Drainage Computations – Moodus Food Stop – 416 East Haddam – Moodus Road
Date: 1/3/26
Prepared by: Nemergut Consulting

Description:

The subject property is a 1.52 +/- acre parcel located at intersection for East Haddam – Moodus Road and Moodus Leesville Road. The site is currently an abandoned gas station & convenience store. The project area slopes gently up from East Haddam – Leesville Road to the south (in the area of proposed construction/improvements) and then slopes moderately up to the southern property line.

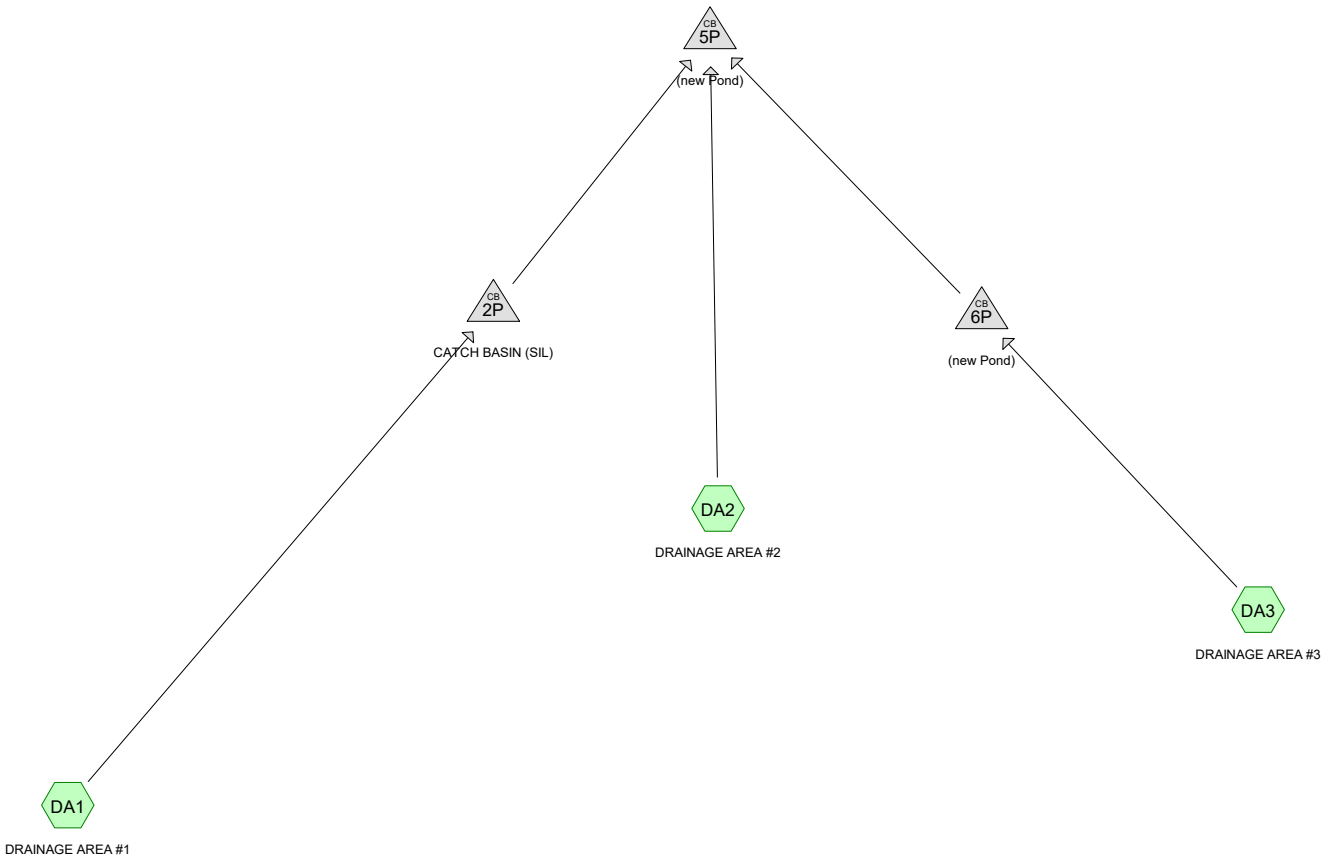
The proposed improvements will result in an increase in impervious area of approximately 2,300 S.F.

Due to the topography of the lot, stormwater detention will be achieved by directing most of the undeveloped portion of the property to a detention basing & forebay. It is also common practice to direct the runoff from the canopy into the tank farm where there will be additional stormwater detention. We do not have test hole data in the tank farm area, so we did not include it in our computations.

The following storms were analyzed using HydroCAD stormwater modeling software and the results are as follows. (See attached for more detailed analysis)

Storm	Existing (cfs)	Proposed w/detention (cfs)
2	1.96	1.99
5	3.14	3.02
10	4.20	3.93
25	5.71	4.12
50	6.87	5.98
100	8.14	6.89

The run-off from the site will maintain it's current path into the Conn. DOT drainage system in East Haddam – Moodus Road. The final catch basin will be equipped with a 4' sump and a SNOUT outlet device to prevent debris from entering the state drainage system.



Subcat Reach Pond Link

Routing Diagram for Moodius Food Stop EXISTING revised
Prepared by NEMERGUT CONSULTING
HydroCAD® 10.00-14 s/n 03111 © 2015 HydroCAD Software Solutions LLC

Time span=2.00-20.00 hrs, dt=0.05 hrs, 361 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DA1: DRAINAGE AREA #1 Runoff Area=35,823 sf 23.76% Impervious Runoff Depth>0.88"
Flow Length=276' Tc=12.6 min CN=70 Runoff=1.07 cfs 0.060 af

Subcatchment DA2: DRAINAGE AREA #2 Runoff Area=7,400 sf 87.16% Impervious Runoff Depth>2.63"
Tc=6.0 min CN=94 Runoff=0.76 cfs 0.037 af

Subcatchment DA3: DRAINAGE AREA #3 Runoff Area=7,983 sf 32.69% Impervious Runoff Depth>1.21"
Flow Length=161' Tc=11.0 min CN=76 Runoff=0.36 cfs 0.019 af

Pond 2P: CATCH BASIN (SIL) Peak Elev=118.94' Inflow=1.07 cfs 0.060 af
12.0" Round Culvert n=0.011 L=82.0' S=0.0122 '/' Outflow=1.07 cfs 0.060 af

Pond 5P: (new Pond) Peak Elev=118.04' Inflow=1.96 cfs 0.116 af
18.0" Round Culvert n=0.012 L=28.0' S=0.0571 '/' Outflow=1.96 cfs 0.116 af

Pond 6P: (new Pond) Peak Elev=118.69' Inflow=0.36 cfs 0.019 af
12.0" Round Culvert n=0.011 L=51.0' S=0.0196 '/' Outflow=0.36 cfs 0.019 af

Total Runoff Area = 1.176 ac Runoff Volume = 0.116 af Average Runoff Depth = 1.18"
65.68% Pervious = 0.772 ac 34.32% Impervious = 0.403 ac

Summary for Subcatchment DA1: DRAINAGE AREA #1

Runoff = 1.07 cfs @ 12.06 hrs, Volume= 0.060 af, Depth> 0.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2 YEAR Rainfall=3.46"

Area (sf)	CN	Description
24,300	60	Woods, Fair, HSG B
3,010	69	50-75% Grass cover, Fair, HSG B
8,513	98	Paved parking, HSG B
35,823	70	Weighted Average
27,310		76.24% Pervious Area
8,513		23.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	100	0.0950	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.9	100	0.1300	1.80		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	76	0.0260	3.27		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
12.6	276	Total			

Summary for Subcatchment DA2: DRAINAGE AREA #2

Runoff = 0.76 cfs @ 11.96 hrs, Volume= 0.037 af, Depth> 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2 YEAR Rainfall=3.46"

Area (sf)	CN	Description
6,450	98	Paved parking, HSG B
950	69	50-75% Grass cover, Fair, HSG B
7,400	94	Weighted Average
950		12.84% Pervious Area
6,450		87.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment DA3: DRAINAGE AREA #3

Runoff = 0.36 cfs @ 12.03 hrs, Volume= 0.019 af, Depth> 1.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2 YEAR Rainfall=3.46"

Area (sf)	CN	Description
2,610	98	Paved parking, HSG B
5,373	65	Woods/grass comb., Fair, HSG B
7,983	76	Weighted Average
5,373		67.31% Pervious Area
2,610		32.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.1100	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	61	0.0330	3.69		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.0	161	Total			

Summary for Pond 2P: CATCH BASIN (SIL)

Inflow Area = 0.822 ac, 23.76% Impervious, Inflow Depth > 0.88" for 2 YEAR event
Inflow = 1.07 cfs @ 12.06 hrs, Volume= 0.060 af
Outflow = 1.07 cfs @ 12.06 hrs, Volume= 0.060 af, Atten= 0%, Lag= 0.0 min
Primary = 1.07 cfs @ 12.06 hrs, Volume= 0.060 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.94' @ 12.06 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.40'	**12.0" Round Culvert** L= 82.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.40' / 117.40' S= 0.0122 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=1.05 cfs @ 12.06 hrs HW=118.93' (Free Discharge)
1=Culvert (Inlet Controls 1.05 cfs @ 2.48 fps)

Summary for Pond 5P: (new Pond)

Inflow Area = 1.176 ac, 34.32% Impervious, Inflow Depth > 1.18" for 2 YEAR event
Inflow = 1.96 cfs @ 12.01 hrs, Volume= 0.116 af
Outflow = 1.96 cfs @ 12.01 hrs, Volume= 0.116 af, Atten= 0%, Lag= 0.0 min
Primary = 1.96 cfs @ 12.01 hrs, Volume= 0.116 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.04' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	117.40'	**18.0" Round Culvert** L= 28.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 117.40' / 115.80' S= 0.0571 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=1.92 cfs @ 12.01 hrs HW=118.03' (Free Discharge)
1=Culvert (Inlet Controls 1.92 cfs @ 2.71 fps)

Summary for Pond 6P: (new Pond)

Inflow Area = 0.183 ac, 32.69% Impervious, Inflow Depth > 1.21" for 2 YEAR event
Inflow = 0.36 cfs @ 12.03 hrs, Volume= 0.019 af
Outflow = 0.36 cfs @ 12.03 hrs, Volume= 0.019 af, Atten= 0%, Lag= 0.0 min
Primary = 0.36 cfs @ 12.03 hrs, Volume= 0.019 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.69' @ 12.03 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.40'	**12.0" Round Culvert** L= 51.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.40' / 117.40' S= 0.0196 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=0.35 cfs @ 12.03 hrs HW=118.69' (Free Discharge)
1=Culvert (Inlet Controls 0.35 cfs @ 1.83 fps)

Time span=2.00-20.00 hrs, dt=0.05 hrs, 361 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DA1: DRAINAGE AREA #1 Runoff Area=35,823 sf 23.76% Impervious Runoff Depth>1.50"
Flow Length=276' Tc=12.6 min CN=70 Runoff=1.86 cfs 0.103 af

Subcatchment DA2: DRAINAGE AREA #2 Runoff Area=7,400 sf 87.16% Impervious Runoff Depth>3.57"
Tc=6.0 min CN=94 Runoff=1.00 cfs 0.051 af

