TAZEWELL COUNTY PLANNING COMMISSION

Regular Meeting

May 14th, 2026 - 6:30 P.M. (THURSDAY)

R E V I S E D A G E N D A

6:30 p.m. 1. Call to Order

6:32 p.m. 2. Invocation and Pledge of Allegiance

6:35 p.m. 3. Welcome Visitors

6:37 p.m. 4. Introduce new members Eddy Brown – Western District & Harry Cundiff – Northern District

6:40 p.m. 5. Approval of the Agenda Format - Additions/Deletions

6:42 p.m. 6. Approval of the April 9th, 2026 Meeting Minutes

6:45 p.m. 7. Unfinished Business

A. Appoint Subcommittees:

1. Comprehensive Plan Subcommittee:

2025 Members: N/A (Commission voted to suspend the Comprehensive Plan Subcommittee for the entirety of 2025)

2. Subdivision Subcommittee:

2025 Members: Member Lyons & Member Ramella

Alternate: Chairman Moss

3. Capital Improvements Subcommittee:

2025 Members: Chairman Moss & Vice-Chairman Herndon

Alternate: Member Cruey

7:00 p.m. 8. Items for Discussion:

A. Richlands Gas Generator ESC Plan
B. Consolidated Steel ESC Plan
C. 460 Self Storage ESC Plan

7:15 p.m. 9. Engineering Report:

A. Consideration to approve Safe Street 4 All letter of support
B. Consideration of moving July 9th meeting

7:20 p.m. 10. Subcommittee Reports

7:22 p.m. 11. Citizen Comments: TWO (2) MINUTES PER SPEAKER

7:25 p.m. 12. Member Concerns

7:30 p.m. 13. Adjourn – Thursday, June 11th, 2026 – 6:30 p.m.

Tazewell County Virginia

"Bound For Progress"

Shanna Plaster, Vice-Chair
Northwestern District

John Rhudy, Member
Southern District

Kyle Cruey, Member
Northern District

Chuck Presley, Chair
Eastern District

Curtis Breeding, Member
Western District

C. Eric Young
County Administrator

May 14, 2026

The Honorable Sean Duffy
Secretary
U.S. Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590

RE: Safe Streets and Roads for All Grant – Tazewell County Rural Safety Implementation Project

Dear Secretary Duffy:

The Tazewell County Planning Commission supports Tazewell County's application for roadway safety improvements across several rural corridors.

These roadways are used daily by residents, employees, and local businesses. Existing conditions include faded striping, narrow shoulders, and reduced visibility at curves. Those conditions make travel more difficult and contribute to ongoing safety concerns.

The County's proposal focuses on addressing those conditions through targeted improvements to pavement markings, signage, and roadway surfaces. These changes will improve consistency and visibility for drivers.

We support the County's effort to improve safety across these corridors.

Sincerely,

Robert "Bob" Moss
Chairman – Tazewell County Planning Commission

Quantum Richlands – Gas Turbine Generation Station and Line

Project Narrative

The Town of Richlands requested WSP, who is contracted under Quantum Power, to provide engineering for the new 4.5MW gas power plant connecting to the town's 12kV system.

The proposed Richlands gas generation station is located in Tazewell County, VA north of the City of Richlands, west of Route 67 / Jewel Ridge Road. The project consists of a newly graded station pad, station chain link fencing, access gates, retaining walls and an underground stormwater storage system meeting the VA DEQ requirements. The project erosion and sediment control plan includes silt fence, temporary and permanent seeding, construction entrance and concrete washouts. Proposed drainage patterns generally follow the existing condition, with stormwater runoff flowing north to south into a creek and wetland area at the bottom of the development area.

The existing distribution line will be partially rebuilt within the town of Richlands, and the 3.5-mile proposed distribution line will continue north and tap into the new generation station. Perimeter filter sock/silt fence will be used at all structures and along all gravel access roads to contain the sediment from leaving the site. Tracking/Overland access roads will be utilized as much as possible and in dry conditions only to limit the potential for any rutting. Gravel access roads will be built for a few structures based on the terrain and existing condition of the access route. The gravel roads are to remain as permanent access roads post construction. Once complete, new electric lines will be pulled from the existing substation to the generator site. This is roughly 5 miles of 3-phase, 336ACSR wire.

QUANTUM POWER

RICHLAND GAS GENERATION STATION

RICHLANDS, VIRGINIA

TAZWELL COUNTY

SITE/CIVIL GRADING PACKAGE

PROJECT STATISTICS:

PARCEL NUMBER: 046A0017
ZONING DESIGNATION: N\A

CENTER OF SITE LATITUDE AND LONGITUDE
LAT: 37.138149°
LONG: -81.786560°

FLOOD INFORMATION:
FLOOD INSURANCE RATE MAP PANEL: 51185C0150D
EFFECTIVE DATE: 02/18/2011
FLOOD HAZARD ZONE: X

PROJECT LIMITS OF DISTURBANCE: 0.58 ACRES

NWBD HYDROLOGIC UNIT CODE (HUC 12): 060102050104
DEQ REGION: SOUTHWEST

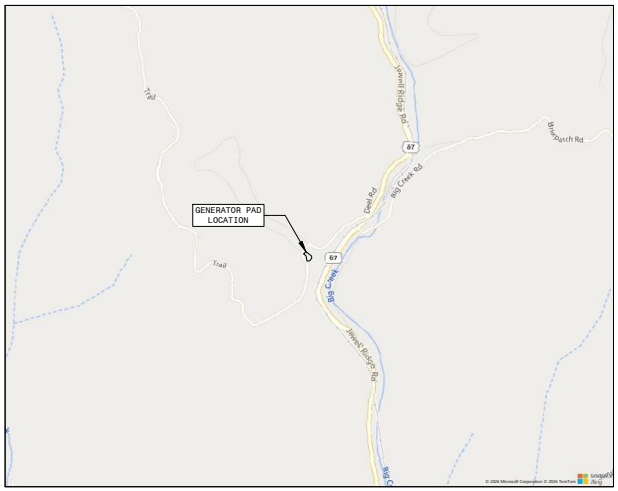
TMDL CLASSIFICATION: N/A

SWPPP INSPECTION FREQUENCY REQUIRED - (i) AT LEAST ONCE EVERY 4 BUSINESS DAYS OR (ii) AT LEAST ONCE EVERY 5 BUSINESS DAYS AND NO LATER THAN 24 HOURS FOLLOWING A MEASURABLE STORM EVENT

LEGEND

EXISTING	PROPOSED
PROPERTY LINE	STRUCTURE
PROPERTY MARKER	INDEX CONTOUR
STRUCTURE	INTERMEDIATE CONTOUR
INDEX CONTOUR	GRADE SPOT SHOT
INTERMEDIATE CONTOUR	EDGE OF PAVEMENT
WETLAND	EDGE OF GRAVEL
STREAM	GRAVEL HATCH (ACCESS ROADS)
FLOOD PLAIN	GRAVEL HATCH (SUBSTATION)
EDGE OF PAVEMENT	GRAVEL HATCH (LAYDOWN STORAGE YARD)
EDGE OF GRAVEL	CROSS SECTION
CHAIN LINK FENCE	CHAIN LINK FENCE
TREE LINE	TREE LINE
STORM DRAIN PIPE	STORM DRAIN PIPE
DITCH	STORM DRAIN INLET
OVERHEAD ELECTRIC	STORM DRAIN MANHOLE
UTILITY POLE	STORM WATER OUTFALL STRUCTURE
ELECTRIC TOWER STRUCTURE	CONCRETE CHANNEL/SWALE
DRAINAGE AREA	GRASS CHANNEL/SWALE
DRAINAGE Tc PATH	OVERHEAD ELECTRIC
OVERHEAD TELEPHONE	UTILITY POLE
	ELECTRIC TOWER STRUCTURE
	EROSION AND SEDIMENT CONTROL (SEE ESC LEGEND)
	SILT FENCE
	DRAINAGE AREA
	DRAINAGE Tc PATH
	LIMITS OF DISTURBANCE
	PLAN SHEET MATCH LINE

NOTE: THE LEGEND & SHEET INDEX IS TO BE USED THROUGHOUT THE CONSTRUCTION PLANS. IT HAS NOT BEEN PLACED ON REMAINING PLAN SHEETS FOR THE PURPOSE OF CLARITY AND READABILITY.



VICINITY MAP

N.T.S.

QUANTITY ESTIMATE

QUANTITIES TO BE ADDED

DRAWING INDEX		
SHEET #	SHEET TITLE	REV 0
CU-CS01-S01	COVER SHEET	5/1/2026
CU-GN01-S02	GENERAL NOTES (WITH MINIMUM STANDARDS)	5/1/2026
CU-EC01-S03	STATION LAYOUT PLAN (EXISTING CONDITIONS AND DEMOLITION)	5/1/2026
CU-SL01-S04	STATION LAYOUT PLAN	5/1/2026
CU-GP01-S05	GRADING PLAN (PHASE I - EROSION AND SEDIMENT CONTROL PLAN)	5/1/2026
CU-GS01-S06	GRADING SECTION VIEWS	5/1/2026
CU-ED01-S07	EROSION AND SEDIMENT CONTROL DETAILS	5/1/2026

NOTIFY UTILITY COMPANIES BEFORE YOU DIG

THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON ABOVE-GROUND STRUCTURES. LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/STRUCTURES.
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ACTUAL LOCATION AND DEPTH OF ALL EXISTING UTILITIES. THE OWNER AND THE SURVEYOR SHALL NOT BE RESPONSIBLE FOR ANY OMISSION OR VARIATION FROM THE LOCATION SHOWN. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 811 TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.

va811.com Dig With CARE

COMMONWEALTH OF VIRGINIA
PRELIMINARY
NOT FOR CONSTRUCTION
####
PROFESSIONAL ENGINEER

THIS DRAWING WAS PREPARED BY WSP FOR A SPECIFIC PROJECT, TAKING INTO CONSIDERATION THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING OR ANY INFORMATION CONTAINED IN THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH WSP AND WSP'S CLIENT IS GRANTED.

REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS
A	ISSUES FOR COUNTY REVIEW - NOT FOR CONSTRUCTION	05/01/2026	JJ	AA	TG		

DSGN	AA	05/01/2026
DRN	JJ	05/01/2026
CKD	TJG	05/01/2026

SCALE: --
FOR 24x36 DWG ONLY

QUANTUM POWER INC.
RICHLANDS GAS GENERATION STATION
TAZEWELL COUNTY, VIRGINIA
COVER SHEET

JOB NUMBER 0245605
REV 0
DRAWING NUMBER CU-CS01-S01

CU-CS01-S01.dwg

SITE / CIVIL GENERAL NOTES:

