CARMINAWOOD DESIGN

ENGINEER'S REPORT

for

Proposed Warehouse

4560 Clinton Street Town of West Seneca, Erie County, New York

Prepared for

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Existing Runoff

Proposed Runoff

Section 1 - Location & Description

This project is the construction of a 9,000 sf metal panel warehouse building on the current developed 3.8 acre site located on the north side of Clinton Street in the Town of West Seneca. Construction will consist of the 9,000 sf warehouse building and include associated utility, lighting and landscaping improvements. Currently the site is developed with existing warehouse buildings and pavement. The proposed site development area to be disturbed for this project is approximately 0.9 acres when construction is completed.

Section 2 - Water Service

An existing water service currently serves the existing two warehouse buildings on site. A new water service will be installed and connected to the existing 12" ECWA water main on the north side of Clinton Street. The service will be a 6" Class 52 DI combined water service, then split into a 6" Class 52 DI fire service and a 2" type 'k' copper domestic service at the ROW line. Both DI services will continue into the proposed insulated enclosure. Inside the enclosure the 2" domestic service will have a meter and RPZ and the 6" fire service will have a RPDA. Heat will be provided in the enclosure to prevent freezing. Drainage due to testing or failure of the RPZ will be via gravity to the nearest drainage inlet. The owner will be responsible for keeping the drainage ports clear of snow and debris. Water inside the buildings will be used for typical domestic uses. The proposed 2" domestic service will continue from the hot box enclosure to the existing front building, where this service will connect to the existing inside the building

The buildings are not to be sprinklered. One private hydrant will be installed on site to ensure fire hose coverage not exceeding 400'.

Domestic Summary:

Peak Operating Demand: 24.20 gpm

Water Main: 12" on Clinton Street

Static Pressure: 62 psi (ECWA)

Friction Loss: 0.0 psi Loss through meter/RPZ: 13.4 psi Elevation Loss: 0.0 psi Pressure after RPZ: 49.0 psi

Repairs to all devices will be made during off hours, dual backflow preventers are not required. The site is not located in a 100-year flood plain. Disinfection of the water service following installation will be continuous feed, according to AWWA C-651, latest revision.

Section 3 - Sanitary Sewer Service

The proposed warehouse building will have a 6" SDR-35 PVC sanitary lateral at 1.0% minimum slope. This lateral will connect to an existing private sanitary sewer on site. This private sewer line connects into the existing Town of West Seneca sanitary sewer located on the north side of Clinton Street.

Design Parameters

Warehouse: $15 \text{ gal/day/employee} \times 8 \text{ emp} = 120 \text{ gpd}$

120 gpd * 4.47 = 536 gpd *use peaking factor of 4.47

The hydraulic loading rate is per "Design Standards for Intermediate Sized Wastewater Treatment Systems" 2014, NYSDEC.

Section 4 - Storm Sewer Service

The existing site currently sheet drains to catch basins within the existing drive lane or sheet drains to an existing stormwater management pond, which connects to the drive lane drains. These ultimately discharge to an existing stormwater management area along the frontage of the property which outlets to the existing public storm sewer system along the north side of Clinton Street.

Stormwater runoff collected onsite as a result of the proposed warehouse building will be routed through the relocated dry stormwater pond connected by a series of catch basins and smooth interior HDPE stormwater pipe. This pond drains to the existing on site storm sewer via and existing 10" outlet pipe.

Detention Pond Summary:

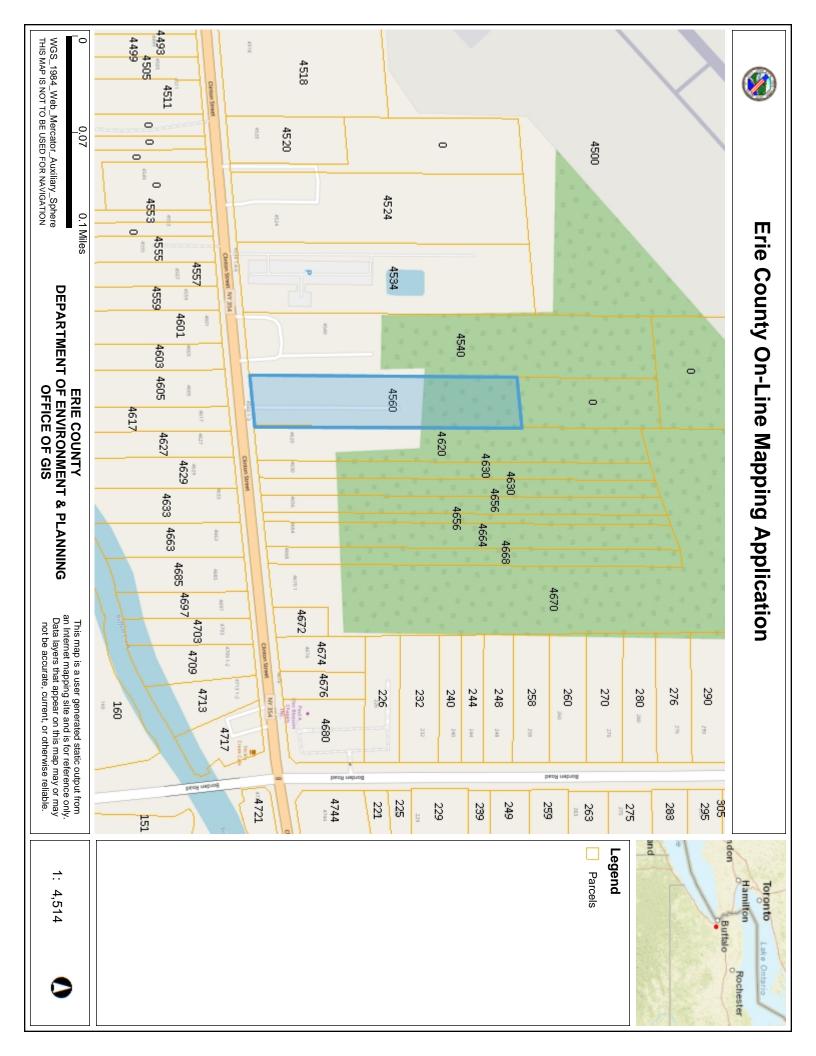
Top of basin elevation = 667.00 Bottom of basin elevation = 665.00 100-year storm storage volume = 18,896 cf @ 587.99

Runoff Summary:

Event	Ex. Runoff (cfs)*	Pro. Runoff (cfs)*	Result (cfs)
1-year	0.66	0.60	-0.06
10-year	1.16	1.16	0.00
100-year	1.75	1.72	-0.03

^{*} Existing and proposed runoff flowrate is the rate controlled by the existing 10" outlet pipe from the dry detention pond which discharges to the existing storm sewer system on site.

Appendix A Location Map



Appendix B

Sanitary Sewer and Water Demand Calculations

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487 MAIN STREET, SUITE 500 BUFFALO, NEW YORK, 14203 (716) 842-3165 FAX (716) 842-0263

Project No.: 22.346 3/22/2023 Date:

Project Name: Proposed Warehouse

Project Address: 4560 Clinton Street West Seneca, NY Sanitary Sewer & Water Demand Calcs

Sheet:

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Δ elev = 0 ft = 0.00 psi Loss through meter = 1 psi Loss through RPZ = 12 psi Total Losses = 13.0 psi Static Pressure = 62 psi (per ECWA) Residual Pressure Following RPZ = 62 - 13.0 = 49.0 psi (available after rpz & meter) Proposed Townhouses Q = 1,000 gpd Headlosses: Q _{peak} = 1000 gpm Pipe = 6 inch Ductile Iron C = 140 Lengtl = 25 LF (approx. distance from tap to RPDA in hot box) H _L = 10.44 LQ 1.85 / C 1.03 D 1.000 psi (140) 1.03 (6) 1.000 psi (140) 1.03 (6) 1.000 psi (150)	Δ elev = 0 ft = 0.00 psi Loss through meter = 1 psi Loss through RPZ = 12 psi Total Losses = 13.0 psi Static Pressure = 62 psi (per ECWA) Residual Pressure Following RPZ = 62 - 13.0 = 49.0 psi (available after rpz & meter) Proposed Townhouses Q = 1,000 gpd Headlosses: Qoesk = 1000 gpm Pipe = 6 inch Ductile Iron C = 140 Lengtl = 25 LF (approx. distance from tap to RPDA in hot box) H _L = 10.44 L Q ^{1.85} /C ^{1.83} D ^{2.806} /C ^{1.83} D ^{2.806} /C 10.44(25)(1000) ^{1.85} /C 11.62 ft = 0.70 psi Loss Through RPZ = 12.0 psi Total Losses = 12.7 psi Static Pressure = 62.0 psi (per ECWA)	Δ elev = 0 ft = 0.00 psi Loss through meter = 1 psi Loss through RPZ = 12 psi Total Losses = 13.0 psi Static Pressure = 62 psi (per ECWA) Residual Pressure Following RPZ = 62 - 13.0 = 49.0 psi (available after rpz & meter) Atter Demand Calculations (fire): Proposed Townhouses Q = 1,000 gpd Headlosses: Q _{eesk} = 1000 gpm Pipe = 6 inch Ductile Iron C = 140 Lengtl = 25 LF (approx. distance from tap to RPDA in hot box) H _L = 10.44 LQ 1.85 C 1.03 D 1.000 psi Loss Through RPZ = 12.0 psi Total Losses = 12.7 psi Static Pressure = 62.0 psi (per ECWA)	10.44 L (J ^{1.85}	10.44(2	25)(0.33) ^{1.85}					
Δ elev = 0 ft = 0.00 psi Loss through meter = 1 psi Loss through RPZ = 12 psi Total Losses = 13.0 psi (per ECWA) Residual Pressure Following RPZ = 62 - 13.0 = 49.0 psi (available after rpz & meter) Proposed Townhouses Q = 1,000 gpd Headlosses: Q _{peak} = 1000 gpm Pipe = 6 inch Ductile Iron C = 140 Lengtl = 25 LF (approx. distance from tap to RPDA in hot box) H _t = 10.44 L Q ^{1.85} / _{C^{1.20} D^{7.000} = 10.44(25)(1000)^{1.85}/_{(140)^{1.20} (6)^{3.000}/_{(140)^{1.20} (6)^{3.000}/_{(140)^{1.200} (6)^{3.000}/}}}}</sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub></sub>	Δ elev = 0 ft = 0.00 psi Loss through meter = 1 psi Loss through RPZ = 12 psi Total Losses = 13.0 psi Static Pressure = 62 psi (per ECWA) Residual Pressure Following RPZ = 62 - 13.0 = 49.0 psi (available after rpz & meter) Proposed Townhouses Q = 1,000 gpd Headlosses: Qoesk = 1000 gpm Pipe = 6 inch Ductile Iron C = 140 Lengtl = 25 LF (approx. distance from tap to RPDA in hot box) H _L = 10.44 L Q ^{1.85} /C ^{1.83} D ^{2.806} /C ^{1.83} D ^{2.806} /C 10.44(25)(1000) ^{1.85} /C 11.62 ft = 0.70 psi Loss Through RPZ = 12.0 psi Total Losses = 12.7 psi Static Pressure = 62.0 psi (per ECWA)	Δ elev = 0 ft = 0.00 psi Loss through meter = 1 psi Loss through RPZ = 12 psi Total Losses = 13.0 psi Static Pressure = 62 psi (per ECWA) Residual Pressure Following RPZ = 62 - 13.0 = 49.0 psi (available after rpz & meter) Atter Demand Calculations (fire): Proposed Townhouses Q = 1,000 gpd Headlosses: Q _{eesk} = 1000 gpm Pipe = 6 inch Ductile Iron C = 140 Lengtl = 25 LF (approx. distance from tap to RPDA in hot box) H _L = 10.44 LQ 1.85 C 1.03 D 1.000 psi Loss Through RPZ = 12.0 psi Total Losses = 12.7 psi Static Pressure = 62.0 psi (per ECWA)	$H_L = \frac{C^{1.85} D^4}{C^{1.85} D^4}$.866 =	(140)	$\frac{1.85}{(2)^{4.866}}$ =	0.00 ft =	0.00 psi			
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Loss through RPZ	Total Losses 13.0 psi Static Pressure 62 psi (per ECWA) Static Pressure Following RPZ 62 - 13.0 62 - 13.0 62 - 13.0 62 - 13.0 63 psi (available after rpz & meter) Static Pressure Following RPZ 12.0 psi (available after rpz & meter) Static Pressure 10.00 psi Static Pressure 10.00 psi Static Pressure 12.0 psi (per ECWA) Static Pressure 62.0 psi (per ECWA) Stati	Loss through RPZ	Loss through mete	er =	- psi						
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Residual Pressure Following RPZ = 62 - 13.0 = 49.0 psi (available after rpz & meter) Atter Demand Calculations (fire):	Residual Pressure Following RPZ = 62 - 13.0 = 49.0 psi (available after rpz & meter) Application Company Comp	Residual Pressure Following RPZ = 62 - 13.0 = 49.0 psi (available after rpz & meter) Atter Demand Calculations (fire):	Static Pressure	=	62 psi	(per ECWA)					
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Loss Through RPZ = 12.0 psi Total Losses = 12.7 psi Static Pressure = 62.0 psi (per ECWA)	Loss Through RPZ = 12.0 psi Total Losses = 12.7 psi Static Pressure = 62.0 psi (per ECWA)	Loss Through RPZ = 12.0 psi Total Losses = 12.7 psi Static Pressure = 62.0 psi (per ECWA)	Proposed Townhouses Q = 1,000 gpd Headlosses: Q _{peak} = 1 Pipe =	000 gpm 6 inch	Ductile Ir	on Cance from tap to (5) (1000) 1.85					
Loss Through RPZ = 12.0 psi Total Losses = 12.7 psi Static Pressure = 62.0 psi (per ECWA)	Loss Through RPZ = 12.0 psi Total Losses = 12.7 psi Static Pressure = 62.0 psi (per ECWA)	Loss Through RPZ = 12.0 psi Total Losses = 12.7 psi Static Pressure = 62.0 psi (per ECWA)	Proposed Townhouses Q = 1,000 gpd Headlosses: Q _{peak} = 1 Pipe =	000 gpm 6 inch	Ductile Ir	on C ance from tap to (25)(1000) ^{1.85} 1.83 (6) ^{4.886}					
Total Losses = 12.7 psi	Total Losses = 12.7 psi	Total Losses = 12.7 psi Static Pressure = 62.0 psi (per ECWA)	Proposed Townhouses Q = 1,000 gpd Headlosses: Q _{peak} = 1 Pipe = Lengtl = H _L = 10.44 L 0 C ^{1.83} D ⁴	000 gpm 6 inch 25 LF (ap 21.85	Ductile Ir pprox. dista 10.44(2 (140)	on C ance from tap to 25)(1000) ^{1.85}					
Static Pressure = 62.0 psi (per ECWA)	Static Pressure = 62.0 psi (per ECWA)	Static Pressure = 62.0 psi (per ECWA)	$\begin{array}{c cccc} Proposed Townhouses \\ \hline Q = & 1,000 \text{ gpd} \\ \hline \\ Headlosses: & \\ \hline Q_{peak} & = & 1 \\ \hline Pipe & = & \\ \hline Lengtl & = & \\ \hline \\ H_L = & \frac{10.44 \text{ L}}{\text{C}^{1.85}} \frac{1}{\text{D}^4} \\ \hline \\ \Delta \text{ elev} & = & 0 \text{ ft} \\ \hline \end{array}$	000 gpm 6 inch 25 LF (ap 2.85 = 0.00	Ductile Ir pprox. dista 10.44(2 (140)	on C = 1.83 (6) ^{4.866} = =					
			$\begin{array}{c cccc} Proposed Townhouses \\ \hline Q = & 1,000 \text{ gpd} \\ \hline \\ Headlosses: & \\ \hline Q_{peak} & = & 1 \\ \hline \\ Pipe & = \\ \hline \\ LengtI & = \\ \hline \\ H_L = & \frac{10.44 \text{ L}}{C^{1.85} \text{ D}^4} \\ \hline \\ \Delta \text{ elev} & = & 0 \text{ ft} \\ \hline \\ Loss Through RPZ \\ \hline \end{array}$	000 gpm 6 inch 25 LF (ap 2.85 = 0.00	Ductile Ir pprox. dista 10.44(2 (140) 0 psi 12.0 psi	on Cance from tap to 25)(1000) ^{1.85} = 1.83 (6) ^{4.866} =					
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			$\begin{array}{c c} \hline Proposed Townhouses \\ \hline Q = 1,000 \ gpd \\ \hline \\ Headlosses: \\ \hline Q_{peak} = 1 \\ \hline Pipe = \\ \hline Lengtl = \\ \hline \\ H_L = \frac{10.44 \ LO}{C^{1.83} \ D^4} \\ \hline \\ \Delta \ elev = 0 \ ft \\ \hline \\ Loss Through RPZ \\ \hline \\ Total Los \\ \hline \\ Static Pressure \\ \hline \end{array}$	000 gpm 6 inch 25 LF (ap 21.85 8888 = 0.00	Ductile Ir pprox. dista 10.44(2 (140) 0 psi 12.0 psi 12.7 psi 62.0 psi	25)(1000) ^{1.85} = 1.83 (6) ^{4.866} = (per ECWA)	1.62 ft =	0.70 psi			
			$\begin{array}{c c} \hline Proposed Townhouses \\ \hline Q = 1,000 \ gpd \\ \hline \\ Headlosses: \\ \hline Q_{peak} = 1 \\ \hline Pipe = \\ \hline Lengtl = \\ \hline \\ H_L = \frac{10.44 \ LO}{C^{1.83} \ D^4} \\ \hline \\ \Delta \ elev = 0 \ ft \\ \hline \\ Loss Through RPZ \\ \hline \\ Total Los \\ \hline \\ Static Pressure \\ \hline \end{array}$	000 gpm 6 inch 25 LF (ap 21.85 8888 = 0.00	Ductile Ir pprox. dista 10.44(2 (140) 0 psi 12.0 psi 12.7 psi 62.0 psi	25)(1000) ^{1.85} = 1.83 (6) ^{4.866} = (per ECWA)	1.62 ft =	0.70 psi			
			$\begin{array}{c c} \hline Proposed Townhouses \\ \hline Q = 1,000 \ gpd \\ \hline \\ Headlosses: \\ \hline Q_{peak} = 1 \\ \hline Pipe = \\ \hline Lengtl = \\ \hline \\ H_L = \frac{10.44 \ LO}{C^{1.83} \ D^4} \\ \hline \\ \Delta \ elev = 0 \ ft \\ \hline \\ Loss Through RPZ \\ \hline \\ Total Los \\ \hline \\ Static Pressure \\ \hline \end{array}$	000 gpm 6 inch 25 LF (ap 21.85 8888 = 0.00	Ductile Ir pprox. dista 10.44(2 (140) 0 psi 12.0 psi 12.7 psi 62.0 psi	25)(1000) ^{1.85} = 1.83 (6) ^{4.866} = (per ECWA)	1.62 ft =	0.70 psi			
			$\begin{array}{c c} \hline Proposed Townhouses \\ \hline Q = 1,000 \ gpd \\ \hline \\ Headlosses: \\ \hline Q_{peak} = 1 \\ \hline Pipe = \\ \hline Lengtl = \\ \hline \\ H_L = \frac{10.44 \ LO}{C^{1.83} \ D^4} \\ \hline \\ \Delta \ elev = 0 \ ft \\ \hline \\ Loss Through RPZ \\ \hline \\ Total Los \\ \hline \\ Static Pressure \\ \hline \end{array}$	000 gpm 6 inch 25 LF (ap 21.85 8888 = 0.00	Ductile Ir pprox. dista 10.44(2 (140) 0 psi 12.0 psi 12.7 psi 62.0 psi	25)(1000) ^{1.85} = 1.83 (6) ^{4.866} = (per ECWA)	1.62 ft =	0.70 psi			
			$\begin{array}{c c} \hline Proposed Townhouses \\ \hline Q = 1,000 \ gpd \\ \hline \\ Headlosses: \\ \hline Q_{peak} = 1 \\ \hline Pipe = \\ \hline Lengtl = \\ \hline \\ H_L = \frac{10.44 \ LO}{C^{1.83} \ D^4} \\ \hline \\ \Delta \ elev = 0 \ ft \\ \hline \\ Loss Through RPZ \\ \hline \\ Total Los \\ \hline \\ Static Pressure \\ \hline \end{array}$	000 gpm 6 inch 25 LF (ap 21.85 8888 = 0.00	Ductile Ir pprox. dista 10.44(2 (140) 0 psi 12.0 psi 12.7 psi 62.0 psi	25)(1000) ^{1.85} = 1.85 (6) ^{4.866} = (per ECWA)	1.62 ft =	0.70 psi			

Appendix C

Storm Sewer System Drainage Calculations

EXISTING RUNOFF STONE 1200.10' MEAS. 1200.00' DEED 125.19' —FIRST FLOOR ELEV: 667.71 STEEL GARAGE SUR PUT (10) BOLLARDS ROW OF 10-12" PINE TREES U.P. #197-3x FOUND FENCE REBAR FENCE CONC RIM:665.70 C.B. RIM:665.87 NO VISIBLE PIPE:

2. THE LOCATION OF ANY UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND ALL UTILITIES MAY NOT BE SHOWN. PRIOR TO ANY CONSTRUCTION ACTIVITIES, ALL UTILITY COMPANIES SHOULD BE KNOTHED IN ORDER TO YEARLY OR AFEND THEIR LOCATIONS AND/OR EXISTENCE, FOR ASSISTANCE 1. ELEVATIONS ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

FIRE HYDRANT

MATER VALVE

SANITARY MANHOLE

8

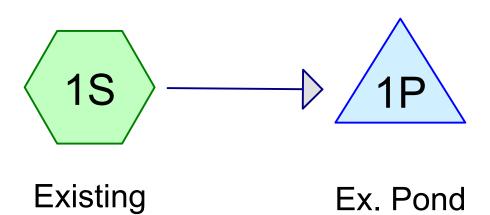
E ELECTRIC BOX CLEANOUT

BOLLARD \varnothing UTILITY POLE LEGEND

Existing Runoff

Events for Pond 1P: Ex. Pond

Event	Inflow	Primary	Elevation	Storage
	(cfs)	(cfs)	(feet)	(cubic-feet)
1-Year	1.36	0.66	665.71	611
2-Year	1.80	0.86	665.84	822
5-Year	2.50	1.07	666.04	1,180
10-Year	3.15	1.16	666.21	1,575
25-Year	4.18	1.41	666.46	2,221
50-Year	5.13	1.58	666.66	2,855
100-Year	6.25	1.75	666.88	3,639











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Rainfall Events Listing (selected events)

Event#	Event	Storm Type	Curve	Mode	Duration	B/B	Depth	AMC
	Name				(hours)		(inches)	
1	1-Year	Type II 24-hr		Default	24.00	1	1.87	2
2	10-Year	Type II 24-hr		Default	24.00	1	3.14	2
3	100-Year	Type II 24-hr		Default	24.00	1	5.23	2

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Area Listing (all nodes)

Ar	ea CN	Description
(sq-	-ft)	(subcatchment-numbers)
23,9	58 79	50-75% Grass cover, Fair, HSG C (1S)
15,2	46 96	Gravel surface, HSG C (1S)
39,2	204 86	TOTAL AREA

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Soil Listing (all nodes)

Area	Soil	Subcatchment
(sq-ft)	Group	Numbers
0	HSG A	
0	HSG B	
39,204	HSG C	1S
0	HSG D	
0	Other	
39,204		TOTAL AREA

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Ground Covers (all nodes)

HSG-A	HSG-B	HSG-C	HSG-D	Other	Total	Ground
(sq-ft)	(sq-ft)	(sq-ft)	(sq-ft)	(sq-ft)	(sq-ft)	Cover
0	0	23,958	0	0	23,958	50-75% Grass
						cover, Fair
0	0	15,246	0	0	15,246	Gravel surface
0	0	39,204	0	0	39,204	TOTAL AREA

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Pipe Listing (all nodes)

Lin	e#	Node	In-Invert	Out-Invert	Length	Slope	n	Width	Diam/Height	Inside-Fill
		Number	(feet)	(feet)	(feet)	(ft/ft)		(inches)	(inches)	(inches)
	1	1P	665.00	664.85	150.0	0.0010	0.013	0.0	10.0	0.0

Type II 24-hr 1-Year Rainfall=1.87"
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Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Existing Runoff Area=0.900 ac 0.00% Impervious Runoff Depth=0.75" Flow Length=155' Slope=0.0100 '/' Tc=3.1 min CN=86 Runoff=1.36 cfs 2,456 cf

Pond 1P: Ex. Pond

Peak Elev=665.71' Storage=611 cf Inflow=1.36 cfs 2,456 cf
10.0" Round Culvert n=0.013 L=150.0' S=0.0010'/' Outflow=0.66 cfs 2,456 cf

Total Runoff Area = 39,204 sf Runoff Volume = 2,456 cf Average Runoff Depth = 0.75" 100.00% Pervious = 39,204 sf 0.00% Impervious = 0 sf

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Summary for Subcatchment 1S: Existing

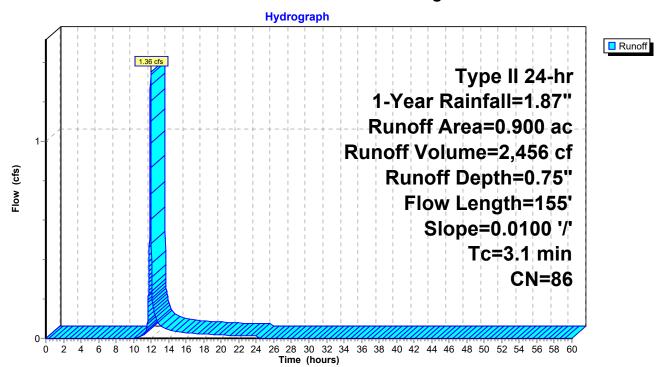
Runoff = 1.36 cfs @ 11.94 hrs, Volume= 2,456 cf, Depth= 0.75"

Routed to Pond 1P: Ex. Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs Type II 24-hr 1-Year Rainfall=1.87"

Area	(ac)	CN D	escrip	otion								
0	.350	96 G	ravel	ravel surface, HSG C								
0	.550	79 5	0-75%	6 Grass	cover, Fair	, HSG C						
0	.900	86 V	/eight	ed Aver	age							
0	.900	1	00.00	% Pervi	ous Area							
Tc	Lengt			'elocity	Capacity	Description						
(min)	(feet) (ft/	ft) ((ft/sec)	(cfs)							
1.8	10	0.01	00	0.92		Sheet Flow, gravel						
						Smooth surfaces n= 0.011 P2= 2.50"						
1.3	5	5 0.01	00	0.70		Shallow Concentrated Flow, grass						
						Short Grass Pasture Kv= 7.0 fps						
3.1	15	5 Tota										

Subcatchment 1S: Existing



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Summary for Pond 1P: Ex. Pond

Inflow Area = 39,204 sf, 0.00% Impervious, Inflow Depth = 0.75" for 1-Year event

Inflow = 1.36 cfs @ 11.94 hrs, Volume= 2,456 cf

Outflow = 0.66 cfs @ 12.02 hrs, Volume= 2,456 cf, Atten= 52%, Lag= 4.5 min

Primary = 0.66 cfs @ 12.02 hrs, Volume= 2,456 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs Peak Elev= 665.71' @ 12.02 hrs Surf.Area= 1,455 sf Storage= 611 cf

Plug-Flow detention time= 26.4 min calculated for 2,456 cf (100% of inflow)

Center-of-Mass det. time= 26.6 min (869.1 - 842.5)

Volume	Inve	ert Avai	l.Storage	Storage	Description	
#1	665.0	00'	4,100 cf	Custon	n Stage Data (Pr	rismatic)Listed below (Recalc)
Elevation (feet)		Surf.Area (sq-ft)		c.Store c-feet)	Cum.Store (cubic-feet)	
665.00)	275		0	0	
666.00)	1,945		1,110	1,110	
667.00)	4,035		2,990	4,100	
Device I	Routing	Inv	vert Out	et Device	es	
#1 I	Primary	665			d Culvert	handrall Kar 0.500

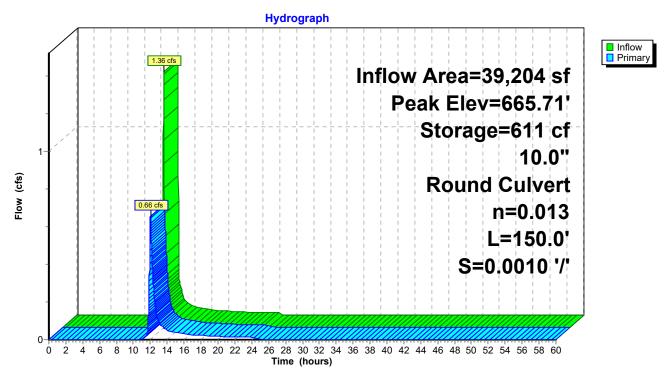
L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 665.00' / 664.85' S= 0.0010 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf

Primary OutFlow Max=0.66 cfs @ 12.02 hrs HW=665.71' (Free Discharge) 1=Culvert (Barrel Controls 0.66 cfs @ 1.79 fps)

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Pond 1P: Ex. Pond



Type II 24-hr 10-Year Rainfall=3.14"

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Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Existing Runoff Area=0.900 ac 0.00% Impervious Runoff Depth=1.78"

Flow Length=155' Slope=0.0100 '/' Tc=3.1 min CN=86 Runoff=3.15 cfs 5,825 cf

Pond 1P: Ex. Pond

Peak Elev=666.21' Storage=1,575 cf Inflow=3.15 cfs 5,825 cf
10.0" Round Culvert n=0.013 L=150.0' S=0.0010 '/' Outflow=1.16 cfs 5,825 cf

Total Runoff Area = 39,204 sf Runoff Volume = 5,825 cf Average Runoff Depth = 1.78" 100.00% Pervious = 39,204 sf 0.00% Impervious = 0 sf

Summary for Subcatchment 1S: Existing

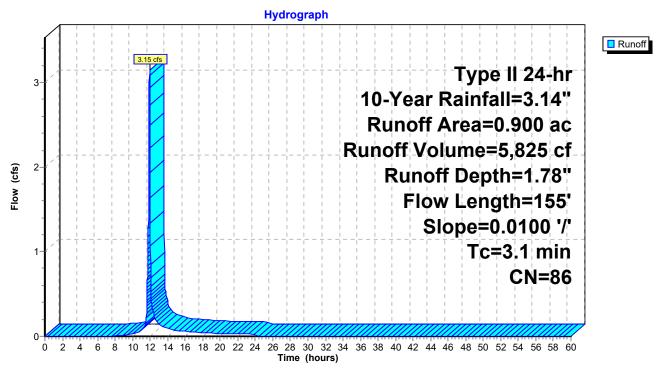
Runoff = 3.15 cfs @ 11.94 hrs, Volume= 5,825 cf, Depth= 1.78"

Routed to Pond 1P: Ex. Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs Type II 24-hr 10-Year Rainfall=3.14"

_	Area	(ac) C	N Desc	cription		
	0.	350 9	96 Grav	el surface	, HSG C	
_	0.	550 7	⁷ 9 50-7	5% Grass	cover, Fair	HSG C
	0.	900 8	36 Weig	ghted Aver	age	
	0.	900	100.	00% Pervi	ous Area	
	Tc	Length	Slope	Velocity	Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	1.8	100	0.0100	0.92		Sheet Flow, gravel
						Smooth surfaces n= 0.011 P2= 2.50"
	1.3	55	0.0100	0.70		Shallow Concentrated Flow, grass
_						Short Grass Pasture Kv= 7.0 fps
	3 1	155	Total			

Subcatchment 1S: Existing



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Summary for Pond 1P: Ex. Pond

Inflow Area = 39,204 sf, 0.00% Impervious, Inflow Depth = 1.78" for 10-Year event

Inflow = 3.15 cfs @ 11.94 hrs, Volume= 5,825 cf

Outflow = 1.16 cfs @ 12.03 hrs, Volume= 5,825 cf, Atten= 63%, Lag= 5.3 min

Primary = 1.16 cfs @ 12.03 hrs, Volume= 5,825 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs Peak Elev= 666.21' @ 12.03 hrs Surf.Area= 2,393 sf Storage= 1,575 cf

Plug-Flow detention time= 22.7 min calculated for 5,825 cf (100% of inflow)

Center-of-Mass det. time= 22.7 min (840.2 - 817.6)

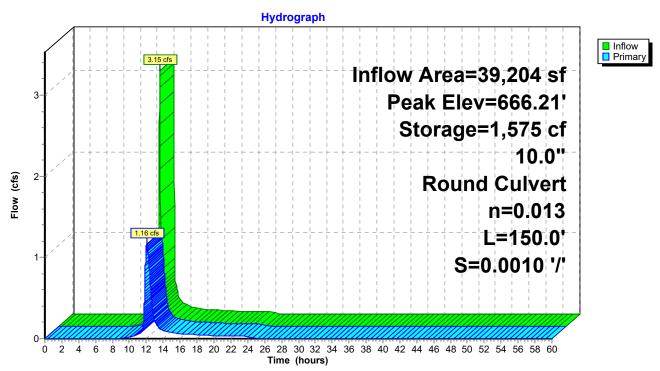
Volume	Inve	ert Avai	I.Storage	Storage	Description				
#1	665.0	00'	4,100 cf	cf Custom Stage Data (Prismatic)Listed below (Recalc)					
Elevatio		Surf.Area (sq-ft)		ic.Store pic-feet)	Cum.Store (cubic-feet)				
665.0	0	275		0	0				
666.0	0	1,945		1,110	1,110				
667.0	0	4,035		2,990	4,100				
Device	Routing	In	vert Ou	tlet Device:	S				
#1	Primary	665	5.00' 10 .	0" Round	Culvert				

L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 665.00' / 664.85' S= 0.0010 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf

Primary OutFlow Max=1.16 cfs @ 12.03 hrs HW=666.21' (Free Discharge) 1=Culvert (Barrel Controls 1.16 cfs @ 2.13 fps)

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Pond 1P: Ex. Pond



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Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Existing Runoff Area=0.900 ac 0.00% Impervious Runoff Depth=3.68"

Flow Length=155' Slope=0.0100 '/' Tc=3.1 min CN=86 Runoff=6.25 cfs 12,030 cf

Pond 1P: Ex. Pond

Peak Elev=666.88' Storage=3,639 cf Inflow=6.25 cfs 12,030 cf
10.0" Round Culvert n=0.013 L=150.0' S=0.0010 '/' Outflow=1.75 cfs 12,030 cf

Total Runoff Area = 39,204 sf Runoff Volume = 12,030 cf Average Runoff Depth = 3.68" 100.00% Pervious = 39,204 sf 0.00% Impervious = 0 sf

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Summary for Subcatchment 1S: Existing

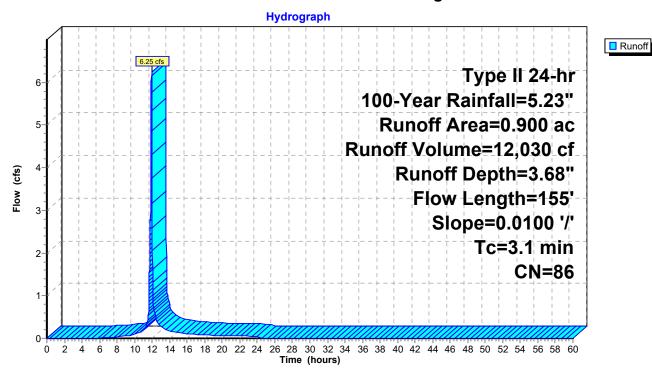
Runoff = 6.25 cfs @ 11.94 hrs, Volume= 12,030 cf, Depth= 3.68"

Routed to Pond 1P: Ex. Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs Type II 24-hr 100-Year Rainfall=5.23"

	Area	(ac) C	N Des	cription					
0.350 96 Gravel surface, HSG C									
0.550 79 50-75% Grass cover, Fair, HSG C									
	0.	900	36 Weig	ghted Aver					
	0.	900	100.	00% Pervi	ous Area				
	Тс	Length	Slope	Velocity	Capacity	Description			
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
	1.8	100	0.0100	0.92		Sheet Flow, gravel			
						Smooth surfaces n= 0.011 P2= 2.50"			
	1.3	55	0.0100	0.70		Shallow Concentrated Flow, grass			
						Short Grass Pasture Kv= 7.0 fps			
	3.1	155	Total						

Subcatchment 1S: Existing



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Summary for Pond 1P: Ex. Pond

Inflow Area = 39,204 sf, 0.00% Impervious, Inflow Depth = 3.68" for 100-Year event

Inflow = 6.25 cfs @ 11.94 hrs, Volume= 12,030 cf

Outflow = 1.75 cfs @ 12.04 hrs, Volume= 12,030 cf, Atten= 72%, Lag= 6.0 min

Primary = 1.75 cfs @ 12.04 hrs, Volume= 12,030 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs Peak Elev= 666.88' @ 12.04 hrs Surf.Area= 3,789 sf Storage= 3,639 cf

Plug-Flow detention time= 24.4 min calculated for 12,030 cf (100% of inflow)

Center-of-Mass det. time= 24.3 min (821.3 - 796.9)

Volume	Inve	ert Avai	I.Storage	Storage l	Description					
#1	665.0	00'	4,100 cf	f Custom Stage Data (Prismatic)Listed below (Recalc)						
Elevatio (fee		Surf.Area (sq-ft)		c.Store ic-feet)	Cum.Store (cubic-feet)					
665.0	0	275		0	0					
666.0	0	1,945		1,110	1,110					
667.0	0	4,035		2,990	4,100					
Device	Routing	In	vert Out	tlet Devices	3					
#1	Primary	665	.00' 10.	0" Round	Culvert					

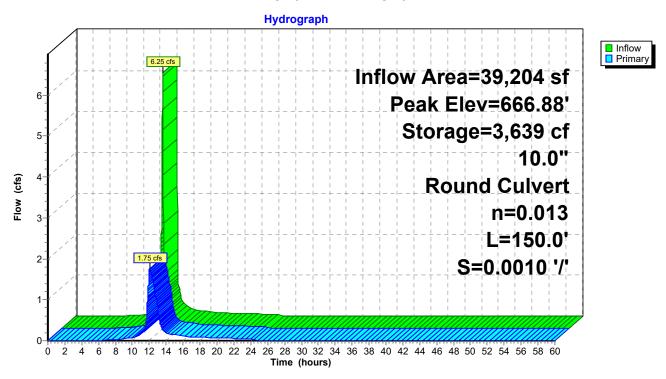
L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 665.00' / 664.85' S= 0.0010 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf

Primary OutFlow Max=1.75 cfs @ 12.04 hrs HW=666.88' (Free Discharge) 1=Culvert (Barrel Controls 1.75 cfs @ 3.21 fps)

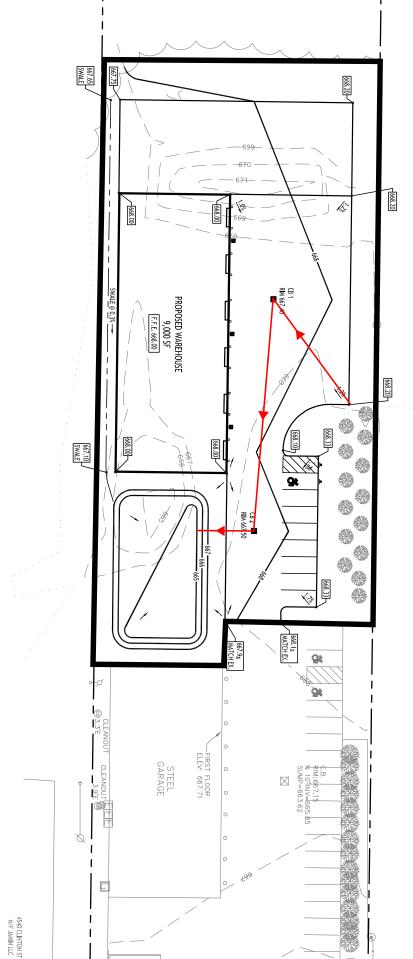
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Pond 1P: Ex. Pond



PROPOSED RUNOFF



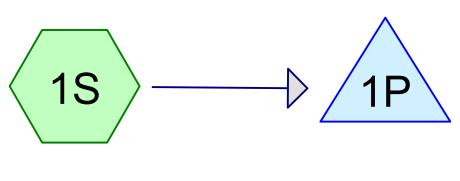


4620 CLINTON ST N/F MICAH MILEWSKI

Proposed Runoff

Events for Pond 1P: Pond

Event	Inflow	Primary	Elevation	Storage
	(cfs)	(cfs)	(feet)	(cubic-feet)
1-Year	1.99	0.60	665.65	1,435
2-Year	2.49	0.79	665.76	1,776
5-Year	3.23	1.03	665.92	2,284
10-Year	3.90	1.16	666.06	2,767
25-Year	4.95	1.32	666.28	3,560
50-Year	5.91	1.52	666.47	4,278
100-Year	7.02	1.72	666.69	5,130















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Rainfall Events Listing (selected events)

Event#	Event	Storm Type	Curve	Mode	Duration	B/B	Depth	AMC
	Name				(hours)		(inches)	
1	1-Year	Type II 24-hr		Default	24.00	1	1.87	2
2	10-Year	Type II 24-hr		Default	24.00	1	3.14	2
3	100-Year	Type II 24-hr		Default	24.00	1	5.23	2

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Area Listing (all nodes)

(sq-ft)		(subcatchment-numbers)
 11,761	79	50-75% Grass cover, Fair, HSG C (1S)
6,098	96	Gravel surface, HSG C (1S)
12,632	98	Paved parking, HSG C (1S)
8,712	98	Roofs, HSG C (1S)
39,204	92	TOTAL AREA
•		

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Soil Listing (all nodes)

Area	Soil	Subcatchment
(sq-ft)	Group	Numbers
0	HSG A	
0	HSG B	
39,204	HSG C	1S
0	HSG D	
0	Other	
39,204		TOTAL AREA

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Ground Covers (all nodes)

HSG-A	HSG-B	HSG-C	HSG-D	Other	Total	Ground
 (sq-ft)	(sq-ft)	(sq-ft)	(sq-ft)	(sq-ft)	(sq-ft)	Cover
 0	0	11,761	0	0	11,761	50-75% Grass
						cover, Fair
0	0	6,098	0	0	6,098	Gravel surface
0	0	12,632	0	0	12,632	Paved parking
0	0	8,712	0	0	8,712	Roofs
0	0	39.204	0	0	39.204	TOTAL AREA

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Pipe Listing (all nodes)

Line#	Node	In-Invert	Out-Invert	Length	Slope	n	Width	Diam/Height	Inside-Fill
	Number	(feet)	(feet)	(feet)	(ft/ft)		(inches)	(inches)	(inches)
 1	1S	0.00	0.00	155.0	0.0030	0.013	0.0	8.0	0.0
2	1P	665.00	664.85	125.0	0.0012	0.013	0.0	10.0	0.0

Type II 24-hr 1-Year Rainfall=1.87"

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Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Proposed Runoff Area=0.900 ac 54.44% Impervious Runoff Depth=1.12"

Flow Length=225' Tc=2.7 min CN=92 Runoff=1.99 cfs 3,663 cf

Pond 1P: Pond

Peak Elev=665.65' Storage=1,435 cf Inflow=1.99 cfs 3,663 cf
10.0" Round Culvert n=0.013 L=125.0' S=0.0012 '/' Outflow=0.60 cfs 3,650 cf

Total Runoff Area = 39,204 sf Runoff Volume = 3,663 cf Average Runoff Depth = 1.12" 45.56% Pervious = 17,860 sf 54.44% Impervious = 21,344 sf

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Summary for Subcatchment 1S: Proposed

[47] Hint: Peak is 301% of capacity of segment #2

Runoff = 1.99 cfs @ 11.93 hrs, Volume= 3,663 cf, Depth= 1.12"

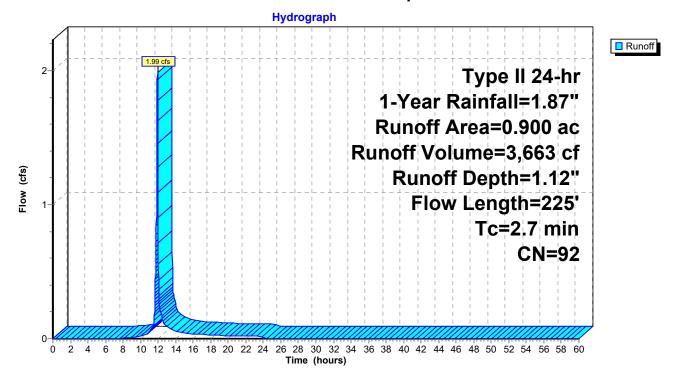
Routed to Pond 1P : Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs Type II 24-hr 1-Year Rainfall=1.87"

Area	(ac)	CN I	Desc	cription		
0	.200	98 I	Root	fs, HSG C		
0	.290	98 I	Pave	ed parking	, HSG C	
0	.140	96	Grav	el surface	, HSG C	
0	.270	79 :	<u>50-7</u>	5% Grass	cover, Fair	, HSG C
0	.900	92	Weig	ghted Aver	age	
0	.410	4	45.5	6% Pervio	us Area	
0	.490	;	54.4	4% Imper	∕ious Area	
					_	
Tc	Lengtl		ope	Velocity	Capacity	Description
(min)	(feet) (f	t/ft)	(ft/sec)	(cfs)	
1.3	70	0.0	120	0.92		Sheet Flow, pavement
						Smooth surfaces n= 0.011 P2= 2.50"
1.4	15	5 0.00	030	1.90	0.66	Pipe Channel, 8" Pipe
						8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17'
						n= 0.013 Corrugated PE, smooth interior
2.7	22	5 Tota	al			

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Subcatchment 1S: Proposed



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Summary for Pond 1P: Pond

Inflow Area = 39,204 sf, 54.44% Impervious, Inflow Depth = 1.12" for 1-Year event

Inflow = 1.99 cfs @ 11.93 hrs, Volume= 3,663 cf

Outflow = 0.60 cfs (a) 12.03 hrs, Volume= 3,650 cf, Atten= 70%, Lag= 5.6 min

Primary = 0.60 cfs @ 12.03 hrs, Volume= 3,650 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs Peak Elev= 665.65' @ 12.03 hrs Surf.Area= 2,831 sf Storage= 1,435 cf

Plug-Flow detention time= 97.3 min calculated for 3,650 cf (100% of inflow)

Center-of-Mass det. time= 95.1 min (907.6 - 812.6)

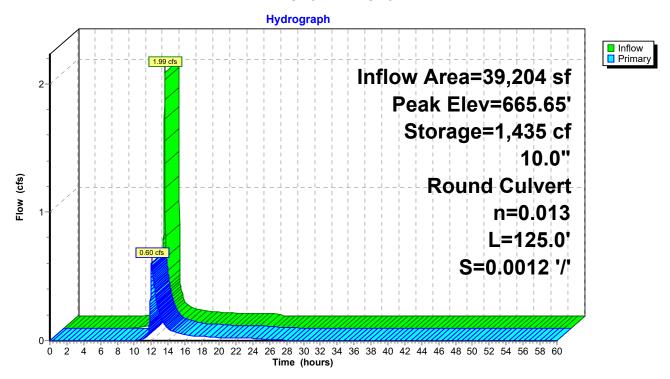
Volume	Inv	ert Avai	I.Storage	Storage	Description	
#1	665.0	00'	6,428 cf	Custon	n Stage Data (Prismatic)	_isted below (Recalc)
Elevation (feet)		Surf.Area (sq-ft)		ic.Store pic-feet)	Cum.Store (cubic-feet)	
665.00)	1,615	•	0	0	
666.00)	3,500		2,558	2,558	
667.00)	4,240		3,870	6,428	
Device	Routing	In	vert Ou	tlet Device	es	
#1	Primary	665		0" Round	d Culvert	I Ke= 0 500

L= 125.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 665.00' / 664.85' S= 0.0012 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf

Primary OutFlow Max=0.60 cfs @ 12.03 hrs HW=665.65' (Free Discharge) 1=Culvert (Barrel Controls 0.60 cfs @ 1.84 fps)

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Pond 1P: Pond



Type II 24-hr 10-Year Rainfall=3.14"

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Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Proposed Runoff Area=0.900 ac 54.44% Impervious Runoff Depth=2.29"

Flow Length=225' Tc=2.7 min CN=92 Runoff=3.90 cfs 7,493 cf

Pond 1P: Pond

Peak Elev=666.06' Storage=2,767 cf Inflow=3.90 cfs 7,493 cf
10.0" Round Culvert n=0.013 L=125.0' S=0.0012 '/' Outflow=1.16 cfs 7,480 cf

Total Runoff Area = 39,204 sf Runoff Volume = 7,493 cf Average Runoff Depth = 2.29" 45.56% Pervious = 17,860 sf 54.44% Impervious = 21,344 sf

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Summary for Subcatchment 1S: Proposed

[47] Hint: Peak is 590% of capacity of segment #2

Runoff = 3.90 cfs @ 11.93 hrs, Volume= 7,493 cf, Depth= 2.29"

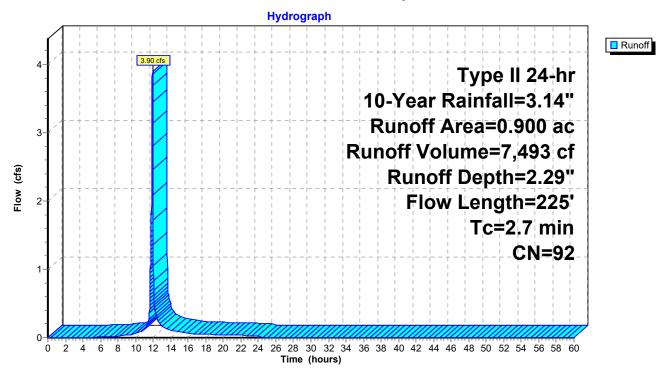
Routed to Pond 1P : Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs Type II 24-hr 10-Year Rainfall=3.14"

Area	(ac) (CN Des	cription		
0	.200	98 Roo	fs, HSG C		
0	.290	98 Pav	ed parking	, HSG C	
0	.140	96 Grav	el surface	, HSG C	
0	.270	79 50-7	'5% Grass	cover, Fair	r, HSG C
0	.900		ghted Aver		
0	.410	45.5	6% Pervio	us Area	
0	.490	54.4	4% Imper	vious Area	
_					
Tc	Length	•	Velocity	Capacity	Description
<u>(min)</u>	(feet)	(ft/ft)	(ft/sec)	(cfs)	
1.3	70	0.0120	0.92		Sheet Flow, pavement
					Smooth surfaces n= 0.011 P2= 2.50"
1.4	155	0.0030	1.90	0.66	Pipe Channel, 8" Pipe
					8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17'
					n= 0.013 Corrugated PE, smooth interior
2.7					

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Subcatchment 1S: Proposed



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Summary for Pond 1P: Pond

Inflow Area = 39,204 sf, 54.44% Impervious, Inflow Depth = 2.29" for 10-Year event

Inflow = 3.90 cfs @ 11.93 hrs, Volume= 7,493 cf

Outflow = 1.16 cfs @ 12.03 hrs, Volume= 7,480 cf, Atten= 70%, Lag= 5.7 min

Primary = 1.16 cfs @ 12.03 hrs, Volume= 7,480 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs Peak Elev= 666.06' @ 12.03 hrs Surf.Area= 3,544 sf Storage= 2,767 cf

Plug-Flow detention time= 72.2 min calculated for 7,479 cf (100% of inflow)

Center-of-Mass det. time= 71.3 min (863.6 - 792.2)

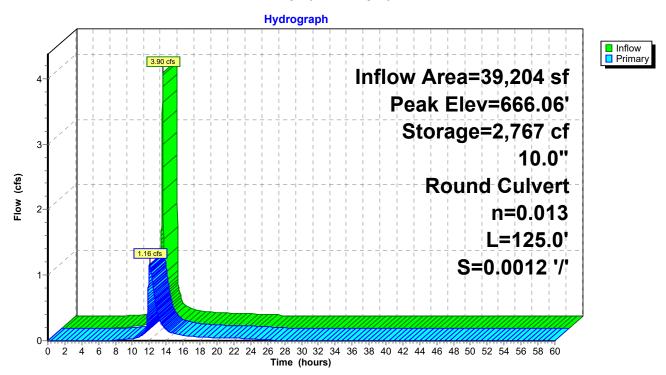
Volume	Inv	ert Avai	I.Storage	Storage	Description	
#1	665.0	00'	6,428 cf	Custon	n Stage Data (Prismatic)L	isted below (Recalc)
Elevation (feet)		Surf.Area (sq-ft)		ic.Store pic-feet)	Cum.Store (cubic-feet)	
665.00		1,615		0	0	
666.00		3,500		2,558	2,558	
667.00		4,240		3,870	6,428	
Device F	Routing	In	vert Ou	tlet Device	es	
#1 F	Primary	665		0" Round	d Culvert	Ke= 0.500

L= 125.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 665.00' / 664.85' S= 0.0012 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf

Primary OutFlow Max=1.16 cfs @ 12.03 hrs HW=666.06' (Free Discharge) 1=Culvert (Barrel Controls 1.16 cfs @ 2.17 fps)

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Pond 1P: Pond



Type II 24-hr 100-Year Rainfall=5.23"

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Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Proposed Runoff Area=0.900 ac 54.44% Impervious Runoff Depth=4.31"

Flow Length=225' Tc=2.7 min CN=92 Runoff=7.02 cfs 14,094 cf

Pond 1P: Pond

Peak Elev=666.69' Storage=5,130 cf Inflow=7.02 cfs 14,094 cf
10.0" Round Culvert n=0.013 L=125.0' S=0.0012 '/' Outflow=1.72 cfs 14,080 cf

Total Runoff Area = 39,204 sf Runoff Volume = 14,094 cf Average Runoff Depth = 4.31" 45.56% Pervious = 17,860 sf 54.44% Impervious = 21,344 sf

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Summary for Subcatchment 1S: Proposed

[47] Hint: Peak is 1061% of capacity of segment #2

Runoff = 7.02 cfs @ 11.93 hrs, Volume= 14,094 cf, Depth= 4.31"

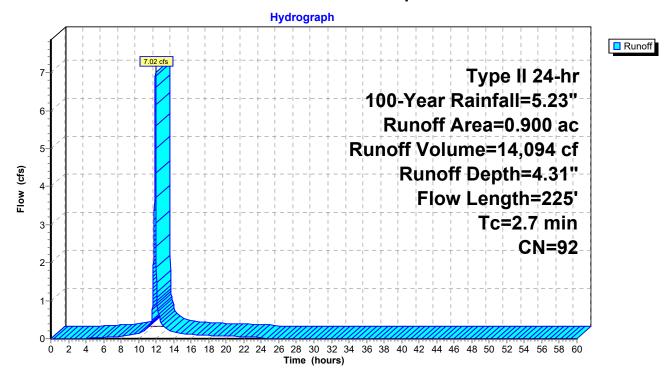
Routed to Pond 1P : Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs Type II 24-hr 100-Year Rainfall=5.23"

Area	(ac) C	N Des	cription		
0	.200 9	98 Roo	fs, HSG C		
0	.290 9	98 Pave	ed parking	, HSG C	
0	.140	96 Grav	el surface	, HSG C	
0	.270	79 50-7	5% Grass	cover, Fair	HSG C
0	.900	92 Weig	ghted Aver	age	
0	.410	45.5	6% Pervio	us Area	
0	.490	54.4	4% Imper	/ious Area	
-		01		0 :	
Tc	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
1.3	70	0.0120	0.92		Sheet Flow, pavement
					Smooth surfaces n= 0.011 P2= 2.50"
1.4	155	0.0030	1.90	0.66	Pipe Channel, 8" Pipe
					8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17'
					n= 0.013 Corrugated PE, smooth interior
2.7	225	Total			

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Subcatchment 1S: Proposed



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Summary for Pond 1P: Pond

Inflow Area = 39,204 sf, 54.44% Impervious, Inflow Depth = 4.31" for 100-Year event

Inflow = 7.02 cfs @ 11.93 hrs, Volume= 14,094 cf

Outflow = 1.72 cfs @ 12.03 hrs, Volume= 14,080 cf, Atten= 76%, Lag= 6.2 min

Primary = 1.72 cfs @ 12.03 hrs, Volume= 14,080 cf

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs Peak Elev= 666.69' @ 12.03 hrs Surf.Area= 4,007 sf Storage= 5,130 cf

Plug-Flow detention time= 61.7 min calculated for 14,078 cf (100% of inflow)

Center-of-Mass det. time= 61.4 min (836.3 - 774.9)

Volume	Inv	ert Avai	I.Storage	Storage	Description		
#1	665.	00'	6,428 cf	Custon	n Stage Data (Prismat	tic)Listed below (Recalc)	
Elevation (feet		Surf.Area (sq-ft)		c.Store ic-feet)	Cum.Store (cubic-feet)		
665.00	0	1,615		0	0		
666.00	0	3,500		2,558	2,558		
667.00	0	4,240		3,870	6,428		
Device	Routing	In	vert Out	let Device	es		
#1	Primary	665			d Culvert	wall Ke- 0.500	

L= 125.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 665.00' / 664.85' S= 0.0012 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf

Primary OutFlow Max=1.72 cfs @ 12.03 hrs HW=666.68' (Free Discharge) 1=Culvert (Barrel Controls 1.72 cfs @ 3.15 fps)

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Pond 1P: Pond

