Contents

Existing Conditions

The subject site consists of three parcels totaling 54.73 acres in the Limited Manufacturing – LM zone. The addresses of record for the parcels are 51-53-55 Summer Street. Summer Street has a 50-foot-wide right-of-way along the frontage of the existing lots. There are no existing buildings or improvements on site. The parcels include frontage on the north side of Summer Street. The site is located within the Limited Manufacturing and extends to the east side of the railroad tracks. On the north side there is a Park, School, Recreation & Conservation (PSRC) zoned area encompassing a large wetland area. On the west and south sides there is Residence B (RB) zoned properties.

There is a railroad yard located on the abutting property on the east side of our project site in the LM zone, across from the railroad right-of-way. The PSRC zone does not contain any existing buildings. The RB zone to the west and south contain residential dwellings with associated improvements (such as stand-alone garages, pools, sheds, driveways, etc).

The site contains a mix of woodlands, isolated vegetated wetlands, bordering vegetated wetlands, vernal pools, and open grassed areas. The terrain ranges on site from elevation 186' to 228' MSL, with the lower areas generally being wetlands and the higher elevations being upland areas. The site pitches from south to north starting at Summer Street and ending at Cedar Swamp Brook at the rear of the site. The site currently accepts direct runoff from abutters on the south and west sides for which there is no easement in place. This runoff flows into a wetland on the northern side of the property. Existing flow patterns are generally from the south and west towards north, with localized flow in other directions due to the site terrain.

The site hydrology consists of upland areas flowing to both isolated and bordering vegetated wetlands existing across the entirety of the site. Surface water flows from south to noth across the site, from Summer Street to Cedar Swamp Brook. The entire site drains to four analysis points. The first (AP1) is a small portion of the entrance to the site drains back onto Summer Street and into the drainage system located within Summer Street. This takes up a very small portion of the site drainage. The second analysis point (AP2) for the site is an isolated wetland which is located adjacent to the existing train tracks on the eastern side of the property. This depression has no outlet; water collects here and slowly infiltrates into the soil. The third analysis point is another wetland area (AP3). This isolated pocket is located adjacent to the eastern train tracks and the other isolated pocket AP2 and collects and infiltrates water. The final analysis point (AP4) is Cedar Swamp Brook which runs along the entirety of the northern part of the property.

There is currently no drainage infrastructure located on-site. There are no known catch basins or other constructed stormwater management systems. There is an existing storm drain system in Summer Street with a catch basin located along the site's frontage.

Soil conditions on site are mainly Fine Sandy Loam (Canton, Ridgebury, Whitman, Scituate, and Merrimac) with a smaller area of Hollis-Rock Outcrop-Charlton Complex. The hydrologic soil group for these soils area A B, C & D with the majority belonging to groups B, C & D.

Both town and private sewer, water, electricity, gas and communications are currently located within the Summer Street right-of-way, which is the preferred source of utilities to service the project.

Proposed Conditions

The existing site is proposed to be improved with the addition of twelve (12), four (4) unit town house buildings, sixty (60) single family homes, and four (4) multifamily apartment buildings. Onsite parking, municipal water and sewer, gas, electric, cable, telephone and onsite drainage improvements have also been added as a part of this development.

The proposed development consists of forty-eight (48) townhouses, one hundred and ninety two (192) apartment units, sixty (60) single family houses, and six hundred and seventy seven (677) total site wide parking spaces and associated roads, utilities and drainage facilities.

Subcatchment 201S is the remaining water which will still flow to the street from the development to analysis point 1 (AP1). Subcatchment 202S which is the beginning of the access road and the single family loop at the front flows into a infiltration pond then to AP2. Subcatchments 217S and 203S flow via overland flow to AP2. Subcatchment 204S is the isolated wetland pocket. The remainder of the subcatchments flow through catchbasins and pipes to sediment forebays and infiltration ponds to receive treatment and recharge a portion of the stormwater back into the ground. These remaining subcatchments ultimately flow to Cedar Swamp Brook (AP4).

All proposed street and driveway runoff will be collected by deep sump, hooded catch basins and piped to surface infiltration areas for recharge to groundwater, as required by the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Standards.

Water quality will be achieved by using several Best Management Practices (BMPs) in series. Deep sump hooded catch basins and a sediment forebay will separate much of the suspended solids in the stormwater before being discharge to the infiltration pond. A site wide average of over 80% of the total suspended solids (TSS) will be removed as part of the BMP treatment chain.

The proposed stormwater management system will result in decreased runoff rates and volumes compared to the existing condition and will provide the required 80% TSS removal per the Massachusetts Stormwater Management Standards.

The following preliminary analysis has been prepared to demonstrate and document the preliminary proposed stormwater management system, including stormwater best management practices (BMP's) to show compliance will all requirements of the Massachusetts Stormwater Management Standards.

Stormwater Management Standards

Standard 1: No new untreated discharges

The Massachusetts Stormwater Handbook requires that the project demonstrates that no new stormwater conveyances (e.g. outfalls) discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.

The proposed project will not discharge stormwater directly to, or cause erosion in, wetlands or water of the Commonwealth and will treat stormwater prior to discharge or infiltration.

BMP's have been proposed to treat most stormwater collected from the newly paved areas. Each treatment chain consists of a deep sump hooded catch basin and a sediment forebay which will be sized to accommodate the water quality volume per the Massachusetts Stormwater Handbook.

Standard 2: Post-development peak discharge rates not to exceed pre-development peak discharge rates

Post-development peak discharge rates do not exceed the pre-development peak discharge rates and total runoff volumes for all storm events. The proposed condition reduces rates by collecting and controlling the stormwater runoff within the stormwater management system.

Storm Event	2-year	10-year	25-year	100-year
Pre-Development Rates (cfs) AP1 Volume (cf) (Summer St)	0.25 825	0.54 1,720	0.79 2,496	1.32 4,215
Post-Development Rates (cfs) AP1 Volume (cf) (Summer St)	0.25 802	0.48 1,509	0.65 2,098	1.03 3,364
Rate Reductions (cfs) **Volume Reductions (cf)**	**0.00** **-23**	**-0.06** **-211**	**-0.14** **-398**	**-0.29** **-851**
Pre-Development Rates (cfs) AP2 Volume (cf) (Wetland at track)	13.26 91,171	29.23 193,364	42.93 282,676	72.71 481,423
Post-Development Rates (cfs) AP2 Volume (cf) (Wetland at track)	7.67 75,498	16.65 159,002	24.40 230,529	41.38 387,752
Rate Reductions (cfs) **Volume Reductions (cf)**	**-5.59** **-15,673**	**-12.58** **-34,362**	**-18.53** **-52,147**	**-31.33** **-93,671**
Pre-Development Rates (cfs) AP3 Volume (cf) (Wetland at track)	3.05 9,986	6.69 21,146	9.79 30,892	16.49 52,569
Post-Development Rates (cfs) AP3 Volume (cf) (Wetland at track)	1.17 3,826	2.56 8,101	3.75 11,834	6.32 20,139
Rate Reductions (cfs) **Volume Reductions (cf)**	**-1.88** **-6,160**	**-4.13** **-13,045**	**-6.04** **-19,058**	**-10.17** **-32,430**
Pre-Development Rates (cfs) AP4 Volume (cf) (Brook)	11.89 83,792	34.18 210,439	55.04 329,122	102.98 606,488
Post-Development Rates (cfs) AP4 Volume (cf) (Brook)	8.31 70,600	29.98 201,368	47.07 327,812	101.46 635,173
Rate Reductions (cfs) **Volume Reductions (cf)**	**-3.58** **-13,192**	**-4.2** **-9,071**	**-7.97** **-1,310**	**-1.52** **28,685**

Standard 3: Minimize or eliminate loss of annual recharge to groundwater

Groundwater recharge will be accomplished using the surface infiltration ponds. As shown in the table summary for Standard 2, the project decreases the total volume of runoff for all storm events with the exception for the 100 year storm event for AP4 which is the discharge to the Cedar Swamp Brook. All other storm have a significant decrease over the existing condition for both volume and runoff. This reduction in volume is generated by collecting and infiltrating a significant portion of the site.

*Rv = F * impervious area*

Rv = Required Recharge Volume, expressed in Ft^3, cubic yards, or acre-feet

F= Target Depth Factor associated with each Hydrologic Soil Group

Impervious Area = pavement and rooftop area on-site

Rv=0.60 in(see note) * 641,656 sf * 1 ft / 12 in = **32,083 cf recharge required**

Total recharge provided:

Pond 202P = 3,827 cf below outlet

Pond 207P = 20,544 cf below outlet

Pond 208P = 7,810 cf below outlet

Pond 209P = 15,314 cf below outlet

Pond 210P = 15,454 cf below outlet

*Ponds 212P – 216P = (5) * (1239 cf) = 6195 cf below outlet*

Total site recharge = 69,144 cf recharge volume > 32,083 cf required

Note: The recharge rate for 'A' soils has been used to conservatively demonstrate the requirement for recharge is met by the preliminary design volumes in the infiltration areas.

Drawdown Within 72 Hours

Pond 202 P 3,827 cf / [(2.41 in/hr)(1 ft/12 in) (3,062 sf)] = 6.0 **hours < 72 hours, OK**

Pond 207 P 20,544 cf / [(2.41 in/hr)(1 ft/12 in) (5,856 sf)] = 17.4 **hours < 72 hours, OK**

Pond 208 P 7,810 cf / [(2.41 in/hr)(1 ft/12 in) (7,139 sf)] = 5.4 **hours < 72 hours, OK**

Pond 209 P 15,314 cf / [(2.41 in/hr)(1 ft/12 in) (6,226 sf)] = 12.2 **hours < 72 hours, OK**

Pond 210 P 15,454 cf / [(2.41 in/hr)(1 ft/12 in) (6,070 sf)] = 12.6 **hours < 72 hours, OK**

Ponds 212-216 P 6,195 cf / [(2.41 in/hr)(1 ft/12 in) (6070 sf)] = 5.08 **hours < 72 hours, OK**

Standard 4: Stormwater management system to remove 80% of the average annual load of Total Suspended Solids (TSS)

The stormwater management system is designed to remove >80% annual total suspended solids (TSS) from the proposed roadway, driveways, and sidewalks.

Typical Treatment Train:

1. Deep Sump Hooded Catch Basin Removes 25% TSS: 100%*(1-25%) = 75% remaining
2. Infiltration Basin Removes 80% TSS: 75%*(1-80%) = 15% remaining
3. Total TSS Removal = 100%-15% = 85%

Water Quality Volume

Calculated as V*wq* = (Dwq/12 inches/foot) * (A*imp* * 43,560 square feet/acre), where:

V*wq* = required water quality volume (in cubic feet)

D*wq* = water quality depth: one-inch for discharges within a Zone II or Interim Wellhead Protection Area, to or near another critical area, runoff from a LUHPPL, or exfiltration to soils with infiltration rate greater than 2.4 inches/hour or greater; ½ inch for discharges near or to other areas.

A*imp* = impervious area (in acres)

***Aimp* = *Impervious* Area of Subcatchments = 641,656 sf**

D*wq* = 1 inch

V*wq* = (1 inch / 12 inches / foot) * (614,656 S.F.) = 54,463 C.F.

Total volume under outlets at Infiltration Ponds = 69,144 cf > 54, 463 cf OK

Standard 5: Land uses with higher potential pollutant loads

The development is not considered a land use that generally produces higher potential pollutant loads.

Standard 6: Stormwater discharges to critical areas

The proposed stormwater system does not discharge to a critical area.

Standard 7: Redevelopment projects

The project is not considered a redevelopment project.

Standard 8: Control construction-related impacts

The project will install erosion and sediment controls prior to any earthwork activity. Erosion control barriers will be placed down slope from the proposed construction to prevent erosion and sedimentation into the surrounding areas. The barriers will be maintained and inspected periodically during construction; sediment buildup will be removed and any damaged barrier will be replaced as needed.

Standard 9: Long-term operation and maintenance plan

See Appendix A for the operation and maintenance requirements of the stormwater management system.

Standard 10: No illicit discharges

An illicit discharge compliance statement will be provided by the property owner under separate cover.

Appendix A: Operation and Maintenance Plan

Deep Sump Hooded Catch Basins

System Owner: 55 BH LLC
(Per DEP Stormwater Structural BMP's Vol 2)

Inspect or clean deep sump basins at least four times per year and at the end of the foliage and snow removal seasons. Sediments must also be removed four times per year or whenever the depth of deposits is greater than or equal to one half the depth from the bottom of the invert of the lowest pipe in the basin. If handling runoff from land uses with higher potential pollutant loads or discharging runoff near or to a critical area, more frequent cleaning may be necessary. Clamshell buckets are typically used to remove sediment in Massachusetts. However, vacuum trucks are preferable, because they remove more trapped sediment and supernatant than clamshells. Vacuuming is also a speedier process and is less likely to snap the cast iron hood within the deep sump catch basin.

Date	Inspector	Condition	Maintenance Performed*

*Evidence of maintenance (i.e. receipts) must be provided.

Sediment Forebay
System Owner: 55 BH LLC
(Per DEP Stormwater Structural BMP's Vol 2)

In many cases, a landscaping contractor working elsewhere on the site can complete maintenance tasks. Stabilize the floor and sidewalls of the sediment forebay before making it operational, otherwise the practice will discharge excess amounts of suspended sediments.

Inspect and clean out the sediment forebay in order to assure that sediments and associated pollutants are cleaned out. Frequently removing accumulated sediments will make it less likely that sediments will be resuspended. At a minimum, inspect the sediment forebays monthly and clean them out at least four times a year.

Mow the grass areas and keep the grass height no greater than 6 inches. Check for signs of rilling and gullying and repair as needed. After removing the sediment, replace any vegetation damaged during the clean-out by either reseeding or resodding. When reseeding, incorporate practices such as hydroseeding with a tackifier, blanket, or similar practice to ensure that no scour occurs in the forebay, while the seeds germinate and develop roots.

* Paying careful attention to pretreatment and operation & maintenance can extend the life of the soil media

Date	Inspector	Condition	Maintenance Performed*

*Evidence of maintenance (ie. receipts) must be provided.

Infiltration Basins

System Owner: 55 BH LLC
(Per DEP Stormwater Structural BMP's Vol 2)
In many cases, a landscaping contractor working elsewhere on the site can complete maintenance tasks. Inspect the basin and outlet structure to ensure no structural damage has occurred and that they are functioning properly and up to design standards.

Inspection and preventive maintenance is required at least twice per year, and after each major storm event. Note how long water remains standing in the basin after a storm. If water remains standing after 48 to 72 hours after a storm, the infiltration basin may be clogged.

At least twice per year, mow the buffer area, side slopes, and basin bottom. Remove grass clippings, accumulated organic matter, trash and debris at this time.

Remove sediment from the basin as necessary when the basin is dry. Use light equipment when removing the top layer, as to not compact the underlying soil. Use deep tilling to break and remove any clogged surfaces and revegetate immediately.

Important items to check during inspections include:

- Signs of differential settlement
- Cracking
- Erosion
- Leakage in the embankments
- Tree growth on the embankments
- Condition of rip rap
- Sediment accumulation
- Health of vegetation, turf

* Paying careful attention to pretreatment and operation & maintenance can extend the life of the soil media

Date	Inspector	Condition	Maintenance Performed*

*Evidence of maintenance (ie. receipts) must be provided.

Appendix B: Erosion and Sediment Control Notes and General Construction Sequence

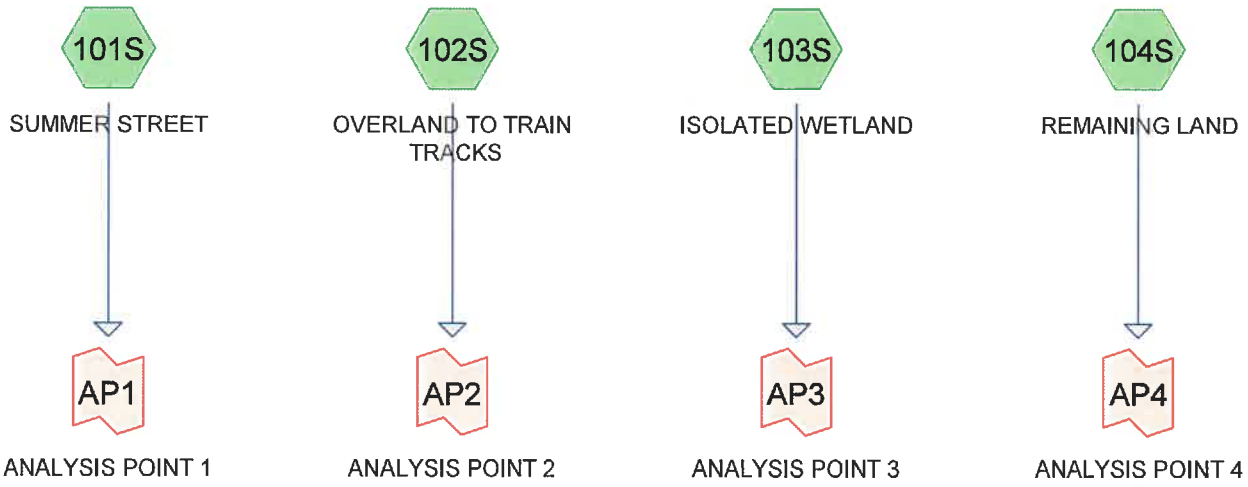
Erosion and Sediment Control Notes

1. Erosion and sediment control measures must be installed prior to the start of construction and maintained and upgraded as necessary during construction by the contractor. It is the contractor's responsibility to inspect and install additional control measures as needed during construction.
2. All catch basins receiving drainage from the project site must be provided with a catch basin filter.
3. Stabilization of all re-graded and soil stockpile areas must be maintained during all phases of construction.
4. Sediment removed from erosion and sediment control devices must be properly removed and disposed. All damaged controls must be removed and replaced.
5. The contractor is responsible for implementing the erosion and sediment control plan. This includes the installation and maintenance of control measures, informing all parties engaged on the construction site of the requirements and objectives of the plan, and notifying the proper city agency of any transfer of this responsibility.
6. The contractor shall be responsible for controlling wind erosion and dust throughout the life of his contract. Dust control may include, but is not limited to, sprinkling of water on exposed soils and street sweeping adjacent roadways.
7. If final grading is to be delayed for more than 21 days after land disturbance activities cease, temporary vegetation or mulch shall be used to stabilize soils within 14 days of the last disturbance.
8. If a disturbed area will be exposed for greater than one year, permanent grasses or other approved cover must be installed.
9. The contractor must keep on-site at all times additional silt fence and hay bales for the installation at the direction of the engineer or the city to mitigate any emergency condition.
10. The construction fencing and erosion and sediment controls as shown may not be practical during all stages of construction. Earthwork activity on-site must be done in a manner such that runoff is directed to a sediment control device or infiltrated to the ground.
11. Demolition and construction debris must be properly contained and disposed of.
12. Disposal of all demolished materials is the responsibility of the contractor and must be hauled off-site in accordance with all federal, state and local requirements.

General Construction Sequence

1. Install erosion and sediment controls prior to starting any earthworks activity.
2. Begin clearing, grubbing and demolition.
3. Begin utility installations.
4. Construct building foundation.
5. Install site furnishings.
6. Install landscaping.
7. Erosion and sediment controls shall be maintained until permanent cover is established.

Appendix C: HydroCAD



Subcat Reach Pond Link

Routing Diagram for 19097 Pre-Development
Prepared by Howard Stein Hudson, Printed 1/10/2020

Project Notes

Rainfall events imported from "19097 Post-Development.hcp"

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
144,197	68	1 acre lots, 20% imp, HSG B (102S, 104S)
99,416	39	>75% Grass cover, Good, HSG A (103S, 104S)
175,905	61	>75% Grass cover, Good, HSG B (101S, 102S)
18,865	74	>75% Grass cover, Good, HSG C (102S, 104S)
14,285	80	>75% Grass cover, Good, HSG D (102S, 103S)
41,108	98	Paved parking, HSG B (101S, 102S)
2,395	98	Water Surface, 0% imp, HSG A (103S)
25,210	98	Water Surface, 0% imp, HSG B (102S)
169,001	98	Water Surface, 0% imp, HSG C (102S, 104S)
247,266	98	Water Surface, 0% imp, HSG D (102S, 103S, 104S)
198,950	30	Woods, Good, HSG A (103S, 104S)
394,352	55	Woods, Good, HSG B (102S, 104S)
509,528	70	Woods, Good, HSG C (102S, 103S, 104S)
541,267	77	Woods, Good, HSG D (102S, 103S, 104S)
2,581,745	**70**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
300,761	HSG A	103S, 104S
780,772	HSG B	101S, 102S, 104S
697,394	HSG C	102S, 103S, 104S
802,818	HSG D	102S, 103S, 104S
0	Other	
2,581,745		**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 101S: SUMMER STREET Runoff Area=8,256 sf 40.96% Impervious Runoff Depth>1.20"
Tc=6.0 min CN=76 Runoff=0.25 cfs 825 cf

Subcatchment 102S: OVERLAND TO Runoff Area=969,625 sf 4.91% Impervious Runoff Depth>1.13"
Flow Length=1,531' Tc=44.5 min CN=75 Runoff=13.26 cfs 91,171 cf

Subcatchment 103S: ISOLATED WETLAND Runoff Area=105,094 sf 0.00% Impervious Runoff Depth>1.14"
Tc=6.0 min CN=75 Runoff=3.05 cfs 9,987 cf

Subcatchment 104S: REMAINING LAND Runoff Area=1,498,770 sf 1.27% Impervious Runoff Depth>0.67"
Flow Length=987' Tc=35.5 min CN=66 Runoff=11.89 cfs 83,792 cf

Link AP1: ANALYSIS POINT 1 Inflow=0.25 cfs 825 cf
Primary=0.25 cfs 825 cf

Link AP2: ANALYSIS POINT 2 Inflow=13.26 cfs 91,171 cf
Primary=13.26 cfs 91,171 cf

Link AP3: ANALYSIS POINT 3 Inflow=3.05 cfs 9,987 cf
Primary=3.05 cfs 9,987 cf

Link AP4: ANALYSIS POINT 4 Inflow=11.89 cfs 83,792 cf
Primary=11.89 cfs 83,792 cf

Total Runoff Area = 2,581,745 sf Runoff Volume = 185,775 cf Average Runoff Depth = 0.86"
97.29% Pervious = 2,511,798 sf 2.71% Impervious = 69,947 sf

Summary for Subcatchment 101S: SUMMER STREET

Runoff = 0.25 cfs @ 12.10 hrs, Volume= 825 cf, Depth> 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
4,874	61	>75% Grass cover, Good, HSG B
3,382	98	Paved parking, HSG B
8,256	76	Weighted Average
4,874		59.04% Pervious Area
3,382		40.96% Impervious Area

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

Summary for Subcatchment 102S: OVERLAND TO TRAIN TRACKS

Runoff = 13.26 cfs @ 12.65 hrs, Volume= 91,171 cf, Depth> 1.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
171,031	61	>75% Grass cover, Good, HSG B
159,669	55	Woods, Good, HSG B
37,726	98	Paved parking, HSG B
25,210	98	Water Surface, 0% imp, HSG B
49,311	68	1 acre lots, 20% imp, HSG B
15,945	74	>75% Grass cover, Good, HSG C
235,444	70	Woods, Good, HSG C
117,580	98	Water Surface, 0% imp, HSG C
9,642	80	>75% Grass cover, Good, HSG D
24,894	77	Woods, Good, HSG D
123,173	98	Water Surface, 0% imp, HSG D
969,625	75	Weighted Average
922,037		95.09% Pervious Area
47,588		4.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	50	0.0800	0.26		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.27"
0.3	77	0.0780	4.50		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
41.0	1,404	0.0130	0.57		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
44.5	1,531	Total			

Summary for Subcatchment 103S: ISOLATED WETLAND

Runoff = 3.05 cfs @ 12.10 hrs, Volume= 9,987 cf, Depth> 1.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
5,813	39	>75% Grass cover, Good, HSG A
1,850	30	Woods, Good, HSG A
2,395	98	Water Surface, 0% imp, HSG A
12,011	70	Woods, Good, HSG C
4,643	80	>75% Grass cover, Good, HSG D
71,972	77	Woods, Good, HSG D
6,410	98	Water Surface, 0% imp, HSG D
105,094	75	Weighted Average
105,094		100.00% Pervious Area

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

Summary for Subcatchment 104S: REMAINING LAND

Runoff = 11.89 cfs @ 12.59 hrs, Volume= 83,792 cf, Depth> 0.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
93,603	39	>75% Grass cover, Good, HSG A
193,683	30	Woods, Good, HSG A
3,417	30	Woods, Good, HSG A
233,993	55	Woods, Good, HSG B
690	55	Woods, Good, HSG B
94,886	68	1 acre lots, 20% imp, HSG B
2,920	74	>75% Grass cover, Good, HSG C
262,073	70	Woods, Good, HSG C
51,421	98	Water Surface, 0% imp, HSG C
444,401	77	Woods, Good, HSG D
117,683	98	Water Surface, 0% imp, HSG D
1,498,770	66	Weighted Average
1,479,793		98.73% Pervious Area
18,977		1.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.1	50	0.0400	0.05		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.27"
19.4	937	0.0260	0.81		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
35.5	987	Total			

Summary for Link AP1: ANALYSIS POINT 1

Inflow Area = 8,256 sf, 40.96% Impervious, Inflow Depth > 1.20" for 2YR event
Inflow = 0.25 cfs @ 12.10 hrs, Volume= 825 cf
Primary = 0.25 cfs @ 12.10 hrs, Volume= 825 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP2: ANALYSIS POINT 2

Inflow Area = 969,625 sf, 4.91% Impervious, Inflow Depth > 1.13" for 2YR event
Inflow = 13.26 cfs @ 12.65 hrs, Volume= 91,171 cf
Primary = 13.26 cfs @ 12.65 hrs, Volume= 91,171 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP3: ANALYSIS POINT 3

Inflow Area = 105,094 sf, 0.00% Impervious, Inflow Depth > 1.14" for 2YR event
Inflow = 3.05 cfs @ 12.10 hrs, Volume= 9,987 cf
Primary = 3.05 cfs @ 12.10 hrs, Volume= 9,987 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP4: ANALYSIS POINT 4

Inflow Area = 1,498,770 sf, 1.27% Impervious, Inflow Depth > 0.67" for 2YR event
Inflow = 11.89 cfs @ 12.59 hrs, Volume= 83,792 cf
Primary = 11.89 cfs @ 12.59 hrs, Volume= 83,792 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 101S: SUMMER STREET Runoff Area=8,256 sf 40.96% Impervious Runoff Depth>2.50"
Tc=6.0 min CN=76 Runoff=0.54 cfs 1,720 cf

Subcatchment 102S: OVERLAND TO Runoff Area=969,625 sf 4.91% Impervious Runoff Depth>2.39"
Flow Length=1,531' Tc=44.5 min CN=75 Runoff=29.23 cfs 193,364 cf

Subcatchment 103S: ISOLATED WETLAND Runoff Area=105,094 sf 0.00% Impervious Runoff Depth>2.41"
Tc=6.0 min CN=75 Runoff=6.69 cfs 21,146 cf