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE QUANTUM POWER SPECIFICATIONS. HERE IN AFTER KNOWN AS THE "SPECIFICATION" OR THIS SITE GRADING PACKAGE, WHICHEVER IS MOST STRINGENT.
2. THE TOPOGRAPHIC SURVEY WAS PERFORMED ON MAY 5TH, 2025 BY ENCOMPASS SERVICES, 304-745-4734, ATTN.: KEVIN SCHAFER, FOR USE IN DESIGN OF THE GAS GENERATION FACILITY IN ACCORDANCE WITH OVERALL SITE DEVELOPMENT RULES / REGULATIONS. THIS MAP MEETS THE MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
3. THE EARTHWORK QUANTITIES SHOWN ARE BASED ON CUT/FILL VOLUMES BETWEEN EXISTING AND FINISHED SUBGRADE. EARTHWORK STRIPPING SHALL BE A MINIMUM OF 12" BELOW FINISHED GRADE . ALL EXISTING GRAVEL, TOPSOIL AND ORGANIC MATERIAL SHALL BE THOROUGHLY STRIPPED AND REPLACED WITH SUITABLE FILL MATERIAL COMPACTED IN ACCORDANCE WITH ABOVE REFERENCED SPECIFICATION.
4. ELEVATIONS SHOWN ON THE GRADING DRAWING (CU-GP01-S05) ARE TOP OF FINISHED SURFACE ELEVATIONS. THE EXISTING CONTOUR INTERVAL IS ONE (1') FOOT. THE PROPOSED CONTOUR INTERVAL IS ONE (1') FOOT, ALSO, ELEVATIONS SHOWN ON THE GRADING DRAWING FOR THE 24' ACCESS ROADS TO THE STATION ARE TO TOP OF FINISHED ROADWAY TOP COURSE. SEE SECTION DETAIL - DWG. CU-SL01-S04.
5. SIDE SLOPES SHALL BE A MINIMUM OF THREE (3) HORIZONTAL TO ONE (1) VERTICAL, UNLESS OTHER WISE NOTED. STEEPER SIDE SLOPES MAY BE OBTAINED THROUGH GEOTEXTILE MEMBRANE INSTALLATION.
6. ALL DISTURBED AREAS THAT ARE NOT STONED SHALL BE RE SEEDED IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH), LATEST EDITION. THE APPLICATION RATES FOR SEEDING, MULCHING, FERTILIZER AND LIME SHALL BE IN ACCORDANCE WITH THIS SPECIFICATION.
7. UNDER ALL ROADWAY AND PARKING AREAS, A GEOTEXTILE FABRIC (MIRAFI 600X, OR APPROVED EQUIVALENT) SHALL BE INSTALLED ON THE PREPARED SUBGRADE AND FASTENED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS PRIOR TO INSTALLATION OF 5" OF AASHTO #2 COMPACTED STONE SHALL BE INSTALLED. FOLLOWING COMPACTION OF AASHTO #2, 4" OF CRUSHER RUN WILL BE INSTALLED.
8. GRADING CONTRACTOR TO PLACE 3" OF AASHTO #2 STONE FOLLOWING COMPLETION OF PAD. ONCE THE ABOVE AND BELOW GRADE CONSTRUCTION IS COMPLETED THE GRADING CONTRACTOR IS TO FINISH GRADE THE SITE TO FINAL CONTOUR AND PROVIDE 4" OF DOUBLE WASHED #57 STONE.
9. CONTRACTOR SHALL CONTACT MISS UTILITY (OR SIMILAR LOCATOR SERVICE) TO CONFIRM UTILITY LOCATIONS BEFORE BEGINNING CONSTRUCTION, CONTRACTOR SHALL VERIFY LOCATIONS AND / OR PRESENCE OF EXISTING UTILITIES.
10. EXCESS SPOIL MATERIAL IS TO BE DISPOSED OF OFFSITE AS PER LOCAL, STATE AND FEDERAL REGULATIONS (VESCH) AT A DUMP SITE APPROVED BY AEP AND THE PLAN APPROVING AUTHORITY.
11. CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING ALL TEMPORARY & PERMANENT DRAINAGE & EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE SWPPP.
12. FUELS, OILS AND OTHER BULK MATERIAL SHALL NOT BE STORED AT THE SITE FOR LONGER THAN A 24 HOUR PERIOD.
13. THE LOCATION OF ANY CONCRETE WASHOUTS UTILIZED ON-SITE WILL BE ADDED TO THE EROSION AND SEDIMENT CONTROL PLAN (APPENDIX B) BY THE QUANTUM POWER OR HIS/HER DESIGNEE ALONG WITH ANY NECESSARY CONTROLS.
14. THE PLAN APPROVING ENTITY HAS THE AUTHORITY TO ADD AND DELETE EROSION AND SEDIMENT CONTROLS ON AN AS NEEDED BASIS. NO EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED UNLESS AUTHORIZED BY THE PLAN APPROVING ENTITY.

QUANTUM POWER ENVIRONMENTAL/CULTURAL GENERAL NOTES:

1. PRIOR TO CONSTRUCTION, MARK (FENCING AND/OR SIGNAGE) PROTECTED ENVIRONMENTAL RESOURCE BOUNDARIES SUCH AS, BUT NOT LIMITED TO, SPRINGS, WETLANDS, KARST FEATURES (SINKHOLES, FISSURES, CAVES), ABANDONED MINE PORTALS, ARCHAEOLOGICAL SITE, GRAVE SITE, SPECIES HABITAT, HAZARDOUS WASTE AREAS, ETC.
2. CEASE CONSTRUCTION AND CONTACT QUANTUM POWER IF AN UNDOCUMENTED NATURAL RESOURCE IS ENCOUNTERED DURING CONSTRUCTION. FOR EXAMPLE, REPORT IMMEDIATELY ANY OF THE FOLLOWING IN THE AREA OF CONSTRUCTION IF NOT CLEARLY IDENTIFIED ON THE MAPPING: STREAMS, SPRINGS, WETLANDS, KARST FEATURES (SINKHOLES, FISSURES, CAVES), WILDLIFE HABITAT, ETC.
3. WORK COMPLETED WITHIN 100 FEET OF CEMETERIES OR BURIALS SHOULD BE CONSIDERED SENSITIVE. CONTACT QUANTUM POWER BEFORE PROCEEDING WITH ANY WORK.
4. DISCOVERY DURING CONSTRUCTION OF ANY HUMAN OR UNIDENTIFIED ARTIFACTS OR OTHER UNKNOWN OBJECTS THAT ARE UNEARTHED OR OTHERWISE DISCOVERED REQUIRES CONSTRUCTION TO CEASE AND IMMEDIATE NOTIFICATION TO QUANTUM POWER.
5. DISCOVERY DURING CONSTRUCTION OF ANY HAZARDOUS WASTE INDICATORS (I.E. TIRES, OIL, LANDFILL, OR OTHER) OR OTHER ISSUE OF POTENTIAL CONCERN (I.E. MINE PORTAL), REQUIRES CONSTRUCTION TO CEASE AND IMMEDIATE NOTIFICATION TO QUANTUM POWER.
6. NO WORK, DISTURBANCE, STORAGE OR ANY OTHER ACTIVITY OUTSIDE "LIMITS OF DISTURBANCE" BOUNDARY SHOWN ON PLANS.
7. NO NEW (I) LAY DOWN YARDS, (II) MARSHALLING YARDS, (III) EQUIPMENT STORAGE AREAS, (IV) TIMBER/LOG LANDING AREAS, (V) OTHER GROUND DISTURBANCES ARE PERMITTED UNLESS SHOWN ON THIS PLAN.
8. PROVIDE ANY PROPOSED NEW GROUND DISTURBANCE TO THE PROJECT ENGINEER OR PROJECT MANAGER, IF NOT SHOWN ON THIS PLAN.
9. PROVIDE ANY ACCESS ROAD MODIFICATIONS OR ADDITIONS TO THE PROJECT ENGINEER OR PROJECT MANAGER, IF NOT SHOWN ON THIS PLAN.
10. ANY MODIFICATIONS OR ADDITIONS MUST BE ADDED TO THIS PLAN, FIELD CHECKED, AND PERMITS UPDATED AS NEEDED PRIOR TO CONSTRUCTION.
11. THE CONDITIONS AND RESTRICTIONS SHOWN ON THESE PLANS ARE PART OF THE APPROVED PERMITS AND MUST BE STRICTLY FOLLOWED.
12. THE LOCATION OF ANY CONCRETE WASHOUTS UTILIZED ON-SITE WILL BE ADDED TO THE EROSION AND SEDIMENT CONTROL PLAN (APPENDIX B) BY QUANTUM POWER OR HIS/HER DESIGNEE ALONG WITH ANY NECESSARY CONTROLS.

EARTHWORK / TRENCHING NOTES:

1. SATISFACTORY SOIL MATERIALS: ASTM D 2487 "COHESIVE" SOIL CLASSIFICATION GROUPS HAVING A PLASTICITY INDEX BETWEEN 10 TO 23. FREE OF ROCK OR GRAVEL LARGER THAN 3 INCHES IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, VEGETATION & OTHER DELETERIOUS MATTER.
2. UNSATISFACTORY SOIL MATERIALS: ASTM D 2487 SOIL CLASSIFICATION GROUP; CH.
3. ENGINEERED BACKFILL & STRUCTURAL FILL MATERIALS: SATISFACTORY SAND AND/OR GRAVEL MATERIALS CONFORMING TO THE REQUIREMENTS OF VDOT SPECIFICATIONS, WELL-GRADED AND GENERALLY MEET UNIFIED SOIL CLASSIFICATION SYSTEM. DESIGNATION; SM, SC, ML, CL.
4. SUBBASE & BASE MATERIAL: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE CONFORMING TO ASTM D 2940, WITH AT LEAST 95 PERCENT PASSING AN 1-1/2" SIEVE & NOT MORE THAN 8 PERCENT PASSING A NO. 200 SIEVE.
5. ENGINEERED BACKFILL: SUBBASE OR BASE MATERIALS
6. STATION PAD MATERIAL: EVENLY GRADED MIXTURE OF CRUSHED STONE AASHTO #57 WASHED LIMESTONE AGGREGATE.
7. PROVIDE EROSION CONTROL MEASURES TO PREVENT EROSION OR DISPLACEMENT OF SOILS & DISCHARGE OF SOIL-BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES.
8. PREVENT SURFACE WATER & SUBSURFACE OR GROUND WATER FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUBGRADES & FROM FLOODING PROJECT SITE & SURROUNDING AREA. PROTECT SUBGRADES & FOUNDATION SOILS FROM SOFTENING & DAMAGE BY RAIN OR WATER ACCUMULATION.
9. "UNCLASSIFIED EXCAVATION" EXCAVATION IS UNCLASSIFIED & INCLUDES EXCAVATION TO REQUIRED SUBGRADE ELEVATIONS REGARDLESS OF THE CHARACTER OF MATERIALS & OBSTRUCTIONS ENCOUNTERED.
10. EXCAVATE SWALES TO INDICATED SLOPES, LINES, DEPTHS & INVERT ELEVATIONS AS INDICATED ON THE GRADING PLAN.
11. DRAINAGE SWALE BOTTOMS: EXCAVATE & SHAPE SWALE BOTTOMS TO PROVIDE UNIFORM BEARING & SUPPORT. SHAPE SUBGRADE TO PROVIDE CONTINUOUS UNIFORMITY. REMOVE STONES & DEBRIS TO ALLOW THE UNIFORM FLOW OF ANY OVERLAND DRAINAGE SURFACE WATER THAT MAY BE PRESENT.
12. STOCKPILE EXCAVATED MATERIALS ACCEPTABLE FOR BACKFILL ALONG WITH FILL SOIL MATERIALS, INCLUDING ACCEPTABLE BORROW MATERIALS. STOCKPILE SOIL MATERIALS IN DESIGNATED AREA. PLACE, GRADE & SHAPE STOCKPILES TO DRAIN SURFACE WATER.
13. PLACE AND COMPACT INITIAL BACKFILL OF SATISFACTORY SOIL MATERIAL OR SUBBASE MATERIAL TO FINAL GRADE AS INDICATED ON THE DRAWINGS. CAREFULLY COMPACT MATERIAL AT THE BOTTOM OF DRAINAGE SWALES AND BRING BACKFILL EVENLY UP ON BOTH SIDES AND ALONG THE FULL LENGTH OF DRAINAGE SWALE.
14. PLACE AND COMPACT FINAL BACKFILL OF SATISFACTORY SOIL MATERIAL TO FINAL SUBGRADE.
15. PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 8 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY APPROPRIATE COMPACTION EQUIPMENT AND NOT MORE THAN 4 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.
16. PERFORM FIELD IN PLACE DENSITY TESTS ACCORDING TO ASTM D 1556 (SAND CONE METHOD), ASTM D 2167 (RUBBER BALLOON METHOD), OR ASTM D 2937 (DRIVE CYLINDER METHOD), AS APPLICABLE.
17. DRAINAGE SWALE BACKFILL: IN EACH COMPACTED INITIAL AND FINAL BACKFILL LAYER, PERFORM AT LEAST ONE FIELD IN PLACE DENSITY TEST FOR EACH 150 FEET OR LESS OF SWALE, BUT NO FEWER THAN TWO TESTS.
18. DISPOSAL: REMOVE SURPLUS SATISFACTORY SOIL AND WASTE MATERIAL, INCLUDING UNSATISFACTORY SOIL, TRASH AND DEBRIS AND DISPOSE OF IT IN SOIL DISPOSAL AREA ON-SITE, UNLESS OTHERWISE AUTHORIZED BY QUANTUM POWER.

COMMONWEALTH OF VIRGINIA
PRELIMINARY
NOT FOR CONSTRUCITON
####
PROFESSIONAL ENGINEER

REFERENCE DRAWING:

CU–CS01–S01 COVER SHEET
CU–GN01–S02 GENERAL NOTES
CU–EC01–S03 STATION LAYOUT PLAN (EXISTING CONDITIONS)
CU–SL01–S04 STATION LAYOUT PLAN
CU–GP01–S05 GRADING PLAN (PHASE I)
CU–GS01–S06 GRADING SECTION VIEWS
CU–ED01–S07 EROSION AND SEDIMENT CONTROL DETAILS

NOTIFY UTILITY COMPANIES BEFORE YOU DIG

THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON ABOVE-GROUND STRUCTURES. LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/STRUCTURES.
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ACTUAL LOCATION AND DEPTH OF ALL EXISTING UTILITIES. THE OWNER AND THE SURVEYOR SHALL NOT BE RESPONSIBLE FOR ANY OMISSION OR VARIATION FROM THE LOCATION SHOWN. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 811 TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.

