

Notes

- The contractor is responsible for obtaining and complying with all permits and easements. This includes all federal, state and local permits.
- The contractor is responsible for checking and complying with all local ordinances that may affect the project.
- MISS UTILITY (Virginia telephone number 811) must be contacted at least 3 working days before construction begins. The contractor is responsible for contacting MISS UTILITY. The contractor must be able to provide the MISS UTILITY ticket number within 24 hours upon request by the SWCD representative. The contractor is responsible for locating any buried utilities (water lines, electric lines, telephone lines, gas lines, sewer lines, etc.) in the work area that are not covered by the MISS UTILITY program.
- SWCD makes no representation of the existence or nonexistence of utilities. The presence or absence of utilities on the construction drawings does not assure that there are or are not utilities in the work area.
- The contractor is responsible for knowing and following the appropriate safety standards required by the Virginia Safety and Health Codes Board.
- The contractor shall notify the local SWCD representative at least one week prior to beginning construction, and at all other times specified in this construction plan and attached specifications.
- These Drawings and Specifications shall not be modified or deviated from unless approved in writing by the Engineer who has sealed these Drawings and a SWCD Representative.
- Prior to beginning construction, the cover sheet must be signed by the contractor, and the SWCD representative. The contractor must sign the cover sheet acknowledging that these responsibilities are understood and the contractor must return the signed cover sheet to the SWCD Representative. If requested by SWCD, the contractor shall arrange for a meeting with SWCD to review the construction drawings and specifications prior to construction.

The SWCD Representative for this project is:

The SWCD office telephone number is:

Benchmark Descriptions

BM #	100	Actual Elev.	418.66
Description: Iron pipe with cap at northern end of dam. N: 6848166.13 E: 11614406.65			
BM #	101	Actual Elev.	419.38
Description: Iron pipe with cap at southern end of dam N: 6847596.47 E: 11614578.50			

Acknowledgment Signatures

These construction drawings and attached specifications have been reviewed I understand what is required. (Sign and date below)

