STORMWATER MANAGEMENT REPORT

FOR

FOX HOLLOW

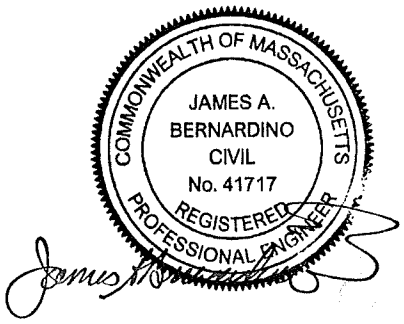
RESIDENTIAL SUBDIVISION

AT

234 TESSIER LANE AND FOWLER ROAD

NORTHBRIDGE, MA

NOVEMBER 17, 2025



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PART 1 – SUMMARY

1.0 PROJECT DESCRIPTION

Existing Property Description

The subject property is located at 234 Tessier Lane and Fowler Road, is shown in the Northbridge, Assessor's records as Map 21, parcels 135, 139 and 181, and is situated in the R2 and R3 Residential zoning districts (the "Site"). The Site is 77.19-acre housing one unoccupied (vacant) residential building with the remaining parts being undeveloped with vmoderate to steep topography and mixtures of hardwood and evergreen trees

The Site is bounded on the north by undeveloped woodlands owned by the Town of Northbridge; to the east by existing residential neighborhood on North and South Tessier Roads; to the south by undeveloped lands with a residential community (Delmar Drive) further to the south; and to the west by residential homes accessing Fowler Road

There is a Bordering Vegetated Wetland (WF#101-#162) associated with an intermittent stream (GCSA and GCSB bank series flagging) located on the western portion of the property. The intermittent stream comes onto the site and traverses northward offsite onto the abutter located at 379 Fowler Road. On the eastern portion of the site, adjacent to Tessier Lane, there is a Bordering Vegetated (WF#1-#28) wetland associated with an intermittent stream (GCSA and GCSB bank series flagging) that traverses to an existing 24" CMP culvert that discharges onto the property of 143 South Tessier Lane. Along the northern portion of the site, there are two resources areas. One being and Isolated Vegetated wetland delineated by WF#B1-B#11. A small BVW (WF A#1-#A7) also exist in this general area which discharges to an Intermittent Stream (WF #AB1-AB#3).

The property does not have any known water protection districts or wellhead protection areas, areas of critical environmental concerns (ACEC's), Certified Vernal Pools, or Activity and Use Limitation (AUL) areas. Based upon the available mapping from the Natural Heritage & Endangered Species Program, endangered priority habitat exists on the site. The Division of Fisheries and Wildlife have identified the area as a potential priority habits area for Scleria Triglomerata (Tall Nut-sedge). That area is shown on the development plans and follows the existing power line easement that traverses the site from north to south.

Proposed Project Description

Eastland proposes to construct a 62 lot multi-family (duplex) subdivision with 124 residences with associated earthwork, roadways, utilities, landscaping, and stormwater management facilities. Fox Hollow would permanently alter approximately 45.80 acres of land, which represents 60.3% of the project site. Approximately 38.35 acres is proposed to be dedicated open space (subject to easements) which is 49.7% of the overall property area.

2.0 BACKGROUND DATA

Soils explorations were performed on the property by Turning Point Engineering on September 19-20, 2024 and witnessed by Graves Engineering, Inc. and the results of the test pits are provided on enclosed "Stormwater Test Pit Exhibit. The U.S. Natural Resources Conservation Service (NRCS), formerly SCS Soil Survey Maps indicate that soils with hydrologic soil group classification C are present on the site, see Part V of this report.

3.0 COMPLIANCE WITH STORMWATER STANDARDS

3.1 Untreated Stormwater (Standard 1)

The project is designed so that new stormwater conveyances (outfalls/ discharges) do not discharge untreated stormwater into, or cause erosion to, wetlands.

Standard #1 is met.

3.2 Post-Development Peak Rates (Standard 2)

Hydrologic calculations were performed to determine the rate of runoff for the 2, 10, 25 and 100-year storm events under pre-development (present) conditions. This value was established as the future (post-development) maximum allowable rate. Unmitigated post-development rates were then computed in a similar manner. It is the intent of the stormwater management system to minimize impacts to drainage patterns of downstream property and wetlands while simultaneously providing water quality treatment to runoff prior to its release from the site or discharge to wetlands.

The U.S.D.A. Soil Conservation Service (SCS) Technical Release 55 (TR-55), 1986, was used as the procedure for estimating runoff. A SCS TR-20-based computer program, "HydroCAD," was used for estimating peak discharges. TR-55 is a generally accepted model for use on small sites that begins with a rainfall amount uniformly imposed on the watershed over a specified time distribution. Mass rainfall is converted to mass runoff by using a runoff curve number (CN). CN is based on soils, ground cover, impervious areas, interception and surface storage. Runoff is then transformed into a hydrograph that depends on runoff travel time through segments of the watershed.

Development in a watershed changes its response to precipitation. The most common effects are reduced infiltration and decreased travel time, which result in significantly higher peak rates of runoff. The volume of runoff is determined primarily by the amount of precipitation and by infiltration characteristics related to soil type, antecedent rainfall, and type of vegetative cover, impervious surfaces, and surface retention. Travel time is determined primarily by slope, flow length, depth of flow surfaces. Peak rates of discharge are based on the relationship of the above parameters as well as the total drainage area of the watershed, the location of the development in relation to the total drainage area, and

the effect of any flood control works or other manmade storage. Peak rates of discharge are also influenced by the distribution of rainfall within a given storm event.

Stormwater management computations for the project site were performed using SCS-based HydroCAD for existing and proposed conditions, curve numbers, time of concentration, and unit hydrograph computations. The following were considered as part of runoff calculations.

Since urban areas are seldom completely covered by impervious structure, soils and soil properties are an important factor in estimating the total volume of direct runoff. The infiltration and percolation rates of soils indicate their potential to absorb rainfall and thereby reduce the amount of direct runoff. Soils having a high infiltration rate (sands or gravels) have a low runoff potential, and soils having a low infiltration rate (clays) have a high runoff potential. Urbanization on soils with a high infiltration rate increases the volume of runoff and peak discharge more than urbanization on soils with a low infiltration rate.

The type of surface cover and its hydrologic condition affects runoff volume through its influence on the infiltration rate of the soil. Unused cultivated land yields more runoff than forested land for a given soil type. Covering areas with impervious material reduces surface storage and infiltration and increases the volume of runoff.

Some rainfall is retained on the ground surface and by vegetation before runoff begins. Interception is rainfall that is caught by foliage, twigs, branches, leaves, etc. This rainfall is lost to evaporation and thus never reaches the ground surface. Increasing the vegetative cover increases the amount of interception. Surface depression storage begins when precipitation exceeds infiltration. Overland flow starts when the surface depressions are full. The water in depression storage is not available as direct runoff.

Initial abstraction is the sum of interception, depression, storage, and infiltration before runoff begins. It occurs on all types of cover, from lawn in good condition to pavement. However, the amount of initial abstraction is less on pavement than on lawn.

Travel time (Tt) is the time it takes water to travel from one location to another in a watershed. Tt is a component of time of concentration (Tc) that is the time for runoff to travel from the hydraulically most distant point of the watershed to a point of interest within the watershed. Tc is computed by summing all the travel time for consecutive components of the drainage conveyance system.

Tc influences the shape and peak of the runoff hydrograph. Urbanization usually decreases Tc thereby increasing the peak discharge. Development can change the effective slope of a watershed if flow paths are altered by channeling and by changing the surface grading for building lots, roads and ditches. The slopes of street gutters, roads and overland flow areas as well as stream channels are significant in determining travel times through urban watersheds.

Flow length may be reduced if natural meandering streams are changed to straight channels. It may be increased if overland flows are diverted through ditches, storm drains, or street gutters to larger collections systems.

Surface roughness is also a consideration. Flow velocity normally increases significantly when the flow path is changed from flow over rough surfaces of woodland, grassland and natural channels to sheet flow over smooth surfaces of parking lots, storm drains, gutters and lined channels.

3.2.1 Design Storms and Rainfall Depth

The stormwater management system was analyzed for the 2, 10, 25 and 100-year storm events. The following table from NOAA Atlas 14 illustrates the rainfall intensities used for each storm event.

Table 1

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.336 (0.264-0.422)	0.401 (0.314-0.504)	0.507 (0.396-0.640)	0.595 (0.462-0.756)	0.716 (0.537-0.950)	0.807 (0.593-1.10)	0.902 (0.642-1.27)	1.01 (0.679-1.46)	1.15 (0.748-1.73)	1.27 (0.804-1.95)
10-min	0.476 (0.374-0.598)	0.568 (0.445-0.715)	0.718 (0.561-0.907)	0.843 (0.655-1.07)	1.01 (0.761-1.35)	1.14 (0.840-1.55)	1.28 (0.910-1.80)	1.42 (0.963-2.06)	1.63 (1.06-2.45)	1.80 (1.14-2.76)
15-min	0.560 (0.440-0.704)	0.668 (0.524-0.841)	0.845 (0.660-1.07)	0.991 (0.770-1.26)	1.19 (0.896-1.58)	1.35 (0.988-1.83)	1.50 (1.07-2.12)	1.68 (1.13-2.42)	1.92 (1.25-2.88)	2.12 (1.34-3.24)
30-min	0.770 (0.605-0.968)	0.919 (0.721-1.16)	1.16 (0.910-1.47)	1.36 (1.06-1.73)	1.64 (1.23-2.18)	1.85 (1.36-2.51)	2.07 (1.47-2.91)	2.31 (1.56-3.34)	2.64 (1.72-3.96)	2.91 (1.84-4.46)
60-min	0.980 (0.769-1.23)	1.17 (0.917-1.47)	1.48 (1.16-1.87)	1.74 (1.35-2.21)	2.09 (1.57-2.78)	2.36 (1.73-3.20)	2.64 (1.88-3.71)	2.94 (1.99-4.25)	3.37 (2.18-5.05)	3.71 (2.35-5.68)
2-hr	1.26 (0.994-1.57)	1.50 (1.18-1.88)	1.89 (1.49-2.38)	2.22 (1.74-2.80)	2.67 (2.02-3.53)	3.01 (2.23-4.07)	3.36 (2.42-4.73)	3.77 (2.55-5.42)	4.36 (2.83-6.49)	4.84 (3.07-7.36)
3-hr	1.45 (1.15-1.80)	1.73 (1.37-2.16)	2.19 (1.72-2.73)	2.56 (2.01-3.23)	3.09 (2.34-4.07)	3.48 (2.58-4.69)	3.89 (2.81-5.46)	4.37 (2.97-6.26)	5.08 (3.31-7.54)	5.67 (3.61-8.59)
6-hr	1.84 (1.46-2.27)	2.20 (1.75-2.72)	2.80 (2.22-3.48)	3.29 (2.59-4.11)	3.97 (3.03-5.21)	4.48 (3.35-6.02)	5.02 (3.65-7.03)	5.67 (3.86-8.07)	6.64 (4.34-9.80)	7.47 (4.77-11.2)
12-hr	2.28 (1.83-2.81)	2.76 (2.21-3.40)	3.54 (2.83-4.38)	4.19 (3.33-5.21)	5.09 (3.91-6.65)	5.75 (4.33-7.69)	6.46 (4.73-9.03)	7.33 (5.01-10.4)	8.66 (5.68-12.7)	9.80 (6.27-14.6)
24-hr	2.71 (2.19-3.31)	3.32 (2.67-4.06)	4.31 (3.46-5.29)	5.13 (4.10-6.34)	6.27 (4.85-8.15)	7.11 (5.39-9.47)	8.02 (5.92-11.2)	9.15 (6.27-12.9)	10.9 (7.17-15.9)	12.4 (7.96-18.4)

3.2.2 Existing Conditions

Under the pre-development scenario fourteen (14) Design Points (DP1 thru DP14) were identified as shown on the plan entitled "PRE-DEVELOPMENT DRAINAGE MAP OVERALL ", included within the attached Maps and described below.

DP1 Flow to catch basin located behind #10 Delmar Drive
DP2 Flow to o Headwall behind #125 Sheryl Rd
DP3 Flow to stream channel discharging towards Providence Road
DP4 24" Culvert Under S. Tessier
DP5 12" Discharge behind #127 S. Tessier
DP4+5 Wetland System behind #148 S. Tessier
DP6 To Spring Hill, at Int with S. Tessier
DP7 #50 Hudson Street

DP8	Drainage system, int. Elston and No. Tessier
DP7+8	Flow to Hudson Street and Spring Hill
DP9	Flow off Southern Portion of No. Tessier
DP10	OMITTED
DP11	OMITTED
DP12	Flow to DI- 4"- outlet discharge to #242 Fowler
DP13A	36" RCP Culvert under Fowler Road @#277 - FLOW INTO
DP13B	24" Culvert at Driveway of #317 Fowler Rd.-FLOW INTO
DP13C	24" Culvert at Driveway of #359 Fowler Rd.
DP14	Flow Across Prop. Line of #379 Fowler to Culvert

In addition to the noted design points, there are several other Analysis Points that were considered in this stormwater analysis. Twenty-Seven (27) Analysis Points (AP1-AP27) were evaluated that quantifies the stormwater runoff directly flowing onto each of the direct abutters of the project. The noted locations and abutters are shown on the identified as shown on the attached plan entitled "PRE-DEVELOPMENT DRAINAGE MAP TO ABUTTERS" and described in Peak Rate Summary Table 2.

3.2.3 Proposed Conditions

The project proposes nine (9) basins in which 7 of them utilize infiltration practices. A number of Best Management Practices (BMP's) have been proposed, including deep sump catch basins, sediment forebays and infiltration basins.

Under the post-development scenario, the site has been divided into several drainage sub catchments, shown on the plans entitled "POST-DEVELOPMENT DRAINAGE MAP OVERALL" and identified as shown on the plan entitled "POST-DEVELOPMENT DRAINAGE MAP OVERALL ", included within Part II – Pre & Post Construction Computations as well as Part VI Maps. There is no increase in contributing watershed area due to the development and peak runoff rates and volumes are mitigated through the construction of the proposed stormwater management system.

Post-development peak rates were determined and routed through infiltration basins with the resulting hydrographs added to the hydrographs for the overland areas. Based upon these analyses, the peak rates of runoff for the 2, 10, 25 and 100-year storm events are as follows:

Standard #2 is met.

Table 2

TABLE 2
FOX HOLLOW
PEAK RATE SUMMARY
NOVEMBER 17, 2025

*	DESIGN POINTS TO INDIVIDUAL ABUTTERS												
	NOAA POINT PRECIPITATION FREQUENCY ESTIMATE	2-YEAR 3.32"			10-YEAR 5.13"			25-YEAR 6.27"			100-YEAR 8.02"		
		PRE	POST	DIF.	PRE	POST							
AP1	#4 - N Tessier N/F Lariviere	1.0	1.0	0.0	2.5	2.5	0.0	3.6	3.6	0.0	5.4	5.4	0.0
AP2	#22 - N Tessier N/F Benjoit	1.8	1.8	0.0	6.0	4.6	-1.4	8.6	6.7	-1.9	12.8	9.9	-2.9
AP3	#30 - N Tessier N/F Rae	0.3	0.3	0.0	0.8	0.8	0.0	1.1	1.1	0.0	1.7	1.7	0.0
AP4	#46 - N Tessier N/F Steele	3.0	0.4	-2.6	7.6	1.0	-6.6	11.0	1.4	-9.6	16.4	2.1	-14.3
AP5	#50 - N Tessier N/F Armstrong	0.4	0.4	0.0	0.9	0.9	0.0	1.3	1.3	0.0	2.0	1.9	-0.1
AP6	#50 Tessier St - Town of Northbridge	0.2	0.2	0.0	0.5	0.5	0.0	0.7	0.7	0.0	1.0	1.0	0.0
AP7	#78 Silver Spring Street - N/F Klocek - NORTH PROPERTY LINE	2.4	1.2	-1.2	6.3	3.0	-3.3	9.1	4.2	-4.9	13.5	6.3	-7.2
AP8	#78 Silver Spring Street - N/F Klocek - WEST PROPERTY LINE	4.3	0.5	-3.8	11.1	1.3	-9.8	16.1	1.9	-14.2	23.9	2.7	-21.2
AP9	#78 Silver Spring Street - N/F Klocek - SOUTH PROPERTY LINE TO WETLAND #116 South Tessier Street (N/F Baillargeon) to wetland #126 South Tessier Street (N/F Decoteau) to wetland	1.3	1.3	0.0	3.5	3.3	-0.2	5.0	4.8	-0.2	7.4	7.1	-0.3
AP10	#134 South Tessier Street (N/F Decoteau)	0.5	0.5	0.0	1.4	1.4	0.0	2.0	2.0	0.0	2.9	2.9	0.0
AP11	#44 South Tessier Street (N/Sentara)	0.2	0.2	0.0	0.4	0.4	0.0	0.6	0.6	0.0	0.9	0.9	0.0
AP12	#221 Tessier Lane (N/F Gautreau) - flow north property line, then north of house	2.3	1.4	-0.9	6.0	3.5	-2.5	8.6	5.0	-3.6	12.8	7.2	-5.6
AP13	#221 Tessier Lane (N/F Gautreau) - flow to property line then south of house	3.6	3.5	-0.1	9.4	8.9	-0.5	13.5	12.9	-0.6	20.0	19.1	-0.9
AP14	Flow to southern property line - towards abutter Kidd - then wetland system discharging to Providence Road	4.0	1.6	-2.4	8.3	3.9	-4.4	11.2	5.5	-5.7	15.6	8.1	-7.5
AP15	Flow to southern property line - towards abutter Kidd - then wetland system discharging to 24" Culvert at #125 Sheryl Road	5.0	2.6	-2.4	12.9	7.0	-5.9	18.6	9.9	-8.7	27.6	14.3	-13.3
AP16	**OMITTED**			0.0			0.0			0.0			0.0
AP17	Flow to southern property line - towards abutter Kidd - then to drop CB behind #10 Delmar	4.6	3.8	-0.8	12.0	8.1	-3.9	17.3	10.0	-7.3	25.7	12.4	-13.3
AP18	Flow to southern property line - towards abutter Kidd - then to drop CB behind #10 Delmar	5.8	5.1	-0.7	15.1	13.0	-2.1	21.7	16.6	-5.1	32.3	22.2	-10.1
AP19	Flow to south west property line- towards abutter Kidd then to site wetland/pond area	0.8	0.8	0.0	2.1	2.0	-0.1	3.0	2.9	-0.1	4.4	4.3	-0.1
AP20	#379 Fowler Road - N/F Marquis - flow across property line to intermittent stream - to 24" culvert at Drive (Size assumed)	4.3	0.9	-3.4	11.1	2.2	-8.9	16.0	3.1	-12.9	23.8	4.6	-19.2
AP21	#359 Fowler Road - N/F Syzmanowski - then to culvert under driveway -24" CMP (assumed)	1.2	0.6	-0.6	3.0	1.5	-1.5	4.3	2.2	-2.1	6.4	3.2	-3.2
AP22	#317 Fowler Road - N/F Mabry - then to 24" CMP under driveway	0.5	0.5	0.0	1.2	1.2	0.0	1.8	1.8	0.0	2.6	2.6	0.0
AP23	#317 Fowler Road - N/F Mabry - then to 36" RCP under Fowler Road	2.6	2.5	-0.1	6.6	6.4	-0.2	9.5	9.2	-0.3	14.2	13.7	-0.5
AP24	#277 Fowler Road - N/F Hyotte -n	1.4	1.4	0.0	3.5	3.5	0.0	5.1	5.1	0.0	7.6	7.6	0.0
AP25	**OMITTED**			0.0			0.0			0.0			0.0
AP26	**OMITTED**			0.0			0.0			0.0			0.0
AP27	Flow to Town Land Property line	4.4	2.0	-2.4	11.3	4.2	-7.1	16.3	5.7	-10.6	24.3	10.2	-14.1

	OVERALL DESIGN POINTS												
	NOAA POINT PRECIPITATION FREQUENCY ESTIMATE	2-YEAR 3.32"			10-YEAR 5.13"			25-YEAR 6.27"			100-YEAR 8.02"		
DP1	To catch basin located behind #10 Delmar Drive	14.4	12.9	-1.5	38.2	34.4	-3.8	55.7	46.5	-9.2	83.7	65.2	-18.5
DP2	To Headwall behind #125 Sheryl Rd	10.6	9.7	-0.9	26.4	22.8	-3.6	37.7	31.9	-5.8	55.7	46.2	-9.5
DP3	To stream channel discharging towards Providence Road	9.4	8.2	-1.2	23.0	19.5	-3.5	32.8	27.5	-5.3	48.2	41.1	-7.1
DP4	24" Culvert Under S. Tessier Discharge through #149 S. Tessier Street - Improved to 36" in post	16.5	12.4	-4.1	39.7	35.4	-4.3	55.9	48.1	-7.8	81.4	67.2	-14.2
DP5	12" Discharge behind #127 S. Tessier	10.5	8.9	-1.6	25.8	20.5	-5.3	36.6	28.5	-8.1	53.6	41.0	-12.6
DP4+5	Wetland System behind #148 S. Tessier	27.0	20.9	-6.1	65.4	55.4	-10.0	92.4	76.0	-16.4	135.0	107.1	-27.9
DP6	To Spring Hill, at Int with S. Tessier	1.5	1.5	0.0	3.4	3.4	0.0	4.8	4.8	0.0	6.8	6.8	0.0
DP7	#50 Hudson Street	1.8	1.8	0.0	4.3	4.2	-0.1	5.9	5.8	-0.1	8.5	8.4	-0.1
DP8	Drainage system, int. Elston and No. Tessier	3.4	1.4	-2.0	8.6	3.2	-5.4	12.3	4.4	-7.9	18.2	6.2	-12.0
DP7+8	Flow to Hudson Street and Spring Hill	5.2	4.7	-0.5	12.8	10.8	-2.0	18.2	15.0	-3.2	26.8	21.5	-5.3
DP9	Flow off Southern Portion of No. Tessier	5.3	4.8	-0.5	12.7	12.2	-0.5	17.9	17.1	-0.8	26.1	24.8	-1.3
DP10	OMITTED			0.0			0.0			0.0			0.0
DP11	OMITTED			0.0			0.0			0.0			0.0
DP12	Flow to DI- 4"- outlet discharge to #242 Fowler	4.0	4.0	0.0	9.7	9.7	0.0	13.7	13.7	0.0	20.1	20.1	0.0
DP13A	36" RCP Culvert under Fowler Road @#277 - FLOW INTO	19.4	18.9	-0.5	35.0	33.4	-1.6	66.1	57.8	-8.3	114.6	107.5	-7.1
	Flood Elevation @36" Culvert at #277 Fowler	372.94	372.92	0.0	373.65	373.58	-0.1	375.05	374.65	-0.4	377.29	376.98	-0.3
DP13B	24" Culvert at Driveway of #317 Fowler Rd.-FLOW INTO	27.2	27.2	0.0	54.4	51.5	-2.9	79.6	73.6	-6.0	110.0	104.2	-5.8
	Flood Elevation @24 Culvert at Driveway of #317 Fowler Rd	379.19	379.18	0.0	381.22	381.19	0.0	381.54	381.48	-0.1	381.93	381.90	0.0
DP13C	24" Culvert at Driveway of #359 Fowler Rd.	16.6	16.7	0.1	40.9	38.7	-2.2	58.3	54.0	-4.3	86.2	85.4	-0.8
	POND FLOOD ELEVATION AT #359	389.74	389.83	0.1	393.21	393.19	0.0	393.38	393.34	0.0	393.57	393.56	0.0
DP14-R48	Flow Across Prop. Line of #379 Fowler to Culvert	16.70	16.70	0.0	41.00	38.60	-2.4	58.30	53.80	-4.5	86.20	85.10	-1.1

3.3 Recharge to Groundwater (Standard 3)

At a minimum, the annual recharge from the post-development site shall approximate the annual recharge from pre-development conditions based on soil type. This standard is met when the stormwater management system is designed to infiltrate the required recharge volume as determined in accordance with the Massachusetts Stormwater Handbook.

Hydrologic Soil Group	Volume to Recharge (x Total Impervious Area)
A	0.60 inches of runoff
B	0.35 inches of runoff
C	0.25 inches of runoff
D	0.10 inches of runoff

The recharge calculations can be found in Part V – Supplemental Documentation.

Drawdown Time

To determine whether an infiltration BMP will drain within 72 hours, the following formula must be used;

$$Time_{drawdown} = \frac{Rv}{(K)(Bottom\ \ Area)}$$

The drawdown calculations can be found in Part III – Supplemental Documentation.

Stormwater basins are within four (4) feet of estimated groundwater, however the basins were modeled without exfiltration for all design storms. For those basins providing recharge (static storage) a minimum two (2) groundwater separation is proposed. Therefore, no groundwater analysis is required for this project.

Standard #3 is met.

3.4 Removal of 80% TSS (Standard 4)

Stormwater management systems shall be designed to remove 80% of the average annual post-construction load of Total Suspended Solids (TSS).

The proposed stormwater management system design calls for 4' deep sump catch basins to collect runoff from the roadway. Stormwater runoff from pavement areas will then be conveyed by a closed pipe system to sediment forebays followed by infiltration basins. Calculations for removal rates for all paved runoff are below. These calculations are shown on the attached TSS Calculation Worksheets.

Deep Sump Catch Basins	25%
Infiltration Basin w/ Sediment Forebay	80%

The TSS removal calculations can be found in Part IV – Supplemental Documentation.

Water Quality Volume Provided
Outlets in the stormwater basins are set at an elevation above the required WQV. The water quality calculations can be found in Part III – Supplemental Documentation.

Forebay Sizing
The forebay volume is based on 0.1-inch over the contributing impervious areas. The forebays for each basin have been sized accordingly and calculations can be found in Part III of the report.

Standard #4 is met.

3.5 Land Uses with Higher Potential (Standard 5)

This project does not contain areas with higher potential for pollution.

Standard #5 is met.

3.6 Critical Areas (Standard 6 – Water Quality Treatments)

The subject property does not discharge stormwater within the Zone II or Interim Wellhead Protection Area of a public water supply or to any other critical area.

Standard #6 is met.

3.7 Redevelopment (Standard 7)

Redevelopment projects are those that involve development, rehabilitation or expansion on previously developed sites provided the redevelopment results in no net increase in impervious area. Furthermore, components of redevelopment project, which include development of previously undeveloped sites, do not fall under Standard 7. In addition, redevelopment of previously developed sites must meet the Stormwater Management Standards to the maximum extent practicable. However, if it is not practicable to meet all the Standards, new (retrofitted or expanded) stormwater management systems must be designed to improve existing conditions.

This site is not a redevelopment project. Standard #7 is not applicable.

3.8 Erosion and Sedimentation Controls (Standard 8)

A separate Operation & Maintenance Plan has been provided.

Standard #8 is met.

3.9 Operation and Maintenance Plan (Standard 9)

A separate Operation & Maintenance Plan has been provided.

Standard #9 is met.

3.10 Illicit Discharges (Standard 10)

See Illicit Discharge statement on following page.

Standard #10 is met.

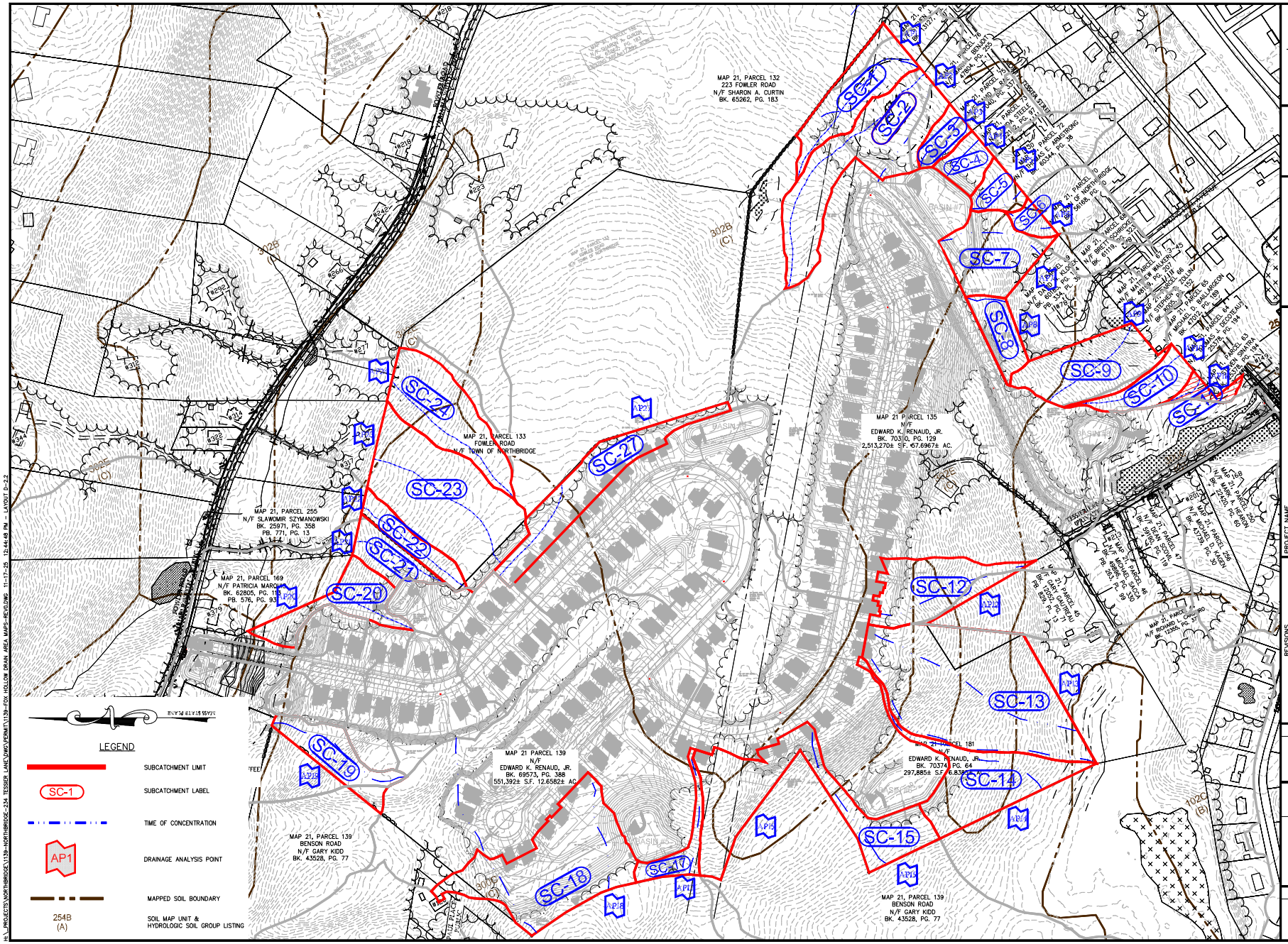
Attachment
Illicit Discharge Compliance Statement

It is the intent of the Applicant, Eastland Partners, Inc., to control illicit disposal into the storm drainage system. There will be no connection to the storm water system to inadvertently direct other types of liquids, chemicals or solids into the storm drainage system. The Applicant will also promote a clean Green Environment by mitigating spills onto pavements; oils, soda, chemicals, pet waste, debris and litter.

Respectfully Acknowledged,

Eastland Partners, Inc.

PART II – PRE & POST-CONSTRUCTION COMPUTATIONS



TURNING POINT ENGINEERING
CIVIL SITE DESIGN
P.O. Box 757 • Sutton, MA 01590
P:(508).381-1515 F:(508) 647-0189
www.specMIdesign.com

APPROVAL UNDER SUBDIVISION CONTROL LAW
NORTHBRIDGE PLANNING BOARD

BEING A MAJORITY

APPROVAL DATE:

ENDORSEMENT DATE:

PROJECT NAME

FOX HOLLOW

DEFINITIVE SUBDIVIONS

#0 ASHWORTH DRIVE & #191 SOUTHBRIDGE ROAD
ASSESSOR'S MAP 3 LOT A05 AND MAP 6 LOT A01
OXFORD, MASSACHUSETTS

PREPARED FOR

Eastland Partners, Inc.
907 Millbury Street
Worcester, MA 01607

Eastland

REVISIONS		
REV.	DATE	DESCRIPTION

PROJECT NO.	TPE-1001D
DESIGNED BY	JAB, TRB
CHECKED BY	JAB
DATE	NOVEMBER 17, 2025
CAD FILE	H:\PERMIT\1139-DRAINAGE MAP

GRAPHIC SCALE

120 0 60 120 240
(IN FEET)
1 inch = 120 feet

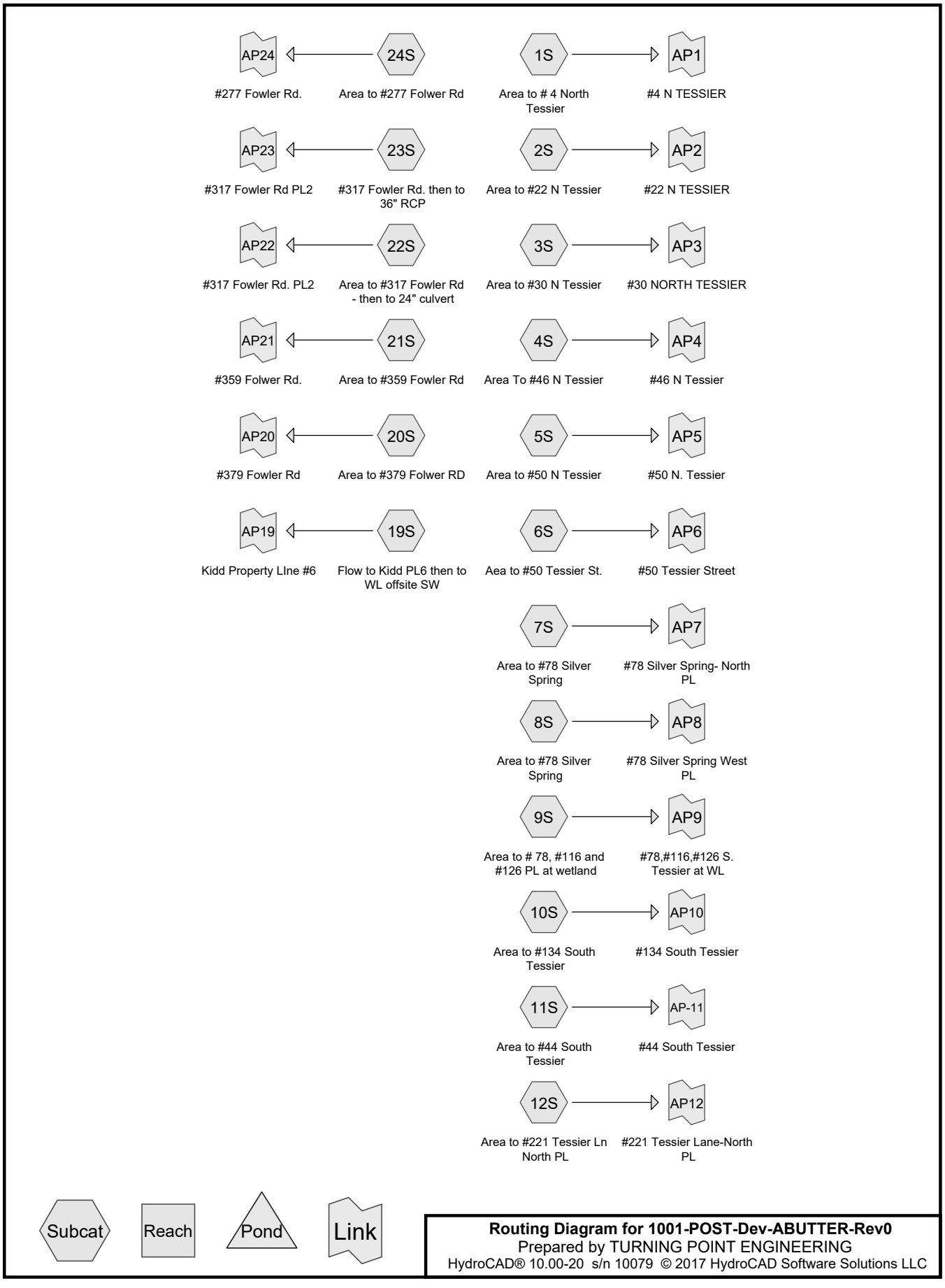
SHEET TITLE

POST-DEVELOPMENT
DRAINAGE MAP
TO ABUTTERS

SHEET NO.