Subcatchment 104S: REMAINING LAND Runoff Area=1,498,770 sf 1.27% Impervious Runoff Depth>1.68"
Flow Length=987' Tc=35.5 min CN=66 Runoff=34.18 cfs 210,439 cf

Link AP1: ANALYSIS POINT 1 Inflow=0.54 cfs 1,720 cf
Primary=0.54 cfs 1,720 cf

Link AP2: ANALYSIS POINT 2 Inflow=29.23 cfs 193,364 cf
Primary=29.23 cfs 193,364 cf

Link AP3: ANALYSIS POINT 3 Inflow=6.69 cfs 21,146 cf
Primary=6.69 cfs 21,146 cf

Link AP4: ANALYSIS POINT 4 Inflow=34.18 cfs 210,439 cf
Primary=34.18 cfs 210,439 cf

Total Runoff Area = 2,581,745 sf Runoff Volume = 426,670 cf Average Runoff Depth = 1.98"
97.29% Pervious = 2,511,798 sf 2.71% Impervious = 69,947 sf

Summary for Subcatchment 101S: SUMMER STREET

Runoff = 0.54 cfs @ 12.09 hrs, Volume= 1,720 cf, Depth> 2.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
4,874	61	>75% Grass cover, Good, HSG B
3,382	98	Paved parking, HSG B
8,256	76	Weighted Average
4,874		59.04% Pervious Area
3,382		40.96% Impervious Area

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

Summary for Subcatchment 102S: OVERLAND TO TRAIN TRACKS

Runoff = 29.23 cfs @ 12.62 hrs, Volume= 193,364 cf, Depth> 2.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
171,031	61	>75% Grass cover, Good, HSG B
159,669	55	Woods, Good, HSG B
37,726	98	Paved parking, HSG B
25,210	98	Water Surface, 0% imp, HSG B
49,311	68	1 acre lots, 20% imp, HSG B
15,945	74	>75% Grass cover, Good, HSG C
235,444	70	Woods, Good, HSG C
117,580	98	Water Surface, 0% imp, HSG C
9,642	80	>75% Grass cover, Good, HSG D
24,894	77	Woods, Good, HSG D
123,173	98	Water Surface, 0% imp, HSG D
969,625	75	Weighted Average
922,037		95.09% Pervious Area
47,588		4.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	50	0.0800	0.26		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.27"
0.3	77	0.0780	4.50		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
41.0	1,404	0.0130	0.57		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
44.5	1,531	Total			

Summary for Subcatchment 103S: ISOLATED WETLAND

Runoff = 6.69 cfs @ 12.09 hrs, Volume= 21,146 cf, Depth> 2.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
5,813	39	>75% Grass cover, Good, HSG A
1,850	30	Woods, Good, HSG A
2,395	98	Water Surface, 0% imp, HSG A
12,011	70	Woods, Good, HSG C
4,643	80	>75% Grass cover, Good, HSG D
71,972	77	Woods, Good, HSG D
6,410	98	Water Surface, 0% imp, HSG D
105,094	75	Weighted Average
105,094		100.00% Pervious Area

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

Summary for Subcatchment 104S: REMAINING LAND

Runoff = 34.18 cfs @ 12.53 hrs, Volume= 210,439 cf, Depth> 1.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
93,603	39	>75% Grass cover, Good, HSG A
193,683	30	Woods, Good, HSG A
3,417	30	Woods, Good, HSG A
233,993	55	Woods, Good, HSG B
690	55	Woods, Good, HSG B
94,886	68	1 acre lots, 20% imp, HSG B
2,920	74	>75% Grass cover, Good, HSG C
262,073	70	Woods, Good, HSG C
51,421	98	Water Surface, 0% imp, HSG C
444,401	77	Woods, Good, HSG D
117,683	98	Water Surface, 0% imp, HSG D
1,498,770	66	Weighted Average
1,479,793		98.73% Pervious Area
18,977		1.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.1	50	0.0400	0.05		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.27"
19.4	937	0.0260	0.81		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
35.5	987	Total			

Summary for Link AP1: ANALYSIS POINT 1

Inflow Area = 8,256 sf, 40.96% Impervious, Inflow Depth > 2.50" for 10YR event
Inflow = 0.54 cfs @ 12.09 hrs, Volume= 1,720 cf
Primary = 0.54 cfs @ 12.09 hrs, Volume= 1,720 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP2: ANALYSIS POINT 2

Inflow Area = 969,625 sf, 4.91% Impervious, Inflow Depth > 2.39" for 10YR event
Inflow = 29.23 cfs @ 12.62 hrs, Volume= 193,364 cf
Primary = 29.23 cfs @ 12.62 hrs, Volume= 193,364 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP3: ANALYSIS POINT 3

Inflow Area = 105,094 sf, 0.00% Impervious, Inflow Depth > 2.41" for 10YR event
Inflow = 6.69 cfs @ 12.09 hrs, Volume= 21,146 cf
Primary = 6.69 cfs @ 12.09 hrs, Volume= 21,146 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP4: ANALYSIS POINT 4

Inflow Area = 1,498,770 sf, 1.27% Impervious, Inflow Depth > 1.68" for 10YR event
Inflow = 34.18 cfs @ 12.53 hrs, Volume= 210,439 cf
Primary = 34.18 cfs @ 12.53 hrs, Volume= 210,439 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 101S: SUMMER STREET Runoff Area=8,256 sf 40.96% Impervious Runoff Depth>3.63"
Tc=6.0 min CN=76 Runoff=0.79 cfs 2,496 cf

Subcatchment 102S: OVERLAND TO Runoff Area=969,625 sf 4.91% Impervious Runoff Depth>3.50"
Flow Length=1,531' Tc=44.5 min CN=75 Runoff=42.93 cfs 282,676 cf

Subcatchment 103S: ISOLATED WETLAND Runoff Area=105,094 sf 0.00% Impervious Runoff Depth>3.53"
Tc=6.0 min CN=75 Runoff=9.79 cfs 30,892 cf

Subcatchment 104S: REMAINING LAND Runoff Area=1,498,770 sf 1.27% Impervious Runoff Depth>2.64"
Flow Length=987' Tc=35.5 min CN=66 Runoff=55.04 cfs 329,122 cf

Link AP1: ANALYSIS POINT 1 Inflow=0.79 cfs 2,496 cf
Primary=0.79 cfs 2,496 cf

Link AP2: ANALYSIS POINT 2 Inflow=42.93 cfs 282,676 cf
Primary=42.93 cfs 282,676 cf

Link AP3: ANALYSIS POINT 3 Inflow=9.79 cfs 30,892 cf
Primary=9.79 cfs 30,892 cf

Link AP4: ANALYSIS POINT 4 Inflow=55.04 cfs 329,122 cf
Primary=55.04 cfs 329,122 cf

Total Runoff Area = 2,581,745 sf Runoff Volume = 645,187 cf Average Runoff Depth = 3.00"
97.29% Pervious = 2,511,798 sf 2.71% Impervious = 69,947 sf

Summary for Subcatchment 101S: SUMMER STREET

Runoff = 0.79 cfs @ 12.09 hrs, Volume= 2,496 cf, Depth> 3.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
4,874	61	>75% Grass cover, Good, HSG B
3,382	98	Paved parking, HSG B
8,256	76	Weighted Average
4,874		59.04% Pervious Area
3,382		40.96% Impervious Area

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

Summary for Subcatchment 102S: OVERLAND TO TRAIN TRACKS

Runoff = 42.93 cfs @ 12.61 hrs, Volume= 282,676 cf, Depth> 3.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
171,031	61	>75% Grass cover, Good, HSG B
159,669	55	Woods, Good, HSG B
37,726	98	Paved parking, HSG B
25,210	98	Water Surface, 0% imp, HSG B
49,311	68	1 acre lots, 20% imp, HSG B
15,945	74	>75% Grass cover, Good, HSG C
235,444	70	Woods, Good, HSG C
117,580	98	Water Surface, 0% imp, HSG C
9,642	80	>75% Grass cover, Good, HSG D
24,894	77	Woods, Good, HSG D
123,173	98	Water Surface, 0% imp, HSG D
969,625	75	Weighted Average
922,037		95.09% Pervious Area
47,588		4.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	50	0.0800	0.26		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.27"
0.3	77	0.0780	4.50		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
41.0	1,404	0.0130	0.57		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
44.5	1,531	Total			

Summary for Subcatchment 103S: ISOLATED WETLAND

Runoff = 9.79 cfs @ 12.09 hrs, Volume= 30,892 cf, Depth> 3.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
5,813	39	>75% Grass cover, Good, HSG A
1,850	30	Woods, Good, HSG A
2,395	98	Water Surface, 0% imp, HSG A
12,011	70	Woods, Good, HSG C
4,643	80	>75% Grass cover, Good, HSG D
71,972	77	Woods, Good, HSG D
6,410	98	Water Surface, 0% imp, HSG D
105,094	75	Weighted Average
105,094		100.00% Pervious Area

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

Summary for Subcatchment 104S: REMAINING LAND

Runoff = 55.04 cfs @ 12.51 hrs, Volume= 329,122 cf, Depth> 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
93,603	39	>75% Grass cover, Good, HSG A
193,683	30	Woods, Good, HSG A
3,417	30	Woods, Good, HSG A
233,993	55	Woods, Good, HSG B
690	55	Woods, Good, HSG B
94,886	68	1 acre lots, 20% imp, HSG B
2,920	74	>75% Grass cover, Good, HSG C
262,073	70	Woods, Good, HSG C
51,421	98	Water Surface, 0% imp, HSG C
444,401	77	Woods, Good, HSG D
117,683	98	Water Surface, 0% imp, HSG D
1,498,770	66	Weighted Average
1,479,793		98.73% Pervious Area
18,977		1.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.1	50	0.0400	0.05		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.27"
19.4	937	0.0260	0.81		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
35.5	987	Total			

Summary for Link AP1: ANALYSIS POINT 1

Inflow Area = 8,256 sf, 40.96% Impervious, Inflow Depth > 3.63" for 25YR event
Inflow = 0.79 cfs @ 12.09 hrs, Volume= 2,496 cf
Primary = 0.79 cfs @ 12.09 hrs, Volume= 2,496 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP2: ANALYSIS POINT 2

Inflow Area = 969,625 sf, 4.91% Impervious, Inflow Depth > 3.50" for 25YR event
Inflow = 42.93 cfs @ 12.61 hrs, Volume= 282,676 cf
Primary = 42.93 cfs @ 12.61 hrs, Volume= 282,676 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP3: ANALYSIS POINT 3

Inflow Area = 105,094 sf, 0.00% Impervious, Inflow Depth > 3.53" for 25YR event
Inflow = 9.79 cfs @ 12.09 hrs, Volume= 30,892 cf
Primary = 9.79 cfs @ 12.09 hrs, Volume= 30,892 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP4: ANALYSIS POINT 4

Inflow Area = 1,498,770 sf, 1.27% Impervious, Inflow Depth > 2.64" for 25YR event
Inflow = 55.04 cfs @ 12.51 hrs, Volume= 329,122 cf
Primary = 55.04 cfs @ 12.51 hrs, Volume= 329,122 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 101S: SUMMER STREET Runoff Area=8,256 sf 40.96% Impervious Runoff Depth>6.13"
Tc=6.0 min CN=76 Runoff=1.32 cfs 4,215 cf

Subcatchment 102S: OVERLAND TO Runoff Area=969,625 sf 4.91% Impervious Runoff Depth>5.96"
Flow Length=1,531' Tc=44.5 min CN=75 Runoff=72.71 cfs 481,423 cf

Subcatchment 103S: ISOLATED WETLAND Runoff Area=105,094 sf 0.00% Impervious Runoff Depth>6.00"
Tc=6.0 min CN=75 Runoff=16.49 cfs 52,570 cf

Subcatchment 104S: REMAINING LAND Runoff Area=1,498,770 sf 1.27% Impervious Runoff Depth>4.86"
Flow Length=987' Tc=35.5 min CN=66 Runoff=102.98 cfs 606,488 cf

Link AP1: ANALYSIS POINT 1 Inflow=1.32 cfs 4,215 cf
Primary=1.32 cfs 4,215 cf

Link AP2: ANALYSIS POINT 2 Inflow=72.71 cfs 481,423 cf
Primary=72.71 cfs 481,423 cf

Link AP3: ANALYSIS POINT 3 Inflow=16.49 cfs 52,570 cf
Primary=16.49 cfs 52,570 cf

Link AP4: ANALYSIS POINT 4 Inflow=102.98 cfs 606,488 cf
Primary=102.98 cfs 606,488 cf

Total Runoff Area = 2,581,745 sf Runoff Volume = 1,144,696 cf Average Runoff Depth = 5.32"
97.29% Pervious = 2,511,798 sf 2.71% Impervious = 69,947 sf

Summary for Subcatchment 101S: SUMMER STREET

Runoff = 1.32 cfs @ 12.09 hrs, Volume= 4,215 cf, Depth> 6.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
4,874	61	>75% Grass cover, Good, HSG B
3,382	98	Paved parking, HSG B
8,256	76	Weighted Average
4,874		59.04% Pervious Area
3,382		40.96% Impervious Area

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

Summary for Subcatchment 102S: OVERLAND TO TRAIN TRACKS

Runoff = 72.71 cfs @ 12.60 hrs, Volume= 481,423 cf, Depth> 5.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
171,031	61	>75% Grass cover, Good, HSG B
159,669	55	Woods, Good, HSG B
37,726	98	Paved parking, HSG B
25,210	98	Water Surface, 0% imp, HSG B
49,311	68	1 acre lots, 20% imp, HSG B
15,945	74	>75% Grass cover, Good, HSG C
235,444	70	Woods, Good, HSG C
117,580	98	Water Surface, 0% imp, HSG C
9,642	80	>75% Grass cover, Good, HSG D
24,894	77	Woods, Good, HSG D
123,173	98	Water Surface, 0% imp, HSG D
969,625	75	Weighted Average
922,037		95.09% Pervious Area
47,588		4.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	50	0.0800	0.26		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.27"
0.3	77	0.0780	4.50		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
41.0	1,404	0.0130	0.57		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
44.5	1,531	Total			

Summary for Subcatchment 103S: ISOLATED WETLAND

Runoff = 16.49 cfs @ 12.09 hrs, Volume= 52,570 cf, Depth> 6.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
5,813	39	>75% Grass cover, Good, HSG A
1,850	30	Woods, Good, HSG A
2,395	98	Water Surface, 0% imp, HSG A
12,011	70	Woods, Good, HSG C
4,643	80	>75% Grass cover, Good, HSG D
71,972	77	Woods, Good, HSG D
6,410	98	Water Surface, 0% imp, HSG D
105,094	75	Weighted Average
105,094		100.00% Pervious Area

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

Summary for Subcatchment 104S: REMAINING LAND

Runoff = 102.98 cfs @ 12.50 hrs, Volume= 606,488 cf, Depth> 4.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
93,603	39	>75% Grass cover, Good, HSG A
193,683	30	Woods, Good, HSG A
3,417	30	Woods, Good, HSG A
233,993	55	Woods, Good, HSG B
690	55	Woods, Good, HSG B
94,886	68	1 acre lots, 20% imp, HSG B
2,920	74	>75% Grass cover, Good, HSG C
262,073	70	Woods, Good, HSG C
51,421	98	Water Surface, 0% imp, HSG C
444,401	77	Woods, Good, HSG D
117,683	98	Water Surface, 0% imp, HSG D
1,498,770	66	Weighted Average
1,479,793		98.73% Pervious Area
18,977		1.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.1	50	0.0400	0.05		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.27"
19.4	937	0.0260	0.81		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
35.5	987	Total			

Summary for Link AP1: ANALYSIS POINT 1

Inflow Area = 8,256 sf, 40.96% Impervious, Inflow Depth > 6.13" for 100YR event
Inflow = 1.32 cfs @ 12.09 hrs, Volume= 4,215 cf
Primary = 1.32 cfs @ 12.09 hrs, Volume= 4,215 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP2: ANALYSIS POINT 2

Inflow Area = 969,625 sf, 4.91% Impervious, Inflow Depth > 5.96" for 100YR event
Inflow = 72.71 cfs @ 12.60 hrs, Volume= 481,423 cf
Primary = 72.71 cfs @ 12.60 hrs, Volume= 481,423 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP3: ANALYSIS POINT 3

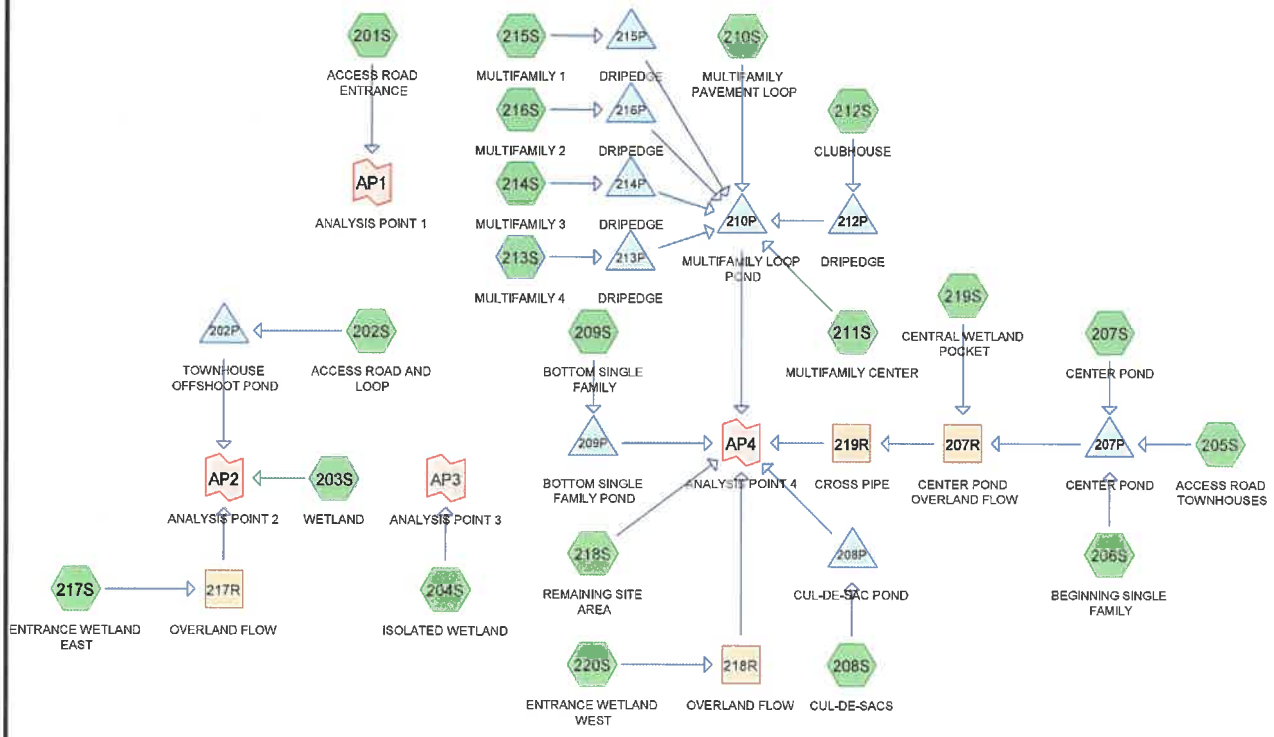
Inflow Area = 105,094 sf, 0.00% Impervious, Inflow Depth > 6.00" for 100YR event
Inflow = 16.49 cfs @ 12.09 hrs, Volume= 52,570 cf
Primary = 16.49 cfs @ 12.09 hrs, Volume= 52,570 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP4: ANALYSIS POINT 4

Inflow Area = 1,498,770 sf, 1.27% Impervious, Inflow Depth > 4.86" for 100YR event
Inflow = 102.98 cfs @ 12.50 hrs, Volume= 606,488 cf
Primary = 102.98 cfs @ 12.50 hrs, Volume= 606,488 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs



Subcat Reach Pond Link

Routing Diagram for 19097 Post-Development
Prepared by Howard Stein Hudson, Printed 1/10/2020

Project Notes

Rainfall events imported from "19097 PreDevelopment.hcp"
Rainfall events imported from "19097 PostDevelopment-prelim.hcp"

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
145,269	68	1 acre lots, 20% imp, HSG B (208S, 217S, 220S)
157,705	39	>75% Grass cover, Good, HSG A (204S, 209S, 210S, 211S, 218S, 219S)
306,716	61	>75% Grass cover, Good, HSG B (201S, 202S, 203S, 208S, 217S, 218S, 220S)
230,033	74	>75% Grass cover, Good, HSG C (202S, 203S, 204S, 207S, 210S, 217S, 218S, 219S, 220S)
150,599	80	>75% Grass cover, Good, HSG D (203S, 204S, 208S, 210S, 211S, 217S, 218S, 219S, 220S)
35,065	98	Paved parking, HSG A (209S, 210S)
155,668	98	Paved parking, HSG B (201S, 202S, 208S, 217S, 220S)
112,954	98	Paved parking, HSG C (202S, 205S, 206S, 208S, 209S, 210S)
103,628	98	Paved parking, HSG D (208S, 210S, 211S)
16,533	98	Roofs, HSG A (209S, 210S, 213S, 214S)
60,677	98	Roofs, HSG B (202S, 208S)
85,394	98	Roofs, HSG C (202S, 205S, 206S, 209S, 210S)
71,737	98	Roofs, HSG D (208S, 209S, 210S, 212S, 213S, 214S, 215S, 216S)
6,306	98	Water Surface, 0% imp, HSG A (204S, 213S, 214S, 219S)
25,949	98	Water Surface, 0% imp, HSG B (217S, 218S, 220S)
166,236	98	Water Surface, 0% imp, HSG C (203S, 217S, 218S, 219S, 220S)
252,399	98	Water Surface, 0% imp, HSG D (203S, 204S, 213S, 214S, 215S, 216S, 217S, 218S, 220S)
85,152	30	Woods, Good, HSG A (204S, 218S, 219S)
86,493	55	Woods, Good, HSG B (203S, 208S, 217S, 218S, 220S)
102,777	70	Woods, Good, HSG C (203S, 217S, 218S, 219S, 220S)
224,455	77	Woods, Good, HSG D (203S, 204S, 217S, 218S, 219S, 220S)
2,581,745	**79**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
300,761	HSG A	204S, 209S, 210S, 211S, 213S, 214S, 218S, 219S
780,772	HSG B	201S, 202S, 203S, 208S, 217S, 218S, 220S
697,394	HSG C	202S, 203S, 204S, 205S, 206S, 207S, 208S, 209S, 210S, 217S, 218S, 219S, 220S
802,818	HSG D	203S, 204S, 208S, 209S, 210S, 211S, 212S, 213S, 214S, 215S, 216S, 217S, 218S, 219S, 220S
0	Other	
2,581,745		**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 201S: ACCESS ROAD Runoff Area=5,776 sf 60.06% Impervious Runoff Depth>1.67"
Tc=6.0 min CN=83 Runoff=0.25 cfs 802 cf

Subcatchment 202S: ACCESS ROAD Runoff Area=110,123 sf 75.52% Impervious Runoff Depth>2.23"
Flow Length=1,382' Slope=0.0100 '/' Tc=11.8 min CN=90 Runoff=5.39 cfs 20,459 cf

Subcatchment 203S: WETLAND Runoff Area=277,240 sf 0.00% Impervious Runoff Depth>1.31"
Flow Length=711' Tc=39.3 min CN=78 Runoff=4.80 cfs 30,320 cf

Subcatchment 204S: ISOLATED WETLAND Runoff Area=40,260 sf 0.00% Impervious Runoff Depth>1.14"
Tc=6.0 min CN=75 Runoff=1.17 cfs 3,826 cf

Subcatchment 205S: ACCESS ROAD Runoff Area=42,289 sf 100.00% Impervious Runoff Depth>3.04"
Tc=6.0 min CN=98 Runoff=3.01 cfs 10,697 cf

Subcatchment 206S: BEGINNING SINGLE Runoff Area=39,188 sf 100.00% Impervious Runoff Depth>3.04"
Tc=6.0 min CN=98 Runoff=2.79 cfs 9,912 cf

Subcatchment 207S: CENTER POND Runoff Area=84,896 sf 0.00% Impervious Runoff Depth>1.08"
Tc=6.0 min CN=74 Runoff=2.32 cfs 7,659 cf

Subcatchment 208S: CUL-DE-SACS Runoff Area=287,997 sf 46.46% Impervious Runoff Depth>1.32"
Flow Length=1,366' Tc=24.9 min CN=78 Runoff=6.15 cfs 31,614 cf

Subcatchment 209S: BOTTOM SINGLE Runoff Area=108,860 sf 79.62% Impervious Runoff Depth>1.89"
Flow Length=1,050' Slope=0.0100 '/' Tc=9.1 min CN=86 Runoff=4.90 cfs 17,175 cf

Subcatchment 210S: MULTIFAMILY Runoff Area=209,178 sf 80.08% Impervious Runoff Depth>2.23"
Flow Length=1,252' Slope=0.0100 '/' Tc=10.8 min CN=90 Runoff=10.52 cfs 38,869 cf

Subcatchment 211S: MULTIFAMILY Runoff Area=60,101 sf 6.57% Impervious Runoff Depth>1.32"
Tc=6.0 min CN=78 Runoff=2.07 cfs 6,629 cf

Subcatchment 212S: CLUBHOUSE Runoff Area=5,226 sf 100.00% Impervious Runoff Depth>3.04"
Tc=6.0 min CN=98 Runoff=0.37 cfs 1,322 cf

Subcatchment 213S: MULTIFAMILY 4 Runoff Area=17,682 sf 89.23% Impervious Runoff Depth>3.04"
Tc=6.0 min CN=98 Runoff=1.26 cfs 4,473 cf

Subcatchment 214S: MULTIFAMILY 3 Runoff Area=17,685 sf 89.22% Impervious Runoff Depth>3.04"
Tc=6.0 min CN=98 Runoff=1.26 cfs 4,473 cf

Subcatchment 215S: MULTIFAMILY 1 Runoff Area=17,843 sf 88.43% Impervious Runoff Depth>3.04"
Tc=6.0 min CN=98 Runoff=1.27 cfs 4,513 cf

Subcatchment 216S: MULTIFAMILY 2 Runoff Area=17,498 sf 90.17% Impervious Runoff Depth>3.04"
Tc=6.0 min CN=98 Runoff=1.25 cfs 4,426 cf

Subcatchment 217S: ENTRANCE Runoff Area=378,675 sf 8.85% Impervious Runoff Depth>1.45"
Flow Length=1,052' Tc=31.9 min CN=80 Runoff=8.06 cfs 45,614 cf

Subcatchment 218S: REMAINING SITE Runoff Area=599,170 sf 0.00% Impervious Runoff Depth>0.81"
Flow Length=798' Tc=31.3 min CN=69 Runoff=6.49 cfs 40,531 cf

Subcatchment 219S: CENTRAL WETLAND Runoff Area=123,160 sf 0.00% Impervious Runoff Depth>1.02"
Flow Length=592' Tc=23.3 min CN=73 Runoff=2.01 cfs 10,485 cf

Subcatchment 220S: ENTRANCE Runoff Area=138,898 sf 6.34% Impervious Runoff Depth>1.02"
Flow Length=846' Tc=25.0 min CN=73 Runoff=2.20 cfs 11,820 cf

