





REVISIONS

NO.	DATE	DESCRIPTION

PROJECT INFORMATION

PROJECT MANAGER:	RJB
DRAWN BY:	AJF
APPROVED BY:	RJB
DRAWING NAME:	BASE-SUNSETGR

PROJECT NAME

SUNSET GROVE SUBDIVISION PHASE 2

CHATHAM COUNTY NORTH CAROLINA

DEVELOPER

CHATHAM CAPITAL LLC

400 MARKET STREET CHAPEL HILL, NC 27516

SHEET NAME

PLAN & PROFILE ROAD CULVERTS

DRAWING SCALE

1"=30' (VERT. PROFILE: 1"=3')

PLAN SET

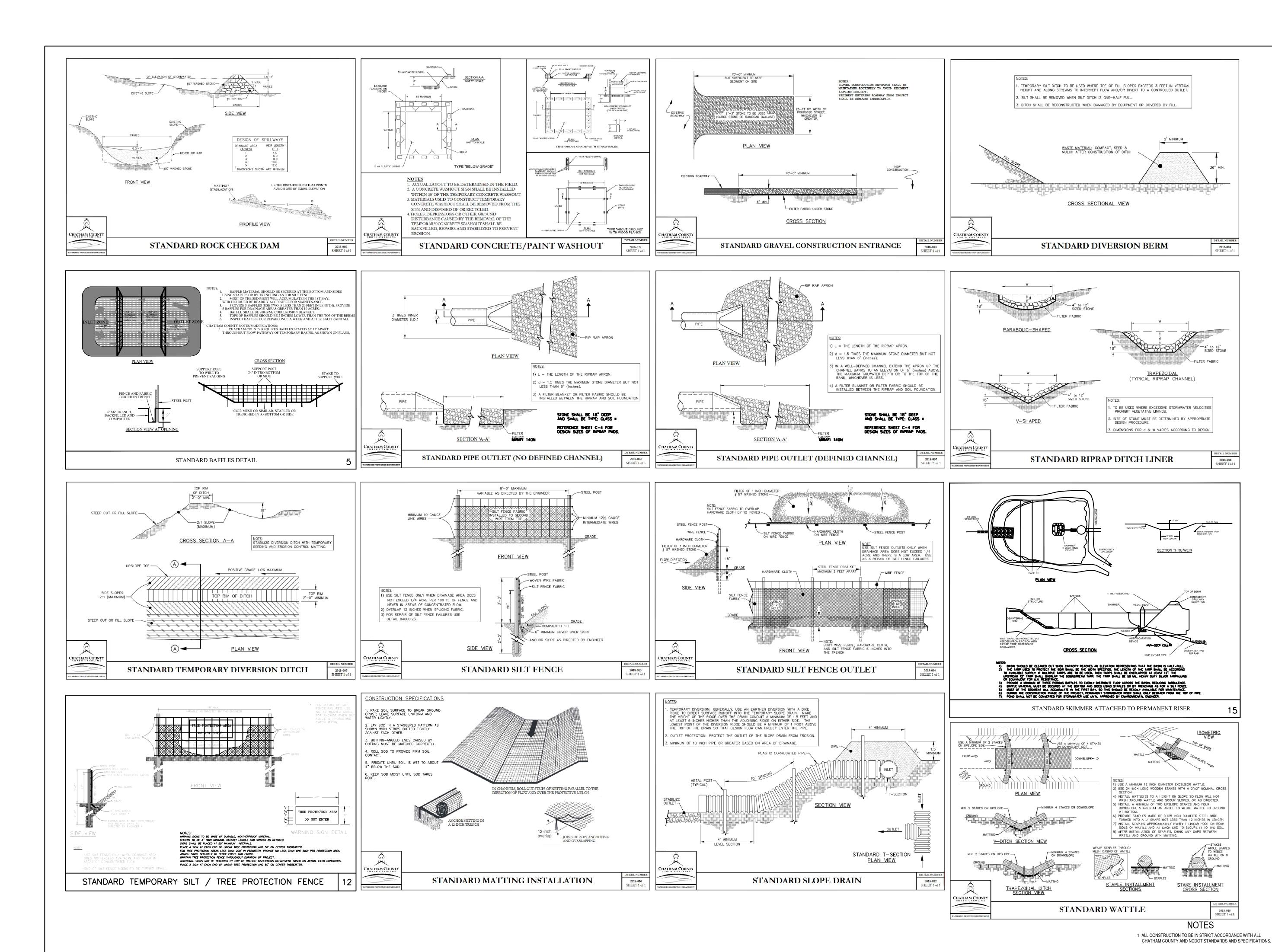
CONSTRUCTION DRAWINGS

DATE

3-8-2019

NORTH AMERICAN GREEN W3000 (NAG W3000)

SHEET NUMBER PP-6



CONSULTING 2805 Tobermory Lane Raleigh, NC 27606 Phone No. (919) 618-0180 License No. C-2149



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APPROVED BY: RJB	DRAWN BY:	AJF
	APPROVED BY:	RJB
DRAWING NAME: BASE-SUNSETGRO	DRAWING NAME:	BASE-SUNSETGRO

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SUNSET **SUBDIVISION** PHASE 2

