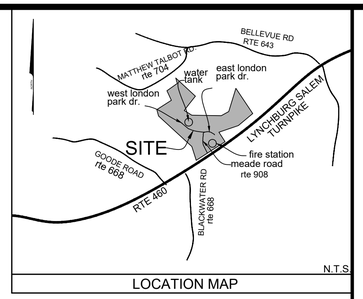
LOT GRADING PLAN

FOR

NEW LONDON BUSINESS & TECHNOLOGY CENTER

LOT 10A & 12A

BEDFORD COUNTY, VIRGINIA



LOCATION MAP

HURT & PROFFITT
INSPIRED / RESPONSIVE / TRUSTED
434.947.7796
2324 LANGHORNE ROAD
LYNCHBURG, VA. 24501
HANDP.COM
ENGINEERING • SURVEYING • LAND DEVELOPMENT • ENVIRONMENTAL
GEOTECHNICAL • CONSTRUCTION TESTING & INSPECTION • CULTURAL RESOURCES

EXISTING LEGEND

IPF	IRON PIN FOUND
	ELECTRIC POLE
	GUY WIRE
	SANITARY MANHOLE
	EDGE OF PAVEMENT
	EDGE OF GRAVEL
	BENCHMARK
	SIGN
	FENCE
	CREEK (LOCATED BY HURT & PROFFITT)
SS	UG SAN. SEWER LINE
OH E	OVERHEAD ELECTRIC
OH T	OVERHEAD TELEPHONE
TW	TOP OF WALL
CCL	CREEK CENTERLINE
	APPROX. LENGTH & DIRECTION OF UG PIPES

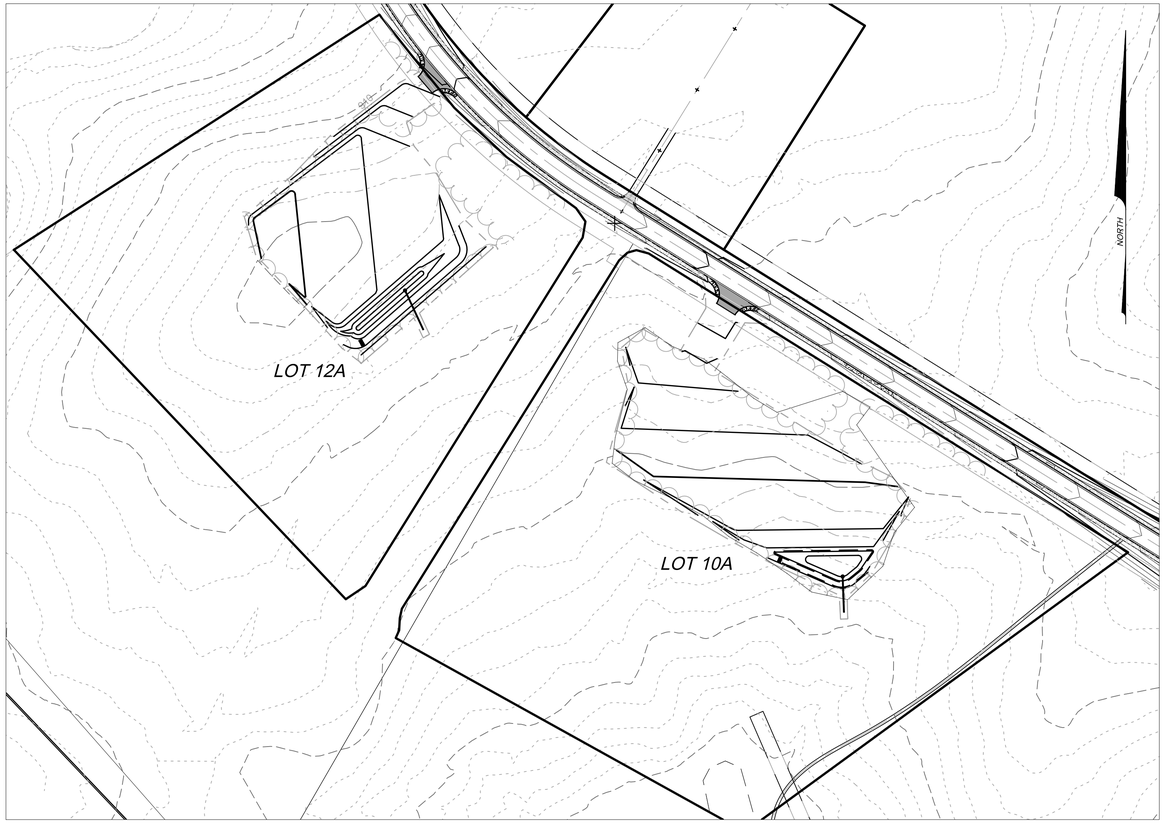
PROPOSED LEGEND

	DROP INLET
	CURB INLET
	STORM SEWER LINE
	STORM SEWER STRUCTURE LABEL
	SUPER SILT FENCE
	CONCRETE
	ASPHALT PAVING
	CG-6 CURB & GUTTER
	CONSTRUCTION ENTRANCE
	TEMPORARY DIVERSION DIKE
	ROCK CHECK DAM
802	PROPOSED 2' CONTOUR
	CONSTRUCTION LIMITS
	CLEARING LIMITS

VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL PRACTICES

* CHART TAKEN FROM THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (JULY 1992)

CE	**TEMPORARY CONSTRUCTION ENTRANCE (3.02)**
SF	**SILT FENCE (3.05)**
ST	**TEMPORARY SEDIMENT TRAP (3.13)**
OP	**OUTLET PROTECTION (3.18)**
TS	**TEMPORARY SEEDING (3.31)**
PS	**PERMANENT SEEDING (3.32)**
MU	**MULCHING (3.35)**



SHEET INDEX

GENERAL NOTES :

1. TAX MAP 152 A 41
2. ZONED: PID PLANNED INDUSTRIAL DEVELOPMENT DISTRICT
   CURRENT USE: VACANT
3. OWNER: ECONOMIC DEVELOPMENT AUTHORITY OF BEDFORD COUNTY
   ADDRESS: WEST LONDON PARK DRIVE
   CONTACT: DOUGLAS COFFMAN
   PHONE: (540) 586-7601
   EMAIL: DCOFFMAN@BEDFORDCOUNTYVA.GOV
   THE SCOPE OF THIS PLAN SHALL INCLUDE GRADING, AND STORM WATER MANAGEMENT.
4. NO DEMOLITION, SITE WORK, OR GRADING IS PERMITTED PRIOR TO ISSUANCE OF A LAND DISTURBANCE PERMIT ISSUED BY THE LOCAL AUTHORITY.
5. ALL EROSION/STORMWATER MANAGEMENT MEASURES MUST BE DE-WATERED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY AND ALL TEMPORARY EROSION MUST BE REMOVED WITHIN 30 DAYS OF PERMANENT STABILIZATION OF THE SITE.
6. ALL CONSTRUCTION STAGING, LOADING, TEMPORARY PARKING, AND LAY DOWN AREAS SHALL BE COORDINATED WITH THE OWNER PRIOR TO ANY CONSTRUCTION OR DEMOLITION ACTIVITIES.
7. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE DUST CONTROL TO PREVENT DAMAGING AND/OR NUISANCE AIRBORNE DUST FROM LEAVING THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING WHATEVER MEASURES ARE NECESSARY TO CORRECT AND/OR COMPENSATE BORDERING PROPERTY OWNERS AND THE OWNER FOR ALL DAMAGES DUE TO DUST.
8. THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE LOCAL AUTHORITY'S STANDARD DETAIL AND SPECIFICATIONS.
9. CONTRACTOR RESPONSIBLE FOR OBTAINING ALL PERMITS AND BONDS AS DEEMED NECESSARY BY THE LOCAL AUTHORITY.
10. CONTRACTOR SHALL CONTACT THE LOCAL AUTHORITY PRIOR TO ANY DEMOLITION OR GRADING ACTIVITIES WITHIN THE RIGHT OF WAY TO OBTAIN THE APPROPRIATE PERMITS.
11. CONTRACTOR SHALL CONTACT THE OWNER IN WRITING NOT LESS THAN 30 DAYS MINIMUM PRIOR TO ANY DEMOLITION AND/OR CONSTRUCTION ACTIVITY TO VERIFY MARKING OF EXISTING UTILITY SERVICES.
12. CONTRACTOR SHALL BE REQUIRED TO PROVIDE PROOF TO THE LOCAL AUTHORITY THAT A SOIL TEST HAS BEEN CONDUCTED IN ORDER TO DETERMINE FERTILIZER APPLICATION RATES FOR THE ESTABLISHMENT OF GRASS ON THE SITE.
13. THE AREA SHOWN HEREON IS LOCATED IN FLOOD HAZARD ZONE "X" AND IS NOT LOCATED WITHIN FLOOD HAZARD ZONE 'AE' FOR A 100 YEAR FLOOD AS DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY AS SHOWN ON COMMUNITY-PANEL MAP # 51019C0365DDTAED SEPTEMBER 29, 2010.
14. BEDFORD COUNTY WILL REQUIRE A PRE-CONSTRUCTION MEETING WITH THE CERTIFIED RESPONSIBLE LAND DISTURBER, THE ENGINEER OF BEDFORD COUNTY PRIOR TO THE ISSUANCE OF THE LAND DISTURBANCE PERMIT. BEDFORD COUNTY MAY BE CONTACTED AT (540) 586-7616 TO SET UP MEETING. CONTRACTOR SHALL BE PREPARED TO PROVIDE THEIR CERTIFICATION NUMBER AT THIS MEETING.
15. ALL APPLICABLE FEDERAL/STATE PERMITS (INCLUDING THOSE ISSUED BY THE U.S. ARMY CORPS OF ENGINEERS, VIRGINIA DEPARTMENT OF ENVIRONMENTAL AND VIRGINIA MARINE RESOURCES COMMISSION) FOR WORK IN STREAMS AND WETLANDS MUST BE SECURED PRIOR TO SITE PLAN APPROVAL FOR THE PROJECT.
16. IT IS THE INTENT OF THIS PHASE 1 EROSION CONTROL PLAN TO INDICATE THE EROSION CONTROL MEASURES REQUIRED FOR THE INITIAL GRADING OF THE PROJECT SITE. ADDITIONAL REVIEW AND APPROVAL BY BEDFORD COUNTY IS REQUIRED FOR THE FINAL SITE PLAN APPROVAL PRIOR TO FINAL GRADING, INSTALLATION OF POST STORM WATER MEASURES, UTILITY INSTALLATIONS, SITE CONSTRUCTION AND/OR BUILDING IMPROVEMENTS. NO LAND DISTURBANCE WILL BE ALLOWED OUTSIDE THE SCOPE OF THIS PHASE 1 PLAN WITHOUT SUBSEQUENT SITE PLAN APPROVAL.
17. CONTACT BEDFORD COUNTY ENVIRONMENTAL REVIEWER, THE BEDFORD COUNTY CONSTRUCTION COORDINATOR AND MISS UTILITY 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITY.
18. BOUNDARIES SHOWN FOR LOTS 10A AND 12A ARE BASED OFF OF THE MASTER PLAN DATED 12/04/2005.