EROSION AND SEDIMENT CONTROL MINIMUM STANDARDS

MS-1 STABILIZATION OF DENUDED AREAS
PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

MS-2 STABILIZATION OF SOIL STOCKPILES
DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

MS-3 PERMANENT VEGETATION
A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT, IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.

MS-4 TIMING AND STABILIZATION OF SEDIMENT TRAPPING MEASURES
SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

MS-5 STABILIZATION OF EARTHEN STRUCTURES
STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

MS-6 SEDIMENT BASINS
SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.
A. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE ACRES.
B. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A TWENTY-FIVE YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.

MS-7 CUT AND FILL SLOPES
CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.

MS-8 CONCENTRATED RUNOFF FLOW DOWN CUT OR FILL SLOPES
CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.

MS-9 WATER SEEPS FROM A SLOPE FACE
WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.

MS-10 STORM SEWER INLET PROTECTION
ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

MS-11 STABILIZATION OF OUTLETS
BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.

MS-12 WORK IN LIVE WATERCOURSES
WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.

MS-13 CROSSING A LIVE WATERCOURSE
WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.

MS-14 APPLICABLE REGULATIONS
ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.

MS-15 STABILIZATION OF BED AND BANKS
THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.

MS-16 UTILITY CONSTRUCTION
UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
D. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
F. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.

MS-17 CONSTRUCTION ACCESS ROUTES
WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.

MS-18 TEMPORARY EROSION & SEDIMENT CONTROL MEASURE REMOVAL
ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

MS-19 PROTECTION OF DOWNSTREAM PROPERTIES AND WATERWAYS
PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS:
A. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED.
B. ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:
B.1. THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR
B.2. (A) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS.
B.3. (B) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND
B.4. (C) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM.
C. IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL:
C.1. IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO CHANNEL THE BED OR BANKS; OR
C.2. IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE TEN-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES;
C.3. DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWOYEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PREDEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MANMADE CHANNEL; OR
C.4. PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE VESCP AUTHORITY TO PREVENT DOWNSTREAM EROSION.
D. THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS.
E. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITION OF THE SUBJECT PROJECT.
F. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE SHALL OBTAIN APPROVAL FROM THE VESCP OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE.
G. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL.
H. ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE.
I. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY.
J. IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS.
K. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE.
L. ANY PLAN APPROVED PRIOR TO JULY 1, 2014, THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS IF THE PRACTICES ARE DESIGNED TO
L.1. DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS;
L.2. DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR, 24- HOUR STORM; AND
L.3. REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5, 2, AND 10-YEAR, 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING IT WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN IT WAS IN A GOOD FORESTED CONDITION DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN ITS PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO § 10.1-562 OR 10.1-570 OF THE ACT.
M. FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 10.1-561 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (§ 10.1-603.2 ET SEQ. OF THE CODE OF VIRGINIA) AND ATTENDANT REGULATIONS, UNLESS SUCH LAND DISTURBING ACTIVITIES ARE IN ACCORDANCE WITH 9VAC25-870-48 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) PERMIT REGULATIONS.
N. COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 9VAC25-870-66 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) PERMIT REGULATIONS SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF MINIMUM STANDARD 19.

ATTENTION:

TO ENSURE ALL PERMITS AND APPROVALS HAVE BEEN OBTAINED PRIOR TO CONSTRUCTION, ANY PROJECT ACTIVITIES SUCH AS THOSE SHOWN BELOW MUST BE APPROVED IN WRITING (OR EMAIL) BY THE PROJECT MANAGER PRIOR TO BEGINNING THE ACTIVITY.

1. PRE-CONSTRUCTION ACTIVITIES
~ CORE BORING, TESTING AND STUDIES
~ ANY TREE CLEARING FOR PROJECTS REQUIRING NEW RIGHT OF WAY

2. GENERAL CONSTRUCTION ACTIVITIES
~ GRADING
~ STUMP REMOVAL OR GRINDING
~ TOPSOIL REMOVAL OR SPREADING OF SPOILS
~ PLACING OR SPREADING GRAVEL (UNLESS GRADING IS NOT REQUIRED)
~ CONSTRUCTION OF A LAY DOWN YARD
~ A CHANGE IN VEGETATION COVER

3. ACCESS ROADS
~ INSTALLATION OF NEW ROADS
~ MODIFICATION OF EXISTING ROADS (REPAIRS, WIDENING, MAINTENANCE, ETC)

4. RIGHT OF WAY CLEARING
~ ANY MECHANIZED CLEARING IN EXISTING RIGHT OF WAY
~ ANY CLEARING OF DEAD/DYING TREES, OR TREES WITH LOOSE OR EXFOLIATING BARK

5. ANY WORK IN OR NEAR (WITHIN 75 FEET) STREAMS, WETLAND,WATER BODIES, FLOOD PLAINS
~ CULVERT INSTALLATION
~ RIP RAP INSTALLATION
~ FORD CROSSINGS AND BANK RESTORATION

6. FACILITY MODIFICATIONS
~ CHANGES TO TRANSMISSION LINE STRUCTURES OR CONDUCTORS(INCLUDES REPLACEMENT, RELOCATION, ETC.), STATION EXPANSIONS OR ANY WORK OUTSIDE THE CURRENTLY FENCED, GRAVELED AREA

va811.com Dig With CARE

THIS DRAWING WAS PREPARED BY WSP FOR A SPECIFIC PROJECT, TAKING INTO CONSIDERATION THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING OR ANY INFORMATION CONTAINED IN THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH WSP AND WSP'S CLIENT IS GRANTED.

REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS
A	ISSUES FOR COUNTY REVIEW - NOT FOR CONSTRUCTION	05/01/2026	JJ	AA	TG		

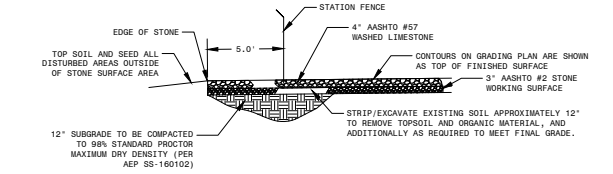
DSGN	AA	05/01/2026
DRN	JJ	05/01/2026
CKD	TJG	05/01/2026
SCALE:	--	

FOR 24x36 DWG ONLY

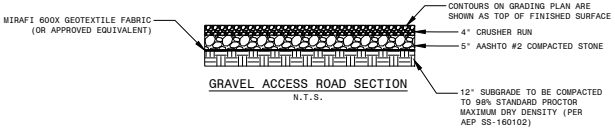
wsp

QUANTUM POWER INC.
RICHLANDS GAS GENERATION STATION
TAZEWELL COUNTY, VIRGINIA
GENERAL NOTES

JOB NUMBER: 0245605
REV: A
DRAWING NUMBER: CU-GN01-S02



TYPICAL STATION YARD DETAIL
N.T.S.



GRAVEL ACCESS ROAD SECTION
N.T.S.

IF THIS DRAWING IS A REDUCTION GRAPHIC SCALE MUST BE USED

SCALE: 1" = 20'

20' 0 20'

PRELIMINARY
NOT FOR CONSTRUCTION
####

COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

PIPE TABLE						
NAME	SIZE (IN)	TYPE	LENGTH (LF)	INVERT IN	INVERT OUT	SLOPE (%)
P1	18.00	RCP	36.00	2267.50	2267.21	0.81%
P2	18.00	RCP	31.00	2267.21	2267.00	0.68%
P3	18.00	HDPE	12.00	2262.90	2262.00	7.50%
P4	18.00	HDPE	10.00	2262.00	2261.00	10.00%
P5	18.00	HDPE	38.00	2244.50	2244.00	1.32%
P6	18.00	RCP	26.00	2263.75	2263.25	1.92%
P7	18.00	RCP	18.00	2263.25	2263.00	1.39%
P8	18.00	RCP	10.00	2263.00	2262.90	1.00%

STRUCTURE TABLE				
NAME	NORTHING	EASTING	RIM	INVERT
MH-1	3590608.47	10525059.35	2270.75	2267.21
MH-2	3590549.28	10525147.85	2268.20	2263.00
MH-3	3590464.38	10525141.77	2268.00	2262.00
MH-4	3590460.74	10525148.88	2268.00	2244.50
CB-1	3590560.21	10525046.45	2271.80	2267.50
CB-2	3590505.10	10525130.92	2267.75	2263.75
CB-3	3590528.30	10525149.94	2267.75	2263.25
HW-1	3590632.69	10525079.26	2270.50	2267.00
HW-2	3590443.99	10525181.62	2248.00	2244.00

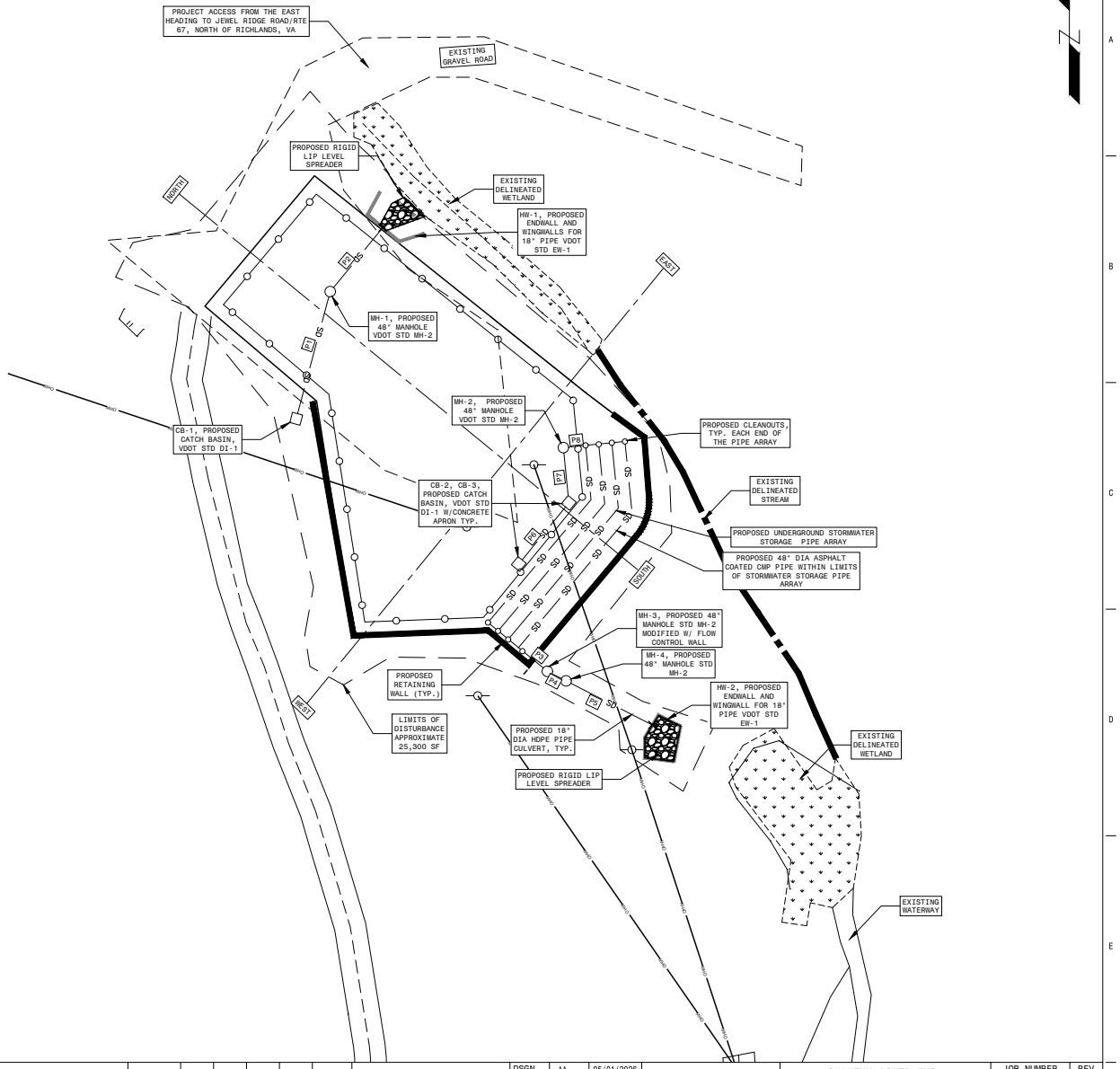
NOTIFY UTILITY COMPANIES BEFORE YOU DIG

THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON ABOVE-GROUND STRUCTURES. LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/STRUCTURES.
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ACTUAL LOCATION AND DEPTH OF ALL EXISTING UTILITIES. THE OWNER AND THE SURVEYOR SHALL NOT BE RESPONSIBLE FOR ANY OMISSION OR VARIATION FROM THE LOCATION SHOWN. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 811 TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.

va 811.com Dig With CARE

REFERENCE DRAWING:

CU-CS01-S01 COVER SHEET
CU-GN01-S02 GENERAL NOTES
CU-EC01-S03 STATION LAYOUT PLAN (EXISTING CONDITIONS)
CU-SL01-S04 STATION LAYOUT PLAN
CU-GP01-S05 GRADING PLAN (PHASE I)
CU-GS01-S06 GRADING SECTION VIEWS
CU-ED01-S07 EROSION AND SEDIMENT CONTROL DETAILS



REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS
A	ISSUES FOR COUNTY REVIEW - NOT FOR CONSTRUCTION	05/01/2026	JJ	AA	TG		

DSGN	AA	05/01/2026
DRN	JJ	05/01/2026
CKD	TJG	05/01/2026

SCALE: 1" = 20'
FOR 24x36 DWG ONLY

QUANTUM POWER INC.
RICHLANDS GAS GENERATION STATION
TAZEWELL COUNTY, VIRGINIA
STATION LAYOUT PLAN

JOB NUMBER 0245605
REV A
DRAWING NUMBER CU-SL01-S04

THIS DRAWING WAS PREPARED BY WSP FOR A SPECIFIC PROJECT, TAKING INTO CONSIDERATION THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING OR ANY INFORMATION CONTAINED IN THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH WSP AND WSP'S CLIENT IS GRANTED.

