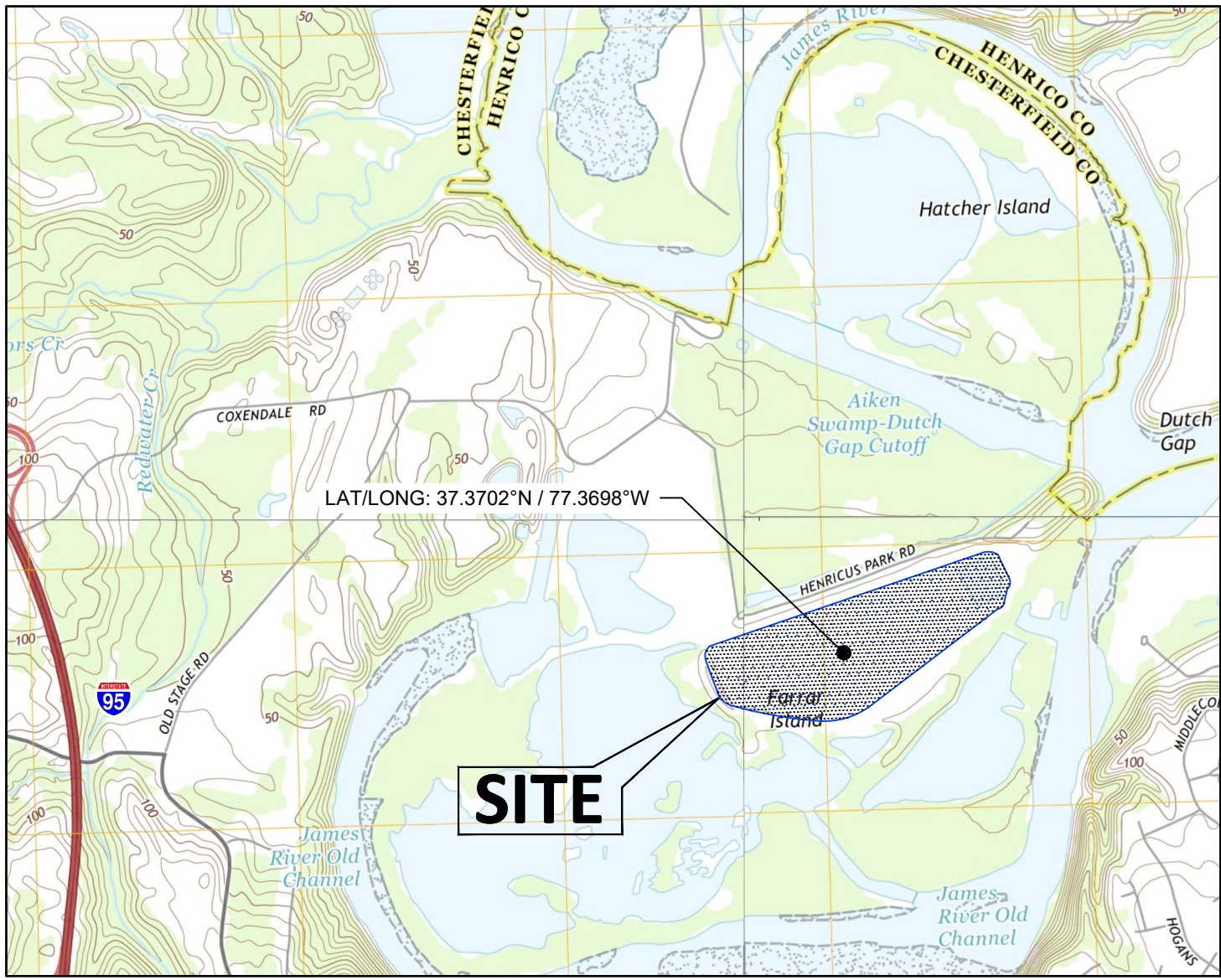


CONTACT INFORMATION

OWNER: DOMINION ENERGY
CHRIS M. GEE
600 E. CANAL STREET
RICHMOND, VIRGINIA 23219
PHONE: (804) 205-0527
FAX: (804) 273-2876
EMAIL: CHRIS.M.GEE@DOMINIONENERGY.COM

ENGINEER: AECOM
STEPHEN WALKER, P.E.
564 WHITE POND DRIVE
AKRON, OHIO 44313
PHONE: (330) 289-4233
EMAIL: STEVE.WALKER@AECOM.COM

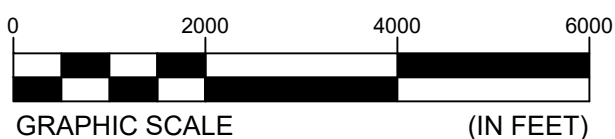
DOMINION ENERGY
CHESTERFIELD POWER STATION
CLOSURE PLAN - UPPER ASH POND
PERMIT APPLICATION DRAWINGS
NOT FOR CONSTRUCTION
CHESTERFIELD COUNTY, VIRGINIA
JULY 22, 2024



SOURCE: 2013 USGS VIRGINIA QUAD MAPS: CHESTER, DREWRY'S BLUFF, DUTCH GAP AND HOPEWELL.

VICINITY MAP

1" = 2,000'



Stormwater Outfall Table									
Site Area (Acres)	144 +/-								
	West Outfall			Middle Outfall			East Outfall		
Drainage Area (Acres)	46.6			51.8			26.4		
Runoff Reduction (CF)	0			0			0		
Receiving Channel Type (Natural, Restored, or Manmade)	Natural			Natural			Natural		
Channel Protection Compliance Method	N/A			N/A			N/A		
Flood Protection Compliance Method	N/A			N/A			N/A		
	1- Year	2- Year	10- Year	1- Year	2- Year	10- Year	1- Year	2- Year	10- Year
CN Existing ¹	N/A			N/A			N/A		
RV Existing (AC-FT) ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Q _{Existing} (CFS) ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CN Developed	84			84			84		
RV _{Developed} (AC-FT)	5.14	6.99	12.96	5.73	7.79	14.45	2.88	3.91	7.25
Q _{Developed} (CFS)	26.94	32.1	41.99	29.93	34.85	44.28	21.12	25.45	34.21
Q _{Allowed} (CFS) ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
V _{Developed} (ft/s)	5.08	6.05	7.92	5.64	6.57	8.35	4.06	4.8	6.45
Outfall Location (Lat/Long)	N 37.3683 W 77.3758			N 37.3684 W 77.3670			N 37.3720 W 77.3636"		

¹ Not computed since the existing condition was a regulated basin.

Stormwater Compliance Table									
Site Area (acres)	144 +/-								
Required Removal for the Site (lbs)	0								
Total Load Removed (lbs)	0								
Offset Generating Facility									
Amount of Phosphorus Purchased (lbs)	N/A								
Equivalent Nitrogen Amount (lbs)									
8-Digit HUC of Generating Facility	N/A								
BMP Type	A BMP is not needed because the TP load is zero following the VRRM								
BMP Service Area (list sections/phases)	N/A								
Design Removal Efficiency (%)	N/A								
Drainage Area Used for Sizing BMP (Acres)	N/A								
Previous Acres Treated	N/A								
Treatment Volume (CF)	N/A								
Load Removed (lbs)	N/A								
Location of BMP (Lat/Long)	N/A								
Receiving Water	James River								
VAHUC6	20802								
MS4 Operator	Dominion Virginia Power								
TMDL	Not Required*								
Downstream BMP	N/A								
Location of storm sewer outfalls 30 inches in diameter and greater (excludes culverts)	N/A								

*The Farrar Gut is considered a category 4A water, and so a TMDL is not required because the TMDL for specific pollutants(s) is complete

CALL MISS UTILITY
BEFORE DIGGING

1-800-552-7001
OR
811

PREPARED FOR:
DOMINION ENERGY (OWNER)
600 E. CANAL STREET
RICHMOND, VA 23219

PREPARED BY:
AECOM
4840 COX RD
GLEN ALLEN, VA 23060

REVISIONS

REV NO	DATE	INITIALS	DESCRIPTION
1	7/22/2024	SCW	REMOVE LOW PERM FILL FROM BACKFILL DETAIL

GENERAL SITE INFORMATION

PARCEL ADDRESS (AS RECORDED IN CHESTERFIELD COUNTY GIS):	451 COXENDALE ROAD CHESTER, VIRGINIA 23836
LAT-LONG:	37.3702°N; 77.3698°W
TAX ID:	811-660-3332-00000
GPIN NUMBER:	8116603332
OFFSITE LAND DISTURBANCE:	NONE
COUNTY LAND DISTURBANCE PERMIT:	A CHESTERFIELD COUNTY LAND DISTURBANCE PERMIT IS REQUIRED FOR THIS PROJECT
VIRGINIA STORMWATER MANAGEMENT PROGRAM PERMIT (VSMP):	UMBRELLA VSMP VAR10G662 IS ALREADY IN PLACE.
FLOODPLAIN:	FLOOD ZONE A AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FIRM PANELS 51041C0335D AND 51041C0169D, EFFECTIVE DATE: DECEMBER 18, 2012.
NAME OF RECEIVING WATERS	JAMES RIVER
VA HU6 FOUR-DIGIT WATERSHED CODE	JL06
VA HU6 TWELVE-DIGIT WATERSHED CODE:	020802060106
FIRE:	EXISTING FIRE HYDRANT LOCATION SUFFICIENT FOR THIS PROJECT
WETLANDS:	WETLANDS AND RPA FIELD DELINEATED BY GOLDER ASSOCIATES JUNE 2018 AND BY AECOM ON MARCH 11, 2020.

ZONING/LAND USE INFORMATION

MAGISTERIAL DEVELOPMENT DISTRICT:	BERMUDA
ZONING/LAND USE OF AREA IN QUESTION:	I-3 (HEAVY INDUSTRIAL)
EXISTING ZONING/LAND USE OF WHOLE PROPERTY (PER CITIZEN GIS, 2010):	I-3 (HEAVY INDUSTRIAL)
LAND USE (PER CITIZEN GIS 2010):	INDUSTRIAL 144 ACRES
VPDES PERMIT NUMBER	VA0004146
ZONING CASE(S)	10SN0114, 19SN0554, 15SN0647

VSMP COMPLIANCE

WATER QUALITY COMPLIANCE IN ACCORDANCE WITH 9VAC25-870-65 IS ACHIEVED THROUGH THE CHIAF PROJECT VSMP VAR10G662.

THIS PROJECT IS COVERED UNDER THE UMBRELLA VSMP VAR10G662.

CBPA COMPLIANCE




- A. TIDAL WETLANDS MINIMALLY IMPACTED
B. NON-TIDAL WETLANDS PERMITTED VIA USACE JD #NAO-2007-02441
C. TIDAL SHORES NOT IMPACTED
D. VEGETATED CONSERVATION AREA WITHIN 100 FEET OF PROPERTY LINE NOT IMPACTED
E. 100-YEAR FLOODPLAIN NOT FILLED
F. HIGHLY ERODIBLE SOILS OR STEEP SLOPES SHOWN ON PLANS AND PROTECTED BY EROSION AND SEDIMENT CONTROL MEASURES SHOWN IN THIS SITE PLAN
G. NO HIGHLY PERMEABLE SOILS
H. THE PURPOSE OF THIS PROJECT IS TO COMPLY WITH FEDERAL CCR RULE TO PERMANENTLY CLOSE EXISTING CCR IMPOUNDMENT. WATER QUALITY COMPLIANCE IN ACCORDANCE WITH 9 VAC 25-870-65.

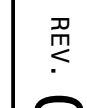
THIS PROJECT WILL HAVE A LAND DISTURBANCE GREATER THAN 2,500 S.F.; THEREFORE THE VSMP REGULATIONS FOR STORMWATER ARE APPLICABLE AND ADMINISTERED BY THE COUNTY.

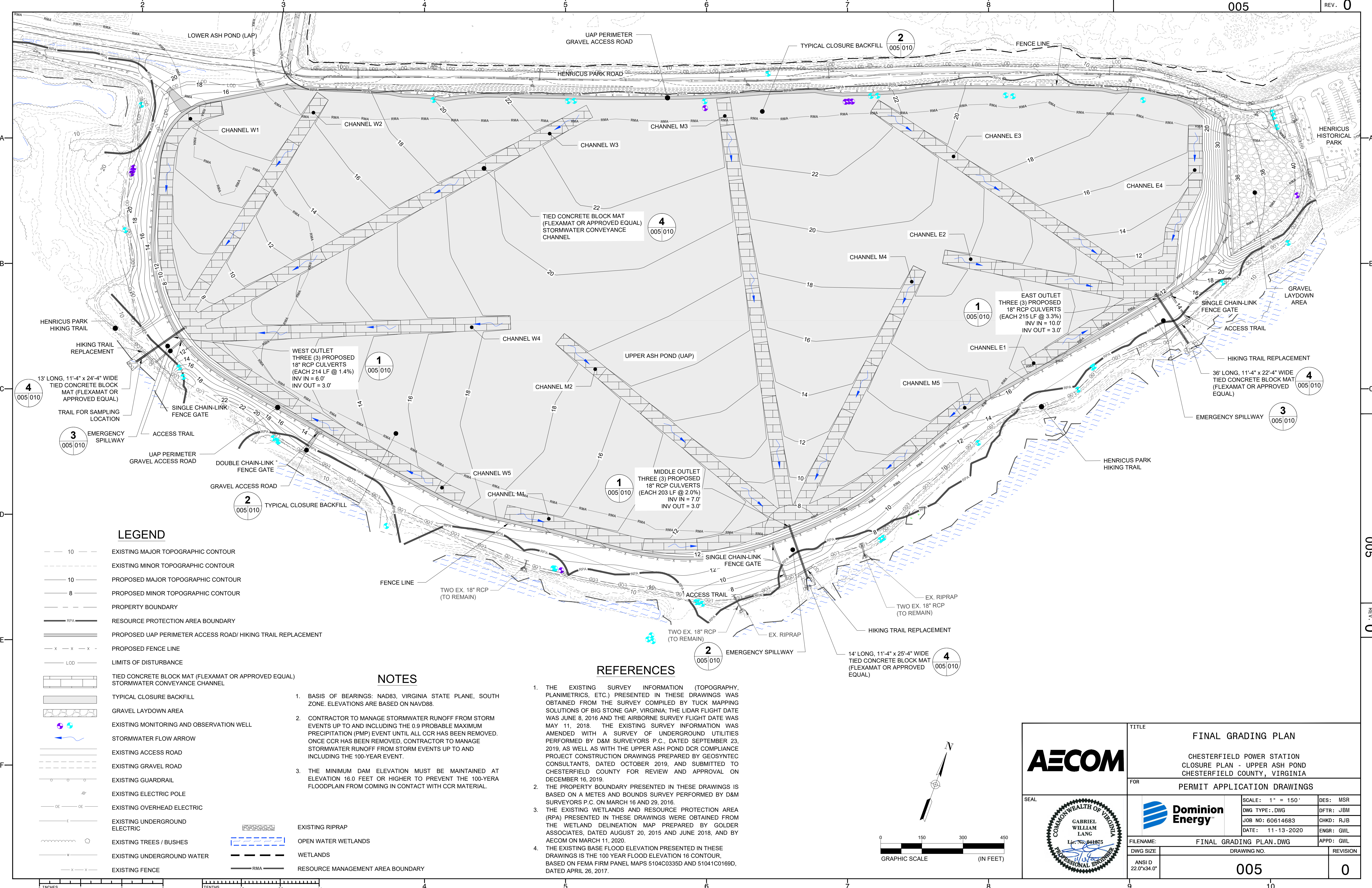
IMPACTS TO WETLAND AND OTHER WATERS OF THE U.S. ARE BEING SUBMITTED FOR APPROVAL UNDER SECTION 404 AND 401 OF THE CLEAN WATER ACT AND THE VIRGINIA TIDAL WETLANDS ACT THROUGH A PENDING MINOR PERMIT MODIFICATION REQUEST CHESTERFIELD POWER STATION FOSSIL FUEL COMBUSTION PRODUCTS MANAGEMENT FACILITY DEPARTMENT OF THE ARMY PERMIT NO. 2007-02441, 10-11787 AND VIRGINIA WATER PROTECTION PERMIT NO. 10-1787. THESE PLANS MAY REQUIRE MODIFICATIONS PENDING PERMIT CONDITIONS AS REQUIRED BY FEDERAL OR STATE REVIEW AGENCIES. PERMIT CONDITIONS AMENDED TO THE PLANS SHALL BE FOLLOWED.

	TITLE CHESTERFIELD POWER STATION CLOSURE PLAN - UPPER ASH POND CHESTERFIELD COUNTY, VIRGINIA		
	FOR PERMIT APPLICATION DRAWINGS		
	SCALE: AS SHOWN		DES: MSR
	DWG TYPE: .DWG		DFT: JBM
	JOB NO: 60614683		CHKD: RJB
	DATE: 8-5-2021		ENGR: SCW
FILENAME: COVER SHEET SWP UAP.DWG			APPD: SCW
DWG SIZE ANSI D 22.0"x34.0"	COUNTY PROJECT #(21PR0205) COUNTY UTILITY PROJECT #(21-0033)		REVISION 001
			2



	TITLE EXISTING CONDITIONS PLAN		
	CHESTERFIELD POWER STATION CLOSURE PLAN - UPPER ASH POND CHESTERFIELD COUNTY, VIRGINIA		
SEAL 	FOR PERMIT APPLICATION DRAWINGS		
 Dominion Energy	SCALE: 1" = 150'	DES: MSR	
	DWG TYPE: DWG	DFTR: JBM	
	JOB NO: 60614683	CHKD: RJB	
	DATE: 11-13-2020	ENGR: GWL	
FILENAME:	EXISTING CONDITIONS PLAN.DWG		APPD: GWL
DWG SIZE ANSI D 22.0"x34.0"	DRAWING NO. <div style="font-size: 2em; font-weight: bold; text-align: center;">002</div>		REVISION <div style="font-size: 2em; font-weight: bold; text-align: center;">0</div>





LEGEND

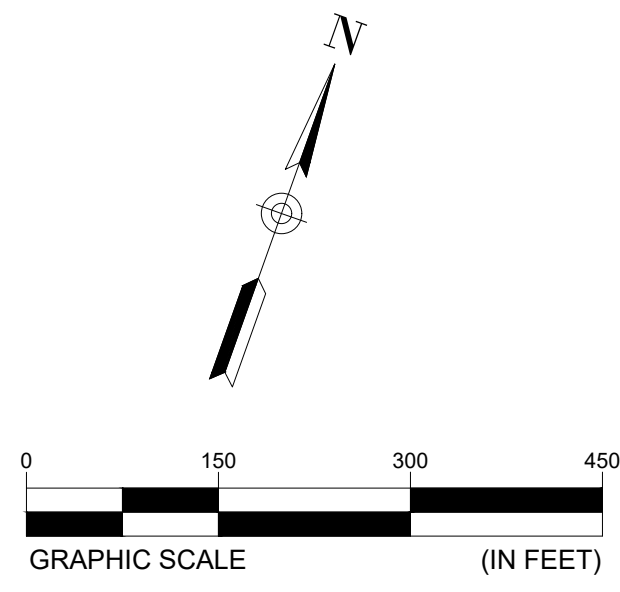
- 10 --- EXISTING MAJOR TOPOGRAPHIC CONTOUR
- EXISTING MINOR TOPOGRAPHIC CONTOUR
- 10 --- PROPOSED MAJOR TOPOGRAPHIC CONTOUR
- 8 --- PROPOSED MINOR TOPOGRAPHIC CONTOUR
- PROPERTY BOUNDARY
- RPA --- RESOURCE PROTECTION AREA BOUNDARY
- PROPOSED UAP PERIMETER ACCESS ROAD/ HIKING TRAIL REPLACEMENT
- X X X --- PROPOSED FENCE LINE
- LOD --- LIMITS OF DISTURBANCE
- [Pattern] --- TIED CONCRETE BLOCK MAT (FLEXAMAT OR APPROVED EQUAL) STORMWATER CONVEYANCE CHANNEL
- [Pattern] --- TYPICAL CLOSURE BACKFILL
- [Pattern] --- GRAVEL LAYDOWN AREA
- [Symbol] --- EXISTING MONITORING AND OBSERVATION WELL
- [Symbol] --- STORMWATER FLOW ARROW
- EXISTING ACCESS ROAD
- EXISTING GRAVEL ROAD
- EXISTING GUARDRAIL
- EXISTING ELECTRIC POLE
- OE OE --- EXISTING OVERHEAD ELECTRIC
- E --- EXISTING UNDERGROUND ELECTRIC
- [Symbol] --- EXISTING TREES / BUSHES
- W --- EXISTING UNDERGROUND WATER
- X X --- EXISTING FENCE
- [Pattern] --- EXISTING RIPRAP
- [Pattern] --- OPEN WATER WETLANDS
- WETLANDS
- RMA --- RESOURCE MANAGEMENT AREA BOUNDARY