Reach 207R: CENTER POND Avg. Flow Depth=0.15' Max Vel=0.05 fps Inflow=2.01 cfs 10,485 cf
n=0.800 L=550.0' S=0.0109 '/' Capacity=10.49 cfs Outflow=0.42 cfs 8,909 cf

Reach 217R: OVERLAND FLOW Avg. Flow Depth=0.46' Max Vel=0.07 fps Inflow=8.06 cfs 45,614 cf
n=0.800 L=700.0' S=0.0057 '/' Capacity=8.69 cfs Outflow=2.08 cfs 39,858 cf

Reach 218R: OVERLAND FLOW Avg. Flow Depth=0.12' Max Vel=0.07 fps Inflow=2.20 cfs 11,820 cf
n=0.800 L=750.0' S=0.0293 '/' Capacity=19.69 cfs Outflow=0.48 cfs 10,092 cf

Reach 219R: CROSS PIPE Avg. Flow Depth=0.16' Max Vel=4.52 fps Inflow=0.42 cfs 8,909 cf
15.0" Round Pipe n=0.013 L=30.0' S=0.0333 '/' Capacity=11.79 cfs Outflow=0.42 cfs 8,908 cf

Pond 202P: TOWNHOUSE OFFSHOOT Peak Elev=205.58' Storage=6,772 cf Inflow=5.39 cfs 20,459 cf
Discarded=0.48 cfs 15,158 cf Primary=2.11 cfs 5,304 cf Outflow=2.60 cfs 20,462 cf

Pond 207P: CENTER POND Peak Elev=201.52' Storage=11,106 cf Inflow=8.10 cfs 28,269 cf
Discarded=0.78 cfs 28,286 cf Primary=0.00 cfs 0 cf Outflow=0.78 cfs 28,286 cf

Pond 208P: CUL-DE-SAC POND Peak Elev=193.42' Storage=11,497 cf Inflow=6.15 cfs 31,614 cf
Discarded=0.82 cfs 27,049 cf Primary=0.90 cfs 4,553 cf Outflow=1.71 cfs 31,602 cf

Pond 209P: BOTTOM SINGLE FAMILY Peak Elev=192.95' Storage=6,565 cf Inflow=4.90 cfs 17,175 cf
Discarded=0.60 cfs 17,195 cf Primary=0.00 cfs 0 cf Outflow=0.60 cfs 17,195 cf

Pond 210P: MULTIFAMILY LOOP POND Peak Elev=192.49' Storage=20,199 cf Inflow=12.59 cfs 46,908 cf
Discarded=1.09 cfs 37,592 cf Primary=1.47 cfs 6,527 cf Outflow=2.56 cfs 44,119 cf

Pond 212P: DRIPEDGE Peak Elev=201.59' Storage=392 cf Inflow=0.37 cfs 1,322 cf
Discarded=0.06 cfs 1,312 cf Primary=0.01 cfs 9 cf Outflow=0.07 cfs 1,322 cf

Pond 213P: DRIPEDGE Peak Elev=201.65' Storage=1,262 cf Inflow=1.26 cfs 4,473 cf
Discarded=0.19 cfs 4,256 cf Primary=0.16 cfs 218 cf Outflow=0.36 cfs 4,475 cf

Pond 214P: DRIPEDGE Peak Elev=201.44' Storage=1,104 cf Inflow=1.26 cfs 4,473 cf
Discarded=0.18 cfs 3,964 cf Primary=0.30 cfs 510 cf Outflow=0.48 cfs 4,474 cf

Pond 215P: DRIPEDGE Peak Elev=203.62' Storage=1,347 cf Inflow=1.27 cfs 4,513 cf
Discarded=0.21 cfs 4,489 cf Primary=0.03 cfs 28 cf Outflow=0.24 cfs 4,517 cf

Pond 216P: DRIPEDGE Peak Elev=201.52' Storage=1,050 cf Inflow=1.25 cfs 4,426 cf
Discarded=0.17 cfs 3,786 cf Primary=0.38 cfs 645 cf Outflow=0.55 cfs 4,431 cf

Link AP1: ANALYSIS POINT 1 Inflow=0.25 cfs 802 cf
Primary=0.25 cfs 802 cf

Link AP2: ANALYSIS POINT 2 Inflow=7.62 cfs 75,482 cf
Primary=7.62 cfs 75,482 cf

Link AP3: ANALYSIS POINT 3 Inflow=1.17 cfs 3,826 cf
Primary=1.17 cfs 3,826 cf

Link AP4: ANALYSIS POINT 4 Inflow=8.31 cfs 70,611 cf
Primary=8.31 cfs 70,611 cf

Total Runoff Area = 2,581,745 sf Runoff Volume = 305,619 cf Average Runoff Depth = 1.42"
74.02% Pervious = 1,911,035 sf 25.98% Impervious = 670,710 sf

Summary for Subcatchment 201S: ACCESS ROAD ENTRANCE

Runoff = 0.25 cfs @ 12.09 hrs, Volume= 802 cf, Depth> 1.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
2,307	61	>75% Grass cover, Good, HSG B
3,469	98	Paved parking, HSG B
5,776	83	Weighted Average
2,307		39.94% Pervious Area
3,469		60.06% Impervious Area

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

Summary for Subcatchment 202S: ACCESS ROAD AND LOOP

Runoff = 5.39 cfs @ 12.16 hrs, Volume= 20,459 cf, Depth> 2.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
17,871	61	>75% Grass cover, Good, HSG B
58,005	98	Paved parking, HSG B
500	98	Paved parking, HSG B
22,398	98	Roofs, HSG B
9,090	74	>75% Grass cover, Good, HSG C
2,150	98	Paved parking, HSG C
109	98	Roofs, HSG C
110,123	90	Weighted Average
26,961		24.48% Pervious Area
83,162		75.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0100	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.27"
10.9	1,332	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.8	1,382	Total			

Summary for Subcatchment 203S: WETLAND

Runoff = 4.80 cfs @ 12.57 hrs, Volume= 30,320 cf, Depth> 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
49,822	61	>75% Grass cover, Good, HSG B
17,151	55	Woods, Good, HSG B
60,420	74	>75% Grass cover, Good, HSG C
49,448	70	Woods, Good, HSG C
95,456	98	Water Surface, 0% imp, HSG C
4,665	80	>75% Grass cover, Good, HSG D
221	77	Woods, Good, HSG D
57	98	Water Surface, 0% imp, HSG D
277,240	78	Weighted Average
277,240		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.1	50	0.0400	0.05		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.27"
23.2	661	0.0090	0.47		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
39.3	711	Total			

Summary for Subcatchment 204S: ISOLATED WETLAND

Runoff = 1.17 cfs @ 12.10 hrs, Volume= 3,826 cf, Depth> 1.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
6,712	39	>75% Grass cover, Good, HSG A
604	30	Woods, Good, HSG A
2,395	98	Water Surface, 0% imp, HSG A
1,493	74	>75% Grass cover, Good, HSG C
13,662	80	>75% Grass cover, Good, HSG D
8,984	77	Woods, Good, HSG D
6,410	98	Water Surface, 0% imp, HSG D
40,260	75	Weighted Average
40,260		100.00% Pervious Area

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

Summary for Subcatchment 205S: ACCESS ROAD TOWNHOUSES

Runoff = 3.01 cfs @ 12.09 hrs, Volume= 10,697 cf, Depth> 3.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
25,918	98	Paved parking, HSG C
16,371	98	Roofs, HSG C
42,289	98	Weighted Average
42,289		100.00% Impervious Area

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

Summary for Subcatchment 206S: BEGINNING SINGLE FAMILY

Runoff = 2.79 cfs @ 12.09 hrs, Volume= 9,912 cf, Depth> 3.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
19,968	98	Paved parking, HSG C
19,220	98	Roofs, HSG C
39,188	98	Weighted Average
39,188		100.00% Impervious Area

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

Summary for Subcatchment 207S: CENTER POND

Runoff = 2.32 cfs @ 12.10 hrs, Volume= 7,659 cf, Depth> 1.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
84,896	74	>75% Grass cover, Good, HSG C
84,896		100.00% Pervious Area

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

Summary for Subcatchment 208S: CUL-DE-SACS

Runoff = 6.15 cfs @ 12.36 hrs, Volume= 31,614 cf, Depth> 1.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
71,810	61	>75% Grass cover, Good, HSG B
5,242	55	Woods, Good, HSG B
61,579	98	Paved parking, HSG B
38,279	98	Roofs, HSG B
94,256	68	1 acre lots, 20% imp, HSG B
6,686	98	Paved parking, HSG C
1,725	80	>75% Grass cover, Good, HSG D
6,067	98	Paved parking, HSG D
2,353	98	Roofs, HSG D
287,997	78	Weighted Average
154,182		53.54% Pervious Area
133,815		46.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.9	50	0.0690	0.06		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.27"
3.4	267	0.0670	1.29		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
8.6	1,049	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
24.9	1,366	Total			

Summary for Subcatchment 209S: BOTTOM SINGLE FAMILY

Runoff = 4.90 cfs @ 12.13 hrs, Volume= 17,175 cf, Depth> 1.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
22,187	39	>75% Grass cover, Good, HSG A
12,245	98	Paved parking, HSG A
10,858	98	Roofs, HSG A
30,222	98	Paved parking, HSG C
31,173	98	Roofs, HSG C
2,175	98	Roofs, HSG D
108,860	86	Weighted Average
22,187		20.38% Pervious Area
86,673		79.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0100	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.27"
8.2	1,000	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
9.1	1,050	Total			

Summary for Subcatchment 210S: MULTIFAMILY PAVEMENT LOOP

Runoff = 10.52 cfs @ 12.15 hrs, Volume= 38,869 cf, Depth> 2.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
22,789	39	>75% Grass cover, Good, HSG A
22,820	98	Paved parking, HSG A
1,454	98	Roofs, HSG A
2,798	74	>75% Grass cover, Good, HSG C
28,010	98	Paved parking, HSG C
18,521	98	Roofs, HSG C
16,080	80	>75% Grass cover, Good, HSG D
93,614	98	Paved parking, HSG D
3,092	98	Roofs, HSG D
209,178	90	Weighted Average
41,667		19.92% Pervious Area
167,511		80.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0100	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.27"
9.9	1,202	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
10.8	1,252	Total			

Summary for Subcatchment 211S: MULTIFAMILY CENTER

Runoff = 2.07 cfs @ 12.10 hrs, Volume= 6,629 cf, Depth> 1.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
4,984	39	>75% Grass cover, Good, HSG A
51,170	80	>75% Grass cover, Good, HSG D
3,947	98	Paved parking, HSG D
60,101	78	Weighted Average
56,154		93.43% Pervious Area
3,947		6.57% Impervious Area

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

Summary for Subcatchment 212S: CLUBHOUSE

Runoff = 0.37 cfs @ 12.09 hrs, Volume= 1,322 cf, Depth> 3.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
5,226	98	Roofs, HSG D
5,226		100.00% Impervious Area

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

Summary for Subcatchment 213S: MULTIFAMILY 4

Runoff = 1.26 cfs @ 12.09 hrs, Volume= 4,473 cf, Depth> 3.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
34	98	Water Surface, 0% imp, HSG A
77	98	Roofs, HSG A
1,870	98	Water Surface, 0% imp, HSG D
15,701	98	Roofs, HSG D
17,682	98	Weighted Average
1,904		10.77% Pervious Area
15,778		89.23% Impervious Area

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

Summary for Subcatchment 214S: MULTIFAMILY 3

Runoff = 1.26 cfs @ 12.09 hrs, Volume= 4,473 cf, Depth> 3.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
460	98	Water Surface, 0% imp, HSG A
4,144	98	Roofs, HSG A
1,447	98	Water Surface, 0% imp, HSG D
11,634	98	Roofs, HSG D
17,685	98	Weighted Average
1,907		10.78% Pervious Area
15,778		89.22% Impervious Area

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

Summary for Subcatchment 215S: MULTIFAMILY 1

Runoff = 1.27 cfs @ 12.09 hrs, Volume= 4,513 cf, Depth> 3.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
2,065	98	Water Surface, 0% imp, HSG D
15,778	98	Roofs, HSG D
17,843	98	Weighted Average
2,065		11.57% Pervious Area
15,778		88.43% Impervious Area

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

Summary for Subcatchment 216S: MULTIFAMILY 2

Runoff = 1.25 cfs @ 12.09 hrs, Volume= 4,426 cf, Depth> 3.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
1,720	98	Water Surface, 0% imp, HSG D
15,778	98	Roofs, HSG D
17,498	98	Weighted Average
1,720		9.83% Pervious Area
15,778		90.17% Impervious Area

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

Summary for Subcatchment 217S: ENTRANCE WETLAND EAST

Runoff = 8.06 cfs @ 12.46 hrs, Volume= 45,614 cf, Depth> 1.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
97,782	61	>75% Grass cover, Good, HSG B
37,648	55	Woods, Good, HSG B
30,250	98	Paved parking, HSG B
22,380	98	Water Surface, 0% imp, HSG B
16,323	68	1 acre lots, 20% imp, HSG B
6,315	74	>75% Grass cover, Good, HSG C
13,280	70	Woods, Good, HSG C
18,143	98	Water Surface, 0% imp, HSG C
7,096	80	>75% Grass cover, Good, HSG D
21,801	77	Woods, Good, HSG D
107,657	98	Water Surface, 0% imp, HSG D
378,675	80	Weighted Average
345,160		91.15% Pervious Area
33,515		8.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	50	0.0400	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.27"
2.3	180	0.0670	1.29		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.2	122	0.0167	0.90		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.4	74	0.0167	0.90		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
2.0	111	0.0167	0.90		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
14.8	515	0.0135	0.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
31.9	1,052	Total			

Summary for Subcatchment 218S: REMAINING SITE AREA

Runoff = 6.49 cfs @ 12.50 hrs, Volume= 40,531 cf, Depth> 0.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
83,481	39	>75% Grass cover, Good, HSG A
72,678	30	Woods, Good, HSG A
20,045	61	>75% Grass cover, Good, HSG B
16,187	55	Woods, Good, HSG B
209	98	Water Surface, 0% imp, HSG B
39,968	74	>75% Grass cover, Good, HSG C
14,728	70	Woods, Good, HSG C
9,983	98	Water Surface, 0% imp, HSG C
50,689	80	>75% Grass cover, Good, HSG D
187,392	77	Woods, Good, HSG D
103,810	98	Water Surface, 0% imp, HSG D
599,170	69	Weighted Average
599,170		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.1	50	0.0400	0.05		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.27"
15.2	748	0.0270	0.82		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
31.3	798	Total			

Summary for Subcatchment 219S: CENTRAL WETLAND POCKET

Runoff = 2.01 cfs @ 12.36 hrs, Volume= 10,485 cf, Depth> 1.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
17,552	39	>75% Grass cover, Good, HSG A
11,870	30	Woods, Good, HSG A
3,417	98	Water Surface, 0% imp, HSG A
23,070	74	>75% Grass cover, Good, HSG C
23,365	70	Woods, Good, HSG C
40,650	98	Water Surface, 0% imp, HSG C
2,073	80	>75% Grass cover, Good, HSG D
1,163	77	Woods, Good, HSG D
123,160	73	Weighted Average
123,160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	50	0.0400	0.14		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.27"
17.2	542	0.0110	0.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
23.3	592	Total			

Summary for Subcatchment 220S: ENTRANCE WETLAND WEST

Runoff = 2.20 cfs @ 12.38 hrs, Volume= 11,820 cf, Depth> 1.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2YR Rainfall=3.27"

Area (sf)	CN	Description
47,079	61	>75% Grass cover, Good, HSG B
10,265	55	Woods, Good, HSG B
1,865	98	Paved parking, HSG B
3,360	98	Water Surface, 0% imp, HSG B
34,690	68	1 acre lots, 20% imp, HSG B
1,983	74	>75% Grass cover, Good, HSG C
1,956	70	Woods, Good, HSG C
2,004	98	Water Surface, 0% imp, HSG C
3,439	80	>75% Grass cover, Good, HSG D
4,894	77	Woods, Good, HSG D
27,363	98	Water Surface, 0% imp, HSG D
138,898	73	Weighted Average
130,095		93.66% Pervious Area
8,803		6.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	50	0.0400	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.27"
5.2	205	0.0170	0.65		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.3	257	0.0700	1.85		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
8.3	334	0.0180	0.67		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
25.0	846	Total			

Summary for Reach 207R: CENTER POND OVERLAND FLOW

Inflow Area = 289,533 sf, 28.14% Impervious, Inflow Depth > 0.43" for 2YR event
Inflow = 2.01 cfs @ 12.36 hrs, Volume= 10,485 cf
Outflow = 0.42 cfs @ 13.28 hrs, Volume= 8,909 cf, Atten= 79%, Lag= 55.8 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.05 fps, Min. Travel Time= 170.3 min
Avg. Velocity = 0.04 fps, Avg. Travel Time= 249.8 min

Peak Storage= 4,261 cf @ 13.28 hrs
Average Depth at Peak Storage= 0.15'
Bank-Full Depth= 1.00' Flow Area= 60.0 sf, Capacity= 10.49 cfs

50.00' x 1.00' deep channel, n= 0.800 Sheet flow: Woods+dense brush
Side Slope Z-value= 10.0 '/' Top Width= 70.00'
Length= 550.0' Slope= 0.0109 '/'
Inlet Invert= 200.00', Outlet Invert= 194.00'

‡

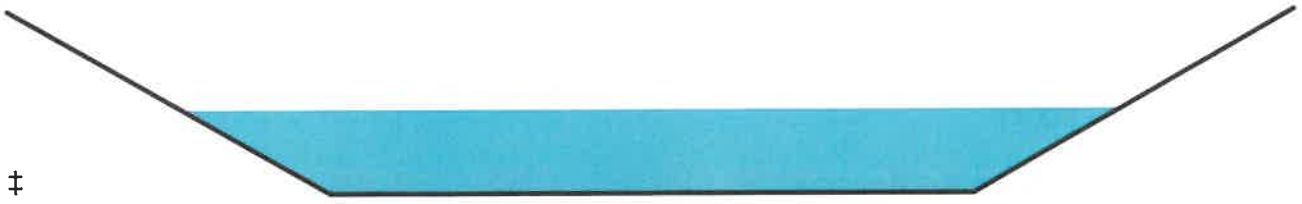
Summary for Reach 217R: OVERLAND FLOW

Inflow Area = 378,675 sf, 8.85% Impervious, Inflow Depth > 1.45" for 2YR event
Inflow = 8.06 cfs @ 12.46 hrs, Volume= 45,614 cf
Outflow = 2.08 cfs @ 13.29 hrs, Volume= 39,858 cf, Atten= 74%, Lag= 49.5 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.07 fps, Min. Travel Time= 157.0 min
Avg. Velocity = 0.05 fps, Avg. Travel Time= 254.5 min

Peak Storage= 19,630 cf @ 13.29 hrs
Average Depth at Peak Storage= 0.46'
Bank-Full Depth= 1.00' Flow Area= 75.0 sf, Capacity= 8.69 cfs

50.00' x 1.00' deep channel, n= 0.800 Sheet flow: Woods+dense brush
Side Slope Z-value= 25.0 '/' Top Width= 100.00'
Length= 700.0' Slope= 0.0057 '/'
Inlet Invert= 206.00', Outlet Invert= 202.00'



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Summary for Reach 218R: OVERLAND FLOW

Inflow Area = 138,898 sf, 6.34% Impervious, Inflow Depth > 1.02" for 2YR event
Inflow = 2.20 cfs @ 12.38 hrs, Volume= 11,820 cf
Outflow = 0.48 cfs @ 13.31 hrs, Volume= 10,092 cf, Atten= 78%, Lag= 56.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.07 fps, Min. Travel Time= 167.4 min
Avg. Velocity = 0.05 fps, Avg. Travel Time= 243.1 min

Peak Storage= 4,776 cf @ 13.31 hrs
Average Depth at Peak Storage= 0.12'
Bank-Full Depth= 1.00' Flow Area= 75.0 sf, Capacity= 19.69 cfs

50.00' x 1.00' deep channel, n= 0.800 Sheet flow: Woods+dense brush
Side Slope Z-value= 25.0 '/' Top Width= 100.00'
Length= 750.0' Slope= 0.0293 '/'
Inlet Invert= 208.00', Outlet Invert= 186.00'

‡

Summary for Reach 219R: CROSS PIPE

[52] Hint: Inlet/Outlet conditions not evaluated
[62] Hint: Exceeded Reach 207R OUTLET depth by 0.02' @ 23.80 hrs

Inflow Area = 289,533 sf, 28.14% Impervious, Inflow Depth > 0.37" for 2YR event
Inflow = 0.42 cfs @ 13.28 hrs, Volume= 8,909 cf
Outflow = 0.42 cfs @ 13.29 hrs, Volume= 8,908 cf, Atten= 0%, Lag= 0.2 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 4.52 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.37 fps, Avg. Travel Time= 0.1 min

Peak Storage= 3 cf @ 13.29 hrs
Average Depth at Peak Storage= 0.16'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 11.79 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 30.0' Slope= 0.0333 '/'
Inlet Invert= 194.00', Outlet Invert= 193.00'

Summary for Pond 202P: TOWNHOUSE OFFSHOOT POND

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=3)

Inflow Area =	110,123 sf,	75.52% Impervious,	Inflow Depth >	2.23"	for 2YR event
Inflow =	5.39 cfs @	12.16 hrs,	Volume=	20,459 cf	
Outflow =	2.60 cfs @	12.43 hrs,	Volume=	20,462 cf,	Atten= 52%, Lag= 15.9 min
Discarded =	0.48 cfs @	12.43 hrs,	Volume=	15,158 cf	
Primary =	2.11 cfs @	12.43 hrs,	Volume=	5,304 cf	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 205.58' @ 12.43 hrs Surf.Area= 5,486 sf Storage= 6,772 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 97.9 min (908.2 - 810.3)

Volume	Invert	Avail.Storage	Storage Description
#1	204.00'	9,183 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
204.00	3,062	0	0
206.00	6,121	9,183	9,183

Device	Routing	Invert	Outlet Devices
#1	Primary	205.00'	**12.0" Round Culvert** L= 30.0' Ke= 0.500 Inlet / Outlet Invert= 205.00' / 204.00' S= 0.0333 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	204.00'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 202.00'
#3	Primary	205.50'	**15.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.48 cfs @ 12.43 hrs HW=205.58' (Free Discharge)
└**2=Exfiltration** (Controls 0.48 cfs)

Primary OutFlow Max=2.09 cfs @ 12.43 hrs HW=205.58' TW=0.00' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 1.24 cfs @ 2.60 fps)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 0.86 cfs @ 0.68 fps)

Summary for Pond 207P: CENTER POND

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=8)

Inflow Area =	166,373 sf,	48.97% Impervious,	Inflow Depth >	2.04" for 2YR event
Inflow =	8.10 cfs @	12.09 hrs, Volume=	28,269 cf	
Outflow =	0.78 cfs @	13.01 hrs, Volume=	28,286 cf,	Atten= 90%, Lag= 54.9 min
Discarded =	0.78 cfs @	13.01 hrs, Volume=	28,286 cf	
Primary =	0.00 cfs @	0.00 hrs, Volume=	0 cf	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 201.52' @ 13.01 hrs Surf.Area= 8,726 sf Storage= 11,106 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 139.1 min (922.9 - 783.8)

Volume	Invert	Avail.Storage	Storage Description
#1	200.00'	38,758 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
200.00	5,856	0	0
202.00	9,624	15,480	15,480
204.00	13,654	23,278	38,758

Device	Routing	Invert	Outlet Devices
#1	Discarded	200.00'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 198.00'
#2	Primary	202.50'	**12.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 202.50' / 201.50' S= 0.0500 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Primary	203.50'	**15.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.78 cfs @ 13.01 hrs HW=201.52' (Free Discharge)
└**1=Exfiltration** (Controls 0.78 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=200.00' TW=200.00' (Dynamic Tailwater)
├**2=Culvert** (Controls 0.00 cfs)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 208P: CUL-DE-SAC POND

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=2)

Inflow Area = 287,997 sf, 46.46% Impervious, Inflow Depth > 1.32" for 2YR event
Inflow = 6.15 cfs @ 12.36 hrs, Volume= 31,614 cf
Outflow = 1.71 cfs @ 13.03 hrs, Volume= 31,602 cf, Atten= 72%, Lag= 40.2 min
Discarded = 0.82 cfs @ 13.03 hrs, Volume= 27,049 cf
Primary = 0.90 cfs @ 13.03 hrs, Volume= 4,553 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 193.42' @ 13.03 hrs Surf.Area= 9,046 sf Storage= 11,497 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 126.2 min (988.4 - 862.1)

Volume	Invert	Avail.Storage	Storage Description
#1	192.00'	39,531 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
192.00	7,139	0	0
194.00	9,823	16,962	16,962
196.00	12,746	22,569	39,531

Device	Routing	Invert	Outlet Devices
#1	Primary	193.00'	**18.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 193.00' / 192.00' S= 0.0500 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Primary	195.50'	**15.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#3	Discarded	192.00'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 190.00'

Discarded OutFlow Max=0.82 cfs @ 13.03 hrs HW=193.42' (Free Discharge)
└**3=Exfiltration** (Controls 0.82 cfs)

Primary OutFlow Max=0.90 cfs @ 13.03 hrs HW=193.42' TW=0.00' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 0.90 cfs @ 2.21 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 209P: BOTTOM SINGLE FAMILY POND

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=39)

Inflow Area = 108,860 sf, 79.62% Impervious, Inflow Depth > 1.89" for 2YR event
Inflow = 4.90 cfs @ 12.13 hrs, Volume= 17,175 cf
Outflow = 0.60 cfs @ 12.95 hrs, Volume= 17,195 cf, Atten= 88%, Lag= 49.1 min
Discarded = 0.60 cfs @ 12.95 hrs, Volume= 17,195 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 192.95' @ 12.95 hrs Surf.Area= 7,586 sf Storage= 6,565 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 102.8 min (926.4 - 823.5)

Volume	Invert	Avail.Storage	Storage Description
#1	192.00'	70,116 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
192.00	6,226	0	0
194.00	9,088	15,314	15,314
196.00	14,029	23,117	38,431
198.00	17,656	31,685	70,116

Device	Routing	Invert	Outlet Devices
#1	Discarded	192.00'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 190.00'
#2	Primary	194.50'	**12.0" Round Culvert** L= 40.0' Ke= 0.500 Inlet / Outlet Invert= 194.50' / 193.80' S= 0.0175 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Discarded OutFlow Max=0.60 cfs @ 12.95 hrs HW=192.95' (Free Discharge)
↑—**1=Exfiltration** (Controls 0.60 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=192.00' TW=0.00' (Dynamic Tailwater)
↑—**2=Culvert** (Controls 0.00 cfs)

Summary for Pond 210P: MULTIFAMILY LOOP POND

Inflow Area =	345,213 sf,	69.46% Impervious,	Inflow Depth >	1.63"	for 2YR event
Inflow =	12.59 cfs @	12.15 hrs, Volume=	46,908 cf		
Outflow =	2.56 cfs @	12.68 hrs, Volume=	44,119 cf,	Atten= 80%,	Lag= 32.0 min
Discarded =	1.09 cfs @	12.68 hrs, Volume=	37,592 cf		
Primary =	1.47 cfs @	12.68 hrs, Volume=	6,527 cf		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 192.49' @ 12.68 hrs Surf.Area= 10,169 sf Storage= 20,199 cf

