ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

STORM DRAINAGE PIPE DESIGN WORKSHEET

WO. NO.	DATE	REVISED	SHEET
944.01	SEPT.'12	JAN. '13	1 OF 6

PROJECT TITLE	LOCATION	STORM FREQUENCY	PIPE TYPE
Mountainside Woods	Town of Lloyd	25 Year	HDPE/CMP

CALCULATED BY	APPROVED BY	REF DRAWING(S)	RAINFALL CURVE
ML			Ulster County

LOCATION FROM	LOCATION TO	ROAD STA.	ACRES SUB.	ACRES TOTAL	" C "	CA	ΣCA	TIME CONC. - MIN Inlet	TIME CONC. - MIN Pipe	TIME CONC. - MIN TOTAL	" i "	" Q " Des.	" Q " Cap.	PIPE " n "	PIPE Size	PIPE Height	PIPE V Des	PIPE V Cap	PIPE Slope	PIPE Lgth.	PIPE Fall	DROP (feet)	INV Upper	INV Lower	GRATE Elev	Depth to INV	Cover Upper	Cover Lower
CB 1	CB 2		0.42		0.90																							
			0.52	0.94	0.30	0.53	0.53	5.00	-	5.00	8.33	4.5	12.75	0.012	18		6.5	7.2	1.26%	135	1.69	0.00	392.25	390.55	396.25	4.00	2.50	3.81
CB 2	CB 5		0.07		0.90																							
			0.16	1.30	0.30	0.11	0.72	5.00	0.35	5.35	8.33	6.0	28.62	0.012	18		12.8	16.2	6.33%	184	11.64	0.00	390.55	378.91	395.86	5.31	3.81	1.77
CB 5	ES 6		0.29		0.90																							
			0.32	2.45	0.30	0.36	1.41	5.35	0.24	5.59	8.22	11.6	16.17	0.012	18		9.9	9.2	2.02%	119	2.40	0.00	378.91	376.50	382.18	3.27	1.77	**0.00**
																									378.00			
CB 3	CB 2		0.06		0.90																							
			0.07	0.13	0.30	0.08	0.08	5.00	-	5.00	8.33	0.6	16.09	0.012	18		4.3	9.1	2.00%	35	0.70	0.00	391.50	390.80	395.80	4.30	2.80	3.56
CB 4	CB 5		0.28		0.90																							
			0.26	0.54	0.30	0.33	0.33	5.00	-	5.00	8.33	2.8	14.84	0.012	18		6.4	8.4	1.70%	21	0.35	0.00	379.27	378.91	383.50	4.23	2.73	1.77
CB 7	CB 8		0.18		0.90																							
			0.19	0.37	0.30	0.22	0.22	5.00	-	5.00	8.33	1.8	16.09	0.012	18		5.9	9.1	2.00%	20	0.40	0.00	356.44	356.04	360.50	4.06	2.56	3.08
CB 8	CB 9		0.26		0.90																							
