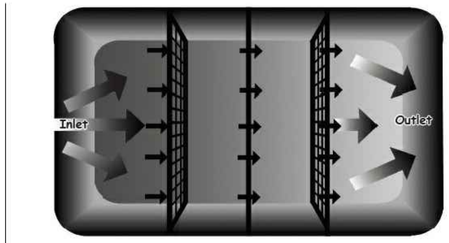
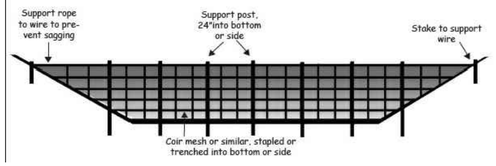


Figure 6.65a Porous baffles in a sediment basin. The flow is distributed evenly across the basin to reduce flow rates and turbulence, resulting in greater sediment retention.

Baffles need to be installed correctly in order fully provide their benefits. Refer to Figure 6.65b and the following key points:

- The baffle material needs to be secured at the bottom and sides using staples or by trenching as for silt fence.
- Most of the sediment will accumulate in the first bay, so this should be readily accessible for maintenance.



BAFFLE DETAIL

NOTES

1. COARSE AGGREGATE SHALL BE GDOT NO.3, NO.4 OR NO.57 CRUSHED STONE.

2. SEDIMENT SHALL BE REMOVED WHEN IT REACHES ONE-THIRD THE ORIGINAL STORAGE CAPACITY SEDIMENT TRAP.

3. DIMENSIONS SHOWN ARE MINIMUM REQUIREMENTS. CONTRACTOR SHALL SIZE SEDIMENT TRAP TO FACILITATE CONSTRUCTION PRACTICES.

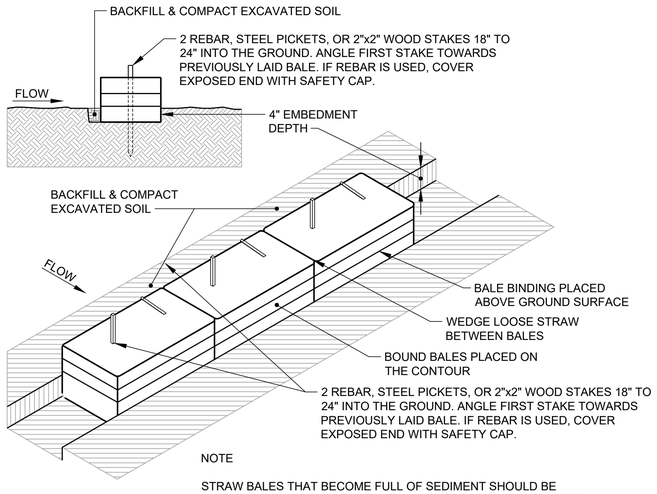
4.COMPACTED FILL SHALL BE PLACED IN 6 INCH MAXIMUM LIFTS.

5. THE CLEANOUT VOLUME FOR TEMPORARY SEDIMENT TRAP IS 1/3 OF THE TOTAL STORAGE VOLUME. CLEANOUT VOLUME SHALL BE CALCULATED AND MARKED WITH A STAKE AT THE OUTLET OF THE TRAP.

REFERENCE

1. BAFFLE DETAIL FROM: NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, 2013.

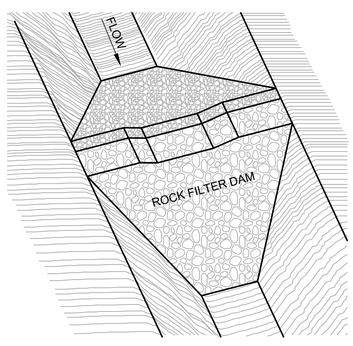
SD4-C / ES12 TEMPORARY SEDIMENT TRAP
NTS



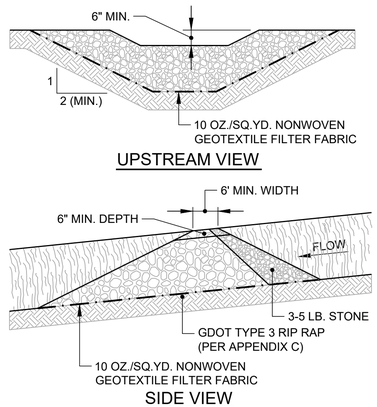
NOTE

STRAW BALES THAT BECOME FULL OF SEDIMENT SHOULD BE REMOVED AND PLACED AWAY FROM THE TEMPORARY SEDIMENT TRAP AND REPLACED WITH FRESH BALES.

SD1-HB / ES12 SEDIMENT BARRIER/CHECK DAM - STRAW BALE
NTS



ISOMETRIC VIEW



UPSTREAM VIEW

SIDE VIEW

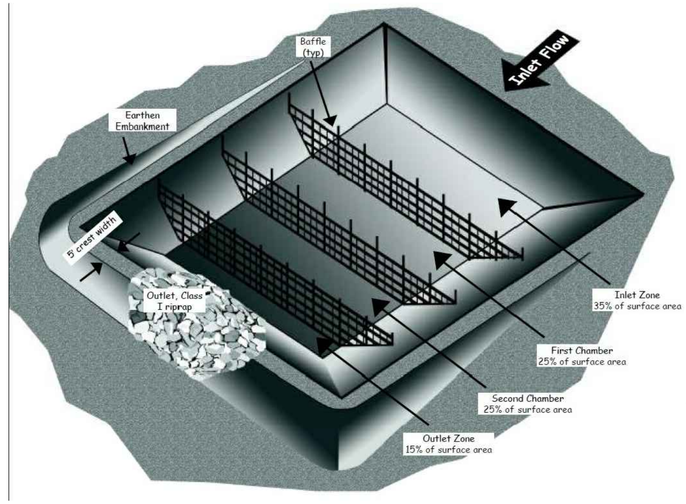
NOTES

1. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED FOR ROCK FILTER DAMS.

2. SEDIMENT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF ONE-HALF OF THE ORIGINAL HEIGHT OF THE ROCK FILTER DAM.

3. ROCK FILTER DAMS SHOULD BE REMOVED ONCE DISTURBED AREAS HAVE BEEN STABILIZED.

Rd / ES12 ROCK FILTER DAM
NTS



BAFFLE ISOMETRIC

TEMPORARY SEDIMENT TRAP DESIGN

For Area Draining to Monitoring Point AP3/4-3

Disturbed Area (DA) =	1.00	acres
Required Storage Volume (Vol) =	1,839	cubic feet

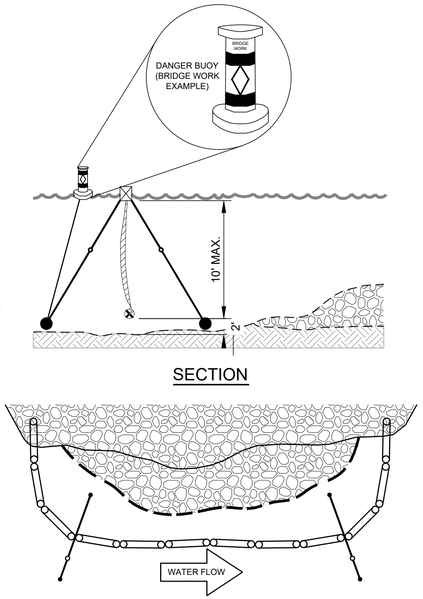
Vol = 67 cubic yds ,1656 cubic feet

Basin Side Slope =	2	H:V
Length to Width Ratio =	2	L:W

Design Trap Size

	Bottom	Spillway	Top
Base Length =	30	42	48
Base Width =	15	27	24
Area (A) =	450	882	1152

Depth below Spillway =	3.0	feet	Cleanout Volume (1/3 Total) = 1231.5
Depth above Spillway =	1.5	feet	Cleanout Depth = 1.5
Total Pond Depth =	4.5	feet	
Storage below Pond Spillway =	1968.0	cubic feet	
Total Pond Design Storage =	3664.5	cubic feet	



SECTION

PLAN

NOTES

1. SILT CURTAINS SHOULD BE ORIENTED PARALLEL TO THE DIRECTION OF FLOW.

2. FOR SITES NOT SUBJECT TO HEAVY WAVE ACTION, THE CURTAIN HEIGHT SHALL PROVIDE SUFFICIENT SLACK TO ALLOW THE TOP OF THE CURTAIN TO RISE TO THE MAXIMUM EXPECTED HIGH-WATER LEVEL (INCLUDING WAVES) WHILE THE BOTTOM MAINTAINS CONTINUOUS CONTACT WITH THE BOTTOM OF THE WATER BODY. THE BOTTOM EDGE OF THE CURTAIN SHALL HAVE A WEIGHT SYSTEM CAPABLE OF HOLDING THE BOTTOM OF THE CURTAIN DOWN AND CONFORMING TO THE BOTTOM OF THE WATER BODY, SO AS TO PROHIBIT ESCAPE OF TURBID WATER UNDER THE CURTAIN.

3. THE SILT CURTAIN SHALL BE LOCATED BEYOND THE LATERAL LIMITS OF THE CONSTRUCTION SITE AND FIRMLY ANCHORED INTO PLACE (THE ALIGNMENT SHOULD BE SET AS CLOSE TO THE WORK AREA AS POSSIBLE BUT NO SO CLOSE AS TO BE DISRUPTED BY CONSTRUCTION EQUIPMENT).