1	10/27/21	SEDIMENT TRAP NOTE

THE ENGINEER AND/OR SURVEYOR TAKES NO RESPONSIBILITY FOR THE LOCATION OR ACCURACY OF THE UTILITIES AS SHOWN HEREON OR ANY UTILITIES WITHIN THE PROJECT THAT MAY NOT BE SHOWN HEREON. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE UTILITY COMPANIES TO SEE IF ANY UTILITIES EXIST WITHIN THE AREA OF THE PROJECT BEFORE ANY CONSTRUCTION BEGINS. ANY COST INCURRED BY DAMAGING ANY UTILITY WITHIN THE PROJECT SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

48 WORKING HOURS PRIOR TO STARTING THE WORK, THE CONTRACTOR SHALL CALL MISS UTILITY AT PHONE NUMBER 811 AND ADVISE THE NATURE AND LOCATION OF THE WORK.

ALWAYS CARE INDEED YOU DIG
CALL MISS UTILITY
KEEP VIRGINIA SAFE 1-800

VIRGINIA CERTIFIED RESPONSIBLE LAND DISTURBER

NAME - PRINTED *SIGNATURE* *DATE*

PHONE # *COMPANY*

ADDRESS

COVER SHEET
FOR
NLBTC - LOTS 10A & 12A GRADING PLAN
BEDFORD, VIRGINIA

PROJECT NO.	20211087
LAT.	37.3084°
LONG.	-79.3429°
DATE:	08/24/2021
DRAWN BY:	ELC
CHECKED BY:	PSB

COMMONWEALTH OF VIRGINIA
P. SCOTT BEASLEY
Lic. No. 041801
12/13/2021
PROFESSIONAL ENGINEER

0 50 100 200
SCALE 1" = 100'

HURT & PROFFITT

SHEET NO.	REV.
G-001	----

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF GRADED BUILDING PADS ON LOTS 10A AND 12A OF THE NEW LONDON BUSINESS AND TECHNOLOGY CENTER IN BEDFORD COUNTY, VIRGINIA. A TOTAL OF 3.65 ACRES (1.95 ON LOT 10A AND 1.70 ON LOT 12A) ACRES WILL BE DISTURBED AS A RESULT OF CONSTRUCTION ACTIVITIES, WITH 0.0 ACRES OF ADDITIONAL IMPERVIOUS AREA.

EXISTING SITE CONDITIONS

THIS SITE IS COMPRISED OF TWO SEPARATE INDUSTRIAL LOTS: A CLEARED LOT KNOWN AS LOT 10A (UNPLATTED, PROPOSED AS 10.00 ACRES, AND A CLEARED LOT KNOWN AS LOT 12A (UNPLATTED, PROPOSED AS 7.52 ACRES). LOT 10A : LOT 10A IS ON THE SOUTH SIDE OF WEST NEW LONDON DRIVE. THE LOT IS CLEARED AND SLOPES FROM NORTHWEST TO SOUTHEAST. RUNOFF FLOWS TO THE SOUTHEAST TOWARD A NATURAL STREAM AND WETLAND AREA ON THE CORNER OF THE LOT. LOT 12A : LOT 12A IS ALSO A CLEARED LOT AND IS LOCATED ADJACENT TO AND WEST OF LOT 10A. THERE IS A HIGH POINT IN THE CENTER OF LOT 12A AND RUNOFF FROM THE LOT DRAINS IN ALL DIRECTIONS.

ADJACENT PROPERTY

BOTH OF THE LOTS IN THIS PROJECT ARE BORDERED BY OTHER LOTS IN THE PARK AND AN INTERNAL PARK ROADWAY. LOT 10A : LOT 10A IS BORDERED BY WEST NEW LONDON DRIVE ON THE NORTH, LOT 8 ON THE EAST, LOT 10B ON THE SOUTH, AND LOT 12A AND A PROPOSED ACCESS DRIVE ON THE WEST. LOT 12A : LOT 12A IS BORDERED BY WEST NEW LONDON DRIVE ON THE NORTH, LOT 13 ON THE WEST, LOT 12B ON THE SOUTH, AND LOT 10A AND A PROPOSED ACCESS DRIVE ON THE EAST.

CRITICAL AREAS

NO CRITICAL AREAS ARE IDENTIFIED FOR THIS SITE.

OFFSITE AREAS

ALL GRADING SHALL OCCUR ON SITE. ANY ADDITIONAL BORROW OR WASTED SOIL FROM THE SITE WILL BE EITHER STOCKPILED ON SITE, OR REMOVED TO A LOCATION CHOSEN BY THE CONTRACTOR AT A LATER DATE. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT A SITE PLAN IS SUBMITTED FOR APPROVAL OF ANY BORROW OR FILL AREAS OFF-SITE, OR AN AMENDED PLAN IS FILED FOR ANY STOCKPILE AREAS ON SITE.

SOILS

THE SOIL SURVEY MAP FOR BEDFORD COUNTY, VIRGINIA, VERSION 12, DATED SEPTEMBER 27, 2016 INDICATES THAT THIS SITE CONSISTS OF THE FOLLOWING SOIL TYPES:

LOT 10A : MINNIEVILLE LOAM (2 TO 7% SLOPES, K = 0.57 TO 1.98, HYDROLOGIC SOIL GROUP B), AND OAK LEVEL LOAM (2 TO 7% SLOPES, K = 0.06 TO 0.20, HYDROLOGIC SOIL GROUP C)
LOT 12A : CLIFFORD FINE SANDY LOAM (2 TO 7% SLOPES, K = 0.57 TO 1.98, HYDROLOGIC SOIL GROUP B).

STORMWATER

MANAGEMENT OF STORMWATER QUALITY IS NOT REQUIRED AS THE TOTAL IMPERVIOUSNESS OF THE BUSINESS PARK AFTER CONSTRUCTION OF THESE PAD SITES WILL BE LESS THAN 16% PER DEQ IIC REQUIREMENTS, WHICH WERE IN PLACE WHEN THE PARK WAS PLANNED. STORMWATER QUANTITY CONTROL WILL BE ACCOMPLISHED WITH THE EXISTING REGIONAL DETENTION POND IN THE BUSINESS PARK. THE POND WAS DESIGNED FOR THE FULL BUILD-OUT OF THE PARK AND IS GRANDFATHERED PER 9VAC25-870-48. IT SHOULD BE NOTED THAT STORMWATER MANAGEMENT BASINS ARE PROVIDED ON EACH PAD SITE. THESE BASINS ARE USED AS SEDIMENT TRAPS DURING CONSTRUCTION BUT CAN ALSO BE USED BY THE ULTIMATE LOT OWNER TO SUPPLEMENT THE STORMWATER MANAGEMENT (QUANTITY) PROVIDED BY THE REGIONAL POND. THE TR55/SCS METHOD WAS USED FOR QUANTITY CALCULATIONS. SEE PROJECT CALCULATIONS FOR A DETAILED ANALYSIS.

EROSION AND SEDIMENT CONTROL

3.02 CONSTRUCTION ENTRANCE (CE) - A CONSTRUCTION ENTRANCES IS PROPOSED FOR THE SITE, AS SHOWN ON PLANS. WHERE THE ENTRANCE IS PROPOSED IN PAVED AREAS CONTRACTOR SHALL REMOVE ALL MUD, DIRT, AND DEBRIS PRIOR TO ENTERING THE PUBLIC RIGHT OF WAY. CONTRACTOR SHALL INSTALL ADDITIONAL STONE STABILIZATION AS NECESSARY TO PREVENT TRACKING ONTO THE EXISTING ROADWAY WITHIN THE LIMITS OF CONSTRUCTION.

3.05 SILT FENCE (SF) - A TEMPORARY SEDIMENT BARRIER CONSTRUCTED OF POSTS PLACED ACROSS OR AT THE TOE OF A SLOPE OR IN A MINOR DRAINAGE WAY TO INTERCEPT AND DETAIN SEDIMENT AND DECREASE FLOW VELOCITIES FROM DRAINAGE AREAS OF LIMITED SIZE.

3.09 TEMPORARY DIVERSION DIKE (DD) - A RIDGE OF COMPACTED SOIL WILL BE USED TO DIVERT SEDIMENT-LADEN RUNOFF TO THE SEDIMENT BASIN DURING INITIAL GRADING OPERATIONS.

3.13 TEMPORARY SEDIMENT TRAP (ST) - A SMALL PONDING AREA FORMED BY CONSTRUCTING AN EMBANKMENT WITH A STONE OUTLET ACROSS A SWALE. IT IS USED TO DETAIN SEDIMENT LADEN RUNOFF FROM DRAINAGE AREAS LESS THAN 3 ACRES FOR ENOUGH TIME TO ALLOW MOST OF THE SUSPENDED SOLIDS TO SETTLE OUT.

3.18 OUTLET PROTECTION (OP) - THE APPLICATION OF RIPRAP CHANNEL SECTIONS AND/OR STILLING BASINS BELOW STORM DRAIN OUTLETS TO REDUCE EROSION AND UNDER-CUTTING FROM SCOURING AT OUTLETS AND TO REDUCE FLOW VELOCITIES BEFORE STORMWATER ENTERS RECEIVING CHANNELS BELOW THESE OUTLETS.

3.31 TEMPORARY SEEDING (TS) - 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.

3.32 PERMANENT SEEDING (PS) - ESTABLISHMENT OF PERENNIAL VEGETATIVE COVER BY PLANTING SEED ON ROUGH-GRADED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A YEAR OR MORE OR WHERE PERMANENT, LONG-LIVED VEGETATIVE COVER IS NEEDED ON FINE-GRADED AREAS.

3.35 MULCHING (MU) - APPLICATION OF PLANT RESIDUES OR OTHER SUITABLE MATERIALS TO DISTURBED SURFACES TO PREVENT EROSION AND REDUCE OVERLAND FLOW VELOCITIES. FOSTERS PLANT GROWTH BY INCREASING AVAILABLE MOISTURE AND PROVIDING INSULATION AGAINST EXTREME HEAT OR COLD.