NOTES

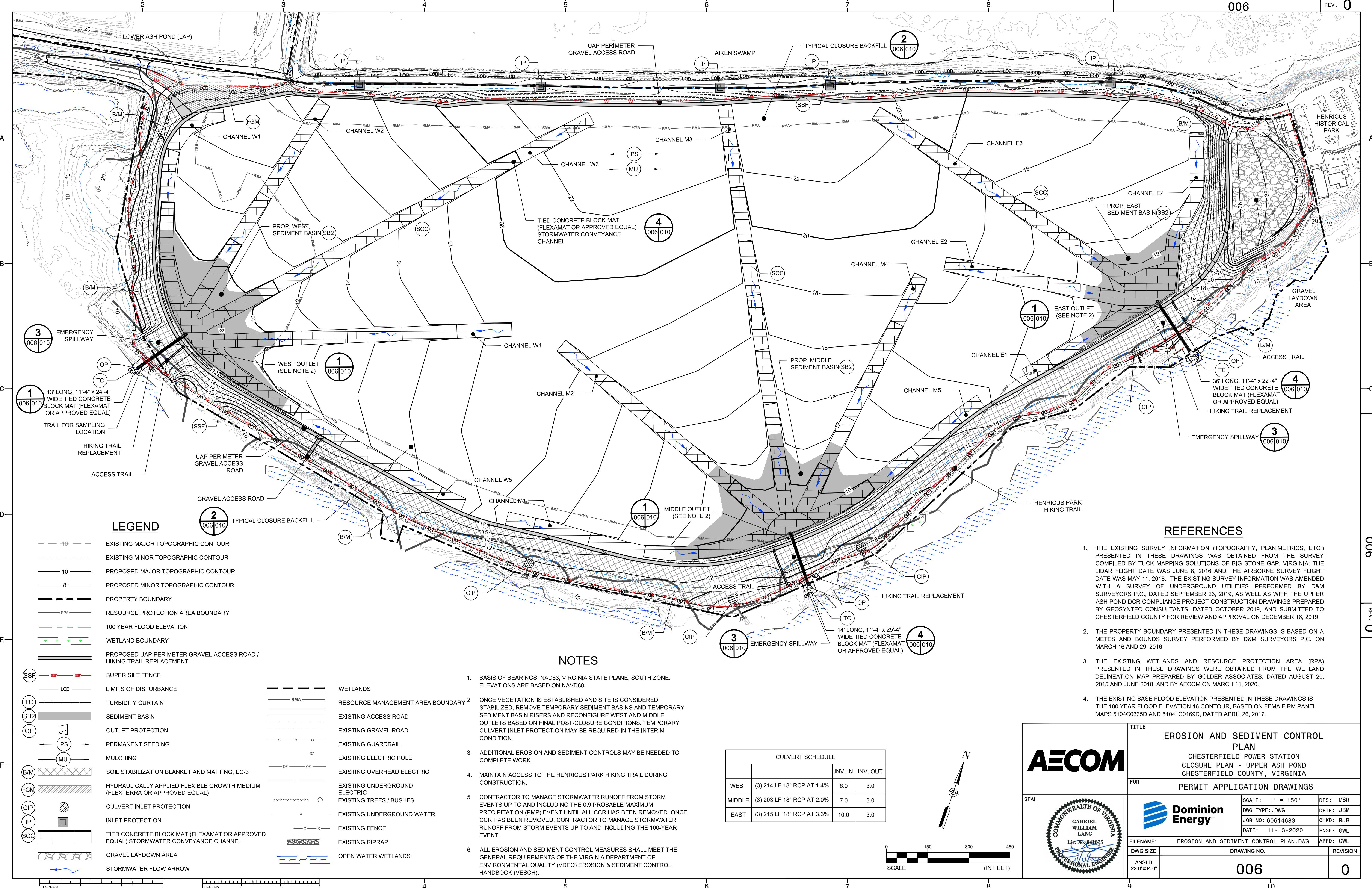
1. BASIS OF BEARINGS: NAD83, VIRGINIA STATE PLANE, SOUTH ZONE. ELEVATIONS ARE BASED ON NAVD88.
2. CONTRACTOR TO MANAGE STORMWATER RUNOFF FROM STORM EVENTS UP TO AND INCLUDING THE 0.9 PROBABLE MAXIMUM PRECIPITATION (PMP) EVENT UNTIL ALL CCR HAS BEEN REMOVED. ONCE CCR HAS BEEN REMOVED, CONTRACTOR TO MANAGE STORMWATER RUNOFF FROM STORM EVENTS UP TO AND INCLUDING THE 100-YEAR EVENT.
3. THE MINIMUM DAM ELEVATION MUST BE MAINTAINED AT ELEVATION 16.0 FEET OR HIGHER TO PREVENT THE 100-YEAR FLOODPLAIN FROM COMING IN CONTACT WITH CCR MATERIAL.

REFERENCES

1. THE EXISTING SURVEY INFORMATION (TOPOGRAPHY, PLANIMETRICS, ETC.) PRESENTED IN THESE DRAWINGS WAS OBTAINED FROM THE SURVEY COMPILED BY TUCK MAPPING SOLUTIONS OF BIG STONE GAP, VIRGINIA; THE LIDAR FLIGHT DATE WAS JUNE 8, 2016 AND THE AIRBORNE SURVEY FLIGHT DATE WAS MAY 11, 2018. THE EXISTING SURVEY INFORMATION WAS AMENDED WITH A SURVEY OF UNDERGROUND UTILITIES PERFORMED BY D&M SURVEYORS P.C., DATED SEPTEMBER 23, 2019, AS WELL AS WITH THE UPPER ASH POND DCR COMPLIANCE PROJECT CONSTRUCTION DRAWINGS PREPARED BY GEOSYNTEC CONSULTANTS, DATED OCTOBER 2019, AND SUBMITTED TO CHESTERFIELD COUNTY FOR REVIEW AND APPROVAL ON DECEMBER 16, 2019.
2. THE PROPERTY BOUNDARY PRESENTED IN THESE DRAWINGS IS BASED ON A METES AND BOUNDS SURVEY PERFORMED BY D&M SURVEYORS P.C. ON MARCH 16 AND 29, 2016.
3. THE EXISTING WETLANDS AND RESOURCE PROTECTION AREA (RPA) PRESENTED IN THESE DRAWINGS WERE OBTAINED FROM THE WETLAND DELINEATION MAP PREPARED BY GOLDER ASSOCIATES, DATED AUGUST 20, 2015 AND JUNE 2018, AND BY AECOM ON MARCH 11, 2020.
4. THE EXISTING BASE FLOOD ELEVATION PRESENTED IN THESE DRAWINGS IS THE 100 YEAR FLOOD ELEVATION 16 CONTOUR, BASED ON FEMA FIRM PANEL MAPS 5104C0335D AND 51041C0169D, DATED APRIL 26, 2017.



	TITLE FINAL GRADING PLAN	
	CHESTERFIELD POWER STATION CLOSURE PLAN - UPPER ASH POND CHESTERFIELD COUNTY, VIRGINIA	
SEAL 	FOR PERMIT APPLICATION DRAWINGS	
		SCALE: 1" = 150' DWG TYPE: .DWG JOB NO: 60614683 DATE: 11-13-2020
FILENAME: FINAL GRADING PLAN.DWG		DES: MSR DFTR: JBM CHKD: RJB ENGR: GWL
ANSI D 22.0"x34.0"		APPD: GWL
005		0



LEGEND

- 10 --- EXISTING MAJOR TOPOGRAPHIC CONTOUR
- 10 --- EXISTING MINOR TOPOGRAPHIC CONTOUR
- 10 --- PROPOSED MAJOR TOPOGRAPHIC CONTOUR
- 8 --- PROPOSED MINOR TOPOGRAPHIC CONTOUR
- PROPERTY BOUNDARY
- RPA --- RESOURCE PROTECTION AREA BOUNDARY
- 100 YEAR FLOOD ELEVATION
- WETLAND BOUNDARY
- PROPOSED UAP PERIMETER GRAVEL ACCESS ROAD / HIKING TRAIL REPLACEMENT
- SSF --- SUPER SILT FENCE
- LOD --- LIMITS OF DISTURBANCE
- TC --- TURBIDITY CURTAIN
- SB2 --- SEDIMENT BASIN
- OP --- OUTLET PROTECTION
- PS --- PERMANENT SEEDING
- MU --- MULCHING
- B/M --- SOIL STABILIZATION BLANKET AND MATTING, EC-3
- FGM --- HYDRAULICALLY APPLIED FLEXIBLE GROWTH MEDIUM (FLEXATERRA OR APPROVED EQUAL)
- CIP --- CULVERT INLET PROTECTION
- IP --- INLET PROTECTION
- SCC --- TIED CONCRETE BLOCK MAT (FLEXAMAT OR APPROVED EQUAL) STORMWATER CONVEYANCE CHANNEL
- GRAVEL LAYDOWN AREA
- STORMWATER FLOW ARROW
- WETLANDS
- RMA --- RESOURCE MANAGEMENT AREA BOUNDARY
- EXISTING ACCESS ROAD
- EXISTING GRAVEL ROAD
- EXISTING GUARDRAIL
- EXISTING ELECTRIC POLE
- EXISTING OVERHEAD ELECTRIC
- EXISTING UNDERGROUND ELECTRIC
- EXISTING TREES / BUSHES
- EXISTING UNDERGROUND WATER
- EXISTING FENCE
- EXISTING RIPRAP
- OPEN WATER WETLANDS

NOTES

1. BASIS OF BEARINGS: NAD83, VIRGINIA STATE PLANE, SOUTH ZONE. ELEVATIONS ARE BASED ON NAVD88.
2. ONCE VEGETATION IS ESTABLISHED AND SITE IS CONSIDERED STABILIZED, REMOVE TEMPORARY SEDIMENT BASINS AND TEMPORARY SEDIMENT BASIN RISERS AND RECONFIGURE WEST AND MIDDLE OUTLETS BASED ON FINAL POST-CLOSURE CONDITIONS. TEMPORARY CULVERT INLET PROTECTION MAY BE REQUIRED IN THE INTERIM CONDITION.
3. ADDITIONAL EROSION AND SEDIMENT CONTROLS MAY BE NEEDED TO COMPLETE WORK.
4. MAINTAIN ACCESS TO THE HENRICUS PARK HIKING TRAIL DURING CONSTRUCTION.
5. CONTRACTOR TO MANAGE STORMWATER RUNOFF FROM STORM EVENTS UP TO AND INCLUDING THE 0.9 PROBABLE MAXIMUM PRECIPITATION (PMP) EVENT UNTIL ALL CCR HAS BEEN REMOVED. ONCE CCR HAS BEEN REMOVED, CONTRACTOR TO MANAGE STORMWATER RUNOFF FROM STORM EVENTS UP TO AND INCLUDING THE 100-YEAR EVENT.
6. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL MEET THE GENERAL REQUIREMENTS OF THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (VDEQ) EROSION & SEDIMENT CONTROL HANDBOOK (VESCH).

CULVERT SCHEDULE				
		INV. IN	INV. OUT	
WEST	(3) 214 LF 18" RCP AT 1.4%	6.0	3.0	
MIDDLE	(3) 203 LF 18" RCP AT 2.0%	7.0	3.0	
EAST	(3) 215 LF 18" RCP AT 3.3%	10.0	3.0	

REFERENCES

1. THE EXISTING SURVEY INFORMATION (TOPOGRAPHY, PLANIMETRICS, ETC.) PRESENTED IN THESE DRAWINGS WAS OBTAINED FROM THE SURVEY COMPILED BY TUCK MAPPING SOLUTIONS OF BIG STONE GAP, VIRGINIA; THE LIDAR FLIGHT DATE WAS JUNE 8, 2016 AND THE AIRBORNE SURVEY FLIGHT DATE WAS MAY 11, 2018. THE EXISTING SURVEY INFORMATION WAS AMENDED WITH A SURVEY OF UNDERGROUND UTILITIES PERFORMED BY D&M SURVEYORS P.C., DATED SEPTEMBER 23, 2019, AS WELL AS WITH THE UPPER ASH POND DCR COMPLIANCE PROJECT CONSTRUCTION DRAWINGS PREPARED BY GEOSYNTEC CONSULTANTS, DATED OCTOBER 2019, AND SUBMITTED TO CHESTERFIELD COUNTY FOR REVIEW AND APPROVAL ON DECEMBER 16, 2019.
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EROSION AND SEDIMENT CONTROL PLAN

CHESTERFIELD POWER STATION
CLOSURE PLAN - UPPER ASH POND
CHESTERFIELD COUNTY, VIRGINIA

FOR

PERMIT APPLICATION DRAWINGS

SCALE: 1" = 150'

DWG TYPE: .DWG

JOB NO: 60614683

DATE: 11-13-2020

DES: MSR

DFTR: JBM

CHKD: RJB

ENGR: GWL

FILENAME: EROSION AND SEDIMENT CONTROL PLAN.DWG

DWG SIZE: 22.0x34.0"

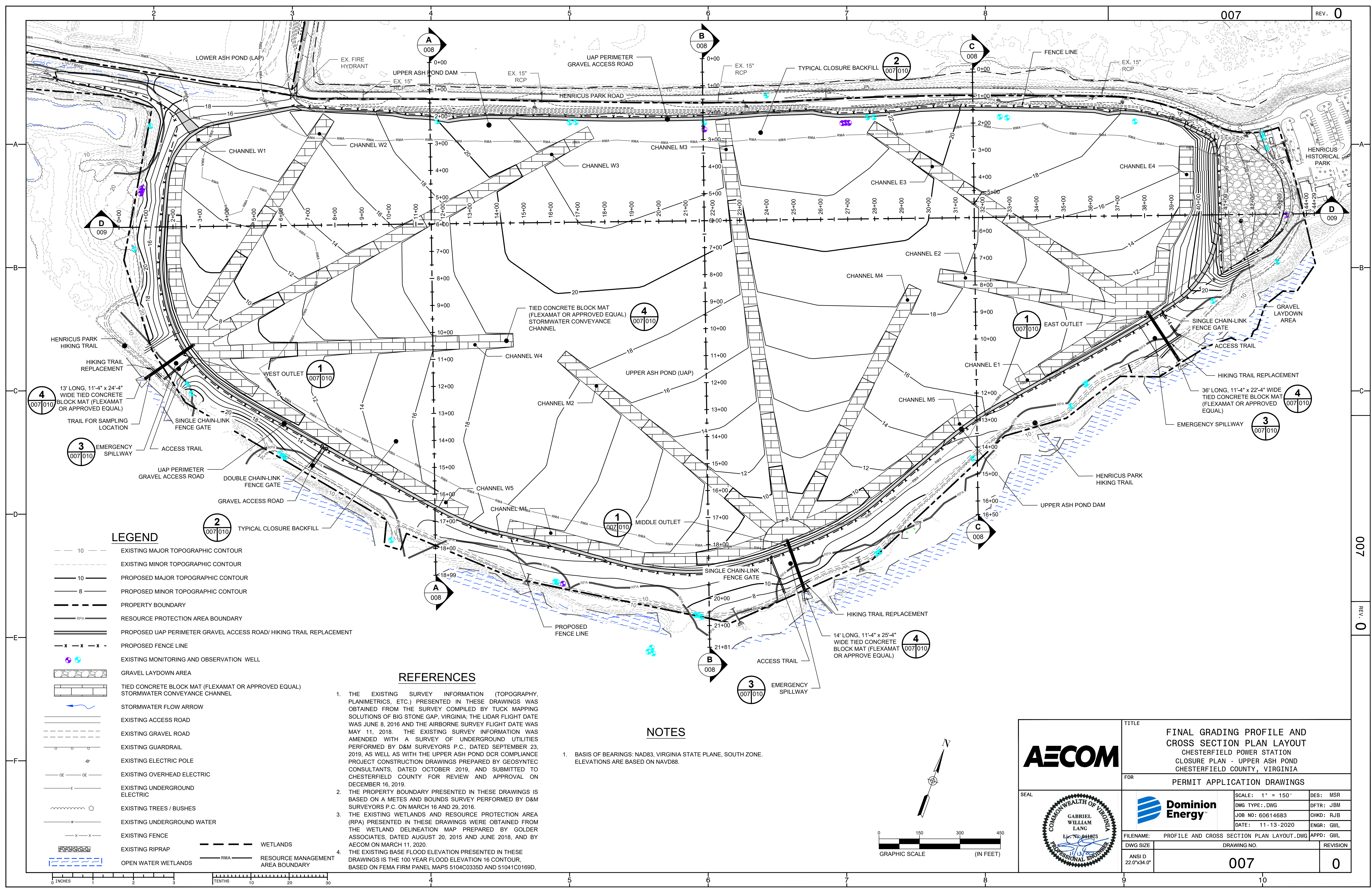
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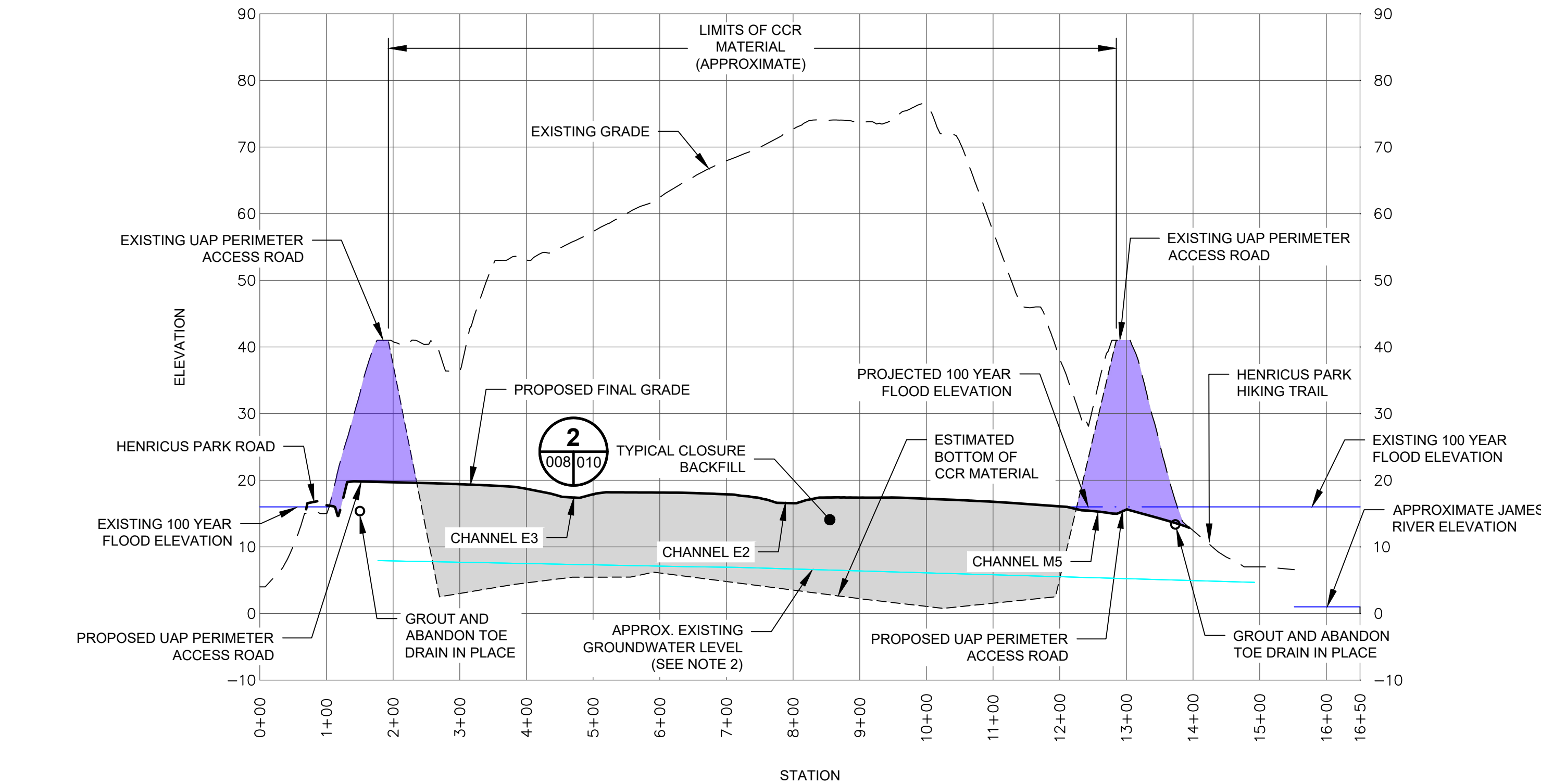
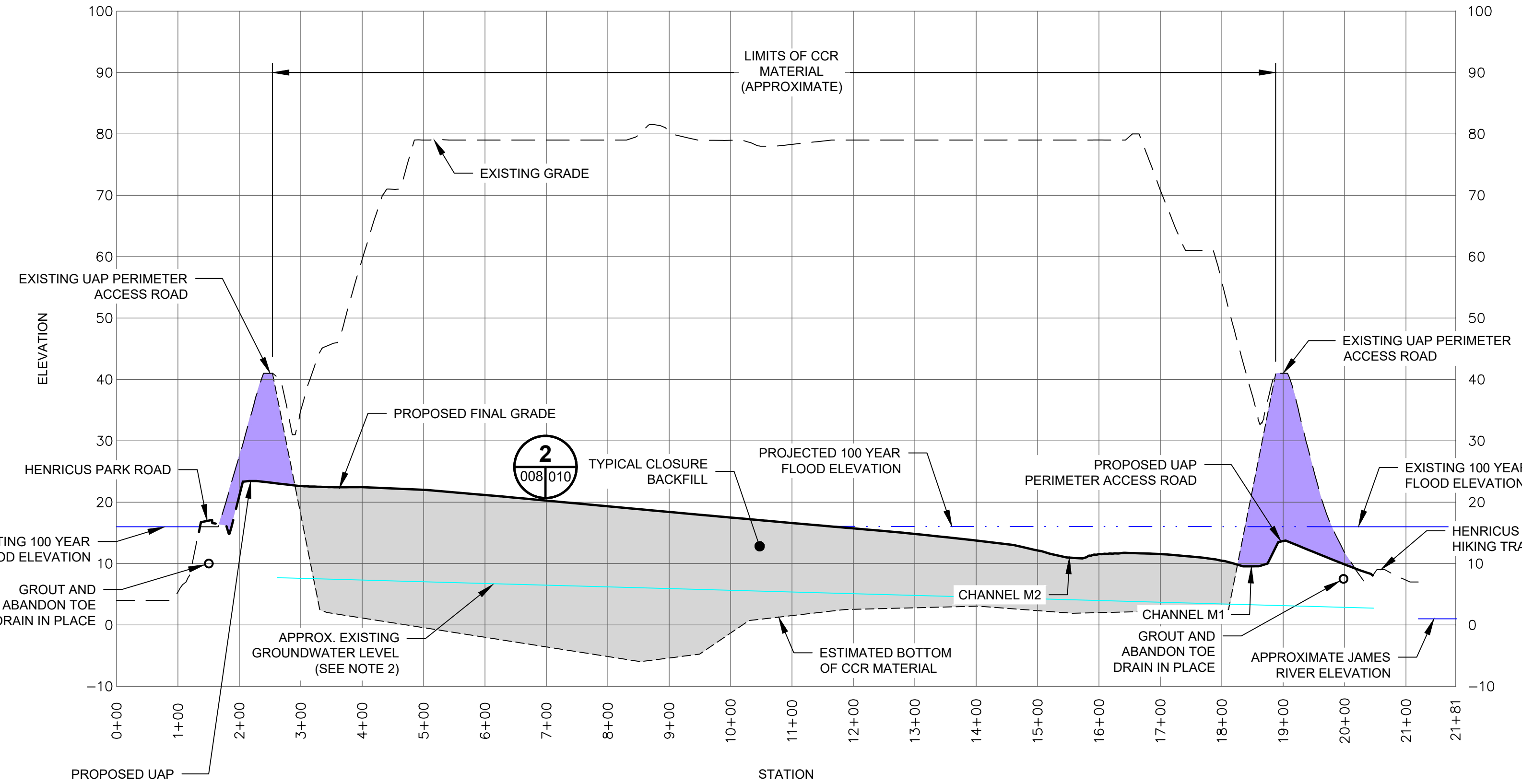
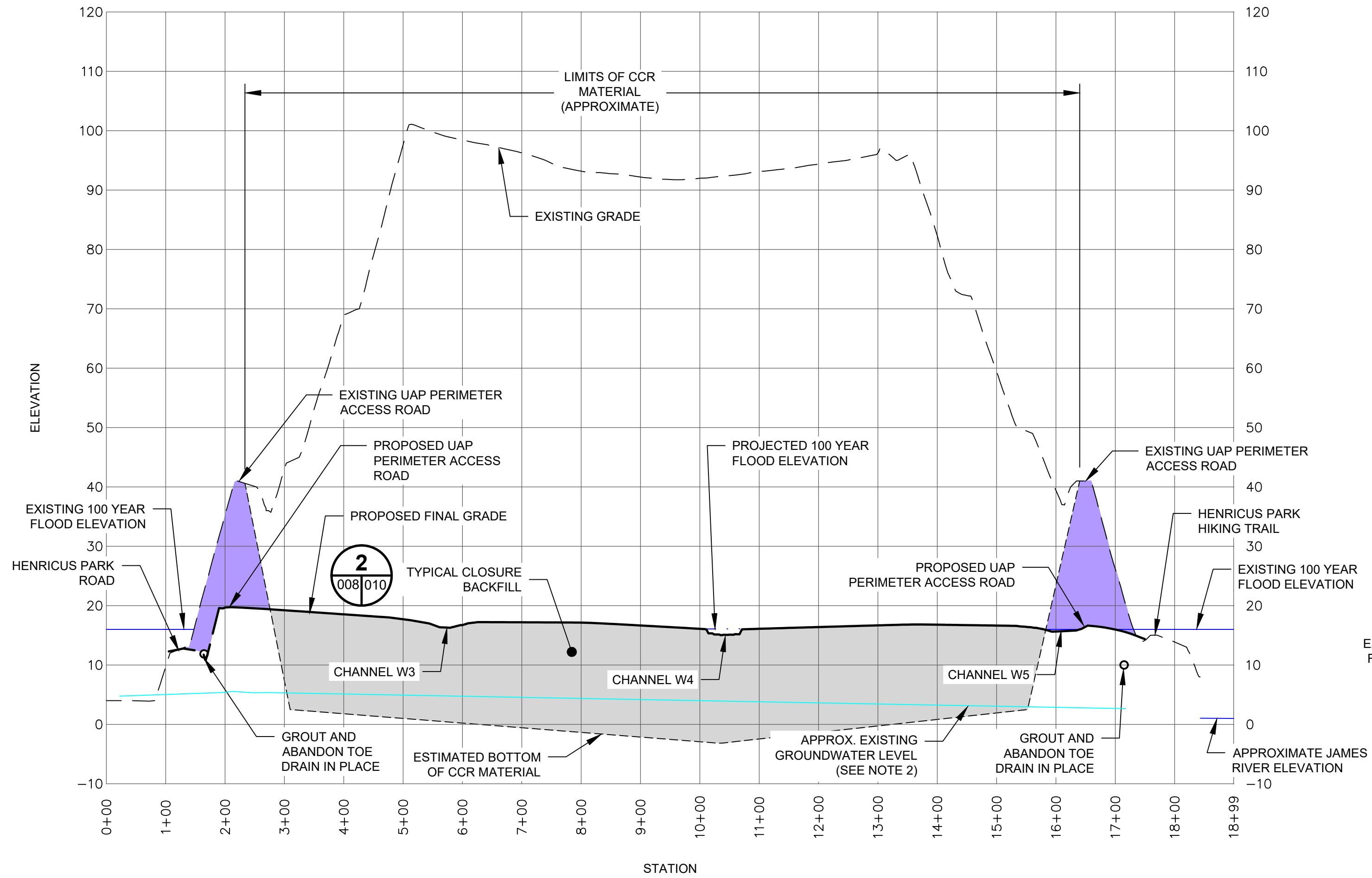
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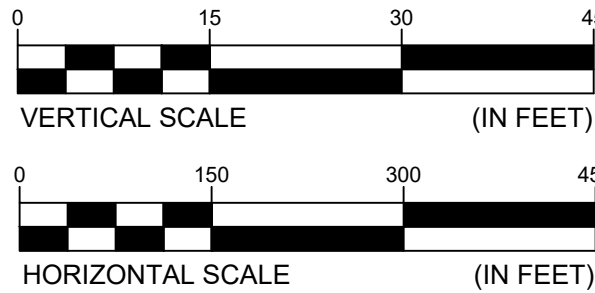
REVISION