			0.45	1.08	0.30	0.37	0.59	5.00	0.06	5.06	8.33	4.9	34.14	0.012	18		13.5	19.3	9.00%	137	12.31	0.00	356.04	343.72	360.62	4.58	3.08	3.14
CB 9	CB 11		0.17		0.90																							
			0.27	1.58	0.30	0.23	0.86	5.06	0.17	5.22	8.32	7.2	32.19	0.012	18		14.6	18.2	8.00%	49	3.90	0.00	343.72	339.82	348.36	4.64	3.14	2.25
CB 11	CB 12		0.14		0.90																							
			0.57	2.29	0.30	0.30	1.16	5.22	0.06	5.28	8.26	9.6	10.18	0.012	18		6.5	5.8	0.80%	20	0.16	0.00	339.82	339.66	343.57	3.75	2.25	2.41
CB 12	CB 13		0.11		0.90																							
			0.13	2.53	0.30	0.14	1.30	5.28	0.05	5.33	8.24	10.7	15.35	0.012	18		9.4	8.7	1.82%	180	3.27	0.00	339.66	336.38	343.57	3.91	2.41	2.51
CB 13	DMH 15		0.57		0.90																							
			0.62	4.20	0.30	0.70	2.30	5.33	0.32	5.65	8.22	18.9	18.98	0.012	24		6.9	6.0	0.60%	91	0.54	3.30	333.08	332.53	340.39	7.31	5.31	7.15
DMH 15	DMH 16				0.90																							
				5.04	0.30	-	2.83	5.65	0.22	5.87	8.11	23.0	23.25	0.012	24		8.4	7.4	0.90%	90	0.81	0.00	332.53	331.71	341.68	9.15	7.15	10.24
DMH 16	CB 17				0.90																							
				5.04	0.30	-	2.83	5.87	0.18	6.05	8.04	22.8	23.25	0.012	24		8.4	7.4	0.90%	186	1.67	0.00	331.71	330.03	343.95	12.24	10.24	10.02
CB 17	CB 19		0.13		0.90																							
			0.08	6.05	0.30	0.14	3.55	6.05	0.37	6.42	7.98	28.3	28.48	0.012	24		10.3	9.1	1.35%	93	1.25	0.00	330.03	328.77	342.05	12.02	10.02	7.43
CB 19	CB 20		0.18		0.90																							
			0.17	6.40	0.30	0.21	3.76	6.42	0.15	6.57	7.87	29.6	30.02	0.012	24		10.9	9.6	1.50%	140	2.10	0.00	328.77	326.66	338.20	9.43	7.43	**1.09**
CB 20	CB 21		0.23		0.90																							
			0.16	6.79	0.30	0.26	4.02	6.57	0.21	6.78	7.82	31.4	31.73	0.012	30		7.4	6.5	0.51%	49	0.25	0.50	326.16	325.91	329.75	3.59	**1.09**	1.82
CB 21	CB 22		0.35		0.90																							
			0.45	7.59	0.30	0.45	4.47	6.78	0.11	6.89	7.76	34.7	34.99	0.012	30		8.1	7.1	0.62%	105	0.65	0.00	325.91	325.25	330.23	4.32	1.82	1.87