VEGETATIVE MEASURES

PERMANENT STABILIZATION : ALL AREAS DISTURBED BY CONSTRUCTION WILL BE STABILIZED BY SEEDING AND MULCHING IMMEDIATELY FOLLOWING FINAL GRADING. UNLESS OTHERWISE INDICATED, ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

MANAGEMENT STRATEGIES

- EROSION AND SEDIMENT CONTROL SHOULD BE DISCUSSED BETWEEN THE GRADING CONTRACTOR AND THE OWNER PRIOR TO ANY EXCAVATION SO THAT LIMITS OF CONSTRUCTION AND EROSION CONTROL METHODS ARE CLEARLY UNDERSTOOD BY BOTH PARTIES.
- CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.
- THERE IS TO BE NO TRACKING OF MUD OR DIRT BY CONSTRUCTION EQUIPMENT ONTO ANY PAVED DRIVES OR ROADS.
- SEDIMENT TRAPPING MEASURES WILL BE INSTALLED AS A FIRST STEP IN GRADING AND WILL BE SEEDED AND MULCHED IMMEDIATELY FOLLOWING INSTALLATION.
- SEEDING OR OTHER STABILIZATION WILL FOLLOW IMMEDIATELY AFTER GRADING.
- AREAS WHICH ARE NOT TO BE DISTURBED WILL BE CLEARLY MARKED BY FLAGS, SIGNS, ETC.
- AFTER ACHIEVING ADEQUATE STABILIZATION, THE TEMPORARY E&S CONTROLS WILL BE CLEANED UP AND REMOVED.

PERMANENT STABILIZATION

ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED BY SEEDING AND MULCHING IMMEDIATELY FOLLOWING FINISHED GRADING.

CONSTRUCTION SEQUENCE

LOTS 10A & 12A :

1. INSTALL CONSTRUCTION ENTRANCE AND SEDIMENT TRAP/BASIN PER PLANS.
2. INSTALL OTHER PERIMETER MEASURES SUCH AS SILT FENCE.
3. CLEAR AND GRUB THE PAD SITE.
4. BEGIN BULK GRADING, CONSTRUCTING DIVERSIONS TO DIVERT RUNOFF TO THE SEDIMENT TRAP/BASIN.
5. COMPLETE BULK GRADING.
6. SPREAD TOPSOIL ON CUT AND FILL SLOPES; STOCKPILE REMAINING TOPSOIL OR MOVE TO AN AREA AS DIRECTED BY THE OWNER; TEMPORARY AND PERMANENT SEEDING AND MULCHING TO BE PLACED ON ALL DISTURBED AREAS.
7. CONTRACTOR TO RESTORE ALL AREAS BACK TO EITHER PROPOSED GRADES OR EXISTING CONDITIONS AFTER COMPLETION OF THE PROJECT. ALL DISTURBED AREAS, HAUL ROADS, CONSTRUCTION ROADS, LAY DOWN AREAS, ETC. SHALL BE RESTORED.

MINIMUM STANDARDS (MS):

ALL APPLICABLE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS AND MINIMUM STANDARDS SHALL BE ADHERED TO DURING ALL PHASES OF CONSTRUCTION. THESE INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

MS-1 STABILIZATION OF DENUDED AREAS:
PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO BARE AREAS WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE UNLESS OTHERWISE SHOWN. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN 7 DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE, BUT WILL REMAIN DORMANT OR UNDISTURBED FOR LONGER THEN 30 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 SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

MS-3 PERMANENT VEGETATIVE COVER:
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, IN THE OPINION OF THE COUNTY INSPECTOR, IS UNIFORM AND MATURE ENOUGH TO SURVIVE AND INHIBIT EROSION.

MS-4 TIMING AND STABILIZATION OF SILT TRAPPING MEASURES:
SEDIMENT TRAPS, STORM DRAIN INLET PROTECTION, SILT FENCING, AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY. THE STRUCTURES 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:
A SEDIMENT BASIN SHALL CONTROL SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES. THE SEDIMENT BASIN SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE THE ANTICIPATED SEDIMENT LOADING FOR THE LAND DISTURBING ACTIVITY. THE OUTFALL DEVISE OR SYSTEM DEVICE SHALL TAKE INTO ACCOUNT THE TOTAL DRAINAGE AREA FLOWING THROUGH THE DISTURBED AREA TO BE SERVED BY THE BASIN.

MS-7 CUT AND FILL SLOPES:
CUT AND FILL SLOPES SHALL BE 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 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 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 STORM WATER CONVEYANCE CHANNELS 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:
PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT AND SEDIMENT TRANSPORT WHEN WORKING IN LIVE WATERCOURSES. THE WORK AREA SHALL BE STABILIZED TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NON-ERODIBLE 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 STREAM CROSSING CONSTRUCTED OF NON-ERODIBLE MATERIALS 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 UNDERGROUND UTILITIES:
UNDERGROUND UTILITIES 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 OPEN AT ONE TIME.
- B.EXCAVATED MATERIAL SHALL BE PLACE ON THE UPHILL SIDE OF TRENCHES.
- C. EFFLUENT FOR DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVISE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFFSITE PROPERTY.
- D. RE-STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
- E.APPLICABLE SAFETY REGULATIONS SHALL BE COMPILED WITH AT ALL TIMES.

MS-17 CONSTRUCTION ACCESS ROUTES:
WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED 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 SEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WAHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.

MS-18 TEMPORARY E&S CONTROL MEASURE REMOVAL:
ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE COUNTY INSPECTOR.

MS-19 ADEQUACY OF RECEIVING CHANNELS:
PROPERTIES AND WATERWAYS DOWNSTREAM FROM THE DEVELOPMENT SITE SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION, AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY, AND PEAK FLOW RATES OF STORM WATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24 HOUR DURATION.

E&S MAINTENANCE SECTIONS

SECTION 3.02- TEMPORARY STONE CONSTRUCTION ENTRANCE

MAINTENANCE

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR THE WASHING AND REWORKING OF EXISTING STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED ONTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.

SECTION 3.05- SILT FENCE

MAINTENANCE

1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM END RUNS AND UNDERCUTTING.
3. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
4. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
5. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.

SECTION 3.09- TEMPORARY DIVERSION DIKE

MAINTENANCE

1. THE MEASURE SHALL BE INSPECTED AFTER EVERY STORM AND REPAIRS MADE TO THE DIKE, FLOW CHANNEL, OUTLET OR SEDIMENT TRAPPING FACILITY, AS NECESSARY. ONCE EVERY TWO WEEKS, WHETHER A STORM EVENT HAS OCCURRED OR NOT, THE MEASURE SHALL BE INSPECTED AND REPAIRS MADE IF NEEDED. DAMAGES CAUSED BY CONSTRUCTION TRAFFIC OR OTHER ACTIVITY MUST BE REPAIRED BEFORE THE END OF EACH WORKING DAY.

SECTION 3.13- TEMPORARY SEDIMENT TRAP

MAINTENANCE

1. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN VOLUME OF THE WET STORAGE. SEDIMENT REMOVAL FROM THE BASIN SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE AND CAUSE SEDIMENTATION PROBLEMS.
2. FILTER STONE SHALL BE REGULARLY CHECKED TO ENSURE THAT FILTRATION PERFORMANCE IS MAINTAINED. STONE CHOKED WITH SEDIMENT SHALL BE REMOVED AND CLEANED OR REPLACED.
3. THE STRUCTURE SHOULD BE CHECKED REGULARLY TO ENSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT. THE HEIGHT OF THE STONE OUTLET SHOULD BE CHECKED TO ENSURE THAT ITS CENTER IS AT LEAST 1 FOOT BELOW THE TOP OF THE EMBANKMENT.

SECTION 3.18- OUTLET PROTECTION

MAINTENANCE

1. OUTLET PROTECTION SHOULD BE CHECKED FOR SEDIMENT ACCUMULATION AFTER EACH RUNOFF-PRODUCING STORM EVENT. IT SHOULD BE INSPECTED PERIODICALLY TO DETERMINE IF HIGH FLOWS HAVE CAUSED SCOUR BENEATH THE RIPRAP OR FILTER FABRIC OR DISLODGED ANY OF THE STONE. CARE MUST BE TAKEN TO PROPERTY CONTROL SEDIMENT-LADEN CONSTRUCTION RUNOFF WHICH MAY DRAIN TO THE POINT OF THE NEW INSTALLATION. IF REPAIRS ARE NEEDED, THEY SHOULD BE ACCOMPLISHED IMMEDIATELY.

EROSION AND SEDIMENT CONTROL DEVICES:

PERIMETER EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITY. AS CONSTRUCTION PROCEEDS, ALL ADDITIONAL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS SOON AS POSSIBLE. EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLAN ARE A MINIMUM AND THE PROJECT CONDITION MAY DICTATE ADDITIONAL CONTROL. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE PER THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

EROSION AND SEDIMENT CONTROL MAINTENANCE:

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL DEVICES FOR THE DURATION OF THE PROJECT. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE CHECKED WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL TO INSURE THAT ALL DEVICES ARE IN PLACE AND FUNCTIONING AS REQUIRED. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE MAINTAINED PER THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. IN GENERAL, IF THE SILT BUILT UP BEHIND A BARRIER BECOMES AS DEEP AS 9 INCHES, THE SILT IS TO BE REMOVED AND THE BARRIER REPAIRED OR REPLACED. AFTER COMPLETION OF THE PROJECT, AND PERMANENT SEEDING HAS BEEN ESTABLISHED, EROSION CONTROL DEVICES AND ANY SILT BUILT UP SHALL BE REMOVED. DISTURBED AREAS DUE TO THIS CLEANUP OPERATION SHALL BE REPAIRED, RESEEDED AND REMULCHED.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

TABLE 6-1

ES-1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS.

ES-2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.

ES-3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.

ES-4: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

ES-5: PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.

ES-6: THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.