4. DANGER BUOYS SHALL BE USED AS DIRECTED BY THE COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERS.

5. THE ENDS OF THE SILT CURTAIN SHALL BE SECURELY ANCHORED AND KEYED IN ORDER TO ENCLOSE AREA.

6. A GENERAL RULE OF THUMB FOR ATTACHING ANCHORS IS TO DO SO AT 100' INTERVALS (DEPENDING ON CURRENT AND TIDAL CONDITIONS, IT MAY BE NECESSARY TO ANCHOR THE BARRIER ON BOTH SIDES-AS SHOWN).

7. THE TURBIDITY CURTAIN SHOULD BE REMOVED AFTER FINAL STABILIZATION OF THE CONTRIBUTING DRAINAGE AREA AND PERIMETER CONTROL REMOVAL AS OCCURRED.

Tc / ES12 TURBIDITY CURTAIN
NTS

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
1	07/1916	MTC	CHANGE LEVEL II DESIGN PROFESSIONAL	RMS	GLH	MTC

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GSWCC GEORGIA SOIL AND WATER CONSERVATION COMMISSION

MICHAEL T. CHILSON
LEVEL II DESIGN PROFESSIONAL
CERTIFICATION NUMBER 0000072142
ISSUED: 08/29/2014 EXPIRES: 08/29/2017

GEORGIA SAFE DAMS PROGRAM

GEORGIA REGISTERED No. 036075 PROFESSIONAL ENGINEER MICHAEL THOMAS CHILSON

MICHAEL T. CHILSON
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 036075

CLIENT
GEORGIA POWER COMPANY /
SOUTHERN COMPANY SERVICES

Southern Company

PROJECT
PLANT MCDONOUGH
ASH POND NO. 3 & 4 CLOSURE PLAN

TITLE
EROSION, SEDIMENT & POLLUTION CONTROL DETAILS - SHEET 2 OF 7

CONSULTANT
GOLDER

YYYY-MM-DD	2017-02-17
DESIGNED	GLH
PREPARED	RMS
REVIEWED	WRS
APPROVED	MTC

PROJECT NO.	PROJECT ID	REV.	SHEET
1539180	MCD15017	3	ES12

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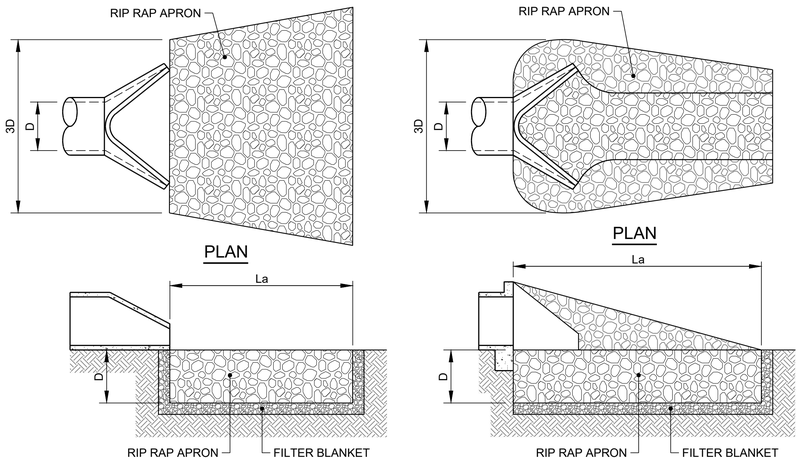


PLAN

SECTION

PIPE OUTLET TO FLAT AREA

PLAN

SECTION

PIPE OUTLET TO WELL DEFINED CHANNEL

NOTES

1. ENSURE THAT THE SUBGRADE FOR THE FILTER AND RIP RAP FOLLOWS THE REQUIRED LINES AND GRADES SHOWN IN THE PLAN. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO THE DENSITY OF THE SURROUNDING UNDISTURBED MATERIAL. LOW AREAS IN THE SUBGRADE ON UNDISTURBED SOIL MAY ALSO BE FILLED BY INCREASING THE RIP RAP THICKNESS.

2. THE RIP RAP AND GRAVEL FILTER MUST CONFORM TO THE SPECIFIED GRADING LIMITS SHOWN ON THE PLANS. IN A WELL-DEFINED CHANNEL, EXTEND THE APRON UP THE CHANNEL BANKS TO THE ELEVATION OF SIX INCHES OF THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK (WHICHEVER IS LESS).

3. GEOTEXTILE MUST MEET DESIGN REQUIREMENTS AND BE PROPERLY PROTECTED FROM PUNCHING OR TEARING DURING INSTALLATION. REPAIR ANY DAMAGE BY REMOVING THE RIP RAP AND PLACING ANOTHER PIECE OF FILTER FABRIC OVER THE DAMAGED AREA. ALL CONNECTING JOINTS SHOULD OVERLAP A MINIMUM OF 1 FT. IF THE DAMAGE IS EXTENSIVE, REPLACE THE ENTIRE FILTER FABRIC.

4. RIP RAP MAY BE PLACED BY EQUIPMENT, BUT TAKE CARE TO AVOID DAMAGING THE FILTER.

5. THE MINIMUM THICKNESS OF THE RIP RAP SHOULD BE 1.5 TIMES THE MAXIMUM STONE DIAMETER

6. CONSTRUCT THE APRON ON ZERO GRADE WITH NO OVERFALL AT THE END. MAKE THE TOP OF THE RIP RAP AT THE DOWNSTREAM END LEVEL WITH THE RECEIVING AREA OR SLIGHTLY BELOW IT.

7. ENSURE THAT THE APRON IS PROPERLY ALIGNED WITH THE RECEIVING STREAM AND PREFERABLY STRAIGHT THROUGHOUT ITS LENGTH. IF A CURVE IS NEEDED TO FIT SITE CONDITIONS, PLACE IT IN THE UPPER SECTION OF THE APRON.

8. IMMEDIATELY AFTER CONSTRUCTION, STABILIZE ALL DISTURBED AREAS WITH VEGETATION.

9. STONE QUALITY - SELECT STONE FOR RIP RAP FROM FIELD STONE OR QUARRY STONE. THE STONE SHOULD BE HARD, ANGULAR, AND HIGHLY WEATHER-RESISTANT. THE SPECIFIC GRAVITY OF THE INDIVIDUAL STONES SHOULD BE AT LEAST 2.5.

10. FILTER - INSTALL A FILTER TO PREVENT SOIL MOVEMENT THROUGH THE OPENINGS IN THE RIP RAP. THE FILTER SHOULD CONSIST OF A GRADED GRAVEL LAYER OR A SYNTHETIC FILTER CLOTH.

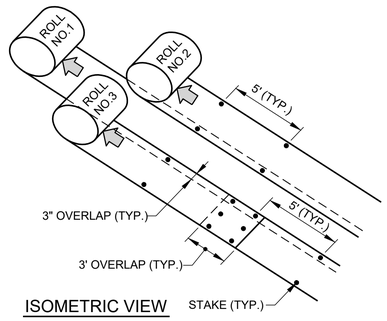
11. INSPECT RIP RAP OUTLET STRUCTURES AFTER HEAVY RAINS TO SEE IF ANY EROSION AROUND OR BELOW THE RIP RAP HAS TAKEN PLACE OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

RIP RAP APRON DIMENSIONS

*

St ES13 RIP RAP OUTLET PROTECTION

NTS



ISOMETRIC VIEW

NOTES

1. START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.

2. FIRST ROLL IS CENTERED LONGITUDINALLY IN MID CHANNEL AND PINNED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT.

3. SUBSEQUENT ROLLS FOLLOW IN STAGGERED. SEQUENCE BEHIND FIRST ROLL. USE CENTER ROLL FOR ALIGNMENT TO CHANNEL CENTER.

4. WORK OUTWARDS FROM CHANNEL CENTER TO EDGE. E. USE 3 INCH OVERLAP AND STAKE AT 5 FOOT INTERVALS ALONG SEAMS.

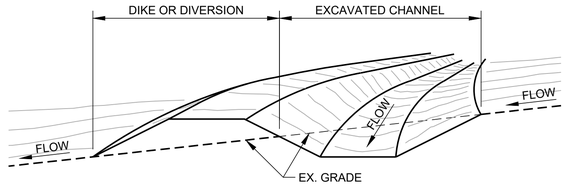
5. USE 3 FOOT OVERLAP AND SHINGLE DOWNSTREAM TO CONNECT LINING AT ROLL ENDS.

6. MAT SHALL BE SECURED AT UPSTREAM AND DOWNSTREAM ENDS USING STAKES AND ENTRENCHMENT. INTERMEDIATE STAKES SHALL BE USED TO ENSURE INTIMATE CONTACT BETWEEN MATS AND SUBGRADE.

7. ALL EROSION CONTROL BLANKETS AND MATTING SHOULD BE INSPECTED PERIODICALLY FOLLOWING INSTALLATION, PARTICULARLY AFTER RAINSTORMS TO CHECK FOR EROSION AND UNDERMINING. ANY DISLOCATION OR FAILURE SHOULD BE REPAIRED IMMEDIATELY. IF WASHOUTS OR BREAKAGE OCCURS, REINSTALL THE MATERIAL AFTER REPAIRING DAMAGE TO THE SLOPE OR DITCH. CONTINUE TO MONITOR THESE AREAS UNTIL THEY BECOME PERMANENTLY STABILIZED.

Ss ES13 EROSION CONTROL MATTING

NTS



NOTES

1. REMOVE TREES, BRUSH, STUMPS AND OTHER OBJECTIONABLE MATERIAL.

2. EXCAVATE NARROW, DEEP CHANNELS ON STEEPS AND BROAD, SHALLOW CHANNELS ON GENTLE SLOPES. SIDE SLOPES SHOULD BE 2:1 OR FLATTER. CHANNEL CROSS-SECTION SHOULD BE TRAPEZOIDAL OR PARABOLIC IN SHAPE.