Contractor _____

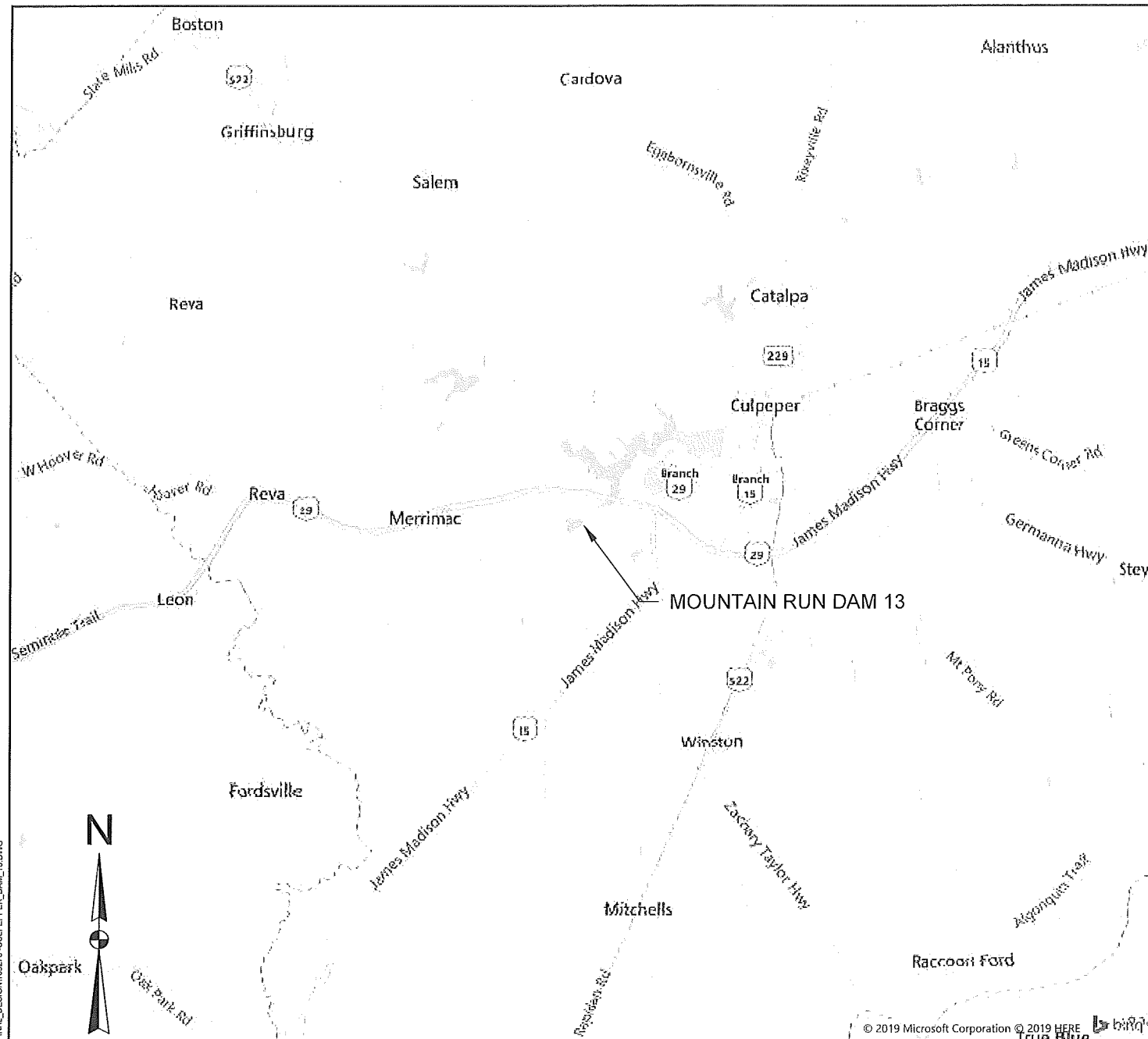
Contractor _____

SWCD Representative _____

Engineering Job Class:



Know what's below. Call before you dig.



Site Location Map
Scale 1 inch = 5000 feet

Index of Sheets	
Sheet No.	Title
1	COVER
2	EXISTING SITE PLAN
3	PROPOSED SITE PLAN
4	EMBANKMENT SECTIONS

Specification Table	
No.	Title
VA-705	POLLUTION CONTROL
VA-706	SEEDING/EROSION BLANKET
VA-707	SITE PREPARATION
VA-708	SALVAGING & SPREADING TOPSOIL
VA-721	EXCAVATION
VA-723	EARTHFILL
	REMOVAL OF WATER (SEE NOTES, PAGE 3)

Table of Estimated Quantities		
Item	Unit	Quantity
Mobilization & Demobilization	1	LS
Erosion & Sediment Control	1	LS
Control of Water	1	LS
Topsoil Stripping & Replacement	175	CY
Common Excavation	600	CY
Earthfill	725	CY
Permanent Turf Establishment	0.3	AC
Erosion Control Matting	1500	SY

DESIGNED BY: JTC	DRAWN BY: BPH	CHECKED BY: RPL	DATE: 10/11/19
RANDALL P. BASS, P.E.		DATE: 10/11/19	
		VIRGINIA PROFESSIONAL ENGINEER NO. 046718	
		6445 Shiloh Road, Suite A1, Albemarle, VA 20085 / Phone: 770-781-8029 / Fax: 770-781-8033 / schnabel-eng.com	
MOUNTAIN RUN DAM #13		COVER SHEET	
WAVE BERM RECONSTRUCTION		CULPEPER COUNTY, VIRGINIA	
PROJECT: 19C17047.00		DATE: OCTOBER 2019	
SHEET 1 OF 4			