D-2.2

H:_PROJECTS\NORTHBRIDGE\1139-NORTHBRIDGE-234 TESSIER LANE\DWG\PDMAT\1139-FOX HOLLOW DRAIN AREA MAPS-REVLOWG 11-17-25 12:44:48 PM -- LAYOUT D-2.2



Routing Diagram for 1001-POST-Dev-ABUTTER-Rev0
Prepared by TURNING POINT ENGINEERING

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
65,176	74	>75% Grass cover, Good, HSG C (2S, 3S, 4S, 5S, 7S, 8S, 12S, 20S, 21S, 23S)
2,878	98	Roofs, HSG C (12S)
664,106	70	Woods, Good, HSG C (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 12S, 19S, 20S, 21S, 22S, 23S, 24S)
732,160	**70**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
732,160	HSG C	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 12S, 19S, 20S, 21S, 22S, 23S, 24S
0	HSG D	
0	Other	
732,160		**TOTAL AREA**

Time span=0.00-72.00 hrs, dt=0.04 hrs, 1801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Area to # 4 North Tessier Runoff Area=48,800 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=525' Slope=0.0950 '/' Tc=8.2 min CN=70 Runoff=1.0 cfs 3,655 cf

Subcatchment2S: Area to #22 N Tessier Runoff Area=99,431 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=808' Slope=0.0930 '/' Tc=11.7 min CN=70 Runoff=1.8 cfs 7,447 cf

Subcatchment3S: Area to #30 N Tessier Runoff Area=14,010 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=192' Slope=0.1400 '/' Tc=6.0 min CN=70 Runoff=0.3 cfs 1,049 cf

Subcatchment4S: Area To #46 N Tessier Runoff Area=16,734 sf 0.00% Impervious Runoff Depth=0.95"
Flow Length=144' Slope=0.1700 '/' Tc=6.0 min CN=71 Runoff=0.4 cfs 1,326 cf

Subcatchment5S: Area to #50 N Tessier Runoff Area=15,292 sf 0.00% Impervious Runoff Depth=0.95"
Flow Length=161' Slope=0.1366 '/' Tc=6.0 min CN=71 Runoff=0.4 cfs 1,212 cf

Subcatchment6S: Aea to #50 Tessier St. Runoff Area=8,367 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=156' Slope=0.1860 '/' Tc=6.0 min CN=70 Runoff=0.2 cfs 627 cf

Subcatchment7S: Area to #78 Silver Spring Runoff Area=51,050 sf 0.00% Impervious Runoff Depth=0.95"
Flow Length=322' Slope=0.1460 '/' Tc=6.0 min CN=71 Runoff=1.2 cfs 4,046 cf

Subcatchment8S: Area to #78 Silver Spring Runoff Area=22,376 sf 0.00% Impervious Runoff Depth=0.95"
Flow Length=125' Slope=0.1600 '/' Tc=6.0 min CN=71 Runoff=0.5 cfs 1,773 cf

Subcatchment9S: Area to # 78, #116 and Runoff Area=59,218 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=337' Slope=0.2050 '/' Tc=6.0 min CN=70 Runoff=1.3 cfs 4,435 cf

Subcatchment10S: Area to #134 South Runoff Area=24,362 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=383' Slope=0.1540 '/' Tc=6.0 min CN=70 Runoff=0.5 cfs 1,825 cf

Subcatchment11S: Area to #44 South Runoff Area=7,924 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=157' Slope=0.0950 '/' Tc=6.0 min CN=70 Runoff=0.2 cfs 594 cf

Subcatchment12S: Area to #221 Tessier Ln Runoff Area=57,617 sf 5.00% Impervious Runoff Depth=1.00"
Flow Length=450' Slope=0.1960 '/' Tc=6.0 min CN=72 Runoff=1.4 cfs 4,825 cf

Subcatchment19S: Flow to Kidd PL6 then Runoff Area=35,853 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=358' Slope=0.1340 '/' Tc=6.0 min CN=70 Runoff=0.8 cfs 2,685 cf

Subcatchment20S: Area to #379 Folwer RD Runoff Area=37,131 sf 0.00% Impervious Runoff Depth=0.95"
Flow Length=250' Slope=0.1470 '/' Tc=6.0 min CN=71 Runoff=0.9 cfs 2,943 cf

Subcatchment21S: Area to #359 Fowler Rd Runoff Area=27,015 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=286' Slope=0.1380 '/' Tc=6.0 min CN=70 Runoff=0.6 cfs 2,023 cf

Subcatchment22S: Area to #317 Fowler Rd Runoff Area=21,863 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=382' Slope=0.1280 '/' Tc=6.0 min CN=70 Runoff=0.5 cfs 1,638 cf

Subcatchment23S: #317 Fowler Rd. then Runoff Area=120,160 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=502' Slope=0.1130 '/' Tc=7.3 min CN=70 Runoff=2.5 cfs 9,000 cf

Subcatchment24S: Area to #277 Folwer Rd Runoff Area=64,957 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=495' Slope=0.1333 '/' Tc=6.6 min CN=70 Runoff=1.4 cfs 4,865 cf

Link AP-11: #44 South Tessier Inflow=0.2 cfs 594 cf
Primary=0.2 cfs 594 cf

Link AP1: #4 N TESSIER Inflow=1.0 cfs 3,655 cf
Primary=1.0 cfs 3,655 cf

Link AP10: #134 South Tessier Inflow=0.5 cfs 1,825 cf
Primary=0.5 cfs 1,825 cf

Link AP12: #221 Tessier Lane-North PL Inflow=1.4 cfs 4,825 cf
Primary=1.4 cfs 4,825 cf

Link AP19: Kidd Property LIne #6 Inflow=0.8 cfs 2,685 cf
Primary=0.8 cfs 2,685 cf

Link AP2: #22 N TESSIER Inflow=1.8 cfs 7,447 cf
Primary=1.8 cfs 7,447 cf

Link AP20: #379 Fowler Rd Inflow=0.9 cfs 2,943 cf
Primary=0.9 cfs 2,943 cf

Link AP21: #359 Folwer Rd. Inflow=0.6 cfs 2,023 cf
Primary=0.6 cfs 2,023 cf

Link AP22: #317 Fowler Rd. PL2 Inflow=0.5 cfs 1,638 cf
Primary=0.5 cfs 1,638 cf

Link AP23: #317 Fowler Rd PL2 Inflow=2.5 cfs 9,000 cf
Primary=2.5 cfs 9,000 cf

Link AP24: #277 Fowler Rd. Inflow=1.4 cfs 4,865 cf
Primary=1.4 cfs 4,865 cf

Link AP3: #30 NORTH TESSIER Inflow=0.3 cfs 1,049 cf
Primary=0.3 cfs 1,049 cf

Link AP4: #46 N Tessier Inflow=0.4 cfs 1,326 cf
Primary=0.4 cfs 1,326 cf

Link AP5: #50 N. Tessier Inflow=0.4 cfs 1,212 cf
Primary=0.4 cfs 1,212 cf

Link AP6: #50 Tessier Street Inflow=0.2 cfs 627 cf
Primary=0.2 cfs 627 cf

Link AP7: #78 Silver Spring- North PL Inflow=1.2 cfs 4,046 cf
Primary=1.2 cfs 4,046 cf

Link AP8: #78 Silver Spring West PL Inflow=0.5 cfs 1,773 cf
Primary=0.5 cfs 1,773 cf

Link AP9: #78,#116,#126S. Tessier at WL Inflow=1.3 cfs 4,435 cf
Primary=1.3 cfs 4,435 cf

Total Runoff Area = 732,160 sf Runoff Volume = 55,970 cf Average Runoff Depth = 0.92"
99.61% Pervious = 729,282 sf 0.39% Impervious = 2,878 sf

Time span=0.00-72.00 hrs, dt=0.04 hrs, 1801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Area to # 4 North Tessier Runoff Area=48,800 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=525' Slope=0.0950 '/' Tc=8.2 min CN=70 Runoff=2.5 cfs 8,675 cf

Subcatchment2S: Area to #22 N Tessier Runoff Area=99,431 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=808' Slope=0.0930 '/' Tc=11.7 min CN=70 Runoff=4.6 cfs 17,676 cf

Subcatchment3S: Area to #30 N Tessier Runoff Area=14,010 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=192' Slope=0.1400 '/' Tc=6.0 min CN=70 Runoff=0.8 cfs 2,491 cf

Subcatchment4S: Area To #46 N Tessier Runoff Area=16,734 sf 0.00% Impervious Runoff Depth=2.22"
Flow Length=144' Slope=0.1700 '/' Tc=6.0 min CN=71 Runoff=1.0 cfs 3,089 cf

Subcatchment5S: Area to #50 N Tessier Runoff Area=15,292 sf 0.00% Impervious Runoff Depth=2.22"
Flow Length=161' Slope=0.1366 '/' Tc=6.0 min CN=71 Runoff=0.9 cfs 2,823 cf

Subcatchment6S: Aea to #50 Tessier St. Runoff Area=8,367 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=156' Slope=0.1860 '/' Tc=6.0 min CN=70 Runoff=0.5 cfs 1,487 cf

Subcatchment7S: Area to #78 Silver Spring Runoff Area=51,050 sf 0.00% Impervious Runoff Depth=2.22"
Flow Length=322' Slope=0.1460 '/' Tc=6.0 min CN=71 Runoff=3.0 cfs 9,424 cf

Subcatchment8S: Area to #78 Silver Spring Runoff Area=22,376 sf 0.00% Impervious Runoff Depth=2.22"
Flow Length=125' Slope=0.1600 '/' Tc=6.0 min CN=71 Runoff=1.3 cfs 4,131 cf

Subcatchment9S: Area to # 78, #116 and Runoff Area=59,218 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=337' Slope=0.2050 '/' Tc=6.0 min CN=70 Runoff=3.3 cfs 10,527 cf

Subcatchment10S: Area to #134 South Runoff Area=24,362 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=383' Slope=0.1540 '/' Tc=6.0 min CN=70 Runoff=1.4 cfs 4,331 cf

Subcatchment11S: Area to #44 South Runoff Area=7,924 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=157' Slope=0.0950 '/' Tc=6.0 min CN=70 Runoff=0.4 cfs 1,409 cf

Subcatchment12S: Area to #221 Tessier Ln Runoff Area=57,617 sf 5.00% Impervious Runoff Depth=2.30"
Flow Length=450' Slope=0.1960 '/' Tc=6.0 min CN=72 Runoff=3.5 cfs 11,036 cf

Subcatchment19S: Flow to Kidd PL6 then Runoff Area=35,853 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=358' Slope=0.1340 '/' Tc=6.0 min CN=70 Runoff=2.0 cfs 6,374 cf

Subcatchment20S: Area to #379 Folwer RD Runoff Area=37,131 sf 0.00% Impervious Runoff Depth=2.22"
Flow Length=250' Slope=0.1470 '/' Tc=6.0 min CN=71 Runoff=2.2 cfs 6,855 cf

Subcatchment21S: Area to #359 Fowler Rd Runoff Area=27,015 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=286' Slope=0.1380 '/' Tc=6.0 min CN=70 Runoff=1.5 cfs 4,802 cf

Subcatchment22S: Area to #317 Fowler Rd Runoff Area=21,863 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=382' Slope=0.1280 '/' Tc=6.0 min CN=70 Runoff=1.2 cfs 3,887 cf

Subcatchment23S: #317 Fowler Rd. then Runoff Area=120,160 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=502' Slope=0.1130 '/' Tc=7.3 min CN=70 Runoff=6.4 cfs 21,361 cf

Subcatchment24S: Area to #277 Folwer Rd Runoff Area=64,957 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=495' Slope=0.1333 '/' Tc=6.6 min CN=70 Runoff=3.5 cfs 11,547 cf

Link AP-11: #44 South Tessier Inflow=0.4 cfs 1,409 cf
Primary=0.4 cfs 1,409 cf

Link AP1: #4 N TESSIER Inflow=2.5 cfs 8,675 cf
Primary=2.5 cfs 8,675 cf

Link AP10: #134 South Tessier Inflow=1.4 cfs 4,331 cf
Primary=1.4 cfs 4,331 cf

Link AP12: #221 Tessier Lane-North PL Inflow=3.5 cfs 11,036 cf
Primary=3.5 cfs 11,036 cf

Link AP19: Kidd Property LIne #6 Inflow=2.0 cfs 6,374 cf
Primary=2.0 cfs 6,374 cf

Link AP2: #22 N TESSIER Inflow=4.6 cfs 17,676 cf
Primary=4.6 cfs 17,676 cf

Link AP20: #379 Fowler Rd Inflow=2.2 cfs 6,855 cf
Primary=2.2 cfs 6,855 cf

Link AP21: #359 Folwer Rd. Inflow=1.5 cfs 4,802 cf
Primary=1.5 cfs 4,802 cf

Link AP22: #317 Fowler Rd. PL2 Inflow=1.2 cfs 3,887 cf
Primary=1.2 cfs 3,887 cf

Link AP23: #317 Fowler Rd PL2 Inflow=6.4 cfs 21,361 cf
Primary=6.4 cfs 21,361 cf

Link AP24: #277 Fowler Rd. Inflow=3.5 cfs 11,547 cf
Primary=3.5 cfs 11,547 cf

Link AP3: #30 NORTH TESSIER Inflow=0.8 cfs 2,491 cf
Primary=0.8 cfs 2,491 cf

Link AP4: #46 N Tessier Inflow=1.0 cfs 3,089 cf
Primary=1.0 cfs 3,089 cf

Link AP5: #50 N. Tessier Inflow=0.9 cfs 2,823 cf
Primary=0.9 cfs 2,823 cf

Link AP6: #50 Tessier Street Inflow=0.5 cfs 1,487 cf
Primary=0.5 cfs 1,487 cf

Link AP7: #78 Silver Spring- North PL Inflow=3.0 cfs 9,424 cf
Primary=3.0 cfs 9,424 cf

Link AP8: #78 Silver Spring West PL Inflow=1.3 cfs 4,131 cf
Primary=1.3 cfs 4,131 cf

Link AP9: #78,#116,#126S. Tessier at WL Inflow=3.3 cfs 10,527 cf
Primary=3.3 cfs 10,527 cf

Total Runoff Area = 732,160 sf Runoff Volume = 131,923 cf Average Runoff Depth = 2.16"
99.61% Pervious = 729,282 sf 0.39% Impervious = 2,878 sf

Time span=0.00-72.00 hrs, dt=0.04 hrs, 1801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Area to # 4 North Tessier Runoff Area=48,800 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=525' Slope=0.0950 '/' Tc=8.2 min CN=70 Runoff=3.6 cfs 12,318 cf

Subcatchment2S: Area to #22 N Tessier Runoff Area=99,431 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=808' Slope=0.0930 '/' Tc=11.7 min CN=70 Runoff=6.7 cfs 25,098 cf

Subcatchment3S: Area to #30 N Tessier Runoff Area=14,010 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=192' Slope=0.1400 '/' Tc=6.0 min CN=70 Runoff=1.1 cfs 3,536 cf

Subcatchment4S: Area To #46 N Tessier Runoff Area=16,734 sf 0.00% Impervious Runoff Depth=3.13"
Flow Length=144' Slope=0.1700 '/' Tc=6.0 min CN=71 Runoff=1.4 cfs 4,359 cf

Subcatchment5S: Area to #50 N Tessier Runoff Area=15,292 sf 0.00% Impervious Runoff Depth=3.13"
Flow Length=161' Slope=0.1366 '/' Tc=6.0 min CN=71 Runoff=1.3 cfs 3,984 cf

Subcatchment6S: Aea to #50 Tessier St. Runoff Area=8,367 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=156' Slope=0.1860 '/' Tc=6.0 min CN=70 Runoff=0.7 cfs 2,112 cf

Subcatchment7S: Area to #78 Silver Spring Runoff Area=51,050 sf 0.00% Impervious Runoff Depth=3.13"
Flow Length=322' Slope=0.1460 '/' Tc=6.0 min CN=71 Runoff=4.2 cfs 13,298 cf

Subcatchment8S: Area to #78 Silver Spring Runoff Area=22,376 sf 0.00% Impervious Runoff Depth=3.13"
Flow Length=125' Slope=0.1600 '/' Tc=6.0 min CN=71 Runoff=1.9 cfs 5,829 cf

Subcatchment9S: Area to # 78, #116 and Runoff Area=59,218 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=337' Slope=0.2050 '/' Tc=6.0 min CN=70 Runoff=4.8 cfs 14,948 cf

Subcatchment10S: Area to #134 South Runoff Area=24,362 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=383' Slope=0.1540 '/' Tc=6.0 min CN=70 Runoff=2.0 cfs 6,149 cf

Subcatchment11S: Area to #44 South Runoff Area=7,924 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=157' Slope=0.0950 '/' Tc=6.0 min CN=70 Runoff=0.6 cfs 2,000 cf

Subcatchment12S: Area to #221 Tessier Ln Runoff Area=57,617 sf 5.00% Impervious Runoff Depth=3.22"
Flow Length=450' Slope=0.1960 '/' Tc=6.0 min CN=72 Runoff=5.0 cfs 15,478 cf

Subcatchment19S: Flow to Kidd PL6 then Runoff Area=35,853 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=358' Slope=0.1340 '/' Tc=6.0 min CN=70 Runoff=2.9 cfs 9,050 cf

Subcatchment20S: Area to #379 Folwer RD Runoff Area=37,131 sf 0.00% Impervious Runoff Depth=3.13"
Flow Length=250' Slope=0.1470 '/' Tc=6.0 min CN=71 Runoff=3.1 cfs 9,673 cf

Subcatchment21S: Area to #359 Fowler Rd Runoff Area=27,015 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=286' Slope=0.1380 '/' Tc=6.0 min CN=70 Runoff=2.2 cfs 6,819 cf

Subcatchment22S: Area to #317 Fowler Rd Runoff Area=21,863 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=382' Slope=0.1280 '/' Tc=6.0 min CN=70 Runoff=1.8 cfs 5,519 cf

Subcatchment23S: #317 Fowler Rd. then Runoff Area=120,160 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=502' Slope=0.1130 '/' Tc=7.3 min CN=70 Runoff=9.2 cfs 30,331 cf

Subcatchment24S: Area to #277 Folwer Rd Runoff Area=64,957 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=495' Slope=0.1333 '/' Tc=6.6 min CN=70 Runoff=5.1 cfs 16,396 cf

Link AP-11: #44 South Tessier Inflow=0.6 cfs 2,000 cf
Primary=0.6 cfs 2,000 cf

Link AP1: #4 N TESSIER Inflow=3.6 cfs 12,318 cf
Primary=3.6 cfs 12,318 cf

Link AP10: #134 South Tessier Inflow=2.0 cfs 6,149 cf
Primary=2.0 cfs 6,149 cf

Link AP12: #221 Tessier Lane-North PL Inflow=5.0 cfs 15,478 cf
Primary=5.0 cfs 15,478 cf

Link AP19: Kidd Property LIne #6 Inflow=2.9 cfs 9,050 cf
Primary=2.9 cfs 9,050 cf

Link AP2: #22 N TESSIER Inflow=6.7 cfs 25,098 cf
Primary=6.7 cfs 25,098 cf

Link AP20: #379 Fowler Rd Inflow=3.1 cfs 9,673 cf
Primary=3.1 cfs 9,673 cf

Link AP21: #359 Folwer Rd. Inflow=2.2 cfs 6,819 cf
Primary=2.2 cfs 6,819 cf

Link AP22: #317 Fowler Rd. PL2 Inflow=1.8 cfs 5,519 cf
Primary=1.8 cfs 5,519 cf

Link AP23: #317 Fowler Rd PL2 Inflow=9.2 cfs 30,331 cf
Primary=9.2 cfs 30,331 cf

Link AP24: #277 Fowler Rd. Inflow=5.1 cfs 16,396 cf
Primary=5.1 cfs 16,396 cf

Link AP3: #30 NORTH TESSIER Inflow=1.1 cfs 3,536 cf
Primary=1.1 cfs 3,536 cf

Link AP4: #46 N Tessier Inflow=1.4 cfs 4,359 cf
Primary=1.4 cfs 4,359 cf

Link AP5: #50 N. Tessier Inflow=1.3 cfs 3,984 cf
Primary=1.3 cfs 3,984 cf

Link AP6: #50 Tessier Street Inflow=0.7 cfs 2,112 cf
Primary=0.7 cfs 2,112 cf

Link AP7: #78 Silver Spring- North PL Inflow=4.2 cfs 13,298 cf
Primary=4.2 cfs 13,298 cf

Link AP8: #78 Silver Spring West PL Inflow=1.9 cfs 5,829 cf
Primary=1.9 cfs 5,829 cf

Link AP9: #78,#116,#126S. Tessier at WL Inflow=4.8 cfs 14,948 cf
Primary=4.8 cfs 14,948 cf

Total Runoff Area = 732,160 sf Runoff Volume = 186,897 cf Average Runoff Depth = 3.06"
99.61% Pervious = 729,282 sf 0.39% Impervious = 2,878 sf

Summary for Subcatchment 1S: Area to # 4 North Tessier

Runoff = 5.4 cfs @ 12.12 hrs, Volume= 18,225 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
48,800	70	Woods, Good, HSG C
48,800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	525	0.0950	1.06		**Lag/CN Method, Flow Path Tc**

Summary for Subcatchment 2S: Area to #22 N Tessier

Runoff = 9.9 cfs @ 12.16 hrs, Volume= 37,133 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
95,222	70	Woods, Good, HSG C
4,209	74	>75% Grass cover, Good, HSG C
99,431	70	Weighted Average
99,431		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	808	0.0930	1.15		**Lag/CN Method,**

Summary for Subcatchment 3S: Area to #30 N Tessier

Runoff = 1.7 cfs @ 12.09 hrs, Volume= 5,232 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
12,699	70	Woods, Good, HSG C
1,311	74	>75% Grass cover, Good, HSG C
14,010	70	Weighted Average
14,010		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	192	0.1400	1.06		**Lag/CN Method,**
3.0	192	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 4S: Area To #46 N Tessier

Runoff = 2.1 cfs @ 12.09 hrs, Volume= 6,410 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
11,284	70	Woods, Good, HSG C
5,450	74	>75% Grass cover, Good, HSG C
16,734	71	Weighted Average
16,734		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.1	144	0.1700	1.13		**Lag/CN Method,**
2.1	144	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 5S: Area to #50 N Tessier

Runoff = 1.9 cfs @ 12.09 hrs, Volume= 5,858 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
13,159	70	Woods, Good, HSG C
2,133	74	>75% Grass cover, Good, HSG C
15,292	71	Weighted Average
15,292		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.6	161	0.1366	1.04		**Lag/CN Method,**
2.6	161	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 6S: Aea to #50 Tessier St.

Runoff = 1.0 cfs @ 12.09 hrs, Volume= 3,125 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
8,367	70	Woods, Good, HSG C
8,367		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	156	0.1860	1.17		**Lag/CN Method,**
2.2	156	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 7S: Area to #78 Silver Spring

Runoff = 6.3 cfs @ 12.09 hrs, Volume= 19,555 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
33,660	70	Woods, Good, HSG C
17,390	74	>75% Grass cover, Good, HSG C
51,050	71	Weighted Average
51,050		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	322	0.1460	1.23		**Lag/CN Method,**
4.4	322	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 8S: Area to #78 Silver Spring

Runoff = 2.7 cfs @ 12.09 hrs, Volume= 8,571 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
17,164	70	Woods, Good, HSG C
5,212	74	>75% Grass cover, Good, HSG C
22,376	71	Weighted Average
22,376		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	125	0.1600	1.07		**Lag/CN Method,**
2.0	125	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 9S: Area to # 78, #116 and #126 PL at wetland

Runoff = 7.1 cfs @ 12.09 hrs, Volume= 22,115 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
59,218	70	Woods, Good, HSG C
59,218		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	337	0.2050	1.43		**Lag/CN Method,**
3.9	337	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 10S: Area to #134 South Tessier

Runoff = 2.9 cfs @ 12.09 hrs, Volume= 9,098 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
24,362	70	Woods, Good, HSG C
24,362		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	383	0.1540	1.27		**Lag/CN Method,**
5.0	383	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 11S: Area to #44 South Tessier

Runoff = 0.9 cfs @ 12.09 hrs, Volume= 2,959 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
7,924	70	Woods, Good, HSG C
7,924		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	157	0.0950	0.84		**Lag/CN Method,**
3.1	157	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 12S: Area to #221 Tessier Ln North PL

Runoff = 7.2 cfs @ 12.09 hrs, Volume= 22,624 cf, Depth= 4.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
40,109	70	Woods, Good, HSG C
14,630	74	>75% Grass cover, Good, HSG C
959	98	Roofs, HSG C
1,919	98	Roofs, HSG C
57,617	72	Weighted Average
54,739		95.00% Pervious Area
2,878		5.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	450	0.1960	1.57		**Lag/CN Method,**
4.8	450	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 19S: Flow to Kidd PL6 then to WL offsite SW

Runoff = 4.3 cfs @ 12.09 hrs, Volume= 13,390 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
35,853	70	Woods, Good, HSG C
35,853		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	358	0.1340	1.17		**Lag/CN Method,**
5.1	358	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 20S: Area to #379 Folwer RD

Runoff = 4.6 cfs @ 12.09 hrs, Volume= 14,223 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
30,606	70	Woods, Good, HSG C
6,525	74	>75% Grass cover, Good, HSG C
37,131	71	Weighted Average
37,131		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	250	0.1470	1.17		**Lag/CN Method,**
3.6	250	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 21S: Area to #359 Fowler Rd

Runoff = 3.2 cfs @ 12.09 hrs, Volume= 10,089 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
25,040	70	Woods, Good, HSG C
1,975	74	>75% Grass cover, Good, HSG C
27,015	70	Weighted Average
27,015		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	286	0.1380	1.14		**Lag/CN Method,**
4.2	286	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 22S: Area to #317 Fowler Rd - then to 24" culvert

Runoff = 2.6 cfs @ 12.09 hrs, Volume= 8,165 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
21,863	70	Woods, Good, HSG C
21,863		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	382	0.1280	1.16		**Lag/CN Method,**
5.5	382	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 23S: #317 Fowler Rd. then to 36" RCP

Runoff = 13.7 cfs @ 12.11 hrs, Volume= 44,875 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
113,819	70	Woods, Good, HSG C
6,341	74	>75% Grass cover, Good, HSG C
120,160	70	Weighted Average
120,160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	502	0.1130	1.15		**Lag/CN Method,**

Summary for Subcatchment 24S: Area to #277 Folwer Rd

Runoff = 7.6 cfs @ 12.10 hrs, Volume= 24,259 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
64,957	70	Woods, Good, HSG C
64,957		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.6	495	0.1333	1.25		**Lag/CN Method,**

Summary for Link AP-11: #44 South Tessier

Inflow Area = 7,924 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 0.9 cfs @ 12.09 hrs, Volume= 2,959 cf
Primary = 0.9 cfs @ 12.09 hrs, Volume= 2,959 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP1: #4 N TESSIER

Inflow Area = 48,800 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 5.4 cfs @ 12.12 hrs, Volume= 18,225 cf
Primary = 5.4 cfs @ 12.12 hrs, Volume= 18,225 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP10: #134 South Tessier

Inflow Area = 24,362 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 2.9 cfs @ 12.09 hrs, Volume= 9,098 cf
Primary = 2.9 cfs @ 12.09 hrs, Volume= 9,098 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP12: #221 Tessier Lane-North PL

Inflow Area = 57,617 sf, 5.00% Impervious, Inflow Depth = 4.71" for 100-Year event
Inflow = 7.2 cfs @ 12.09 hrs, Volume= 22,624 cf
Primary = 7.2 cfs @ 12.09 hrs, Volume= 22,624 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP19: Kidd Property LIne #6

Inflow Area = 35,853 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 4.3 cfs @ 12.09 hrs, Volume= 13,390 cf
Primary = 4.3 cfs @ 12.09 hrs, Volume= 13,390 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP2: #22 N TESSIER

Inflow Area = 99,431 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 9.9 cfs @ 12.16 hrs, Volume= 37,133 cf
Primary = 9.9 cfs @ 12.16 hrs, Volume= 37,133 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP20: #379 Fowler Rd

Inflow Area = 37,131 sf, 0.00% Impervious, Inflow Depth = 4.60" for 100-Year event
Inflow = 4.6 cfs @ 12.09 hrs, Volume= 14,223 cf
Primary = 4.6 cfs @ 12.09 hrs, Volume= 14,223 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP21: #359 Folwer Rd.

Inflow Area = 27,015 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 3.2 cfs @ 12.09 hrs, Volume= 10,089 cf
Primary = 3.2 cfs @ 12.09 hrs, Volume= 10,089 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP22: #317 Fowler Rd. PL2

Inflow Area = 21,863 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 2.6 cfs @ 12.09 hrs, Volume= 8,165 cf
Primary = 2.6 cfs @ 12.09 hrs, Volume= 8,165 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP23: #317 Fowler Rd PL2

Inflow Area = 120,160 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 13.7 cfs @ 12.11 hrs, Volume= 44,875 cf
Primary = 13.7 cfs @ 12.11 hrs, Volume= 44,875 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP24: #277 Fowler Rd.

Inflow Area = 64,957 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 7.6 cfs @ 12.10 hrs, Volume= 24,259 cf
Primary = 7.6 cfs @ 12.10 hrs, Volume= 24,259 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP3: #30 NORTH TESSIER

Inflow Area = 14,010 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 1.7 cfs @ 12.09 hrs, Volume= 5,232 cf
Primary = 1.7 cfs @ 12.09 hrs, Volume= 5,232 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP4: #46 N Tessier

Inflow Area = 16,734 sf, 0.00% Impervious, Inflow Depth = 4.60" for 100-Year event
Inflow = 2.1 cfs @ 12.09 hrs, Volume= 6,410 cf
Primary = 2.1 cfs @ 12.09 hrs, Volume= 6,410 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP5: #50 N. Tessier

Inflow Area = 15,292 sf, 0.00% Impervious, Inflow Depth = 4.60" for 100-Year event
Inflow = 1.9 cfs @ 12.09 hrs, Volume= 5,858 cf
Primary = 1.9 cfs @ 12.09 hrs, Volume= 5,858 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP6: #50 Tessier Street

Inflow Area = 8,367 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 1.0 cfs @ 12.09 hrs, Volume= 3,125 cf
Primary = 1.0 cfs @ 12.09 hrs, Volume= 3,125 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP7: #78 Silver Spring- North PL

Inflow Area = 51,050 sf, 0.00% Impervious, Inflow Depth = 4.60" for 100-Year event
Inflow = 6.3 cfs @ 12.09 hrs, Volume= 19,555 cf
Primary = 6.3 cfs @ 12.09 hrs, Volume= 19,555 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP8: #78 Silver Spring West PL

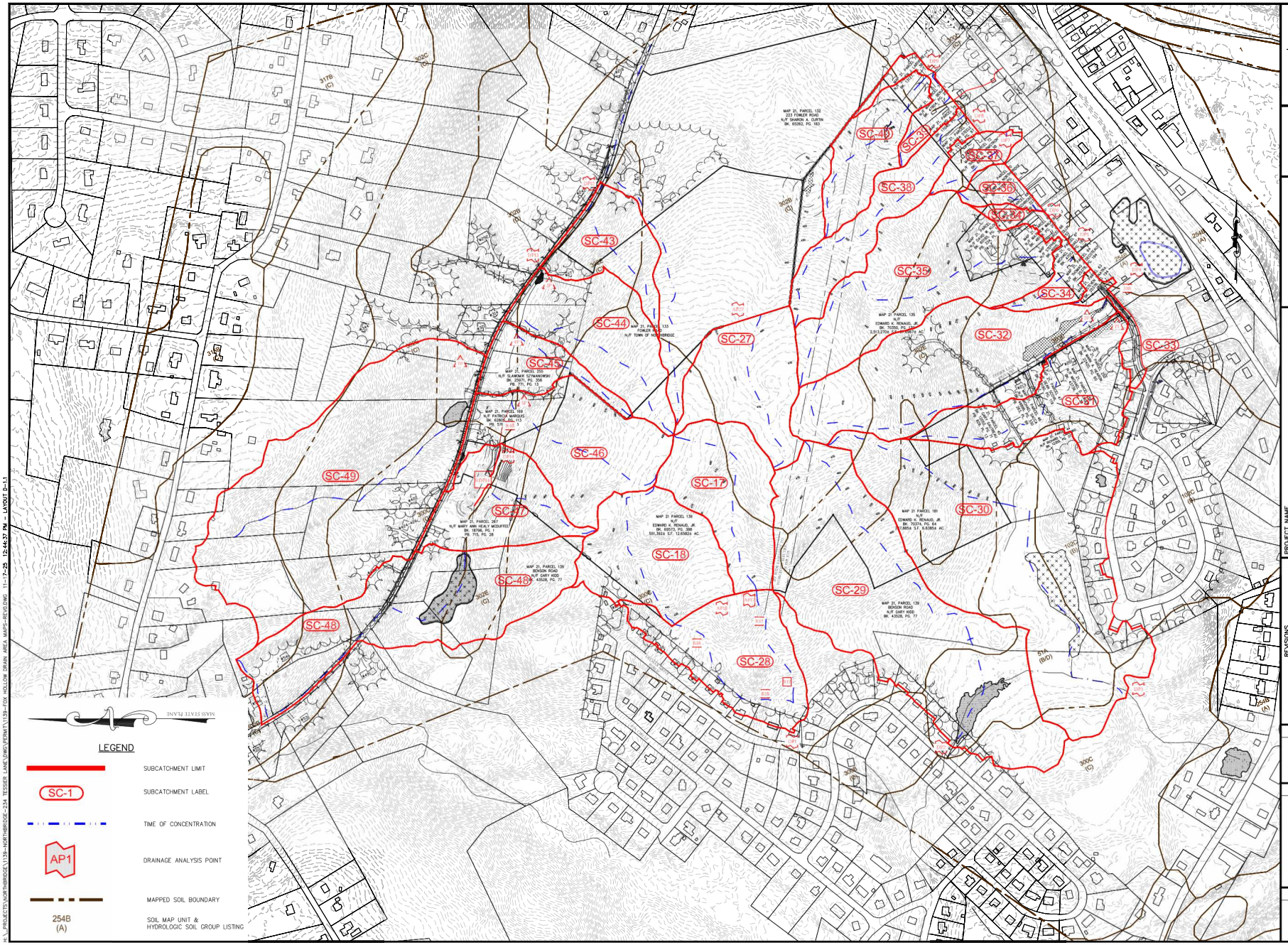
Inflow Area = 22,376 sf, 0.00% Impervious, Inflow Depth = 4.60" for 100-Year event
Inflow = 2.7 cfs @ 12.09 hrs, Volume= 8,571 cf
Primary = 2.7 cfs @ 12.09 hrs, Volume= 8,571 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP9: #78,#116,#126 S. Tessier at WL

Inflow Area = 59,218 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 7.1 cfs @ 12.09 hrs, Volume= 22,115 cf
Primary = 7.1 cfs @ 12.09 hrs, Volume= 22,115 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs



TURNING POINT ENGINEERING
CIVIL SITE DESIGN
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PROJECT NAME
FOX HOLLOW
DEFINITIVE SUBDIVIONS
#0 ASHWORTH DRIVE & #191 SOUTHBRIDGE ROAD
ASSESSOR'S MAP 3 LOT A05 AND MAP 6 LOT A01
OXFORD, MASSACHUSETTS

PREPARED FOR
Eastland

Eastland Partners, Inc.
597 Millbury Street
Worcester, MA 01607

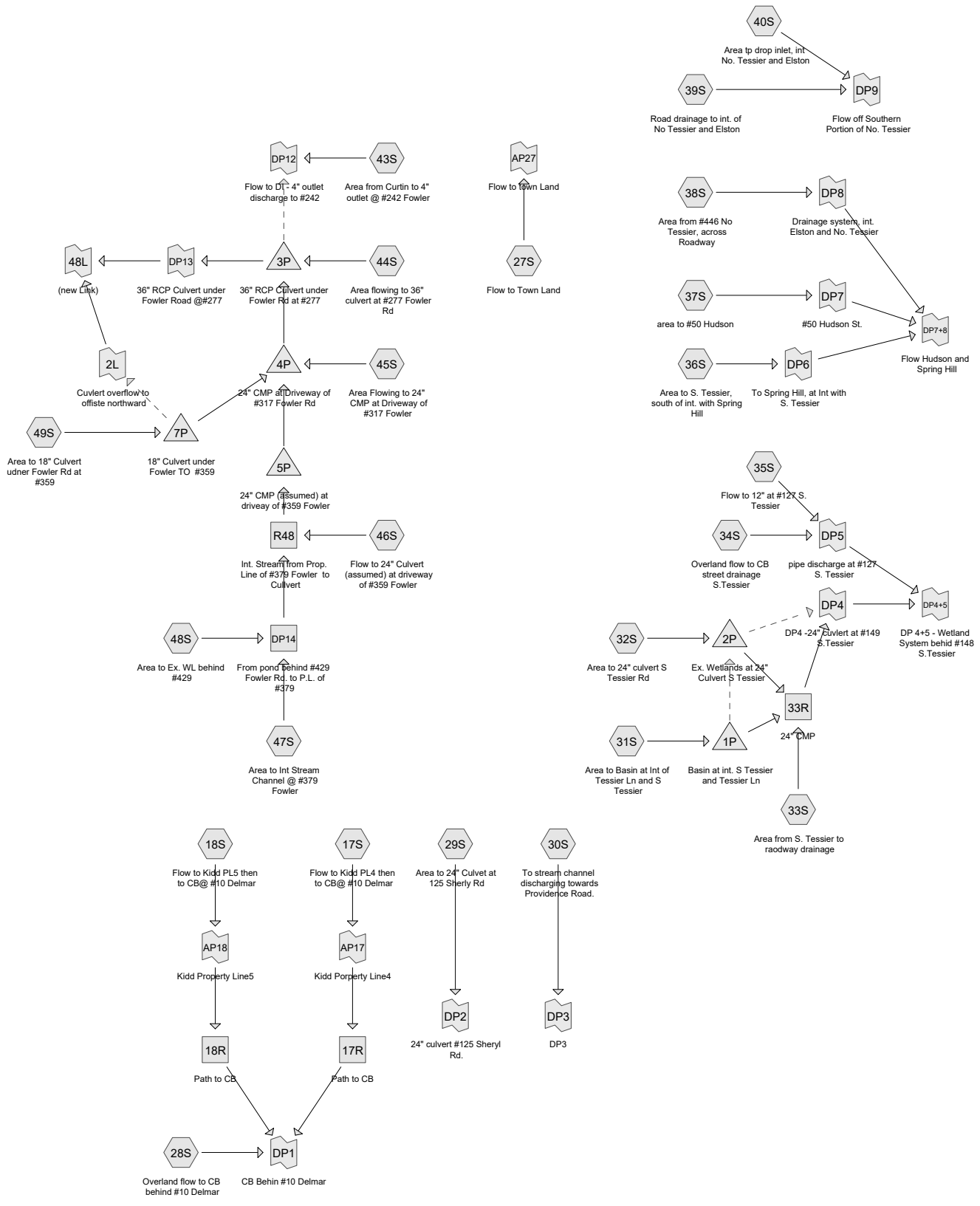
REVISIONS		
REV.	DATE	DESCRIPTION

PROJECT NO.	TPE-1001D
DESIGNED BY	JAB, TRB
CHECKED BY	JAB
DATE	NOVEMBER 17, 2025
CAD FILE	H:\PERMIT\1139-DRAINAGE.MXD

GRAPHIC SCALE
300 0 100 200 400
(IN FEET)
1 inch = 200 feet

SHEET TITLE
PRE-DEVELOPMENT DRAINAGE MAP OVERALL

SHEET NO.
D-1.1



Routing Diagram for 1001-Pre-Dev-OVERALL-Rev0
Prepared by TURNING POINT ENGINEERING

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
770,035	74	>75% Grass cover, Good, HSG C (18S, 28S, 29S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 37S, 38S, 40S, 43S, 44S, 45S, 46S, 47S, 48S)
27,992	96	Gravel surface, HSG C (31S, 32S, 35S, 48S)
142,282	98	Paved parking, HSG C (31S, 32S, 33S, 34S, 36S, 37S, 38S, 39S, 43S, 44S, 45S, 46S, 47S, 48S, 49S)
73,147	98	Roofs, HSG C (18S, 28S, 29S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 37S, 38S, 39S, 40S, 43S, 44S, 46S, 47S, 48S, 49S)
515	98	Unconnected roofs, HSG C (45S)
6,996,014	70	Woods, Good, HSG C (17S, 18S, 27S, 28S, 29S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 37S, 38S, 39S, 40S, 43S, 44S, 45S, 46S, 47S, 48S, 49S)
413,858	77	Woods, Good, HSG D (29S, 30S)
8,423,843	**72**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
8,009,985	HSG C	17S, 18S, 27S, 28S, 29S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 37S, 38S, 39S, 40S, 43S, 44S, 45S, 46S, 47S, 48S, 49S
413,858	HSG D	29S, 30S
0	Other	
8,423,843		**TOTAL AREA**

Time span=0.00-72.00 hrs, dt=0.04 hrs, 1801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment17S: Flow to Kidd PL4 then Runoff Area=293,131 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=996' Slope=0.0660 '/' Tc=16.5 min CN=70 Runoff=4.6 cfs 21,956 cf

Subcatchment18S: Flow to Kidd PL5 then Runoff Area=332,015 sf 0.19% Impervious Runoff Depth=0.90"
Flow Length=837' Slope=0.0870 '/' Tc=12.5 min CN=70 Runoff=5.8 cfs 24,868 cf

Subcatchment27S: Flow to Town Land Runoff Area=311,206 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=820' Slope=0.0270 '/' Tc=22.0 min CN=70 Runoff=4.4 cfs 23,310 cf

Subcatchment28S: Overland flow to CB Runoff Area=323,985 sf 1.79% Impervious Runoff Depth=0.95"
Flow Length=770' Slope=0.0805 '/' Tc=11.8 min CN=71 Runoff=6.2 cfs 25,679 cf

Subcatchment29S: Area to 24" Culvet at Runoff Area=953,769 sf 0.56% Impervious Runoff Depth=0.95"
Flow Length=1,686' Tc=43.3 min CN=71 Runoff=10.6 cfs 75,595 cf

Subcatchment30S: To stream channel Runoff Area=1,140,292 sf 0.83% Impervious Runoff Depth=1.00"
Flow Length=1,506' Slope=0.0050 '/' Tc=78.8 min CN=72 Runoff=9.4 cfs 95,494 cf

Subcatchment31S: Area to Basin at Int of Runoff Area=308,013 sf 6.31% Impervious Runoff Depth=1.06"
Flow Length=1,015' Slope=0.1330 '/' Tc=10.8 min CN=73 Runoff=7.0 cfs 27,217 cf

Subcatchment32S: Area to 24" culvert S Runoff Area=566,475 sf 2.37% Impervious Runoff Depth=1.00"
Flow Length=1,796' Slope=0.1080 '/' Tc=19.5 min CN=72 Runoff=9.7 cfs 47,440 cf

Subcatchment33S: Area from S. Tessier Runoff Area=47,038 sf 39.27% Impervious Runoff Depth=1.71"
Flow Length=205' Slope=0.1070 '/' Tc=6.0 min CN=83 Runoff=2.1 cfs 6,696 cf

Subcatchment34S: Overland flow to CB Runoff Area=94,006 sf 21.71% Impervious Runoff Depth=1.30"
Flow Length=500' Slope=0.1360 '/' Tc=6.0 min CN=77 Runoff=3.2 cfs 10,170 cf

Subcatchment35S: Flow to 12" at #127 S. Runoff Area=531,723 sf 0.78% Impervious Runoff Depth=0.95"
Flow Length=1,608' Slope=0.1200 '/' Tc=17.4 min CN=71 Runoff=8.8 cfs 42,144 cf

Subcatchment36S: Area to S. Tessier, Runoff Area=52,061 sf 10.10% Impervious Runoff Depth=1.12"
Flow Length=485' Slope=0.1460 '/' Tc=6.0 min CN=74 Runoff=1.5 cfs 4,848 cf

Subcatchment37S: area to #50 Hudson Runoff Area=64,975 sf 8.39% Impervious Runoff Depth=1.12"
Flow Length=506' Slope=0.1420 '/' Tc=6.0 min CN=74 Runoff=1.8 cfs 6,050 cf

Subcatchment38S: Area from #446 No Runoff Area=216,628 sf 3.16% Impervious Runoff Depth=0.95"
Flow Length=1,481' Slope=0.0840 '/' Tc=19.5 min CN=71 Runoff=3.4 cfs 17,170 cf

Subcatchment39S: Road drainage to int. Runoff Area=73,621 sf 20.04% Impervious Runoff Depth=1.24"
Flow Length=595' Slope=0.0820 '/' Tc=8.3 min CN=76 Runoff=2.2 cfs 7,585 cf

Subcatchment40S: Area tp drop inlet, int Runoff Area=183,976 sf 0.53% Impervious Runoff Depth=0.95"
Flow Length=986' Slope=0.0930 '/' Tc=13.4 min CN=71 Runoff=3.4 cfs 14,582 cf

Subcatchment43S: Area from Curtin to 4" Runoff Area=186,514 sf 4.44% Impervious Runoff Depth=1.00"
Flow Length=879' Slope=0.1160 '/' Tc=10.6 min CN=72 Runoff=4.0 cfs 15,620 cf

