

VICINITY MAP NOT TO SCALE

LOCATION MAP

UTILITY PROVIDERS:

WATER/SEWER

YORK COUNTY 220 Publis Works Road York, S.C. 29745 (803) 628-3211

Contact: Raymond Bailey

BASE DATA

RESOURCES, 2011).

ELECTRIC

City of Rock Hill 155 Johnston Street Rock Hill, S.C. 29730 (803) 329-7000

Contact: David Hope

BASE SURVEY INFORMATION OBTAINED FROM STEWART, INC. SC FIRM LICENSE C-1882, SEALED BY J. TIMOTHY THOMAS (SC PLSL-28148)

THE COORDINATE SYSTEM IS BASED ON S.C. N.A.D. 83 (N.S.R.S. 2011) AND THE ELEVATIONS ARE BASED ON N.A.V.D. 88. INITIAL POSITIONS

WERE DETERMINED WITH A REAL TIME KINEMATIC GPS UNIT USING THE SOUTH CAROLINA GEODETIC SURVEY REAL TIME NETWORK, AND

THE INITIAL STATE PLANE POSITIONS FOR THIS PROJECT WERE SCALED FROM GRID TO HORIZONTAL GROUND USING THE INVERSE OF A

COMBINED GRID FACTOR OF 1.00006234 AT THE LOCATION OF N(Y): 1,163,618.142' U.S. FT., E(X): 2,029,871.430' U.S. FT. AND ELEVATION OF

TOPOGRAPHIC INFORMATION OUTSIDE SURVEYED AREA (5' CONTOURS) DERIVED FROM LIDAR DATA (SC DEPARTMENT OF NATURAL

WERE TIED TO THE N.G.S. MONUMENT "CCC", 1,170,215.74', E: 2,018,246.16', ELEV: 552.80.

NATURAL GAS

York County Natural Gas 979 W. Main Street Rock Hill, S.C. 29730 (803) 329-5255

Contact: Stephen Comer

CABLE/INTERNET/TELEPHONE

Comporium Communications P.O. Box 470 Rock Hill, S.C. 29730

Contact: Sam Prete (803-326-6160) John Collins (803-487-6675)



YORK COUNTY ENGINEERING DEPARTMENT POST OFFICE BOX 148 6 SOUTH CONGRESS STREET YORK, SOUTH CAROLINA 29745 (803) 684-8571

Construction Drawings for

Sugar Creek Streambank Stabilization Project

FORT MILL, SOUTH CAROLINA FORT MILL TOWNSHIP COUNCIL DISTRICT #1

JULY 2024



COUNTY COUNCIL

Christi Cox, Chairwoman Allison Love, Vice Chairwoman Ton Audette Tommy Adkins William "Bump" Roddey A. Watts Huckabee, Sr. Debi Cloniger

SCDES Permit to Construct/Operate # N/A

System Inventory List	
4' Diameter Manhole	6
4' Diameter Manhole (Doghouse)	
4' Diameter Manhole (Outside Drop)	
5' Diameter Manhole	
5' Diameter Manhole (Outside Drop)	
18" Ductile Iron Pipe	
18" Restrained Joint Ductile Iron Pipe	
Gravity Sewer - 12" Ductile Iron Pipe	1394
Force Main Sewer - size unk	1187
30" Steel Casing	

APPLICANT'S CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
"I (We) hereby certify that to the best of my knowledge, these plans contain all information required by the Zoning Ordinance of York County SC and as referenced by this application. "I (We) hereby certify that all land disturbing activities including clearing, grading, construction and/or development will be done pursuant to this plan and agree to indemnify any person damaged by failure to comply with the approved plan. County and state authorities will be allowed to enter upon the project site provided the present the appropriate credentials."

Permit Applicant

LEGEND				
PROPOSED CONTOUR MAJOR	50 —			
PROPOSED CONTOUR MINOR				
PROPOSED SPOT ELEVATION	+ 511.75			
PROPOSED STORM DRAINAGE EASEMENT	SDE SDE			
PROPOSED TEMPORARY CONSTRUCTION EASEMENT	TCE			
EXISTING CONTOUR MAJOR				
EXISTING CONTOUR MINOR				
STREAM CENTERLINE (PER FEMA)	· ·			
EXISTING PROPERTY LINE				
EXISTING TREELINE				

EXISTING STREAM CENTERLINE — — — — — — — — — — — — — — — — — — —	
EXISTING CHAIN LINK FENCE	Milling S
EXISTING GRAVITY ————————————————————————————————————	
EXISTING FORCE MAIN ————————————————————————————————————	
RELOCATED FORCE MAIN FM FM FM FM FM	

SANITARY SEWER	
FEMA 100-YEAR FLOODPLAIN	100YR100YR-
EXISTING STORM DRAINAGE	=====

EXISTING WETLAND	
EXISTING SANITARY SEWER MANHOLE	S
SURVEY BENCHMARK	•
EXISTING IRRIGATION CONTROL VALVE	ICV
EXISTING ELECTRIC TRANSFORMER	T
EXISTING UTILITY POLE	Ø
EVICTING IDON DIN (FID)	

Sheet List Table		
Sheet Number	Sheet Title	
1	COVER	
2	NOTES	
3	EXISTING CONDITIONS	
4	PLAN - 1	
5	PLAN - 2	
6	EROSION CONTROL PLAN	
7	PLANTING PLAN	
8	DETAILS - 1	
9	DETAILS - 2	
10	DETAILS - 3	

PROFESSIONAL'S CERTIFICATION

I hereby certify that this plan is designed to contain sediment on the property concerned and to provide for the control of stormwater runoff from the property and that to the best of my knowledge and belief all the provisions are in accordance with the Stormwater Management and Sediment control Ordinance of York County, South Carolina.

Registered Landscape Architect Registered Tier B Land Surveyor

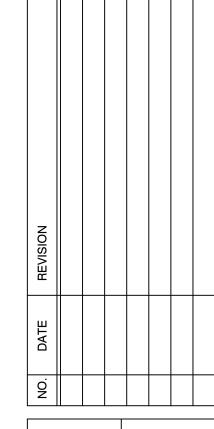
APPROVAL STAMP/PERMIT LOCATION TO BE COMPLETED BY YORK COUNTY

1 OF 10

DICKSON 1213 W. MOREHEAD STREE SUITE 300 CHARLOTTE, NC 28208 (t)704-334-5348 (f)704-334-0078 WWW.WKDICKSON.COM PROJECT #: 20190232.00.CL







York County STREAMBANK STABILIZATION

CONSTRUCTION

Project Manager: WAR Checked By Date: JULY 2024 Scale: VARIES

Engineering Project No.

SCDES STANDARD NOTES:

- 1. IF NECESSARY, SLOPES, WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
- 2. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE
- (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW. • WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS

CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN

- STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
- WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
- 3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INAPPROPRIATELY OR INCORRECTLY MAINTAINED, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION.
- 4. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE
- ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
- 6. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
- 7. RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C REG. 72-300 ET SEQ. AND SCR100000.
- 8. TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
- 9. ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS.
- 10. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
- 11. A COPY OF THE SWPPP, INSPECTIONS RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.
- 12. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR
- 13. MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL
- 14. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE;
- 15. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.).
- 16. THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:
- WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL; WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
- FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND • SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
- 17. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE
- 18. IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.
- 19. A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.

TOLERANCE:

SEWER STRUCTURES SHALL HAVE A TOLERANCE OF ±0.10 FEET. STRUCTURES INCLUDING RISERS, WEIRS, AND ORIFICES, SHALL HAVE A TOLERANCE OF ±0.00 FEET. STREAM IMPROVEMENT STRUCTURES SHALL HAVE A VERTICAL TOLERANCE OF ±0.20 FEET, AND A PLANIMETRIC TOLERANCE OF ±1.0 FEET.

WARRANTY NOTES:

ALL ENCAPSULATED SOIL LIFT VEGETATION, INCLUDING THE LIVE STAKES, BARE ROOT AND BANK STABILIZATION PLANTINGS, INSTALLED BY THE CONTRACTOR SHALL BE ASSESSED BY THE ENGINEER OR REPRESENTATIVE THEREOF AT THE END OF THE SAME PLANTING SEASON THEY WERE INSTALLED. 100% OF THIS VEGETATION MUST BE INSTALLED CORRECTLY AND STILL BE ALIVE AT THE TIME THIS ASSESSMENT IS COMPLETED. IF DEAD PLANT MATERIAL IS FOUND, THE CONTRACTOR IS RESPONSIBLE FOR REPLACING THAT MATERIAL BEFORE THE COMPLETION OF THAT PLANTING SEASON (MARCH 15). AT THE COMPLETION OF ONE FULL GROWING SEASON FOLLOWING PLANTING, LIVE STAKES, BARE ROOTS AND CONTAINER PLANTS PLANTED BY THE CONTRACTOR WILL BE ASSESSED BY THE ENGINEER AGAIN. THE TOTAL PLANTED MATERIAL MUST HAVE AT LEAST 85% OF ALL STEMS SURVIVE (15% MORTALITY). IF THE CONTRACTOR DOES NOT MEET THIS REQUIREMENT AS DETERMINED BY THE ENGINEER, THE CONTRACTOR SHALL REMOVE THE DEAD PLANT MATERIAL AND PLANT NEW VEGETATION AT THE CONTRACTOR'S EXPENSE. THE NEWLY PLANTED VEGETATION WILL BEGIN A NEW WARRANTY PERIOD TO BE ASSESSED AT THE CONCLUSION OF THE NEXT FULL GROWING SEASON. ANY CONTAINERIZED VEGETATION THAT WAS SUBSTITUTED SHALL BE SUBJECT TO THIS WARRANTY; HOWEVER, IF REPLACEMENT IS REQUIRED, THE CONTRACTOR MAY REMOVE THE DEAD PLANT MATERIAL AND PLANT NEW VEGETATION OF THE SAME SPECIES. THIS WARRANTY IS INCIDENTAL TO THE OVERALL PROJECT.

CONSTRUCTION SEQUENCE:

- 1. OBTAIN EROSION CONTROL PERMIT FROM SCDES, YORK COUNTY, AND ALL OTHER APPROVALS NECESSARY TO BEGIN AND COMPLETE THE PROJECT.
- 2. CONTRACTORS ARE REQUIRED TO HAVE RAIN GAUGES AT THE CONSTRUCTION SITE AND THE RAIN TOTALS DOCUMENTED FOR REVIEW BY YORK COUNTY.
- 3. HOLD AN ON-SITE PRE-CONSTRUCTION MEETING WITH YORK COUNTY AND SCDHEC (AS REQUIRED) AT LEAST 48 HOURS PRIOR TO BEGINNING ANY LAND -DISTURBING ACTIVITIES. THE OWNER, DESIGN ENGINEER AND CONTRACTOR MUST BE PRESENT AND HAVE OBTAINED THE STORMWATER PERMIT. STAMPED APPROVED PLANS AND THE N.O.I. APPROVAL LETTER FROM SCDHEC BEFORE CALLING SCDHEC TO SCHEDULE THIS MEETING. RECEIVE THE YORK COUNTY LAND DISTURBANCE PERMIT (AT THE PRE-CONSTRUCTION MEETING). THIS WILL BE A PRELIMINARY ISSUANCE OF THE LAND DISTURBANCE PERMIT.
- 4. CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING ALL APPROPRIATE PARTIES AND ASSURING THAT UTILITIES ARE LOCATED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- 5. STABILIZED CONSTRUCTION ENTRANCE AT THE SITE SHALL BE INSTALLED AS SHOWN ON THE PLANS AND DETAILS
- 6. CLEARING AND GRUBBING ONLY FOR THOSE AREAS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS.
- 7. INSTALL PERIMETER CONTROLS.
- 8. CLEARING, GRUBBING, AND INSTALLATION OF SEDIMENT BASINS AND TRAPS. (NOT APPLICABLE TO THIS PROJECT.)
- CALL THE YORK COUNTY ENVIRONMENTAL COMPLIANCE DIVISION TO REQUEST AN INSPECTION OF THE CONTROL MEASURES FOR PERIMETER CONTROLS. UPON SATISFACTORY INSPECTION AND APPROVAL OF PERIMETER CONTROLS AND ANY SEDIMENT BASINS AND TRAPS, THE ENVIRONMENTAL COMPLIANCE INSPECTOR WILL ISSUE THE FINAL LAND DISTURBANCE PERMIT.
- 10. PERMITTEE SHALL CONDUCT CONSTRUCTION SITE INSPECTIONS ON A ROUTINE BASIS OF ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITY, PERIMETER BMPS AND AREAS USED FOR STORAGE OF MATERIALS THAT AREEXPOSED TO PRECIPITATION, ALL IN ACCORDANCE WITH SECTION 4 OF THE NPDES-CGP.
- 11. HAUL ROUTE SHALL HAVE 5' OR MORE OF VERTICAL COVER OVER THE SANITARY SEWER FORCE MAIN. CONTRACTOR SHALL PERFORM SOFT DIGS PRIOR TO START OF CONSTRUCTION TO VERIFY LOCATION AND DEPTH OF FORCE MAIN. CONTRACTOR SHALL ADD SOIL OR GRAVEL TO HAUL ROUTE AS NEEDED TO ACHIEVE DESIGNATED COVER. AND SHALL MAINTAIN SURFACE DRAINAGE. CONTRACTOR SHALL PROVIDE TWO (2) POLES (MIN. 6' TALL ABOVE GROUND) WITH FLAGGING TO MARK EACH SANITARY SEWER MANHOLE IN PROJECT AREA.
- 12. PREPARE STAGING AND STOCKPILING AREAS IN LOCATIONS AS SHOWN ON THE CONSTRUCTION PLANS OR AS APPROVED BY THE ENGINEER.
- 13. REMAINING CLEARING AND GRUBBING. INSTALL ANY REMAINING EROSION CONTROL MEASURES PER PLAN.
- 14. UTILITY INSTALLATION AND STATEMENT OF WHETHER STORM DRAINS WILL BE USED OR BLOCKED UNTIL AFTER COMPLETION OF CONSTRUCTION, IF APPLICABLE. (NOT APPLICABLE TO THIS PROJECT.)
- 15. ROAD GRADING, IF APPLICABLE. (NOT APPLICABLE TO THIS PROJECT.)
- 16. GRADING FOR THE REMAINDER OF THE SITE.
- 17. GRADE THE CHANNEL BANKS PER PLAN, CUTTING AND FILLING AS NECESSARY. WORK SHALL TAKE PLACE AT A TIME WHEN CUTTINGS AND LIVE STAKES TO BE INSTALLED ARE DORMANT (NOV. 15 - MAR 15).
- 18. PRIOR TO FINE GRADING AND INSTALLATION OF ROCK AND OTHER STRUCTURES, OBTAIN APPROVAL OF ENGINEER. REVIEW VANE DETAIL ON SHEET 8 FOR ITEM-SPECIFIC CONSTRUCTION SEQUENCE.
- 19. CONSTRUCTION SHALL PROCEED IN AN UPSTREAM TO DOWNSTREAM DIRECTION, ONE VANE AT A TIME WITH ASSOCIATED STREAM BANK. CONTRACTOR SHALL INSTALL TEMPORARY COFFERDAM IN ORDER TO WORK IN DRY CONDITIONS. COFFERDAM SHALL BE TALL ENOUGH TO MAINTAIN DRY WORK CONDITIONS WITH BASE FLOW IN THE CHANNEL, BUT IS NOT EXPECTED TO BE TALLER THAN ELEVATION 501 AND WILL NOT PREVENT FULL CHANNEL FLOW DURING LARGE STORM EVENTS.
- 20. FINAL GRADING, LANDSCAPING, OR STABILIZATION.
- ESTABLISH PERMANENT VEGETATION AS SHOWN ON PLANS. EROSION CONTROL MEASURES SHALL BE PROPERLY MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED.
- DISTURBED AREAS NOT AT FINAL GRADE, LEFT IDLE FOR TWO OR MORE WEEKS DURING ANY PHASE OF CONSTRUCTION, SHALL BE TEMPORARILY VEGETATED. UPON COMPLETION OF FINAL GRADING, PERMANENT VEGETATION SHALL BE ESTABLISHED WITHIN 7 CALENDAR DAYS.
- ALL OTHER DISTURBED AREAS WILL BE STABILIZED BY PERMANENTLY VEGETATING WITH SEED AND MULCH AS RECOMMENDED BY THE PERMANENT SEEDING SPECIFICATIONS DUE TO THE RESTRAINTS ON THE LENGTH OF IMPROVEMENTS AND/OR DURATION OF EXPOSED DISTURBED AREAS.
- 21. REMOVAL OF SEDIMENT AND DEBRIS FROM BMPS. (NOT APPLICABLE TO THIS PROJECT.)
- 22. CONFIRM FINAL STABILIZATION HAS BEEN REACHED AND REQUEST INSPECTION FROM THE COUNTY.
- 23. REMOVAL OF TEMPORARY EROSION AND SEDIMENT CONTROLS, AND/OR CONVERSION OF TEMPORARY WATER QUALITY AND/OR WATER QUANTITY BMPS TO PERMANENT FEATURES WITH YORK COUNTY APPROVAL REQUIRED PRIOR TO FILING FOR NOTICE OF TERMINATION.
- 24. IT SHALL BE UNDERSTOOD THAT FAILURE TO SPECIFICALLY MENTION ANY WORK THAT WOULD NATURALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.
- 25. NO CLEARING WILL TAKE PLACE BETWEEN APRIL 1ST AND OCTOBER 14TH.

EROSION CONTROL

- 1. TOTAL DISTURBED AREA: 2.7 ACRES
- 2. THE CONTRACTOR SHALL FOLLOW THE EROSION CONTROL MEASURES SHOWN ON SHEET 6 FOR EROSION CONTROL NOTES, PLANS, AND DETAILS. ALL EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND SCDES BMP MANUAL.
- 3. THE LOCATIONS OF SOME EROSION CONTROL MEASURES MAY HAVE TO BE ALTERED FROM THOSE SHOWN ON THE PLANS IF DRAINAGE PATTERNS CHANGE DURING CONSTRUCTION.
- 4. EROSION CONTROL MEASURES MAY BE PHASED-IN TO THOSE AREAS OF THE PROJECT CURRENTLY BEING WORKED ON. THE CONTRACTOR MAY MODIFY OR RELOCATE EROSION CONTROL MEASURES TO MAKE ADJUSTMENTS FOR UNFORESEEN FIELD CONDITIONS SO LONG AS PROPER CONSTRUCTION OF MEASURES IS MAINTAINED TO ENSURE THE INTEGRITY AND USEFULNESS OF THE PROPOSED MEASURES. SUCH MODIFICATIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. COORDINATE FIELD REVISIONS WITH YORK COUNTY ENVIRONMENTAL COMPLIANCE DIVISION.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING SEDIMENT FROM LEAVING THE CONSTRUCTION LIMITS. IT MAY BE NECESSARY TO ADD EROSION CONTROL MEASURES AS PROVIDED IN THE SCDES BMP MANUAL AND THE PROJECT SWPPP DURING THE COURSE OF WORK.
- MINIMUM EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND PERMITTED REQUIREMENTS (WHERE NECESSARY) SHALL BE IN ACCORDANCE WITH THE SCDES STORM WATER MANAGEMENT BMP FIELD MANUAL
- 7. PROPERTY OUTSIDE DESIGNATED LIMITS OF DISTURBANCE CANNOT BE ENCROACHED UPON UNDER ANY CIRCUMSTANCES IF NOT APPROVED AS DESIGNATED IMPACT AREAS. HIGH VISIBILITY FENCING. UNLESS SILT FENCE IS ALREADY INSTALLED. MUST BE INSTALLED ALONG THE LIMITS OF DISTURBANCE BOUNDARIES ADJACENT TO ANY CONSTRUCTION ACTIVITIES.
- 8. REVIEW CONSTRUCTION SEQUENCE FOR ADDITIONAL EROSION CONTROL MEASURES. ALL PERMANENT AND TEMPORARY EROSION CONTROL STRUCTURES (I.E. FILTER SOCK AND TEMPORARY CONSTRUCTION ENTRANCES) SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION OF THE LAND-DISTURBING ACTIVITY

- CONSTRUCTION ACCESS AREAS SHOWN ARE TO GUIDE CONTRACTOR DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH ENGINEER IF ALTERNATIVE CONSTRUCTION ACCESS ROUTES WILL IMPROVE EFFICIENCY OF CONSTRUCTION.
- 10. INSTALL PERMANENT VEGETATIVE COVER AND THE LONG-TERM EROSION PROTECTION MEASURES OR STRUCTURES AS DIRECTED BY ENGINEER UPON CONSTRUCTION COMPLETION. APPROPRIATE EROSION CONTROL MEASURES MUST BE PLACED BETWEEN THE DISTURBED AREA AND AFFECTED WATERWAY AND MAINTAINED UNTIL PERMANENTLY VEGETATED.
- 11. THE CONTRACTOR SHALL PREVENT STANDING WATER DUE TO CONSTRUCTION.
- 12. PROVIDE FOR HANDLING THE INCREASED RUNOFF CAUSED BY CHANGED SOIL AND SURFACE CONDITIONS. USE EFFECTIVE MEANS TO CONSERVE EXISTING ON-SITE SOIL CONDITIONS.
- 13. COMPOST FILTER SOCK OR SILT FENCING TO BE INSTALLED AROUND INDICATED STOCKPILE AREAS TO PREVENT LOSS OF SEDIMENT. STOCKPILE AREAS MAY BE RELOCATED UPON APPROVAL FROM ENGINEER.
- 14. ACTIVITIES MUST AVOID DISTURBANCE OF WOODY RIPARIAN VEGETATION WITHIN THE PROJECT AREA TO THE GREATEST EXTENT PRACTICABLE. REMOVAL OF VEGETATION MUST BE LIMITED TO ONLY THAT NECESSARY FOR CONSTRUCTION.
- 15. NO ONSITE BURIAL OR BURNING OF VEGETATION OR CONSTRUCTION DEBRIS WILL BE PERMITTED. VEGETATIVE DEBRIS SHALL BE DISPOSED OF OFFSITE AT AN APPROVED SITE DETERMINED BY THE CONTRACTOR.

SEEDING NOTES:

- 1. SEED BED PREPARATION: THE SEED SHALL BE PREPARED BY PULVERIZING THE SOIL IN AN APPROVED MANNER TO A DEPTH OF THREE (3) INCHES FOR FIELD CONDITIONS OR SLOPES THAT ARE 3:1 OR FLATTER AND TO A DEPTH OF THREE (3) INCHES, AS DETERMINED ON SITE FOR SLOPES STEEPER THAN 3:1. THE SOIL SHALL BE TILLED UNTIL A WELL PULVERIZED, FIRM, REASONABLY UNIFORM SEED BED IS PREPARED CONFORMING SUBSTANTIALLY TO GROUND ELEVATIONS AS SHOWN ON THE PLANS AND/OR EXISTED PRIOR TO CONSTRUCTION. THE DISTURBED AREA SHALL BLEND UNIFORMLY INTO ADJACENT TOPOGRAPHY. GOOD SURFACE DRAINAGE MUST BE PROVIDED, ALLOWANCES FOR SETTLEMENT MADE AND GROUND ELEVATIONS ADJUSTED ACCORDINGLY. VISIBLE PONDING WILL NOT BE ALLOWED. ALL STONES, ROOTS, STICKS, RUBBISH, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED.
- 2. SOIL IMPROVEMENTS: SOIL ADDITIVES SHALL BE INCORPORATED IN AN APPROVED MANNER INTO THE TOP SOIL AT THE **FOLLOWING RATES:**
- FERTILIZER 20 POUNDS PER 1000 SQUARE FEET OF 5-10-10 FERTILIZER GENERALLY AND 30 POUNDS PER 1000 SQUARE FEET OF 10-10-10 FERTILIZER FOR ESTABLISHED LAWN AREAS. FERTILIZER SHALL BE OF UNIFORM COMPOSITION, FREE-FLOWING AND SUITABLE FOR APPLICATION WITH EQUIPMENT, DELIVERED TO SITE IN BAGS LABELED WITH MANUFACTURER'S GUARANTEED ANALYSIS, AND SHALL CONFORM TO ALL STATE AND FEDERAL
- LIME 100 POUNDS PER 1000 SQUARE FEET. LIME SHALL BE AGRICULTURAL GRADE, GROUND LIMESTONE. GROUND LIMESTONE SHALL CONTAIN NOT LESS THAN 85% OF CALCIUM CARBONATE CONTENT EQUIVALENT AND SHALL BE SUCH A FINENESS THAT 90% WILL PASS THROUGH A NO. 20 SIEVE AND NOT LESS THAN 50% THROUGH A NO. 100 SIEVE • SUPERPHOSPHATE (0-20-0) - 12 POUNDS PER 1000 SQUARE FEET.
- 3. SEEDING: PERMANENT SEED MIX SHALL BE APPLIED TO ANY AND ALL DISTURBED AREAS WITHIN THE LIMIT OF DISTURBANCE NOT BEING COVERED BY OTHER SURFACE TREATMENTS. PERMANENT SEEDING SHALL NOT OCCUR ON THE CHANNEL BOTTOM. ALL DISTURBED AREAS ARE TO BE GRASSED IMMEDIATELY AFTER CONSTRUCTION IN THE AREA. AT NO TIME WILL AN AREA BE LEFT BARE FOR MORE THAN 14 DAYS AFTER COMPLETION OF CONSTRUCTION. SEEDING MUST BE DONE WITHIN THIRTY (30) CALENDAR DAYS AFTER THE INITIAL GROUND DISTURBING ACTIVITY.
- SEEDS SHALL MEET REQUIREMENTS OF SEED LAWS OF THE STATE AND THE U.S. DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS UNDER FEDERAL SEED ACT IN EFFECT ON DATE BIDS ARE RECEIVED. SEED SHALL BE DELIVERED IN STANDARD CONTAINERS. SEED WHICH HAS BECOME WET, MOLDY OR DAMAGED IN TRANSIT OR STORAGE WILL NOT BE ACCEPTABLE. SEED SHALL BE A MINIMUM 90% PURITY AND 80% GERMINATION.
- THE SEED BED MUST BE IN GOOD, FRIABLE CONDITION AND NOT MUDDY OR HARD AT THE TIME OF SEEDING IS
- SEED SHALL BE APPLIED AT THE RATE SPECIFIED AND RAKED OR TILLED INTO THE TOPSOIL WITH THE RESULTING FURROUGHS RUNNING ACROSS THE NATURAL SLOPE OF THE GROUND. UNDER NO CIRCUMSTANCES WILL ANY TILLING ACTIVITY BE ALLOWED PARALLEL WITH SAID SLOPE. SLOPES STEEPER THAN 3:1 SHALL REQUIRE THE USE OF HYDRAULIC SEEDING UNLESS OTHERWISE SPECIFICALLY APPROVED BY THE ENGINEER. • IMMEDIATELY AFTER FERTILIZING AND SEEDING HAVE BEEN COMPLETED, ENTIRE AREA SHALL BE COMPACTED BY
- MEANS OF A CULTIPACKER, ROLLER, OR APPROVED EQUIPMENT WEIGHING APPROXIMATELY 90 LBS. PER LINEAR FOOT OF ROLLER. USE OF SPECIFIED MULCH SHALL BE USED TO PROTECT SITE AGAINST EROSION.
- 4. MULCHING: AFTER FERTILIZING, SEEDING, AND RAKING, DRIED STRAW SHALL BE SPREAD UNIFORMLY OVER THE AREA AT A RATE OF 90 POUNDS PER 1000 SQUARE FEET. MULCH SHALL CONSIST OF SMALL GRAIN STRAW OF GOOD QUALITY, CLEAN, FREE OF NOXIOUS WEEDS, AND REASONABLY FREE OF OTHER WEEDS, APPROXIMATELY 1/4 OF THE GROUND SHOULD REMAIN VISIBLE TO AVOID SMOTHERING SEEDLINGS.
- MAINTENANCE: THE CONTRACTOR SHALL MAINTAIN THE SEEDED AREAS UNTIL THERE IS UNIFORM GROWTH THREE (3) INCHES HIGH. MAINTENANCE SHALL CONSIST OF WATERING, WEED AND PEST CONTROL WITHIN ESTABLISHED LAWNS, FERTILIZATION, EROSION REPAIR, RESEEDING AND ALL ELSE NECESSARY TO ESTABLISH A VIGOROUS HEALTHY AND UNIFORM STAND OF GRASS. ALL AREAS AND SPOTS WHICH DO NOT SHOW A UNIFORM STAND OF GRASS, FOR ANY REASON, SHALL BE TREATED REPEATEDLY UNTIL A UNIFORM STAND IS ATTAINED.
- SEASONAL SEEDING MIXTURES AND RATES OF APPLICATION ARE SHOWN IN DETAIL 2/SHEET 8. ALL RATES ARE IN POUNDS PER 1000 SQUARE FEET AND ANY RATES LISTED BELOW MAY BE CUT BY ½ FOR TEMPORARY EROSION CONTROL MEASURES ONLY.
- 7. AREAS THAT REQUIRE RE-FERTILIZATION AND\OR RE-SEEDING WILL BE DESIGNATED BY THE ENGINEER. WHEN ANY PORTION OF SURFACE BECOMES GULLED OR OTHERWISE DAMAGED FOLLOWING SEEDING, OR SEEDLINGS HAVE BEEN WINTER-KILLED OR OTHERWISE DESTROYED, AFFECTED PORTION SHALL BE REPAIRED TO RE-ESTABLISH CONDITION AND GRADE OF SOIL PRIOR TO SEEDLING AND SHALL BE RE-SEEDED AS SPECIFIED ABOVE.
- 8. COIR FABRIC MATERIALS SHALL NOT BE CUT WITH PLANTING IMPLEMENTS. THE SMALLEST OPENING NECESSARY TO ACCOMMODATE EACH PLANT SHALL BE CUT INTO COIR FABRIC USING A SHARP KNIFE OR SHEARS. NO HOLES LARGER THAN 12 INCHES SHALL BE MADE.

SPILL PREVENTION AND RESPONSE:

CONTRACTOR SHALL PROVIDE A PLAN FOR ENGINEER'S APPROVAL PRIOR TO START OF CONSTRUCTION THAT WILL DETAIL MEASURES TO PREVENT, CONTAIN, AND RESPOND TO THE RELEASE OF FUEL OR OTHER HAZARDOUS SUBSTANCES.

CONSTRUCTION ACCESS ROUTE:

FROM MERRITT ROAD (674) ALONG THE SOUTHERN PORTION OF FAIRNTOSH DRIVE AND THEN TO KILBURN LANE, TO ACCESS TO PUMP STATION BETWEEN 1702 AND 1710 KILBURN LANE.