CU-SL01-S04.dwg

LEGEND

SEDIMENT CONTROL MEASURES

C-SCM-03	TEMPORARY STONE CONSTRUCTION ENTRANCE	
C-SCM-13	CONCRETE WASHOUT PIT	

PERIMETER CONTROL MEASURES

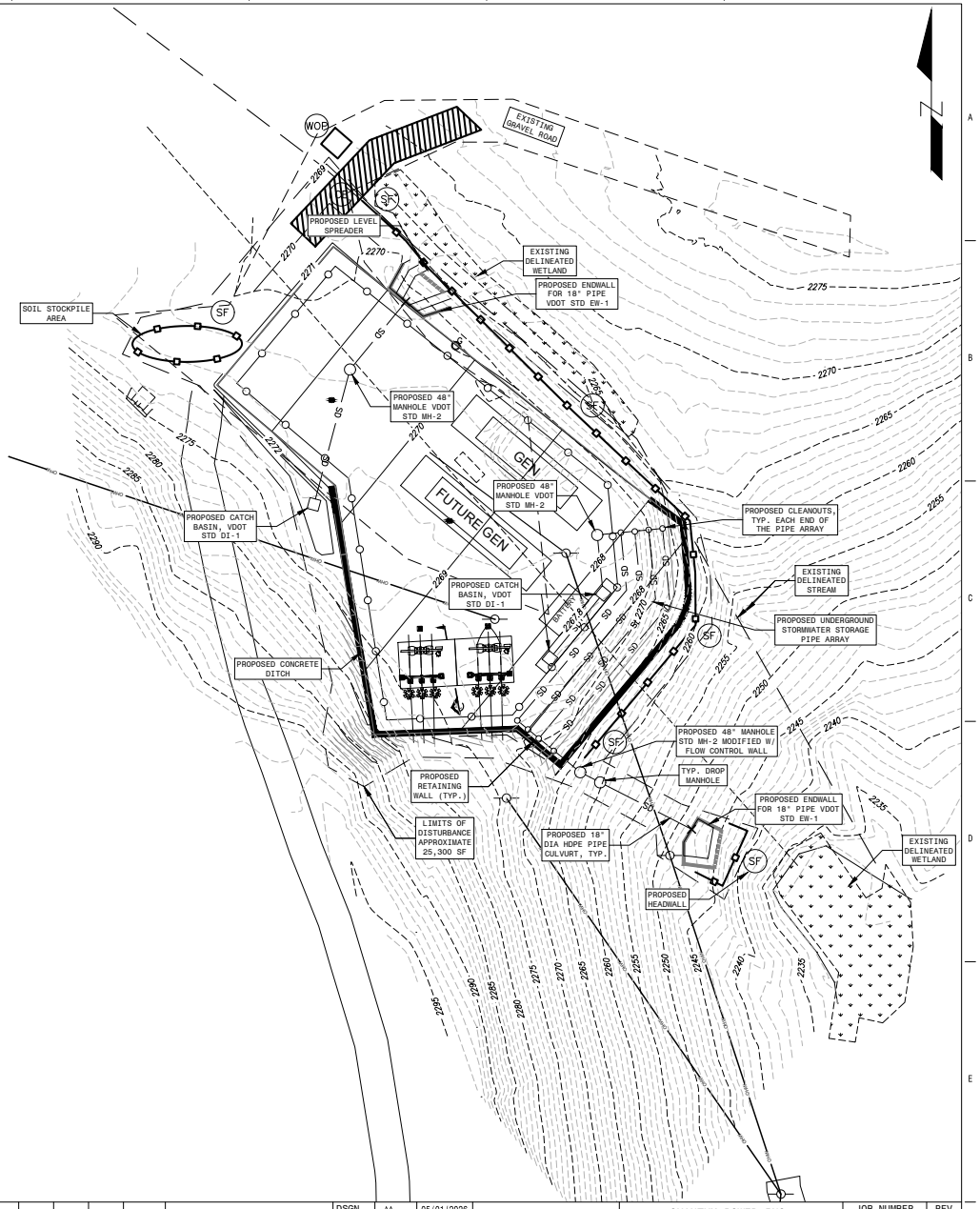
C-PCM-04	SILT FENCE	

SEQUENCE OF CONSTRUCTION:

1. INSTALL SILT FENCE, CONCRETE WASHOUT AND CONSTRUCTION ENTRANCE.
2. CONDUCT ROUGH GRADING OF SITE AND TEMPORARY SEEDING.
3. INSTALL RETAINING WALL, STORMWATER DRAINAGE FEATURES, CONCRETE WALLS AND RIPRAP.
4. INSTALL PERMANENT SEEDING TO STABILIZE THE SITE.
5. INSTALL STATION STONE, AND ALL STATION FOUNDATIONS AND EQUIPMENT.
6. DEMOBILIZE AND REMOVE ALL EROSION CONTROL MEASURES ONCE THE SITE HAS BEEN STABILIZED AND APPROVED BY THE PLAN REVIEWING AUTHORITY.

STANDARDS FOR FILL PLACEMENT/COMPACTION:

1. ALL UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE CONSTRUCTION LIMITS OF ALL ROADWAYS AND PADS BEFORE PLACING EMBANKMENT MATERIAL. ALL PERMANENT FILL SHOULD CONSIST OF CLEAN SOIL FILL, COMPACTED 6" TO 8" LIFTS TO A MINIMUM COMPACTIVE EFFORT OF 98% OF STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698). MOISTURE CONTENT SHOULD BE MAINTAINED WITHIN 2 TO 3 PERCENTAGE POINTS OF OPTIMUM MOISTURE CONTENT TO FACILITATE COMPACTION. A PORTABLE COMPACTOR, SUCH AS A JUMPING JACK, PLATE TAMPER OR TRENCH ROLLER, SHOULD BE USED WITHIN CLOSE PROXIMITY OF THE PIPES TO ENSURE PROPER COMPACTION, WHEREAS HEAVY CONSTRUCTION EQUIPMENT CAN BE USED FOR THE MASS FILL. EACH LIFT OF FILL SHOULD BE TESTED IN ORDER TO CONFIRM THAT THE RECOMMENDED DEGREE OF COMPACTION IS ACHIEVED.
2. NEW FILL SHOULD BE BENCHED WITH A MINIMUM WIDTH OF 15 FEET PARALLEL TO THE TOE OF THE EMBANKMENT AND CUT INTO THE EXISTING SLOPE AS THE FILL PLACEMENT PROCEEDS. THE PURPOSE OF THE BENCHING IS TO CREATE POSITIVE SOIL BOND BETWEEN THE NATURAL SOILS AND THE NEW FILL. TOPSOIL, TREE STUMPS AND ROOT MAT SHOULD BE REMOVED PRIOR TO FILL PLACEMENT. EACH SUCCESSIVE LIFT OF FILL SHOULD BE PLACED HORIZONTALLY AND PARALLEL TO THE SLOPE FACE.
3. COMPACTION OF THE OUTER FACE OF THE SLOPES USING TRACKED EQUIPMENT OR PORTABLE COMPACTORS IS CRITICAL TO MAINTAINING A STABLE SLOPE AND TO MINIMIZE SLOUGHING. IF POSSIBLE, THE SLOPES SHOULD BE OVER FILLED AT LEAST 2 FEET BEYOND THE LIMITS OF THE FILL SLOPE, COMPACTED AND CLIPPED(CUT) WITH A TRACK DOZER TO THE DESIGN GRADES TO ENSURE THAT THE OUTER EDGE OF THE SLOPE IS PROPERLY COMPACTED. EROSION PROTECTION, SUCH AS EROSION MATTING, CAN HELP TO ESTABLISH GRASS AND OTHER VEGETATIVE GROWTH.
4. ALL FILL USED FOR EARTHEN EMBANKMENTS (POND BERMS) SHALL BE CONSTRUCTED USING CLEAN SOIL, FREE OF ROOTS, WOODY VEGETATION, STUMPS, SOD, STONES GREATER THAN 6 INCHES, ROCKS, OR OTHER PERISHABLE OR OBJECTIONABLE MATERIAL. FILL SHOULD CONFORM TO THE UNIFIED SOIL CLASSIFICATION GC, SC, OR CL. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIAL IN THE EMBANKMENT BASED ON THE RECOMMENDATIONS OF A GEOTECHNICAL ENGINEER SUPERVISING THE DESIGN AND CONSIDERATION. COMPACTION SHALL MEET THE REQUIREMENTS LISTED ABOVE IN NO. 1 OF THIS SECTION. A CUT-OFF TRENCH SHALL BE EXCAVATED ALONG THE CENTERLINE OF THE EARTH FILL EMBANKMENT (DAM) TO PREVENT EXCESSIVE SEEPAGE AND POSSIBLE INTERNAL EROSION. THE TRENCH MUST EXTEND AT LEAST 1 FOOT INTO A STABLE, IMPERVIOUS LAYER OF SOIL AND HAVE A MINIMUM DEPTH OF 2 FEET. THE CUT-OFF TRENCH SHALL EXTEND UP BOTH ABUTMENTS TO THE RISER CREST ELEVATION. THE MINIMUM WIDTH SHALL BE 4 FEET, BUT ALSO MUST BE WIDE ENOUGH TO PERMIT OPERATION OF COMPACTION EQUIPMENT. THE SIDE SLOPES SHALL BE NO STEEPER THAN 1:1. COMPACTION REQUIREMENTS SHALL BE THE SAME AS THOSE FOR THE EMBANKMENT. THE TRENCH SHALL BE DRAINED DURING THE BACKFILLING/COMPACTING OPERATIONS.



IF THIS DRAWING IS A REDUCTION GRAPHIC SCALE MUST BE USED

SCALE: 1" = 20'

20' 0 20'

COMMONWEALTH OF VIRGINIA
PRELIMINARY
NOT FOR CONSTRUCTION
####
PROFESSIONAL ENGINEER

NOTIFY UTILITY COMPANIES BEFORE YOU DIG

THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON ABOVE-GROUND STRUCTURES. LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/STRUCTURES.
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ACTUAL LOCATION AND DEPTH OF ALL EXISTING UTILITIES. THE OWNER AND THE SURVEYOR SHALL NOT BE RESPONSIBLE FOR ANY OMISSION OR VARIATION FROM THE LOCATION SHOWN. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 811 TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.

va 811.com Dig With CARE

REFERENCE DRAWING:

CU-CS01-S01 COVER SHEET
CU-GN01-S02 GENERAL NOTES
CU-EC01-S03 STATION LAYOUT PLAN (EXISTING CONDITIONS)
CU-SL01-S04 STATION LAYOUT PLAN
CU-GP01-S05 GRADING PLAN (PHASE I)
CU-GS01-S06 GRADING SECTION VIEWS
CU-ED01-S07 EROSION AND SEDIMENT CONTROL DETAILS

THIS DRAWING WAS PREPARED BY WSP FOR A SPECIFIC PROJECT, TAKING INTO CONSIDERATION THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING OR ANY INFORMATION CONTAINED IN THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH WSP AND WSP'S CLIENT IS GRANTED.

REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS
A	ISSUES FOR COUNTY REVIEW - NOT FOR CONSTRUCTION	05/01/2026	JJ	AA	TG		

DSGN	AA	05/01/2026
DRN	JJ	05/01/2026
CKD	TJG	05/01/2026

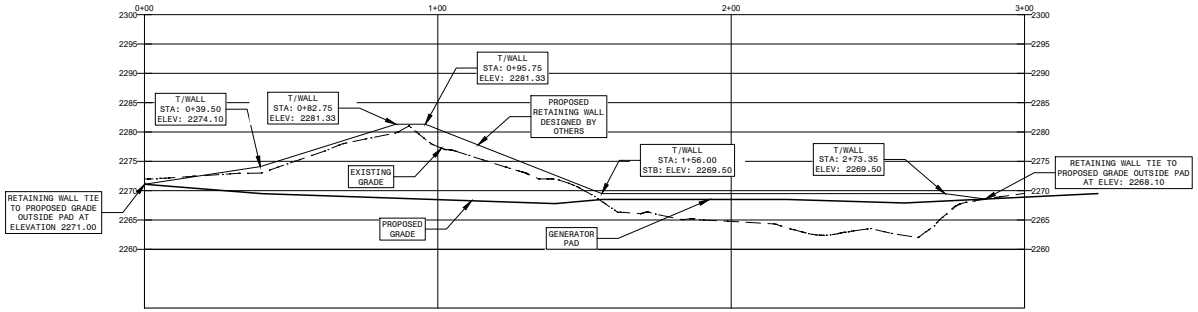
SCALE: 1" = 20'
FOR 24x36 DWG ONLY

QUANTUM POWER INC.
RICHLANDS GAS GENERATION STATION
TAZEWELL COUNTY, VIRGINIA
GRADING PLAN

JOB NUMBER 0245605
REV A
DRAWING NUMBER CU-GP01-S05

CU-GP01-S05.dwg

RETAINING WALL PROFILE

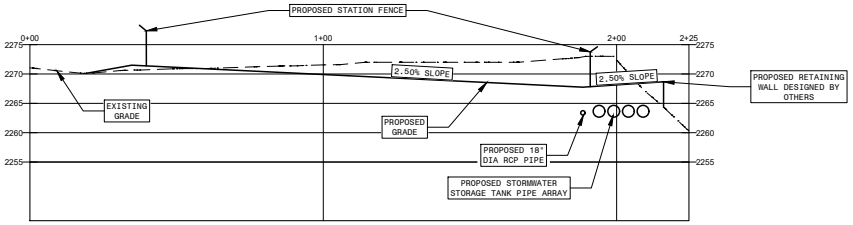


IF THIS DRAWING IS A REDUCTION
GRAPHIC SCALE MUST BE USED

SCALE: 1" = 20'

20' 0 20'

NORTH-SOUTH STATION PROFILE

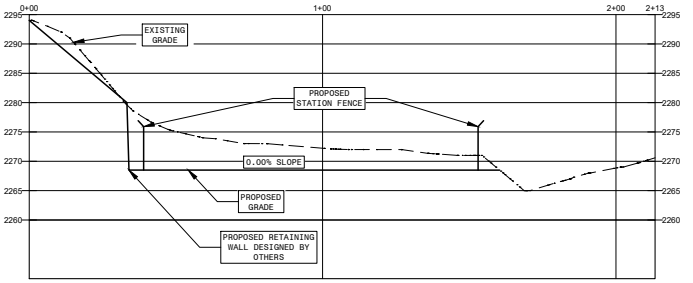


IF THIS DRAWING IS A REDUCTION
GRAPHIC SCALE MUST BE USED

SCALE: 1" = 20'

20' 0 20'

EAST-WEST STATION PROFILE



IF THIS DRAWING IS A REDUCTION
GRAPHIC SCALE MUST BE USED

SCALE: 1" = 20'

20' 0 20'

NOTIFY UTILITY COMPANIES BEFORE YOU DIG

THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON ABOVE-GROUND STRUCTURES. LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/STRUCTURES.
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ACTUAL LOCATION AND DEPTH OF ALL EXISTING UTILITIES. THE OWNER AND THE SURVEYOR SHALL NOT BE RESPONSIBLE FOR ANY OMISSION OR VARIATION FROM THE LOCATION SHOWN. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 811 TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.

va811.com Dig With CARE

COMMONWEALTH OF VIRGINIA
PRELIMINARY
NOT FOR CONSTRUCTION
####
PROFESSIONAL ENGINEER

REFERENCE DRAWING:

CU-CS01-S01 COVER SHEET
CU-GN01-S02 GENERAL NOTES
CU-EC01-S03 STATION LAYOUT PLAN (EXISTING CONDITIONS)
CU-SL01-S04 STATION LAYOUT PLAN
CU-GP01-S05 GRADING PLAN (PHASE I)
CU-GS01-S06 GRADING SECTION VIEWS
CU-ED01-S07 EROSION AND SEDIMENT CONTROL DETAILS

THIS DRAWING WAS PREPARED BY WSP FOR A SPECIFIC PROJECT, TAKING INTO CONSIDERATION THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING OR ANY INFORMATION CONTAINED IN THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH WSP AND WSP'S CLIENT IS GRANTED.

REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS
A	ISSUES FOR COUNTY REVIEW - NOT FOR CONSTRUCTION	05/01/2026	JJ	AA	TG		

DSGN	AA	05/01/2026
DRN	JJ	05/01/2026
CKD	TG	05/01/2026

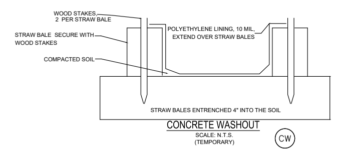
SCALE: AS SHOWN
FOR 24x36 DWG ONLY

WSP

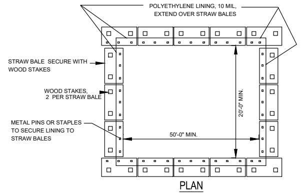
QUANTUM POWER INC.
RICHLANDS GAS GENERATION STATION
TAZEWELL COUNTY, VIRGINIA
GRADING SECTION VIEWS

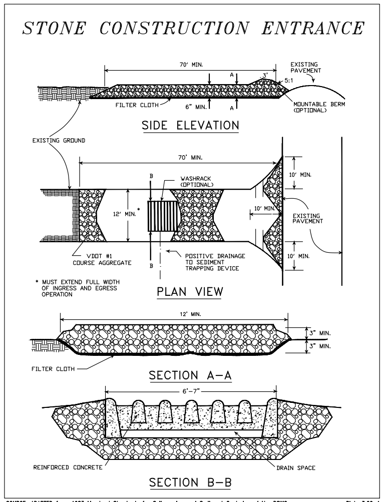
JOB NUMBER 0245605
REV A
DRAWING NUMBER CU-GS01-S06

CU-GS01-S06.dwg

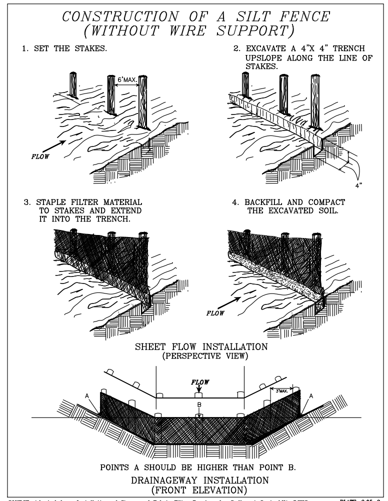


1. CONCRETE WASHOUT SYSTEM WILL CONTAIN WASHOUT WATER WHEN CHUTES & HOPPERS ARE RINSED FOLLOWING CONCRETE DELIVERY TO THE CONSTRUCTION SITE.
2. SCRAP AS MUCH MATERIAL FROM CHUTES AS POSSIBLE BEFORE WASHING THEM. USE NON-WATER CLEANING METHODS TO MINIMIZE THE CHANCE FOR WASTE TO FLOW OFF SITE.
3. DO NOT BACK FLUSH EQUIPMENT AT THE PROJECT SITE, IT SHOULD BE RESTRICTED TO PLANT.
4. DO NOT USE ADDITIVES WITH WASH WATER. DO NOT USE ACID OR SOLVENTS.
5. FURNISH A SIGNAGE FOR THE CONCRETE WASHOUT AREA.
6. FURNISH ORANGE SAFETY FENCING OR EQUAL.





SOURCE: ADAPTED from 1983 Maryland Standards for Soil erosion and Sediment Control, and Va. DSWC — Plate 3.02-1



SOURCE: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant. VA. DSWC — PLATE. 3.05-2

TEMPORARY SEEDING

PLANTING DATES	SPECIES	RATE (lbs. /ACRE)
SEPTEMBER 1 - FEBUARY 15	50/50 MIX OF ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM) & CEREAL (WINTER) RYE (SECALE CEREALE)	50-100
FEBRUARY 16 - APRIL 30	ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM)	60-100
MAY 1 - AUGUST 31	GERMAN MILLET (SETARIA ITALICA)	50

PERMANENT SEEDING

	TOTAL LBS. PER ACRE
MINIMUM CARE LAWN	
-COMMERCIAL OR RESIDENTIAL	175-200 LBS.
-KENTUCKY 31 OR TURF-TYPE TALL FESCUE	95-100%
-IMPROVED PERNNIAL RYEGRASS	0-5%
-KENTUCKY BLUEGRASS	0-5%
HIGH-MAINTENANCE LAWN	200-250 LBS.
-KENTUCKY 31 OR TURF-TYPE TALL FESCUE	100%
GENERAL SLOPE (3:1 OR LESS)	
-KENTUCKY 31 FESCUE	128 LBS.
-RED TOP GRASS	2 LBS.
-SEASONAL NURSE CROP*	20 LBS.
	150 LBS.
LOW-MAINTENANCE SLOPE (STEEPER THAN 3:1)	
-KENTUCKY 31 FESCUE	108 LBS.
-RED TOP GRASS	2 LBS.
-SEASONAL NURSE CROP*	20 LBS.
-CROWNVETCH **	20 LBS.
	150 LBS.

*USE SEASONAL NURSE CROP IN ACCORDANCE WITH SEEDING DATES AS STATED BELOW:
FEBRUARY 16TH THROUGH APRIL............ANNUAL RYE
MAY 1ST THROUGH AUGUST 15TH............FOXTAIL MILLET
AUGUST 16TH THROUGH OCTOBER............ANNUAL RYE
NOVEMBER THROUGH FEBRUARY 15TH............WINTER RYE

LIME: 2 TONS/ACRE PULVERIZED AGRICULTURAL GRADE LIMESTONE (90 LBS. /1000 FT. ^2).

FERTILIZER: 600 LBS. /ACRE 10-20-10 OR EQUIVALENT NUTRIENTS (14 LBS. /1000 FT. ^2).

1992 — 3.35

TABLE 3.35-A
ORGANIC MULCH MATERIALS AND APPLICATION RATES

MULCHES:	RATES: Per Acre	RATES: Per 1000 sq. ft.	NOTES:
Straw or Hay	1 1/2 - 2 tons (Minimum 2 tons for winter cover)	70 - 90 lbs.	Free from weeds and coarse matter. Must be anchored. Spread with mulch blower or by hand.
Fiber Mulch	Minimum 1500 lbs.	35 lbs.	Do not use as mulch for winter cover or during hot, dry periods.* Apply as slurry.
Corn Stalks	4 - 6 tons	185 - 275 lbs.	Cut or shredded in 4-6" lengths. Air-dried. Do not use in fine turf areas. Apply with mulch blower or by hand.
Wood Chips	4 - 6 tons	185 - 275 lbs.	Free of coarse matter. Air- dried. Treat with 12 lbs nitrogen per ton. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.
Bark Chips or Shredded Bark	50 - 70 cu. yds.	1-2 cu. yds.	Free of coarse matter. Air-dried. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.

* When fiber mulch is the only available mulch during periods when straw should be used, apply at a minimum rate of 2000 lbs./ac. or 45 lbs./1000 sq. ft.

Source: Va. DSWC

III-353

SEEDBED PREPARATION NOTES:

EXCERPTS FROM SPEC. 3.29 - SURFACE ROUGHENING
VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK

- AREAS WITH GRADES LESS STEEP THAN 3:1 SHOULD HAVE THE SOIL SURFACE LIGHTLY ROUGHENED AND LOOSE TO A DEPTH OF 2 TO 4 INCHES PRIOR TO SEEDING.

- IT IS IMPORTANT TO AVOID EXCESSIVE COMPACTING OF THE SOIL SURFACE WHEN SCARIFYING. TRACKING WITH BULLDOZER TREADS IS PREFERABLE TO NOT ROUGHENING AT ALL, BUT IS NOT AS EFFECTIVE AS OTHER FORMS OF ROUGHENING, AS THE SOIL SURFACE IS SEVERELY COMPACTED AND RUNOFF IS INCREASED.