ES-7: ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

ES-8: DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

ES-9: THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

VIRGINIA EROSION AND SEDIMENT CONTROL PLAN MINIMUM STANDARDS (MS) CHECKLIST

Y	N	N/A		
☒	☐	☐	MS-1:	HAS TEMPORARY STABILIZATION BEEN ADDRESSED FOR ANY PERIOD LONGER THAN 14 DAYS AND PERMANENT STABILIZATION BEEN ADDRESSED FOR ANY PERIOD LONGER THAN ONE YEAR IN THE NARRATIVE?
☒	☐	☐	MS-2:	HAS STABILIZATION OF SOIL STOCKPILES, BORROW AREAS, AND DISPOSAL AREAS BEEN ADDRESSED IN THE NARRATIVE AND ON THE PLAN?
☒	☐	☐	MS-3:	HAS THE ESTABLISHMENT AND MAINTENANCE OF PERMANENT VEGETATIVE STABILIZATION BEEN ADDRESSED?
☒	☐	☐	MS-4:	DOES THE PLAN SPECIFICALLY STATE THAT SEDIMENT-TRAPPING FACILITIES SHALL BE CONSTRUCTED AS A FIRST STEP IN LAND-DISTURBING ACTIVITIES?
☒	☐	☐	MS-5:	DOES THE PLAN SPECIFICALLY STATE THAT STABILIZATION OF EARTHEN STRUCTURES IS REQUIRED IMMEDIATELY AFTER INSTALLATION? IS THIS NOTED FOR EACH MEASURE ON THE PLAN?
☒	☐	☐	MS-6:	ARE SEDIMENT TRAPS AND SEDIMENT BASINS SPECIFIED WHERE NEEDED AND DESIGNED TO THE STANDARD AND SPECIFICATION?
☒	☐	☐	MS-7:	HAVE THE DESIGN AND TEMPORARY/PERMANENT STABILIZATION OF CUT AND FILL SLOPES BEEN ADEQUATELY ADDRESSED? IS SURFACE ROUGHENING PROVIDED FOR SLOPES STEEPER THAN 3:1?
☒	☐	☐	MS-8:	HAVE ADEQUATE TEMPORARY OR PERMANENT CONVEYANCES (PAVED FLUMES, CHANNELS, SLOPE DRAINS) BEEN PROVIDED FOR CONCENTRATED STORMWATER RUNOFF ON CUT AND FILL SLOPES?
☐	☐	☒	MS-9:	HAS WATER SEEPING FROM A SLOPE FACE BEEN ADDRESSED (E.G., SUBSURFACE DRAINS)?
☐	☐	☒	MS-10:	IS ADEQUATE INLET PROTECTION PROVIDED FOR ALL OPERATIONAL STORM DRAIN AND CULVERT INLETS?
☒	☐	☐	MS-11:	ARE ADEQUATE OUTLET PROTECTION AND/OR CHANNEL LININGS PROVIDED FOR ALL STORMWATER CONVEYANCE CHANNELS AND RECEIVING CHANNELS? IS THERE A SCHEDULE INDICATING: 1. DIMENSIONS OF THE OUTLET PROTECTION? LINING? SIZE OF RIPRAP? 2. CROSS SECTION AND SLOPE OF THE CHANNELS? TYPE OF LINING? SIZE OF RIPRAP, IF USED?
☐	☐	☒	MS-12:	ARE IN-STREAM PROTECTION MEASURES REQUIRED SO THAT CHANNEL IMPACTS ARE MINIMIZED?
☐	☐	☒	MS-13:	ARE TEMPORARY STREAM CROSSINGS OF NON-ERODIBLE MATERIAL REQUIRED WHERE APPLICABLE?
☐	☐	☒	MS-14:	ARE ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES BEING FOLLOWED?
☐	☐	☒	MS-15:	HAS IMMEDIATE RE-STABILIZATION OF AREAS SUBJECT TO IN-STREAM CONSTRUCTION (BED AND BANKS) BEEN ADEQUATELY ADDRESSED?
☒	☐	☐	MS-16:	HAVE DISTURBANCES FROM UNDERGROUND UTILITY LINE INSTALLATIONS BEEN ADDRESSED? 1. NO MORE THAN 500 LINEAR FEET OF TRENCH OPEN AT ONE TIME? 2. EXCAVATION MATERIAL PLACED ON THE UPHILL SIDE OF TRENCHES (EXCEPT WHERE PROHIBITED BY SAFETY STANDARD REQUIREMENTS)? 3. EFFLUENT FROM DEWATERING FILTERED OR PASSED THROUGH A SEDIMENT-TRAPPING DEVICE? 4. PROPER BACKFILL, COMPACTION, AND RESTABILIZATION?
☒	☐	☐	MS-17:	IS THE TRANSPORT OF SOIL AND MUD ONTO PUBLIC ROADWAYS PROPERLY CONTROLLED? (I.E., CONSTRUCTION ENTRANCES, WASH RACKS, TRANSPORT OF SEDIMENT TO A TRAPPING FACILITY, CLEANING OF ROADWAYS AT THE END OF EACH DAY, NO WASHING BEFORE SWEEPING AND SHOVELING)
☒	☐	☐	MS-18:	HAS THE REMOVAL OF TEMPORARY PRACTICES BEEN ADDRESSED? HAVE THE REMOVAL OF ACCUMULATED SEDIMENT AND THE FINAL STABILIZATION OF THE RESULTING DISTURBED AREAS BEEN ADDRESSED?
☒	☐	☐	MS-19:	ARE PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT ADEQUATELY PROTECTED FROM SEDIMENT DEPOSITION, EROSION, AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY, AND PEAK FLOW RATE OF STORMWATER RUNOFF? HAVE ADEQUATE CHANNELS BEEN PROVIDED ON-SITE?

1	10/27/21	SEDIMENT TRAP NOTE

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GENERAL NOTES
FOR
NLBTC - LOTS 10A & 12A GRADING PLAN
BEDFORD, VIRGINIA

PROJECT NO.	20211087
LAT.	37.3084°
LONG.	-79.3429°
DATE:	08/24/2021
DRAWN BY:	ELC
CHECKED BY:	PSB

COMMONWEALTH OF VIRGINIA
P. Scott Beasley
P. SCOTT BEASLEY
Lic. No. 041801
12/13/2021
PROFESSIONAL ENGINEER

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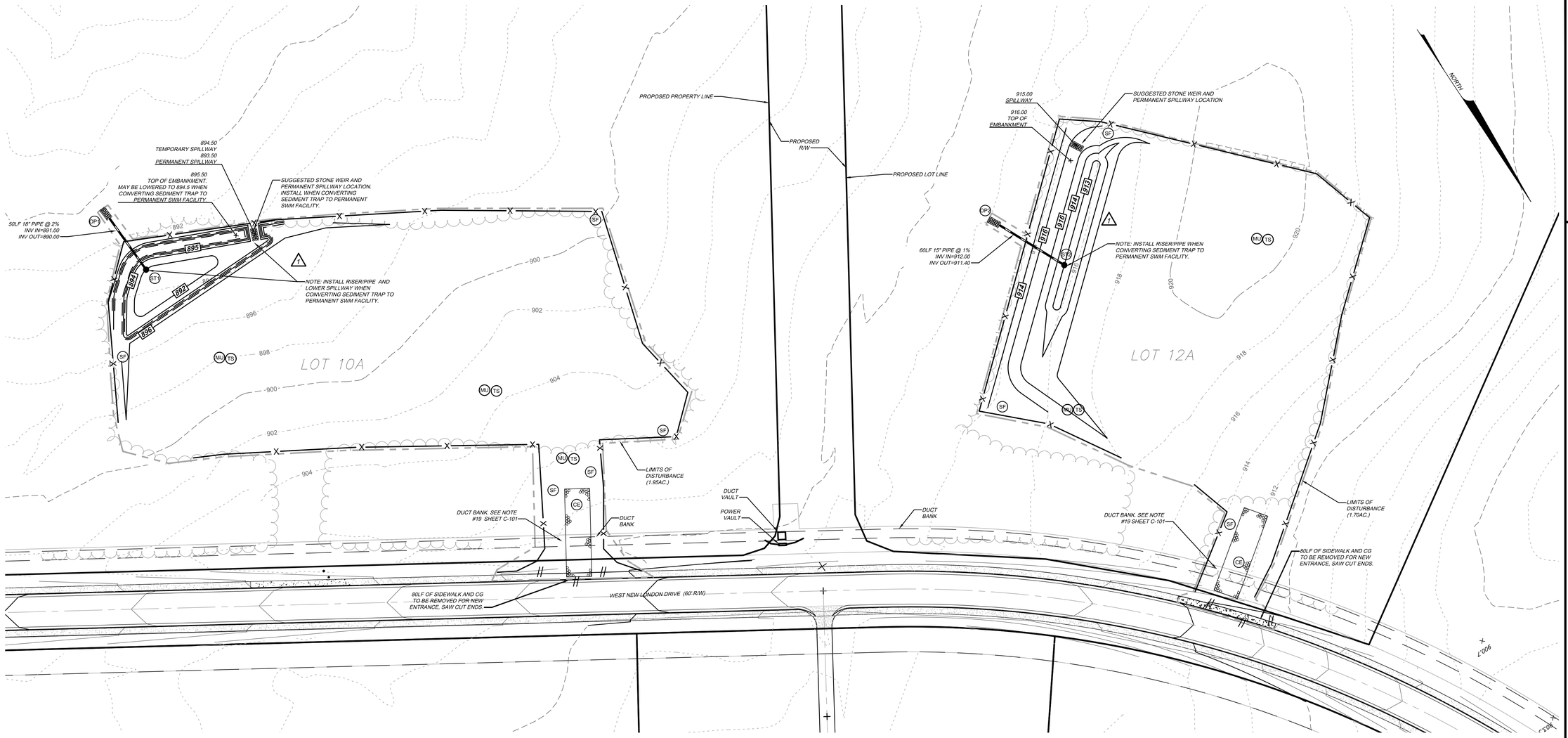
SHEET NO.	REV.
G-002	----



TEMPORARY SEDIMENT TRAP TABLES (3.13)

3.13 Temporary Sediment Trap	
ID	ST-1
drainage area (acres)	1.95
dry storage volume (cf)	144
wet storage volume (cf)	142
excavation depth wet storage (ft)	2.50
bottom elevation	891.00
sediment cleanout elevation	892.25
outlet elevation	894.50
outlet spillway length (across flow, ft)	12
top embankment elevation	895.50
embankment top width (ft)	6.0
embankment slope	2:1

3.13 Temporary Sediment Trap	
ID	ST-2
drainage area (acres)	1.70
dry storage volume (cf)	127
wet storage volume (cf)	116
excavation depth wet storage (ft)	2.00
bottom elevation	912.00
sediment cleanout elevation	913.00
outlet elevation	915.00
outlet spillway length (across flow, ft)	10
top embankment elevation	916.00
embankment top width (ft)	6.0
embankment slope	2:1

OUTLET PROTECTION TABLE (3.18)

ID	OP1	OP2
DESIGN FLOW	4.4cfs	0.8cfs
TAILWATER DEPTH	.75'	.70'
DISCHARGE VELOCITY	7.3fps	3.5fps
RIP RAP GRADATION	Class 1A	Class 1A
APRON LENGTH	7.5'	6.0'
APRON WIDTH(S)	4.5'	3.75'
SIDE SLOPES	48/1	48/1
APRON DEPTH	6"	6"

DEMOLITION NOTES:

1. NO LAND DISTURBING ACTIVITY SHALL OCCUR PRIOR TO OBTAINING A LAND DISTURBANCE PERMIT FROM THE LOCAL AUTHORITY.
2. ALL EXCESS AND UNSUITABLE MATERIAL TO BE DISPOSED OF BY CONTRACTOR, NO BURNING IS ALLOWED ONSITE.
3. CONTRACTOR RESPONSIBLE FOR COORDINATION WITH ALL APPLICABLE UTILITY COMPANIES & OWNER AS NECESSARY DURING CONSTRUCTION AND DURING RELOCATION OF EXISTING UTILITIES.
4. CONTRACTOR TO NOTIFY ENGINEER AND APPLICABLE UTILITY SERVICE PROVIDER OF ANY CONFLICTS WITH UNDERGROUND UTILITIES.
5. CONTRACTOR TO SUPPLY LOCAL AUTHORITY WITH THE NAME AND CERTIFICATION NUMBER OF THE RESPONSIBLE LAND DISTURBER AND POST THE LAND DISTURBANCE BOND AT THE AMOUNT SET BY THE LOCAL AUTHORITY WHEN OBTAINING THE LAND DISTURBANCE PERMIT.
6. CONTRACTOR RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, BONDS, AND FEES AT HIS EXPENSE FOR THIS PROJECT THAT HAVE NOT BEEN OBTAINED BY OWNER. CONTRACTOR SHALL COORDINATE WITH OWNER.
7. THE SCOPE OF WORK IS FOR THE GRADING OF A PAD SITE , STORMWATER MANAGEMENT, AND THE CONSTRUCTION OF A PAVED ENTRY TO THE EXISTING ROAD .
8. DEMOLITION CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS IN THE FIELD. ANY DISCREPANCIES FOUND SHALL BE REPORTED TO OWNER AND CIVIL ENGINEER PRIOR TO SUBMISSION OF BIDS.
9. ALL PORTIONS OF WORK SHALL BE DONE IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL CODES (ORDINANCES, AND STANDARDS).
10. CONTRACTOR TO ESTABLISH AND PROPERLY FLAG PROPERTY LINES PRIOR TO DEMOLITION.
11. DEMOLITION CONTRACTOR TO ACQUIRE ALL NECESSARY PERMITS TO COMPLETE DEMOLITION. VERIFY WITH THE LOCAL AUTHORITY BUILDING DEPARTMENT, ZONING, RIGHT OF WAY, AND ALL OTHER GOVERNING AUTHORITIES.
12. ALL PLUMBING, SANITARY, GAS, CABLE T.V., ELECTRICAL, AND TELEPHONE LINES SERVICING THIS SITE TO BE CAPPED IN ACCORDANCE WITH LOCAL CODES.
13. DEMOLITION CONTRACTOR TO NOTIFY UTILITY NOTIFICATION CENTER NO LESS THAN 48 HOURS OR MORE THAN (5) WORKING DAYS PRIOR TO DEMOLITION OF EXISTING UTILITIES AS REQUIRED BY LOCAL UTILITIES, CONTRACTOR TO VERIFY.
14. DEMOLITION CONTRACTOR TO PROVIDE ALL BARRICADES, SCAFFOLDING, AND OTHER MEANS OF PROTECTION REQUIRED TO COMPLY WITH ALL STATE LAWS, AND LOCAL MUNICIPAL ORDINANCES TO SAFE GUARD PERSONS.
15. ANY FILL MATERIAL REQUIRED SHALL BE CLEAN, NO CONCRETE RUBBLE ETC. WILL BE ACCEPTED.
16. REMOVAL OF ASBESTOS CONTAINING MATERIALS SHALL BE IN ACCORDANCE WITH REGULATORY STANDARDS AND IN ACCORDANCE OUTLINED IN THE LIMITED ASBESTOS SURVEY REPORT PERFORMED FOR THIS PROJECT.
17. TREES SHOWN TO REMAIN SHALL MAINTAIN PROTECTIVE BARRIERS DURING DEMOLITION AND CONSTRUCTION. THESE BARRIERS SHALL BE IN ACCORDANCE WITH CURRENT LOCAL AUTHORITY/VDOT STANDARDS.
18. CONTRACTOR SHALL SAWCUT PAVEMENT AT THE LIMITS OF DEMOLITION FOR THE ENTIRE PERIMETER OF THE LIMITS. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY EXISTING SITE IMPROVEMENTS, NOT SPECIFICALLY PLANNED FOR DEMOLITION, DAMAGED DUE TO DEMOLITION ACTIVITY.
19. CONTRACTOR SHALL LOCATE/POTHOLE DUCTBANK AT PROPOSED ENTRANCE LOCATION PRIOR TO CONSTRUCTION TO CONFIRM CONSTRUCTABILITY AT THAT LOCATION. NOTIFY COUNTY & ENGINEER IMMEDIATELY, SHOULD CONFLICTS BE FOUND.

VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL PRACTICES

* CHART TAKEN FROM THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (JULY 1992)

- (CE) **TEMPORARY CONSTRUCTION ENTRANCE (3.02)**
- (SF) **SILT FENCE (3.05)**
- (ST) **TEMPORARY SEDIMENT TRAP (3.13)**
- (OP) **OUTLET PROTECTION (3.18)**
- (TS) **TEMPORARY SEEDING (3.31)**
- (PS) **PERMANENT SEEDING (3.32)**
- (MU) **MULCHING (3.35)**

// *ITEM TO BE REMOVED*

1	10/27/21	SEDIMENT TRAP NOTE

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E&S CONTROL STAGE 1
FOR
NLBTC - LOTS 10A & 12A GRADING PLAN
BEDFORD, VIRGINIA

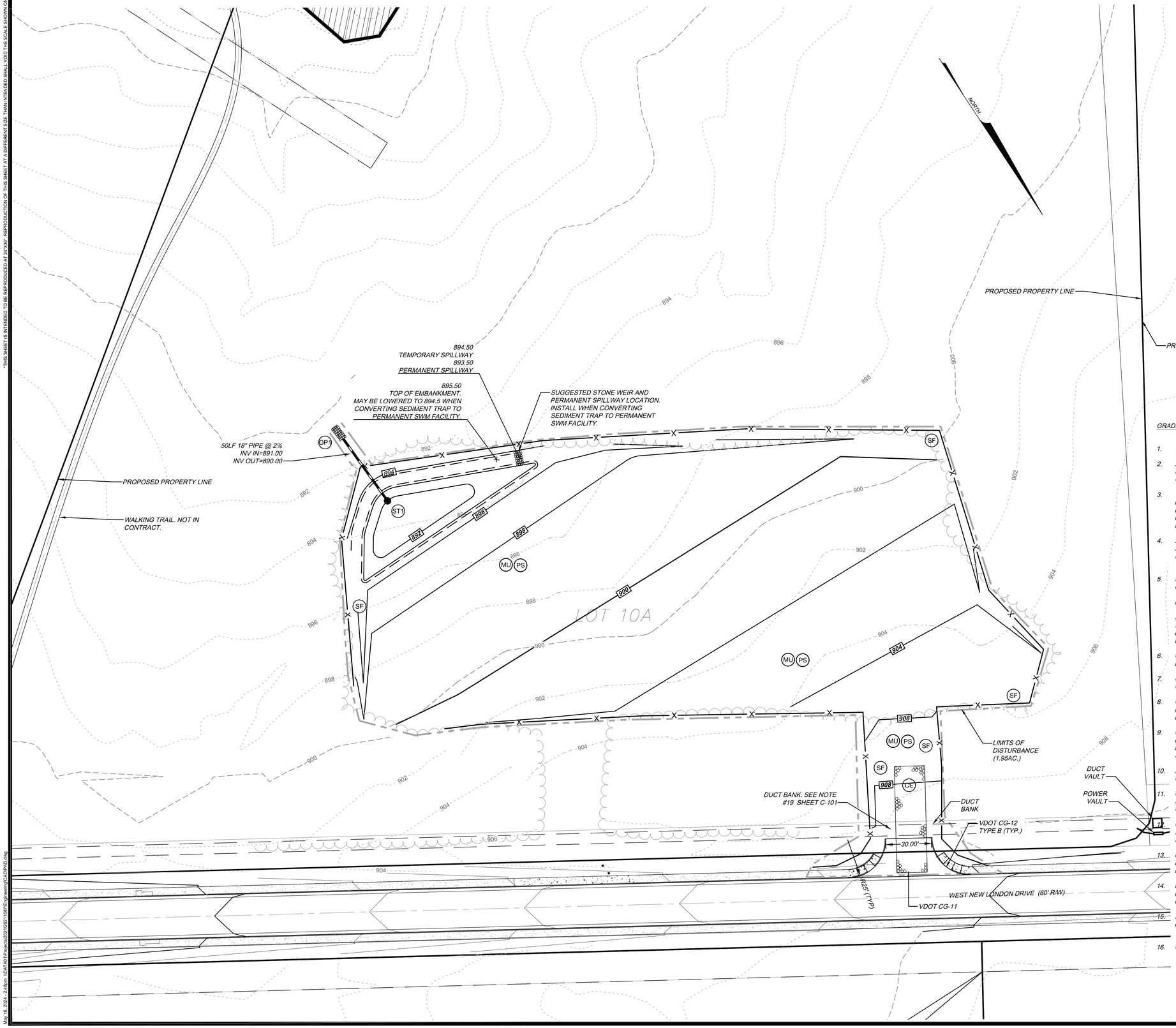
PROJECT NO.	20211087
LAT.	37.3084°
LONG.	-79.3429°
DATE:	08/24/2021
DRAWN BY:	ELC
CHECKED BY:	PSB

COMMONWEALTH OF VIRGINIA
P. SCOTT BEASLEY
Lic. No. 041801
12/13/2021
PROFESSIONAL ENGINEER

0 20 40 80
SCALE 1" = 40'

HURT & PROFFITT

SHEET NO.	REV.
C-101	----



VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL PRACTICES

* CHART TAKEN FROM THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (JULY 1992)

- (CE) **TEMPORARY CONSTRUCTION ENTRANCE (3.02)**
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- (TS) **TEMPORARY SEEDING (3.31)**
- (PS) **PERMANENT SEEDING (3.32)**
- (MU) **MULCHING (3.35)**

GRADING NOTES :

1. *TOTAL DISTURBED AREA LOT 10A = 1.95AC.*
2. *ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE PER THE STANDARDS AND SPECIFICATIONS OF THE MOST RECENT VERSION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH).*
3. *THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL DEVICES FOR THE DURATION OF THE PROJECT. ALL EROSION CONTROL DEVICES SHALL BE CHECKED DAILY TO ENSURE THAT ALL ARE PROPERLY IN PLACE AND FUNCTIONING AS PLANNED. ALL EROSION CONTROL DEVICES WILL BE REPAIRED (CLEANED) AS NECESSARY, AND AFTER EACH RAINFALL PRODUCING RUNOFF AS A MINIMUM.*
4. *ALL DISTURBED AREAS TO RECEIVE TEMPORARY SEEDING, PERMANENT SEEDING AND MULCH. ALL SLOPES OF 2:1 OR GREATER MUST RECEIVE BLANKET AND MATTING IN ADDITION TO SEEDING AND MULCHING PRACTICES AS STATED IN THE MOST RECENT VERSION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.*
5. *STRUCTURAL FILL MATERIAL UNDER AND WITHIN 15 FEET OF THE BUILDING PAD AND THE UPPER 12 INCHES OF ROADS AND PARKING AREAS SHOULD BE PLACED IN HORIZONTAL LIFTS, WITH AN 8 INCH TO 9 INCH LOOSE THICKNESS, AND COMPACTED TO AT LEAST 98% OF THE MATERIAL'S MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR).*