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

STORM DRAINAGE PIPE DESIGN WORKSHEET

WO. NO.	DATE	REVISED	SHEET
944.01	SEPT.'12	JAN. '13	2 OF 6

PROJECT TITLE	LOCATION	STORM FREQUENCY	PIPE TYPE
Mountainside Woods	Town of Lloyd	25 Year	HDPE/CMP

CALCULATED BY	APPROVED BY	REF DRAWING(S)	RAINFALL CURVE
ML			Ulster County

LOCATION FROM	LOCATION TO	ROAD STA.	ACRES SUB.	ACRES TOTAL	" C "	CA	ΣCA	TIME CONC. - MIN Inlet	Pipe	TOTAL	" i "	" Q " Des.	Cap.	PIPE " n "	Size	Height	V Des	V Cap	Slope	Lgth.	Fall	DROP (feet)	INV Upper	INV Lower	GRATE Elev	Depth to INV	Cover Upper	Cover Lower
			0.55		0.90																							
CB 22	CB 24		0.58	9.31	0.30	0.67	5.49	6.89	0.22	7.11	7.73	42.4	42.67	0.012	30		9.9	8.7	0.92%	109	1.00	0.00	325.25	324.24	329.62	4.37	1.87	4.35
			0.22		0.90																							
CB 24	DMH 26		0.18	10.42	0.30	0.25	6.17	7.11	0.18	7.29	7.66	47.3	51.09	0.012	36		8.2	7.2	0.50%	102	0.51	0.50	323.74	323.23	331.09	7.35	4.35	5.69
					0.90																							
DMH 26	DMH 27			10.42	0.30	-	6.17	7.29	0.21	7.50	7.61	47.0	51.09	0.012	36		8.2	7.2	0.50%	10	0.05	0.00	323.23	323.18	331.92	8.69	5.69	7.82
					0.90																							
DMH 27	CB 28			10.42	0.30	-	6.17	7.50	0.02	7.52	7.55	46.6	72.26	0.012	36		10.8	10.2	1.00%	118	1.18	0.00	323.18	322.00	334.00	10.82	7.82	5.29
			0.17		0.90																							
CB 28	CB 29		0.27	10.86	0.30	0.23	6.41	7.52	0.18	7.70	7.55	48.3	51.09	0.012	36		8.2	7.2	0.50%	20	0.10	0.00	322.00	321.90	330.29	8.29	5.29	5.39
			0.07		0.90																							
CB 29	DMH 32		0.06	10.99	0.30	0.08	6.49	7.70	0.04	7.74	7.49	48.6	51.09	0.012	36		8.2	7.2	0.50%	157	0.79	0.00	321.90	321.11	330.29	8.39	5.39	10.66
					0.90																							
DMH 32	DMH 33			10.99	0.30	-	6.93	7.74	0.32	8.06	7.48	51.9	52.10	0.012	36		8.4	7.4	0.52%	165	0.86	0.00	321.11	320.25	334.77	13.66	10.66	9.25
					0.90																							
DMH 33	DMH 33a			10.99	0.30	-	6.93	8.06	0.33	8.38	7.40	51.3	88.50	0.012	36		12.9	12.5	1.50%	253	3.79	0.00	320.25	316.46	332.50	12.25	9.25	2.54
					0.90																							
DMH 33a	ES 33b			10.99	0.30	-	6.93	8.38	0.33	8.71	7.31	50.7	417.90	0.012	36		39.5	59.1	33.45%	28	9.47	0.00	316.46	306.99	322.00	5.54	2.54	**0.00**
																									309.99			
			0.04		0.90																							
CB 10	CB 9		0.02	0.06	0.30	0.04	0.04	5.00	-	5.00	8.33	0.4	16.09	0.012	18		3.7	9.1	2.00%	20	0.40	1.50	344.31	343.91	348.31	4.00	2.50	2.95
			0.26		0.90																							
CB 14	CB 13		0.22	0.48	0.30	0.30	0.30	5.00	-	5.00	8.33	2.5	8.05	0.012	18		4.0	4.6	0.50%	20	0.10	1.50	336.39	336.29	340.39	4.00	2.50	2.60
			0.02		0.90																							
CB 39	CB 40		0.01	0.03	0.30	0.02	0.02	5.00	-	5.00	8.33	0.2	16.09	0.012	18		2.9	9.1	2.00%	20	0.40	1.50	360.93	360.53	365.10	4.17	2.67	3.07
			0.02		0.90																							
CB 40	CB 41		0.04	0.09	0.30	0.03	0.05	5.00	0.11	5.11	8.33	0.4	31.16	0.012	18		6.1	17.6	7.50%	206	15.41	0.00	360.53	345.11	365.10	4.57	3.07	2.98
			0.17		0.90																							
CB 41	CB 43		0.13	0.48	0.30	0.19	0.31	5.11	0.56	5.67	8.30	2.5	33.00	0.012	18		10.8	18.7	8.41%	118	9.89	0.00	345.11	335.21	349.59	4.48	2.98	2.56
			0.17		0.90																							
CB 43	DMH 45		0.15	0.84	0.30	0.20	0.53	5.67	0.18	5.85	8.11	4.3	8.05	0.012	18		4.6	4.6	0.50%	78	0.39	0.00	335.21	334.81	339.27	4.06	2.56	6.59
					0.90																							
DMH 45	DMH 15			0.84	0.30	-	0.53	5.85	0.28	6.14	8.05	4.3	8.05	0.012	18		4.6	4.6	0.50%	123	0.62	0.00	334.81	334.19	342.90	8.09	6.59	5.99

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

STORM DRAINAGE PIPE DESIGN WORKSHEET

WO. NO.	DATE	REVISED	SHEET
944.01	SEPT.'12	JAN. '13	3 OF 6

PROJECT TITLE	LOCATION	STORM FREQUENCY	PIPE TYPE
Mountainside Woods	Town of Lloyd	25 Year	HDPE/CMP