- MOWED SLOPES SHOULD NOT BE STEEPER THAN 3:1. EXCESSIVE ROUGHNESS IS UNDESIRABLE WHERE MOWING IS PLANNED. THESE AREAS MAY BE ROUGHENED WITH SHALLOW GROOVES SUCH AS REMAIN AFTER TILLING, DISCING, HARROWING, RAKING, OR USE OF A CULTIPACKER-SEEDER. THE FINAL PASS OF ANY SUCH TILLAGE IMPLEMENT SHALL BE ON THE CONTOUR (PERPENDICULAR TO THE SLOPE).

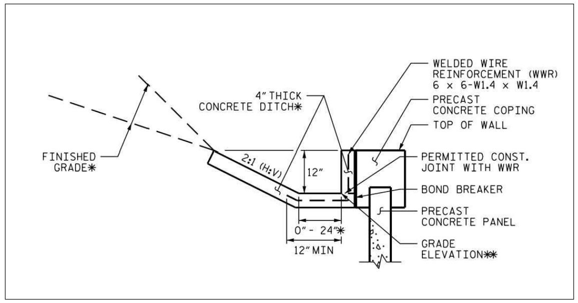
- GROOVES FORMED BY SUCH IMPLEMENTS SHALL BE NOT LESS THAN 1-INCH DEEP AND NOT FURTHER THAN 12-INCHES APART. FILL SLOPES WHICH ARE LEFT ROUGH AS CONSTRUCTED MAY BE SMOOTHED WITH A DRAGLINE OR PICKCHAIN TO FACILITATE MOWING. ROUGHENING WITH TRACKED MACHINERY ON CLAYEY SOILS IS NOT RECOMMENDED WHEN NO ALTERNATIVES ARE AVAILABLE.

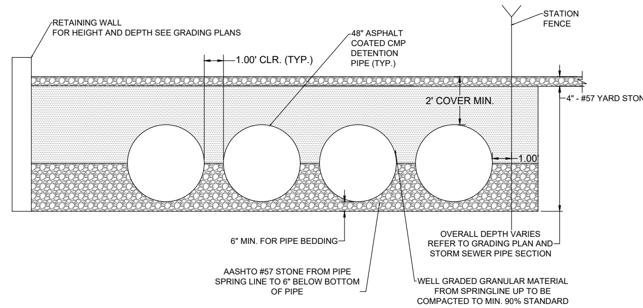
SEE PLATE 3.29-1 THRU 3.29-4 FOR SURFACE ROUGHENING DETAILS IN SPEC. 3.29 FROM THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK

EXCERPTS FROM SPEC. 3.32 - PERMANENT SEEDING
VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK

- SEEDBED PREPARATION - THE SOIL ON A DISTURBED SITE MUST BE MODIFIED TO PROVIDE AN OPTIMUM ENVIRONMENT FOR SEED GERMINATION AND SEEDLING GROWTH. THE SURFACE SOIL MUST BE LOOSE ENOUGH FOR WATER INFILTRATION AND ROOT PENETRATION. THE PH (ACIDITY AND ALKALINITY) OF THE SOIL MUST BE SUCH THAT IT IS NOT TOXIC AND NUTRIENTS ARE AVAILABLE, USUALLY BETWEEN PH 6.0-7.0. SUFFICIENT NUTRIENTS (ADDED AS FERTILIZER) MUST BE PRESENT. AFTER SEED IS IN PLACE, IT MUST BE PROTECTED WITH A MULCH TO HOLD MOISTURE AND MODIFY TEMPERATURE EXTREMES, AND TO PREVENT EROSION WHILE SEEDLINGS ARE GROWING.

- [THE EXISTING SOIL] MUST HAVE SUFFICIENT DEPTH OF SOIL TO PROVIDE AN ADEQUATE ROOT ZONE. THE DEPTH TO ROCK OR IMPERMEABLE LAYERS SUCH AS HARDPANS SHALL BE 12 INCHES OR MORE, EXCEPT ON SLOPES STEEPER THAN 2:1 WHERE THE ADDITION OF SOIL IS NOT FEASIBLE.





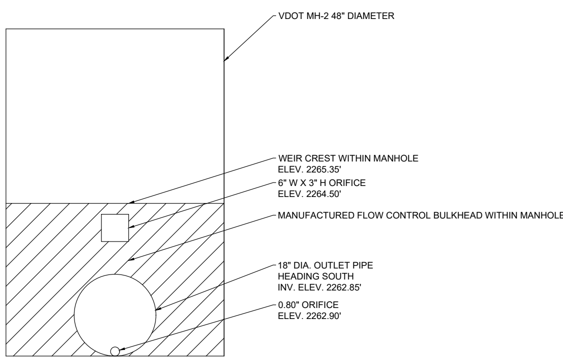
48" ASPHALT COATED CMP
DETENTION PIPE BARRELS
TYPICAL SECTION

NOT TO SCALE

TABLE 3.30-A

CUBIC YARDS OF TOPSOIL REQUIRED
FOR APPLICATION TO VARIOUS DEPTHS

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



VDOT MODIFIED MH-2 WITH
FLOW CONTROL BULKHEAD

NOT TO SCALE

va811.com Dig With CARE

NOTIFY UTILITY COMPANIES BEFORE YOU DIG

THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON ABOVE-GROUND STRUCTURES. LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/STRUCTURES.
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ACTUAL LOCATION AND DEPTH OF ALL EXISTING UTILITIES. THE OWNER AND THE SURVEYOR SHALL NOT BE RESPONSIBLE FOR ANY OMISSION OR VARIATION FROM THE LOCATION SHOWN. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 811 TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.

REFERENCE DRAWING:

CU-CS01-S01 COVER SHEET
CU-GN01-S02 GENERAL NOTES
CU-EC01-S03 STATION LAYOUT PLAN (EXISTING CONDITIONS)
CU-SL01-S04 STATION LAYOUT PLAN
CU-GP01-S05 GRADING PLAN (PHASE I)
CU-GS01-S06 GRADING SECTION VIEWS
CU-ED01-S07 EROSION AND SEDIMENT CONTROL DETAILS

COMMONWEALTH OF VIRGINIA — PRELIMINARY — NOT FOR CONSTRUCITON — #### — PROFESSIONAL ENGINEER

THIS DRAWING WAS PREPARED BY WSP FOR A SPECIFIC PROJECT, TAKING INTO CONSIDERATION THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING OR ANY INFORMATION CONTAINED IN THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH WSP AND WSP'S CLIENT IS GRANTED.

REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS
A	ISSUES FOR COUNTY REVIEW - NOT FOR CONSTRUCTION	05/01/2026	JJ	AA	TG		

DSGN	AA	05/01/2026
DRN	JJ	05/01/2026
CKD	TJG	05/01/2026
SCALE:	" "	

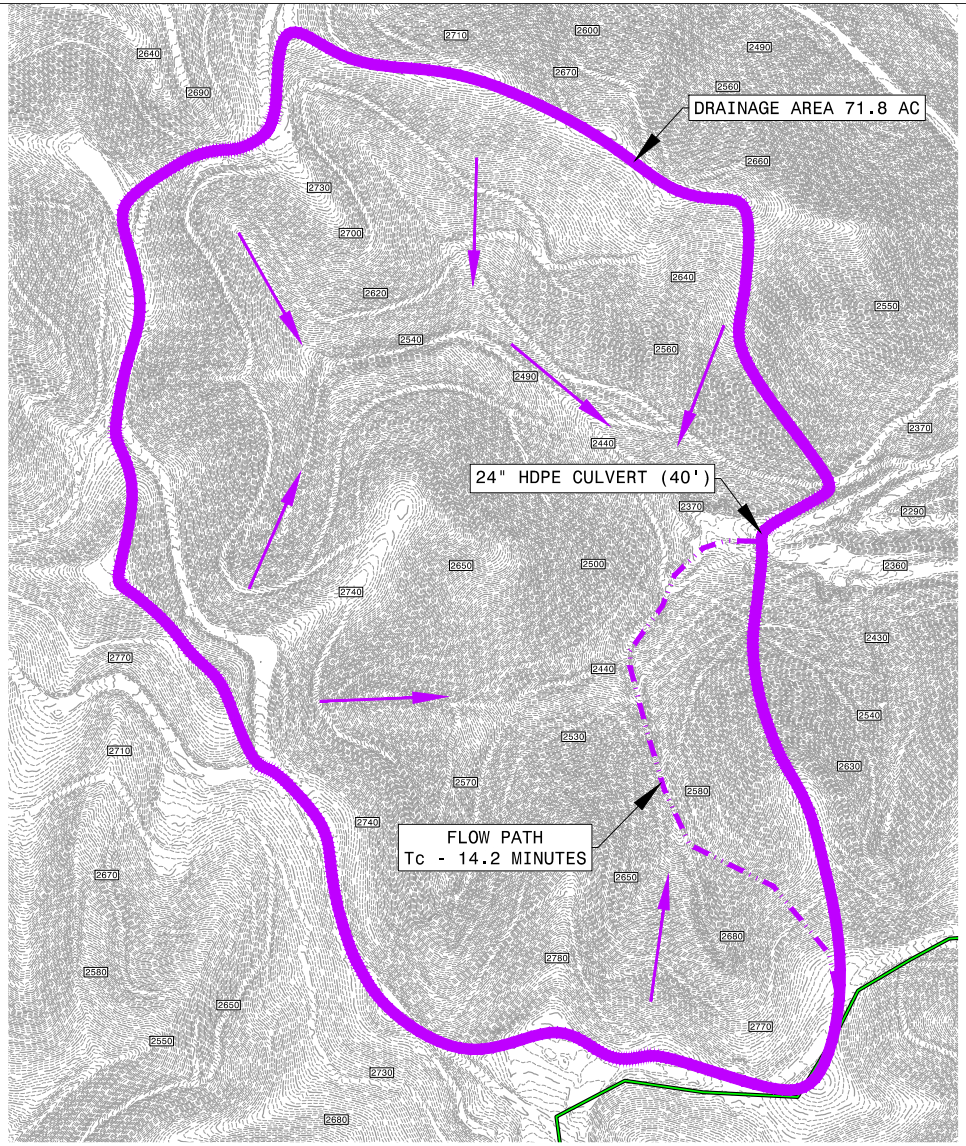
FOR 24x36 DWG ONLY

wsp

QUANTUM POWER INC.
RICHLANDS GAS GENERATION STATION
TAZEWELL COUNTY, VIRGINIA
EROSION AND SEDIMENT CONTROL DETAILS

JOB NUMBER 0245605 — REV A
DRAWING NUMBER CU-ED01-S07

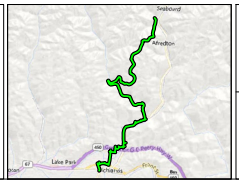
CU-ED01-S07.dwg



DRAINAGE AREA - CULVERT		
SOIL TYPE	CURVE NUMBER	ACRES
A	30	36.87
B	55	23.82
C	70	10.21
IMPERVIOUS	98	0.90
TOTAL	45	71.80

OVERHEAD ELECTRIC
DRAINAGE AREA

IF THIS DRAWING IS A REDUCTION
GRAPHIC SCALE MUST BE USED
SCALE: 1" = 300'
300' 0 300'



REV 0

QUANTUM RICHLANDS GAS TURBINE GENERATION DISTRIBUTION LINE

SCC MAP

TAZEWELL COUNTY, VA

Sheet 1 of 1

Quantum Power Inc

WSP

WO#: DR: LCL ENG: AGC CH: DATE: 4/2/2026

Erosion, Sediment Control, and Stormwater Management Plan
For
Roadway Relocation and Pad Expansion
296 Industrial Park Road
Cedar Bluff, Virginia 24609

Report prepared for:

Consolidated Steel, Inc.
P.O. Box 110
Pounding Mill, VA 24637
Phone: (888) 315-4950
Fax: (276) 963-7138

Report Prepared By:

Onsite Systems Engineering, PLLC
9748 Coeburn Mountain Road
Wise, Virginia 24293
Phone: (275) 395-1727
Email: wms.ose@gmail.com

April 16, 2026

Revised May 8, 2026

NARRATIVE

Project Description

The purpose of this document is to outline a re-development plan by Consolidated Steel, Inc. in Tazewell County VA to relocate its existing truck entrance roadway and to expand their materials storage pad area. Reference to the final grading configuration can be found on *Map 5, Final Grading Plan*.

Consolidated Steel, Inc. is a family-operated business situated on River Industrial Park Road in Cedar Bluff, Virginia. For further geographic context, see *Vicinity Map* on *Map 1*.

The primary facility for Consolidated Steel currently occupies two parcels of land - BB&C, Inc., and Cedar Hills Properties, Inc. In addition, small portions of land from a tract owned by Keith & Linda Matney and another tract owned by Mountain Peak Land and Cattle, LLC are used by Consolidated Steel. All parcels mentioned are under the operational management of Consolidated Steel, Inc.

