SITE PLAN, DWQ PLAN AND EROSION CONTROL PLAN

FOR

PINEY GROVE STORAGE FACILITY

PINEY GROVE RAWLS ROAD
FUQUAY VARINA, NORTH CAROLINA

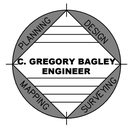
PREPARED FOR

JIM MOORE
CEDAR ROCK TRAIL
FUQUAY VARINA, NORTH CAROLINA
TELEPHONE 910-922-7010

ENGINEER

C. GREGORY BAGLEY
805 COKESBURY ROAD
FUQUAY VARINA, NC 27526
PHONE: (919) 609-300

SHEET INDEX



As the owner of record, I hereby formally consent to the proposed development shown on this site plan and all regulations and requirements of the Harnett County ordinances.

———————————————————————
Date Owner Signature

Note "Water Supply Watershed Special Intensity Allocation permit (# BOA1902–0005) for 69% maximum impervious, approved 3/14/19"

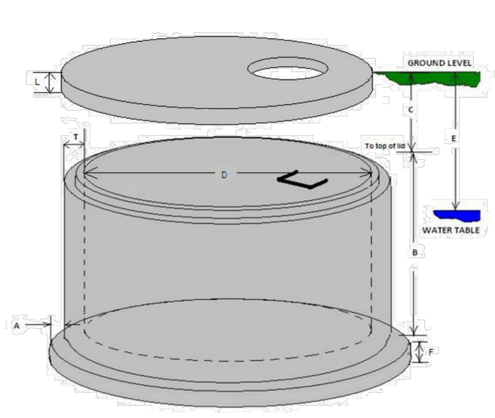
"This development is within one mile of a Voluntary Agricultural District."

STABILIZATION TIMEFRAMES (Effective Aug. 3, 2011)		
Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

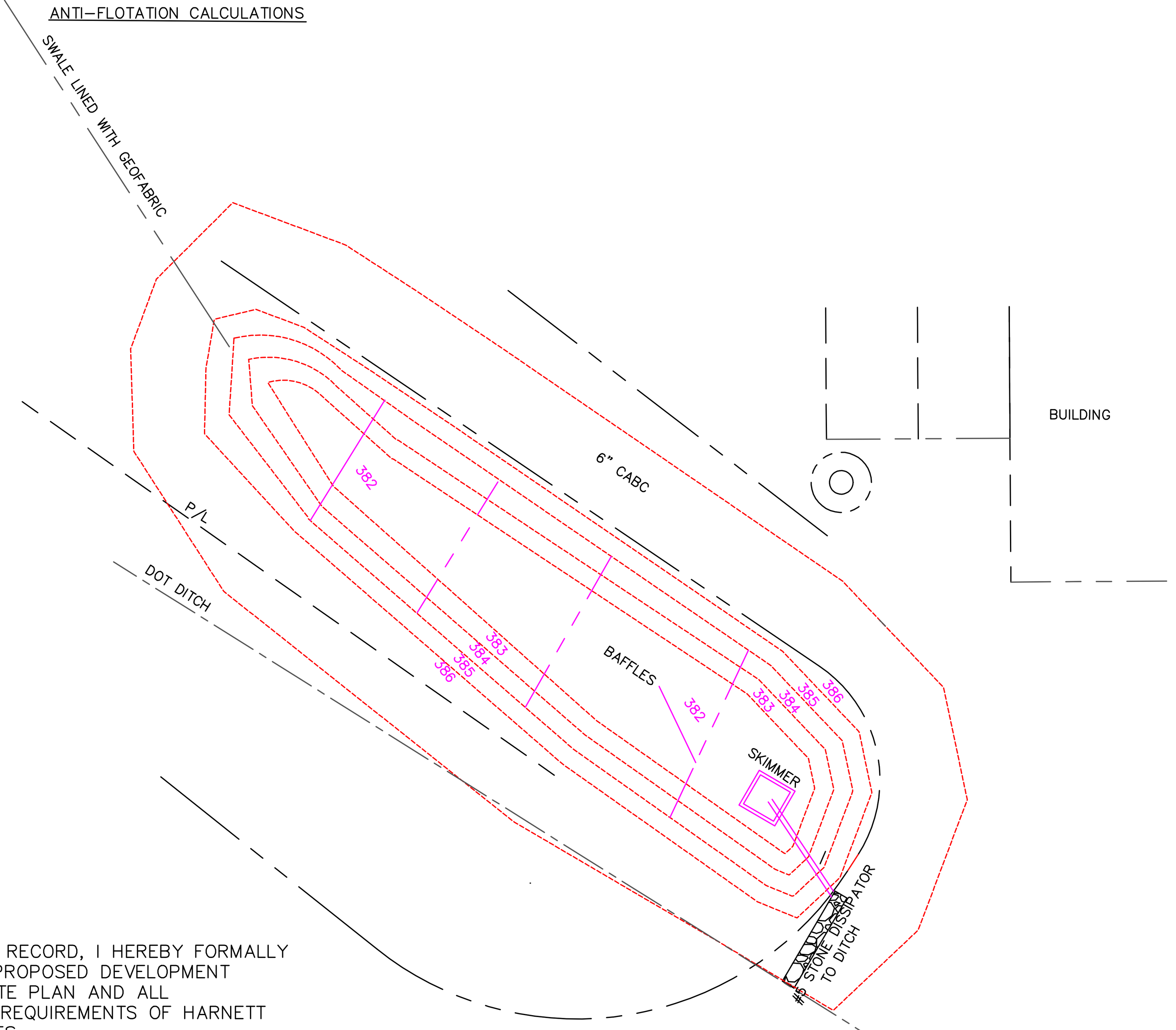
STABILIZATION TIME FRAMES

s for Piney Wilbon Mini Storage Manhole 9-4-19

Product:	4 ft (ID) manhole	
Inside Diameter of MH (D)	4.00	(feet)
Diameter of Lip around MH (A)	6.00	(inches)
›ight of MH Barrel Sections (B)	3.50	(feet)
›f Bury (grd elev - top of lid) (C)	0.0	(feet)
Wall thickness (T)	5.0	(inches)
Base Thickness (F)	6.0	(inches)
Lid Thickness (L)	0.0	(inches)
Lid Hole Diameter	48.0	(inches)
Weight of Casting	325.0	(lbs)
Distance to Groundwater (E)	1.0	(feet)
Depth of MH not Submerged	1.0	(feet)
Weight of MH	5197	(lbs.)
Unit Weight of Water	62.4	(lbs/cf)
Unit Weight of Soil	110.0	(lbs/cf)
Unit Weight of Submerged Soil	47.6	(lbs/cf)
Unit Weight of Concrete	145	(lbs/cf)
Uplift force	4841	(lbs.)
Safety Factor	1.50	
Uplift force with safety factor	7261	(lbs.)
Weight of Soil on Cover	0	(lbs.)
Weight of Soil on Lip	3225	(lbs.)
Additional Ballast required	**NONE**	**(lbs.)**
Hole # 1 diameter	48	(inches)
Hole # 2 diameter	4	(inches)
Hole # 3 diameter	8	(inches)
Hole # 4 diameter	0	(inches)
›al weight removed due to holes	785.5799685	