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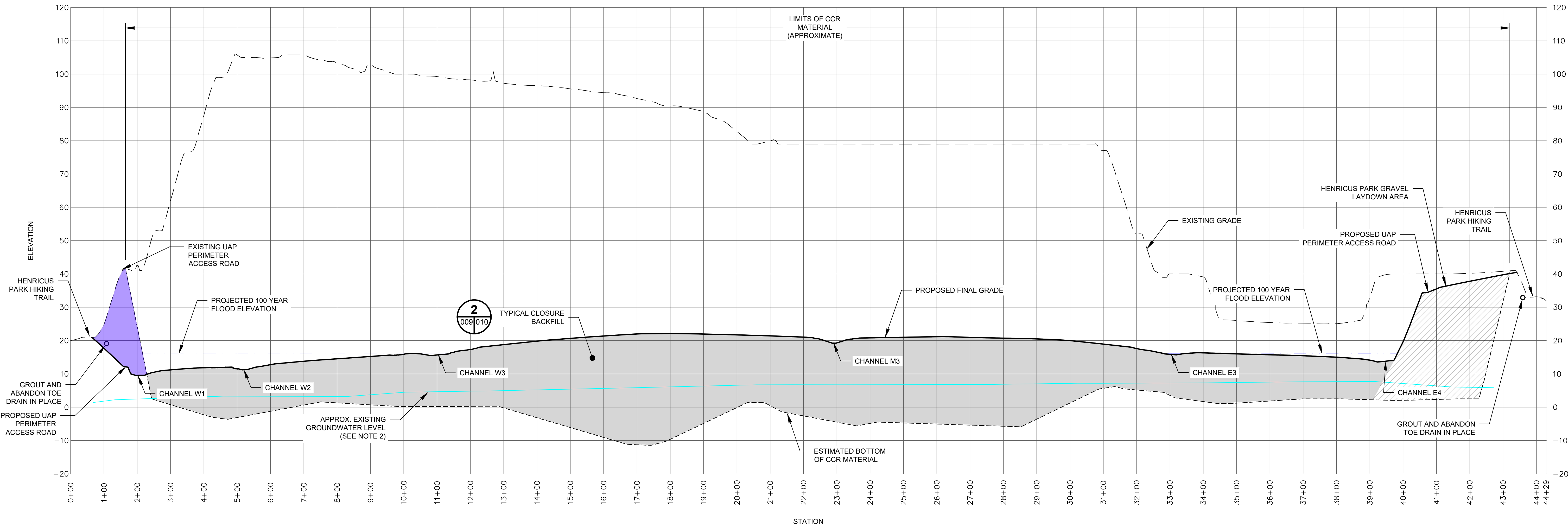




- LEGEND**
- EXISTING GRADE
 - ESTIMATED BOTTOM OF CCR MATERIAL
 - PROPOSED FINAL GRADE
 - 100 YEAR FLOOD ELEVATION
 - PROJECTED 100 YEAR FLOOD ELEVATION
 - APPROXIMATE EXISTING GROUNDWATER LEVEL
 - TYPICAL CLOSURE BACKFILL
 - DIKE LOWERING AREA
- NOTES**
- BASIS OF BEARINGS: NAD83, VIRGINIA STATE PLANE, SOUTH ZONE. ELEVATIONS ARE BASED ON NAVD88.
 - APPROXIMATE EXISTING GROUNDWATER LEVELS ARE BASED UPON A SINGLE DATA POINT AND ARE PROVIDED FOR REFERENCE ONLY. CONTRACTOR IS TO VERIFY INFORMATION PROVIDED IN DEVELOPMENT OF WATER MANAGEMENT PLAN.
 - TOE DRAIN LOCATION IS APPROXIMATE; CONTRACTOR TO FIELD VERIFY.



	TITLE FINAL GRADING PROFILES AND CROSS SECTIONS I CHESTERFIELD POWER STATION CLOSURE PLAN - UPPER ASH POND CHESTERFIELD COUNTY, VIRGINIA			
	FOR PERMIT APPLICATION DRAWINGS			
			SCALE: 1" = 150'	DES: MSR
		DWG TYPE: .DWG	DFTR: JBM	
FILENAME: CROSS SECTIONS.DWG		APPD: GWL		
ANSI D 22.0"x34.0"		REVISION		



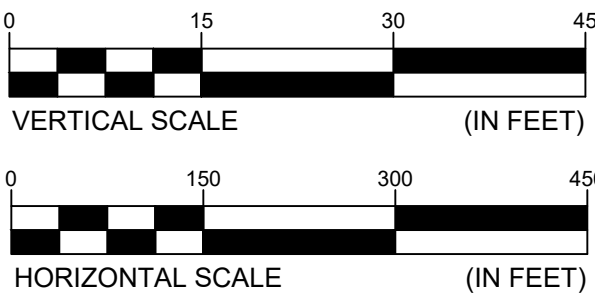
SECTION D-D

LEGEND

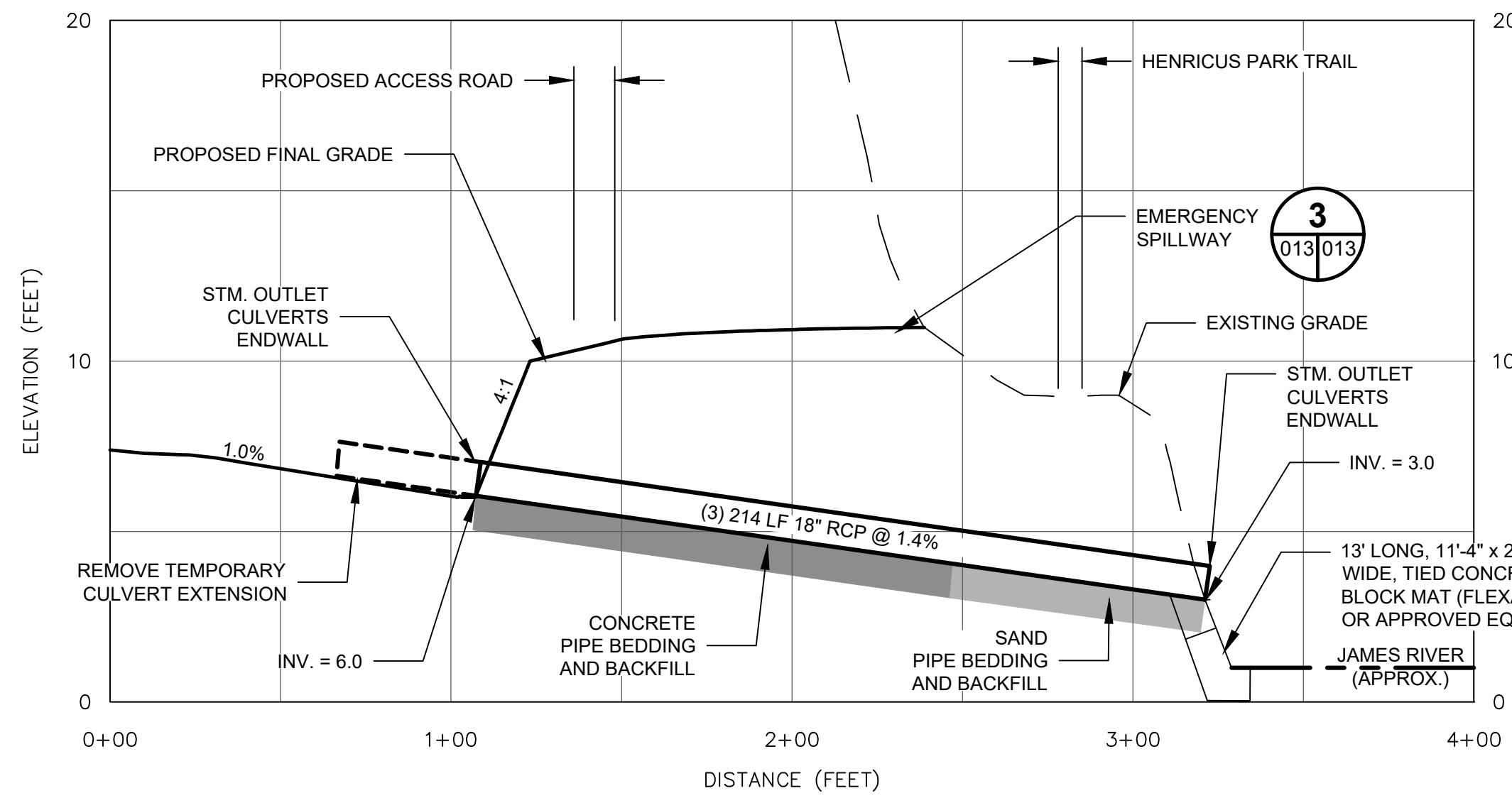
- EXISTING GRADE
- - - - ESTIMATED BOTTOM OF CCR MATERIAL
- PROPOSED FINAL GRADE
- . - . - PROJECTED 100 YEAR FLOOD ELEVATION
- APPROXIMATE EXISTING GROUNDWATER LEVEL
- TYPICAL CLOSURE BACKFILL
- DIKE LOWERING AREA
- STRUCTURAL FILL

NOTES

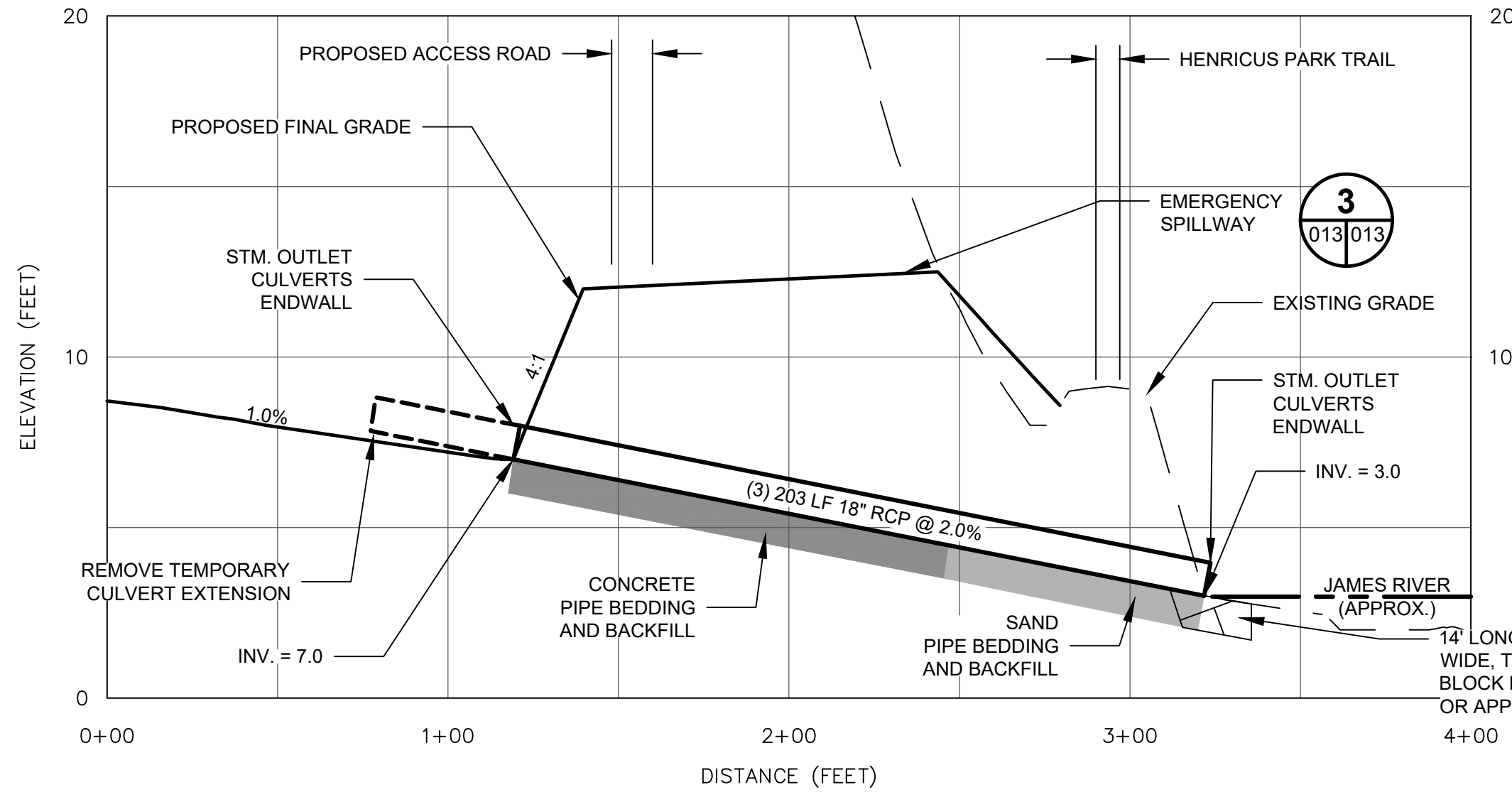
- BASIS OF BEARINGS: NAD83, VIRGINIA STATE PLANE, SOUTH ZONE. ELEVATIONS ARE BASED ON NAVD88.
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- TOE DRAIN LOCATION IS APPROXIMATE; CONTRACTOR TO FIELD VERIFY.