CALCULATED BY	APPROVED BY	REF DRAWING(S)	RAINFALL CURVE
ML			Ulster County

LOCATION FROM	LOCATION TO	ROAD STA.	ACRES SUB.	ACRES TOTAL	" C "	CA	ΣCA	TIME CONC. - MIN Inlet	TIME CONC. - MIN Pipe	TIME CONC. - MIN TOTAL	" i "	" Q " Des.	" Q " Cap.	PIPE " n "	PIPE Size	PIPE Height	PIPE V Des	PIPE V Cap	PIPE Slope	PIPE Lgth.	PIPE Fall	DROP (feet)	INV Upper	INV Lower	GRATE Elev	Depth to INV	Cover Upper	Cover Lower
			0.06		0.90																							
CB 42	CB 41		0.03	0.09	0.30	0.06	0.06	5.00	-	5.00	8.33	0.5	11.38	0.012	18		3.1	6.4	1.00%	20	0.20	1.50	345.59	345.39	349.59	4.00	2.50	2.70
			0.03		0.90																							
CB 44	CB 43		0.01	0.04	0.30	0.03	0.03	5.00	-	5.00	8.33	0.3	11.38	0.012	18		2.6	6.4	1.00%	20	0.20	1.50	335.41	335.21	339.27	3.86	2.36	2.56
			0.08		0.90																							
CB 46	CB 47		0.04	0.12	0.30	0.08	0.08	5.00	-	5.00	8.33	0.7	21.29	0.012	18		5.4	12.0	3.50%	37	1.28	1.50	338.67	337.38	342.67	4.00	2.50	2.53
			0.04		0.90																							
CB 47	CB 48		0.02	0.18	0.30	0.04	0.13	5.00	0.11	5.11	8.33	1.1	29.01	0.012	18		7.8	16.4	6.50%	83	5.41	0.00	337.38	331.96	341.41	4.03	2.53	3.04
			0.33		0.90																							
CB 48	DMH 32		0.07	0.58	0.30	0.32	0.44	5.11	0.18	5.29	8.30	3.7	13.94	0.012	18		6.6	7.9	1.50%	125	1.87	0.00	331.96	330.08	336.50	4.54	3.04	3.19
			0.11		0.90																							
CB 18	CB 17		0.11	0.80	0.30	0.13	0.58	5.00	0.31	5.31	8.33	4.8	16.09	0.012	18		7.9	9.1	2.00%	21	0.42	0.00	337.99	337.57	341.99	4.00	2.50	2.98
			0.29		0.90																							
CB 23	CB 22		0.30	0.59	0.30	0.35	0.35	5.00	-	5.00	8.33	2.9	16.09	0.012	18		6.8	9.1	2.00%	20	0.40	1.50	326.65	326.25	329.62	2.97	**1.47**	1.87
			0.05		0.90																							
CB 35	CB 34		0.02	0.07	0.30	0.05	0.05	5.00	-	5.00	8.33	0.4	16.09	0.012	18		3.9	9.1	2.00%	20	0.41		331.36	330.95	335.36	4.00	2.50	**-332.45**
			0.37		0.90																							
CB 25	CB 24		0.34	0.71	0.30	0.44	0.44	5.00	-	5.00	8.33	3.6	16.09	0.012	18		7.3	9.1	2.00%	20	0.40		327.10	326.70	331.10	4.00	2.50	2.89
			0.06		0.90																							
CB 51	CB 52		0.01	0.07	0.30	0.06	0.06	5.00	-	5.00	8.33	0.5	16.09	0.012	18		3.9	9.1	2.00%	20	0.40		319.50	319.10	323.54	4.04	2.54	2.94
			0.22		0.90																							
CB 52	CB 53		0.29	0.58	0.30	0.29	0.34	5.00	0.09	5.09	8.33	2.9	19.71	0.012	18		7.8	11.2	3.00%	201	6.02	1.94	317.16	311.13	323.54	6.38	4.88	**1.43**
			0.24		0.90																							
CB 53	CB 54		0.47	1.29	0.30	0.36	0.70	5.09	0.43	5.51	8.30	5.8	8.05	0.012	18		4.9	4.6	0.50%	29	0.14	0.00	311.13	310.98	314.06	2.93	**1.43**	1.50
			0.09		0.90																							
CB 54	ES 82		0.10	1.48	0.30	0.11	0.81	5.51	0.10	5.61	8.16	6.6	8.05	0.012	18		5.1	4.6	0.50%	45	0.23	0.00	310.98	310.75	313.98	3.00	1.50	**0.00**

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

STORM DRAINAGE PIPE DESIGN WORKSHEET

WO. NO.	DATE	REVISED	SHEET
944.01	SEPT.'12	JAN. '13	4 OF 6

PROJECT TITLE	LOCATION	STORM FREQUENCY	PIPE TYPE
Mountainside Woods	Town of Lloyd	25 Year	HDPE/CMP