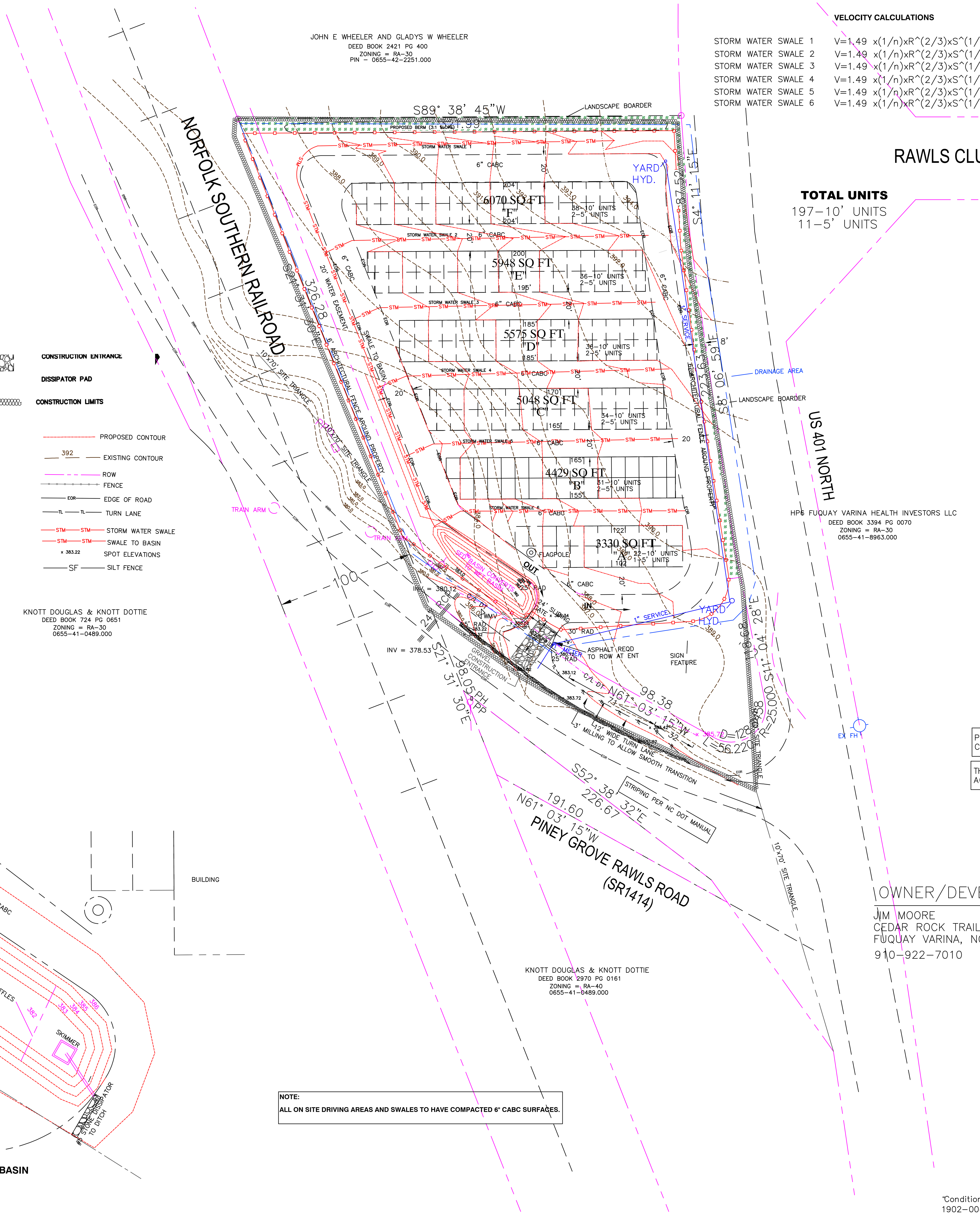
ANTI–FLOTATION CALCULATIONS



SEDIMENT BASIN

AS THE OWNER OF RECORD, I HEREBY FORMALLY CONSENT TO THE PROPOSED DEVELOPMENT SHOWN ON THIS SITE PLAN AND ALL REGULATIONS AND REQUIREMENTS OF HARNETT COUNTY ORDINANCES.

Date: Owners Signature:



JOHN E WHEELER AND GLADYS W WHEELER
DEED BOOK 2421 PG 400
ZONING = RA–30
PIN = 0655–42–2251.000
REINERT DEREK ANGUS
DEED BOOK 3483 PG 557
ZONING = RA–40
0655–32–8091.000
CONSTRUCTION ENTRANCE
DISSIPATOR PAD
CONSTRUCTION LIMITS
PROPOSED CONTOUR
EXISTING CONTOUR
ROW
FENCE
EDGE OF ROAD
TURN LANE
STORM WATER SWALE
SWALE TO BASIN
SPOT ELEVATIONS
SILT FENCE
KNOTT DOUGLAS & KNOTT DOTTIE
DEED BOOK 724 PG 0651
ZONING = RA–30
0655–41–0489.000
NORFOLK SOUTHERN RAILROAD
S89° 38' 45"W
LANDSCAPE BOARDER
YARD HYD.
6070 SQ FT
"F"
38–10' UNITS
2–5' UNITS
5948 SQ FT
"E"
36–10' UNITS
2–5' UNITS
5575 SQ FT
"D"
36–10' UNITS
2–5' UNITS
5048 SQ FT
"C"
34–10' UNITS
2–5' UNITS
4429 SQ FT
"B"
31–10' UNITS
2–5' UNITS
3330 SQ FT
"A"
22–10' UNITS
1–5' UNITS
FLAGPOLE
DRAINAGE AREA
US 401 NORTH
HPG FUQUAY VARINA HEALTH INVESTORS LLC
DEED BOOK 3394 PG 0070
ZONING = RA–30
0655–41–8963.000
SIGN FEATURE
ASPHALT REQD TO ROW AT ENT
INV = 378.53
PINEY GROVE RAWLS ROAD (SR1414)
S52° 38' 32"E
N61° 03' 15"W
STRIPING PER NC DOT MANUAL
KNOTT DOUGLAS & KNOTT DOTTIE
DEED BOOK 2970 PG 0161
ZONING = RA–40
0655–41–0489.000
RAWLS CLUB ROAD (SR1447)

VELOCITY CALCULATIONS

R=(bd+xd^2)/b+2Dx)
R=.5

STORM WATER SWALE 1	V=1.49 x(1/n)xR^(2/3)xS^(1/2)	S=.028	V=4.67
STORM WATER SWALE 2	V=1.49 x(1/n)xR^(2/3)xS^(1/2)	S=.021	V=4.03
STORM WATER SWALE 3	V=1.49 x(1/n)xR^(2/3)xS^(1/2)	S=.023	V=4.23
STORM WATER SWALE 4	V=1.49 x(1/n)xR^(2/3)xS^(1/2)	S=.022	V=4.05
STORM WATER SWALE 5	V=1.49 x(1/n)xR^(2/3)xS^(1/2)	S=.024	V=4.31
STORM WATER SWALE 6	V=1.49 x(1/n)xR^(2/3)xS^(1/2)	S=.025	V=4.42

TOTAL UNITS
197–10' UNITS
11–5' UNITS

40' 20' 0' 40' 80'

SITE DATA

AREA PER DEED	3.0 Ac.
AREA LESS ROW	2.51 Ac.
AREA IN DRAINAGE AREA	2.32 Ac.
70% of AREA	2.1 Ac.
IMPERVIOUS AREA	1.71 Ac.
ZONING	RA–30
PIN NUMBERS	0655–41–3933.000
DEED	BK 3513 PG 0440
WATERSHED	IV
FEMA PANEL #	N/A
SETBACKS	Front 35', Rear 25', Side 10', Corner 20'
CLASSIFICATION	RURAL CENTER DEVELOPMENT NODE

PINEY GROVE RAWLS AND US 401 ARE ON THE HARNETT COUNTY COMPREHENSIVE TRANSPORTATION PLAN

THIS DEVELOPMENT IS WITHIN ONE MILE OF A VOLUNTARY AGRICULTURAL DISTRICT.

NOTE:
ALL ON SITE DRIVING AREAS AND SWALES TO HAVE COMPACTED 6" CABC SURFACES.

OWNER/DEVELOPER
JIM MOORE
CEDAR ROCK TRAIL
FUQUAY VARINA, NC 27526
910–922–7010

ENGINEER
GREG BAGLEY
805 COKESBURY ROAD
FUQUAY VARINA, N.C. 27526
Ph. (919) 552–1600

SITE PLAN
1" = 40'

"Conditional Use Permit #BOA 1902–004, approved 3/14/19"

Project #:
Date:
Drawn/Design By:
Scale:

REVISIONS		
No.	Date:	Remarks
1	9-27-19	DWQ COMMENTS
2	10-02-19	DWQ COMMENTS
3		
4		

C. Gregory Bagley, Engineer
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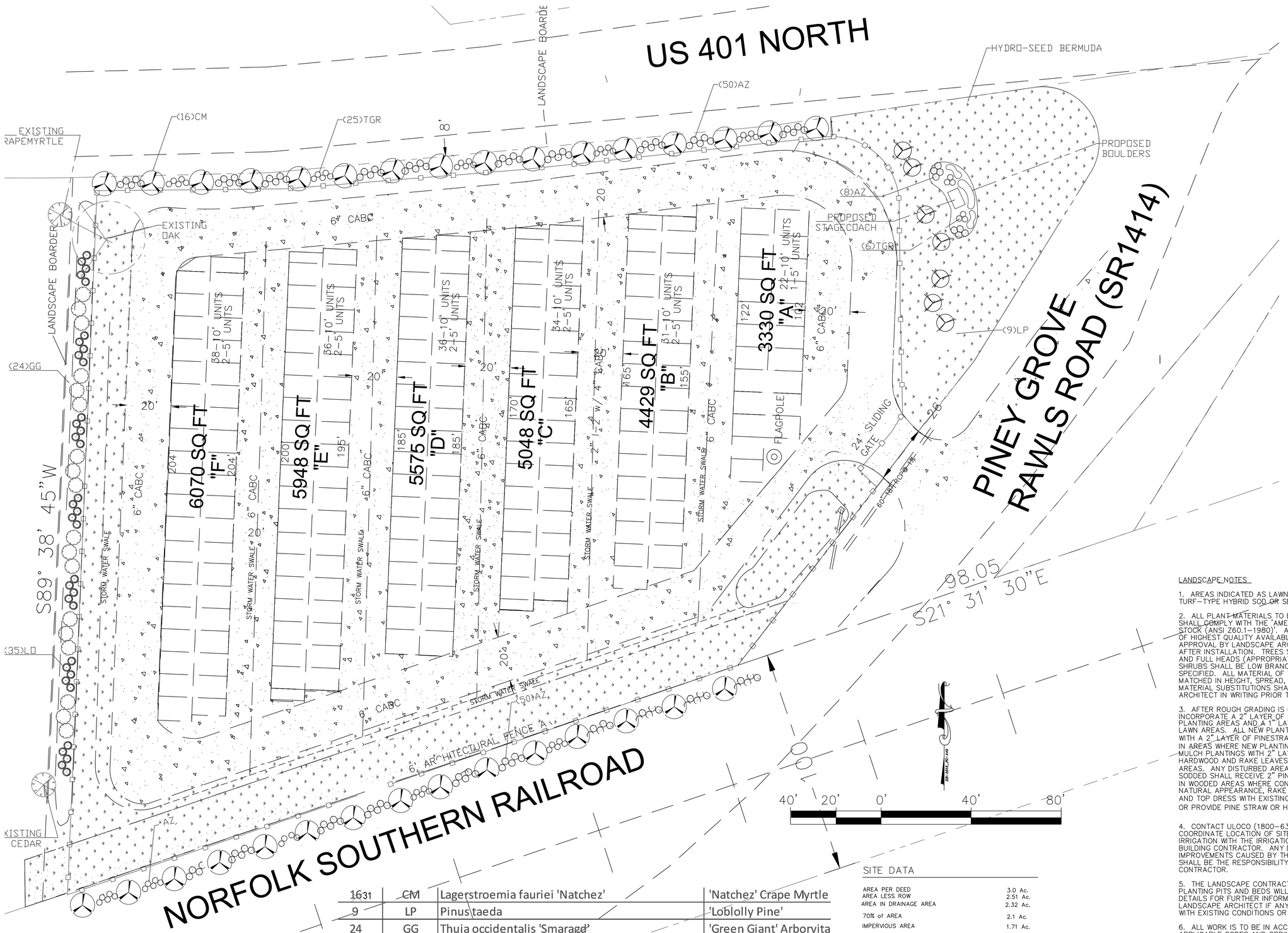
Fuquay Varina, N.C. 27526
Office: (919)552–1600
Fax: (919) 552–6325

SITE PLAN
GRADING
EROSION CONTROL

PINEY GROVE STORAGE FACILITY
FOR
Jim Moore
Harnet County N.C.

