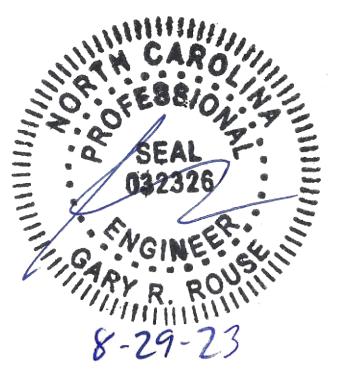




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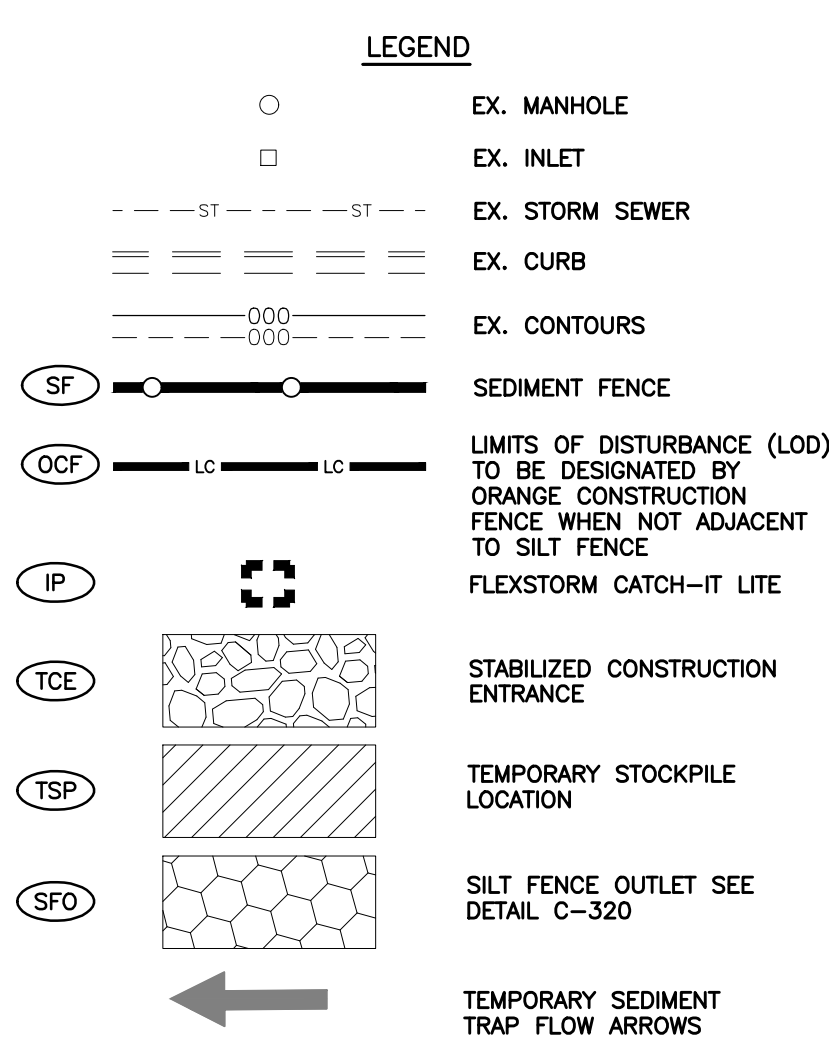
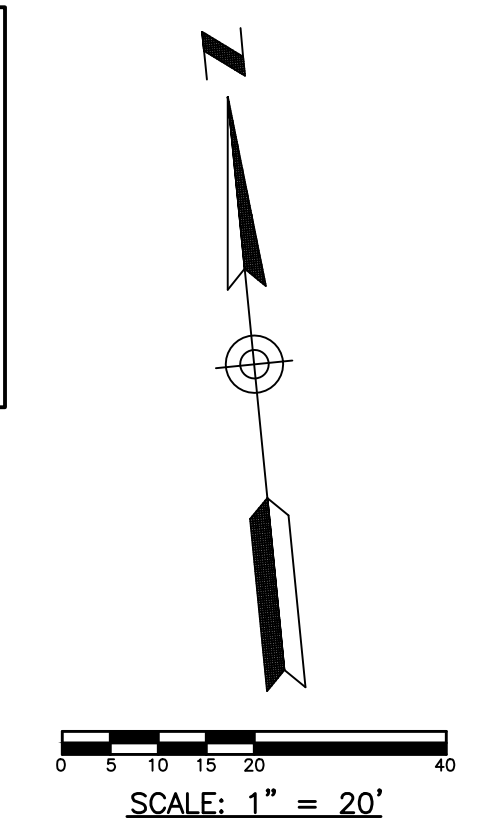
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SHEET **STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PHASE 1**

SHEET NUMBER **C-310**

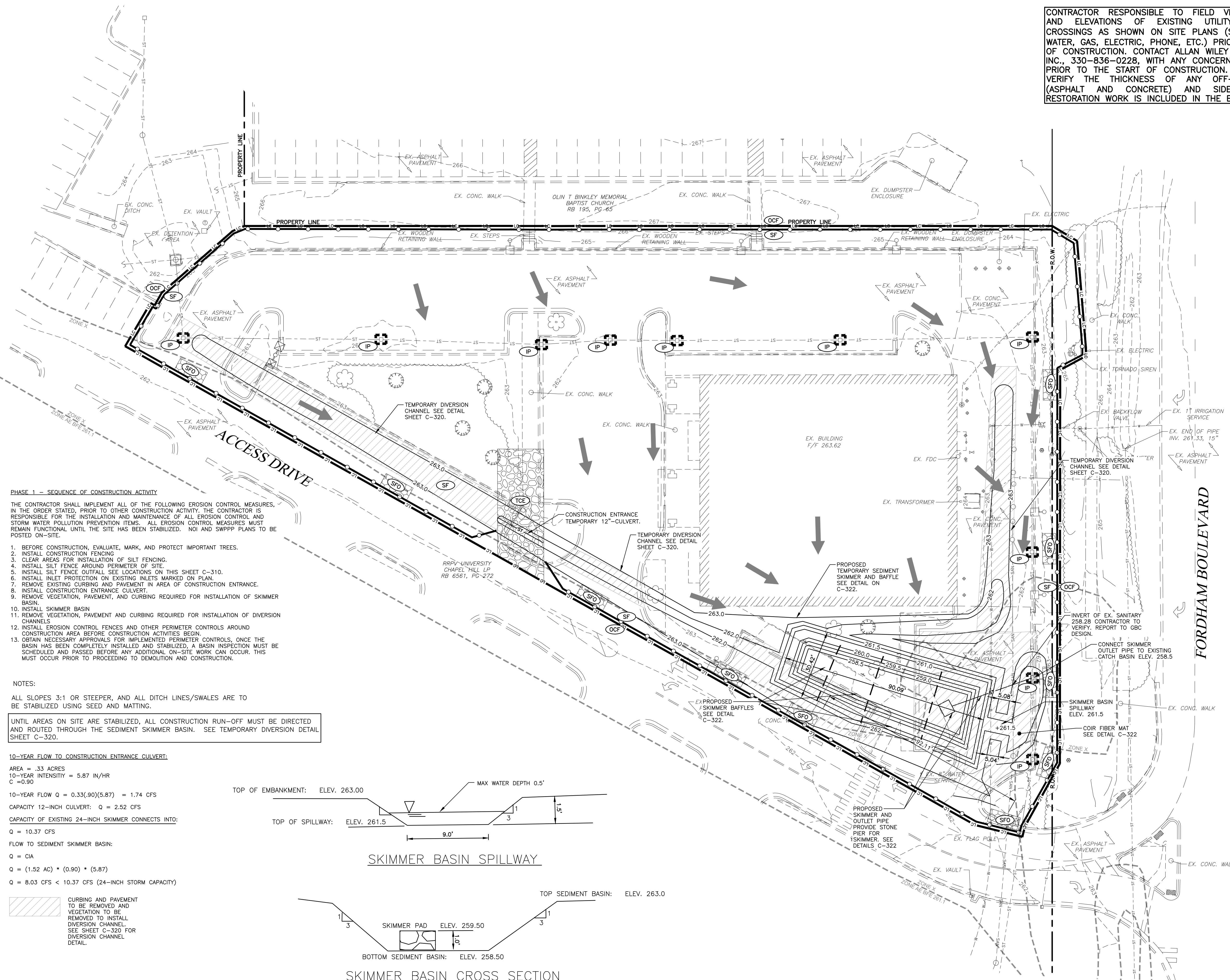
CONTRACTOR RESPONSIBLE TO FIELD VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITY TIE-INS AND CROSSINGS AS SHOWN ON SITE PLANS (SANITARY, STORM, WATER, GAS, ELECTRIC, PHONE, ETC.) PRIOR TO THE START OF CONSTRUCTION. CONTACT ALLAN WILEY AT GBC DESIGN, INC., 330-836-0228, WITH ANY CONCERNS OR CONFLICTS PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR TO VERIFY THE THICKNESS OF ANY OFF-SITE PAVEMENT (ASPHALT AND CONCRETE) AND SIDEWALK SO THE RESTORATION WORK IS INCLUDED IN THE BID.



LIMITS OF DISTURBANCE (LOD) = 1.52 AC.
NOTE: PERMANENT SITE STABILIZATION PROVIDED BY LANDSCAPING AND SOD. SEE SHEET L-100.

