

**NORTH RIDGE COUNTRY CLUB
#300 WELCH ROAD
SOUTHINGTON, CT**

Date: 5/3/21

CALCULATIONS FOR A TYPICAL LOT

HYDROLOGIC CONDITIONS:

	PRE-DEVELOPMENT			POST-DEVELOPMENT		
	AREA		'C'	AREA		'C'
	(s.f.)	(Acres)		(s.f.)	(Acres)	
Impervious Areas:						
Building	0	0.00	0.95	2,459	0.06	0.95
Bit. Pavement	0	0.00	0.95	1,577	0.04	0.95
Millings	0	0.00	0.60	0	0.00	0.60
Subtotal	0	0.00	0.00	4,036	0.09	0.95
Unimproved Areas:						
Open, Lawn	4,036	0.09	0.30	0	0.00	0.30
Forest	0	0.00	0.20	0	0.00	0.20
Subtotal	4,036	0.09	0.30	0	0.00	0.00
TOTAL	4,036	0.09	0.30	4,036	0.09	0.95

TIME OF CONCENTRATION (MINS.) 10 5

STORAGE COMPUTATIONS:

Design Storm: 100 Year Storm Event

Q = CiA	PRE-DEVELOPMENT	POST-DEVELOPMENT
C	0.3	0.95
i (inches)	6.50	7.80
A (Acres)	0.09	0.09
Q (cfs)	0.18	0.69

Allowable discharge Q = Pre-Development Q: 0.18 cfs

Time to the allowable Q on the Post-Development Hydrograph:

Ascending Limb	1.3	mins.
Descending Limb	12.4	mins.
Descending Limb Factor	2	
Total time for Q greater than allowable	11.1	mins.

Store increase in Q: $Q_{POST} - Q_{PRE}$ 0.69 - 0.18 = 0.51 cfs

REQUIRED STORAGE VOLUME = $1/2 b h = 1/2 \Delta Q T =$	170	cf
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PROVIDED STORAGE VOLUME =	186	cf
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SEE ATTACHED STORMTECH CUMULATIVE STORAGE VOLUMES SHEET
OF STORMTECH SC-310 CHAMBER SYSTEM UNITS PROPOSED = 6

Project:



Chamber Model -
Units -

SC-310
Imperial [Click Here for Metric](#)

Number of chambers -
Voids in the stone (porosity) -
Base of Stone Elevation -

6
40 %
100.00 ft

Amount of Stone Above Chambers -
Amount of Stone Below Chambers -

6 in
6 in

Include Perimeter Stone in Calculations

Height of System (inches)	Incremental Single Chamber (cubic feet)	Incremental Total Chamber (cubic feet)	Incremental Stone (cubic feet)	Incremental Ch & St (cubic feet)	Cumulative Chamber (cubic feet)	Elevation (feet)
28	0.00	0.00	4.74	4.74	185.98	102.33
27	0.00	0.00	4.74	4.74	181.24	102.25
26	0.00	0.00	4.74	4.74	176.49	102.17
25	0.00	0.00	4.74	4.74	171.75	102.08
24	0.00	0.00	4.74	4.74	167.00	102.00
23	0.00	0.00	4.74	4.74	162.26	101.92
22	0.06	0.35	4.60	4.96	157.51	101.83
21	0.15	0.93	4.37	5.30	152.56	101.75
20	0.27	1.60	4.11	5.70	147.26	101.67
19	0.54	3.27	3.44	6.71	141.56	101.58
18	0.70	4.22	3.05	7.28	134.85	101.50
17	0.82	4.95	2.77	7.71	127.57	101.42
16	0.92	5.55	2.53	8.07	119.86	101.33
15	1.01	6.09	2.31	8.40	111.78	101.25
14	1.09	6.57	2.12	8.68	103.39	101.17
13	1.15	6.93	1.97	8.90	94.70	101.08
12	1.21	7.29	1.83	9.12	85.80	101.00
11	1.27	7.65	1.68	9.33	76.68	100.92
10	1.32	7.95	1.57	9.51	67.35	100.83
9	1.36	8.19	1.47	9.66	57.84	100.75
8	1.40	8.43	1.37	9.80	48.18	100.67
7	1.43	8.61	1.30	9.91	38.38	100.58
6	0.00	0.00	4.74	4.74	28.47	100.50
5	0.00	0.00	4.74	4.74	23.72	100.42
4	0.00	0.00	4.74	4.74	18.98	100.33
3	0.00	0.00	4.74	4.74	14.23	100.25
2	0.00	0.00	4.74	4.74	9.49	100.17
1	0.00	0.00	4.74	4.74	4.74	100.08