Subcatchment44S: Area flowing to 36" Runoff Area=313,972 sf 2.22% Impervious Runoff Depth=0.95"
Flow Length=988' Slope=0.1160 '/' Tc=12.0 min CN=71 Runoff=6.0 cfs 24,885 cf

Subcatchment45S: Area Flowing to 24" Runoff Area=131,452 sf 6.06% Impervious Runoff Depth=1.00"
Flow Length=709' Slope=0.1550 '/' Tc=7.7 min CN=72 Runoff=3.1 cfs 11,008 cf

Subcatchment46S: Flow to 24" Culvert Runoff Area=386,344 sf 2.93% Impervious Runoff Depth=0.95"
Flow Length=589' Slope=0.1600 '/' Tc=6.8 min CN=71 Runoff=8.7 cfs 30,621 cf

Subcatchment47S: Area to Int Stream Runoff Area=252,861 sf 2.33% Impervious Runoff Depth=0.95"
Flow Length=849' Slope=0.1110 '/' Tc=10.9 min CN=71 Runoff=5.0 cfs 20,041 cf

Subcatchment48S: Area to Ex. WL behind Runoff Area=585,575 sf 3.96% Impervious Runoff Depth=1.00"
Flow Length=1,745' Slope=0.0690 '/' Tc=23.9 min CN=72 Runoff=9.2 cfs 49,039 cf

Subcatchment49S: Area to 18" Culvert Runoff Area=1,074,211 sf 2.04% Impervious Runoff Depth=0.95"
Flow Length=1,228' Slope=0.1060 '/' Tc=14.9 min CN=71 Runoff=18.9 cfs 85,141 cf

Reach 17R: Path to CB Avg. Flow Depth=0.10' Max Vel=2.81 fps Inflow=4.6 cfs 21,956 cf
n=0.035 L=600.0' S=0.1100 '/' Capacity=1,429.4 cfs Outflow=4.5 cfs 21,956 cf

Reach 18R: Path to CB Avg. Flow Depth=0.12' Max Vel=2.71 fps Inflow=5.8 cfs 24,868 cf
n=0.035 L=770.0' S=0.0805 '/' Capacity=1,223.0 cfs Outflow=5.4 cfs 24,868 cf

Reach 33R: 24" CMP Avg. Flow Depth=0.84' Max Vel=12.01 fps Inflow=16.5 cfs 81,307 cf
24.0" Round Pipe w/ 1.0" inside fill n=0.025 L=130.0' S=0.1138 '/' Capacity=38.8 cfs Outflow=16.5 cfs 81,306 cf

Reach DP14: From pond behind #429 Avg. Flow Depth=1.19' Max Vel=3.34 fps Inflow=12.5 cfs 69,081 cf
n=0.040 L=330.0' S=0.0152 '/' Capacity=1,335.6 cfs Outflow=12.0 cfs 69,081 cf

Reach R48: Int. Stream from Prop. Line Avg. Flow Depth=0.87' Max Vel=5.80 fps Inflow=16.7 cfs 99,702 cf
n=0.040 L=170.0' S=0.0529 '/' Capacity=1,322.6 cfs Outflow=16.6 cfs 99,702 cf

Pond 1P: Basin at int. S Tessier and Tessier Peak Elev=288.93' Storage=2,992 cf Inflow=7.0 cfs 27,217 cf
Primary=4.0 cfs 25,075 cf Secondary=3.1 cfs 2,096 cf Outflow=7.2 cfs 27,171 cf

Pond 2P: Ex. Wetlands at 24" Culvert S Peak Elev=283.73' Storage=98 cf Inflow=11.6 cfs 49,535 cf
Primary=11.6 cfs 49,535 cf Secondary=0.0 cfs 0 cf Outflow=11.6 cfs 49,535 cf

Pond 3P: 36" RCP Culvert under Fowler Rd Peak Elev=372.94' Storage=96 cf Inflow=19.4 cfs 213,670 cf
Primary=19.4 cfs 213,670 cf Secondary=0.0 cfs 0 cf Outflow=19.4 cfs 213,670 cf

Pond 4P: 24" CMP at Driveway of #317 Peak Elev=379.19' Storage=30,383 cf Inflow=27.2 cfs 188,785 cf
Outflow=17.7 cfs 188,785 cf

Pond 5P: 24" CMP (assumed) at driveay of Peak Elev=389.74' Storage=2,114 cf Inflow=16.6 cfs 99,702 cf
Outflow=15.8 cfs 99,702 cf

Pond 7P: 18" Culvert under Fowler TO #359 Peak Elev=389.26' Storage=5,369 cf Inflow=18.9 cfs 85,141 cf
Primary=9.7 cfs 78,075 cf Secondary=8.7 cfs 7,066 cf Outflow=18.4 cfs 85,141 cf

Link 2L: Cuvlert overflow to offiste northward Inflow=8.7 cfs 7,066 cf
Primary=8.7 cfs 7,066 cf

Link 48L: (new Link) Inflow=27.2 cfs 220,736 cf
Primary=27.2 cfs 220,736 cf

Link AP17: Kidd Porperty Line4 Inflow=4.6 cfs 21,956 cf
Primary=4.6 cfs 21,956 cf

Link AP18: Kidd Property Line5 Inflow=5.8 cfs 24,868 cf
Primary=5.8 cfs 24,868 cf

Link AP27: Flow to town Land Inflow=4.4 cfs 23,310 cf
Primary=4.4 cfs 23,310 cf

Link DP1: CB Behin #10 Delmar Inflow=14.4 cfs 72,502 cf
Primary=14.4 cfs 72,502 cf

Link DP12: Flow to DI - 4" outlet discharge to #242 Inflow=4.0 cfs 15,620 cf
Primary=4.0 cfs 15,620 cf

Link DP13: 36" RCP Culvert under Fowler Road @#277 Inflow=19.4 cfs 213,670 cf
Primary=19.4 cfs 213,670 cf

Link DP2: 24" culvert #125 Sheryl Rd. Inflow=10.6 cfs 75,595 cf
Primary=10.6 cfs 75,595 cf

Link DP3: DP3 Inflow=9.4 cfs 95,494 cf
Primary=9.4 cfs 95,494 cf

Link DP4: DP4 -24" cuvlert at #149 S.Tessier Inflow=16.5 cfs 81,306 cf
Primary=16.5 cfs 81,306 cf

Link DP4+5: DP 4+5 - Wetland System behid #148 S.Tessier Inflow=27.0 cfs 133,620 cf
Primary=27.0 cfs 133,620 cf

Link DP5: pipe discharge at #127 S. Tessier Inflow=10.5 cfs 52,314 cf
Primary=10.5 cfs 52,314 cf

Link DP6: To Spring Hill, at Int with S. Tessier Inflow=1.5 cfs 4,848 cf
Primary=1.5 cfs 4,848 cf

Link DP7: #50 Hudson St. Inflow=1.8 cfs 6,050 cf
Primary=1.8 cfs 6,050 cf

Link DP7+8: Flow Hudson and Spring Hill Inflow=5.2 cfs 28,067 cf
Primary=5.2 cfs 28,067 cf

Link DP8: Drainage system, int. Elston and No. Tessier Inflow=3.4 cfs 17,170 cf
Primary=3.4 cfs 17,170 cf

Link DP9: Flow off Southern Portion of No. Tessier Inflow=5.3 cfs 22,166 cf
Primary=5.3 cfs 22,166 cf

Total Runoff Area = 8,423,843 sf Runoff Volume = 687,155 cf Average Runoff Depth = 0.98"
97.44% Pervious = 8,207,899 sf 2.56% Impervious = 215,944 sf

Time span=0.00-72.00 hrs, dt=0.04 hrs, 1801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment17S: Flow to Kidd PL4 then Runoff Area=293,131 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=996' Slope=0.0660 '/' Tc=16.5 min CN=70 Runoff=12.0 cfs 52,109 cf

Subcatchment18S: Flow to Kidd PL5 then Runoff Area=332,015 sf 0.19% Impervious Runoff Depth=2.13"
Flow Length=837' Slope=0.0870 '/' Tc=12.5 min CN=70 Runoff=15.1 cfs 59,022 cf

Subcatchment27S: Flow to Town Land Runoff Area=311,206 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=820' Slope=0.0270 '/' Tc=22.0 min CN=70 Runoff=11.3 cfs 55,323 cf

Subcatchment28S: Overland flow to CB Runoff Area=323,985 sf 1.79% Impervious Runoff Depth=2.22"
Flow Length=770' Slope=0.0805 '/' Tc=11.8 min CN=71 Runoff=15.7 cfs 59,809 cf

Subcatchment29S: Area to 24" Culvet at Runoff Area=953,769 sf 0.56% Impervious Runoff Depth=2.22"
Flow Length=1,686' Tc=43.3 min CN=71 Runoff=26.4 cfs 176,070 cf

Subcatchment30S: To stream channel Runoff Area=1,140,292 sf 0.83% Impervious Runoff Depth=2.30"
Flow Length=1,506' Slope=0.0050 '/' Tc=78.8 min CN=72 Runoff=23.0 cfs 218,409 cf

Subcatchment31S: Area to Basin at Int of Runoff Area=308,013 sf 6.31% Impervious Runoff Depth=2.38"
Flow Length=1,015' Slope=0.1330 '/' Tc=10.8 min CN=73 Runoff=16.6 cfs 61,162 cf

Subcatchment32S: Area to 24" culvert S Runoff Area=566,475 sf 2.37% Impervious Runoff Depth=2.30"
Flow Length=1,796' Slope=0.1080 '/' Tc=19.5 min CN=72 Runoff=23.5 cfs 108,502 cf

Subcatchment33S: Area from S. Tessier Runoff Area=47,038 sf 39.27% Impervious Runoff Depth=3.29"
Flow Length=205' Slope=0.1070 '/' Tc=6.0 min CN=83 Runoff=4.1 cfs 12,904 cf

Subcatchment34S: Overland flow to CB Runoff Area=94,006 sf 21.71% Impervious Runoff Depth=2.73"
Flow Length=500' Slope=0.1360 '/' Tc=6.0 min CN=77 Runoff=6.9 cfs 21,403 cf

Subcatchment35S: Flow to 12" at #127 S. Runoff Area=531,723 sf 0.78% Impervious Runoff Depth=2.22"
Flow Length=1,608' Slope=0.1200 '/' Tc=17.4 min CN=71 Runoff=22.2 cfs 98,158 cf

Subcatchment36S: Area to S. Tessier, Runoff Area=52,061 sf 10.10% Impervious Runoff Depth=2.47"
Flow Length=485' Slope=0.1460 '/' Tc=6.0 min CN=74 Runoff=3.4 cfs 10,709 cf

Subcatchment37S: area to #50 Hudson Runoff Area=64,975 sf 8.39% Impervious Runoff Depth=2.47"
Flow Length=506' Slope=0.1420 '/' Tc=6.0 min CN=74 Runoff=4.3 cfs 13,365 cf

Subcatchment38S: Area from #446 No Runoff Area=216,628 sf 3.16% Impervious Runoff Depth=2.22"
Flow Length=1,481' Slope=0.0840 '/' Tc=19.5 min CN=71 Runoff=8.6 cfs 39,990 cf

Subcatchment39S: Road drainage to int. Runoff Area=73,621 sf 20.04% Impervious Runoff Depth=2.64"
Flow Length=595' Slope=0.0820 '/' Tc=8.3 min CN=76 Runoff=4.8 cfs 16,215 cf

Subcatchment40S: Area tp drop inlet, int Runoff Area=183,976 sf 0.53% Impervious Runoff Depth=2.22"
Flow Length=986' Slope=0.0930 '/' Tc=13.4 min CN=71 Runoff=8.5 cfs 33,963 cf

Subcatchment43S: Area from Curtin to 4" Runoff Area=186,514 sf 4.44% Impervious Runoff Depth=2.30"
Flow Length=879' Slope=0.1160 '/' Tc=10.6 min CN=72 Runoff=9.7 cfs 35,725 cf

Subcatchment44S: Area flowing to 36" Runoff Area=313,972 sf 2.22% Impervious Runoff Depth=2.22"
Flow Length=988' Slope=0.1160 '/' Tc=12.0 min CN=71 Runoff=15.1 cfs 57,961 cf

Subcatchment45S: Area Flowing to 24" Runoff Area=131,452 sf 6.06% Impervious Runoff Depth=2.30"
Flow Length=709' Slope=0.1550 '/' Tc=7.7 min CN=72 Runoff=7.5 cfs 25,178 cf

Subcatchment46S: Flow to 24" Culvert Runoff Area=386,344 sf 2.93% Impervious Runoff Depth=2.22"
Flow Length=589' Slope=0.1600 '/' Tc=6.8 min CN=71 Runoff=21.8 cfs 71,321 cf

Subcatchment47S: Area to Int Stream Runoff Area=252,861 sf 2.33% Impervious Runoff Depth=2.22"
Flow Length=849' Slope=0.1110 '/' Tc=10.9 min CN=71 Runoff=12.6 cfs 46,679 cf

Subcatchment48S: Area to Ex. WL behind Runoff Area=585,575 sf 3.96% Impervious Runoff Depth=2.30"
Flow Length=1,745' Slope=0.0690 '/' Tc=23.9 min CN=72 Runoff=22.3 cfs 112,160 cf

Subcatchment49S: Area to 18" Culvert Runoff Area=1,074,211 sf 2.04% Impervious Runoff Depth=2.22"
Flow Length=1,228' Slope=0.1060 '/' Tc=14.9 min CN=71 Runoff=47.7 cfs 198,304 cf

Reach 17R: Path to CB Avg. Flow Depth=0.17' Max Vel=3.95 fps Inflow=12.0 cfs 52,109 cf
n=0.035 L=600.0' S=0.1100 '/' Capacity=1,429.4 cfs Outflow=11.8 cfs 52,109 cf

Reach 18R: Path to CB Avg. Flow Depth=0.21' Max Vel=3.80 fps Inflow=15.1 cfs 59,022 cf
n=0.035 L=770.0' S=0.0805 '/' Capacity=1,223.0 cfs Outflow=14.3 cfs 59,022 cf

Reach 33R: 24" CMP Avg. Flow Depth=1.09' Max Vel=13.29 fps Inflow=24.8 cfs 164,191 cf
24.0" Round Pipe w/ 1.0" inside fill n=0.025 L=130.0' S=0.1138 '/' Capacity=38.8 cfs Outflow=24.8 cfs 164,191 cf

Reach DP14: From pond behind #429 Avg. Flow Depth=1.49' Max Vel=3.28 fps Inflow=30.6 cfs 158,839 cf
n=0.040 L=330.0' S=0.0152 '/' Capacity=1,335.6 cfs Outflow=30.4 cfs 158,839 cf

Reach R48: Int. Stream from Prop. Avg. Flow Depth=1.42' Max Vel=6.15 fps Inflow=41.0 cfs 230,160 cf
n=0.040 L=170.0' S=0.0529 '/' Capacity=1,322.6 cfs Outflow=40.9 cfs 230,160 cf

Pond 1P: Basin at int. S Tessier and Peak Elev=289.18' Storage=3,408 cf Inflow=16.6 cfs 61,162 cf
Primary=5.1 cfs 47,160 cf Secondary=11.4 cfs 13,956 cf Outflow=16.6 cfs 61,116 cf

Pond 2P: Ex. Wetlands at 24" Culvert S Peak Elev=284.85' Storage=261 cf Inflow=32.4 cfs 122,457 cf
Primary=17.1 cfs 104,127 cf Secondary=15.3 cfs 18,330 cf Outflow=32.4 cfs 122,457 cf

Pond 3P: 36" RCP Culvert under Fowler Rd Peak Elev=373.65' Storage=200 cf Inflow=35.0 cfs 457,527 cf
Primary=35.1 cfs 457,527 cf Secondary=0.0 cfs 0 cf Outflow=35.1 cfs 457,527 cf

Pond 4P: 24" CMP at Driveway of #317 Peak Elev=381.22' Storage=76,844 cf Inflow=54.4 cfs 399,567 cf
Outflow=32.6 cfs 399,567 cf

Pond 5P: 24" CMP (assumed) at driveay Peak Elev=393.21' Storage=15,251 cf Inflow=40.9 cfs 230,160 cf
Outflow=40.5 cfs 230,160 cf

Pond 7P: 18" Culvert under Fowler TO Peak Elev=389.67' Storage=7,296 cf Inflow=47.7 cfs 198,304 cf
Primary=10.6 cfs 144,229 cf Secondary=36.7 cfs 54,075 cf Outflow=47.3 cfs 198,304 cf

Link 2L: Cuvlert overflow to offiste northward Inflow=36.7 cfs 54,075 cf
Primary=36.7 cfs 54,075 cf

Link 48L: (new Link) Inflow=68.5 cfs 511,603 cf
Primary=68.5 cfs 511,603 cf

Link AP17: Kidd Porperty Line4 Inflow=12.0 cfs 52,109 cf
Primary=12.0 cfs 52,109 cf

Link AP18: Kidd Property Line5 Inflow=15.1 cfs 59,022 cf
Primary=15.1 cfs 59,022 cf

Link AP27: Flow to town Land Inflow=11.3 cfs 55,323 cf
Primary=11.3 cfs 55,323 cf

Link DP1: CB Behin #10 Delmar Inflow=38.2 cfs 170,940 cf
Primary=38.2 cfs 170,940 cf

Link DP12: Flow to DI - 4" outlet discharge to #242 Inflow=9.7 cfs 35,725 cf
Primary=9.7 cfs 35,725 cf

Link DP13: 36" RCP Culvert under Fowler Road @#277 Inflow=35.1 cfs 457,527 cf
Primary=35.1 cfs 457,527 cf

Link DP2: 24" culvert #125 Sheryl Rd. Inflow=26.4 cfs 176,070 cf
Primary=26.4 cfs 176,070 cf

Link DP3: DP3 Inflow=23.0 cfs 218,409 cf
Primary=23.0 cfs 218,409 cf

Link DP4: DP4 -24" cuvlert at #149 S.Tessier Inflow=39.7 cfs 182,521 cf
Primary=39.7 cfs 182,521 cf

Link DP4+5: DP 4+5 - Wetland System behid #148 S.Tessier Inflow=65.4 cfs 302,083 cf
Primary=65.4 cfs 302,083 cf

Link DP5: pipe discharge at #127 S. Tessier Inflow=25.8 cfs 119,561 cf
Primary=25.8 cfs 119,561 cf

Link DP6: To Spring Hill, at Int with S. Tessier Inflow=3.4 cfs 10,709 cf
Primary=3.4 cfs 10,709 cf

Link DP7: #50 Hudson St. Inflow=4.3 cfs 13,365 cf
Primary=4.3 cfs 13,365 cf

Link DP7+8: Flow Hudson and Spring Hill Inflow=12.8 cfs 64,065 cf
Primary=12.8 cfs 64,065 cf

Link DP8: Drainage system, int. Elston and No. Tessier Inflow=8.6 cfs 39,990 cf
Primary=8.6 cfs 39,990 cf

Link DP9: Flow off Southern Portion of No. Tessier Inflow=12.7 cfs 50,178 cf
Primary=12.7 cfs 50,178 cf

Total Runoff Area = 8,423,843 sf Runoff Volume = 1,584,441 cf Average Runoff Depth = 2.26"
97.44% Pervious = 8,207,899 sf 2.56% Impervious = 215,944 sf

Time span=0.00-72.00 hrs, dt=0.04 hrs, 1801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment17S: Flow to Kidd PL4 then Runoff Area=293,131 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=996' Slope=0.0660 '/' Tc=16.5 min CN=70 Runoff=17.3 cfs 73,991 cf

Subcatchment18S: Flow to Kidd PL5 then Runoff Area=332,015 sf 0.19% Impervious Runoff Depth=3.03"
Flow Length=837' Slope=0.0870 '/' Tc=12.5 min CN=70 Runoff=21.7 cfs 83,806 cf

Subcatchment27S: Flow to Town Land Runoff Area=311,206 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=820' Slope=0.0270 '/' Tc=22.0 min CN=70 Runoff=16.3 cfs 78,554 cf

Subcatchment28S: Overland flow to CB Runoff Area=323,985 sf 1.79% Impervious Runoff Depth=3.13"
Flow Length=770' Slope=0.0805 '/' Tc=11.8 min CN=71 Runoff=22.4 cfs 84,397 cf

Subcatchment29S: Area to 24" Culvet at Runoff Area=953,769 sf 0.56% Impervious Runoff Depth=3.13"
Flow Length=1,686' Tc=43.3 min CN=71 Runoff=37.7 cfs 248,454 cf

Subcatchment30S: To stream channel Runoff Area=1,140,292 sf 0.83% Impervious Runoff Depth=3.22"
Flow Length=1,506' Slope=0.0050 '/' Tc=78.8 min CN=72 Runoff=32.8 cfs 306,333 cf

Subcatchment31S: Area to Basin at Int of Runoff Area=308,013 sf 6.31% Impervious Runoff Depth=3.32"
Flow Length=1,015' Slope=0.1330 '/' Tc=10.8 min CN=73 Runoff=23.3 cfs 85,277 cf

Subcatchment32S: Area to 24" culvert S Runoff Area=566,475 sf 2.37% Impervious Runoff Depth=3.22"
Flow Length=1,796' Slope=0.1080 '/' Tc=19.5 min CN=72 Runoff=33.3 cfs 152,180 cf

Subcatchment33S: Area from S. Tessier Runoff Area=47,038 sf 39.27% Impervious Runoff Depth=4.35"
Flow Length=205' Slope=0.1070 '/' Tc=6.0 min CN=83 Runoff=5.4 cfs 17,059 cf

Subcatchment34S: Overland flow to CB Runoff Area=94,006 sf 21.71% Impervious Runoff Depth=3.72"
Flow Length=500' Slope=0.1360 '/' Tc=6.0 min CN=77 Runoff=9.3 cfs 29,179 cf

Subcatchment35S: Flow to 12" at #127 S. Runoff Area=531,723 sf 0.78% Impervious Runoff Depth=3.13"
Flow Length=1,608' Slope=0.1200 '/' Tc=17.4 min CN=71 Runoff=31.7 cfs 138,512 cf

Subcatchment36S: Area to S. Tessier, Runoff Area=52,061 sf 10.10% Impervious Runoff Depth=3.42"
Flow Length=485' Slope=0.1460 '/' Tc=6.0 min CN=74 Runoff=4.8 cfs 14,845 cf

Subcatchment37S: area to #50 Hudson Runoff Area=64,975 sf 8.39% Impervious Runoff Depth=3.42"
Flow Length=506' Slope=0.1420 '/' Tc=6.0 min CN=74 Runoff=5.9 cfs 18,527 cf

Subcatchment38S: Area from #446 No Runoff Area=216,628 sf 3.16% Impervious Runoff Depth=3.13"
Flow Length=1,481' Slope=0.0840 '/' Tc=19.5 min CN=71 Runoff=12.3 cfs 56,431 cf

Subcatchment39S: Road drainage to int. Runoff Area=73,621 sf 20.04% Impervious Runoff Depth=3.62"
Flow Length=595' Slope=0.0820 '/' Tc=8.3 min CN=76 Runoff=6.6 cfs 22,227 cf

Subcatchment40S: Area tp drop inlet, int Runoff Area=183,976 sf 0.53% Impervious Runoff Depth=3.13"
Flow Length=986' Slope=0.0930 '/' Tc=13.4 min CN=71 Runoff=12.1 cfs 47,925 cf

Subcatchment43S: Area from Curtin to 4" Runoff Area=186,514 sf 4.44% Impervious Runoff Depth=3.22"
Flow Length=879' Slope=0.1160 '/' Tc=10.6 min CN=72 Runoff=13.7 cfs 50,106 cf

Subcatchment44S: Area flowing to 36" Runoff Area=313,972 sf 2.22% Impervious Runoff Depth=3.13"
Flow Length=988' Slope=0.1160 '/' Tc=12.0 min CN=71 Runoff=21.6 cfs 81,789 cf

Subcatchment45S: Area Flowing to 24" Runoff Area=131,452 sf 6.06% Impervious Runoff Depth=3.22"
Flow Length=709' Slope=0.1550 '/' Tc=7.7 min CN=72 Runoff=10.6 cfs 35,314 cf

Subcatchment46S: Flow to 24" Culvert Runoff Area=386,344 sf 2.93% Impervious Runoff Depth=3.13"
Flow Length=589' Slope=0.1600 '/' Tc=6.8 min CN=71 Runoff=31.1 cfs 100,641 cf

Subcatchment47S: Area to Int Stream Runoff Area=252,861 sf 2.33% Impervious Runoff Depth=3.13"
Flow Length=849' Slope=0.1110 '/' Tc=10.9 min CN=71 Runoff=17.9 cfs 65,869 cf

Subcatchment48S: Area to Ex. WL behind Runoff Area=585,575 sf 3.96% Impervious Runoff Depth=3.22"
Flow Length=1,745' Slope=0.0690 '/' Tc=23.9 min CN=72 Runoff=31.6 cfs 157,312 cf

Subcatchment49S: Area to 18" Culvert Runoff Area=1,074,211 sf 2.04% Impervious Runoff Depth=3.13"
Flow Length=1,228' Slope=0.1060 '/' Tc=14.9 min CN=71 Runoff=68.1 cfs 279,829 cf

Reach 17R: Path to CB Avg. Flow Depth=0.21' Max Vel=4.46 fps Inflow=17.3 cfs 73,991 cf
n=0.035 L=600.0' S=0.1100 '/' Capacity=1,429.4 cfs Outflow=17.0 cfs 73,991 cf

Reach 18R: Path to CB Avg. Flow Depth=0.26' Max Vel=4.30 fps Inflow=21.7 cfs 83,806 cf
n=0.035 L=770.0' S=0.0805 '/' Capacity=1,223.0 cfs Outflow=20.7 cfs 83,806 cf

Reach 33R: 24" CMP Avg. Flow Depth=1.20' Max Vel=13.69 fps Inflow=28.5 cfs 215,180 cf
24.0" Round Pipe w/ 1.0" inside fill n=0.025 L=130.0' S=0.1138 '/' Capacity=38.8 cfs Outflow=28.5 cfs 215,180 cf

Reach DP14: From pond behind #429 Avg. Flow Depth=1.61' Max Vel=3.32 fps Inflow=43.4 cfs 223,181 cf
n=0.040 L=330.0' S=0.0152 '/' Capacity=1,335.6 cfs Outflow=43.1 cfs 223,181 cf

Reach R48: Int. Stream from Prop. Avg. Flow Depth=1.57' Max Vel=6.24 fps Inflow=58.3 cfs 323,822 cf
n=0.040 L=170.0' S=0.0529 '/' Capacity=1,322.6 cfs Outflow=58.3 cfs 323,822 cf

Pond 1P: Basin at int. S Tessier and Peak Elev=289.32' Storage=3,654 cf Inflow=23.3 cfs 85,277 cf
Primary=5.6 cfs 61,046 cf Secondary=17.7 cfs 24,184 cf Outflow=23.3 cfs 85,230 cf

Pond 2P: Ex. Wetlands at 24" Culvert S Peak Elev=285.41' Storage=384 cf Inflow=47.4 cfs 176,364 cf
Primary=19.3 cfs 137,075 cf Secondary=28.2 cfs 39,290 cf Outflow=47.5 cfs 176,364 cf

Pond 3P: 36" RCP Culvert under Fowler Peak Elev=375.05' Storage=3,838 cf Inflow=66.1 cfs 626,243 cf
Primary=62.4 cfs 626,243 cf Secondary=0.0 cfs 0 cf Outflow=62.4 cfs 626,243 cf

Pond 4P: 24" CMP at Driveway of #317 Peak Elev=381.54' Storage=86,198 cf Inflow=79.6 cfs 544,455 cf
Outflow=57.8 cfs 544,455 cf

Pond 5P: 24" CMP (assumed) at driveay Peak Elev=393.38' Storage=16,338 cf Inflow=58.3 cfs 323,822 cf
Outflow=59.3 cfs 323,822 cf

Pond 7P: 18" Culvert under Fowler TO Peak Elev=389.90' Storage=8,526 cf Inflow=68.1 cfs 279,829 cf
Primary=11.1 cfs 185,319 cf Secondary=56.5 cfs 94,510 cf Outflow=67.6 cfs 279,829 cf

Link 2L: Cuvlert overflow to offiste northward Inflow=56.5 cfs 94,510 cf
Primary=56.5 cfs 94,510 cf

Link 48L: (new Link) Inflow=97.7 cfs 720,753 cf
Primary=97.7 cfs 720,753 cf

Link AP17: Kidd Porperty Line4 Inflow=17.3 cfs 73,991 cf
Primary=17.3 cfs 73,991 cf

Link AP18: Kidd Property Line5 Inflow=21.7 cfs 83,806 cf
Primary=21.7 cfs 83,806 cf

Link AP27: Flow to town Land Inflow=16.3 cfs 78,554 cf
Primary=16.3 cfs 78,554 cf

Link DP1: CB Behin #10 Delmar Inflow=55.7 cfs 242,195 cf
Primary=55.7 cfs 242,195 cf

Link DP12: Flow to DI - 4" outlet discharge to #242 Inflow=13.7 cfs 50,106 cf
Primary=13.7 cfs 50,106 cf

Link DP13: 36" RCP Culvert under Fowler Road @#277 Inflow=62.4 cfs 626,243 cf
Primary=62.4 cfs 626,243 cf

Link DP2: 24" culvert #125 Sheryl Rd. Inflow=37.7 cfs 248,454 cf
Primary=37.7 cfs 248,454 cf

Link DP3: DP3 Inflow=32.8 cfs 306,333 cf
Primary=32.8 cfs 306,333 cf

Link DP4: DP4 -24" cuvlert at #149 S.Tessier Inflow=55.9 cfs 254,470 cf
Primary=55.9 cfs 254,470 cf

Link DP4+5: DP 4+5 - Wetland System behid #148 S.Tessier Inflow=92.4 cfs 422,161 cf
Primary=92.4 cfs 422,161 cf

Link DP5: pipe discharge at #127 S. Tessier Inflow=36.6 cfs 167,691 cf
Primary=36.6 cfs 167,691 cf

Link DP6: To Spring Hill, at Int with S. Tessier Inflow=4.8 cfs 14,845 cf
Primary=4.8 cfs 14,845 cf

Link DP7: #50 Hudson St. Inflow=5.9 cfs 18,527 cf
Primary=5.9 cfs 18,527 cf

Link DP7+8: Flow Hudson and Spring Hill Inflow=18.2 cfs 89,803 cf
Primary=18.2 cfs 89,803 cf

Link DP8: Drainage system, int. Elston and No. Tessier Inflow=12.3 cfs 56,431 cf
Primary=12.3 cfs 56,431 cf

Link DP9: Flow off Southern Portion of No. Tessier Inflow=17.9 cfs 70,152 cf
Primary=17.9 cfs 70,152 cf

Total Runoff Area = 8,423,843 sf Runoff Volume = 2,228,557 cf Average Runoff Depth = 3.17"
97.44% Pervious = 8,207,899 sf 2.56% Impervious = 215,944 sf

Summary for Subcatchment 17S: Flow to Kidd PL4 then to CB@ #10 Delmar

Runoff = 25.7 cfs @ 12.23 hrs, Volume= 109,472 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
293,131	70	Woods, Good, HSG C
293,131		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	996	0.0660	1.01		**Lag/CN Method,**

Summary for Subcatchment 18S: Flow to Kidd PL5 then to CB@ #10 Delmar

Runoff = 32.3 cfs @ 12.17 hrs, Volume= 123,993 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
320,693	70	Woods, Good, HSG C
10,680	74	>75% Grass cover, Good, HSG C
642	98	Roofs, HSG C
332,015	70	Weighted Average
331,373		99.81% Pervious Area
642		0.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.5	837	0.0870	1.12		**Lag/CN Method,**

Summary for Subcatchment 27S: Flow to Town Land

Runoff = 24.3 cfs @ 12.30 hrs, Volume= 116,222 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
311,206	70	Woods, Good, HSG C
311,206		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.0	820	0.0270	0.62		**Lag/CN Method,**

Summary for Subcatchment 28S: Overland flow to CB behind #10 Delmar

Runoff = 33.0 cfs @ 12.17 hrs, Volume= 124,103 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
255,692	70	Woods, Good, HSG C
5,785	98	Roofs, HSG C
62,508	74	>75% Grass cover, Good, HSG C
323,985	71	Weighted Average
318,200		98.21% Pervious Area
5,785		1.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	770	0.0805	1.09		**Lag/CN Method,**

Summary for Subcatchment 29S: Area to 24" Culvet at 125 Sherly Rd

Runoff = 55.7 cfs @ 12.59 hrs, Volume= 365,341 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
506,676	70	Woods, Good, HSG C
127,527	77	Woods, Good, HSG D
46,347	74	>75% Grass cover, Good, HSG C
5,350	98	Roofs, HSG C
267,869	70	Woods, Good, HSG C
953,769	71	Weighted Average
948,419		99.44% Pervious Area
5,350		0.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.6	1,225	0.1100	1.39		**Lag/CN Method,**
28.7	461	0.0060	0.27		**Lag/CN Method,**
43.3	1,686	Total			

Summary for Subcatchment 30S: To stream channel discharging towards Providence Road.

Runoff = 48.2 cfs @ 13.05 hrs, Volume= 447,755 cf, Depth= 4.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
455,559	70	Woods, Good, HSG C
286,331	77	Woods, Good, HSG D
122,174	74	>75% Grass cover, Good, HSG C
9,441	98	Roofs, HSG C
266,787	70	Woods, Good, HSG C
1,140,292	72	Weighted Average
1,130,851		99.17% Pervious Area
9,441		0.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
78.8	1,506	0.0050	0.32		**Lag/CN Method,**

Summary for Subcatchment 31S: Area to Basin at Int of Tessier Ln and S Tessier

Runoff = 33.8 cfs @ 12.15 hrs, Volume= 123,915 cf, Depth= 4.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
166,328	70	Woods, Good, HSG C
11,360	98	Roofs, HSG C
8,077	98	Paved parking, HSG C
1,583	96	Gravel surface, HSG C
120,665	74	>75% Grass cover, Good, HSG C
308,013	73	Weighted Average
288,576		93.69% Pervious Area
19,437		6.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.8	1,015	0.1330	1.56		**Lag/CN Method,**

Summary for Subcatchment 32S: Area to 24" culvert S Tessier Rd

Runoff = 48.8 cfs @ 12.27 hrs, Volume= 222,436 cf, Depth= 4.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
492,019	70	Woods, Good, HSG C
5,052	98	Roofs, HSG C
46,558	74	>75% Grass cover, Good, HSG C
8,382	98	Paved parking, HSG C
14,464	96	Gravel surface, HSG C
566,475	72	Weighted Average
553,041		97.63% Pervious Area
13,434		2.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.5	1,796	0.1080	1.53		**Lag/CN Method,**

Summary for Subcatchment 33S: Area from S. Tessier to raodway drainage

Runoff = 7.3 cfs @ 12.09 hrs, Volume= 23,505 cf, Depth= 6.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
20,661	74	>75% Grass cover, Good, HSG C
7,905	70	Woods, Good, HSG C
1,963	98	Roofs, HSG C
16,509	98	Paved parking, HSG C
47,038	83	Weighted Average
28,566		60.73% Pervious Area
18,472		39.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	205	0.1070	1.38		**Lag/CN Method,**
2.5	205	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 34S: Overland flow to CB street drainage S.Tessier

Runoff = 13.2 cfs @ 12.09 hrs, Volume= 41,462 cf, Depth= 5.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
28,614	74	>75% Grass cover, Good, HSG C
44,981	70	Woods, Good, HSG C
14,532	98	Paved parking, HSG C
5,879	98	Roofs, HSG C
94,006	77	Weighted Average
73,595		78.29% Pervious Area
20,411		21.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.4	500	0.1360	1.54		**Lag/CN Method,**
5.4	500	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 35S: Flow to 12" at #127 S. Tessier

Runoff = 46.9 cfs @ 12.24 hrs, Volume= 203,677 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
460,004	70	Woods, Good, HSG C
62,031	74	>75% Grass cover, Good, HSG C
4,122	98	Roofs, HSG C
5,566	96	Gravel surface, HSG C
531,723	71	Weighted Average
527,601		99.22% Pervious Area
4,122		0.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	1,608	0.1200	1.54		**Lag/CN Method,**

Summary for Subcatchment 36S: Area to S. Tessier, south of int. with Spring Hill

Runoff = 6.8 cfs @ 12.09 hrs, Volume= 21,447 cf, Depth= 4.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
36,161	70	Woods, Good, HSG C
897	98	Roofs, HSG C
10,641	74	>75% Grass cover, Good, HSG C
4,362	98	Paved parking, HSG C
52,061	74	Weighted Average
46,802		89.90% Pervious Area
5,259		10.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.6	485	0.1460	1.45		**Lag/CN Method,**
5.6	485	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 37S: area to #50 Hudson

Runoff = 8.5 cfs @ 12.09 hrs, Volume= 26,767 cf, Depth= 4.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
28,484	70	Woods, Good, HSG C
3,980	98	Roofs, HSG C
31,042	74	>75% Grass cover, Good, HSG C
1,469	98	Paved parking, HSG C
64,975	74	Weighted Average
59,526		91.61% Pervious Area
5,449		8.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.8	506	0.1420	1.44		**Lag/CN Method,**
5.8	506	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 38S: Area from #446 No Tessier, across Roadway

Runoff = 18.2 cfs @ 12.27 hrs, Volume= 82,979 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
194,477	70	Woods, Good, HSG C
5,440	98	Paved parking, HSG C
1,401	98	Roofs, HSG C
15,310	74	>75% Grass cover, Good, HSG C
216,628	71	Weighted Average
209,787		96.84% Pervious Area
6,841		3.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.5	1,481	0.0840	1.27		**Lag/CN Method,**

Summary for Subcatchment 39S: Road drainage to int. of No Tessier and Elston

Runoff = 9.4 cfs @ 12.12 hrs, Volume= 31,756 cf, Depth= 5.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
29,652	70	Woods, Good, HSG C
3,789	98	Roofs, HSG C
10,965	98	Paved parking, HSG C
29,215	70	Woods, Good, HSG C
73,621	76	Weighted Average
58,867		79.96% Pervious Area
14,754		20.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	595	0.0820	1.20		**Lag/CN Method,**

Summary for Subcatchment 40S: Area tp drop inlet, int No. Tessier and Elston

Runoff = 17.9 cfs @ 12.19 hrs, Volume= 70,472 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
164,895	70	Woods, Good, HSG C
967	98	Roofs, HSG C
18,114	74	>75% Grass cover, Good, HSG C
183,976	71	Weighted Average
183,009		99.47% Pervious Area
967		0.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	986	0.0930	1.23		**Lag/CN Method,**

Summary for Subcatchment 43S: Area from Curtin to 4" outlet @ #242 Fowler

Runoff = 20.1 cfs @ 12.15 hrs, Volume= 73,238 cf, Depth= 4.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
155,312	70	Woods, Good, HSG C
1,041	98	Roofs, HSG C
7,233	98	Paved parking, HSG C
22,928	74	>75% Grass cover, Good, HSG C
186,514	72	Weighted Average
178,240		95.56% Pervious Area
8,274		4.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	879	0.1160	1.38		**Lag/CN Method,**

Summary for Subcatchment 44S: Area flowing to 36" culvert at #277 Fowler Rd

Runoff = 31.8 cfs @ 12.17 hrs, Volume= 120,267 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
269,233	70	Woods, Good, HSG C
884	98	Roofs, HSG C
6,079	98	Paved parking, HSG C
37,776	74	>75% Grass cover, Good, HSG C
313,972	71	Weighted Average
307,009		97.78% Pervious Area
6,963		2.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	988	0.1160	1.37		**Lag/CN Method,**

Summary for Subcatchment 45S: Area Flowing to 24" CMP at Driveway of #317 Fowler

Runoff = 15.6 cfs @ 12.11 hrs, Volume= 51,617 cf, Depth= 4.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
101,008	70	Woods, Good, HSG C
515	98	Unconnected roofs, HSG C
7,450	98	Paved parking, HSG C
22,479	74	>75% Grass cover, Good, HSG C
131,452	72	Weighted Average
123,487		93.94% Pervious Area
7,965		6.06% Impervious Area
515		6.47% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	709	0.1550	1.53		**Lag/CN Method,**

Summary for Subcatchment 46S: Flow to 24" Culvert (assumed) at driveway of #359 Fowler

Runoff = 46.0 cfs @ 12.10 hrs, Volume= 147,989 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
346,989	70	Woods, Good, HSG C
2,319	98	Roofs, HSG C
8,986	98	Paved parking, HSG C
28,050	74	>75% Grass cover, Good, HSG C
386,344	71	Weighted Average
375,039		97.07% Pervious Area
11,305		2.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.8	589	0.1600	1.45		**Lag/CN Method,**

