Self-Storage Development
108 Old Church Street
Pembroke, MA
Bohler Job Number: MAA220228
February 22, 2023

Rational Pipe Sizing Calculations

Design Period Storm:		100	Year	Design Period Intensity*			7	in/hr									
LOCATION		IMPERVIOUS			OTHER												
FROM	TO	A	C	CA	A	C	CA	SUM CA	Tc (min)	I (in/hr)	Q (cfs)	D (in)	S (ft/ft)	Material	n	Q Full (cfs)	V Full (fps)
ROOF	CB-4	0.60	0.95	0.57	0.00	0.30	0.00	0.57	6	7	3.99	15	0.005	HDPE	0.012	4.95	4.03
CB-4	DMH-2	0.67	0.95	0.64	0.04	0.30	0.01	0.65	6	7	4.54	15	0.005	HDPE	0.012	4.95	4.03
CB-3	DMH-2	0.02	0.95	0.02	0.00	0.30	0.00	0.02	6	7	0.13	12	0.040	HDPE	0.012	7.72	9.83
DMH-2	DMH-1	0.69	0.95	0.66	0.04	0.30	0.01	0.67	6	7	4.67	15	0.005	HDPE	0.012	4.95	4.03
CB-2	DMH-1	0.15	0.95	0.14	0.07	0.30	0.02	0.16	6	7	1.14	12	0.040	HDPE	0.012	7.72	9.83
CB-1	DMH-1	0.10	0.95	0.10	0.00	0.30	0.00	0.10	6	7	0.67	12	0.005	HDPE	0.012	2.73	3.47
DMH-1	ICS-1	0.94	0.95	0.89	0.11	0.30	0.03	0.93	6	7	6.48	15	0.010	HDPE	0.012	7.00	5.70
OCS-1	FES-1	–	–	–	–	–	–	–	–	–	0.58	12	0.011	HDPE	0.012	4.05	5.15

*Rainfall intensity provided by TP-40

Prepared By:
BOHLER
352 Turnpike Road
Southborough, MA 01772
(508) 480-9900