3. COMPACT ALL FILLS.

4. ADEQUATE OUTLET MUST BE PRESENT.

5. STABILIZE CHANNEL AND OUTLET WITH VEGETATION (MULCH REQUIRED FOR ALL SEEDED OR SPRIGGED CHANNELS), RIP RAP, OR PAVEMENT.

6. DISPOSE OF AND/OR STABILIZED UNNEEDED EXCAVATED MATERIAL.

Di ES13 TEMPORARY DIVERSION BERM

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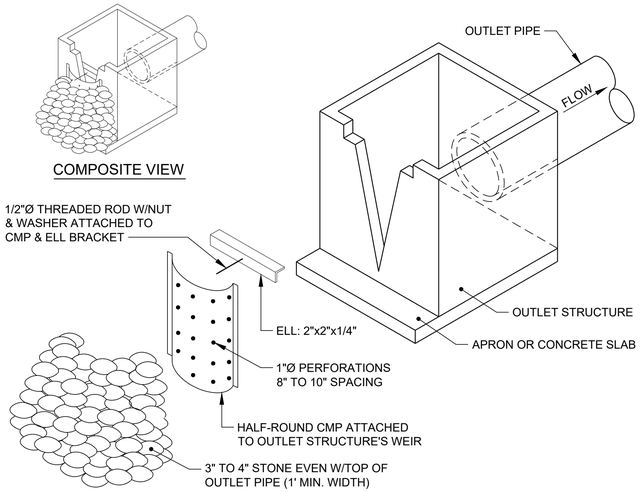

NOTES

INSTALLATION

1. HALF-ROUND CMP DIAMETER SHOULD BE 1.5 TIMES THE DIAMETER OF THE OUTLET PIPE OR WIDER THAN THE GREATEST WIDTH OF THE CONCRETE WEIR.

2. ATTACH TO OUTLET STRUCTURE, BUT NEVER ON EXPOSED PIPE OR WINGED HEADWALL.

3. DRAINAGE AREA NOT TO EXCEED 30 ACRES.

STONE FILTER RING

1. STONE FILTER RING SHALL HAVE A MINIMUM HEIGHT OF 2 FEET, AND A MINIMUM DISTANCE OF 8 TO 10 FEET BETWEEN RETROFIT AND RING.

2. OUTLET PIPE WITH DIAMETER LARGER THAN 12 INCHES REQUIRES 10 TO 15 INCH STONE, FACED WITH SMALLER FILTER STONE.

MAINTENANCE

1. RETROFIT STRUCTURES SHALL BE KEPT CLEAR OF TRASH AND DEBRIS. THIS WILL REQUIRE CONTINUOUS MONITORING AND MAINTENANCE, WHICH INCLUDES SEDIMENT REMOVAL WHEN ONE-THIRD OF THE SEDIMENT STORAGE CAPACITY HAS BEEN LOST. **STRUCTURES ARE TEMPORARY AND SHALL BE REMOVED WHEN DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.**

Rt ES13 RETROFITTING

NTS

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3	08/09/16	MTC	ADD DI DETAIL	RMS	GLH	MTC
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DEFINITION
THE PLANTING OF PERENNIAL VEGETATION SUCH AS TREES, SHRUBS, VINES, GRASSES, OR LEGUMES ON EXPOSED AREAS FOR FINAL PERMANENT STABILIZATION. PERMANENT PERENNIAL VEGETATION SHALL BE USED TO ACHIEVE FINAL STABILIZATION.

CONDITIONS
PERMANENT PERENNIAL VEGETATION IS USED TO PROVIDE A PROTECTIVE COVER FOR EXPOSED AREAS INCLUDING CUTS, FILLS, DAMS, AND OTHER DENUDED AREAS.

SPECIFICATIONS
GRADING AND SHAPING
GRADING AND SHAPING MAY NOT BE REQUIRED WHERE HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS TO BE USED. VERTICAL BANKS SHALL BE SLOPED TO ENABLE PLANT ESTABLISHMENT. WHEN CONVENTIONAL SEEDING AND FERTILIZING ARE TO BE DONE, GRADE AND SHAPE WHERE FEASIBLE AND PRACTICAL, SO THAT EQUIPMENT CAN BE USED SAFELY AND EFFICIENTLY DURING SEEDBED PREPARATION, SEEDING, MULCHING AND MAINTENANCE OF THE VEGETATION. CONCENTRATIONS OF WATER THAT WILL CAUSE EXCESSIVE SOIL EROSION SHALL BE DIVERTED TO A SAFE OUTLET. DIVERSIONS AND OTHER TREATMENT PRACTICES SHALL CONFORM WITH THE APPROPRIATE STANDARDS AND SPECIFICATIONS.

SEEDBED PREPARATION
SEEDBED PREPARATION MAY NOT BE REQUIRED WHERE HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS TO BE USED (BUT IS STRONGLY RECOMMENDED FOR ANY SEEDING PROCESS, WHEN POSSIBLE). WHEN CONVENTIONAL SEEDING IS TO BE USED, SEEDBED PREPARATION WILL BE DONE AS FOLLOWS:

BROADCAST PLANTINGS
1. TILLAGE, AT A MINIMUM, SHALL ADEQUATELY LOOSEN THE SOIL TO A DEPTH OF 4 TO 6 INCHES; ALLEVIATE COMPACTION; INCORPORATE LIME AND FERTILIZER; SMOOTH AND FIRM THE SOIL; ALLOW FOR THE PROPER PLACEMENT OF SEED, SPRIGS, OR PLANTS; AND ALLOW FOR THE ANCHORING OF STRAW OR HAY MULCH IF A DISK IS TO BE USED.
2. TILLAGE MAY BE DONE WITH ANY SUITABLE EQUIPMENT.
3. TILLAGE SHOULD BE DONE ON THE CONTOUR WHERE FEASIBLE.
4. ON SLOPES TOO STEEP FOR THE SAFE OPERATION OF TILLAGE EQUIPMENT, THE SOIL SURFACE SHALL BE PITTED OR TRENCHED ACROSS THE SLOPE WITH APPROPRIATE HAND TOOLS TO PROVIDE TWO PLACES 6 TO 8 INCHES APART IN WHICH SEED MAY LODGE AND GERMINATE. HYDRAULIC SEEDING MAY ALSO BE USED.

INDIVIDUAL PLANTS
1. WHERE INDIVIDUAL PLANTS ARE TO BE SET, THE SOIL SHALL BE PREPARED BY EXCAVATING HOLES, OPENING FURROWS, OR DIBBLE PLANTING.
2. FOR NURSERY STOCK PLANTS, HOLES SHALL BE LARGE ENOUGH TO ACCOMMODATE ROOTS WITHOUT CROWDING.
3. WHERE PINE SEEDLINGS ARE TO BE PLANTED, SUBSOIL UNDER THE ROW 36 INCHES DEEP ON THE CONTOUR FOUR TO SIX MONTHS PRIOR TO PLANTING. SUBSOILING SHOULD BE DONE WHEN THE SOIL IS DRY, PREFERABLY IN AUGUST OR SEPTEMBER.

PLANTING
HYDRAULIC SEEDING
MIX THE SEED (INNOCULATED IF NEEDED), FERTILIZER, AND WOOD CELLULOSE OR WOOD PULP FIBER MULCH WITH WATER AND APPLY IN A SLURRY UNIFORMLY OVER THE AREA TO BE TREATED. APPLY WITHIN ONE HOUR AFTER THE MIXTURE IS MADE.

CONVENTIONAL SEEDING
SEEDING WILL BE DONE ON A FRESHLY PREPARED AND FIRMED SEEDBED. FOR BROADCAST PLANTING, USE A CULTI-PACKER-SEEDER, DRILL ROTARY SEEDER, OTHER MECHANICAL SEEDER, OR HAND SEEDING TO DISTRIBUTE THE SEED UNIFORMLY OVER THE AREA TO BE TREATED. COVER THE SEED LIGHTLY WITH 1/8 TO 1/4 INCH OF SOIL FOR SMALL SEED AND 1/2 TO 1 INCH FOR LARGE SEED WHEN USING A CULTIPACKER OR OTHER SUITABLE EQUIPMENT.

NO-TILLING SEEDING
NO-TILL SEEDING IS PERMISSIBLE INTO ANNUAL COVER CROPS WHEN PLANTING IS DONE FOLLOWING MATURITY OF THE COVER CROP OR IF THE TEMPORARY COVER STAND IS SPARSE ENOUGH TO ALLOW ADEQUATE GROWTH OF THE PERMANENT (PERENNIAL) SPECIES. MO-TILL SEEDING SHALL BE DONE WITH APPROPRIATE NO-TILL SEEDING EQUIPMENT. THE SEED MUST BE UNIFORMLY DISTRIBUTED AND PLANTED AT THE PROPER DEPTH.

INDIVIDUAL PLANTS
SHRUBS, VINES AND SPRIGS MAY BE PLANTED WITH APPROPRIATE PLANTERS OR HAND TOOLS. PINE TREES SHALL BE PLANTED MANUALLY IN THE SUBSOIL FURROW. EACH PLANT SHALL BE SET IN A MANNER THAT WILL AVOID CROWDING THE ROOTS.