   STRUCTURAL FILL MATERIAL PLACED IN SLOPES, AND THE LOWER PORTIONS OF ROADS AND PARKING LOTS SHOULD BE PLACED IN HORIZONTAL LIFTS, WITH AN 8 INCH TO 9 INCH LOOSE THICKNESS, AND COMPACTED TO AT LEAST 95% OF THE MATERIAL'S MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR).
6. *CONTRACTOR IS TO FURNISH THE NAME OF THEIR VIRGINIA CERTIFIED RESPONSIBLE LAND DISTURBER TO THE BEDFORD COUNTY PRIOR TO ANY LAND DISTURBANCE.*
7. *CONTRACTOR TO TEMPORARY SEED & MULCH DIVERSIONS IMMEDIATELY FOLLOWING CONSTRUCTION.*
8. *CONTRACTOR TO BE RESPONSIBLE FOR REROUTING ALL TEMPORARY DIVERSIONS AND SILT FENCE AS NECESSARY DURING CONSTRUCTION TO MAINTAIN PROPER DRAINAGE OF DISTURBED AREAS.*
9. *CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL ADDITIONAL E&S MEASURES OR MAINTENANCE REQUESTS OR REROUTING, OR RELOCATING, E&S MEASURES AS DEEMED NECESSARY BY THE BEDFORD COUNTY OR LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.*
10. *ALL FILL AREAS TO BE STRIPPED OF UNSUITABLE MATERIAL BEFORE PLACING AND COMPACTING FILL MATERIAL.*
11. *CONTRACTOR SHALL BACKFILL TO THE EDGE OF PAVEMENT AND COMPACT. CONTRACTOR SHALL SEED, FERTILIZE AND MULCH IMMEDIATELY UPON COMPLETION OF GRADING OPERATIONS.*
12. *CONTRACTOR SHALL CONTACT ENGINEER IF ADDITIONAL CONSTRUCTION ENTRANCE MEASURES ARE NEEDED TO PREVENT THE TRACKING OF MUD, DIRT, OR DEBRIS ONTO ANY PAVED SURFACES INSIDE OR OUTSIDE OF THE PROPOSED CONSTRUCTION LIMITS.*
13. *UPON COMMENCEMENT OF DEMOLITION ACTIVITIES THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND SUPPLYING THE NECESSARY SAMPLES AND RESULTS TO DETERMINE FERTILIZER AND NUTRIENT APPLICATION FOR THE ESTABLISHMENT OF GRASS IN THE SITE.*
14. *NO SITE WORK, LOGGING, GRUBBING OR GRADING IS PERMITTED PRIOR TO ISSUANCE OF A LAND DISTURBING PERMIT. NO BURNING OF ANY DEBRIS WITHOUT PRIOR APPROVAL FROM THE FIRE MARSHAL'S OFFICE.*
15. *ALL EROSION/STORMWATER MANAGEMENT MEASURES MUST BE DE-WATERED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY AND ALL TEMPORARY EROSION MUST BE REMOVED WITHIN 30 DAYS OF PERMANENT STABILIZATION OF THE SITE.*
16. *CONTRACTOR TO PROVIDE ALL NECESSARY TRAFFIC CONTROL MEASURES WHEN WORKING IN THE RIGHT OF WAY.*

1	10/27/21	SEDIMENT TRAP NOTE

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LOT 10A GRADING & E&S STAGE 2
FOR
NLBTC - LOTS 10A & 12A GRADING PLAN
BEDFORD, VIRGINIA

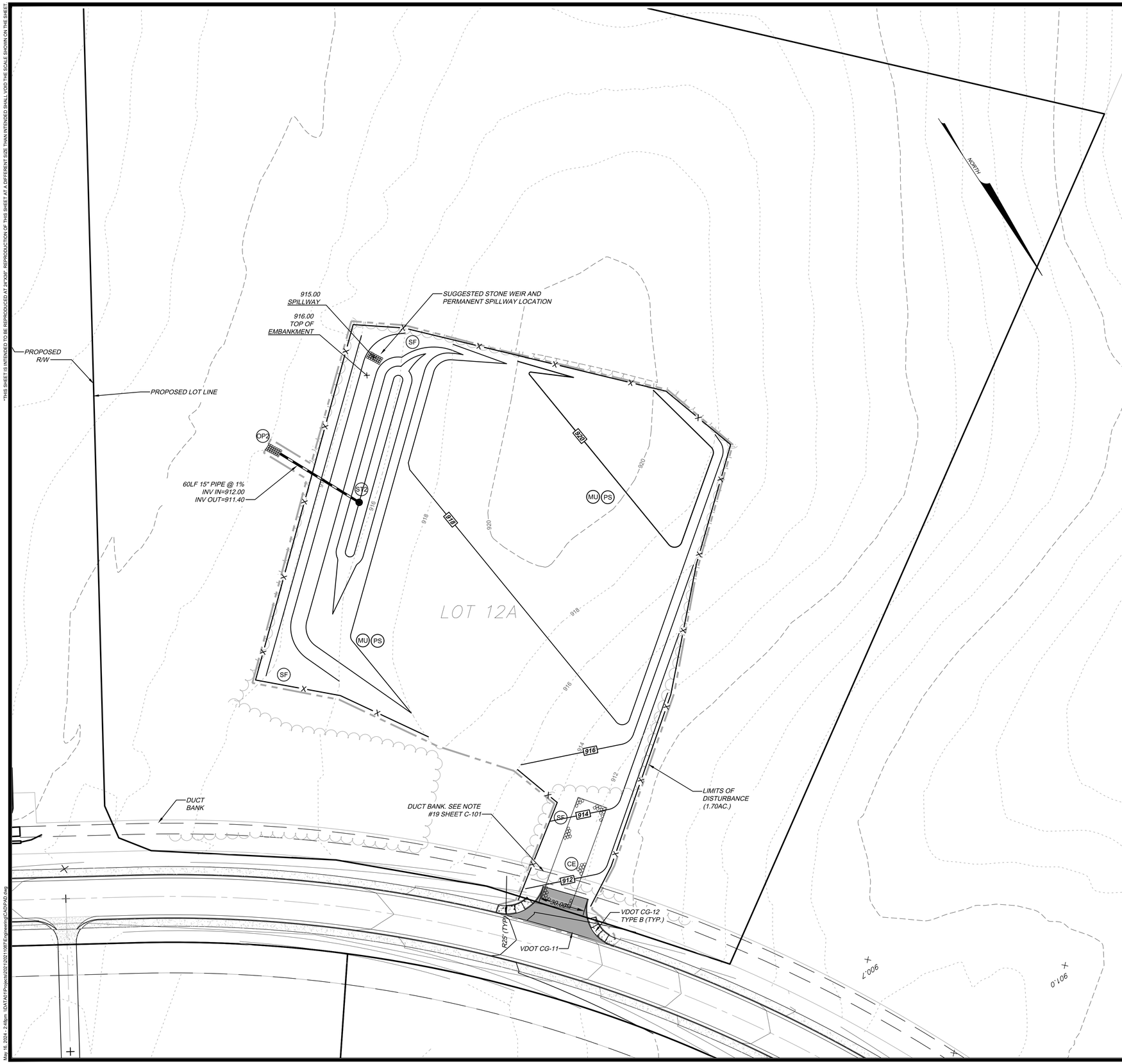
PROJECT NO.	20211087
LAT.	37.3084°
LONG.	-79.3429°
DATE:	08/24/2021
DRAWN BY:	ELC
CHECKED BY:	PSB

COMMONWEALTH OF VIRGINIA
P. SCOTT BEASLEY
Lic. No. 041801
12/13/2021
PROFESSIONAL ENGINEER

0 15 30 60
SCALE 1" = 30'

HURT & PROFFITT

SHEET NO.	REV.
C-102	----



GRADING NOTES :

1. TOTAL DISTURBED AREA LOT 12A = 1.70 AC.
2. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE PER THE STANDARDS AND SPECIFICATIONS OF THE MOST RECENT VERSION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH).
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL DEVICES FOR THE DURATION OF THE PROJECT. ALL EROSION CONTROL DEVICES SHALL BE CHECKED DAILY TO ENSURE THAT ALL ARE PROPERLY IN PLACE AND FUNCTIONING AS PLANNED. ALL EROSION CONTROL DEVICES WILL BE REPAIRED (CLEANED) AS NECESSARY, AND AFTER EACH RAINFALL PRODUCING RUNOFF AS A MINIMUM.
4. ALL DISTURBED AREAS TO RECEIVE TEMPORARY SEEDING, PERMANENT SEEDING AND MULCH. ALL SLOPES OF 2:1 OR GREATER MUST RECEIVE BLANKET AND MATTING IN ADDITION TO SEEDING AND MULCHING PRACTICES AS STATED IN THE MOST RECENT VERSION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
5. STRUCTURAL FILL MATERIAL UNDER AND WITHIN 15 FEET OF THE BUILDING PAD AND THE UPPER 12 INCHES OF ROADS AND PARKING AREAS SHOULD BE PLACED IN HORIZONTAL LIFTS, WITH AN 8 INCH TO 9 INCH LOOSE THICKNESS, AND COMPACTED TO AT LEAST 98% OF THE MATERIAL'S MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR).

   STRUCTURAL FILL MATERIAL PLACED IN SLOPES, AND THE LOWER PORTIONS OF ROADS AND PARKING LOTS SHOULD BE PLACED IN HORIZONTAL LIFTS, WITH AN 8 INCH TO 9 INCH LOOSE THICKNESS, AND COMPACTED TO AT LEAST 95% OF THE MATERIAL'S MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR).
6. CONTRACTOR IS TO FURNISH THE NAME OF THEIR VIRGINIA CERTIFIED RESPONSIBLE LAND DISTURBER TO THE BEDFORD COUNTY PRIOR TO ANY LAND DISTURBANCE.
7. CONTRACTOR TO TEMPORARY SEED & MULCH DIVERSIONS IMMEDIATELY FOLLOWING CONSTRUCTION.
8. CONTRACTOR TO BE RESPONSIBLE FOR REROUTING ALL TEMPORARY DIVERSIONS AND SILT FENCE AS NECESSARY DURING CONSTRUCTION TO MAINTAIN PROPER DRAINAGE OF DISTURBED AREAS.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL ADDITIONAL E&S MEASURES OR MAINTENANCE REQUESTS OR REROUTING, OR RELOCATING, E&S MEASURES AS DEEMED NECESSARY BY THE BEDFORD COUNTY OR LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
10. ALL FILL AREAS TO BE STRIPPED OF UNSUITABLE MATERIAL BEFORE PLACING AND COMPACTING FILL MATERIAL.
11. CONTRACTOR SHALL BACKFILL TO THE EDGE OF PAVEMENT AND COMPACT. CONTRACTOR SHALL SEED, FERTILIZE AND MULCH IMMEDIATELY UPON COMPLETION OF GRADING OPERATIONS.
12. CONTRACTOR SHALL CONTACT ENGINEER IF ADDITIONAL CONSTRUCTION ENTRANCE MEASURES ARE NEEDED TO PREVENT THE TRACKING OF MUD, DIRT, OR DEBRIS ONTO ANY PAVED SURFACES INSIDE OR OUTSIDE OF THE PROPOSED CONSTRUCTION LIMITS.
13. UPON COMMENCEMENT OF DEMOLITION ACTIVITIES THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND SUPPLYING THE NECESSARY SAMPLES AND RESULTS TO DETERMINE FERTILIZER AND NUTRIENT APPLICATION FOR THE ESTABLISHMENT OF GRASS IN THE SITE.
14. NO SITE WORK, LOGGING, GRUBBING OR GRADING IS PERMITTED PRIOR TO ISSUANCE OF A LAND DISTURBING PERMIT. NO BURNING OF ANY DEBRIS WITHOUT PRIOR APPROVAL FROM THE FIRE MARSHAL'S OFFICE.
15. ALL EROSION/STORMWATER MANAGEMENT MEASURES MUST BE DE-WATERED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY AND ALL TEMPORARY EROSION MUST BE REMOVED WITHIN 30 DAYS OF PERMANENT STABILIZATION OF THE SITE.
16. CONTRACTOR TO PROVIDE ALL NECESSARY TRAFFIC CONTROL MEASURES WHEN WORKING IN THE RIGHT OF WAY.

VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL PRACTICES

* CHART TAKEN FROM THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (JULY 1992)

CE	**TEMPORARY CONSTRUCTION ENTRANCE (3.02)**
SF	**SILT FENCE (3.05)**
ST	**TEMPORARY SEDIMENT TRAP (3.13)**
OP	**OUTLET PROTECTION (3.18)**
TS	**TEMPORARY SEEDING (3.31)**
PS	**PERMANENT SEEDING (3.32)**
MU	**MULCHING (3.35)**

1	10/27/21	SEDIMENT TRAP NOTE

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LOT 12A GRADING & E&S STAGE 2
FOR
NLBTC - LOTS 10A & 12A GRADING PLAN
BEDFORD, VIRGINIA

PROJECT NO.	20211087
LAT.	37.3084°
LONG.	-79.3429°
DATE:	08/24/2021
DRAWN BY:	ELC
CHECKED BY:	PSB

COMMONWEALTH OF VIRGINIA
P. SCOTT BEASLEY
Lic. No. 041801
12/13/2021
PROFESSIONAL ENGINEER

0 15 30 60
SCALE 1" = 30'

HURT & PROFFITT

SHEET NO.	REV.
C-103	----

TABLE 3.31-B (TS)
(Revised June 2003)
TEMPORARY SEEDING SPECIFICATIONS
QUICK REFERENCE FOR ALL REGIONS

SEED		
APPLICATION DATES	**SPECIES**	**APPLICATION RATES**
Sept. 1 - Feb. 15	50/50 Mix of Annual Ryegrass (Iolium multi-florum) & Cereal (Winter) Rye (Secale cereale)	50 - 100 (lbs/acre)
Feb. 16 - Apr. 30	Annual Ryegrass (Iolium multi-florum)	60 - 100 (lbs/acre)
May 1 - Aug. 31	German Millet	50 (lbs/acre)
FERTILIZER & LIME		

- Apply 10-20-10 **fertilizer** at a rate of 450 lbs. / acre (or 10 lbs. / 1,000 sq. ft.)
- Apply **Pulverized Agricultural Limestone** at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.)

NOTE:
- A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
- Incorporate the lime and fertilizer into the top 4 – 6 inches of the soil by disking or by other means.
- When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin #4, 2003 Nutrient Management for Development Sites at http://www.dcr.state.va.us/sw/e&s.htm#pubs

TABLE 3.32-D (PS)
(Revised June 2003)
PERMANENT SEEDING SPECIFICATIONS FOR PIEDMONT AREA

SEED[1]		
LAND USE	**SPECIES**	**APPLICATION PER ACRE**
Minimum Care Lawn (Commercial or Residential)	Tall Fescue[1] Perennial Ryegrass Kentucky Bluegrass[1]	95-100% 0-5% 0-5% TOTAL: 175-200 lbs.
High-Maintenance Lawn	Tall Fescue[1]	TOTAL: 200-250 lbs.
General Slope (3:1 or less)	Tall Fescue[1] Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop[2]	128 lbs. 2 lbs. 20 lbs. TOTAL: 150 lbs.
Low-Maintenance Slope (Steeper than 3:1)	Tall Fescue[1] Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop[2] Crownvetch[3]	108 lbs. 2 lbs. 20 lbs. 20 lbs. TOTAL: 150 lbs.

1 - When selecting varieties of turfgrass, use the Virginia Crop Improvement Association (VCIA) recommended turfgrass variety list. Quality seed will bear a label indicating that they are approved by VCIA. A current turfgrass variety list is available at the local County Extension office or through VCIA at 804-746-4884 or at http://sudan.cses.vt.edu/html/Turf/turf/publications/publications2.html
2 - Use seasonal nurse crop in accordance with seeding dates as stated below:

February 16th - April ..... Annual Rye
May 1st - August 15th ..... Foxtail Millet
August 16th - October ..... Annual Rye
November - February 15th ..... Winter Rye

3 - Substitute Sericea lespedeza for Crownvetch east of Farmville, VA (May through September use hulled seed, all other periods, use unhulled Sericea). If Flatpea is used, increase rate to 30 lbs./acre. If Weeping Lovegrass is used, include in any slope or low maintenance mixture during warmer seeding periods, increase to 30 -40

FERTILIZER & LIME

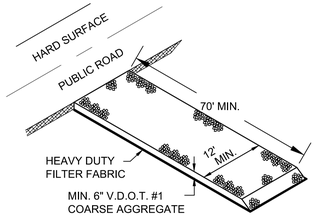
- Apply 10-20-10 **fertilizer** at a rate of **500** lbs. / acre (or 12 lbs. / 1,000 sq. ft.)
- Apply **Pulverized Agricultural Limestone** at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.)

NOTE:
- A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
- Incorporate the lime and fertilizer into the top 4 – 6 inches of the soil by disking or by other means.
- When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin #4, 2003 Nutrient Management for Development Sites at http://www.dcr.state.va.us/sw/e&s.htm#pubs

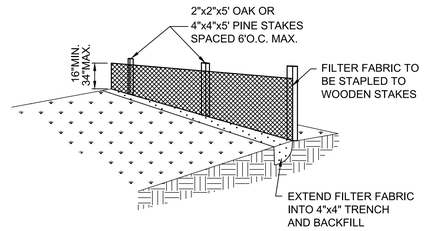
TABLE 3.35-A (MU)

ORGANIC MULCH MATERIALS AND APPLICATION RATES

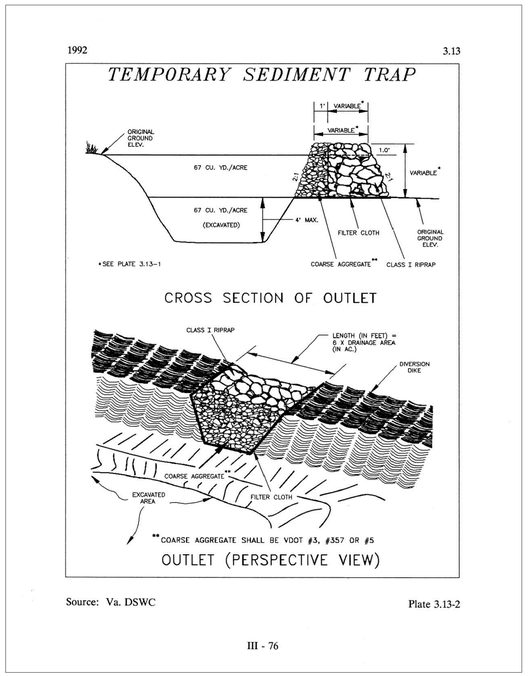
MULCHES	RATES:		NOTES:
	Per Acre	Per 1,000 sq. ft.	
Straw or Hay	1 ½ - 2 tons (Minimum 2 tons for winter cover)	70 - 90 lbs.	Free from weeds and coarse matter. Must be anchored. Spread with a mulch blower or by hand.

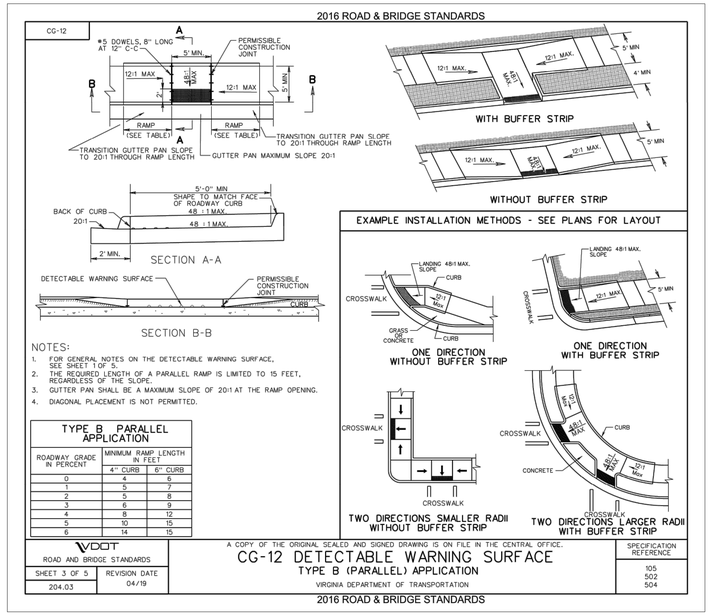


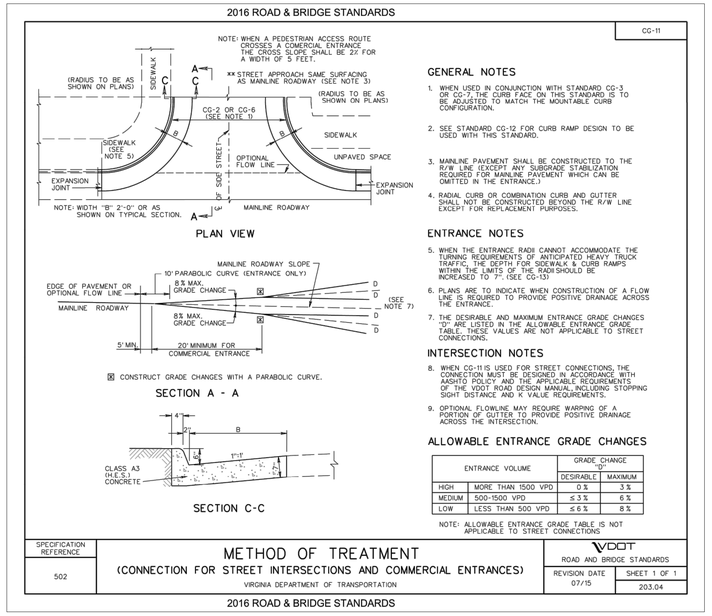
TEMPORARY CONSTRUCTION ENTRANCE (CE)
VESHC STD. 3.02
N.T.S.



SILT FENCE (SF)
(WITHOUT WIRE SUPPORT)
VESHC STD. 3.05
N.T.S.