Plug-Flow detention time= 175.2 min calculated for 44,119 cf (94% of inflow)
Center-of-Mass det. time= 143.5 min (956.4 - 812.9)

Volume	Invert	Avail.Storage	Storage Description
#1	190.00'	66,125 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
190.00	6,070	0	0
192.00	9,384	15,454	15,454
194.00	12,620	22,004	37,458
196.00	16,047	28,667	66,125

Device	Routing	Invert	Outlet Devices
#1	Primary	191.90'	**15.0" Round Culvert** L= 30.0' Ke= 0.500 Inlet / Outlet Invert= 191.90' / 190.00' S= 0.0633 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Discarded	190.00'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 188.00'
#3	Primary	195.50'	**10.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=1.09 cfs @ 12.68 hrs HW=192.48' (Free Discharge)
└**2=Exfiltration** (Controls 1.09 cfs)

Primary OutFlow Max=1.47 cfs @ 12.68 hrs HW=192.48' TW=0.00' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 1.47 cfs @ 2.60 fps)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 212P: DRIPEDGE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=73)

Inflow Area =	5,226 sf,100.00% Impervious,	Inflow Depth >	3.04"	for 2YR event	
Inflow =	0.37 cfs @	12.09 hrs, Volume=	1,322 cf		
Outflow =	0.07 cfs @	12.52 hrs, Volume=	1,322 cf,	Atten= 80%,	Lag= 25.9 min
Discarded =	0.06 cfs @	12.52 hrs, Volume=	1,312 cf		
Primary =	0.01 cfs @	12.52 hrs, Volume=	9 cf		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 201.59' @ 12.52 hrs Surf.Area= 613 sf Storage= 392 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 43.3 min (798.8 - 755.5)

Volume	Invert	Avail.Storage	Storage Description
#1	199.99'	983 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
199.99	613	0.0	0	0
200.00	613	40.0	2	2
203.99	613	40.0	978	981
204.00	613	40.0	2	983

Device	Routing	Invert	Outlet Devices
#1	Primary	201.50'	**4.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 201.50' / 201.40' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.09 sf
#2	Discarded	199.99'	**2.410 in/hr Exfiltration over Surface area**

Conductivity to Groundwater Elevation = 198.00'

Discarded OutFlow Max=0.06 cfs @ 12.52 hrs HW=201.59' (Free Discharge)
2=Exfiltration (Controls 0.06 cfs)

Primary OutFlow Max=0.01 cfs @ 12.52 hrs HW=201.59' TW=192.43' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.01 cfs @ 0.94 fps)

Summary for Pond 213P: DRIPEDGE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=72)

Inflow Area =	17,682 sf,	89.23% Impervious,	Inflow Depth >	3.04"	for 2YR event
Inflow =	1.26 cfs @	12.09 hrs, Volume=	4,473 cf		
Outflow =	0.36 cfs @	12.42 hrs, Volume=	4,475 cf,	Atten= 71%,	Lag= 20.2 min
Discarded =	0.19 cfs @	12.42 hrs, Volume=	4,256 cf		
Primary =	0.16 cfs @	12.42 hrs, Volume=	218 cf		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 201.65' @ 12.42 hrs Surf.Area= 1,904 sf Storage= 1,262 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 41.3 min (796.8 - 755.5)

Volume	Invert	Avail.Storage	Storage Description
#1	199.99'	3,054 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
199.99	1,904	0.0	0	0
200.00	1,904	40.0	8	8
203.99	1,904	40.0	3,039	3,046
204.00	1,904	40.0	8	3,054

Device	Routing	Invert	Outlet Devices
#1	Primary	201.40'	**6.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 201.25' / 201.40' S= -0.0075 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Discarded	199.99'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 198.00'

Discarded OutFlow Max=0.19 cfs @ 12.42 hrs HW=201.65' (Free Discharge)
2=Exfiltration (Controls 0.19 cfs)

Primary OutFlow Max=0.16 cfs @ 12.42 hrs HW=201.65' TW=192.31' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.16 cfs @ 1.69 fps)

Summary for Pond 214P: DRIPEDGE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=76)

Inflow Area = 17,685 sf, 89.22% Impervious, Inflow Depth > 3.04" for 2YR event
Inflow = 1.26 cfs @ 12.09 hrs, Volume= 4,473 cf
Outflow = 0.48 cfs @ 12.32 hrs, Volume= 4,474 cf, Atten= 62%, Lag= 14.1 min
Discarded = 0.18 cfs @ 12.32 hrs, Volume= 3,964 cf
Primary = 0.30 cfs @ 12.32 hrs, Volume= 510 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 201.44' @ 12.32 hrs Surf.Area= 1,907 sf Storage= 1,104 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 31.5 min (787.0 - 755.5)

Volume	Invert	Avail.Storage	Storage Description
#1	199.99'	3,059 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
199.99	1,907	0.0	0	0
200.00	1,907	40.0	8	8
203.99	1,907	40.0	3,044	3,051
204.00	1,907	40.0	8	3,059

Device	Routing	Invert	Outlet Devices
#1	Primary	201.00'	**6.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 201.00' / 200.90' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Discarded	199.99'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 198.00'

Discarded OutFlow Max=0.18 cfs @ 12.32 hrs HW=201.44' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.18 cfs)

Primary OutFlow Max=0.30 cfs @ 12.32 hrs HW=201.44' TW=192.10' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 0.30 cfs @ 2.19 fps)

Summary for Pond 215P: DRIPEDGE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=72)

Inflow Area = 17,843 sf, 88.43% Impervious, Inflow Depth > 3.04" for 2YR event
Inflow = 1.27 cfs @ 12.09 hrs, Volume= 4,513 cf
Outflow = 0.24 cfs @ 12.53 hrs, Volume= 4,517 cf, Atten= 81%, Lag= 26.6 min
Discarded = 0.21 cfs @ 12.53 hrs, Volume= 4,489 cf
Primary = 0.03 cfs @ 12.53 hrs, Volume= 28 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 203.62' @ 12.53 hrs Surf.Area= 2,065 sf Storage= 1,347 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 44.5 min (800.0 - 755.5)

Volume	Invert	Avail.Storage	Storage Description
#1	201.99'	3,312 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
201.99	2,065	0.0	0	0
202.00	2,065	40.0	8	8
205.99	2,065	40.0	3,296	3,304
206.00	2,065	40.0	8	3,312

Device	Routing	Invert	Outlet Devices
#1	Primary	203.50'	**6.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 203.50' / 203.40' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Discarded	201.99'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 200.00'

Discarded OutFlow Max=0.21 cfs @ 12.53 hrs HW=203.62' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.21 cfs)

Primary OutFlow Max=0.03 cfs @ 12.53 hrs HW=203.62' TW=192.44' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 0.03 cfs @ 1.15 fps)

Summary for Pond 216P: DRIPEDGE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=74)

Inflow Area =	17,498 sf, 90.17% Impervious,	Inflow Depth >	3.04"	for 2YR event
Inflow =	1.25 cfs @ 12.09 hrs,	Volume=	4,426 cf	
Outflow =	0.55 cfs @ 12.27 hrs,	Volume=	4,431 cf,	Atten= 56%, Lag= 11.3 min
Discarded =	0.17 cfs @ 12.27 hrs,	Volume=	3,786 cf	
Primary =	0.38 cfs @ 12.27 hrs,	Volume=	645 cf	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 201.52' @ 12.27 hrs Surf.Area= 1,720 sf Storage= 1,050 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 31.1 min (786.6 - 755.5)

Volume	Invert	Avail.Storage	Storage Description
#1	199.99'	2,759 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
199.99	1,720	0.0	0	0
200.00	1,720	40.0	7	7
203.99	1,720	40.0	2,745	2,752
204.00	1,720	40.0	7	2,759

Device	Routing	Invert	Outlet Devices
#1	Primary	201.00'	**6.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 201.00' / 200.90' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Discarded	199.99'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 198.00'

Discarded OutFlow Max=0.17 cfs @ 12.27 hrs HW=201.51' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.17 cfs)

Primary OutFlow Max=0.38 cfs @ 12.27 hrs HW=201.51' TW=191.97' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 0.38 cfs @ 2.32 fps)

Summary for Link AP1: ANALYSIS POINT 1

Inflow Area = 5,776 sf, 60.06% Impervious, Inflow Depth > 1.67" for 2YR event
Inflow = 0.25 cfs @ 12.09 hrs, Volume= 802 cf
Primary = 0.25 cfs @ 12.09 hrs, Volume= 802 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP2: ANALYSIS POINT 2

Inflow Area = 766,038 sf, 15.23% Impervious, Inflow Depth > 1.18" for 2YR event
Inflow = 7.62 cfs @ 12.54 hrs, Volume= 75,482 cf
Primary = 7.62 cfs @ 12.54 hrs, Volume= 75,482 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP3: ANALYSIS POINT 3

Inflow Area = 40,260 sf, 0.00% Impervious, Inflow Depth > 1.14" for 2YR event
Inflow = 1.17 cfs @ 12.10 hrs, Volume= 3,826 cf
Primary = 1.17 cfs @ 12.10 hrs, Volume= 3,826 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP4: ANALYSIS POINT 4

Inflow Area = 1,769,671 sf, 31.11% Impervious, Inflow Depth > 0.48" for 2YR event
Inflow = 8.31 cfs @ 12.58 hrs, Volume= 70,611 cf
Primary = 8.31 cfs @ 12.58 hrs, Volume= 70,611 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 201S: ACCESS ROAD Runoff Area=5,776 sf 60.06% Impervious Runoff Depth>3.14"
Tc=6.0 min CN=83 Runoff=0.48 cfs 1,509 cf

Subcatchment 202S: ACCESS ROAD Runoff Area=110,123 sf 75.52% Impervious Runoff Depth>3.83"
Flow Length=1,382' Slope=0.0100 '/' Tc=11.8 min CN=90 Runoff=9.05 cfs 35,159 cf

Subcatchment 203S: WETLAND Runoff Area=277,240 sf 0.00% Impervious Runoff Depth>2.66"
Flow Length=711' Tc=39.3 min CN=78 Runoff=9.92 cfs 61,362 cf

Subcatchment 204S: ISOLATED WETLAND Runoff Area=40,260 sf 0.00% Impervious Runoff Depth>2.41"
Tc=6.0 min CN=75 Runoff=2.56 cfs 8,101 cf

Subcatchment 205S: ACCESS ROAD Runoff Area=42,289 sf 100.00% Impervious Runoff Depth>4.72"
Tc=6.0 min CN=98 Runoff=4.60 cfs 16,635 cf

Subcatchment 206S: BEGINNING SINGLE Runoff Area=39,188 sf 100.00% Impervious Runoff Depth>4.72"
Tc=6.0 min CN=98 Runoff=4.26 cfs 15,415 cf

Subcatchment 207S: CENTER POND Runoff Area=84,896 sf 0.00% Impervious Runoff Depth>2.33"
Tc=6.0 min CN=74 Runoff=5.20 cfs 16,485 cf

Subcatchment 208S: CUL-DE-SACS Runoff Area=287,997 sf 46.46% Impervious Runoff Depth>2.66"
Flow Length=1,366' Tc=24.9 min CN=78 Runoff=12.71 cfs 63,948 cf

Subcatchment 209S: BOTTOM SINGLE Runoff Area=108,860 sf 79.62% Impervious Runoff Depth>3.43"
Flow Length=1,050' Slope=0.0100 '/' Tc=9.1 min CN=86 Runoff=8.75 cfs 31,071 cf

Subcatchment 210S: MULTIFAMILY Runoff Area=209,178 sf 80.08% Impervious Runoff Depth>3.83"
Flow Length=1,252' Slope=0.0100 '/' Tc=10.8 min CN=90 Runoff=17.67 cfs 66,796 cf

Subcatchment 211S: MULTIFAMILY Runoff Area=60,101 sf 6.57% Impervious Runoff Depth>2.68"
Tc=6.0 min CN=78 Runoff=4.25 cfs 13,399 cf

Subcatchment 212S: CLUBHOUSE Runoff Area=5,226 sf 100.00% Impervious Runoff Depth>4.72"
Tc=6.0 min CN=98 Runoff=0.57 cfs 2,056 cf

Subcatchment 213S: MULTIFAMILY 4 Runoff Area=17,682 sf 89.23% Impervious Runoff Depth>4.72"
Tc=6.0 min CN=98 Runoff=1.92 cfs 6,955 cf

Subcatchment 214S: MULTIFAMILY 3 Runoff Area=17,685 sf 89.22% Impervious Runoff Depth>4.72"
Tc=6.0 min CN=98 Runoff=1.92 cfs 6,957 cf

Subcatchment 215S: MULTIFAMILY 1 Runoff Area=17,843 sf 88.43% Impervious Runoff Depth>4.72"
Tc=6.0 min CN=98 Runoff=1.94 cfs 7,019 cf

Subcatchment 216S: MULTIFAMILY 2 Runoff Area=17,498 sf 90.17% Impervious Runoff Depth>4.72"
Tc=6.0 min CN=98 Runoff=1.90 cfs 6,883 cf

Subcatchment 217S: ENTRANCE Runoff Area=378,675 sf 8.85% Impervious Runoff Depth>2.84"
Flow Length=1,052' Tc=31.9 min CN=80 Runoff=16.00 cfs 89,624 cf

Subcatchment 218S: REMAINING SITE Runoff Area=599,170 sf 0.00% Impervious Runoff Depth>1.91"
Flow Length=798' Tc=31.3 min CN=69 Runoff=16.75 cfs 95,558 cf

Subcatchment 219S: CENTRAL WETLAND Runoff Area=123,160 sf 0.00% Impervious Runoff Depth>2.24"
Flow Length=592' Tc=23.3 min CN=73 Runoff=4.65 cfs 22,967 cf

Subcatchment 220S: ENTRANCE Runoff Area=138,898 sf 6.34% Impervious Runoff Depth>2.24"
Flow Length=846' Tc=25.0 min CN=73 Runoff=5.09 cfs 25,891 cf

Reach 207R: CENTER POND Avg. Flow Depth=0.31' Max Vel=0.09 fps Inflow=4.65 cfs 23,159 cf
n=0.800 L=550.0' S=0.0109 '/' Capacity=10.49 cfs Outflow=1.43 cfs 20,994 cf

Reach 217R: OVERLAND FLOW Avg. Flow Depth=0.77' Max Vel=0.10 fps Inflow=16.00 cfs 89,624 cf
n=0.800 L=700.0' S=0.0057 '/' Capacity=8.69 cfs Outflow=5.33 cfs 81,909 cf

Reach 218R: OVERLAND FLOW Avg. Flow Depth=0.24' Max Vel=0.12 fps Inflow=5.09 cfs 25,891 cf
n=0.800 L=750.0' S=0.0293 '/' Capacity=19.69 cfs Outflow=1.58 cfs 23,506 cf

Reach 219R: CROSS PIPE Avg. Flow Depth=0.29' Max Vel=6.50 fps Inflow=1.43 cfs 20,994 cf
15.0" Round Pipe n=0.013 L=30.0' S=0.0333 '/' Capacity=11.79 cfs Outflow=1.43 cfs 20,993 cf

Pond 202P: TOWNHOUSE OFFSHOOT Peak Elev=205.79' Storage=7,933 cf Inflow=9.05 cfs 35,159 cf
Discarded=0.53 cfs 18,689 cf Primary=7.71 cfs 15,705 cf Outflow=8.24 cfs 34,393 cf

Pond 207P: CENTER POND Peak Elev=202.61' Storage=21,701 cf Inflow=14.05 cfs 48,535 cf
Discarded=1.16 cfs 44,722 cf Primary=0.05 cfs 192 cf Outflow=1.21 cfs 44,914 cf

Pond 208P: CUL-DE-SAC POND Peak Elev=194.23' Storage=19,211 cf Inflow=12.71 cfs 63,948 cf
Discarded=1.08 cfs 34,218 cf Primary=5.82 cfs 27,033 cf Outflow=6.90 cfs 61,251 cf

Pond 209P: BOTTOM SINGLE FAMILY Peak Elev=193.81' Storage=13,645 cf Inflow=8.75 cfs 31,071 cf
Discarded=0.86 cfs 30,996 cf Primary=0.00 cfs 0 cf Outflow=0.86 cfs 30,996 cf

Pond 210P: MULTIFAMILY LOOP POND Peak Elev=193.71' Storage=33,896 cf Inflow=23.57 cfs 86,346 cf
Discarded=1.51 cfs 46,225 cf Primary=6.44 cfs 34,278 cf Outflow=7.95 cfs 80,503 cf

Pond 212P: DRIPEDGE Peak Elev=202.05' Storage=505 cf Inflow=0.57 cfs 2,056 cf
Discarded=0.07 cfs 1,734 cf Primary=0.19 cfs 322 cf Outflow=0.26 cfs 2,055 cf

Pond 213P: DRIPEDGE Peak Elev=202.25' Storage=1,721 cf Inflow=1.92 cfs 6,955 cf
Discarded=0.23 cfs 5,636 cf Primary=0.63 cfs 1,320 cf Outflow=0.86 cfs 6,955 cf

Pond 214P: DRIPEDGE Peak Elev=202.06' Storage=1,577 cf Inflow=1.92 cfs 6,957 cf
Discarded=0.22 cfs 5,306 cf Primary=0.73 cfs 1,650 cf Outflow=0.94 cfs 6,956 cf

Pond 215P: DRIPEDGE Peak Elev=204.21' Storage=1,838 cf Inflow=1.94 cfs 7,019 cf
Discarded=0.24 cfs 5,984 cf Primary=0.50 cfs 1,036 cf Outflow=0.75 cfs 7,021 cf

Pond 216P: DRIPEDGE Peak Elev=202.19' Storage=1,513 cf Inflow=1.90 cfs 6,883 cf
Discarded=0.20 cfs 5,062 cf Primary=0.80 cfs 1,823 cf Outflow=1.00 cfs 6,885 cf

Link AP1: ANALYSIS POINT 1 Inflow=0.48 cfs 1,509 cf
Primary=0.48 cfs 1,509 cf

Link AP2: ANALYSIS POINT 2 Inflow=16.54 cfs 158,976 cf
Primary=16.54 cfs 158,976 cf

Link AP3: ANALYSIS POINT 3 Inflow=2.56 cfs 8,101 cf
Primary=2.56 cfs 8,101 cf

Link AP4: ANALYSIS POINT 4 Inflow=29.98 cfs 201,368 cf
Primary=29.98 cfs 201,368 cf

Total Runoff Area = 2,581,745 sf Runoff Volume = 593,792 cf Average Runoff Depth = 2.76"
74.02% Pervious = 1,911,035 sf 25.98% Impervious = 670,710 sf

Summary for Subcatchment 201S: ACCESS ROAD ENTRANCE

Runoff = 0.48 cfs @ 12.09 hrs, Volume= 1,509 cf, Depth> 3.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
2,307	61	>75% Grass cover, Good, HSG B
3,469	98	Paved parking, HSG B
5,776	83	Weighted Average
2,307		39.94% Pervious Area
3,469		60.06% Impervious Area

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

Summary for Subcatchment 202S: ACCESS ROAD AND LOOP

Runoff = 9.05 cfs @ 12.16 hrs, Volume= 35,159 cf, Depth> 3.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
17,871	61	>75% Grass cover, Good, HSG B
58,005	98	Paved parking, HSG B
500	98	Paved parking, HSG B
22,398	98	Roofs, HSG B
9,090	74	>75% Grass cover, Good, HSG C
2,150	98	Paved parking, HSG C
109	98	Roofs, HSG C
110,123	90	Weighted Average
26,961		24.48% Pervious Area
83,162		75.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0100	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.27"
10.9	1,332	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.8	1,382	Total			

Summary for Subcatchment 203S: WETLAND

Runoff = 9.92 cfs @ 12.55 hrs, Volume= 61,362 cf, Depth> 2.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
49,822	61	>75% Grass cover, Good, HSG B
17,151	55	Woods, Good, HSG B
60,420	74	>75% Grass cover, Good, HSG C
49,448	70	Woods, Good, HSG C
95,456	98	Water Surface, 0% imp, HSG C
4,665	80	>75% Grass cover, Good, HSG D
221	77	Woods, Good, HSG D
57	98	Water Surface, 0% imp, HSG D
277,240	78	Weighted Average
277,240		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.1	50	0.0400	0.05		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.27"
23.2	661	0.0090	0.47		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
39.3	711	Total			

Summary for Subcatchment 204S: ISOLATED WETLAND

Runoff = 2.56 cfs @ 12.09 hrs, Volume= 8,101 cf, Depth> 2.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
6,712	39	>75% Grass cover, Good, HSG A
604	30	Woods, Good, HSG A
2,395	98	Water Surface, 0% imp, HSG A
1,493	74	>75% Grass cover, Good, HSG C
13,662	80	>75% Grass cover, Good, HSG D
8,984	77	Woods, Good, HSG D
6,410	98	Water Surface, 0% imp, HSG D
40,260	75	Weighted Average
40,260		100.00% Pervious Area

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

Summary for Subcatchment 205S: ACCESS ROAD TOWNHOUSES

Runoff = 4.60 cfs @ 12.09 hrs, Volume= 16,635 cf, Depth> 4.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
25,918	98	Paved parking, HSG C
16,371	98	Roofs, HSG C
42,289	98	Weighted Average
42,289		100.00% Impervious Area

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

Summary for Subcatchment 206S: BEGINNING SINGLE FAMILY

Runoff = 4.26 cfs @ 12.09 hrs, Volume= 15,415 cf, Depth> 4.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
19,968	98	Paved parking, HSG C
19,220	98	Roofs, HSG C
39,188	98	Weighted Average
39,188		100.00% Impervious Area

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

Summary for Subcatchment 207S: CENTER POND

Runoff = 5.20 cfs @ 12.09 hrs, Volume= 16,485 cf, Depth> 2.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
84,896	74	>75% Grass cover, Good, HSG C
84,896		100.00% Pervious Area

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

Summary for Subcatchment 208S: CUL-DE-SACS

Runoff = 12.71 cfs @ 12.35 hrs, Volume= 63,948 cf, Depth> 2.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
71,810	61	>75% Grass cover, Good, HSG B
5,242	55	Woods, Good, HSG B
61,579	98	Paved parking, HSG B
38,279	98	Roofs, HSG B
94,256	68	1 acre lots, 20% imp, HSG B
6,686	98	Paved parking, HSG C
1,725	80	>75% Grass cover, Good, HSG D
6,067	98	Paved parking, HSG D
2,353	98	Roofs, HSG D
287,997	78	Weighted Average
154,182		53.54% Pervious Area
133,815		46.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.9	50	0.0690	0.06		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.27"
3.4	267	0.0670	1.29		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
8.6	1,049	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
24.9	1,366	Total			

Summary for Subcatchment 209S: BOTTOM SINGLE FAMILY

Runoff = 8.75 cfs @ 12.13 hrs, Volume= 31,071 cf, Depth> 3.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
22,187	39	>75% Grass cover, Good, HSG A
12,245	98	Paved parking, HSG A
10,858	98	Roofs, HSG A
30,222	98	Paved parking, HSG C
31,173	98	Roofs, HSG C
2,175	98	Roofs, HSG D
108,860	86	Weighted Average
22,187		20.38% Pervious Area
86,673		79.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0100	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.27"
8.2	1,000	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
9.1	1,050	Total			

Summary for Subcatchment 210S: MULTIFAMILY PAVEMENT LOOP

Runoff = 17.67 cfs @ 12.15 hrs, Volume= 66,796 cf, Depth> 3.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
22,789	39	>75% Grass cover, Good, HSG A
22,820	98	Paved parking, HSG A
1,454	98	Roofs, HSG A
2,798	74	>75% Grass cover, Good, HSG C
28,010	98	Paved parking, HSG C
18,521	98	Roofs, HSG C
16,080	80	>75% Grass cover, Good, HSG D
93,614	98	Paved parking, HSG D
3,092	98	Roofs, HSG D
209,178	90	Weighted Average
41,667		19.92% Pervious Area
167,511		80.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0100	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.27"
9.9	1,202	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
10.8	1,252	Total			

Summary for Subcatchment 211S: MULTIFAMILY CENTER

Runoff = 4.25 cfs @ 12.09 hrs, Volume= 13,399 cf, Depth> 2.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
4,984	39	>75% Grass cover, Good, HSG A
51,170	80	>75% Grass cover, Good, HSG D
3,947	98	Paved parking, HSG D
60,101	78	Weighted Average
56,154		93.43% Pervious Area
3,947		6.57% Impervious Area

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

Summary for Subcatchment 212S: CLUBHOUSE

Runoff = 0.57 cfs @ 12.09 hrs, Volume= 2,056 cf, Depth> 4.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
5,226	98	Roofs, HSG D
5,226		100.00% Impervious Area

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

Summary for Subcatchment 213S: MULTIFAMILY 4

Runoff = 1.92 cfs @ 12.09 hrs, Volume= 6,955 cf, Depth> 4.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
34	98	Water Surface, 0% imp, HSG A
77	98	Roofs, HSG A
1,870	98	Water Surface, 0% imp, HSG D
15,701	98	Roofs, HSG D
17,682	98	Weighted Average
1,904		10.77% Pervious Area
15,778		89.23% Impervious Area

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

Summary for Subcatchment 214S: MULTIFAMILY 3

Runoff = 1.92 cfs @ 12.09 hrs, Volume= 6,957 cf, Depth> 4.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
460	98	Water Surface, 0% imp, HSG A
4,144	98	Roofs, HSG A
1,447	98	Water Surface, 0% imp, HSG D
11,634	98	Roofs, HSG D
17,685	98	Weighted Average
1,907		10.78% Pervious Area
15,778		89.22% Impervious Area

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

Summary for Subcatchment 215S: MULTIFAMILY 1

Runoff = 1.94 cfs @ 12.09 hrs, Volume= 7,019 cf, Depth> 4.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
2,065	98	Water Surface, 0% imp, HSG D
15,778	98	Roofs, HSG D
17,843	98	Weighted Average
2,065		11.57% Pervious Area
15,778		88.43% Impervious Area

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

Summary for Subcatchment 216S: MULTIFAMILY 2

Runoff = 1.90 cfs @ 12.09 hrs, Volume= 6,883 cf, Depth> 4.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
1,720	98	Water Surface, 0% imp, HSG D
15,778	98	Roofs, HSG D
17,498	98	Weighted Average
1,720		9.83% Pervious Area
15,778		90.17% Impervious Area

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

Summary for Subcatchment 217S: ENTRANCE WETLAND EAST

Runoff = 16.00 cfs @ 12.45 hrs, Volume= 89,624 cf, Depth> 2.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
97,782	61	>75% Grass cover, Good, HSG B
37,648	55	Woods, Good, HSG B
30,250	98	Paved parking, HSG B
22,380	98	Water Surface, 0% imp, HSG B
16,323	68	1 acre lots, 20% imp, HSG B
6,315	74	>75% Grass cover, Good, HSG C
13,280	70	Woods, Good, HSG C
18,143	98	Water Surface, 0% imp, HSG C
7,096	80	>75% Grass cover, Good, HSG D
21,801	77	Woods, Good, HSG D
107,657	98	Water Surface, 0% imp, HSG D
378,675	80	Weighted Average
345,160		91.15% Pervious Area
33,515		8.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	50	0.0400	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.27"
2.3	180	0.0670	1.29		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.2	122	0.0167	0.90		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.4	74	0.0167	0.90		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
2.0	111	0.0167	0.90		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
14.8	515	0.0135	0.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
31.9	1,052	Total			