Sheet Number
1
of 1



~~16~~ 31	CM	Lagerstroemia fauriei 'Natchez'	'Natchez' Crape Myrtle
9	LP	Pinus taeda	'Loblolly Pine'
24	GG	Thuja occidentalis 'Smaragd'	'Green Giant' Arborvita
		SHRUBS	
35	LO	Loropetalum chinense rubrum Zhuzhou Fuchsia"	Loropetalum 'Zhuzhou F
~~58~~ 133	AZ	Rhododendron 'Conled'	Encore Azalea 'Autumn
31	TGR	Rosa 'Top Gun' PPAF	Top Gun Rose

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ZONING	RA-30
PIN NUMBERS	0655-41-3933.000
DEED	BK 3513 PG 0440
WATERSHED	IV
FEMA PANEL #	N/A
SETBACKS	Front 35', Rear 25', Side 10', Corner 20'

LANDSCAPE NOTES

1. AREAS INDICATED AS LAWN OR TURF ARE TO BE TURF-TYPE HYBRID SOD OR SEED.

2. ALL PLANT MATERIALS TO BE NURSERY GROWN AND SHALL COMPLY WITH THE 'AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z60.1-1980)'. ALL PLANT MATERIAL SHALL BE OF HIGHEST QUALITY AVAILABLE AND IS SUBJECT TO APPROVAL BY LANDSCAPE ARCHITECT BOTH PRIOR TO AND AFTER INSTALLATION. TREES SHALL HAVE STRAIGHT TRUNKS AND FULL HEADS (APPROPRIATE FOR GENUS AND SPECIES). SHRUBS SHALL BE LOW BRANCHED AND FULL EXCEPT AS SPECIFIED. ALL MATERIAL OF THE SAME TYPE SHALL BE MATCHED IN HEIGHT, SPREAD, AND FORM. ANY PLANT MATERIAL SUBSTITUTIONS SHALL BE APPROVED BY LANDSCAPE ARCHITECT IN WRITING PRIOR TO INSTALLATION.

3. AFTER ROUGH GRADING IS COMPLETE, PLACE AND INCORPORATE A 2" LAYER OF SOIL AMENDMENT IN ALL PLANTING AREAS AND A 1" LAYER OF TOPSOIL IN ALL NEW LAWN AREAS. ALL NEW PLANTING BEDS SHALL BE MULCHED WITH A 2" LAYER OF PINESTRAW OR HARDWOOD MULCH. IN AREAS WHERE NEW PLANTING IS WITHIN NATURAL AREAS, MULCH PLANTINGS WITH 2" LAYER OF PINESTRAW OR HARDWOOD AND RAKE LEAVES TO TURF OR OTHER PLANTED AREAS. ANY DISTURBED AREAS THAT ARE NOT SEEDED OR SODDED SHALL RECEIVE 2" PINE STRAW OR HARDWOOD MULCH. IN WOODED AREAS WHERE CONSTRUCTION HAS DISTURBED NATURAL APPEARANCE, RAKE SMOOTH ANY UNEVEN AREAS AND TOP DRESS WITH EXISTING LEAF MATTER IF AVAILABLE OR PROVIDE PINE STRAW OR HARDWOOD MULCH AS REQUIRED.

4. CONTACT ULOCO (1800-632-4949) PRIOR TO ANY DIGGING. COORDINATE LOCATION OF SITE SPECIFIC UTILITIES AND IRRIGATION WITH THE IRRIGATION CONTRACTOR AND THE BUILDING CONTRACTOR. ANY DAMAGES TO UTILITIES OR SITE IMPROVEMENTS CAUSED BY THE LANDSCAPE CONTRACTOR SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.

5. THE LANDSCAPE CONTRACTOR WILL INSURE THAT ALL PLANTING PITS AND BEDS WILL DRAIN. SEE PLANTING DETAILS FOR FURTHER INFORMATION. CONTACT THE LANDSCAPE ARCHITECT IF ANY PROPOSED LOCATION CONFLICTS WITH EXISTING CONDITIONS OR OTHER IMPROVEMENTS.

6. ALL WORK IS TO BE IN ACCORDANCE WITH ALL APPLICABLE CODES AND ORDINANCES.

7. ALL WORK OF THE LANDSCAPE CONTRACTOR IS TO BE WARRANTED TO THE OWNER FOR ONE (1) YEAR FOLLOWING FINAL ACCEPTANCE. THE LANDSCAPE CONTRACTOR WILL PROVIDE TYPED INSTRUCTIONS FOR THE MAINTENANCE OF THE PLANTINGS AND TURF TO THE OWNER AT THE TIME OF FINAL ACCEPTANCE.

Project #:
Date:
Drawn/Design By:
Scale:

REVISIONS

No.	Date:	Remarks
1	9-27-19	DWQ COMMENTS
2	10-02-19	DWQ COMMENTS
3		
4		

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23956 C. GREGORY BAGLEY 10-2-19

C. Gregory Bagley, Engineer
805 Cokesbury Road
Fuquay Varina, N.C. 27526
Office: (919)552-1600
Fax: (919) 552-6325

DESIGN SURVEYING PLANNING C. GREGORY BAGLEY ENGINEER

LANDSCAPE PLAN

Client Name:
PINEY GROVE STORAGE FACILITY
FOR
Jim Moore
Harnet County N.C.

Sheet Number
L-1
of 1

TIME OF CONCENTRATION:

$t_c = \frac{L/H}{128}$ $\quad t_c = \frac{(450'-402')}{128}$

t = 4.68 MIN. => USE 5 MIN.

=> Rainfall Intensity for 25Year 5 Minute Storm = 8.14 in/hr.
1 => Q = C x I x A = 0.30 x 8.14 in/hr x2.32 ac. = 5.67 cfs

=> Rainfall Intensity for 10 Year 10 Minute Storm = 6.78 in/hr.
=> Q = C x I x A = 0.30 x 6.78 in/hr x 2.32 ac. =4.72 cfs

SURFACE AREA CAPACITY
1 325 x Q25 =1755 SQ FT

MINIMUM STORAGE CAPACITY:

1,800 cf/acre x denuded drainage area = calculated cf
1 1800*1.71 =3078 CF

BASIN SCHEDULE

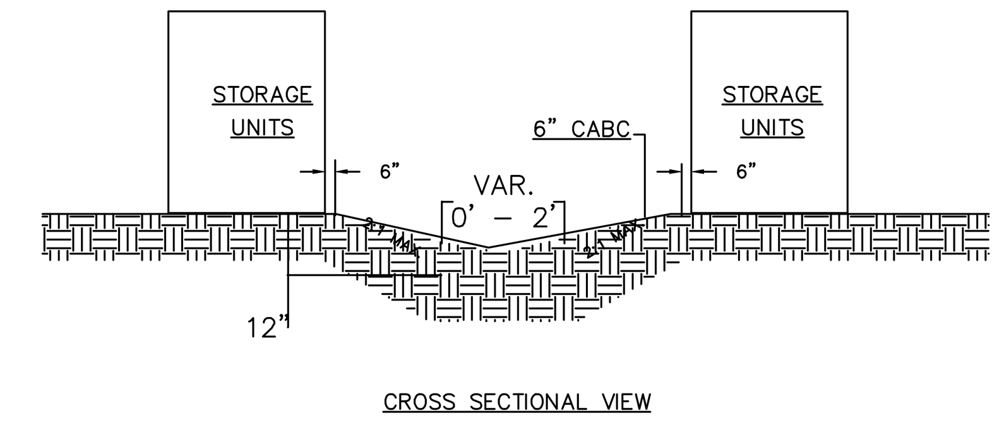
BASIN NO.	DENUDED AREA (AC.)	DRAINAGE AREA (AC.)	Q25	WEIR LTH (FT.)	LENGTH (FT.)	WIDTH (FT.)	DEPTH (FT.)	REQUIRED SURFACE SF	ACTUAL SURFACE SF	REQUIRED STORAGE	PROVIDED STORAGE (CF)
1	1.71	2.32	5.67	12	65	25	2	1842	1856	3078	3250

SKIMMER SIZING

BASIN NO.	SURFACE AREA	TIME FOR DRAW DOWN	ORIFICE SIZE	FLOW TYPE OUTLETS	#ORIFICE
1	1856	48 HR	1.5"	2"	1

NOTES:

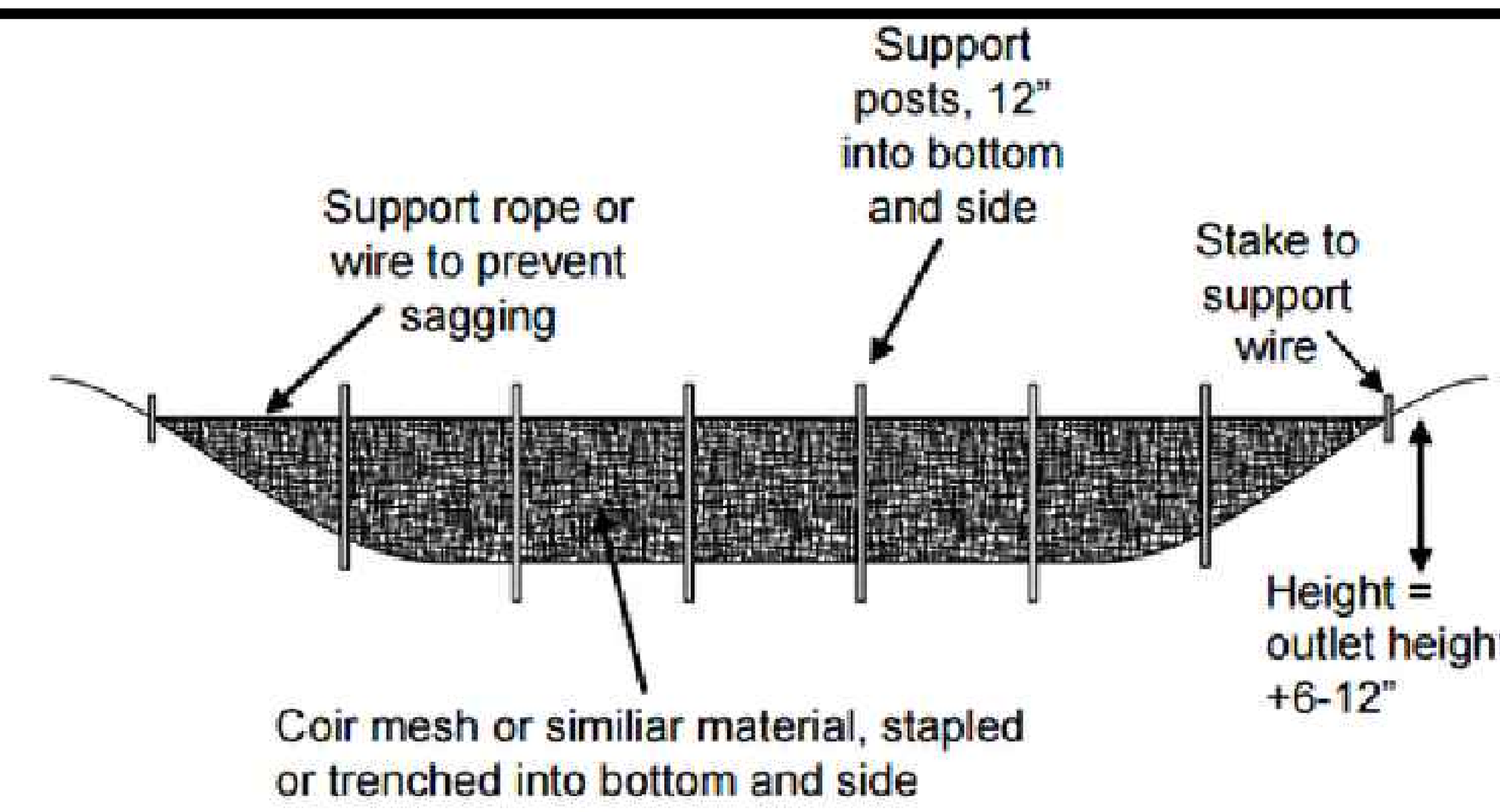
1. TEMPORARY SWALE AND PERMANENT ARE SAME AND TO BE USED TO INTERCEPT FLOW AND/OR DIVERT TO A SEDIMENT CONTROL MEASURE OR BMP.
2. SILT SHALL BE REMOVED WHEN DITCH IS ONE-HALF FULL DURING CONSTRUCTION.
3. DITCH SHALL BE RECONSTRUCTED WHEN DAMAGED BY EQUIPMENT OR COVERED BY FILL.
4. STABILIZE SWALE WITH STONE FROM THE BEGINNING OF CONSTRUCTION



SWALE/TEMPORARY DIVERSION DITCH DETAIL

NO SCALE

TEMPORARY SWALES TO BE LINED WITH STONE FOR FINAL SURFACE
AND REPAIRED WHEN DAMAGED BY EQUIPMENT

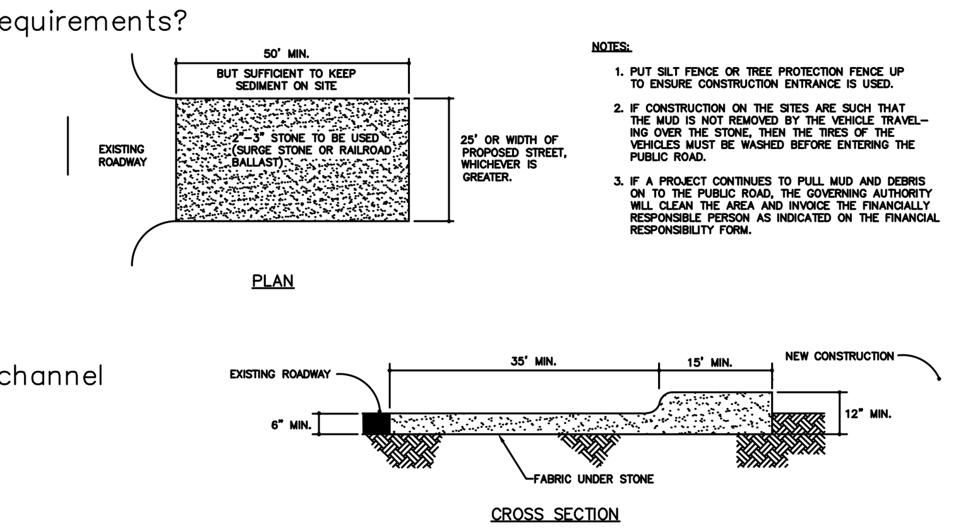


BAFFLE DETAIL

Erosion and Sediment Control Inspection Checklist*

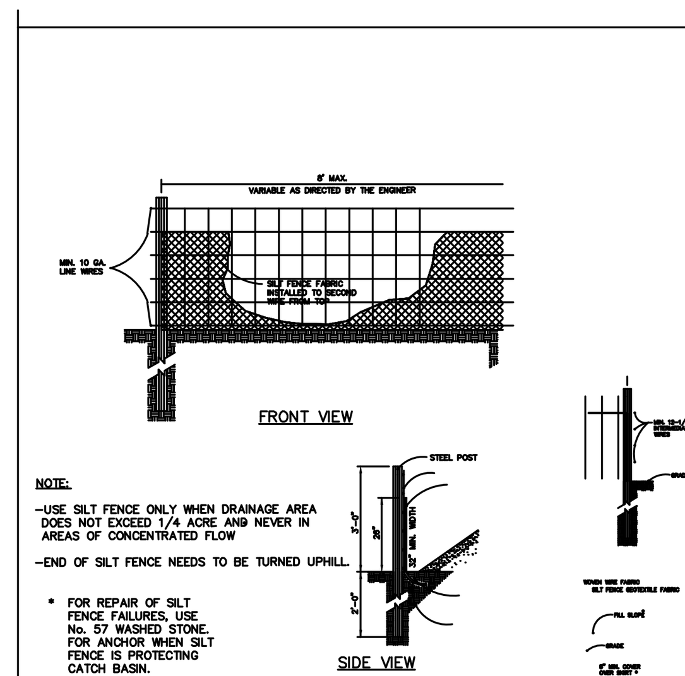
- □ Are all the practices specified in the approved plan installed in the proper location and do they meet the minimum requirements?
- □ Are all practices working well and is the perimeter protected?
- □ Do any practices require repair or cleanout?
- □ Are there any bare areas that require temporary or permanent stabilization?
- □ Do seeded areas require maintenance, reseeding or mulching?
- □ Are cut and fill slopes stable and adequately protected from erosion?
- □ Are channels and outlets stable?
- □ Are storm inlets protected from sediment?
- □ Are stream banks and stream crossings stable?
- □ Are utility installations properly located with respect to erosion and sediment control?
- □ Are construction roads and right-of-way access routes stable?
- □ Is there evidence of sediment leaving the site or entering streams on the site through construction entrances/exits, channel outlets, storm drains, or by washing off slopes?
- □ Is dust control needed?
- □ Is there adequate buffer zone between the construction site and any water resource?
- □ Is there evidence of sediment entering a stream buffer?

