

HYDRAULIC CALCULATIONS TABLE

SYSTEM ID	Conduit Properties												Incremental Drainage Area										HGL										Headloss Calculations					Design HGL	Top of Curb Elev.	HGL Depth Below T/C	Remarks		
	Collection Point		Length	# of Barrels	Pipe Size	Box		Type	Area	Wetted Perimeter Pw	Hydraulic Radius	Manning's n	Flowline Elevation			Inlet ID	Area	Runoff Coeff. C	Incremental C*A	Accumulated C*A	Up-stream Tc	Design Storm Freq.	Intensity I	Runoff Q	Conduit Capacity Qc	Partial Flow	Velocity	Time in Conduit	Friction Slope Sf	Friction Head-loss	D/S		U/S		v12/2g	v22/2g	Jct Type					Coeff. KJ	Head-loss HI
	D/S	U/S				Span	Rise						Down-stream	Up-stream	Slope																ft	ft	ft/ft	acres									
ST-1 FROM EXIST.	0+00.00	0+05.35	5.35	1	21	NA	NA	RCP	2.41	5.50	0.44	0.013	578.17	578.18	0.0024	N/A	0	0.8	0.00	1.27	10	100	9.8	13.21	7.76	No	5.49	0.02	0.0069	0.0370	579.92	579.96	0.4684	0.4684	Bend - 30°	0.25	0.1171	580.07	NA	NA			
	0+05.35	0+65.35	60.00	1	21	NA	NA	RCP	2.41	5.50	0.44	0.013	578.18	578.33	0.0024	5G	0.14	0.8	0.11	1.27	10	100	9.8	13.21	7.76	No	5.49	0.18	0.0069	0.4148	580.07	580.49	0.3930	0.4684	Wye 45°	0.5	0.2719	580.76	NA	NA			
	0+65.35	0+97.72	32.37	1	21	NA	NA	RCP	2.41	5.50	0.44	0.013	578.33	578.40	0.0024	N/A	0	0.8	0.00	1.16	10	100	9.8	12.10	7.76	No	5.03	0.11	0.0058	0.1878	580.76	580.95	0.3930	0.3930	Manhole - Through	0.05	0.0196	580.97	NA	NA			
	0+97.72	1+71.51	73.79	1	21	NA	NA	DI	2.41	5.50	0.44	0.012	578.40	578.58	0.0024	5F	0.07	0.8	0.06	1.16	10	100	9.8	12.10	7.76	No	5.03	0.24	0.0049	0.3647	580.97	581.33	0.3581	0.3930	Manhole - w/ 90°	0.25	0.3035	581.64	NA	NA			
	1+71.51	1+89.14	17.63	1	21	NA	NA	RCP	2.41	5.50	0.44	0.013	578.58	578.62	0.0024	9,10	0.34	0.8	0.27	1.10	10	100	9.8	11.55	7.76	No	4.80	0.06	0.0053	0.0932	581.64	581.73	0.2121	0.3581	Wye 22.5°	0.75	0.1990	581.93	NA	NA			
	1+89.14	2+01.71	12.57	1	21	NA	NA	RCP	2.41	5.50	0.44	0.013	578.62	578.65	0.0024	5D/5E	0.16	0.8	0.13	0.83	10	100	9.8	8.89	7.76	No	3.70	0.06	0.0031	0.0394	581.93	581.97	0.1538	0.2121	Wye 45°	0.5	0.1352	582.10	NA	NA			
	2+01.71	2+37.56	35.85	1	21	NA	NA	RCP	2.41	5.50	0.44	0.013	578.65	578.74	0.0024	5A/5B/5C	0.25	0.8	0.20	0.70	10	100	9.8	7.57	7.76	No	3.15	0.19	0.0023	0.0814	582.10	582.18	0.0842	0.1538	Wye 45°	0.5	0.1117	582.30	NA	NA			
	2+37.56	2+48.54	10.98	1	21	NA	NA	RCP	2.41	5.50	0.44	0.013	578.74	578.77	0.0024	7,8	0.46	0.8	0.37	0.50	10	100	9.8	5.60	7.76	No	2.33	0.08	0.0012	0.0136	582.30	582.31	0.0108	0.0842	Wye 45°	0.5	0.0788	582.39	NA	NA			
	2+48.54	2+53.54	5.00	1	21	NA	NA	RCP	2.41	5.50	0.44	0.013	578.77	578.78	0.0024	N/A	0	0.8	0.00	0.14	10	100	9.8	2.00	7.76	No	0.83	0.10	0.0002	0.0008	582.39	582.39	0.0199	0.0108	Size Change	0.0053	0.0053	582.39	NA	NA			
	2+53.54	2+73.98	20.44	1	18	NA	NA	RCP	1.77	4.71	0.38	0.013	579.03	579.08	0.0024	N/A	0	0.8	0.00	0.14	10	100	9.8	2.00	5.14	No	1.13	0.30	0.0004	0.0074	582.39	582.40	0.0199	0.0199	Manhole - Through	0.05	0.0010	582.40	NA	NA			
2+73.98	3+00.20	26.22	1	18	NA	NA	DI	1.77	4.71	0.38	0.012	579.08	579.14	0.0024	6	0.17	0.8	0.14	0.14	10	100	9.8	2.00	5.14	No	1.13	0.39	0.0003	0.0081	582.40	582.41	0.0000	0.0199	Manhole - Through	0.05	0.0010	582.41	NA	NA				
ST-1A	0+00.00	0+67.46	67.46	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	578.70	580.81	0.0312	N/A	0	0.8	0.11	0.11	10	100	9.8	1.10	42.84	Yes	1.40	0.80	0.0009	0.0637	580.94	581.00	0.0303	0.0303	Bend 45°	0.37	0.0112	581.30	NA	NA			
	0+67.46	0+69.51	2.05	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	580.81	580.87	0.0312	5G	0.14	0.8	0.11	0.11	10	100	9.8	1.10	8.14	No	1.40	0.02	0.0009	0.0019	581.30	581.30	0.0000	0.0303	None	0	0.0000	581.30	NA	NA			
ST-1B	0+00.00	0+33.82	33.82	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	579.33	579.62	0.0085	5F	0.07	0.8	0.06	0.06	10	100	9.8	0.55	3.28	No	0.70	0.81	0.0002	0.0080	581.55	581.56	0.0000	0.0076	Inlet	1.25	0.0095	581.57	NA	NA			
	0+33.82	0+36.37	2.55	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	579.62	579.69	0.0085	5E	0.06	0.8	0.05	0.05	10	100	9.8	0.47	30.77	No	0.60	0.79	0.0002	0.0049	582.23	582.23	0.0000	0.0056	Inlet	1.25	0.0070	582.24	NA	NA			
ST-1C	0+00.00	0+05.21	5.21	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	579.03	579.43	0.0090	5D	0.1	0.8	0.08	0.13	10	100	9.8	1.25	35.65	Yes	2.00	0.04	0.0011	0.0057	582.16	582.17	0.0396	0.0621	Wye - 45°	0.5	0.0423	582.21	NA	NA			
	0+05.21	0+08.16	2.95	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	579.43	579.45	0.0090	5D	0.1	0.8	0.08	0.13	10	100	9.8	1.25	30.85	No	1.60	0.03	0.0012	0.0031	582.21	582.21	0.0056	0.0396	Bend - 45°	0.37	0.0147	582.23	NA	NA			
	0+08.16	0+36.37	28.21	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	579.45	579.59	0.0050	5E	0.06	0.8	0.05	0.05	10	100	9.8	0.47	30.77	No	0.60	0.79	0.0002	0.0049	582.23	582.23	0.0000	0.0056	Inlet	1.25	0.0070	582.24	NA	NA			
ST-1D	0+00.00	0+05.64	5.64	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	579.12	579.57	0.0810	5C	0.1	0.8	0.08	0.20	10	100	9.8	1.96	30.60	No	2.50	0.04	0.0030	0.0170	582.30	582.32	0.0348	0.0967	Wye - 45°	0.5	0.0793	582.40	NA	NA			
	0+05.64	0+08.38	2.74	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	579.57	579.59	0.0050	5A	0.1	0.8	0.08	0.12	10	100	9.8	1.18	30.85	No	1.50	0.03	0.0011	0.0030	582.40	582.40	0.0039	0.0348	Wye - 45°	0.5	0.0329	582.43	NA	NA			
	0+08.38	0+36.29	27.91	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	579.59	579.73	0.0050	5B	0.05	0.8	0.04	0.04	10	100	9.8	0.39	30.77	No	0.50	0.93	0.0001	0.0034	582.43	582.44	0.0000	0.0039	None	0	0.0000	582.44	NA	NA			
ST-1E	0+00.00	0+03.01	3.01	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	579.59	579.81	0.0728	N/A	0	0.8	0.00	0.08	10	100	9.8	0.75	8.14	No	3.29	0.02	0.0004	0.0013	582.42	582.42	0.1681	0.1681	Bend - 45°	0.37	0.0622	582.48	NA	NA			
	0+03.01	0+17.45	14.44	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	579.81	580.86	0.0728	5A	0.1	0.8	0.08	0.08	10	100	9.8	0.75	8.14	No	3.29	0.07	0.0004	0.0064	582.48	582.49	0.0000	0.1681	None	0	0.0000	582.49	NA	NA			
ST-2	0+00.00	0+51.75	51.75	1	24	NA	NA	RCP	3.14	6.28	0.50	0.013	575.92	576.36	0.0242	1A	0.97	0.8	0.78	0.78	10	100	9.8	7.60	35.21	No	2.42	0.36	0.0011	0.0582	579.44	579.50	0.0000	0.0910	Inlet	1.25	0.1137	579.61	NA	NA			
	0+51.75	0+51.75	0	1	24	NA	NA	RCP	3.14	6.28	0.50	0.013	576.36	576.36	0.0242	1A	0.97	0.8	0.78	0.78	10	100	9.8	7.60	35.21	No	2.42	0.36	0.0011	0.0582	579.44	579.50	0.0000	0.0910	Inlet	1.25	0.1137	579.61	NA	NA			
ST-3	0+00.00	0+24.87	24.87	1	36	NA	NA	RCP	7.07	9.42	0.75	0.013	575.25	575.37	0.0050	OS 3/OS 4	3.39	0.8	2.71	2.71	10	100	9.8	29.80	47.24	No	4.22	0.10	0.0020	0.0494	579.4	579.45	0.0000	0.2760	none	0	0.0000	579.45	NA	NA			
	0+24.87	0+24.87	0	1	36	NA	NA	RCP	7.07	9.42	0.75	0.013	575.37	575.37	0.0050	OS 3/OS 4	3.39	0.8	2.71	2.71	10	100	9.8	29.80	47.24	No	4.22	0.10	0.0020	0.0494	579.4	579.45	0.0000	0.2760	none	0	0.0000	579.45	NA	NA			
ST-4	0+00.00	0+07.19	7.19	1	18	NA	NA	RCP	1.77	4.71	0.38	0.013	579.59	579.81	0.0728	N/A	0	0.8	0.00	0.17	10	100	9.8	1.65	8.14	No	3.29	0.04	0.0002	0.0018	578.4	578.40	0.1681	0.1681	Bend - 45°	0.37	0.0622	578.46	NA	NA			
	0+07.19	0+34.																																									