Summary for Subcatchment 218S: REMAINING SITE AREA

Runoff = 16.75 cfs @ 12.46 hrs, Volume= 95,558 cf, Depth> 1.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
83,481	39	>75% Grass cover, Good, HSG A
72,678	30	Woods, Good, HSG A
20,045	61	>75% Grass cover, Good, HSG B
16,187	55	Woods, Good, HSG B
209	98	Water Surface, 0% imp, HSG B
39,968	74	>75% Grass cover, Good, HSG C
14,728	70	Woods, Good, HSG C
9,983	98	Water Surface, 0% imp, HSG C
50,689	80	>75% Grass cover, Good, HSG D
187,392	77	Woods, Good, HSG D
103,810	98	Water Surface, 0% imp, HSG D
599,170	69	Weighted Average
599,170		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.1	50	0.0400	0.05		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.27"
15.2	748	0.0270	0.82		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
31.3	798	Total			

Summary for Subcatchment 219S: CENTRAL WETLAND POCKET

Runoff = 4.65 cfs @ 12.33 hrs, Volume= 22,967 cf, Depth> 2.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
17,552	39	>75% Grass cover, Good, HSG A
11,870	30	Woods, Good, HSG A
3,417	98	Water Surface, 0% imp, HSG A
23,070	74	>75% Grass cover, Good, HSG C
23,365	70	Woods, Good, HSG C
40,650	98	Water Surface, 0% imp, HSG C
2,073	80	>75% Grass cover, Good, HSG D
1,163	77	Woods, Good, HSG D
123,160	73	Weighted Average
123,160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	50	0.0400	0.14		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.27"
17.2	542	0.0110	0.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
23.3	592	Total			

Summary for Subcatchment 220S: ENTRANCE WETLAND WEST

Runoff = 5.09 cfs @ 12.36 hrs, Volume= 25,891 cf, Depth> 2.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10YR Rainfall=4.96"

Area (sf)	CN	Description
47,079	61	>75% Grass cover, Good, HSG B
10,265	55	Woods, Good, HSG B
1,865	98	Paved parking, HSG B
3,360	98	Water Surface, 0% imp, HSG B
34,690	68	1 acre lots, 20% imp, HSG B
1,983	74	>75% Grass cover, Good, HSG C
1,956	70	Woods, Good, HSG C
2,004	98	Water Surface, 0% imp, HSG C
3,439	80	>75% Grass cover, Good, HSG D
4,894	77	Woods, Good, HSG D
27,363	98	Water Surface, 0% imp, HSG D
138,898	73	Weighted Average
130,095		93.66% Pervious Area
8,803		6.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	50	0.0400	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.27"
5.2	205	0.0170	0.65		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.3	257	0.0700	1.85		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
8.3	334	0.0180	0.67		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
25.0	846	Total			

Summary for Reach 207R: CENTER POND OVERLAND FLOW

Inflow Area = 289,533 sf, 28.14% Impervious, Inflow Depth > 0.96" for 10YR event
Inflow = 4.65 cfs @ 12.33 hrs, Volume= 23,159 cf
Outflow = 1.43 cfs @ 12.93 hrs, Volume= 20,994 cf, Atten= 69%, Lag= 35.5 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.09 fps, Min. Travel Time= 106.6 min
Avg. Velocity = 0.05 fps, Avg. Travel Time= 200.4 min

Peak Storage= 9,131 cf @ 12.93 hrs
Average Depth at Peak Storage= 0.31'
Bank-Full Depth= 1.00' Flow Area= 60.0 sf, Capacity= 10.49 cfs

50.00' x 1.00' deep channel, n= 0.800 Sheet flow: Woods+dense brush
Side Slope Z-value= 10.0 '/' Top Width= 70.00'
Length= 550.0' Slope= 0.0109 '/'
Inlet Invert= 200.00', Outlet Invert= 194.00'

‡

Summary for Reach 217R: OVERLAND FLOW

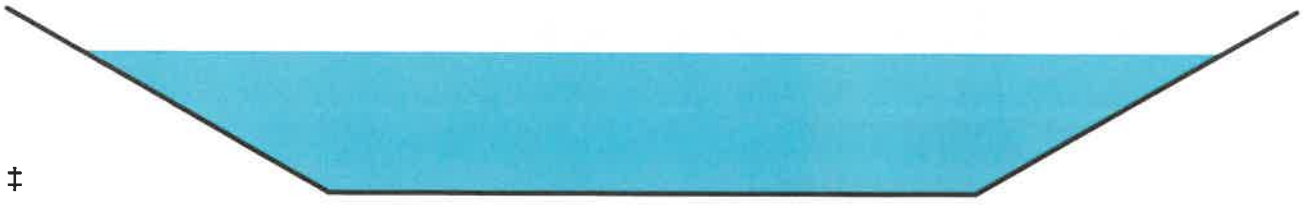
[55] Hint: Peak inflow is 184% of Manning's capacity

Inflow Area = 378,675 sf, 8.85% Impervious, Inflow Depth > 2.84" for 10YR event
Inflow = 16.00 cfs @ 12.45 hrs, Volume= 89,624 cf
Outflow = 5.33 cfs @ 13.07 hrs, Volume= 81,909 cf, Atten= 67%, Lag= 37.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.10 fps, Min. Travel Time= 116.6 min
Avg. Velocity = 0.05 fps, Avg. Travel Time= 217.0 min

Peak Storage= 37,264 cf @ 13.07 hrs
Average Depth at Peak Storage= 0.77'
Bank-Full Depth= 1.00' Flow Area= 75.0 sf, Capacity= 8.69 cfs

50.00' x 1.00' deep channel, n= 0.800 Sheet flow: Woods+dense brush
Side Slope Z-value= 25.0 '/' Top Width= 100.00'
Length= 700.0' Slope= 0.0057 '/'
Inlet Invert= 206.00', Outlet Invert= 202.00'



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Summary for Reach 218R: OVERLAND FLOW

Inflow Area = 138,898 sf, 6.34% Impervious, Inflow Depth > 2.24" for 10YR event
Inflow = 5.09 cfs @ 12.36 hrs, Volume= 25,891 cf
Outflow = 1.58 cfs @ 12.96 hrs, Volume= 23,506 cf, Atten= 69%, Lag= 35.8 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.12 fps, Min. Travel Time= 108.0 min
Avg. Velocity = 0.06 fps, Avg. Travel Time= 197.7 min

Peak Storage= 10,229 cf @ 12.96 hrs
Average Depth at Peak Storage= 0.24'
Bank-Full Depth= 1.00' Flow Area= 75.0 sf, Capacity= 19.69 cfs

50.00' x 1.00' deep channel, n= 0.800 Sheet flow: Woods+dense brush
Side Slope Z-value= 25.0 '/' Top Width= 100.00'
Length= 750.0' Slope= 0.0293 '/'
Inlet Invert= 208.00', Outlet Invert= 186.00'

‡

Summary for Reach 219R: CROSS PIPE

[52] Hint: Inlet/Outlet conditions not evaluated
[62] Hint: Exceeded Reach 207R OUTLET depth by 0.02' @ 23.00 hrs

Inflow Area = 289,533 sf, 28.14% Impervious, Inflow Depth > 0.87" for 10YR event
Inflow = 1.43 cfs @ 12.93 hrs, Volume= 20,994 cf
Outflow = 1.43 cfs @ 12.93 hrs, Volume= 20,993 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 6.50 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.95 fps, Avg. Travel Time= 0.1 min

Peak Storage= 7 cf @ 12.93 hrs
Average Depth at Peak Storage= 0.29'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 11.79 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 30.0' Slope= 0.0333 '/'
Inlet Invert= 194.00', Outlet Invert= 193.00'

Summary for Pond 202P: TOWNHOUSE OFFSHOOT POND

Inflow Area = 110,123 sf, 75.52% Impervious, Inflow Depth > 3.83" for 10YR event
Inflow = 9.05 cfs @ 12.16 hrs, Volume= 35,159 cf
Outflow = 8.24 cfs @ 12.22 hrs, Volume= 34,393 cf, Atten= 9%, Lag= 3.7 min
Discarded = 0.53 cfs @ 12.22 hrs, Volume= 18,689 cf
Primary = 7.71 cfs @ 12.22 hrs, Volume= 15,705 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 205.79' @ 12.22 hrs Surf.Area= 5,800 sf Storage= 7,933 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 66.9 min (862.2 - 795.3)

Volume	Invert	Avail.Storage	Storage Description
#1	204.00'	9,183 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
204.00	3,062	0	0
206.00	6,121	9,183	9,183

Device	Routing	Invert	Outlet Devices
#1	Primary	205.00'	**12.0" Round Culvert** L= 30.0' Ke= 0.500 Inlet / Outlet Invert= 205.00' / 204.00' S= 0.0333 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	204.00'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 202.00'
#3	Primary	205.50'	**15.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.53 cfs @ 12.22 hrs HW=205.78' (Free Discharge)
└**2=Exfiltration** (Controls 0.53 cfs)

Primary OutFlow Max=7.52 cfs @ 12.22 hrs HW=205.78' TW=0.00' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 1.99 cfs @ 3.02 fps)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 5.52 cfs @ 1.30 fps)

Summary for Pond 207P: CENTER POND

Inflow Area = 166,373 sf, 48.97% Impervious, Inflow Depth > 3.50" for 10YR event
Inflow = 14.05 cfs @ 12.09 hrs, Volume= 48,535 cf
Outflow = 1.21 cfs @ 13.10 hrs, Volume= 44,914 cf, Atten= 91%, Lag= 60.3 min
Discarded = 1.16 cfs @ 13.10 hrs, Volume= 44,722 cf
Primary = 0.05 cfs @ 13.10 hrs, Volume= 192 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 202.61' @ 13.10 hrs Surf.Area= 10,849 sf Storage= 21,701 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 165.6 min (943.7 - 778.1)

Volume	Invert	Avail.Storage	Storage Description
#1	200.00'	38,758 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
200.00	5,856	0	0
202.00	9,624	15,480	15,480
204.00	13,654	23,278	38,758

Device	Routing	Invert	Outlet Devices
#1	Discarded	200.00'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 198.00'
#2	Primary	202.50'	**12.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 202.50' / 201.50' S= 0.0500 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Primary	203.50'	**15.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=1.16 cfs @ 13.10 hrs HW=202.61' (Free Discharge)
└**1=Exfiltration** (Controls 1.16 cfs)

Primary OutFlow Max=0.05 cfs @ 13.10 hrs HW=202.61' TW=200.31' (Dynamic Tailwater)
├**2=Culvert** (Inlet Controls 0.05 cfs @ 1.12 fps)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 208P: CUL-DE-SAC POND

Inflow Area = 287,997 sf, 46.46% Impervious, Inflow Depth > 2.66" for 10YR event
Inflow = 12.71 cfs @ 12.35 hrs, Volume= 63,948 cf
Outflow = 6.90 cfs @ 12.70 hrs, Volume= 61,251 cf, Atten= 46%, Lag= 21.3 min
Discarded = 1.08 cfs @ 12.70 hrs, Volume= 34,218 cf
Primary = 5.82 cfs @ 12.70 hrs, Volume= 27,033 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 194.23' @ 12.70 hrs Surf.Area= 10,152 sf Storage= 19,211 cf

Plug-Flow detention time= 97.3 min calculated for 61,251 cf (96% of inflow)
Center-of-Mass det. time= 74.5 min (916.4 - 842.0)

Volume	Invert	Avail.Storage	Storage Description
#1	192.00'	39,531 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
192.00	7,139	0	0
194.00	9,823	16,962	16,962
196.00	12,746	22,569	39,531

Device	Routing	Invert	Outlet Devices
#1	Primary	193.00'	**18.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 193.00' / 192.00' S= 0.0500 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Primary	195.50'	**15.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#3	Discarded	192.00'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 190.00'

Discarded OutFlow Max=1.08 cfs @ 12.70 hrs HW=194.22' (Free Discharge)
└**3=Exfiltration** (Controls 1.08 cfs)

Primary OutFlow Max=5.82 cfs @ 12.70 hrs HW=194.22' TW=0.00' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 5.82 cfs @ 3.77 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 209P: BOTTOM SINGLE FAMILY POND

Inflow Area =	108,860 sf, 79.62% Impervious,	Inflow Depth >	3.43"	for 10YR event
Inflow =	8.75 cfs @ 12.13 hrs,	Volume=	31,071 cf	
Outflow =	0.86 cfs @ 13.11 hrs,	Volume=	30,996 cf,	Atten= 90%, Lag= 59.1 min
Discarded =	0.86 cfs @ 13.11 hrs,	Volume=	30,996 cf	
Primary =	0.00 cfs @ 0.00 hrs,	Volume=	0 cf	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 193.81' @ 13.11 hrs Surf.Area= 8,821 sf Storage= 13,645 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 169.5 min (976.3 - 806.8)

Volume	Invert	Avail.Storage	Storage Description
#1	192.00'	70,116 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
192.00	6,226	0	0
194.00	9,088	15,314	15,314
196.00	14,029	23,117	38,431
198.00	17,656	31,685	70,116

Device	Routing	Invert	Outlet Devices
#1	Discarded	192.00'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 190.00'
#2	Primary	194.50'	**12.0" Round Culvert** L= 40.0' Ke= 0.500 Inlet / Outlet Invert= 194.50' / 193.80' S= 0.0175 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Discarded OutFlow Max=0.86 cfs @ 13.11 hrs HW=193.81' (Free Discharge)
↑**1=Exfiltration** (Controls 0.86 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=192.00' TW=0.00' (Dynamic Tailwater)
↑**2=Culvert** (Controls 0.00 cfs)

Summary for Pond 210P: MULTIFAMILY LOOP POND

Inflow Area = 345,213 sf, 69.46% Impervious, Inflow Depth > 3.00" for 10YR event
Inflow = 23.57 cfs @ 12.15 hrs, Volume= 86,346 cf
Outflow = 7.95 cfs @ 12.55 hrs, Volume= 80,503 cf, Atten= 66%, Lag= 24.0 min
Discarded = 1.51 cfs @ 12.55 hrs, Volume= 46,225 cf
Primary = 6.44 cfs @ 12.55 hrs, Volume= 34,278 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 193.71' @ 12.55 hrs Surf.Area= 12,155 sf Storage= 33,896 cf

Plug-Flow detention time= 127.1 min calculated for 80,336 cf (93% of inflow)
Center-of-Mass det. time= 92.1 min (888.2 - 796.0)

Volume	Invert	Avail.Storage	Storage Description
#1	190.00'	66,125 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
190.00	6,070	0	0
192.00	9,384	15,454	15,454
194.00	12,620	22,004	37,458
196.00	16,047	28,667	66,125

Device	Routing	Invert	Outlet Devices
#1	Primary	191.90'	**15.0" Round Culvert** L= 30.0' Ke= 0.500 Inlet / Outlet Invert= 191.90' / 190.00' S= 0.0633 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Discarded	190.00'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 188.00'
#3	Primary	195.50'	**10.0' long x 6.0' breadth Broad-Crested Rectangular Weir**

Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
2.50 3.00 3.50 4.00 4.50 5.00 5.50
Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65
2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=1.51 cfs @ 12.55 hrs HW=193.71' (Free Discharge)
└**2=Exfiltration** (Controls 1.51 cfs)

Primary OutFlow Max=6.44 cfs @ 12.55 hrs HW=193.71' TW=0.00' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 6.44 cfs @ 5.25 fps)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 212P: DRIPEDGE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=64)

Inflow Area =	5,226 sf,100.00% Impervious,	Inflow Depth >	4.72"	for 10YR event	
Inflow =	0.57 cfs @	12.09 hrs, Volume=	2,056 cf		
Outflow =	0.26 cfs @	12.26 hrs, Volume=	2,055 cf,	Atten= 54%,	Lag= 10.6 min
Discarded =	0.07 cfs @	12.26 hrs, Volume=	1,734 cf		
Primary =	0.19 cfs @	12.26 hrs, Volume=	322 cf		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 202.05' @ 12.26 hrs Surf.Area= 613 sf Storage= 505 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 39.5 min (787.3 - 747.7)

Volume	Invert	Avail.Storage	Storage Description
#1	199.99'	983 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
199.99	613	0.0	0	0
200.00	613	40.0	2	2
203.99	613	40.0	978	981
204.00	613	40.0	2	983

Device	Routing	Invert	Outlet Devices
#1	Primary	201.50'	**4.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 201.50' / 201.40' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.09 sf
#2	Discarded	199.99'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 198.00'

Discarded OutFlow Max=0.07 cfs @ 12.26 hrs HW=202.04' (Free Discharge)
└**2=Exfiltration** (Controls 0.07 cfs)

Primary OutFlow Max=0.19 cfs @ 12.26 hrs HW=202.04' TW=193.30' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 0.19 cfs @ 2.18 fps)

Summary for Pond 213P: DRIPEDGE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=62)

Inflow Area = 17,682 sf, 89.23% Impervious, Inflow Depth > 4.72" for 10YR event
Inflow = 1.92 cfs @ 12.09 hrs, Volume= 6,955 cf
Outflow = 0.86 cfs @ 12.27 hrs, Volume= 6,955 cf, Atten= 55%, Lag= 11.0 min
Discarded = 0.23 cfs @ 12.27 hrs, Volume= 5,636 cf
Primary = 0.63 cfs @ 12.27 hrs, Volume= 1,320 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 202.25' @ 12.27 hrs Surf.Area= 1,904 sf Storage= 1,721 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 38.4 min (786.2 - 747.7)

Volume	Invert	Avail.Storage	Storage Description
#1	199.99'	3,054 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
199.99	1,904	0.0	0	0
200.00	1,904	40.0	8	8
203.99	1,904	40.0	3,039	3,046
204.00	1,904	40.0	8	3,054

Device	Routing	Invert	Outlet Devices
#1	Primary	201.40'	**6.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 201.25' / 201.40' S= -0.0075 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Discarded	199.99'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 198.00'

Discarded OutFlow Max=0.23 cfs @ 12.27 hrs HW=202.24' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.23 cfs)

Primary OutFlow Max=0.63 cfs @ 12.27 hrs HW=202.24' TW=193.32' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 0.63 cfs @ 3.22 fps)

Summary for Pond 214P: DRIPEDGE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=66)

Inflow Area = 17,685 sf, 89.22% Impervious, Inflow Depth > 4.72" for 10YR event
Inflow = 1.92 cfs @ 12.09 hrs, Volume= 6,957 cf
Outflow = 0.94 cfs @ 12.24 hrs, Volume= 6,956 cf, Atten= 51%, Lag= 9.4 min
Discarded = 0.22 cfs @ 12.24 hrs, Volume= 5,306 cf
Primary = 0.73 cfs @ 12.24 hrs, Volume= 1,650 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 202.06' @ 12.24 hrs Surf.Area= 1,907 sf Storage= 1,577 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 30.4 min (778.1 - 747.7)

Volume	Invert	Avail.Storage	Storage Description
#1	199.99'	3,059 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
199.99	1,907	0.0	0	0
200.00	1,907	40.0	8	8
203.99	1,907	40.0	3,044	3,051
204.00	1,907	40.0	8	3,059

Device	Routing	Invert	Outlet Devices
#1	Primary	201.00'	**6.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 201.00' / 200.90' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Discarded	199.99'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 198.00'

Discarded OutFlow Max=0.22 cfs @ 12.24 hrs HW=202.06' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.22 cfs)

Primary OutFlow Max=0.73 cfs @ 12.24 hrs HW=202.06' TW=193.23' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 0.73 cfs @ 3.70 fps)

Summary for Pond 215P: DRIPEDGE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=62)

Inflow Area =	17,843 sf, 88.43% Impervious,	Inflow Depth >	4.72"	for 10YR event
Inflow =	1.94 cfs @ 12.09 hrs,	Volume=	7,019 cf	
Outflow =	0.75 cfs @ 12.32 hrs,	Volume=	7,021 cf, Atten= 61%, Lag= 14.0 min	
Discarded =	0.24 cfs @ 12.32 hrs,	Volume=	5,984 cf	
Primary =	0.50 cfs @ 12.32 hrs,	Volume=	1,036 cf	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 204.21' @ 12.32 hrs Surf.Area= 2,065 sf Storage= 1,838 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 42.2 min (789.9 - 747.7)

Volume	Invert	Avail.Storage	Storage Description
#1	201.99'	3,312 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
201.99	2,065	0.0	0	0
202.00	2,065	40.0	8	8
205.99	2,065	40.0	3,296	3,304
206.00	2,065	40.0	8	3,312

Device	Routing	Invert	Outlet Devices
#1	Primary	203.50'	**6.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 203.50' / 203.40' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Discarded	201.99'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 200.00'

Discarded OutFlow Max=0.24 cfs @ 12.32 hrs HW=204.21' (Free Discharge)
↑**2=Exfiltration** (Controls 0.24 cfs)

Primary OutFlow Max=0.50 cfs @ 12.32 hrs HW=204.21' TW=193.46' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 0.50 cfs @ 2.55 fps)

Summary for Pond 216P: DRIPEDGE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=63)

Inflow Area =	17,498 sf, 90.17% Impervious,	Inflow Depth >	4.72"	for 10YR event
Inflow =	1.90 cfs @	12.09 hrs, Volume=	6,883 cf	
Outflow =	1.00 cfs @	12.22 hrs, Volume=	6,885 cf, Atten= 47%, Lag= 8.3 min	
Discarded =	0.20 cfs @	12.22 hrs, Volume=	5,062 cf	
Primary =	0.80 cfs @	12.22 hrs, Volume=	1,823 cf	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 202.19' @ 12.22 hrs Surf.Area= 1,720 sf Storage= 1,513 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 30.2 min (778.0 - 747.7)

Volume	Invert	Avail.Storage	Storage Description
#1	199.99'	2,759 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
199.99	1,720	0.0	0	0
200.00	1,720	40.0	7	7
203.99	1,720	40.0	2,745	2,752
204.00	1,720	40.0	7	2,759

Device	Routing	Invert	Outlet Devices
#1	Primary	201.00'	**6.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 201.00' / 200.90' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Discarded	199.99'	**2.410 in/hr Exfiltration over Surface area**

Conductivity to Groundwater Elevation = 198.00'

Discarded OutFlow Max=0.20 cfs @ 12.22 hrs HW=202.18' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.20 cfs)

Primary OutFlow Max=0.79 cfs @ 12.22 hrs HW=202.18' TW=193.14' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 0.79 cfs @ 4.03 fps)

Summary for Link AP1: ANALYSIS POINT 1

Inflow Area = 5,776 sf, 60.06% Impervious, Inflow Depth > 3.14" for 10YR event
Inflow = 0.48 cfs @ 12.09 hrs, Volume= 1,509 cf
Primary = 0.48 cfs @ 12.09 hrs, Volume= 1,509 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP2: ANALYSIS POINT 2

Inflow Area = 766,038 sf, 15.23% Impervious, Inflow Depth > 2.49" for 10YR event
Inflow = 16.54 cfs @ 12.52 hrs, Volume= 158,976 cf
Primary = 16.54 cfs @ 12.52 hrs, Volume= 158,976 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP3: ANALYSIS POINT 3

Inflow Area = 40,260 sf, 0.00% Impervious, Inflow Depth > 2.41" for 10YR event
Inflow = 2.56 cfs @ 12.09 hrs, Volume= 8,101 cf
Primary = 2.56 cfs @ 12.09 hrs, Volume= 8,101 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP4: ANALYSIS POINT 4

Inflow Area = 1,769,671 sf, 31.11% Impervious, Inflow Depth > 1.37" for 10YR event
Inflow = 29.98 cfs @ 12.54 hrs, Volume= 201,368 cf
Primary = 29.98 cfs @ 12.54 hrs, Volume= 201,368 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 201S: ACCESS ROAD Runoff Area=5,776 sf 60.06% Impervious Runoff Depth>4.36"
Tc=6.0 min CN=83 Runoff=0.65 cfs 2,098 cf

Subcatchment 202S: ACCESS ROAD Runoff Area=110,123 sf 75.52% Impervious Runoff Depth>5.12"
Flow Length=1,382' Slope=0.0100 '/' Tc=11.8 min CN=90 Runoff=11.92 cfs 46,989 cf

Subcatchment 203S: WETLAND Runoff Area=277,240 sf 0.00% Impervious Runoff Depth>3.81"
Flow Length=711' Tc=39.3 min CN=78 Runoff=14.20 cfs 87,958 cf

Subcatchment 204S: ISOLATED WETLAND Runoff Area=40,260 sf 0.00% Impervious Runoff Depth>3.53"
Tc=6.0 min CN=75 Runoff=3.75 cfs 11,834 cf

Subcatchment 205S: ACCESS ROAD Runoff Area=42,289 sf 100.00% Impervious Runoff Depth>6.05"
Tc=6.0 min CN=98 Runoff=5.85 cfs 21,313 cf

Subcatchment 206S: BEGINNING SINGLE Runoff Area=39,188 sf 100.00% Impervious Runoff Depth>6.05"
Tc=6.0 min CN=98 Runoff=5.42 cfs 19,750 cf

Subcatchment 207S: CENTER POND Runoff Area=84,896 sf 0.00% Impervious Runoff Depth>3.43"
Tc=6.0 min CN=74 Runoff=7.69 cfs 24,246 cf

Subcatchment 208S: CUL-DE-SACS Runoff Area=287,997 sf 46.46% Impervious Runoff Depth>3.82"
Flow Length=1,366' Tc=24.9 min CN=78 Runoff=18.20 cfs 91,645 cf

Subcatchment 209S: BOTTOM SINGLE Runoff Area=108,860 sf 79.62% Impervious Runoff Depth>4.68"
Flow Length=1,050' Slope=0.0100 '/' Tc=9.1 min CN=86 Runoff=11.81 cfs 42,452 cf

Subcatchment 210S: MULTIFAMILY Runoff Area=209,178 sf 80.08% Impervious Runoff Depth>5.12"
Flow Length=1,252' Slope=0.0100 '/' Tc=10.8 min CN=90 Runoff=23.26 cfs 89,269 cf

Subcatchment 211S: MULTIFAMILY Runoff Area=60,101 sf 6.57% Impervious Runoff Depth>3.83"
Tc=6.0 min CN=78 Runoff=6.06 cfs 19,197 cf

Subcatchment 212S: CLUBHOUSE Runoff Area=5,226 sf 100.00% Impervious Runoff Depth>6.05"
Tc=6.0 min CN=98 Runoff=0.72 cfs 2,634 cf

Subcatchment 213S: MULTIFAMILY 4 Runoff Area=17,682 sf 89.23% Impervious Runoff Depth>6.05"
Tc=6.0 min CN=98 Runoff=2.44 cfs 8,912 cf

Subcatchment 214S: MULTIFAMILY 3 Runoff Area=17,685 sf 89.22% Impervious Runoff Depth>6.05"
Tc=6.0 min CN=98 Runoff=2.44 cfs 8,913 cf

