

- 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, roots and other obstructions leaving surfaces 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, reasonably uniform seedbed is prepared 4 to 6 inches deep.
  - 6) Seed a freshly prepared seedbed and cover seed lightly with seeding equipment or cutlappack 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 Conservation Inspector on maintenance treatment and fertilization after permanent cover is established.

\* Apply: Agricultural Limestone - 2 Tons/Acre (3 Ton per Acre on clay soils)  
Fertilizer - 1,000 lbs/acre - 10-10-10  
Superphosphate - 500 lbs/acre - 20%  
Mulch - 2 Tons/Acre - small grain straw  
Anchor - Asphalt Emulsion @ 300 gal. acre

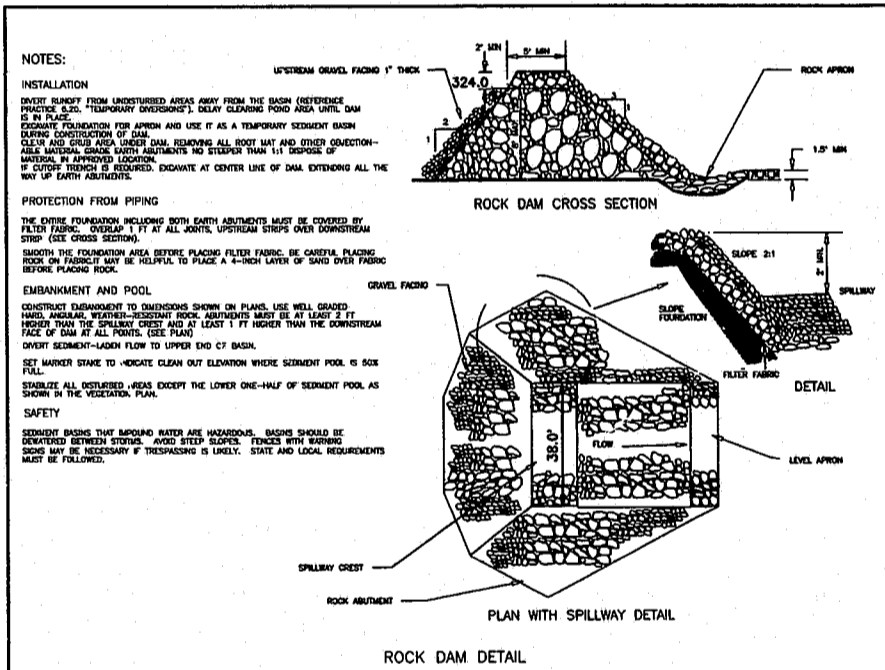
**SEEDING SCHEDULE**  
SHOULDERS, SIDE DITCHES, SLOPES (max. 3:1)

DATE	TYPE	PLANTING RATE
Aug 15 - Nov 1	Tall Fescue	300 lbs/acre
Nov 1 - Mar 1	Tall Fescue & Abruzzi Rye	300 lbs/acre
Mar 1 - Apr 15	Tall Fescue	300 lbs/acre
Apr 15 - June 30	Hulled Common Bermudagrass	25 lbs/acre
July 15 - Aug 15	Tall Fescue and *** Sorghum-Sudan Hybrids	35 lbs/acre
<b>SLOPES (3:1 to 2:1)</b>		
Mar 1 - June 1	Sericola Lespedeza (scarified)	50 lbs/acre
Mar 1 - Apr 15	ADD Tall Fescue	120 lbs/acre
Mar 1 - June 30	ADD Weeping Lovegrass	10 lbs/acre
Mar 1 - June 30	ADD Hulled Common Bermudagrass	25 lbs/acre
June 1 - Sep 1	*** Tall Fescue and *** Snowgrass Millet *** Sorghum-Sudan Hybrids	120 lbs/acre 35 lbs/acre 30 lbs/acre
Sep 1 - Mar 1	Sericola Lespedeza (unthinned-unscarified)	70 lbs/acre
Nov 1 - Mar 1	Tall Fescue and ADD Abruzzi Rye	120 lbs/acre 25 lbs/acre

Consult Erosion Control 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 rate combinations are possible.