SELF INSPECTION CHECKLIST



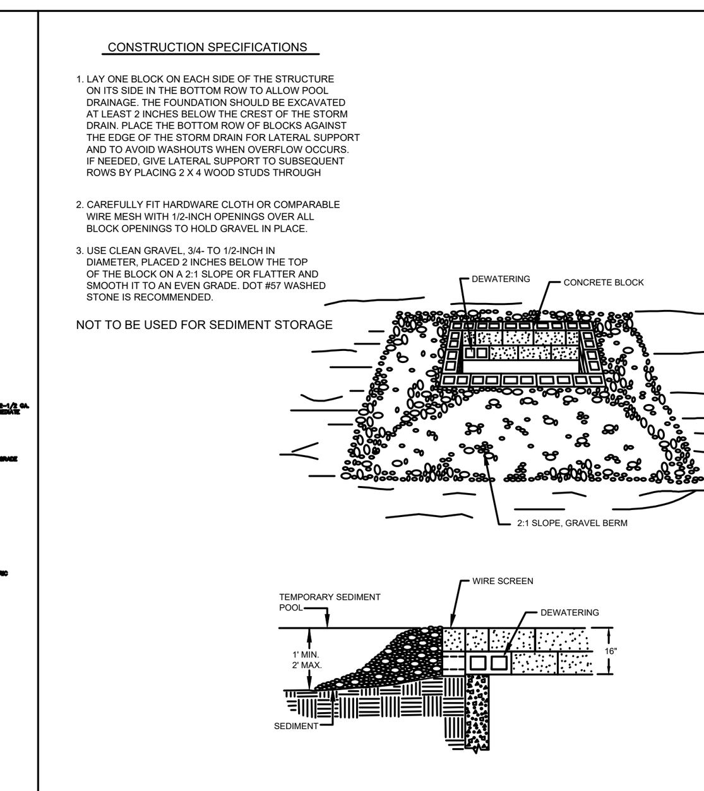
CONSTRUCTION ENTRANCE DETAIL

NO SCALE



SILT FENCE DETAIL

NO SCALE



BLOCK AND GRAVEL INLET PROTECTION

CONSTRUCTION SEQUENCE

1. Schedule a preconstruction conference with the NCDNR.
2. Install gravel construction pad, storm water swales, silt fencing, sediment basins or other measures as shown on the approved plan. Clear only as necessary to install these devices. Seed temporary diversions, berms and basins immediately after construction.
3. Call for onsite inspection by Environmental Inspector and
4. Begin clearing and grubbing. Maintain devices as needed.
5. Install storm sewer (if applicable) and protect inlets with block and gravel inlet controls, sediment traps or other approved measures as shown on the plan.
6. Stabilize site as areas are brought up to finish grade with permanent vegetation, paving, ditch lining mulch denuded areas within Seven (7) days of completion of any phase of construction. Storm water swales must be stabilized within Seven (7) days> and repaired when disturbed within 3 days
7. When construction is complete and all areas are stabilized completely, call for inspection by Environmental Engineer.
8. If site is approved, remove temporary diversions, silt fencing sediment basins, etc. , and seed out or pave any resulting bare areas. All remaining permanent erosion control devices (such as velocity dissipators) should then be installed.
9. When vegetation has become established, call for final site inspection by Environmental Engineer.

MAINTENANCE REQUIREMENTS

LAND GRADING

Periodically, check all graded areas and the supporting erosion and sedimentation control practices, especially after heavy rainfalls. Promptly remove all sediment from diversions and other water-disposal practices. If washouts or breaks occur, repair them immediately. Prompt maintenance of small eroded areas before they become significant gullies is an essential part of an effective erosion and sedimentation control plan.

CONSTRUCTION ENTRANCE

Maintain the gravel pad in a condition to prevent mud or sediment from leaving the construction site. This may require periodic topdressing 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.

PLANTED AREAS

Replant areas lost to erosion. Fertilize twice during the second growing season and once a year thereafter if needed. Replace American beachgrass that dies out with sea oats, bitter panicum, or seashore elder.

SWALES WITH STONE LINER

Inspect swales once a week and after every rainfall. Immediately remove sediment from the flow area and repair the swale. Carefully check outlets and make timely repairs as needed. When the area protected is permanently stabilized, blend with the natural ground level and appropriately stabilize it. Check liners for slippage. replace or reset liner and stabilize liner(stone).

ADDITIONAL MAINTAINANCE REQUIREMENTS FOR SEDIMENT BASINS.

1. THE SITE SHALL BE OBSERVED BY THE CONTRACTOR BI-WEEKLY TO DETERMINE THE NEED FOR ADJUSTING THE SILT FENCE OR CLEANING THE BASINS IN ORDER THAT THE SEDIMENT CONTROLS FUNCTION PROPERLY.
2. CONTRACTOR SHALL CHECK SEDIMENT CONTROLS AFTER EACH STORM EVENT AND MAKE REPAIRS AS NEEDED.
3. IN THE EVENT THAT THE ENVIRONMENTAL CONTROL OFFICIAL DEEMS THAT ADDITIONAL MEASURES ARE NEEDED, THE CONTRACTOR SHALL ADD SUCH MEASURES.

OUTLET DISSIPATORS

Inspect riprap outlet structures weekly and after significant (1/2 inch or greater) rainfall events to see if any erosion around or below the riprap has taken place, or if stones have been dislodged. Immediately make all needed repairs to prevent further damage.

SEDIMENT BASINS

Inspect temporary sediment basins at least weekly and after each significant (½ inch or greater) rainfall event and repair immediately. Remove sediment and restore the basin to its original dimensions when it accumulates to one-half the design depth. Place removed sediment in an area with sediment controls.
Check the embankment, spillways, and outlet for erosion damage, and inspect the embankment for piping and settlement. Make all necessary repairs immediately. Remove all trash and other debris from the riser and pool area.

BAFFLES

Inspect baffles at least once a week and after each rainfall. Make any required repairs immediately.
Be sure to maintain access to the baffles. Should the fabric of a baffle collapse, tear, decompose, or become ineffective, replace it promptly.
Remove sediment deposits when it reaches half full to provide adequate storage volume for the next rain and to reduce pressure on the baffles. Take care to avoid damaging the baffles during cleanout. Sediment depth should never exceed half the designed storage depth.
After the contributing drainage area has been properly stabilized, remove all baffle materials and unstable sediment deposits, bring the area to grade, and stabilize it.

SILT FENCE

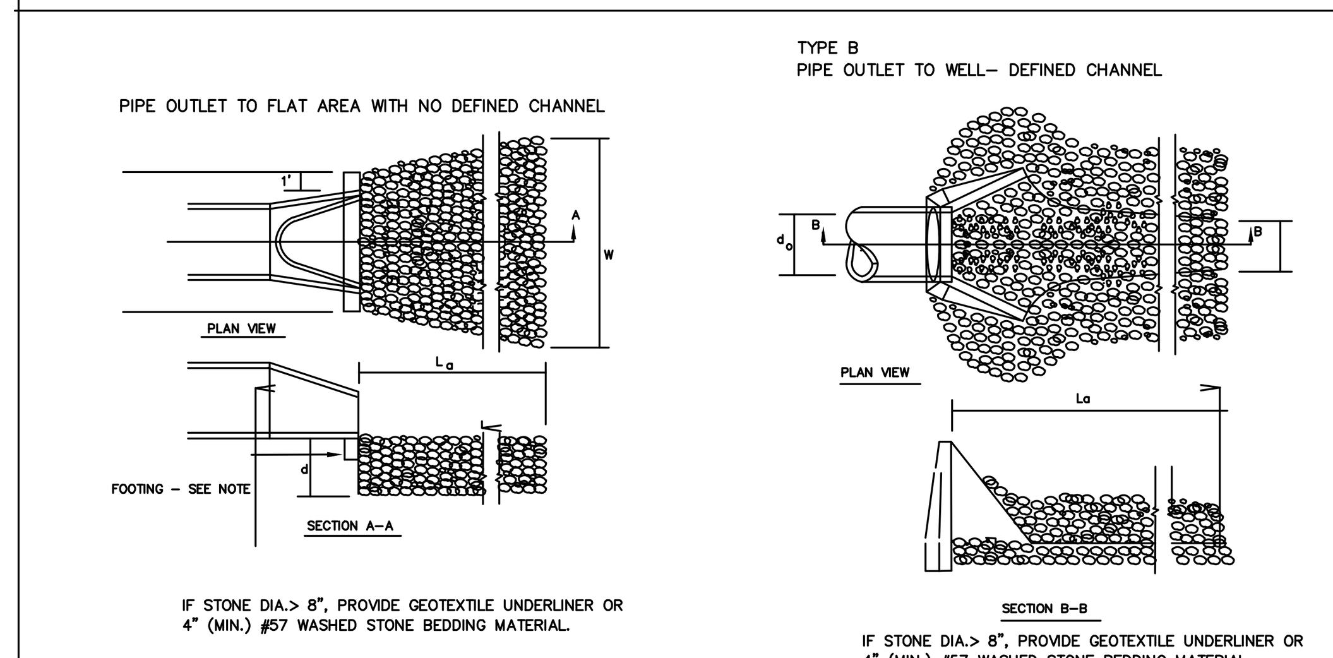
Inspect sediment fences at least once a week and after each rainfall. Make any required repairs immediately.
Should the fabric of a sediment fence collapse, tear, decompose or become ineffective, replace it promptly.
Remove sediment deposits as necessary to provide adequate storage volume for the next rain and to reduce pressure on the fence. Take care to avoid undermining the fence during cleanout.
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.

INLET PROTECTION

Inspect all inlet protections at least once a week and after each rainfall. Should the block and gravel be displaced, correct immediately. Remove sediment deposits as necessary to provide adequate storage volume for the next rain and to reduce pressure on the protection. Take care to avoid undermining the gravel and block during clean out.