Subcatchment 215S: MULTIFAMILY 1 Runoff Area=17,843 sf 88.43% Impervious Runoff Depth>6.05"
Tc=6.0 min CN=98 Runoff=2.47 cfs 8,993 cf

Subcatchment 216S: MULTIFAMILY 2 Runoff Area=17,498 sf 90.17% Impervious Runoff Depth>6.05"
Tc=6.0 min CN=98 Runoff=2.42 cfs 8,819 cf

Subcatchment 217S: ENTRANCE Runoff Area=378,675 sf 8.85% Impervious Runoff Depth>4.02"
Flow Length=1,052' Tc=31.9 min CN=80 Runoff=22.56 cfs 126,866 cf

Subcatchment 218S: REMAINING SITE Runoff Area=599,170 sf 0.00% Impervious Runoff Depth>2.92"
Flow Length=798' Tc=31.3 min CN=69 Runoff=26.04 cfs 145,830 cf

Subcatchment 219S: CENTRAL WETLAND Runoff Area=123,160 sf 0.00% Impervious Runoff Depth>3.32"
Flow Length=592' Tc=23.3 min CN=73 Runoff=6.95 cfs 34,026 cf

Subcatchment 220S: ENTRANCE Runoff Area=138,898 sf 6.34% Impervious Runoff Depth>3.31"
Flow Length=846' Tc=25.0 min CN=73 Runoff=7.61 cfs 38,359 cf

Reach 207R: CENTER POND Avg. Flow Depth=0.51' Max Vel=0.12 fps Inflow=8.00 cfs 42,234 cf
n=0.800 L=550.0' S=0.0109 '/' Capacity=10.49 cfs Outflow=3.27 cfs 39,672 cf

Reach 217R: OVERLAND FLOW Avg. Flow Depth=0.98' Max Vel=0.11 fps Inflow=22.56 cfs 126,866 cf
n=0.800 L=700.0' S=0.0057 '/' Capacity=8.69 cfs Outflow=8.38 cfs 117,845 cf

Reach 218R: OVERLAND FLOW Avg. Flow Depth=0.34' Max Vel=0.14 fps Inflow=7.61 cfs 38,359 cf
n=0.800 L=750.0' S=0.0293 '/' Capacity=19.69 cfs Outflow=2.77 cfs 35,540 cf

Reach 219R: CROSS PIPE Avg. Flow Depth=0.45' Max Vel=8.22 fps Inflow=3.27 cfs 39,672 cf
15.0" Round Pipe n=0.013 L=30.0' S=0.0333 '/' Capacity=11.79 cfs Outflow=3.27 cfs 39,670 cf

Pond 202P: TOWNHOUSE OFFSHOOT Peak Elev=205.87' Storage=8,402 cf Inflow=11.92 cfs 46,989 cf
Discarded=0.55 cfs 20,844 cf Primary=10.72 cfs 24,694 cf Outflow=11.27 cfs 45,538 cf

Pond 207P: CENTER POND Peak Elev=203.18' Storage=28,292 cf Inflow=18.94 cfs 65,310 cf
Discarded=1.37 cfs 51,328 cf Primary=1.61 cfs 8,208 cf Outflow=2.99 cfs 59,536 cf

Pond 208P: CUL-DE-SAC POND Peak Elev=194.87' Storage=26,083 cf Inflow=18.20 cfs 91,645 cf
Discarded=1.30 cfs 38,590 cf Primary=9.01 cfs 48,415 cf Outflow=10.31 cfs 87,005 cf

Pond 209P: BOTTOM SINGLE FAMILY Peak Elev=194.46' Storage=19,752 cf Inflow=11.81 cfs 42,452 cf
Discarded=1.08 cfs 39,693 cf Primary=0.00 cfs 0 cf Outflow=1.08 cfs 39,693 cf

Pond 210P: MULTIFAMILY LOOP POND Peak Elev=194.69' Storage=46,547 cf Inflow=32.00 cfs 118,896 cf
Discarded=1.87 cfs 52,682 cf Primary=8.69 cfs 58,356 cf Outflow=10.56 cfs 111,038 cf

Pond 212P: DRIPEDGE Peak Elev=202.49' Storage=614 cf Inflow=0.72 cfs 2,634 cf
Discarded=0.08 cfs 2,029 cf Primary=0.30 cfs 605 cf Outflow=0.37 cfs 2,634 cf

Pond 213P: DRIPEDGE Peak Elev=202.80' Storage=2,140 cf Inflow=2.44 cfs 8,912 cf
Discarded=0.26 cfs 6,609 cf Primary=0.92 cfs 2,303 cf Outflow=1.18 cfs 8,912 cf

Pond 214P: DRIPEDGE Peak Elev=202.58' Storage=1,977 cf Inflow=2.44 cfs 8,913 cf
Discarded=0.24 cfs 6,251 cf Primary=0.98 cfs 2,664 cf Outflow=1.22 cfs 8,914 cf

Pond 215P: DRIPEDGE Peak Elev=204.74' Storage=2,270 cf Inflow=2.47 cfs 8,993 cf
Discarded=0.27 cfs 7,005 cf Primary=0.82 cfs 1,989 cf Outflow=1.10 cfs 8,994 cf

Pond 216P: DRIPEDGE Peak Elev=202.74' Storage=1,890 cf Inflow=2.42 cfs 8,819 cf
Discarded=0.23 cfs 5,950 cf Primary=1.04 cfs 2,869 cf Outflow=1.27 cfs 8,819 cf

Link AP1: ANALYSIS POINT 1 Inflow=0.65 cfs 2,098 cf
Primary=0.65 cfs 2,098 cf

Link AP2: ANALYSIS POINT 2 Inflow=24.23 cfs 230,497 cf
Primary=24.23 cfs 230,497 cf

Link AP3: ANALYSIS POINT 3 Inflow=3.75 cfs 11,834 cf
Primary=3.75 cfs 11,834 cf

Link AP4: ANALYSIS POINT 4 Inflow=47.07 cfs 327,812 cf
Primary=47.07 cfs 327,812 cf

Total Runoff Area = 2,581,745 sf Runoff Volume = 840,101 cf Average Runoff Depth = 3.90"
74.02% Pervious = 1,911,035 sf 25.98% Impervious = 670,710 sf

Summary for Subcatchment 201S: ACCESS ROAD ENTRANCE

Runoff = 0.65 cfs @ 12.09 hrs, Volume= 2,098 cf, Depth> 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
2,307	61	>75% Grass cover, Good, HSG B
3,469	98	Paved parking, HSG B
5,776	83	Weighted Average
2,307		39.94% Pervious Area
3,469		60.06% Impervious Area

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

Summary for Subcatchment 202S: ACCESS ROAD AND LOOP

Runoff = 11.92 cfs @ 12.16 hrs, Volume= 46,989 cf, Depth> 5.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
17,871	61	>75% Grass cover, Good, HSG B
58,005	98	Paved parking, HSG B
500	98	Paved parking, HSG B
22,398	98	Roofs, HSG B
9,090	74	>75% Grass cover, Good, HSG C
2,150	98	Paved parking, HSG C
109	98	Roofs, HSG C
110,123	90	Weighted Average
26,961		24.48% Pervious Area
83,162		75.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0100	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.27"
10.9	1,332	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.8	1,382	Total			

Summary for Subcatchment 203S: WETLAND

Runoff = 14.20 cfs @ 12.54 hrs, Volume= 87,958 cf, Depth> 3.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
49,822	61	>75% Grass cover, Good, HSG B
17,151	55	Woods, Good, HSG B
60,420	74	>75% Grass cover, Good, HSG C
49,448	70	Woods, Good, HSG C
95,456	98	Water Surface, 0% imp, HSG C
4,665	80	>75% Grass cover, Good, HSG D
221	77	Woods, Good, HSG D
57	98	Water Surface, 0% imp, HSG D
277,240	78	Weighted Average
277,240		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.1	50	0.0400	0.05		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.27"
23.2	661	0.0090	0.47		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
39.3	711	Total			

Summary for Subcatchment 204S: ISOLATED WETLAND

Runoff = 3.75 cfs @ 12.09 hrs, Volume= 11,834 cf, Depth> 3.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
6,712	39	>75% Grass cover, Good, HSG A
604	30	Woods, Good, HSG A
2,395	98	Water Surface, 0% imp, HSG A
1,493	74	>75% Grass cover, Good, HSG C
13,662	80	>75% Grass cover, Good, HSG D
8,984	77	Woods, Good, HSG D
6,410	98	Water Surface, 0% imp, HSG D
40,260	75	Weighted Average
40,260		100.00% Pervious Area

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

Summary for Subcatchment 205S: ACCESS ROAD TOWNHOUSES

Runoff = 5.85 cfs @ 12.09 hrs, Volume= 21,313 cf, Depth> 6.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
25,918	98	Paved parking, HSG C
16,371	98	Roofs, HSG C
42,289	98	Weighted Average
42,289		100.00% Impervious Area

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

Summary for Subcatchment 206S: BEGINNING SINGLE FAMILY

Runoff = 5.42 cfs @ 12.09 hrs, Volume= 19,750 cf, Depth> 6.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
19,968	98	Paved parking, HSG C
19,220	98	Roofs, HSG C
39,188	98	Weighted Average
39,188		100.00% Impervious Area

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

Summary for Subcatchment 207S: CENTER POND

Runoff = 7.69 cfs @ 12.09 hrs, Volume= 24,246 cf, Depth> 3.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
84,896	74	>75% Grass cover, Good, HSG C
84,896		100.00% Pervious Area

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

Summary for Subcatchment 208S: CUL-DE-SACS

Runoff = 18.20 cfs @ 12.34 hrs, Volume= 91,645 cf, Depth> 3.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
71,810	61	>75% Grass cover, Good, HSG B
5,242	55	Woods, Good, HSG B
61,579	98	Paved parking, HSG B
38,279	98	Roofs, HSG B
94,256	68	1 acre lots, 20% imp, HSG B
6,686	98	Paved parking, HSG C
1,725	80	>75% Grass cover, Good, HSG D
6,067	98	Paved parking, HSG D
2,353	98	Roofs, HSG D
287,997	78	Weighted Average
154,182		53.54% Pervious Area
133,815		46.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.9	50	0.0690	0.06		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.27"
3.4	267	0.0670	1.29		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
8.6	1,049	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
24.9	1,366	Total			

Summary for Subcatchment 209S: BOTTOM SINGLE FAMILY

Runoff = 11.81 cfs @ 12.13 hrs, Volume= 42,452 cf, Depth> 4.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
22,187	39	>75% Grass cover, Good, HSG A
12,245	98	Paved parking, HSG A
10,858	98	Roofs, HSG A
30,222	98	Paved parking, HSG C
31,173	98	Roofs, HSG C
2,175	98	Roofs, HSG D
108,860	86	Weighted Average
22,187		20.38% Pervious Area
86,673		79.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0100	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.27"
8.2	1,000	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
9.1	1,050	Total			

Summary for Subcatchment 210S: MULTIFAMILY PAVEMENT LOOP

Runoff = 23.26 cfs @ 12.15 hrs, Volume= 89,269 cf, Depth> 5.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
22,789	39	>75% Grass cover, Good, HSG A
22,820	98	Paved parking, HSG A
1,454	98	Roofs, HSG A
2,798	74	>75% Grass cover, Good, HSG C
28,010	98	Paved parking, HSG C
18,521	98	Roofs, HSG C
16,080	80	>75% Grass cover, Good, HSG D
93,614	98	Paved parking, HSG D
3,092	98	Roofs, HSG D
209,178	90	Weighted Average
41,667		19.92% Pervious Area
167,511		80.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0100	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.27"
9.9	1,202	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
10.8	1,252	Total			

Summary for Subcatchment 211S: MULTIFAMILY CENTER

Runoff = 6.06 cfs @ 12.09 hrs, Volume= 19,197 cf, Depth> 3.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
4,984	39	>75% Grass cover, Good, HSG A
51,170	80	>75% Grass cover, Good, HSG D
3,947	98	Paved parking, HSG D
60,101	78	Weighted Average
56,154		93.43% Pervious Area
3,947		6.57% Impervious Area

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

Summary for Subcatchment 212S: CLUBHOUSE

Runoff = 0.72 cfs @ 12.09 hrs, Volume= 2,634 cf, Depth> 6.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
5,226	98	Roofs, HSG D
5,226		100.00% Impervious Area

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

Summary for Subcatchment 213S: MULTIFAMILY 4

Runoff = 2.44 cfs @ 12.09 hrs, Volume= 8,912 cf, Depth> 6.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
34	98	Water Surface, 0% imp, HSG A
77	98	Roofs, HSG A
1,870	98	Water Surface, 0% imp, HSG D
15,701	98	Roofs, HSG D
17,682	98	Weighted Average
1,904		10.77% Pervious Area
15,778		89.23% Impervious Area

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

Summary for Subcatchment 214S: MULTIFAMILY 3

Runoff = 2.44 cfs @ 12.09 hrs, Volume= 8,913 cf, Depth> 6.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
460	98	Water Surface, 0% imp, HSG A
4,144	98	Roofs, HSG A
1,447	98	Water Surface, 0% imp, HSG D
11,634	98	Roofs, HSG D
17,685	98	Weighted Average
1,907		10.78% Pervious Area
15,778		89.22% Impervious Area

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

Summary for Subcatchment 215S: MULTIFAMILY 1

Runoff = 2.47 cfs @ 12.09 hrs, Volume= 8,993 cf, Depth> 6.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
2,065	98	Water Surface, 0% imp, HSG D
15,778	98	Roofs, HSG D
17,843	98	Weighted Average
2,065		11.57% Pervious Area
15,778		88.43% Impervious Area

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

Summary for Subcatchment 216S: MULTIFAMILY 2

Runoff = 2.42 cfs @ 12.09 hrs, Volume= 8,819 cf, Depth> 6.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
1,720	98	Water Surface, 0% imp, HSG D
15,778	98	Roofs, HSG D
17,498	98	Weighted Average
1,720		9.83% Pervious Area
15,778		90.17% Impervious Area

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

Summary for Subcatchment 217S: ENTRANCE WETLAND EAST

Runoff = 22.56 cfs @ 12.44 hrs, Volume= 126,866 cf, Depth> 4.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
97,782	61	>75% Grass cover, Good, HSG B
37,648	55	Woods, Good, HSG B
30,250	98	Paved parking, HSG B
22,380	98	Water Surface, 0% imp, HSG B
16,323	68	1 acre lots, 20% imp, HSG B
6,315	74	>75% Grass cover, Good, HSG C
13,280	70	Woods, Good, HSG C
18,143	98	Water Surface, 0% imp, HSG C
7,096	80	>75% Grass cover, Good, HSG D
21,801	77	Woods, Good, HSG D
107,657	98	Water Surface, 0% imp, HSG D
378,675	80	Weighted Average
345,160		91.15% Pervious Area
33,515		8.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	50	0.0400	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.27"
2.3	180	0.0670	1.29		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.2	122	0.0167	0.90		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.4	74	0.0167	0.90		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
2.0	111	0.0167	0.90		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
14.8	515	0.0135	0.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
31.9	1,052	Total			

Summary for Subcatchment 218S: REMAINING SITE AREA

Runoff = 26.04 cfs @ 12.45 hrs, Volume= 145,830 cf, Depth> 2.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
83,481	39	>75% Grass cover, Good, HSG A
72,678	30	Woods, Good, HSG A
20,045	61	>75% Grass cover, Good, HSG B
16,187	55	Woods, Good, HSG B
209	98	Water Surface, 0% imp, HSG B
39,968	74	>75% Grass cover, Good, HSG C
14,728	70	Woods, Good, HSG C
9,983	98	Water Surface, 0% imp, HSG C
50,689	80	>75% Grass cover, Good, HSG D
187,392	77	Woods, Good, HSG D
103,810	98	Water Surface, 0% imp, HSG D
599,170	69	Weighted Average
599,170		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.1	50	0.0400	0.05		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.27"
15.2	748	0.0270	0.82		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
31.3	798	Total			

Summary for Subcatchment 219S: CENTRAL WETLAND POCKET

Runoff = 6.95 cfs @ 12.33 hrs, Volume= 34,026 cf, Depth> 3.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
17,552	39	>75% Grass cover, Good, HSG A
11,870	30	Woods, Good, HSG A
3,417	98	Water Surface, 0% imp, HSG A
23,070	74	>75% Grass cover, Good, HSG C
23,365	70	Woods, Good, HSG C
40,650	98	Water Surface, 0% imp, HSG C
2,073	80	>75% Grass cover, Good, HSG D
1,163	77	Woods, Good, HSG D
123,160	73	Weighted Average
123,160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	50	0.0400	0.14		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.27"
17.2	542	0.0110	0.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
23.3	592	Total			

Summary for Subcatchment 220S: ENTRANCE WETLAND WEST

Runoff = 7.61 cfs @ 12.35 hrs, Volume= 38,359 cf, Depth> 3.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.29"

Area (sf)	CN	Description
47,079	61	>75% Grass cover, Good, HSG B
10,265	55	Woods, Good, HSG B
1,865	98	Paved parking, HSG B
3,360	98	Water Surface, 0% imp, HSG B
34,690	68	1 acre lots, 20% imp, HSG B
1,983	74	>75% Grass cover, Good, HSG C
1,956	70	Woods, Good, HSG C
2,004	98	Water Surface, 0% imp, HSG C
3,439	80	>75% Grass cover, Good, HSG D
4,894	77	Woods, Good, HSG D
27,363	98	Water Surface, 0% imp, HSG D
138,898	73	Weighted Average
130,095		93.66% Pervious Area
8,803		6.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	50	0.0400	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.27"
5.2	205	0.0170	0.65		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.3	257	0.0700	1.85		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
8.3	334	0.0180	0.67		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
25.0	846	Total			

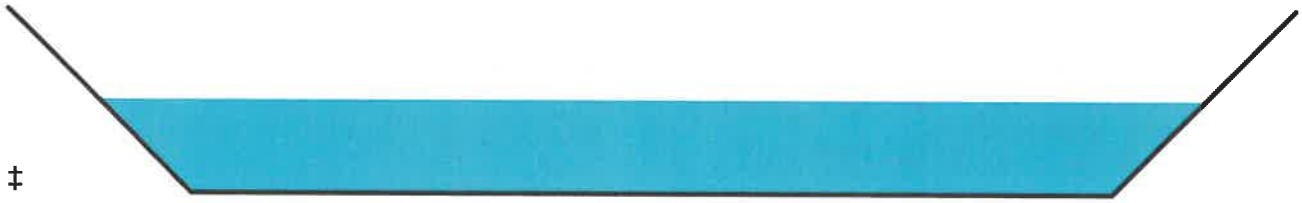
Summary for Reach 207R: CENTER POND OVERLAND FLOW

Inflow Area = 289,533 sf, 28.14% Impervious, Inflow Depth > 1.75" for 25YR event
Inflow = 8.00 cfs @ 12.36 hrs, Volume= 42,234 cf
Outflow = 3.27 cfs @ 12.94 hrs, Volume= 39,672 cf, Atten= 59%, Lag= 34.8 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.12 fps, Min. Travel Time= 78.6 min
Avg. Velocity = 0.05 fps, Avg. Travel Time= 170.7 min

Peak Storage= 15,433 cf @ 12.94 hrs
Average Depth at Peak Storage= 0.51'
Bank-Full Depth= 1.00' Flow Area= 60.0 sf, Capacity= 10.49 cfs

50.00' x 1.00' deep channel, n= 0.800 Sheet flow: Woods+dense brush
Side Slope Z-value= 10.0 '/' Top Width= 70.00'
Length= 550.0' Slope= 0.0109 '/'
Inlet Invert= 200.00', Outlet Invert= 194.00'



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Summary for Reach 217R: OVERLAND FLOW

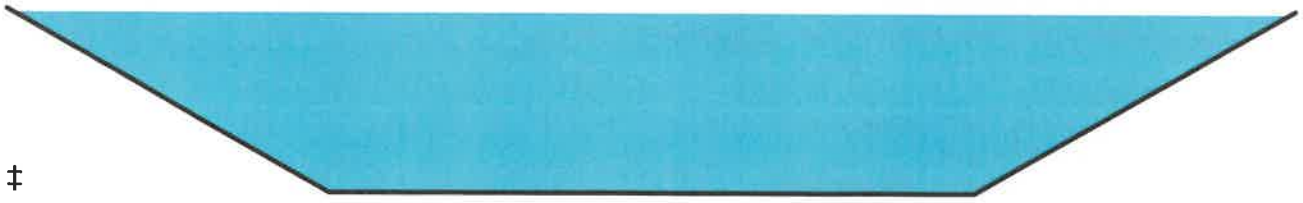
[55] Hint: Peak inflow is 260% of Manning's capacity

Inflow Area = 378,675 sf, 8.85% Impervious, Inflow Depth > 4.02" for 25YR event
Inflow = 22.56 cfs @ 12.44 hrs, Volume= 126,866 cf
Outflow = 8.38 cfs @ 13.00 hrs, Volume= 117,845 cf, Atten= 63%, Lag= 33.9 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.11 fps, Min. Travel Time= 101.8 min
Avg. Velocity = 0.06 fps, Avg. Travel Time= 200.3 min

Peak Storage= 51,162 cf @ 13.00 hrs
Average Depth at Peak Storage= 0.98'
Bank-Full Depth= 1.00' Flow Area= 75.0 sf, Capacity= 8.69 cfs

50.00' x 1.00' deep channel, n= 0.800 Sheet flow: Woods+dense brush
Side Slope Z-value= 25.0 '/' Top Width= 100.00'
Length= 700.0' Slope= 0.0057 '/'
Inlet Invert= 206.00', Outlet Invert= 202.00'



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Summary for Reach 218R: OVERLAND FLOW

Inflow Area = 138,898 sf, 6.34% Impervious, Inflow Depth > 3.31" for 25YR event
Inflow = 7.61 cfs @ 12.35 hrs, Volume= 38,359 cf
Outflow = 2.77 cfs @ 12.86 hrs, Volume= 35,540 cf, Atten= 64%, Lag= 30.6 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.14 fps, Min. Travel Time= 88.8 min
Avg. Velocity = 0.07 fps, Avg. Travel Time= 178.6 min

Peak Storage= 14,751 cf @ 12.86 hrs
Average Depth at Peak Storage= 0.34'
Bank-Full Depth= 1.00' Flow Area= 75.0 sf, Capacity= 19.69 cfs

50.00' x 1.00' deep channel, n= 0.800 Sheet flow: Woods+dense brush
Side Slope Z-value= 25.0 '/' Top Width= 100.00'
Length= 750.0' Slope= 0.0293 '/'
Inlet Invert= 208.00', Outlet Invert= 186.00'

‡

Summary for Reach 219R: CROSS PIPE

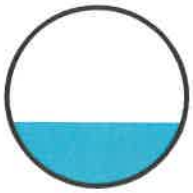
[52] Hint: Inlet/Outlet conditions not evaluated
[62] Hint: Exceeded Reach 207R OUTLET depth by 0.02' @ 11.45 hrs

Inflow Area = 289,533 sf, 28.14% Impervious, Inflow Depth > 1.64" for 25YR event
Inflow = 3.27 cfs @ 12.94 hrs, Volume= 39,672 cf
Outflow = 3.27 cfs @ 12.94 hrs, Volume= 39,670 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 8.22 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.44 fps, Avg. Travel Time= 0.1 min

Peak Storage= 12 cf @ 12.94 hrs
Average Depth at Peak Storage= 0.45'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 11.79 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 30.0' Slope= 0.0333 '/'
Inlet Invert= 194.00', Outlet Invert= 193.00'



Summary for Pond 202P: TOWNHOUSE OFFSHOOT POND

Inflow Area = 110,123 sf, 75.52% Impervious, Inflow Depth > 5.12" for 25YR event
Inflow = 11.92 cfs @ 12.16 hrs, Volume= 46,989 cf
Outflow = 11.27 cfs @ 12.20 hrs, Volume= 45,538 cf, Atten= 5%, Lag= 2.7 min
Discarded = 0.55 cfs @ 12.20 hrs, Volume= 20,844 cf
Primary = 10.72 cfs @ 12.20 hrs, Volume= 24,694 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 205.87' @ 12.20 hrs Surf.Area= 5,923 sf Storage= 8,402 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 52.5 min (840.0 - 787.5)

Volume	Invert	Avail.Storage	Storage Description
#1	204.00'	9,183 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
204.00	3,062	0	0
206.00	6,121	9,183	9,183

Device	Routing	Invert	Outlet Devices
#1	Primary	205.00'	**12.0" Round Culvert** L= 30.0' Ke= 0.500 Inlet / Outlet Invert= 205.00' / 204.00' S= 0.0333 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	204.00'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 202.00'
#3	Primary	205.50'	**15.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.55 cfs @ 12.20 hrs HW=205.87' (Free Discharge)
└**2=Exfiltration** (Controls 0.55 cfs)

Primary OutFlow Max=10.66 cfs @ 12.20 hrs HW=205.87' TW=0.00' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 2.30 cfs @ 3.17 fps)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 8.36 cfs @ 1.51 fps)

Summary for Pond 207P: CENTER POND

Inflow Area = 166,373 sf, 48.97% Impervious, Inflow Depth > 4.71" for 25YR event
Inflow = 18.94 cfs @ 12.09 hrs, Volume= 65,310 cf
Outflow = 2.99 cfs @ 12.58 hrs, Volume= 59,536 cf, Atten= 84%, Lag= 29.7 min
Discarded = 1.37 cfs @ 12.58 hrs, Volume= 51,328 cf
Primary = 1.61 cfs @ 12.58 hrs, Volume= 8,208 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 203.18' @ 12.58 hrs Surf.Area= 12,011 sf Storage= 28,292 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 142.8 min (917.3 - 774.5)

Volume	Invert	Avail.Storage	Storage Description
#1	200.00'	38,758 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
200.00	5,856	0	0
202.00	9,624	15,480	15,480
204.00	13,654	23,278	38,758

Device	Routing	Invert	Outlet Devices
#1	Discarded	200.00'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 198.00'
#2	Primary	202.50'	**12.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 202.50' / 201.50' S= 0.0500 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Primary	203.50'	**15.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=1.37 cfs @ 12.58 hrs HW=203.18' (Free Discharge)
└**1=Exfiltration** (Controls 1.37 cfs)

Primary OutFlow Max=1.61 cfs @ 12.58 hrs HW=203.18' TW=200.45' (Dynamic Tailwater)
├**2=Culvert** (Inlet Controls 1.61 cfs @ 2.82 fps)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 208P: CUL-DE-SAC POND

Inflow Area = 287,997 sf, 46.46% Impervious, Inflow Depth > 3.82" for 25YR event
Inflow = 18.20 cfs @ 12.34 hrs, Volume= 91,645 cf
Outflow = 10.31 cfs @ 12.68 hrs, Volume= 87,005 cf, Atten= 43%, Lag= 19.9 min
Discarded = 1.30 cfs @ 12.68 hrs, Volume= 38,590 cf
Primary = 9.01 cfs @ 12.68 hrs, Volume= 48,415 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 194.87' @ 12.68 hrs Surf.Area= 11,097 sf Storage= 26,083 cf

Plug-Flow detention time= 82.0 min calculated for 86,824 cf (95% of inflow)
Center-of-Mass det. time= 55.2 min (887.0 - 831.8)