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

- GENERAL NOTES**  
**GRADING & STORM DRAINAGE**
1. Site geotechnical report prepared by S&ME dated June 12, 1998 contains significant information regarding the constructability of the site, site sensitivity to weather and information regarding the depth and character of rock. The recommendations outlined in this report are part of the site work specifications for this project and all work should be in accordance with these recommendations unless waived by the site geotechnical engineer or his appropriate representative. In the event of a conflict between the specifications outlined in the geotechnical report and the engineers site work specifications, the geotechnical report shall govern.
  2. Depending on the amount of organics present, blending of topsoil for use in structural fill may be allowed in pavement areas under the supervision of the site geotechnical engineer. For more information see geotechnical report.
  3. Rock in the building pads should be over blasted to allow over excavation of 5 feet below finished floor. Landscape areas should be over-blasted 2 feet below finished grade.
  4. Rock materials greater than 3 inches in diameter should not be placed in the upper 2.0 feet of subgrade fill in pavement areas, nor 5.0 feet below the finished floor subgrade of buildings. Below these depths, the maximum stone size should not exceed 6 inches in diameter beneath buildings and the maximum stone size beneath pavements should not exceed 12 inches. When placing rock material in deep fill, soil must be used to fill voids and rock pieces shall not be stacked.
  5. This site will be mass graded for all phases. The grading plan in the parking areas reflects finish grades for all phases. Phases 2 thru 5 shall be left 4" above subgrade. Phase 2 thru 5 building pads shall be left 4" above subgrade (6" pad thickness); topsoil shall be respread 6" over building pad areas from back of curb to back of curb.
  6. Catch basins for Phases 2 thru 5 will be left 18" low to accommodate drainage during the phasing. See structure schedule for additional notes.
  7. The frame and grate for the catch basins (TOC STD 8.03) on Phases 2 thru 5 will not be installed as part of this construction contract. The contractor should include in his price a temporary catch basin slab cover in accordance with NCDOT Standard 840.04. The slab should be placed on blocks providing a 6" open throat on 4 sides of the catch basin.
  8. If precast catch basin are utilized for this project, contractor shall assume all additional cost associated with using precast catch basins as a result of grade adjustments required for site balancing of earthwork and adjustments to accommodate project phasing.
  9. The temporary slope drains shall conform to NCDOT Standard 1622.01.
  10. All slopes and graded surfaces outside of building and parking areas shall receive permanent seeding for all phases. All building and parking areas in Phases 2 thru 5 shall receive temporary seeding. Temporary seeding shall be applied per the Town of Cary grading permit requirements.
  11. A wash station will be required at the main site entrance to be installed and maintained by the Phase 1 Site/Work Contractor until the Phase 1 site contract is completed at which time the wash station becomes the property of the Owner. The wash station will be available for use by others.