Zoning Approved
by Katherine Shor
09/14/2023

Skimmer Basin	
Okay	
1.52	Disturbed Area (Acres)
8.08	Peak Flow from 10-year Storm (cfs)
2736	Required Volume ft ³
2610	Required Surface Area ft ²
1.5	Suggested Width ft
7.1	Suggested Length ft
30	Trial Top Width at Spillway Invert ft
90	Trial Top Length at Spillway Invert ft
2	Trial Side Slope Ratio Z:1
1.5	Trial Depth ft (2 to 3.5 feet above grade)
24	Bottom Width ft
84	Bottom Length ft
2016	Bottom Area ft ²
3528	Actual Volume ft ³ Okay
2700	Actual Surface Area ft ² Okay
8	Trial Weir Length ft
0.5	Trial Depth of Flow ft
9.5	Spillway Capacity cfs Okay
2	Skimmer Size (inches)
0.167	Head on Skimmer (feet)
1	Orifice Size (1/4 inch increments)
2.90	Dewatering Time (days)
	Suggest about 3 days

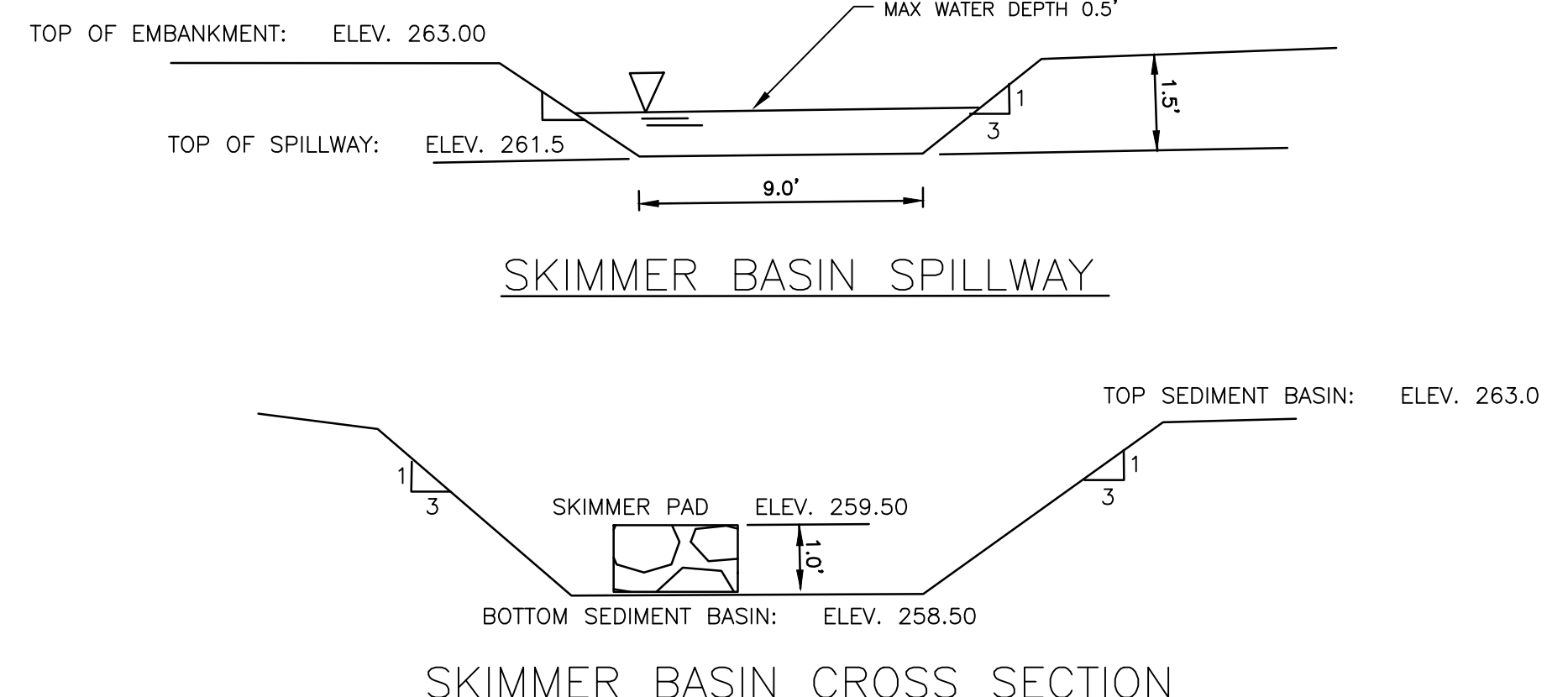


- PHASE 1 - SEQUENCE OF CONSTRUCTION ACTIVITY**
- BEFORE CONSTRUCTION, EVALUATE, MARK, AND PROTECT IMPORTANT TREES.
 - INSTALL CONSTRUCTION FENCING
 - CLEAR AREAS FOR INSTALLATION OF SILT FENCING.
 - INSTALL SILT FENCE AROUND PERIMETER OF SITE.
 - INSTALL SILT FENCE OUTFALL SEE LOCATIONS ON THIS SHEET C-310.
 - INSTALL INLET PROTECTION ON EXISTING INLETS MARKED ON PLAN.
 - REMOVE EXISTING CURBING AND PAVEMENT IN AREA OF CONSTRUCTION ENTRANCE.
 - INSTALL CONSTRUCTION ENTRANCE CULVERT.
 - REMOVE VEGETATION, PAVEMENT, AND CURBING REQUIRED FOR INSTALLATION OF SKIMMER BASIN.
 - INSTALL SKIMMER BASIN
 - REMOVE VEGETATION, PAVEMENT AND CURBING REQUIRED FOR INSTALLATION OF DIVERSION CHANNELS
 - INSTALL EROSION CONTROL FENCES AND OTHER PERIMETER CONTROLS AROUND CONSTRUCTION AREA BEFORE CONSTRUCTION ACTIVITIES BEGIN.
 - OBTAIN NECESSARY APPROVALS FOR IMPLEMENTED PERIMETER CONTROLS, ONCE THE BASIN HAS BEEN COMPLETELY INSTALLED AND STABILIZED, A BASIN INSPECTION MUST BE SCHEDULED AND PASSED BEFORE ANY ADDITIONAL ON-SITE WORK CAN OCCUR. THIS MUST OCCUR PRIOR TO PROCEEDING TO DEMOLITION AND CONSTRUCTION.

NOTES:
ALL SLOPES 3:1 OR STEEPER, AND ALL DITCH LINES/SWALES ARE TO BE STABILIZED USING SEED AND MATTING.

UNTIL AREAS ON SITE ARE STABILIZED, ALL CONSTRUCTION RUN-OFF MUST BE DIRECTED AND ROUTED THROUGH THE SEDIMENT SKIMMER BASIN. SEE TEMPORARY DIVERSION DETAIL SHEET C-320.

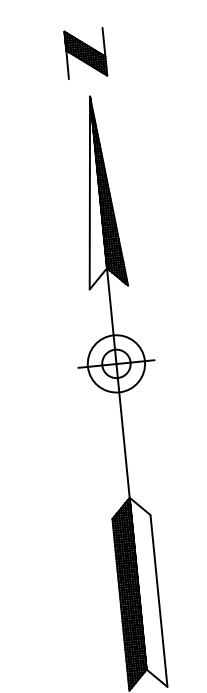
10-YEAR FLOW TO CONSTRUCTION ENTRANCE CULVERT:
AREA = .33 ACRES
10-YEAR INTENSITY = 5.87 IN/HR
C = 0.90
10-YEAR FLOW Q = 0.33(.90)(5.87) = 1.74 CFS
CAPACITY 12-INCH CULVERT: Q = 2.52 CFS
CAPACITY OF EXISTING 24-INCH SKIMMER CONNECTS INTO:
Q = 10.37 CFS
FLOW TO SEDIMENT SKIMMER BASIN:
Q = CIA
Q = (1.52 AC) * (0.90) * (5.87)
Q = 8.03 CFS < 10.37 CFS (24-INCH STORM CAPACITY)



CURBING AND PAVEMENT TO BE REMOVED AND VEGETATION TO BE REMOVED TO INSTALL DIVERSION CHANNEL. SEE SHEET C-320 FOR DIVERSION CHANNEL DETAIL.

NOTE: EROSION CONTROL MEASURES ARE NOT TO BE REMOVED WITHOUT PERMISSION OF THE EROSION CONTROL INSPECTOR FOR THE PROJECT.

CONTRACTOR RESPONSIBLE TO FIELD VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITY TIE-INS AND CROSSINGS AS SHOWN ON SITE PLANS (SANITARY, STORM, WATER, GAS, ELECTRIC, PHONE, ETC.) PRIOR TO THE START OF CONSTRUCTION. CONTACT ALLAN WILEY AT GBC DESIGN, INC., 330-836-0228, WITH ANY CONCERNS OR CONFLICTS PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR TO VERIFY THE THICKNESS OF ANY OFF-SITE PAVEMENT (ASPHALT AND CONCRETE) AND SIDEWALK SO THE RESTORATION WORK IS INCLUDED IN THE BID.