Subcatchment DA3: DRAINAGE AREA #3 Runoff Area=7,983 sf 32.69% Impervious Runoff Depth>1.93"
Flow Length=161' Tc=11.0 min CN=76 Runoff=0.57 cfs 0.029 af

Pond 2P: CATCH BASIN (SIL) Peak Elev=119.15' Inflow=1.86 cfs 0.103 af
12.0" Round Culvert n=0.011 L=82.0' S=0.0122 '/' Outflow=1.86 cfs 0.103 af

Pond 5P: (new Pond) Peak Elev=118.23' Inflow=3.14 cfs 0.183 af
18.0" Round Culvert n=0.012 L=28.0' S=0.0571 '/' Outflow=3.14 cfs 0.183 af

Pond 6P: (new Pond) Peak Elev=118.78' Inflow=0.57 cfs 0.029 af
12.0" Round Culvert n=0.011 L=51.0' S=0.0196 '/' Outflow=0.57 cfs 0.029 af

Total Runoff Area = 1.176 ac Runoff Volume = 0.183 af Average Runoff Depth = 1.86"
65.68% Pervious = 0.772 ac 34.32% Impervious = 0.403 ac

Summary for Subcatchment DA1: DRAINAGE AREA #1

Runoff = 1.86 cfs @ 12.05 hrs, Volume= 0.103 af, Depth> 1.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 5 Year Rainfall=4.47"

Area (sf)	CN	Description
24,300	60	Woods, Fair, HSG B
3,010	69	50-75% Grass cover, Fair, HSG B
8,513	98	Paved parking, HSG B
35,823	70	Weighted Average
27,310		76.24% Pervious Area
8,513		23.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	100	0.0950	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.9	100	0.1300	1.80		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	76	0.0260	3.27		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
12.6	276	Total			

Summary for Subcatchment DA2: DRAINAGE AREA #2

Runoff = 1.00 cfs @ 11.96 hrs, Volume= 0.051 af, Depth> 3.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 5 Year Rainfall=4.47"

Area (sf)	CN	Description
6,450	98	Paved parking, HSG B
950	69	50-75% Grass cover, Fair, HSG B
7,400	94	Weighted Average
950		12.84% Pervious Area
6,450		87.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment DA3: DRAINAGE AREA #3

Runoff = 0.57 cfs @ 12.03 hrs, Volume= 0.029 af, Depth> 1.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 5 Year Rainfall=4.47"

Area (sf)	CN	Description
2,610	98	Paved parking, HSG B
5,373	65	Woods/grass comb., Fair, HSG B
7,983	76	Weighted Average
5,373		67.31% Pervious Area
2,610		32.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.1100	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	61	0.0330	3.69		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.0	161	Total			

Summary for Pond 2P: CATCH BASIN (SIL)

Inflow Area = 0.822 ac, 23.76% Impervious, Inflow Depth > 1.50" for 5 Year event
Inflow = 1.86 cfs @ 12.05 hrs, Volume= 0.103 af
Outflow = 1.86 cfs @ 12.05 hrs, Volume= 0.103 af, Atten= 0%, Lag= 0.0 min
Primary = 1.86 cfs @ 12.05 hrs, Volume= 0.103 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 119.15' @ 12.05 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.40'	**12.0" Round Culvert** L= 82.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.40' / 117.40' S= 0.0122 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=1.85 cfs @ 12.05 hrs HW=119.15' (Free Discharge)
1=Culvert (Inlet Controls 1.85 cfs @ 2.94 fps)

Summary for Pond 5P: (new Pond)

Inflow Area = 1.176 ac, 34.32% Impervious, Inflow Depth > 1.86" for 5 Year event
Inflow = 3.14 cfs @ 12.02 hrs, Volume= 0.183 af
Outflow = 3.14 cfs @ 12.02 hrs, Volume= 0.183 af, Atten= 0%, Lag= 0.0 min
Primary = 3.14 cfs @ 12.02 hrs, Volume= 0.183 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.23' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	117.40'	**18.0" Round Culvert** L= 28.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 117.40' / 115.80' S= 0.0571 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=3.07 cfs @ 12.02 hrs HW=118.22' (Free Discharge)
1=Culvert (Inlet Controls 3.07 cfs @ 3.09 fps)

Summary for Pond 6P: (new Pond)

Inflow Area = 0.183 ac, 32.69% Impervious, Inflow Depth > 1.93" for 5 Year event
Inflow = 0.57 cfs @ 12.03 hrs, Volume= 0.029 af
Outflow = 0.57 cfs @ 12.03 hrs, Volume= 0.029 af, Atten= 0%, Lag= 0.0 min
Primary = 0.57 cfs @ 12.03 hrs, Volume= 0.029 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.78' @ 12.03 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.40'	**12.0" Round Culvert** L= 51.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.40' / 117.40' S= 0.0196 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=0.55 cfs @ 12.03 hrs HW=118.77' (Free Discharge)
1=Culvert (Inlet Controls 0.55 cfs @ 2.07 fps)

Time span=2.00-20.00 hrs, dt=0.05 hrs, 361 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DA1: DRAINAGE AREA #1 Runoff Area=35,823 sf 23.76% Impervious Runoff Depth>2.07"
Flow Length=276' Tc=12.6 min CN=70 Runoff=2.59 cfs 0.142 af

Subcatchment DA2: DRAINAGE AREA #2 Runoff Area=7,400 sf 87.16% Impervious Runoff Depth>4.36"
Tc=6.0 min CN=94 Runoff=1.21 cfs 0.062 af

Subcatchment DA3: DRAINAGE AREA #3 Runoff Area=7,983 sf 32.69% Impervious Runoff Depth>2.57"
Flow Length=161' Tc=11.0 min CN=76 Runoff=0.75 cfs 0.039 af

Pond 2P: CATCH BASIN (SIL) Peak Elev=119.36' Inflow=2.59 cfs 0.142 af
12.0" Round Culvert n=0.011 L=82.0' S=0.0122 '/' Outflow=2.59 cfs 0.142 af

Pond 5P: (new Pond) Peak Elev=118.39' Inflow=4.20 cfs 0.243 af
18.0" Round Culvert n=0.012 L=28.0' S=0.0571 '/' Outflow=4.20 cfs 0.243 af

Pond 6P: (new Pond) Peak Elev=118.84' Inflow=0.75 cfs 0.039 af
12.0" Round Culvert n=0.011 L=51.0' S=0.0196 '/' Outflow=0.75 cfs 0.039 af

Total Runoff Area = 1.176 ac Runoff Volume = 0.243 af Average Runoff Depth = 2.48"
65.68% Pervious = 0.772 ac 34.32% Impervious = 0.403 ac

Summary for Subcatchment DA1: DRAINAGE AREA #1

Runoff = 2.59 cfs @ 12.05 hrs, Volume= 0.142 af, Depth> 2.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 YEAR Rainfall=5.31"

Area (sf)	CN	Description
24,300	60	Woods, Fair, HSG B
3,010	69	50-75% Grass cover, Fair, HSG B
8,513	98	Paved parking, HSG B
35,823	70	Weighted Average
27,310		76.24% Pervious Area
8,513		23.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	100	0.0950	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.9	100	0.1300	1.80		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	76	0.0260	3.27		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
12.6	276	Total			

Summary for Subcatchment DA2: DRAINAGE AREA #2

Runoff = 1.21 cfs @ 11.96 hrs, Volume= 0.062 af, Depth> 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 YEAR Rainfall=5.31"

Area (sf)	CN	Description
6,450	98	Paved parking, HSG B
950	69	50-75% Grass cover, Fair, HSG B
7,400	94	Weighted Average
950		12.84% Pervious Area
6,450		87.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment DA3: DRAINAGE AREA #3

Runoff = 0.75 cfs @ 12.03 hrs, Volume= 0.039 af, Depth> 2.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 YEAR Rainfall=5.31"

Area (sf)	CN	Description
2,610	98	Paved parking, HSG B
5,373	65	Woods/grass comb., Fair, HSG B
7,983	76	Weighted Average
5,373		67.31% Pervious Area
2,610		32.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.1100	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	61	0.0330	3.69		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.0	161	Total			

Summary for Pond 2P: CATCH BASIN (SIL)

Inflow Area = 0.822 ac, 23.76% Impervious, Inflow Depth > 2.07" for 10 YEAR event
Inflow = 2.59 cfs @ 12.05 hrs, Volume= 0.142 af
Outflow = 2.59 cfs @ 12.05 hrs, Volume= 0.142 af, Atten= 0%, Lag= 0.0 min
Primary = 2.59 cfs @ 12.05 hrs, Volume= 0.142 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 119.36' @ 12.05 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.40'	**12.0" Round Culvert** L= 82.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.40' / 117.40' S= 0.0122 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=2.59 cfs @ 12.05 hrs HW=119.36' (Free Discharge)
1=Culvert (Inlet Controls 2.59 cfs @ 3.34 fps)

Summary for Pond 5P: (new Pond)

Inflow Area = 1.176 ac, 34.32% Impervious, Inflow Depth > 2.48" for 10 YEAR event
Inflow = 4.20 cfs @ 12.02 hrs, Volume= 0.243 af
Outflow = 4.20 cfs @ 12.02 hrs, Volume= 0.243 af, Atten= 0%, Lag= 0.0 min
Primary = 4.20 cfs @ 12.02 hrs, Volume= 0.243 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.39' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	117.40'	**18.0" Round Culvert** L= 28.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 117.40' / 115.80' S= 0.0571 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=4.11 cfs @ 12.02 hrs HW=118.38' (Free Discharge)
└**1=Culvert** (Inlet Controls 4.11 cfs @ 3.37 fps)

Summary for Pond 6P: (new Pond)

Inflow Area = 0.183 ac, 32.69% Impervious, Inflow Depth > 2.57" for 10 YEAR event
Inflow = 0.75 cfs @ 12.03 hrs, Volume= 0.039 af
Outflow = 0.75 cfs @ 12.03 hrs, Volume= 0.039 af, Atten= 0%, Lag= 0.0 min
Primary = 0.75 cfs @ 12.03 hrs, Volume= 0.039 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.84' @ 12.03 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.40'	**12.0" Round Culvert** L= 51.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.40' / 117.40' S= 0.0196 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=0.73 cfs @ 12.03 hrs HW=118.83' (Free Discharge)
└**1=Culvert** (Inlet Controls 0.73 cfs @ 2.24 fps)

Time span=2.00-20.00 hrs, dt=0.05 hrs, 361 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DA1: DRAINAGE AREA #1 Runoff Area=35,823 sf 23.76% Impervious Runoff Depth>2.91"
Flow Length=276' Tc=12.6 min CN=70 Runoff=3.64 cfs 0.200 af

Subcatchment DA2: DRAINAGE AREA #2 Runoff Area=7,400 sf 87.16% Impervious Runoff Depth>5.44"
Tc=6.0 min CN=94 Runoff=1.49 cfs 0.077 af

Subcatchment DA3: DRAINAGE AREA #3 Runoff Area=7,983 sf 32.69% Impervious Runoff Depth>3.50"
Flow Length=161' Tc=11.0 min CN=76 Runoff=1.01 cfs 0.053 af