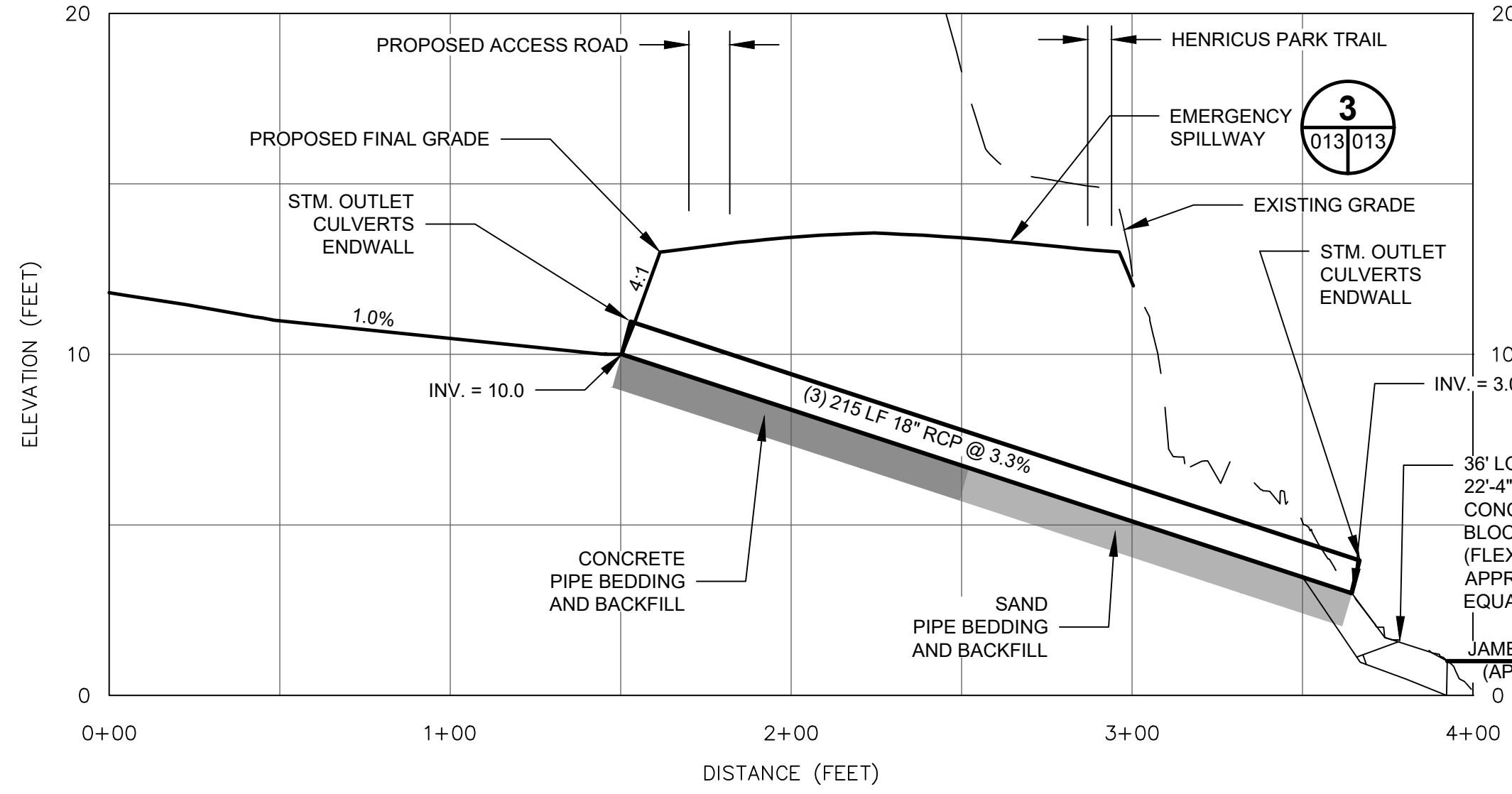
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	FOR PERMIT APPLICATION DRAWINGS		
SEAL 		SCALE: 1" = 150'	DES: MSR
		DWG TYPE: .DWG	DFTR: JBM
		JOB NO: 60614683	CHKD: RJB
		DATE: 11-13-2020	ENGR: GWL
FILENAME: CROSS SECTIONS.DWG		APPD: GWL	
DWG SIZE ANSI D 22.0"x34.0"	DRAWING NO. 009		REVISION 0



WEST OUTLET



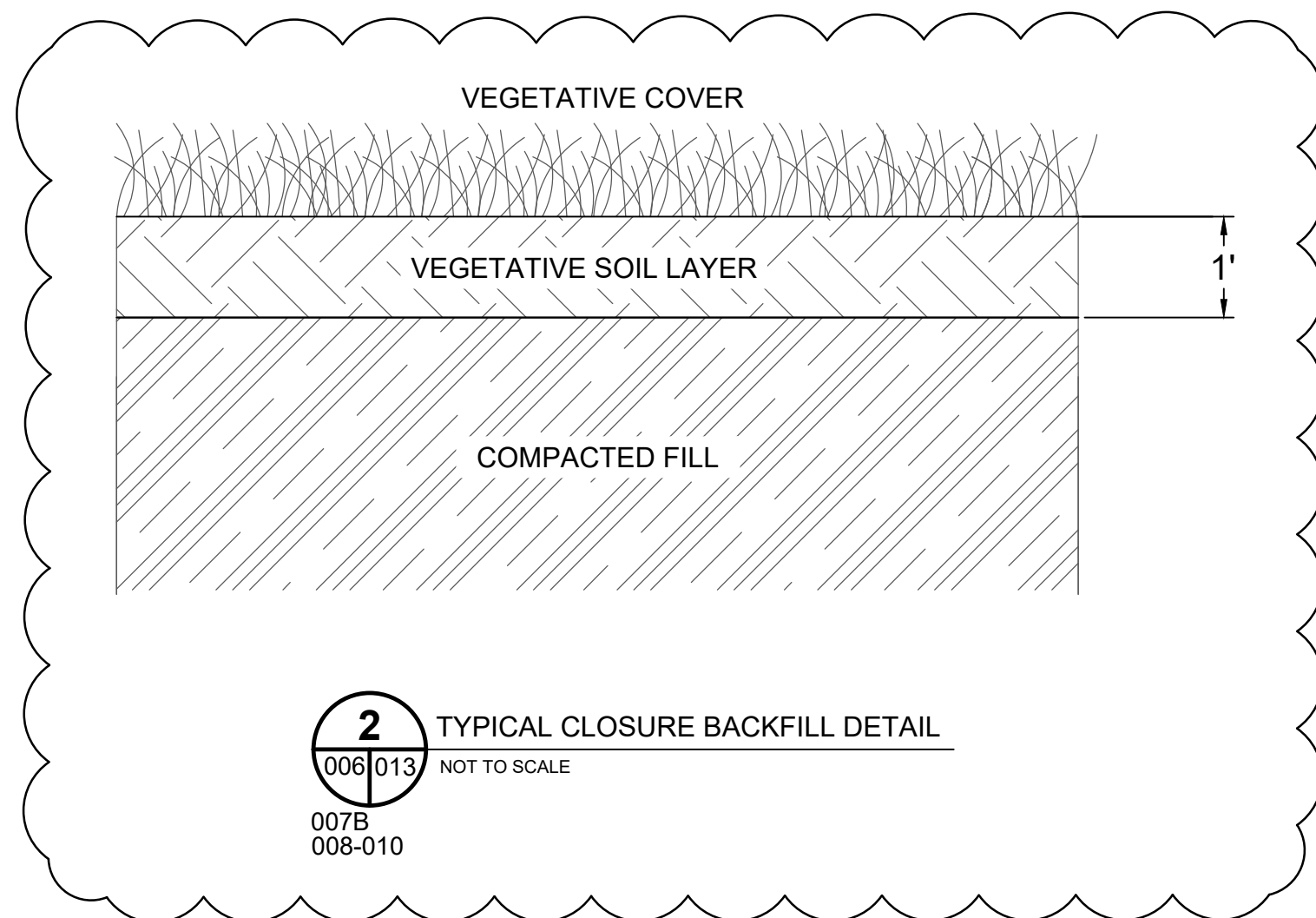
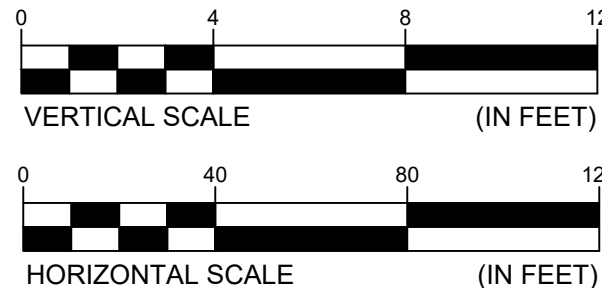
MIDDLE OUTLET



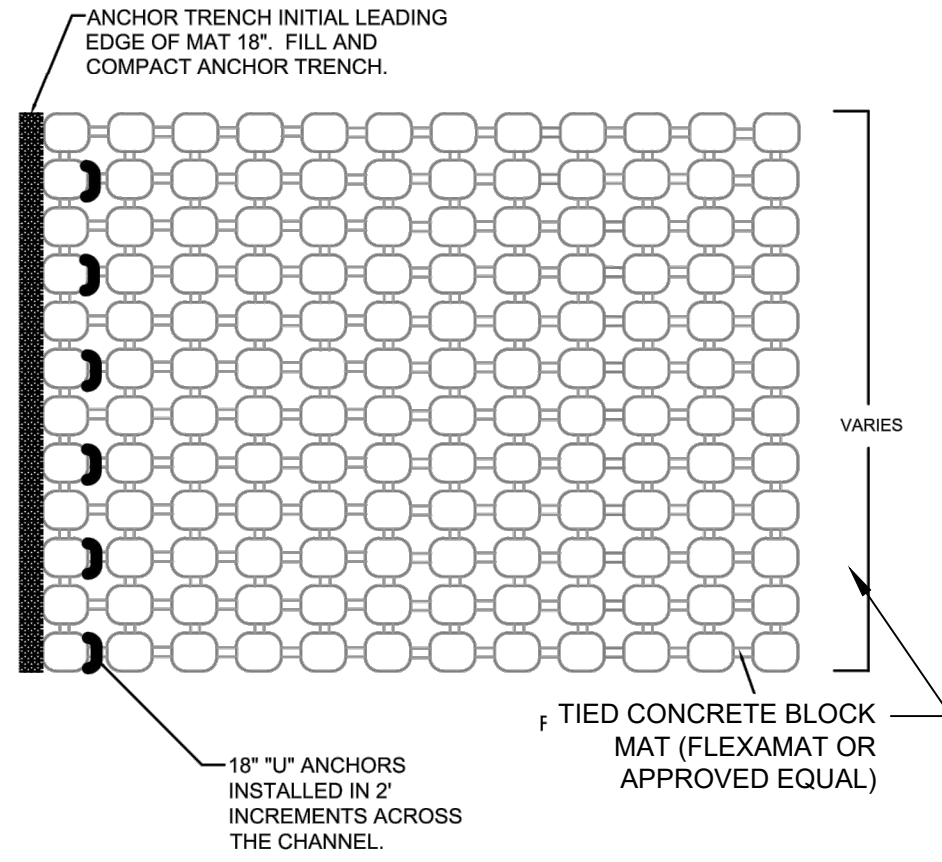
EAST OUTLET

1 STORMWATER OUTLET CULVERT DETAIL

1. JAMES RIVER WATER ELEVATION (USGS) SHOWN IS APPROXIMATE.



2 TYPICAL CLOSURE BACKFILL DETAIL

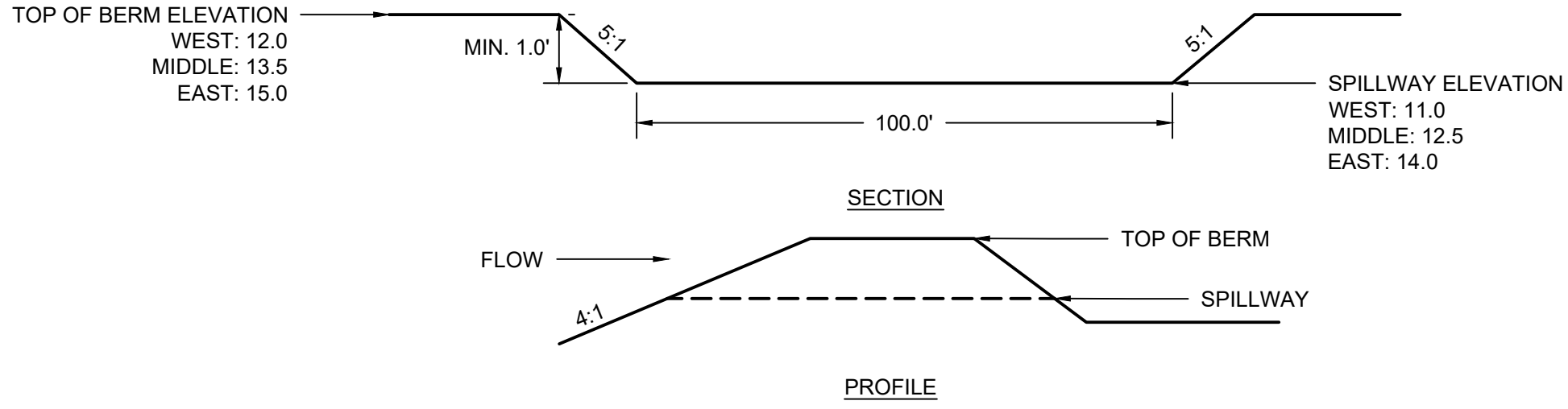


4 TIED CONCRETE BLOCK MAT (FLEXAMAT OR APPROVED EQUAL) STORMWATER CONVEYANCE CHANNEL

007B
008
013

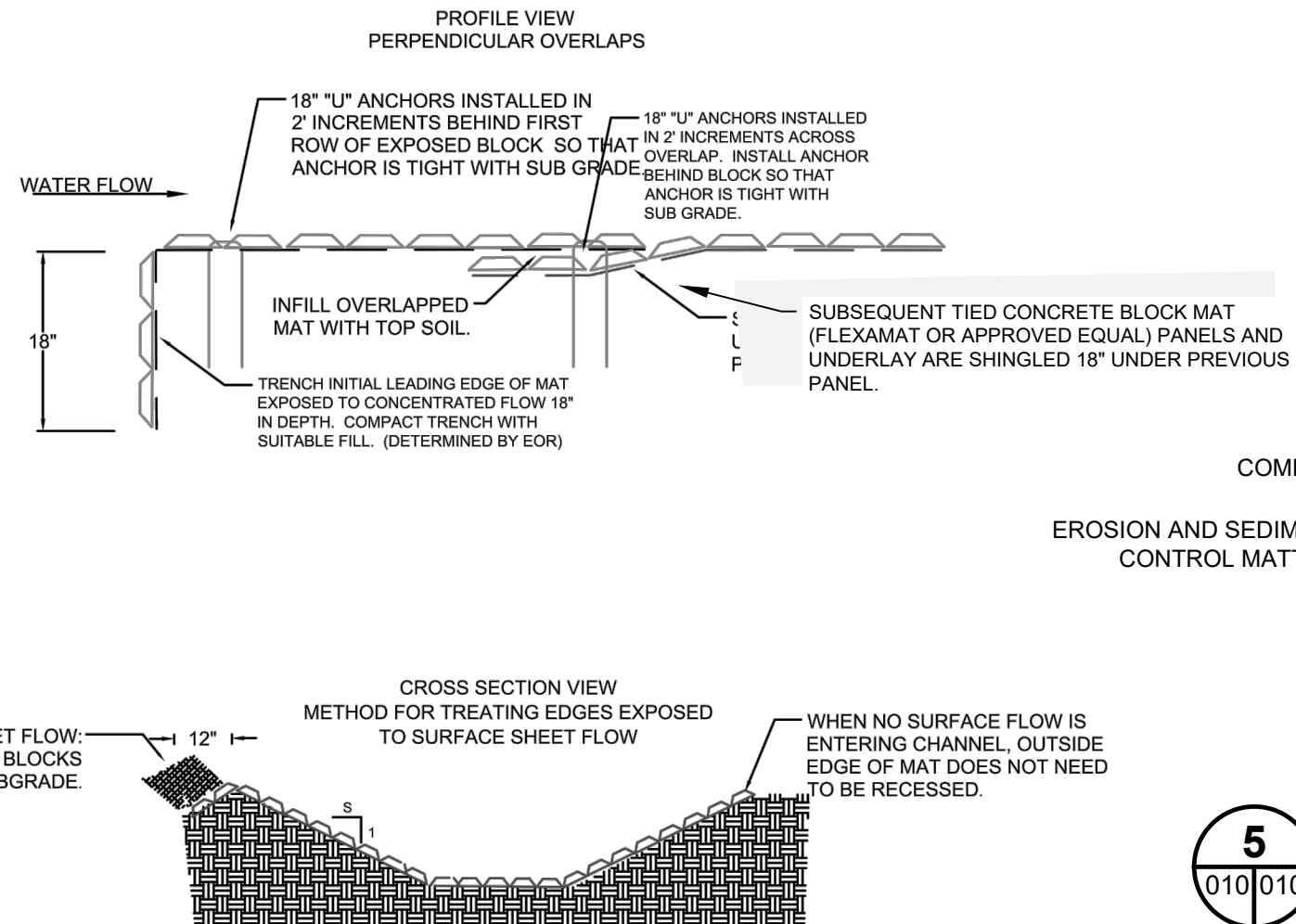
CONSTRUCTION NOTES:

- GRADE CHANNEL SO THAT WATER WILL FLOW DOWN THE CENTER OF THE CHANNEL AND BE CONTAINED TO THE CHANNEL. ALL SUBGRADE SURFACES PREPARED FOR PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF ALL ROCKS, STICKS, ROOTS, OTHER PROTRUSIONS, OR DEBRIS OF ANY KIND, THE PREPARED SURFACE SHALL PROVIDE A FIRM UNYIELDING FOUNDATION FOR THE MATS.
- APPLY SEED DIRECTLY TO THE PREPARED SOIL PRIOR TO TIED CONCRETE BLOCK MAT (FLEXAMAT OR APPROVED EQUAL) INSTALLATION. USE SEED PER PROJECT SPECIFICATIONS.
- INSTALL TIED CONCRETE BLOCK MAT (FLEXAMAT OR APPROVED EQUAL). AVAILABLE WIDTHS ARE 4', 5.5', 8', 10', 12' & 16' AVAILABLE IN CUSTOM LENGTHS. FOR WIDER WIDTHS, INSTALL MATS ADJACENT TO EACH OTHER. (CONTACT MANUFACTURE FOR DETAIL ADDRESSING LONGITUDINAL SEAMS.)
- AT THE TOP OF THE CHANNEL, THE INITIAL LEADING EDGE OF TIED CONCRETE BLOCK MAT (FLEXAMAT OR APPROVED EQUAL) EXPOSED TO CONCENTRATED FLOWS SHALL BE EMBEDDED 18" VERTICALLY INTO THE SUB GRADE TO SERVE AS AN ANCHOR TRENCH. THE TRENCH SHALL BE FILLED AND COMPACTED WITH SUITABLE FILL OR OTHER (AS SPECIFIED BY ENGINEER OF RECORD).
- FOR ADDITIONAL SECTIONS OF MAT, OVERLAP THE DOWNSTREAM SECTION 18" WITH UPSTREAM SECTION OF MAT. PRIOR TO INSTALLING OVERLAP, FLIP UPSTREAM MAT BACK 24". EXCAVATE 2.25" OF SOIL 18" FROM END OF UPSTREAM MAT. DOWNSTREAM SECTION IS LAID IN THE SHALLOW TRENCH. LIGHTLY SPREAD TOPSOIL OVER INITIAL EDGE. FLIP END OF UPSTREAM MAT OVER THE SOIL COVERED INITIAL LEADING EDGE OF DOWNSTREAM MAT.
- INSTALL 18" "U" ANCHORS IN 2' INCREMENTS ACROSS THE OVERLAP. INSTALL ANCHORS DIRECTLY BEHIND BLOCKS. "U" ANCHORS CONSIST OF #3 REBAR "U" ANCHOR WITH 18" LEGS.
- AT THE END OF THE ARMORED CHANNEL, EMBED THE MAT 18" IN A TERMINATION TRENCH. FILL AND COMPACT TERMINATION TRENCH WITH SOIL.



3 EMERGENCY SPILLWAY DETAIL

007B
008
013



5 TYPICAL DIVERSION BERM

- DIVERSION BERMS SIZED TO HANDLE THE 100-YEAR STORM EVENT WITHOUT OVERTOPPING.
- THE ESTIMATED BERM HEIGHT (PROVIDED IN THE TABLE ON THIS SHEET) IS BASED ON AN ESTIMATED DRAINAGE AREA. CONTRACTOR TO CONFIRM THE REQUIRED BERM HEIGHT BASED ON THE ACTUAL DRAINAGE AREA DURING CONSTRUCTION.