SCALE: 1" = 20'

LEGEND

- PROP. MANHOLE
- EX. MANHOLE
- PROP. INLET
- EX. INLET
- ST --- EX. STORM SEWER
- ST --- PROP. STORM SEWER
- ST --- EX. CURB
- ST --- PROP. CURB & GUTTER
- 000 --- PROP. CONTOURS
- 000 --- EX. CONTOURS
- 00.00 / 00.00 PROP. TOP OF WALL ELEV.
- 00.00 / 00.00 PROP. BOTTOM OF WALL ELEV.
- SF --- SEDIMENT FENCE
- OCF --- LIMITS OF CONSTRUCTION TO BE DESIGNATED BY ORANGE COUNTY CONSTRUCTION FENCE WHEN NOT ADJACENT TO SILT FENCE
- IP --- FLEXSTORM CATCH-IT LITE
- TCE --- STABILIZED CONSTRUCTION ENTRANCE
- TSP --- TEMPORARY STOCKPILE LOCATION
- TS/PS --- TEMPORARY SEEDING & MULCHING/ PERMANENT SEEDING & MULCHING SEE LANDSCAPE PLAN L-1.0
- TCW --- TEMPORARY CONCRETE WASH-OUT AREA
- SFO --- SILT FENCE OUTLET SEE DETAIL C-320
- ← TEMPORARY SEDIMENT TRAP FLOW ARROWS

LIMITS OF DISTURBANCE = 1.52 AC.
NOTE: PERMANENT SITE STABILIZATION PROVIDED BY LANDSCAPING AND SOD. SEE SHEET L-100.

Zoning Approved
 by Katherine Shor
 09/14/2023

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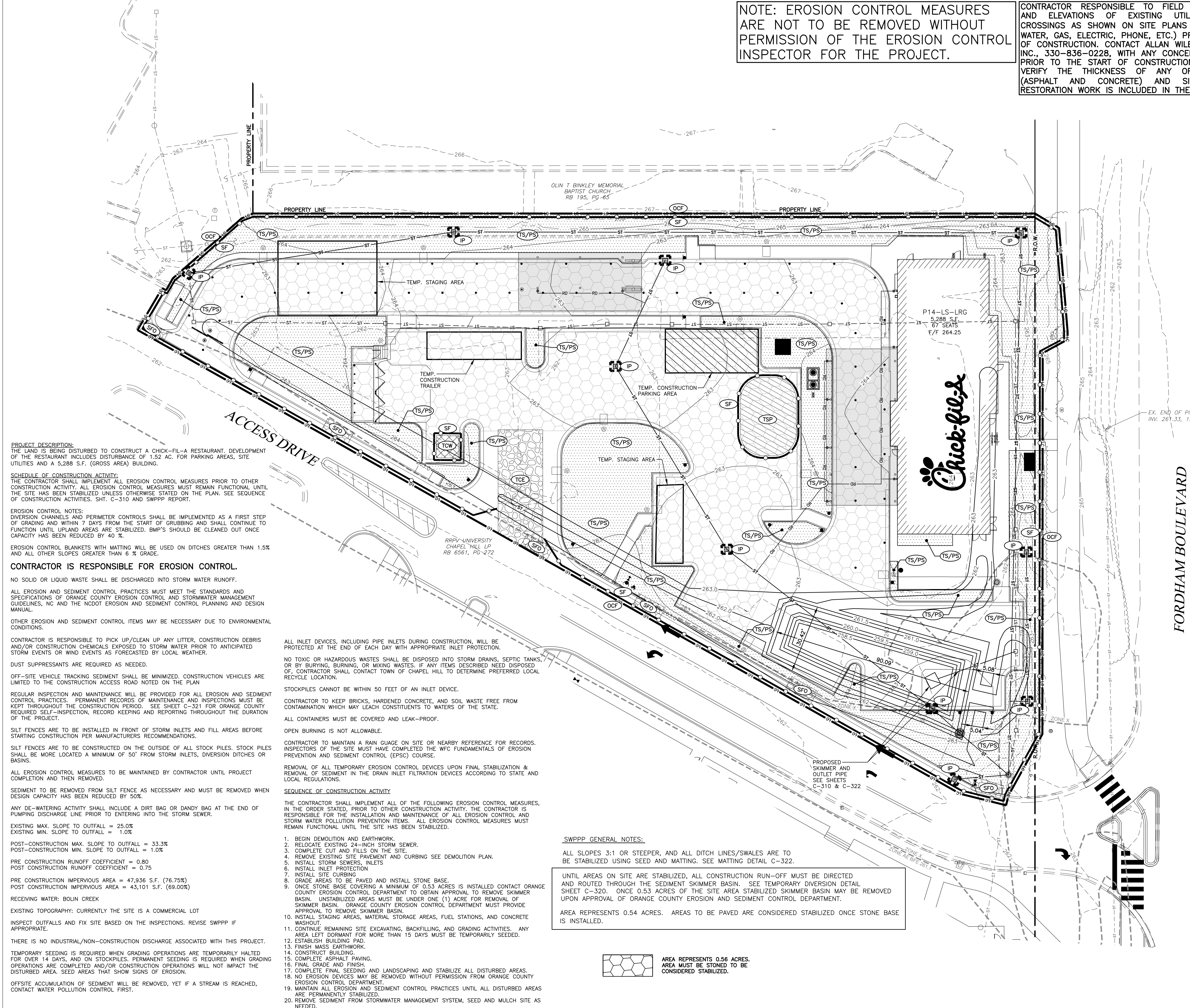
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SHEET
STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PHASE 2

SHEET NUMBER
C-315



PROJECT DESCRIPTION:
 THE LAND IS BEING DISTURBED TO CONSTRUCT A CHICK-FIL-A RESTAURANT. DEVELOPMENT OF THE RESTAURANT INCLUDES DISTURBANCE OF 1.52 AC. FOR PARKING AREAS, SITE UTILITIES AND A 5,288 S.F. (GROSS AREA) BUILDING.

SCHEDULE OF CONSTRUCTION ACTIVITY:
 THE CONTRACTOR SHALL IMPLEMENT ALL EROSION CONTROL MEASURES PRIOR TO OTHER CONSTRUCTION ACTIVITY. ALL EROSION CONTROL MEASURES MUST REMAIN FUNCTIONAL UNTIL THE SITE HAS BEEN STABILIZED UNLESS OTHERWISE STATED ON THE PLAN. SEE SEQUENCE OF CONSTRUCTION ACTIVITIES. SHT. C-310 AND SWPPP REPORT.

EROSION CONTROL NOTES:
 DIVERSION CHANNELS AND PERIMETER CONTROLS SHALL BE IMPLEMENTED AS A FIRST STEP OF GRADING AND WITHIN 7 DAYS FROM THE START OF GRUBBING AND SHALL CONTINUE TO FUNCTION UNTIL UPLAND AREAS ARE STABILIZED. BMP'S SHOULD BE CLEANED OUT ONCE CAPACITY HAS BEEN REDUCED BY 40 %.

EROSION CONTROL BLANKETS WITH MATTING WILL BE USED ON DITCHES GREATER THAN 1.5% AND ALL OTHER SLOPES GREATER THAN 6 % GRADE.

CONTRACTOR IS RESPONSIBLE FOR EROSION CONTROL.

NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORM WATER RUNOFF.

ALL EROSION AND SEDIMENT CONTROL PRACTICES MUST MEET THE STANDARDS AND SPECIFICATIONS OF ORANGE COUNTY EROSION CONTROL AND STORMWATER MANAGEMENT GUIDELINES, NC AND THE NCDOT EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

OTHER EROSION AND SEDIMENT CONTROL ITEMS MAY BE NECESSARY DUE TO ENVIRONMENTAL CONDITIONS.

CONTRACTOR IS RESPONSIBLE TO PICK UP/CLEAN UP ANY LITTER, CONSTRUCTION DEBRIS AND/OR CONSTRUCTION CHEMICALS EXPOSED TO STORM WATER PRIOR TO ANTICIPATED STORM EVENTS OR WIND EVENTS AS FORECASTED BY LOCAL WEATHER.

DUST SUPPRESSANTS ARE REQUIRED AS NEEDED.

OFF-SITE VEHICLE TRACKING SEDIMENT SHALL BE MINIMIZED. CONSTRUCTION VEHICLES ARE LIMITED TO THE CONSTRUCTION ACCESS ROAD NOTED ON THE PLAN

REGULAR INSPECTION AND MAINTENANCE WILL BE PROVIDED FOR ALL EROSION AND SEDIMENT CONTROL PRACTICES. PERMANENT RECORDS OF MAINTENANCE AND INSPECTIONS MUST BE KEPT THROUGHOUT THE CONSTRUCTION PERIOD. SEE SHEET C-321 FOR ORANGE COUNTY REQUIRED SELF-INSPECTION, RECORD KEEPING AND REPORTING THROUGHOUT THE DURATION OF THE PROJECT.

SILT FENCES ARE TO BE INSTALLED IN FRONT OF STORM INLETS AND FILL AREAS BEFORE STARTING CONSTRUCTION PER MANUFACTURERS RECOMMENDATIONS.

SILT FENCES ARE TO BE CONSTRUCTED ON THE OUTSIDE OF ALL STOCK PILES. STOCK PILES SHALL BE MORE LOCATED A MINIMUM OF 50' FROM STORM INLETS, DIVERSION DITCHES OR BASINS.

ALL EROSION CONTROL MEASURES TO BE MAINTAINED BY CONTRACTOR UNTIL PROJECT COMPLETION AND THEN REMOVED.

SEDIMENT TO BE REMOVED FROM SILT FENCE AS NECESSARY AND MUST BE REMOVED WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50%.

ANY DE-WATERING ACTIVITY SHALL INCLUDE A DIRT BAG OR DANDY BAG AT THE END OF PUMPING DISCHARGE LINE PRIOR TO ENTERING INTO THE STORM SEWER.