Pond 2P: CATCH BASIN (SIL) Peak Elev=119.82' Inflow=3.64 cfs 0.200 af
12.0" Round Culvert n=0.011 L=82.0' S=0.0122 '/' Outflow=3.64 cfs 0.200 af

Pond 5P: (new Pond) Peak Elev=118.61' Inflow=5.71 cfs 0.330 af
18.0" Round Culvert n=0.012 L=28.0' S=0.0571 '/' Outflow=5.71 cfs 0.330 af

Pond 6P: (new Pond) Peak Elev=118.92' Inflow=1.01 cfs 0.053 af
12.0" Round Culvert n=0.011 L=51.0' S=0.0196 '/' Outflow=1.01 cfs 0.053 af

Total Runoff Area = 1.176 ac Runoff Volume = 0.330 af Average Runoff Depth = 3.37"
65.68% Pervious = 0.772 ac 34.32% Impervious = 0.403 ac

Summary for Subcatchment DA1: DRAINAGE AREA #1

Runoff = 3.64 cfs @ 12.05 hrs, Volume= 0.200 af, Depth> 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25 Year Rainfall=6.46"

Area (sf)	CN	Description
24,300	60	Woods, Fair, HSG B
3,010	69	50-75% Grass cover, Fair, HSG B
8,513	98	Paved parking, HSG B
35,823	70	Weighted Average
27,310		76.24% Pervious Area
8,513		23.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	100	0.0950	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.9	100	0.1300	1.80		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	76	0.0260	3.27		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
12.6	276	Total			

Summary for Subcatchment DA2: DRAINAGE AREA #2

Runoff = 1.49 cfs @ 11.96 hrs, Volume= 0.077 af, Depth> 5.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25 Year Rainfall=6.46"

Area (sf)	CN	Description
6,450	98	Paved parking, HSG B
950	69	50-75% Grass cover, Fair, HSG B
7,400	94	Weighted Average
950		12.84% Pervious Area
6,450		87.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment DA3: DRAINAGE AREA #3

Runoff = 1.01 cfs @ 12.03 hrs, Volume= 0.053 af, Depth> 3.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25 Year Rainfall=6.46"

Area (sf)	CN	Description
2,610	98	Paved parking, HSG B
5,373	65	Woods/grass comb., Fair, HSG B
7,983	76	Weighted Average
5,373		67.31% Pervious Area
2,610		32.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.1100	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	61	0.0330	3.69		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.0	161	Total			

Summary for Pond 2P: CATCH BASIN (SIL)

Inflow Area = 0.822 ac, 23.76% Impervious, Inflow Depth > 2.91" for 25 Year event
Inflow = 3.64 cfs @ 12.05 hrs, Volume= 0.200 af
Outflow = 3.64 cfs @ 12.05 hrs, Volume= 0.200 af, Atten= 0%, Lag= 0.0 min
Primary = 3.64 cfs @ 12.05 hrs, Volume= 0.200 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 119.82' @ 12.05 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.40'	**12.0" Round Culvert** L= 82.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.40' / 117.40' S= 0.0122 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=3.62 cfs @ 12.05 hrs HW=119.81' (Free Discharge)
1=Culvert (Inlet Controls 3.62 cfs @ 4.61 fps)

Summary for Pond 5P: (new Pond)

Inflow Area = 1.176 ac, 34.32% Impervious, Inflow Depth > 3.37" for 25 Year event
Inflow = 5.71 cfs @ 12.02 hrs, Volume= 0.330 af
Outflow = 5.71 cfs @ 12.02 hrs, Volume= 0.330 af, Atten= 0%, Lag= 0.0 min
Primary = 5.71 cfs @ 12.02 hrs, Volume= 0.330 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.61' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	117.40'	**18.0" Round Culvert** L= 28.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 117.40' / 115.80' S= 0.0571 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=5.59 cfs @ 12.02 hrs HW=118.59' (Free Discharge)
└**1=Culvert** (Inlet Controls 5.59 cfs @ 3.71 fps)

Summary for Pond 6P: (new Pond)

Inflow Area = 0.183 ac, 32.69% Impervious, Inflow Depth > 3.50" for 25 Year event
Inflow = 1.01 cfs @ 12.03 hrs, Volume= 0.053 af
Outflow = 1.01 cfs @ 12.03 hrs, Volume= 0.053 af, Atten= 0%, Lag= 0.0 min
Primary = 1.01 cfs @ 12.03 hrs, Volume= 0.053 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.92' @ 12.03 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.40'	**12.0" Round Culvert** L= 51.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.40' / 117.40' S= 0.0196 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=0.98 cfs @ 12.03 hrs HW=118.91' (Free Discharge)
└**1=Culvert** (Inlet Controls 0.98 cfs @ 2.43 fps)

Time span=2.00-20.00 hrs, dt=0.05 hrs, 361 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DA1: DRAINAGE AREA #1 Runoff Area=35,823 sf 23.76% Impervious Runoff Depth>3.58"
Flow Length=276' Tc=12.6 min CN=70 Runoff=4.45 cfs 0.245 af

Subcatchment DA2: DRAINAGE AREA #2 Runoff Area=7,400 sf 87.16% Impervious Runoff Depth>6.25"
Tc=6.0 min CN=94 Runoff=1.69 cfs 0.088 af

Subcatchment DA3: DRAINAGE AREA #3 Runoff Area=7,983 sf 32.69% Impervious Runoff Depth>4.22"
Flow Length=161' Tc=11.0 min CN=76 Runoff=1.21 cfs 0.064 af

Pond 2P: CATCH BASIN (SIL) Peak Elev=120.28' Inflow=4.45 cfs 0.245 af
12.0" Round Culvert n=0.011 L=82.0' S=0.0122 '/' Outflow=4.45 cfs 0.245 af

Pond 5P: (new Pond) Peak Elev=118.79' Inflow=6.87 cfs 0.398 af
18.0" Round Culvert n=0.012 L=28.0' S=0.0571 '/' Outflow=6.87 cfs 0.398 af

Pond 6P: (new Pond) Peak Elev=118.98' Inflow=1.21 cfs 0.064 af
12.0" Round Culvert n=0.011 L=51.0' S=0.0196 '/' Outflow=1.21 cfs 0.064 af

Total Runoff Area = 1.176 ac Runoff Volume = 0.398 af Average Runoff Depth = 4.06"
65.68% Pervious = 0.772 ac 34.32% Impervious = 0.403 ac

Summary for Subcatchment DA1: DRAINAGE AREA #1

Runoff = 4.45 cfs @ 12.05 hrs, Volume= 0.245 af, Depth> 3.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 50 Year Rainfall=7.32"

Area (sf)	CN	Description
24,300	60	Woods, Fair, HSG B
3,010	69	50-75% Grass cover, Fair, HSG B
8,513	98	Paved parking, HSG B
35,823	70	Weighted Average
27,310		76.24% Pervious Area
8,513		23.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	100	0.0950	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.9	100	0.1300	1.80		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	76	0.0260	3.27		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
12.6	276	Total			

Summary for Subcatchment DA2: DRAINAGE AREA #2

Runoff = 1.69 cfs @ 11.96 hrs, Volume= 0.088 af, Depth> 6.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 50 Year Rainfall=7.32"

Area (sf)	CN	Description
6,450	98	Paved parking, HSG B
950	69	50-75% Grass cover, Fair, HSG B
7,400	94	Weighted Average
950		12.84% Pervious Area
6,450		87.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment DA3: DRAINAGE AREA #3

Runoff = 1.21 cfs @ 12.03 hrs, Volume= 0.064 af, Depth> 4.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 50 Year Rainfall=7.32"

Area (sf)	CN	Description
2,610	98	Paved parking, HSG B
5,373	65	Woods/grass comb., Fair, HSG B
7,983	76	Weighted Average
5,373		67.31% Pervious Area
2,610		32.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.1100	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	61	0.0330	3.69		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.0	161	Total			

Summary for Pond 2P: CATCH BASIN (SIL)

Inflow Area = 0.822 ac, 23.76% Impervious, Inflow Depth > 3.58" for 50 Year event
Inflow = 4.45 cfs @ 12.05 hrs, Volume= 0.245 af
Outflow = 4.45 cfs @ 12.05 hrs, Volume= 0.245 af, Atten= 0%, Lag= 0.0 min
Primary = 4.45 cfs @ 12.05 hrs, Volume= 0.245 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 120.28' @ 12.05 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.40'	**12.0" Round Culvert** L= 82.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.40' / 117.40' S= 0.0122 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=4.42 cfs @ 12.05 hrs HW=120.26' (Free Discharge)
1=Culvert (Inlet Controls 4.42 cfs @ 5.62 fps)

Summary for Pond 5P: (new Pond)

Inflow Area = 1.176 ac, 34.32% Impervious, Inflow Depth > 4.06" for 50 Year event
Inflow = 6.87 cfs @ 12.02 hrs, Volume= 0.398 af
Outflow = 6.87 cfs @ 12.02 hrs, Volume= 0.398 af, Atten= 0%, Lag= 0.0 min
Primary = 6.87 cfs @ 12.02 hrs, Volume= 0.398 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.79' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	117.40'	**18.0" Round Culvert** L= 28.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 117.40' / 115.80' S= 0.0571 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=6.73 cfs @ 12.02 hrs HW=118.77' (Free Discharge)
1=Culvert (Inlet Controls 6.73 cfs @ 3.98 fps)

Summary for Pond 6P: (new Pond)

Inflow Area = 0.183 ac, 32.69% Impervious, Inflow Depth > 4.22" for 50 Year event
Inflow = 1.21 cfs @ 12.03 hrs, Volume= 0.064 af
Outflow = 1.21 cfs @ 12.03 hrs, Volume= 0.064 af, Atten= 0%, Lag= 0.0 min
Primary = 1.21 cfs @ 12.03 hrs, Volume= 0.064 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.98' @ 12.03 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.40'	**12.0" Round Culvert** L= 51.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.40' / 117.40' S= 0.0196 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=1.17 cfs @ 12.03 hrs HW=118.97' (Free Discharge)
1=Culvert (Inlet Controls 1.17 cfs @ 2.56 fps)

Time span=2.00-20.00 hrs, dt=0.05 hrs, 361 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DA1: DRAINAGE AREA #1 Runoff Area=35,823 sf 23.76% Impervious Runoff Depth>4.32"
Flow Length=276' Tc=12.6 min CN=70 Runoff=5.34 cfs 0.296 af

Subcatchment DA2: DRAINAGE AREA #2 Runoff Area=7,400 sf 87.16% Impervious Runoff Depth>7.12"
Tc=6.0 min CN=94 Runoff=1.91 cfs 0.101 af

Subcatchment DA3: DRAINAGE AREA #3 Runoff Area=7,983 sf 32.69% Impervious Runoff Depth>5.00"
Flow Length=161' Tc=11.0 min CN=76 Runoff=1.42 cfs 0.076 af

Pond 2P: CATCH BASIN (SIL) Peak Elev=120.89' Inflow=5.34 cfs 0.296 af
12.0" Round Culvert n=0.011 L=82.0' S=0.0122 '/' Outflow=5.34 cfs 0.296 af

Pond 5P: (new Pond) Peak Elev=119.06' Inflow=8.14 cfs 0.473 af
18.0" Round Culvert n=0.012 L=28.0' S=0.0571 '/' Outflow=8.14 cfs 0.473 af