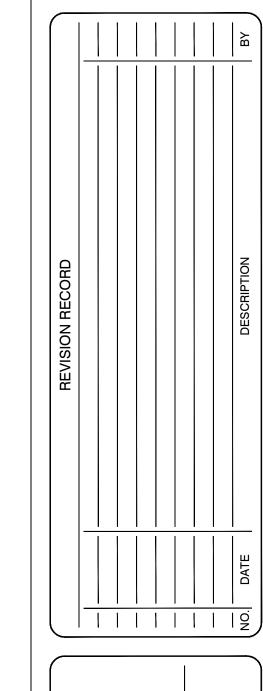


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PROFESSIONAL SEAL

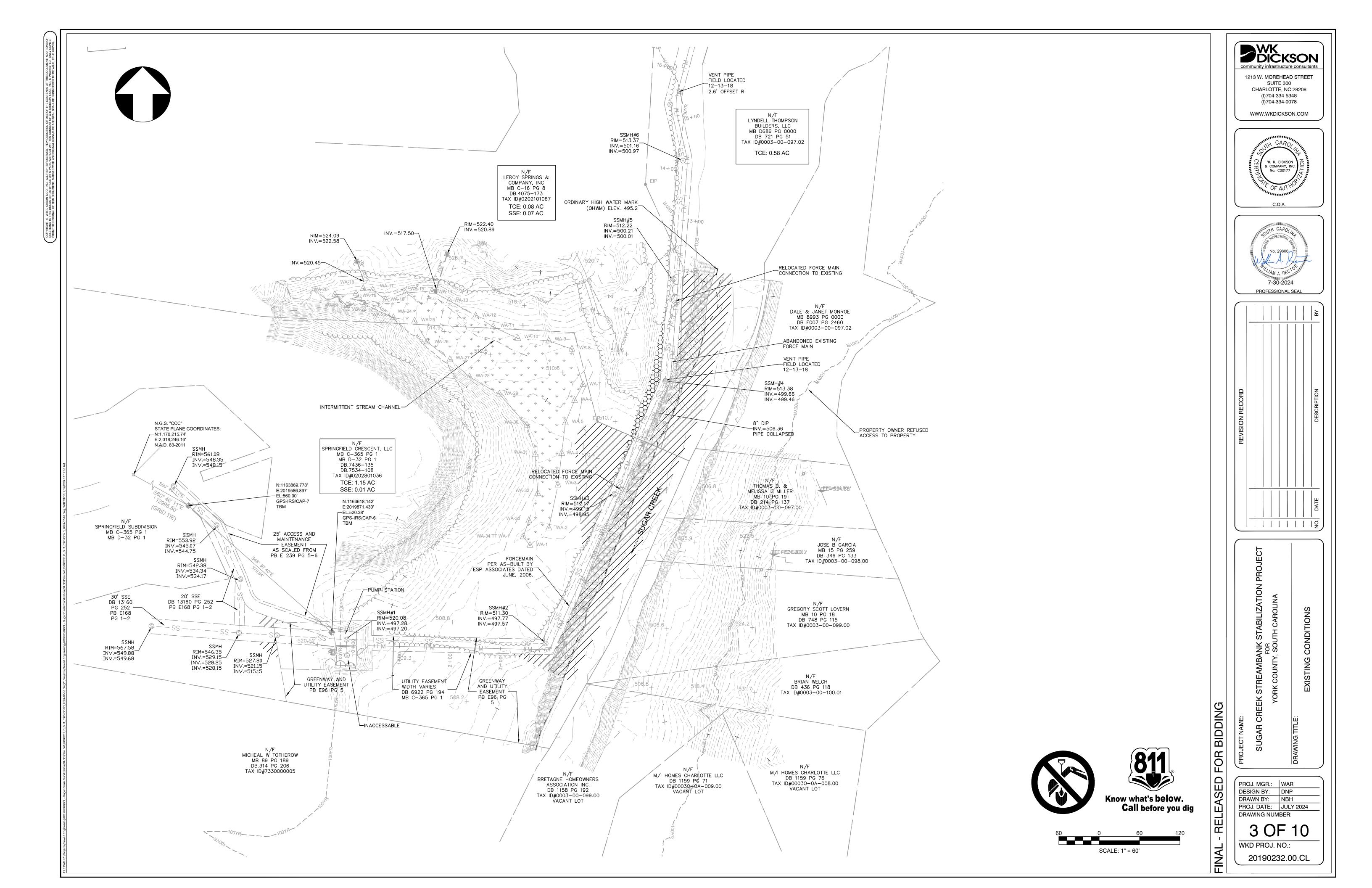


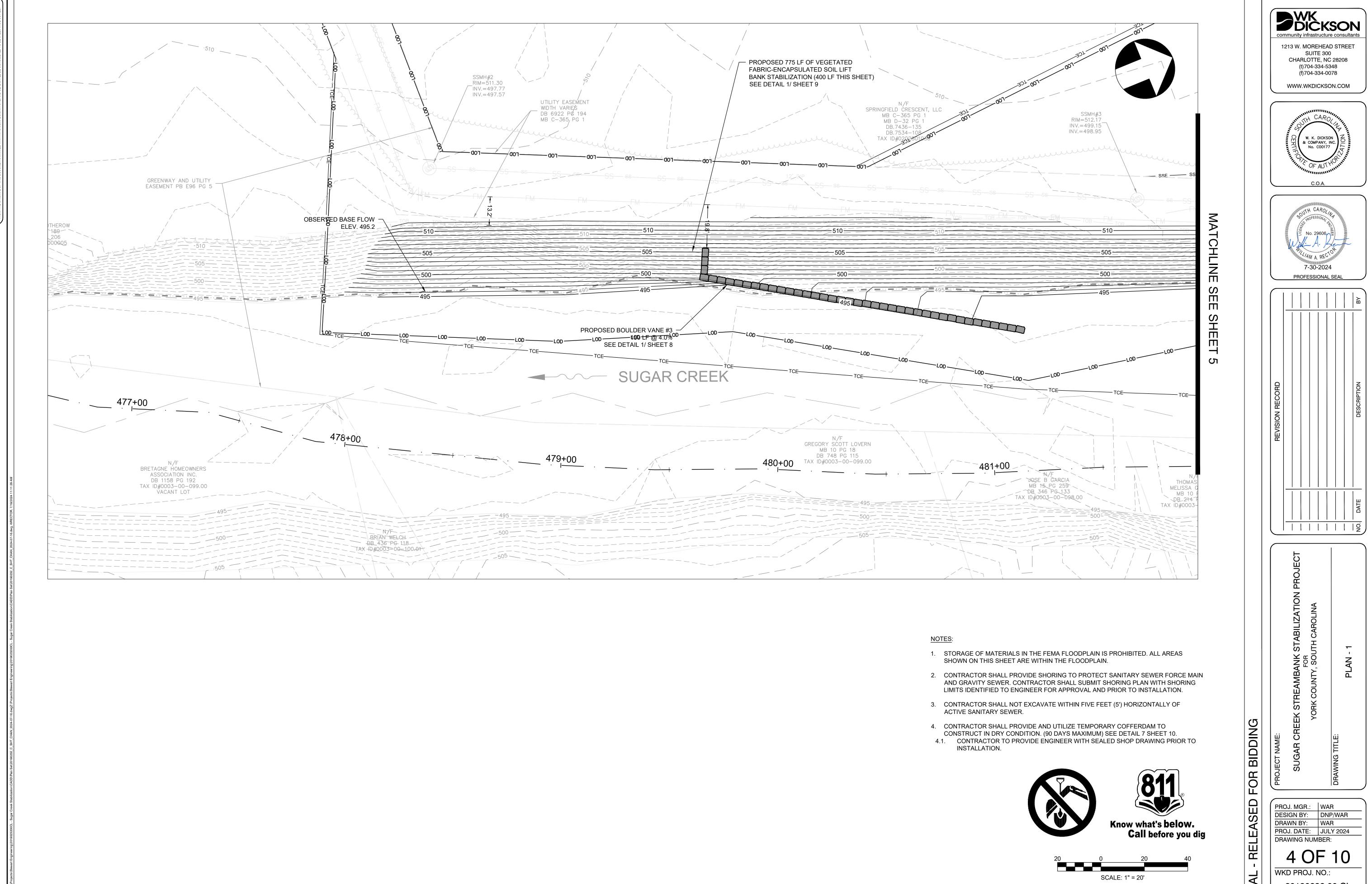
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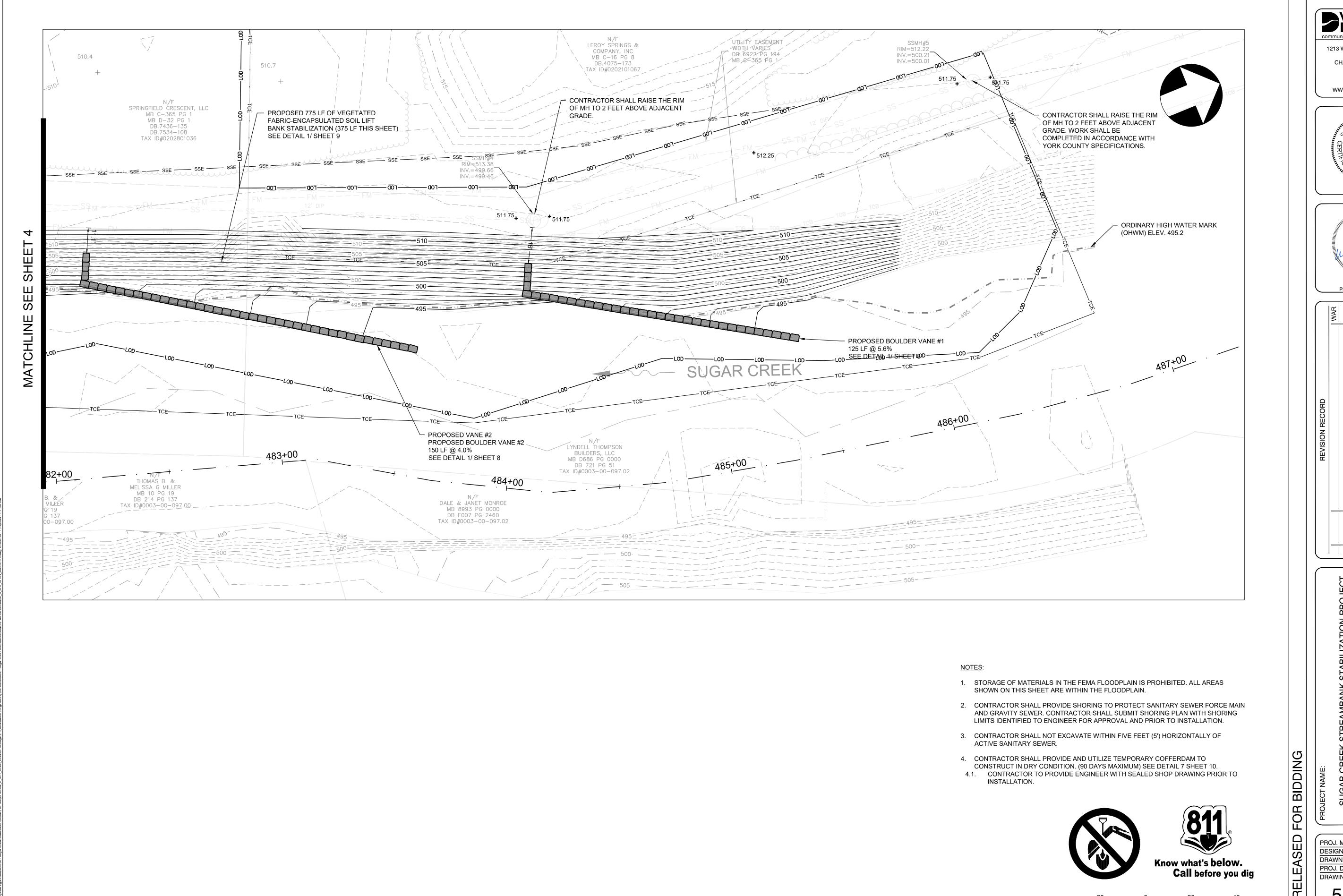
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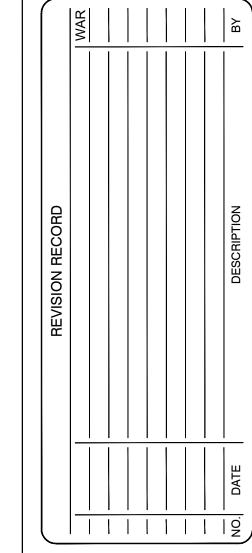


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STREAMBANK (FOR SOUNTY, SOU

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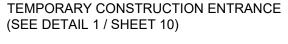
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EROSION CONTROL LEGEND

LIMITS OF DISTURBANCE



CONSTRUCTION ACCESS/HAUL ROAD (SEE DETAIL 2 / SHEET 10)

STAGING/LAY-DOWN/STOCKPILE AREA (SEE DETAIL 3 / SHEET 10)

SILT FENCE (SEE DETAIL 6 / SHEET 10)

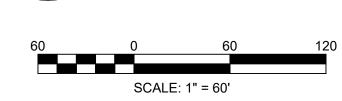
TEMPORARY DEPRESSION CROSSING

(SEE DETAIL 5 / SHEET 10)

TOTAL AREA OF DISTURBANCE: 2.7 ACRES

- 1. CONSTRUCTION ACCESS ROAD SHALL BE MAINTAINED. ANY DAMAGES RESULTING FROM CONSTRUCTION EQUIPMENT INGRESS/EGRESS SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE. ALL ROAD REPAIRS SHALL BE COMPLETED IN ACCORDANCE WITH YORK COUNTY SPECIFICATIONS.
- 2. WETLANDS AS ILLUSTRATED ON THIS SHEET AND LOCATED ADJACENT TO THE IDENTIFIED STAGING AREA SHALL BE MAINTAINED. NO CONSTRUCTION EQUIPMENT OR MATERIALS ARE ALLOWED TO ENTER THIS AREA. CONTRACTOR SHALL DEMARCATE THIS AREA WITH ORANGE CONSTRUCTION FENCING PRIOR TO THE COMMENCEMENT OF CLEARING AND GRUBBING ACTIVITIES.
- 3. CONTRACTOR SHALL PROTECT EXISTING SEWER MANHOLES AND FORCE MAIN. SEE CONSTRUCTION SEQUENCE AND NOTES ON SHEET 2.
- 4. CONCRETE WASH-OUT (IF NEEDED) SHALL BE LOCATED OUTSIDE THE 100-YEAR FLOODPLAIN.
- 5. ALL PORTABLE TOILETS, EQUIPMENT, AND ANY HAZARDOUS OR TOXIC MATERIAL SHALL BE STORED OUTSIDE OF THE 100-YEAR FLOODPLAIN BOUNDARY.





Know what's **below.**Call before you dig

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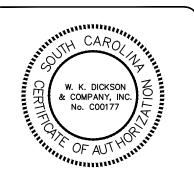
DWKDICKSON community infrastructure consultants 1213 W. MOREHEAD STREET

> (f)704-334-0078 WWW.WKDICKSON.COM

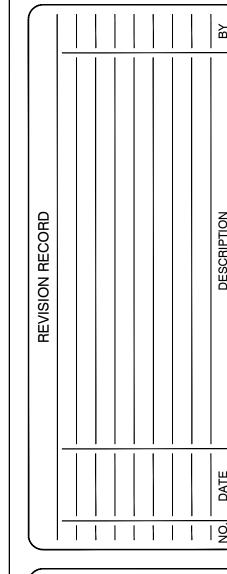
SUITE 300

CHARLOTTE, NC 28208

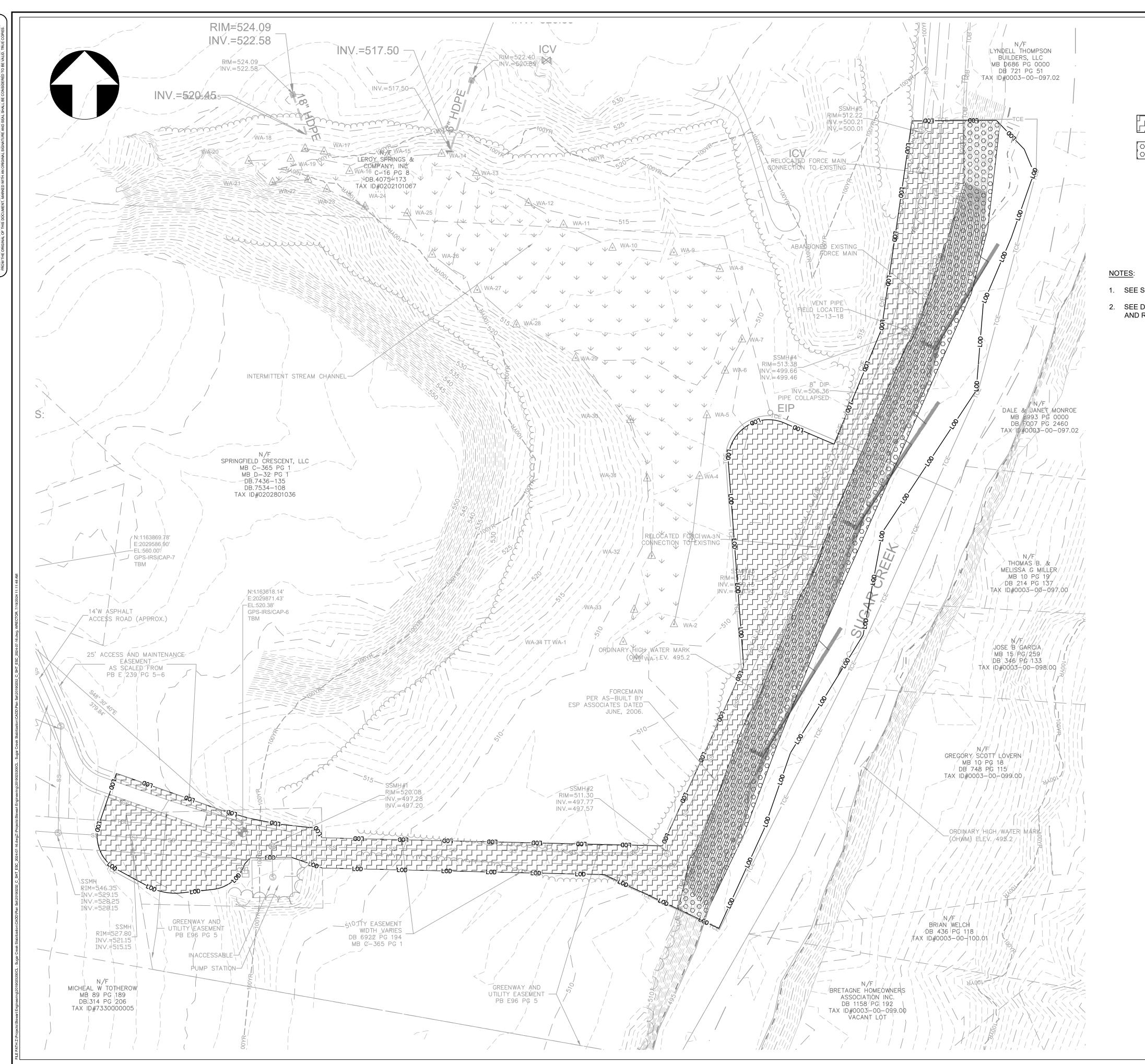
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STABILIZATION STREAM



PLANTING LEGEND

PERMANENT SEEDING (1.5 ACRES)

LIVE STAKES, LIVE CUTTING, AND PERMANENT

SEEDING (0.7 ACRES)

- 1. SEE SHEET 2 FOR SEEDING NOTES.
- 2. SEE DETAIL 2 / SHEET 8 FOR TEMPORARY AND PERMANENT SEEDING MIXTURES AND RATES OF APPLICATION.