NURSERY STOCK PLANTS SHALL BE PLANTED AT THE SAME DEPTH OR SLIGHTLY DEEPER THAN THEY GREW AT THE NURSERY. THE TIPS OF VINES AND SPRIGS MUST BE AT OR SLIGHTLY ABOVE THE GROUND SURFACE.

WHERE INDIVIDUAL HOLES ARE DUG, FERTILIZER SHALL BE PLACED IN THE BOTTOM OF THE HOLE, TWO INCHES OF SOIL SHALL BE ADDED AND THE PLANT SHALL BE SET IN THE HOLE.

MULCHING
MULCH IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS. MULCH APPLIED TO SEEDED AREAS SHALL RECEIVE 75% TO 100% SOIL COVER. WHEN SELECTING A MULCH, DESIGN PROFESSIONALS SHOULD CONSIDER THE MULCH'S FUNCTIONAL LONGEVITY, VEGETATION ESTABLISHMENT ENHANCEMENT, AND EROSION CONTROL EFFECTIVENESS. SELECT THE MULCHING MATERIAL FROM THE FOLLOWING AND APPLY AS INDICATED:
1. *DRY STRAW OR DRY HAY* OF GOOD QUALITY AND FREE OF WEED SEEDS CAN BE USED. DRY STRAW SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE. DRY HAY SHALL BE APPLIED AT A RATE OF 2 1/2 TONS PER ACRE.
2. *WOOD CELLULOSE MULCH* OR *WOOD PULP FIBER* SHALL BE USED WITH HYDRAULIC SEEDING. IT SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE. DRY STRAW OR DRY HAY SHALL BE APPLIED (AT THE RATE INDICATED ABOVE) AFTER HYDRAULIC SEEDING.
3. ONE THOUSAND POUNDS OF *WOOD CELLULOSE* OR *WOOD PULP FIBER*, WHICH INCLUDES A TACKIFIER, SHALL BE USED WITH HYDRAULIC SEEDING ON SLOPES 1/4:1 OR STEEPER.
4. *SERICEA LESPEDEZA* HAY CONTAINING MATURE SEED SHALL BE APPLIED AT A RATE OF THREE TONS PER ACRE.
5. *PINE STRAW* OR *PINE BARK* SHALL BE APPLIED AT A THICKNESS OF 3 INCHES FOR BEDDING PURPOSES. OTHER SUITABLE MATERIALS IN SUFFICIENT QUANTITY MAY BE USED WHERE ORNAMENTALS OR OTHER GROUND COVERS ARE PLANTED. THIS IS NOT APPROPRIATE FOR SEEDED AREAS.
6. WHEN USING TEMPORARY EROSION CONTROL BLANKETS OR BLOCK SOD, MULCH IS NOT REQUIRED.
7. *BITUMINOUS TREATED ROVING* MAY BE APPLIED ON PLANTED AREAS, SLOPES, IN DITCHES OR DRY WATERWAYS TO PREVENT EROSION. BITUMINOUS TREATED ROVING SHALL BE APPLIED WITHIN 24 HOURS AFTER AN AREA HAS BEEN PLANTED. APPLICATION RATES AND MATERIALS MUST MEET GEORGIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS. WOOD CELLULOSE AND WOOD PULP FIBERS SHALL NOT CONTAIN GERMINATION OR GROWTH INHIBITING FACTORS. THEY SHALL BE EVENLY DISPERSED WHEN AGITATED IN WATER. THE FIBERS SHALL CONTAIN A DYE TO ALLOW VISUAL METERING AND AID IN UNIFORM APPLICATION DURING SEEDING.

APPLYING MULCH
STRAW OR *HAY MULCH* WILL BE SPREAD UNIFORMLY WITHIN 24 HOURS AFTER SEEDING AND/OR PLANTING. THE MULCH MAY BE SPREAD BY BLOWER-TYPE SPREADING EQUIPMENT, OTHER SPREADING EQUIPMENT OR BY HAND. MULCH SHALL BE APPLIED TO COVER 75% OF THE SOIL SURFACE.
WOOD CELLULOSE OR *WOOD FIBER MULCH* SHALL BE APPLIED UNIFORMLY WITH HYDRAULIC SEEDING EQUIPMENT.

ANCHORING MULCH
ANCHOR STRAW OR HAY MULCH IMMEDIATELY AFTER APPLICATION BY ONE OF THE FOLLOWING METHODS:
1. *HAY AND STRAW MULCH* SHALL BE PRESSED INTO THE SOIL IMMEDIATELY AFTER THE MULCH IS SPREAD. A SPECIAL "PACKER DISK" OR DISK HARROW WITH THE DISKS SET STRAIGHT MAY BE USED. THE DISKS MAY BE SMOOTH OR SERRATED AND SHOULD BE 20 INCHES OR MORE IN DIAMETER AND 8 TO 12 INCHES APART. THE EDGES OF THE DISKS SHALL BE DULL ENOUGH TO PRESS THE MULCH INTO THE GROUND WITHOUT CUTTING IT, LEAVING MUCH OF IT IN AN ERECT POSITION. MULCH SHALL NOT BE PLOWED INTO THE SOIL.
2. *SYNTHETIC TACKIFIERS, FINDERS OR HYDRAULIC MULCH SPECIFICALLY* DESIGNED TO TACK STRAW, SHALL BE APPLIED IN CONJUNCTION WITH OR IMMEDIATELY AFTER THE MULCH IS SPREAD. SYNTHETIC TACKIFIERS SHALL BE MIXED AND APPLIED ACCORDING TO MANUFACTURER'S SPECIFICATIONS. ALL TACKIFIERS, FINDERS OR HYDRAULIC MULCH SPECIFICALLY DESIGNED TO TACK STRAW SHOULD BE VERIFIED NONTOXIC THROUGH EPA 2021.0 TESTING. REFER TO TACKIFIERS-TAC IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, SIXTH EDITION.
3. *RYE OR WHEAT* CAN BE INCLUDED WITH FALL AND WINTER PLANTINGS TO STABILIZE THE MULCH. THEY SHALL BE APPLIED AT A RATE OF ONE-QUARTER TO ONE-HALF BUSHEL PER ACRE.
4. *PLASTIC MESH OR NETTING* WITH MESH NO LARGER THAN ONE INCH BY ONE INCH MAY BE NEEDED TO ANCHOR STRAW OR HAY MULCH ON UNSTABLE SOILS AND CONCENTRATED FLOW AREAS. THESE MATERIALS SHALL BE INSTALLED AND ANCHORED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

IRRIGATION
IRRIGATION WILL BE APPLIED AT A RATE THAT WILL NOT CAUSE RUNOFF.

ALTERNATE PERMIT STABILIZATION
THE CLOSURE TURF PRODUCT BY AGRU AMERICAN WHICH CONSIST OF SAND BLASTED ENGINEERED TURF SYSTEM OVERLYING AN INTEGRATED AGRU 50 MIL LLDPE SUPERGRIPNET IS AN APPROVED ALTERNATE TO PERMANENT STABILIZATION WITH VEGETATION.

DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION) Ds3

FERTILIZER REQUIREMENTS

WARM SEASON GRASSES			
YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE
First	6-12-12	1500 lbs./ac.	50-100 lbs./ac. 2/6/
Second	6-12-12	800 lbs./ac.	50-100 lbs./ac. 2/
Maintenance	10-10-10	400 lbs./ac.	30 lbs./ac.

COOL SEASON GRASSES			
YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE
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.	------

PLANT, PLANTING RATE & PLANTING DATE FOR PERMANENT COVER

SPECIES	BROADCAST RATES	PLANTING DATES (J F M A M J J A S O N D)	REMARKS
Lespedeza Sericea scarified	60 lbs./ac	....——	Widely adapted. Low maintenence. Mix with Common Bermuda or Tall Fescue. Inoculate seed with EL inoculant.
Lespedeza Sericea unscarified	75 lbs./ac	——.....———	Mix with tall fescue.
Pensacola Bahia alone or with temporary cover	60 lbs./ac	.——.....	Low growing. Sod forming. Slow to establish. Plant with a companion crop. will spread into bermuda pastures and lawns. Mix with Sericea Lespedeza.
Wilmington Bahia with other perennials	30 lbs./ac	.——.....	
Tall Fescue alone	50 lbs./ac	..——	Use alone only on better sites. Mix with perennial lespedeza or Crownvetch. Apply top dressing in spring following fall plantings. Nor for heavy use areas or athletic fields.
Tall Fescue with other perennials	30 lbs./ac	..——	
Reed Canary Grass alone	50 lbs./ac	..——.....	
Reed Canary Grass with other perennials	30 lbs./ac	..——.....	Grows similar to Tall Fescue.
Common Bermuda unhulled seed with temporary cover	10 lbs./ac	——.....——	Plant with winter annuals
Common Bermuda unhulled seed w/other perennials	6 lbs./ac	——.....——	Plant with Tall Fescue.

Solid lines indicate optimum dates, dotted lines indicate permissible but marginal dates.