©2019 PHARETTA19C17047_00_CULPEPERSWCD-DAMS-WAVE BERM RECONSTRUCTION-FINAL_DESIGN10275-CULPEPER_DAM_13.DWG

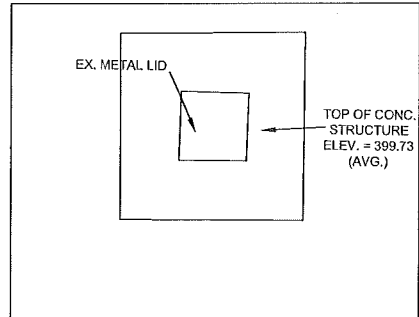
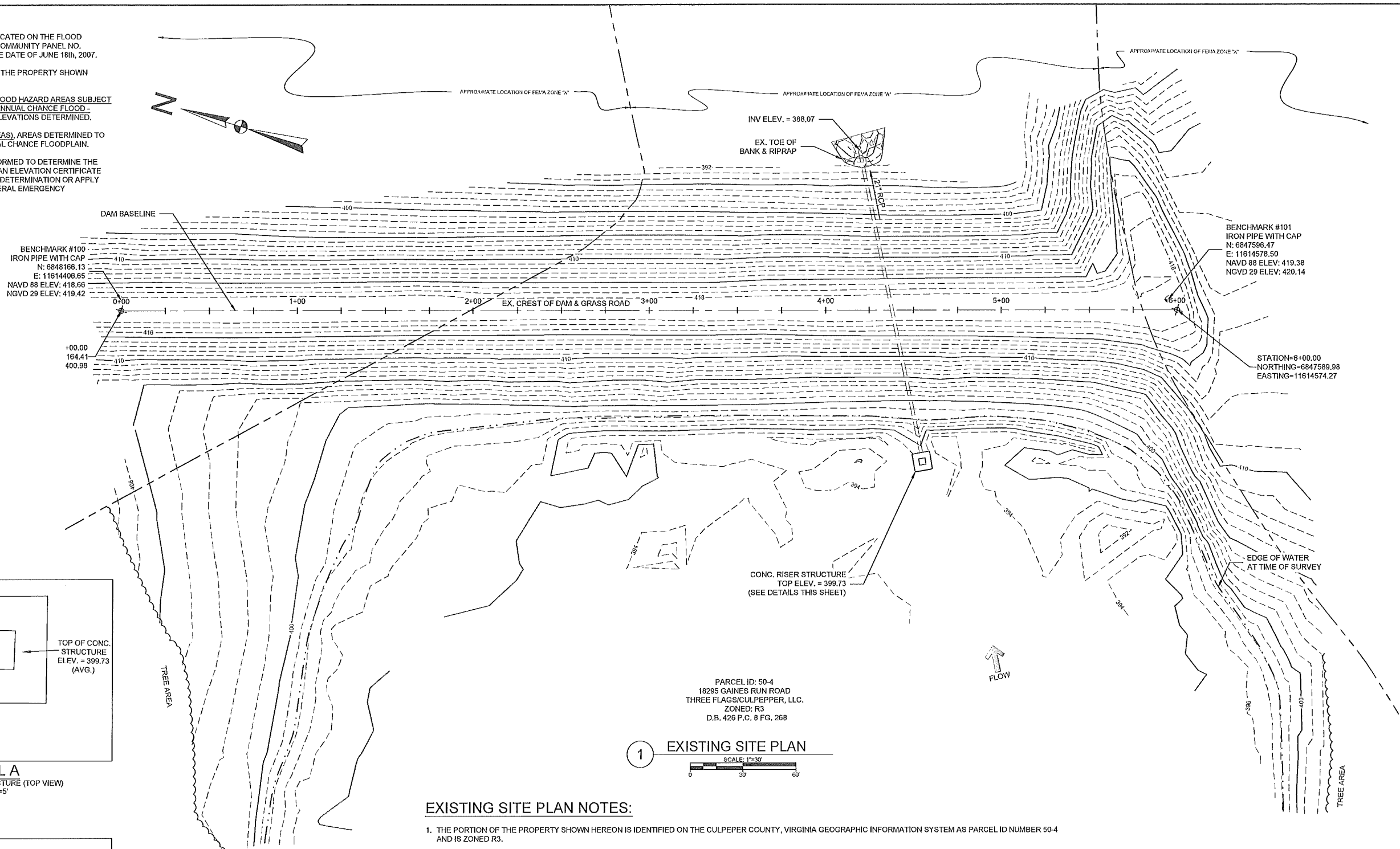
FLOOD ZONE NOTES:

THE AREA SHOWN HEREON IS LOCATED ON THE FLOOD INSURANCE RATE MAPS (FIRM), COMMUNITY PANEL NO. 51047C0210C, WITH AN EFFECTIVE DATE OF JUNE 18th, 2007.

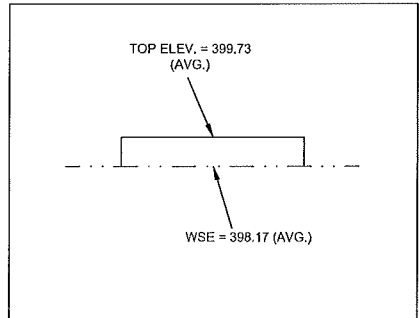
BY GRAPHICAL DEPICTION ONLY, THE PROPERTY SHOWN HEREON IS SHOWN IN:

- FLOOD ZONE "A" (SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD - SHADED), NO BASE FLOOD ELEVATIONS DETERMINED.
- FLOOD ZONE "X" (OTHER AREAS), AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

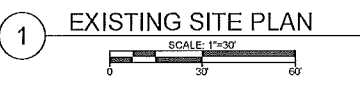
A FIELD SURVEY WAS NOT PERFORMED TO DETERMINE THE FLOOD ZONES LISTED HEREON. AN ELEVATION CERTIFICATE MAY BE NEEDED TO VERIFY THIS DETERMINATION OR APPLY FOR A VARIANCE FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY.