Summary for Subcatchment 47S: Area to Int Stream Channel @ #379 Fowler

Runoff = 26.4 cfs @ 12.15 hrs, Volume= 96,858 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
237,662	70	Woods, Good, HSG C
9,297	74	>75% Grass cover, Good, HSG C
1,016	98	Roofs, HSG C
4,886	98	Paved parking, HSG C
252,861	71	Weighted Average
246,959		97.67% Pervious Area
5,902		2.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	849	0.1110	1.30		**Lag/CN Method,**

Summary for Subcatchment 48S: Area to Ex. WL behind #429

Runoff = 46.4 cfs @ 12.33 hrs, Volume= 229,936 cf, Depth= 4.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
501,824	70	Woods, Good, HSG C
3,534	98	Roofs, HSG C
6,379	96	Gravel surface, HSG C
19,678	98	Paved parking, HSG C
54,160	74	>75% Grass cover, Good, HSG C
585,575	72	Weighted Average
562,363		96.04% Pervious Area
23,212		3.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.9	1,745	0.0690	1.22		**Lag/CN Method,**

Summary for Subcatchment 49S: Area to 18" Culvert udner Fowler Rd at #359

Runoff = 100.6 cfs @ 12.21 hrs, Volume= 411,477 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
1,052,252	70	Woods, Good, HSG C
3,725	98	Roofs, HSG C
18,234	98	Paved parking, HSG C
1,074,211	71	Weighted Average
1,052,252		97.96% Pervious Area
21,959		2.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	1,228	0.1060	1.37		**Lag/CN Method,**

Summary for Reach 17R: Path to CB

Inflow Area = 293,131 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 25.7 cfs @ 12.23 hrs, Volume= 109,472 cf
Outflow = 25.4 cfs @ 12.29 hrs, Volume= 109,472 cf, Atten= 1%, Lag= 3.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Max. Velocity= 5.09 fps, Min. Travel Time= 2.0 min
Avg. Velocity = 1.67 fps, Avg. Travel Time= 6.0 min

Peak Storage= 2,997 cf @ 12.25 hrs
Average Depth at Peak Storage= 0.26'
Bank-Full Depth= 2.00' Flow Area= 90.0 sf, Capacity= 1,429.4 cfs

15.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 15.0 '/' Top Width= 75.00'
Length= 600.0' Slope= 0.1100 '/'
Inlet Invert= 426.00', Outlet Invert= 360.00'

‡

Summary for Reach 18R: Path to CB

Inflow Area = 332,015 sf, 0.19% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 32.3 cfs @ 12.17 hrs, Volume= 123,993 cf
Outflow = 31.3 cfs @ 12.25 hrs, Volume= 123,993 cf, Atten= 3%, Lag= 4.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Max. Velocity= 4.90 fps, Min. Travel Time= 2.6 min
Avg. Velocity = 1.54 fps, Avg. Travel Time= 8.4 min

Peak Storage= 4,933 cf @ 12.21 hrs
Average Depth at Peak Storage= 0.32'
Bank-Full Depth= 2.00' Flow Area= 90.0 sf, Capacity= 1,223.0 cfs

15.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 15.0 '/' Top Width= 75.00'
Length= 770.0' Slope= 0.0805 '/'
Inlet Invert= 422.00', Outlet Invert= 360.00'

‡

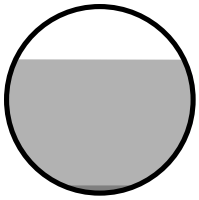
Summary for Reach 33R: 24" CMP

Inflow Area = 921,526 sf, 5.57% Impervious, Inflow Depth = 3.79" for 100-Year event
Inflow = 33.2 cfs @ 12.13 hrs, Volume= 290,681 cf
Outflow = 33.2 cfs @ 12.13 hrs, Volume= 290,681 cf, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Max. Velocity= 14.08 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.86 fps, Avg. Travel Time= 0.8 min

Peak Storage= 307 cf @ 12.13 hrs
Average Depth at Peak Storage= 1.43' above invert (1.35' above fill)
Bank-Full Depth= 2.00' above invert (1.92' above fill) Flow Area= 3.1 sf, Capacity= 38.8 cfs

24.0" Round Pipe w/ 1.0" inside fill
n= 0.025
Length= 130.0' Slope= 0.1138 '/'
Inlet Invert= 277.80', Outlet Invert= 263.00'



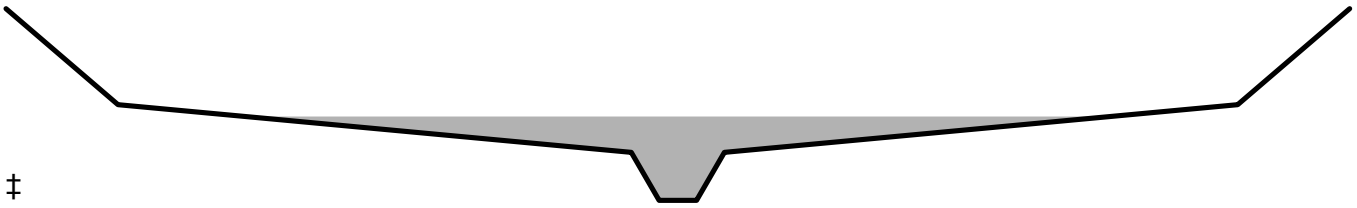
Summary for Reach DP14: From pond behind #429 Fowler Rd. to P.L. of #379

Inflow Area = 838,436 sf, 3.47% Impervious, Inflow Depth = 4.68" for 100-Year event
Inflow = 63.8 cfs @ 12.26 hrs, Volume= 326,794 cf
Outflow = 63.4 cfs @ 12.32 hrs, Volume= 326,794 cf, Atten= 1%, Lag= 3.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Max. Velocity= 3.28 fps, Min. Travel Time= 1.7 min
Avg. Velocity = 1.94 fps, Avg. Travel Time= 2.8 min

Peak Storage= 7,444 cf @ 12.29 hrs
Average Depth at Peak Storage= 1.75'
Bank-Full Depth= 4.00' Flow Area= 168.0 sf, Capacity= 1,335.6 cfs

Custom cross-section, Length= 330.0' Slope= 0.0152 '/'
Constant n= 0.040 Mountain streams
Inlet Invert= 408.00', Outlet Invert= 403.00'



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Offset (feet)	Elevation (feet)	Chan.Depth (feet)
-36.00	4.00	0.00
-30.00	2.00	2.00
-2.50	1.00	3.00
-1.00	0.00	4.00
1.00	0.00	4.00
2.50	1.00	3.00
30.00	2.00	2.00
36.00	4.00	0.00

Depth (feet)	End Area (sq-ft)	Perim. (feet)	Storage (cubic-feet)	Discharge (cfs)
0.00	0.0	2.0	0	0.0
1.00	3.5	5.6	1,155	11.7
2.00	36.0	60.6	11,880	116.3
4.00	168.0	73.3	55,440	1,335.6

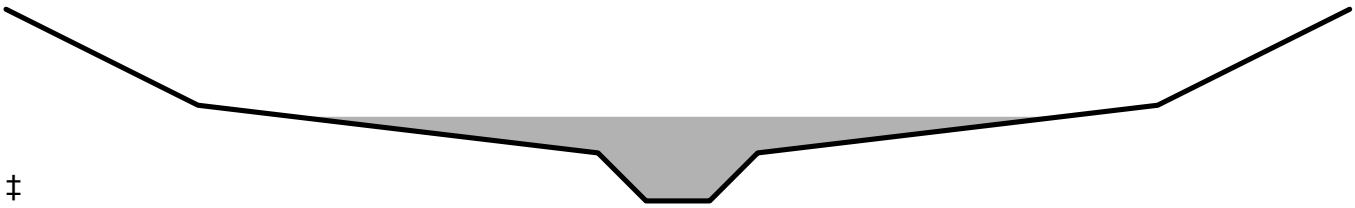
Summary for Reach R48: Int. Stream from Prop. Line of #379 Fowler to Cullvert

Inflow Area = 1,224,780 sf, 3.30% Impervious, Inflow Depth = 4.65" for 100-Year event
Inflow = 86.2 cfs @ 12.16 hrs, Volume= 474,783 cf
Outflow = 86.2 cfs @ 12.22 hrs, Volume= 474,783 cf, Atten= 0%, Lag= 3.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Max. Velocity= 6.22 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 3.50 fps, Avg. Travel Time= 0.8 min

Peak Storage= 2,447 cf @ 12.16 hrs
Average Depth at Peak Storage= 1.75'
Bank-Full Depth= 4.00' Flow Area= 93.0 sf, Capacity= 1,322.6 cfs

Custom cross-section, Length= 170.0' Slope= 0.0529 '/'
Constant n= 0.040 Mountain streams
Inlet Invert= 403.00', Outlet Invert= 394.00'



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Offset (feet)	Elevation (feet)	Chan.Depth (feet)
-21.00	4.00	0.00
-15.00	2.00	2.00
-2.50	1.00	3.00
-1.00	0.00	4.00
1.00	0.00	4.00
2.50	1.00	3.00
15.00	2.00	2.00
21.00	4.00	0.00

Depth (feet)	End Area (sq-ft)	Perim. (feet)	Storage (cubic-feet)	Discharge (cfs)
0.00	0.0	2.0	0	0.0
1.00	3.5	5.6	595	21.9
2.00	21.0	30.7	3,570	139.4
4.00	93.0	43.3	15,810	1,322.6

Summary for Pond 1P: Basin at int. S Tessier and Tessier Ln

Inflow Area = 308,013 sf, 6.31% Impervious, Inflow Depth = 4.83" for 100-Year event
Inflow = 33.8 cfs @ 12.15 hrs, Volume= 123,915 cf
Outflow = 33.8 cfs @ 12.16 hrs, Volume= 123,869 cf, Atten= 0%, Lag= 0.6 min
Primary = 6.0 cfs @ 12.16 hrs, Volume= 81,351 cf
Secondary = 27.8 cfs @ 12.16 hrs, Volume= 42,518 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 289.54' @ 12.16 hrs Surf.Area= 0 sf Storage= 4,019 cf

Plug-Flow detention time= 18.9 min calculated for 123,869 cf (100% of inflow)
Center-of-Mass det. time= 18.6 min (841.4 - 822.8)

Volume	Invert	Avail.Storage	Storage Description
#1	287.80'	4,800 cf	**Custom Stage Data** Listed below

Elevation (feet)	Cum.Store (cubic-feet)
287.80	0
288.00	1,405
290.00	4,800

Device	Routing	Invert	Outlet Devices
#1	Primary	287.80'	**15.0" Round Culvert** L= 50.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 287.80' / 287.30' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	287.80'	**24.0" W x 18.0" H Vert. Orifice/Grate** C= 0.600
#3	Secondary	288.75'	**15.0' long x 30.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=6.0 cfs @ 12.16 hrs HW=289.54' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 6.0 cfs @ 4.89 fps)
↑—**2=Orifice/Grate** (Passes 6.0 cfs of 14.0 cfs potential flow)

Secondary OutFlow Max=27.8 cfs @ 12.16 hrs HW=289.54' (Free Discharge)
↑—**3=Broad-Crested Rectangular Weir** (Weir Controls 27.8 cfs @ 2.35 fps)

Summary for Pond 2P: Ex. Wetlands at 24" Culvert S Tessier

Inflow Area = 566,475 sf, 2.37% Impervious, Inflow Depth = 5.61" for 100-Year event
Inflow = 71.5 cfs @ 12.21 hrs, Volume= 264,954 cf
Outflow = 71.4 cfs @ 12.22 hrs, Volume= 264,954 cf, Atten= 0%, Lag= 0.2 min
Primary = 21.9 cfs @ 12.22 hrs, Volume= 185,825 cf
Secondary = 49.5 cfs @ 12.22 hrs, Volume= 79,129 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Peak Elev= 286.17' @ 12.22 hrs Surf.Area= 419 sf Storage= 606 cf

Plug-Flow detention time= 0.1 min calculated for 264,807 cf (100% of inflow)
Center-of-Mass det. time= 0.1 min (817.3 - 817.2)

Volume	Invert	Avail.Storage	Storage Description
#1	281.80'	2,545 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
281.80	0	0	0
282.00	10	1	1
284.00	117	127	128
286.00	300	417	545
288.00	1,700	2,000	2,545

Device	Routing	Invert	Outlet Devices
#1	Secondary	283.75'	**5.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	281.80'	**24.0" Round Culvert** L= 25.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 281.80' / 277.85' S= 0.1580 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf

Primary OutFlow Max=21.9 cfs @ 12.22 hrs HW=286.16' (Free Discharge)
↑—**2=Culvert** (Inlet Controls 21.9 cfs @ 6.96 fps)

Secondary OutFlow Max=49.1 cfs @ 12.22 hrs HW=286.16' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 49.1 cfs @ 4.08 fps)

Summary for Pond 3P: 36" RCP Culvert under Fowler Rd at #277

Inflow Area = 2,744,415 sf, 2.82% Impervious, Inflow Depth = 3.89" for 100-Year event
Inflow = 114.6 cfs @ 12.38 hrs, Volume= 890,383 cf
Outflow = 94.6 cfs @ 12.56 hrs, Volume= 890,383 cf, Atten= 17%, Lag= 11.3 min
Primary = 89.2 cfs @ 12.56 hrs, Volume= 886,924 cf
Secondary = 5.5 cfs @ 12.56 hrs, Volume= 3,459 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 377.29' @ 12.56 hrs Surf.Area= 19,232 sf Storage= 33,182 cf

Plug-Flow detention time= 1.2 min calculated for 889,888 cf (100% of inflow)
Center-of-Mass det. time= 1.2 min (876.2 - 875.0)

Volume	Invert	Avail.Storage	Storage Description
#1	371.40'	48,085 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
371.40	0	0	0
372.00	50	15	15
374.00	200	250	265
376.00	12,306	12,506	12,771
378.00	23,008	35,314	48,085

Device	Routing	Invert	Outlet Devices
#1	Primary	371.40'	**36.0" Round Culvert** L= 43.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 371.40' / 370.33' S= 0.0249 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Secondary	376.95'	**10.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=89.2 cfs @ 12.56 hrs HW=377.29' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 89.2 cfs @ 12.61 fps)

Secondary OutFlow Max=5.4 cfs @ 12.56 hrs HW=377.29' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 5.4 cfs @ 1.58 fps)

Summary for Pond 4P: 24" CMP at Driveway of #317 Fowler Rd

Inflow Area = 2,430,443 sf, 2.89% Impervious, Inflow Depth = 3.80" for 100-Year event
Inflow = 110.0 cfs @ 12.17 hrs, Volume= 770,115 cf
Outflow = 96.9 cfs @ 12.41 hrs, Volume= 770,115 cf, Atten= 12%, Lag= 14.2 min
Primary = 96.9 cfs @ 12.41 hrs, Volume= 770,115 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 381.93' @ 12.41 hrs Surf.Area= 31,331 sf Storage= 97,861 cf

Plug-Flow detention time= 26.4 min calculated for 769,688 cf (100% of inflow)
Center-of-Mass det. time= 26.4 min (882.3 - 855.9)

Volume	Invert	Avail.Storage	Storage Description
#1	376.00'	172,808 cf	**Custom Stage Data-From Lidar (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
376.00	0	0	0
378.00	12,334	12,334	12,334
380.00	21,924	34,258	46,592
382.00	31,696	53,620	100,212
384.00	40,900	72,596	172,808

Device	Routing	Invert	Outlet Devices
#1	Primary	376.00'	**24.0" Round Culvert** L= 50.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 376.00' / 375.00' S= 0.0200 '/' Cc= 0.900

			n= 0.025 Corrugated metal, Flow Area= 3.14 sf
#2	Primary	381.00'	**30.0' long x 15.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=96.7 cfs @ 12.41 hrs HW=381.92' (Free Discharge)
1=Culvert (Inlet Controls 26.5 cfs @ 8.44 fps)
2=Broad-Crested Rectangular Weir (Weir Controls 70.2 cfs @ 2.53 fps)

Summary for Pond 5P: 24" CMP (assumed) at driveay of #359 Fowler

Inflow Area = 1,224,780 sf, 3.30% Impervious, Inflow Depth = 4.65" for 100-Year event
Inflow = 86.2 cfs @ 12.22 hrs, Volume= 474,783 cf
Outflow = 86.4 cfs @ 12.22 hrs, Volume= 474,783 cf, Atten= 0%, Lag= 0.0 min
Primary = 86.4 cfs @ 12.22 hrs, Volume= 474,783 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 393.57' @ 12.22 hrs Surf.Area= 6,960 sf Storage= 17,638 cf

Plug-Flow detention time= 3.1 min calculated for 474,520 cf (100% of inflow)
Center-of-Mass det. time= 3.1 min (837.6 - 834.5)

Volume	Invert	Avail.Storage	Storage Description
#1	387.00'	20,778 cf	**Estimated areas (LIDAR) (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
387.00	0	0	0
388.00	508	254	254
390.00	1,799	2,307	2,561
392.00	4,376	6,175	8,736
394.00	7,666	12,042	20,778

Device	Routing	Invert	Outlet Devices
#1	Primary	387.00'	**24.0" Round 24" CMP Culvert (assumed)**
			L= 50.0' CMP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 387.00' / 386.00' S= 0.0200 '/' Cc= 0.900
			n= 0.025 Corrugated metal, Flow Area= 3.14 sf
#2	Primary	393.00'	**50.0' long x 20.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=86.2 cfs @ 12.22 hrs HW=393.57' (Free Discharge)
1=24" CMP Culvert (assumed) (Inlet Controls 28.2 cfs @ 8.97 fps)
2=Broad-Crested Rectangular Weir (Weir Controls 58.0 cfs @ 2.04 fps)

Summary for Pond 7P: 18" Culvert under Fowler TO #359

Inflow Area = 1,074,211 sf, 2.04% Impervious, Inflow Depth = 4.60" for 100-Year event
Inflow = 100.6 cfs @ 12.21 hrs, Volume= 411,477 cf
Outflow = 99.9 cfs @ 12.22 hrs, Volume= 411,477 cf, Atten= 1%, Lag= 0.8 min
Primary = 11.7 cfs @ 12.22 hrs, Volume= 243,715 cf
Secondary = 88.2 cfs @ 12.22 hrs, Volume= 167,761 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 390.21' @ 12.22 hrs Surf.Area= 5,686 sf Storage= 10,283 cf

Plug-Flow detention time= 3.5 min calculated for 411,248 cf (100% of inflow)
Center-of-Mass det. time= 3.5 min (834.3 - 830.8)

Volume	Invert	Avail.Storage	Storage Description
#1	386.30'	11,913 cf	**Custom Stage Data- (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
386.30	0	0	0
388.00	1,829	1,555	1,555
390.00	5,686	7,515	9,070
390.50	5,686	2,843	11,913

Device	Routing	Invert	Outlet Devices
#1	Primary	386.30'	**18.0" Round Culvert** L= 40.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 386.30' / 385.60' S= 0.0175 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf
#2	Secondary	389.00'	**25.0' long x 25.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=11.6 cfs @ 12.22 hrs HW=390.21' (Free Discharge)
↑**1=Culvert** (Barrel Controls 11.6 cfs @ 6.59 fps)

Secondary OutFlow Max=87.5 cfs @ 12.22 hrs HW=390.21' (Free Discharge)
↑**2=Broad-Crested Rectangular Weir** (Weir Controls 87.5 cfs @ 2.90 fps)

Summary for Link 2L: Cuvlert overflow to offiste northward

Inflow = 88.2 cfs @ 12.22 hrs, Volume= 167,761 cf
Primary = 88.2 cfs @ 12.22 hrs, Volume= 167,761 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link 48L: (new Link)

Inflow Area = 2,744,415 sf, 2.82% Impervious, Inflow Depth = 4.61" for 100-Year event
Inflow = 153.1 cfs @ 12.27 hrs, Volume= 1,054,685 cf
Primary = 153.1 cfs @ 12.27 hrs, Volume= 1,054,685 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP17: Kidd Porperty Line4

Inflow Area = 293,131 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 25.7 cfs @ 12.23 hrs, Volume= 109,472 cf
Primary = 25.7 cfs @ 12.23 hrs, Volume= 109,472 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP18: Kidd Property Line5

Inflow Area = 332,015 sf, 0.19% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 32.3 cfs @ 12.17 hrs, Volume= 123,993 cf
Primary = 32.3 cfs @ 12.17 hrs, Volume= 123,993 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP27: Flow to town Land

Inflow Area = 311,206 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 24.3 cfs @ 12.30 hrs, Volume= 116,222 cf
Primary = 24.3 cfs @ 12.30 hrs, Volume= 116,222 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP1: CB Behin #10 Delmar

Inflow Area = 949,131 sf, 0.68% Impervious, Inflow Depth = 4.52" for 100-Year event
Inflow = 83.7 cfs @ 12.23 hrs, Volume= 357,567 cf
Primary = 83.7 cfs @ 12.23 hrs, Volume= 357,567 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP12: Flow to DI - 4" outlet discharge to #242

Inflow Area = 186,514 sf, 4.44% Impervious, Inflow Depth = 4.93" for 100-Year event
Inflow = 20.1 cfs @ 12.15 hrs, Volume= 76,697 cf
Primary = 20.1 cfs @ 12.15 hrs, Volume= 76,697 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP13: 36" RCP Culvert under Fowler Road @#277

Inflow Area = 2,744,415 sf, 2.82% Impervious, Inflow Depth = 3.88" for 100-Year event
Inflow = 89.2 cfs @ 12.56 hrs, Volume= 886,924 cf
Primary = 89.2 cfs @ 12.56 hrs, Volume= 886,924 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP2: 24" culvert #125 Sheryl Rd.

Inflow Area = 953,769 sf, 0.56% Impervious, Inflow Depth = 4.60" for 100-Year event
Inflow = 55.7 cfs @ 12.59 hrs, Volume= 365,341 cf
Primary = 55.7 cfs @ 12.59 hrs, Volume= 365,341 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP3: DP3

Inflow Area = 1,140,292 sf, 0.83% Impervious, Inflow Depth = 4.71" for 100-Year event
Inflow = 48.2 cfs @ 13.05 hrs, Volume= 447,755 cf
Primary = 48.2 cfs @ 13.05 hrs, Volume= 447,755 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP4: DP4 -24" cuvlert at #149 S.Tessier

Inflow Area = 921,526 sf, 5.57% Impervious, Inflow Depth = 4.82" for 100-Year event
Inflow = 81.4 cfs @ 12.21 hrs, Volume= 369,810 cf
Primary = 81.4 cfs @ 12.21 hrs, Volume= 369,810 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP4+5: DP 4+5 - Wetland System behid #148 S.Tessier

Inflow Area = 1,547,255 sf, 4.90% Impervious, Inflow Depth = 4.77" for 100-Year event
Inflow = 134.9 cfs @ 12.21 hrs, Volume= 614,948 cf
Primary = 134.9 cfs @ 12.21 hrs, Volume= 614,948 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP5: pipe discharge at #127 S. Tessier

Inflow Area = 625,729 sf, 3.92% Impervious, Inflow Depth = 4.70" for 100-Year event
Inflow = 53.6 cfs @ 12.22 hrs, Volume= 245,139 cf
Primary = 53.6 cfs @ 12.22 hrs, Volume= 245,139 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP6: To Spring Hill, at Int with S. Tessier

Inflow Area = 52,061 sf, 10.10% Impervious, Inflow Depth = 4.94" for 100-Year event
Inflow = 6.8 cfs @ 12.09 hrs, Volume= 21,447 cf
Primary = 6.8 cfs @ 12.09 hrs, Volume= 21,447 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP7: #50 Hudson St.

Inflow Area = 64,975 sf, 8.39% Impervious, Inflow Depth = 4.94" for 100-Year event
Inflow = 8.5 cfs @ 12.09 hrs, Volume= 26,767 cf
Primary = 8.5 cfs @ 12.09 hrs, Volume= 26,767 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP7+8: Flow Hudson and Spring Hill

Inflow Area = 333,664 sf, 5.26% Impervious, Inflow Depth = 4.72" for 100-Year event
Inflow = 26.8 cfs @ 12.13 hrs, Volume= 131,194 cf
Primary = 26.8 cfs @ 12.13 hrs, Volume= 131,194 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP8: Drainage system, int. Elston and No. Tessier

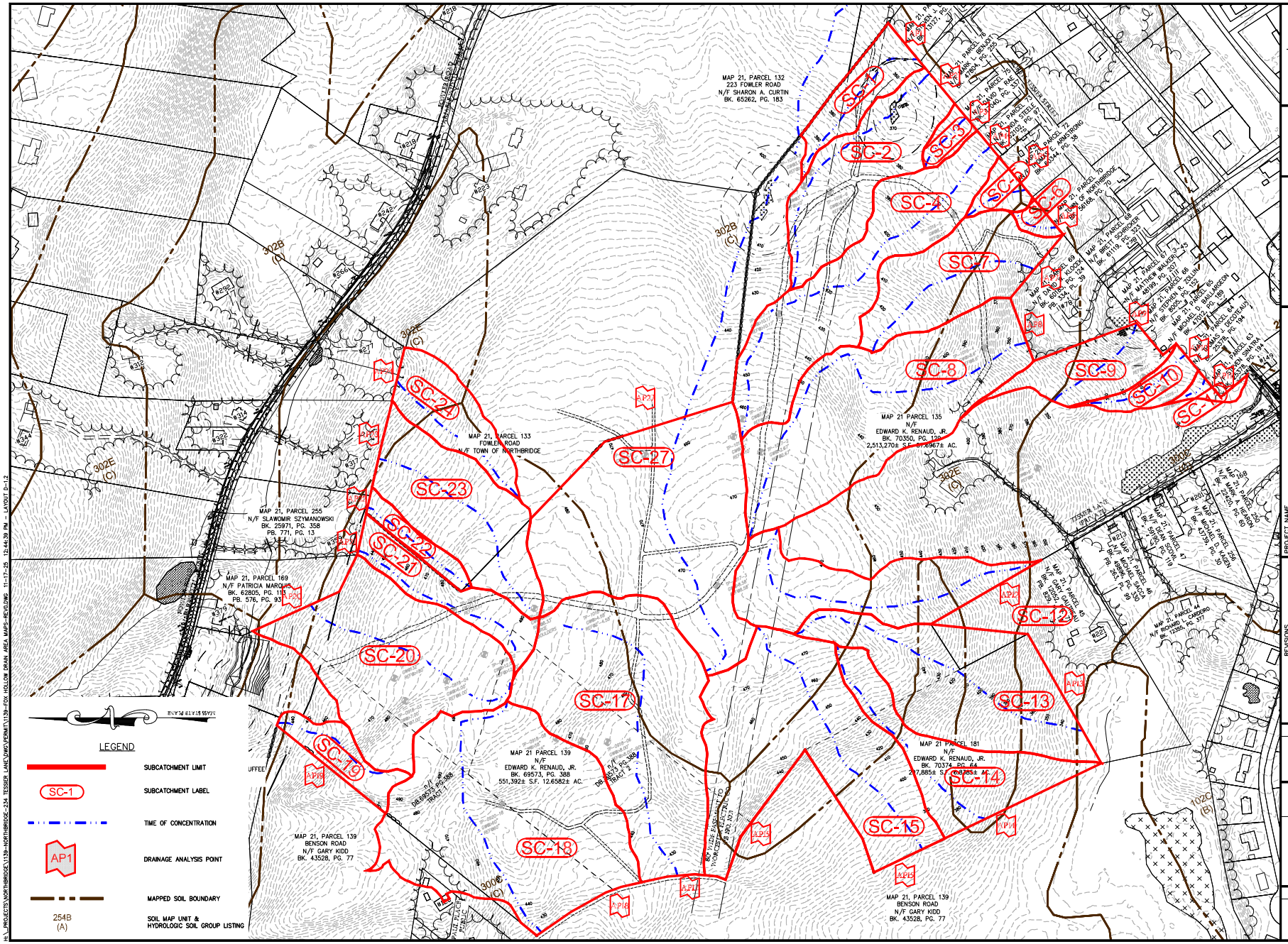
Inflow Area = 216,628 sf, 3.16% Impervious, Inflow Depth = 4.60" for 100-Year event
Inflow = 18.2 cfs @ 12.27 hrs, Volume= 82,979 cf
Primary = 18.2 cfs @ 12.27 hrs, Volume= 82,979 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP9: Flow off Southern Portion of No. Tessier

Inflow Area = 257,597 sf, 6.10% Impervious, Inflow Depth = 4.76" for 100-Year event
Inflow = 26.1 cfs @ 12.16 hrs, Volume= 102,228 cf
Primary = 26.1 cfs @ 12.16 hrs, Volume= 102,228 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs



TURNING POINT ENGINEERING
CIVIL SITE DESIGN
P.O. Box 757 • Sutton, MA 01590
P:(508) 381-1515 F:(508) 647-0189
www.tpecltd.com

PROJECT NAME
FOX HOLLOW
DEFINITIVE SUBDIVIONS
#0 ASHWORTH DRIVE & #191 SOUTHBRIDGE ROAD
ASSESSOR'S MAP 3 LOT A05 AND MAP 6 LOT A01
OXFORD, MASSACHUSETTS

PREPARED FOR
Eastland

Eastland Partners, Inc.
307 Millbury Street
Worcester, MA 01607

REVISIONS		
REV.	DATE	DESCRIPTION

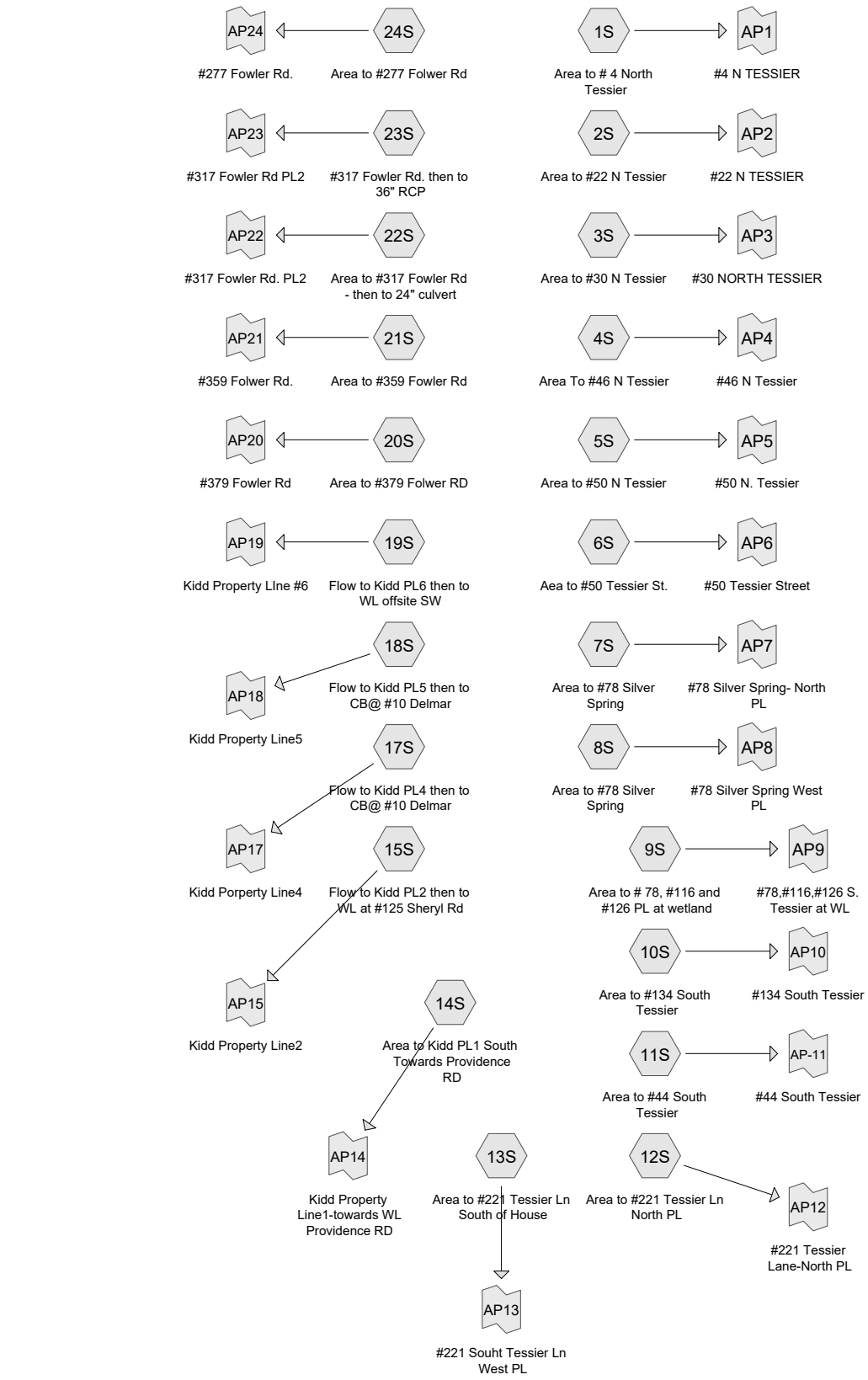
PROJECT NO.	TPE-1001D
DESIGNED BY	JAB, TRB
CHECKED BY	JAB
DATE	NOVEMBER 17, 2025
CAD FILE	H:\PERMIT\1139-DRAINAGE MAP

GRAPHIC SCALE
120 0 60 120 240
(IN FEET)
1 inch = 120 feet

SHEET TITLE
PRE-DEVELOPMENT DRAINAGE MAP TO ABUTTERS

SHEET NO.
D-1.2

H:_PROJECTS\NORTHBRIDGE\1139-NORTHBRIDGE_234 TESSIER LANE\DWG\PDMAT\1139-FOX HOLLOW DRAIN AREA MAPS-REVLDWG 11-17-25 12:44:39 PM -- LAYOUT D-1.2



Routing Diagram for 1001-Pre-Dev-ABUTTER-Rev0
Prepared by TURNING POINT ENGINEERING

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
16,436	74	>75% Grass cover, Good, HSG C (7S, 8S, 18S)
107,702	79	Desert shrub range, Good, HSG C (14S)
642	98	Roofs, HSG C (18S)
2,624,315	70	Woods, Good, HSG C (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 12S, 13S, 15S, 17S, 18S, 19S, 20S, 21S, 22S, 23S, 24S)
2,749,095	**70**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
2,749,095	HSG C	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 12S, 13S, 14S, 15S, 17S, 18S, 19S, 20S, 21S, 22S, 23S, 24S
0	HSG D	
0	Other	
2,749,095		**TOTAL AREA**

Time span=0.00-72.00 hrs, dt=0.04 hrs, 1801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Area to # 4 North Tessier Runoff Area=48,800 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=525' Slope=0.0950 '/' Tc=8.2 min CN=70 Runoff=1.0 cfs 3,655 cf

Subcatchment2S: Area to #22 N Tessier Runoff Area=128,117 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=808' Slope=0.0930 '/' Tc=11.7 min CN=70 Runoff=2.3 cfs 9,596 cf

Subcatchment3S: Area to #30 N Tessier Runoff Area=14,018 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=192' Slope=0.1400 '/' Tc=6.0 min CN=70 Runoff=0.3 cfs 1,050 cf

Subcatchment4S: Area To #46 N Tessier Runoff Area=188,111 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=1,228' Slope=0.0880 '/' Tc=16.8 min CN=70 Runoff=3.0 cfs 14,090 cf

Subcatchment5S: Area to #50 N Tessier Runoff Area=16,400 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=197' Slope=0.1070 '/' Tc=6.0 min CN=70 Runoff=0.4 cfs 1,228 cf

Subcatchment6S: Aea to #50 Tessier St. Runoff Area=8,367 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=156' Slope=0.1860 '/' Tc=6.0 min CN=70 Runoff=0.2 cfs 627 cf

Subcatchment7S: Area to #78 Silver Runoff Area=115,409 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=578' Slope=0.1750 '/' Tc=6.5 min CN=70 Runoff=2.4 cfs 8,644 cf

Subcatchment8S: Area to #78 Silver Runoff Area=265,204 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=1,241' Slope=0.1070 '/' Tc=15.4 min CN=70 Runoff=4.3 cfs 19,864 cf

Subcatchment9S: Area to # 78, #116 and Runoff Area=61,856 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=337' Slope=0.2050 '/' Tc=6.0 min CN=70 Runoff=1.3 cfs 4,633 cf

Subcatchment10S: Area to #134 South Runoff Area=24,362 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=383' Slope=0.1540 '/' Tc=6.0 min CN=70 Runoff=0.5 cfs 1,825 cf

Subcatchment11S: Area to #44 South Runoff Area=7,924 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=157' Slope=0.0950 '/' Tc=6.0 min CN=70 Runoff=0.2 cfs 594 cf

Subcatchment12S: Area to #221 Tessier Runoff Area=129,386 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=988' Slope=0.1240 '/' Tc=11.9 min CN=70 Runoff=2.3 cfs 9,691 cf

Subcatchment13S: Area to #221 Tessier Runoff Area=193,500 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=935' Slope=0.1530 '/' Tc=10.3 min CN=70 Runoff=3.6 cfs 14,493 cf

Subcatchment14S: Area to Kidd PL1 Runoff Area=107,702 sf 0.00% Impervious Runoff Depth=1.43"
Flow Length=688' Slope=0.1540 '/' Tc=6.2 min CN=79 Runoff=4.0 cfs 12,812 cf

Subcatchment15S: Flow to Kidd PL2 then Runoff Area=267,869 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=826' Slope=0.1230 '/' Tc=10.4 min CN=70 Runoff=5.0 cfs 20,064 cf

Subcatchment17S: Flow to Kidd PL4 then Runoff Area=293,131 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=996' Slope=0.0660 '/' Tc=16.5 min CN=70 Runoff=4.6 cfs 21,956 cf

Subcatchment18S: Flow to Kidd PL5 then Runoff Area=332,015 sf 0.19% Impervious Runoff Depth=0.90"
Flow Length=837' Slope=0.0870 '/' Tc=12.5 min CN=70 Runoff=5.8 cfs 24,868 cf

Subcatchment19S: Flow to Kidd PL6 then Runoff Area=36,751 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=358' Slope=0.1340 '/' Tc=6.0 min CN=70 Runoff=0.8 cfs 2,753 cf

Subcatchment20S: Area to #379 Folwer Runoff Area=223,139 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=683' Slope=0.1080 '/' Tc=9.5 min CN=70 Runoff=4.3 cfs 16,713 cf

Subcatchment21S: Area to #359 Fowler Rd Runoff Area=61,677 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=633' Slope=0.0853 '/' Tc=10.1 min CN=70 Runoff=1.2 cfs 4,620 cf

Subcatchment22S: Area to #317 Fowler Rd Runoff Area=21,863 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=382' Slope=0.1280 '/' Tc=6.0 min CN=70 Runoff=0.5 cfs 1,638 cf

Subcatchment23S: #317 Fowler Rd. then Runoff Area=138,537 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=693' Slope=0.0880 '/' Tc=10.7 min CN=70 Runoff=2.6 cfs 10,377 cf

Subcatchment24S: Area to #277 Folwer Rd Runoff Area=64,957 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=495' Slope=0.1333 '/' Tc=6.6 min CN=70 Runoff=1.4 cfs 4,865 cf

Link AP-11: #44 South Tessier Inflow=0.2 cfs 594 cf
Primary=0.2 cfs 594 cf

Link AP1: #4 N TESSIER Inflow=1.0 cfs 3,655 cf
Primary=1.0 cfs 3,655 cf

Link AP10: #134 South Tessier Inflow=0.5 cfs 1,825 cf
Primary=0.5 cfs 1,825 cf

Link AP12: #221 Tessier Lane-North PL Inflow=2.3 cfs 9,691 cf
Primary=2.3 cfs 9,691 cf

Link AP13: #221 Souht Tessier Ln West PL Inflow=3.6 cfs 14,493 cf
Primary=3.6 cfs 14,493 cf

Link AP14: Kidd Property Line1-towards WL Providence RD Inflow=4.0 cfs 12,812 cf
Primary=4.0 cfs 12,812 cf

Link AP15: Kidd Property Line2 Inflow=5.0 cfs 20,064 cf
Primary=5.0 cfs 20,064 cf

Link AP17: Kidd Porperty Line4 Inflow=4.6 cfs 21,956 cf
Primary=4.6 cfs 21,956 cf

Link AP18: Kidd Property Line5 Inflow=5.8 cfs 24,868 cf
Primary=5.8 cfs 24,868 cf

Link AP19: Kidd Property LIne #6 Inflow=0.8 cfs 2,753 cf
Primary=0.8 cfs 2,753 cf

