INITIAL SAFETY FACTOR ASSESSMENT
40 C.F.R. PART 257.73
PLANT WANSLEY ASH POND 1 (AP-1)
GEORGIA POWER COMPANY

EPA's "Disposal of Coal Combustion Residuals from Electric Utilities" Final Rule (40 C.F.R. Part 257 and Part 261), §257.73(e), requires the owner or operator of an existing CCR surface impoundment to conduct initial and periodic safety factor assessments. The owner or operator of the CCR unit must conduct an assessment and document that the minimum safety factors outlined in §257.73(e)(1)(i) through (iv) for the critical cross-section of the embankment are achieved.

The CCR surface impoundment known as Plant Wansley AP-1 is located on Plant Wansley property, south of Carrollton, Georgia. AP-1 is formed by engineered cross-valley embankments. The foundations and abutments generally consist of Piedmont Physiographic Provence residual soils consisting of silt, silty sand, sandy clay, and silty clay. A transitional layer of partially weathered rock is present between the residual soils and the underlying bedrock. The bedrock consists primarily of graphitic schist, biotite schist, schist with interlayered mafic units, amphibolite/hornblende gneiss, granitic gneiss, and feldspathic quartzite. The critical cross-section of AP-1 has been determined to be located on the southern third section of the embankment at the maximum height of fill.

The analyses used to determine the minimum safety factor for the critical section resulted in the following minimum safety factors:

Loading Condition	Minimum Calculated Safety Factor	Minimum Required Safety Factor
Long-term Maximum Storage Pool (Static)	1.8	1.5
Maximum Surcharge Pool (Static)	1.7	1.4
Seismic	2.0	1.0

The embankments of AP-1 are not constructed of soils that are susceptible to liquefaction. Therefore, a minimum liquefaction safety factor determination was not required.

This assessment is supported by appropriate engineering calculations which are attached.

I hereby certify that the safety factor assessment was conducted in accordance with 40 C.F.R. Part 257.73 (e)(1).

James C. Pegues, P.E.

Licensed State of Georgia, PE No. 17419

SOUTHERN COMPANY

Engineering and Construction Services Calculation

Calculation Number:
TV-WN-GPC603330 591-001

Project/Plant: Plant Wansley Ash Pond	**Unit(s):** Units 1-2	**Discipline/Area:** ESFS
Title/Subject: Slope Stability Analyses of Ash Pond Separator Dike		
Purpose/Objective: Analyze slope stability of Ash Pond Separator Dike		
System or Equipment Tag Numbers: NA	**Originator:** Alexandria R. Wild	

Contents

Revision Record

Rev. No.	**Description**	**Originator Initial / Date**	**Reviewer Initial / Date**	**Approver Initial / Date**
0	Issued for CCR Compliance	ARW / 10-3-16	JAL / 10-3-16	JCP / 10-3-16

Notes:

Purpose of Calculation

Plant Wansley currently disposes of coal combustion residuals (CCR) in the Ash Pond located directly northwest of the plant generating facility and separated from the Storage Water Pond by a Separator Dike. The Plant Wansley Ash Pond was commissioned in 1975, and the Separator Dike was constructed to a crest elevation of 805 ft. with 2.3 (H):1(V) and 3(H): 1(V) upstream and downstream slopes, intermediate berms at elevations 775 ft. and 745 ft. The maximum height of the Ash Pond Separator Dike is approximately 105 ft.

The purpose of this calculation is to check the stability of the dike of Ash Pond 1 using current software.

Methodology

The calculation was performed using the following methods and software:

GeoStudio 2012 (Version 8.15, Build 11777), Copyright 1991-2016, GEO-SLOPE International, Ltd

Strata (Version alpha, Revision 0.2.0), Geotechnical Engineering Center, Department of Civil, Architectural, and Environmental Engineering, University of Texas.

Morgenstern-Price analytical method was reported.

Criteria and Assumptions

The slope stability models were run using the following assumptions and design criteria:

- Seismic site response was determined using a one-dimensional equivalent linear site response analysis. The analysis was performed using Strata and utilizing random vibration theory. The input motion consisted of the USGS published 2008 Uniform Hazard Response Spectrum (UHRS) for Site Class B/C at a 2% Probability of Exceedance in 50 years. The UHRS was converted to a Fourier Amplitude Spectrum, and propagated through a representative one dimensional soil column using linear wave propagation with strain-dependent dynamic soil properties. The input soil properties and layer thickness were randomized based on defined statistical distributions to perform Monte Carlo simulations for 100 realizations, which were used to generate a median estimate of the surface ground motions.
- The median surface ground motions were then used to calculate a pseudostatic seismic coefficient for utilization in the stability analysis using the approach suggested by Bray and Tavasarou (2009). The procedure calculates the seismic coefficient for an allowable seismic displacement and a probability exceedance of the displacement. For this analysis, an allowable displacement of 0.5 ft, and a probability of exceedance of 16% were conservatively selected, providing a seismic coefficient of 0.026g for use as a horizontal acceleration in the stability analysis.

- The stability of the Plant Wansley Separator Dike is based on the safety factor requirements from EPA's "Disposal of Coal Combustion Residuals from Electric Utilities Final Rule (40 C.F.R. Part 257 and Part 261) subsection §257.73(e).
- The soil and CCR material properties for unit weight, phi angle, and cohesion were obtained from the summary table of material properties in the Ash Pond Closure Feasibility Study by Geosyntec Consultants (Geosyntec). The estimated material properties are a result of laboratory testing conducted for the feasibility study completed in 2016.
- A surcharge load is applied to the sluiced ash due to the short-term gypsum cell berm located adjacent to the Separator Dike. The short-term gypsum cells were constructed on the ash delta in 2008.

Ash Pond 1

- The cross-section of the dike was obtained using the original design drawings H12399 and H12365, Section G-G.
- The cross-section of the sluiced CCR was obtained from the 2014 bathymetric survey of the Ash Pond.
- Material properties were obtained from recent material testing conducted by Geosyntec Consultants (Geosyntec) for the Ash Pond Closure Feasibility Study completed in 2016.

Input Data

The CCR and soil material properties for unit weight, phi angle, and cohesion were obtained from recent material testing conducted by Geosyntec for the Ash Pond Closure Feasibility Study completed in 2016. The final recommended parameters used in the study and therefore also used in this analysis are shown in Appendix B from Geosyntec's Ash Pond Closure Feasibility Study final deliverable.

Based on Georgia Power's (GP) Land Department Drawing P355-6 (1), Plant Wansley Ash Pond 2014 Survey, top of the ash in the impoundment is at an elevation of approximately 800 ft.

Hydraulic Considerations

The normal pool elevation of the Ash Pond is 795 ft., based on plant operations. The maximum storage water elevation is based on the calculation package DC-WN-WAN16030-001 Hydrologic and Hydraulic Study for the Ash Pond dated 8/19/16 prepared by Southern Company Services, Inc. This calculation states the Plant Wansley Ash Pond is capable of handling the 100-year 24-hour storm event with a maximum surcharge pool elevation of 800 ft.

The normal (and maximum) pool elevation of the Storage Water Pond is 780 ft. This maximum level constraint has been established to minimize the occurrence of excessive seepage conditions along the downstream slope / toe of the dike.

The following hydraulic information identified in Table 1 is a summary of the hydraulic data identified in the slope stability analyses:

Table 1: Pool Level Elevations for the Ash Pond and Storage Water Pond.

	Normal Pool Level Elevation (ft.)	Maximum Pool Level Elevation (ft.)
Ash Pond	795	800
Storage Water Pond	780	780

Loading Condition

The Separator Dike for the Plant Wansley Ash Pond was evaluated for the loading conditions indicated in the Table 2.

Summary of Conclusions

The following table lists the factors of safety for various slope stability failure conditions and the minimum required values as provided in EPA's 40 C.F.R. Part 257.

Table 2: Summary of the Minimum Calculated Safety Factor and the Minimum Required Safety Factor for the Critical Section of the Dike.

Loading Condition	Minimum Calculated Safety Factor	Minimum Required Safety Factor
Long-term Maximum Storage Pool (Static)	1.8	1.5
Maximum Surcharge Pool (Static)	1.7	1.4
Seismic	2.0	1.0

Safety factors for all cases were acceptable and exceeded the minimum safety factors required. Therefore, the analyses show the separation dike is stable in all cases.