DETAIL A
CONCRETE POND STRUCTURE (TOP VIEW)
SCALE: 1"=5'



DETAIL B
CONCRETE POND STRUCTURE (PROFILE VIEW)
SCALE: 1"=5'



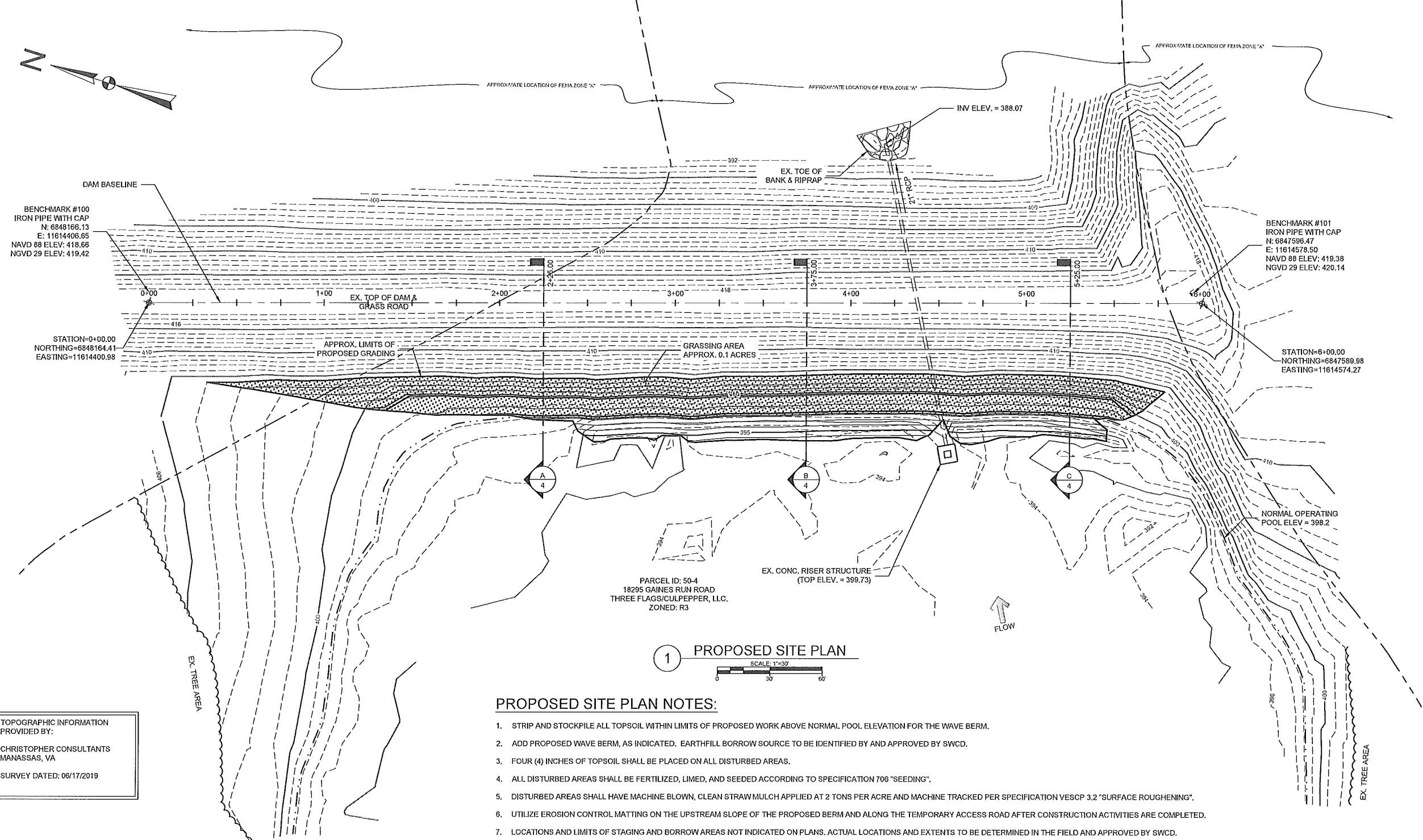
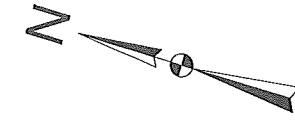
EXISTING SITE PLAN NOTES:

- THE PORTION OF THE PROPERTY SHOWN HEREON IS IDENTIFIED ON THE CULPEPER COUNTY, VIRGINIA GEOGRAPHIC INFORMATION SYSTEM AS PARCEL ID NUMBER 50-4 AND IS ZONED R3.
- THE PROPERTY SHOWN HEREON IS NOW IN THE NAME OF THREE FLAGS / CULPEPER, LLC, RECORDED IN DEED BOOK 426, AND LEGAL DESCRIPTION RECORDED IN PLAT CABINET 8 AT PAGE 268, AMONG THE LAND RECORDS OF CULPEPER COUNTY, VIRGINIA.
- DURING THE PROCESS OF OUR PHYSICAL SURVEY NO INDICATIONS OF A CEMETERY WERE FOUND. NO FURTHER INSPECTION OF THIS PROPERTY HAS BEEN MADE FOR POSSIBLE CEMETERIES.
- NO TITLE REPORT FURNISHED. ALL UNDERLYING TITLE LINES, EASEMENTS, SERVITUDES AND OTHER MATTERS OF TITLE MAY NOT BE SHOWN HEREON.
THIS DOCUMENT DOES NOT REPRESENT A CURRENT BOUNDARY SURVEY.
- THE PHYSICAL IMPROVEMENTS AND TOPOGRAPHY SHOWN HEREON ARE BASED UPON A FIELD SURVEY DONE BY CHRISTOPHER CONSULTANTS BETWEEN THE DATES OF JUNE 13th AND JUNE 17th, 2019.
- A.) HORIZONTAL DATUM SHOWN HEREON IS REFERENCED TO THE VIRGINIA COORDINATE SYSTEM (VCS) 1983 - NORTH AS ESTABLISHED FROM A CURRENT GPS SURVEY.
B.) THE VERTICAL DATUM SHOWN HEREON IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AS ESTABLISHED FROM A CURRENT GPS SURVEY.
- NO GEOTECHNICAL, SUBSURFACE, FIELD REVIEWS, RESEARCH, AGENCY OR GOVERNMENTAL RECORD REVIEWS, OR OTHER INVESTIGATIONS HAVE BEEN MADE FOR THE PURPOSE OF LOCATING, OR DETERMINING THE EXISTENCE OF HAZARDOUS MATERIALS, OR OTHER ENVIRONMENTAL CONCERNS ON SITE IN THE PERFORMANCE OF CHRISTOPHER CONSULTANTS, LTD SERVICES FOR THE PROJECT AS SHOWN HEREON.
- NO CERTIFICATION HAS BEEN MADE AS TO THE LOCATIONS OF UNDERGROUND UTILITIES SUCH AS, BUT NOT LIMITED TO ELECTRIC, GAS, TELEPHONE, CATV, WATER, SANITARY AND STORM SEWERS.

TOPOGRAPHIC INFORMATION PROVIDED BY:
CHRISTOPHER CONSULTANTS
MANASSAS, VA
SURVEY DATED: 06/17/2019

DESIGNED BY: JTC	DRAWN BY: BPH	CHECKED BY: RPE	DATE: 10/11/19
RANDALL P. BASS, P.E. VIRGINIA PROFESSIONAL ENGINEER NO. 046718			DESCRIPTION: MOUNTAIN RUN DAM #13 WAVE BERM RECONSTRUCTION CULPEPER COUNTY, VIRGINIA
			PROJECT: 19C17047.00 DATE: OCTOBER 2019
			SHEET 2 OF 4

G:\2019\PHARETTA\19C17047_00_CULPEPERSVCDAMS-WAVE BERM\3D-SE PRODUCTS\03-CAD\DRAWINGS\05-FINAL_DESIGN\19275-CULPEPPER_DAM_13.DWG



TOPOGRAPHIC INFORMATION PROVIDED BY:
 CHRISTOPHER CONSULTANTS
 MANASSAS, VA
 SURVEY DATED: 06/17/2019

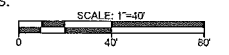
PROPOSED SITE PLAN NOTES:

1. STRIP AND STOCKPILE ALL TOPSOIL WITHIN LIMITS OF PROPOSED WORK ABOVE NORMAL POOL ELEVATION FOR THE WAVE BERM.
2. ADD PROPOSED WAVE BERM, AS INDICATED. EARTHFILL BORROW SOURCE TO BE IDENTIFIED BY AND APPROVED BY SWCD.
3. FOUR (4) INCHES OF TOPSOIL SHALL BE PLACED ON ALL DISTURBED AREAS.
4. ALL DISTURBED AREAS SHALL BE FERTILIZED, LIMED, AND SEEDED ACCORDING TO SPECIFICATION 706 "SEEDING".
5. DISTURBED AREAS SHALL HAVE MACHINE BLOWN, CLEAN STRAW MULCH APPLIED AT 2 TONS PER ACRE AND MACHINE TRACKED PER SPECIFICATION VESCP 3.2 "SURFACE ROUGHENING".
6. UTILIZE EROSION CONTROL MATTING ON THE UPSTREAM SLOPE OF THE PROPOSED BERM AND ALONG THE TEMPORARY ACCESS ROAD AFTER CONSTRUCTION ACTIVITIES ARE COMPLETED.
7. LOCATIONS AND LIMITS OF STAGING AND BORROW AREAS NOT INDICATED ON PLANS. ACTUAL LOCATIONS AND EXTENTS TO BE DETERMINED IN THE FIELD AND APPROVED BY SWCD.
8. ACCESS BETWEEN STAGING AND BORROW AREAS AND DAM NOT INCLUDED IN DISTURBED AREA CALCULATIONS.
9. CONTRACTOR SHALL RETURN ALL DISTURBED AREAS AND AREAS IMPACTED BY INGRESS/EGRESS TRAFFIC TO ORIGINAL CONDITION AND GRADE.
10. CONTRACTOR SHALL PERFORM AS-BUILT SURVEY OF THE FINAL GRADE PRIOR TO THE RE-FILLING OF THE LAKE FOR THE PURPOSES OF DEVELOPING RECORD DRAWINGS FOR THE PROJECT. AS-BUILT SURVEY SHALL BE PROVIDED TO THE SWCD IN AN ACCEPTABLE CAD/D FORMAT.
11. REMOVE AND STOCKPILE ALL TOPSOIL PRIOR TO EARTHWORK ACTIVITIES. PLACE 4" OF TOPSOIL ON COMPLETED WAVE BERM (175 CY). ALL AREAS TO RECEIVE COMPACTED STRUCTURAL FILL SHALL BE COMPLETELY STRIPPED OF VEGETATION.
12. APPROXIMATELY 600 CUBIC YARDS OF COMMON EXCAVATION IS REQUIRED TO PREPARE THE EMBANKMENT TO RECEIVE COMPACTED STRUCTURAL FILL ASSOCIATED WITH THE PROPOSED WAVE BERM, AS SHOWN. DEPENDING ON SITE CONDITIONS, THE AMOUNT OF EXCAVATION SHOWN MAY BE REDUCED IF THE CONTRACTOR IS ABLE TO SUFFICIENTLY DRY THE AREAS TO RECEIVE COMPACTED STRUCTURAL FILL TO THE SATISFACTORY DRY TO THE SATISFACTION OF THE DESIGN ENGINEER AND SWCD. SUBGRADES FOR STRUCTURAL FILL WILL BE CONSIDERED ACCEPTABLE IF THE SUBGRADE IS ABLE TO SUPPORT A TAMPING SHEEPSFOOT ROLLER WITHOUT CAUSING PUMPING OF THE SOILS (I.E., MOISTURE CONTENT OF SUBGRADE SOILS LESS THAN 4% ABOVE OPTIMUM MOISTURE CONTENT AS DETERMINED BY STANDARD PROCTOR TESTING) WHILE ALLOWING THE STRUCTURAL FILL TO MEET SPECIFIED COMPACTION REQUIREMENTS. IF DRYING THE IN-PLACE MATERIAL SUFFICES, IN-PLACE SOILS SHALL BE MACHINE SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES PRIOR TO THE PLACEMENT OF COMPACTED STRUCTURAL FILL.
13. APPROXIMATELY 725 CY OF EARTHFILL IS REQUIRED TO RECONSTRUCT THE PROPOSED WAVE BERM.
14. TAMPING SHEEPSFOOT ROLLER TO BE USED FOR EARTHFILL COMPACTION ACCORDING TO SPECIFICATION VA 723 "EARTH FILL", SECTION 6A.
15. CONSTRUCTION ACTIVITIES WILL OCCUR OVER AND IN THE VICINITY OF THE EXISTING PRINCIPAL SPILLWAY CONDUIT. CONTRACTOR SHALL EXERCISE EXTREME CAUTION TO PREVENT DAMAGE TO ANY EXISTING STRUCTURES AND/OR CONDUITS. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO EXISTING STRUCTURES AND/OR CONDUITS.

1 PROPOSED SITE PLAN
 SCALE: 1"=30'

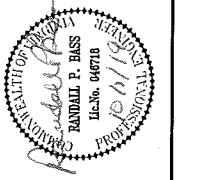
CONTROL OF WATER NOTES:

1. AT LEAST TWO WEEKS PRIOR TO PROJECT MOBILIZATION, COMPLETELY DRAIN AND MAINTAIN THE LAKE IN A DRAINED STATE. CONTRACTOR SHALL MAINTAIN THE LAKE IN A DRAINED STATE UNTIL A PERMANENT STAND OF GRASS ON THE BERM IS ACHIEVED.
2. THE CONSTRUCTION SITE SHALL BE DEWATERED AND KEPT FREE OF STANDING WATER OR EXCESSIVELY MUDDY OR SOFT CONDITIONS AS NEEDED FOR PROPER EXECUTION OF THE CONSTRUCTION WORK.
3. SUBGRADE SHALL BE DEWATERED TO AN ELEVATION THAT IS THREE (3) FEET BELOW THE PROPOSED SUBGRADE INDICATED ON THE PLANS. DEWATERING METHODS FOR SUBGRADE PREPARATION THAT CAUSE A LOSS OF FINE GRAINED SOIL MATERIAL FROM SUBGRADE AREAS WILL NOT BE PERMITTED.
4. CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGES INCURRED AS A RESULT OF THE LACK OF ADEQUATE SURFACE OR SUBSURFACE WATER CONTROL.
5. CONTRACTOR SHALL PROVIDE THE SWCD WITH A WATER CONTROL PLAN FOR REVIEW AND ACCEPTANCE PRIOR TO THE START OF CONSTRUCTION.