1	10/27/21	SEDIMENT TRAP NOTE

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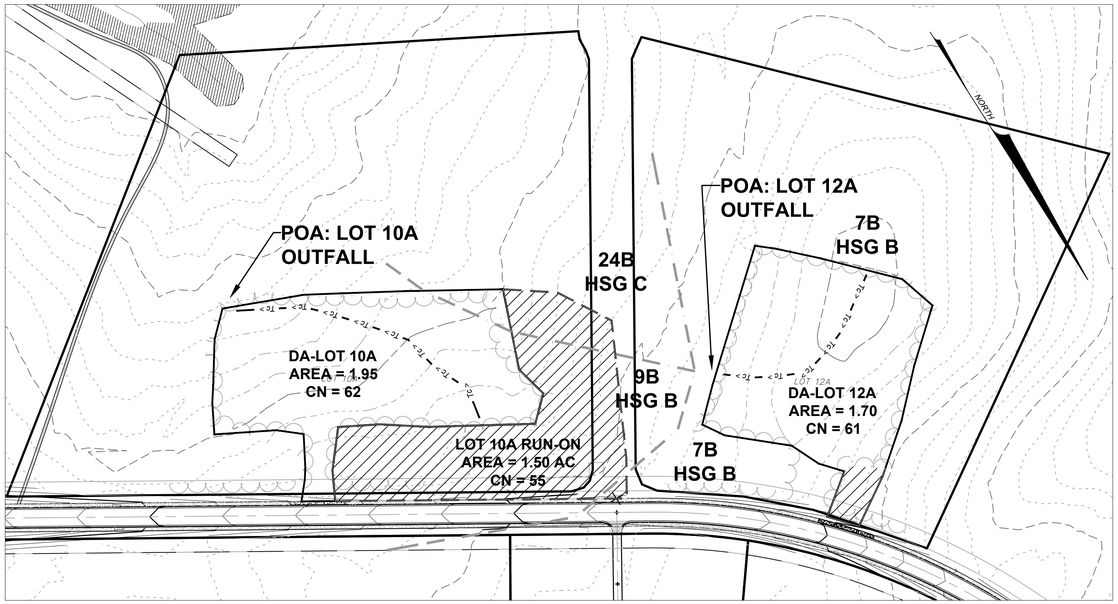
DETAIL SHEET
FOR
NLBTC - LOTS 10A & 12A GRADING PLAN
BEDFORD, VIRGINIA

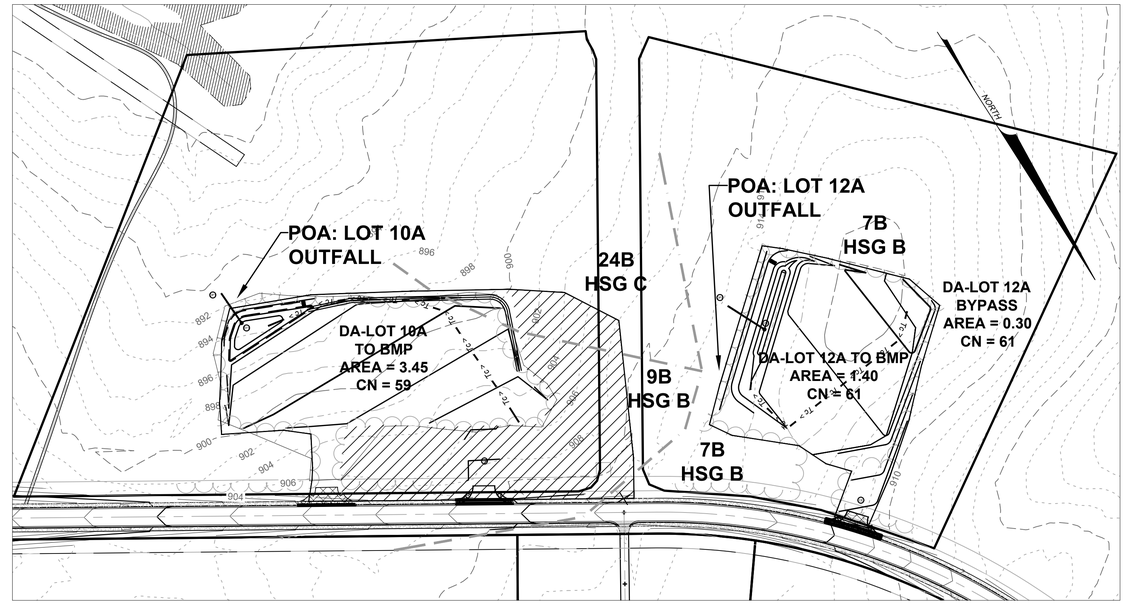
PROJECT NO.	20211087
LAT.	37.3084°
LONG.	-79.3429°
DATE:	08/24/2021
DRAWN BY:	ELC
CHECKED BY:	PSB

COMMONWEALTH OF VIRGINIA
P. SCOTT BEASLEY
Lic. No. 041801
12/13/2021
PROFESSIONAL ENGINEER

HURT & PROFFITT

SHEET NO.	REV.
C-501	----





PRE-DEVELOPED DRAINAGE AREA

HUC: 030101011501 (RU55, BIG OTTER RIVER-ORRIX CREEK)

100 50 0 100 200
GRAPHIC SCALE IN FEET
1" = 100'

LEGEND

- WOODED/OPEN SPACE (B) CN=55 (C) CN=70
- MANAGED TURF (B) CN=61 (C) CN=74
- IMPERVIOUS AREA CN=98

POST-DEVELOPED DRAINAGE AREA

HUC: 030101011501 (RU55, BIG OTTER RIVER-ORRIX CREEK)

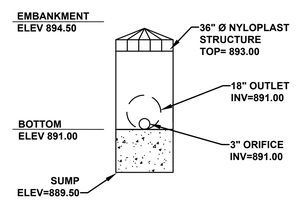
100 50 0 100 200
GRAPHIC SCALE IN FEET
1" = 100'

Pre-developed Quantity Calculations			DA-Lot 10A	Lot 10A Offsite Run-on	Total (Lot 10A + Offsite)	DA-Lot 12A
			Hydrograph 1	Hydrograph 2	Hydrograph 3	Hydrograph 4
Total Area		AC	1.95	1.50	3.45	1.70
Drainage Area Breakdown						
Description	CN					
Woods/Open Space (B)	55	AC	0.00	1.50	1.50	0.09
Managed Turf (C)	74	AC	0.08	0.00	0.08	0.00
Managed Turf (B)	61	AC	1.86	0.00	1.86	1.61
Impervious Area	98	AC	0.01	0.00	0.01	0.00
Weighted Curve Number			62	55	59	61
Time of Concentration		MIN	10.6	5.0		10.9
Design Flow (1-YR)		CFS	**0.6**	**0.1**	**0.7**	**0.4**
Design Flow (2-YR)		CFS	**1.2**	**0.4**	**1.6**	**0.9**
Design Flow (10-YR)		CFS	**4.1**	**2.5**	**6.4**	**3.4**

Post-developed Quantity Calculations			DA-Lot 10A	DA-Lot 10A BMP	DA-Lot 12A	DA-Lot 12A BMP	DA-Lot 12A Bypass	DA-Lot 12A
			Hydrograph 5	Hydrographs 6, 7	Hydrograph 8	Hydrograph 9, 10	Hydrograph 11	Hydrograph 12
Total Area		AC	1.95	3.45	1.70	1.40	0.30	1.70
Drainage Area Breakdown								
Description	CN							
Woods/Open Space (B)	55	AC	0.00	1.50	0.00	0.00	0.00	0.00
Managed Turf (C)	74		0.08	0.08	0.00	0.00	0.00	0.00
Managed Turf (B)	61	AC	1.84	1.84	1.70	1.40	0.30	1.70
Impervious Area	98	AC	0.03	0.03	0.00	0.00	0.00	0.00
Weighted Curve Number			62	59	61	61	61	61
Time of Concentration		MIN	11.1	5.0	12.3	12.3	5.0	
Design Flow (1-YR)		CFS	**0.6**	**0.7**	**0.4**	**0.3**	**0.2**	
Design Flow (2-YR)		CFS	**1.2**	**1.6**	**0.9**	**0.7**	**0.3**	
Design Flow (10-YR)		CFS	**4.1**	**6.4**	**3.1**	**2.6**	**0.9**	
Routed/Combined Flow (1-YR)		CFS		**0.2**		**0.1**		**0.2**
Routed/Combined Flow (2-YR)		CFS		**0.2**		**0.2**		**0.4**
Routed/Combined Flow (10-YR)		CFS		**4.4**		**0.8**		**1.2**

Energy Balance Calculations Channel Protection Compliance (1-Year Storm)		DA-Lot 10A	DA-Lot 12A
Drainage Area	AC	1.95	1.70
Improvement Factor (I.F.)		0.8	0.8
1-Year Rainfall (P)	IN	2.8	2.8
Pre-developed Area	AC	1.95	1.70
Pre-developed CN		62	61
Pre-developed S	IN	6.13	6.39
Pre-developed Runoff Depth	IN	0.32	0.29
Pre-developed POA Flow (Q_{pre})	CFS	0.6	0.4
Pre-developed Volume (RV_{pre})	CF	2,277	1,804
Post-developed Area	AC	1.95	1.70
Post-developed CN		62	61
Post-developed S	IN	6.13	6.39
Post-developed Runoff Depth	IN	0.32	0.29
Post-developed Volume (RV_{post})	CF	2,277	1,804
Allowable Flow (Site + Offsite) = I.F. x (Q_{pre} x RV_{pre}) / RVpost + $Q_{pre\text{-}offsite}$	CFS	**0.6**	**0.3**
Post-developed Flow (Site + Offsite)	CFS	**0.2**	**0.2**

Energy Balance Calculations Flood Protection Compliance (10-Year Storm)		DA-Lot 10A	DA-West
Pre-developed Flow (Site + Offsite)	CFS	**6.4**	**3.4**
Post-developed Flow (Site + Offsite)	CFS	**4.4**	**1.2**



LOT 10A POND RISER DETAIL

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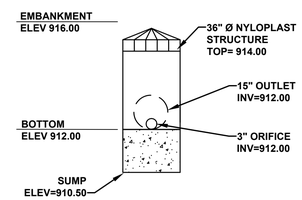

LOT 12A POND RISER DETAIL

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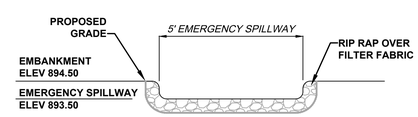
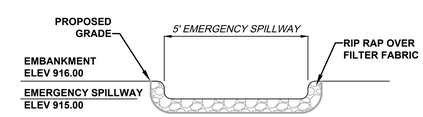


LOT 10A POND WEIR DETAIL

N.T.S.



LOT 12A POND WEIR DETAIL

N.T.S.

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DRAINAGE MAPS & SWM DETAILS
FOR
NLBTC - LOTS 10A & 12A GRADING PLAN
BEDFORD, VIRGINIA

PROJECT NO.	20211087
LAT.	37.3084°
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COMMONWEALTH OF VIRGINIA
P. SCOTT BEASLEY
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