**STRUCTURE SCHEDULE**

Structure	Description	Rim or T/C Elevation	Bottom Elevation	Depth of Box (ft)
FES10	Std Class III RC Flared End Section	N/A	360.00	N/A
CB11	TOC STD 8.03 Catch Basin	374.80	362.80	12.0
CB14	TOC STD 8.03 Catch Basin	375.50	369.33	6.2
CB16	TOC STD 8.03 Catch Basin	375.60	371.07	4.4
CB17	TOC STD 8.03 Catch Basin	374.80	370.88	3.9
CB18	TOC STD 8.03 Catch Basin	375.50	365.33	10.2
CB19	TOC STD 8.03 Catch Basin	375.50	371.64	3.9
FES30	Std Class III RC Flared End Section	N/A	342.00	N/A
CB31	TOC STD 8.03 Catch Basin	368.80	354.00	12.8
CB32	TOC STD 8.03 Catch Basin	373.50	365.76	7.8
CB33	TOC STD 8.03 Catch Basin	373.50	367.00	6.5
CB34	TOC STD 8.03 Catch Basin	367.00	361.50	5.5
FES35	Std CMP Flared End Section	N/A	344.00	N/A
CB35A	TOC STD 8.03 Catch Basin	366.30	350.00	16.3
CB36A	TOC STD 8.03 Catch Basin	370.70	358.80	11.9
CB37	TOC STD 8.03 Catch Basin	375.00	362.64	12.4
CB38	TOC STD 8.03 Catch Basin	375.00	367.80	7.2
CB39	TOC STD 8.03 Catch Basin	375.00	368.25	6.8
CB40	TOC STD 8.03 Catch Basin	375.00	371.25	3.8
CB41	TOC STD 8.03 Catch Basin	377.80	371.25	6.6
CB41A	TOC STD 8.03 Catch Basin	375.00	368.60	6.2
CB42	TOC STD 8.03 Catch Basin	378.00	372.90	5.1
CB43	TOC STD 8.03 Catch Basin	376.00	375.00	3.5
CB45	TOC STD 8.03 Catch Basin	374.70	368.50	6.2
CB45A	TOC STD 8.03 Catch Basin	375.00	366.85	8.1
CB46	TOC STD 8.03 Catch Basin	374.70	370.10	4.6
CB47	TOC STD 8.03 Catch Basin	375.00	370.50	4.5
CB48	TOC STD 8.03 Catch Basin	375.00	368.60	6.4
CB48A	TOC STD 8.03 Catch Basin	370.70	369.00	5.7
CB49	TOC STD 8.03 Catch Basin	374.70	370.10	4.6
CB49A	TOC STD 8.03 Catch Basin	375.00	370.50	4.5
CB59	TOC STD 8.03 Catch Basin	372.50	369.00	3.5
FES50	Std Class III RC Flared End Section	N/A	342.00	N/A
CB51	TOC STD 8.03 Catch Basin	365.00	354.50	10.5
FES60	Std Class III RC Flared End Section	N/A	314.00	N/A
YI61	TOC STD 8.02 Yard Inlet	337.50	330.00	7.5
CB83	TOC STD 8.03 Catch Basin	360.00	349.50	10.5
CB84	TOC STD 8.03 Catch Basin	367.00	359.00	8.0
CB85	TOC STD 8.03 Catch Basin	367.25	361.75	5.5
CB86	TOC STD 8.03 Catch Basin	371.00	365.50	5.5
CB87	TOC STD 8.03 Catch Basin	373.40	362.20	11.2
CB88	TOC STD 8.03 Catch Basin	375.00	364.30	10.7
CB89	TOC STD 8.03 Catch Basin	375.00	364.90	10.1
CB70	TOC STD 8.03 Catch Basin	375.00	365.90	9.1
CB71	TOC STD 8.03 Catch Basin	375.00	366.50	8.5
CB72	TOC STD 8.03 Catch Basin	375.00	368.58	6.4
CB73	TOC STD 8.03 Catch Basin	375.50	369.80	5.7
YI73A	TOC STD 8.02 Yard Inlet	375.80	372.30	3.5
CB74	TOC STD 8.03 Catch Basin	375.50	371.00	4.5
CB75	TOC STD 8.03 Catch Basin	376.70	372.95	3.8
CB76	TOC STD 8.03 Catch Basin	379.00	375.50	3.5
CB77	TOC STD 8.03 Catch Basin	375.50	369.80	5.7
CB78	TOC STD 8.03 Catch Basin	375.50	369.80	5.7
CB79	TOC STD 8.03 Catch Basin	372.50	367.50	5.0
CB81	TOC STD 8.03 Catch Basin	365.75	348.60	7.3
CB82	TOC STD 8.03 Catch Basin	361.75	356.00	6.8
CB83	TOC STD 8.03 Catch Basin	367.50	361.00	6.5
CB84	TOC STD 8.03 Catch Basin	367.50	362.25	5.3
CB85	TOC STD 8.03 Catch Basin	370.25	364.75	5.5
CB86	TOC STD 8.03 Catch Basin	364.70	359.35	5.3
CB87	TOC STD 8.03 Catch Basin	368.70	363.00	5.7
CB88	TOC STD 8.03 Catch Basin	354.50	348.80	7.7
CB89	TOC STD 8.03 Catch Basin	369.25	353.15	6.1
FES20	Std Class III RC Flared End Section	N/A	329.50	N/A
YI21	TOC STD 8.02 Yard Inlet	339.00	331.50	7.5
CB91	TOC STD 8.03 Catch Basin	354.00	349.00	5.0
RISER90	5' Dia. Concrete Manhole	352.00	340.00	12.0