DRAINAGE ACREAGE	BERM HEIGHT (FT)
10	2.0
15	2.5
20	2.5
25	3.0
30	3.5
35	3.5
40	4.0
45	4.5
50	4.5
55	5.0
60	5.5
65	5.5

FINAL GRADING AND STORMWATER DETAILS I

CHESTERFIELD POWER STATION
CLOSURE PLAN - UPPER ASH POND
CHESTERFIELD COUNTY, VIRGINIA

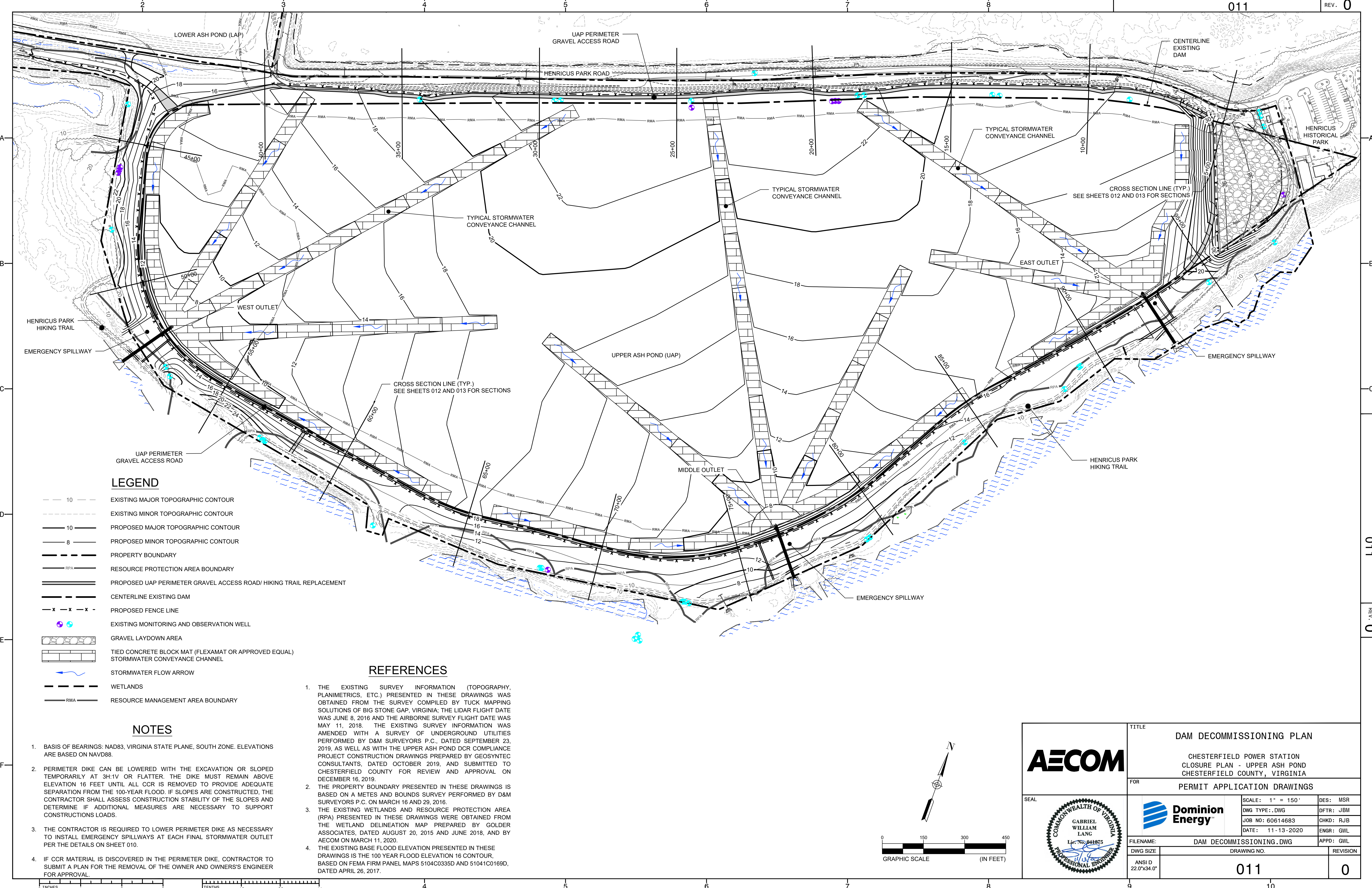
FOR PERMIT APPLICATION DRAWINGS

SCALE: AS SHOWN	DES: MSR
DWG TYPE: DWG	DFTR: JBM
JOB NO: 60614683	CHKD: RJB
DATE: 7-22-2024	ENGR: SCW

FILENAME: FINAL GRADING DETAILS SWP REV1.DWG	APPD: SCW
DWG SIZE	DRAWING NO.
ANSI D 22.0"x34.0"	COUNTY PROJECT #21PR0205 COUNTY UTILITY PROJECT #21-0033

010		1
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REV NO	DATE	INITIALS	DESCRIPTION
1	7/22/2024	SCW	REMOVE LOW PERM FILL FROM BACKFILL DETAIL



LEGEND

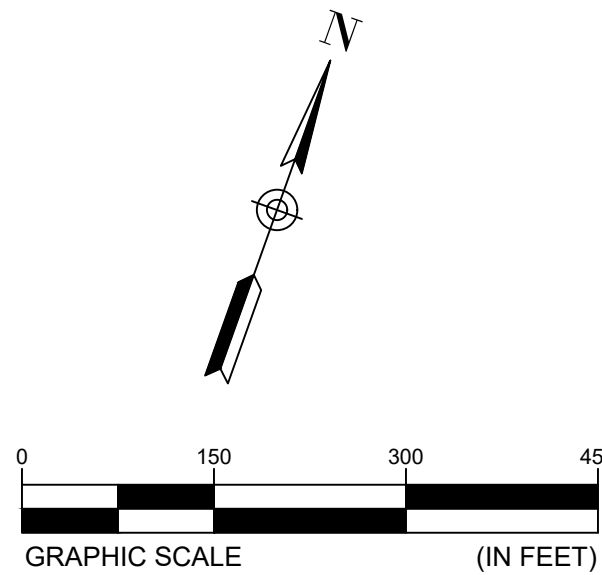
- 10 EXISTING MAJOR TOPOGRAPHIC CONTOUR
- 10 EXISTING MINOR TOPOGRAPHIC CONTOUR
- 10 PROPOSED MAJOR TOPOGRAPHIC CONTOUR
- 8 PROPOSED MINOR TOPOGRAPHIC CONTOUR
- PROPERTY BOUNDARY
- RPA RESOURCE PROTECTION AREA BOUNDARY
- PROPOSED UAP PERIMETER GRAVEL ACCESS ROAD/ HIKING TRAIL REPLACEMENT
- CENTERLINE EXISTING DAM
- PROPOSED FENCE LINE
- EXISTING MONITORING AND OBSERVATION WELL
- GRAVEL LAYDOWN AREA
- TIED CONCRETE BLOCK MAT (FLEXAMAT OR APPROVED EQUAL) STORMWATER CONVEYANCE CHANNEL
- STORMWATER FLOW ARROW
- WETLANDS
- RMA RESOURCE MANAGEMENT AREA BOUNDARY

NOTES

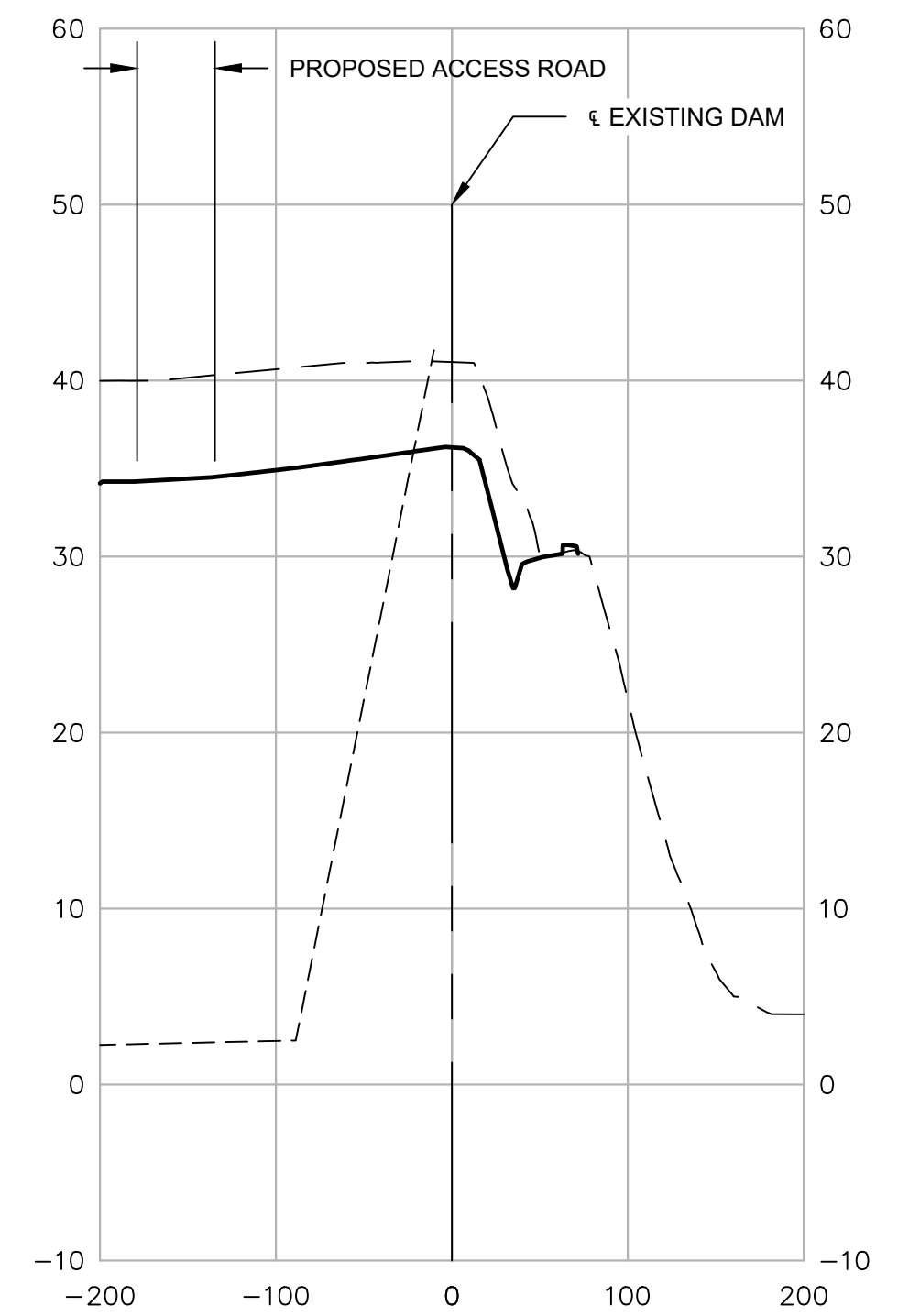
1. BASIS OF BEARINGS: NAD83, VIRGINIA STATE PLANE, SOUTH ZONE. ELEVATIONS ARE BASED ON NAVD88.
2. PERIMETER DIKE CAN BE LOWERED WITH THE EXCAVATION OR SLOPED TEMPORARILY AT 3H:1V OR FLATTER. THE DIKE MUST REMAIN ABOVE ELEVATION 16 FEET UNTIL ALL CCR IS REMOVED TO PROVIDE ADEQUATE SEPARATION FROM THE 100-YEAR FLOOD. IF SLOPES ARE CONSTRUCTED, THE CONTRACTOR SHALL ASSESS CONSTRUCTION STABILITY OF THE SLOPES AND DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO SUPPORT CONSTRUCTIONS LOADS.
3. THE CONTRACTOR IS REQUIRED TO LOWER PERIMETER DIKE AS NECESSARY TO INSTALL EMERGENCY SPILLWAYS AT EACH FINAL STORMWATER OUTLET PER THE DETAILS ON SHEET 010.
4. IF CCR MATERIAL IS DISCOVERED IN THE PERIMETER DIKE, CONTRACTOR TO SUBMIT A PLAN FOR THE REMOVAL OF THE OWNER AND OWNERS'S ENGINEER FOR APPROVAL.

REFERENCES

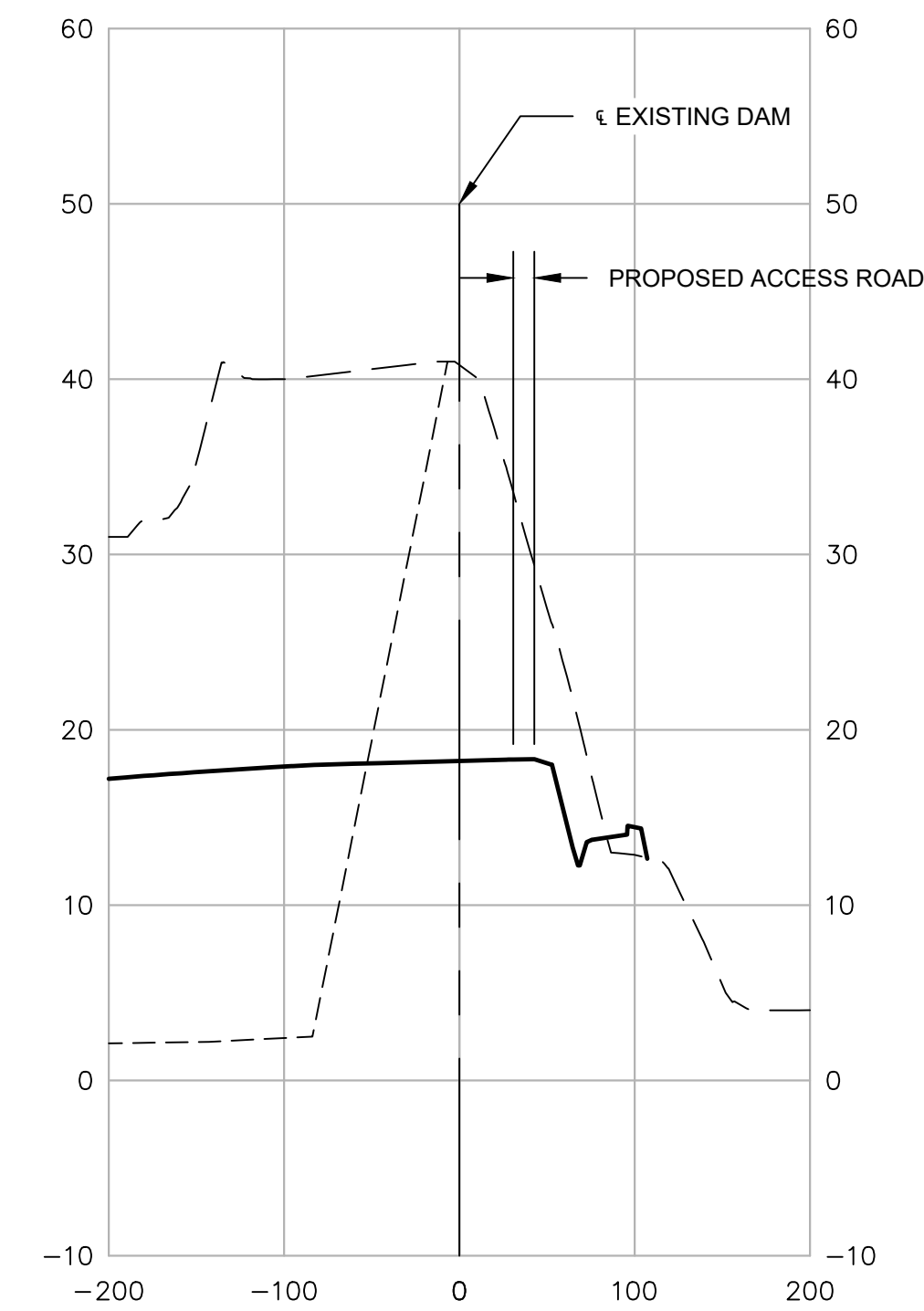
1. THE EXISTING SURVEY INFORMATION (TOPOGRAPHY, PLANIMETRICS, ETC.) PRESENTED IN THESE DRAWINGS WAS OBTAINED FROM THE SURVEY COMPILED BY TUCK MAPPING SOLUTIONS OF BIG STONE GAP, VIRGINIA; THE LIDAR FLIGHT DATE WAS JUNE 8, 2016 AND THE AIRBORNE SURVEY FLIGHT DATE WAS MAY 11, 2018. THE EXISTING SURVEY INFORMATION WAS AMENDED WITH A SURVEY OF UNDERGROUND UTILITIES PERFORMED BY D&M SURVEYORS P.C., DATED SEPTEMBER 23, 2019, AS WELL AS WITH THE UPPER ASH POND DCR COMPLIANCE PROJECT CONSTRUCTION DRAWINGS PREPARED BY GEOSYNTEC CONSULTANTS, DATED OCTOBER 2019, AND SUBMITTED TO CHESTERFIELD COUNTY FOR REVIEW AND APPROVAL ON DECEMBER 16, 2019.
2. THE PROPERTY BOUNDARY PRESENTED IN THESE DRAWINGS IS BASED ON A METES AND BOUNDS SURVEY PERFORMED BY D&M SURVEYORS P.C. ON MARCH 16 AND 29, 2016.
3. THE EXISTING WETLANDS AND RESOURCE PROTECTION AREA (RPA) PRESENTED IN THESE DRAWINGS WERE OBTAINED FROM THE WETLAND DELINEATION MAP PREPARED BY GOLDER ASSOCIATES, DATED AUGUST 20, 2015 AND JUNE 2018, AND BY AECOM ON MARCH 11, 2020.
4. THE EXISTING BASE FLOOD ELEVATION PRESENTED IN THESE DRAWINGS IS THE 100 YEAR FLOOD ELEVATION 16 CONTOUR, BASED ON FEMA FIRM PANEL MAPS 5104C0335D AND 51041C0169D, DATED APRIL 26, 2017.



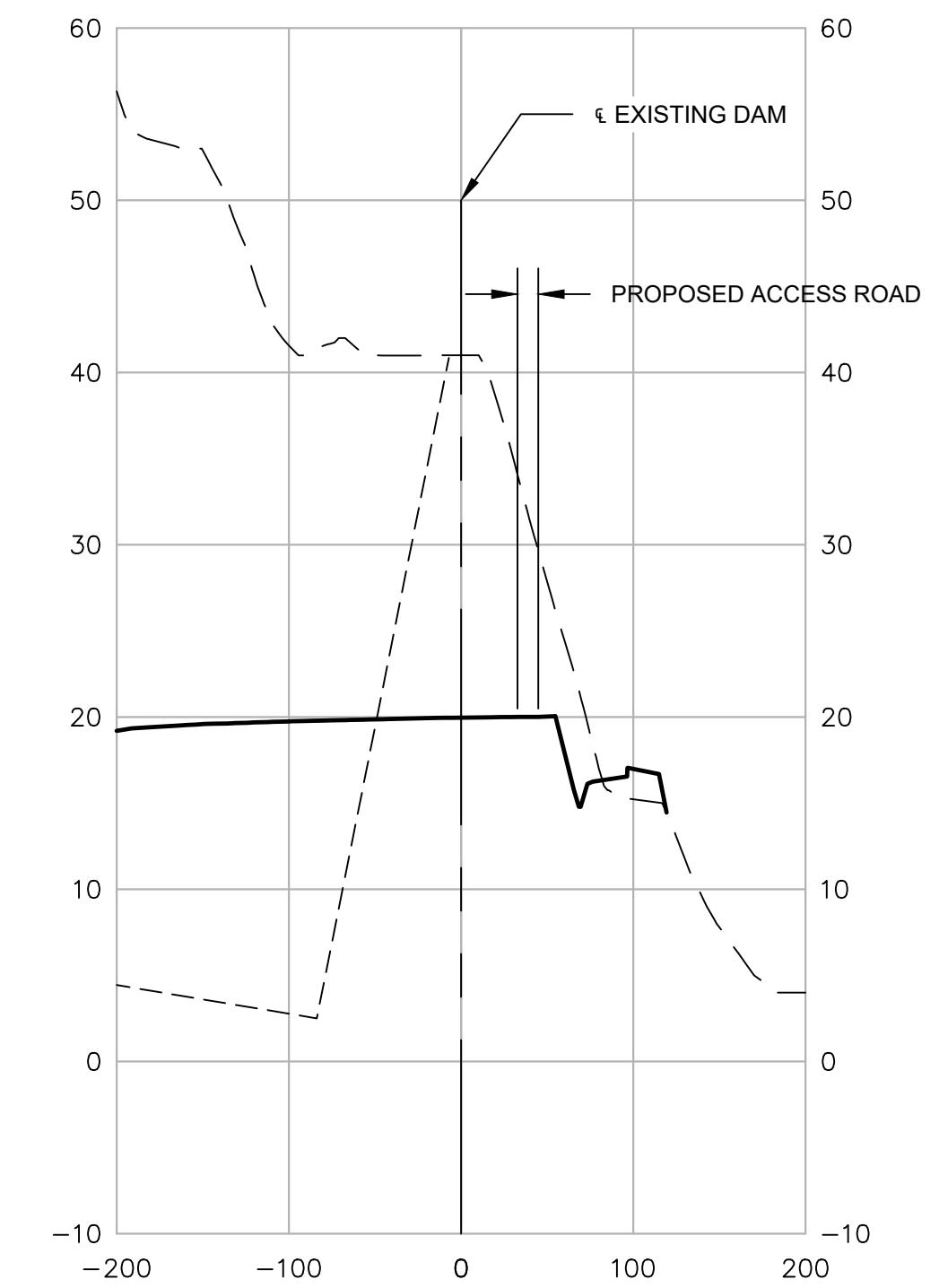
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	FOR PERMIT APPLICATION DRAWINGS		
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	ANSI D 22.0"x34.0"	DATE: 11-13-2020	CHKD: RJB
DRAWING NO. 011		ENGR: GWL	
		APPD: GWL	
		REVISION	
		0	