CALCULATED BY	APPROVED BY	REF DRAWING(S)	RAINFALL CURVE
ML			Ulster County

LOCATION FROM	LOCATION TO	ROAD STA.	ACRES SUB.	ACRES TOTAL	" C "	CA	ΣCA	TIME CONC. - MIN Inlet	TIME CONC. - MIN Pipe	TIME CONC. - MIN TOTAL	" i "	" Q " Des.	" Q " Cap.	PIPE " n "	PIPE Size	PIPE Height	PIPE V Des	PIPE V Cap	PIPE Slope	PIPE Lgth.	PIPE Fall	DROP (feet)	INV Upper	INV Lower	GRATE Elev	Depth to INV	Cover Upper	Cover Lower
																									312.25			
CB 55	CB 56		0.11	0.13	0.90	0.11	0.11	5.00	-	5.00	8.33	0.9	8.05	0.012	18		3.0	4.6	0.50%	20	0.10	1.50	306.47	306.37	311.15	4.68	3.18	3.28
			0.02		0.30																							
CB 56	CB 57		0.31	1.00	0.90	0.45	0.55	5.00	0.11	5.11	8.33	4.6	8.05	0.012	18		4.7	4.6	0.50%	79	0.40	0.00	306.37	305.97	311.15	4.78	3.28	4.40
			0.56		0.30																							
CB 57	CB 58		0.22	2.76	0.90	0.30	1.40	5.11	0.28	5.39	8.30	11.6	17.33	0.012	24		5.9	5.5	0.50%	28	0.14	0.50	305.47	305.33	311.87	6.40	4.40	4.67
			0.34		0.30																							
CB 58	CB EX 3		0.05	2.83	0.90	0.05	1.45	5.39	0.08	5.47	8.20	11.9	17.33	0.012	24		5.9	5.5	0.50%	4	0.02	0.00	305.33	305.30	312.00	6.67	4.67	3.40
			0.02		0.30																							
																									310.70			
CB 59	CB 60		0.06	0.62	0.90	0.22	0.22	5.00	-	5.00	8.33	1.9	11.38	0.012	18		4.7	6.4	1.00%	20	0.20	1.50	313.88	313.68	317.88	4.00	2.50	2.70
			0.56		0.30																							
CB 60	CB 57		0.25	1.20	0.90	0.32	0.55	5.00	0.07	5.07	8.33	4.6	21.29	0.012	18		9.5	12.0	3.50%	168	5.87	0.00	313.68	307.81	317.88	4.20	2.70	2.56
			0.33		0.30																							
CB 61	CB 62		0.47	1.11	0.90	0.62	0.62	5.00	-	5.00	8.33	5.1	8.05	0.012	18		4.8	4.6	0.50%	76	0.38	1.50	325.75	325.37	329.75	4.00	2.50	2.69
			0.64		0.30																							
CB 62	CB 64		0.01	1.30	0.90	0.01	0.73	5.00	0.26	5.26	8.33	6.1	10.18	0.012	18		6.0	5.8	0.80%	126	1.01	0.00	325.37	324.36	329.56	4.19	2.69	2.68
			0.01		0.30																							
CB 64	DMH 67		0.23	1.96	0.90	0.29	1.54	5.26	0.35	5.61	8.24	12.7	17.33	0.012	24		6.0	5.5	0.50%	84	0.42	0.50	323.86	323.44	328.54	4.68	2.68	3.73
			0.26		0.30																							
DMH 67	CB 68			4.48		-	3.03	5.61	0.23	5.85	8.13	24.6	31.42	0.012	30		7.1	6.4	0.50%	136	0.68	0.50	322.94	322.25	329.17	6.23	3.73	5.99
CB 68	CB 69		0.41	5.46	0.90	0.54	3.57	5.85	0.32	6.17	8.05	28.8	31.42	0.012	30		7.3	6.4	0.50%	20	0.10	0.00	322.25	322.15	330.74	8.49	5.99	6.09
			0.57		0.30																							
CB 69	DMH 70		0.52	7.85	0.90	0.63	5.00	6.17	0.05	6.21	7.95	39.7	39.74	0.012	30		9.2	8.1	0.80%	85	0.68	0.00	322.15	321.47	330.74	8.59	6.09	4.46
			0.53		0.30																							
DMH 70	DMH 71			7.85	0.90	-	5.00	6.21	0.15	6.37	7.93	39.6	213.10	0.012	30		33.1	43.4	23.00%	52	11.96	0.00	321.47	309.51	328.43	6.96	4.46	2.18
					0.30																							
DMH 71	DMH 72			7.85	0.90	-	5.00	6.37	0.03	6.39	7.89	39.4	51.09	0.012	36		7.9	7.2	0.50%	180	0.90	0.50	309.01	308.10	314.19	5.18	2.18	4.68
					0.30																							
DMH 72	DMH 72a			7.85	0.90	-	5.00	6.39	0.38	6.77	7.88	39.4	62.58	0.012	36		9.3	8.9	0.75%	211	1.58	0.00	308.10	306.51	315.78	7.68	4.68	6.27
					0.30																							
DMH 72a	ES 73			7.85	0.90	-	5.00	6.77	0.38	7.15	7.76	38.8	83.02	0.012	36		11.5	11.7	1.32%	266	3.51	0.00	306.51	303.00	315.78	9.27	6.27	**0.00**
					0.30																							
																									306.00			