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SEPTEMBER 2017 - ISSUED FOR APPROVAL & CONSTRUCTION

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
1	07/1916	MTC	CHANGE LEVEL II DESIGN PROFESSIONAL	RMS	GLH	MTC

GSWCC GEORGIA SOIL AND WATER CONSERVATION COMMISSION
MICHAEL T. CHILSON
LEVEL II DESIGN PROFESSIONAL
CERTIFICATION NUMBER 0000072142
ISSUED: 08/29/2014 EXPIRES: 08/29/2017

GEORGIA SAFE DAMS PROGRAM
GEORGIA REGISTERED No. 036075 PROFESSIONAL ENGINEER MICHAEL THOMAS CHILSON
MICHAEL T. CHILSON
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 036075

CLIENT
GEORGIA POWER COMPANY /
SOUTHERN COMPANY SERVICES
Southern Company

PROJECT
PLANT MCDONOUGH
ASH POND NO. 3 & 4 CLOSURE PLAN

TITLE
EROSION, SEDIMENT & POLLUTION CONTROL DETAILS - SHEET 4 OF 7

CONSULTANT
GOLDER

YYYY-MM-DD	2017-02-17
DESIGNED	GLH
PREPARED	RMS
REVIEWED	WRS
APPROVED	MTC

PROJECT NO.	PROJECT ID	REV.	SHEET
1539180	MCD15017	3	ES14

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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DEFINITION
THE ESTABLISHMENT OF TEMPORARY VEGETATION COVER WITH FAST GROWING SEEDINGS FOR SEASONAL PROTECTION ON DISTURBED OR DENUDED AREAS.

CONDITIONS
TEMPORARY VEGETATIVE MEASURES SHOULD BE COORDINATED WITH PERMANENT MEASURES TO ASSURE ECONOMICAL AND EFFECTIVE STABILIZATION. MOST TYPES OF TEMPORARY VEGETATION ARE IDEAL TO USE AS COMPANION CROPS UNTIL THE PERMANENT VEGETATION IS ESTABLISHED. NOTE: SOME SPECIES OF TEMPORARY VEGETATION ARE NOT APPROPRIATE FOR COMPANION CROP PLANTINGS BECAUSE OF THEIR POTENTIAL TO OUT-COMPETE THE DESIRED SPECIES. (E.G. ANNUAL RYEGRASS). CONTACT NRCS OR THE LOCAL SWCD FOR MORE INFORMATION.

SPECIFICATIONS
GRADING AND SHAPING
EXCESSIVE WATER RUN-OFF SHALL BE REDUCED BY PROPERLY DESIGNED AND INSTALLED EROSION CONTROL PRACTICES SUCH AS CLOSED DRAINS, DITCHES, DIKES, DIVERSIONS, SEDIMENT BARRIERS AND OTHERS. NO SHAPING OR GRADING IS REQUIRED IF SLOPES CAN BE STABILIZED BY HAND-SEEDED VEGETATION OR IF HYDRAULIC SEEDING EQUIPMENT IS TO BE USED.

SEEDBED PREPARATION
WHEN A HYDRAULIC SEEDER IS USED, SEEDBED PREPARATION IS NOT REQUIRED. WHEN USING CONVENTIONAL OR HAND-SEEDING, SEEDBED PREPARATION IS NOT REQUIRED IF THE SOIL MATERIAL IS LOOSE AND NOT SEALED BY RAINFALL. WHEN SOIL HAS BEEN SEALED BY RAINFALL OR CONSISTS OF SMOOTH CUT SLOPES, THE SOIL SHALL BE PITTED, TRENCHED OR OTHERWISE SCARIFIED TO PROVIDE A PLACE FOR SEED TO LEDGE AND GERMINATE.

LIME AND FERTILIZER
AGRICULTURAL LIME IS REQUIRED UNLESS SOIL TESTS INDICATE OTHERWISE. APPLY AGRICULTURAL LIME AT A RATE DETERMINED BY SOIL TEST FOR pH. QUICK ACTING LIME SHOULD BE INCORPORATED TO MODIFY pH DURING THE GERMINATION PERIOD. BIO STIMULANTS SHOULD ALSO BE CONSIDERED WHEN THERE IS LESS THAN 3% ORGANIC MATTER IN THE SOIL. GRADED AREAS REQUIRE LIME APPLICATION. SOILS MUST BE TESTED TO DETERMINE REQUIRED AMOUNTS OF FERTILIZER AND AMENDMENTS. FERTILIZER SHOULD BE APPLIED BEFORE LAND PREPARATION AND INCORPORATED WITH A DISK, RIPPER, OR CHISEL. ON SLOPES TOO STEEP FOR, OR INACCESSIBLE TO EQUIPMENT, FERTILIZER SHALL BE HYDRAULICALLY APPLIED, PREFERABLY IN THE FIRST PASS WITH SEED AND SOME HYDRAULIC MULCH, THEN TOPPED WITH THE REMAINING REQUIRED APPLICATION RATE.

SEEDING
SELECT A GRASS OR GRASS-LEGUME MIXTURE SUITABLE TO THE AREA AND SEASON OF THE YEAR. SEED SHALL BE APPLIED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, SULTI-PACKER-SEEDER, OR HYDRAULIC SEEDER (SLURRY INCLUDING SEED AND FERTILIZER). DRILL OR CULTIPACKER SEEDERS SHOULD NORMALLY PLACE SEED ONE-QUARTER TO ONE-HALF INCH DEEP. APPROPRIATE DEPTH OF PLANTING IS TEN TIMES THE SEED DIAMETER. SOIL SHOULD BE "RAKED" LIGHTLY TO COVER SEED WITH SOIL IF SEEDED BY HAND. SE TABLE 6-4.1 IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, SIXTH EDITION, 2014.

MULCHING
TEMPORARY VEGETATION CAN, IN MOST CASES, BE ESTABLISHED WITHOUT THE USE OF MULCH, PROVIDED THERE IS LITTLE TO NO EROSION POTENTIAL. HOWEVER, THE USE OF MULCH CAN OFTEN ACCELERATE AND ENHANCE GERMINATION AND VEGETATION ESTABLISHMENT. MULCH WITHOUT SEEDING SHOULD BE CONSIDERED FOR SHORT TERM PROTECTION. REFER TO Ds1-DISTURBED AREA STABILIZATION (WITH MULCHING ONLY) IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, SIXTH EDITION, 2014.

IRRIGATION
DURING TIMES OF DROUGHT, WATER SHALL BE APPLIED AT A RATE NOT CAUSING RUNOFF AND EROSION. THE SOIL SHALL BE THOROUGHLY WETTED TO A DEPTH THAT WILL INSURE GERMINATION OF THE SEED. SUBSEQUENT APPLICATIONS SHOULD BE MADE WHEN NEEDED.

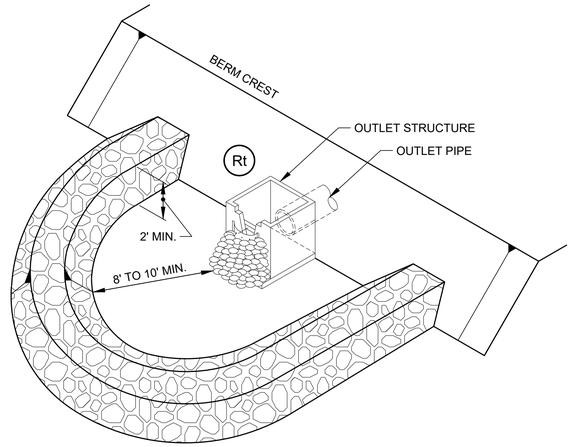
ALTERNATE TEMPORARY STABILIZATION
A SYHTHETIC GEOMEMBRANE CAN BE SUBSTITUTED AS TEMPORARY STABILIZATION.

DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING) Ds2

SEEDING RATES FOR TEMPORARY SEEDING

BROADCAST			
SPECIES	RATES	PLANTING DATES (J F M A M J J A S O N D)	COMMENTS
Barley alone	144 lbs./ac		Winter hardy, use on productive soils
Barley in mixture	24 lbs./ac		
Lespedeza, Annual alone	40 lbs./ac		May volunteer for several years. Use inoculant EL.
Lespedeza, Annual in mixture	10 lbs./ac		
Lovegrass, Weeping alone	4 lbs./ac		May last for several years. Mix with Sericea Lespedeza.
Lovegrass, Weeping in mixture	2 lbs./ac		
Millet, Browntop alone	40 lbs./ac		Quick dense cover. Will provide too much competition in mixtures if seeded at high rates.
Millet, Browntop in mixture	10 lbs./ac		
Millet, Pearl alone	50 lbs./ac		Quick dense cover. May reach 5 feet in height. NOT recommended for mixtures.
Oats alone	128 lbs./ac		Use on productive soils. Not as winter hardy as rye or barley.
Oats in mixture	32 lbs./ac		
Rye alone	168 lbs./ac		Quick cover. Drought tolerant and winter hardy.
Rye in mixture	28 lbs./ac		
Ryegrass, Annual alone	40 lbs./ac		Dense cover. Very competitive and NOT to be used in mixtures.
Sudangrass alone	60 lbs./ac		Good on droughty sites. NOT recommended for mixtures.
Triticale alone	144 lbs./ac		Use on lower part of Southern Coastal Plain and in Atlantic Coastal Flatwoods only.
Triticale in mixture	24 lbs./ac		
Wheat alone	180 lbs./ac		Winter hardy.
Wheat w/other perennials	30 lbs./ac		

Solid lines indicate optimum dates, dotted lines indicate permissible but marginal dates.



NOTES

1. FILTER RING SHALL BE USED IN CONJUNCTION WITH OTHER SEDIMENT CONTROL MEASURES, EXCEPT WHERE OTHER PRACTICES ARE NOT APPROPRIATE.

2. THE FILTER RING SHALL SURROUND ALL SIDES OR THE STRUCTURE RECEIVING RUNOFF FROM DISTURBED AREAS.

3. THE RING SHOULD BE PLACED A MINIMUM OF 4 FEET FROM THE STRUCTURE.

4. IF THE RING IS UTILIZED ABOVE A RETROFIT STRUCTURE, IT SHOULD BE A MINIMUM OF 8 TO 10 FEET FROM THE STRUCTURE.

5. WHEN UTILIZED AT INLETS WITH DIAMETERS LESS THAN 12 INCHES, THE FILTER RING SHALL BE CONSTRUCTED OF STONE NO SMALLER THAN 3-5 INCHES (15-30 LBS.).

