STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSNHS-M003-00(340)	348A	414

OUTLET PROTECTION INFORMATION

Station	Pipe Diameter			Pipe Tailwater Condition	Length of Apron (La)	Width at Headwall (3Do)	Downstream Width (W)	Average Stone Diameter (d50)	Stone Depth (D)
714+85	15 in	6.14 cfs	12.56 ft/s	TW < 0.5Do	10.00 ft	3.75 ft	11.25 ft	0.30 ft	0.45 ft
720+09	15 in	6.11 cfs	6.13 ft/s	TW ≥ 0.5Do	10.00 ft	3.75 ft	5.25 ft	0.10 ft	0.15 ft
723+10	18 in	3.52 cfs	5.15 ft/s	TW < 0.5Do	10.00 ft	4.50 ft	11.50 ft	0.20 ft	0.30 ft
725+10	15 in	2.34 cfs	5.48 ft/s	TW < 0.5Do	10.00 ft	3.75 ft	11.25 ft	0.10 ft	0.15 ft
729+59	24 in	37.39 cfs	23.80 ft/s	TW < 0.5Do	22.00 ft	6.00 ft	24.00 ft	0.80 ft	1.20 ft
734+10	15 in	5.90 cfs	6.10 ft/s	TW ≥ 0.5Do	10.00 ft	3.75 ft	5.25 ft	0.10 ft	0.15 ft
744+10	18 in	3.04 cfs	6.32 ft/s	TW < 0.5Do	10.00 ft	4.50 ft	11.50 ft	0.10 ft	0.15 ft
752+09	18 in	21.23 cfs	12.01 ft/s	TW ≥ 0.5Do	18.00 ft	4.50 ft	8.70 ft	0.40 ft	0.60 ft
772+80	18 in	6.19 cfs	5.39 ft/s	TW ≥ 0.5Do	10.00 ft	4.50 ft	5.50 ft	0.10 ft	0.15 ft
786+61	24 in	15.38 cfs	6.72 ft/s	TW ≥ 0.5Do	10.00 ft	6.00 ft	6.00 ft	0.00 ft	0.00 ft
800+18	18 in	7.42 cfs	6.74 ft/s	TW ≥ 0.5Do	10.00 ft	4.50 ft	5.50 ft	0.10 ft	0.15 ft
802+86	24 in	39.99 cfs	12.73 ft/s	TW ≥ 0.5Do	23.00 ft	6.00 ft	11.20 ft	0.00 ft	0.00 ft
805+01	24 in	13.35 cfs	6.57 ft/s	TW ≥ 0.5Do	10.00 ft	6.00 ft	6.00 ft	0.00 ft	0.00 ft
814+51	18 in	2.77 cfs	4.41 ft/s	TW < 0.5Do	10.00 ft	4.50 ft	11.50 ft	0.10 ft	0.15 ft
825+10	18 in	12.11 cfs	8.18 ft/s	TW ≥ 0.5Do	11.00 ft	4.50 ft	5.90 ft	0.20 ft	0.30 ft
829+10	24 in	3.32 cfs	5.29 ft/s	TW < 0.5Do	10.00 ft	6.00 ft	12.00 ft	0.10 ft	0.15 ft
831+46	18 in	4.70 cfs	7.31 ft/s	TW < 0.5Do	10.00 ft	4.50 ft	11.50 ft	0.20 ft	0.30 ft
834+80	24 in	19.80 cfs	6.30 ft/s	TW ≥ 0.5Do	15.00 ft	6.00 ft	8.00 ft	0.00 ft	0.00 ft
849+02	24 in	5.34 cfs	5.82 ft/s	TW < 0.5Do	10.00 ft	6.00 ft	12.00 ft	0.20 ft	0.30 ft
852+20	18 in	14.49 cfs	8.20 ft/s	TW ≥ 0.5Do	12.00 ft	4.50 ft	6.30 ft	0.20 ft	0.30 ft
862+10	24 in	21.45 cfs	10.37 ft/s	TW ≥ 0.5Do	14.00 ft	6.00 ft	7.60 ft	0.00 ft	0.00 ft