REV.	DESCRIPTION	DATE

DESIGNED BY: JTC
 CHECKED BY: RPB
 DRAWN BY: BPH
 RANDALL P. BASS, P.E.
 10/11/19
 VIRGINIA PROFESSIONAL ENGINEER NO. 046718



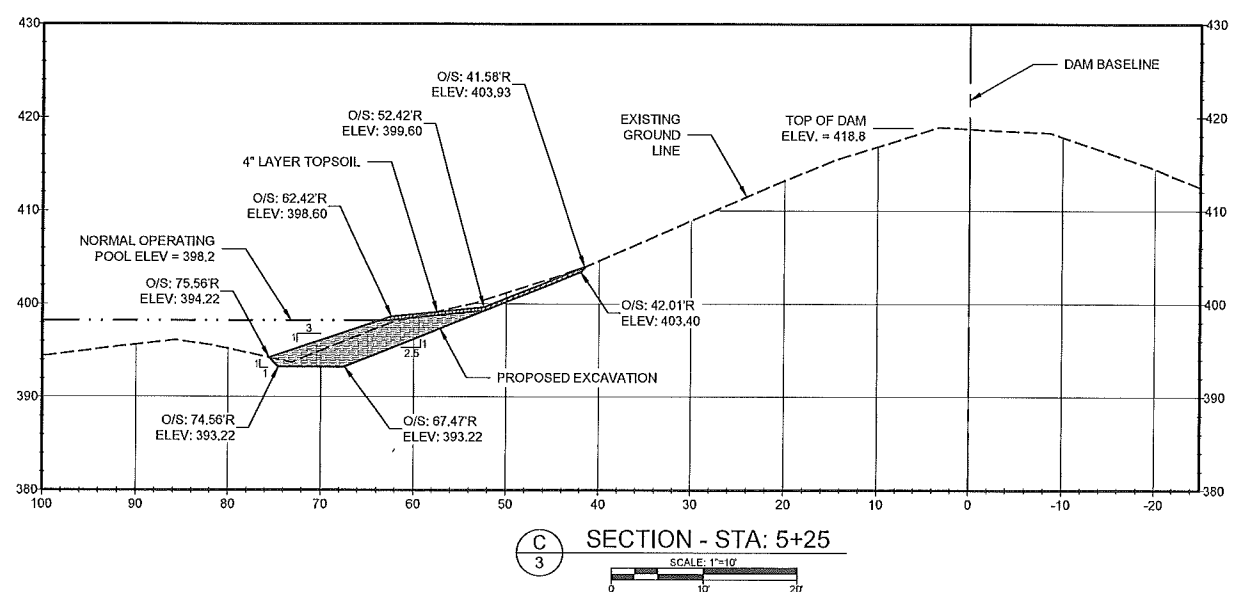
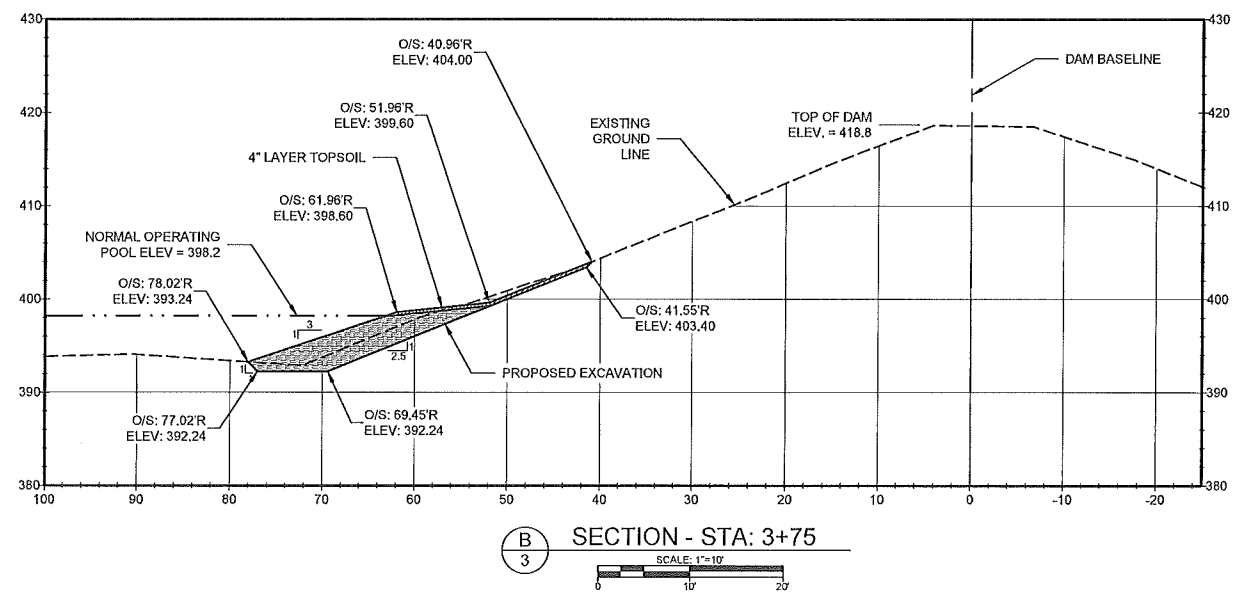
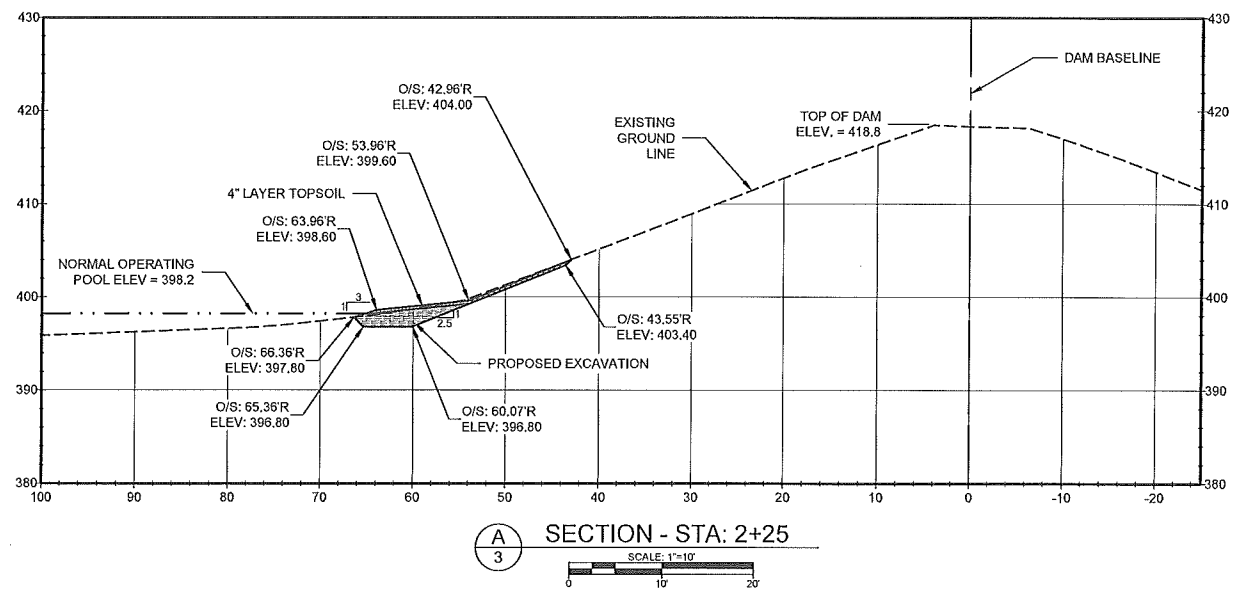
Schnabel ENGINEERING
 6445 Shiloh Road, Suite A / Alpharetta, GA 30005 /
 Phone: 770-781-8808 / Fax: 770-781-8803 /
 schnabel-eng.com

MOUNTAIN RUN DAM #13
 WAVE BERM RECONSTRUCTION
 CULPEPER COUNTY, VIRGINIA
PROPOSED SITE PLAN

PROJECT: 19C17047.00
 DATE: OCTOBER 2019
 SHEET
 3 OF 4

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DESIGNED BY: JTC	DRAWN BY: BPH	CHECKED BY: RFB	RANDALL P. BASS, P.E. <i>Randall P. Bass</i> VIRGINIA PROFESSIONAL ENGINEER NO. 046718			DATE: 10/11/19	REV:	DESCRIPTION:	DATE:
MOUNTAIN RUN DAM #13 WAVE BERM RECONSTRUCTION CULPEPER COUNTY, VIRGINIA									
EMBANKMENT SECTIONS									
PROJECT: 19C17047.00 DATE: OCTOBER 2019 SHEET 4 OF 4									
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