EXISTING MAX. SLOPE TO OUTFALL = 25.0%
 EXISTING MIN. SLOPE TO OUTFALL = 1.0%

POST-CONSTRUCTION MAX. SLOPE TO OUTFALL = 33.3%
 POST-CONSTRUCTION MIN. SLOPE TO OUTFALL = 1.0%

PRE CONSTRUCTION RUNOFF COEFFICIENT = 0.80
 POST CONSTRUCTION RUNOFF COEFFICIENT = 0.75

PRE CONSTRUCTION IMPERVIOUS AREA = 47,936 S.F. (76.75%)
 POST CONSTRUCTION IMPERVIOUS AREA = 43,101 S.F. (69.00%)

RECEIVING WATER: BOLIN CREEK

EXISTING TOPOGRAPHY: CURRENTLY THE SITE IS A COMMERCIAL LOT

INSPECT OUTFALLS AND FIX SITE BASED ON THE INSPECTIONS. REVISE SWPPP IF APPROPRIATE.

THERE IS NO INDUSTRIAL/NON-CONSTRUCTION DISCHARGE ASSOCIATED WITH THIS PROJECT.

TEMPORARY SEEDING IS REQUIRED WHEN GRADING OPERATIONS ARE TEMPORARILY HALTED FOR OVER 14 DAYS, AND ON STOCKPILES. PERMANENT SEEDING IS REQUIRED WHEN GRADING OPERATIONS ARE COMPLETED AND/OR CONSTRUCTION OPERATIONS WILL NOT IMPACT THE DISTURBED AREA. SEED AREAS THAT SHOW SIGNS OF EROSION.

OFFSITE ACCUMULATION OF SEDIMENT WILL BE REMOVED, YET IF A STREAM IS REACHED, CONTACT WATER POLLUTION CONTROL FIRST.

ALL INLET DEVICES, INCLUDING PIPE INLETS DURING CONSTRUCTION, WILL BE PROTECTED AT THE END OF EACH DAY WITH APPROPRIATE INLET PROTECTION.

NO TOXIC OR HAZARDOUS WASTES SHALL BE DISPOSED INTO STORM DRAINS, SEPTIC TANKS, OR BY BURYING, BURNING, OR MIXING WASTES. IF ANY ITEMS DESCRIBED NEED DISPOSED OF, CONTRACTOR SHALL CONTACT TOWN OF CHAPEL HILL TO DETERMINE PREFERRED LOCAL RECYCLE LOCATION.

STOCKPILES CANNOT BE WITHIN 50 FEET OF AN INLET DEVICE.

CONTRACTOR TO KEEP BRICKS, HARDENED CONCRETE, AND SOIL WASTE FREE FROM CONTAMINATION WHICH MAY LEACH CONSTITUENTS TO WATERS OF THE STATE.

ALL CONTAINERS MUST BE COVERED AND LEAK-PROOF.

OPEN BURNING IS NOT ALLOWABLE.

CONTRACTOR TO MAINTAIN A RAIN GAUGE ON SITE OR NEARBY REFERENCE FOR RECORDS. INSPECTORS OF THE SITE MUST HAVE COMPLETED THE WFC FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) COURSE.

REMOVAL OF ALL TEMPORARY EROSION CONTROL DEVICES UPON FINAL STABILIZATION & REMOVAL OF SEDIMENT IN THE DRAIN INLET FILTRATION DEVICES ACCORDING TO STATE AND LOCAL REGULATIONS.

SEQUENCE OF CONSTRUCTION ACTIVITY

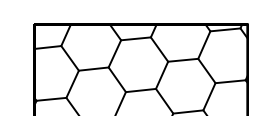
THE CONTRACTOR SHALL IMPLEMENT ALL OF THE FOLLOWING EROSION CONTROL MEASURES, IN THE ORDER STATED, PRIOR TO OTHER CONSTRUCTION ACTIVITY. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION CONTROL AND STORM WATER POLLUTION PREVENTION ITEMS. ALL EROSION CONTROL MEASURES MUST REMAIN FUNCTIONAL UNTIL THE SITE HAS BEEN STABILIZED.

SWPPP GENERAL NOTES:

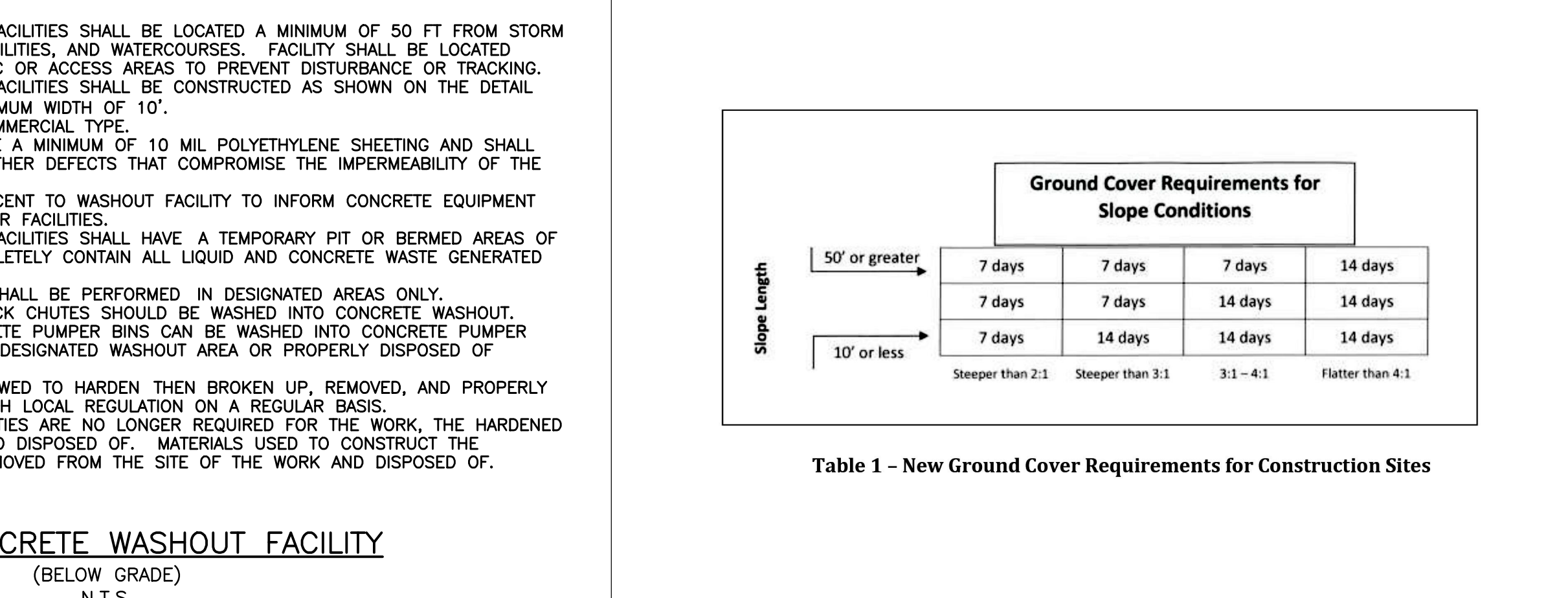
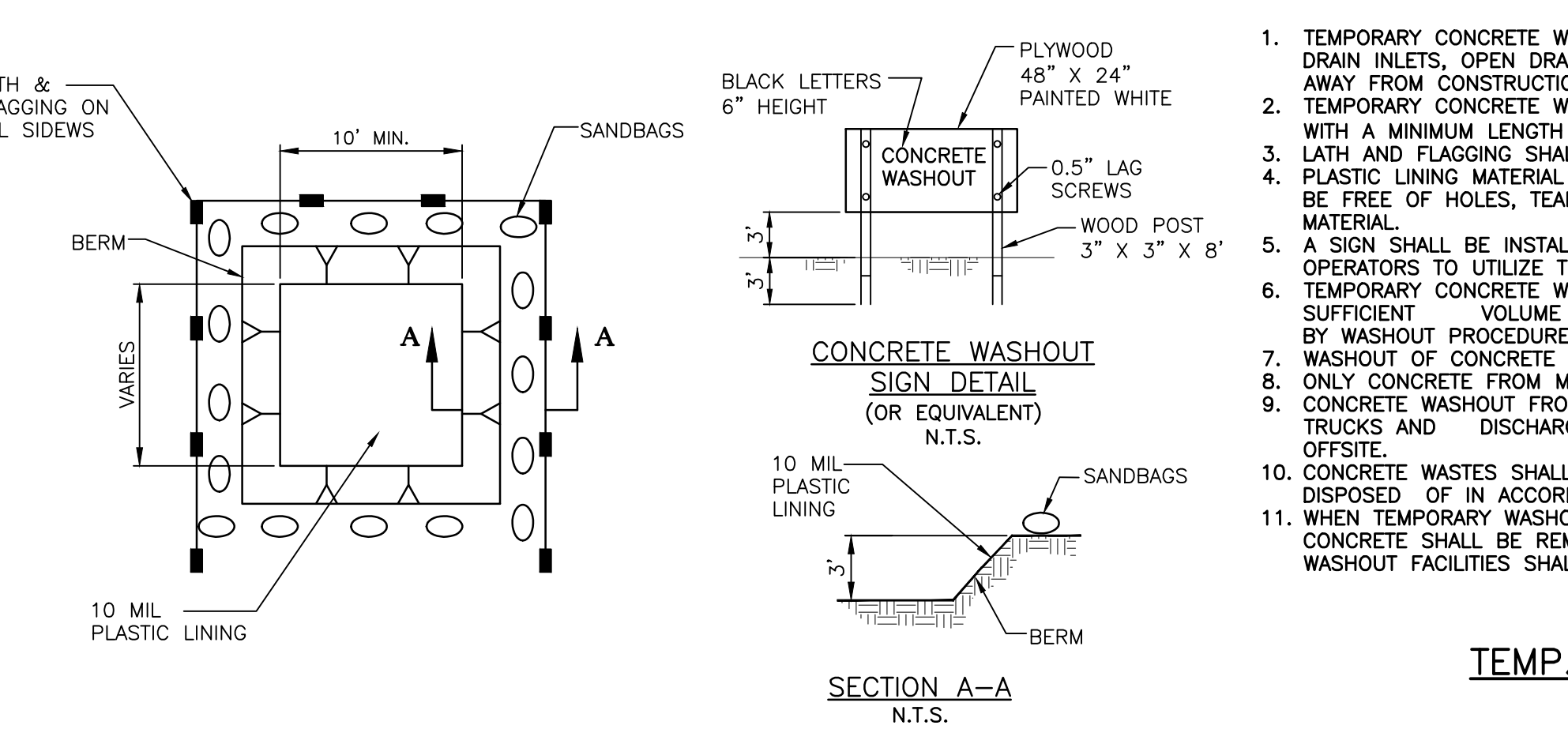
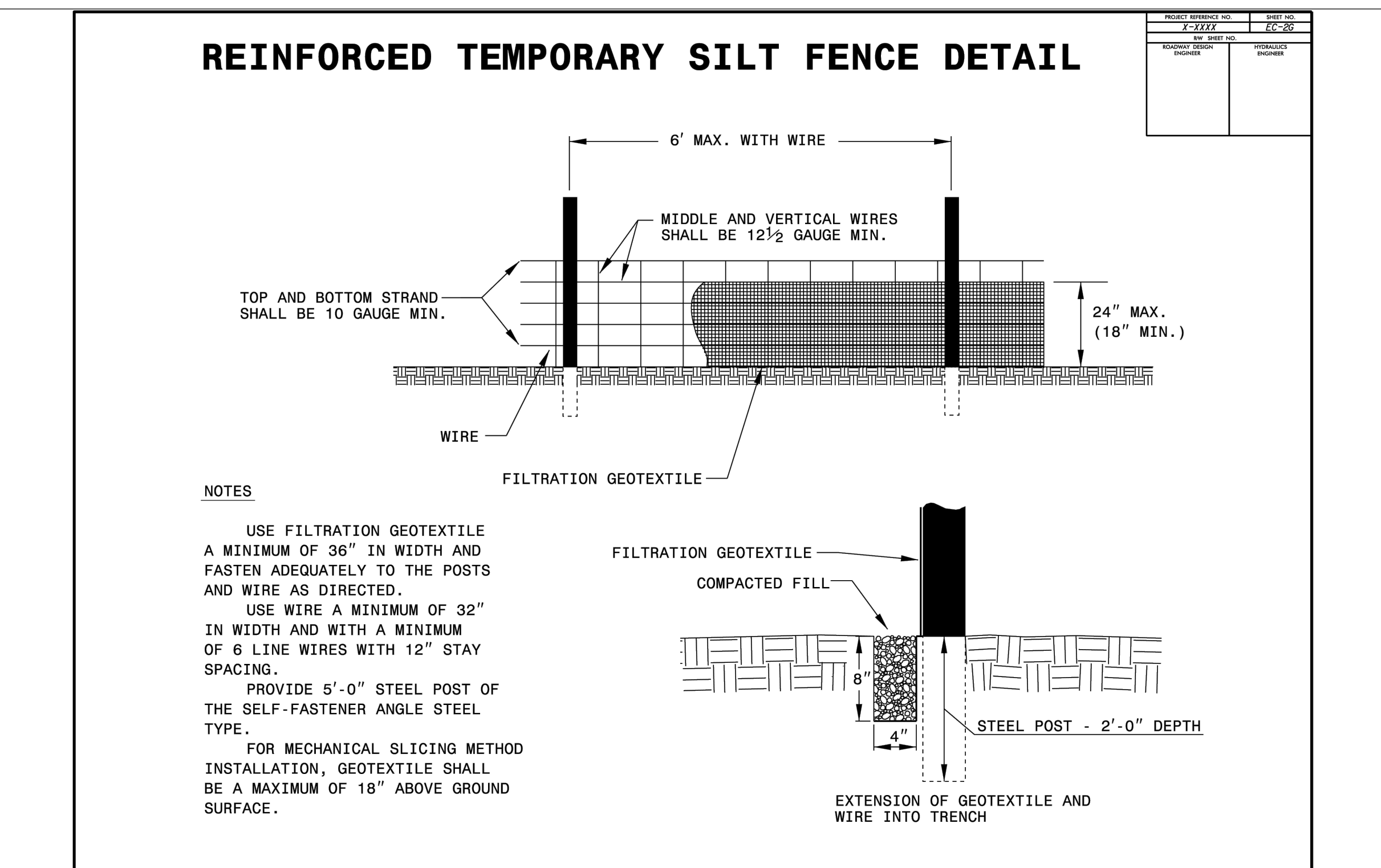
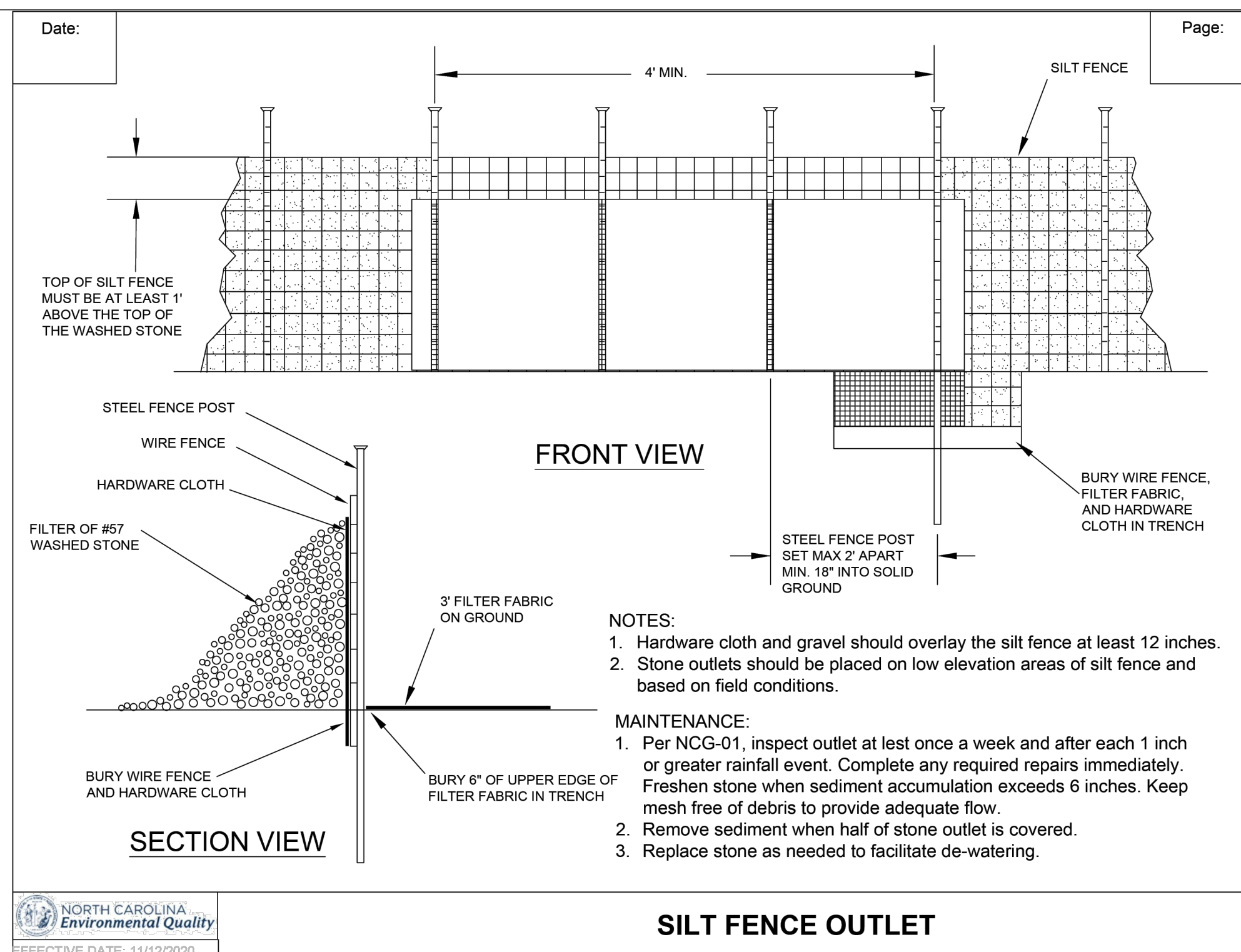
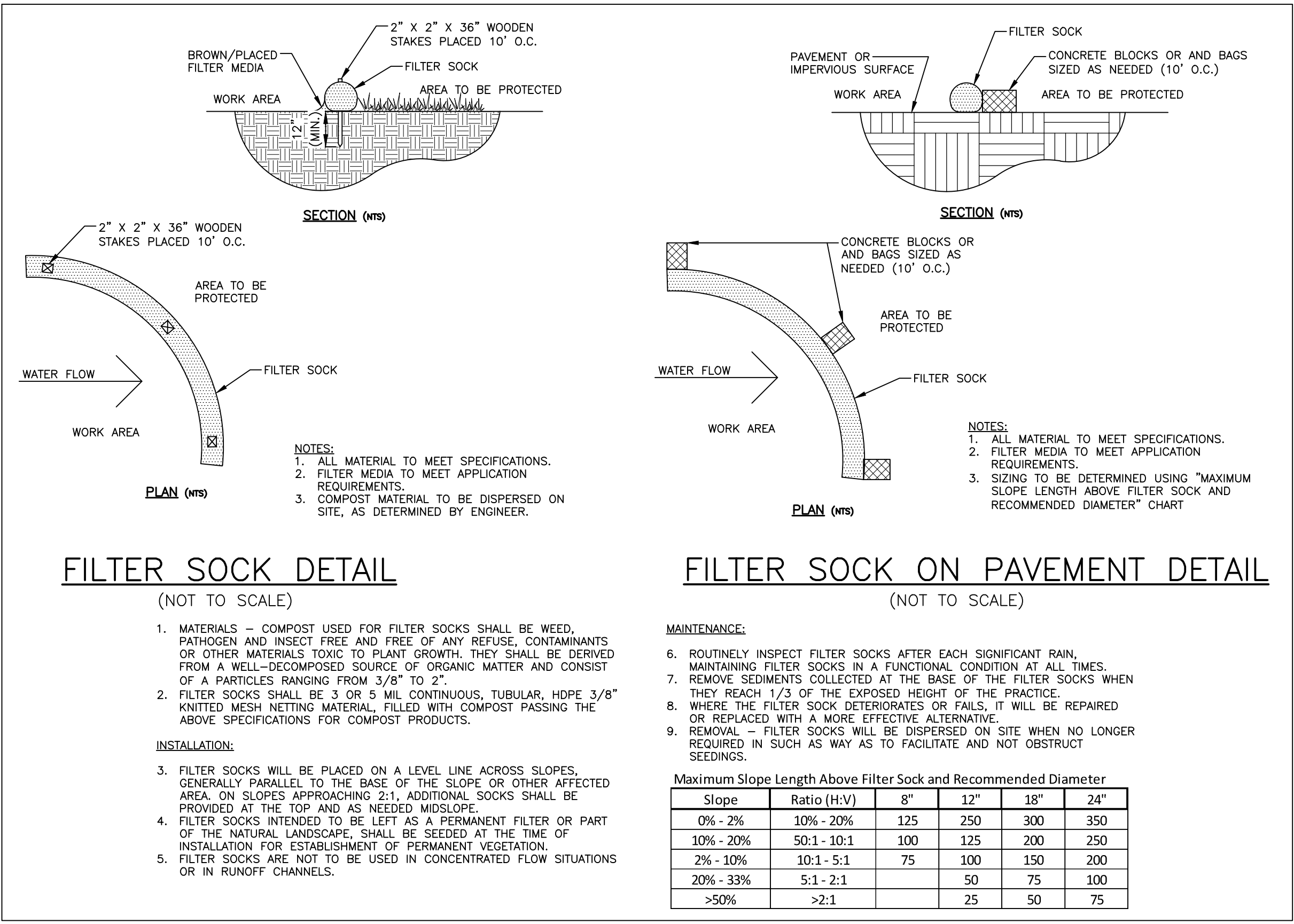
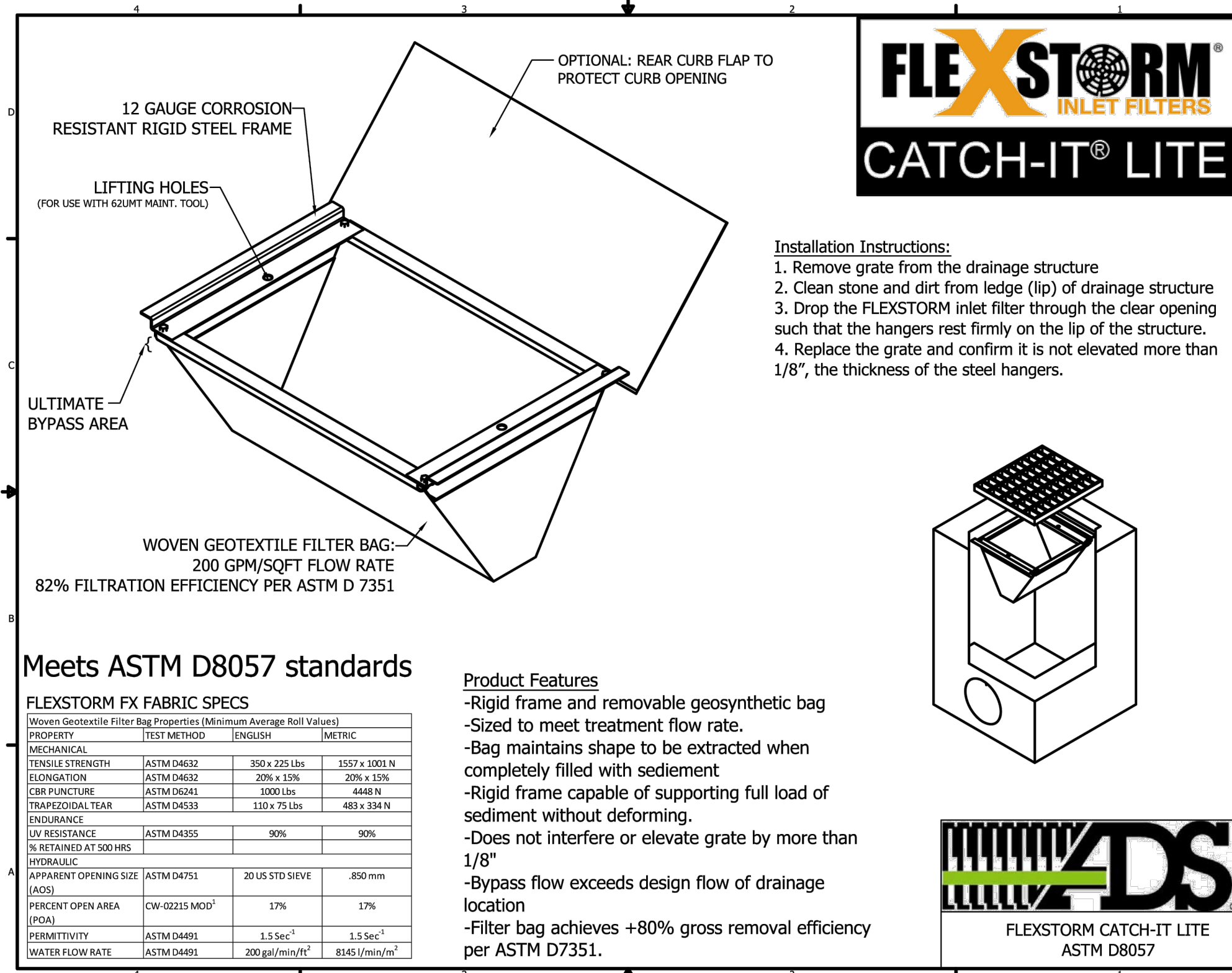
ALL SLOPES 3:1 OR STEEPER, AND ALL DITCH LINES/SWALES ARE TO BE STABILIZED USING SEED AND MATTING. SEE MATTING DETAIL C-322.

UNTIL AREAS ON SITE ARE STABILIZED, ALL CONSTRUCTION RUN-OFF MUST BE DIRECTED AND ROUTED THROUGH THE SEDIMENT SKIMMER BASIN. SEE TEMPORARY DIVERSION DETAIL SHEET C-320. ONCE 0.53 ACRES OF THE SITE AREA STABILIZED SKIMMER BASIN MAY BE REMOVED UPON APPROVAL OF ORANGE COUNTY EROSION AND SEDIMENT CONTROL DEPARTMENT.

AREA REPRESENTS 0.54 ACRES. AREAS TO BE PAVED ARE CONSIDERED STABILIZED ONCE STONE BASE IS INSTALLED.



AREA REPRESENTS 0.56 ACRES.
 AREA MUST BE STONED TO BE CONSIDERED STABILIZED.



TEMPORARY SEEDING SCHEDULE

SEEDING DATE	SEEDING MIXTURE	APPLICATION RATE
JAN 1 - MAY 1	RYE (GRAIN)	120 LBS/AC
	KOBE LESPEDEZA	50 LBS/AC
MAY 1 - AUG 15	GERMAN MILLET	40 LBS/AC
AUG 15 - DEC 30	RYE (GRAIN)	120 LBS/AC

SOIL AMENDMENTS
 FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 4,000 LB/AC GROUND AGRICULTURE LIMESTONE AND 750 LB/AC 10-10-10 FERTILIZER (FROM AUG 15 - DEC 30, INCREASE 10-10-10 FERTILIZER TO 1000 LB/AC).

MULCH
 APPLY 4000 LB/AC STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE
 JAN 1 - AUG 15: REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.
 AUG 15 - DEC 30: REPAIR AND REFERTILIZE DAMAGED AREAS IMMEDIATELY. TOP DRESS WITH 50 LB/AC OF NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/AC KOBE LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

NOTE: USE THE TEMPORARY SEEDING SCHEDULE ONLY WHEN DATE IS NOT CORRECT TO USE THE PERMANENT SEEDING SCHEDULE.