872+23	15 in	5.30 cfs	5.03 ft/s	TW ≥ 0.5Do	10.00 ft	3.75 ft	5.25 ft	0.10 ft	0.15 ft
885+56	15 in	12.79 cfs	10.42 ft/s	TW ≥ 0.5Do	10.00 ft	3.75 ft	5.25 ft	0.30 ft	0.45 ft
915+43	36 in	120.94 cfs	17.11 ft/s	TW ≥ 0.5Do	10.00 ft	9.00 ft	17.40 ft	0.00 ft	0.00 ft
825+87	24 in	4.47 cfs	4.10 ft/s	TW < 0.5Do	10.00 ft	6.00 ft	12.00 ft	0.10 ft	0.15 ft
929+81	36 in	99.00 cfs	16.20 ft/s	TW ≥ 0.5Do	10.00 ft	9.00 ft	15.80 ft	0.00 ft	0.00 ft
931+30	15 in	5.02 cfs	5.01 ft/s	TW ≥ 0.5Do	10.00 ft	3.75 ft	5.25 ft	0.10 ft	0.15 ft
933+60	18 in	15.12 cfs	9.67 ft/s	TW ≥ 0.5Do	10.00 ft	4.50 ft	7.10 ft	0.20 ft	0.30 ft
941+97	15 in	2.29 cfs	5.45 ft/s	TW < 0.5Do	12.00 ft	3.75 ft	11.25 ft	0.10 ft	0.15 ft
944+25	24 in	5.83 cfs	5.81 ft/s	TW < 0.5Do	10.00 ft	6.00 ft	12.00 ft	0.20 ft	0.30 ft
947+05	18 in	5.83 cfs	5.32 ft/s	TW ≥ 0.5Do	10.00 ft	4.50 ft	5.50 ft	0.10 ft	0.15 ft
952+31	15 in	9.85 cfs	8.03 ft/s	TW ≥ 0.5Do	10.00 ft	3.75 ft	5.25 ft	0.20 ft	0.30 ft
955+50	18 in	2.31 cfs	7.96 ft/s	TW < 0.5Do	10.00 ft	4.50 ft	11.50 ft	0.10 ft	0.15 ft
957+07	15 in	1.77 cfs	9.01 ft/s	TW < 0.5Do	10.00 ft	3.75 ft	11.25 ft	0.06 ft	0.09 ft
959+84	24 in	33.39 cfs	10.63 ft/s	TW ≥ 0.5Do	20.00 ft	6.00 ft	10.00 ft	0.00 ft	0.00 ft
965+29	24 in	3.47 cfs	7.98 ft/s	TW < 0.5Do	10.00 ft	6.00 ft	12.00 ft	0.07 ft	0.10 ft
981+07	24 in	15.81 cfs	11.52 ft/s	TW < 0.5Do	10.00 ft	6.00 ft	12.00 ft	0.31 ft	0.46 ft
983+82	18 in	4.68 cfs	7.67 ft/s	TW < 0.5Do	10.00 ft	4.50 ft	11.50 ft	0.14 ft	0.21 ft
989+96	15 in	7.72 cfs	6.29 ft/s	TW ≥ 0.5Do	10.00 ft	3.75 ft	5.25 ft	0.12 ft	0.18 ft
993+62	18 in	4.66 cfs	7.81 ft/s	TW < 0.5Do	10.00 ft	4.50 ft	11.50 ft	0.14 ft	0.21 ft
997+63	15 in	4.52 cfs	3.68 ft/s	TW ≥ 0.5Do	10.00 ft	3.75 ft	5.25 ft	0.05 ft	0.08 ft
1913+46	18 in	6.77 cfs	10.52 ft/s	TW < 0.5Do	10.00 ft	4.50 ft	11.50 ft	0.21 ft	0.31 ft
2914+06	18 in	8.35 cfs	8.88 ft/s	TW ≥ 0.5Do	10.00 ft	4.50 ft	5.50 ft	0.07 ft	0.10 ft

USE ON CONSTRUCTION

GEORGIA
DEPARTMENT OF TRANSPORTATION

REVISION DATES		
10-08-2010		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: ROADWAY DESIGN

ESPC GENERAL NOTES

OUTLET PROTECTION TABLE

DRAWING No. 51-07A

3/1/2007 GPLN