Pond 6P: (new Pond) Peak Elev=119.03' Inflow=1.42 cfs 0.076 af
12.0" Round Culvert n=0.011 L=51.0' S=0.0196 '/' Outflow=1.42 cfs 0.076 af

Total Runoff Area = 1.176 ac Runoff Volume = 0.473 af Average Runoff Depth = 4.83"
65.68% Pervious = 0.772 ac 34.32% Impervious = 0.403 ac

Summary for Subcatchment DA1: DRAINAGE AREA #1

Runoff = 5.34 cfs @ 12.04 hrs, Volume= 0.296 af, Depth> 4.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=8.24"

Area (sf)	CN	Description
24,300	60	Woods, Fair, HSG B
3,010	69	50-75% Grass cover, Fair, HSG B
8,513	98	Paved parking, HSG B
35,823	70	Weighted Average
27,310		76.24% Pervious Area
8,513		23.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	100	0.0950	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.9	100	0.1300	1.80		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	76	0.0260	3.27		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
12.6	276	Total			

Summary for Subcatchment DA2: DRAINAGE AREA #2

Runoff = 1.91 cfs @ 11.96 hrs, Volume= 0.101 af, Depth> 7.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=8.24"

Area (sf)	CN	Description
6,450	98	Paved parking, HSG B
950	69	50-75% Grass cover, Fair, HSG B
7,400	94	Weighted Average
950		12.84% Pervious Area
6,450		87.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment DA3: DRAINAGE AREA #3

Runoff = 1.42 cfs @ 12.02 hrs, Volume= 0.076 af, Depth> 5.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=8.24"

Area (sf)	CN	Description
2,610	98	Paved parking, HSG B
5,373	65	Woods/grass comb., Fair, HSG B
7,983	76	Weighted Average
5,373		67.31% Pervious Area
2,610		32.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.1100	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	61	0.0330	3.69		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.0	161	Total			

Summary for Pond 2P: CATCH BASIN (SIL)

Inflow Area = 0.822 ac, 23.76% Impervious, Inflow Depth > 4.32" for 100 Year event
Inflow = 5.34 cfs @ 12.04 hrs, Volume= 0.296 af
Outflow = 5.34 cfs @ 12.04 hrs, Volume= 0.296 af, Atten= 0%, Lag= 0.0 min
Primary = 5.34 cfs @ 12.04 hrs, Volume= 0.296 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 120.89' @ 12.05 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.40'	**12.0" Round Culvert** L= 82.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.40' / 117.40' S= 0.0122 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=5.29 cfs @ 12.04 hrs HW=120.85' (Free Discharge)
1=Culvert (Inlet Controls 5.29 cfs @ 6.73 fps)

Summary for Pond 5P: (new Pond)

Inflow Area = 1.176 ac, 34.32% Impervious, Inflow Depth > 4.83" for 100 Year event
Inflow = 8.14 cfs @ 12.02 hrs, Volume= 0.473 af
Outflow = 8.14 cfs @ 12.02 hrs, Volume= 0.473 af, Atten= 0%, Lag= 0.0 min
Primary = 8.14 cfs @ 12.02 hrs, Volume= 0.473 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 119.06' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	117.40'	**18.0" Round Culvert** L= 28.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 117.40' / 115.80' S= 0.0571 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=7.97 cfs @ 12.02 hrs HW=119.03' (Free Discharge)
└**1=Culvert** (Inlet Controls 7.97 cfs @ 4.51 fps)

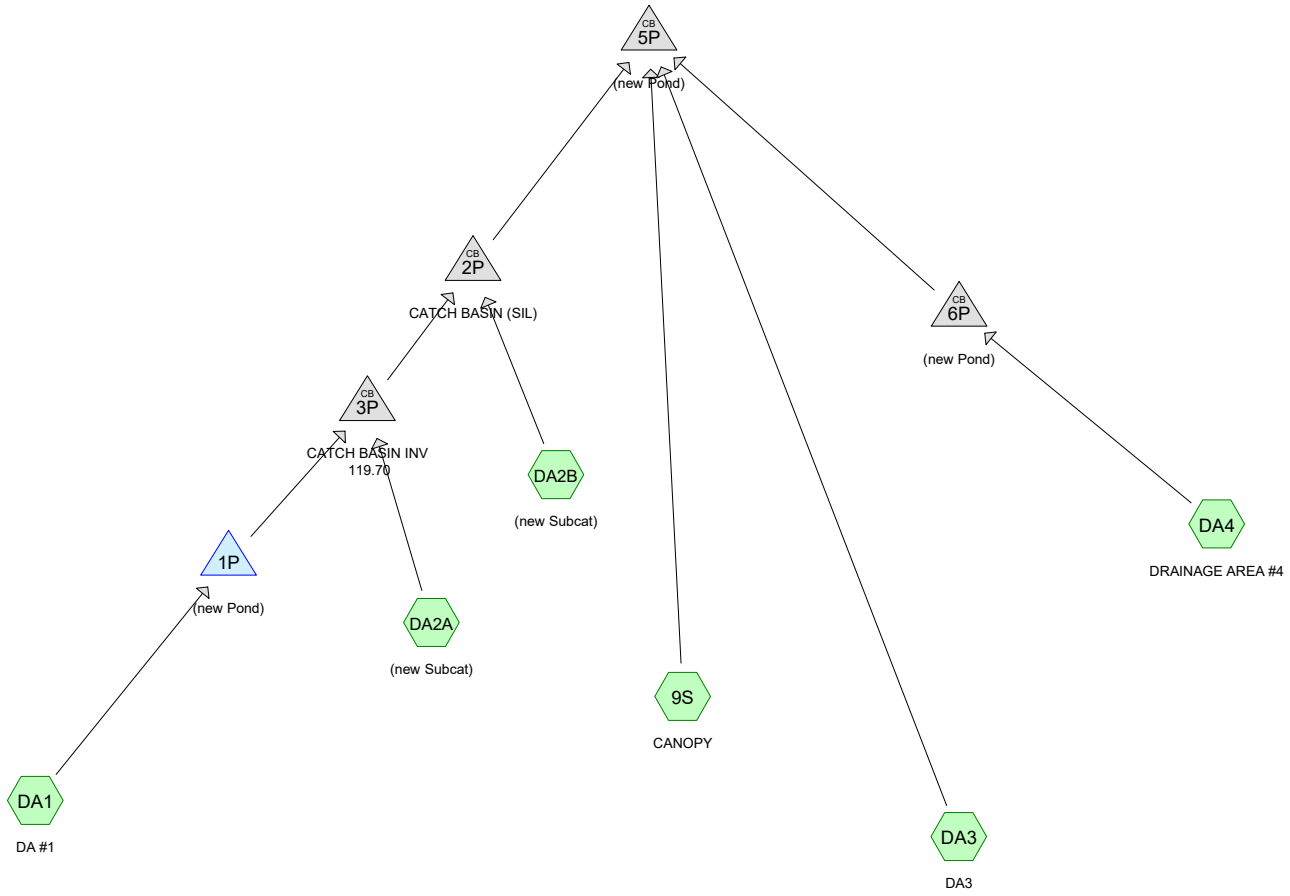
Summary for Pond 6P: (new Pond)

Inflow Area = 0.183 ac, 32.69% Impervious, Inflow Depth > 5.00" for 100 Year event
Inflow = 1.42 cfs @ 12.02 hrs, Volume= 0.076 af
Outflow = 1.42 cfs @ 12.02 hrs, Volume= 0.076 af, Atten= 0%, Lag= 0.0 min
Primary = 1.42 cfs @ 12.02 hrs, Volume= 0.076 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 119.03' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.40'	**12.0" Round Culvert** L= 51.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.40' / 117.40' S= 0.0196 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=1.38 cfs @ 12.02 hrs HW=119.02' (Free Discharge)
└**1=Culvert** (Inlet Controls 1.38 cfs @ 2.69 fps)



Subcat Reach Pond Link

Routing Diagram for Moodius Food Stop DESIGN revised
Prepared by NEMERGUT CONSULTING
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Summary for Subcatchment 9S: CANOPY

Runoff = 0.20 cfs @ 11.95 hrs, Volume= 0.010 af, Depth> 2.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2 YEAR Rainfall=3.46"

Area (sf)	CN	Description
1,745	98	Paved parking, HSG B
1,745		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment DA1: DA #1

Runoff = 0.23 cfs @ 12.09 hrs, Volume= 0.016 af, Depth> 0.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2 YEAR Rainfall=3.46"

Area (sf)	CN	Description
19,450	60	Woods, Fair, HSG B
19,450		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	100	0.0800	0.14		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
1.2	120	0.1160	1.70		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
13.3	220	Total			

Summary for Subcatchment DA2A: (new Subcat)

Runoff = 0.36 cfs @ 12.04 hrs, Volume= 0.020 af, Depth> 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2 YEAR Rainfall=3.46"

Area (sf)	CN	Description
3,030	60	Woods, Fair, HSG B
960	61	>75% Grass cover, Good, HSG B
3,640	98	Paved parking, HSG B
7,630	78	Weighted Average
3,990		52.29% Pervious Area
3,640		47.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	100	0.0950	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.6	103	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.9	203	Total			

Summary for Subcatchment DA2B: (new Subcat)

Runoff = 0.67 cfs @ 12.04 hrs, Volume= 0.037 af, Depth> 2.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2 YEAR Rainfall=3.46"

Area (sf)	CN	Description
2,553	61	>75% Grass cover, Good, HSG B
6,717	98	Paved parking, HSG B
9,270	88	Weighted Average
2,553		27.54% Pervious Area
6,717		72.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	100	0.0950	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.6	103	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.9	203	Total			

Summary for Subcatchment DA3: DA3

Runoff = 0.46 cfs @ 11.95 hrs, Volume= 0.020 af, Depth> 2.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2 YEAR Rainfall=3.46"

Area (sf)	CN	Description
3,700	98	Paved parking, HSG B
1,360	61	>75% Grass cover, Good, HSG B
5,060	88	Weighted Average
1,360		26.88% Pervious Area
3,700		73.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment DA4: DRAINAGE AREA #4

Runoff = 0.47 cfs @ 12.03 hrs, Volume= 0.025 af, Depth> 1.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2 YEAR Rainfall=3.46"

Area (sf)	CN	Description
4,180	98	Paved parking, HSG B
3,800	65	Woods/grass comb., Fair, HSG B
7,980	82	Weighted Average
3,800		47.62% Pervious Area
4,180		52.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.1100	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	61	0.0330	3.69		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.0	161	Total			

Summary for Pond 1P: (new Pond)

Inflow Area = 0.447 ac, 0.00% Impervious, Inflow Depth > 0.44" for 2 YEAR event
Inflow = 0.23 cfs @ 12.09 hrs, Volume= 0.016 af
Outflow = 0.16 cfs @ 12.20 hrs, Volume= 0.016 af, Atten= 32%, Lag= 6.5 min
Discarded = 0.01 cfs @ 12.20 hrs, Volume= 0.003 af
Primary = 0.15 cfs @ 12.20 hrs, Volume= 0.013 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 121.27' @ 12.20 hrs Surf.Area= 376 sf Storage= 93 cf