PERMANENT SEEDING SCHEDULE

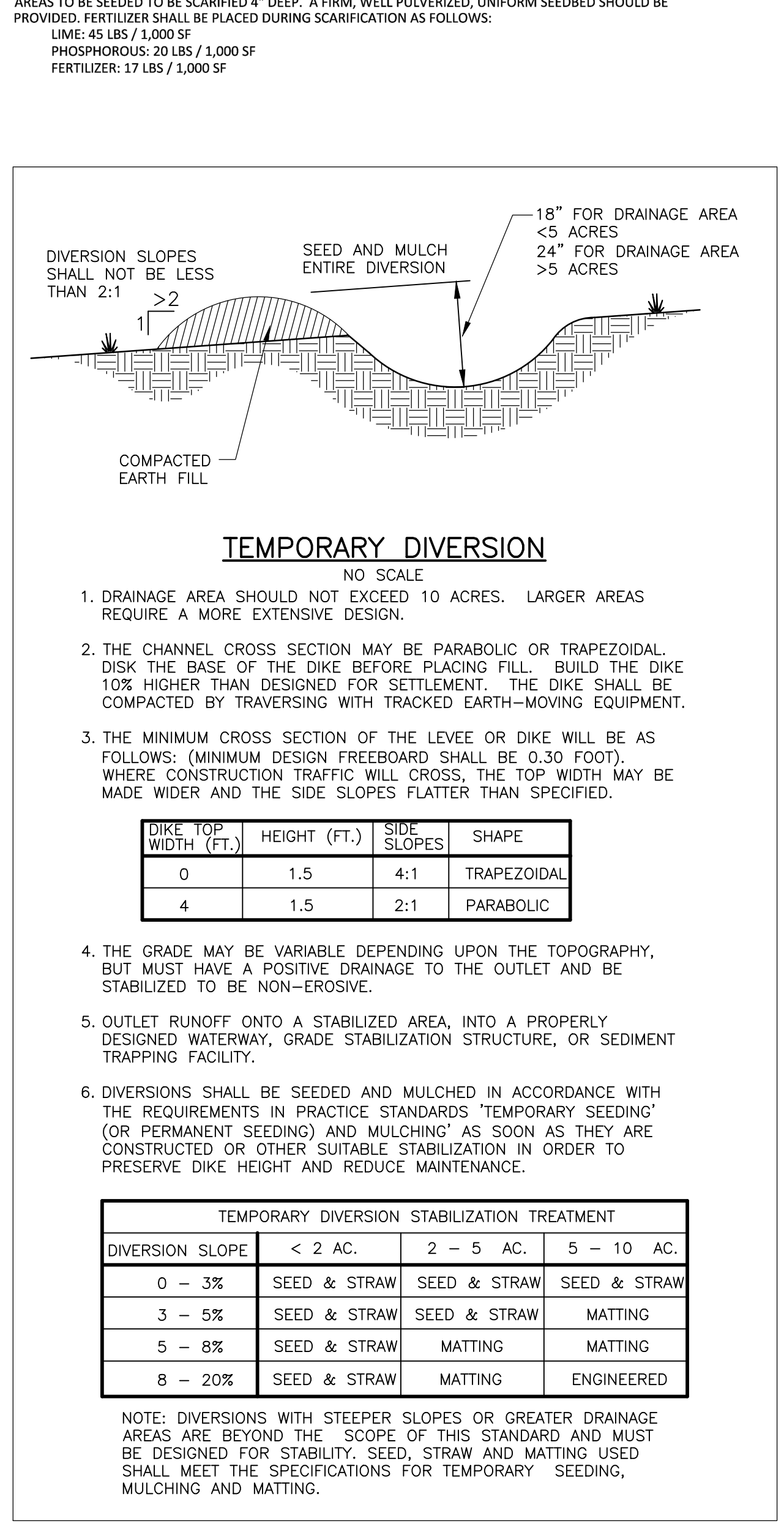
SEEDING DATE	SEEDING MIXTURE	APPLICATION RATE
AUG 25 - OCT (BEST)	TALL FESCUE	200 LBS/AC
	RYE (GRAIN)	50 LBS/AC
	GERMAN MILLET	50 LBS/AC
FEB - APR 15 (POSSIBLE)	TALL FESCUE	200 LBS/AC
	RYE (GRAIN)	50 LBS/AC
	GERMAN MILLET	50 LBS/AC

SOIL AMENDMENTS
 FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 4,000 LB/AC GROUND AGRICULTURE LIMESTONE AND 1000 LB/AC 10-10-10 FERTILIZER.

MULCH
 APPLY 4000 LB/AC STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE
 INSPECT AND REPAIR MULCH FREQUENTLY. REFERTILIZE IN LATE WINTER OF THE FOLLOWING YEAR; USE SOIL TESTS OR APPLY 150 LB/AC 10-10-10 FERTILIZER. MOW REGULARLY TO A HEIGHT OF 2-4 INCHES.

SEEDBED PREPARATION
 AREAS TO BE SEED TO BE SCARIFIED 4" DEEP. A FIRM, WELL PULVERIZED, UNIFORM SEEDBED SHOULD BE PROVIDED. FERTILIZER SHALL BE PLACED DURING SCARIFICATION AS FOLLOWS:
 LIME: 45 LBS / 1,000 SF
 PHOSPHOROUS: 20 LBS / 1,000 SF
 FERTILIZER: 17 LBS / 1,000 SF



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 SEAL 032376
 R. ROUSE
 8-29-23

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FSU# 04954

REVISION SCHEDULE

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SWPPP DETAILS
 Zoning Approved
 by Katherine Shor
 09/14/2023

SHEET NUMBER
C-320

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT
 Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION		
Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed -7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(d) Slopes 3:1 to 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION
 Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> Temporary grass seed covered with straw or other mulches and tackifiers Hydroseeding Rolled erosion control products with or without temporary grass seed Appropriately applied straw or other mulch Plastic sheeting 	<ul style="list-style-type: none"> Permanent grass seed covered with straw or other mulches and tackifiers Geotextile fabrics such as permanent soil reinforcement matting Hydroseeding Shrubs or other permanent plantings covered with mulch Uniform and evenly distributed ground cover sufficient to restrain erosion Structural methods such as concrete, asphalt or retaining walls Rolled erosion control products with grass seed

- POLYACRYLAMIDES (PAMS) AND FLOCCULANTS**
- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
 - Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
 - Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
 - Provide ponding area for containment of treated Stormwater before discharging offsite.
 - Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

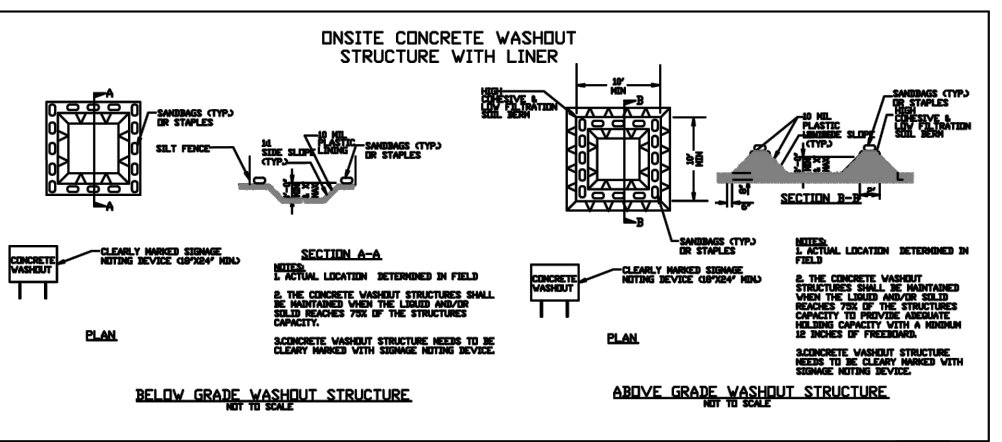
- EQUIPMENT AND VEHICLE MAINTENANCE**
- Maintain vehicles and equipment to prevent discharge of fluids.
 - Provide drip pans under any stored equipment.
 - Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
 - Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
 - Remove leaking vehicles and construction equipment from service until the problem has been corrected.
 - Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

- LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE**
- Never bury or burn waste. Place litter and debris in approved waste containers.
 - Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
 - Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
 - Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
 - Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
 - Anchor all lightweight items in waste containers during times of high winds.
 - Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
 - Dispose waste off-site at an approved disposal facility.
 - On business days, clean up and dispose of waste in designated waste containers.

- PAINT AND OTHER LIQUID WASTE**
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
 - Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
 - Contain liquid wastes in a controlled area.
 - Containment must be labeled, sized and placed appropriately for the needs of site.
 - Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

- PORTABLE TOILETS**
- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
 - Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
 - Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

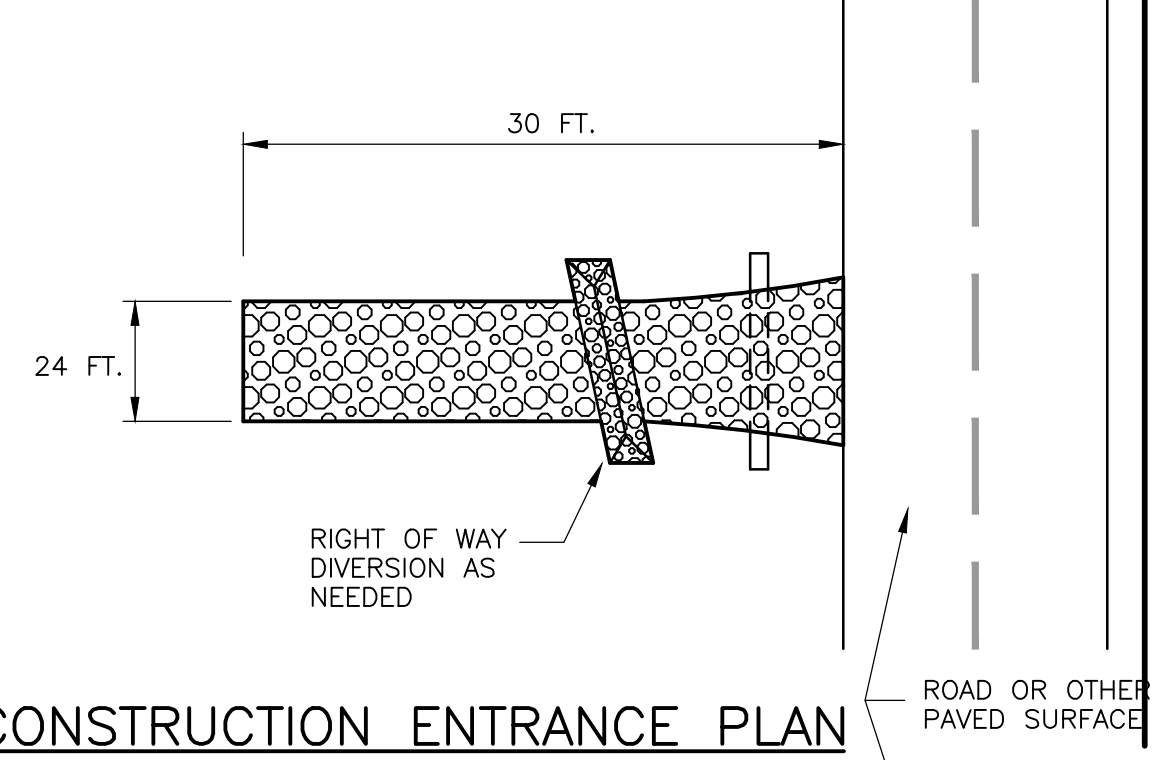
- EARTHEN STOCKPILE MANAGEMENT**
- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
 - Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
 - Provide stable stone access point when feasible.
 - Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



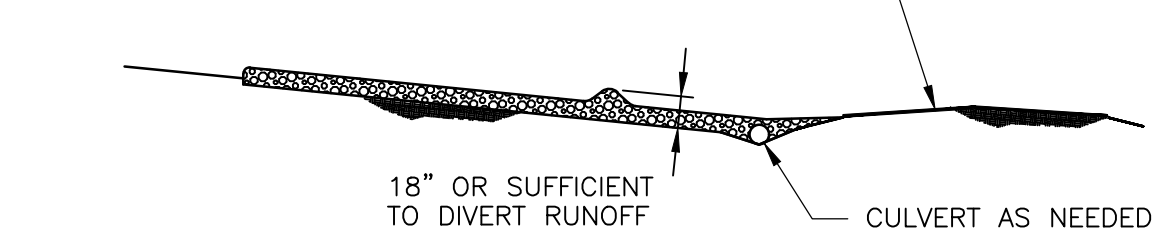
- CONCRETE WASHOUTS**
- Do not discharge concrete or cement slurry from the site.
 - Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
 - Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
 - Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
 - Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
 - Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
 - Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
 - Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
 - Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
 - At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

- HERBICIDES, PESTICIDES AND RODENTICIDES**
- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
 - Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
 - Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into vials, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
 - Do not stockpile these materials onsite.

- HAZARDOUS AND TOXIC WASTE**
- Create designated hazardous waste collection area on-site.
 - Place hazardous waste containers under cover or in secondary containment.
 - Do not store hazardous chemicals, drums or bagged materials directly on the ground.



CONSTRUCTION ENTRANCE PLAN
NO SCALE



CONSTRUCTION ENTRANCE PROFILE
NO SCALE

- STONE SIZE--TWO-INCH STONE SHALL BE USED, OR RECYCLED CONCRETE PAVEMENT.
- LENGTH--THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 50 FT. (EXCEPT ON SINGLE RESIDENCE LOT WHERE A 30 FT. MINIMUM LENGTH APPLIES).
- THICKNESS--THE STONE LAYER SHALL BE AT LEAST 6-IN. THICK.
- WIDTH--THE ENTRANCE SHALL BE AT LEAST 10-FT. WIDE, BUT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- BEDDING--A GEOTEXTILE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL HAVE A GRAB TENSILE STRENGTH OF AT LEAST 200 LB. AND A MULLED BURST STRENGTH OF AT LEAST 190 LB.
- CULVERT--A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FLOWING ACROSS THE ENTRANCE FROM BEING DIRECTED OUT ONTO PAVED SURFACES.
- WATER BAR--A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAVED SURFACES.
- MAINTENANCE--TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND. MUD SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVED IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING OR SWEEPING.
- CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION-SITE SHALL BE RESTRICTED FROM MUDDY AREAS.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero". The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Indication of whether the measures were operating properly. 5. Description of maintenance needs for the measure. 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater outfalls (SOWs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration. 5. Indication of visible sediment leaving the site. 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits. 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of this required reports to the appropriate Division Regional Office per Part III of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation
 The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site
 In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- This General Permit as well as the Certificate of Coverage, after it is received.
- Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years
 All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

- Permittees shall report the following occurrences:
- Visible sediment deposition in a stream or wetland.
 - Oil spills if:
 - They are 25 gallons or more.
 - They are less than 25 gallons but cannot be cleaned up within 24 hours,
 - They cause sheen on surface waters (regardless of volume), or
 - They are within 100 feet of surface waters (regardless of volume).
 - Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 149-215.85.
 - Anticipated bypasses and unanticipated bypasses.
 - Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)(2) above	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with this permit that may endanger health or the environment [40 CFR 122.41(h)(7)]	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(h)(8)]. Division staff may waive the requirement for a written report on a case-by-case basis.



NOTICE OF INTENT (NOI) PROCESS: Any construction activities that have an E&SC Plan approved on or after April 1, 2019 are required to fill out and submit an electronic Notice of Intent (e-NOI) form at deq.nc.gov/NCG01. All construction activities are required to follow the new NCG01 permit regardless of when they were approved. The new permit and the two standard detail sheets (or similar) shall be available at every construction site.

Under the new NCG01 process, construction sites will continue to receive approval for E&SC Plans from either DEMLR or the delegated local ES&P Program just like before. After receiving E&SCP Plan Approval, permittees will officially obtain coverage under the NCG01 by completing an e-NOI (available at deq.nc.gov/NCG01). The e-NOI will take about 20 minutes to fill out and submit on-line. Initially there will be no charge associated with applying for an NCG01 permit but on or around June 1, 2019, DEMLR will begin charging a \$100.00 annual general permit fee as required per §143-215.3D. When the project is ready to close out an E&SC Plan, the close-out letter will advise permittees that they must submit a notice of termination (e-NOT).

***When preparing plans for E&SC projects please add the two sheets listed below to your plan. They are required to be on-site during construction as required by the NCG01 permit:*

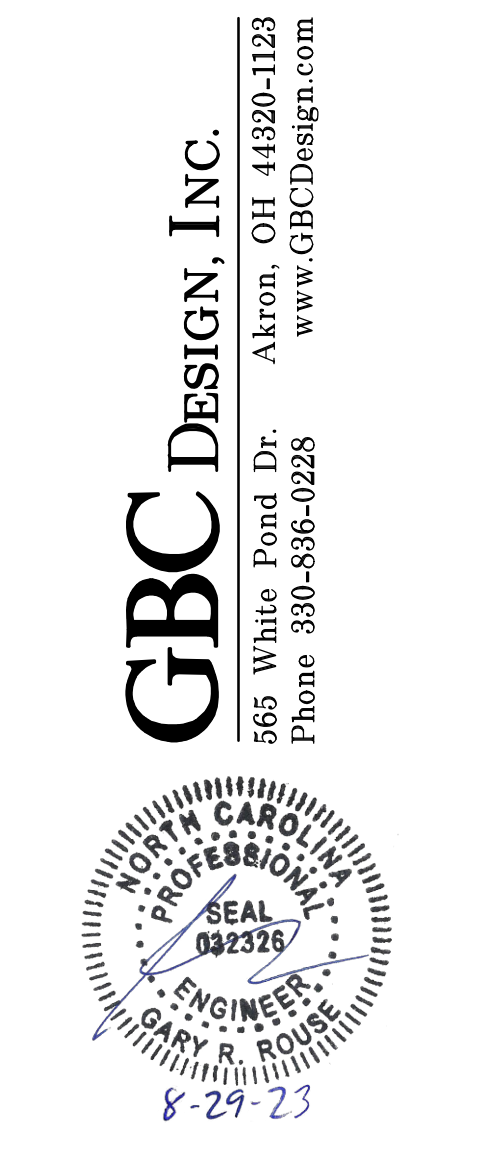
NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19



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 241 SOUTH ESTES DRIVE
 CHAPEL HILL, NC 27514

FSU# 04954

REVISION SCHEDULE	NO.	DATE	DESCRIPTION

GBC PROJECT #	54053A
PREPARED FOR	Permit
DATE	9/28/22
DRAWN BY	BAW

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SHEET
SWPPP DETAILS
Zoning Approved
 by Katherine Shor
 09/14/2023

SHEET NUMBER

C-321