- NOTES:**
1. CB IS CATCH BASIN, TOC STD 8.03, T/C IS TOP OF COVER OR CURB
  2. JB IS JUNCTION BOX, TOC STD 8.05
  3. FES IS FLARED END SECTION
  4. GI IS YARD INLET W/ GRATE AND FRAME, TOC STD 8.02
  5. YI IS YARD INLET WITH CONCRETE SLAB TOP
  6. ALL CB, GI, YI WILL RECEIVE WIRE MESH AND GRAVEL INLET PROTECTION
  7. JUNCTION BOX SHALL HAVE RIM AND FRAME CAPABLE OF H-20 TRAFFIC LOADING
- \* REPRESENTS STRUCTURES TO BE BUILT TO CATCH BASIN STANDARD (TOC STD 8.03) W/ GRATE AND FRAME. A CONCRETE SLAB TOP SHALL BE INSTALLED PER NCDOT STD 840.04 (F' = 52", G' = 42") WITH 6" OPENING ON ALL SIDES. THE TOP OF THE BOX (NOT SLAB) SHALL BE BUILT 18" LOWER THAN THE RIM ELEVATION LISTED IN THE STRUCTURE SCHEDULE.

**Storm Drainage Schedule**

Pipe Run	Upstream Structure	Downstream Structure	Discharge (CFS)	Capacity Q10 (CFS)	Section Size	Section Material	Length (ft)	Upstream Invert	Downstream Invert	Constructed Slope	Average Velocity (ft/s)
16-14	CB16	CB14	6.0	6.2	15 inch	RCP	135.0	371.07	369.83	0.92%	5.7
16-18	CB16	CB18	1.5	6.8	12 inch	RCP	17.7	371.64	371.00	3.62%	5.1
14-18	CB14	CB18	10.9	11.4	18 inch	RCP	295.5	369.33	365.83	1.16%	6.6
18-11	CB18	CB11	17.1	20.8	18 inch	RCP	274.8	368.33	363.00	0.85%	6.1
17-11	CB17	CB11	4.3	5.8	12 inch	RCP	11.3	370.88	370.60	2.46%	6.5
11-10	CB11	FES10	25.4	48.2	24 inch	RCP	61.8	362.80	360.00	4.53%	8.6
48A-48	CB48A	CB48	1.9	7.4	15 inch	RCP	15.1	370.50	370.30	1.32%	3.1
48-48A	CB48	CB48A	4.9	5.8	15 inch	RCP	119.9	370.10	369.20	0.76%	4.6
48A-48A	CB48A	CB48A	7.9	12.1	18 inch	RCP	15.0	369.00	368.80	1.33%	4.6
48-48A	CB48	CB48A	10.3	10.3	18 inch	RCP	157.1	369.60	367.10	0.85%	5.8
48A-48A	CB48A	CB48A	12.6	22.6	24 inch	RCP	15.0	368.85	366.70	1.00%	4.0
47-48	CB47	CB48	1.9	7.5	15 inch	RCP	15.0	370.50	370.30	1.33%	3.0
48-45	CB48	CB45	5.8	10.0	15 inch	RCP	120.0	370.10	367.25	2.36%	6.0
45-37	CB45	CB37	21.5	24.4	24 inch	RCP	289.1	368.50	363.14	1.16%	5.9
45-42	CB45	CB42	1.9	4.8	12 inch	RCP	102.0	376.00	373.15	1.82%	3.1
42-41	CB42	CB41	7.9	10.9	15 inch	RCP	46.1	372.90	371.50	2.85%	6.7
41-41A	CB41	CB41A	10.3	12.8	18 inch	RCP	157.1	371.25	369.00	1.43%	6.9
41A-41	CB41A	CB41	12.6	12.9	18 inch	RCP	19.9	368.80	368.50	1.51%	7.8