Link AP2: #22 N TESSIER Inflow=2.3 cfs 9,596 cf
Primary=2.3 cfs 9,596 cf

Link AP20: #379 Fowler Rd Inflow=4.3 cfs 16,713 cf
Primary=4.3 cfs 16,713 cf

Link AP21: #359 Folwer Rd. Inflow=1.2 cfs 4,620 cf
Primary=1.2 cfs 4,620 cf

Link AP22: #317 Fowler Rd. PL2 Inflow=0.5 cfs 1,638 cf
Primary=0.5 cfs 1,638 cf

Link AP23: #317 Fowler Rd PL2 Inflow=2.6 cfs 10,377 cf
Primary=2.6 cfs 10,377 cf

Link AP24: #277 Fowler Rd. Inflow=1.4 cfs 4,865 cf
Primary=1.4 cfs 4,865 cf

Link AP3: #30 NORTH TESSIER Inflow=0.3 cfs 1,050 cf
Primary=0.3 cfs 1,050 cf

Link AP4: #46 N Tessier Inflow=3.0 cfs 14,090 cf
Primary=3.0 cfs 14,090 cf

Link AP5: #50 N. Tessier Inflow=0.4 cfs 1,228 cf
Primary=0.4 cfs 1,228 cf

Link AP6: #50 Tessier Street Inflow=0.2 cfs 627 cf
Primary=0.2 cfs 627 cf

Link AP7: #78 Silver Spring- North PL Inflow=2.4 cfs 8,644 cf
Primary=2.4 cfs 8,644 cf

Link AP8: #78 Silver Spring West PL Inflow=4.3 cfs 19,864 cf
Primary=4.3 cfs 19,864 cf

Link AP9: #78,#116,#126S. Tessier at WL Inflow=1.3 cfs 4,633 cf
Primary=1.3 cfs 4,633 cf

Total Runoff Area = 2,749,095 sf Runoff Volume = 210,654 cf Average Runoff Depth = 0.92"
99.98% Pervious = 2,748,453 sf 0.02% Impervious = 642 sf

Time span=0.00-72.00 hrs, dt=0.04 hrs, 1801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Area to # 4 North Tessier Runoff Area=48,800 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=525' Slope=0.0950 '/' Tc=8.2 min CN=70 Runoff=2.5 cfs 8,675 cf

Subcatchment2S: Area to #22 N Tessier Runoff Area=128,117 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=808' Slope=0.0930 '/' Tc=11.7 min CN=70 Runoff=6.0 cfs 22,775 cf

Subcatchment3S: Area to #30 N Tessier Runoff Area=14,018 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=192' Slope=0.1400 '/' Tc=6.0 min CN=70 Runoff=0.8 cfs 2,492 cf

Subcatchment4S: Area To #46 N Tessier Runoff Area=188,111 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=1,228' Slope=0.0880 '/' Tc=16.8 min CN=70 Runoff=7.6 cfs 33,440 cf

Subcatchment5S: Area to #50 N Tessier Runoff Area=16,400 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=197' Slope=0.1070 '/' Tc=6.0 min CN=70 Runoff=0.9 cfs 2,915 cf

Subcatchment6S: Aea to #50 Tessier St. Runoff Area=8,367 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=156' Slope=0.1860 '/' Tc=6.0 min CN=70 Runoff=0.5 cfs 1,487 cf

Subcatchment7S: Area to #78 Silver Runoff Area=115,409 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=578' Slope=0.1750 '/' Tc=6.5 min CN=70 Runoff=6.3 cfs 20,516 cf

Subcatchment8S: Area to #78 Silver Runoff Area=265,204 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=1,241' Slope=0.1070 '/' Tc=15.4 min CN=70 Runoff=11.1 cfs 47,145 cf

Subcatchment9S: Area to # 78, #116 and Runoff Area=61,856 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=337' Slope=0.2050 '/' Tc=6.0 min CN=70 Runoff=3.5 cfs 10,996 cf

Subcatchment10S: Area to #134 South Runoff Area=24,362 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=383' Slope=0.1540 '/' Tc=6.0 min CN=70 Runoff=1.4 cfs 4,331 cf

Subcatchment11S: Area to #44 South Runoff Area=7,924 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=157' Slope=0.0950 '/' Tc=6.0 min CN=70 Runoff=0.4 cfs 1,409 cf

Subcatchment12S: Area to #221 Tessier Runoff Area=129,386 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=988' Slope=0.1240 '/' Tc=11.9 min CN=70 Runoff=6.0 cfs 23,001 cf

Subcatchment13S: Area to #221 Tessier Runoff Area=193,500 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=935' Slope=0.1530 '/' Tc=10.3 min CN=70 Runoff=9.4 cfs 34,398 cf

Subcatchment14S: Area to Kidd PL1 Runoff Area=107,702 sf 0.00% Impervious Runoff Depth=2.91"
Flow Length=688' Slope=0.1540 '/' Tc=6.2 min CN=79 Runoff=8.3 cfs 26,153 cf

Subcatchment15S: Flow to Kidd PL2 then Runoff Area=267,869 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=826' Slope=0.1230 '/' Tc=10.4 min CN=70 Runoff=12.9 cfs 47,619 cf

Subcatchment17S: Flow to Kidd PL4 then Runoff Area=293,131 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=996' Slope=0.0660 '/' Tc=16.5 min CN=70 Runoff=12.0 cfs 52,109 cf

Subcatchment18S: Flow to Kidd PL5 then Runoff Area=332,015 sf 0.19% Impervious Runoff Depth=2.13"
Flow Length=837' Slope=0.0870 '/' Tc=12.5 min CN=70 Runoff=15.1 cfs 59,022 cf

Subcatchment19S: Flow to Kidd PL6 then Runoff Area=36,751 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=358' Slope=0.1340 '/' Tc=6.0 min CN=70 Runoff=2.1 cfs 6,533 cf

Subcatchment20S: Area to #379 Folwer Runoff Area=223,139 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=683' Slope=0.1080 '/' Tc=9.5 min CN=70 Runoff=11.1 cfs 39,667 cf

Subcatchment21S: Area to #359 Fowler Rd Runoff Area=61,677 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=633' Slope=0.0853 '/' Tc=10.1 min CN=70 Runoff=3.0 cfs 10,964 cf

Subcatchment22S: Area to #317 Fowler Rd Runoff Area=21,863 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=382' Slope=0.1280 '/' Tc=6.0 min CN=70 Runoff=1.2 cfs 3,887 cf

Subcatchment23S: #317 Fowler Rd. then Runoff Area=138,537 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=693' Slope=0.0880 '/' Tc=10.7 min CN=70 Runoff=6.6 cfs 24,627 cf

Subcatchment24S: Area to #277 Folwer Rd Runoff Area=64,957 sf 0.00% Impervious Runoff Depth=2.13"
Flow Length=495' Slope=0.1333 '/' Tc=6.6 min CN=70 Runoff=3.5 cfs 11,547 cf

Link AP-11: #44 South Tessier Inflow=0.4 cfs 1,409 cf
Primary=0.4 cfs 1,409 cf

Link AP1: #4 N TESSIER Inflow=2.5 cfs 8,675 cf
Primary=2.5 cfs 8,675 cf

Link AP10: #134 South Tessier Inflow=1.4 cfs 4,331 cf
Primary=1.4 cfs 4,331 cf

Link AP12: #221 Tessier Lane-North PL Inflow=6.0 cfs 23,001 cf
Primary=6.0 cfs 23,001 cf

Link AP13: #221 Souht Tessier Ln West PL Inflow=9.4 cfs 34,398 cf
Primary=9.4 cfs 34,398 cf

Link AP14: Kidd Property Line1-towards WL Providence RD Inflow=8.3 cfs 26,153 cf
Primary=8.3 cfs 26,153 cf

Link AP15: Kidd Property Line2 Inflow=12.9 cfs 47,619 cf
Primary=12.9 cfs 47,619 cf

Link AP17: Kidd Porperty Line4 Inflow=12.0 cfs 52,109 cf
Primary=12.0 cfs 52,109 cf

Link AP18: Kidd Property Line5 Inflow=15.1 cfs 59,022 cf
Primary=15.1 cfs 59,022 cf

Link AP19: Kidd Property LIne #6 Inflow=2.1 cfs 6,533 cf
Primary=2.1 cfs 6,533 cf

Link AP2: #22 N TESSIER Inflow=6.0 cfs 22,775 cf
Primary=6.0 cfs 22,775 cf

Link AP20: #379 Fowler Rd Inflow=11.1 cfs 39,667 cf
Primary=11.1 cfs 39,667 cf

Link AP21: #359 Folwer Rd. Inflow=3.0 cfs 10,964 cf
Primary=3.0 cfs 10,964 cf

Link AP22: #317 Fowler Rd. PL2 Inflow=1.2 cfs 3,887 cf
Primary=1.2 cfs 3,887 cf

Link AP23: #317 Fowler Rd PL2 Inflow=6.6 cfs 24,627 cf
Primary=6.6 cfs 24,627 cf

Link AP24: #277 Fowler Rd. Inflow=3.5 cfs 11,547 cf
Primary=3.5 cfs 11,547 cf

Link AP3: #30 NORTH TESSIER Inflow=0.8 cfs 2,492 cf
Primary=0.8 cfs 2,492 cf

Link AP4: #46 N Tessier Inflow=7.6 cfs 33,440 cf
Primary=7.6 cfs 33,440 cf

Link AP5: #50 N. Tessier Inflow=0.9 cfs 2,915 cf
Primary=0.9 cfs 2,915 cf

Link AP6: #50 Tessier Street Inflow=0.5 cfs 1,487 cf
Primary=0.5 cfs 1,487 cf

Link AP7: #78 Silver Spring- North PL Inflow=6.3 cfs 20,516 cf
Primary=6.3 cfs 20,516 cf

Link AP8: #78 Silver Spring West PL Inflow=11.1 cfs 47,145 cf
Primary=11.1 cfs 47,145 cf

Link AP9: #78,#116,#126S. Tessier at WL Inflow=3.5 cfs 10,996 cf
Primary=3.5 cfs 10,996 cf

Total Runoff Area = 2,749,095 sf Runoff Volume = 495,708 cf Average Runoff Depth = 2.16"
99.98% Pervious = 2,748,453 sf 0.02% Impervious = 642 sf

Time span=0.00-72.00 hrs, dt=0.04 hrs, 1801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Area to # 4 North Tessier Runoff Area=48,800 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=525' Slope=0.0950 '/' Tc=8.2 min CN=70 Runoff=3.6 cfs 12,318 cf

Subcatchment2S: Area to #22 N Tessier Runoff Area=128,117 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=808' Slope=0.0930 '/' Tc=11.7 min CN=70 Runoff=8.6 cfs 32,339 cf

Subcatchment3S: Area to #30 N Tessier Runoff Area=14,018 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=192' Slope=0.1400 '/' Tc=6.0 min CN=70 Runoff=1.1 cfs 3,538 cf

Subcatchment4S: Area To #46 N Tessier Runoff Area=188,111 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=1,228' Slope=0.0880 '/' Tc=16.8 min CN=70 Runoff=11.0 cfs 47,483 cf

Subcatchment5S: Area to #50 N Tessier Runoff Area=16,400 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=197' Slope=0.1070 '/' Tc=6.0 min CN=70 Runoff=1.3 cfs 4,140 cf

Subcatchment6S: Aea to #50 Tessier St. Runoff Area=8,367 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=156' Slope=0.1860 '/' Tc=6.0 min CN=70 Runoff=0.7 cfs 2,112 cf

Subcatchment7S: Area to #78 Silver Runoff Area=115,409 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=578' Slope=0.1750 '/' Tc=6.5 min CN=70 Runoff=9.1 cfs 29,131 cf

Subcatchment8S: Area to #78 Silver Runoff Area=265,204 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=1,241' Slope=0.1070 '/' Tc=15.4 min CN=70 Runoff=16.1 cfs 66,942 cf

Subcatchment9S: Area to # 78, #116 and Runoff Area=61,856 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=337' Slope=0.2050 '/' Tc=6.0 min CN=70 Runoff=5.0 cfs 15,614 cf

Subcatchment10S: Area to #134 South Runoff Area=24,362 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=383' Slope=0.1540 '/' Tc=6.0 min CN=70 Runoff=2.0 cfs 6,149 cf

Subcatchment11S: Area to #44 South Runoff Area=7,924 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=157' Slope=0.0950 '/' Tc=6.0 min CN=70 Runoff=0.6 cfs 2,000 cf

Subcatchment12S: Area to #221 Tessier Runoff Area=129,386 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=988' Slope=0.1240 '/' Tc=11.9 min CN=70 Runoff=8.6 cfs 32,659 cf

Subcatchment13S: Area to #221 Tessier Runoff Area=193,500 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=935' Slope=0.1530 '/' Tc=10.3 min CN=70 Runoff=13.5 cfs 48,843 cf

Subcatchment14S: Area to Kidd PL1 Runoff Area=107,702 sf 0.00% Impervious Runoff Depth=3.93"
Flow Length=688' Slope=0.1540 '/' Tc=6.2 min CN=79 Runoff=11.2 cfs 35,279 cf

Subcatchment15S: Flow to Kidd PL2 then Runoff Area=267,869 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=826' Slope=0.1230 '/' Tc=10.4 min CN=70 Runoff=18.6 cfs 67,615 cf

Subcatchment17S: Flow to Kidd PL4 then Runoff Area=293,131 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=996' Slope=0.0660 '/' Tc=16.5 min CN=70 Runoff=17.3 cfs 73,991 cf

Subcatchment18S: Flow to Kidd PL5 then Runoff Area=332,015 sf 0.19% Impervious Runoff Depth=3.03"
Flow Length=837' Slope=0.0870 '/' Tc=12.5 min CN=70 Runoff=21.7 cfs 83,806 cf

Subcatchment19S: Flow to Kidd PL6 then Runoff Area=36,751 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=358' Slope=0.1340 '/' Tc=6.0 min CN=70 Runoff=3.0 cfs 9,277 cf

Subcatchment20S: Area to #379 Folwer Runoff Area=223,139 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=683' Slope=0.1080 '/' Tc=9.5 min CN=70 Runoff=16.0 cfs 56,324 cf

Subcatchment21S: Area to #359 Fowler Rd Runoff Area=61,677 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=633' Slope=0.0853 '/' Tc=10.1 min CN=70 Runoff=4.3 cfs 15,568 cf

Subcatchment22S: Area to #317 Fowler Rd Runoff Area=21,863 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=382' Slope=0.1280 '/' Tc=6.0 min CN=70 Runoff=1.8 cfs 5,519 cf

Subcatchment23S: #317 Fowler Rd. then Runoff Area=138,537 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=693' Slope=0.0880 '/' Tc=10.7 min CN=70 Runoff=9.5 cfs 34,969 cf

Subcatchment24S: Area to #277 Folwer Rd Runoff Area=64,957 sf 0.00% Impervious Runoff Depth=3.03"
Flow Length=495' Slope=0.1333 '/' Tc=6.6 min CN=70 Runoff=5.1 cfs 16,396 cf

Link AP-11: #44 South Tessier Inflow=0.6 cfs 2,000 cf
Primary=0.6 cfs 2,000 cf

Link AP1: #4 N TESSIER Inflow=3.6 cfs 12,318 cf
Primary=3.6 cfs 12,318 cf

Link AP10: #134 South Tessier Inflow=2.0 cfs 6,149 cf
Primary=2.0 cfs 6,149 cf

Link AP12: #221 Tessier Lane-North PL Inflow=8.6 cfs 32,659 cf
Primary=8.6 cfs 32,659 cf

Link AP13: #221 Souht Tessier Ln West PL Inflow=13.5 cfs 48,843 cf
Primary=13.5 cfs 48,843 cf

Link AP14: Kidd Property Line1-towards WL Providence RD Inflow=11.2 cfs 35,279 cf
Primary=11.2 cfs 35,279 cf

Link AP15: Kidd Property Line2 Inflow=18.6 cfs 67,615 cf
Primary=18.6 cfs 67,615 cf

Link AP17: Kidd Porperty Line4 Inflow=17.3 cfs 73,991 cf
Primary=17.3 cfs 73,991 cf

Link AP18: Kidd Property Line5 Inflow=21.7 cfs 83,806 cf
Primary=21.7 cfs 83,806 cf

Link AP19: Kidd Property LIne #6 Inflow=3.0 cfs 9,277 cf
Primary=3.0 cfs 9,277 cf

Link AP2: #22 N TESSIER Inflow=8.6 cfs 32,339 cf
Primary=8.6 cfs 32,339 cf

Link AP20: #379 Fowler Rd Inflow=16.0 cfs 56,324 cf
Primary=16.0 cfs 56,324 cf

Link AP21: #359 Folwer Rd. Inflow=4.3 cfs 15,568 cf
Primary=4.3 cfs 15,568 cf

Link AP22: #317 Fowler Rd. PL2 Inflow=1.8 cfs 5,519 cf
Primary=1.8 cfs 5,519 cf

Link AP23: #317 Fowler Rd PL2 Inflow=9.5 cfs 34,969 cf
Primary=9.5 cfs 34,969 cf

Link AP24: #277 Fowler Rd. Inflow=5.1 cfs 16,396 cf
Primary=5.1 cfs 16,396 cf

Link AP3: #30 NORTH TESSIER Inflow=1.1 cfs 3,538 cf
Primary=1.1 cfs 3,538 cf

Link AP4: #46 N Tessier Inflow=11.0 cfs 47,483 cf
Primary=11.0 cfs 47,483 cf

Link AP5: #50 N. Tessier Inflow=1.3 cfs 4,140 cf
Primary=1.3 cfs 4,140 cf

Link AP6: #50 Tessier Street Inflow=0.7 cfs 2,112 cf
Primary=0.7 cfs 2,112 cf

Link AP7: #78 Silver Spring- North PL Inflow=9.1 cfs 29,131 cf
Primary=9.1 cfs 29,131 cf

Link AP8: #78 Silver Spring West PL Inflow=16.1 cfs 66,942 cf
Primary=16.1 cfs 66,942 cf

Link AP9: #78,#116,#126S. Tessier at WL Inflow=5.0 cfs 15,614 cf
Primary=5.0 cfs 15,614 cf

Total Runoff Area = 2,749,095 sf Runoff Volume = 702,013 cf Average Runoff Depth = 3.06"
99.98% Pervious = 2,748,453 sf 0.02% Impervious = 642 sf

Summary for Subcatchment 1S: Area to # 4 North Tessier

Runoff = 5.4 cfs @ 12.12 hrs, Volume= 18,225 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
48,800	70	Woods, Good, HSG C
48,800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	525	0.0950	1.06		**Lag/CN Method, Flow Path Tc**

Summary for Subcatchment 2S: Area to #22 N Tessier

Runoff = 12.8 cfs @ 12.16 hrs, Volume= 47,846 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
128,117	70	Woods, Good, HSG C
128,117		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	808	0.0930	1.15		**Lag/CN Method,**

Summary for Subcatchment 3S: Area to #30 N Tessier

Runoff = 1.7 cfs @ 12.09 hrs, Volume= 5,235 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
14,018	70	Woods, Good, HSG C
14,018		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	192	0.1400	1.06		**Lag/CN Method,**
3.0	192	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 4S: Area To #46 N Tessier

Runoff = 16.4 cfs @ 12.23 hrs, Volume= 70,251 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
188,111	70	Woods, Good, HSG C
188,111		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	1,228	0.0880	1.21		**Lag/CN Method,**

Summary for Subcatchment 5S: Area to #50 N Tessier

Runoff = 2.0 cfs @ 12.09 hrs, Volume= 6,125 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
16,400	70	Woods, Good, HSG C
16,400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	197	0.1070	0.93		**Lag/CN Method,**
3.5	197	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 6S: Aea to #50 Tessier St.

Runoff = 1.0 cfs @ 12.09 hrs, Volume= 3,125 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
8,367	70	Woods, Good, HSG C
8,367		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	156	0.1860	1.17		**Lag/CN Method,**
2.2	156	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 7S: Area to #78 Silver Spring

Runoff = 13.5 cfs @ 12.10 hrs, Volume= 43,100 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
113,480	70	Woods, Good, HSG C
1,929	74	>75% Grass cover, Good, HSG C
115,409	70	Weighted Average
115,409		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	578	0.1750	1.47		**Lag/CN Method,**

Summary for Subcatchment 8S: Area to #78 Silver Spring

Runoff = 23.9 cfs @ 12.21 hrs, Volume= 99,042 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
261,377	70	Woods, Good, HSG C
3,827	74	>75% Grass cover, Good, HSG C
265,204	70	Weighted Average
265,204		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	1,241	0.1070	1.34		**Lag/CN Method,**

Summary for Subcatchment 9S: Area to # 78, #116 and #126 PL at wetland

Runoff = 7.4 cfs @ 12.09 hrs, Volume= 23,101 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
61,856	70	Woods, Good, HSG C
61,856		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	337	0.2050	1.43		**Lag/CN Method,**
3.9	337	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 10S: Area to #134 South Tessier

Runoff = 2.9 cfs @ 12.09 hrs, Volume= 9,098 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
24,362	70	Woods, Good, HSG C
24,362		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	383	0.1540	1.27		**Lag/CN Method,**
5.0	383	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 11S: Area to #44 South Tessier

Runoff = 0.9 cfs @ 12.09 hrs, Volume= 2,959 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
7,924	70	Woods, Good, HSG C
7,924		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	157	0.0950	0.84		**Lag/CN Method,**
3.1	157	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 12S: Area to #221 Tessier Ln North PL

Runoff = 12.8 cfs @ 12.17 hrs, Volume= 48,320 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
129,386	70	Woods, Good, HSG C
129,386		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.9	988	0.1240	1.38		**Lag/CN Method,**

Summary for Subcatchment 13S: Area to #221 Tessier Ln South of House

Runoff = 20.0 cfs @ 12.15 hrs, Volume= 72,264 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
193,500	70	Woods, Good, HSG C
193,500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	935	0.1530	1.52		**Lag/CN Method,**

Summary for Subcatchment 14S: Area to Kidd PL1 South Towards Providence RD

Runoff = 15.6 cfs @ 12.09 hrs, Volume= 49,602 cf, Depth= 5.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
107,702	79	Desert shrub range, Good, HSG C
107,702		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.2	688	0.1540	1.85		**Lag/CN Method,**

Summary for Subcatchment 15S: Flow to Kidd PL2 then to WL at #125 Sheryl Rd

Runoff = 27.6 cfs @ 12.15 hrs, Volume= 100,037 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
267,869	70	Woods, Good, HSG C
267,869		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.4	826	0.1230	1.33		**Lag/CN Method,**

Summary for Subcatchment 17S: Flow to Kidd PL4 then to CB@ #10 Delmar

Runoff = 25.7 cfs @ 12.23 hrs, Volume= 109,472 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
293,131	70	Woods, Good, HSG C
293,131		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	996	0.0660	1.01		**Lag/CN Method,**

Summary for Subcatchment 18S: Flow to Kidd PL5 then to CB@ #10 Delmar

Runoff = 32.3 cfs @ 12.17 hrs, Volume= 123,993 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
320,693	70	Woods, Good, HSG C
10,680	74	>75% Grass cover, Good, HSG C
642	98	Roofs, HSG C
332,015	70	Weighted Average
331,373		99.81% Pervious Area
642		0.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.5	837	0.0870	1.12		**Lag/CN Method,**

Summary for Subcatchment 19S: Flow to Kidd PL6 then to WL offsite SW

Runoff = 4.4 cfs @ 12.09 hrs, Volume= 13,725 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
36,751	70	Woods, Good, HSG C
36,751		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	358	0.1340	1.17		**Lag/CN Method,**
5.1	358	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 20S: Area to #379 Folwer RD

Runoff = 23.8 cfs @ 12.13 hrs, Volume= 83,333 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
223,139	70	Woods, Good, HSG C
223,139		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	683	0.1080	1.20		**Lag/CN Method,**

Summary for Subcatchment 21S: Area to #359 Fowler Rd

Runoff = 6.4 cfs @ 12.14 hrs, Volume= 23,034 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
61,677	70	Woods, Good, HSG C
61,677		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.1	633	0.0853	1.05		**Lag/CN Method,**

Summary for Subcatchment 22S: Area to #317 Fowler Rd - then to 24" culvert

Runoff = 2.6 cfs @ 12.09 hrs, Volume= 8,165 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
21,863	70	Woods, Good, HSG C
21,863		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	382	0.1280	1.16		**Lag/CN Method,**
5.5	382	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 23S: #317 Fowler Rd. then to 36" RCP

Runoff = 14.2 cfs @ 12.15 hrs, Volume= 51,738 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
138,537	70	Woods, Good, HSG C
138,537		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	693	0.0880	1.08		**Lag/CN Method,**

Summary for Subcatchment 24S: Area to #277 Folwer Rd

Runoff = 7.6 cfs @ 12.10 hrs, Volume= 24,259 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
64,957	70	Woods, Good, HSG C
64,957		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.6	495	0.1333	1.25		**Lag/CN Method,**

Summary for Link AP-11: #44 South Tessier

Inflow Area = 7,924 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 0.9 cfs @ 12.09 hrs, Volume= 2,959 cf
Primary = 0.9 cfs @ 12.09 hrs, Volume= 2,959 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP1: #4 N TESSIER

Inflow Area = 48,800 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 5.4 cfs @ 12.12 hrs, Volume= 18,225 cf
Primary = 5.4 cfs @ 12.12 hrs, Volume= 18,225 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP10: #134 South Tessier

Inflow Area = 24,362 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 2.9 cfs @ 12.09 hrs, Volume= 9,098 cf
Primary = 2.9 cfs @ 12.09 hrs, Volume= 9,098 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP12: #221 Tessier Lane-North PL

Inflow Area = 129,386 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 12.8 cfs @ 12.17 hrs, Volume= 48,320 cf
Primary = 12.8 cfs @ 12.17 hrs, Volume= 48,320 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP13: #221 Souht Tessier Ln West PL

Inflow Area = 193,500 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 20.0 cfs @ 12.15 hrs, Volume= 72,264 cf
Primary = 20.0 cfs @ 12.15 hrs, Volume= 72,264 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP14: Kidd Property Line1-towards WL Providence RD

Inflow Area = 107,702 sf, 0.00% Impervious, Inflow Depth = 5.53" for 100-Year event
Inflow = 15.6 cfs @ 12.09 hrs, Volume= 49,602 cf
Primary = 15.6 cfs @ 12.09 hrs, Volume= 49,602 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP15: Kidd Property Line2

Inflow Area = 267,869 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 27.6 cfs @ 12.15 hrs, Volume= 100,037 cf
Primary = 27.6 cfs @ 12.15 hrs, Volume= 100,037 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP17: Kidd Porperty Line4

Inflow Area = 293,131 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 25.7 cfs @ 12.23 hrs, Volume= 109,472 cf
Primary = 25.7 cfs @ 12.23 hrs, Volume= 109,472 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP18: Kidd Property Line5

Inflow Area = 332,015 sf, 0.19% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 32.3 cfs @ 12.17 hrs, Volume= 123,993 cf
Primary = 32.3 cfs @ 12.17 hrs, Volume= 123,993 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP19: Kidd Property LIne #6

Inflow Area = 36,751 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 4.4 cfs @ 12.09 hrs, Volume= 13,725 cf
Primary = 4.4 cfs @ 12.09 hrs, Volume= 13,725 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP2: #22 N TESSIER

Inflow Area = 128,117 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 12.8 cfs @ 12.16 hrs, Volume= 47,846 cf
Primary = 12.8 cfs @ 12.16 hrs, Volume= 47,846 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP20: #379 Fowler Rd

Inflow Area = 223,139 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 23.8 cfs @ 12.13 hrs, Volume= 83,333 cf
Primary = 23.8 cfs @ 12.13 hrs, Volume= 83,333 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP21: #359 Folwer Rd.

Inflow Area = 61,677 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 6.4 cfs @ 12.14 hrs, Volume= 23,034 cf
Primary = 6.4 cfs @ 12.14 hrs, Volume= 23,034 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP22: #317 Fowler Rd. PL2

Inflow Area = 21,863 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 2.6 cfs @ 12.09 hrs, Volume= 8,165 cf
Primary = 2.6 cfs @ 12.09 hrs, Volume= 8,165 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP23: #317 Fowler Rd PL2

Inflow Area = 138,537 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 14.2 cfs @ 12.15 hrs, Volume= 51,738 cf
Primary = 14.2 cfs @ 12.15 hrs, Volume= 51,738 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP24: #277 Fowler Rd.

Inflow Area = 64,957 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 7.6 cfs @ 12.10 hrs, Volume= 24,259 cf
Primary = 7.6 cfs @ 12.10 hrs, Volume= 24,259 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP3: #30 NORTH TESSIER

Inflow Area = 14,018 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 1.7 cfs @ 12.09 hrs, Volume= 5,235 cf
Primary = 1.7 cfs @ 12.09 hrs, Volume= 5,235 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP4: #46 N Tessier

Inflow Area = 188,111 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 16.4 cfs @ 12.23 hrs, Volume= 70,251 cf
Primary = 16.4 cfs @ 12.23 hrs, Volume= 70,251 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP5: #50 N. Tessier

Inflow Area = 16,400 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 2.0 cfs @ 12.09 hrs, Volume= 6,125 cf
Primary = 2.0 cfs @ 12.09 hrs, Volume= 6,125 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP6: #50 Tessier Street

Inflow Area = 8,367 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 1.0 cfs @ 12.09 hrs, Volume= 3,125 cf
Primary = 1.0 cfs @ 12.09 hrs, Volume= 3,125 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP7: #78 Silver Spring- North PL

Inflow Area = 115,409 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 13.5 cfs @ 12.10 hrs, Volume= 43,100 cf
Primary = 13.5 cfs @ 12.10 hrs, Volume= 43,100 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP8: #78 Silver Spring West PL

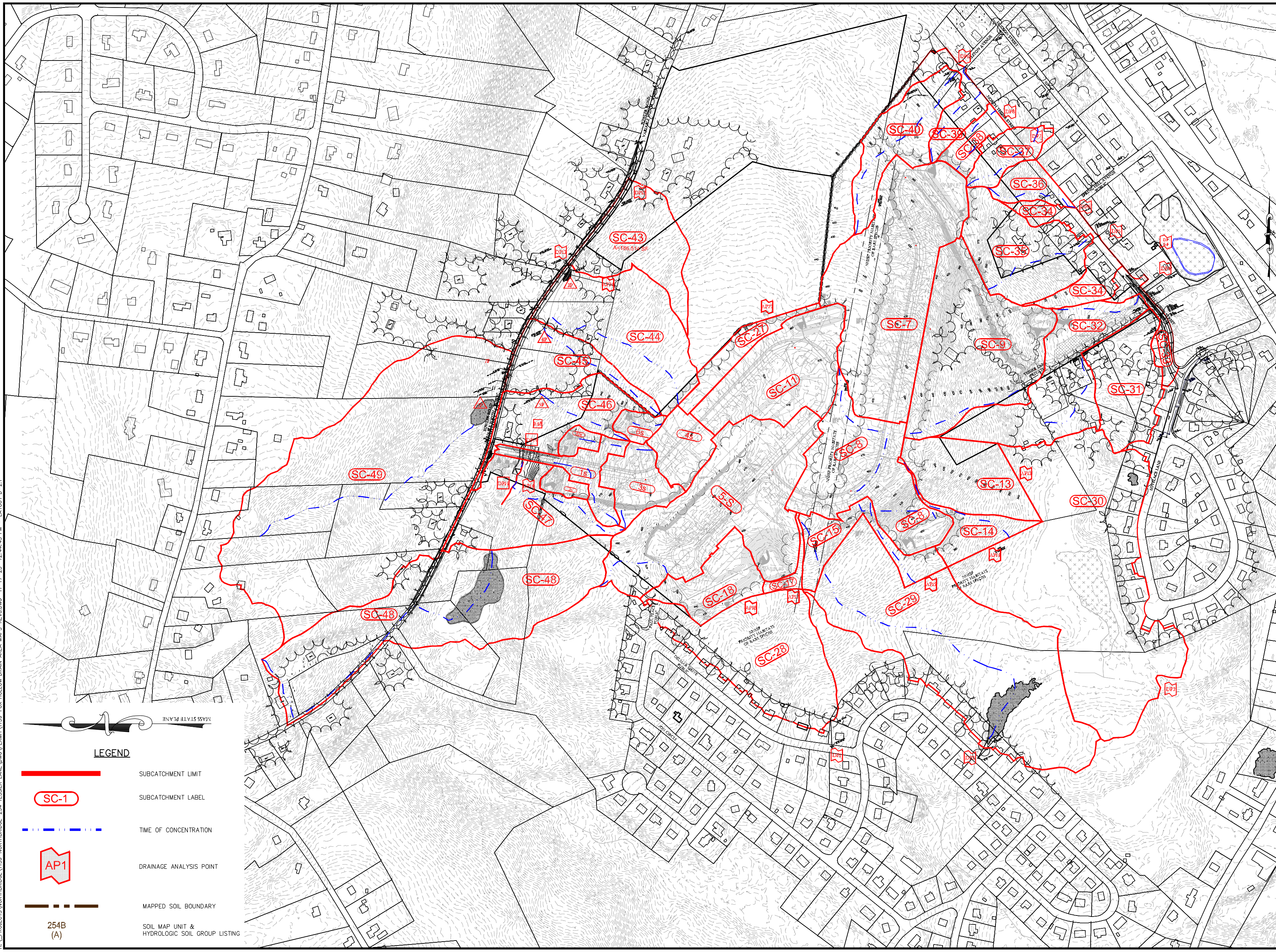
Inflow Area = 265,204 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 23.9 cfs @ 12.21 hrs, Volume= 99,042 cf
Primary = 23.9 cfs @ 12.21 hrs, Volume= 99,042 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP9: #78,#116,#126 S. Tessier at WL

Inflow Area = 61,856 sf, 0.00% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 7.4 cfs @ 12.09 hrs, Volume= 23,101 cf
Primary = 7.4 cfs @ 12.09 hrs, Volume= 23,101 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs



LEGEND

(red line)	SUBCATCHMENT LIMIT
SC-1	SUBCATCHMENT LABEL
(blue dash-dot line)	TIME OF CONCENTRATION
AP1	DRAINAGE ANALYSIS POINT
(brown dash line)	MAPPED SOIL BOUNDARY
254B (A)	SOIL MAP UNIT & HYDROLOGIC SOIL GROUP LISTING

MASS STATE PLANE

TURNING POINT ENGINEERING
CIVIL SITE DESIGN
P.O. Box 757 • Sutton, MA 01590
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APPROVAL UNDER SUBDIVSION CONTROL LAW
NORTHBRIDGE PLANNING BOARD

BEING A MAJORITY

APPROVAL DATE:
ENDORSEMENT DATE:

PROJECT NAME

FOX HOLLOW

DEFINITIVE SUBDIVIONS

#0 ASHWORTH DRIVE & #191 SOUTHBRIDGE ROAD
ASSESSOR'S MAP 3 LOT A05 AND MAP 6 LOT A01
OXFORD, MASSACHUSETTS

PREPARED FOR

Eastland
Eastland Partners, Inc.
997 Millbury Street
Worcester, MA 01607

REVISIONS

REV.	DATE	DESCRIPTION

PROJECT NO.	TPE-1001D
DESIGNED BY	JAB, TRB
CHECKED BY	JAB
DATE	NOVEMBER 17, 2025
CAD FILE	H:\PERMIT\1139-DRAINAGE MAP

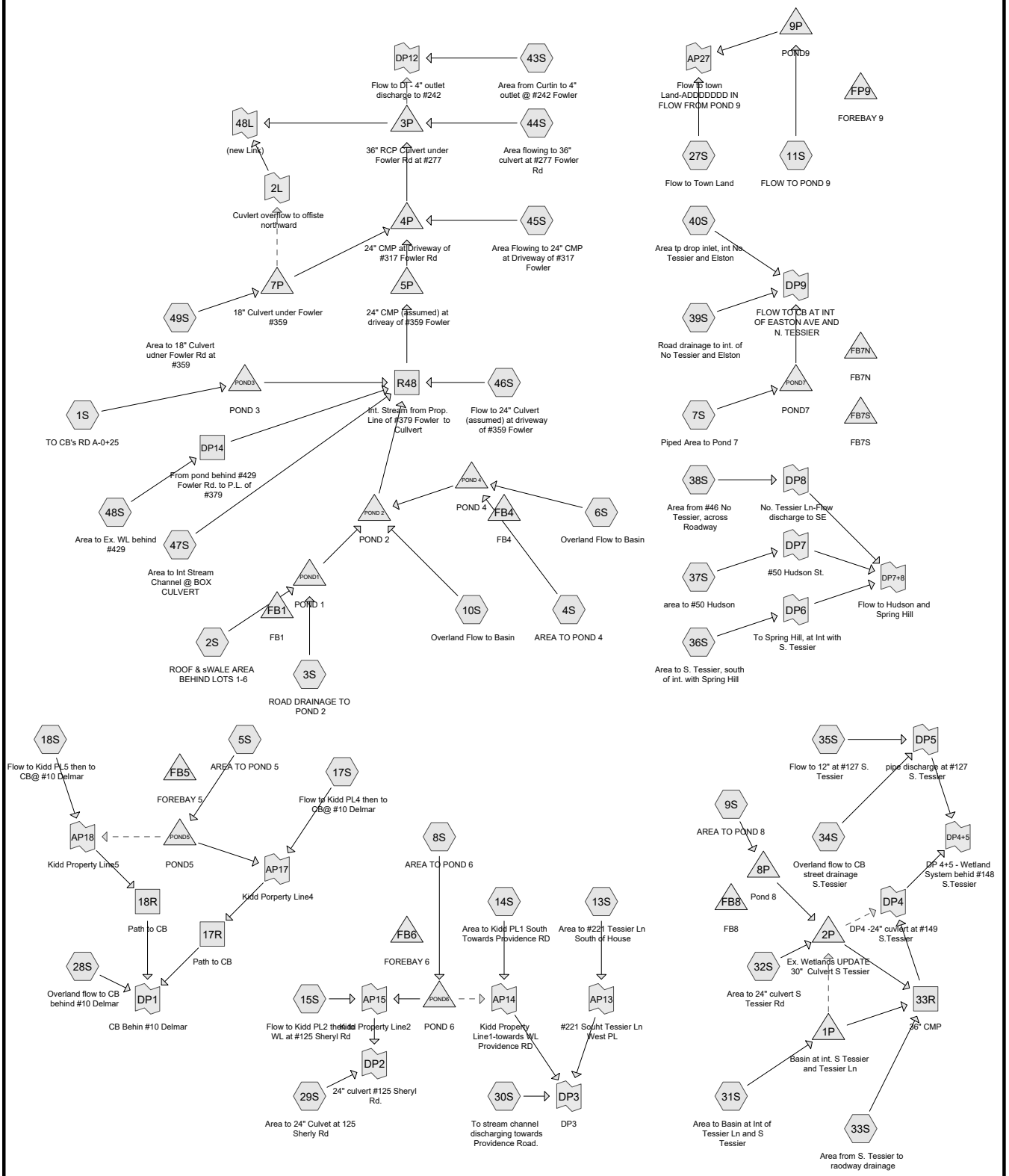
GRAPHIC SCALE
200 0 100 200 400
(IN FEET)
1 inch = 200 feet

SHEET TITLE

POST-DEVELOPMENT
DRAINAGE MAP
OVERALL

SHEET NO.