BOUYANCY CALCULATION FOR RISER

LENGTH OF IMMERSED PIPE = MAX 12' DIAMETER OF PIPE =12"
VOLUME OF PIPE = [(1*1)*^2 *3.147}*12 = 37.76 cu ft
WEIGHT OF DISPLACEMENT = 37.76 * 62.4 = 2,356 LBS
WEIGHT OF SLAB = 1*4*4*180 LBS/CF= 2880
WEIGHT OF SOIL/STONE COVERING ROCK = 165 LBS/CU FT* 2CU FT = 330 LBS
TOTAL WEIGHT IS 2880 LBS+330 LBS= 3210 LBS > 2356 LBS
THEREFORE, PIPE DOES NOT FLOAT!!!



NOTES:
(1) d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6 INCHES.
(2) d_t = 1' ABOVE MAXIMUM TAILWATER OR TOP OF CHANNEL BANK (WHICHEVER IS LESS).
(3) La =LENGTH OF RIPRAP APRON.

CALCS FOR DISSIPATOR

PIPE SIZE	WIDTH(V)	DEPTH(d)
18"	8'	12'

DISSIPATOR PAD DETAIL

NO SCALE

SEEDBED PREPARATION

1) Chisel compacted areas and spread topsoil 3 inches deep over adverse soil conditions, if available.
2) Rip the entire area to 6 inches depth.
3) Remove all loose rock, and other obstructions leaving surface reasonably smooth and uniform.
4) Apply agricultural lime, fertilizer, and superphosphate uniformly and mix with soil (see below).
5) Continue tillage until a well-pulverized, firm, reasonbly uniform seedbed is prepared 4 to 6 inches deep.
6) Seed on a freshly prepared seedbed and cover seed lightly with seeding equipment or cultipack after seeding.
7) Mulch immediately after seeding and anchor mulch.
8) Inspect all seeded areas and make necessary repairs or reseedings within the planting season, if possible. If stand should be over 60% damaged, reestablish following original lime, fertilizer and seeding rates.
9) Consult Conversation Inspector on maintenance treatment and fertilization after permanent cover is established.

* Apply : Agricultural Limestone – 2 Tons/Acre
Fertilizer – 10–10–10 Analysis at 800 – 1,000 lbs./acre
Superphosphate – 500 lbs./acre of 20% Analysis Superphosphate
Emulsified Asphalt at 300 gallons/acre
Mulch – 2 Tons (Approx. 80 Baales) Small Grain Straw/Acre
Anchor – Tack with Liquid Asphalt at 400 gallons/acre or

NOTE: PERMANENT GROUND COVER WILL BE PROVIDED FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR NO MORE THAN 60 CALENDER DAYS (WHICHEVER IS SHORTER)

SEEDING SCHEDULE

Shoulders, Side Ditches, Slopes, (Max. 3:1)

Date	Type	Planting Rate
Aug 15–Nov 1	Tall Fescue	300 lbs/acre
Nov 1–Mar 1	Tall Fescue	300 lbs/acre
	and Abruzzi Rye	25 lbs/acre
Mar 1–Apr 15	Tall Fescue	300 lbs/acre
Apr 15–Jun 30	Hulled Common Bermudagrass	25 lbs/acre
July 15–Aug 15	Tall Fescue and	120 lbs/acre
	***Browntop Millet	35 lbs/acre
	***or Sorghum–Sudan Hybrids	30 lbs/acre
	Slopes (3:1 to 2:1)	
Mar 1–Jun 1	Sericea Lespedeza (scarified) and	50 lbs/acre
(Mar 1–Apr 15)	Add Tall Fescue	120 lbs/acre
(Mar 1–Jun 30)	Or Add Hulled Common Bermudagrass	25 lbs/acre
Jun 1–Sep 1	***Tall Fescue and	120 lbs/acre
	***Browntop Millet	35 lbs/acre
	***or Sorghum–Sudan Hybrids	30 lbs/acre
Sep 1– Mar 1	Sericea Lespedeza (unhulled–unscarified)	70 lbs/acre
	and Tall Fescue	120 lbs/acre
(Nov 1–Mar 1)	Add Abruzzi Rye	25 lbs/acre

Consult Conservation Engineer or Soil Conservation Service for additional information concerning other alternatives for vegetation of denuded areas. The above vegetation rates are those which do well under local conditions; other seeding combinations are possible.

***Temporary – Reseed according to optimum season for desired permanent vegetation. Do not allow temporary cover to grow over 12" in height before mowing, otherwise fescue may be shaded out.

Project #:

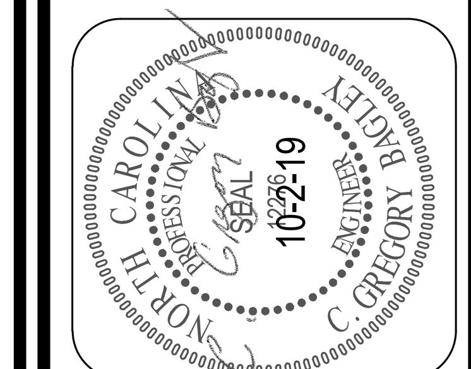
Date:

Drawn/Design By:

Scale:

REVISIONS

No.	Date:	Remarks
1	9-27-19	DWQ COMMENTS
2	10-02-19	DWQ COMMENTS
3		
4		



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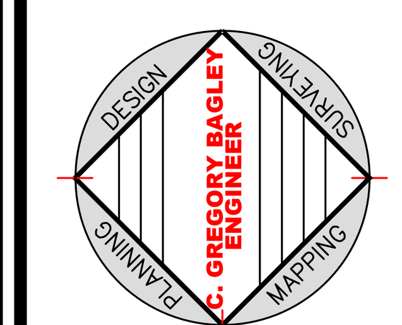


S&E 1 DETAILS

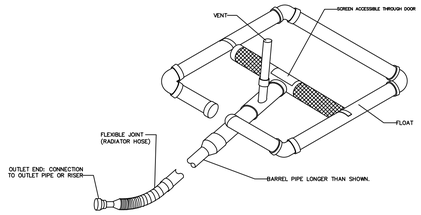
Client Name:

PINEY GROVE STORAGE FACILITY
FOR
Jim Moore
Harnet County N.C.

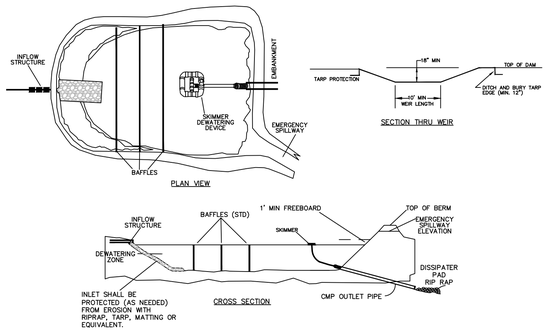
Sheet Number

S&E 1

of 1



SKIMMER



NOTES:
1) BASIN SHOULD BE CLEANED OUT WHEN CAPACITY REACHES AN ELEVATION REPRESENTING THAT THE BASIN IS HALF-FULL.
2) THE TARP USED TO PROTECT THE WEIR SHALL BE THE WIDTH SPECIFIED. THE LENGTH OF THE TARP SHALL BE ACCORDING TO AVAILABLE SUPPLY. IF MULTIPLE TARPS ARE TO BE USED, THEN TARPS SHALL BE OVERLAPPED AT LEAST 12". THE UPSTREAM 12" TARP SHALL OVERLAP THE DOWNSTREAM TARP. THE TARP SHALL BE 50 MIL. HEAVY DUTY SILVER TARPAULINS OR EQUALENT FOR U.V. RESISTANCE.
3) PROVIDE A MINIMUM OF THREE POROUS BAFFLES TO EVENLY DISTRIBUTE FLOW ACROSS THE BASIN, REDUCING TURBULENCE.
4) BAFFLE MATERIAL MUST BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR A SILT FENCE.
5) MOST OF THE SEDIMENT WILL ACCUMULATE IN THE FIRST BAY, SO THIS SHOULD BE READILY AVAILABLE FOR MAINTENANCE.
6) DURING THE CONSTRUCTION PHASE OF THE PROJECT, PERMANENT STORMWATER RISER SHALL ONLY DEWATER FROM THE TOP O
7) POND SHALL NOT BE CONVERTED FOR STORMWATER USE UNTIL APPROVED BY ENVIRONMENTAL ENGINEER.

SKIMMER BASIN

Maintenance

Inspect baffles at least once a week and after each rainfall. Make any required repairs immediately.

Be sure to maintain access to the baffles. Should the fabric of a baffle collapse, tear, decompose, or become ineffective, replace it promptly.

Remove sediment deposits when it reaches half full, to provide adequate storage volume for the next rain and to reduce pressure on the baffles. Take care to avoid damaging the baffles during cleanout, and replace if damaged during cleanout operations. Sediment depth should never exceed half the designed storage depth.

After the contributing drainage area has been properly stabilized, remove all baffle materials and unstable sediment deposits, bring the area to grade, and stabilize it.

References

Sediment Traps and Barriers
6.60, Temporary Sediment Trap
6.61, Sediment Basins
6.62, Sediment Fence
6.64, Skimmer Sediment Basin

McLaughlin, Richard, "Soil Facts: Baffles to Improve Sediment Basins." N.C. State University Cooperative Extension Service Fact Sheet AGW-439-59, 2005.

North Carolina Department of Transportation Erosion and Sedimentation Control Special Provisions

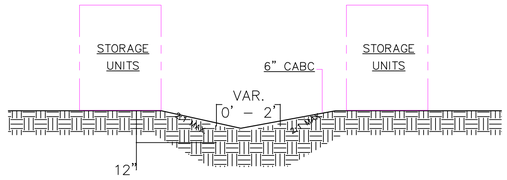
Sullivan, Brian. City of High Point Erosion Control Specifications.