Re-development activities will occur on a 5.52-acre parcel owned by Cedar Hills Properties, Inc. (tax parcel 141A0057L). Additionally, a small section of the westerly adjoining parcel, owned by Triple H Construction and Equipment, will be used to accommodate the relocated roadway outslope. Triple H Construction and Equipment will provide a permanent easement to permit grading and right-of-way for the roadway and to provide permanent stormwater easements for Pond No. 1 and Pond No. 2 (see Appendix F).

Land-disturbing activities associated with this development will primarily involve grading to facilitate various components of the project. The following tasks are planned:

- Building three sediment ponds that will be converted to permanent stormwater management ponds upon stabilization and successful revegetation of the site.

- Development of stormwater conveyance structures
- Grading to expand the materials storage pad
- Construction of a new roadway to replace the existing truck access road
- Filling of a portion of the current truck access road to create additional storage pad area

This project is scheduled to proceed in three phases, as depicted on *Maps 3, 4, and 5*. The activities are expected to impact 7.25 acres and it is estimated that it will take 60 days to complete. The anticipated earthwork for the undertaking comprises just over 31,000 cubic yards of balanced cut and fill.

The Responsible Land Disturber (RLD) for this project is Keith Matney (RLD #37232)

Existing Site Conditions

Map 2 presents the current topography with aerial imagery of the subject property and surrounding areas. The planning area evaluated using the Virginia Runoff Reduction Method (VRRM) encompasses 8.25 acres, as depicted on *Maps 10 and 11*. This area includes all land impacted by the re-development and for which the owner holds legal authority to alter land cover. Of the total acreage, 5.66 acres are previously disturbed: 2.52 acres consist of prior cut-and-fill slopes maintained as turf within an industrial context, and 3.14 acres comprise an asphalt truck access roadway and a nearly level gravel-surfaced storage area that slopes southward at approximately 0.8%. The remaining 2.59 acres remain undisturbed or wooded, with portions currently utilized for grazing

Runoff originating from this project, along with 8.64 acres of adjacent land, is directed to two highway culverts located beneath Kents Ridge Road, designated as EP #1 and EP #2 on Maps 8 and 9. Both culverts discharge into Little River to the west of the site, and are utilized as evaluation points for pre- and post-development peak flow analysis. The Virginia Department of Transportation (VDOT) concurs with discharging into their

drainage system as evidenced by a copy of email correspondence with them (see *Appendix G under Correspondence* for a copy of that email).

The site is outside the Zone A designation for the floodplain of Little River, in an area of minimal flood hazard as shown by the Flood Map included in *Appendix B*. The site to be permitted is also outside any Resource Protection Area (RPA) that might be present due to its proximity to the perennial flow of Little River.

The location is situated at the eastern portion of the Clinch/Powell River Basin, which is identified by the 8-digit hydrologic unit code (HUC) 06010205.

Post-Development Site Conditions

Map 5 presents the final grading contours for the site. *Map 7* details the proposed land cover categories, which are also provided in tabular form in *Appendix B under Post-Development Runoff Curve Number Calculations*. The newly developed site will include a 4.03-acre gravel-surfaced materials storage pad with access via a re-aligned truck access roadway, as well as three permanent stormwater management ponds.

Karst Terrain Evaluation

The site has undergone an evaluation for potential karst features. A desktop review confirms the site's location within a region mapped as having moderate to high karst potential, with soils typical of residuum derived from limestone and dolomite. According to the NRCS soils report (*see Appendix A*), only the 13E Carbo Rock outcrop complex map unit mentions karst in its description. The soil map shows that the 13E Carbo Rock soils cover a minimal area (0.1 acre) at the far east edge of the watershed adjacent to the site. Only 0.02 acres of this will be disturbed where a construction entrance is planned at the existing grade. An aerial / topographic review along with field reconnaissance found no sinkholes, closed depressions, rock outcrops, or losing streams/swales within the proposed disturbance area.

Nevertheless, additional precautions will be taken during construction:

If karst conditions are identified, such as:

- Sinkholes
- Voids
- Sudden ground settlement

The following protocol will be followed:

- Construction activities in the affected area will cease immediately
- The area will be secured and stabilized
- A qualified geotechnical professional will assess the situation
- Suitable remedial actions will be implemented before work resumes

Adjacent Property

The site is mainly bordered by industrial properties, with agricultural land to the east. The VDOT right-of-way for Kents Ridge Road borders the west side of the project.

Off-Site Areas

No off-site land disturbing activities are planned to be disturbed in association with the development of this site, however off-site compliance with water quality standards is planned for a property located 14 miles east of this site in the same Clinch/Powell River Basin designated by the HUC of 06010205.

Soils

A custom soil resource report covering the planning area and associated watershed has been obtained from the Natural Resources Conservation Service's Web Soil Survey (see *Appendix A*).

Critical Erosion Areas

All proposed final slopes are under 75 feet in length, so no critical erosion areas will occur due to slope length. Silt control measures will be implemented near disturbed land to prevent runoff onto neighboring properties.

EARTHWORK SUMMARY (PHASE 2)

	CUT (BCY)	SWELL (%)	EMBANKMENT VOLUME (CY)	FILL (BCY)	EXCESS CUT
POND NO. 1	2,070	14.0%	2,360	50	2,310
POND NO. 2	1,350	18.0%	1,593	240	1,353
DIVERSION NO.1	370	-4.0%	355	270	85
NORTH END OF PAD FILL AND PARTIAL ROADWAY GRADING	18,260	16.0%	21,182	7,380	13,802
TEMPORARY STORAGE OF EXCESS MATERIAL	-			17,550	
TOTALS	22,050		25,490	25,490	(0)

EROSION CONTROL MEASURES

C-ECM-06 TEMPORARY FILL DIVERSION	FD
C-ECM-09 STORMWATER CONVEYANCE CHANNEL	SCC
C-ECM-11 PAVED FLUME	PF

SEDIMENT CONTROL MEASURES

C-SCM-01 DUST CONTROL	DC
C-SCM-02 CONSTRUCTION ROAD STABILIZATION	CRS
C-SCM-03 TEMP STONE CONSTRUCTION ENTRANCE	CE
C-SCM-05 CULVERT INLET PROTECTION	CIP
C-SCM-12 TEMPORARY SEDIMENT BASIN	SB

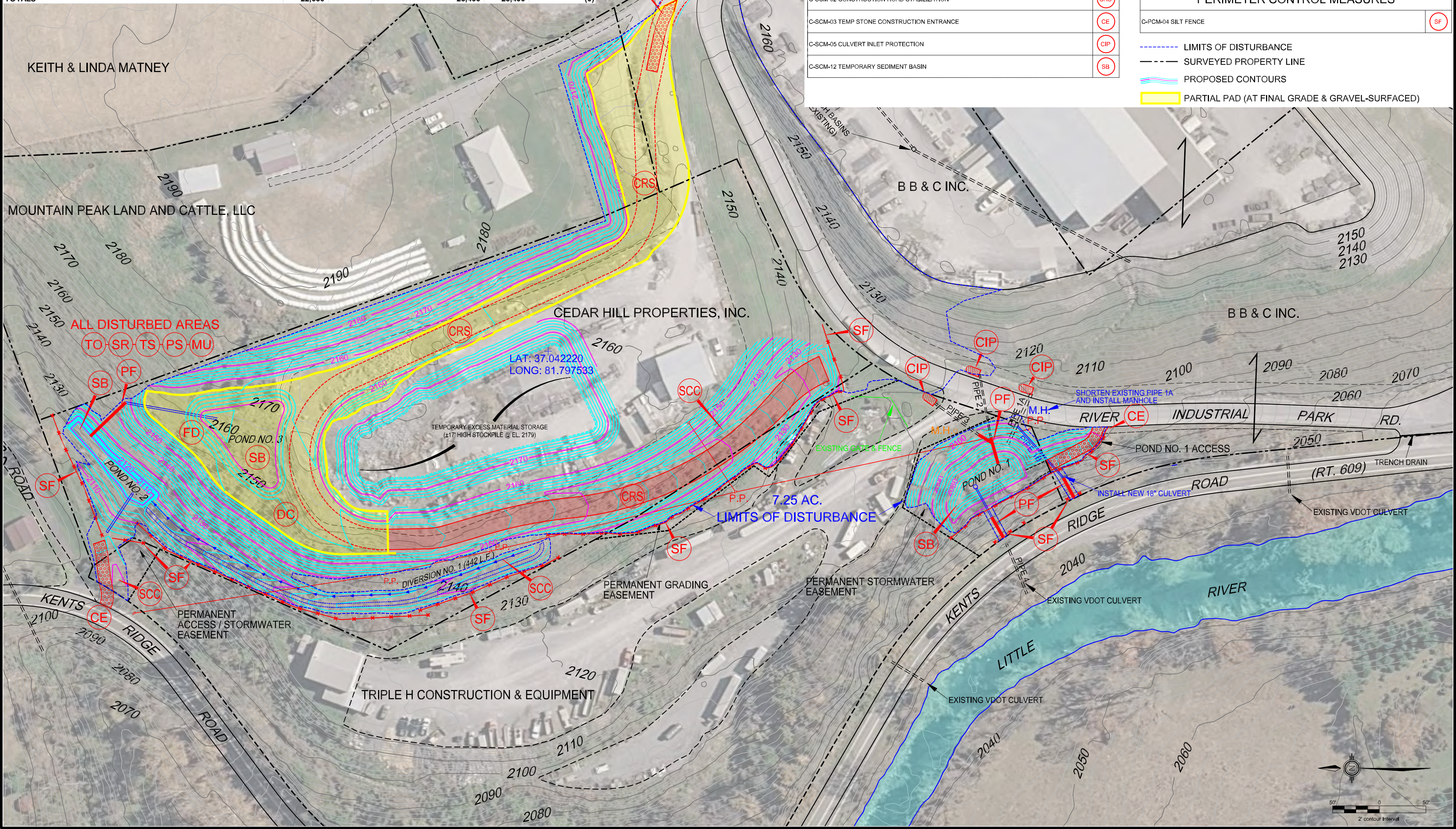
SURFACE STABILIZATION MEASURES

C-SSM-02 TOPSOILING	TO
C-SSM-03 SURFACE ROUGHENING	SR
C-SSM-09 TEMPORARY SEEDING	TS
C-SSM-10 PERMANENT SEEDING	PS
C-SSM-11 MULCHING	MU

PERIMETER CONTROL MEASURES

C-PCM-04 SILT FENCE	SF

LIMITS OF DISTURBANCE
SURVEYED PROPERTY LINE
PROPOSED CONTOURS
PARTIAL PAD (AT FINAL GRADE & GRAVEL-SURFACED)