D-2.1



Routing Diagram for 1001-POST Dev-OVERALL-Rev0
Prepared by TURNING POINT ENGINEERING
HydroCAD® 10.00-20 s/n 10079 © 2017 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
2,103,800	74	>75% Grass cover, Good, HSG C (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 13S, 14S, 15S, 17S, 18S, 27S, 28S, 29S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 37S, 38S, 40S, 43S, 44S, 45S, 46S, 47S, 48S)
13,528	96	Gravel surface, HSG C (32S, 35S, 48S)
436,982	98	Paved parking, HSG C (1S, 3S, 4S, 5S, 7S, 8S, 9S, 11S, 31S, 32S, 33S, 34S, 36S, 37S, 38S, 39S, 43S, 44S, 45S, 46S, 47S, 48S, 49S)
317,011	98	Roofs, HSG C (1S, 2S, 3S, 4S, 5S, 7S, 8S, 9S, 10S, 11S, 13S, 15S, 18S, 27S, 28S, 29S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 37S, 38S, 39S, 40S, 43S, 44S, 46S, 47S, 48S, 49S)
515	98	Unconnected roofs, HSG C (45S)
5,138,149	70	Woods, Good, HSG C (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 11S, 13S, 14S, 15S, 17S, 18S, 27S, 28S, 29S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 37S, 38S, 39S, 40S, 43S, 44S, 45S, 46S, 47S, 48S, 49S)
413,858	77	Woods, Good, HSG D (29S, 30S)
8,423,843	**74**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
8,009,985	HSG C	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 13S, 14S, 15S, 17S, 18S, 27S, 28S, 29S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 37S, 38S, 39S, 40S, 43S, 44S, 45S, 46S, 47S, 48S, 49S
413,858	HSG D	29S, 30S
0	Other	
8,423,843		**TOTAL AREA**

Time span=0.00-72.00 hrs, dt=0.04 hrs, 1801 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

Subcatchment1S: TO CB's RD A-0+25 Runoff Area=73,977 sf 35.08% Impervious Runoff Depth=1.64"
Flow Length=496' Slope=0.1210 '/' Tc=6.0 min CN=82 Runoff=3.2 cfs 10,080 cf

Subcatchment2S: ROOF & sWALE AREA Runoff Area=21,932 sf 8.74% Impervious Runoff Depth=1.24"
Tc=6.0 min CN=76 Runoff=0.7 cfs 2,259 cf

Subcatchment3S: ROAD DRAINAGE TO Runoff Area=88,128 sf 33.97% Impervious Runoff Depth=1.64"
Flow Length=355' Slope=0.0960 '/' Tc=6.0 min CN=82 Runoff=3.8 cfs 12,008 cf

Subcatchment4S: AREA TO POND 4 Runoff Area=77,591 sf 39.28% Impervious Runoff Depth=1.71"
Flow Length=260' Slope=0.0540 '/' Tc=6.0 min CN=83 Runoff=3.5 cfs 11,045 cf

Subcatchment5S: AREA TO POND 5 Runoff Area=472,727 sf 22.20% Impervious Runoff Depth=1.36"
Flow Length=420' Slope=0.0700 '/' Tc=6.4 min CN=78 Runoff=16.6 cfs 53,654 cf

Subcatchment6S: Overland Flow to Basin Runoff Area=26,261 sf 0.00% Impervious Runoff Depth=1.06"
Tc=6.0 min CN=73 Runoff=0.7 cfs 2,320 cf

Subcatchment7S: Piped Area to Pond 7 Runoff Area=500,825 sf 25.59% Impervious Runoff Depth=1.43"
Flow Length=1,290' Slope=0.0790 '/' Tc=14.3 min CN=79 Runoff=14.5 cfs 59,577 cf

Subcatchment8S: AREA TO POND 6 Runoff Area=291,844 sf 20.03% Impervious Runoff Depth=1.36"
Flow Length=1,266' Slope=0.0700 '/' Tc=15.4 min CN=78 Runoff=7.8 cfs 33,124 cf

Subcatchment9S: AREA TO POND 8 Runoff Area=383,814 sf 10.10% Impervious Runoff Depth=1.18"
Flow Length=565' Slope=0.1600 '/' Tc=6.0 min CN=75 Runoff=11.6 cfs 37,613 cf

Subcatchment10S: Overland Flow to Basin Runoff Area=19,940 sf 9.57% Impervious Runoff Depth=1.24"
Tc=6.0 min CN=76 Runoff=0.6 cfs 2,054 cf

Subcatchment11S: FLOW TO POND 9 Runoff Area=248,876 sf 36.78% Impervious Runoff Depth=1.71"
Tc=6.0 min CN=83 Runoff=11.3 cfs 35,428 cf

Subcatchment13S: Area to #221 Tessier Runoff Area=174,501 sf 1.10% Impervious Runoff Depth=0.90"
Flow Length=780' Slope=0.1620 '/' Tc=8.6 min CN=70 Runoff=3.5 cfs 13,070 cf

Subcatchment14S: Area to Kidd PL1 South Runoff Area=69,364 sf 0.00% Impervious Runoff Depth=0.95"
Flow Length=668' Slope=0.1740 '/' Tc=7.2 min CN=71 Runoff=1.6 cfs 5,498 cf

Subcatchment15S: Flow to Kidd PL2 then Runoff Area=102,135 sf 2.25% Impervious Runoff Depth=1.00"
Flow Length=449' Slope=0.1700 '/' Tc=6.0 min CN=72 Runoff=2.6 cfs 8,553 cf

Subcatchment17S: Flow to Kidd PL4 then Runoff Area=17,400 sf 0.00% Impervious Runoff Depth=0.95"
Flow Length=335' Slope=0.1370 '/' Tc=6.0 min CN=71 Runoff=0.4 cfs 1,379 cf

Subcatchment18S: Flow to Kidd PL5 then Runoff Area=115,441 sf 4.85% Impervious Runoff Depth=1.06"
Flow Length=322' Slope=0.0900 '/' Tc=6.0 min CN=73 Runoff=3.1 cfs 10,201 cf

Subcatchment27S: Flow to Town Land Runoff Area=61,326 sf 14.92% Impervious Runoff Depth=1.30"
Flow Length=330' Slope=0.0360 '/' Tc=7.6 min CN=77 Runoff=2.0 cfs 6,635 cf

Subcatchment28S: Overland flow to CB Runoff Area=323,985 sf 1.79% Impervious Runoff Depth=0.95"
Flow Length=770' Slope=0.0805 '/' Tc=11.8 min CN=71 Runoff=6.2 cfs 25,679 cf

Subcatchment29S: Area to 24" Culvet at Runoff Area=685,900 sf 0.78% Impervious Runoff Depth=1.00"
Flow Length=1,686' Tc=42.1 min CN=72 Runoff=8.3 cfs 57,441 cf

Subcatchment30S: To stream channel Runoff Area=838,569 sf 1.13% Impervious Runoff Depth=1.06"
Flow Length=1,506' Slope=0.0050 '/' Tc=76.6 min CN=73 Runoff=7.5 cfs 74,098 cf

Subcatchment31S: Area to Basin at Int of Runoff Area=165,871 sf 7.60% Impervious Runoff Depth=1.12"
Flow Length=1,015' Slope=0.1330 '/' Tc=10.5 min CN=74 Runoff=4.0 cfs 15,445 cf

Subcatchment32S: Area to 24" culvert S Runoff Area=260,153 sf 10.57% Impervious Runoff Depth=1.12"
Flow Length=423' Slope=0.1100 '/' Tc=6.0 min CN=74 Runoff=7.4 cfs 24,223 cf

Subcatchment33S: Area from S. Tessier Runoff Area=47,038 sf 39.27% Impervious Runoff Depth=1.71"
Flow Length=205' Slope=0.1070 '/' Tc=6.0 min CN=83 Runoff=2.1 cfs 6,696 cf

Subcatchment34S: Overland flow to CB Runoff Area=94,006 sf 21.71% Impervious Runoff Depth=1.30"
Flow Length=500' Slope=0.1360 '/' Tc=6.0 min CN=77 Runoff=3.2 cfs 10,170 cf

Subcatchment35S: Flow to 12" at #127 S. Runoff Area=220,521 sf 2.30% Impervious Runoff Depth=1.06"
Flow Length=552' Slope=0.1400 '/' Tc=6.5 min CN=73 Runoff=5.7 cfs 19,486 cf

Subcatchment36S: Area to S. Tessier, Runoff Area=52,061 sf 10.10% Impervious Runoff Depth=1.12"
Flow Length=485' Slope=0.1460 '/' Tc=6.0 min CN=74 Runoff=1.5 cfs 4,848 cf

Subcatchment37S: area to #50 Hudson Runoff Area=63,872 sf 8.53% Impervious Runoff Depth=1.12"
Flow Length=467' Slope=0.1420 '/' Tc=6.0 min CN=74 Runoff=1.8 cfs 5,947 cf

Subcatchment38S: Area from #46 No Runoff Area=45,246 sf 15.12% Impervious Runoff Depth=1.24"
Flow Length=382' Slope=0.1000 '/' Tc=6.0 min CN=76 Runoff=1.4 cfs 4,661 cf

Subcatchment39S: Road drainage to int. Runoff Area=73,621 sf 20.04% Impervious Runoff Depth=1.24"
Flow Length=595' Slope=0.0820 '/' Tc=8.3 min CN=76 Runoff=2.2 cfs 7,585 cf

Subcatchment40S: Area tp drop inlet, int Runoff Area=155,510 sf 0.62% Impervious Runoff Depth=0.95"
Flow Length=986' Slope=0.0930 '/' Tc=13.4 min CN=71 Runoff=2.9 cfs 12,326 cf

Subcatchment43S: Area from Curtin to 4" Runoff Area=186,514 sf 4.44% Impervious Runoff Depth=1.00"
Flow Length=879' Slope=0.1160 '/' Tc=10.6 min CN=72 Runoff=4.0 cfs 15,620 cf

Subcatchment44S: Area flowing to 36" Runoff Area=295,658 sf 2.36% Impervious Runoff Depth=0.95"
Flow Length=808' Slope=0.1300 '/' Tc=9.7 min CN=71 Runoff=6.1 cfs 23,433 cf

Subcatchment45S: Area Flowing to 24" Runoff Area=131,452 sf 6.06% Impervious Runoff Depth=1.00"
Flow Length=709' Slope=0.1550 '/' Tc=7.7 min CN=72 Runoff=3.1 cfs 11,008 cf

Subcatchment46S: Flow to 24" Culvert Runoff Area=165,646 sf 6.82% Impervious Runoff Depth=1.06"
Flow Length=867' Slope=0.1110 '/' Tc=10.5 min CN=73 Runoff=3.8 cfs 14,637 cf

Subcatchment47S: Area to Int Stream Runoff Area=212,352 sf 2.78% Impervious Runoff Depth=0.95"
Flow Length=750' Slope=0.1110 '/' Tc=9.8 min CN=71 Runoff=4.3 cfs 16,831 cf

Subcatchment48S: Area to Ex. WL behind Runoff Area=585,575 sf 3.96% Impervious Runoff Depth=1.00"
Flow Length=1,745' Slope=0.0690 '/' Tc=23.9 min CN=72 Runoff=9.2 cfs 49,039 cf

Subcatchment49S: Area to 18" Culvert Runoff Area=1,074,211 sf 2.04% Impervious Runoff Depth=0.95"
Flow Length=1,228' Slope=0.1060 '/' Tc=14.9 min CN=71 Runoff=18.9 cfs 85,141 cf

Reach 17R: Path to CB Avg. Flow Depth=0.09' Max Vel=2.62 fps Inflow=3.7 cfs 20,171 cf
n=0.035 L=600.0' S=0.1100 '/' Capacity=1,429.4 cfs Outflow=3.7 cfs 20,171 cf

Reach 18R: Path to CB Avg. Flow Depth=0.11' Max Vel=2.64 fps Inflow=5.0 cfs 28,037 cf
n=0.035 L=770.0' S=0.0805 '/' Capacity=1,223.0 cfs Outflow=4.9 cfs 28,037 cf

Reach 33R: 36" CMP Avg. Flow Depth=0.60' Max Vel=10.66 fps Inflow=12.3 cfs 80,276 cf
36.0" Round Pipe w/ 1.0" inside fill n=0.025 L=130.0' S=0.1138 '/' Capacity=115.7 cfs Outflow=12.4 cfs 80,276 cf

Reach DP14: From pond behind #429 Avg. Flow Depth=0.88' Max Vel=3.12 fps Inflow=9.2 cfs 49,039 cf
n=0.040 L=330.0' S=0.0152 '/' Capacity=1,335.6 cfs Outflow=9.1 cfs 49,039 cf

Reach R48: Int. Stream from Prop. Avg. Flow Depth=0.73' Max Vel=5.59 fps Inflow=16.7 cfs 106,150 cf
n=0.040 L=170.0' S=0.0529 '/' Capacity=1,358.3 cfs Outflow=16.7 cfs 106,150 cf

Pond 1P: Basin at int. S Tessier and Tessier Peak Elev=288.75' Storage=2,681 cf Inflow=4.0 cfs 15,445 cf
Primary=3.1 cfs 15,372 cf Secondary=0.0 cfs 0 cf Outflow=3.1 cfs 15,372 cf

Pond 2P: Ex. Wetlands UPDATE 30" Culvert S Peak Elev=284.11' Storage=3 cf Inflow=8.7 cfs 58,209 cf
Primary=8.7 cfs 58,209 cf Secondary=0.0 cfs 0 cf Outflow=8.7 cfs 58,209 cf

Pond 3P: 36" RCP Culvert under Fowler Rd Peak Elev=372.92' Storage=93 cf Inflow=18.9 cfs 218,668 cf
Primary=18.9 cfs 218,669 cf Secondary=0.0 cfs 0 cf Outflow=18.9 cfs 218,669 cf

Pond 4P: 24" CMP at Driveway of #317 Peak Elev=379.18' Storage=30,140 cf Inflow=27.2 cfs 195,235 cf
Outflow=17.6 cfs 195,235 cf

Pond 5P: 24" CMP (assumed) at driveay of Peak Elev=389.83' Storage=2,263 cf Inflow=16.7 cfs 106,150 cf
Outflow=16.2 cfs 106,150 cf

Pond 7P: 18" Culvert under Fowler #359 Peak Elev=389.26' Storage=5,371 cf Inflow=18.9 cfs 85,141 cf
Primary=9.7 cfs 78,077 cf Secondary=8.7 cfs 7,064 cf Outflow=18.4 cfs 85,141 cf

Pond 8P: Pond 8 Peak Elev=323.57' Storage=11,932 cf Inflow=11.6 cfs 37,613 cf
Outflow=4.0 cfs 33,985 cf

Pond 9P: POND9 Peak Elev=456.23' Storage=23,381 cf Inflow=11.3 cfs 35,428 cf
Discarded=0.3 cfs 35,431 cf Primary=0.0 cfs 0 cf Outflow=0.3 cfs 35,431 cf

Pond FB1: FB1 Peak Elev=0.00' Storage=0 cf

Pond FB4: FB4 Peak Elev=0.00' Storage=0 cf

Pond FB5: FOREBAY5 Peak Elev=0.00' Storage=0 cf

Pond FB6: FOREBAY6 Peak Elev=0.00' Storage=0 cf

Pond FB7N: FB7N Peak Elev=0.00' Storage=0 cf

Pond FB7S: FB7S Peak Elev=0.00' Storage=0 cf

Pond FB8: FB8 Peak Elev=0.00' Storage=0 cf

Pond FP9: FOREBAY9 Peak Elev=0.00' Storage=0 cf

Pond POND 2: POND 2 Peak Elev=427.94' Storage=3,770 cf Inflow=3.2 cfs 16,314 cf
Outflow=1.3 cfs 15,565 cf

Pond POND 4: POND 4 Peak Elev=465.57' Storage=13,366 cf Inflow=4.2 cfs 13,366 cf
Outflow=0.0 cfs 0 cf

Pond POND1: POND 1 Peak Elev=428.03' Storage=2,659 cf Inflow=4.5 cfs 14,268 cf
Outflow=2.6 cfs 14,259 cf

Pond POND3: POND 3 Peak Elev=415.58' Storage=1,892 cf Inflow=3.2 cfs 10,080 cf
Outflow=1.5 cfs 10,078 cf

Pond POND5: POND5 Peak Elev=431.48' Storage=14,811 cf Inflow=16.6 cfs 53,654 cf
Discarded=0.3 cfs 17,026 cf Primary=3.5 cfs 18,792 cf Secondary=3.4 cfs 17,836 cf Outflow=7.2 cfs 53,654 cf

Pond POND6: POND 6 Peak Elev=395.15' Storage=16,099 cf Inflow=7.8 cfs 33,124 cf
Primary=1.0 cfs 29,119 cf Secondary=0.0 cfs 0 cf Outflow=1.0 cfs 29,119 cf

Pond POND7: POND7 Peak Elev=373.51' Storage=28,959 cf Inflow=14.5 cfs 59,577 cf
Discarded=0.5 cfs 35,465 cf Primary=0.8 cfs 24,125 cf Outflow=1.3 cfs 59,591 cf

Link 2L: Cuvlert overflow to offiste northward Inflow=8.7 cfs 7,064 cf
Primary=8.7 cfs 7,064 cf

Link 48L: (new Link) Inflow=26.3 cfs 225,732 cf
Primary=26.3 cfs 225,732 cf

Link AP13: #221 Souht Tessier Ln West PL Inflow=3.5 cfs 13,070 cf
Primary=3.5 cfs 13,070 cf

Link AP14: Kidd Property Line1-towards WL Providence RD Inflow=1.6 cfs 5,498 cf
Primary=1.6 cfs 5,498 cf

Link AP15: Kidd Property Line2 Inflow=2.6 cfs 37,672 cf
Primary=2.6 cfs 37,672 cf

Link AP17: Kidd Porperty Line4 Inflow=3.7 cfs 20,171 cf
Primary=3.7 cfs 20,171 cf

Link AP18: Kidd Property Line5 Inflow=5.0 cfs 28,037 cf
Primary=5.0 cfs 28,037 cf

Link AP27: Flow to town Land-ADDDDDDDIN FLOW FROM POND 9 Inflow=2.0 cfs 6,635 cf
Primary=2.0 cfs 6,635 cf

Link DP1: CB Behin #10 Delmar Inflow=13.5 cfs 73,886 cf
Primary=13.5 cfs 73,886 cf

Link DP12: Flow to DI - 4" outlet discharge to #242 Inflow=4.0 cfs 15,620 cf
Primary=4.0 cfs 15,620 cf

Link DP2: 24" culvert #125 Sheryl Rd. Inflow=9.6 cfs 95,113 cf
Primary=9.6 cfs 95,113 cf

Link DP3: DP3 Inflow=8.2 cfs 92,666 cf
Primary=8.2 cfs 92,666 cf

Link DP4: DP4 -24" cuvlert at #149 S.Tessier Inflow=12.4 cfs 80,276 cf
Primary=12.4 cfs 80,276 cf

Link DP4+5: DP 4+5 - Wetland System behid #148 S.Tessier Inflow=20.9 cfs 109,932 cf
Primary=20.9 cfs 109,932 cf

Link DP5: pipe discharge at #127 S. Tessier Inflow=8.9 cfs 29,656 cf
Primary=8.9 cfs 29,656 cf

Link DP6: To Spring Hill, at Int with S. Tessier Inflow=1.5 cfs 4,848 cf
Primary=1.5 cfs 4,848 cf

Link DP7: #50 Hudson St. Inflow=1.8 cfs 5,947 cf
Primary=1.8 cfs 5,947 cf

Link DP7+8: Flow to Hudson and Spring Hill Inflow=4.7 cfs 15,456 cf
Primary=4.7 cfs 15,456 cf

Link DP8: No. Tessier Ln-Flow discharge to SE Inflow=1.4 cfs 4,661 cf
Primary=1.4 cfs 4,661 cf

Link DP9: FLOW TO CB AT INT OF EASTON AVE AND N. TESSIER Inflow=4.8 cfs 44,036 cf
Primary=4.8 cfs 44,036 cf

Total Runoff Area = 8,423,843 sf Runoff Volume = 788,811 cf Average Runoff Depth = 1.12"
91.04% Pervious = 7,669,335 sf 8.96% Impervious = 754,508 sf

Time span=0.00-72.00 hrs, dt=0.04 hrs, 1801 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

Subcatchment1S: TO CB's RD A-0+25 Runoff Area=73,977 sf 35.08% Impervious Runoff Depth=3.20"
Flow Length=496' Slope=0.1210 '/' Tc=6.0 min CN=82 Runoff=6.3 cfs 19,700 cf

Subcatchment2S: ROOF & sWALE AREA Runoff Area=21,932 sf 8.74% Impervious Runoff Depth=2.64"
Tc=6.0 min CN=76 Runoff=1.5 cfs 4,831 cf

Subcatchment3S: ROAD DRAINAGE TO Runoff Area=88,128 sf 33.97% Impervious Runoff Depth=3.20"
Flow Length=355' Slope=0.0960 '/' Tc=6.0 min CN=82 Runoff=7.5 cfs 23,469 cf

Subcatchment4S: AREA TO POND 4 Runoff Area=77,591 sf 39.28% Impervious Runoff Depth=3.29"
Flow Length=260' Slope=0.0540 '/' Tc=6.0 min CN=83 Runoff=6.8 cfs 21,286 cf

Subcatchment5S: AREA TO POND 5 Runoff Area=472,727 sf 22.20% Impervious Runoff Depth=2.82"
Flow Length=420' Slope=0.0700 '/' Tc=6.4 min CN=78 Runoff=35.1 cfs 111,185 cf

Subcatchment6S: Overland Flow to Basin Runoff Area=26,261 sf 0.00% Impervious Runoff Depth=2.38"
Tc=6.0 min CN=73 Runoff=1.7 cfs 5,215 cf

Subcatchment7S: Piped Area to Pond 7 Runoff Area=500,825 sf 25.59% Impervious Runoff Depth=2.91"
Flow Length=1,290' Slope=0.0790 '/' Tc=14.3 min CN=79 Runoff=30.2 cfs 121,612 cf

Subcatchment8S: AREA TO POND 6 Runoff Area=291,844 sf 20.03% Impervious Runoff Depth=2.82"
Flow Length=1,266' Slope=0.0700 '/' Tc=15.4 min CN=78 Runoff=16.6 cfs 68,642 cf

Subcatchment9S: AREA TO POND 8 Runoff Area=383,814 sf 10.10% Impervious Runoff Depth=2.56"
Flow Length=565' Slope=0.1600 '/' Tc=6.0 min CN=75 Runoff=26.1 cfs 81,724 cf

Subcatchment10S: Overland Flow to Basin Runoff Area=19,940 sf 9.57% Impervious Runoff Depth=2.64"
Tc=6.0 min CN=76 Runoff=1.4 cfs 4,392 cf

Subcatchment11S: FLOW TO POND 9 Runoff Area=248,876 sf 36.78% Impervious Runoff Depth=3.29"
Tc=6.0 min CN=83 Runoff=21.7 cfs 68,274 cf

Subcatchment13S: Area to #221 Tessier Runoff Area=174,501 sf 1.10% Impervious Runoff Depth=2.13"
Flow Length=780' Slope=0.1620 '/' Tc=8.6 min CN=70 Runoff=8.9 cfs 31,021 cf

Subcatchment14S: Area to Kidd PL1 South Runoff Area=69,364 sf 0.00% Impervious Runoff Depth=2.22"
Flow Length=668' Slope=0.1740 '/' Tc=7.2 min CN=71 Runoff=3.9 cfs 12,805 cf

Subcatchment15S: Flow to Kidd PL2 then Runoff Area=102,135 sf 2.25% Impervious Runoff Depth=2.30"
Flow Length=449' Slope=0.1700 '/' Tc=6.0 min CN=72 Runoff=6.2 cfs 19,563 cf

Subcatchment17S: Flow to Kidd PL4 then Runoff Area=17,400 sf 0.00% Impervious Runoff Depth=2.22"
Flow Length=335' Slope=0.1370 '/' Tc=6.0 min CN=71 Runoff=1.0 cfs 3,212 cf

Subcatchment18S: Flow to Kidd PL5 then Runoff Area=115,441 sf 4.85% Impervious Runoff Depth=2.38"
Flow Length=322' Slope=0.0900 '/' Tc=6.0 min CN=73 Runoff=7.3 cfs 22,923 cf

Subcatchment27S: Flow to Town Land Runoff Area=61,326 sf 14.92% Impervious Runoff Depth=2.73"
Flow Length=330' Slope=0.0360 '/' Tc=7.6 min CN=77 Runoff=4.2 cfs 13,962 cf

Subcatchment28S: Overland flow to CB Runoff Area=323,985 sf 1.79% Impervious Runoff Depth=2.22"
Flow Length=770' Slope=0.0805 '/' Tc=11.8 min CN=71 Runoff=15.7 cfs 59,809 cf

Subcatchment29S: Area to 24" Culvet at Runoff Area=685,900 sf 0.78% Impervious Runoff Depth=2.30"
Flow Length=1,686' Tc=42.1 min CN=72 Runoff=20.1 cfs 131,376 cf

Subcatchment30S: To stream channel Runoff Area=838,569 sf 1.13% Impervious Runoff Depth=2.38"
Flow Length=1,506' Slope=0.0050 '/' Tc=76.6 min CN=73 Runoff=18.0 cfs 166,514 cf

Subcatchment31S: Area to Basin at Int of Runoff Area=165,871 sf 7.60% Impervious Runoff Depth=2.47"
Flow Length=1,015' Slope=0.1330 '/' Tc=10.5 min CN=74 Runoff=9.4 cfs 34,119 cf

Subcatchment32S: Area to 24" culvert S Runoff Area=260,153 sf 10.57% Impervious Runoff Depth=2.47"
Flow Length=423' Slope=0.1100 '/' Tc=6.0 min CN=74 Runoff=17.1 cfs 53,513 cf

Subcatchment33S: Area from S. Tessier Runoff Area=47,038 sf 39.27% Impervious Runoff Depth=3.29"
Flow Length=205' Slope=0.1070 '/' Tc=6.0 min CN=83 Runoff=4.1 cfs 12,904 cf

Subcatchment34S: Overland flow to CB Runoff Area=94,006 sf 21.71% Impervious Runoff Depth=2.73"
Flow Length=500' Slope=0.1360 '/' Tc=6.0 min CN=77 Runoff=6.9 cfs 21,403 cf

Subcatchment35S: Flow to 12" at #127 S. Runoff Area=220,521 sf 2.30% Impervious Runoff Depth=2.38"
Flow Length=552' Slope=0.1400 '/' Tc=6.5 min CN=73 Runoff=13.7 cfs 43,789 cf

Subcatchment36S: Area to S. Tessier, Runoff Area=52,061 sf 10.10% Impervious Runoff Depth=2.47"
Flow Length=485' Slope=0.1460 '/' Tc=6.0 min CN=74 Runoff=3.4 cfs 10,709 cf

Subcatchment37S: area to #50 Hudson Runoff Area=63,872 sf 8.53% Impervious Runoff Depth=2.47"
Flow Length=467' Slope=0.1420 '/' Tc=6.0 min CN=74 Runoff=4.2 cfs 13,138 cf

Subcatchment38S: Area from #46 No Runoff Area=45,246 sf 15.12% Impervious Runoff Depth=2.64"
Flow Length=382' Slope=0.1000 '/' Tc=6.0 min CN=76 Runoff=3.2 cfs 9,966 cf

Subcatchment39S: Road drainage to int. Runoff Area=73,621 sf 20.04% Impervious Runoff Depth=2.64"
Flow Length=595' Slope=0.0820 '/' Tc=8.3 min CN=76 Runoff=4.8 cfs 16,215 cf

Subcatchment40S: Area tp drop inlet, int Runoff Area=155,510 sf 0.62% Impervious Runoff Depth=2.22"
Flow Length=986' Slope=0.0930 '/' Tc=13.4 min CN=71 Runoff=7.2 cfs 28,708 cf

Subcatchment43S: Area from Curtin to 4" Runoff Area=186,514 sf 4.44% Impervious Runoff Depth=2.30"
Flow Length=879' Slope=0.1160 '/' Tc=10.6 min CN=72 Runoff=9.7 cfs 35,725 cf

Subcatchment44S: Area flowing to 36" Runoff Area=295,658 sf 2.36% Impervious Runoff Depth=2.22"
Flow Length=808' Slope=0.1300 '/' Tc=9.7 min CN=71 Runoff=15.2 cfs 54,580 cf

Subcatchment45S: Area Flowing to 24" Runoff Area=131,452 sf 6.06% Impervious Runoff Depth=2.30"
Flow Length=709' Slope=0.1550 '/' Tc=7.7 min CN=72 Runoff=7.5 cfs 25,178 cf

Subcatchment46S: Flow to 24" Culvert Runoff Area=165,646 sf 6.82% Impervious Runoff Depth=2.38"
Flow Length=867' Slope=0.1110 '/' Tc=10.5 min CN=73 Runoff=9.0 cfs 32,892 cf

Subcatchment47S: Area to Int Stream Runoff Area=212,352 sf 2.78% Impervious Runoff Depth=2.22"
Flow Length=750' Slope=0.1110 '/' Tc=9.8 min CN=71 Runoff=10.9 cfs 39,201 cf

Subcatchment48S: Area to Ex. WL behind Runoff Area=585,575 sf 3.96% Impervious Runoff Depth=2.30"
Flow Length=1,745' Slope=0.0690 '/' Tc=23.9 min CN=72 Runoff=22.3 cfs 112,160 cf

Subcatchment49S: Area to 18" Culvert Runoff Area=1,074,211 sf 2.04% Impervious Runoff Depth=2.22"
Flow Length=1,228' Slope=0.1060 '/' Tc=14.9 min CN=71 Runoff=47.7 cfs 198,304 cf

Reach 17R: Path to CB Avg. Flow Depth=0.14' Max Vel=3.46 fps Inflow=8.0 cfs 50,907 cf
n=0.035 L=600.0' S=0.1100 '/' Capacity=1,429.4 cfs Outflow=8.0 cfs 50,907 cf

Reach 18R: Path to CB Avg. Flow Depth=0.19' Max Vel=3.59 fps Inflow=13.0 cfs 67,238 cf
n=0.035 L=770.0' S=0.0805 '/' Capacity=1,223.0 cfs Outflow=12.1 cfs 67,238 cf

Reach 33R: 36" CMP Avg. Flow Depth=1.07' Max Vel=14.47 fps Inflow=35.3 cfs 178,558 cf
36.0" Round Pipe w/ 1.0" inside fill n=0.025 L=130.0' S=0.1138 '/' Capacity=115.7 cfs Outflow=35.4 cfs 178,558 cf

Reach DP14: From pond behind #429 Avg. Flow Depth=1.39' Max Vel=3.27 fps Inflow=22.3 cfs 112,160 cf
n=0.040 L=330.0' S=0.0152 '/' Capacity=1,335.6 cfs Outflow=22.1 cfs 112,160 cf

Reach R48: Int. Stream from Prop. Avg. Flow Depth=1.26' Max Vel=6.46 fps Inflow=38.6 cfs 242,076 cf
n=0.040 L=170.0' S=0.0529 '/' Capacity=1,358.3 cfs Outflow=38.6 cfs 242,076 cf

Pond 1P: Basin at int. S Tessier and Tessier Peak Elev=289.00' Storage=3,099 cf Inflow=9.4 cfs 34,119 cf
Primary=4.4 cfs 29,557 cf Secondary=5.0 cfs 4,489 cf Outflow=9.3 cfs 34,046 cf

Pond 2P: Ex. Wetlands UPDATE 30" Culvert Peak Elev=284.46' Storage=31 cf Inflow=27.2 cfs 136,097 cf
Primary=27.3 cfs 136,097 cf Secondary=0.0 cfs 0 cf Outflow=27.3 cfs 136,097 cf

Pond 3P: 36" RCP Culvert under Fowler Rd Peak Elev=373.58' Storage=187 cf Inflow=33.3 cfs 466,071 cf
Primary=33.3 cfs 466,071 cf Secondary=0.0 cfs 0 cf Outflow=33.3 cfs 466,071 cf

Pond 4P: 24" CMP at Driveway of #317 Peak Elev=381.19' Storage=76,240 cf Inflow=51.3 cfs 411,491 cf
Outflow=31.3 cfs 411,492 cf

Pond 5P: 24" CMP (assumed) at driveay Peak Elev=393.19' Storage=15,097 cf Inflow=38.6 cfs 242,076 cf
Outflow=38.1 cfs 242,076 cf

Pond 7P: 18" Culvert under Fowler #359 Peak Elev=389.67' Storage=7,296 cf Inflow=47.7 cfs 198,304 cf
Primary=10.6 cfs 144,238 cf Secondary=36.7 cfs 54,066 cf Outflow=47.3 cfs 198,304 cf

Pond 8P: Pond 8 Peak Elev=325.17' Storage=26,214 cf Inflow=26.1 cfs 81,724 cf
Outflow=8.4 cfs 78,095 cf

Pond 9P: POND9 Peak Elev=457.84' Storage=45,092 cf Inflow=21.7 cfs 68,274 cf
Discarded=0.3 cfs 58,807 cf Primary=0.6 cfs 9,479 cf Outflow=0.9 cfs 68,286 cf

Pond FB1: FB1 Peak Elev=0.00' Storage=0 cf

Pond FB4: FB4 Peak Elev=0.00' Storage=0 cf

Pond FB5: FOREBAY5 Peak Elev=0.00' Storage=0 cf

Pond FB6: FOREBAY6 Peak Elev=0.00' Storage=0 cf

Pond FB7N: FB7N Peak Elev=0.00' Storage=0 cf

Pond FB7S: FB7S Peak Elev=0.00' Storage=0 cf

Pond FB8: FB8 Peak Elev=0.00' Storage=0 cf

Pond FP9: FOREBAY9 Peak Elev=0.00' Storage=0 cf

Pond POND 2: POND 2 Peak Elev=428.50' Storage=5,340 cf Inflow=4.3 cfs 38,873 cf
Outflow=3.3 cfs 38,125 cf

Pond POND 4: POND 4 Peak Elev=466.84' Storage=20,583 cf Inflow=8.4 cfs 26,500 cf
Outflow=0.4 cfs 6,191 cf

Pond POND1: POND 1 Peak Elev=429.20' Storage=6,541 cf Inflow=9.0 cfs 28,299 cf
Outflow=3.1 cfs 28,291 cf

Pond POND3: POND 3 Peak Elev=417.04' Storage=4,657 cf Inflow=6.3 cfs 19,700 cf
Outflow=2.1 cfs 19,698 cf

Pond POND5: POND5 Peak Elev=432.78' Storage=29,937 cf Inflow=35.1 cfs 111,185 cf
Discarded=0.3 cfs 19,190 cf Primary=7.6 cfs 47,695 cf Secondary=6.4 cfs 44,315 cf Outflow=14.3 cfs 111,199 cf

Pond POND6: POND 6 Peak Elev=396.27' Storage=36,582 cf Inflow=16.6 cfs 68,642 cf
Primary=1.7 cfs 64,618 cf Secondary=0.0 cfs 0 cf Outflow=1.7 cfs 64,618 cf

Pond POND7: POND7 Peak Elev=375.25' Storage=67,930 cf Inflow=30.2 cfs 121,612 cf
Discarded=0.6 cfs 51,671 cf Primary=1.5 cfs 69,967 cf Outflow=2.1 cfs 121,637 cf

Link 2L: Cuvlert overflow to offiste northward Inflow=36.7 cfs 54,066 cf
Primary=36.7 cfs 54,066 cf

Link 48L: (new Link) Inflow=66.8 cfs 520,138 cf
Primary=66.8 cfs 520,138 cf

Link AP13: #221 Souht Tessier Ln West PL Inflow=8.9 cfs 31,021 cf
Primary=8.9 cfs 31,021 cf

Link AP14: Kidd Property Line1-towards WL Providence RD Inflow=3.9 cfs 12,805 cf
Primary=3.9 cfs 12,805 cf

Link AP15: Kidd Property Line2 Inflow=6.9 cfs 84,181 cf
Primary=6.9 cfs 84,181 cf

Link AP17: Kidd Porperty Line4 Inflow=8.0 cfs 50,907 cf
Primary=8.0 cfs 50,907 cf

Link AP18: Kidd Property Line5 Inflow=13.0 cfs 67,238 cf
Primary=13.0 cfs 67,238 cf

Link AP27: Flow to town Land-ADDDDDDDIN FLOW FROM POND 9 Inflow=4.2 cfs 23,441 cf
Primary=4.2 cfs 23,441 cf

Link DP1: CB Behin #10 Delmar Inflow=35.1 cfs 177,953 cf
Primary=35.1 cfs 177,953 cf

Link DP12: Flow to DI - 4" outlet discharge to #242 Inflow=9.7 cfs 35,725 cf
Primary=9.7 cfs 35,725 cf

Link DP2: 24" culvert #125 Sheryl Rd. Inflow=22.8 cfs 215,557 cf
Primary=22.8 cfs 215,557 cf

Link DP3: DP3 Inflow=19.5 cfs 210,340 cf
Primary=19.5 cfs 210,340 cf

Link DP4: DP4 -24" cuvlert at #149 S.Tessier Inflow=35.4 cfs 178,558 cf
Primary=35.4 cfs 178,558 cf

Link DP4+5: DP 4+5 - Wetland System behid #148 S.Tessier Inflow=55.4 cfs 243,750 cf
Primary=55.4 cfs 243,750 cf

Link DP5: pipe discharge at #127 S. Tessier Inflow=20.5 cfs 65,192 cf
Primary=20.5 cfs 65,192 cf

Link DP6: To Spring Hill, at Int with S. Tessier Inflow=3.4 cfs 10,709 cf
Primary=3.4 cfs 10,709 cf

Link DP7: #50 Hudson St. Inflow=4.2 cfs 13,138 cf
Primary=4.2 cfs 13,138 cf

Link DP7+8: Flow to Hudson and Spring Hill Inflow=10.8 cfs 33,813 cf
Primary=10.8 cfs 33,813 cf

Link DP8: No. Tessier Ln-Flow discharge to SE Inflow=3.2 cfs 9,966 cf
Primary=3.2 cfs 9,966 cf

Link DP9: FLOW TO CB AT INT OF EASTON AVE AND N. TESSIER Inflow=12.2 cfs 114,890 cf
Primary=12.2 cfs 114,890 cf

Total Runoff Area = 8,423,843 sf Runoff Volume = 1,734,018 cf Average Runoff Depth = 2.47"
91.04% Pervious = 7,669,335 sf 8.96% Impervious = 754,508 sf

Time span=0.00-72.00 hrs, dt=0.04 hrs, 1801 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

Subcatchment1S: TO CB's RD A-0+25 Runoff Area=73,977 sf 35.08% Impervious Runoff Depth=4.25"
Flow Length=496' Slope=0.1210 '/' Tc=6.0 min CN=82 Runoff=8.3 cfs 26,172 cf

Subcatchment2S: ROOF & sWALE AREA Runoff Area=21,932 sf 8.74% Impervious Runoff Depth=3.62"
Tc=6.0 min CN=76 Runoff=2.1 cfs 6,622 cf

Subcatchment3S: ROAD DRAINAGE TO Runoff Area=88,128 sf 33.97% Impervious Runoff Depth=4.25"
Flow Length=355' Slope=0.0960 '/' Tc=6.0 min CN=82 Runoff=9.9 cfs 31,179 cf

Subcatchment4S: AREA TO POND 4 Runoff Area=77,591 sf 39.28% Impervious Runoff Depth=4.35"
Flow Length=260' Slope=0.0540 '/' Tc=6.0 min CN=83 Runoff=8.9 cfs 28,139 cf

Subcatchment5S: AREA TO POND 5 Runoff Area=472,727 sf 22.20% Impervious Runoff Depth=3.83"
Flow Length=420' Slope=0.0700 '/' Tc=6.4 min CN=78 Runoff=47.5 cfs 150,773 cf

Subcatchment6S: Overland Flow to Basin Runoff Area=26,261 sf 0.00% Impervious Runoff Depth=3.32"
Tc=6.0 min CN=73 Runoff=2.3 cfs 7,271 cf

Subcatchment7S: Piped Area to Pond 7 Runoff Area=500,825 sf 25.59% Impervious Runoff Depth=3.93"
Flow Length=1,290' Slope=0.0790 '/' Tc=14.3 min CN=79 Runoff=40.6 cfs 164,049 cf

Subcatchment8S: AREA TO POND 6 Runoff Area=291,844 sf 20.03% Impervious Runoff Depth=3.83"
Flow Length=1,266' Slope=0.0700 '/' Tc=15.4 min CN=78 Runoff=22.4 cfs 93,081 cf

Subcatchment9S: AREA TO POND 8 Runoff Area=383,814 sf 10.10% Impervious Runoff Depth=3.52"
Flow Length=565' Slope=0.1600 '/' Tc=6.0 min CN=75 Runoff=36.1 cfs 112,647 cf

Subcatchment10S: Overland Flow to Basin Runoff Area=19,940 sf 9.57% Impervious Runoff Depth=3.62"
Tc=6.0 min CN=76 Runoff=1.9 cfs 6,020 cf

Subcatchment11S: FLOW TO POND 9 Runoff Area=248,876 sf 36.78% Impervious Runoff Depth=4.35"
Tc=6.0 min CN=83 Runoff=28.5 cfs 90,258 cf

Subcatchment13S: Area to #221 Tessier Runoff Area=174,501 sf 1.10% Impervious Runoff Depth=3.03"
Flow Length=780' Slope=0.1620 '/' Tc=8.6 min CN=70 Runoff=12.9 cfs 44,047 cf

Subcatchment14S: Area to Kidd PL1 South Runoff Area=69,364 sf 0.00% Impervious Runoff Depth=3.13"
Flow Length=668' Slope=0.1740 '/' Tc=7.2 min CN=71 Runoff=5.5 cfs 18,069 cf

Subcatchment15S: Flow to Kidd PL2 then Runoff Area=102,135 sf 2.25% Impervious Runoff Depth=3.22"
Flow Length=449' Slope=0.1700 '/' Tc=6.0 min CN=72 Runoff=8.8 cfs 27,438 cf

Subcatchment17S: Flow to Kidd PL4 then Runoff Area=17,400 sf 0.00% Impervious Runoff Depth=3.13"
Flow Length=335' Slope=0.1370 '/' Tc=6.0 min CN=71 Runoff=1.4 cfs 4,533 cf

Subcatchment18S: Flow to Kidd PL5 then Runoff Area=115,441 sf 4.85% Impervious Runoff Depth=3.32"
Flow Length=322' Slope=0.0900 '/' Tc=6.0 min CN=73 Runoff=10.2 cfs 31,961 cf

Subcatchment27S: Flow to Town Land Runoff Area=61,326 sf 14.92% Impervious Runoff Depth=3.72"
Flow Length=330' Slope=0.0360 '/' Tc=7.6 min CN=77 Runoff=5.7 cfs 19,035 cf

Subcatchment28S: Overland flow to CB Runoff Area=323,985 sf 1.79% Impervious Runoff Depth=3.13"
Flow Length=770' Slope=0.0805 '/' Tc=11.8 min CN=71 Runoff=22.4 cfs 84,397 cf

Subcatchment29S: Area to 24" Culvet at Runoff Area=685,900 sf 0.78% Impervious Runoff Depth=3.22"
Flow Length=1,686' Tc=42.1 min CN=72 Runoff=28.5 cfs 184,263 cf

Subcatchment30S: To stream channel Runoff Area=838,569 sf 1.13% Impervious Runoff Depth=3.32"
Flow Length=1,506' Slope=0.0050 '/' Tc=76.6 min CN=73 Runoff=25.3 cfs 232,167 cf

Subcatchment31S: Area to Basin at Int of Runoff Area=165,871 sf 7.60% Impervious Runoff Depth=3.42"
Flow Length=1,015' Slope=0.1330 '/' Tc=10.5 min CN=74 Runoff=13.0 cfs 47,297 cf

Subcatchment32S: Area to 24" culvert S Runoff Area=260,153 sf 10.57% Impervious Runoff Depth=3.42"
Flow Length=423' Slope=0.1100 '/' Tc=6.0 min CN=74 Runoff=23.8 cfs 74,181 cf

Subcatchment33S: Area from S. Tessier Runoff Area=47,038 sf 39.27% Impervious Runoff Depth=4.35"
Flow Length=205' Slope=0.1070 '/' Tc=6.0 min CN=83 Runoff=5.4 cfs 17,059 cf

Subcatchment34S: Overland flow to CB Runoff Area=94,006 sf 21.71% Impervious Runoff Depth=3.72"
Flow Length=500' Slope=0.1360 '/' Tc=6.0 min CN=77 Runoff=9.3 cfs 29,179 cf

Subcatchment35S: Flow to 12" at #127 S. Runoff Area=220,521 sf 2.30% Impervious Runoff Depth=3.32"
Flow Length=552' Slope=0.1400 '/' Tc=6.5 min CN=73 Runoff=19.2 cfs 61,054 cf

Subcatchment36S: Area to S. Tessier, Runoff Area=52,061 sf 10.10% Impervious Runoff Depth=3.42"
Flow Length=485' Slope=0.1460 '/' Tc=6.0 min CN=74 Runoff=4.8 cfs 14,845 cf

Subcatchment37S: area to #50 Hudson Runoff Area=63,872 sf 8.53% Impervious Runoff Depth=3.42"
Flow Length=467' Slope=0.1420 '/' Tc=6.0 min CN=74 Runoff=5.8 cfs 18,213 cf

Subcatchment38S: Area from #46 No Runoff Area=45,246 sf 15.12% Impervious Runoff Depth=3.62"
Flow Length=382' Slope=0.1000 '/' Tc=6.0 min CN=76 Runoff=4.4 cfs 13,660 cf

Subcatchment39S: Road drainage to int. Runoff Area=73,621 sf 20.04% Impervious Runoff Depth=3.62"
Flow Length=595' Slope=0.0820 '/' Tc=8.3 min CN=76 Runoff=6.6 cfs 22,227 cf

Subcatchment40S: Area tp drop inlet, int Runoff Area=155,510 sf 0.62% Impervious Runoff Depth=3.13"
Flow Length=986' Slope=0.0930 '/' Tc=13.4 min CN=71 Runoff=10.2 cfs 40,510 cf

Subcatchment43S: Area from Curtin to 4" Runoff Area=186,514 sf 4.44% Impervious Runoff Depth=3.22"
Flow Length=879' Slope=0.1160 '/' Tc=10.6 min CN=72 Runoff=13.7 cfs 50,106 cf

Subcatchment44S: Area flowing to 36" Runoff Area=295,658 sf 2.36% Impervious Runoff Depth=3.13"
Flow Length=808' Slope=0.1300 '/' Tc=9.7 min CN=71 Runoff=21.7 cfs 77,018 cf

Subcatchment45S: Area Flowing to 24" Runoff Area=131,452 sf 6.06% Impervious Runoff Depth=3.22"
Flow Length=709' Slope=0.1550 '/' Tc=7.7 min CN=72 Runoff=10.6 cfs 35,314 cf

Subcatchment46S: Flow to 24" Culvert Runoff Area=165,646 sf 6.82% Impervious Runoff Depth=3.32"
Flow Length=867' Slope=0.1110 '/' Tc=10.5 min CN=73 Runoff=12.6 cfs 45,861 cf

Subcatchment47S: Area to Int Stream Runoff Area=212,352 sf 2.78% Impervious Runoff Depth=3.13"
Flow Length=750' Slope=0.1110 '/' Tc=9.8 min CN=71 Runoff=15.5 cfs 55,317 cf

Subcatchment48S: Area to Ex. WL behind Runoff Area=585,575 sf 3.96% Impervious Runoff Depth=3.22"
Flow Length=1,745' Slope=0.0690 '/' Tc=23.9 min CN=72 Runoff=31.6 cfs 157,312 cf

Subcatchment49S: Area to 18" Culvert Runoff Area=1,074,211 sf 2.04% Impervious Runoff Depth=3.13"
Flow Length=1,228' Slope=0.1060 '/' Tc=14.9 min CN=71 Runoff=68.1 cfs 279,829 cf

Reach 17R: Path to CB Avg. Flow Depth=0.15' Max Vel=3.73 fps Inflow=10.0 cfs 73,219 cf
n=0.035 L=600.0' S=0.1100 '/' Capacity=1,429.4 cfs Outflow=10.0 cfs 73,219 cf

Reach 18R: Path to CB Avg. Flow Depth=0.22' Max Vel=3.91 fps Inflow=16.6 cfs 93,821 cf
n=0.035 L=770.0' S=0.0805 '/' Capacity=1,223.0 cfs Outflow=15.8 cfs 93,821 cf

Reach 33R: 36" CMP Avg. Flow Depth=1.28' Max Vel=15.71 fps Inflow=48.1 cfs 247,481 cf
36.0" Round Pipe w/ 1.0" inside fill n=0.025 L=130.0' S=0.1138 '/' Capacity=115.7 cfs Outflow=48.1 cfs 247,481 cf

Reach DP14: From pond behind #429 Avg. Flow Depth=1.50' Max Vel=3.29 fps Inflow=31.6 cfs 157,312 cf
n=0.040 L=330.0' S=0.0152 '/' Capacity=1,335.6 cfs Outflow=31.3 cfs 157,312 cf

Reach R48: Int. Stream from Prop. Avg. Flow Depth=1.44' Max Vel=6.44 fps Inflow=53.8 cfs 342,823 cf
n=0.040 L=170.0' S=0.0529 '/' Capacity=1,358.3 cfs Outflow=53.9 cfs 342,823 cf

Pond 1P: Basin at int. S Tessier and Peak Elev=289.09' Storage=3,264 cf Inflow=13.0 cfs 47,297 cf
Primary=4.8 cfs 38,324 cf Secondary=8.2 cfs 8,899 cf Outflow=13.0 cfs 47,223 cf

Pond 2P: Ex. Wetlands UPDATE 30" Culvert Peak Elev=284.62' Storage=55 cf Inflow=38.3 cfs 192,098 cf
Primary=38.3 cfs 192,098 cf Secondary=0.0 cfs 0 cf Outflow=38.3 cfs 192,098 cf

Pond 3P: 36" RCP Culvert under Fowler Peak Elev=374.65' Storage=1,660 cf Inflow=57.6 cfs 640,487 cf
Primary=56.2 cfs 640,487 cf Secondary=0.0 cfs 0 cf Outflow=56.2 cfs 640,487 cf

Pond 4P: 24" CMP at Driveway of #317 Peak Elev=381.48' Storage=84,265 cf Inflow=73.5 cfs 563,469 cf
Outflow=51.8 cfs 563,469 cf

Pond 5P: 24" CMP (assumed) at driveay Peak Elev=393.34' Storage=16,074 cf Inflow=53.9 cfs 342,823 cf
Outflow=54.2 cfs 342,823 cf

Pond 7P: 18" Culvert under Fowler #359 Peak Elev=389.90' Storage=8,526 cf Inflow=68.1 cfs 279,829 cf
Primary=11.1 cfs 185,332 cf Secondary=56.5 cfs 94,497 cf Outflow=67.6 cfs 279,829 cf

Pond 8P: Pond 8 Peak Elev=326.23' Storage=37,055 cf Inflow=36.1 cfs 112,647 cf
Outflow=10.4 cfs 109,018 cf

Pond 9P: POND9 Peak Elev=458.34' Storage=52,718 cf Inflow=28.5 cfs 90,258 cf
Discarded=0.4 cfs 60,770 cf Primary=1.5 cfs 29,500 cf Outflow=1.8 cfs 90,270 cf

Pond FB1: FB1 Peak Elev=0.00' Storage=0 cf

Pond FB4: FB4 Peak Elev=0.00' Storage=0 cf

Pond FB5: FOREBAY5 Peak Elev=0.00' Storage=0 cf

Pond FB6: FOREBAY6 Peak Elev=0.00' Storage=0 cf

Pond FB7N: FB7N Peak Elev=0.00' Storage=0 cf

Pond FB7S: FB7S Peak Elev=0.00' Storage=0 cf

Pond FB8: FB8 Peak Elev=0.00' Storage=0 cf

Pond FP9: FOREBAY9 Peak Elev=0.00' Storage=0 cf

Pond POND 2: POND 2 Peak Elev=428.87' Storage=6,519 cf Inflow=5.4 cfs 58,912 cf
Outflow=4.5 cfs 58,164 cf

Pond POND 4: POND 4 Peak Elev=466.90' Storage=20,964 cf Inflow=11.2 cfs 35,410 cf
Outflow=1.4 cfs 15,101 cf

Pond POND1: POND 1 Peak Elev=429.93' Storage=9,424 cf Inflow=12.0 cfs 37,800 cf
Outflow=3.9 cfs 37,792 cf

Pond POND3: POND 3 Peak Elev=417.88' Storage=6,809 cf Inflow=8.3 cfs 26,172 cf
Outflow=2.4 cfs 26,170 cf

Pond POND5: POND5 Peak Elev=433.66' Storage=41,602 cf Inflow=47.5 cfs 150,773 cf
Discarded=0.3 cfs 20,237 cf Primary=9.4 cfs 68,686 cf Secondary=7.5 cfs 61,860 cf Outflow=17.2 cfs 150,783 cf

Pond POND6: POND 6 Peak Elev=396.98' Storage=51,294 cf Inflow=22.4 cfs 93,081 cf
Primary=2.0 cfs 88,096 cf Secondary=0.1 cfs 947 cf Outflow=2.2 cfs 89,043 cf

Pond POND7: POND7 Peak Elev=376.39' Storage=97,054 cf Inflow=40.6 cfs 164,049 cf
Discarded=0.6 cfs 62,579 cf Primary=1.8 cfs 101,487 cf Outflow=2.4 cfs 164,066 cf

Link 2L: Cuvlert overflow to offiste northward Inflow=56.5 cfs 94,497 cf
Primary=56.5 cfs 94,497 cf

Link 48L: (new Link) Inflow=94.5 cfs 734,984 cf
Primary=94.5 cfs 734,984 cf

Link AP13: #221 Souht Tessier Ln West PL Inflow=12.9 cfs 44,047 cf
Primary=12.9 cfs 44,047 cf

Link AP14: Kidd Property Line1-towards WL Providence RD Inflow=5.5 cfs 19,016 cf
Primary=5.5 cfs 19,016 cf

Link AP15: Kidd Property Line2 Inflow=9.9 cfs 115,534 cf
Primary=9.9 cfs 115,534 cf

Link AP17: Kidd Porperty Line4 Inflow=10.0 cfs 73,219 cf
Primary=10.0 cfs 73,219 cf

Link AP18: Kidd Property Line5 Inflow=16.6 cfs 93,821 cf
Primary=16.6 cfs 93,821 cf

Link AP27: Flow to town Land-ADDDDDDDIN FLOW FROM POND 9 Inflow=5.7 cfs 48,535 cf
Primary=5.7 cfs 48,535 cf

Link DP1: CB Behin #10 Delmar Inflow=47.2 cfs 251,437 cf
Primary=47.2 cfs 251,437 cf

Link DP12: Flow to DI - 4" outlet discharge to #242 Inflow=13.7 cfs 50,106 cf
Primary=13.7 cfs 50,106 cf

Link DP2: 24" culvert #125 Sheryl Rd. Inflow=31.9 cfs 299,797 cf
Primary=31.9 cfs 299,797 cf

Link DP3: DP3 Inflow=27.5 cfs 295,230 cf
Primary=27.5 cfs 295,230 cf

Link DP4: DP4 -24" cuvlert at #149 S.Tessier Inflow=48.1 cfs 247,481 cf
Primary=48.1 cfs 247,481 cf

Link DP4+5: DP 4+5 - Wetland System behid #148 S.Tessier Inflow=76.0 cfs 337,713 cf
Primary=76.0 cfs 337,713 cf

Link DP5: pipe discharge at #127 S. Tessier Inflow=28.5 cfs 90,232 cf
Primary=28.5 cfs 90,232 cf

Link DP6: To Spring Hill, at Int with S. Tessier Inflow=4.8 cfs 14,845 cf
Primary=4.8 cfs 14,845 cf

Link DP7: #50 Hudson St. Inflow=5.8 cfs 18,213 cf
Primary=5.8 cfs 18,213 cf

Link DP7+8: Flow to Hudson and Spring Hill Inflow=15.0 cfs 46,718 cf
Primary=15.0 cfs 46,718 cf

Link DP8: No. Tessier Ln-Flow discharge to SE Inflow=4.4 cfs 13,660 cf
Primary=4.4 cfs 13,660 cf

Link DP9: FLOW TO CB AT INT OF EASTON AVE AND N. TESSIER Inflow=17.1 cfs 164,223 cf
Primary=17.1 cfs 164,223 cf

Total Runoff Area = 8,423,843 sf Runoff Volume = 2,401,100 cf Average Runoff Depth = 3.42"
91.04% Pervious = 7,669,335 sf 8.96% Impervious = 754,508 sf

Summary for Subcatchment 1S: TO CB's RD A-0+25

Runoff = 11.3 cfs @ 12.09 hrs, Volume= 36,241 cf, Depth= 5.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
37,216	74	>75% Grass cover, Good, HSG C
18,052	98	Paved parking, HSG C
7,896	98	Roofs, HSG C
10,813	70	Woods, Good, HSG C
73,977	82	Weighted Average
48,029		64.92% Pervious Area
25,948		35.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	496	0.1210	1.69		**Lag/CN Method,**
4.9	496	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 2S: ROOF & sWALE AREA BEHIND LOTS 1-6

Runoff = 3.0 cfs @ 12.09 hrs, Volume= 9,460 cf, Depth= 5.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
19,313	74	>75% Grass cover, Good, HSG C
703	70	Woods, Good, HSG C
1,916	98	Roofs, HSG C
21,932	76	Weighted Average
20,016		91.26% Pervious Area
1,916		8.74% Impervious Area

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

Summary for Subcatchment 3S: ROAD DRAINAGE TO POND 2

Runoff = 13.5 cfs @ 12.09 hrs, Volume= 43,174 cf, Depth= 5.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
15,186	98	Roofs, HSG C
14,747	98	Paved parking, HSG C
50,632	74	>75% Grass cover, Good, HSG C
7,563	70	Woods, Good, HSG C
88,128	82	Weighted Average
58,195		66.03% Pervious Area
29,933		33.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	355	0.0960	1.41		**Lag/CN Method,**
4.2	355	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 4S: AREA TO POND 4

Runoff = 12.1 cfs @ 12.09 hrs, Volume= 38,773 cf, Depth= 6.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
15,080	98	Paved parking, HSG C
15,400	98	Roofs, HSG C
365	70	Woods, Good, HSG C
46,746	74	>75% Grass cover, Good, HSG C
77,591	83	Weighted Average
47,111		60.72% Pervious Area
30,480		39.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	260	0.0540	1.03		**Lag/CN Method,**
4.2	260	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 5S: AREA TO POND 5

Runoff = 66.5 cfs @ 12.09 hrs, Volume= 213,102 cf, Depth= 5.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
58,987	98	Paved parking, HSG C
98,718	70	Woods, Good, HSG C
45,974	98	Roofs, HSG C
269,048	74	>75% Grass cover, Good, HSG C
472,727	78	Weighted Average
367,766		77.80% Pervious Area
104,961		22.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.4	420	0.0700	1.10		**Lag/CN Method,**

Summary for Subcatchment 6S: Overland Flow to Basin

Runoff = 3.4 cfs @ 12.09 hrs, Volume= 10,565 cf, Depth= 4.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
16,855	74	>75% Grass cover, Good, HSG C
9,406	70	Woods, Good, HSG C
26,261	73	Weighted Average
26,261		100.00% Pervious Area

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

Summary for Subcatchment 7S: Piped Area to Pond 7

Runoff = 56.6 cfs @ 12.19 hrs, Volume= 230,652 cf, Depth= 5.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
221,676	74	>75% Grass cover, Good, HSG C
55,328	98	Roofs, HSG C
72,836	98	Paved parking, HSG C
150,985	70	Woods, Good, HSG C
500,825	79	Weighted Average
372,661		74.41% Pervious Area
128,164		25.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	1,290	0.0790	1.50		**Lag/CN Method,**

Summary for Subcatchment 8S: AREA TO POND 6

Runoff = 31.5 cfs @ 12.21 hrs, Volume= 131,561 cf, Depth= 5.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
31,068	98	Paved parking, HSG C
27,380	98	Roofs, HSG C
71,277	70	Woods, Good, HSG C
162,119	74	>75% Grass cover, Good, HSG C
291,844	78	Weighted Average
233,396		79.97% Pervious Area
58,448		20.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	1,266	0.0700	1.37		**Lag/CN Method,**

Summary for Subcatchment 9S: AREA TO POND 8

Runoff = 51.6 cfs @ 12.09 hrs, Volume= 161,833 cf, Depth= 5.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
176,206	70	Woods, Good, HSG C
14,631	98	Roofs, HSG C
24,152	98	Paved parking, HSG C
168,825	74	>75% Grass cover, Good, HSG C
383,814	75	Weighted Average
345,031		89.90% Pervious Area
38,783		10.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.8	565	0.1600	1.61		**Lag/CN Method,**
5.8	565	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 10S: Overland Flow to Basin

Runoff = 2.7 cfs @ 12.09 hrs, Volume= 8,601 cf, Depth= 5.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
18,031	74	>75% Grass cover, Good, HSG C
1,909	98	Roofs, HSG C
19,940	76	Weighted Average
18,031		90.43% Pervious Area
1,909		9.57% Impervious Area

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

Summary for Subcatchment 11S: FLOW TO POND 9

Runoff = 38.7 cfs @ 12.09 hrs, Volume= 124,366 cf, Depth= 6.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
145,685	74	>75% Grass cover, Good, HSG C
41,195	98	Roofs, HSG C
50,331	98	Paved parking, HSG C
11,665	70	Woods, Good, HSG C
248,876	83	Weighted Average
157,350		63.22% Pervious Area
91,526		36.78% Impervious Area

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

Summary for Subcatchment 13S: Area to #221 Tessier Ln South of House

Runoff = 19.1 cfs @ 12.12 hrs, Volume= 65,169 cf, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
165,415	70	Woods, Good, HSG C
7,170	74	>75% Grass cover, Good, HSG C
1,916	98	Roofs, HSG C
174,501	70	Weighted Average
172,585		98.90% Pervious Area
1,916		1.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.6	780	0.1620	1.51		**Lag/CN Method,**

Summary for Subcatchment 14S: Area to Kidd PL1 South Towards Providence RD

Runoff = 8.1 cfs @ 12.11 hrs, Volume= 26,570 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
53,198	70	Woods, Good, HSG C
16,166	74	>75% Grass cover, Good, HSG C
69,364	71	Weighted Average
69,364		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	668	0.1740	1.55		**Lag/CN Method,**

Summary for Subcatchment 15S: Flow to Kidd PL2 then to WL at #125 Sheryl Rd

Runoff = 12.8 cfs @ 12.09 hrs, Volume= 40,105 cf, Depth= 4.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
70,191	70	Woods, Good, HSG C
2,293	98	Roofs, HSG C
29,651	74	>75% Grass cover, Good, HSG C
102,135	72	Weighted Average
99,842		97.75% Pervious Area
2,293		2.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	449	0.1700	1.46		**Lag/CN Method,**
5.1	449	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 17S: Flow to Kidd PL4 then to CB@ #10 Delmar

Runoff = 2.1 cfs @ 12.09 hrs, Volume= 6,665 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
11,541	70	Woods, Good, HSG C
5,859	74	>75% Grass cover, Good, HSG C
17,400	71	Weighted Average
17,400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	335	0.1370	1.20		**Lag/CN Method,**
4.6	335	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 18S: Flow to Kidd PL5 then to CB@ #10 Delmar

Runoff = 14.8 cfs @ 12.09 hrs, Volume= 46,442 cf, Depth= 4.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
49,270	70	Woods, Good, HSG C
60,575	74	>75% Grass cover, Good, HSG C
5,596	98	Roofs, HSG C
115,441	73	Weighted Average
109,845		95.15% Pervious Area
5,596		4.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	322	0.0900	1.02		**Lag/CN Method,**
5.3	322	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 27S: Flow to Town Land

Runoff = 8.1 cfs @ 12.11 hrs, Volume= 27,048 cf, Depth= 5.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
11,540	70	Woods, Good, HSG C
9,149	98	Roofs, HSG C
40,637	74	>75% Grass cover, Good, HSG C
61,326	77	Weighted Average
52,177		85.08% Pervious Area
9,149		14.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	330	0.0360	0.73		**Lag/CN Method,**

Summary for Subcatchment 28S: Overland flow to CB behind #10 Delmar

Runoff = 33.0 cfs @ 12.17 hrs, Volume= 124,103 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
255,692	70	Woods, Good, HSG C
5,785	98	Roofs, HSG C
62,508	74	>75% Grass cover, Good, HSG C
323,985	71	Weighted Average
318,200		98.21% Pervious Area
5,785		1.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	770	0.0805	1.09		**Lag/CN Method,**

Summary for Subcatchment 29S: Area to 24" Culvet at 125 Sherly Rd

Runoff = 41.7 cfs @ 12.58 hrs, Volume= 269,330 cf, Depth= 4.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
506,676	70	Woods, Good, HSG C
127,527	77	Woods, Good, HSG D
46,347	74	>75% Grass cover, Good, HSG C
5,350	98	Roofs, HSG C
685,900	72	Weighted Average
680,550		99.22% Pervious Area
5,350		0.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	1,225	0.1100	1.43		**Lag/CN Method,**
27.9	461	0.0060	0.28		**Lag/CN Method,**
42.1	1,686	Total			

Summary for Subcatchment 30S: To stream channel discharging towards Providence Road.

Runoff = 37.0 cfs @ 13.02 hrs, Volume= 337,360 cf, Depth= 4.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
420,623	70	Woods, Good, HSG C
286,331	77	Woods, Good, HSG D
122,174	74	>75% Grass cover, Good, HSG C
9,441	98	Roofs, HSG C
838,569	73	Weighted Average
829,128		98.87% Pervious Area
9,441		1.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
76.6	1,506	0.0050	0.33		**Lag/CN Method,**

Summary for Subcatchment 31S: Area to Basin at Int of Tessier Ln and S Tessier

Runoff = 18.8 cfs @ 12.15 hrs, Volume= 68,333 cf, Depth= 4.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
72,078	70	Woods, Good, HSG C
8,980	98	Roofs, HSG C
3,625	98	Paved parking, HSG C
81,188	74	>75% Grass cover, Good, HSG C
165,871	74	Weighted Average
153,266		92.40% Pervious Area
12,605		7.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.5	1,015	0.1330	1.61		**Lag/CN Method,**

Summary for Subcatchment 32S: Area to 24" culvert S Tessier Rd

Runoff = 34.2 cfs @ 12.09 hrs, Volume= 107,174 cf, Depth= 4.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
159,714	70	Woods, Good, HSG C
5,208	98	Roofs, HSG C
71,368	74	>75% Grass cover, Good, HSG C
22,280	98	Paved parking, HSG C
1,583	96	Gravel surface, HSG C
260,153	74	Weighted Average
232,665		89.43% Pervious Area
27,488		10.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.8	423	0.1100	1.23		**Lag/CN Method,**
5.8	423	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 33S: Area from S. Tessier to raodway drainage

Runoff = 7.3 cfs @ 12.09 hrs, Volume= 23,505 cf, Depth= 6.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
20,661	74	>75% Grass cover, Good, HSG C
7,905	70	Woods, Good, HSG C
1,963	98	Roofs, HSG C
16,509	98	Paved parking, HSG C
47,038	83	Weighted Average
28,566		60.73% Pervious Area
18,472		39.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	205	0.1070	1.38		**Lag/CN Method,**
2.5	205	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 34S: Overland flow to CB street drainage S.Tessier

Runoff = 13.2 cfs @ 12.09 hrs, Volume= 41,462 cf, Depth= 5.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
28,614	74	>75% Grass cover, Good, HSG C
44,981	70	Woods, Good, HSG C
14,532	98	Paved parking, HSG C
5,879	98	Roofs, HSG C
94,006	77	Weighted Average
73,595		78.29% Pervious Area
20,411		21.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.4	500	0.1360	1.54		**Lag/CN Method,**
5.4	500	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 35S: Flow to 12" at #127 S. Tessier

Runoff = 27.8 cfs @ 12.09 hrs, Volume= 88,717 cf, Depth= 4.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
142,841	70	Woods, Good, HSG C
67,031	74	>75% Grass cover, Good, HSG C
5,083	98	Roofs, HSG C
5,566	96	Gravel surface, HSG C
220,521	73	Weighted Average
215,438		97.70% Pervious Area
5,083		2.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	552	0.1400	1.42		**Lag/CN Method,**

Summary for Subcatchment 36S: Area to S. Tessier, south of int. with Spring Hill

Runoff = 6.8 cfs @ 12.09 hrs, Volume= 21,447 cf, Depth= 4.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
36,161	70	Woods, Good, HSG C
897	98	Roofs, HSG C
10,641	74	>75% Grass cover, Good, HSG C
4,362	98	Paved parking, HSG C
52,061	74	Weighted Average
46,802		89.90% Pervious Area
5,259		10.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.6	485	0.1460	1.45		**Lag/CN Method,**
5.6	485	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 37S: area to #50 Hudson

Runoff = 8.4 cfs @ 12.09 hrs, Volume= 26,313 cf, Depth= 4.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
25,442	70	Woods, Good, HSG C
3,980	98	Roofs, HSG C
32,981	74	>75% Grass cover, Good, HSG C
1,469	98	Paved parking, HSG C
63,872	74	Weighted Average
58,423		91.47% Pervious Area
5,449		8.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	467	0.1420	1.42		**Lag/CN Method,**
5.5	467	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 38S: Area from #46 No Tessier, across Roadway

Runoff = 6.2 cfs @ 12.09 hrs, Volume= 19,516 cf, Depth= 5.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
16,492	70	Woods, Good, HSG C
5,440	98	Paved parking, HSG C
1,401	98	Roofs, HSG C
21,913	74	>75% Grass cover, Good, HSG C
45,246	76	Weighted Average
38,405		84.88% Pervious Area
6,841		15.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.2	382	0.1000	1.21		**Lag/CN Method,**
5.2	382	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 39S: Road drainage to int. of No Tessier and Elston

Runoff = 9.4 cfs @ 12.12 hrs, Volume= 31,756 cf, Depth= 5.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
29,652	70	Woods, Good, HSG C
3,789	98	Roofs, HSG C
10,965	98	Paved parking, HSG C
29,215	70	Woods, Good, HSG C
73,621	76	Weighted Average
58,867		79.96% Pervious Area
14,754		20.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	595	0.0820	1.20		**Lag/CN Method,**

Summary for Subcatchment 40S: Area tp drop inlet, int No. Tessier and Elston

Runoff = 15.1 cfs @ 12.19 hrs, Volume= 59,568 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
132,220	70	Woods, Good, HSG C
967	98	Roofs, HSG C
22,323	74	>75% Grass cover, Good, HSG C
155,510	71	Weighted Average
154,543		99.38% Pervious Area
967		0.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	986	0.0930	1.23		**Lag/CN Method,**

Summary for Subcatchment 43S: Area from Curtin to 4" outlet @ #242 Fowler

Runoff = 20.1 cfs @ 12.15 hrs, Volume= 73,238 cf, Depth= 4.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
155,312	70	Woods, Good, HSG C
1,041	98	Roofs, HSG C
7,233	98	Paved parking, HSG C
22,928	74	>75% Grass cover, Good, HSG C
186,514	72	Weighted Average
178,240		95.56% Pervious Area
8,274		4.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	879	0.1160	1.38		**Lag/CN Method,**

Summary for Subcatchment 44S: Area flowing to 36" culvert at #277 Fowler Rd

Runoff = 32.1 cfs @ 12.14 hrs, Volume= 113,252 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
243,604	70	Woods, Good, HSG C
884	98	Roofs, HSG C
6,079	98	Paved parking, HSG C
45,091	74	>75% Grass cover, Good, HSG C
295,658	71	Weighted Average
288,695		97.64% Pervious Area
6,963		2.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.7	808	0.1300	1.40		**Lag/CN Method,**

Summary for Subcatchment 45S: Area Flowing to 24" CMP at Driveway of #317 Fowler

Runoff = 15.6 cfs @ 12.11 hrs, Volume= 51,617 cf, Depth= 4.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
101,008	70	Woods, Good, HSG C
515	98	Unconnected roofs, HSG C
7,450	98	Paved parking, HSG C
22,479	74	>75% Grass cover, Good, HSG C
131,452	72	Weighted Average
123,487		93.94% Pervious Area
7,965		6.06% Impervious Area
515		6.47% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	709	0.1550	1.53		**Lag/CN Method,**

Summary for Subcatchment 46S: Flow to 24" Culvert (assumed) at driveway of #359 Fowler

Runoff = 18.3 cfs @ 12.15 hrs, Volume= 66,640 cf, Depth= 4.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
119,541	70	Woods, Good, HSG C
2,319	98	Roofs, HSG C
8,986	98	Paved parking, HSG C
34,800	74	>75% Grass cover, Good, HSG C
165,646	73	Weighted Average
154,341		93.18% Pervious Area
11,305		6.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.5	867	0.1110	1.38		**Lag/CN Method,**

Summary for Subcatchment 47S: Area to Int Stream Channel @ BOX CULVERT

Runoff = 23.0 cfs @ 12.14 hrs, Volume= 81,341 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
186,060	70	Woods, Good, HSG C
20,389	74	>75% Grass cover, Good, HSG C
1,016	98	Roofs, HSG C
4,887	98	Paved parking, HSG C
212,352	71	Weighted Average
206,449		97.22% Pervious Area
5,903		2.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	750	0.1110	1.27		**Lag/CN Method,**

Summary for Subcatchment 48S: Area to Ex. WL behind #429

Runoff = 46.4 cfs @ 12.33 hrs, Volume= 229,936 cf, Depth= 4.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
501,824	70	Woods, Good, HSG C
3,534	98	Roofs, HSG C
6,379	96	Gravel surface, HSG C
19,678	98	Paved parking, HSG C
54,160	74	>75% Grass cover, Good, HSG C
585,575	72	Weighted Average
562,363		96.04% Pervious Area
23,212		3.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.9	1,745	0.0690	1.22		**Lag/CN Method,**

Summary for Subcatchment 49S: Area to 18" Culvert udner Fowler Rd at #359

Runoff = 100.6 cfs @ 12.21 hrs, Volume= 411,477 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=8.02"

Area (sf)	CN	Description
1,052,252	70	Woods, Good, HSG C
3,725	98	Roofs, HSG C
18,234	98	Paved parking, HSG C
1,074,211	71	Weighted Average
1,052,252		97.96% Pervious Area
21,959		2.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	1,228	0.1060	1.37		**Lag/CN Method,**

Summary for Reach 17R: Path to CB

Inflow Area = 490,127 sf, 21.42% Impervious, Inflow Depth = 2.67" for 100-Year event
Inflow = 12.4 cfs @ 12.33 hrs, Volume= 108,888 cf
Outflow = 12.4 cfs @ 12.36 hrs, Volume= 108,888 cf, Atten= 0%, Lag= 1.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Max. Velocity= 4.02 fps, Min. Travel Time= 2.5 min
Avg. Velocity = 1.61 fps, Avg. Travel Time= 6.2 min

Peak Storage= 1,850 cf @ 12.36 hrs
Average Depth at Peak Storage= 0.17'
Bank-Full Depth= 2.00' Flow Area= 90.0 sf, Capacity= 1,429.4 cfs

15.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 15.0 '/' Top Width= 75.00'
Length= 600.0' Slope= 0.1100 '/'
Inlet Invert= 426.00', Outlet Invert= 360.00'

‡

Summary for Reach 18R: Path to CB

Inflow Area = 115,441 sf, 4.85% Impervious, Inflow Depth = 14.11" for 100-Year event
Inflow = 22.2 cfs @ 12.10 hrs, Volume= 135,692 cf
Outflow = 21.2 cfs @ 12.13 hrs, Volume= 135,692 cf, Atten= 5%, Lag= 2.2 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Max. Velocity= 4.32 fps, Min. Travel Time= 3.0 min
Avg. Velocity = 1.54 fps, Avg. Travel Time= 8.3 min

Peak Storage= 3,772 cf @ 12.13 hrs
Average Depth at Peak Storage= 0.26'
Bank-Full Depth= 2.00' Flow Area= 90.0 sf, Capacity= 1,223.0 cfs

15.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 15.0 '/' Top Width= 75.00'
Length= 770.0' Slope= 0.0805 '/'
Inlet Invert= 422.00', Outlet Invert= 360.00'

‡

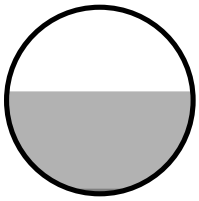
Summary for Reach 33R: 36" CMP

Inflow Area = 856,876 sf, 11.36% Impervious, Inflow Depth = 5.00" for 100-Year event
Inflow = 67.1 cfs @ 12.12 hrs, Volume= 357,141 cf
Outflow = 67.2 cfs @ 12.12 hrs, Volume= 357,141 cf, Atten= 0%, Lag= 0.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Max. Velocity= 17.09 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.56 fps, Avg. Travel Time= 0.8 min

Peak Storage= 511 cf @ 12.12 hrs
Average Depth at Peak Storage= 1.65' above invert (1.57' above fill)
Bank-Full Depth= 3.00' above invert (2.92' above fill) Flow Area= 7.0 sf, Capacity= 115.7 cfs

36.0" Round Pipe w/ 1.0" inside fill
n= 0.025
Length= 130.0' Slope= 0.1138 '/' (101 Elevation Intervals)
Inlet Invert= 277.80', Outlet Invert= 263.00'



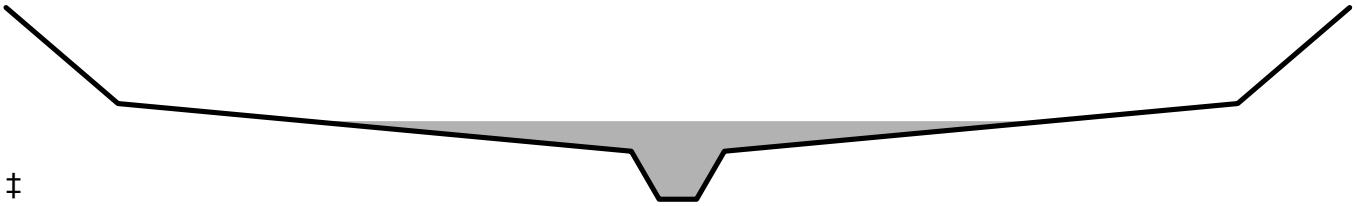
Summary for Reach DP14: From pond behind #429 Fowler Rd. to P.L. of #379

Inflow Area = 585,575 sf, 3.96% Impervious, Inflow Depth = 4.71" for 100-Year event
Inflow = 46.4 cfs @ 12.33 hrs, Volume= 229,936 cf
Outflow = 46.0 cfs @ 12.36 hrs, Volume= 229,936 cf, Atten= 1%, Lag= 1.8 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Max. Velocity= 3.28 fps, Min. Travel Time= 1.7 min
Avg. Velocity = 1.78 fps, Avg. Travel Time= 3.1 min

Peak Storage= 5,775 cf @ 12.36 hrs
Average Depth at Peak Storage= 1.63'
Bank-Full Depth= 4.00' Flow Area= 168.0 sf, Capacity= 1,335.6 cfs

Custom cross-section, Length= 330.0' Slope= 0.0152 '/'
Constant n= 0.040 Mountain streams
Inlet Invert= 408.00', Outlet Invert= 403.00'



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Offset (feet)	Elevation (feet)	Chan.Depth (feet)
-36.00	4.00	0.00
-30.00	2.00	2.00
-2.50	1.00	3.00
-1.00	0.00	4.00
1.00	0.00	4.00
2.50	1.00	3.00
30.00	2.00	2.00
36.00	4.00	0.00

Depth (feet)	End Area (sq-ft)	Perim. (feet)	Storage (cubic-feet)	Discharge (cfs)
0.00	0.0	2.0	0	0.0
1.00	3.5	5.6	1,155	11.7
2.00	36.0	60.6	11,880	116.3
4.00	168.0	73.3	55,440	1,335.6

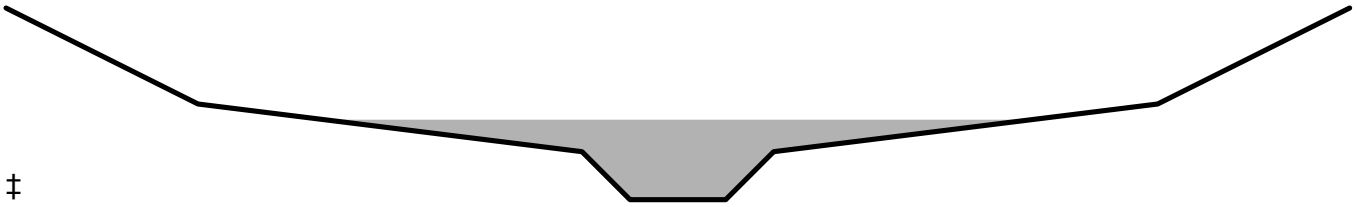
Summary for Reach R48: Int. Stream from Prop. Line of #379 Fowler to Cullvert

Inflow Area = 1,271,402 sf, 10.27% Impervious, Inflow Depth = 4.75" for 100-Year event
Inflow = 85.1 cfs @ 12.29 hrs, Volume= 503,662 cf
Outflow = 85.1 cfs @ 12.30 hrs, Volume= 503,662 cf, Atten= 0%, Lag= 0.3 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Max. Velocity= 6.61 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.67 fps, Avg. Travel Time= 1.7 min

Peak Storage= 2,352 cf @ 12.30 hrs
Average Depth at Peak Storage= 1.67'
Bank-Full Depth= 4.00' Flow Area= 94.5 sf, Capacity= 1,358.3 cfs

Custom cross-section, Length= 170.0' Slope= 0.0529 '/'
Constant n= 0.040 Mountain streams
Inlet Invert= 403.00', Outlet Invert= 394.00'



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Offset (feet)	Elevation (feet)	Chan.Depth (feet)
-21.00	4.00	0.00
-15.00	2.00	2.00
-3.00	1.00	3.00
-1.50	0.00	4.00
1.50	0.00	4.00
3.00	1.00	3.00
15.00	2.00	2.00
21.00	4.00	0.00

Depth (feet)	End Area (sq-ft)	Perim. (feet)	Storage (cubic-feet)	Discharge (cfs)
0.00	0.0	3.0	0	0.0
1.00	4.5	6.6	765	29.8
2.00	22.5	30.7	3,825	156.4
4.00	94.5	43.3	16,065	1,358.3

Summary for Pond 1P: Basin at int. S Tessier and Tessier Ln

Inflow Area = 165,871 sf, 7.60% Impervious, Inflow Depth = 4.94" for 100-Year event
Inflow = 18.8 cfs @ 12.15 hrs, Volume= 68,333 cf
Outflow = 18.8 cfs @ 12.16 hrs, Volume= 68,259 cf, Atten= 0%, Lag= 0.7 min
Primary = 5.3 cfs @ 12.16 hrs, Volume= 51,346 cf
Secondary = 13.5 cfs @ 12.16 hrs, Volume= 16,913 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 289.23' @ 12.16 hrs Surf.Area= 0 sf Storage= 3,493 cf

Plug-Flow detention time= 29.7 min calculated for 68,259 cf (100% of inflow)
Center-of-Mass det. time= 29.0 min (849.4 - 820.4)

Volume	Invert	Avail.Storage	Storage Description
#1	287.80'	4,800 cf	**Custom Stage Data** Listed below