CHATHAM COUNTY NORTH CAROLINA

DEVELOPER

CHATHAM CAPITAL LLC

400 MARKET STREET CHAPEL HILL, NC 27516

SHEET NAME

DETAILS

DRAWING SCALE

AS SHOWN

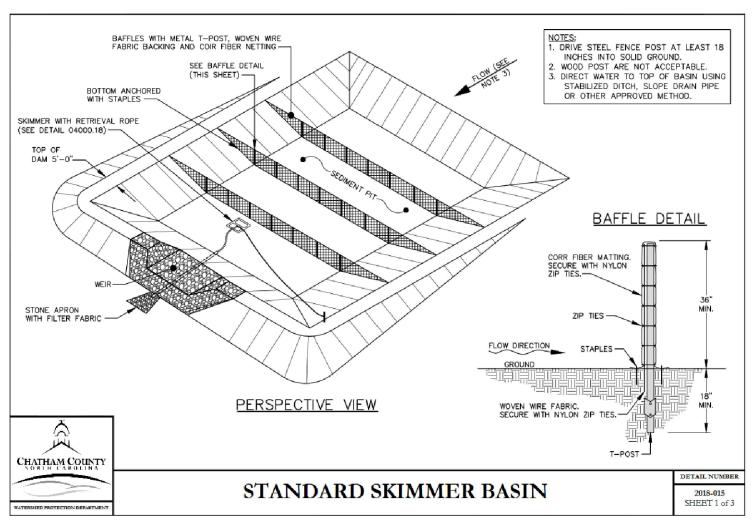
PLAN SET CONSTRUCTION DRAWINGS

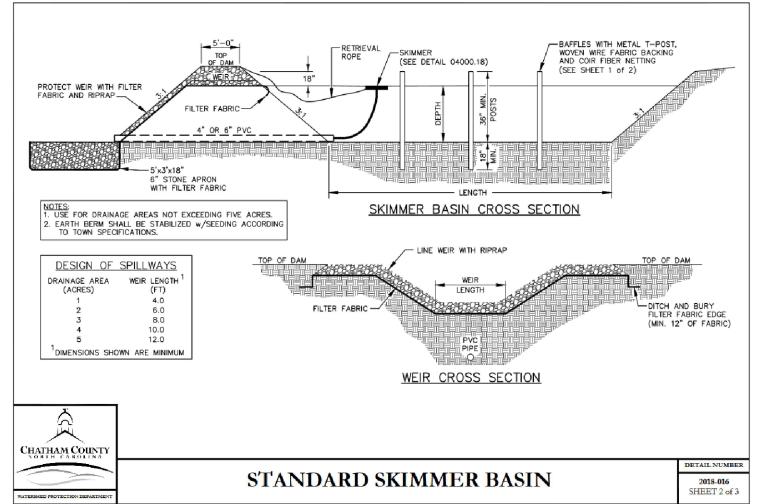
DATE

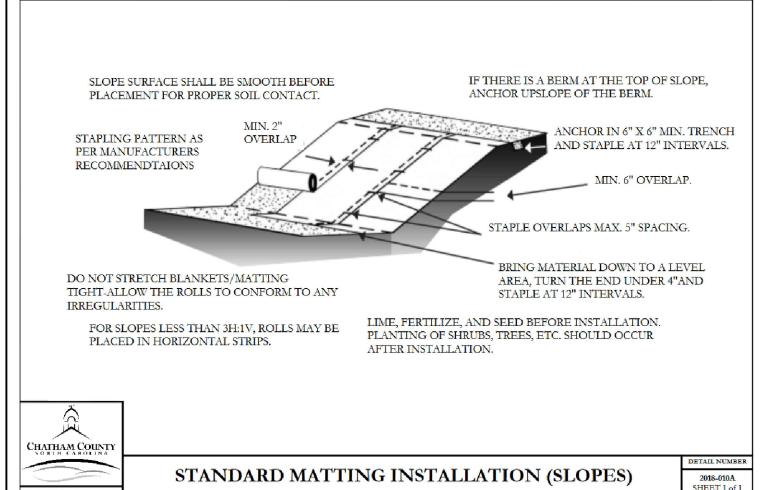
3-8-2019

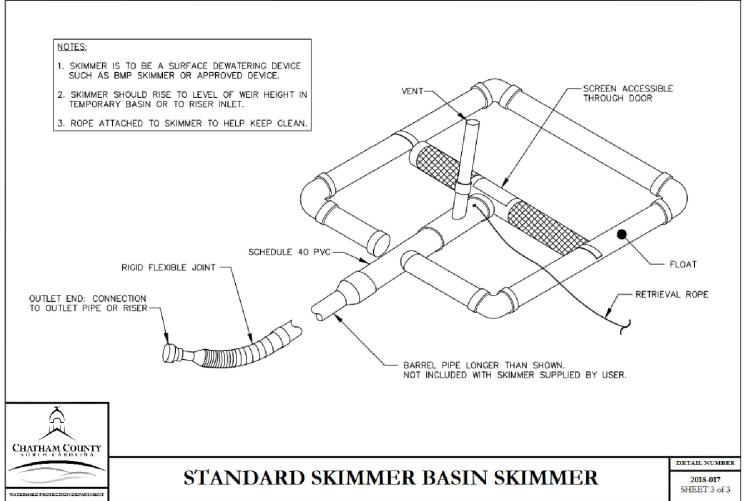
2018-018 SHEET 1 of 1

SHEET NUMBER



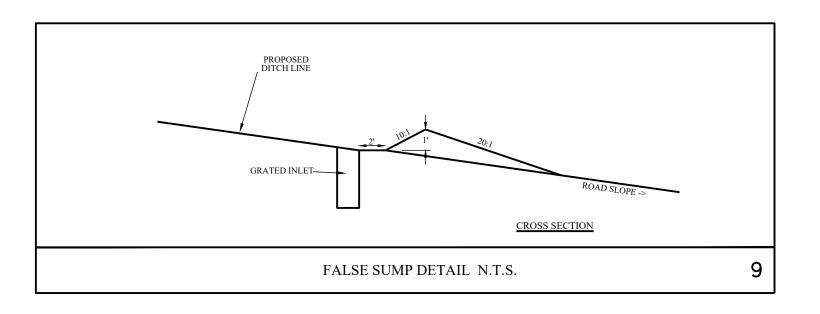


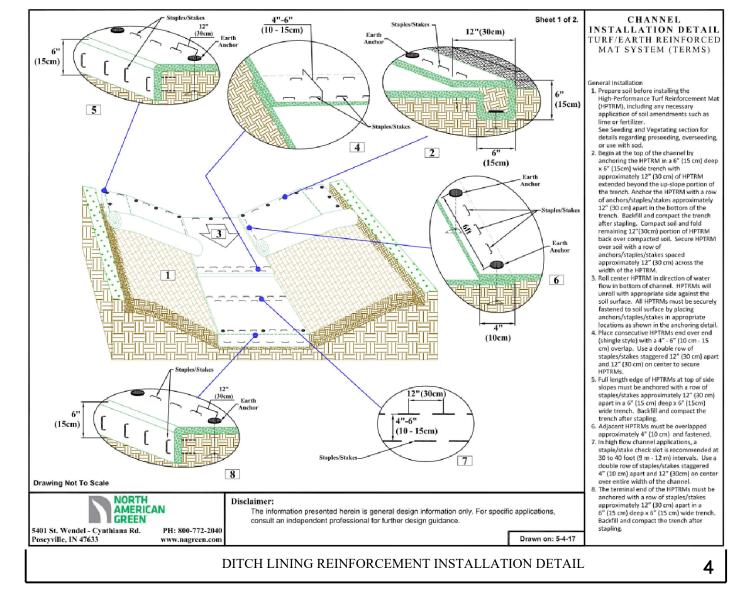




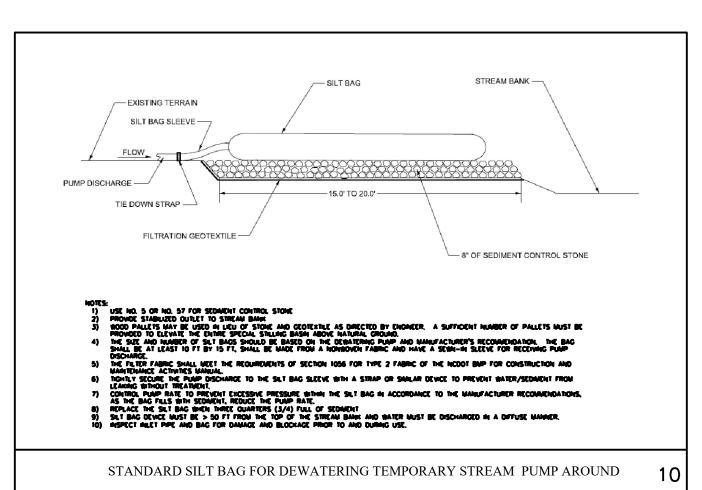
				S	torm D	rainage	Summary	- Sunset G	rove S	ubdivisior	n - Phase	2			\$	Storm Drainag	ge Summary	•		
							Summar	y of Pipes -	2/20/20)19					Summary of Structures					
										calculated										
From	То	Rational	Intensity	Area	Q_10	Q	Length	Diameter		DIA.	Slope	Invert	Invert	Structure	Type	Rational	Area	Q_10	Reference	Depth
		С	(in/hr)	(ac)	(cfs)	(cfs)	(ft)	(inches)		(inches)	(%)	(From)	(To)			С	(ac)	(cfs)	Elevation	(ft)
																			(TOP)	
Subdivis	ion Pipe	s																		
FES-21	GI-22	0.60	5.92	0.10	0.4	3.6	89.5	15	RCP	9.8	3.00%	488.04	490.73	GI-22	GRATED INLET	0.60	0.10	0.4	495.50	4.8
GI-22	GI-23	0.50	5.92	1.09	3.2	3.2	57.6	15	RCP	8.2	6.20%	490.93	494.50	GI-23	GRATED INLET	0.50	1.09	3.2	499.50	5.0
FES-24A	GI-24B	0.60	5.92	0.01	0.0	13.3	44.5	24	RCP	22.4	0.50%	387.75	387.97	GI-24B	GRATED INLET	0.60	0.01	0.0	388.00	0.0
GI-24B	GI-24	0.60	5.92	0.01	0.0	13.3	54.7	24	RCP	22.4	0.50%	388.17	388.45	GI-24	GRATED INLET	0.60	0.01	0.0	393.00	4.6
GI-24	GI-25	0.60	5.92	0.14	0.5	13.2	163.0	24	RCP	22.3	0.50%	388.65	389.46	GI-25	GRATED INLET	0.60	0.14	0.5	395.50	6.0
GI-25	GI-26	0.50	5.92	3.10	9.2	12.7	42.0	18	RCP	17.0	2.00%	389.66	390.50	GI-26	GRATED INLET	0.50	3.10	9.2	395.50	5.0
FES-27	GI-28	0.60	5.92	0.29	1.0	11.4	65.5	18	RCP	16.3	2.00%	387.59	388.90	GI-28	GRATED INLET	0.60	0.29	1.0	396.00	7.1
GI-28	GI-29	0.50	5.92	3.49	10.3	10.3	47.4	15	RCP	13.8	4.00%	389.10	391.00	GI-29	GRATED INLET	0.50	3.49	10.3	396.00	5.0
Cross Dra	ainage P	ipes																		
INV-30	INV-31			448			58.5	ARCH PIPE	ALUM	0.0	3.76%	379.00	381.20	INV-31	PREFAB HEADWALL	0.00	448.00	0.0	391.45	10.3
INV-34	INV-35			26.3			124.0	36	RCP	0.0	4.92%	412.10	418.20	INV-35	PRECAST ENDWALL	0.00	26.30	0.0	424.13	5.9
SCM-C O	utlet																			
FES-36	RB-37	0.70	5.92	9.39	38.9	2.4	56.0	15	RCP	11.8	0.50%	382.72	383.00	RB-37	60" RCP RISER	0.70	9.39	38.9	389.60	6.6
								P Type IV (m ior height, wi				oss sections								

		Storr	n Drainag	e Summary	- Sunset G	rove Subdi	vision - Ph	ase 2	
				Rip-Rap P	ad Calcula	tions			
Invert	Q (cfs)	Diameter	Area	V=Q/A	Type of	Mirafi 140N	Length of	Width of	Thickness
		(feet)	(sq.ft.)	(fps)	Stone	Required?	Pad (ft.)	Pad (ft.)	of Pad (in)
FES-21	3.6	1.25	1.2	2.9	Class B	Yes	10.0	5.0	27
FES-24A	13.3	2.00	3.1	4.2	Class B	Yes	16.0	8.0	27
FES-27	11.4	1.50	1.8	6.4	Class B	Yes	12.0	6.0	27
INV-34	93.4	3.00	7.1	13.2	Class 2	Yes	10.0	10.0	27
FES-36	2.4	1.25	1.2	2.0	Class B	Yes	10.0	5.0	27



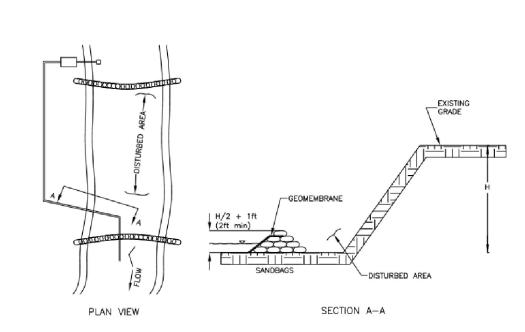


	SEEDING SCHEDULE (REVISED: 1–1–86)																
	,	<u>SE</u>	EDBED	PREF	PAR.	ATIO	N										
	SHOULDERS, SIDE DITCHES, SLOPES (MAX. 3:1)																
	g 15- Nov 1 Tall Fescue 300 lbs./acre	1.)	Chisel advers	comp e soil	acte co	ed ar	eas ns,	and if av	spre ailab	ead t le.	ops	soil 3	incl	hes	deep	over	
No	v 1 — Mar 1 Tall Fescue and 300 lbs./acre Abruzzi Rye 25lbs./acre	2.)	Rip th	e enti	ire d	orea	to 6	5 inc	hes	deep.							
	r 1 — Apr 15 Tall Fescue 300 lbs./acre - 15 — Jun 30 Hulled Common Bermudagrass 25 lbs./acre	3.)	Remov surfac									obst	ructi	ons	leavi	ng	
Jul	1 - Aug 15 Tall Fescue and 125 lbs./acre ***Browntop Millet or 35 lbs./acre	4.)	Apply and n							and s	supe	erpho	spho	ote (unifor	mly	
	***Sorghum—Sudan Hybrids 30 lbs./acre	5.)	Contin seedb							erized es d	i, fi leep	irm,	reas	onat	ole ur	iform	1
	SLOPES (3:1 TO 2:1)	6.)	Seed seedin	on a	fres	hly p	repo	red	seed	bed	and	d cov	er s				
DA		7.)	Mulch	-								-		:h.			
Mar	r 1 — June 1 Sericea Lespedeza (scarified) 50 lbs./acre r 1 — Apr 15 and Tall Fescue 120 lbs./acre	8.)	Inspec within	t all :	seed	ing o	reas	s an	d mo	ske r	nece	essar if sta	y rep	pairs	s or	reseed	din r
	r 1 — June 30 or add Weeping Love grass 10 lbs./acre r 1 — June 30 or add Hulled Common 25 lbs./acre		60% o	amag	e, r	eesta	blish	n foll	owing	g orio	gino	ol lim	ne, fe	ertili	izer d	nd	
Jun	Bermudagrass 1 - Sept 1 Tall Fescue and 120 lbs./acre and Browntop Millet 35 lbs./acre	9.)	Consu fertiliz	t con ation	serv afte	ation r per	ins _i man	pecto nent	or on	mai ris	inte esto	enanc ablish	e tre	eatm	nent	and	
Sec	or Sorghum—Sudan Hybrids*** 30 lbs./acre bt 1 — Mar 1 Sericea Lespedeza (unhulled—unscarified) 70 lbs./acre		APPLY: Ag	icultu	ral l	Imes	tone		2 to	ns/a	cre	(3 t	tons/	/acr	e in	clay s	soi
·	and Tall Fescue 120 lbs./acre 1 - Mar 1 add Abruzzi Rye 25 lbs./acre			ertilize uperph										ılveie			
	Consult Conservation Engineer or Soil Conservation Service for additional		М	ulch -	- 2	tons	/acı	re –	smo	all gr	ain	stra	w		•		
above	ation concerning other alternatives for vegetation of denuded areas. The vegetation rates are those which do well under local conditions; other		А	nchor	- 4	spha	it Ei	rnuis	ion (ں د س	iu g	gais./	acre	;			
	g rate combinations are possible. ***Temporary—Reseed according to optimum season for desired permanent																
vegeta	tion. Do not allow temporary cover to grow over 12" in height before a, otherwise fescue may be shaded out.																
TEMP	ORARY SEEDING																
<u>PUR</u>	POSE	<u>MAII</u>	ITENANC	<u>E</u>													
1.)	To stabilize disturbed areas before final grading or in a season not suitable for permanent seeding.	1.)	Inspect Check f	or dar	mage	e afte	er h	eavy	rain	s. S	Star	nds s	shoul	ld b	e uni	form	
MINI	MUM REQUIREMENTS	and dense. Fertilize, reseed, and mulch damaged and sparce as immeditely. Tack or tie down mulch as necessary. 2.) Topdress fall plantings with 50 lb/acre nitrogen in February or M															
1.)	Seedbed Preparation: lime and fertilizer incorporated 4-6 inches, where conditions allow, steep slopes roughened by tracking.	2.)	opdress	ıall	pian	ungs	with	n 50	ID/(ucre	nitr	ogen	ıın	rebi	uary	or M	ar
2.)	and I the transfer of the state																
/	Plant selection: temporary species appropriate for season and region.	CAI	NDAR	,													
3.)	Plant selection: temporary species appropriate for season and region. Seed quality: North Carolina certified seed, testinged within the past 9 months.	<u>CAL</u>	ENDAR		J	F	М	A	м	J	,	J A	s	;	0 1	_ D	,
	Seed quality: North Carolina certified seed, testinged within the past 9 months. Mulch: effective mulch such as clean grain straw, tacked and/or tied	<u>CAL</u>	Mountair		J	F	М	A	м	J	,	J A	s	-	0 N		
3.)	Seed quality: North Carolina certified seed, testinged within the past 9 months. Mulch: effective mulch such as clean grain straw, tacked and/or tied down with netting to protect seedbed and encourage plant growth.	<u>CAL</u>	Mountair above 25 Mountair	00'	J	F	M 1	A	М	J J		J A	s	 	0 N	D	
3.) 4.) <u>INST</u>	Seed quality: North Carolina certified seed, testinged within the past 9 months. Mulch: effective mulch such as clean grain straw, tacked and/or tied down with netting to protect seedbed and encourage plant growth. ALLATION	<u>CAL</u>	Mountair above 25 Mountair below 25	00' s 00'	J	F	M	A	М М			J A	S		0 N	D	
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GROUND STABILIZATION* DWQ CONSTRUCTION GENERAL PERMIT SCHEDULE STABILIZATION TIME SITE AREA STABILIZATION FRAME EXCEPTIONS DESCRIPTION TIME FRAME Perimeter dikes, swales, ditches None and slopes High Quality 7 days Water (HQW) None Zones If slopes are 10' or less Slopes steeper 7 days in length and are not than 3:1 steeper than 2:1, then 14 days are allowed 14 days 7 days for slopes greater Slopes 3:1 or than 50 feet in length All other areas with slopes flatter 14 days None (except for perimeters and HWQ Zones noted above) * Extensions of time may be approved by the permitting authority based on weather or other site—specific conditions that make compliance impractical.