Plug-Flow detention time= 17.9 min calculated for 0.016 af (98% of inflow)
Center-of-Mass det. time= 11.4 min (860.0 - 848.6)

Volume	Invert	Avail.Storage	Storage Description
#1	121.00'	2,307 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
121.00	314	0	0
122.00	545	430	430
123.00	830	688	1,117
124.00	1,550	1,190	2,307

Device	Routing	Invert	Outlet Devices
#1	Primary	121.00'	**6.0" Round 120** L= 120.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 121.00' / 118.00' S= 0.0250 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf

#2	Primary	123.20'	**3.0" x 1.5" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	121.00'	**0.520 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 119.50'

Discarded OutFlow Max=0.01 cfs @ 12.20 hrs HW=121.27' (Free Discharge)
└**3=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.15 cfs @ 12.20 hrs HW=121.27' (Free Discharge)
├**1=120** (Inlet Controls 0.15 cfs @ 1.39 fps)
└**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond 2P: CATCH BASIN (SIL)

Inflow Area = 0.834 ac, 28.49% Impervious, Inflow Depth > 1.00" for 2 YEAR event
Inflow = 1.08 cfs @ 12.05 hrs, Volume= 0.070 af
Outflow = 1.08 cfs @ 12.05 hrs, Volume= 0.070 af, Atten= 0%, Lag= 0.0 min
Primary = 1.08 cfs @ 12.05 hrs, Volume= 0.070 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.99' @ 12.05 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.45'	**12.0" Round Culvert** L= 80.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.45' / 117.40' S= 0.0131 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf

Primary OutFlow Max=1.08 cfs @ 12.05 hrs HW=118.99' (Free Discharge)
└**1=Culvert** (Inlet Controls 1.08 cfs @ 2.50 fps)

Summary for Pond 3P: CATCH BASIN INV 119.70

Inflow Area = 0.622 ac, 13.44% Impervious, Inflow Depth > 0.63" for 2 YEAR event
Inflow = 0.43 cfs @ 12.07 hrs, Volume= 0.033 af
Outflow = 0.43 cfs @ 12.07 hrs, Volume= 0.033 af, Atten= 0%, Lag= 0.0 min
Primary = 0.43 cfs @ 12.07 hrs, Volume= 0.033 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 120.22' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	119.70'	**12.0" Round Culvert** L= 80.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 119.70' / 119.70' S= 0.0000 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf

Primary OutFlow Max=0.42 cfs @ 12.07 hrs HW=120.22' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.42 cfs @ 1.49 fps)

Summary for Pond 5P: (new Pond)

Inflow Area = 1.174 ac, 39.08% Impervious, Inflow Depth > 1.27" for 2 YEAR event
Inflow = 1.99 cfs @ 12.01 hrs, Volume= 0.124 af
Outflow = 1.99 cfs @ 12.01 hrs, Volume= 0.124 af, Atten= 0%, Lag= 0.0 min
Primary = 1.99 cfs @ 12.01 hrs, Volume= 0.124 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.10' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	117.40'	**15.0" Round Culvert** L= 26.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 117.40' / 115.60' S= 0.0692 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 1.23 sf

Primary OutFlow Max=1.98 cfs @ 12.01 hrs HW=118.09' (Free Discharge)
1=Culvert (Inlet Controls 1.98 cfs @ 2.83 fps)

Summary for Pond 6P: (new Pond)

Inflow Area = 0.183 ac, 52.38% Impervious, Inflow Depth > 1.61" for 2 YEAR event
Inflow = 0.47 cfs @ 12.03 hrs, Volume= 0.025 af
Outflow = 0.47 cfs @ 12.03 hrs, Volume= 0.025 af, Atten= 0%, Lag= 0.0 min
Primary = 0.47 cfs @ 12.03 hrs, Volume= 0.025 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.74' @ 12.03 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.40'	**12.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.40' / 117.50' S= 0.0180 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=0.46 cfs @ 12.03 hrs HW=118.74' (Free Discharge)
1=Culvert (Inlet Controls 0.46 cfs @ 1.97 fps)

Summary for Subcatchment 9S: CANOPY

Runoff = 0.26 cfs @ 11.95 hrs, Volume= 0.013 af, Depth> 3.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 5 Year Rainfall=4.47"

Area (sf)	CN	Description
1,745	98	Paved parking, HSG B
1,745		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment DA1: DA #1

Runoff = 0.54 cfs @ 12.07 hrs, Volume= 0.033 af, Depth> 0.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 5 Year Rainfall=4.47"

Area (sf)	CN	Description
19,450	60	Woods, Fair, HSG B
19,450		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	100	0.0800	0.14		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
1.2	120	0.1160	1.70		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
13.3	220	Total			

Summary for Subcatchment DA2A: (new Subcat)

Runoff = 0.57 cfs @ 12.04 hrs, Volume= 0.030 af, Depth> 2.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 5 Year Rainfall=4.47"

Area (sf)	CN	Description
3,030	60	Woods, Fair, HSG B
960	61	>75% Grass cover, Good, HSG B
3,640	98	Paved parking, HSG B
7,630	78	Weighted Average
3,990		52.29% Pervious Area
3,640		47.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	100	0.0950	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.6	103	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.9	203	Total			

Summary for Subcatchment DA2B: (new Subcat)

Runoff = 0.93 cfs @ 12.03 hrs, Volume= 0.052 af, Depth> 2.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 5 Year Rainfall=4.47"

Area (sf)	CN	Description
2,553	61	>75% Grass cover, Good, HSG B
6,717	98	Paved parking, HSG B
9,270	88	Weighted Average
2,553		27.54% Pervious Area
6,717		72.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	100	0.0950	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.6	103	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.9	203	Total			

Summary for Subcatchment DA3: DA3

Runoff = 0.63 cfs @ 11.95 hrs, Volume= 0.029 af, Depth> 2.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 5 Year Rainfall=4.47"

Area (sf)	CN	Description
3,700	98	Paved parking, HSG B
1,360	61	>75% Grass cover, Good, HSG B
5,060	88	Weighted Average
1,360		26.88% Pervious Area
3,700		73.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment DA4: DRAINAGE AREA #4

Runoff = 0.70 cfs @ 12.03 hrs, Volume= 0.037 af, Depth> 2.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 5 Year Rainfall=4.47"

Area (sf)	CN	Description
4,180	98	Paved parking, HSG B
3,800	65	Woods/grass comb., Fair, HSG B
7,980	82	Weighted Average
3,800		47.62% Pervious Area
4,180		52.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.1100	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	61	0.0330	3.69		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.0	161	Total			

Summary for Pond 1P: (new Pond)

Inflow Area = 0.447 ac, 0.00% Impervious, Inflow Depth > 0.88" for 5 Year event
Inflow = 0.54 cfs @ 12.07 hrs, Volume= 0.033 af
Outflow = 0.39 cfs @ 12.16 hrs, Volume= 0.032 af, Atten= 27%, Lag= 5.6 min
Discarded = 0.01 cfs @ 12.16 hrs, Volume= 0.003 af
Primary = 0.39 cfs @ 12.16 hrs, Volume= 0.029 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 121.52' @ 12.16 hrs Surf.Area= 434 sf Storage= 194 cf

Plug-Flow detention time= 13.8 min calculated for 0.032 af (98% of inflow)
Center-of-Mass det. time= 8.6 min (838.4 - 829.8)

Volume	Invert	Avail.Storage	Storage Description
#1	121.00'	2,307 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
121.00	314	0	0
122.00	545	430	430
123.00	830	688	1,117
124.00	1,550	1,190	2,307

Device	Routing	Invert	Outlet Devices
#1	Primary	121.00'	**6.0" Round 120** L= 120.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 121.00' / 118.00' S= 0.0250 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf

#2	Primary	123.20'	**3.0" x 1.5" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	121.00'	**0.520 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 119.50'

Discarded OutFlow Max=0.01 cfs @ 12.16 hrs HW=121.51' (Free Discharge)
└**3=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.38 cfs @ 12.16 hrs HW=121.51' (Free Discharge)
├**1=120** (Inlet Controls 0.38 cfs @ 1.95 fps)
└**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond 2P: CATCH BASIN (SIL)

Inflow Area = 0.834 ac, 28.49% Impervious, Inflow Depth > 1.62" for 5 Year event
Inflow = 1.76 cfs @ 12.05 hrs, Volume= 0.112 af
Outflow = 1.76 cfs @ 12.05 hrs, Volume= 0.112 af, Atten= 0%, Lag= 0.0 min
Primary = 1.76 cfs @ 12.05 hrs, Volume= 0.112 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 119.17' @ 12.05 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.45'	**12.0" Round Culvert** L= 80.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.45' / 117.40' S= 0.0131 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf

Primary OutFlow Max=1.76 cfs @ 12.05 hrs HW=119.17' (Free Discharge)
└**1=Culvert** (Inlet Controls 1.76 cfs @ 2.89 fps)

Summary for Pond 3P: CATCH BASIN INV 119.70

Inflow Area = 0.622 ac, 13.44% Impervious, Inflow Depth > 1.16" for 5 Year event
Inflow = 0.86 cfs @ 12.07 hrs, Volume= 0.060 af
Outflow = 0.86 cfs @ 12.07 hrs, Volume= 0.060 af, Atten= 0%, Lag= 0.0 min
Primary = 0.86 cfs @ 12.07 hrs, Volume= 0.060 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 120.44' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	119.70'	**12.0" Round Culvert** L= 80.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 119.70' / 119.70' S= 0.0000 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf

Primary OutFlow Max=0.84 cfs @ 12.07 hrs HW=120.43' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.84 cfs @ 1.92 fps)

Summary for Pond 5P: (new Pond)

Inflow Area = 1.174 ac, 39.08% Impervious, Inflow Depth > 1.95" for 5 Year event
Inflow = 3.02 cfs @ 12.01 hrs, Volume= 0.191 af
Outflow = 3.02 cfs @ 12.01 hrs, Volume= 0.191 af, Atten= 0%, Lag= 0.0 min
Primary = 3.02 cfs @ 12.01 hrs, Volume= 0.191 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.29' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	117.40'	**15.0" Round Culvert** L= 26.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 117.40' / 115.60' S= 0.0692 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 1.23 sf

Primary OutFlow Max=2.97 cfs @ 12.01 hrs HW=118.28' (Free Discharge)
1=Culvert (Inlet Controls 2.97 cfs @ 3.20 fps)

Summary for Pond 6P: (new Pond)

Inflow Area = 0.183 ac, 52.38% Impervious, Inflow Depth > 2.42" for 5 Year event
Inflow = 0.70 cfs @ 12.03 hrs, Volume= 0.037 af
Outflow = 0.70 cfs @ 12.03 hrs, Volume= 0.037 af, Atten= 0%, Lag= 0.0 min
Primary = 0.70 cfs @ 12.03 hrs, Volume= 0.037 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.82' @ 12.03 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.40'	**12.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.40' / 117.50' S= 0.0180 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=0.68 cfs @ 12.03 hrs HW=118.82' (Free Discharge)
1=Culvert (Inlet Controls 0.68 cfs @ 2.20 fps)