40-39	CB40	CB39	5.1	12.1	15 inch	RCP	51.1	371.25	369.45	3.52%	4.8
39-38	CB39	CB38	6.5	7.0	15 inch	RCP	107.7	369.25	368.00	1.16%	5.7
38-37	CB38	CB37	7.5	10.9	18 inch	RCP	51.1	367.80	367.25	1.08%	6.1
58-38A	CB58	CB38A	3.7	7.5	12 inch	RCP	74.1	369.00	365.75	4.39%	7.4
37-38A	CB37	CB38A	4.1	46.2	30 inch	RCP	268.8	362.64	359.00	1.27%	9.8
38A-38A	CB38A	CB38A	52.1	54.1	30 inch	CMP	61.0	358.60	354.00	5.93%	11.7
38A-35	CB38A	FES35	52.4	70.8	30 inch	CMP	89.0	350.00	344.00	10.17%	11.0
34-31	CB34	CB31	4.9	7.5	15 inch	RCP	165.0	361.50	359.00	1.34%	5.9
33-32	CB33	CB32	4.1	4.9	12 inch	RCP	63.0	367.00	366.00	1.86%	4.9
32-31	CB32	CB31	7.4	16.2	15 inch	RCP	63.0	365.75	360.50	6.33%	9.7
31-30	CB31	FES30	14.0	16.1	15 inch	CMP	57.0	354.00	342.00	21.05%	11.4
51-50	CB51	FES50	6.2	14.5	12 inch	CMP	76.0	354.50	342.00	16.45%	8.0
79-77	CB79	CB77	3.1	6.2	12 inch	RCP	100.4	367.50	364.50	2.99%	6.3
77-68	CB77	CB68	2.5	6.1	12 inch	RCP	27.1	369.80	369.00	2.95%	5.8
78-71	CB78	CB71	2.0	9.1	12 inch	RCP	27.3	363.80	368.00	6.69%	6.7
78-75	CB78	CB75	4.0	6.2	12 inch	RCP	76.1	375.50	373.20	3.06%	5.8
75-74	CB75	CB74	7.0	9.9	18 inch	RCP	72.4	372.95	371.25	2.35%	6.5
74-72	CB74	CB72	10.8	13.4	18 inch	RCP	118.7	371.00	369.08	1.63%	7.2
73A-73	YI73A	CB73	1.2	4.8	32 inch	RCP	127.3	370.00	370.00	1.81%	2.5
73-72	CB73	CB72	6.2	4.9	12 inch	RCP	16.1	369.60	369.50	1.86%	7.9
72-71	CB72	CB71	19.0	23.2	24 inch	RCP	148.4	368.56	367.00	1.05%	7.7
71-70	CB71	CB70	23.7	38.2	30 inch	RCP	51.3	368.50	366.10	0.78%	7.3
70-69	CB70	CB69	25.0	39.2	30 inch	RCP	87.7	366.90	366.10	0.91%	7.5
69-68	CB69	CB68	23.9	38.1	30 inch	RCP	51.9	364.90	364.50	0.76%	7.2
68-67	CB68	CB67	31.1	38.3	30 inch	RCP	218.3	362.40	361.00	0.87%	7.9
67-64	CB67	CB64	35.5	53.8	30 inch	RCP	171.7	362.20	359.25	1.72%	6.4
68-65	CB68	CB65	5.6	6.2	12 inch	RCP	116.1	365.50	362.00	3.04%	7.7
65-64	CB65	CB64	7.4	7.8	15 inch	RCP	89.6	361.75	360.50	1.40%	6.8
64-63	CB64	CB63	45.8	85.7	30 inch	RCP	144.0	359.00	351.00	5.56%	14.3
63-61	CB63	YI61	48.7	202.0	30 inch	RCP	70.1	349.50	332.50	24.25%	19.9
69-61	CB69	CB61	3.1	7.9	12 inch	RCP	64.7	363.15	360.00	4.87%	7.1
68-62	CB68	CB62	4.3	7.2							