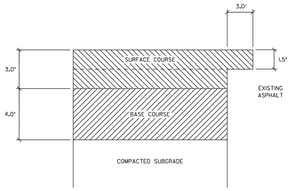
Thaxton, C. S., J. Calantoni, and R. A. McLaughlin. 2004. Hydrodynamic assessment of various types of baffles in a sediment detention pond. Transactions of the ASAE. Vol. 47(3): 741-749.

MAINTENANCE FOR SKIMMER BASIN

NOTES:

1. TEMPORARY SWALE AND PERMANENT ARE SAME AND TO BE USED TO INTERCEPT FLOW AND/OR DIVERT TO A SEDIMENT CONTROL MEASURE OR BMP.
2. SILT SHALL BE REMOVED WHEN DITCH IS ONE-HALF FULL DURING CONSTRUCTION.
3. DITCH SHALL BE RECONSTRUCTED WHEN DAMAGED BY EQUIPMENT OR COVERED BY FILL.
4. STABILIZE SWALE WITH STONE FROM THE BEGINNING OF CONSTRUCTION





PAVEMENT SCHEDULE

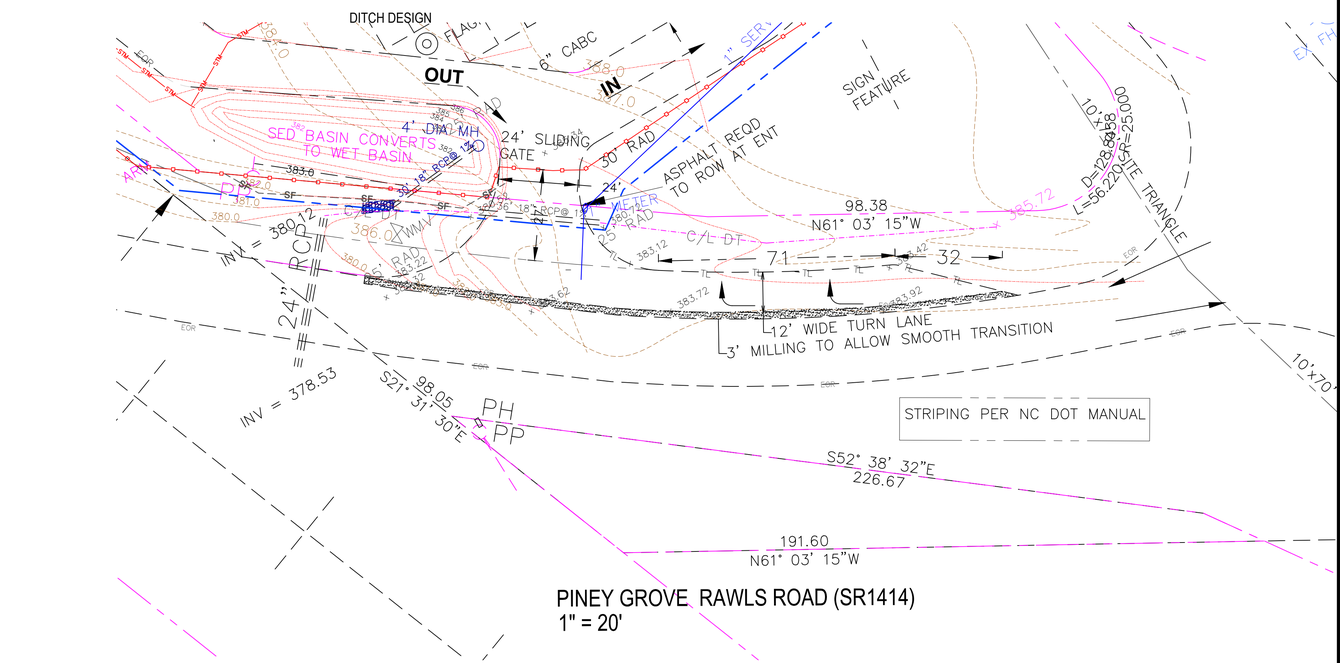
MILLING REQUIRED THREE FEET AT DEPTH OF 1.5' AT EXISTING EDGE ALONG ENTIRE LENGTH OF WIDENING!

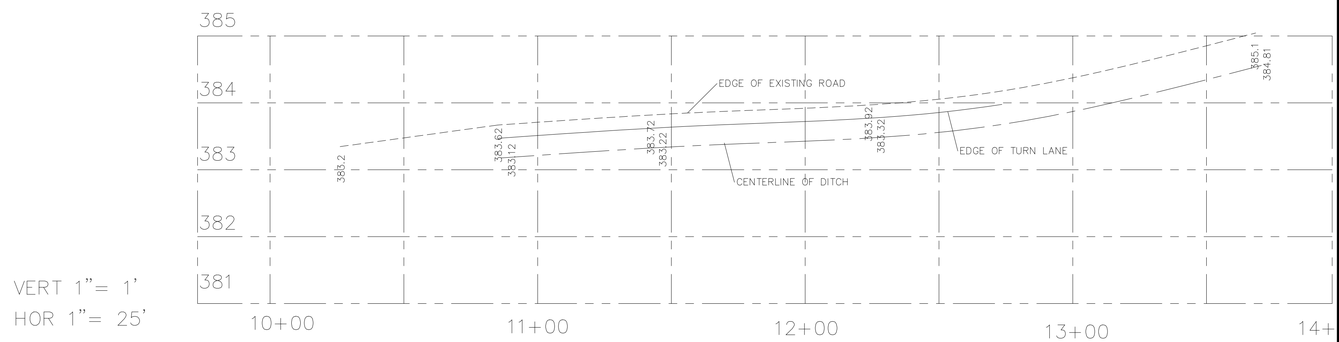
3.0" S 9.5 C

4.0" B 25.0 C

DRAWING IS NOT TO SCALE

DITCH DESIGN





Project #:
Date:
Drawn/Design By:
Scale:

REVISIONS

No.	Date:	Remarks
1	9-27-19	DWQ COMMENTS
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3		
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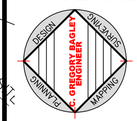

S&E 2 DETAILS

Client Name:

PINEY GROVE STORAGE FACILITY
FOR
Jim Moore
Harnet County N.C.

Sheet Number

S&E 2
of 1

JOHN E WHEELER AND GLADYS W WHEELER
DEED BOOK 2421 PG 400
ZONING = RA-30
PIN - 0655-42-2251.000

REINERT DEREK ANGUS
DEED BOOK 3483 PG 557
ZONING = RA-40
0655-32-8091.000

KNOTT DOUGLAS & KNOTT DOTTIE
DEED BOOK 724 PG 0651
ZONING = RA-30
0655-41-0489.000

KNOTT DOUGLAS & KNOTT DOTTIE
DEED BOOK 2970 PG 0161
ZONING = RA-40
0655-41-0489.000

HP6 FUQUAY VARINA HEALTH INVESTORS LLC
DEED BOOK 3394 PG 0070
ZONING = RA-30
0655-41-8963.000

NORFOLK SOUTHERN RAILROAD

US 401 NORTH

RAWLS CLUB ROAD (SR1447)

PINEY GROVE RAWLS ROAD (SR1414)

PROPOSED CONTOUR
EXISTING CONTOUR
ROW
FENCE
EDGE OF ROAD
TURN LANE
STORM WATER SWALE
SWALE TO BASIN
SPOT ELEVATIONS
SILT FENCE

40' 20' 0' 40' 80'

TOTAL UNITS
197-10' UNITS
11-5' UNITS

6070 SQ FT "F" 204' — 38-10' UNITS 2-5' UNITS
5948 SQ FT "E" 200' 195' — 36-10' UNITS 2-5' UNITS
5575 SQ FT "D" 185' 185' — 36-10' UNITS 2-5' UNITS
5048 SQ FT "C" 170' 165' — 34-10' UNITS 2-5' UNITS
4429 SQ FT "B" 165' 155' — 31-10' UNITS 2-5' UNITS
3330 SQ FT "A" 122' 122' — 22-10' UNITS 1-5' UNITS

FLAGPOLE

LANDSCAPE BOARDER
PROPOSED BERM (3:1 SLOPES)
STORM WATER SWALE
6" CABC
20'
SWALE TO BASIN
6' ARCHITECTURAL FENCE AROUND PROPERTY
DRAINAGE AREA
10'x70' SITE TRIANGLE
4' CMP MH
24" SLIDING GATE
24' RCP @ 1%
INV = 380.12
INV = 378.53
ASPHALT REOD TO ROW AT ENT
SIGN FEATURE
GRAVEL CONSTRUCTION ENTRANCE
12' WIDE TURN LANE
L3' MILLING TO ALLOW SMOOTH TRANSITION
STRIPING PER NC DOT MANUAL
EX FH

S89° 38' 45"W 1326.99'
S21° 31' 30"E 326.28'
S21° 31' 30"E 93.05'
N61° 03' 15"W 98.38'
D=128°58'38" R=25.00' L=56.22'
S11° 28' 04"E 118.68'
S52° 38' 32"E 226.67'
N61° 03' 15"W 191.60'