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

STORM DRAINAGE PIPE DESIGN WORKSHEET

WO. NO.	DATE	REVISED	SHEET
944.01	SEPT.'12	JAN. '13	5 OF 6

PROJECT TITLE	LOCATION	STORM FREQUENCY	PIPE TYPE
Mountainside Woods	Town of Lloyd	25 Year	HDPE/CMP

CALCULATED BY	APPROVED BY	REF DRAWING(S)	RAINFALL CURVE
ML			Ulster County

LOCATION FROM	LOCATION TO	ROAD STA.	ACRES SUB.	ACRES TOTAL	" C "	CA	ΣCA	TIME CONC. - MIN Inlet	TIME CONC. - MIN Pipe	TIME CONC. - MIN TOTAL	" i "	" Q " Des.	" Q " Cap.	PIPE " n "	PIPE Size	PIPE Height	PIPE V Des	PIPE V Cap	PIPE Slope	PIPE Lgth.	PIPE Fall	DROP (feet)	INV Upper	INV Lower	GRATE Elev	Depth to INV	Cover Upper	Cover Lower
			0.09		0.90																							
CB 63	CB 62		0.08	0.17	0.30	0.11	0.11	5.00	-	5.00	8.33	0.9	8.05	0.012	18		3.0	4.6	0.50%	20	0.10	0.00	325.56	325.46	329.56	4.00	2.50	2.60
			0.34		0.90																							
CB 80	CB 81		0.32	0.66	0.30	0.40	0.40	5.00	-	5.00	8.33	3.4	16.09	0.012	18		7.1	9.1	2.00%	20	0.40	0.00	331.27	330.87	335.27	4.00	2.50	2.90
			0.32		0.90																							
CB 81	CB 69		0.36	1.34	0.30	0.40	0.80	5.00	0.05	5.05	8.33	6.7	12.20	0.012	18		7.0	6.9	1.15%	361	4.15	0.00	330.87	326.72	335.27	4.40	2.90	2.52
			0.39		0.90																							
CB 74	CB 75		0.40	0.79	0.30	0.47	0.47	5.00	-	5.00	8.33	3.9	11.38	0.012	18		5.8	6.4	1.00%	20	0.20	1.50	334.40	334.20	338.40	4.00	2.50	2.70
			0.16		0.90																							
CB 75	DMH 76		0.13	1.08	0.30	0.18	0.65	5.00	0.06	5.06	8.33	5.5	18.87	0.012	18		9.1	10.7	2.75%	78	2.13	0.00	334.20	332.06	338.40	4.20	2.70	2.56
					0.90																							
DMH 76	CB 78			1.08	0.30	-	0.65	5.06	0.14	5.20	8.31	5.4	20.52	0.012	18		9.8	11.6	3.25%	96	3.12	0.00	332.06	328.94	336.12	4.06	2.56	2.56
			0.19		0.90																							
CB 78	DMH 79		0.24	1.70	0.30	0.24	1.02	5.20	0.16	5.36	8.27	8.4	17.07	0.012	18		9.6	9.7	2.25%	82	1.85	0.00	328.94	327.09	333.00	4.06	2.56	1.94
					0.90																							
DMH 79	CB 66			1.70	0.30	-	1.02	5.36	0.14	5.51	8.21	8.4	21.29	0.012	18		11.3	12.0	3.50%	79	2.78	0.00	327.09	324.31	330.53	3.44	1.94	3.36
			0.19		0.90																							
CB 66	DMH 67		0.18	2.52	0.30	0.23	1.49	5.51	0.12	5.62	8.16	12.2	18.59	0.012	18		11.2	10.5	2.67%	27	0.72	0.00	324.31	323.58	328.57	4.26	2.76	5.66
			0.45		0.90																							
CB 65	CB 64		0.39	0.84	0.30	0.52	0.52	5.00	-	5.00	8.33	4.4	8.05	0.012	18		4.6	4.6	0.50%	20	0.10	1.50	324.53	324.43	328.53	4.00	2.50	2.61
			0.19		0.90																							
CB 67a	CB 66		0.26	0.45	0.30	0.25	0.25	5.00	-	5.00	8.33	2.1	8.05	0.012	18		3.8	4.6	0.50%	20	0.10	1.50	324.57	324.47	328.57	4.00	2.50	2.60
			0.11		0.90																							
CB 49	CB 50		0.13	0.24	0.30	0.14	0.14	5.00	-	5.00	8.33	1.2	16.09	0.012	18		5.3	9.1	2.00%	20	0.40		338.28	337.88	342.28	4.00	2.50	2.90
			0.10		0.90																							
CB 50	CB 35		0.11	0.45	0.30	0.12	0.26	5.00	0.06	5.06	8.33	2.2	18.37	0.012	18		6.9	10.4	2.61%	194	5.05	0.00	337.88	332.82	342.28	4.40	2.90	2.70
			0.26		0.90																							
CB 35	CB 36a		0.24	1.07	0.30	0.38	0.65	5.00	0.47	5.47	8.33	5.4	24.14	0.012	18		11.0	13.7	4.50%	109	4.90		332.82	327.91	337.02	4.20	2.70	2.57
			0.15		0.90																							
CB 36a	CB 36b		0.18	1.40	0.30	0.19	0.83	5.47	0.17	5.63	8.18	6.8	11.38	0.012	18		6.7	6.4	1.00%	35	0.35	0.00	327.91	327.56	331.98	4.07	2.57	2.54

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

STORM DRAINAGE PIPE DESIGN WORKSHEET

WO. NO.	DATE	REVISED	SHEET
944.01	SEPT.'12	JAN. '13	6 OF 6

PROJECT TITLE	LOCATION	STORM FREQUENCY	PIPE TYPE
Mountainside Woods	Town of Lloyd	25 Year	HDPE/CMP
CALCULATED BY: ML	APPROVED BY:	REF DRAWING(S):	RAINFALL CURVE: Ulster County

LOCATION FROM	LOCATION TO	ROAD STA.	ACRES SUB.	ACRES TOTAL	" C "	CA	ΣCA	TIME CONC. - MIN Inlet	TIME CONC. - MIN Pipe	TIME CONC. - MIN TOTAL	" i "	" Q " Des.	" Q " Cap.	PIPE " n "	PIPE Size	PIPE Height	PIPE V Des	PIPE V Cap	PIPE Slope	PIPE Lgth.	PIPE Fall	DROP (feet)	INV Upper	INV Lower	GRATE Elev	Depth to INV	Cover Upper	Cover Lower
			0.11		0.90																							
CB 36b	YD 36c		0.09	1.60	0.30	0.13	0.96	5.63	0.09	5.72	8.12	7.8	29.01	0.012	18		13.8	16.4	6.50%	73	4.75	0.00	327.56	322.81	331.60	4.04	2.54	2.51
			0.40		0.90																							
YD 36c	DMH 37		0.48	2.48	0.30	0.50	1.46	5.72	0.09	5.81	8.09	11.8	17.33	0.012	24		5.9	5.5	0.50%	142	0.71	0.50	322.31	321.59	326.82	4.51	2.51	6.55
			-		0.90																							
DMH 37	ES 38		-	2.48	0.30	-	1.46	5.81	0.40	6.21	8.06	11.8	141.42	0.012	24		26.9	45.0	33.30%	47	15.58	0.00	321.59	306.00	330.14	8.55	6.55	**0.00**
																									308.00			
			0.07		0.90																							
CB 77	CB 78		0.05	0.12	0.30	0.08	0.08	5.00	0.03	5.03	8.33	0.7	11.38	0.012	18		3.5	6.4	1.00%	20	0.20	0.00	333.02	332.82	337.02	4.00	2.50	2.70