W M Skeen
COMMONWEALTH OF VIRGINIA
W. M. SKEEN
Lic. No. 0402008191
4/18/26
LICENSED PROFESSIONAL ENGINEER

DESIGNED:	SLM
DRAWN:	SLM
CHECKED:	WMS
DATE:	MARCH 16, 2026
SCALE:	AS NOTED
PROJECT NO.:	
FILE NO.:	MAPS 1-12

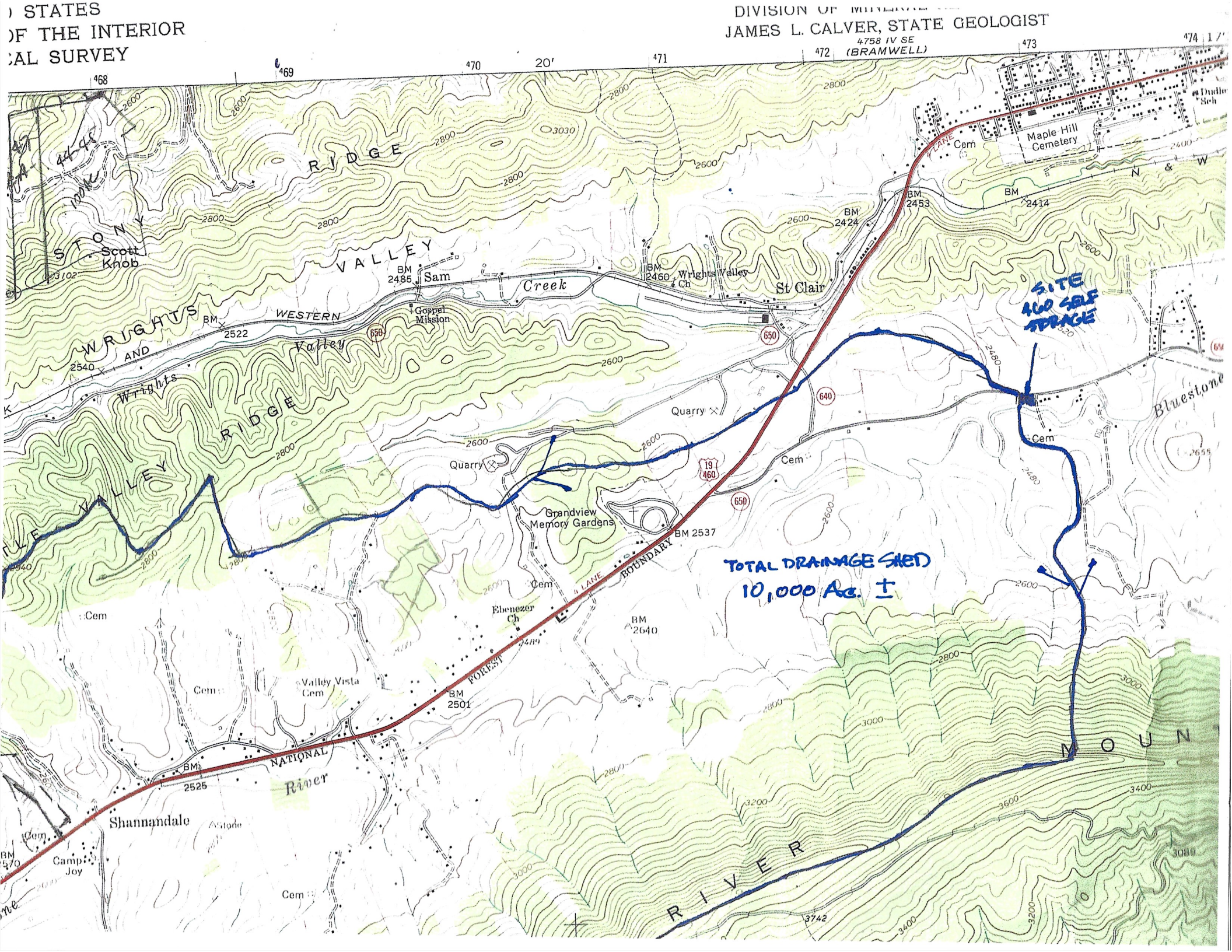
Consolidated Steel, Inc.
296 RIVER INDUSTRIAL PARK ROAD
Cedar Bluff, VA 24609

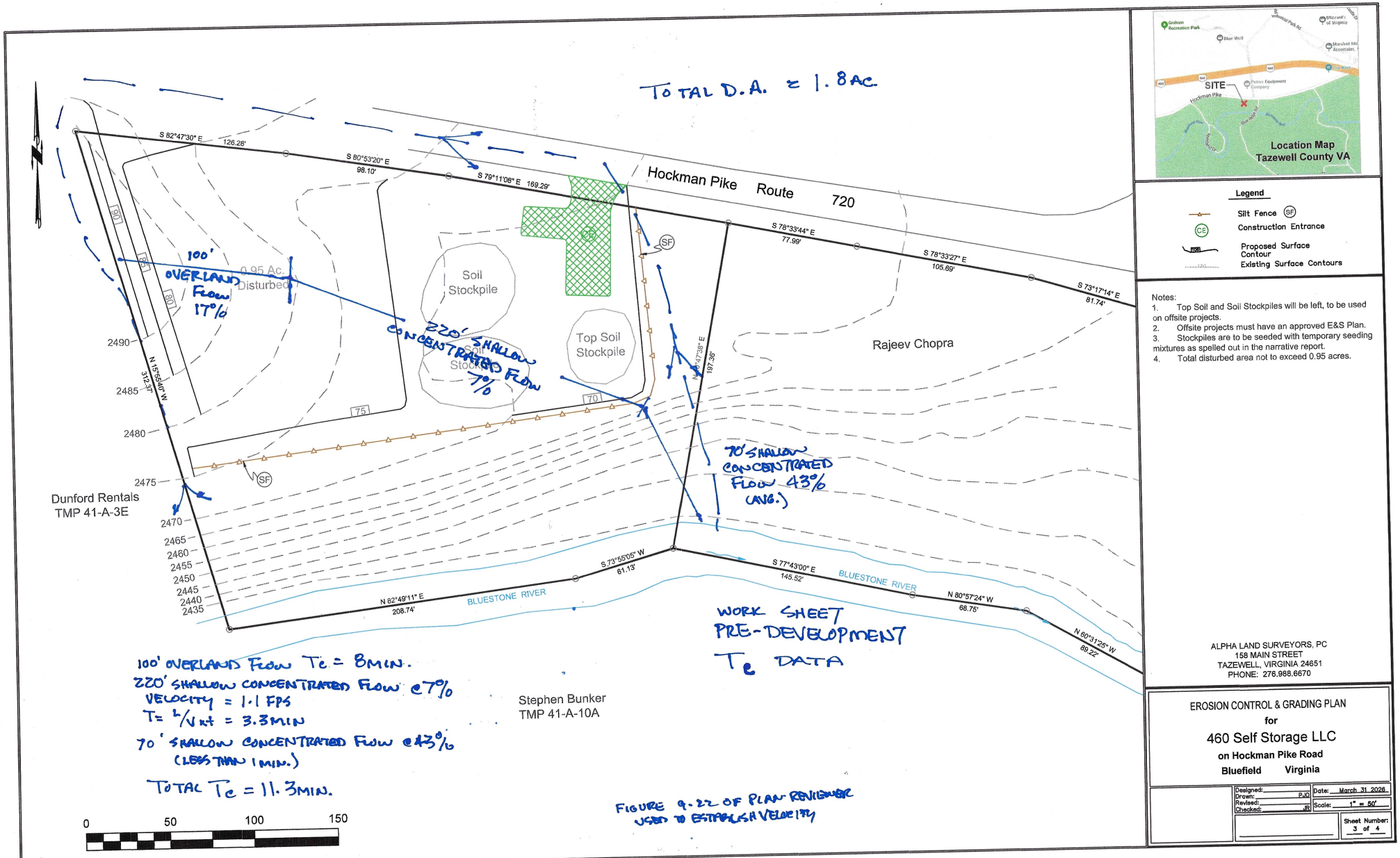
PHASE 2 GRADING PLAN
ROADWAY RELOCATION AND PAD EXPANSION

SHEET NUMBER
4

) STATES
)F THE INTERIOR
:AL SURVEY

DIVISION OF MINERAL ...
JAMES L. CALVER, STATE GEOLOGIST





Legend

- Silt Fence (SF)
- Construction Entrance (CE)
- Proposed Surface Contour
- Existing Surface Contours

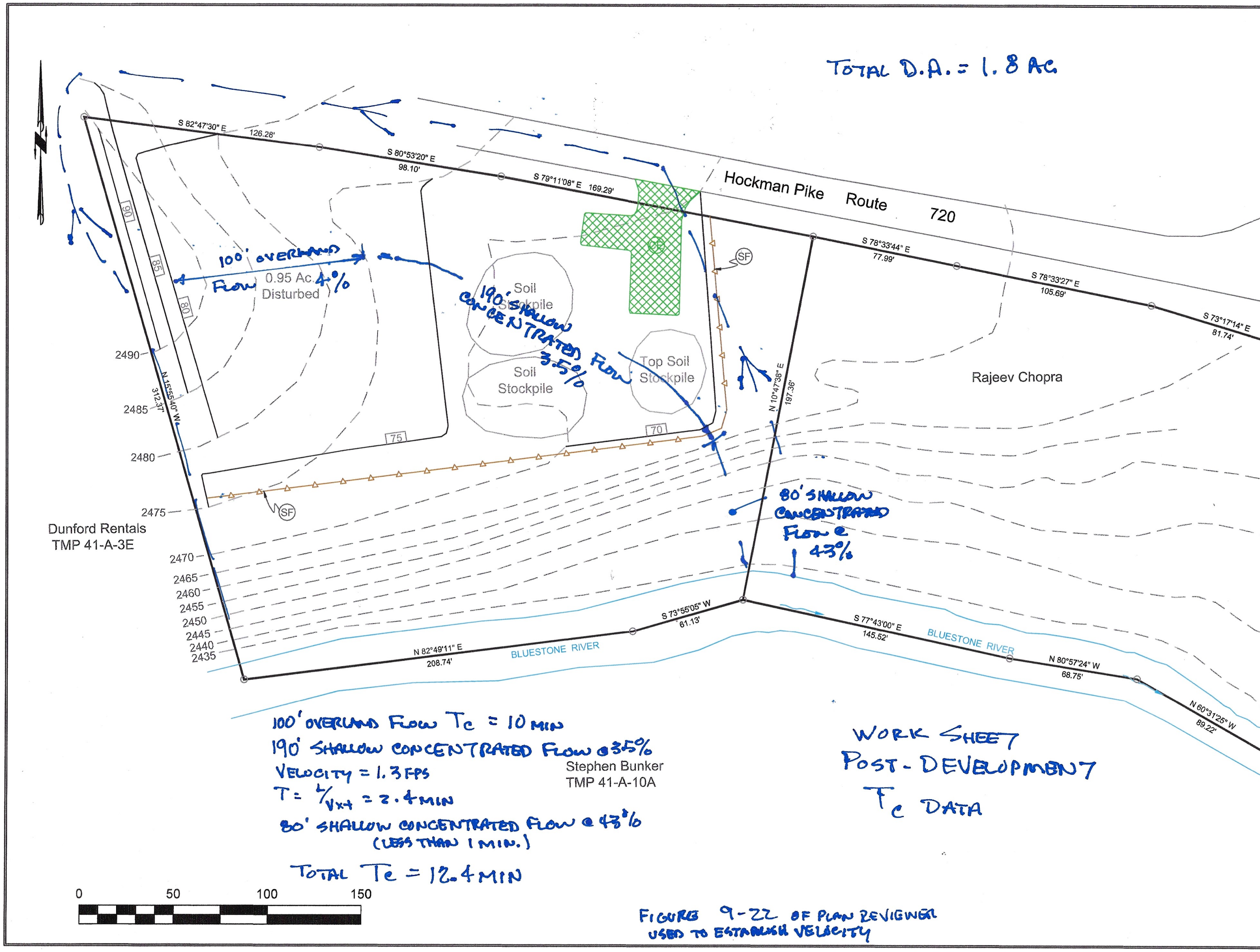
Notes:

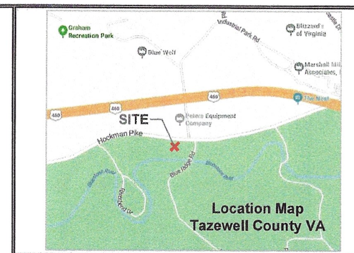
1. Top Soil and Soil Stockpiles will be left, to be used on offsite projects.
2. Offsite projects must have an approved E&S Plan.
3. Stockpiles are to be seeded with temporary seeding mixtures as spelled out in the narrative report.
4. Total disturbed area not to exceed 0.95 acres.

ALPHA LAND SURVEYORS, PC
158 MAIN STREET
TAZEWELL, VIRGINIA 24651
PHONE: 276.988.6670

EROSION CONTROL & GRADING PLAN
for
460 Self Storage LLC
on Hockman Pike Road
Bluefield Virginia

Designed: PJO
Drawn:
Revised:
Checked: JG
Date: March 31 2026
Scale: 1" = 50'
Sheet Number: 3 of 4





Legend

Silt Fence (SF)
Construction Entrance (CE)
Proposed Surface Contour
Existing Surface Contours

Notes:
1. Top Soil and Soil Stockpiles will be left, to be used on offsite projects.
2. Offsite projects must have an approved E&S Plan.
3. Stockpiles are to be seeded with temporary seeding mixtures as spelled out in the narrative report.
4. Total disturbed area not to exceed 0.95 acres.

ALPHA LAND SURVEYORS, PC
158 MAIN STREET
TAZEWELL, VIRGINIA 24651
PHONE: 276.988.6670

EROSION CONTROL & GRADING PLAN
for
460 Self Storage LLC
on Hockman Pike Road
Bluefield Virginia

Designed:	Date: March 31 2026
Drawn: PJO	Scale: 1" = 50'
Revised:	
Checked: JR	Sheet Number: 3 of 4

460 SELF STORAGE
PRE & POST DEVELOPMENT DRAINAGE
CALCULATIONS

PRE-DEVELOPMENT:

D.A. = 1.8 acres
C = 0.3
Tc = 11.3 min.
I (10yr) = 5.0
Q (10yr) = 1.8 x 0.3 x 5.0 = 2.7 cfs

POST-DEVELOPMENT:

D.A. = 1.8 acres
C = 0.3
Tc = 12.4 min.
I (10yr) = 4.9
Q (10yr) = 1.8 x 0.3 x 4.9 = 2.6 cfs

See PRE & POST Tc work sheets for time of concentration data