VELOCITY CALCULATIONS

R=(bd+xd^2)/b+2Dx)
R=.5

STORM WATER SWALE 1	V=1.49 x(1/n)xR^(2/3)xS^(1/2)	S=.028	V=4.67
STORM WATER SWALE 2	V=1.49 x(1/n)xR^(2/3)xS^(1/2)	S=.021	V=4.03
STORM WATER SWALE 3	V=1.49 x(1/n)xR^(2/3)xS^(1/2)	S=.023	V=4.23
STORM WATER SWALE 4	V=1.49 x(1/n)xR^(2/3)xS^(1/2)	S=.022	V=4.05
STORM WATER SWALE 5	V=1.49 x(1/n)xR^(2/3)xS^(1/2)	S=.024	V=4.31
STORM WATER SWALE 6	V=1.49 x(1/n)xR^(2/3)xS^(1/2)	S=.025	V=4.42

PLASTIC TRASH STRAINER CONTECH OR EQUAL WITH MAX 5.5" SPACING
EL. = 384.5 25 YEAR STORM
EL. = 384.1 TOP OF RISER
4' MH
EL. = 383.8 8" ORIFICE PIPE
18" RCP DISCHARGE
EL. = 382.5 INV OUT
EL. = 382.80 PERMANENT POOL
2" PIPE WITH SCREENED OPENING
EL. = 381.80 POND BOTTOM
EL. = 381.0 INV OF 4' MANHOLE
6"
GROUT FROM EL. 382.8 TO BOTTOM OF MH TO FORM INVERT

RISER

SWALE LINED WITH GEOFABRIC
FOREBAY
20'
25'
65'
P/L
DOT DITCH
BUILDING
10' ACCESS EASEMENT FOR ACCESS TO BANKS OF BASIN. ACCESS MAY REQUIRE TEMPORARY REMOVAL OF FENCE FO
SHALLOW LAND FOR PLANTS
4' DIA MANHOLE WITH TRASH COLLECTOR ON TOP
30" 18" RCP @ 1%
PROVIDE CLASS C RIP RAP FOR PROTECTION OF THE WEIR AT THE SPILLWAY. ELEVATIONS ARE TO TOP OF THE RIP
SILT FENCE

PLAN

SHALLOW WATER
THALIA DEALBATA - POWDERY THALIA
LEERSIA ORYZOIDES - RICE CUTGRASS
JUNCUS EFFUSUS - COMMON RUSH

SHALLOW LAND
ANDROPOGON GERARDII-BIG BLUESTEM
HELIANTHUS ANGUSTIFOLIUS-SWAMP SUNFLOWER
VACCINIUM CORYMBOSUM HIGHBUSH BLUEBERRY

WASHED CENTIPEDE ON ALL SURFACES ABOVE VEGETATED SHELF

PLANTING DENSITY
PLANTS TO BE SPACED 24" TO 36"
NOT LESS THAN 50 PLANTS PER 200 SQUARE FEET.
SHALLOW LAND = 1546 SQ FT = 386 PLANTS
SHALLOWWATER = 1518 SQ FT = 380 PLANTS

366.5
SWALE 385.3 IN
FOREBAY 18%
1' FREEBOARD
25 YEAR FLOOD
385.1
8" ORIFICE 383.8
NORMAL POOL 2" ORIFICE 382.8
385.5
384.5 DAM BREACH
382.5 18" INV
POND BOTTOM = 381.8
382.2
DOT DITCH C/L
30' 18" RCP@ 1%

PROFILE
NTS

SITE DATA

AREA PER DEED	3.0 Ac.
AREA LESS ROW	2.51 Ac.
70% of AREA	1.76 Ac.
IMPERVIOUS AREA	1.71 Ac.
ZONING	RA-30
PIN NUMBERS	0655-41-3933.000
DEED	BK 3513 PG 0440
WATERSHED	IV
FEMA PANEL #	N/A
SETBACKS	Front 35', Rear 25', Side 10', Corner 20'

OWNER/DEVELOPER
JIM MOORE
CEDAR ROCK TRAIL
FUQUAY VARINA, NC 27526
910-922-7010

ENGINEER
GREG BAGLEY
805 COKESBURY ROAD
FUQUAY VARINA, N.C. 27526
Ph. (919) 552-1600

STORM WATER
1" = 40'

"Conditional Use Permit #BOA 1902-004, approved 3/14/19"

Project #:
Date:
Drawn/Design By:
Scale:

REVISIONS

No.	Date:	Remarks
1		
2		
3		
4		

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 12576 C GREGORY BAGLEY 10-2-19

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Fax: (919) 552-6325

C. GREGORY BAGLEY ENGINEER — DESIGN PLANNING SURVEYING MAPPING

STORM WATER

Client Name:
PINEY GROVE STORAGE FACILITY
FOR
Jim Moore
Harnet County N.C.

Sheet Number
1
of 1

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
(d) Slopes 3:1 to 4:1	14	-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
(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
• 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	• 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

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

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. 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

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. 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.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

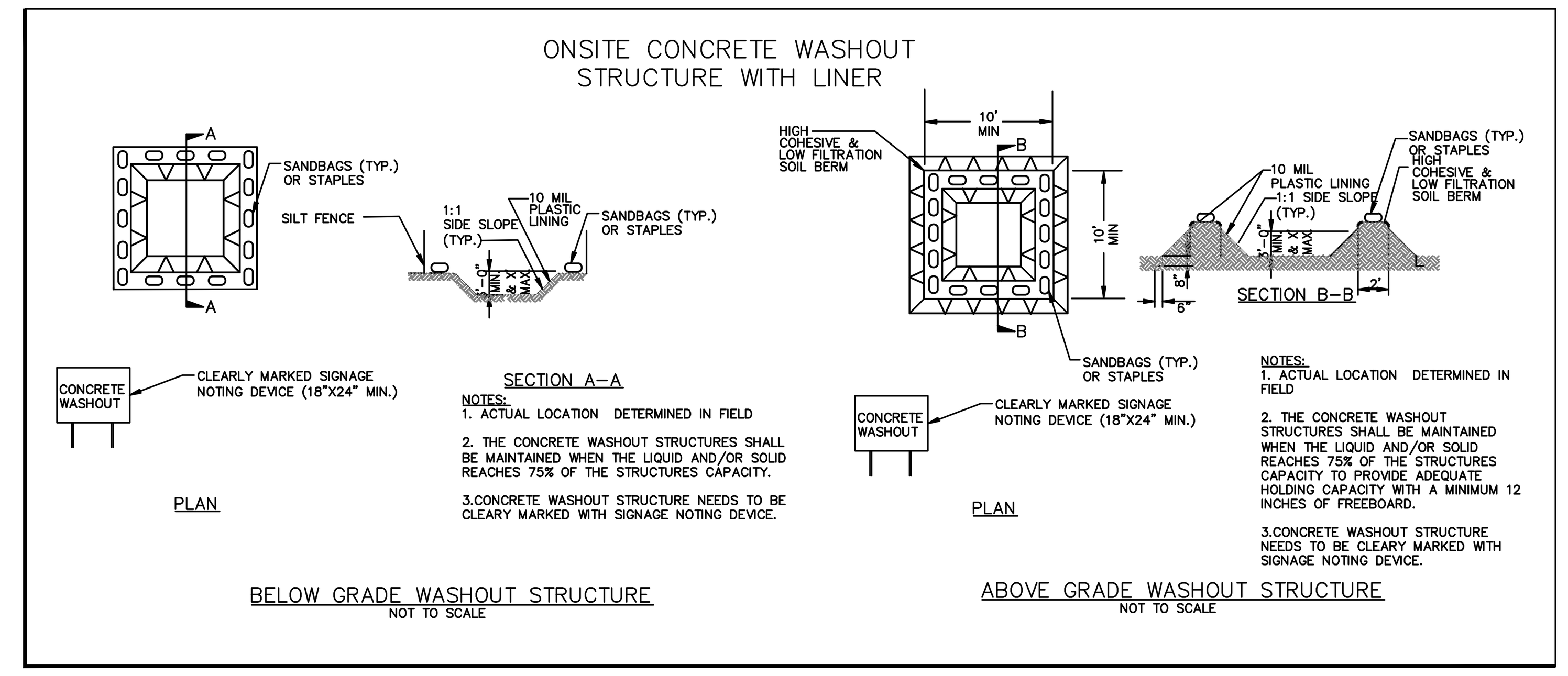
1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled,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

PORTABLE TOILETS

1. 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.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. 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

1. 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.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. 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

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. 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.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

Project #:
Date:
Drawn/Design By:
Scale:

REVISIONS

No.	Date:	Remarks
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DWQ MATERIALS HANDLING

Client Name: PINEY GROVE STORAGE FACILITY FOR Jim Moore Harnett County N.C.

Sheet Number 1 of 1

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 jEORardy, 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 un-attended 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 $\geq$ 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 discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event $\geq$ 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 $\geq$ 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 $\geq$ 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 the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) 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:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) 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:

(a) Visible sediment deposition in a stream or wetland.

(b) 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).

(c) 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. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) 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	• ***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)-(c) above	• ***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)]	• ***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)]	• ***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 the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	• ***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 reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

Project #:
Date:
Drawn/Design By:
Scale:

REVISIONS

No.	Date:	Remarks
1	9-27-19	DWQ COMMENTS
2	10-02-19	DWQ COMMENTS
3		
4		

NORTH CAROLINA PROFESSIONAL SEAL 022676 ENGINEER C. GREGORY BAGLEY 10-2-19

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C. GREGORY BAGLEY ENGINEER — DESIGN · SURVEYING · MAPPING · PLANNING

DWQ REPORTING

Client Name: PINEY GROVE STORAGE FACILITY FOR Jim Moore Harnet County N.C.