Summary for Subcatchment 9S: CANOPY

Runoff = 0.31 cfs @ 11.95 hrs, Volume= 0.016 af, Depth> 4.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 YEAR Rainfall=5.31"

Area (sf)	CN	Description
1,745	98	Paved parking, HSG B
1,745		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment DA1: DA #1

Runoff = 0.85 cfs @ 12.07 hrs, Volume= 0.049 af, Depth> 1.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 YEAR Rainfall=5.31"

Area (sf)	CN	Description
19,450	60	Woods, Fair, HSG B
19,450		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	100	0.0800	0.14		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
1.2	120	0.1160	1.70		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
13.3	220	Total			

Summary for Subcatchment DA2A: (new Subcat)

Runoff = 0.74 cfs @ 12.04 hrs, Volume= 0.040 af, Depth> 2.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 YEAR Rainfall=5.31"

Area (sf)	CN	Description
3,030	60	Woods, Fair, HSG B
960	61	>75% Grass cover, Good, HSG B
3,640	98	Paved parking, HSG B
7,630	78	Weighted Average
3,990		52.29% Pervious Area
3,640		47.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	100	0.0950	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.6	103	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.9	203	Total			

Summary for Subcatchment DA2B: (new Subcat)

Runoff = 1.15 cfs @ 12.03 hrs, Volume= 0.066 af, Depth> 3.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 YEAR Rainfall=5.31"

Area (sf)	CN	Description
2,553	61	>75% Grass cover, Good, HSG B
6,717	98	Paved parking, HSG B
9,270	88	Weighted Average
2,553		27.54% Pervious Area
6,717		72.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	100	0.0950	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.6	103	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.9	203	Total			

Summary for Subcatchment DA3: DA3

Runoff = 0.78 cfs @ 11.95 hrs, Volume= 0.036 af, Depth> 3.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 YEAR Rainfall=5.31"

Area (sf)	CN	Description
3,700	98	Paved parking, HSG B
1,360	61	>75% Grass cover, Good, HSG B
5,060	88	Weighted Average
1,360		26.88% Pervious Area
3,700		73.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment DA4: DRAINAGE AREA #4

Runoff = 0.89 cfs @ 12.03 hrs, Volume= 0.048 af, Depth> 3.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 YEAR Rainfall=5.31"

Area (sf)	CN	Description
4,180	98	Paved parking, HSG B
3,800	65	Woods/grass comb., Fair, HSG B
7,980	82	Weighted Average
3,800		47.62% Pervious Area
4,180		52.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.1100	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	61	0.0330	3.69		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.0	161	Total			

Summary for Pond 1P: (new Pond)

Inflow Area = 0.447 ac, 0.00% Impervious, Inflow Depth > 1.33" for 10 YEAR event
Inflow = 0.85 cfs @ 12.07 hrs, Volume= 0.049 af
Outflow = 0.56 cfs @ 12.17 hrs, Volume= 0.049 af, Atten= 33%, Lag= 6.5 min
Discarded = 0.01 cfs @ 12.17 hrs, Volume= 0.003 af
Primary = 0.56 cfs @ 12.17 hrs, Volume= 0.046 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 121.80' @ 12.17 hrs Surf.Area= 500 sf Storage= 328 cf

Plug-Flow detention time= 12.5 min calculated for 0.049 af (99% of inflow)
Center-of-Mass det. time= 8.1 min (828.5 - 820.4)

Volume	Invert	Avail.Storage	Storage Description
#1	121.00'	2,307 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
121.00	314	0	0
122.00	545	430	430
123.00	830	688	1,117
124.00	1,550	1,190	2,307

Device	Routing	Invert	Outlet Devices
#1	Primary	121.00'	**6.0" Round 120** L= 120.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 121.00' / 118.00' S= 0.0250 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf

#2	Primary	123.20'	**3.0" x 1.5" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	121.00'	**0.520 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 119.50'

Discarded OutFlow Max=0.01 cfs @ 12.17 hrs HW=121.80' (Free Discharge)
└**3=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.55 cfs @ 12.17 hrs HW=121.80' (Free Discharge)
└**1=120** (Inlet Controls 0.55 cfs @ 2.81 fps)
└**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond 2P: CATCH BASIN (SIL)

Inflow Area = 0.834 ac, 28.49% Impervious, Inflow Depth > 2.18" for 10 YEAR event
Inflow = 2.32 cfs @ 12.05 hrs, Volume= 0.151 af
Outflow = 2.32 cfs @ 12.05 hrs, Volume= 0.151 af, Atten= 0%, Lag= 0.0 min
Primary = 2.32 cfs @ 12.05 hrs, Volume= 0.151 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 119.33' @ 12.05 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.45'	**12.0" Round Culvert** L= 80.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.45' / 117.40' S= 0.0131 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf

Primary OutFlow Max=2.31 cfs @ 12.05 hrs HW=119.32' (Free Discharge)
└**1=Culvert** (Inlet Controls 2.31 cfs @ 3.18 fps)

Summary for Pond 3P: CATCH BASIN INV 119.70

Inflow Area = 0.622 ac, 13.44% Impervious, Inflow Depth > 1.65" for 10 YEAR event
Inflow = 1.19 cfs @ 12.06 hrs, Volume= 0.086 af
Outflow = 1.19 cfs @ 12.06 hrs, Volume= 0.086 af, Atten= 0%, Lag= 0.0 min
Primary = 1.19 cfs @ 12.06 hrs, Volume= 0.086 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 120.57' @ 12.06 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	119.70'	**12.0" Round Culvert** L= 80.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 119.70' / 119.70' S= 0.0000 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf

Primary OutFlow Max=1.17 cfs @ 12.06 hrs HW=120.57' (Free Discharge)
└**1=Culvert** (Barrel Controls 1.17 cfs @ 2.16 fps)

Summary for Pond 5P: (new Pond)

Inflow Area = 1.174 ac, 39.08% Impervious, Inflow Depth > 2.56" for 10 YEAR event
Inflow = 3.93 cfs @ 12.01 hrs, Volume= 0.251 af
Outflow = 3.93 cfs @ 12.01 hrs, Volume= 0.251 af, Atten= 0%, Lag= 0.0 min
Primary = 3.93 cfs @ 12.01 hrs, Volume= 0.251 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.47' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	117.40'	**15.0" Round Culvert** L= 26.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 117.40' / 115.60' S= 0.0692 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 1.23 sf

Primary OutFlow Max=3.88 cfs @ 12.01 hrs HW=118.46' (Free Discharge)
1=Culvert (Inlet Controls 3.88 cfs @ 3.50 fps)

Summary for Pond 6P: (new Pond)

Inflow Area = 0.183 ac, 52.38% Impervious, Inflow Depth > 3.12" for 10 YEAR event
Inflow = 0.89 cfs @ 12.03 hrs, Volume= 0.048 af
Outflow = 0.89 cfs @ 12.03 hrs, Volume= 0.048 af, Atten= 0%, Lag= 0.0 min
Primary = 0.89 cfs @ 12.03 hrs, Volume= 0.048 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.88' @ 12.03 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.40'	**12.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.40' / 117.50' S= 0.0180 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=0.87 cfs @ 12.03 hrs HW=118.88' (Free Discharge)
1=Culvert (Inlet Controls 0.87 cfs @ 2.35 fps)

Summary for Subcatchment 9S: CANOPY

Runoff = 0.37 cfs @ 11.95 hrs, Volume= 0.019 af, Depth> 5.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25 Year Rainfall=6.46"

Area (sf)	CN	Description
1,745	98	Paved parking, HSG B
1,745		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment DA1: DA #1

Runoff = 1.32 cfs @ 12.06 hrs, Volume= 0.075 af, Depth> 2.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25 Year Rainfall=6.46"

Area (sf)	CN	Description
19,450	60	Woods, Fair, HSG B
19,450		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	100	0.0800	0.14		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
1.2	120	0.1160	1.70		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
13.3	220	Total			

Summary for Subcatchment DA2A: (new Subcat)

Runoff = 0.99 cfs @ 12.04 hrs, Volume= 0.054 af, Depth> 3.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25 Year Rainfall=6.46"

Area (sf)	CN	Description
3,030	60	Woods, Fair, HSG B
960	61	>75% Grass cover, Good, HSG B
3,640	98	Paved parking, HSG B
7,630	78	Weighted Average
3,990		52.29% Pervious Area
3,640		47.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	100	0.0950	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.6	103	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.9	203	Total			

Summary for Subcatchment DA2B: (new Subcat)

Runoff = 1.46 cfs @ 12.03 hrs, Volume= 0.084 af, Depth> 4.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25 Year Rainfall=6.46"

Area (sf)	CN	Description
2,553	61	>75% Grass cover, Good, HSG B
6,717	98	Paved parking, HSG B
9,270	88	Weighted Average
2,553		27.54% Pervious Area
6,717		72.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	100	0.0950	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.6	103	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.9	203	Total			

Summary for Subcatchment DA3: DA3

Runoff = 0.99 cfs @ 11.95 hrs, Volume= 0.046 af, Depth> 4.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25 Year Rainfall=6.46"

Area (sf)	CN	Description
3,700	98	Paved parking, HSG B
1,360	61	>75% Grass cover, Good, HSG B
5,060	88	Weighted Average
1,360		26.88% Pervious Area
3,700		73.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment DA4: DRAINAGE AREA #4

Runoff = 1.15 cfs @ 12.02 hrs, Volume= 0.063 af, Depth> 4.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25 Year Rainfall=6.46"

Area (sf)	CN	Description
4,180	98	Paved parking, HSG B
3,800	65	Woods/grass comb., Fair, HSG B
7,980	82	Weighted Average
3,800		47.62% Pervious Area
4,180		52.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.1100	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	61	0.0330	3.69		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.0	161	Total			

Summary for Pond 1P: (new Pond)

Inflow Area = 0.447 ac, 0.00% Impervious, Inflow Depth > 2.01" for 25 Year event
Inflow = 1.32 cfs @ 12.06 hrs, Volume= 0.075 af
Outflow = 0.76 cfs @ 12.19 hrs, Volume= 0.074 af, Atten= 42%, Lag= 7.9 min
Discarded = 0.01 cfs @ 12.19 hrs, Volume= 0.004 af
Primary = 0.75 cfs @ 12.19 hrs, Volume= 0.070 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 122.27' @ 12.19 hrs Surf.Area= 621 sf Storage= 585 cf

Plug-Flow detention time= 12.3 min calculated for 0.074 af (99% of inflow)
Center-of-Mass det. time= 8.6 min (820.0 - 811.4)

Volume	Invert	Avail.Storage	Storage Description
#1	121.00'	2,307 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
121.00	314	0	0
122.00	545	430	430
123.00	830	688	1,117
124.00	1,550	1,190	2,307

Device	Routing	Invert	Outlet Devices
#1	Primary	121.00'	**6.0" Round 120** L= 120.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 121.00' / 118.00' S= 0.0250 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf

#2	Primary	123.20'	**3.0" x 1.5" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	121.00'	**0.520 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 119.50'

Discarded OutFlow Max=0.01 cfs @ 12.19 hrs HW=122.26' (Free Discharge)
└**3=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.75 cfs @ 12.19 hrs HW=122.26' (Free Discharge)
├**1=120** (Inlet Controls 0.75 cfs @ 3.83 fps)
└**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond 2P: CATCH BASIN (SIL)