Volume	Invert	Avail.Storage	Storage Description
#1	192.00'	39,531 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
192.00	7,139	0	0
194.00	9,823	16,962	16,962
196.00	12,746	22,569	39,531

Device	Routing	Invert	Outlet Devices
#1	Primary	193.00'	**18.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 193.00' / 192.00' S= 0.0500 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Primary	195.50'	**15.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#3	Discarded	192.00'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 190.00'

Discarded OutFlow Max=1.30 cfs @ 12.68 hrs HW=194.87' (Free Discharge)
└**3=Exfiltration** (Controls 1.30 cfs)

Primary OutFlow Max=9.00 cfs @ 12.68 hrs HW=194.87' TW=0.00' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 9.00 cfs @ 5.09 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 209P: BOTTOM SINGLE FAMILY POND

Inflow Area = 108,860 sf, 79.62% Impervious, Inflow Depth > 4.68" for 25YR event
Inflow = 11.81 cfs @ 12.13 hrs, Volume= 42,452 cf
Outflow = 1.08 cfs @ 13.16 hrs, Volume= 39,693 cf, Atten= 91%, Lag= 62.3 min
Discarded = 1.08 cfs @ 13.16 hrs, Volume= 39,693 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 194.46' @ 13.16 hrs Surf.Area= 10,223 sf Storage= 19,752 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 174.7 min (972.8 - 798.1)

Volume	Invert	Avail.Storage	Storage Description
#1	192.00'	70,116 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
192.00	6,226	0	0
194.00	9,088	15,314	15,314
196.00	14,029	23,117	38,431
198.00	17,656	31,685	70,116

Device	Routing	Invert	Outlet Devices
#1	Discarded	192.00'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 190.00'
#2	Primary	194.50'	**12.0" Round Culvert** L= 40.0' Ke= 0.500 Inlet / Outlet Invert= 194.50' / 193.80' S= 0.0175 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Discarded OutFlow Max=1.08 cfs @ 13.16 hrs HW=194.46' (Free Discharge)
↑—**1=Exfiltration** (Controls 1.08 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=192.00' TW=0.00' (Dynamic Tailwater)
↑—**2=Culvert** (Controls 0.00 cfs)

Summary for Pond 210P: MULTIFAMILY LOOP POND

Inflow Area = 345,213 sf, 69.46% Impervious, Inflow Depth > 4.13" for 25YR event
Inflow = 32.00 cfs @ 12.14 hrs, Volume= 118,896 cf
Outflow = 10.56 cfs @ 12.55 hrs, Volume= 111,038 cf, Atten= 67%, Lag= 24.8 min
Discarded = 1.87 cfs @ 12.55 hrs, Volume= 52,682 cf
Primary = 8.69 cfs @ 12.55 hrs, Volume= 58,356 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 194.69' @ 12.55 hrs Surf.Area= 13,799 sf Storage= 46,547 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 77.7 min (865.8 - 788.0)

Volume	Invert	Avail.Storage	Storage Description
#1	190.00'	66,125 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
190.00	6,070	0	0
192.00	9,384	15,454	15,454
194.00	12,620	22,004	37,458
196.00	16,047	28,667	66,125

Device	Routing	Invert	Outlet Devices
#1	Primary	191.90'	**15.0" Round Culvert** L= 30.0' Ke= 0.500 Inlet / Outlet Invert= 191.90' / 190.00' S= 0.0633 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Discarded	190.00'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 188.00'
#3	Primary	195.50'	**10.0' long x 6.0' breadth Broad-Crested Rectangular Weir**

Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
2.50 3.00 3.50 4.00 4.50 5.00 5.50
Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65
2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=1.87 cfs @ 12.55 hrs HW=194.69' (Free Discharge)
└**2=Exfiltration** (Controls 1.87 cfs)

Primary OutFlow Max=8.69 cfs @ 12.55 hrs HW=194.69' TW=0.00' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 8.69 cfs @ 7.08 fps)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 212P: DRIPEDGE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=57)

Inflow Area =	5,226 sf,	100.00% Impervious,	Inflow Depth >	6.05"	for 25YR event
Inflow =	0.72 cfs @	12.09 hrs,	Volume=	2,634 cf	
Outflow =	0.37 cfs @	12.23 hrs,	Volume=	2,634 cf,	Atten= 48%, Lag= 8.4 min
Discarded =	0.08 cfs @	12.23 hrs,	Volume=	2,029 cf	
Primary =	0.30 cfs @	12.23 hrs,	Volume=	605 cf	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 202.49' @ 12.23 hrs Surf.Area= 613 sf Storage= 614 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 38.7 min (782.8 - 744.0)

Volume	Invert	Avail.Storage	Storage Description
#1	199.99'	983 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
199.99	613	0.0	0	0
200.00	613	40.0	2	2
203.99	613	40.0	978	981
204.00	613	40.0	2	983

Device	Routing	Invert	Outlet Devices
#1	Primary	201.50'	**4.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 201.50' / 201.40' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.09 sf
#2	Discarded	199.99'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 198.00'

Discarded OutFlow Max=0.08 cfs @ 12.23 hrs HW=202.49' (Free Discharge)
└**2=Exfiltration** (Controls 0.08 cfs)

Primary OutFlow Max=0.30 cfs @ 12.23 hrs HW=202.49' TW=194.03' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 0.30 cfs @ 3.40 fps)

Summary for Pond 213P: DRIPEDGE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=55)

Inflow Area = 17,682 sf, 89.23% Impervious, Inflow Depth > 6.05" for 25YR event
Inflow = 2.44 cfs @ 12.09 hrs, Volume= 8,912 cf
Outflow = 1.18 cfs @ 12.25 hrs, Volume= 8,912 cf, Atten= 52%, Lag= 9.8 min
Discarded = 0.26 cfs @ 12.25 hrs, Volume= 6,609 cf
Primary = 0.92 cfs @ 12.25 hrs, Volume= 2,303 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 202.80' @ 12.25 hrs Surf.Area= 1,904 sf Storage= 2,140 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 38.3 min (782.3 - 744.0)

Volume	Invert	Avail.Storage	Storage Description
#1	199.99'	3,054 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
199.99	1,904	0.0	0	0
200.00	1,904	40.0	8	8
203.99	1,904	40.0	3,039	3,046
204.00	1,904	40.0	8	3,054

Device	Routing	Invert	Outlet Devices
#1	Primary	201.40'	**6.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 201.25' / 201.40' S= -0.0075 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Discarded	199.99'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 198.00'

Discarded OutFlow Max=0.26 cfs @ 12.25 hrs HW=202.80' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.26 cfs)

Primary OutFlow Max=0.92 cfs @ 12.25 hrs HW=202.80' TW=194.15' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 0.92 cfs @ 4.68 fps)

Summary for Pond 214P: DRIPEDGE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=59)

Inflow Area = 17,685 sf, 89.22% Impervious, Inflow Depth > 6.05" for 25YR event
Inflow = 2.44 cfs @ 12.09 hrs, Volume= 8,913 cf
Outflow = 1.22 cfs @ 12.24 hrs, Volume= 8,914 cf, Atten= 50%, Lag= 9.1 min
Discarded = 0.24 cfs @ 12.24 hrs, Volume= 6,251 cf
Primary = 0.98 cfs @ 12.24 hrs, Volume= 2,664 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 202.58' @ 12.24 hrs Surf.Area= 1,907 sf Storage= 1,977 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 31.0 min (775.0 - 744.0)

Volume	Invert	Avail.Storage	Storage Description
#1	199.99'	3,059 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
199.99	1,907	0.0	0	0
200.00	1,907	40.0	8	8
203.99	1,907	40.0	3,044	3,051
204.00	1,907	40.0	8	3,059

Device	Routing	Invert	Outlet Devices
#1	Primary	201.00'	**6.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 201.00' / 200.90' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Discarded	199.99'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 198.00'

Discarded OutFlow Max=0.24 cfs @ 12.24 hrs HW=202.58' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.24 cfs)

Primary OutFlow Max=0.97 cfs @ 12.24 hrs HW=202.58' TW=194.09' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 0.97 cfs @ 4.96 fps)

Summary for Pond 215P: DRIPEDGE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=56)

Inflow Area =	17,843 sf, 88.43% Impervious,	Inflow Depth >	6.05"	for 25YR event
Inflow =	2.47 cfs @ 12.09 hrs,	Volume=	8,993 cf	
Outflow =	1.10 cfs @ 12.27 hrs,	Volume=	8,994 cf,	Atten= 56%, Lag= 11.1 min
Discarded =	0.27 cfs @ 12.27 hrs,	Volume=	7,005 cf	
Primary =	0.82 cfs @ 12.27 hrs,	Volume=	1,989 cf	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 204.74' @ 12.27 hrs Surf.Area= 2,065 sf Storage= 2,270 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 41.3 min (785.3 - 744.0)

Volume	Invert	Avail.Storage	Storage Description
#1	201.99'	3,312 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
201.99	2,065	0.0	0	0
202.00	2,065	40.0	8	8
205.99	2,065	40.0	3,296	3,304
206.00	2,065	40.0	8	3,312

Device	Routing	Invert	Outlet Devices
#1	Primary	203.50'	**6.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 203.50' / 203.40' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Discarded	201.99'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 200.00'

Discarded OutFlow Max=0.27 cfs @ 12.27 hrs HW=204.73' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.27 cfs)

Primary OutFlow Max=0.82 cfs @ 12.27 hrs HW=204.73' TW=194.23' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 0.82 cfs @ 4.17 fps)

Summary for Pond 216P: DRIPEDGE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=56)

Inflow Area =	17,498 sf, 90.17% Impervious,	Inflow Depth >	6.05"	for 25YR event
Inflow =	2.42 cfs @	12.09 hrs, Volume=	8,819 cf	
Outflow =	1.27 cfs @	12.22 hrs, Volume=	8,819 cf, Atten= 48%, Lag= 8.3 min	
Discarded =	0.23 cfs @	12.22 hrs, Volume=	5,950 cf	
Primary =	1.04 cfs @	12.22 hrs, Volume=	2,869 cf	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 202.74' @ 12.22 hrs Surf.Area= 1,720 sf Storage= 1,890 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 30.8 min (774.8 - 744.0)

Volume	Invert	Avail.Storage	Storage Description
#1	199.99'	2,759 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
199.99	1,720	0.0	0	0
200.00	1,720	40.0	7	7
203.99	1,720	40.0	2,745	2,752
204.00	1,720	40.0	7	2,759

Device	Routing	Invert	Outlet Devices
#1	Primary	201.00'	**6.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 201.00' / 200.90' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Discarded	199.99'	**2.410 in/hr Exfiltration over Surface area**

Conductivity to Groundwater Elevation = 198.00'

Discarded OutFlow Max=0.23 cfs @ 12.22 hrs HW=202.72' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.23 cfs)

Primary OutFlow Max=1.03 cfs @ 12.22 hrs HW=202.72' TW=194.02' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 1.03 cfs @ 5.26 fps)

Summary for Link AP1: ANALYSIS POINT 1

Inflow Area = 5,776 sf, 60.06% Impervious, Inflow Depth > 4.36" for 25YR event
Inflow = 0.65 cfs @ 12.09 hrs, Volume= 2,098 cf
Primary = 0.65 cfs @ 12.09 hrs, Volume= 2,098 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP2: ANALYSIS POINT 2

Inflow Area = 766,038 sf, 15.23% Impervious, Inflow Depth > 3.61" for 25YR event
Inflow = 24.23 cfs @ 12.53 hrs, Volume= 230,497 cf
Primary = 24.23 cfs @ 12.53 hrs, Volume= 230,497 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP3: ANALYSIS POINT 3

Inflow Area = 40,260 sf, 0.00% Impervious, Inflow Depth > 3.53" for 25YR event
Inflow = 3.75 cfs @ 12.09 hrs, Volume= 11,834 cf
Primary = 3.75 cfs @ 12.09 hrs, Volume= 11,834 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP4: ANALYSIS POINT 4

Inflow Area = 1,769,671 sf, 31.11% Impervious, Inflow Depth > 2.22" for 25YR event
Inflow = 47.07 cfs @ 12.51 hrs, Volume= 327,812 cf
Primary = 47.07 cfs @ 12.51 hrs, Volume= 327,812 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 201S: ACCESS ROAD Runoff Area=5,776 sf 60.06% Impervious Runoff Depth>6.99"
Tc=6.0 min CN=83 Runoff=1.03 cfs 3,364 cf

Subcatchment 202S: ACCESS ROAD Runoff Area=110,123 sf 75.52% Impervious Runoff Depth>7.84"
Flow Length=1,382' Slope=0.0100 '/' Tc=11.8 min CN=90 Runoff=17.82 cfs 71,934 cf

Subcatchment 203S: WETLAND Runoff Area=277,240 sf 0.00% Impervious Runoff Depth>6.33"
Flow Length=711' Tc=39.3 min CN=78 Runoff=23.36 cfs 146,343 cf

Subcatchment 204S: ISOLATED WETLAND Runoff Area=40,260 sf 0.00% Impervious Runoff Depth>6.00"
Tc=6.0 min CN=75 Runoff=6.32 cfs 20,139 cf

Subcatchment 205S: ACCESS ROAD Runoff Area=42,289 sf 100.00% Impervious Runoff Depth>8.81"
Tc=6.0 min CN=98 Runoff=8.44 cfs 31,063 cf

Subcatchment 206S: BEGINNING SINGLE Runoff Area=39,188 sf 100.00% Impervious Runoff Depth>8.81"
Tc=6.0 min CN=98 Runoff=7.82 cfs 28,785 cf

Subcatchment 207S: CENTER POND Runoff Area=84,896 sf 0.00% Impervious Runoff Depth>5.88"
Tc=6.0 min CN=74 Runoff=13.08 cfs 41,591 cf

Subcatchment 208S: CUL-DE-SACS Runoff Area=287,997 sf 46.46% Impervious Runoff Depth>6.35"
Flow Length=1,366' Tc=24.9 min CN=78 Runoff=29.94 cfs 152,437 cf

Subcatchment 209S: BOTTOM SINGLE Runoff Area=108,860 sf 79.62% Impervious Runoff Depth>7.35"
Flow Length=1,050' Slope=0.0100 '/' Tc=9.1 min CN=86 Runoff=18.24 cfs 66,708 cf

Subcatchment 210S: MULTIFAMILY Runoff Area=209,178 sf 80.08% Impervious Runoff Depth>7.84"
Flow Length=1,252' Slope=0.0100 '/' Tc=10.8 min CN=90 Runoff=34.76 cfs 136,660 cf

Subcatchment 211S: MULTIFAMILY Runoff Area=60,101 sf 6.57% Impervious Runoff Depth>6.37"
Tc=6.0 min CN=78 Runoff=9.93 cfs 31,921 cf

Subcatchment 212S: CLUBHOUSE Runoff Area=5,226 sf 100.00% Impervious Runoff Depth>8.81"
Tc=6.0 min CN=98 Runoff=1.04 cfs 3,839 cf

Subcatchment 213S: MULTIFAMILY 4 Runoff Area=17,682 sf 89.23% Impervious Runoff Depth>8.81"
Tc=6.0 min CN=98 Runoff=3.53 cfs 12,988 cf

Subcatchment 214S: MULTIFAMILY 3 Runoff Area=17,685 sf 89.22% Impervious Runoff Depth>8.81"
Tc=6.0 min CN=98 Runoff=3.53 cfs 12,990 cf

Subcatchment 215S: MULTIFAMILY 1 Runoff Area=17,843 sf 88.43% Impervious Runoff Depth>8.81"
Tc=6.0 min CN=98 Runoff=3.56 cfs 13,106 cf

Subcatchment 216S: MULTIFAMILY 2 Runoff Area=17,498 sf 90.17% Impervious Runoff Depth>8.81"
Tc=6.0 min CN=98 Runoff=3.49 cfs 12,853 cf

Subcatchment 217S: ENTRANCE Runoff Area=378,675 sf 8.85% Impervious Runoff Depth>6.59"
Flow Length=1,052' Tc=31.9 min CN=80 Runoff=36.44 cfs 207,942 cf

Subcatchment 218S: REMAINING SITE Runoff Area=599,170 sf 0.00% Impervious Runoff Depth>5.23"
Flow Length=798' Tc=31.3 min CN=69 Runoff=46.98 cfs 261,227 cf

Subcatchment 219S: CENTRAL WETLAND Runoff Area=123,160 sf 0.00% Impervious Runoff Depth>5.74"
Flow Length=592' Tc=23.3 min CN=73 Runoff=12.02 cfs 58,869 cf

Subcatchment 220S: ENTRANCE Runoff Area=138,898 sf 6.34% Impervious Runoff Depth>5.73"
Flow Length=846' Tc=25.0 min CN=73 Runoff=13.14 cfs 66,369 cf

Reach 207R: CENTER POND Avg. Flow Depth=0.98' Max Vel=0.17 fps Inflow=23.46 cfs 91,463 cf
n=0.800 L=550.0' S=0.0109 '/' Capacity=10.49 cfs Outflow=10.11 cfs 88,209 cf

Reach 217R: OVERLAND FLOW Avg. Flow Depth=1.39' Max Vel=0.13 fps Inflow=36.44 cfs 207,942 cf
n=0.800 L=700.0' S=0.0057 '/' Capacity=8.69 cfs Outflow=15.00 cfs 196,555 cf

Reach 218R: OVERLAND FLOW Avg. Flow Depth=0.51' Max Vel=0.18 fps Inflow=13.14 cfs 66,369 cf
n=0.800 L=750.0' S=0.0293 '/' Capacity=19.69 cfs Outflow=5.73 cfs 62,775 cf

Reach 219R: CROSS PIPE Avg. Flow Depth=0.89' Max Vel=10.80 fps Inflow=10.11 cfs 88,209 cf
15.0" Round Pipe n=0.013 L=30.0' S=0.0333 '/' Capacity=11.79 cfs Outflow=10.11 cfs 88,207 cf

Pond 202P: TOWNHOUSE OFFSHOOT Peak Elev=206.00' Storage=9,183 cf Inflow=17.82 cfs 71,934 cf
Discarded=0.58 cfs 24,458 cf Primary=16.49 cfs 44,808 cf Outflow=17.06 cfs 69,266 cf

Pond 207P: CENTER POND Peak Elev=203.86' Storage=36,874 cf Inflow=29.32 cfs 101,439 cf
Discarded=1.63 cfs 59,903 cf Primary=11.57 cfs 32,595 cf Outflow=13.20 cfs 92,497 cf

Pond 208P: CUL-DE-SAC POND Peak Elev=195.88' Storage=38,019 cf Inflow=29.94 cfs 152,437 cf
Discarded=1.66 cfs 46,236 cf Primary=21.21 cfs 98,737 cf Outflow=22.87 cfs 144,973 cf

Pond 209P: BOTTOM SINGLE FAMILY Peak Elev=195.34' Storage=29,657 cf Inflow=18.24 cfs 66,708 cf
Discarded=1.43 cfs 49,834 cf Primary=2.18 cfs 10,894 cf Outflow=3.61 cfs 60,728 cf

Pond 210P: MULTIFAMILY LOOP POND Peak Elev=196.17' Storage=66,125 cf Inflow=48.48 cfs 188,896 cf
Discarded=2.42 cfs 64,255 cf Primary=26.17 cfs 113,333 cf Outflow=28.59 cfs 177,589 cf

Pond 212P: DRIPEDGE Peak Elev=203.46' Storage=851 cf Inflow=1.04 cfs 3,839 cf
Discarded=0.09 cfs 2,576 cf Primary=0.45 cfs 1,263 cf Outflow=0.54 cfs 3,839 cf

Pond 213P: DRIPEDGE Peak Elev=203.97' Storage=3,034 cf Inflow=3.53 cfs 12,988 cf
Discarded=0.32 cfs 8,420 cf Primary=1.34 cfs 4,572 cf Outflow=1.66 cfs 12,992 cf

Pond 214P: DRIPEDGE Peak Elev=203.70' Storage=2,832 cf Inflow=3.53 cfs 12,990 cf
Discarded=0.30 cfs 7,983 cf Primary=1.36 cfs 5,007 cf Outflow=1.67 cfs 12,990 cf

Pond 215P: DRIPEDGE Peak Elev=205.90' Storage=3,231 cf Inflow=3.56 cfs 13,106 cf
Discarded=0.34 cfs 8,915 cf Primary=1.27 cfs 4,192 cf Outflow=1.61 cfs 13,108 cf

Pond 216P: DRIPEDGE Peak Elev=203.88' Storage=2,677 cf Inflow=3.49 cfs 12,853 cf
Discarded=0.28 cfs 7,570 cf Primary=1.41 cfs 5,281 cf Outflow=1.70 cfs 12,851 cf

Link AP1: ANALYSIS POINT 1 Inflow=1.03 cfs 3,364 cf
Primary=1.03 cfs 3,364 cf

Link AP2: ANALYSIS POINT 2 Inflow=41.11 cfs 387,706 cf
Primary=41.11 cfs 387,706 cf

Link AP3: ANALYSIS POINT 3 Inflow=6.32 cfs 20,139 cf
Primary=6.32 cfs 20,139 cf

Link AP4: ANALYSIS POINT 4 Inflow=101.46 cfs 635,173 cf
Primary=101.46 cfs 635,173 cf

Total Runoff Area = 2,581,745 sf Runoff Volume = 1,381,128 cf Average Runoff Depth = 6.42"
74.02% Pervious = 1,911,035 sf 25.98% Impervious = 670,710 sf

Summary for Subcatchment 201S: ACCESS ROAD ENTRANCE

Runoff = 1.03 cfs @ 12.09 hrs, Volume= 3,364 cf, Depth> 6.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
2,307	61	>75% Grass cover, Good, HSG B
3,469	98	Paved parking, HSG B
5,776	83	Weighted Average
2,307		39.94% Pervious Area
3,469		60.06% Impervious Area

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

Summary for Subcatchment 202S: ACCESS ROAD AND LOOP

Runoff = 17.82 cfs @ 12.16 hrs, Volume= 71,934 cf, Depth> 7.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
17,871	61	>75% Grass cover, Good, HSG B
58,005	98	Paved parking, HSG B
500	98	Paved parking, HSG B
22,398	98	Roofs, HSG B
9,090	74	>75% Grass cover, Good, HSG C
2,150	98	Paved parking, HSG C
109	98	Roofs, HSG C
110,123	90	Weighted Average
26,961		24.48% Pervious Area
83,162		75.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0100	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.27"
10.9	1,332	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.8	1,382	Total			

Summary for Subcatchment 203S: WETLAND

Runoff = 23.36 cfs @ 12.53 hrs, Volume= 146,343 cf, Depth> 6.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
49,822	61	>75% Grass cover, Good, HSG B
17,151	55	Woods, Good, HSG B
60,420	74	>75% Grass cover, Good, HSG C
49,448	70	Woods, Good, HSG C
95,456	98	Water Surface, 0% imp, HSG C
4,665	80	>75% Grass cover, Good, HSG D
221	77	Woods, Good, HSG D
57	98	Water Surface, 0% imp, HSG D
277,240	78	Weighted Average
277,240		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.1	50	0.0400	0.05		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.27"
23.2	661	0.0090	0.47		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
39.3	711	Total			

Summary for Subcatchment 204S: ISOLATED WETLAND

Runoff = 6.32 cfs @ 12.09 hrs, Volume= 20,139 cf, Depth> 6.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
6,712	39	>75% Grass cover, Good, HSG A
604	30	Woods, Good, HSG A
2,395	98	Water Surface, 0% imp, HSG A
1,493	74	>75% Grass cover, Good, HSG C
13,662	80	>75% Grass cover, Good, HSG D
8,984	77	Woods, Good, HSG D
6,410	98	Water Surface, 0% imp, HSG D
40,260	75	Weighted Average
40,260		100.00% Pervious Area

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

Summary for Subcatchment 205S: ACCESS ROAD TOWNHOUSES

Runoff = 8.44 cfs @ 12.09 hrs, Volume= 31,063 cf, Depth> 8.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
25,918	98	Paved parking, HSG C
16,371	98	Roofs, HSG C
42,289	98	Weighted Average
42,289		100.00% Impervious Area

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

Summary for Subcatchment 206S: BEGINNING SINGLE FAMILY

Runoff = 7.82 cfs @ 12.09 hrs, Volume= 28,785 cf, Depth> 8.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
19,968	98	Paved parking, HSG C
19,220	98	Roofs, HSG C
39,188	98	Weighted Average
39,188		100.00% Impervious Area

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

Summary for Subcatchment 207S: CENTER POND

Runoff = 13.08 cfs @ 12.09 hrs, Volume= 41,591 cf, Depth> 5.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
84,896	74	>75% Grass cover, Good, HSG C
84,896		100.00% Pervious Area

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

Summary for Subcatchment 208S: CUL-DE-SACS

Runoff = 29.94 cfs @ 12.34 hrs, Volume= 152,437 cf, Depth> 6.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
71,810	61	>75% Grass cover, Good, HSG B
5,242	55	Woods, Good, HSG B
61,579	98	Paved parking, HSG B
38,279	98	Roofs, HSG B
94,256	68	1 acre lots, 20% imp, HSG B
6,686	98	Paved parking, HSG C
1,725	80	>75% Grass cover, Good, HSG D
6,067	98	Paved parking, HSG D
2,353	98	Roofs, HSG D
287,997	78	Weighted Average
154,182		53.54% Pervious Area
133,815		46.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.9	50	0.0690	0.06		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.27"
3.4	267	0.0670	1.29		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
8.6	1,049	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
24.9	1,366	Total			

Summary for Subcatchment 209S: BOTTOM SINGLE FAMILY

Runoff = 18.24 cfs @ 12.12 hrs, Volume= 66,708 cf, Depth> 7.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
22,187	39	>75% Grass cover, Good, HSG A
12,245	98	Paved parking, HSG A
10,858	98	Roofs, HSG A
30,222	98	Paved parking, HSG C
31,173	98	Roofs, HSG C
2,175	98	Roofs, HSG D
108,860	86	Weighted Average
22,187		20.38% Pervious Area
86,673		79.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0100	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.27"
8.2	1,000	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
9.1	1,050	Total			

Summary for Subcatchment 210S: MULTIFAMILY PAVEMENT LOOP

Runoff = 34.76 cfs @ 12.15 hrs, Volume= 136,660 cf, Depth> 7.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
22,789	39	>75% Grass cover, Good, HSG A
22,820	98	Paved parking, HSG A
1,454	98	Roofs, HSG A
2,798	74	>75% Grass cover, Good, HSG C
28,010	98	Paved parking, HSG C
18,521	98	Roofs, HSG C
16,080	80	>75% Grass cover, Good, HSG D
93,614	98	Paved parking, HSG D
3,092	98	Roofs, HSG D
209,178	90	Weighted Average
41,667		19.92% Pervious Area
167,511		80.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0100	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.27"
9.9	1,202	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
10.8	1,252	Total			

Summary for Subcatchment 211S: MULTIFAMILY CENTER

Runoff = 9.93 cfs @ 12.09 hrs, Volume= 31,921 cf, Depth> 6.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
4,984	39	>75% Grass cover, Good, HSG A
51,170	80	>75% Grass cover, Good, HSG D
3,947	98	Paved parking, HSG D
60,101	78	Weighted Average
56,154		93.43% Pervious Area
3,947		6.57% Impervious Area