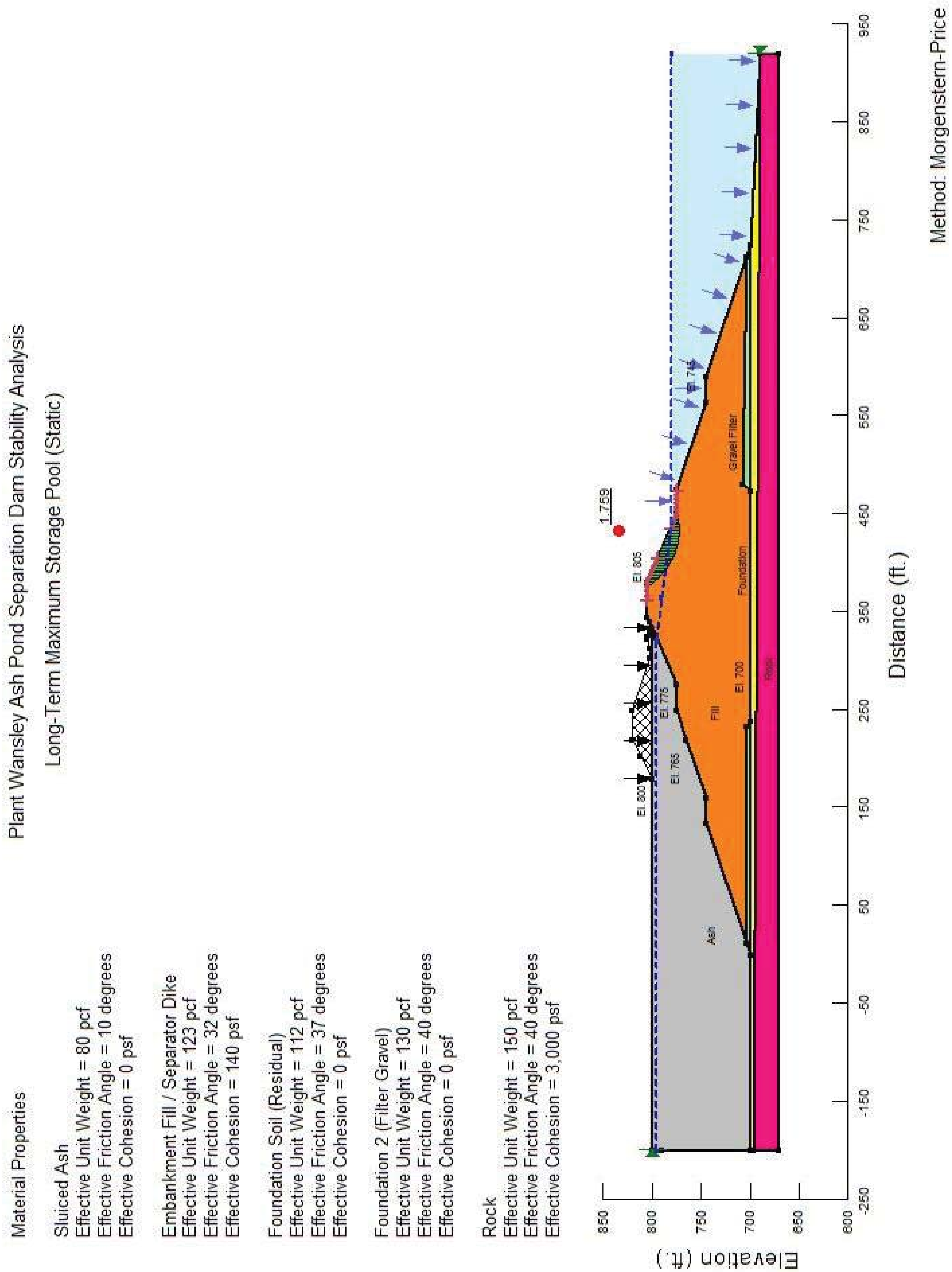
Design Inputs/References

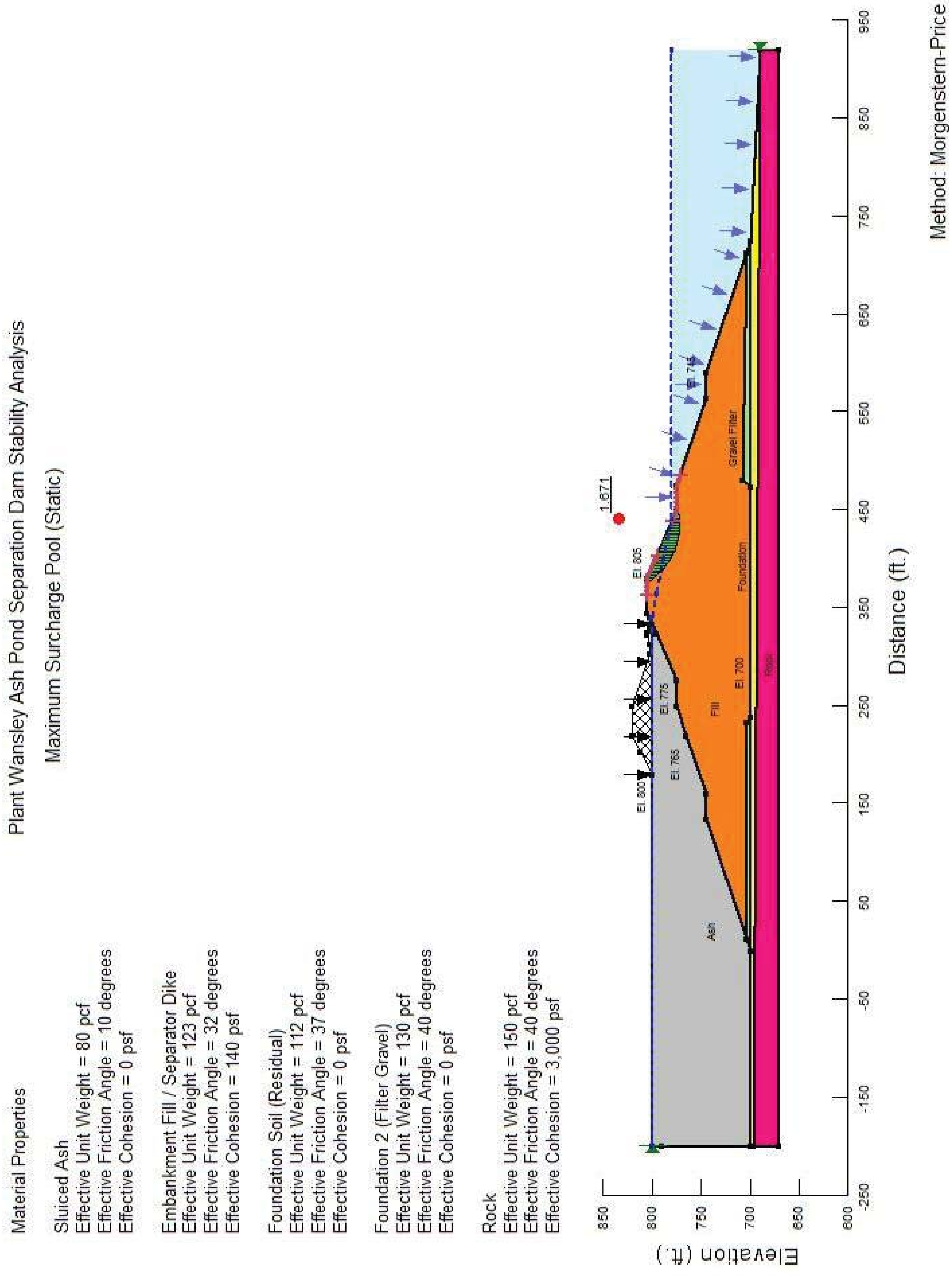
USGS Earthquake Hazards website, http://earthquake.usgs.gov/hazards/hazmaps/.
Bray, J. D. and Travasarou, T., *Pseudostatic Coefficient for Use in Simplified Seismic Slope Stability Evaluation*, Journal of Geotechnical and Environmental Engineering, American Society of Civil Engineers, September 2009
Calculation package DC-WN-WAN16030-001 Hydrologic and Hydraulic Study for the Ash Pond prepared by Southern Company Services, Inc
GPC Land Department Drawing P355-6 (1), Plant Wansley Ash Pond 2014 Survey
GPC Drawing H10027 - Project Location Map
GPC Drawing H12363 - Plant Wansley Ash Pond Discharge Structure General Arrangement
GPC Drawing H12364 - Plant Wansley Separation Dike Construction
GPC Drawing H12365 - Plant Wansley Separation Dike section and Details
GPC Drawing H12366 - Plant Wansley Separation Dike Construction

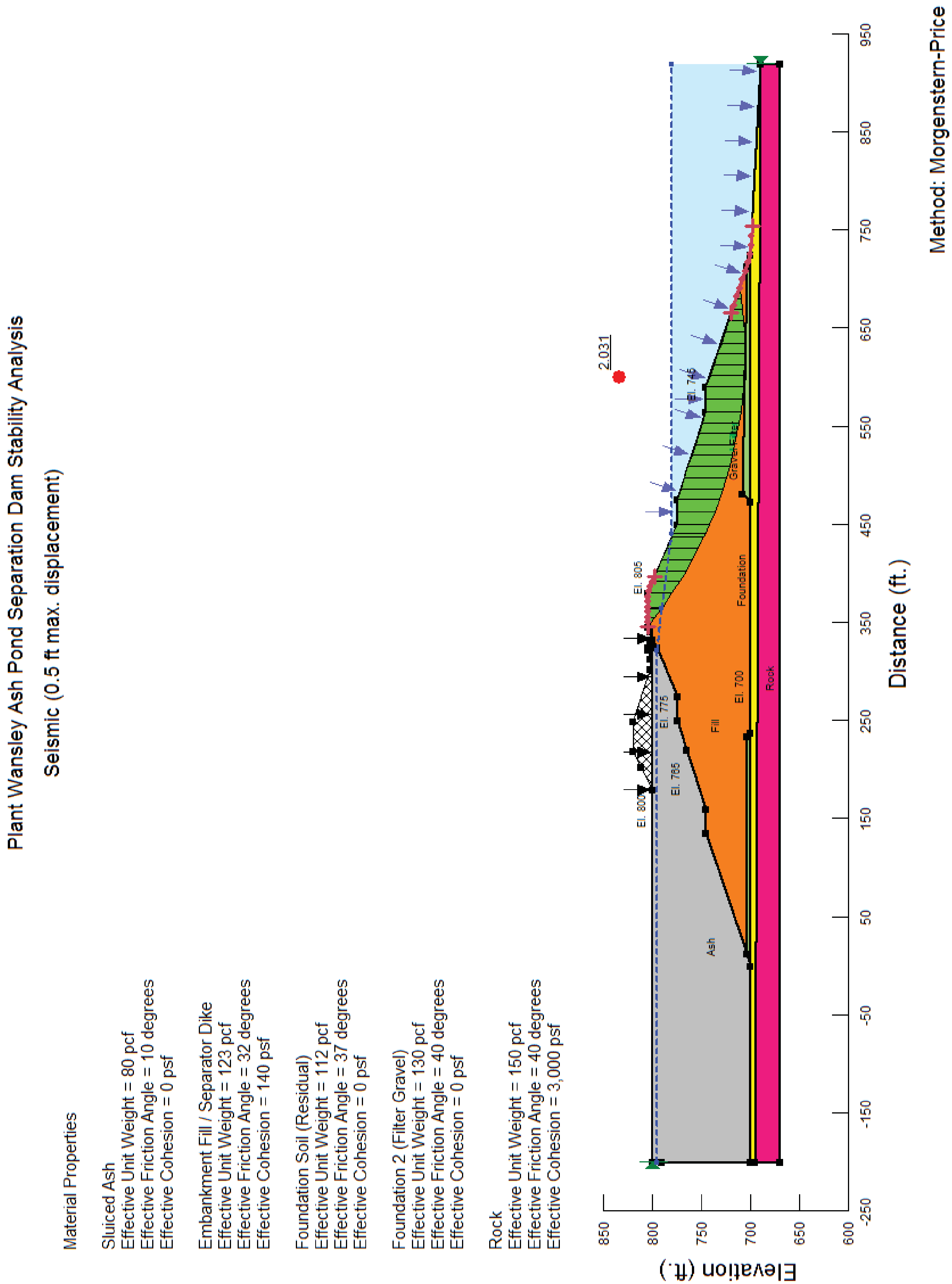
GPC Drawing H12399 - Plant Wansley Separation Dike General Arrangement
GPC Drawing E1C11102 - Short Term Gypsum Disposal General Arrangement and Site Plan

Body of Calculation

Calculation consists of Slope/W modeling attached.


Plant Wansley Ash Pond Separation Dam Stability Analysis
Long-Term Maximum Storage Pool (Static)
Material Properties
Sluiced Ash
Effective Unit Weight = 80 pcf
Effective Friction Angle = 10 degrees
Effective Cohesion = 0 psf
Embankment Fill / Separator Dike
Effective Unit Weight = 123 pcf
Effective Friction Angle = 32 degrees
Effective Cohesion = 140 psf
Foundation Soil (Residual)
Effective Unit Weight = 112 pcf
Effective Friction Angle = 37 degrees
Effective Cohesion = 0 psf
Foundation 2 (Filter Gravel)
Effective Unit Weight = 130 pcf
Effective Friction Angle = 40 degrees
Effective Cohesion = 0 psf
Rock
Effective Unit Weight = 150 pcf
Effective Friction Angle = 40 degrees
Effective Cohesion = 3,000 psf
1.759
El. 800
El. 765
El. 775
El. 805
Fill
El. 700
Foundation
Gravel Filter
Ash
Rock
Elevation (ft.)
Distance (ft.)
Method: Morgenstern-Price


Plant Wansley Ash Pond Separation Dam Stability Analysis
Maximum Surcharge Pool (Static)
Material Properties
Sluiced Ash
Effective Unit Weight = 80 pcf
Effective Friction Angle = 10 degrees
Effective Cohesion = 0 psf
Embankment Fill / Separator Dike
Effective Unit Weight = 123 pcf
Effective Friction Angle = 32 degrees
Effective Cohesion = 140 psf
Foundation Soil (Residual)
Effective Unit Weight = 112 pcf
Effective Friction Angle = 37 degrees
Effective Cohesion = 0 psf
Foundation 2 (Filter Gravel)
Effective Unit Weight = 130 pcf
Effective Friction Angle = 40 degrees
Effective Cohesion = 0 psf
Rock
Effective Unit Weight = 150 pcf
Effective Friction Angle = 40 degrees
Effective Cohesion = 3,000 psf
1.671
El. 800
El. 765
El. 775
El. 805
El. 700
El. 745
Ash
Fill
Foundation
Gravel Filter
Rock
Elevation (ft.)
Distance (ft.)
Method: Morgenstern-Price


Plant Wansley Ash Pond Separation Dam Stability Analysis
Seismic (0.5 ft max. displacement)
Material Properties
Sluiced Ash
Effective Unit Weight = 80 pcf
Effective Friction Angle = 10 degrees
Effective Cohesion = 0 psf
Embankment Fill / Separator Dike
Effective Unit Weight = 123 pcf
Effective Friction Angle = 32 degrees
Effective Cohesion = 140 psf
Foundation Soil (Residual)
Effective Unit Weight = 112 pcf
Effective Friction Angle = 37 degrees
Effective Cohesion = 0 psf
Foundation 2 (Filter Gravel)
Effective Unit Weight = 130 pcf
Effective Friction Angle = 40 degrees
Effective Cohesion = 0 psf
Rock
Effective Unit Weight = 150 pcf
Effective Friction Angle = 40 degrees
Effective Cohesion = 3,000 psf
2.031
El. 800
El. 785
El. 775
El. 805
El. 745
El. 700
Ash
Fill
Foundation
Gravel Filter
Rock
Elevation (ft.)
850
800
750
700
650
600
Distance (ft.)
-250
-150
-50
50
150
250
350
450
550
650
750
850
950
Method: Morgenstern-Price

Attachment A

Geosyntec Estimated Material Properties

Geosyntec consultants

CP: CPC Date: 06/17/16 APC: MZ Date: 06/17/16 CC: SOS Date: 06/17/16

Client: SCS Project: Plant Wansley Project No: GW6007

Table 1. Estimated Material Properties of the Ash Pond Closure and Subsurface Soils

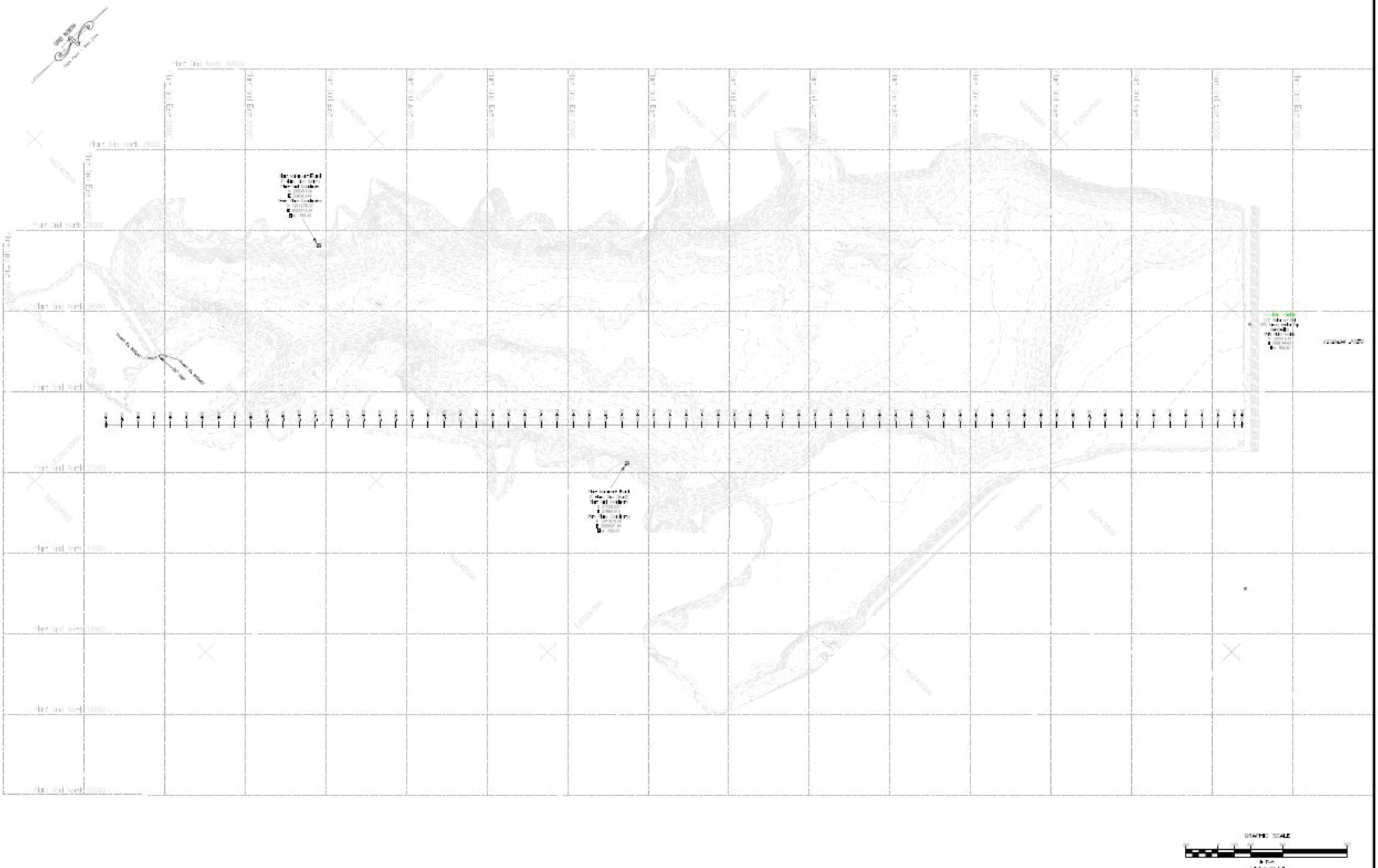
		Drained		Undrained		
Material	Unit Weight (pcf)	Effective Friction Angle (degrees)	Cohesion (psf)	Effective Friction Angle (degrees)	Cohesion (psf)	Undrained Shear Strength Ratio[1]
Sluiced Ash	80	10[2]	0	-	-	0.12[3,4]
Dry Ash	80	25	0	25	0	-
Gypsum	120	35	0	35	0	-
Embankment Fill/Separator Dike	123	32	140	29	400	-
Foundation Soil	112	37	0	24	80	-
Rock	150	40	3,000	40	3,000	-
Concrete	150	55	0	55	0	-
Stabilized Ash	100	0	7,200[5]	0	7,200[5]	-

Notes:
[1] The listed value has been reduced by 20% to account for shear strength reduction in pseudo-static stability analyses.
[2] Increased to 25 degrees as part of the sensitivity analyses.
[3] Increased to 0.4 (i.e., reduced value of 0.32) as part of the sensitivity analyses.
[4] The undrained shear strength ratio was estimated based on in situ cone penetrometer tests; all other properties were based on previous analyses completed by Southern Company Services.
[5] Changed to 3,240 and 10,800 psf as part of the sensitivity analyses.

GW6007/PW_Phase II FS_Global Stability.docx

Attachment B

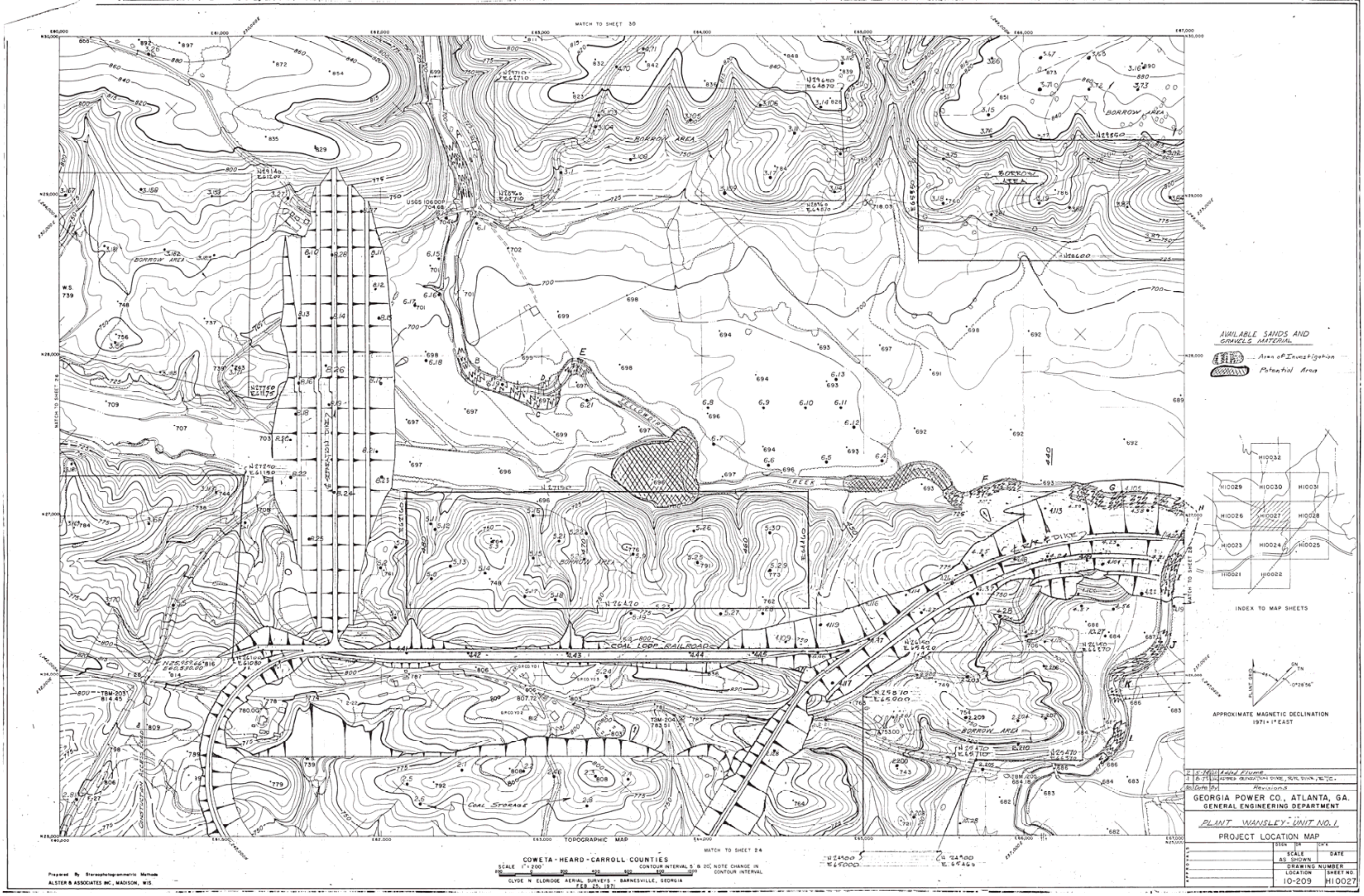
Reference Drawings

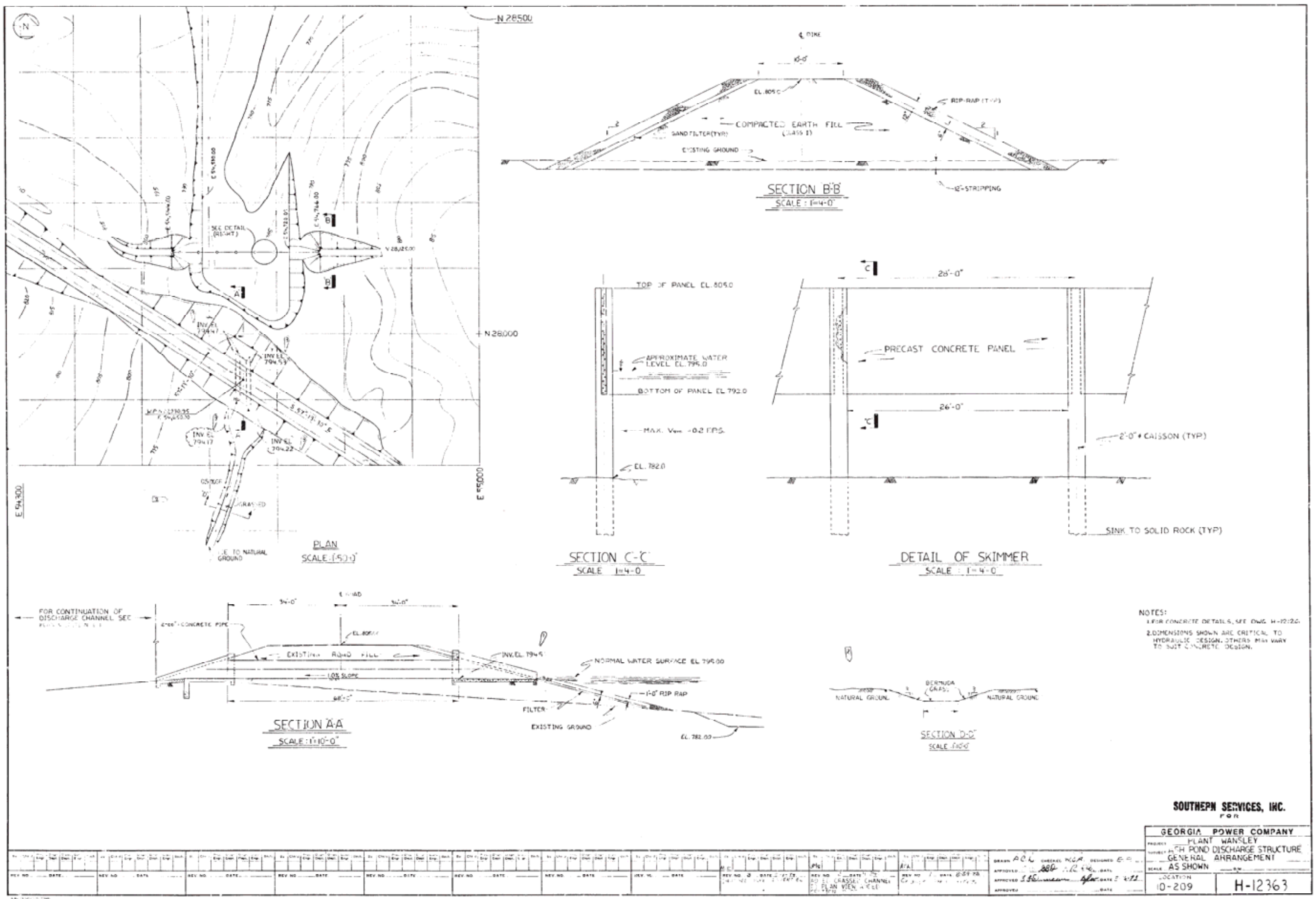


Notes:
1) All coordinates shown are Georgia State Plane – West Zone NAD83/94 unless specified otherwise.
2) All elevations shown are NAVD88 unless otherwise specified.

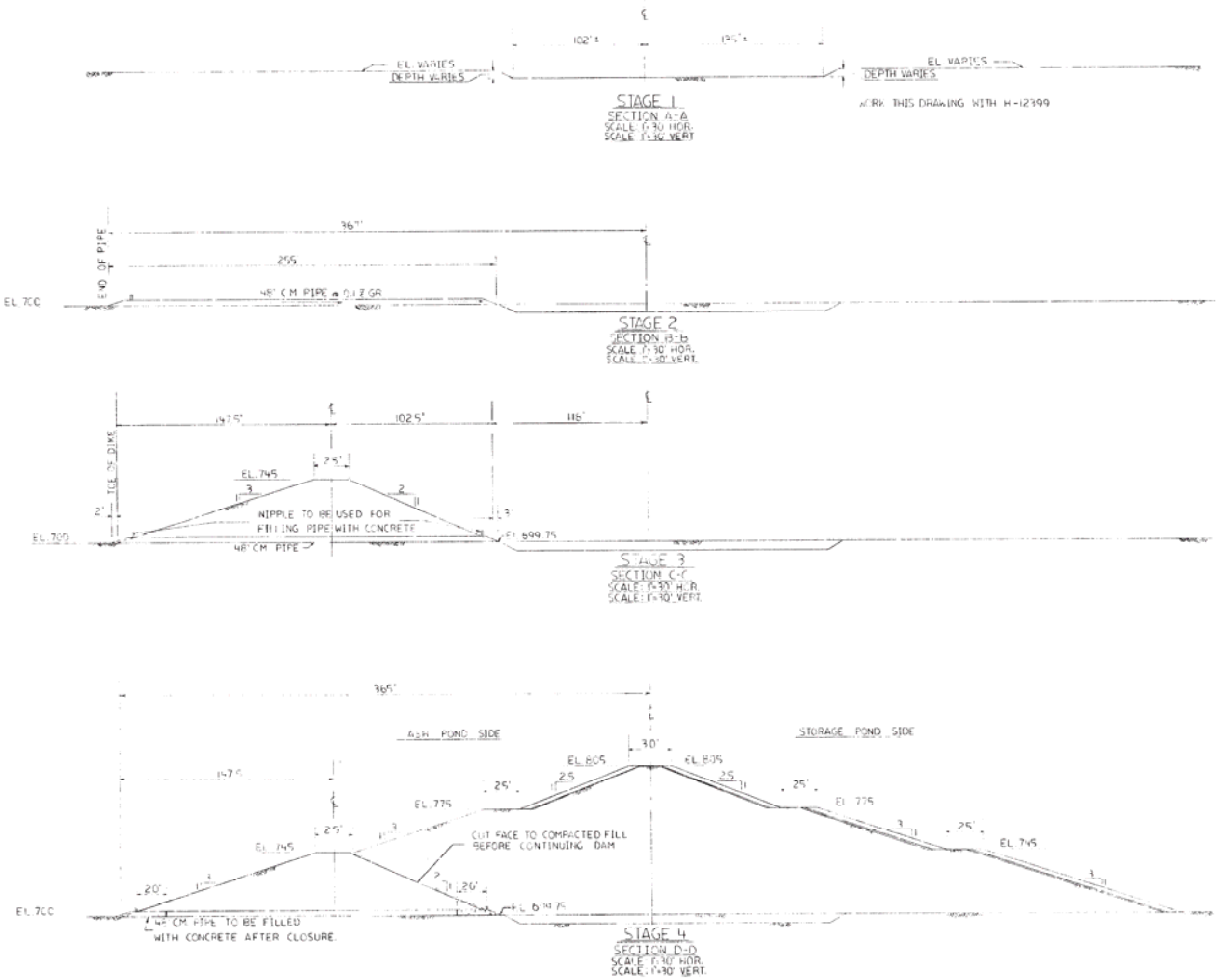
References:
1) Plant Wansley Ash Pond, GPC Land Dept. map file no. [illegible], Dec. 1977.
2) Plant Wansley Aerial Topo, GPC Land Dept. map file no. [illegible], March 2006.
3) Plant Wansley Aerial Topo, GPC Land Dept. map file no. [illegible], July 2009.

GEORGIA POWER CO., ATLANTA, GA. Land Department	
Plant Wansley Ash Pond – June 2014 Survey Topographic Map – Sheet 1 of 12 Heard County, Georgia	
Drawing Number	P355-6 (1)


MATCH TO SHEET 30
MATCH TO SHEET 24
MATCH TO SHEET 26
MATCH TO SHEET 28
BORROW AREA
COAL LOOP RAILROAD
COAL STORAGE
CREEK
CONSTRUCTION ACCESS ROAD
USGS 106.00P 704.68
TBM-203 814.45
TBM-204 783.51
TBM-205 684.18
W.S. 739
AVAILABLE SANDS AND GRAVELS MATERIAL
Area of Investigation
Potential Area
H10032
H10029
H10030
H10031
H10026
H10027
H10028
H10023
H10024
H10025
H10021
H10022
INDEX TO MAP SHEETS
APPROXIMATE MAGNETIC DECLINATION 1971 ± 1° EAST
TOPOGRAPHIC MAP
COWETA - HEARD - CARROLL COUNTIES
SCALE 1" = 200'
CONTOUR INTERVAL 5 & 20, NOTE CHANGE IN CONTOUR INTERVAL
CLYDE N. ELDRIDGE AERIAL SURVEYS - BARNESVILLE, GEORGIA
FEB 25, 1971
Prepared By Stereophotogrammetric Methods
ALSTER & ASSOCIATES INC., MADISON, WIS.
Added Flume
Revisions
GEORGIA POWER CO., ATLANTA, GA.
GENERAL ENGINEERING DEPARTMENT
PLANT WANSLEY - UNIT NO. 1
PROJECT LOCATION MAP
SCALE AS SHOWN
DATE
DRAWING NUMBER
LOCATION 10-209
SHEET NO. H10027



N 28500
N 28000
E 54300
E 55000
SEE DETAIL (RIGHT)
INV. EL. 794.53
INV. EL. 794.22
INV. EL. 794.17
GRASSED
TIE TO NATURAL GROUND
PLAN
SCALE: 1"=50'
¢ DIKE
10'-0"
EL. 805.0
RIP-RAP (TYP)
COMPACTED EARTH FILL (CLASS I)
SAND FILTER (TYP)
EXISTING GROUND
12" STRIPPING
SECTION B-B
SCALE: 1"=4'-0"
TOP OF PANEL EL. 805.0
APPROXIMATE WATER LEVEL EL. 795.0
BOTTOM OF PANEL EL. 792.0
MAX. Vel. = 0.2 FPS
EL. 782.0
SECTION C-C
SCALE: 1"=4'-0"
28'-0"
26'-0"
PRECAST CONCRETE PANEL
2'-0" ø CAISSON (TYP)
SINK TO SOLID ROCK (TYP)
DETAIL OF SKIMMER
SCALE: 1"=4'-0"
FOR CONTINUATION OF DISCHARGE CHANNEL SEC
CONCRETE PIPE
¢ ROAD
34'-0"
EXISTING ROAD FILL
1.0% SLOPE
68'-0"
INV. EL. 794.5
NORMAL WATER SURFACE EL. 795.00
1'-0" RIP RAP
FILTER
EXISTING GROUND
EL. 782.00
SECTION A-A
SCALE: 1"=10'-0"
BERMUDA GRASS
NATURAL GROUND
SECTION D-D
NOTES:
1. FOR CONCRETE DETAILS, SEE DWG. H-12124.
2. DIMENSIONS SHOWN ARE CRITICAL TO HYDRAULIC DESIGN. OTHERS MAY VARY TO SUIT CONCRETE DESIGN.
SOUTHERN SERVICES, INC.
FOR
GEORGIA POWER COMPANY
PLANT WANSLEY
ASH POND DISCHARGE STRUCTURE
GENERAL ARRANGEMENT
AS SHOWN
10-209
H-12363



NOTES

(1) USUAL STRIPPING AND ROLLING SHALL BE DONE AS NECESSARY BEFORE PLACING THE FILL WHERE EXCAVATION IS NOT MADE.
(2) THE LIMITS OF EXCAVATION ON THIS DRAWING ARE APPROX.
(3) THE DIVERSION PIPE IS TYPICAL 48" D, .109" THICK, 3x1" CORRUGATIONS, ARMCO OR EQUIVALENT QUALITY STEEL PIPE.
(4) SPECIAL CARE SHALL BE TAKEN TO COMPACT SOIL AROUND THE PIPE TO ACHIEVE 100% STANDARD PROCTOR DENSITY.
(5) SUFFICIENTLY STRONG STOP LOGS SHALL BE PLACED AT BOTH ENDS OF THE DIVERSION PIPE BEFORE FORCING CONCRETE INTO IT.

REFERENCES

DWG. NO. H-12366 : SEPARATION DAM CONSTRUCTION DIVERSION SCHEME STAGE DRAWINGS, PLANS.
DWG. NO. H-12399 : SEPARATION DAM PLAN AND SECTIONS.

SOUTHERN SERVICES INC.
FOR
GEORGIA POWER CO. ATLANTA, GA.
GENERAL ENGINEERING DEPARTMENT

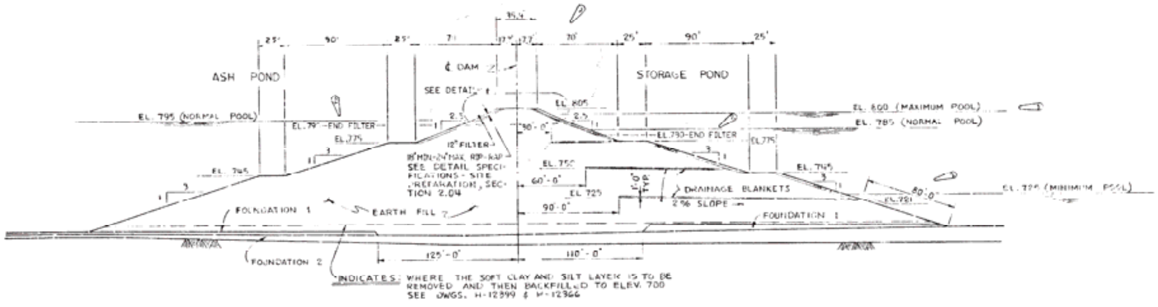
SUBJECT: SEPARATION DAM - CONSTRUCTION ... ION SCHEME STAGE DWGS, SECTIONS
SCALE: 1"=30' HOR. & VERT.

DRAWN CDL CHECKED C.P. DESIGNED C.R.
APPROVED [signature] DATE 7-30-73
APPROVED [signature] DATE 7-30-73
APPROVED DATE

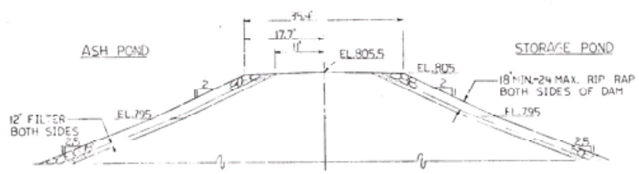
LOCATION 10-269
SHEET NO. H-12364

RETURN TO HYDRO

30X



SECTION G-G (H-12399)
1"=40'-0"



TYPICAL TOP OF DAM DETAIL
SCALE: 1"=10'-0"

SOIL DESCRIPTION

EARTH FILL	CLAYEY SANDY SILT
RIP - RAP	ROCK AGGREGATE
DRAINAGE BLANKET	SAND AND GRAVEL FROM BORROW PIT LOCATIONS SELECTED FOR HIGH PERMEABILITY
FOUNDATION 1	SAND AND GRAVEL (ALLUVIUM)
FOUNDATION 2	SANDY MICACEOUS SILT (RESIDUAL)

NOTE:
1. FOR THE LOCATION OF THE SECTION SHOWN, PLEASE REFER TO DWG. H-12399.
2. THIS DESIGN IS BASED ON THE ASSUMPTION THAT THE WATER LEVEL IN STORAGE POND SIDE ONLY WILL FLUCTUATE FROM EL.785 TO EL.720.
3. FOR ADDITIONAL NOTES CONCERNING SOIL MATERIALS TO BE USED IN DAM SEE DWG. H-12396.

REFERENCES: SEPARATION DAM

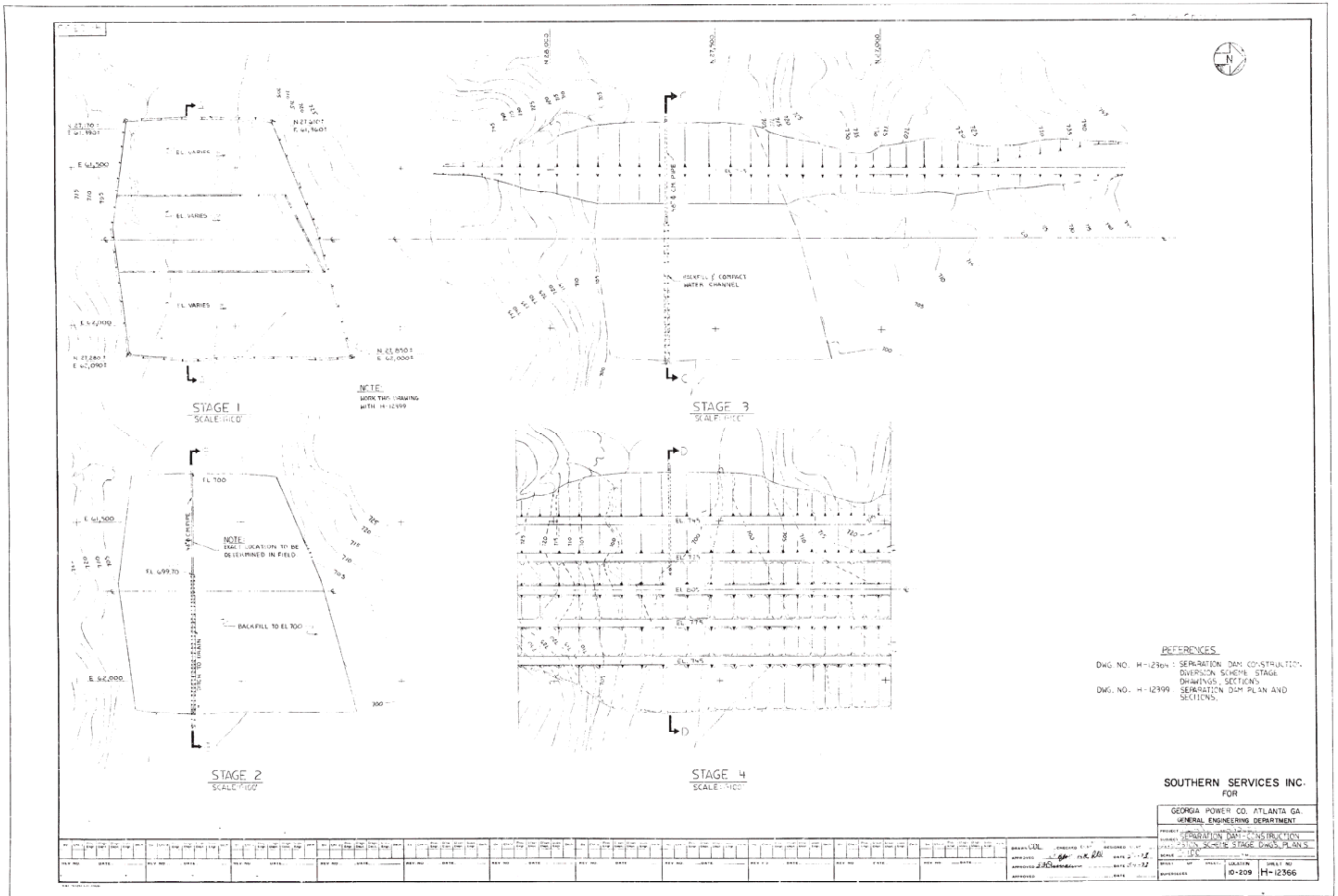
H-12364 — DIVERSION SCHEME — STAGE DRAWINGS & SECTIONS
H-12366 — CONSTRUCTION DIVERSION SCHEME — STAGE DRAWINGS & PLANS
H-12396 — STABILITY ANALYSIS, SHEET 1 OF 3
H-12397 — " " , SHEET 2 OF 3
H-12398 — " " , SHEET 3 OF 3
H-12399 — GENERAL ARRANGEMENT WITH EXCAVATION LIMITS

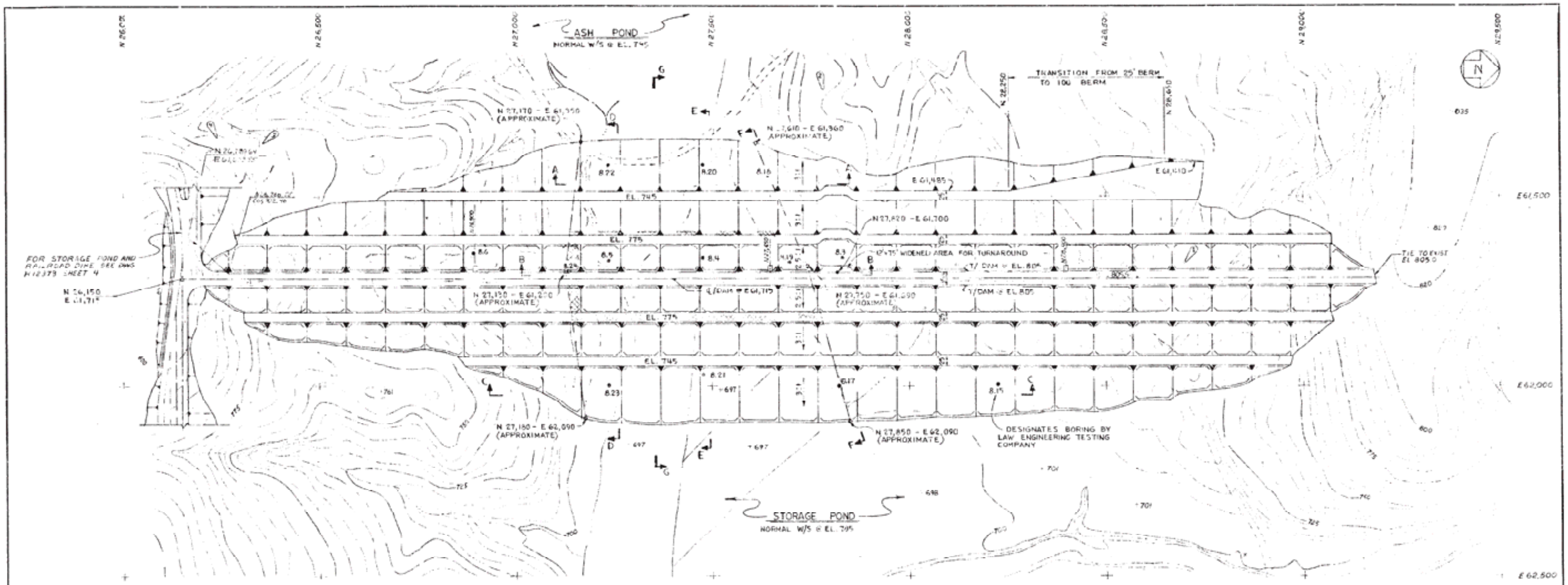
SOUTHERN SERVICES, INC.
FOR
GEORGIA POWER CO., ATLANTA, GA.
GENERAL ENGINEERING DEPARTMENT

PLANT WANSLEY
SEPARATION DAM
SECTION & DETAILS

SCALE: AS SHOWN | DATE: 4-?-73
DRAWING NUMBER — LOCATION: 10-209 | SHEET NO.: H-12365

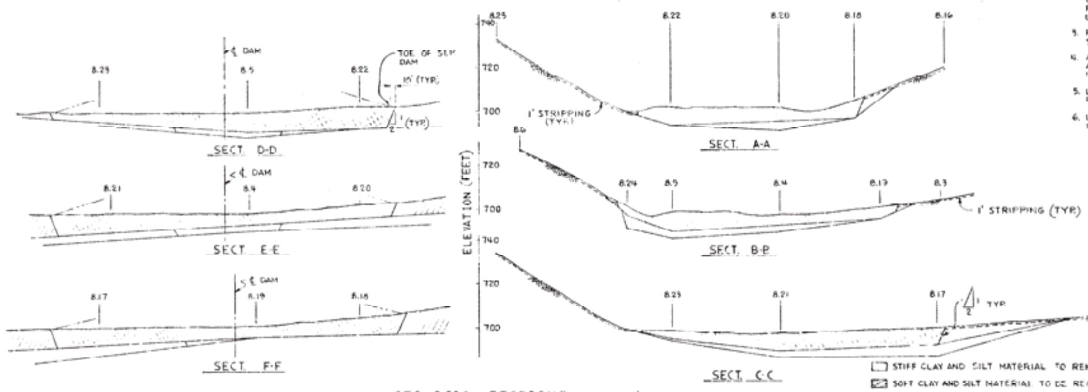
30X


STAGE 1
SCALE: 1"=100'
EL VARIES
N 27,280±
E 62,090±
N 27,610±
E 61,960±
N 27,850±
E 62,000±
E 61,500
E 62,000
NOTE:
WORK THIS DRAWING WITH H-12399
STAGE 2
SCALE: 1"=100'
EL 700
EL 699.70
NOTE:
EXACT LOCATION TO BE DETERMINED IN FIELD
BACKFILL TO EL 700
DITCH TO DRAIN
STAGE 3
SCALE: 1"=100'
N 28,000
N 27,500
N 27,000
48" Ø CM PIPE
BACKFILL & COMPACT WATER CHANNEL
STAGE 4
SCALE: 1"=100'
EL 745
EL 805
REFERENCES
DWG. NO. H-12364 : SEPARATION DAM CONSTRUCTION DIVERSION SCHEME STAGE DRAWINGS, SECTIONS
DWG. NO. H-12399 : SEPARATION DAM PLAN AND SECTIONS
SOUTHERN SERVICES INC.
FOR
GEORGIA POWER CO. ATLANTA GA.
GENERAL ENGINEERING DEPARTMENT
SEPARATION DAM-CONSTRUCTION
DIVERSION SCHEME STAGE DWGS. PLANS
10-209
H-12366
RETURN TO HYDRO



PLAN OF SEPARATION DAM

1" = 100'-0"



- STIFF CLAY AND SILT MATERIAL TO REMAIN IN PLACE
- SOFT CLAY AND SILT MATERIAL TO BE REMOVED
- SAND AND GRAVEL MATERIAL TO BE REMOVED
- SAND AND GRAVEL MATERIAL TO REMAIN IN PLACE

GEOLOGIC SECTIONS

HORIZ. SCALE: 1" = 100'-0"
VERT. SCALE: 1" = 20'-0"

NOTE:

1. SOFT TO VERY SOFT ALLUVIUM (CLAY AND SILT) IS TO BE REMOVED UNDER THE SUPERVISION OF THE FIELD ENGINEER. THE APPROXIMATE BOUNDARY IS SHOWN BY THE SHADED AREA. LEAVE STIFF CLAY AND SILT IN PLACE.
2. SAND AND GRAVEL LAYER BELOW THE CLAY AND SILT IS TO BE REMOVED FROM THE HATCHED AREA ONLY. THE REST WILL BE CONSOLIDATED BY ROLLERS BEFORE PLACING EMBANKMENT FILL AND USED AS A DRAINAGE BLANKET.
3. FOR GEOLOGIC CROSS SECTIONS & OTHER RELATED DETAILS SEE LAW'S COMMUNICATION NO. 39; FIGURES 1-5,9.
4. APPROXIMATE LOCATION OF LIMITS OF MATERIAL TO BE REMOVED ARE NOT TO BE CONSTRUED AS EXACT. ACTUAL EXCAVATION IS TO BE DETERMINED BY NATURE OF THE MATERIAL.
5. LOGS OF SOIL BORINGS MAY BE OBTAINED FROM GEORGIA POWER COMPANY OR SOUTHERN SERVICES INC.
6. USUAL STRIPPING SHOULD BE DONE AS NECESSARY BEFORE PLACING THE FILL.

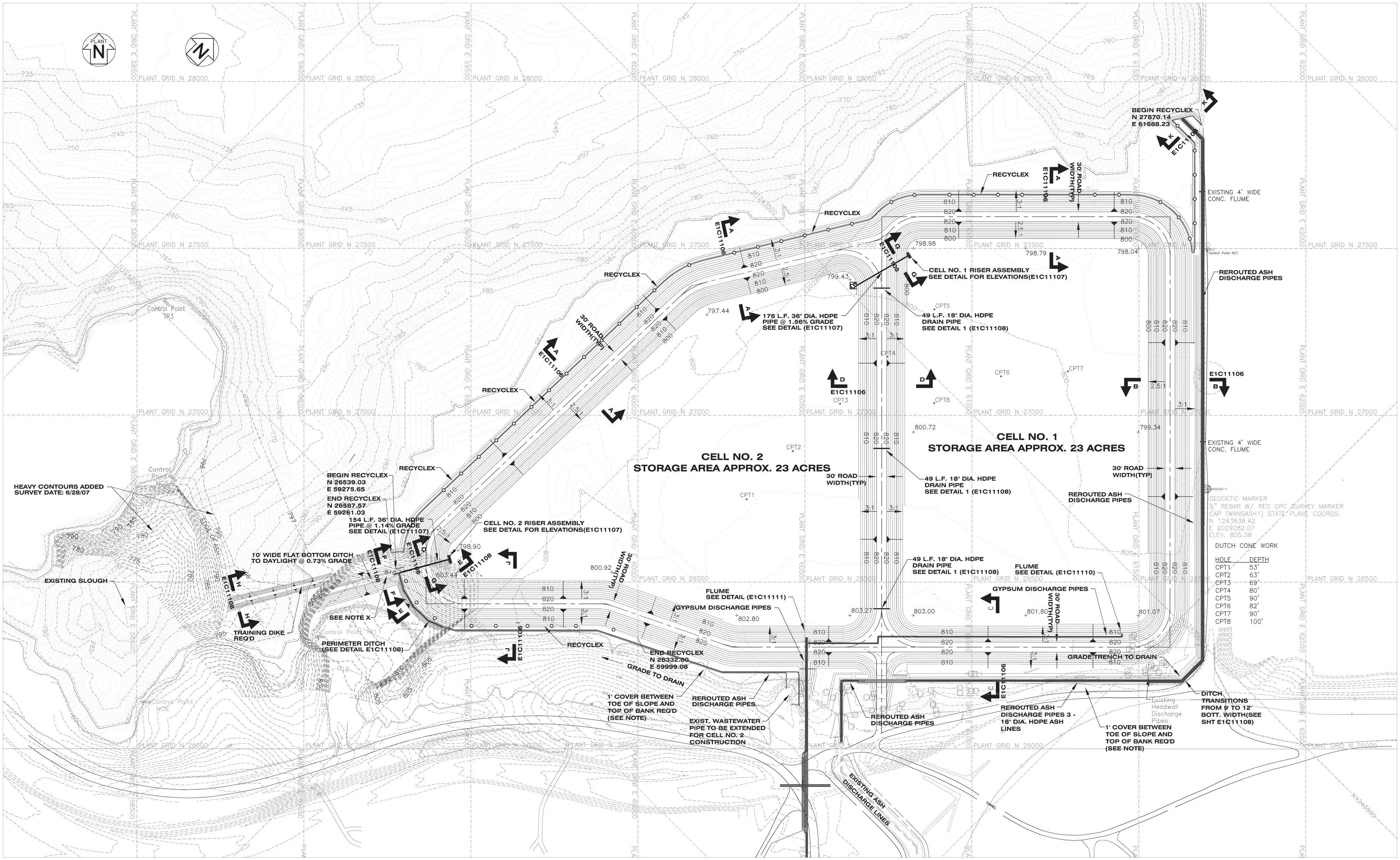
REFERENCES: SEPARATION DAM

H-12364 — DIVERSION SCHEME — STAGE DRAWINGS & SECTIONS
H-12365 — SECTION & DETAILS
H-12366 — CONSTRUCTION DIVERSION SCHEME — STAGE DRAWINGS & PLANS
H-12373 — STORAGE POND DAM, SHEET 4
H-12396 — STABILITY ANALYSIS, SHEET 1 OF 3
H-12397 — " " , SHEET 2 OF 3
H-12398 — " " , SHEET 3 OF 3
H 12217 — GEN. ARRANGEMENT, ASH PIPE ROUTING

SOUTHERN SERVICES, INC.
FOR
GEORGIA POWER CO., ATLANTA, GA.
GENERAL ENGINEERING DEPARTMENT

PLANT WANSLEY
SEPARATION DAM - GENERAL ARRANGEMENT WITH LIMITS OF EXCAVATION

DR. WGP
SCALE AS SHOWN
DRAWING NUMBER
LOCATION 10-209
SHEET NO. H12399



GENERAL ARRANGEMENT AND SITE PLAN

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

GENERAL NOTES

1. FOR DRAWING INDEX, NOTES, AND SPECIFICATIONS SEE E1C11100.
2. ALONG THE TOE OF DIKE, ALL EXPOSED ASH SHALL BE COVERED WITH 1 FOOT OF SOIL COVER. (SC/SM, MH/ML)
3. WASTE WATER DISCHARGE PIPES TO BE TEMPORARILY EXTENDED TO FACILITATE DIKE CONSTRUCTION. THESE PIPES WILL BE LATER REMOVED TO PERMANENTLY END IN THE DISCHARGE DITCH FROM CELL NO. 2.

Southern Company Generation
Engineering and Construction Services
FOR
Georgia Power Company

PLANT WANSLEY UNITS 1 & 2
FGD PROJECT

SHORT TERM GYPSUM DISPOSAL
GENERAL ARRANGEMENT AND SITE PLAN

REVISION	DATE	DESCRIPTION	JOB NO.	EWO	BY	CHK'D	CIVIL APPR	ELECT APPR	I/C APPR	MECH APPR	DISC MGR
1	8-10-07	GENERAL REVISION ISSUED FOR CONSTRUCTION	C07510	3059DE	JWM	PMG	DHF				CKT
0	7-27-07	ISSUED FOR CONSTRUCTION	C07510	3059DE	JWM	PMG	AMW	RKC	KAH	MTB	CKT

SCALE	PROJ I.D.	DRAWING NUMBER	SH	CONT'D	REV
1"=100'		E1C11102	1	FINAL	1

ANSI E: 44x34 Acad2004