NPDES GROUND STABILIZATION



- I. <u>DESCRIPTION</u>
 THE WORK SHALL CONSIST OF INSTALLING A PUMP AROUND WHEN CONSTRUCTION ACTIVITIES TAKE PLACE WITHIN THE STREAM CHANNEL
- II. MATERIAL SPECIFICATIONS
 SANDBAGS: SANDBAGS SHALL CONSIST OF MATERIALS WHICH ARE
 RESISTANT TO ULTRAVIOLET RADIATION, TEARING AND PUNCTURE, AND
 WOVEN TIGHTLY ENOUGH TO PREVENT LEAKAGE OF FILL MATERIAL (i.e. SAND, FINE GRAVEL, ETC.)
- III. CONSTRUCTION REQUIREMENTS
 1. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS
 THE FIRST ORDER OF WORK,
 2. THE HEIGHT OF THE SANDBAGS SHALL BE AS INDICATED IN SECTION A—A.
- THE SANDBAGS SHALL BE PLACED ON A SMOOTH PREPARED SURFACE.

 3. ALL EXCAVATED MATERIALS SHALL BE DISPOSED OF OUTSIDE THE 100
 YEAR FLOOD PLAIN UNLESS APPROVED ON THE PLANS.

 4. ALL DEWATERING OF THE CONSTRUCTION AREA SHALL BE PUMPED TO A
 DEWATERING PUMP DISCHARGE FILTER BAG OR SILT BASIN. 5. THE PUMP SHALL BE OF SUFFICIENT SIZE TO CONVEY NORMAL STREAM
- FLOW.

 6. SEDIMENT CONTROL DEVICES ARE TO REMAIN IN PLACE UNTIL ALL
 DISTURBED AREAS ARE STABILIZED AND THE CITY ENGINEERING DEPT APPROVES
 THEIR REMOVAL.

TEMPORARY CREEK CROSSING PUMP AROUND DETAIL

NOTES 1. ALL CONSTRUCTION TO BE IN STRICT ACCORDANCE WITH ALL CHATHAM COUNTY AND NCDOT STANDARDS AND SPECIFICATIONS.

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REVISIONS

NO.	DATE	DESCRIPTION

PROJECT INFORMATION

PROJECT MANAGER:	RJB
DRAWN BY:	AJF
APPROVED BY:	RJB
DRAWING NAME:	BASE-SUNSETGROV

PROJECT NAME

SUBDIVISION PHASE 2

CHATHAM COUNTY NORTH CAROLINA

DEVELOPER

CHATHAM CAPITAL LLC

400 MARKET STREET CHAPEL HILL, NC 27516

SHEET NAME

DETAILS

DRAWING SCALE

AS SHOWN

PLAN SET CONSTRUCTION DRAWINGS

DATE

3-8-2019

SHEET NUMBER