

MT. SOUTHWINGTON SKI AREA LIMITED PARTNERSHIP
#396 MT. VERNON ROAD
SOUTHWINGTON, CT

Date: 1/5/21

HYDROLOGIC CONDITIONS:

	PRE-DEVELOPMENT			POST-DEVELOPMENT		
	AREA		'C'	AREA		'C'
	(s.f.)	(Acres)		(s.f.)	(Acres)	
Impervious Areas:						
Building	2,099	0.05	0.95	3,030	0.07	0.95
Bit. Pavement	0	0.00	0.95	0	0.00	0.95
Millings	0	0.00	0.60	0	0.00	0.60
Subtotal	2,099	0.05	0.95	3,030	0.07	0.95
Unimproved Areas:						
Open, Lawn	2,793	0.06	0.30	1,862	0.04	0.30
Forest	0	0.00	0.20	0	0.00	0.20
Subtotal	2,793	0.06	0.17	1,862	0.04	0.11
TOTAL	4,892	0.11	0.51	4,892	0.11	0.63

TIME OF CONCENTRATION (MINS.) 10 5

STORAGE COMPUTATIONS:

Design Storm: 100 Year Storm Event

Q = CiA	PRE-DEVELOPMENT	POST-DEVELOPMENT
C	0.51	0.63
i (inches)	6.50	7.80
A (Acres)	0.11	0.11
Q (cfs)	0.37	0.55

Allowable discharge Q = Pre-Development Q: 0.37 cfs

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

Ascending Limb	3.4	mins.
Descending Limb	8.3	mins.
Descending Limb Factor	2	
Total time for Q greater than allowable	4.9	mins.

Store increase in Q: $Q_{POST} - Q_{PRE}$ 0.55 - 0.37 = 0.18 cfs

REQUIRED STORAGE VOLUME = $1/2 b h = 1/2 \Delta Q T =$	27	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) -

6
40 %

Base of Stone Elevation -

100.00 ft

Amount of Stone Above Chambers -

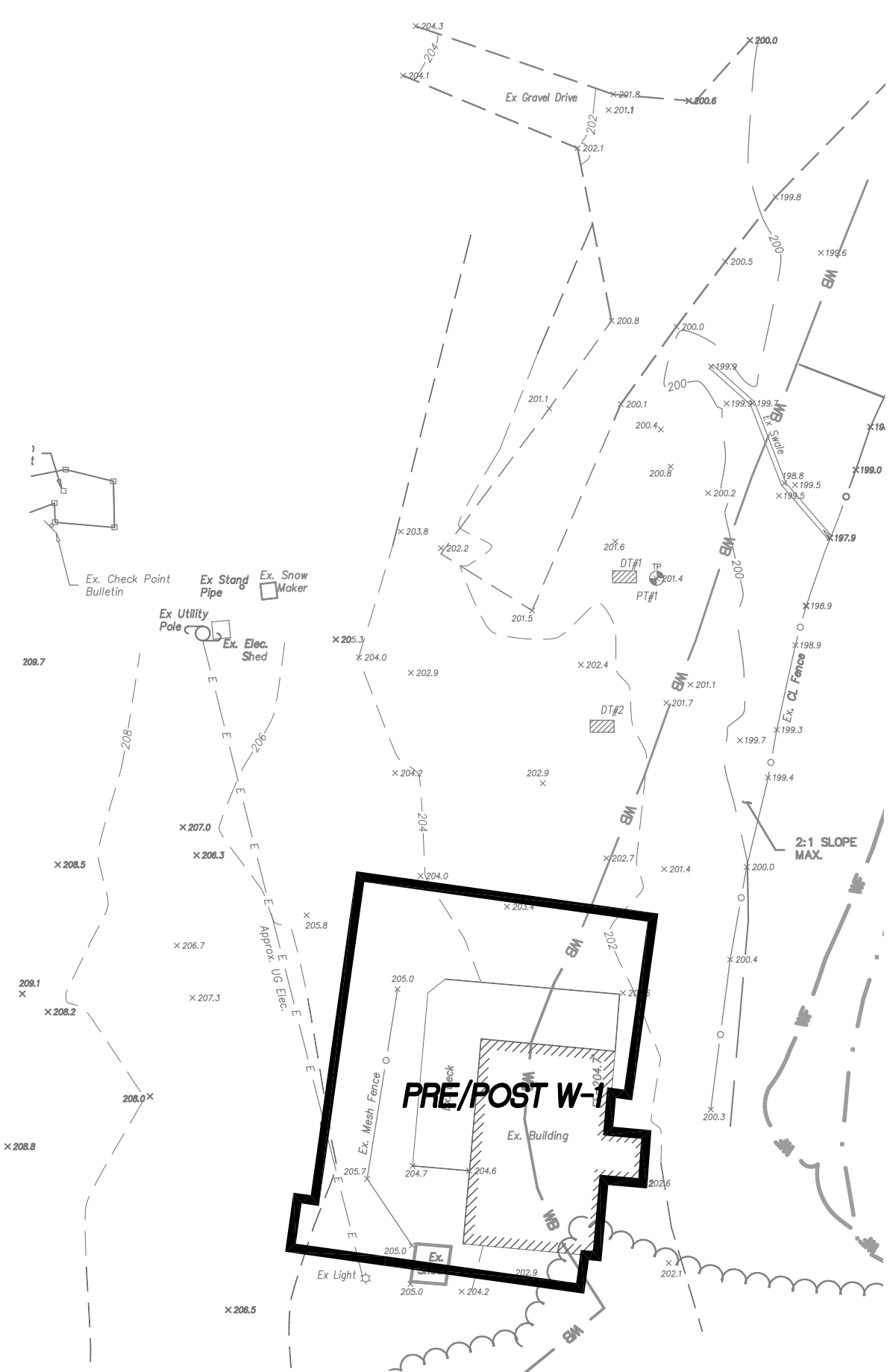
6 in

Amount of Stone Below Chambers -

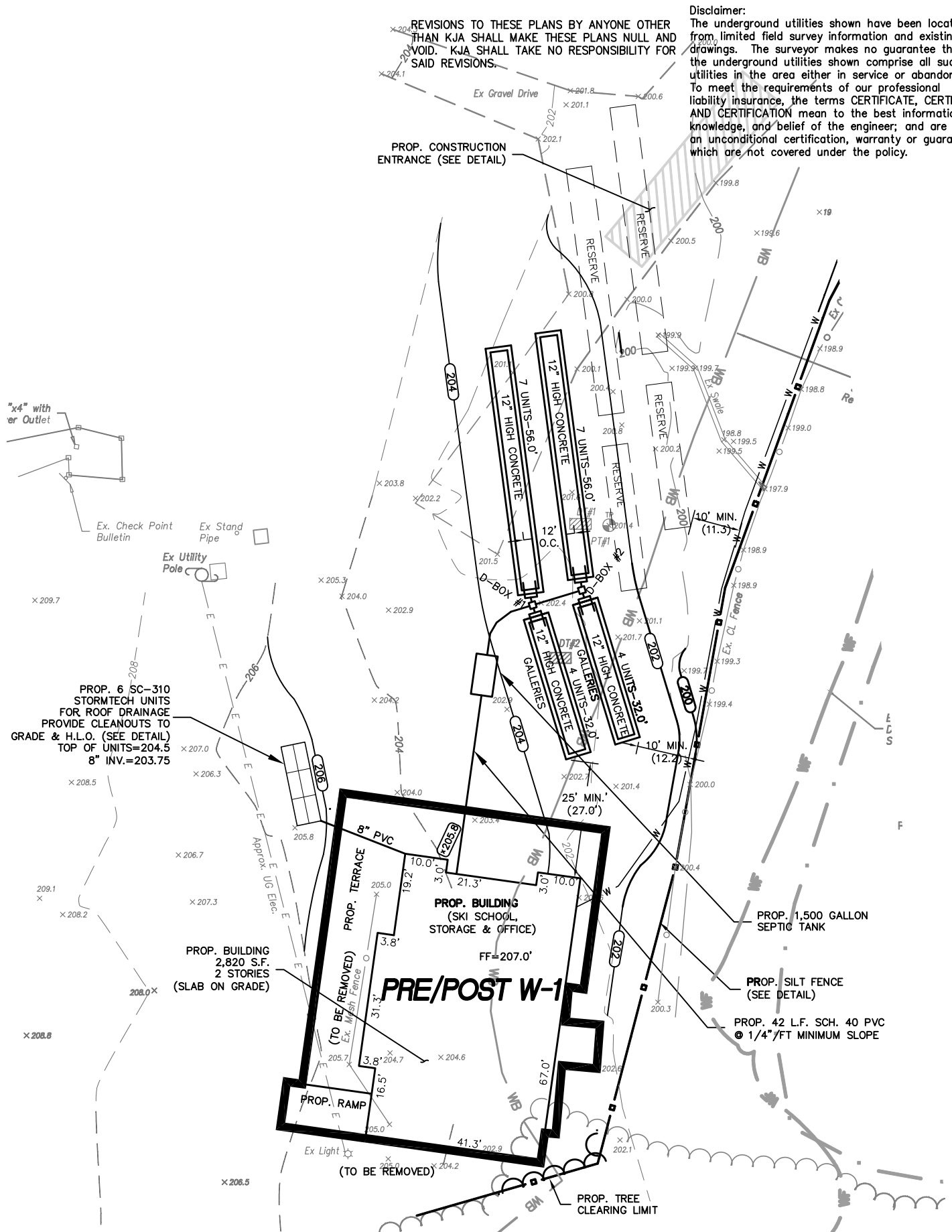
6 in

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



PRE-DEVELOPMENT WATERSHED MAP



POST-DEVELOPMENT WATERSHED MAP

REVISIONS TO THESE PLANS BY ANYONE OTHER THAN KJA SHALL MAKE THESE PLANS NULL AND VOID. KJA SHALL TAKE NO RESPONSIBILITY FOR SAID REVISIONS.

Disclaimer: The underground utilities shown have been located from limited field survey information and existing drawings. The surveyor makes no guarantee that the underground utilities shown comprise all such utilities in the area either in service or abandoned. To meet the requirements of our professional liability insurance, the terms CERTIFICATE, CERTIFY, AND CERTIFICATION mean to the best information, knowledge, and belief of the engineer; and are not an unconditional certification, warranty or guarantee which are not covered under the policy.

REVISION-7:
REVISION-6:
REVISION-5:
REVISION-4:
REVISION-3:
REVISION-2:
REVISION-1:
PROJECT:

DB:---	SR:---	DR:---
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SEAL:

James N. Sakonchick
CT P.E. & L.S. #11302

kratzer,
jones &
associates, inc.

CIVIL ENGINEERS • LAND SURVEYORS
SITE PLANNERS • BUILDING ENGINEERS

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WATERSHED MAPS

for

MT. SOUTHTON
SKI AREA LIMITED
PARTNERSHIP

#396 MT. VERNON ROAD
SOUTHTON, CT

SCALE: 1" = 30'
DATE: NOVEMBER 12, 2020

HALF ONE INCH
INCHES ON ORIGINAL

KJA FILE NO.: 207-150
DRAWING NO.: W-1

M:\1\207150 SKI\W-1 SITE PLAN-SKI SCHOOL & SEPTIC 2020.dwg
LAYOUT: W-1 DATE: Jan 05, 2021 - 5:00pm