6. WHEN UTILIZED AT PIPES WITH DIAMETERS GREATER THAN 12 INCHES, THE FILTER RING SHALL BE CONSTRUCTED OF STONE NO SMALLER THAN 10-15 INCHES (50-100 LBS.).

7. THE FILTER RING SHALL BE CONSTRUCTED AT A HEIGHT NO LESS THAN 2 FEET ABOVE GRADE.

8. THE FILTER RING MUST BE KEPT CLEAR OF TRASH AND DEBRIS. THIS WILL REQUIRE CONTINUOUS MONITORING AND MAINTENANCE, WHICH INCLUDES SEDIMENT REMOVAL WHEN ONE-HALF FULL. STRUCTURES ARE TEMPORARY AND SHOULD BE REMOVED WHEN THE LAND DISTURBING PROJECT HAS BEEN STABILIZED.

Fr ES13 FILTER RING NTS

SEPTEMBER 2017 - ISSUED FOR APPROVAL & CONSTRUCTION

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
1	01/2017	MTC	CHANGE LEVEL II DESIGN PROFESSIONAL	RMS	GLH	MTC

CLIENT
GEORGIA POWER COMPANY / SOUTHERN COMPANY SERVICES

Southern Company

PROJECT
PLANT MCDONOUGH
ASH POND NO. 3 & 4 CLOSURE PLAN

TITLE
EROSION, SEDIMENT & POLLUTION CONTROL DETAILS - SHEET 5 OF 7

GSWCC GEORGIA SOIL AND WATER CONSERVATION COMMISSION
MICHAEL T. CHILSON
LEVEL II DESIGN PROFESSIONAL
CERTIFICATION NUMBER 0000072142
ISSUED: 08/29/2014 EXPIRES: 08/29/2017

GEORGIA SAFE DAMS PROGRAM

GEORGIA REGISTERED PROFESSIONAL ENGINEER MICHAEL THOMAS CHILSON
MICHAEL T. CHILSON
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 036075

CONSULTANT
GOLDER

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1539180	MCD15017	3	ES15

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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DUST CONTROL ON DISTURBED AREAS — Du

DEFINITION

CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADS, AND DEMOLITION SITES.

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 STANDARD Ds1 - DISTURBED AREA STABILIZATION (WITH MULCHING ONLY). SYNTHETIC RESINS MAY BE USED INSTEAD OF ASPHALT TO BIND MULCH MATERIAL. REFER TO SPECIFICATION TAC-TACKIFIERS IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION. RESINS SUCH AS CURASOL OR TERRATACK SHOULD BE USED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

VEGETATIVE COVER. SEE SPECIFICATION Ds2 - DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING) IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION.

SPRAY-ON ADHESIVES. THESE ARE USED ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS. REFER TO SPECIFICATION TAC-TACKIFIERS IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION.

TILLAGE. THIS PRACTICE IS DESIGNED TO ROUGHEN AND BRING CLODS TO THE SURFACE. IT IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE WIND EROSION STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.

IRRIGATION. THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS WET. REPEAT AS NEEDED.

BARRIERS. SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACES AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 15 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING WIND EROSION.

CALCIUM CHLORIDE. APPLY AT RATE THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

B. PERMANENT METHODS

PERMANENT VEGETATION. SEE SPECIFICATION Ds3 - DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION) IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION. EXISTING TREES AND LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.

TOPSOILING. THIS ENTAILS COVERING THE SURFACE WITH LESS EROSIVE SOIL MATERIAL. SEE SPECIFICATION Tp - TOPSOILING IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION.

STONE. COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL. SEE SPECIFICATION Cr - CONSTRUCTION ROAD STABILIZATION.

DISTURBED AREA STABILIZATION (WITH MULCH ONLY) — Ds1

DEFINITION

APPLYING PLANT RESIDUES OR OTHER SUITABLE MATERIALS, PRODUCED ON THE SITE IF POSSIBLE, TO THE SOIL SURFACE.

CONDITIONS

MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF DISTURBANCE. MULCH CAN BE USED AS A SINGULAR EROSION CONTROL DEVICE FOR UP TO SIX MONTHS, BUT IT SHALL BE APPLIED AT THE APPROPRIATE DEPTH, DEPENDING ON THE MATERIAL USED, ANCHORED AND HAVE A CONTINUOUS 90% COVER OR GREATER OF THE SOIL SURFACE. MAINTENANCE SHALL BE REQUIRED TO MAINTAIN APPROPRIATE DEPTH AND 90% COVER. TEMPORARY VEGETATION MAY BE EMPLOYED INSTEAD OF MULCH IF THE AREA WILL REMAIN UNDISTURBED FOR LESS THAN SIX MONTHS. IF ANY AREA WILL REMAIN UNDISTURBED FOR GREATER THAN SIX MONTHS, PERMANENT VEGETATIVE TECHNIQUES SHALL BE EMPLOYED.

SPECIFICATIONS

MULCHING WITHOUT SEEDING:
THIS STANDARD APPLIES TO GRADED OR CLEARED AREAS WHERE SEEDINGS MAY NOT HAVE A SUITABLE GROWING SEASON TO PRODUCE AN EROSION RETARDANT COVER, BUT CAN BE STABILIZED WITH A MULCH COVER.

SITE PREPARATION:
1. GRADE TO PERMIT THE USE OF EQUIPMENT FOR APPLYING AND ANCHORING MULCH.
2. INSTALL NEEDED EROSION CONTROL MEASURES AS REQUIRED SUCH AS DIKES, DIVERSIONS, BERMS, TERRACES AND SEDIMENT BARRIERS.
3. LOOSEN COMPACT SOIL TO A MINIMUM DEPTH OF 3 INCHES.

MULCHING MATERIALS
SELECT ONE OF THE FOLLOWING MATERIALS AND APPLY AT THE DEPTH INDICATED:
1. DRY STRAW OR HAY SHALL BE APPLIED AT A DEPTH OF 4 INCHES PROVIDING COMPLETE SOIL COVERAGE. ONE ADVANTAGE OF THIS MATERIAL IS EASY APPLICATION.
2. WOOD WASTE (CHIPS, SAWDUST OR BARK) SHALL APPLIED AT A DEPTH OF 2 TO 3 INCHES. ORGANICS FROM THE CLEARING STAGE OF DEVELOPMENT ARE TO REMAIN ON SITE, BE CHIPPED, AND APPLIED AS MULCH. THIS METHOD OF MULCHING CAN GREATLY REDUCE EROSION CONTROL COSTS.
3. POLYETHYLENE FILM SHALL BE SECURED OVER BANKS OR STOCKPILED SOIL MATERIAL FOR TEMPORARY PROTECTION. THIS MATERIAL CAN BE SALVAGED AND RE-USED.

APPLYING MULCH
WHEN MULCH IS USED WITHOUT SEEDING, MULCH SHALL BE APPLIED TO PROVIDE FULL COVERAGE OF THE EXPOSED AREA.
1. DRY STRAW OR HAY MULCH AND WOOD CHIPS SHALL BE APPLIED UNIFORMLY BY HAND OR BY MECHANICAL EQUIPMENT.
2. IF THE AREA WILL EVENTUALLY BE COVERED WITH PERENNIAL VEGETATION, 20-30 POUNDS OF NITROGEN PER ACRE IN ADDITION TO THE NORMAL AMOUNT SHALL BE APPLIED TO OFFSET THE UPTAKE OF NITROGEN CAUSED BY THE DECOMPOSITION OF THE ORGANIC MULCHES.
3. APPLY POLYETHYLENE FILM ON EXPOSED AREAS.

ANCHORING MULCH
1. STRAW OR HAY MULCH CAN BE PRESSED INTO THE STRAIGHT OR WITH A SPECIAL "PACKER DISK." DISKS MAY BE SMOOTH OR SERRATED AND SHOULD BE 20 INCHES OR MORE IN DIAMETER AND 8 TO 12 INCHES APART. THE EDGES OF THE DISK SHOULD BE DULL ENOUGH NOT TO CUT THE MULCH BUT TO PRESS IT INTO THE SOIL LEAVING MUCH OF IT IN AN ERECT POSITION. STRAW OR HAY MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION.
   STRAW OR HAY MULCH SPREAD WITH SPECIAL BLOWER-TYPE EQUIPMENT MAY BE ANCHORED. TACKIFERS, BINDERS AND HYDRAULIC MULCH WITH TACKIFIER SPECIFICALLY DESIGNED FOR TACKING STRAW CAN BE SUBSTITUTED FOR EMULSIFIED ASPHALT. REFER MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION, SPECIFICATION TAC-TACKIFERS. PLASTIC MESH OF NETTING WITH MESH NO LARGER THAN ONE INCH BY ONE INCH SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
2. NETTING OF THE APPROPRIATE SIZE SHALL BE USED TO ANCHOR WOOD WASTE. OPENINGS OF THE NETTING SHALL NOT BE LARGER THAN THE AVERAGE SIZE OF THE WOOD WASTE CHIPS.
3. FILM SHALL BE ANCHOR TRENCHED AT THE TOP AS WELL AS INCREMENTALLY AS NECESSARY.

TACKIFIERS — Tac

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.

CRITERIA

TYPE I TACKIFIERS: SYNTHETIC POLYMERS — Tac-1
- APPLICATION RATES SHALL CONFORM TO MANUFACTURER'S GUIDELINES FOR APPLICATION.
- ONLY ANIONIC FORMS OF PAM SHALL BE USED. ANIONIC PAMs SHALL BE NO MORE THAN 0.05% ACRYLAMIDE MONOMER BY WEIGHT, AS ESTABLISHED BY THE FOOD AND DRUG ADMINISTRATION AND THE ENVIRONMENTAL PROTECTION AGENCY.
- NOT HARMFUL TO PLANTS, ANIMALS AND AQUATIC LIFE.
- CONTAIN NO GROWTH OR GERMINATION INHIBITING MATERIALS.
- SHALL NOT REDUCE INFILTRATION RATES.

TYPE II TACKIFIERS: ORGANIC POLYMERS — Tac-2
SUCH AS GUAR GUM, POLYSACCHARIDES, AND STARCHES
- APPLICATION RATES SHALL CONFORM TO MANUFACTURER'S GUIDELINES FOR APPLICATION.
- DERIVED FROM NATURAL PLANT SOURCES.
- NOT HARMFUL TO PLANTS, ANIMALS AND AQUATIC LIFE.
- CONTAIN NO GROWTH OR GERMINATION INHIBITING MATERIALS.
- SHALL NOT REDUCE INFILTRATION RATES.

TYPE III TACKIFIERS: SYNTHETIC/ORGANIC BLENDS — Tac-3
- APPLICATION RATES SHALL CONFORM TO MANUFACTURER'S GUIDELINES FOR APPLICATION.
- ONLY ANIONIC FORMS OF PAM SHALL BE USED IN THE BLEND, AND SHALL BE NO MORE THAN 0.05% ACRYLAMIDE MONOMER BY WEIGHT.
- ORGANIC MATERIAL MUST BE DERIVED FROM NATURAL PLANT SOURCES.
- NOT HARMFUL TO PLANTS, ANIMALS AND AQUATIC LIFE.
- CONTAIN NO GROWTH OR GERMINATION INHIBITING MATERIALS.
- SHALL NOT REDUCE INFILTRATION RATES.

TYPE IV TACKIFIERS: ORGANIC TACKIFIERS WITH SYNTHETIC FIBERS — Tac-4
- APPLICATION RATES SHALL CONFORM TO MANUFACTURER'S GUIDELINES FOR APPLICATION.
- ORGANIC MATERIAL MUST BE DERIVED FROM NATURAL PLANT SOURCES.
- NOT HARMFUL TO PLANTS, ANIMALS AND AQUATIC LIFE.
- CONTAIN NO GROWTH OR GERMINATION INHIBITING MATERIALS.
- SHALL NOT REDUCE INFILTRATION RATES.
- SYNTHETIC FIBERS SHALL BE OF NYLON OR POLYESTER BLENDS.

TYPE V TACKIFIERS: SYNTHETIC/ORGANIC BLENDS WITH SYNTHETIC FIBERS — Tac-5
- APPLICATION RATES SHALL CONFORM TO MANUFACTURER'S GUIDELINES FOR APPLICATION.
- ONLY ANIONIC FORMS OF PAM SHALL BE USED IN THE BLEND, AND SHALL BE NO MORE THAN 0.05% ACRYLAMIDE MONOMER BY WEIGHT.
- ORGANIC MATERIAL MUST BE DERIVED FROM NATURAL PLANT SOURCES.
- NOT HARMFUL TO PLANTS, ANIMALS AND AQUATIC LIFE.
- CONTAIN NO GROWTH OR GERMINATION INHIBITING MATERIALS.
- SHALL NOT REDUCE INFILTRATION RATES.
- SYNTHETIC FIBERS SHALL BE OF NYLON OR POLYESTER BLENDS.

MAINTENANCE
TACKIFIED AREAS SHOULD BE CHECKED AFTER EVERY RAIN EVENT. PERIODIC INSPECTIONS AND REQUIRED MAINTENANCE MUST BE PROVIDED PER MANUFACTURER'S RECOMMENDATIONS.

TOPSOILING — Tp

DEPTH (INCHES)	PER 1,000 SQUARE FEET	PER ACRE
1	3.1	134
2	6.2	268
3	9.3	403
4	12.4	537
5	15.5	672
6	18.6	806

CUBIC YARDS OF TOPSOIL REQUIRED FOR APPLICATION TO VARIOUS DEPTHS

CONDITIONS
THIS PRACTICE IS RECOMMENDED FOR SITES OF 2:1 OR FLATTER SLOPES WHERE:
1. THE TEXTURE OF THE EXPOSED SUBSOIL OR PARENT MATERIAL IS NOT SUITABLE TO PRODUCE ADEQUATE VEGETATIVE GROWTH.
2. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS WITH CONTINUING SUPPLIES OF MOISTURE AND FOOD.
3. THE SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.

CONSTRUCTION SPECIFICATIONS

MATERIALS
TOPSOIL SHOULD BE FRIABLE AND LOAMY, FREE OF DEBRIS, OBJECTIONABLE WEEDS AND STONES, AND CONTAIN NO TOXIC SUBSTANCE THAT MAY BE HARMFUL TO PLANT GROWTH. A pH RANGE OF 5.0-7.5 IS ACCEPTABLE. SOLUBLE SALTS SHOULD NOT EXCEED 500 PPM.

TESTING
FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER THE QUANTITY AND QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING.

STRIPPING
STRIPPING SHOULD BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA.
A 4 TO 6 INCH STRIPPING DEPTH IS COMMON, BUT MAY VARY DEPENDING ON THE PARTICULAR SOIL.

TOPSOIL pH
IF pH VALUE IS LESS THAN 6.0, LIME SHALL BE APPLIED AND INCORPORATED WITH THE TOPSOIL TO ADJUST THE pH TO 6.5 OR HIGHER. TOPSOILS CONTAINING SOLUBLE SALTS GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.

STOCKPILES
THE LOCATION OF TOPSOIL STOCKPILES SHOULD NOT OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE.

STABILIZATION
STOCKPILES SHALL BE CONTAINED BY SEDIMENT BARRIERS TO PREVENT SEDIMENTATION ON ADJACENT AREAS. STOCKPILES SHALL BE STABILIZED IN ACCORDANCE WITH SPECIFICATIONS Ds1 AND Ds2 - DISTURBED AREA STABILIZATION (WITH MULCHING) AND (WITH TEMPORARY GRASSING), RESPECTIVELY, OR Pm - POLYACRYLAMIDE OR Tb - TACKIFIERS.

SITE PREPARATION (WHERE TOPSOIL IS TO BE ADDED)
TOPSOILING - WHEN TOPSOILING, MAINTAIN NEEDED EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, BERMS, DIKES, LEVEL SPREADERS, WATERWAYS, SEDIMENT BASINS, ETC.

GRADING - GRADES ON THE AREAS TO BE TOPSOILED WHICH HAVE BEEN PREVIOUSLY ESTABLISHED SHALL BE MAINTAINED.

LIMING - SOIL TESTS SHOULD BE USED TO DETERMINE THE pH OF THE SOIL. WHERE THE pH OF THE SUBSOIL IS 5.0 OR LESS OR COMPOSED OF HEAVY CLAYS, AGRICULTURAL LIMESTONE SHALL BE SPREAD AT THE RATE OF 100 POUNDS PER 1,000 SQUARE FEET. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURE.

BONDING - USE ONE OF THE FOLLOWING METHODS TO INSURE BONDING OF TOPSOIL AND SUBSOIL:
1. TILLING. AFTER THE AREAS TO BE TOPSOILED HAVE BEEN BROUGHT TO GRADE, AND IMMEDIATELY PRIOR TO DUMPING AND SPREADING THE TOPSOIL, THE SUBGRADE SHALL BE LOOSENED BY DISCING OR SCARIFYING TO A DEPTH OF AT LEAST 3 INCHES TO PERMIT BONDING OF THE TOPSOIL TO THE SUBSOIL.
2. TRACKING. PASSING A BULLDOZER OVER THE ENTIRE SURFACE AREA OF THE SLOPE TO LEAVE HORIZONTAL DEPRESSIONS.

APPLYING TOPSOIL
1. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE.
2. A UNIFORM APPLICATION OF 6 INCHES (UNSETTLED) IS RECOMMENDED, BUT MAY BE ADJUSTED AT THE DISCRETION OF THE ENGINEER OR LANDSCAPE ARCHITECT.