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

Summary for Subcatchment 212S: CLUBHOUSE

Runoff = 1.04 cfs @ 12.09 hrs, Volume= 3,839 cf, Depth> 8.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
5,226	98	Roofs, HSG D
5,226		100.00% Impervious Area

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

Summary for Subcatchment 213S: MULTIFAMILY 4

Runoff = 3.53 cfs @ 12.09 hrs, Volume= 12,988 cf, Depth> 8.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
34	98	Water Surface, 0% imp, HSG A
77	98	Roofs, HSG A
1,870	98	Water Surface, 0% imp, HSG D
15,701	98	Roofs, HSG D
17,682	98	Weighted Average
1,904		10.77% Pervious Area
15,778		89.23% Impervious Area

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

Summary for Subcatchment 214S: MULTIFAMILY 3

Runoff = 3.53 cfs @ 12.09 hrs, Volume= 12,990 cf, Depth> 8.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
460	98	Water Surface, 0% imp, HSG A
4,144	98	Roofs, HSG A
1,447	98	Water Surface, 0% imp, HSG D
11,634	98	Roofs, HSG D
17,685	98	Weighted Average
1,907		10.78% Pervious Area
15,778		89.22% Impervious Area

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

Summary for Subcatchment 215S: MULTIFAMILY 1

Runoff = 3.56 cfs @ 12.09 hrs, Volume= 13,106 cf, Depth> 8.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
2,065	98	Water Surface, 0% imp, HSG D
15,778	98	Roofs, HSG D
17,843	98	Weighted Average
2,065		11.57% Pervious Area
15,778		88.43% Impervious Area

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

Summary for Subcatchment 216S: MULTIFAMILY 2

Runoff = 3.49 cfs @ 12.09 hrs, Volume= 12,853 cf, Depth> 8.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
1,720	98	Water Surface, 0% imp, HSG D
15,778	98	Roofs, HSG D
17,498	98	Weighted Average
1,720		9.83% Pervious Area
15,778		90.17% Impervious Area

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

Summary for Subcatchment 217S: ENTRANCE WETLAND EAST

Runoff = 36.44 cfs @ 12.43 hrs, Volume= 207,942 cf, Depth> 6.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
97,782	61	>75% Grass cover, Good, HSG B
37,648	55	Woods, Good, HSG B
30,250	98	Paved parking, HSG B
22,380	98	Water Surface, 0% imp, HSG B
16,323	68	1 acre lots, 20% imp, HSG B
6,315	74	>75% Grass cover, Good, HSG C
13,280	70	Woods, Good, HSG C
18,143	98	Water Surface, 0% imp, HSG C
7,096	80	>75% Grass cover, Good, HSG D
21,801	77	Woods, Good, HSG D
107,657	98	Water Surface, 0% imp, HSG D
378,675	80	Weighted Average
345,160		91.15% Pervious Area
33,515		8.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	50	0.0400	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.27"
2.3	180	0.0670	1.29		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.2	122	0.0167	0.90		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.4	74	0.0167	0.90		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
2.0	111	0.0167	0.90		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
14.8	515	0.0135	0.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
31.9	1,052	Total			

Summary for Subcatchment 218S: REMAINING SITE AREA

Runoff = 46.98 cfs @ 12.43 hrs, Volume= 261,227 cf, Depth> 5.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
83,481	39	>75% Grass cover, Good, HSG A
72,678	30	Woods, Good, HSG A
20,045	61	>75% Grass cover, Good, HSG B
16,187	55	Woods, Good, HSG B
209	98	Water Surface, 0% imp, HSG B
39,968	74	>75% Grass cover, Good, HSG C
14,728	70	Woods, Good, HSG C
9,983	98	Water Surface, 0% imp, HSG C
50,689	80	>75% Grass cover, Good, HSG D
187,392	77	Woods, Good, HSG D
103,810	98	Water Surface, 0% imp, HSG D
599,170	69	Weighted Average
599,170		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.1	50	0.0400	0.05		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.27"
15.2	748	0.0270	0.82		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
31.3	798	Total			

Summary for Subcatchment 219S: CENTRAL WETLAND POCKET

Runoff = 12.02 cfs @ 12.32 hrs, Volume= 58,869 cf, Depth> 5.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
17,552	39	>75% Grass cover, Good, HSG A
11,870	30	Woods, Good, HSG A
3,417	98	Water Surface, 0% imp, HSG A
23,070	74	>75% Grass cover, Good, HSG C
23,365	70	Woods, Good, HSG C
40,650	98	Water Surface, 0% imp, HSG C
2,073	80	>75% Grass cover, Good, HSG D
1,163	77	Woods, Good, HSG D
123,160	73	Weighted Average
123,160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	50	0.0400	0.14		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.27"
17.2	542	0.0110	0.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
23.3	592	Total			

Summary for Subcatchment 220S: ENTRANCE WETLAND WEST

Runoff = 13.14 cfs @ 12.34 hrs, Volume= 66,369 cf, Depth> 5.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=9.06"

Area (sf)	CN	Description
47,079	61	>75% Grass cover, Good, HSG B
10,265	55	Woods, Good, HSG B
1,865	98	Paved parking, HSG B
3,360	98	Water Surface, 0% imp, HSG B
34,690	68	1 acre lots, 20% imp, HSG B
1,983	74	>75% Grass cover, Good, HSG C
1,956	70	Woods, Good, HSG C
2,004	98	Water Surface, 0% imp, HSG C
3,439	80	>75% Grass cover, Good, HSG D
4,894	77	Woods, Good, HSG D
27,363	98	Water Surface, 0% imp, HSG D
138,898	73	Weighted Average
130,095		93.66% Pervious Area
8,803		6.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	50	0.0400	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.27"
5.2	205	0.0170	0.65		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.3	257	0.0700	1.85		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
8.3	334	0.0180	0.67		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
25.0	846	Total			

Summary for Reach 207R: CENTER POND OVERLAND FLOW

[55] Hint: Peak inflow is 224% of Manning's capacity

Inflow Area = 289,533 sf, 28.14% Impervious, Inflow Depth > 3.79" for 100YR event
Inflow = 23.46 cfs @ 12.30 hrs, Volume= 91,463 cf
Outflow = 10.11 cfs @ 12.69 hrs, Volume= 88,209 cf, Atten= 57%, Lag= 23.6 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.17 fps, Min. Travel Time= 53.1 min
Avg. Velocity = 0.06 fps, Avg. Travel Time= 141.2 min

Peak Storage= 32,198 cf @ 12.69 hrs
Average Depth at Peak Storage= 0.98'
Bank-Full Depth= 1.00' Flow Area= 60.0 sf, Capacity= 10.49 cfs

50.00' x 1.00' deep channel, n= 0.800 Sheet flow: Woods+dense brush
Side Slope Z-value= 10.0 '/' Top Width= 70.00'
Length= 550.0' Slope= 0.0109 '/'
Inlet Invert= 200.00', Outlet Invert= 194.00'

‡

Summary for Reach 217R: OVERLAND FLOW

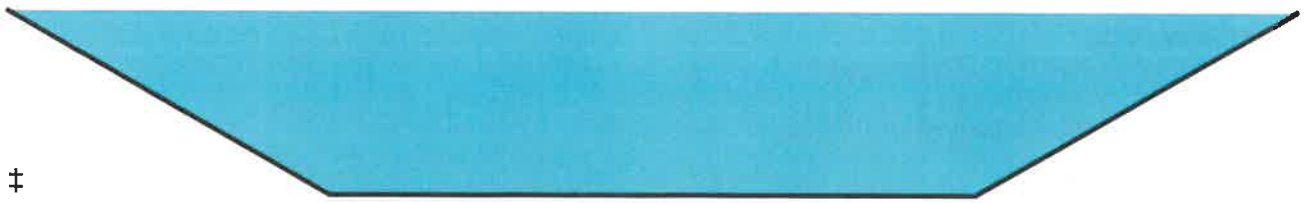
[91] Warning: Storage range exceeded by 0.39'
[55] Hint: Peak inflow is 419% of Manning's capacity

Inflow Area = 378,675 sf, 8.85% Impervious, Inflow Depth > 6.59" for 100YR event
Inflow = 36.44 cfs @ 12.43 hrs, Volume= 207,942 cf
Outflow = 15.00 cfs @ 12.94 hrs, Volume= 196,555 cf, Atten= 59%, Lag= 30.6 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.13 fps, Min. Travel Time= 88.3 min
Avg. Velocity = 0.07 fps, Avg. Travel Time= 178.7 min

Peak Storage= 79,483 cf @ 12.94 hrs
Average Depth at Peak Storage= 1.39'
Bank-Full Depth= 1.00' Flow Area= 75.0 sf, Capacity= 8.69 cfs

50.00' x 1.00' deep channel, n= 0.800 Sheet flow: Woods+dense brush
Side Slope Z-value= 25.0 '/' Top Width= 100.00'
Length= 700.0' Slope= 0.0057 '/'
Inlet Invert= 206.00', Outlet Invert= 202.00'



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Summary for Reach 218R: OVERLAND FLOW

Inflow Area = 138,898 sf, 6.34% Impervious, Inflow Depth > 5.73" for 100YR event
Inflow = 13.14 cfs @ 12.34 hrs, Volume= 66,369 cf
Outflow = 5.73 cfs @ 12.77 hrs, Volume= 62,775 cf, Atten= 56%, Lag= 25.8 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.18 fps, Min. Travel Time= 69.7 min
Avg. Velocity = 0.08 fps, Avg. Travel Time= 156.3 min

Peak Storage= 23,957 cf @ 12.77 hrs
Average Depth at Peak Storage= 0.51'
Bank-Full Depth= 1.00' Flow Area= 75.0 sf, Capacity= 19.69 cfs

50.00' x 1.00' deep channel, n= 0.800 Sheet flow: Woods+dense brush
Side Slope Z-value= 25.0 '/' Top Width= 100.00'
Length= 750.0' Slope= 0.0293 '/'
Inlet Invert= 208.00', Outlet Invert= 186.00'

‡

Summary for Reach 219R: CROSS PIPE

[52] Hint: Inlet/Outlet conditions not evaluated
[62] Hint: Exceeded Reach 207R OUTLET depth by 0.02' @ 10.45 hrs

Inflow Area = 289,533 sf, 28.14% Impervious, Inflow Depth > 3.66" for 100YR event
Inflow = 10.11 cfs @ 12.69 hrs, Volume= 88,209 cf
Outflow = 10.11 cfs @ 12.69 hrs, Volume= 88,207 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 10.80 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 5.08 fps, Avg. Travel Time= 0.1 min

Peak Storage= 28 cf @ 12.69 hrs
Average Depth at Peak Storage= 0.89'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 11.79 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 30.0' Slope= 0.0333 '/'
Inlet Invert= 194.00', Outlet Invert= 193.00'

Summary for Pond 202P: TOWNHOUSE OFFSHOOT POND

Inflow Area = 110,123 sf, 75.52% Impervious, Inflow Depth > 7.84" for 100YR event
Inflow = 17.82 cfs @ 12.16 hrs, Volume= 71,934 cf
Outflow = 17.06 cfs @ 12.20 hrs, Volume= 69,266 cf, Atten= 4%, Lag= 2.3 min
Discarded = 0.58 cfs @ 12.20 hrs, Volume= 24,458 cf
Primary = 16.49 cfs @ 12.20 hrs, Volume= 44,808 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 206.00' @ 12.20 hrs Surf.Area= 6,121 sf Storage= 9,183 cf

Plug-Flow detention time= 57.9 min calculated for 69,122 cf (96% of inflow)
Center-of-Mass det. time= 36.4 min (813.1 - 776.7)

Volume	Invert	Avail.Storage	Storage Description
#1	204.00'	9,183 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
204.00	3,062	0	0
206.00	6,121	9,183	9,183

Device	Routing	Invert	Outlet Devices
#1	Primary	205.00'	**12.0" Round Culvert** L= 30.0' Ke= 0.500 Inlet / Outlet Invert= 205.00' / 204.00' S= 0.0333 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	204.00'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 202.00'
#3	Primary	205.50'	**15.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.58 cfs @ 12.20 hrs HW=206.00' (Free Discharge)
└**2=Exfiltration** (Controls 0.58 cfs)

Primary OutFlow Max=16.42 cfs @ 12.20 hrs HW=206.00' TW=0.00' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 2.67 cfs @ 3.40 fps)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 13.75 cfs @ 1.84 fps)

Summary for Pond 207P: CENTER POND

Inflow Area = 166,373 sf, 48.97% Impervious, Inflow Depth > 7.32" for 100YR event
Inflow = 29.32 cfs @ 12.09 hrs, Volume= 101,439 cf
Outflow = 13.20 cfs @ 12.28 hrs, Volume= 92,497 cf, Atten= 55%, Lag= 11.2 min
Discarded = 1.63 cfs @ 12.28 hrs, Volume= 59,903 cf
Primary = 11.57 cfs @ 12.28 hrs, Volume= 32,595 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 203.86' @ 12.28 hrs Surf.Area= 13,373 sf Storage= 36,874 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 102.1 min (870.7 - 768.6)

Volume	Invert	Avail.Storage	Storage Description
#1	200.00'	38,758 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
200.00	5,856	0	0
202.00	9,624	15,480	15,480
204.00	13,654	23,278	38,758

Device	Routing	Invert	Outlet Devices
#1	Discarded	200.00'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 198.00'
#2	Primary	202.50'	**12.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 202.50' / 201.50' S= 0.0500 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Primary	203.50'	**15.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=1.63 cfs @ 12.28 hrs HW=203.86' (Free Discharge)
└**1=Exfiltration** (Controls 1.63 cfs)

Primary OutFlow Max=11.48 cfs @ 12.28 hrs HW=203.86' TW=200.59' (Dynamic Tailwater)
├**2=Culvert** (Inlet Controls 3.50 cfs @ 4.46 fps)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 7.98 cfs @ 1.48 fps)

Summary for Pond 208P: CUL-DE-SAC POND

Inflow Area = 287,997 sf, 46.46% Impervious, Inflow Depth > 6.35" for 100YR event
Inflow = 29.94 cfs @ 12.34 hrs, Volume= 152,437 cf
Outflow = 22.87 cfs @ 12.54 hrs, Volume= 144,973 cf, Atten= 24%, Lag= 12.3 min
Discarded = 1.66 cfs @ 12.54 hrs, Volume= 46,236 cf
Primary = 21.21 cfs @ 12.54 hrs, Volume= 98,737 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 195.88' @ 12.54 hrs Surf.Area= 12,571 sf Storage= 38,019 cf

Plug-Flow detention time= 65.3 min calculated for 144,672 cf (95% of inflow)
Center-of-Mass det. time= 39.0 min (856.6 - 817.6)

Volume	Invert	Avail.Storage	Storage Description
#1	192.00'	39,531 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
192.00	7,139	0	0
194.00	9,823	16,962	16,962
196.00	12,746	22,569	39,531

Device	Routing	Invert	Outlet Devices
#1	Primary	193.00'	**18.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 193.00' / 192.00' S= 0.0500 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Primary	195.50'	**15.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#3	Discarded	192.00'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 190.00'

Discarded OutFlow Max=1.66 cfs @ 12.54 hrs HW=195.88' (Free Discharge)
└**3=Exfiltration** (Controls 1.66 cfs)

Primary OutFlow Max=21.12 cfs @ 12.54 hrs HW=195.88' TW=0.00' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 12.41 cfs @ 7.02 fps)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 8.71 cfs @ 1.53 fps)

Summary for Pond 209P: BOTTOM SINGLE FAMILY POND

Inflow Area =	108,860 sf, 79.62% Impervious,	Inflow Depth >	7.35"	for 100YR event
Inflow =	18.24 cfs @ 12.12 hrs,	Volume=	66,708 cf	
Outflow =	3.61 cfs @ 12.60 hrs,	Volume=	60,728 cf,	Atten= 80%, Lag= 28.4 min
Discarded =	1.43 cfs @ 12.60 hrs,	Volume=	49,834 cf	
Primary =	2.18 cfs @ 12.60 hrs,	Volume=	10,894 cf	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 195.34' @ 12.60 hrs Surf.Area= 12,388 sf Storage= 29,657 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 141.3 min (927.1 - 785.8)

Volume	Invert	Avail.Storage	Storage Description
#1	192.00'	70,116 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
192.00	6,226	0	0
194.00	9,088	15,314	15,314
196.00	14,029	23,117	38,431
198.00	17,656	31,685	70,116

Device	Routing	Invert	Outlet Devices
#1	Discarded	192.00'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 190.00'
#2	Primary	194.50'	**12.0" Round Culvert** L= 40.0' Ke= 0.500 Inlet / Outlet Invert= 194.50' / 193.80' S= 0.0175 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Discarded OutFlow Max=1.43 cfs @ 12.60 hrs HW=195.34' (Free Discharge)
↑**1=Exfiltration** (Controls 1.43 cfs)

Primary OutFlow Max=2.18 cfs @ 12.60 hrs HW=195.34' TW=0.00' (Dynamic Tailwater)
↑**2=Culvert** (Inlet Controls 2.18 cfs @ 3.11 fps)

Summary for Pond 210P: MULTIFAMILY LOOP POND

[93] Warning: Storage range exceeded by 0.17'

Inflow Area = 345,213 sf, 69.46% Impervious, Inflow Depth > 6.57" for 100YR event
Inflow = 48.48 cfs @ 12.14 hrs, Volume= 188,896 cf
Outflow = 28.59 cfs @ 12.40 hrs, Volume= 177,589 cf, Atten= 41%, Lag= 15.8 min
Discarded = 2.42 cfs @ 12.40 hrs, Volume= 64,255 cf
Primary = 26.17 cfs @ 12.40 hrs, Volume= 113,333 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 196.17' @ 12.40 hrs Surf.Area= 16,047 sf Storage= 66,125 cf

Plug-Flow detention time= 94.6 min calculated for 177,219 cf (94% of inflow)
Center-of-Mass det. time= 63.1 min (840.6 - 777.6)

Volume	Invert	Avail.Storage	Storage Description
#1	190.00'	66,125 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
190.00	6,070	0	0
192.00	9,384	15,454	15,454
194.00	12,620	22,004	37,458
196.00	16,047	28,667	66,125

Device	Routing	Invert	Outlet Devices
#1	Primary	191.90'	**15.0" Round Culvert** L= 30.0' Ke= 0.500 Inlet / Outlet Invert= 191.90' / 190.00' S= 0.0633 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Discarded	190.00'	**2.410 in/hr Exfiltration over Surface area**

			Conductivity to Groundwater Elevation = 188.00'
#3	Primary	195.50'	**10.0' long x 6.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
			2.50 3.00 3.50 4.00 4.50 5.00 5.50
			Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65
			2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=2.42 cfs @ 12.40 hrs HW=196.17' (Free Discharge)
└**2=Exfiltration** (Controls 2.42 cfs)

Primary OutFlow Max=26.04 cfs @ 12.40 hrs HW=196.17' TW=0.00' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 11.28 cfs @ 9.19 fps)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 14.76 cfs @ 2.20 fps)

Summary for Pond 212P: DRIPEDGE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=44)

Inflow Area =	5,226 sf,100.00% Impervious,	Inflow Depth >	8.81"	for 100YR event
Inflow =	1.04 cfs @ 12.09 hrs,	Volume=	3,839 cf	
Outflow =	0.54 cfs @ 12.23 hrs,	Volume=	3,839 cf,	Atten= 48%, Lag= 8.3 min
Discarded =	0.09 cfs @ 12.23 hrs,	Volume=	2,576 cf	
Primary =	0.45 cfs @ 12.23 hrs,	Volume=	1,263 cf	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 203.46' @ 12.23 hrs Surf.Area= 613 sf Storage= 851 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 39.2 min (778.5 - 739.3)

Volume	Invert	Avail.Storage	Storage Description
#1	199.99'	983 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
199.99	613	0.0	0	0
200.00	613	40.0	2	2
203.99	613	40.0	978	981
204.00	613	40.0	2	983

Device	Routing	Invert	Outlet Devices
#1	Primary	201.50'	**4.0" Round Culvert** L= 20.0' Ke= 0.500
			Inlet / Outlet Invert= 201.50' / 201.40' S= 0.0050 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.09 sf
#2	Discarded	199.99'	**2.410 in/hr Exfiltration over Surface area**
			Conductivity to Groundwater Elevation = 198.00'

Discarded OutFlow Max=0.09 cfs @ 12.23 hrs HW=203.45' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.09 cfs)

Primary OutFlow Max=0.45 cfs @ 12.23 hrs HW=203.45' TW=195.55' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 0.45 cfs @ 5.13 fps)

Summary for Pond 213P: DRIPEDGE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=41)

Inflow Area = 17,682 sf, 89.23% Impervious, Inflow Depth > 8.81" for 100YR event
Inflow = 3.53 cfs @ 12.09 hrs, Volume= 12,988 cf
Outflow = 1.66 cfs @ 12.26 hrs, Volume= 12,992 cf, Atten= 53%, Lag= 10.1 min
Discarded = 0.32 cfs @ 12.26 hrs, Volume= 8,420 cf
Primary = 1.34 cfs @ 12.26 hrs, Volume= 4,572 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 203.97' @ 12.26 hrs Surf.Area= 1,904 sf Storage= 3,034 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 39.7 min (779.0 - 739.3)

Volume	Invert	Avail.Storage	Storage Description
#1	199.99'	3,054 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
199.99	1,904	0.0	0	0
200.00	1,904	40.0	8	8
203.99	1,904	40.0	3,039	3,046
204.00	1,904	40.0	8	3,054

Device	Routing	Invert	Outlet Devices
#1	Primary	201.40'	**6.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 201.25' / 201.40' S= -0.0075 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Discarded	199.99'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 198.00'

Discarded OutFlow Max=0.32 cfs @ 12.26 hrs HW=203.97' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.32 cfs)

Primary OutFlow Max=1.34 cfs @ 12.26 hrs HW=203.97' TW=195.72' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 1.34 cfs @ 6.81 fps)

Summary for Pond 214P: DRIPEDGE

Inflow Area = 17,685 sf, 89.22% Impervious, Inflow Depth > 8.81" for 100YR event
Inflow = 3.53 cfs @ 12.09 hrs, Volume= 12,990 cf
Outflow = 1.67 cfs @ 12.25 hrs, Volume= 12,990 cf, Atten= 53%, Lag= 10.0 min
Discarded = 0.30 cfs @ 12.25 hrs, Volume= 7,983 cf
Primary = 1.36 cfs @ 12.25 hrs, Volume= 5,007 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 203.70' @ 12.25 hrs Surf.Area= 1,907 sf Storage= 2,832 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 32.9 min (772.3 - 739.3)

Volume	Invert	Avail.Storage	Storage Description
#1	199.99'	3,059 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
199.99	1,907	0.0	0	0
200.00	1,907	40.0	8	8
203.99	1,907	40.0	3,044	3,051
204.00	1,907	40.0	8	3,059

Device	Routing	Invert	Outlet Devices
#1	Primary	201.00'	**6.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 201.00' / 200.90' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Discarded	199.99'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 198.00'

Discarded OutFlow Max=0.30 cfs @ 12.25 hrs HW=203.70' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.30 cfs)

Primary OutFlow Max=1.36 cfs @ 12.25 hrs HW=203.70' TW=195.72' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 1.36 cfs @ 6.93 fps)

Summary for Pond 215P: DRIPEDGE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=43)

Inflow Area = 17,843 sf, 88.43% Impervious, Inflow Depth > 8.81" for 100YR event
Inflow = 3.56 cfs @ 12.09 hrs, Volume= 13,106 cf
Outflow = 1.61 cfs @ 12.27 hrs, Volume= 13,108 cf, Atten= 55%, Lag= 10.7 min
Discarded = 0.34 cfs @ 12.27 hrs, Volume= 8,915 cf
Primary = 1.27 cfs @ 12.27 hrs, Volume= 4,192 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 205.90' @ 12.27 hrs Surf.Area= 2,065 sf Storage= 3,231 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 42.1 min (781.4 - 739.3)

Volume	Invert	Avail.Storage	Storage Description
#1	201.99'	3,312 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
201.99	2,065	0.0	0	0
202.00	2,065	40.0	8	8
205.99	2,065	40.0	3,296	3,304
206.00	2,065	40.0	8	3,312

Device	Routing	Invert	Outlet Devices
#1	Primary	203.50'	**6.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 203.50' / 203.40' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Discarded	201.99'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 200.00'

Discarded OutFlow Max=0.34 cfs @ 12.27 hrs HW=205.89' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.34 cfs)

Primary OutFlow Max=1.27 cfs @ 12.27 hrs HW=205.89' TW=195.76' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 1.27 cfs @ 6.46 fps)

Summary for Pond 216P: DRIPEDGE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=42)

Inflow Area =	17,498 sf, 90.17% Impervious,	Inflow Depth >	8.81"	for 100YR event
Inflow =	3.49 cfs @ 12.09 hrs,	Volume=	12,853 cf	
Outflow =	1.70 cfs @ 12.25 hrs,	Volume=	12,851 cf,	Atten= 51%, Lag= 9.6 min
Discarded =	0.28 cfs @ 12.25 hrs,	Volume=	7,570 cf	
Primary =	1.41 cfs @ 12.25 hrs,	Volume=	5,281 cf	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 203.88' @ 12.25 hrs Surf.Area= 1,720 sf Storage= 2,677 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 32.4 min (771.7 - 739.3)

Volume	Invert	Avail.Storage	Storage Description
#1	199.99'	2,759 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
199.99	1,720	0.0	0	0
200.00	1,720	40.0	7	7
203.99	1,720	40.0	2,745	2,752
204.00	1,720	40.0	7	2,759

Device	Routing	Invert	Outlet Devices
#1	Primary	201.00'	**6.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 201.00' / 200.90' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Discarded	199.99'	**2.410 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 198.00'

Discarded OutFlow Max=0.28 cfs @ 12.25 hrs HW=203.88' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.28 cfs)

Primary OutFlow Max=1.41 cfs @ 12.25 hrs HW=203.88' TW=195.68' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 1.41 cfs @ 7.19 fps)

Summary for Link AP1: ANALYSIS POINT 1

Inflow Area = 5,776 sf, 60.06% Impervious, Inflow Depth > 6.99" for 100YR event
Inflow = 1.03 cfs @ 12.09 hrs, Volume= 3,364 cf
Primary = 1.03 cfs @ 12.09 hrs, Volume= 3,364 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP2: ANALYSIS POINT 2

Inflow Area = 766,038 sf, 15.23% Impervious, Inflow Depth > 6.07" for 100YR event
Inflow = 41.11 cfs @ 12.53 hrs, Volume= 387,706 cf
Primary = 41.11 cfs @ 12.53 hrs, Volume= 387,706 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP3: ANALYSIS POINT 3

Inflow Area = 40,260 sf, 0.00% Impervious, Inflow Depth > 6.00" for 100YR event
Inflow = 6.32 cfs @ 12.09 hrs, Volume= 20,139 cf
Primary = 6.32 cfs @ 12.09 hrs, Volume= 20,139 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link AP4: ANALYSIS POINT 4

Inflow Area = 1,769,671 sf, 31.11% Impervious, Inflow Depth > 4.31" for 100YR event
Inflow = 101.46 cfs @ 12.50 hrs, Volume= 635,173 cf
Primary = 101.46 cfs @ 12.50 hrs, Volume= 635,173 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs