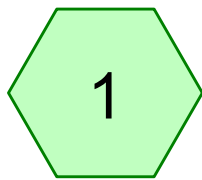
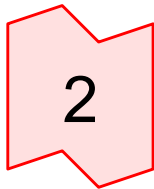


EXISTING

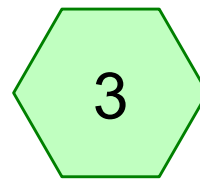
PROPOSED



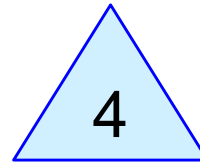
SUB 1



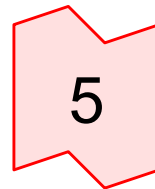
S/N 001



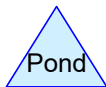
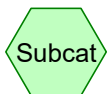
SUB 1



UNDERGROUND
CHAMBERS



S/N 001



Gristmill Richmond - Prelim Master

Type II 24-hr 10 YEAR Rainfall=3.48"

Prepared by Grenier Engineering

Printed 5/23/2023

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Page 2

Summary for Subcatchment 1: SUB 1

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

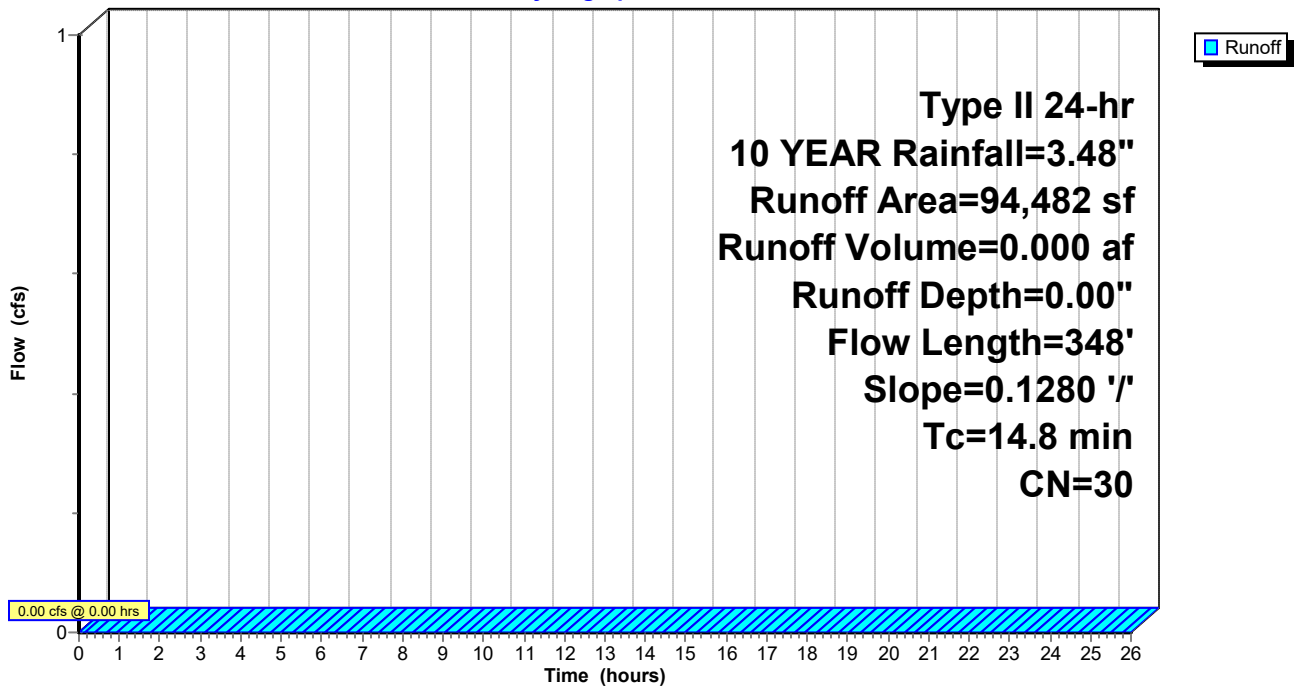
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-26.00 hrs, dt= 0.01 hrs
Type II 24-hr 10 YEAR Rainfall=3.48"

Area (sf)	CN	Description
94,482	30	Woods, Good, HSG A
94,482		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.8	348	0.1280	0.39		Lag/CN Method,

Subcatchment 1: SUB 1

Hydrograph



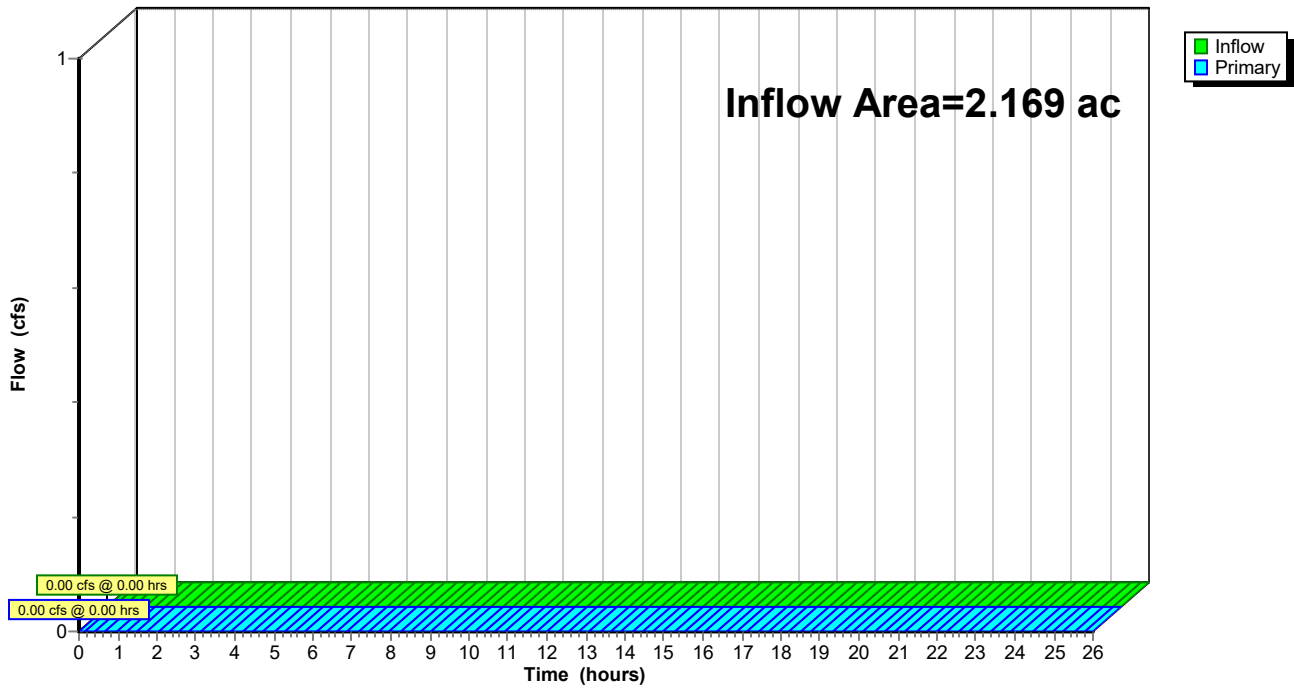
Summary for Link 2: S/N 001

Inflow Area = 2.169 ac, 0.00% Impervious, Inflow Depth = 0.00" for 10 YEAR event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.01 hrs

Link 2: S/N 001

Hydrograph



Summary for Subcatchment 3: SUB 1

Runoff = 2.88 cfs @ 11.94 hrs, Volume= 0.145 af, Depth= 2.48"

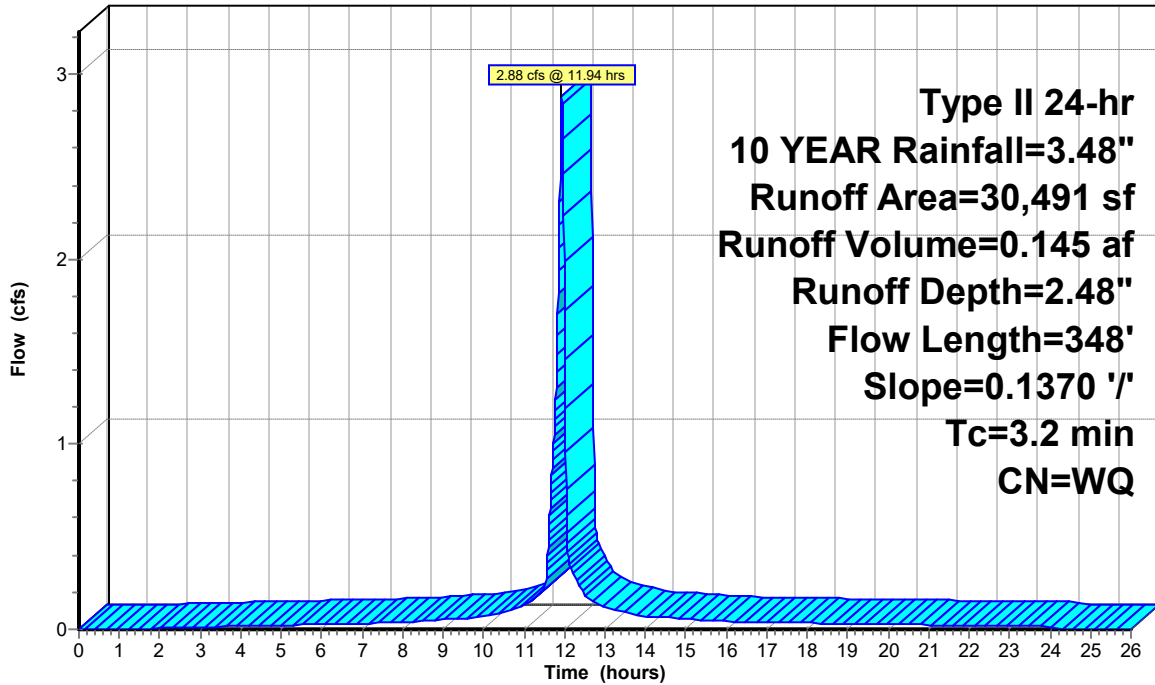
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-26.00 hrs, dt= 0.01 hrs
 Type II 24-hr 10 YEAR Rainfall=3.48"

Area (sf)	CN	Description
15,420	98	Roofs, HSG A
7,884	98	Paved parking, HSG A
7,187	39	>75% Grass cover, Good, HSG A
30,491		Weighted Average
7,187		23.57% Pervious Area
23,304		76.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	348	0.1370	1.79		Lag/CN Method,

Subcatchment 3: SUB 1

Hydrograph



Summary for Pond 4: UNDERGROUND CHAMBERS

Inflow Area = 0.700 ac, 76.43% Impervious, Inflow Depth = 2.48" for 10 YEAR event
 Inflow = 2.88 cfs @ 11.94 hrs, Volume= 0.145 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.01 hrs
 Peak Elev= 314.85' @ 24.19 hrs Surf.Area= 2,101 sf Storage= 6,309 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

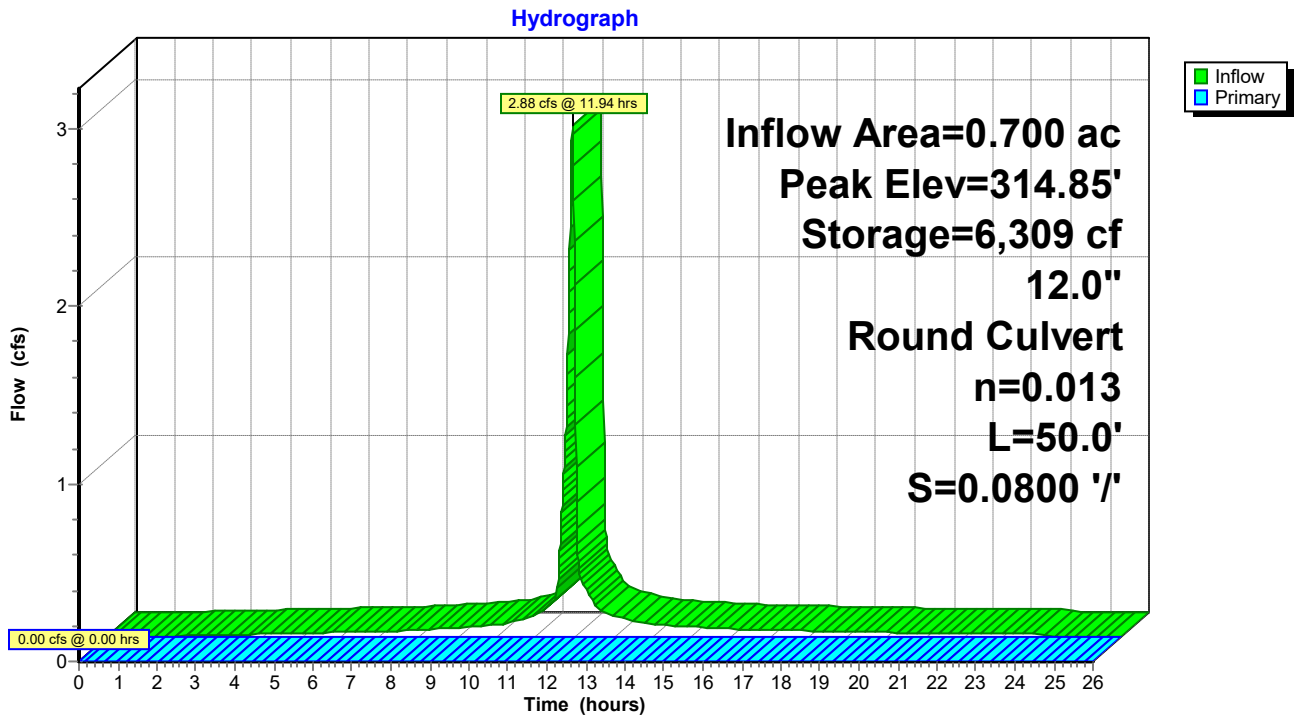
Volume	Invert	Avail.Storage	Storage Description
#1A	310.25'	2,991 cf	29.92'W x 70.23'L x 5.50'H Field A 11,556 cf Overall - 4,077 cf Embedded = 7,478 cf x 40.0% Voids
#2A	311.00'	4,077 cf	ADS_StormTech MC-3500 d +Cap x 36 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 36 Chambers in 4 Rows Cap Storage= +14.9 cf x 2 x 4 rows = 119.2 cf
		7,069 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	315.00'	12.0" Round Culvert L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 315.00' / 311.00' S= 0.0800 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=310.25' (Free Discharge)
 ↑1=Culvert (Controls 0.00 cfs)

Pond 4: UNDERGROUND CHAMBERS



Summary for Link 5: S/N 001

Inflow Area = 0.700 ac, 76.43% Impervious, Inflow Depth = 0.00" for 10 YEAR event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.01 hrs

Link 5: S/N 001

Hydrograph