Inflow Area = 0.834 ac, 28.49% Impervious, Inflow Depth > 3.00" for 25 Year event
Inflow = 3.04 cfs @ 12.04 hrs, Volume= 0.209 af
Outflow = 3.04 cfs @ 12.04 hrs, Volume= 0.209 af, Atten= 0%, Lag= 0.0 min
Primary = 3.04 cfs @ 12.04 hrs, Volume= 0.209 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 119.59' @ 12.04 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.45'	**12.0" Round Culvert** L= 80.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.45' / 117.40' S= 0.0131 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf

Primary OutFlow Max=3.01 cfs @ 12.04 hrs HW=119.58' (Free Discharge)
└**1=Culvert** (Inlet Controls 3.01 cfs @ 3.83 fps)

Summary for Pond 3P: CATCH BASIN INV 119.70

Inflow Area = 0.622 ac, 13.44% Impervious, Inflow Depth > 2.40" for 25 Year event
Inflow = 1.60 cfs @ 12.06 hrs, Volume= 0.124 af
Outflow = 1.60 cfs @ 12.06 hrs, Volume= 0.124 af, Atten= 0%, Lag= 0.0 min
Primary = 1.60 cfs @ 12.06 hrs, Volume= 0.124 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 120.75' @ 12.06 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	119.70'	**12.0" Round Culvert** L= 80.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 119.70' / 119.70' S= 0.0000 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf

Primary OutFlow Max=1.58 cfs @ 12.06 hrs HW=120.74' (Free Discharge)
└**1=Culvert** (Barrel Controls 1.58 cfs @ 2.41 fps)

Summary for Pond 5P: (new Pond)

Inflow Area = 1.174 ac, 39.08% Impervious, Inflow Depth > 3.44" for 25 Year event
Inflow = 5.12 cfs @ 12.01 hrs, Volume= 0.336 af
Outflow = 5.12 cfs @ 12.01 hrs, Volume= 0.336 af, Atten= 0%, Lag= 0.0 min
Primary = 5.12 cfs @ 12.01 hrs, Volume= 0.336 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.77' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	117.40'	**15.0" Round Culvert** L= 26.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 117.40' / 115.60' S= 0.0692 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 1.23 sf

Primary OutFlow Max=5.06 cfs @ 12.01 hrs HW=118.76' (Free Discharge)
1=Culvert (Inlet Controls 5.06 cfs @ 4.13 fps)

Summary for Pond 6P: (new Pond)

Inflow Area = 0.183 ac, 52.38% Impervious, Inflow Depth > 4.11" for 25 Year event
Inflow = 1.15 cfs @ 12.02 hrs, Volume= 0.063 af
Outflow = 1.15 cfs @ 12.02 hrs, Volume= 0.063 af, Atten= 0%, Lag= 0.0 min
Primary = 1.15 cfs @ 12.02 hrs, Volume= 0.063 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 118.96' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.40'	**12.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.40' / 117.50' S= 0.0180 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=1.13 cfs @ 12.02 hrs HW=118.95' (Free Discharge)
1=Culvert (Inlet Controls 1.13 cfs @ 2.53 fps)

Summary for Subcatchment 9S: CANOPY

Runoff = 0.42 cfs @ 11.95 hrs, Volume= 0.022 af, Depth> 6.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 50 Year Rainfall=7.32"

Area (sf)	CN	Description
1,745	98	Paved parking, HSG B
1,745		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment DA1: DA #1

Runoff = 1.70 cfs @ 12.06 hrs, Volume= 0.096 af, Depth> 2.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 50 Year Rainfall=7.32"

Area (sf)	CN	Description
19,450	60	Woods, Fair, HSG B
19,450		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	100	0.0800	0.14		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
1.2	120	0.1160	1.70		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
13.3	220	Total			

Summary for Subcatchment DA2A: (new Subcat)

Runoff = 1.17 cfs @ 12.04 hrs, Volume= 0.065 af, Depth> 4.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 50 Year Rainfall=7.32"

Area (sf)	CN	Description
3,030	60	Woods, Fair, HSG B
960	61	>75% Grass cover, Good, HSG B
3,640	98	Paved parking, HSG B
7,630	78	Weighted Average
3,990		52.29% Pervious Area
3,640		47.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	100	0.0950	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.6	103	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.9	203	Total			

Summary for Subcatchment DA2B: (new Subcat)

Runoff = 1.68 cfs @ 12.03 hrs, Volume= 0.098 af, Depth> 5.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 50 Year Rainfall=7.32"

Area (sf)	CN	Description
2,553	61	>75% Grass cover, Good, HSG B
6,717	98	Paved parking, HSG B
9,270	88	Weighted Average
2,553		27.54% Pervious Area
6,717		72.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	100	0.0950	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.6	103	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.9	203	Total			

Summary for Subcatchment DA3: DA3

Runoff = 1.14 cfs @ 11.95 hrs, Volume= 0.054 af, Depth> 5.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 50 Year Rainfall=7.32"

Area (sf)	CN	Description
3,700	98	Paved parking, HSG B
1,360	61	>75% Grass cover, Good, HSG B
5,060	88	Weighted Average
1,360		26.88% Pervious Area
3,700		73.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment DA4: DRAINAGE AREA #4

Runoff = 1.35 cfs @ 12.02 hrs, Volume= 0.074 af, Depth> 4.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 50 Year Rainfall=7.32"

Area (sf)	CN	Description
4,180	98	Paved parking, HSG B
3,800	65	Woods/grass comb., Fair, HSG B
7,980	82	Weighted Average
3,800		47.62% Pervious Area
4,180		52.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.1100	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	61	0.0330	3.69		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.0	161	Total			

Summary for Pond 1P: (new Pond)

Inflow Area = 0.447 ac, 0.00% Impervious, Inflow Depth > 2.57" for 50 Year event
Inflow = 1.70 cfs @ 12.06 hrs, Volume= 0.096 af
Outflow = 0.89 cfs @ 12.21 hrs, Volume= 0.095 af, Atten= 47%, Lag= 8.8 min
Discarded = 0.01 cfs @ 12.21 hrs, Volume= 0.004 af
Primary = 0.88 cfs @ 12.21 hrs, Volume= 0.091 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 122.63' @ 12.21 hrs Surf.Area= 725 sf Storage= 831 cf

Plug-Flow detention time= 12.7 min calculated for 0.095 af (99% of inflow)
Center-of-Mass det. time= 9.4 min (815.7 - 806.3)

Volume	Invert	Avail.Storage	Storage Description
#1	121.00'	2,307 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
121.00	314	0	0
122.00	545	430	430
123.00	830	688	1,117
124.00	1,550	1,190	2,307

Device	Routing	Invert	Outlet Devices
#1	Primary	121.00'	**6.0" Round 120** L= 120.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 121.00' / 118.00' S= 0.0250 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf

#2	Primary	123.20'	**3.0" x 1.5" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	121.00'	**0.520 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 119.50'

Discarded OutFlow Max=0.01 cfs @ 12.21 hrs HW=122.63' (Free Discharge)
└**3=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.88 cfs @ 12.21 hrs HW=122.63' (Free Discharge)
├**1=120** (Inlet Controls 0.88 cfs @ 4.46 fps)
└**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond 2P: CATCH BASIN (SIL)

Inflow Area = 0.834 ac, 28.49% Impervious, Inflow Depth > 3.65" for 50 Year event
Inflow = 3.55 cfs @ 12.04 hrs, Volume= 0.254 af
Outflow = 3.55 cfs @ 12.04 hrs, Volume= 0.254 af, Atten= 0%, Lag= 0.0 min
Primary = 3.55 cfs @ 12.04 hrs, Volume= 0.254 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 119.83' @ 12.04 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.45'	**12.0" Round Culvert** L= 80.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.45' / 117.40' S= 0.0131 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf

Primary OutFlow Max=3.51 cfs @ 12.04 hrs HW=119.81' (Free Discharge)
└**1=Culvert** (Inlet Controls 3.51 cfs @ 4.47 fps)

Summary for Pond 3P: CATCH BASIN INV 119.70

Inflow Area = 0.622 ac, 13.44% Impervious, Inflow Depth > 3.00" for 50 Year event
Inflow = 1.89 cfs @ 12.06 hrs, Volume= 0.155 af
Outflow = 1.89 cfs @ 12.06 hrs, Volume= 0.155 af, Atten= 0%, Lag= 0.0 min
Primary = 1.89 cfs @ 12.06 hrs, Volume= 0.155 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 120.89' @ 12.06 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	119.70'	**12.0" Round Culvert** L= 80.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 119.70' / 119.70' S= 0.0000 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf

Primary OutFlow Max=1.88 cfs @ 12.06 hrs HW=120.88' (Free Discharge)
└**1=Culvert** (Barrel Controls 1.88 cfs @ 2.55 fps)

Summary for Pond 5P: (new Pond)

Inflow Area = 1.174 ac, 39.08% Impervious, Inflow Depth > 4.12" for 50 Year event
Inflow = 5.98 cfs @ 12.01 hrs, Volume= 0.403 af
Outflow = 5.98 cfs @ 12.01 hrs, Volume= 0.403 af, Atten= 0%, Lag= 0.0 min
Primary = 5.98 cfs @ 12.01 hrs, Volume= 0.403 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 119.05' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	117.40'	**15.0" Round Culvert** L= 26.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 117.40' / 115.60' S= 0.0692 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 1.23 sf

Primary OutFlow Max=5.93 cfs @ 12.01 hrs HW=119.03' (Free Discharge)
↑**1=Culvert** (Inlet Controls 5.93 cfs @ 4.83 fps)

Summary for Pond 6P: (new Pond)

Inflow Area = 0.183 ac, 52.38% Impervious, Inflow Depth > 4.87" for 50 Year event
Inflow = 1.35 cfs @ 12.02 hrs, Volume= 0.074 af
Outflow = 1.35 cfs @ 12.02 hrs, Volume= 0.074 af, Atten= 0%, Lag= 0.0 min
Primary = 1.35 cfs @ 12.02 hrs, Volume= 0.074 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 119.02' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.40'	**12.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.40' / 117.50' S= 0.0180 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=1.32 cfs @ 12.02 hrs HW=119.01' (Free Discharge)
↑**1=Culvert** (Inlet Controls 1.32 cfs @ 2.65 fps)

Summary for Subcatchment 9S: CANOPY

Runoff = 0.48 cfs @ 11.95 hrs, Volume= 0.024 af, Depth> 7.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=8.24"

Area (sf)	CN	Description
1,745	98	Paved parking, HSG B
1,745		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment DA1: DA #1

Runoff = 2.12 cfs @ 12.06 hrs, Volume= 0.119 af, Depth> 3.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=8.24"

Area (sf)	CN	Description
19,450	60	Woods, Fair, HSG B
19,450		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	100	0.0800	0.14		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
1.2	120	0.1160	1.70		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
13.3	220	Total			

Summary for Subcatchment DA2A: (new Subcat)

Runoff = 1.37 cfs @ 12.03 hrs, Volume= 0.076 af, Depth> 5.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=8.24"