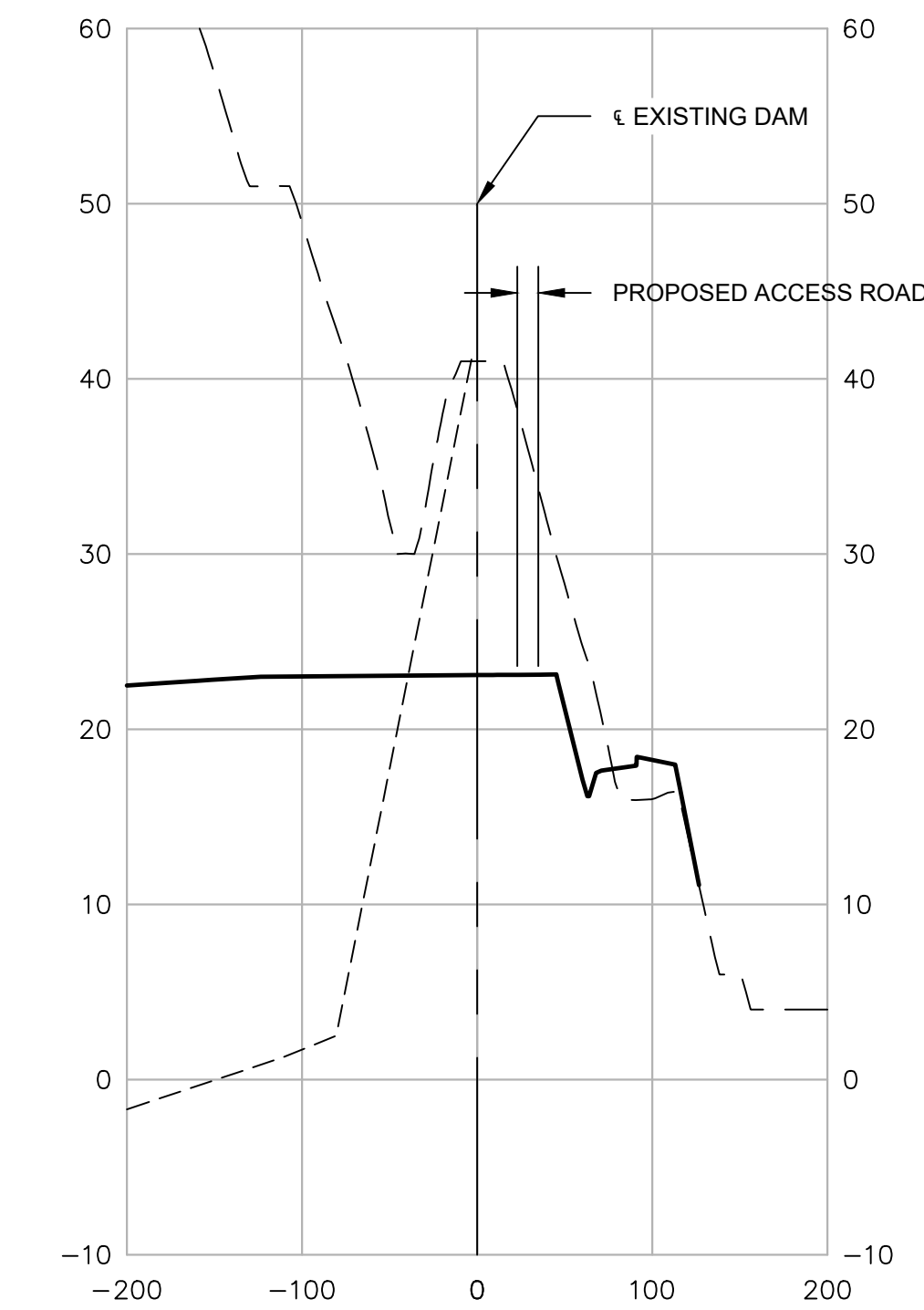
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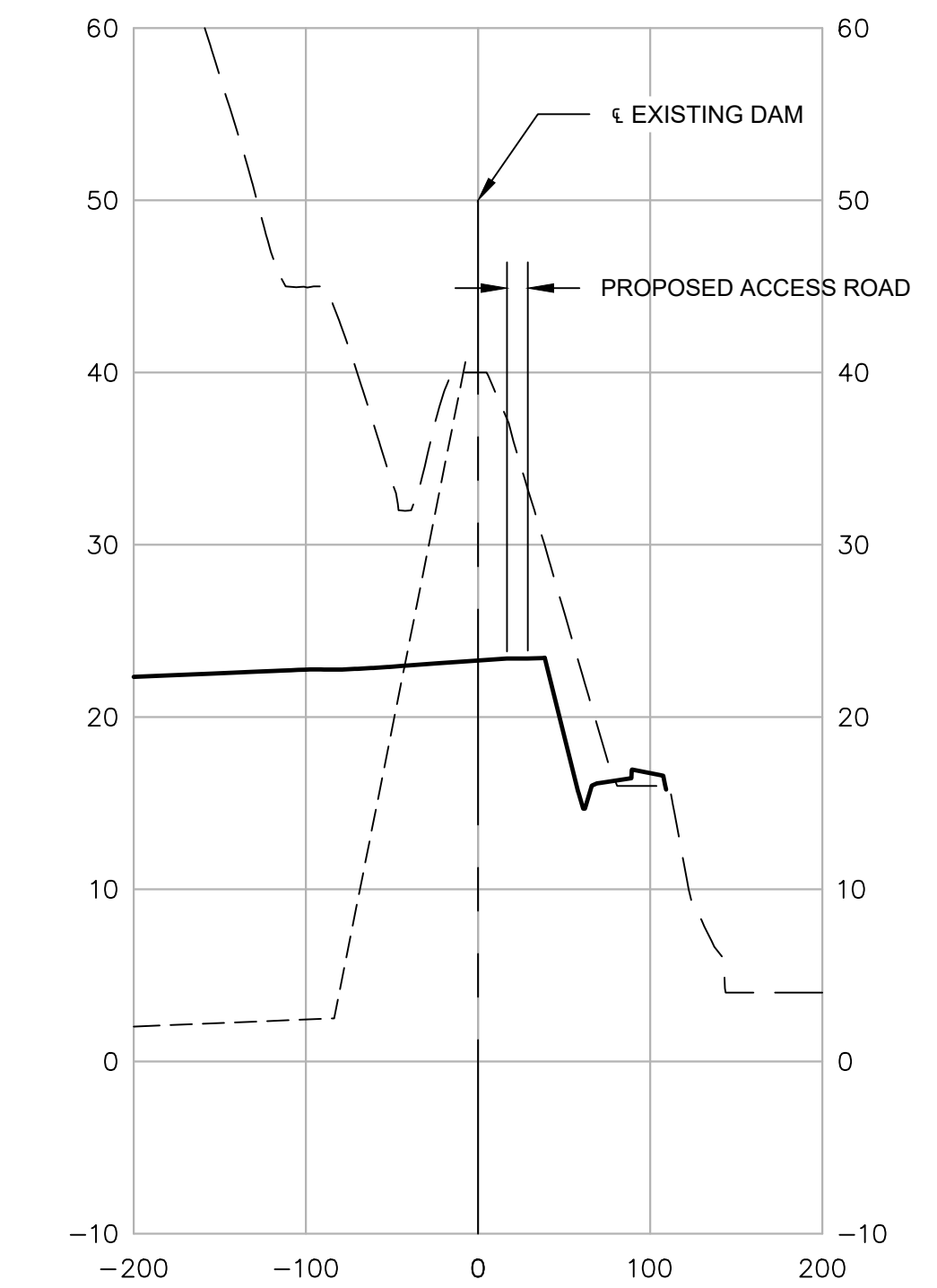
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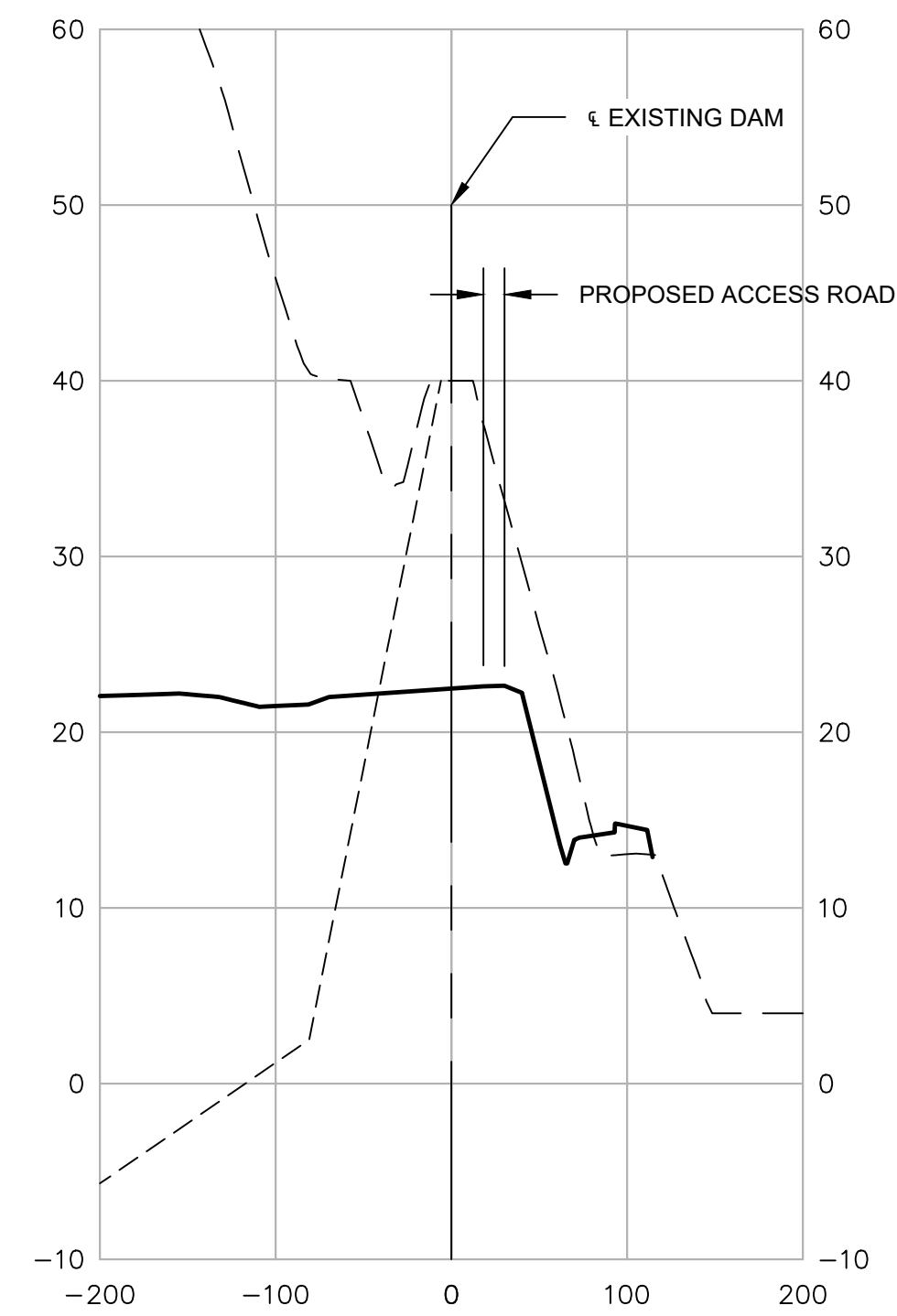
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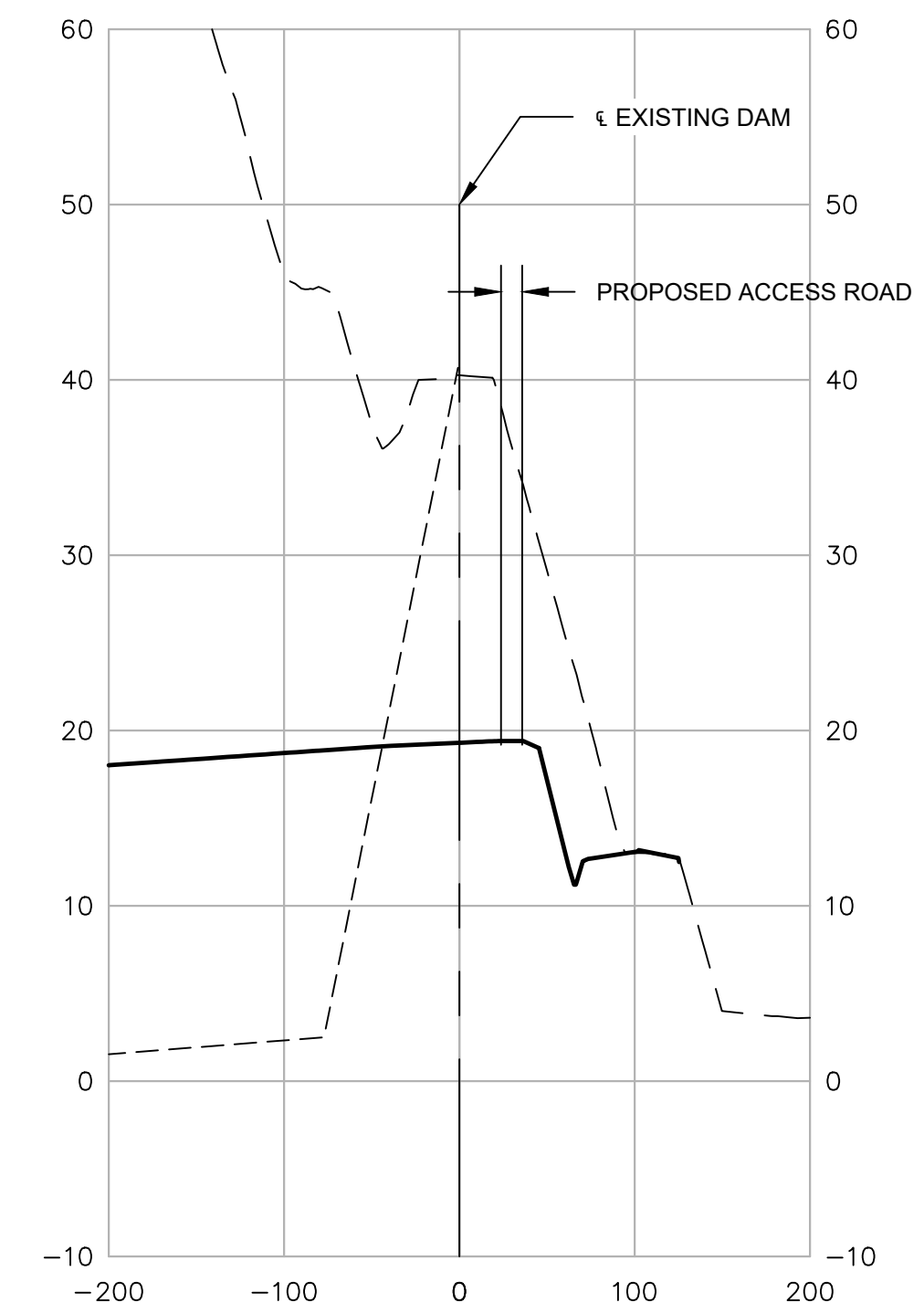
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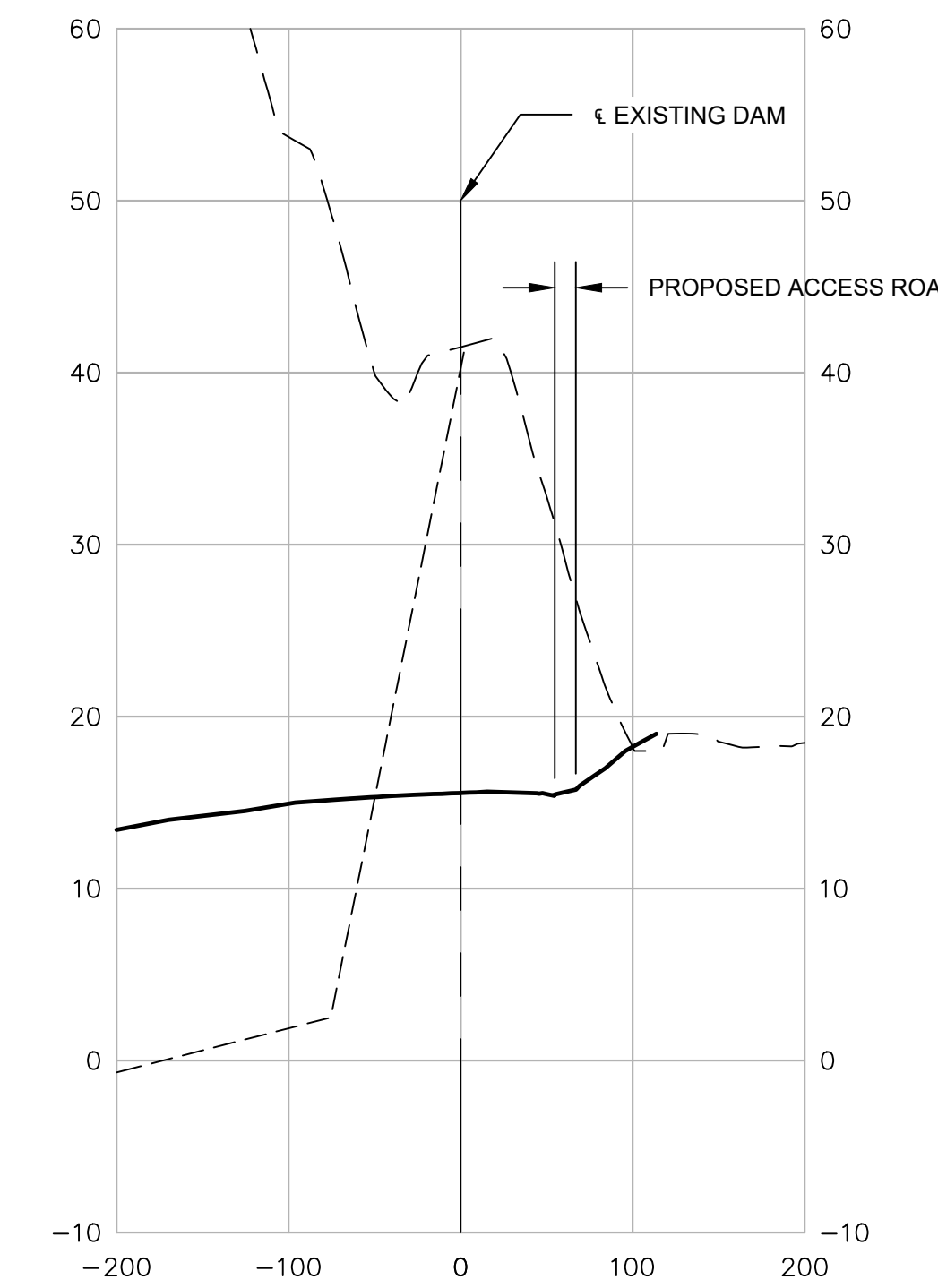
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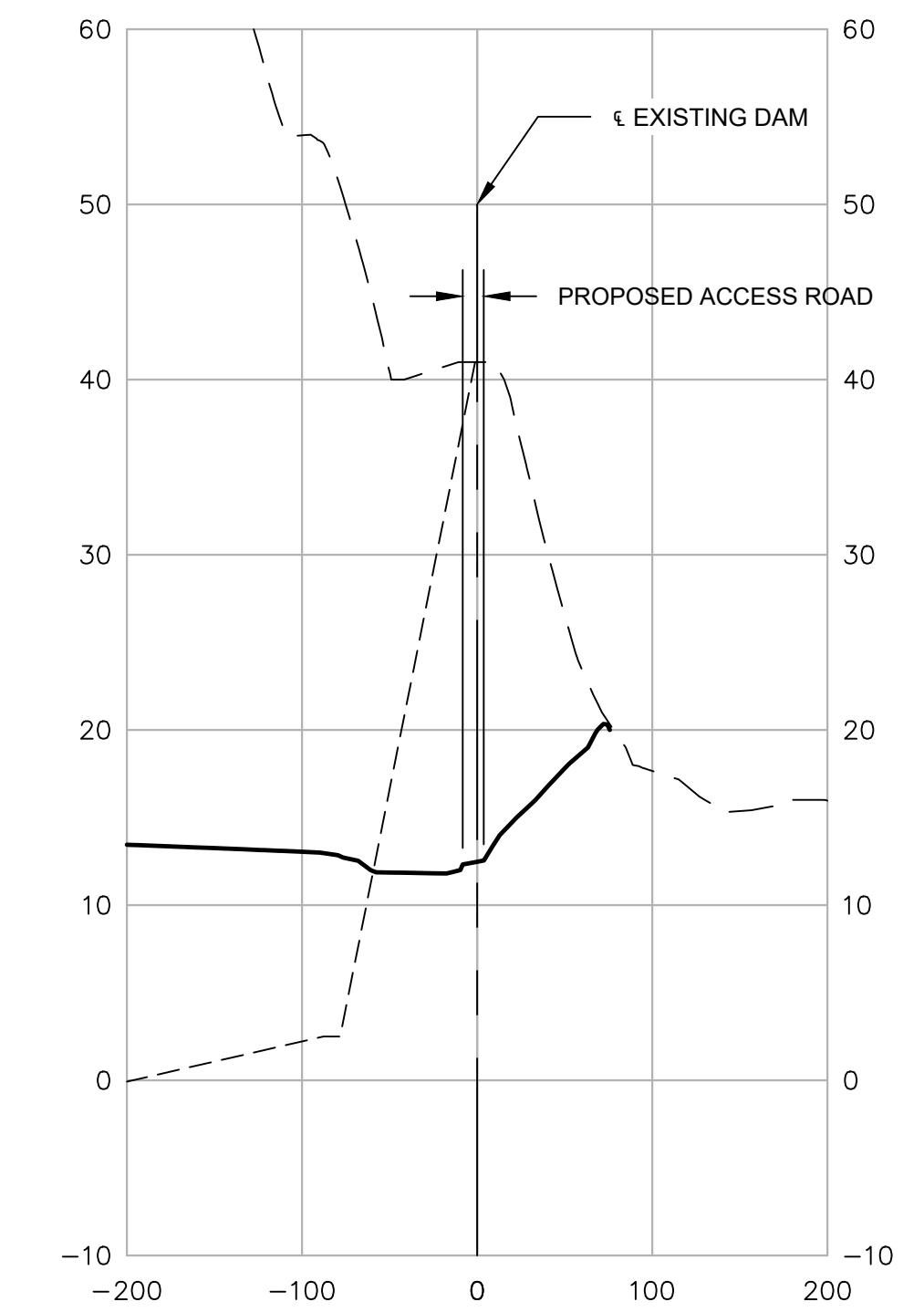
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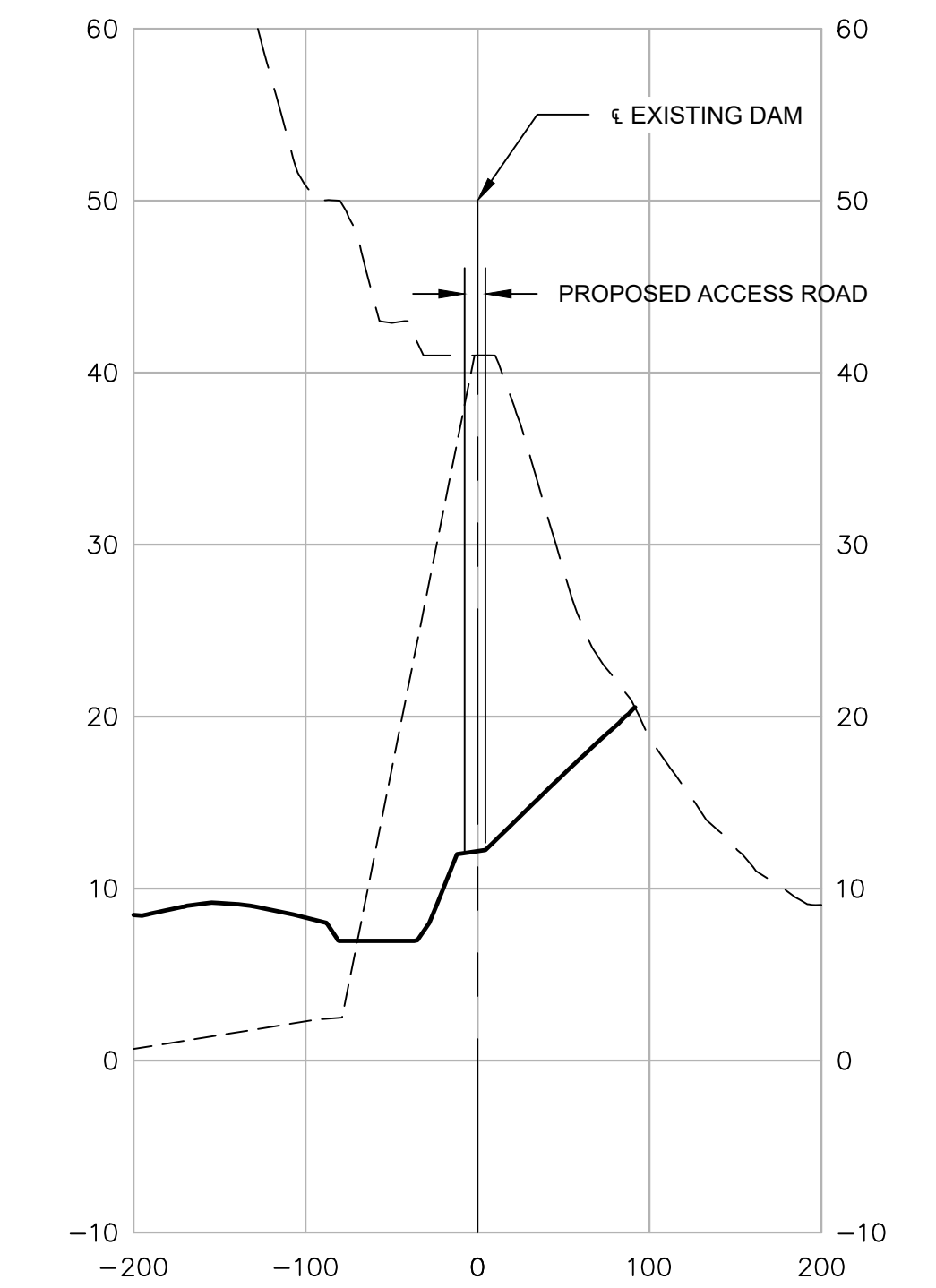
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STA. 40+00



STA. 45+00



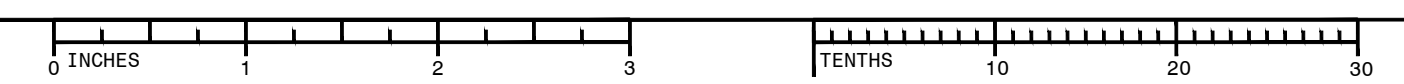
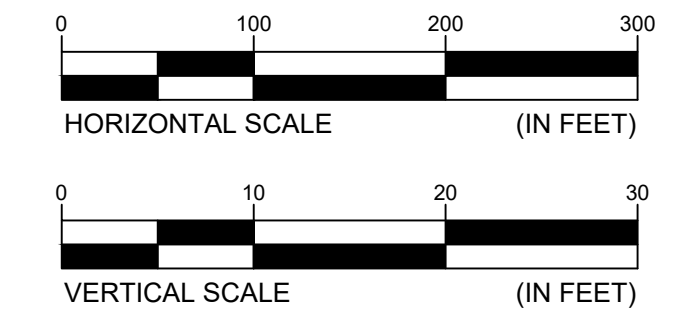
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LEGEND

- EXISTING GRADE
- ESTIMATED BOTTOM OF CCR MATERIAL
- PROPOSED FINAL GRADE

NOTES

- BASIS OF BEARINGS: NAD83, VIRGINIA STATE PLANE, SOUTH ZONE. ELEVATIONS ARE BASED ON NAVD88.



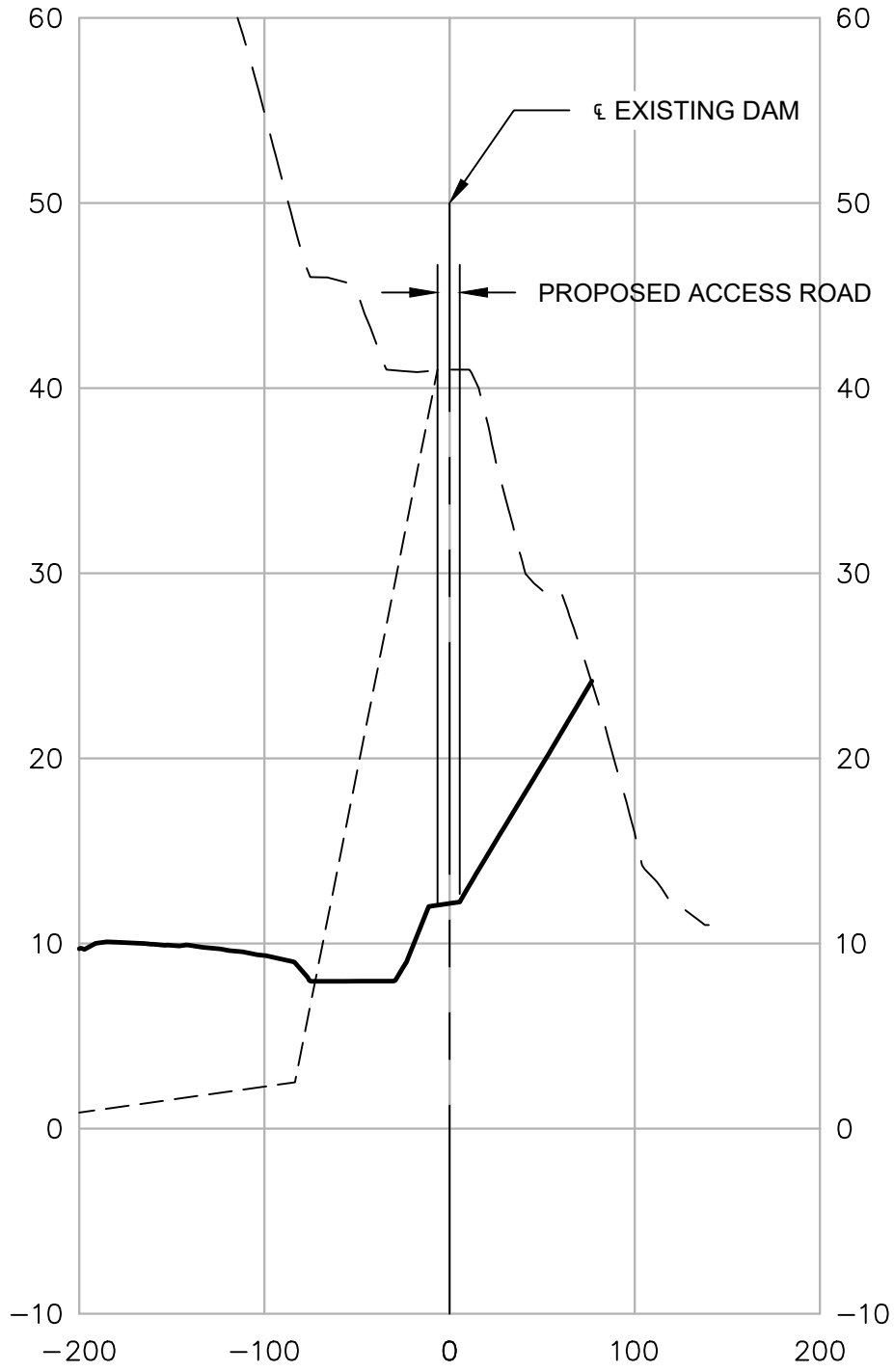
DAM DECOMMISSIONING
CROSS SECTIONS I
CHESTERFIELD POWER STATION
CLOSURE PLAN - UPPER ASH POND
CHESTERFIELD COUNTY, VIRGINIA

FOR
PERMIT APPLICATION DRAWINGS

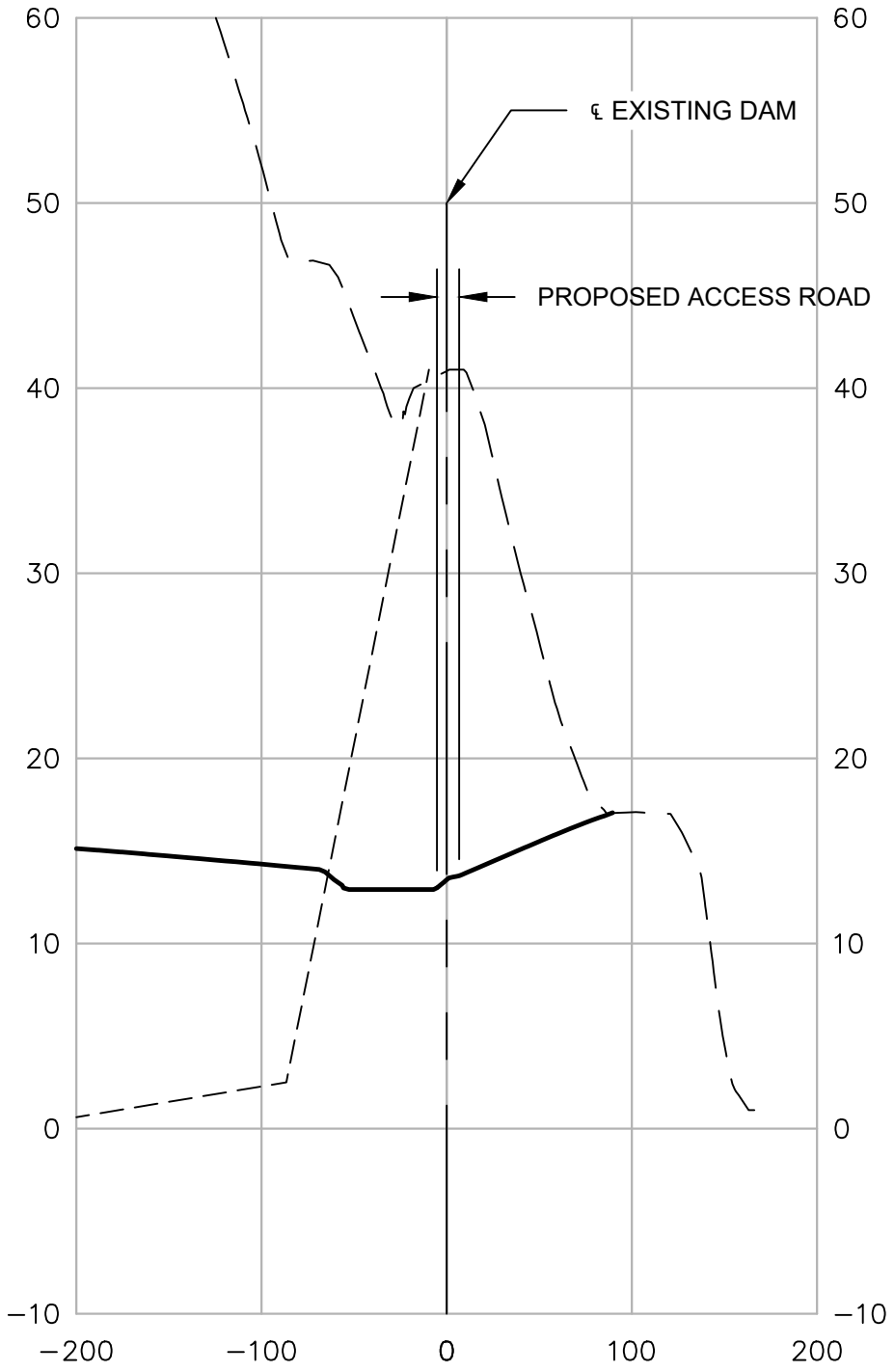
SEAL

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JOB NO: 60614683	CHKD: RJB
DATE: 11-13-2020	ENGR: GWL

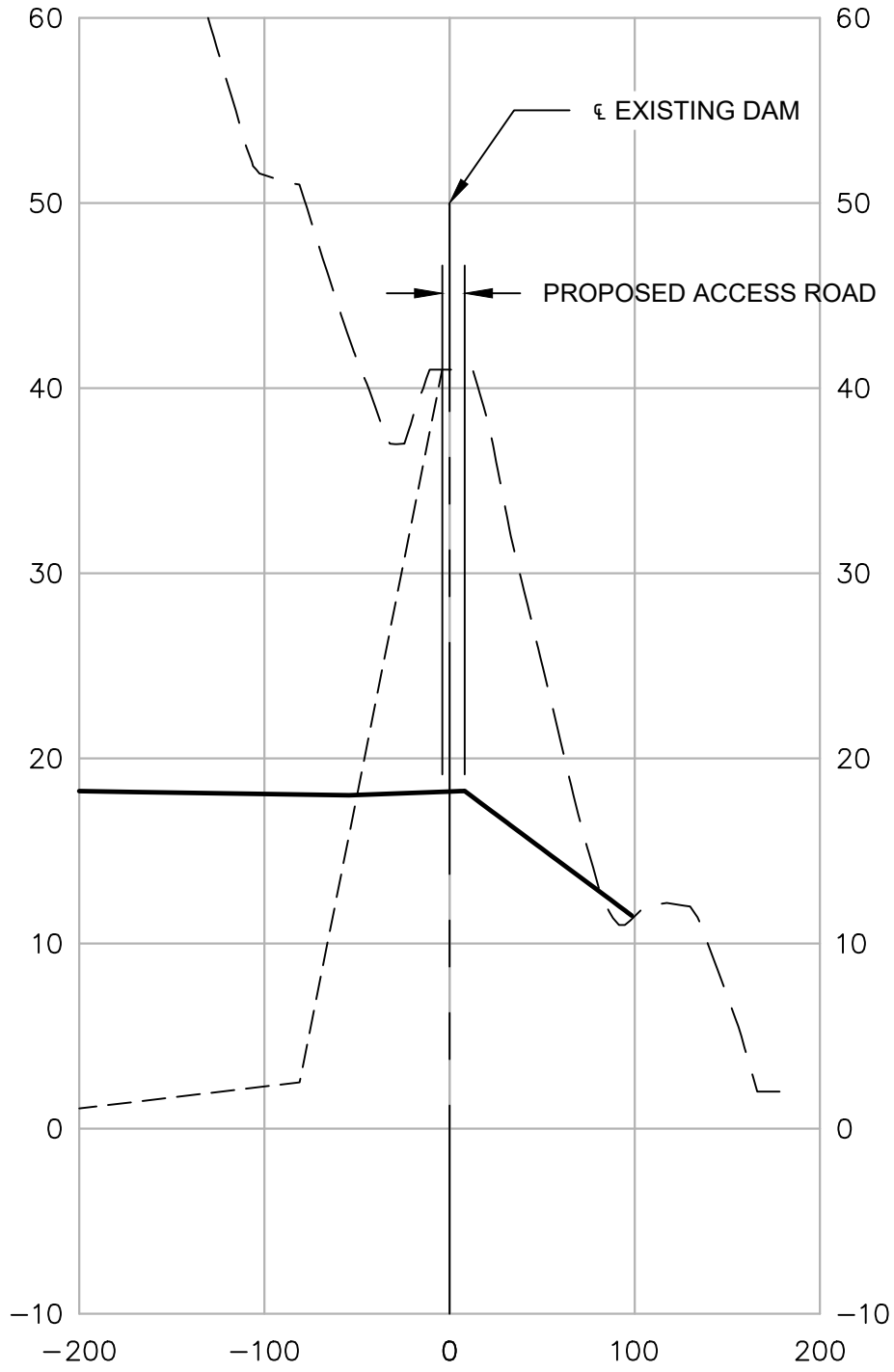
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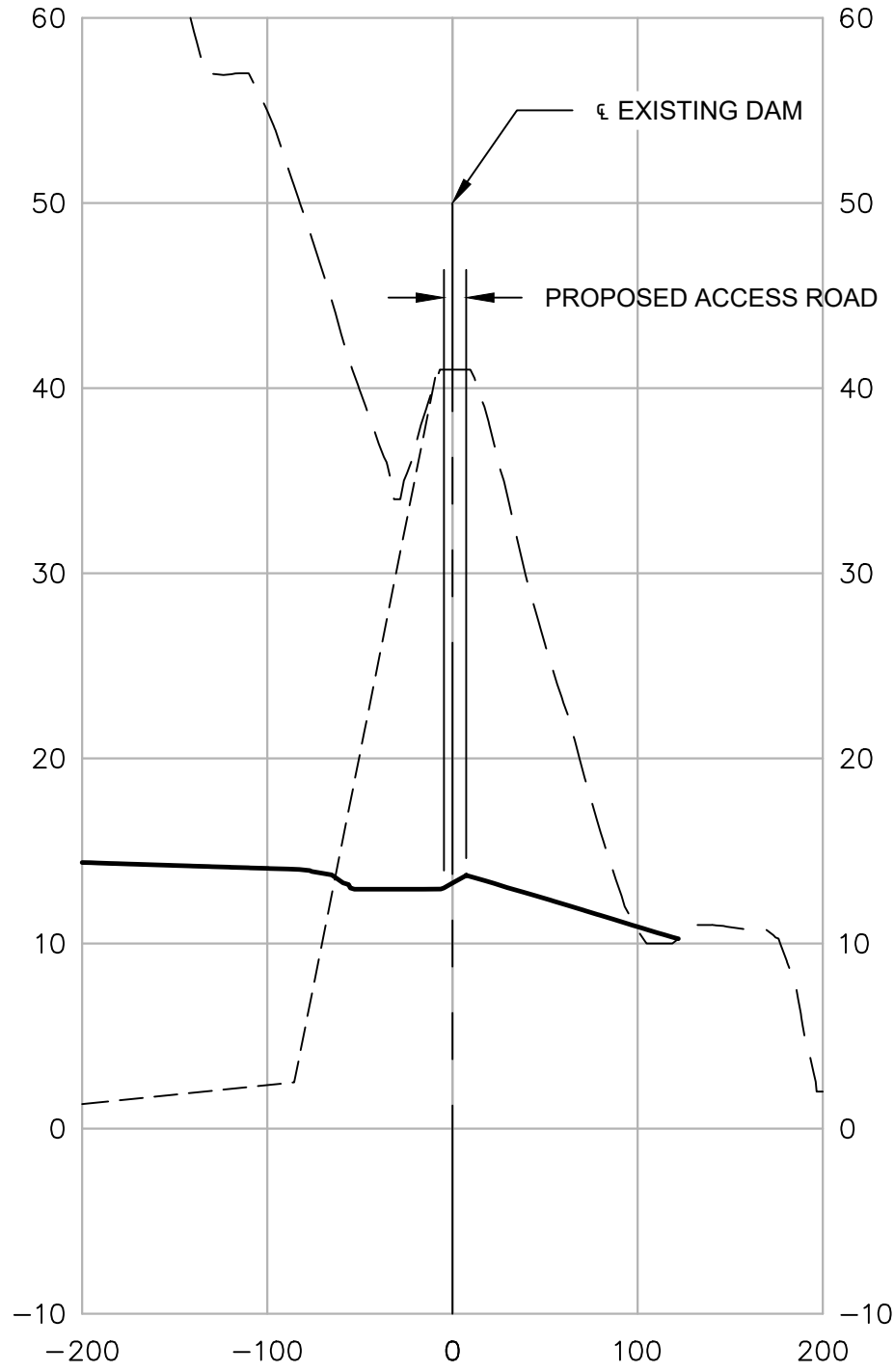
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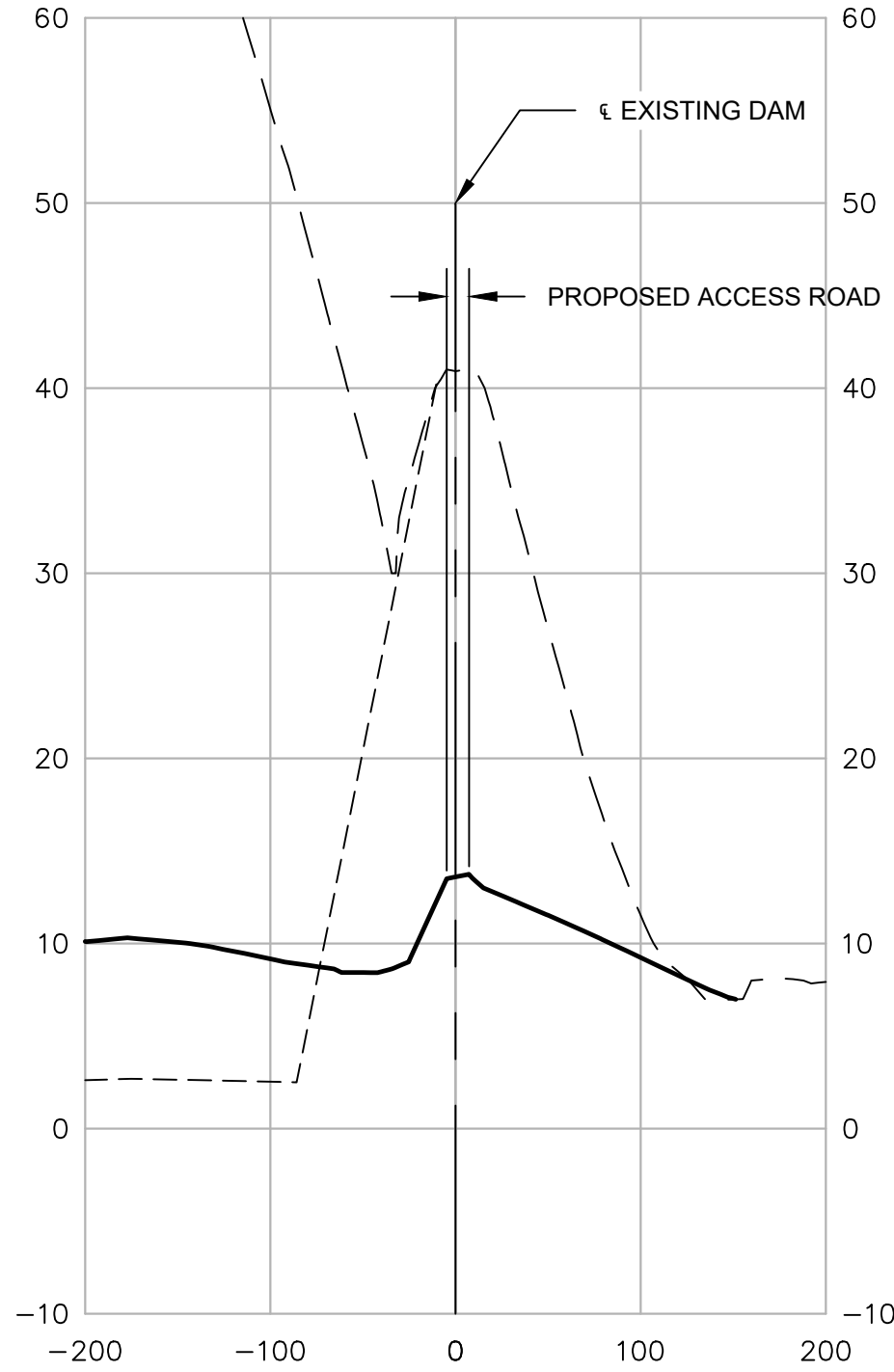
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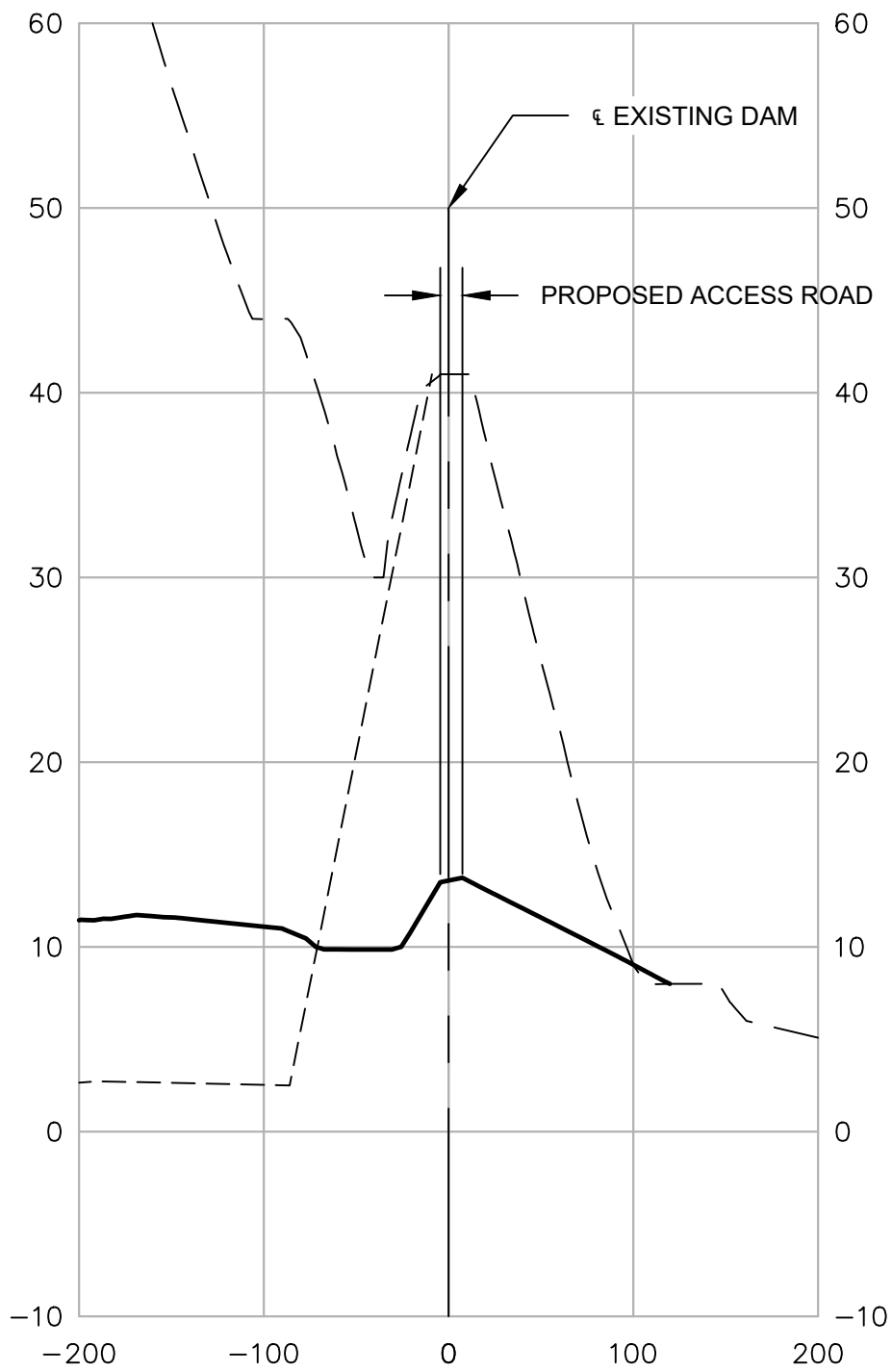
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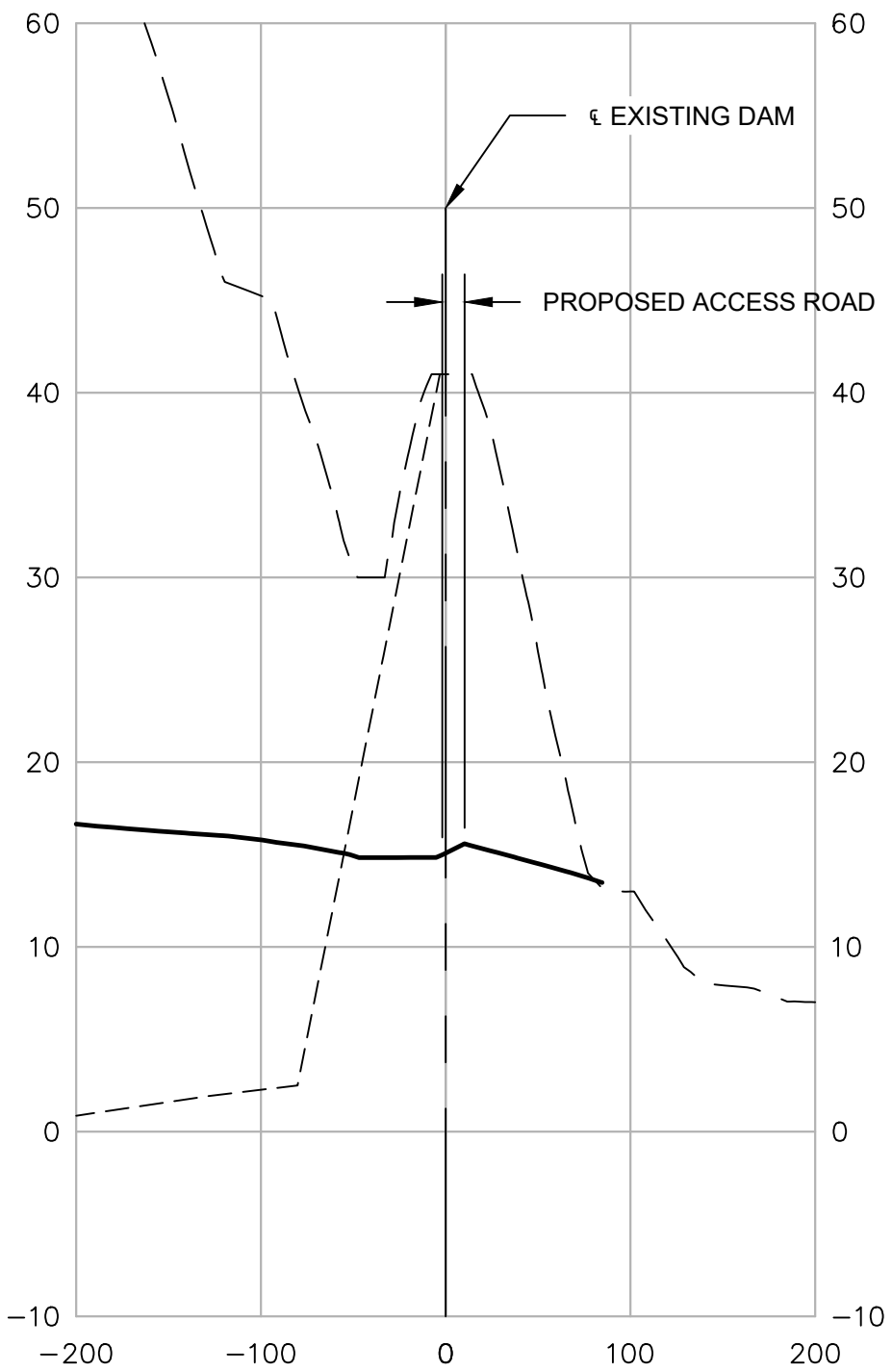
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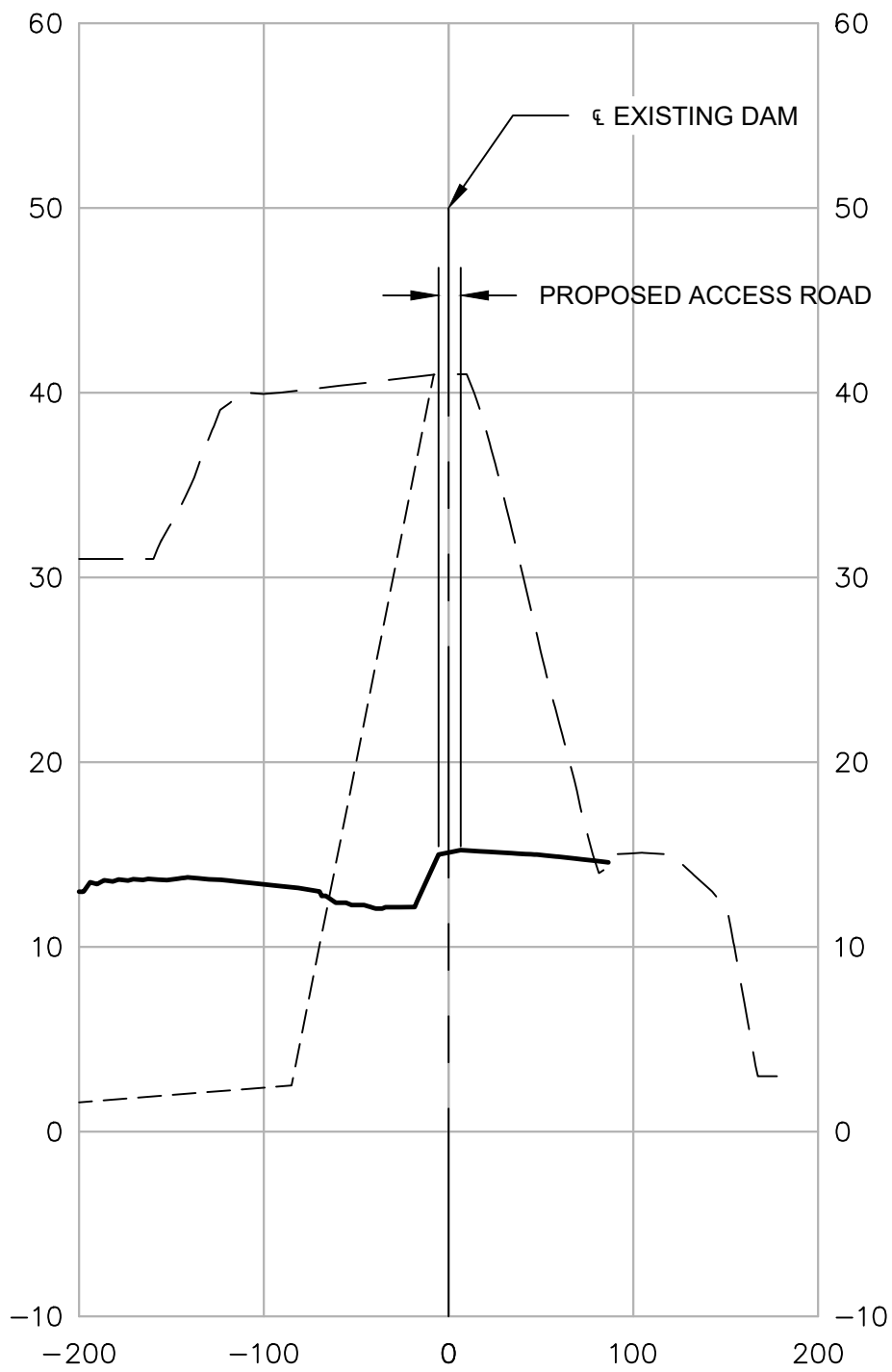
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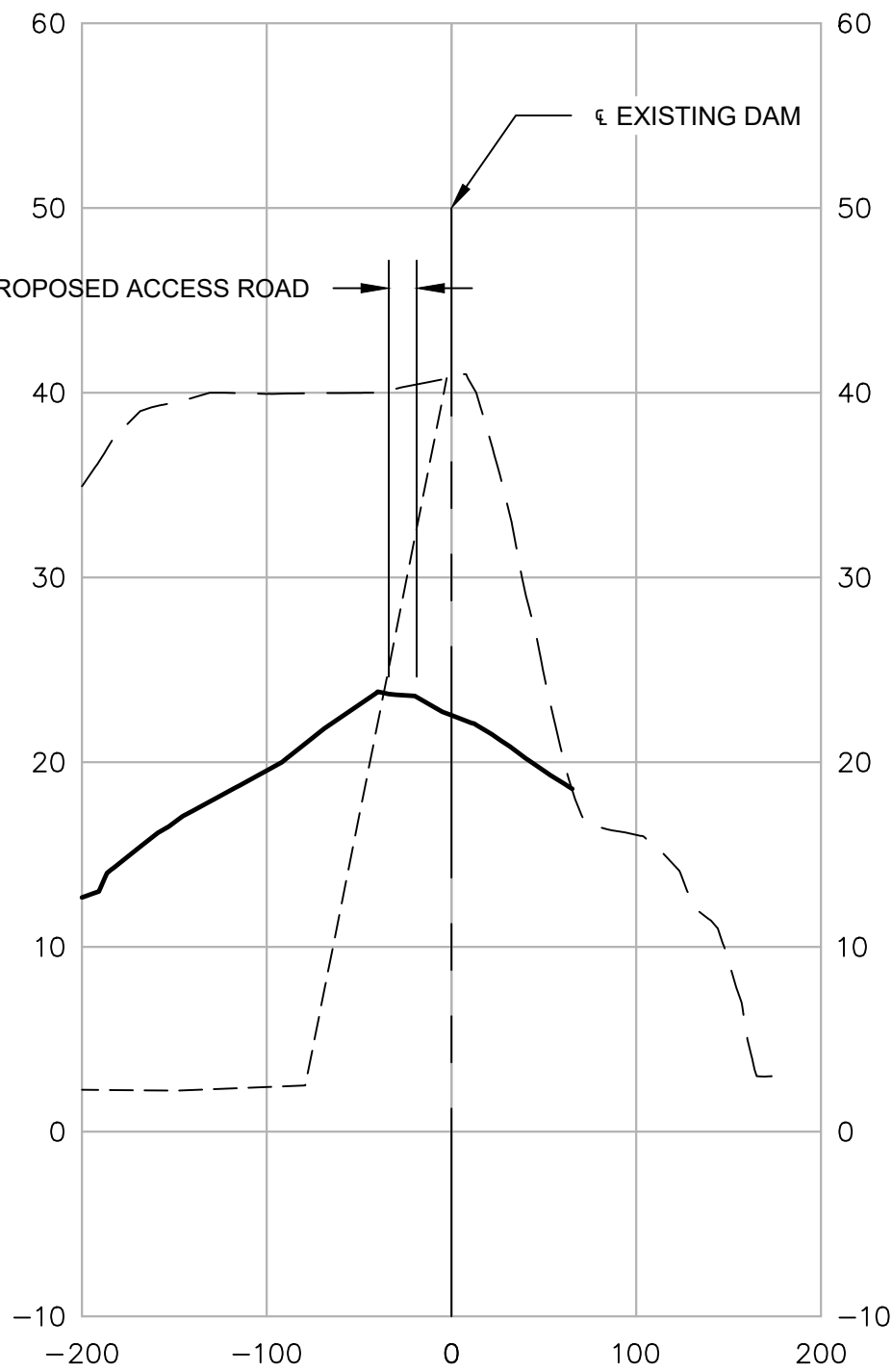
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STA. 85+00



STA. 90+00



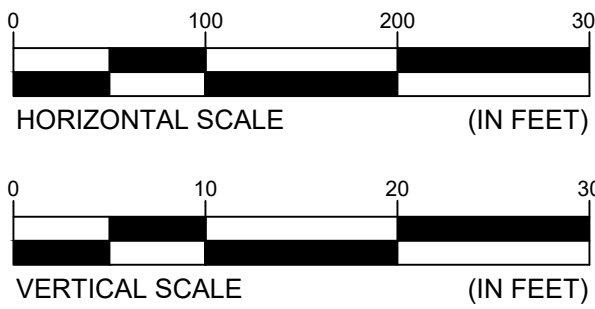
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LEGEND

- EXISTING GRADE
- ESTIMATED BOTTOM OF CCR MATERIAL
- PROPOSED FINAL GRADE

NOTES

- BASIS OF BEARINGS: NAD83, VIRGINIA STATE PLANE, SOUTH ZONE. ELEVATIONS ARE BASED ON NAVD88.



DAM DECOMMISSIONING CROSS SECTIONS II
CHESTERFIELD POWER STATION
CLOSURE PLAN - UPPER ASH POND
CHESTERFIELD COUNTY, VIRGINIA

FOR **PERMIT APPLICATION DRAWINGS**

SCALE: 1" = 100'	DES: MSR
DWG TYPE: .DWG	DFTR: JBM
JOB NO: 60614683	CHKD: RJB
DATE: 11-13-2020	ENGR: GWL

FILENAME: DAM DECOMMISSIONING.DWG	APPD: GWL
DWG SIZE: ANS I D 22.0"x34.0"	DRAWING NO. 013
	REVISION 0