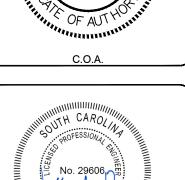


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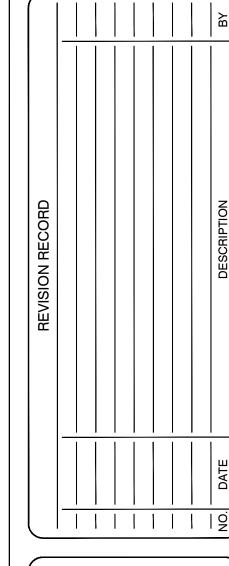
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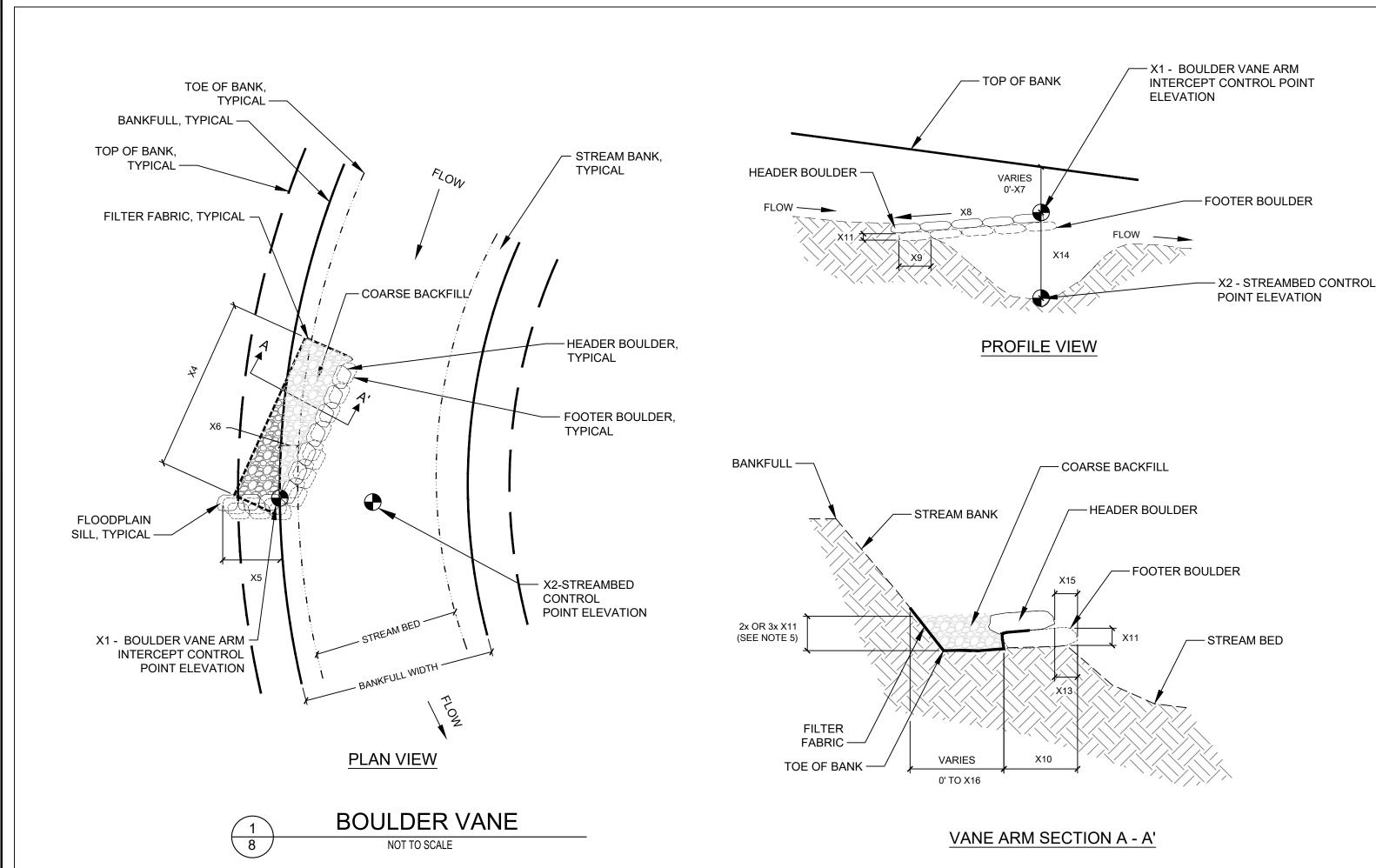
ST REEK STREAMBANK S FOR YORK COUNTY, SOU

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SCALE: 1" = 50'

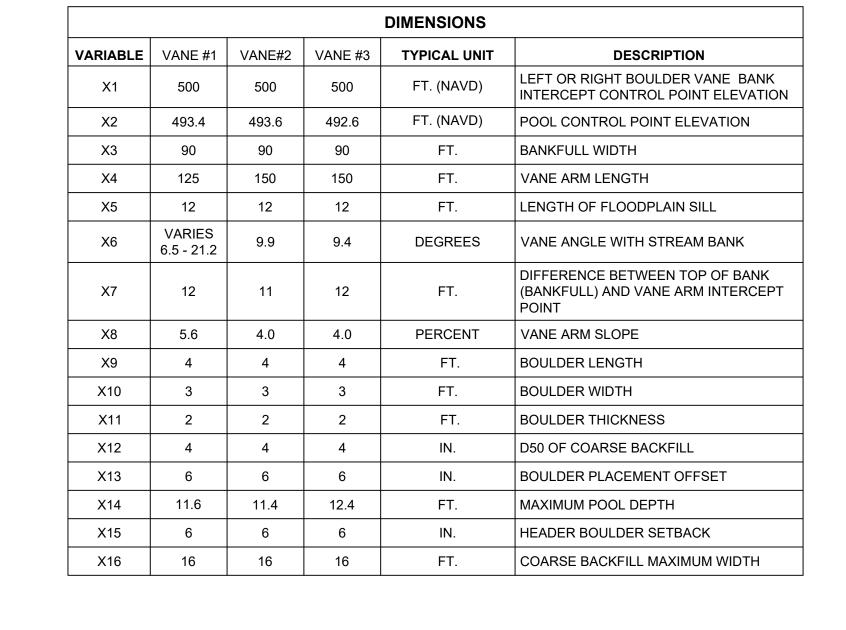
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DESIGN BY:	DNP		
DRAWN BY:	NBH		
PROJ. DATE:	JULY 2024		
DRAWING NUMBER:			

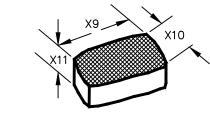
7 OF 10 WKD PROJ. NO.: 20190232.00.CL



20 lbs/acre of: SEE CHART + TEMPORARY SEEDING AT 8 LBS/ACRE SHOWN IN DETAIL B BELOW	4 1 1		
	Andropogon glomeratus	Bushy Broomsedge	5%
	Carex crinita	Sedge, Fringed	5%
OPTIMAL SEEDING MONTHS: NOVEMBER, FEBRUARY, OR MARCH	Carex lurida	Sedge, Shallow	5%
	Carex stricta	Sedge, Tussock	5%
	Elymus virginicus	Virginia Wildrye	25%
Temporary seeding will be required on all stream restoration	Eragrostis spectabilis	Purple Lovegrass	10%
areas disturbed following all land disturbing activities.	Muhlenbergia capillaris	Hairawn Muhly	5%
All soil in planting areas shall be tested and the rate of fertilization	Panicum clandestinum	Deertongue	10%
•	Panicum virgatum	Switchgrass	10%
streams and channels is prohibited unless otherwise approved by	Schizachyrium scoparium	Little Blue Stem	10%
the Engineer.	Panicum anceps	Beaked Panic Grass	10%
All areas shall be mulched for erosion control upon completion of construction activities or as directed by the Engineer.			
, ,	Total	l	100%
	Temporary seeding will be required on all stream restoration areas disturbed following all land disturbing activities. All soil in planting areas shall be tested and the rate of fertilization and lining shall be in accordance with the test results. The planting of any species of fescue grass along or adjacent to streams and channels is prohibited unless otherwise approved by the Engineer. All areas shall be mulched for erosion control upon completion of	OPTIMAL SEEDING MONTHS: NOVEMBER, FEBRUARY, OR MARCH Carex stricta Elymus virginicus Elymus virginicus Eragrostis spectabilis Muhlenbergia capillaris All soil in planting areas shall be tested and the rate of fertilization and lining shall be in accordance with the test results. The planting of any species of fescue grass along or adjacent to streams and channels is prohibited unless otherwise approved by the Engineer. All areas shall be mulched for erosion control upon completion of construction activities or as directed by the Engineer.	OPTIMAL SEEDING MONTHS: NOVEMBER, FEBRUARY, OR MARCH Carex stricta Sedge, Shallow Carex stricta Sedge, Tussock Elymus virginicus Virginia Wildrye Eragrostis spectabilis Purple Lovegrass Muhlenbergia capillaris Hairawn Muhly Panicum clandestinum Deertongue Panicum virgatum Switchgrass All areas shall be mulched for erosion control upon completion of

A PERMANENT SEEDING FOR STREAM BANK STABILIZATION





3 PRIMARY ROCK DIMENSIONS:

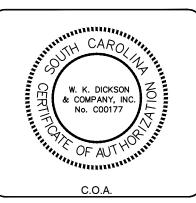
- X9. LONGEST DIMENSION
- X10. INTERMEDIATE DIMENSION X11. SHORTEST DIMENSION

NOTES:

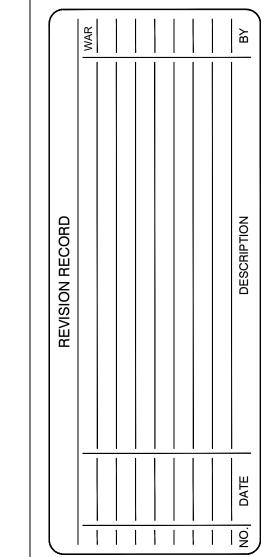
- A BOULDER VANE IS A STREAM BANK PROTECTION, IN-STREAM STRUCTURE THAT DIRECTS STREAM FLOW AWAY FROM THE STREAM BANK AND IN TOWARD THE CENTER OF THE CHANNEL. THE DETAIL SHALL BE "FLIPPED" DEPENDING ON WHICH STREAM BANK (LEFT OR RIGHT) IS ON THE OUTSIDE OF THE MEANDER BEND.
- 2. BOULDER VANES SHALL BE CONSTRUCTED OF FLAT-SIDED BOULDERS OF AT LEAST 4' x 3' x 2' IN SIZE.
- 3. 10 OZ. NON-WOVEN GEOTEXTILE FILTER FABRIC SHALL BE USED TO SEAL THE GAPS BETWEEN THE BOULDERS AND UNDER THE COARSE BACKFILL MATERIAL OF THE VANE. THERE SHALL BE NO NON-WOVEN GEOTEXTILE VISIBLE IN THE FINISHED WORK; EDGES SHALL BE FOLDED, TUCKED, OR TRIMMED AS NEEDED. CONTRACTOR SHALL SUBMIT MATERIAL SPECIFICATION FOR REVIEW AND APPROVAL BY ENGINEER PRIOR TO USE.
- 4. COARSE BACKFILL SHALL BE A 50/50 MIX OF SCDOT CLASS A RIPRAP AND #5 COURSE AGGREGATE. COARSE BACKFILL SHALL BE PLACED TO A THICKNESS EQUAL TO THE DEPTH OF THE HEADER AND FOOTER BOULDERS AND SHALL EXTEND OUT FROM THE VANE TO THE STREAM BANK.
- 5. A THIRD-ROW OF BOULDERS WILL BE REQUIRED AS STATED BELOW. ALL DISTANCES ARE MEASURED FROM THE LEADING EDGE OF THE MOST UPSTREAM BOULDER BEGINNING AT THE INTERCEPT CONTROL POINT. A. VANE #1: FROM 0 LF TO 45 LF
- B. VANE #2: FROM 0 LF TO 50 LF
- C. VANE #3: FROM 0 LF TO 50 LF
- 6. BOULDER VANES SHALL BE BUILT TYPICALLY AS FOLLOWS:
 - A. OVER-EXCAVATE STREAM BED TO A DEPTH EQUAL TO THE TOTAL HEIGHT OF THE FOOTER BOULDER AND BACKFILL WITH COARSE BACKFILL. THIS WORK SHALL BE REVIEWED BY THE ENGINEER AND APPROVED PRIOR TO PROCEEDING TO THE NEXT STEP.
- B. PLACE FOOTER BOULDERS OF VANE AND FLOODPLAIN SILL. THIS WORK SHALL BE REVIEWED BY THE ENGINEER AND APPROVED PRIOR TO PROCEEDING TO THE NEXT STEP. A MINIMUM OF 24 HOURS SHALL PASS PRIOR TO EVALUATING SETTLING. ADDITIONAL BEDDING AND RESETTING OF BOULDERS MAY BE REQUIRED PRIOR TO PROCEEDING TO THE NEXT STEP.
- C. INSTALL FILTER FABRIC OVER FOOTERS OF VANE.
- D. PLACE COARSE BACKFILL ON NON-WOVEN GEOTEXTILE AND UP TO THE TOP OF THE FOOTER BOULDERS. ALSO PLACE BEHIND FLOODPLAIN SILL FOOTERS. THIS WORK SHALL BE REVIEWED BY THE ENGINEER AND APPROVED PRIOR TO PROCEEDING TO THE NEXT STEP.
- E. INSTALL HEADER BOULDERS ON TOP OF AND SET SLIGHTLY BACK FROM THE FOOTER BOULDERS. THE NON-WOVEN GEOTEXTILE WILL BE SECURED BETWEEN THE HEADER AND FOOTER BOULDERS OF THE VANE AND EXTENDED UP THE BACK OF THE HEADERS. THE SLOPE OF THE VANE ARM IS MEASURED ALONG THE VANE ARM WHICH IS INSTALLED AT AN ANGLE TO THE STREAM BANK AND PROFILE. SILL HEADER BOULDERS ARE AT CONSTANT ELEVATION (X1) INTO THE BANK. THIS WORK SHALL BE REVIEWED BY THE ENGINEER AND APPROVED PRIOR TO PROCEEDING TO THE NEXT STEP.
- F. PLACE REMAINING COARSE BACKFILL BEHIND HEADER BOULDERS OF THE VANE OVER TO THE STREAM BANK, ENSURING THAT ANY VOIDS BETWEEN THE BOULDERS ARE FILLED. COMPACT TO 80% STANDARD PROCTOR DENSITY.
- G. BACKFILL REMAINDER OF VANE AND FLOODPLAIN SILL WITH PREVIOUSLY EXCAVATED MATERIAL. COMPACT TO 80% STANDARD PROCTOR DENSITY.
- 7. IF ANY EROSION CONTROL MATTING IS SPECIFIED FOR USE IN THE VICINITY OF THE STREAM BANK/VANE INTERCEPT POINT THE MATTING EDGES SHALL BE NEATLY SECURED AROUND THE BOULDERS.

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STREAMBA

BIDDING

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TEMPORARY SEEDING FOR SUMMER AND WINTER SEASONS

February 15 through April Winter Mix and Replant with Summer Mix in May

July 15 through September Summer Mix and Replant with Winter Mix in October

Scientific Name

Hordeum sp.

Secale cereale

Panicum ramosum Pennisetum glaucum

October through April Plant Winter Mix

May through September Plant Summer Mix

Seed Mix A – Winter (Select at least 2)

Seed Mix B – Summer (Select at least 2)

Seeding Rate

Apply at 25 lb/ac

Apply at 25 lb/ac

Common Name

Barley

Winter Rye

Browntop Millet

B TEMPORARY SEEDING AND MULCHING FOR STREAM BANK STABILIZATION

Pearl Millet

STREAM BANK

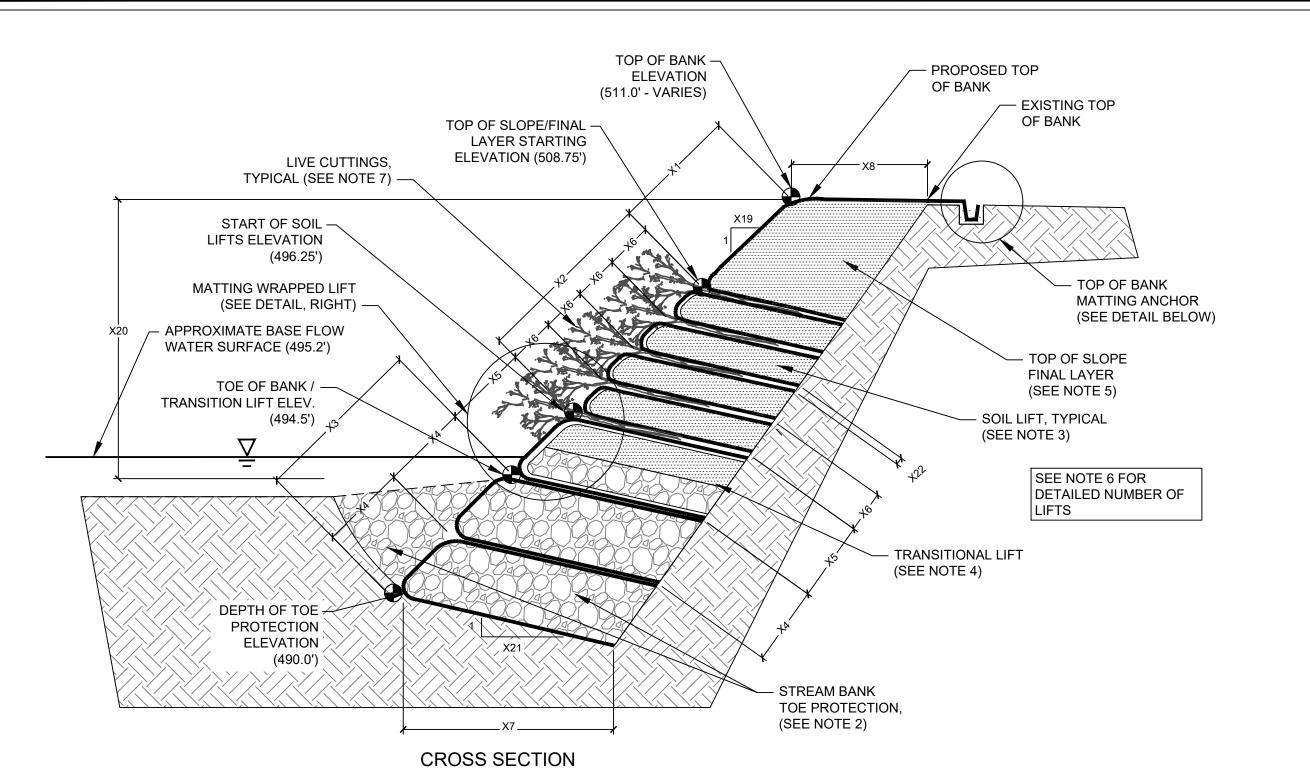
(SEE NOTE 2)

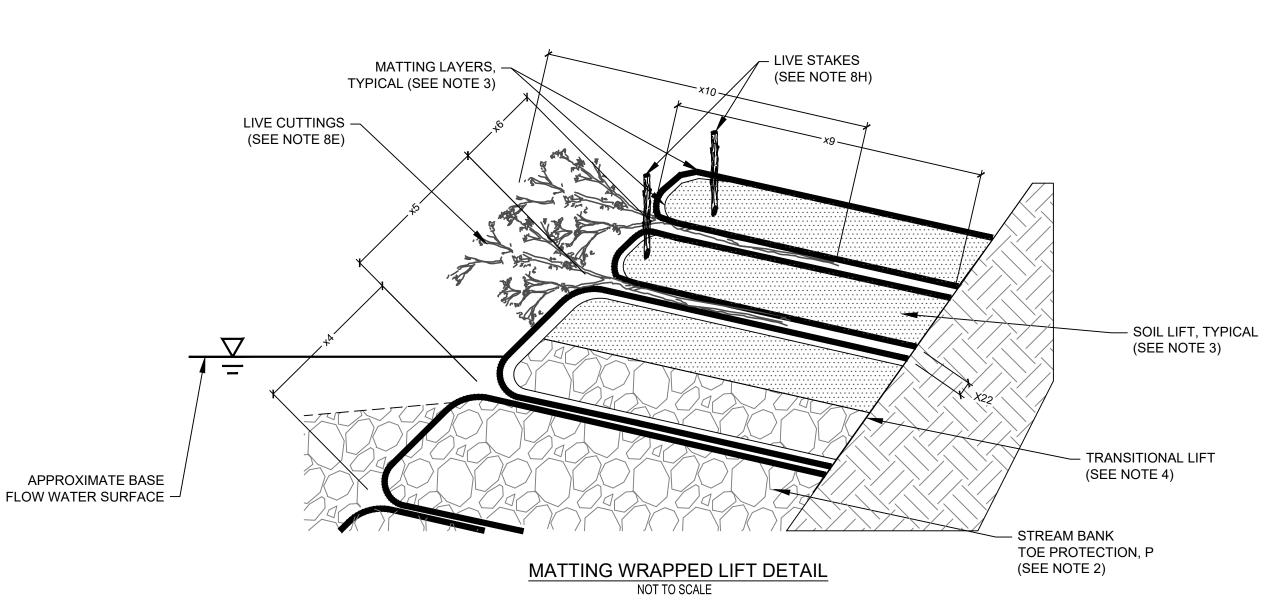
TOE OF BANK

APPROXIMATE

BASE FLOW WATER SURFACE

TOE PROTECTION,





PROPOSED TOP OF BANK X2 X1 X8 MATTING STAKE DEAD STOUT STAKE, TYPICAL (SEE DETAIL, BELOW) X12 TOP OF ANCHOR (SEE DETAIL, BELOW) X13 EXISTING TOP OF BANK

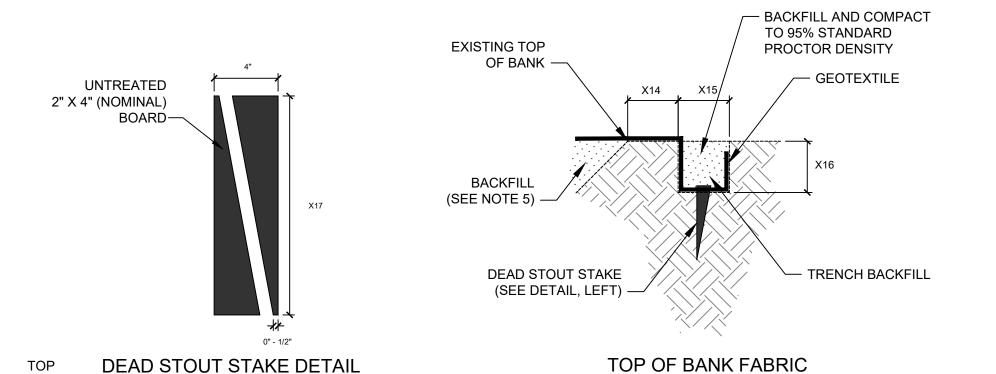
- LIVE CUTTINGS, TYPICAL

(SEE NOTE 8E)