Area (sf)	CN	Description
3,030	60	Woods, Fair, HSG B
960	61	>75% Grass cover, Good, HSG B
3,640	98	Paved parking, HSG B
7,630	78	Weighted Average
3,990		52.29% Pervious Area
3,640		47.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	100	0.0950	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.6	103	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.9	203	Total			

Summary for Subcatchment DA2B: (new Subcat)

Runoff = 1.92 cfs @ 12.03 hrs, Volume= 0.113 af, Depth> 6.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=8.24"

Area (sf)	CN	Description
2,553	61	>75% Grass cover, Good, HSG B
6,717	98	Paved parking, HSG B
9,270	88	Weighted Average
2,553		27.54% Pervious Area
6,717		72.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	100	0.0950	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.6	103	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.9	203	Total			

Summary for Subcatchment DA3: DA3

Runoff = 1.30 cfs @ 11.95 hrs, Volume= 0.062 af, Depth> 6.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=8.24"

Area (sf)	CN	Description
3,700	98	Paved parking, HSG B
1,360	61	>75% Grass cover, Good, HSG B
5,060	88	Weighted Average
1,360		26.88% Pervious Area
3,700		73.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment DA4: DRAINAGE AREA #4

Runoff = 1.57 cfs @ 12.02 hrs, Volume= 0.087 af, Depth> 5.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Year Rainfall=8.24"

Area (sf)	CN	Description
4,180	98	Paved parking, HSG B
3,800	65	Woods/grass comb., Fair, HSG B
7,980	82	Weighted Average
3,800		47.62% Pervious Area
4,180		52.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.1100	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	61	0.0330	3.69		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.0	161	Total			

Summary for Pond 1P: (new Pond)

Inflow Area = 0.447 ac, 0.00% Impervious, Inflow Depth > 3.20" for 100 Year event
Inflow = 2.12 cfs @ 12.06 hrs, Volume= 0.119 af
Outflow = 1.01 cfs @ 12.22 hrs, Volume= 0.118 af, Atten= 52%, Lag= 9.6 min
Discarded = 0.02 cfs @ 12.21 hrs, Volume= 0.004 af
Primary = 0.99 cfs @ 12.22 hrs, Volume= 0.114 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 123.02' @ 12.22 hrs Surf.Area= 848 sf Storage= 1,138 cf

Plug-Flow detention time= 13.5 min calculated for 0.118 af (99% of inflow)
Center-of-Mass det. time= 10.6 min (812.3 - 801.7)

Volume	Invert	Avail.Storage	Storage Description
#1	121.00'	2,307 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
121.00	314	0	0
122.00	545	430	430
123.00	830	688	1,117
124.00	1,550	1,190	2,307

Device	Routing	Invert	Outlet Devices
#1	Primary	121.00'	**6.0" Round 120** L= 120.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 121.00' / 118.00' S= 0.0250 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf

#2	Primary	123.20'	**3.0" x 1.5" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	121.00'	**0.520 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 119.50'

Discarded OutFlow Max=0.02 cfs @ 12.21 hrs HW=123.02' (Free Discharge)
└**3=Exfiltration** (Controls 0.02 cfs)

Primary OutFlow Max=0.99 cfs @ 12.22 hrs HW=123.02' (Free Discharge)
├**1=120** (Inlet Controls 0.99 cfs @ 5.05 fps)
└**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond 2P: CATCH BASIN (SIL)

Inflow Area = 0.834 ac, 28.49% Impervious, Inflow Depth > 4.36" for 100 Year event
Inflow = 4.09 cfs @ 12.04 hrs, Volume= 0.303 af
Outflow = 4.09 cfs @ 12.04 hrs, Volume= 0.303 af, Atten= 0%, Lag= 0.0 min
Primary = 4.09 cfs @ 12.04 hrs, Volume= 0.303 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 120.12' @ 12.04 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.45'	**12.0" Round Culvert** L= 80.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.45' / 117.40' S= 0.0131 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf

Primary OutFlow Max=4.04 cfs @ 12.04 hrs HW=120.09' (Free Discharge)
└**1=Culvert** (Inlet Controls 4.04 cfs @ 5.14 fps)

Summary for Pond 3P: CATCH BASIN INV 119.70

Inflow Area = 0.622 ac, 13.44% Impervious, Inflow Depth > 3.67" for 100 Year event
Inflow = 2.19 cfs @ 12.05 hrs, Volume= 0.190 af
Outflow = 2.19 cfs @ 12.05 hrs, Volume= 0.190 af, Atten= 0%, Lag= 0.0 min
Primary = 2.19 cfs @ 12.05 hrs, Volume= 0.190 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 121.10' @ 12.06 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	119.70'	**12.0" Round Culvert** L= 80.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 119.70' / 119.70' S= 0.0000 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf

Primary OutFlow Max=2.18 cfs @ 12.05 hrs HW=121.09' (Free Discharge)
└**1=Culvert** (Barrel Controls 2.18 cfs @ 2.77 fps)

Summary for Pond 5P: (new Pond)

Inflow Area = 1.174 ac, 39.08% Impervious, Inflow Depth > 4.87" for 100 Year event
Inflow = 6.89 cfs @ 12.01 hrs, Volume= 0.476 af
Outflow = 6.89 cfs @ 12.01 hrs, Volume= 0.476 af, Atten= 0%, Lag= 0.0 min
Primary = 6.89 cfs @ 12.01 hrs, Volume= 0.476 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 119.39' @ 12.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	117.40'	**15.0" Round Culvert** L= 26.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 117.40' / 115.60' S= 0.0692 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 1.23 sf

Primary OutFlow Max=6.84 cfs @ 12.01 hrs HW=119.36' (Free Discharge)
1=Culvert (Inlet Controls 6.84 cfs @ 5.57 fps)

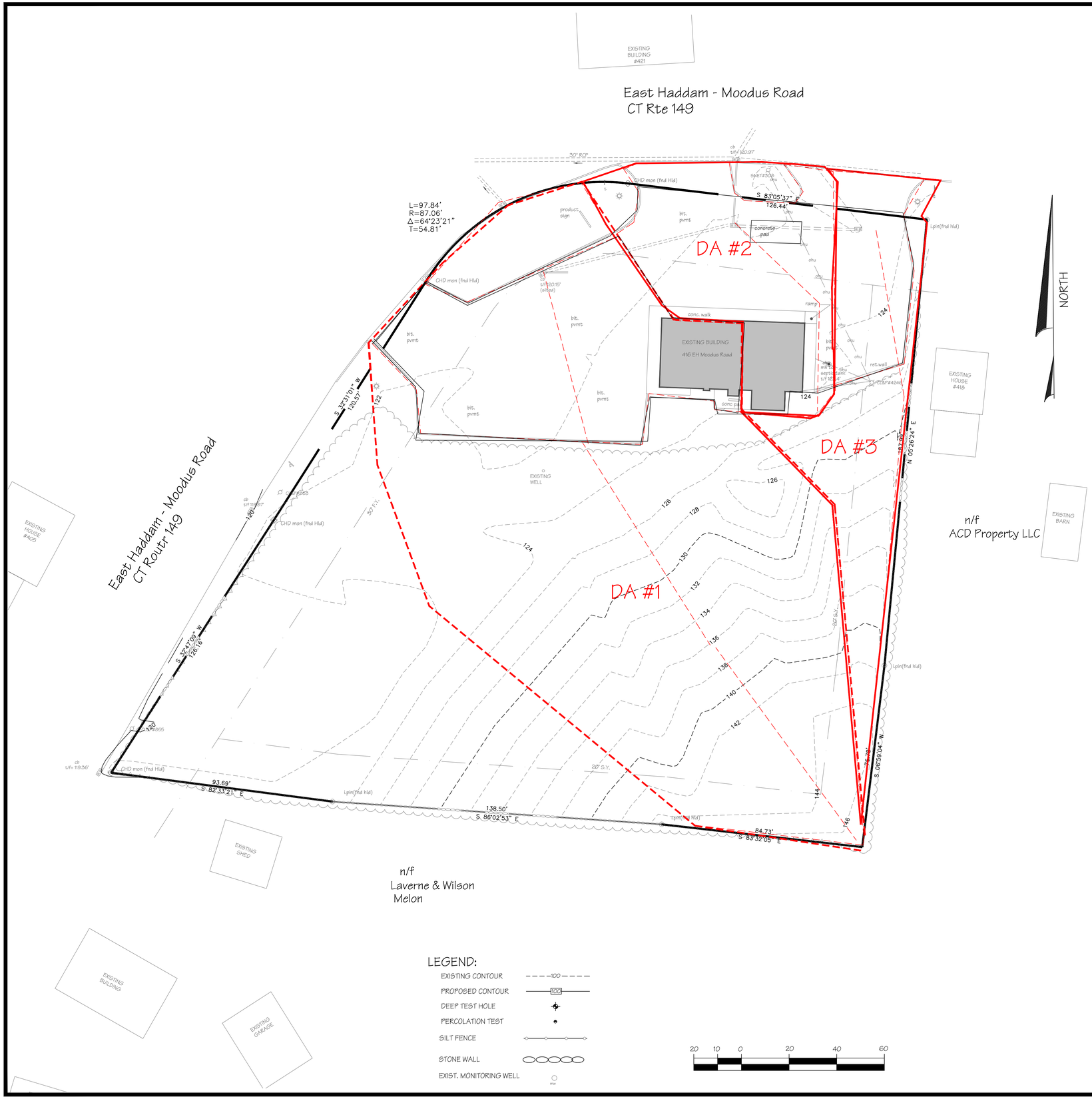
Summary for Pond 6P: (new Pond)

Inflow Area = 0.183 ac, 52.38% Impervious, Inflow Depth > 5.70" for 100 Year event
Inflow = 1.57 cfs @ 12.02 hrs, Volume= 0.087 af
Outflow = 1.57 cfs @ 12.02 hrs, Volume= 0.087 af, Atten= 0%, Lag= 0.0 min
Primary = 1.57 cfs @ 12.02 hrs, Volume= 0.087 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 119.07' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	118.40'	**12.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 118.40' / 117.50' S= 0.0180 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=1.53 cfs @ 12.02 hrs HW=119.06' (Free Discharge)
1=Culvert (Inlet Controls 1.53 cfs @ 2.77 fps)



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DRAINAGE AREAS - EXISTING

MOODUS FOOD STOP
416 EAST HADDAM - MOODUS ROAD
(ROUTE 149)
EAST HADDAM CONNECTICUT
MAP: 64 LOT: 64

DATE: 3-4-25
DRAWN BY: J.A.N.
CHECKED BY: R.D.N.
SCALE: 1" = 20'

NO.	DATE	REVISIONS
1	12/3/25	TOWN ENG. REV.

SHEET

1 OF 2



NOTE:
MAINTAIN EXISTING (PRE-CONSTRUCTION) GRADES IN ALL AREAS WHERE PROPOSED CONTOURS ARE NOT SHOWN

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DRAINAGE AREAS - PROPOSED

MOODUS FOOD STOP
416 EAST HADDAM - MOODUS ROAD
(ROUTE 149)
EAST HADDAM CONNECTICUT
MAP: 64 LOT: 64

DATE: 3-4-25
DRAWN BY: J.A.N.
CHECKED BY: R.D.N.
SCALE: 1" = 20'

NO.	DATE	REVISIONS
1	1/9/26	

SHEET

2 OF 2