VOID

SOIL SERIES INFORMATION

A project specific soil survey and geotechnical investigation was performed for this project and can be made available upon request. Soil characteristics have been given full consideration in the hydrologic analysis, the design of channels and linings, selection of temporary BMP's, design of energy dissipaters, and in the selection of permanent vegetation and fertilizers.

The following is a summary of the soils that are expected to be found on the project site:

Map unit symbol	Map unit name	Rating	Component name (percent)
AmB	Appling sandy loam, 2 to 6 percent slopes	Slight	Appling (100%)
CfB2	Cecil sandy clay loam, 2 to 6 percent slopes, eroded	Slight	Cecil (100%)
CfC2	Cecil sandy clay loam, 6 to 10 percent slopes, eroded	Slight	Cecil (100%)
CfE2	Cecil sandy clay loam, 10 to 25 percent slopes, eroded	Moderate	Cecil (100%)
CK	Chewacla and Congaree soils	Slight	Chewacla (60%)
			Congaree (35%)
			Roanoke (5%)
EnD	Enon sandy loam, 10 to 15 percent slopes	Slight	Enon (100%)
GeD	Grover sandy loam, 10 to 15 percent slopes	Slight	Grover (100%)
HeB	Helena loamy coarse sand, 2 to 6 percent slopes	Slight	Helena (100%)
HeC	Helena loamy coarse sand, 6 to 10 percent slopes	Slight	Helena (100%)
MdE	Madison sandy loam, 10 to 25 percent slopes	Moderate	Madison (100%)
Tv	Toccoa loam	Slight	Toccoa (100%)
TwC	Troup sand, 2 to 10 percent slopes	Slight	Troup (100%)
VeB	Vaucluse loamy coarse sand, 2 to 6 percent slopes	Slight	Vaucluse (100%)
WaB	Wagram loamy sand, 2 to 6 percent slopes	Slight	Wagram (100%)
WeC	Wedowee loamy sand, 6 to 10 percent slopes	Slight	Wedowee (100%)
WhB	Wickham fine sandy loam, 2 to 6 percent slopes	Slight	Wickham (100%)

Due to the size and scope of this project and the nature of soil series maps, it is not reasonably possible to identify the precise locations of the above reference soils on the plans. The NRCS soil survey and soil series maps for the project area are also available online at: http://websoilsurvey.nrcs.usda.gov/.

Ditch Lining Details

Ditch Name	Roadway	Beginning Station	Ending Station	Side	Drainage Area (ac)	Q25 (cfs)	Ditch Slope %	Bottom Width (ft)	Front Slope Z1	Back Slope Z2	Erosion Index	Velocity (ft/s)	Normal Depth Dn (ft)	USCS Soil Class	Plasticity Index	Min. Required Lining Height Dp (ft)	Min. Required Median Dia for Rip Rap d50	Lining Type
Ditch 1	Riverwatch Parkway	102+40	103+60	LT	2.2	3.7	7.5	2	2	2	5.71	3.8	0.36	SC	14	1.0		TRM TYPE 1
Ditch 2	Riverwatch Parkway	104+20	106+40	LT	2.8	5.0	4.8	2	2	2	5.71	3.4	0.49	SC	14	1.0		TRM TYPE 1
Ditch 3	Riverwatch Parkway	106+40	107+00	LT	2.8	5.0	12.8	2	2	2	4.23	5.7	0.33	SC	18	1.0		TRM TYPE 2
Ditch 4	Riverwatch Parkway	114+00	115+15	RT	3.6	12.8	5.2	4	2	2	6.19	4.5	0.56	SC	7	2.0		TRM TYPE 1
Ditch 5	Riverwatch Parkway	116+00	117+54	RT	4.7	16.7	3.4	4	2	2	6.19	4.1	0.74	SC	7	2.0		TRM TYPE 1
Ditch 6	Riverwatch Parkway	118+20	120+20	LT	2.0	7.8	0.6	2	2	2	7.3	1.3	1.28	SC	0	2.0		TRM TYPE 1
Ditch 7	Riverwatch Parkway	119+20	121+55	RT	4.7	16.7	7.0	4	2	2	7.55	5.3	0.61	SC	0	2.0		TRM TYPE 2
Ditch 8	Riverwatch Parkway	125+17	127+54	LT	0.3	0.8		3										CONCRETE
Ditch 9	Riverwatch Parkway	127+60	130+40	LT	2.8	6.0	7.2	4	2	2	6.69	3.8	0.34	SC	14	1.0		TRM TYPE 1
Ditch 10	Riverwatch Parkway	133+40	133+80	LT	12.2	20.2	19.8	4	4	2	6.93	10.3	0.38	SC	0	1.0		TRM TYPE 3
Ditch 11	Riverwatch Parkway	138+40	138+80	RT	1.0	2.1	6.3	4	4	2	7.92	2.0	0.22	SC	0	1.0		TRM TYPE 1
Ditch 12	Riverwatch Parkway	142+60	143+00	RT	2.0	4.1	0.3	4	4	2	7.42	0.6	0.98	SC	0	1.5		TRM TYPE 1
Ditch 13	Riverwatch Parkway	143+00	146+00	RT	2.0	4.1	14.7	4	4	2	7.42	4.3	0.21	SC	0	1.0		TRM TYPE 1
Ditch 14	Riverwatch Parkway	150+40	151+80	RT	0.5	1.8	2.7	4	4	2	6.07	1.3	0.30	SC	13	1.0		TRM TYPE 1
Ditch 15	Riverwatch Parkway	154+08	154+60	LT	0.5	1.4	6.2	4	4	2	4.84	1.7	0.19	SC	20	1.0		TRM TYPE 1
Ditch 16	Riverwatch Parkway	155+00	155+40	RT	2.4	8.4	2.2	4	2	2	5.95	2.4	0.65	SC	14	1.5		TRM TYPE 2
Ditch 17	Riverwatch Parkway	155+40	157+00	RT	2.4	8.4	14.6	4	4	2	5.95	6.0	0.29	SC	14	1.0		TRM TYPE 2
Ditch 18	Riverwatch Parkway	167+20	167+80	RT	4.1	9.8	2.8	2	4	2	6.81	3.1	0.75	SC	0	1.5		TRM TYPE 1
Ditch 19	Riverwatch Parkway	175+25	175+60	RT	2.4	6.4	7.5	2	4	2	5.33	4.5	0.44	SC	13	1.0		TRM TYPE 2
Ditch 20	Riverwatch Parkway	176+20	176+40	RT	0.7	2.4	5.0	2	4	2	5.33	2.4	0.34	SC	13	1.0		TRM TYPE 1
Ditch 21	Riverwatch Parkway	193+60	198+20	LT	2.6	5.1	6.6	4	4	2	6.44	3.2	0.33	SC	7	1.0		TRM TYPE 1
Ditch 22	Riverwatch Parkway	198+60	200+20	LT	0.4	0.9	6.4	2	2	2	5.83	1.8	0.21	SC	7	1.0		TRM TYPE 1
Ditch 23	Riverwatch Parkway	205+25	206+35	LT	9.6	46.2	7.0	8										SWALE
Ditch 24	Riverwatch Parkway	223+60	226+20	LT	3.0	6.0	4.9	4	4	2	5.09	3.0	0.39	SC	20	1.0		TRM TYPE 1
Ditch 25	Riverwatch Parkway	234+40	237+20	LT	3.8	6.2	1.4	4	4	2	6.57	1.6	0.66	SC	14	1.5		TRM TYPE 1
Ditch 26	Riverwatch Parkway	237+80	238+20	LT	9.4	14.4	1.1	4	4	2	6.57	2.0	1.03	SC	14	2.0		TRM TYPE 1
Ditch 27	Washington Road	13+34	17+80	RT	2.0	3.8	4.3	4	2	2	7.06	2.4	0.35	SC	0	1.0		TRM TYPE 1
Ditch 28	Washington Road	15+60	16+50	LT	0.7	1.5	3.6	4	4	2	7.06	1.3	0.24	SC	0	1.0		TRM TYPE 1
Ditch 29	Washington Road	31+80	33+00	RT	14.2	28.9	7.2	8										SWALE
Ditch 30	Columbia Industrial Blvd	43+40	44+00	LT	7.2	10.9	4.6	4	2	2	6.42	4.0	0.54	SC	8	1.5		TRM TYPE 1
Ditch 31	Columbia Industrial Blvd	45+20	46+00	LT	7.2	10.9	12.9	4	4	2	6.42	6.3	0.34	SC	8	1.0		TRM TYPE 2
Ditch 32	Columbia Industrial Blvd	46+00	47+60	LT	7.2	10.9	1.3	4	4	2	6.42	1.9	0.86	SC	8	1.5		TRM TYPE 1
Ditch 33	Old Evans/Blue Ridge	45+40	47+40	RT	9.0	17.9	4.7	4	4	2	6.42	4.7	0.65	SC	8	1.5		TRM TYPE 1
Ditch 34	Old Evans/Blue Ridge	48+20	55+00	RT	3.6	7.8	7.0	4	4	2	6.42	4.0	0.38	SC	8	1.0		TRM TYPE 1
Ditch 35	Old Evans/Blue Ridge	58+20	59+20	RT	2.4	8.4	4.7	4	4	2	6.42	3.4	0.47	SC	8	1.0		TRM TYPE 1
Ditch 36	Old Evans/Blue Ridge	61+60	62+60	RT	0.5	1.4	10.7	2	4	2	6.42	2.8	0.20	SC	8	1.0		TRM TYPE 1
Ditch 37	Old Evans/Blue Ridge	62+60	62+80	RT	0.5	1.4	1.1	2	2	2	6.42	0.9	0.50	SC	8	1.0		TRM TYPE 1
Ditch 38	Old Evans/Blue Ridge	62+80	63+40	RT	0.5	1.4	11.4	2	4	2	6.42	2.9	0.20	SC	8	1.0		TRM TYPE 1
Ditch 39	Jamaica Court	37+00	37+20	LT	2.5	4.1	1.9	4	4	2	6.42	1.5	0.49	SC	8	1.0		TRM TYPE 1
Ditch 40	Connor Drive	3+60	5+00	RT	0.6	1.2	3.4	4	4	2	6.42	1.2	0.23	SC	8	1.0		TRM TYPE 1

ALL DITCHES ASSUME A MIXED GRASS TYPE WITH A GOOD DENSITY OF GRASS COVER AND A STEM HEIGHT OF 0.75 FEET.
ALL D75 ARE ASSUMED TO BE 3 INCHES.

GEORGIA
DEPARTMENT
OF
TRANSPORTATION

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: ROADWAY DESIGN

ESPC GENERAL NOTES

P. I. No. 250470
COLUMBIA COUNTY

DRAWING No.
51-002

1/5/2009 GPLN