ANCHOR DETAIL

NOT TO SCALE

DIMENSIONS (VALUES TO BE PROVIDED BY DESIGNER)			
VARIABLE	VALUES	TYPICAL UNIT	DESCRIPTION
X1	2.25	FT.	SOIL LIFT PLACEMENT FROM TOP OF BANK
X2	13	FT.	SOIL LIFT HEIGHT
Х3	5.0	FT.	TOE PROTECTION HEIGHT
X4	1.5	FT.	ROCK LIFT FACE HEIGHT
X5	1.5	FT.	TRANSITIONAL LIFT FACE HEIGHT
X6	1	FT.	SOIL LIFT FACE HEIGHT
X7	14	FT.	BASE DEPTH OF STREAM BANK/SLOPE REPAIR
X8	3	FT.	TOP DEPTH OF STREAM BANK/SLOPE REPAIR
X9	6-14	FT.	DEPTH OF LIFTS (MIN. AND MAX. IF APPLICABLE), SEE NOTE 6
X10	4-5	FT.	LIVE CUTTING LENGTH
X11	0.5-3.0	IN.	LIVE CUTTING DIAMETER (MIN. AND MAX.)
X12	2	FT.	DEAD STOUT STAKE SPACING - TOP OF ANCHOR
X13	2	FT.	MATTING STAKE SPACING
X14	8	FT.	TOP OF BANK ANCHOR TRENCH SETBACK FROM TOP OF BANK (2' BEYOND END OF SOIL LIFT)
X15	8	IN.	TOP OF BANK ANCHOR TRENCH WIDTH
X16	8	IN.	TOP OF BANK ANCHOR TRENCH DEPTH
X17	2	FT	DEAD STOUT STAKE LENGTH
X18	6	IN.	LIVE CUTTING SPACING
X19	2	NONE	BANK SLOPE (HORIZONTAL COMPONENT)
X20	16.5	FT.	SLOPE/BANK HEIGHT
X21	10	NONE	LIFT SLOPE (HORIZONTAL COMPONENT)
X22	3	IN.	SPACE BETWEEN SOIL LIFTS



PLAN VIEW

(SEE NOTE 8) NOT TO SCALE

NOT TO SCALE

LIVE CUTTINGS & LIVE STAKE TREE SPECIES		
SCIENTIFIC NAME	COMMON NAME	
Cornus Amomum	Silky Dogwood	
Salix Sericea	Silky Willow	

NOTE: CONTRACTOR SHALL USE A MIX OF 50% OF EACH SPECIES.

VEGETATED FABRIC-ENCAPSULATED SOIL LIFTS (FESLs)

NOTES

- 1. VEGETATED FABRIC-ENCAPSULATED SOIL LIFTS (FESLs) CONSIST OF LAYERS OF SOIL WRAPPED IN GEOTEXTILE MATTING (SOIL LIFTS) WITH LIVE CUTTINGS INSTALLED BETWEEN THE LAYERS. THE SYSTEM IS INSTALLED OVER A STREAM BANK TOE PROTECTION.
- 2. STREAM BANK TOE PROTECTION SHALL CONSIST OF SCDOT CLASS A RIPRAP ROCK LIFTS WRAPPED WITH SCDOT 804.2.11 CLASS 2 GEOTEXTILE TO THE SPECIFIED DEPTH BELLOW THE BANK TOE.
- 3. SOIL LIFTS SHALL CONSIST OF SOIL MEETING SCDOT STANDARD 713.2.7.6 WRAPPED IN TWO (2) LAYERS OF GEOTEXTILE (OUTER LAYER: TURF-REINFORCEMENT MATTING AS SPECIFIED, INNER LAYER: COIR MATTING 900G/M2). SOIL BACKFILL SHOULD BE TESTED AND AMELIORATED WITH THE REQUIRED FERTILIZERS AND LIME AS NEEDED TO PROMOTE HEALTHY GROWTH PER TECHNICAL SPECIFICATIONS.
- 4. A TRANSITIONAL LIFT SHALL BE PLACED OVER THE TOE PROTECTION AND UNDER SOIL LIFTS AND CONTAIN BOTH LAYERS OF GEOTEXTILE. THIS LIFT SHALL CONSIST OF A BOTTOM LAYER OF THE SAME MATERIAL USED IN THE ROCK LIFTS AND A TOP LAYER OF THE SAME MATERIAL USED IN THE SOIL LIFTS. ENOUGH MATERIAL SHOULD BE USED IN THE BOTTOM ROCK LAYER SO THAT ROCK MATERIAL EXTENDS A FEW INCHES ABOVE THE LEVEL OF STREAM BASE FLOW.
- 5. THE TOP OF BANK ABOVE THE LAST SOIL LIFT (FINAL LAYER) SHALL BE WRAPPED WITH TURF REINFORCEMENT MATTING ONLY, SEEDED, AND MULCHED. SOIL USED IN THIS LAYER SHALL BE THE SAME AS IN THE SOIL LIFTS AND COMPACTED IN THE SAME FASHION.
- AS IN THE SOIL LIFTS AND COMPACTED IN THE SAME FASHION.

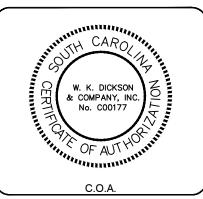
 6. THE APPROXIMATE NUMBER AND DEPTH INTO BANK OF THE LIFTS ARE AS FOLLOWS:
- TOE PROTECTION ROCK LIFTS: 3 LAYERS AT 14' DEPTH (LENGTH INTO BANK) (STARTING ELEV. = 490.0')
 TRANSITION LIFT: 1 LAYER AT 14' DEPTH (STARTING ELEV. = 494.50')
 SOIL LIFTS: 3 LAYERS AT 14' DEPTH (STARTING ELEV. = 496.25), 3 LAYERS AT 10' DEPTH (STARTING ELEV. =
- 500.00'), AND 4 LAYERS AT 6' DEPTH (STARTING ELEV. = 503.75')

 TOP-OF SLOPE "LIFT": 1 LAYER AT 2.25' DEPTH AT BOTTOM (STARTING ELEV. = 508.75'). TOP DEPTH VARIES. FOLLOW PROPOSED GRADING PLAN FOR FINAL TOP OF BANK ELEVATION.
- 7. THE LIVE CUTTINGS USED IN THE VEGETATED FESL ARE SPECIFIED IN THE TABLE BELOW. ADDITIONAL INFORMATION ABOUT LIVE CUTTINGS INCLUDING HARVESTING AND HANDLING INFORMATION SHALL BE DETAILED IN THE SPECIFICATIONS.
- 8. INSTALLATION OF VEGETATED FESL SHALL PROGRESS GENERALLY AS FOLLOWS:
 - A. COLLECT AND SOAK THE LIVE CUTTINGS IN WATER FOR 5-7 DAYS BEFORE PLANTING.
- B. EXCAVATE THE EXISTING STREAMBANK SLOPE UNTIL A STABLE, UNDISTURBED SURFACE IS ENCOUNTERED. AN ANGLED BENCH OF SPECIFIED SLOPE SHOULD BE CREATED SLOPING UPWARD FROM THE TOE OF THE STABLE CUT SLOPE TO THE TOE OF THE PROPOSED STREAMBANK. EXCAVATE A TRENCH ALONG THE PROPOSED TOE OF THE STREAM BANK TO THE SPECIFIED DEPTH BELOW EXISTING BANK TOE.
- C. CONSTRUCT ROCK LIFTS. LAY GEOTEXTILE ON THE BENCH FROM THE BACK OF EXCAVATION. A SUFFICIENT AMOUNT OF MATTING SHOULD REMAIN TO WRAP THE FACE OF THE LIFT AND EXTEND BACK ON TOP OF THE LIFT. OVERLAP EXISTING MATTING BY 1 FOOT. PLACE ROCK FILL AND WRAP COMPACTED ROCK LIFT WITH THE REMAINING MATTING AND STAKE. LIFTS SHALL SLOPE UPWARD TOWARD THE PROPOSED SLOPE FACE TO ACHIEVE THE SPECIFIED SLOPE OF THE PROPOSED STREAM BANK FACE. BACKFILL TRENCH FROM THE POINT OF EXCAVATION TO THE BOTTOM LIFT WITH ROCK.
- D. CONSTRUCT TRANSITIONAL LIFT. PLACE DOUBLE LAYER OF EROSION CONTROL MATTING AS DESCRIBED IN NOTE 3 FROM THE BACK EXCAVATION OVER TOE PROTECTION. STAKE BOTTOM OF MATTING WITH A MINIMUM OF THREE (3) ROWS OF STAKING. FILL BOTTOM 3/4 OF THE TRANSITIONAL LAYER WITH ROCK AND THE REMAINDER WITH THE SOIL. SOIL BACKFILL SHALL BE PLACED IN 4-6 INCH LIFTS AND COMPACTED TO 80-90% STANDARD PROCTOR DENSITY WITH A SKID-TYPE, ROLLER, OR VIBRATORY COMPACTOR. WRAP COMPACTED SOIL LIFT WITH THE REMAINING MATTING AND STAKE.
- E. PLACE A 1-2 IN. LAYER OF SOIL EVENLY OVER TERRACE. PLACE LAYER OF LIVE CUTTINGS ON TOP OF THE LIFT AT THE SPECIFIED SPACING. THE BUDDING END SHALL PROJECT NO MORE THAN 6 INCHES FROM THE PROPOSED SLOPE FACE. PLACE BRANCHES ORIENTED AT RIGHT ANGLES TO STREAM. COVER THE LIVE BRANCHES WITH 1-2 IN. OF TOPSOIL TO ENSURE ROOTING MEDIUM AND CREATE AN EVEN SURFACE FOR NEXT LIFT.
- F. CONSTRUCT SOIL LIFTS FOLLOWING METHOD DESCRIBED IN NOTE 8D SUBSTITUTING SOIL FOR THE ROCK COMPONENT.
- G. CONSTRUCT FINAL, TOP OF BANK LAYER ABOVE LAST SOIL LIFT. SEED AND MULCH AS SPECIFIED.
- H. INSTALL LIVE STAKES ON HORIZONTAL SURFACE OF EACH SOIL LIFT, ONE ROW WITH THREE FOOT (3') SPACING.
- I. THE FACE OF THE COMPLETED VEGETATED FESL SHALL HAVE TERRACES, AND OVERALL SHALL MATCH THE PROPOSED BANK SLOPE.
- 9. THE PLAN VIEW ILLUSTRATES A PERPENDICULAR PERSPECTIVE OF EACH SURFACE DEPICTED IN THE CROSS SECTION. THERE IS NO FORESHORTENING OF THE STREAM BANK (OR ANY OTHER SLOPED SURFACE) IN THE PLAN VIEW.

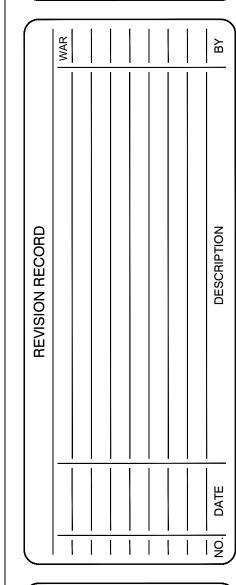


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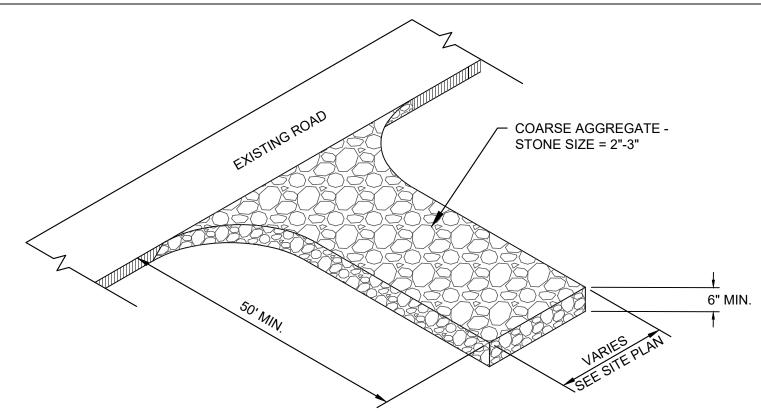


SUGAR CREEK STREAMBANK STABILI
FOR
YORK COUNTY, SOUTH CAR

PROJ. MGR.: WAR
DESIGN BY: DNP/WAR
DRAWN BY: NBH
PROJ. DATE: JULY 2024
DRAWING NUMBER:

9 OF 10

WKD PROJ. NO.: 20190232.00.CL



PURPOSE:

STABILIZED CONSTRUCTION ENTRANCES SHOULD BE USED AT ALL POINTS WHERE TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE AND MOVING DIRECTLY ONTO A PUBLIC ROAD.