TOPSOILING — Tp

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
1	07/1916	MTC	CHANGE LEVEL II DESIGN PROFESSIONAL	RMS	GLH	MTC

CLIENT
GEORGIA POWER COMPANY /
SOUTHERN COMPANY SERVICES

Southern Company

PROJECT
PLANT MCDONOUGH
ASH POND NO. 3 & 4 CLOSURE PLAN

TITLE
EROSION, SEDIMENT & POLLUTION CONTROL DETAILS - SHEET 6 OF 7

GSWCC GEORGIA SOIL AND WATER CONSERVATION COMMISSION
MICHAEL T. CHILSON
LEVEL II DESIGN PROFESSIONAL
CERTIFICATION NUMBER 0000072142
ISSUED: 08/29/2014 EXPIRES: 08/29/2017

GEORGIA SAFE DAMS PROGRAM

GEORGIA REGISTERED No. 036075 PROFESSIONAL ENGINEER MICHAEL THOMAS CHILSON
MICHAEL T. CHILSON
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 036075

SEPTEMBER 2017 - ISSUED FOR APPROVAL & CONSTRUCTION

CONSULTANT
GOLDER

YYYY-MM-DD	2017-02-17
DESIGNED	GLH
PREPARED	RMS
REVIEWED	WRS
APPROVED	MTC

PROJECT NO.	PROJECT ID	REV.	SHEET
1539180	MCD15017	3	ES16

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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SEDIMENT BASIN (Sd3) DESIGN DATA SHEET

IMPLEMENTED Plant McDonough

Stage Storage Curve

Elevation	Area (ft²)	Area (acres)	Volume (CY)	Volume (acre-ft)
836	20110	0.46	0	0.0
838	27446	0.63	8083	1.9
840	36026	0.83	30076	7.0
842	44461	1.02	60424	14.0
844	54016	1.24	98954	22.9
846	64888	1.49	146008	33.8
848	76918	1.77	201863	46.8
850	89671	2.06	266104	61.6

Use grading on sheets 1 & 2 of 2

Volume

1. Compute minimum required storage volume (Vs)

V_s = 67 cy/ac * 27.00 acres = 1821 cy

2. Compute volume of basin at clean-out (Vc)

V_c = 22 cy/ac * 27.00 acres = 604 cy

3. Determine elevation corresponding to minimum required storage volume, Vs.

Minimum riser crest elevation = 839.2 ft (determined by stage storage relationship)

4. Determine elevation corresponding to clean-out volume, Vc.

Clean-out elevation = 838.0 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

Total length =	839.2	ft	838	ft
Riser length =	1.2	ft	Use as Specified	

Stormwater Runoff

6. Compute peak discharge from 2 yr, 24 hr storm event

Q_{2yr} = 80.00 cfs

7. Compute peak discharge from 25 yr, 24 hour storm event

Q_{25yr} = 131.00 cfs

Surface Area/ Configuration Design

8. Compute minimum basin surface area (Basin)

SA_{min} = 100 cfs/ac * Q_{25}

SA_{min} = 100 cfs/ac * 80.00 cfs

SA_{min} =	0.00	ac.	43560 sf/ac. *	0.00	ac.	= 349408	sf

9. Check available area at elevation of riser crest

Available Area = 20110 sf (determined by stage storage relationship)

Available Area > SA_{min}? Yes X No

10. Compute required length to width ratio (2:1 W ratio)

Average Width = 65 ft

Required length = 2 * average width

Required length = 2* 65 ft

Required length = 130 ft

Average Length = 460 ft

2:1 L:W ratio satisfied? Yes X No

Principal Spillways (PS)

11. Determine minimum principal spillway capacity Q_{ps} = 80.00 cfs

12. Compute the vertical distance between the centerline of the outlet pipe and the emergency spillway crest (H)

H = N/A ft

13. Compute the total pipe length of the principal spillway, L, using Eqution 6.22.3

L = [A (D/2)/2] / [2*0.5*H + D/2]

L = 3.0 ft

14. Determine diameter of principal spillway (D_{ps}) and flow through the principal spillway (Q_p) from

D_{ps} = 24 in Q_p = 5.6 cfs (value taken from model)

15. Calculate total flow through the principal spillway, using Table 6.22.1A to determine coefficient

Q_{ps} = Q_p * coefficient factor = 5.6 cfs * 1

Q_{ps} = 5.6 cfs

16. Compute riser diameter (D_r)

D_r = 1.5 * D_{ps}

D_r = 1.5 * 24 in

D_r = 36 in

D_r = 48 in

17. Compute feed tank diameter (D_f)

D_f = 1.4 * D_r

D_f = 1.4 * 48 in

D_f = 67.2 in

D_f = 68 in

18. Determine the minimum distance between the riser crest and the emergency spillway crest, h

h = N/A ft

Concrete Riser Base Design

19. Determine the volume of concrete per vertical foot of the riser height needed (from table 6

Required volume of concrete per vertical foot = 2.70 cf/vf

20. Compute the total volume of concrete required

Total required volume of concrete = Required volume per vertical foot * Riser length

Total required volume of concrete = 2.70 cf/vf * 10 ft

Total volume of concrete required = 27.00 cf

21. Assume base thickness (initially 1ft) (t)

t = 1.0 ft 12.0 in

22. Compute required top area

Required surface area = Total volume required / t

Required surface area = 27.00 cf / 1.0 ft

Required surface area = 27.00 sf

23. Compute final base length (l) and width (w) (assume square base)

l = w = (required surface area) ^ 1/2

l = w = 27.00 ft

l = w = 4.24 ft 51.00 in

Base is designed to be 4' x 4' square slab

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.
X	The principal spillway diameter (D_{ps}) is smooth pipe larger than 8".
	The principal spillway diameter (D_{ps}) is corrugated metal pipe larger than 12".

25. Determine the size of the anti-seep collar required.

X	18-in projection (for heads (H) less than or equal to 10 feet).
	24-inch project (for heads (H) greater than 10 feet).

Emergency Spillway (es)

No emergency spillway. See Note 5 in temporary sediment basin detail.

Design Elevations

30. Riser crest elevation = 836.0 ft

31. Compute minimum emergency spillway crest elevation

Minimum emergency spillway crest elevation = Riser crest elevation + h

Minimum emergency spillway crest elevation = 836.0 ft + ft

Minimum emergency spillway crest elevation = ft

Actual emergency spillway crest elevation = 421.2 ft

32. Determine design high water elevation

Design high water elevation = Emergency spillway crest elevation + Stage elevation (Hp)

Design high water elevation = 421.2 ft + 0.9 ft

Design high water elevation = ft

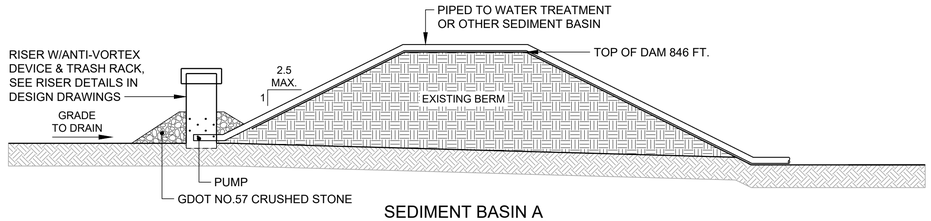
33. Determine elevation of top of dam

Elevation of top of dam = Design high water elevation + 1 ft freeboard

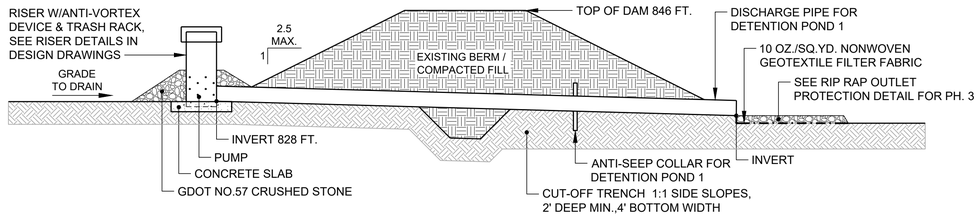
Elevation of top of dam = ft + 1 ft

Elevation of top of dam = 846.0

Detailed H&H calculations are available upon request



SEDIMENT BASIN A



NOTES

1. LENGTH TO WIDTH RATIO SHALL BE GREATER THAN 2:1, WHERE LENGTH IS THE DISTANCE BETWEEN THE INLET AND OUTLET.

2. LOCATE POINTS OF ENTRY (DIKES, SWALES, OR OTHER WATER CONTROL DEVICES) AS FAR AWAY FROM THE RISER AS POSSIBLE. STABILIZE WITH PERMANENT VEGETATION IMMEDIATELY FOLLOWING CONSTRUCTION.

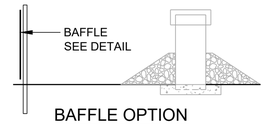
3. RISER'S LOWER HALF SHALL BE PERFORATED WITH 1/2 INCH HOLES SPACED APPROXIMATELY 3 INCHES, AND COVERED WITH 2 FEET OF GDOT NO.57 CRUSHED STONE.

4. THE RISER AND ALL PIPE CONNECTIONS SHALL BE COMPLETELY WATERTIGHT.

5. NO EMERGENCY SPILLWAY TO BE CONSTRUCTED FOR TEMPORARY SEDIMENT POND A OR DETENTION POND 1. TEMPORARY SEDIMENT POND A WILL BE MONITORED FREQUENTLY DURING CONSTRUCTION AND EMPTIED BY PUMPING. FOR DETENTION POND 1, THE PROPOSED RISER SPILLWAY AND DISCHARGE PIPE PROVIDES 9.1 FEET OF FREEBOARD FOR THE 100-YEAR, 24-HOUR DESIGN STORM. ANY POTENTIAL OVERFLOW WILL DISCHARGE INTO AN EXISTING STORMWATER CHANNEL NORTH OF ASH PONDS 3 AND 4.

6. SEE DESIGN DRAWINGS FOR ADDITIONAL DETAILS REGARDING THE RISER AND PIPE INSTALLATION.

DETENTION POND 1



BAFFLE OPTION

BAFFLE DETAIL
NTS

Sd3 / ES17 TEMPORARY SEDIMENT BASIN
NTS

SEPTEMBER 2017 - ISSUED FOR APPROVAL & CONSTRUCTION

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ASH POND NO. 3 & 4 CLOSURE PLAN

TITLE
EROSION, SEDIMENT & POLLUTION CONTROL DETAILS - SHEET 7 OF 7

CONSULTANT
GOLDER

YYYY-MM-DD	2017-02-17
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