CONSTRUCTION SPECIFICATIONS:

- CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL AND PROPERLY GRADE IT.
- PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE DETAIL, AND SMOOTH IT.
- PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET. USE GEOTEXTILE FABRICS BECAUSE THEY IMPROVE STABILITY OF THE FOUNDATION IN LOCATIONS SUBJECT TO SEEPAGE OR HIGH WATER TABLE.

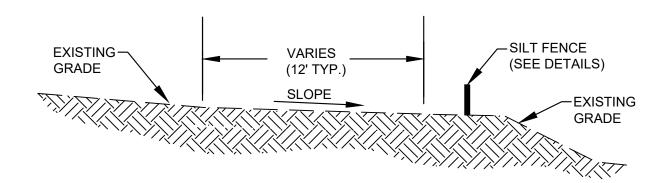
MAINTENANCE:

∖ 10 ∫

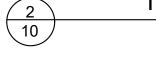
MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS, OR AIRFIELD PAVEMENTS.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE

NOT TO SCALE

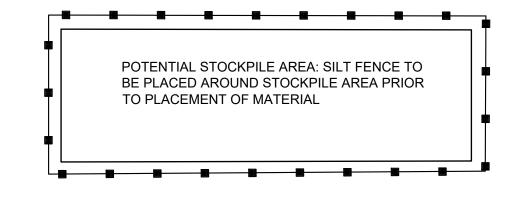


- 1. MAINTAIN HAUL ROAD IN A SERVICEABLE CONDITION DURING CONSTRUCTION.
- 2. RETURN TO ORIGINAL GRADE AT THE COMPLETION OF WORK.
- 3. VEGETATE ALL DISTURBED AREAS.
- 4. REMOVE SILT FENCE UPON ESTABLISHMENT OF VEGETATION.



TYPICAL HAUL ROAD SECTION

NOT TO SCALE

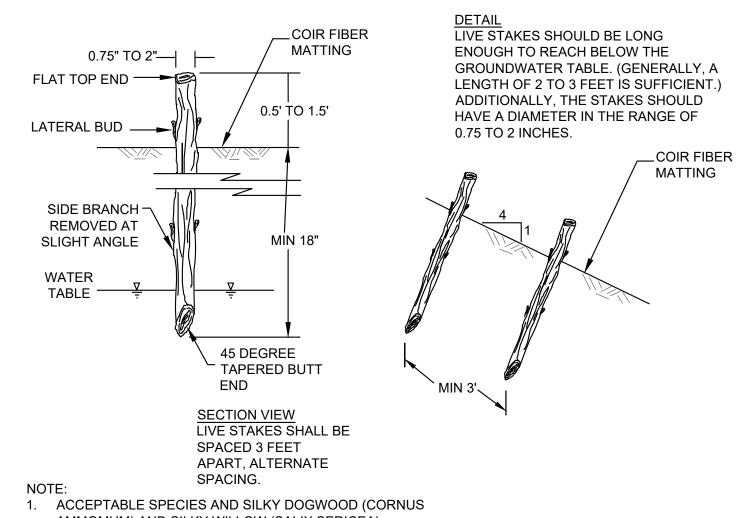


SILT FENCE IS TO BE INSTALLED ONLY ON THE DOWNHILL SLOPE. OPEN AND CLOSE AS NEEDED FOR TEMPORARY ACCESS.



STOCKPILE STORAGE AREA

NOT TO SCALE



AMMOMUM) AND SILKY WILLOW (SALIX SERICEA).



WHEN AND WHERE TO USE IT

SILT FENCE IS APPLICABLE IN AREAS:

- WHERE THE MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE FENCE IS 100-FEET.
- WHERE THE MAXIMUM SLOPE STEEPNESS (NORMAL [PERPENDICULAR] TO FENCE LINE) IS 2H:1V.
- THAT DO NOT RECEIVE CONCENTRATED FLOWS GREATER THAN 0.5 CFS.

<u>DO NOT</u> PLACE SILT FENCE ACROSS CHANNELS OR USE IT AS A VELOCITY CONTROL BMP.

CONSTRUCTION SPECIFICATIONS:

- 1. USE A SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYOLEFINS OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D 6461. SYNTHETIC FILTER FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0° TO 120° F.
- 2. ENSURE THAT POSTS FOR SEDIMENT FENCES ARE 1.33 LB/LINEAR FT STEEL WITH A MINIMUM LENGTH OF 5 FEET MAKE SURE THAT STEEL POSTS HAVE PROJECTIONS TO FACILITATE FASTENING THE FABRIC.

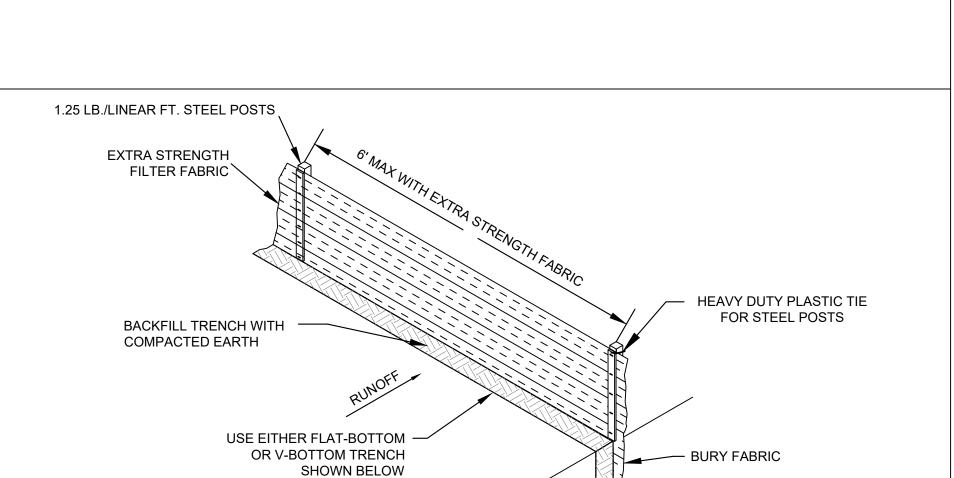
CONSTRUCTION:

- CONSTRUCT THE SEDIMENT BARRIER OF EXTRA STRENGTH SYNTHETIC FILTER FABRICS.
- 2. ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 24 INCHES ABOVE THE GROUND SURFACE. (HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE
- 3. CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST.
- EXTRA STRENGTH FILTER FABRIC WITH 6 FEET POST SPACING DOES NOT REQUIRE WIRE MESH SUPPORT FENCE. SECURELY FASTEN THE FILTER FABRIC DIRECTLY TO POSTS. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.
- 5. EXCAVATE A TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
- 6. PLACE 12 INCHES OF THE FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
- 7. BACKFILL THE TRENCH WITH SOIL PLACED OVER THE FILTER FABRIC AND COMPACT. THOROUGH COMPACTION
- OF THE BACKFILL IS CRITICAL TO SILT FENCE PERFORMANCE.

8. DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.

MAINTENANCE:

- 1. INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS
- 2. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE
- 3. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING
- CLEANOUT. 4. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



LINE DEPRESSION BOTTOM

WITH GEOTEXTILE FABRIC

CLASS A RIP RAP

TEMPORARY DEPRESSION CROSSING

NOT TO SCALE

1. REMOVE THE STRUCTURE WHEN NO LONGER NEEDED.

AS A MINIMUM, DESIGN STRUCTURE TO PASS 2 YEAR PEAK

ENSURE THAT DESIGN FLOW VELOCITY AT THE OUTLET OF THE CROSSING STRUCTURE IS NON-EROSIVE FOR THE

- #57 WASHED STONE

PROPOSED 12" DIP OR RCP CLASS IV/V

DEPENDING ON COVER OVER PIPE.

TOP OF DEPRESSION

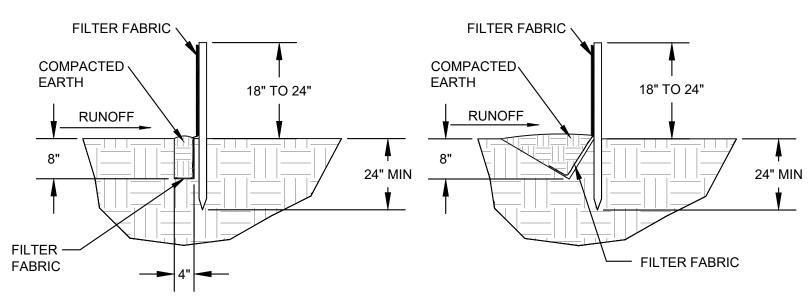
CLASS A RIP RAP

(NOT TO EXCEED 90 DAYS)

FLOW WITHOUT OVERTOPPING

RECEIVING STREAM CHANNEL

SILT FENCE INSTALLATION



FLAT-BOTTOM TRENCH DETAIL

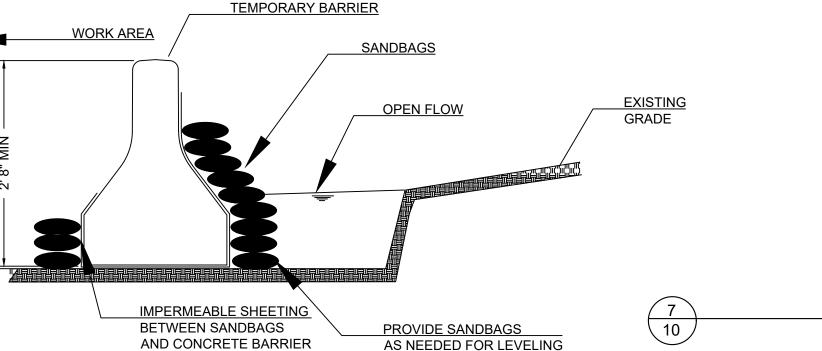
V-SHAPED TRENCH DETAIL



NOT TO SCALE

#57 WASHED STONE

DEPRESSION AREA-



1. FOR SANDBAGS, USE MATERIALS THAT ARE RESISTANT TO UV RADIATION.

2. USE BARRIER MADE OF CONCRETE, WATER BAGS, OR OTHER APPROVED MATERIAL.

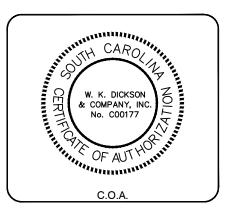
TEARING AND PUNCTURE AND ARE TIGHTLY WOVEN SO AS TO NOT SPILL

- 3. USE 10 MIL OR THICKER IMPERMEABLE SHEETING. 4. OVERLAP SHEETING FROM UPSTREAM TO DOWNSTREAM A MIN OF 18
- INCHES. 5. INSTALL BARRIER FROM UPSTREAM TO DOWNSTREAM.
- 6. DE-WATER WORK AREA AS SHOWN.
- 7. KEEP ABUTMENTS BETWEEN CONCRETE BARRIERS WATER TIGHT,
- REPLACE SANDBAGS AND IMPERMEABLE SHEETING AS NEEDED. 8. PROVIDE SEALED SHOP DRAWING FOR REVIEW BY ENGINEER PRIOR TO
 - INSTALLATION.

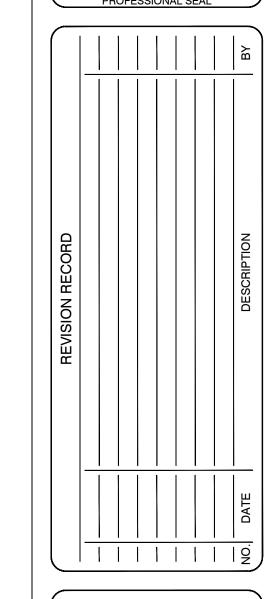
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