Elevation (feet)	Cum.Store (cubic-feet)
287.80	0
288.00	1,405
290.00	4,800

Device	Routing	Invert	Outlet Devices
#1	Primary	287.80'	**15.0" Round Culvert** L= 50.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 287.80' / 287.30' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	287.80'	**24.0" W x 18.0" H Vert. Orifice/Grate** C= 0.600
#3	Secondary	288.75'	**15.0' long x 30.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=5.3 cfs @ 12.16 hrs HW=289.23' TW=279.42' (Dynamic Tailwater)
↑**1=Culvert** (Inlet Controls 5.3 cfs @ 4.32 fps)
↑**2=Orifice/Grate** (Passes 5.3 cfs of 11.0 cfs potential flow)

Secondary OutFlow Max=13.4 cfs @ 12.16 hrs HW=289.23' TW=284.84' (Dynamic Tailwater)
↑**3=Broad-Crested Rectangular Weir** (Weir Controls 13.4 cfs @ 1.87 fps)

Summary for Pond 2P: Ex. Wetlands UPDATE 30" Culvert S Tessier

Inflow Area = 643,967 sf, 10.29% Impervious, Inflow Depth = 5.26" for 100-Year event
Inflow = 55.1 cfs @ 12.20 hrs, Volume= 282,290 cf
Outflow = 55.1 cfs @ 12.20 hrs, Volume= 282,290 cf, Atten= 0%, Lag= 0.0 min
Primary = 55.1 cfs @ 12.20 hrs, Volume= 282,290 cf
Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 284.85' @ 12.20 hrs Surf.Area= 218 sf Storage= 98 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.0 min (840.3 - 840.3)

Volume	Invert	Avail.Storage	Storage Description
#1	283.80'	511 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
283.80	0	0	0
284.00	10	1	1
286.00	500	510	511

Device	Routing	Invert	Outlet Devices
#1	Secondary	285.10'	**10.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	278.80'	**36.0" Round Culvert** L= 15.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 278.80' / 278.50' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#3	Device 2	283.80'	**60.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=55.1 cfs @ 12.20 hrs HW=284.85' TW=279.41' (Dynamic Tailwater)
↑—**2=Culvert** (Passes 55.1 cfs of 72.6 cfs potential flow)
↑—**3=Orifice/Grate** (Weir Controls 55.1 cfs @ 3.35 fps)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=283.80' TW=0.00' (Dynamic Tailwater)
↑—**1=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Pond 3P: 36" RCP Culvert under Fowler Rd at #277

Inflow Area = 2,772,723 sf, 6.04% Impervious, Inflow Depth = 3.95" for 100-Year event
Inflow = 107.2 cfs @ 12.42 hrs, Volume= 912,268 cf
Outflow = 86.1 cfs @ 12.61 hrs, Volume= 912,268 cf, Atten= 20%, Lag= 11.4 min
Primary = 86.0 cfs @ 12.61 hrs, Volume= 912,236 cf
Secondary = 0.2 cfs @ 12.60 hrs, Volume= 31 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 376.98' @ 12.61 hrs Surf.Area= 17,572 sf Storage= 27,474 cf

Plug-Flow detention time= 1.0 min calculated for 911,761 cf (100% of inflow)
Center-of-Mass det. time= 1.0 min (881.9 - 880.9)

Volume	Invert	Avail.Storage	Storage Description
#1	371.40'	48,085 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
371.40	0	0	0
372.00	50	15	15
374.00	200	250	265
376.00	12,306	12,506	12,771
378.00	23,008	35,314	48,085

Device	Routing	Invert	Outlet Devices
#1	Primary	371.40'	**36.0" Round Culvert** L= 43.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 371.40' / 370.33' S= 0.0249 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Secondary	376.95'	**10.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=85.9 cfs @ 12.61 hrs HW=376.98' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 85.9 cfs @ 12.16 fps)

Secondary OutFlow Max=0.2 cfs @ 12.60 hrs HW=376.98' TW=0.00' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 0.2 cfs @ 0.48 fps)

Summary for Pond 4P: 24" CMP at Driveway of #317 Fowler Rd

Inflow Area = 2,477,065 sf, 6.48% Impervious, Inflow Depth = 3.87" for 100-Year event
Inflow = 103.9 cfs @ 12.30 hrs, Volume= 799,016 cf
Outflow = 93.5 cfs @ 12.44 hrs, Volume= 799,016 cf, Atten= 10%, Lag= 8.0 min
Primary = 93.5 cfs @ 12.44 hrs, Volume= 799,016 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 381.90' @ 12.44 hrs Surf.Area= 31,191 sf Storage= 96,961 cf

Plug-Flow detention time= 27.2 min calculated for 798,572 cf (100% of inflow)
Center-of-Mass det. time= 27.2 min (888.7 - 861.5)

Volume	Invert	Avail.Storage	Storage Description
#1	376.00'	172,808 cf	**Custom Stage Data-From Lidar (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
376.00	0	0	0
378.00	12,334	12,334	12,334
380.00	21,924	34,258	46,592
382.00	31,696	53,620	100,212
384.00	40,900	72,596	172,808

Device	Routing	Invert	Outlet Devices
#1	Primary	376.00'	**24.0" Round Culvert** L= 50.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 376.00' / 375.00' S= 0.0200 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf
#2	Primary	381.00'	**30.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=93.5 cfs @ 12.44 hrs HW=381.90' TW=376.48' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 26.4 cfs @ 8.41 fps)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 67.0 cfs @ 2.49 fps)

Summary for Pond 5P: 24" CMP (assumed) at driveay of #359 Fowler

Inflow Area = 1,271,402 sf, 10.27% Impervious, Inflow Depth = 4.75" for 100-Year event
Inflow = 85.1 cfs @ 12.30 hrs, Volume= 503,662 cf
Outflow = 84.9 cfs @ 12.32 hrs, Volume= 503,662 cf, Atten= 0%, Lag= 1.2 min
Primary = 84.9 cfs @ 12.32 hrs, Volume= 503,662 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 393.56' @ 12.32 hrs Surf.Area= 6,944 sf Storage= 17,572 cf

Plug-Flow detention time= 3.3 min calculated for 503,382 cf (100% of inflow)
Center-of-Mass det. time= 3.3 min (847.7 - 844.4)

Volume	Invert	Avail.Storage	Storage Description
#1	387.00'	20,778 cf	**Estimated areas (LIDAR) (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
387.00	0	0	0
388.00	508	254	254
390.00	1,799	2,307	2,561
392.00	4,376	6,175	8,736
394.00	7,666	12,042	20,778

Device	Routing	Invert	Outlet Devices
#1	Primary	387.00'	**24.0" Round 24" CMP Culvert (assumed)** L= 50.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 387.00' / 386.00' S= 0.0200 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf
#2	Primary	393.00'	**50.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=84.9 cfs @ 12.32 hrs HW=393.56' TW=381.74' (Dynamic Tailwater)
└─**1=24" CMP Culvert (assumed)** (Inlet Controls 28.2 cfs @ 8.96 fps)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 56.7 cfs @ 2.02 fps)

Summary for Pond 7P: 18" Culvert under Fowler #359

Inflow Area = 1,074,211 sf, 2.04% Impervious, Inflow Depth = 4.60" for 100-Year event
Inflow = 100.6 cfs @ 12.21 hrs, Volume= 411,477 cf
Outflow = 99.9 cfs @ 12.22 hrs, Volume= 411,477 cf, Atten= 1%, Lag= 0.8 min
Primary = 11.7 cfs @ 12.22 hrs, Volume= 243,737 cf
Secondary = 88.2 cfs @ 12.22 hrs, Volume= 167,740 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 390.21' @ 12.22 hrs Surf.Area= 5,686 sf Storage= 10,283 cf

Plug-Flow detention time= 3.5 min calculated for 411,248 cf (100% of inflow)
Center-of-Mass det. time= 3.5 min (834.3 - 830.8)

Volume	Invert	Avail.Storage	Storage Description
#1	386.30'	11,913 cf	**Custom Stage Data- (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
386.30	0	0	0
388.00	1,829	1,555	1,555
390.00	5,686	7,515	9,070
390.50	5,686	2,843	11,913

Device	Routing	Invert	Outlet Devices
#1	Primary	386.30'	**18.0" Round Culvert** L= 40.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 386.30' / 385.60' S= 0.0175 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf
#2	Secondary	389.00'	**25.0' long x 25.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=11.6 cfs @ 12.22 hrs HW=390.21' TW=381.16' (Dynamic Tailwater)
1=Culvert (Barrel Controls 11.6 cfs @ 6.59 fps)

Secondary OutFlow Max=87.5 cfs @ 12.22 hrs HW=390.21' TW=0.00' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Weir Controls 87.5 cfs @ 2.90 fps)

Summary for Pond 8P: Pond 8

Inflow Area = 383,814 sf, 10.10% Impervious, Inflow Depth = 5.06" for 100-Year event
Inflow = 51.6 cfs @ 12.09 hrs, Volume= 161,833 cf
Outflow = 25.2 cfs @ 12.26 hrs, Volume= 158,203 cf, Atten= 51%, Lag= 10.2 min
Primary = 25.2 cfs @ 12.26 hrs, Volume= 158,203 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 327.08' @ 12.26 hrs Surf.Area= 11,572 sf Storage= 46,443 cf
Flood Elev= 327.10' Surf.Area= 11,598 sf Storage= 46,732 cf

Plug-Flow detention time= 67.5 min calculated for 158,203 cf (98% of inflow)
Center-of-Mass det. time= 54.1 min (868.1 - 814.0)

Volume	Invert	Avail.Storage	Storage Description
#1	322.00'	57,585 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
322.00	6,928	0	0
324.00	8,597	15,525	15,525
326.00	10,472	19,069	34,594
328.00	12,519	22,991	57,585

Device	Routing	Invert	Outlet Devices
#1	Primary	316.00'	**24.0" Round Culvert** L= 67.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 316.00' / 315.25' S= 0.0112 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

#2	Primary	327.10'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Device 1	322.50'	**15.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	326.60'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=24.9 cfs @ 12.26 hrs HW=327.07' TW=284.79' (Dynamic Tailwater)
- **1=Culvert** (Passes 24.9 cfs of 48.0 cfs potential flow)
  - **3=Orifice/Grate** (Orifice Controls 11.7 cfs @ 9.56 fps)
  - **4=Orifice/Grate** (Weir Controls 13.1 cfs @ 2.24 fps)
- **2=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Pond 9P: POND9

Inflow Area = 248,876 sf, 36.78% Impervious, Inflow Depth = 6.00" for 100-Year event
Inflow = 38.7 cfs @ 12.09 hrs, Volume= 124,366 cf
Outflow = 8.3 cfs @ 12.51 hrs, Volume= 124,378 cf, Atten= 78%, Lag= 25.2 min
Discarded = 0.4 cfs @ 12.51 hrs, Volume= 63,036 cf
Primary = 7.9 cfs @ 12.51 hrs, Volume= 61,343 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 459.07' @ 12.51 hrs Surf.Area= 16,921 sf Storage= 64,613 cf
Flood Elev= 459.10' Surf.Area= 16,974 sf Storage= 65,122 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 712.5 min (1,508.0 - 795.5)

Volume	Invert	Avail.Storage	Storage Description
#1	454.00'	81,101 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
454.00	8,799	0	0
456.00	11,819	20,618	20,618
458.00	15,064	26,883	47,501
460.00	18,536	33,600	81,101

Device	Routing	Invert	Outlet Devices
#1	Primary	456.40'	**15.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 456.40' / 456.00' S= 0.0080 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Discarded	454.00'	**1.020 in/hr Exfiltration over Surface area**
#3	Device 1	458.80'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	457.50'	**6.0" Vert. Orifice/Grate X 2.00** C= 0.600
#5	Primary	459.10'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.4 cfs @ 12.51 hrs HW=459.07' (Free Discharge)
└**2=Exfiltration** (Exfiltration Controls 0.4 cfs)

Primary OutFlow Max=7.9 cfs @ 12.51 hrs HW=459.07' TW=0.00' (Dynamic Tailwater)
├**1=Culvert** (Passes 7.9 cfs of 8.4 cfs potential flow)
│ ├**3=Orifice/Grate** (Weir Controls 5.7 cfs @ 1.70 fps)
│ └**4=Orifice/Grate** (Orifice Controls 2.2 cfs @ 5.53 fps)
└**5=Broad-Crested Rectangular Weir**(Controls 0.0 cfs)

Summary for Pond FB1: FB1

Volume	Invert	Avail.Storage	Storage Description
#1	427.00'	855 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
427.00	685	0	0
428.00	1,024	855	855

Summary for Pond FB4: FB4

Volume	Invert	Avail.Storage	Storage Description
#1	462.00'	387 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
462.00	166	0	0
464.00	221	387	387

Summary for Pond FB5: FOREBAY 5

Volume	Invert	Avail.Storage	Storage Description
#1	430.00'	3,314 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
430.00	1,349	0	0
432.00	1,965	3,314	3,314

Summary for Pond FB6: FOREBAY 6

Volume	Invert	Avail.Storage	Storage Description
#1	394.00'	1,465 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
394.00	1,109	0	0
395.00	1,820	1,465	1,465

Summary for Pond FB7N: FB7N

Volume	Invert	Avail.Storage	Storage Description
#1	372.00'	1,931 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
372.00	586	0	0
374.00	1,345	1,931	1,931

Summary for Pond FB7S: FB7S

Volume	Invert	Avail.Storage	Storage Description
#1	372.00'	1,410 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
372.00	402	0	0
374.00	1,008	1,410	1,410

Summary for Pond FB8: FB8

Volume	Invert	Avail.Storage	Storage Description
#1	322.00'	2,040 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
322.00	612	0	0
324.00	1,428	2,040	2,040

Summary for Pond FP9: FOREBAY 9

Volume	Invert	Avail.Storage	Storage Description
#1	454.00'	2,183 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
454.00	1,051	0	0
456.00	1,132	2,183	2,183

Summary for Pond POND 2: POND 2

Inflow Area = 233,852 sf, 27.47% Impervious, Inflow Depth = 4.63" for 100-Year event
Inflow = 13.4 cfs @ 12.24 hrs, Volume= 90,255 cf
Outflow = 12.5 cfs @ 12.31 hrs, Volume= 89,506 cf, Atten= 7%, Lag= 4.4 min
Primary = 12.5 cfs @ 12.31 hrs, Volume= 89,506 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 429.50' @ 12.31 hrs Surf.Area= 3,809 sf Storage= 8,745 cf
Flood Elev= 429.50' Surf.Area= 3,812 sf Storage= 8,759 cf

Plug-Flow detention time= 34.9 min calculated for 89,456 cf (99% of inflow)
Center-of-Mass det. time= 29.9 min (890.9 - 861.0)

Volume	Invert	Avail.Storage	Storage Description
#1	426.00'	10,764 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
426.00	1,317	0	0
428.00	2,619	3,936	3,936
430.00	4,209	6,828	10,764

Device	Routing	Invert	Outlet Devices
#1	Primary	426.00'	**24.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 426.00' / 425.50' S= 0.0125 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	426.50'	**6.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	429.20'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	429.50'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#5	Device 1	427.70'	**12.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=12.5 cfs @ 12.31 hrs HW=429.50' TW=404.66' (Dynamic Tailwater)
- **1=Culvert** (Passes 12.5 cfs of 18.9 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 1.6 cfs @ 7.98 fps)
  - **3=Orifice/Grate** (Weir Controls 6.6 cfs @ 1.78 fps)
  - **5=Orifice/Grate** (Orifice Controls 4.3 cfs @ 5.48 fps)
- **4=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Pond POND 4: POND 4

Inflow Area = 103,852 sf, 29.35% Impervious, Inflow Depth = 5.70" for 100-Year event
Inflow = 15.5 cfs @ 12.09 hrs, Volume= 49,338 cf
Outflow = 7.6 cfs @ 12.25 hrs, Volume= 29,029 cf, Atten= 51%, Lag= 10.0 min
Primary = 7.6 cfs @ 12.25 hrs, Volume= 29,029 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 467.12' @ 12.25 hrs Surf.Area= 6,523 sf Storage= 22,380 cf

Plug-Flow detention time= 200.4 min calculated for 29,029 cf (59% of inflow)
Center-of-Mass det. time= 94.7 min (895.2 - 800.4)

Volume	Invert	Avail.Storage	Storage Description
#1	462.00'	28,443 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
462.00	2,451	0	0
464.00	3,848	6,299	6,299
466.00	5,481	9,329	15,628
468.00	7,334	12,815	28,443

Device	Routing	Invert	Outlet Devices
#1	Primary	462.00'	**12.0" Round Culvert** L= 47.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 462.00' / 460.00' S= 0.0426 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	466.80'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=7.5 cfs @ 12.25 hrs HW=467.12' TW=429.43' (Dynamic Tailwater)
↑—**1=Culvert** (Passes 7.5 cfs of 8.1 cfs potential flow)
↑—**2=Orifice/Grate** (Weir Controls 7.5 cfs @ 1.85 fps)

Summary for Pond POND1: POND 1

Inflow Area = 110,060 sf, 28.94% Impervious, Inflow Depth = 5.74" for 100-Year event
Inflow = 16.5 cfs @ 12.09 hrs, Volume= 52,634 cf
Outflow = 4.7 cfs @ 12.18 hrs, Volume= 52,625 cf, Atten= 72%, Lag= 5.8 min
Primary = 4.7 cfs @ 12.18 hrs, Volume= 52,625 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 431.06' @ 12.45 hrs Surf.Area= 5,128 sf Storage= 14,717 cf
Flood Elev= 431.10' Surf.Area= 5,158 sf Storage= 14,909 cf

Plug-Flow detention time= 50.1 min calculated for 52,625 cf (100% of inflow)
Center-of-Mass det. time= 49.6 min (850.1 - 800.5)

Volume	Invert	Avail.Storage	Storage Description
#1	427.00'	19,878 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
427.00	2,270	0	0
428.00	2,880	2,575	2,575
430.00	4,269	7,149	9,724
432.00	5,885	10,154	19,878

Device	Routing	Invert	Outlet Devices
#1	Primary	427.00'	**10.0" Round Culvert X 2.00** L= 127.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 427.00' / 426.50' S= 0.0039 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf
#2	Primary	431.10'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=4.3 cfs @ 12.18 hrs HW=430.58' TW=429.07' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 4.3 cfs @ 3.95 fps)
└—**2=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Pond POND3: POND 3

Inflow Area = 73,977 sf, 35.08% Impervious, Inflow Depth = 5.88" for 100-Year event
Inflow = 11.3 cfs @ 12.09 hrs, Volume= 36,241 cf
Outflow = 2.7 cfs @ 12.48 hrs, Volume= 36,239 cf, Atten= 76%, Lag= 23.7 min
Primary = 2.7 cfs @ 12.48 hrs, Volume= 36,239 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 419.02' @ 12.48 hrs Surf.Area= 3,559 sf Storage= 10,432 cf
Flood Elev= 419.10' Surf.Area= 3,612 sf Storage= 10,714 cf

Plug-Flow detention time= 36.0 min calculated for 36,239 cf (100% of inflow)
Center-of-Mass det. time= 35.4 min (833.4 - 798.0)

Volume	Invert	Avail.Storage	Storage Description
#1	414.00'	14,237 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
414.00	878	0	0
416.00	1,699	2,577	2,577
418.00	2,872	4,571	7,148
420.00	4,217	7,089	14,237

Device	Routing	Invert	Outlet Devices
#1	Primary	414.00'	**8.0" Round Culvert** L= 72.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 414.00' / 413.50' S= 0.0069 '/' Cc= 0.900

n= 0.012, Flow Area= 0.35 sf

#2	Primary	419.10'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=2.7 cfs @ 12.48 hrs HW=419.02' TW=404.57' (Dynamic Tailwater)
- **1=Culvert** (Barrel Controls 2.7 cfs @ 7.75 fps)
- **2=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Pond POND5: POND5

Inflow Area =	472,727 sf,	22.20% Impervious,	Inflow Depth =	5.41" for 100-Year event
Inflow =	66.5 cfs @	12.09 hrs, Volume=	213,102 cf	
Outflow =	20.8 cfs @	12.42 hrs, Volume=	213,104 cf,	Atten= 69%, Lag= 19.8 min
Discarded =	0.4 cfs @	12.42 hrs, Volume=	21,632 cf	
Primary =	11.6 cfs @	12.42 hrs, Volume=	102,223 cf	
Secondary =	8.8 cfs @	12.42 hrs, Volume=	89,249 cf	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 435.00' @ 12.42 hrs Surf.Area= 15,671 sf Storage= 61,209 cf
Flood Elev= 435.10' Surf.Area= 15,823 sf Storage= 62,839 cf

Plug-Flow detention time= 60.4 min calculated for 212,986 cf (100% of inflow)
Center-of-Mass det. time= 60.6 min (868.4 - 807.8)

Volume	Invert	Avail.Storage	Storage Description
#1	430.00'	77,672 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
430.00	9,063	0	0
432.00	11,521	20,584	20,584
434.00	14,214	25,735	46,319
436.00	17,139	31,353	77,672

Device	Routing	Invert	Outlet Devices
#1	Discarded	430.00'	**1.020 in/hr Exfiltration over Surface area**
#2	Primary	430.50'	**15.0" Round Culvert**
			L= 54.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 430.50' / 429.00' S= 0.0278 '/' Cc= 0.900
			n= 0.012, Flow Area= 1.23 sf
#3	Secondary	430.50'	**15.0" Round Culvert**
			L= 223.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 430.50' / 429.00' S= 0.0067 '/' Cc= 0.900
			n= 0.012, Flow Area= 1.23 sf
#4	Secondary	435.10'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.4 cfs @ 12.42 hrs HW=434.99' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.4 cfs)

Primary OutFlow Max=11.6 cfs @ 12.42 hrs HW=434.99' TW=0.00' (Dynamic Tailwater)
└**2=Culvert** (Inlet Controls 11.6 cfs @ 9.47 fps)

Secondary OutFlow Max=8.8 cfs @ 12.42 hrs HW=434.99' TW=0.00' (Dynamic Tailwater)
├**3=Culvert** (Barrel Controls 8.8 cfs @ 7.18 fps)
└**4=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Pond POND6: POND 6

Inflow Area = 291,844 sf, 20.03% Impervious, Inflow Depth = 5.41" for 100-Year event
Inflow = 31.5 cfs @ 12.21 hrs, Volume= 131,561 cf
Outflow = 3.6 cfs @ 13.27 hrs, Volume= 127,508 cf, Atten= 89%, Lag= 63.7 min
Primary = 2.4 cfs @ 13.27 hrs, Volume= 111,068 cf
Secondary = 1.2 cfs @ 13.27 hrs, Volume= 16,439 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 397.87' @ 13.27 hrs Surf.Area= 23,014 sf Storage= 71,123 cf
Flood Elev= 398.10' Surf.Area= 23,442 sf Storage= 76,428 cf

Plug-Flow detention time= 335.5 min calculated for 127,437 cf (97% of inflow)
Center-of-Mass det. time= 318.9 min (1,135.0 - 816.1)

Volume	Invert	Avail.Storage	Storage Description
#1	394.00'	98,305 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
394.00	11,693	0	0
396.00	19,575	31,268	31,268
398.00	23,250	42,825	74,093
399.00	25,174	24,212	98,305

Device	Routing	Invert	Outlet Devices
#1	Primary	394.30'	**8.0" Round Culvert** L= 54.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 394.30' / 391.00' S= 0.0611 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Secondary	396.75'	**8.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 396.75' / 395.00' S= 0.0350 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf

Primary OutFlow Max=2.4 cfs @ 13.27 hrs HW=397.87' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 2.4 cfs @ 6.84 fps)

Secondary OutFlow Max=1.2 cfs @ 13.27 hrs HW=397.87' TW=0.00' (Dynamic Tailwater)
└**2=Culvert** (Inlet Controls 1.2 cfs @ 3.37 fps)

Summary for Pond POND7: POND7

Inflow Area = 500,825 sf, 25.59% Impervious, Inflow Depth = 5.53" for 100-Year event
Inflow = 56.6 cfs @ 12.19 hrs, Volume= 230,652 cf
Outflow = 12.9 cfs @ 12.71 hrs, Volume= 230,679 cf, Atten= 77%, Lag= 31.1 min
Discarded = 0.7 cfs @ 12.71 hrs, Volume= 69,580 cf
Primary = 12.2 cfs @ 12.71 hrs, Volume= 161,099 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Peak Elev= 377.10' @ 12.71 hrs Surf.Area= 28,258 sf Storage= 116,434 cf
Flood Elev= 377.10' Surf.Area= 28,266 sf Storage= 116,540 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 443.4 min (1,256.2 - 812.8)

Volume	Invert	Avail.Storage	Storage Description
#1	372.00'	142,875 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
372.00	17,671	0	0
374.00	21,640	39,311	39,311
376.00	25,834	47,474	86,785
378.00	30,256	56,090	142,875

Device	Routing	Invert	Outlet Devices
#1	Primary	372.00'	**18.0" Round Culvert** L= 80.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 372.00' / 371.00' S= 0.0125 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Discarded	372.00'	**1.020 in/hr Exfiltration over Surface area**
#3	Device 1	372.50'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	376.70'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Primary	377.10'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.7 cfs @ 12.71 hrs HW=377.10' (Free Discharge)
└**2=Exfiltration** (Exfiltration Controls 0.7 cfs)

Primary OutFlow Max=12.2 cfs @ 12.71 hrs HW=377.10' TW=0.00' (Dynamic Tailwater)
├**1=Culvert** (Passes 12.2 cfs of 17.7 cfs potential flow)
│ ├**3=Orifice/Grate** (Orifice Controls 2.0 cfs @ 10.04 fps)
│ └**4=Orifice/Grate** (Weir Controls 10.2 cfs @ 2.06 fps)
└**5=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Link 2L: Cuvlert overflow to offiste northward

Inflow = 88.2 cfs @ 12.22 hrs, Volume= 167,740 cf
Primary = 88.2 cfs @ 12.22 hrs, Volume= 167,740 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link 48L: (new Link)

Inflow Area = 2,772,723 sf, 6.04% Impervious, Inflow Depth = 4.67" for 100-Year event
Inflow = 143.5 cfs @ 12.27 hrs, Volume= 1,079,976 cf
Primary = 143.5 cfs @ 12.27 hrs, Volume= 1,079,976 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP13: #221 Souht Tessier Ln West PL

Inflow Area = 174,501 sf, 1.10% Impervious, Inflow Depth = 4.48" for 100-Year event
Inflow = 19.1 cfs @ 12.12 hrs, Volume= 65,169 cf
Primary = 19.1 cfs @ 12.12 hrs, Volume= 65,169 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP14: Kidd Property Line1-towards WL Providence RD

Inflow Area = 69,364 sf, 0.00% Impervious, Inflow Depth = 7.44" for 100-Year event
Inflow = 8.1 cfs @ 12.11 hrs, Volume= 43,009 cf
Primary = 8.1 cfs @ 12.11 hrs, Volume= 43,009 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP15: Kidd Property Line2

Inflow Area = 393,979 sf, 15.42% Impervious, Inflow Depth > 4.60" for 100-Year event
Inflow = 14.3 cfs @ 12.09 hrs, Volume= 151,173 cf
Primary = 14.3 cfs @ 12.09 hrs, Volume= 151,173 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP17: Kidd Porperty Line4

Inflow Area = 490,127 sf, 21.42% Impervious, Inflow Depth = 2.67" for 100-Year event
Inflow = 12.4 cfs @ 12.33 hrs, Volume= 108,888 cf
Primary = 12.4 cfs @ 12.33 hrs, Volume= 108,888 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP18: Kidd Property Line5

Inflow Area = 115,441 sf, 4.85% Impervious, Inflow Depth = 14.11" for 100-Year event
Inflow = 22.2 cfs @ 12.10 hrs, Volume= 135,692 cf
Primary = 22.2 cfs @ 12.10 hrs, Volume= 135,692 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link AP27: Flow to town Land-ADDDDDDD IN FLOW FROM POND 9

Inflow Area = 310,202 sf, 32.45% Impervious, Inflow Depth = 3.42" for 100-Year event
Inflow = 10.2 cfs @ 12.48 hrs, Volume= 88,391 cf
Primary = 10.2 cfs @ 12.48 hrs, Volume= 88,391 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP1: CB Behin #10 Delmar

Inflow Area = 929,553 sf, 12.52% Impervious, Inflow Depth = 4.76" for 100-Year event
Inflow = 65.4 cfs @ 12.16 hrs, Volume= 368,682 cf
Primary = 65.4 cfs @ 12.16 hrs, Volume= 368,682 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP12: Flow to DI - 4" outlet discharge to #242

Inflow Area = 186,514 sf, 4.44% Impervious, Inflow Depth = 4.71" for 100-Year event
Inflow = 20.1 cfs @ 12.15 hrs, Volume= 73,269 cf
Primary = 20.1 cfs @ 12.15 hrs, Volume= 73,269 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP2: 24" culvert #125 Sheryl Rd.

Inflow Area = 1,079,879 sf, 6.12% Impervious, Inflow Depth = 4.67" for 100-Year event
Inflow = 46.2 cfs @ 12.55 hrs, Volume= 420,503 cf
Primary = 46.2 cfs @ 12.55 hrs, Volume= 420,503 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP3: DP3

Inflow Area = 1,082,434 sf, 1.05% Impervious, Inflow Depth = 4.94" for 100-Year event
Inflow = 41.1 cfs @ 13.00 hrs, Volume= 445,538 cf
Primary = 41.1 cfs @ 13.00 hrs, Volume= 445,538 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP4: DP4 -24" cuvlert at #149 S.Tessier

Inflow Area = 856,876 sf, 11.36% Impervious, Inflow Depth = 5.00" for 100-Year event
Inflow = 67.2 cfs @ 12.12 hrs, Volume= 357,141 cf
Primary = 67.2 cfs @ 12.12 hrs, Volume= 357,141 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP4+5: DP 4+5 - Wetland System behid #148 S.Tessier

Inflow Area = 1,171,403 sf, 10.49% Impervious, Inflow Depth = 4.99" for 100-Year event
Inflow = 107.1 cfs @ 12.10 hrs, Volume= 487,320 cf
Primary = 107.1 cfs @ 12.10 hrs, Volume= 487,320 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP5: pipe discharge at #127 S. Tessier

Inflow Area = 314,527 sf, 8.11% Impervious, Inflow Depth = 4.97" for 100-Year event
Inflow = 41.0 cfs @ 12.09 hrs, Volume= 130,179 cf
Primary = 41.0 cfs @ 12.09 hrs, Volume= 130,179 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP6: To Spring Hill, at Int with S. Tessier

Inflow Area = 52,061 sf, 10.10% Impervious, Inflow Depth = 4.94" for 100-Year event
Inflow = 6.8 cfs @ 12.09 hrs, Volume= 21,447 cf
Primary = 6.8 cfs @ 12.09 hrs, Volume= 21,447 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP7: #50 Hudson St.

Inflow Area = 63,872 sf, 8.53% Impervious, Inflow Depth = 4.94" for 100-Year event
Inflow = 8.4 cfs @ 12.09 hrs, Volume= 26,313 cf
Primary = 8.4 cfs @ 12.09 hrs, Volume= 26,313 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP7+8: Flow to Hudson and Spring Hill

Inflow Area = 161,179 sf, 10.89% Impervious, Inflow Depth = 5.01" for 100-Year event
Inflow = 21.5 cfs @ 12.09 hrs, Volume= 67,277 cf
Primary = 21.5 cfs @ 12.09 hrs, Volume= 67,277 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP8: No. Tessier Ln-Flow discharge to SE

Inflow Area = 45,246 sf, 15.12% Impervious, Inflow Depth = 5.18" for 100-Year event
Inflow = 6.2 cfs @ 12.09 hrs, Volume= 19,516 cf
Primary = 6.2 cfs @ 12.09 hrs, Volume= 19,516 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

Summary for Link DP9: FLOW TO CB AT INT OF EASTON AVE AND N. TESSIER

Inflow Area = 729,956 sf, 19.71% Impervious, Inflow Depth = 4.15" for 100-Year event
Inflow = 24.8 cfs @ 12.16 hrs, Volume= 252,423 cf
Primary = 24.8 cfs @ 12.16 hrs, Volume= 252,423 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs

PART III – Recharge, Water Quality, Drawdown and Forebay Calculations

FOX HOLLOW
NORTHBRIDGE, MA
NOVEMBER 2025

NRCS HYDROLOGIC SOIL TYPE	APPROX. SOIL TEXTURE	TARGET DEPTH FACTOR (F)
A	sand	**0.6-inch**
B	loam	**0.35-inch**
C	silty loam	**0.25-inch**
D	clay	**0.1-inch**

OVEARLL RECHARGE FOR DESIGN POINT 14 (Reach 48)

	Paved	Roof	Total Imp	Recharge Required	
B Soils			0	0	
C Soils	47,879	42,307	90,186	1879	*
D Soils	0	0	0	0	
			Total	**1879**	
Total Impv	**90,186** sf				
	2.07 AC				

Basin — Elevation — Lowest Outlet-storage below
Storage — cf

Dewatering
Rate — in/hr
surface area — sf
Volume to Recharge — 0 cf
Time to dewater — #DIV/0! HRS

Capture Area Adjustment-Design Point R48
Minium required — 0.65 of Impervious Coverage

Total Impv	**90,186** sf		
Impv Directed to BMP	64,238		
Ratio Sent to BMP	0.71	>	65 OK

NOTES
*
Impervious areas derived from sub catchments
1s, 2s, 3s, 10s, 4s, 6s

TOTAL RECAHRGE PROVIDED TO DP R48

	Volume CF
POND 1	0
POND 2	740
POND 3	0
POND 4	15,548
Total Provided	16288 cf

RECHARGE-WQV POND #2

	Paved	Roof	Total Imp	Recharge Required	
B Soils			0	0	
C Soils	14,747	19,011	33,758	703	
D Soils	0	0	0	0	
			Total	**703**	
Total Impv	**33,758** sf				
	0.77 AC				

Basin 8P — Elevation — 426.5 Lowest Outlet-storage below
Storage — **740** cf

Dewatering
Rate — 0.52 in/hr
surface area — 1317 sf
Volume to Recharge — 740 cf
Time to dewater — 12.97 HRS

Capture Area Adjustment-AP5
Minium required — 0.65 of Impervious Coverage

Total Impv	**33,758** sf		
Impv Directed to BMP	33,758		
Ratio Sent to BMP	1.00	>	65 OK

WATER QUALITY POND #2 ONLY

Water Quality Volume (WQV)
Water Quality Depth — 0.5 inches
Impervious Area — 33,758 sf
WQV — **1,407** cf

Infiltration BMP — > — 1,407
740 OK

Sizing of Forebay - INSTALLED AT Pond 1
vol. required — 0.1 x impv
impervious area to BMP — 33,758
Forebay Size Required — **281** cf

Forebay Spillway elev — 427.5
Forebay Storage Below Spillway — cf — 385

385 > **281** **OK**

WQV AND RECHARGE

DESIGN POINT DP 14 (REACH 48)

RECHARGE POND #3-no recharge provided

	Paved	Roof	Total Imp	Recharge Required
B Soils			0	0
C Soils	18,052	7,896	25,948	541
D Soils	0	0	0	0
			Total	**541**

Total Impv **25,948** sf
0.60 AC

Basin 8P
Elevation — Lowest Outlet-storage below
Storage — cf

Dewatering
Rate — in/hr
surface area — 878 sf
Volume to Recharge — 0 cf
Time to dewater — #DIV/0! HRS

Capture Area Adjustment-AP5
Minium required — 0.65 of Impervious Coverage

Total Impv — **25,948** sf
Impv Directed to BMP — 25,948

Ratio Sent to BMP — 1.00 > 65 OK

WATER QUALITY DESIGN POINT POND#3

Water Quality Volume (WQV)
Water Quality Depth — 0.5 inches
Impervious Area — 25,948 sf
WQV — **1,081** cf

WQU USED **>80% TSS REMOVAL**

0

RECHARGE POND #4

	Paved	Roof	Total Imp	Recharge Required
B Soils			0	0
C Soils	15,080	15,400	30,480	635
D Soils	0	0	0	0
			Total	**635**

Total Impv **30,480** sf
0.70 AC

Basin 4P
Elevation — 465.8 Lowest Outlet-storage below
Storage — **14548** cf

Dewatering
Rate — 1.02 in/hr
surface area — 2451 sf
Volume to Recharge — 14548 cf
Time to dewater — 69.83 HRS

Capture Area Adjustment-AP5
Minium required — 0.65 of Impervious Coverage

Total Impv — **30,480** sf
Impv Directed to BMP — 30,480

Ratio Sent to BMP — 1.00 > 65 OK

WATER QUALITY DESIGN POND #4

Water Quality Volume (WQV)
Water Quality Depth — 0.5 inches
Impervious Area — 30,480 sf
WQV — **1,270** cf

Infiltration BMP — **14,548** > 1,270

Sizing of Forebay
vol. required — 0.1 x impv
impervious area to BMP — 30,480
Forebay Size Required — **254** cf

Forebay Spillway elev — 463.4
Forebay Storage Below Spillway — cf — 259

259 > 254 OK

WQV AND RECHARGE

DESIGN POINT DP 14 (REACH 48)

Area Listing (selected nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
188,793	74	>75% Grass cover, Good, HSG C (1S, 2S, 3S, 4S, 6S, 10S)
47,879	98	Paved parking, HSG C (1S, 3S, 4S)
42,307	98	Roofs, HSG C (1S, 2S, 3S, 4S, 10S)
28,850	70	Woods, Good, HSG C (1S, 2S, 3S, 4S, 6S)
307,829	**81**	**TOTAL AREA**

IMPERVIOUS AREA TO DESIGN POINT DP R48

USED FOR REQUIRED RECHARGE

TOTAL IMPERVIOUS AREA TO

DESIGN POINT DP 14 (REACH 48)

Area Listing (selected nodes)

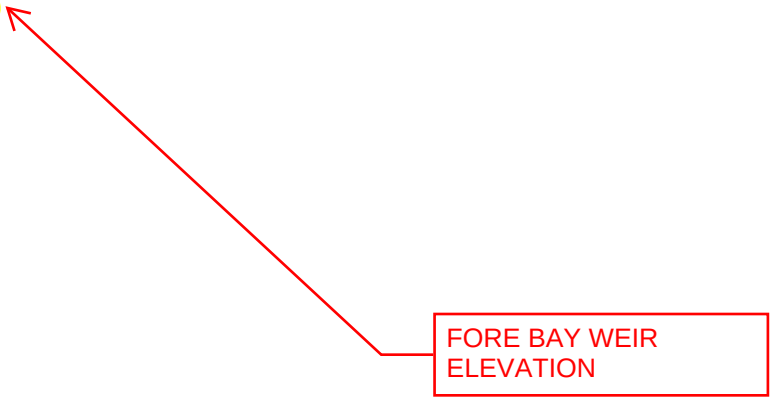
Area (sq-ft)	CN	Description (subcatchment-numbers)
87,976	74	>75% Grass cover, Good, HSG C (2S, 3S, 10S)
14,747	98	Paved parking, HSG C (3S)
19,011	98	Roofs, HSG C (2S, 3S, 10S)
8,266	70	Woods, Good, HSG C (2S, 3S)
130,000	**80**	**TOTAL AREA**

IMPERVIOUS AREA DIRECTED TO POND 1

DESIGN POINT DP 14 (REACH 48)

Stage-Area-Storage for Pond FB1: FB1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
427.00	685	0
427.10	719	70
427.20	753	144
427.30	787	221
427.40	821	301
427.50	855	385
427.60	888	472
427.70	922	563
427.80	956	656
427.90	990	754
428.00	**1,024**	**855**



FOREBAY STORAGE TABLE-POND 1

DESIGN POINT DP 14 (REACH 48)

Stage-Area-Storage for Pond POND 2: POND 2

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
426.00	1,317	0
426.10	1,382	135
426.20	1,447	276
426.30	1,512	424
426.40	1,577	579
426.50	1,643	740
426.60	1,708	907
426.70	1,773	1,081
426.80	1,838	1,262
426.90	1,903	1,449
427.00	1,968	1,643
427.10	2,033	1,843
427.20	2,098	2,049
427.30	2,163	2,262
427.40	2,228	2,482
427.50	2,294	2,708
427.60	2,359	2,940
427.70	2,424	3,180
427.80	2,489	3,425
427.90	2,554	3,677
428.00	2,619	3,936
428.10	2,699	4,202
428.20	2,778	4,476
428.30	2,858	4,757
428.40	2,937	5,047
428.50	3,017	5,345
428.60	3,096	5,651
428.70	3,175	5,964
428.80	3,255	6,286
428.90	3,334	6,615
429.00	3,414	6,953
429.10	3,494	7,298
429.20	3,573	7,651
429.30	3,653	8,012
429.40	3,732	8,382
429.50	3,812	8,759
429.60	3,891	9,144
429.70	3,970	9,537
429.80	4,050	9,938
429.90	4,129	10,347
430.00	**4,209**	**10,764**

STATIC STORAGE; VOLUME BELOW LOWEST BASIN OUTLET

WQV AND RECHARGE POND 2

DESIGN POINT DP 14 (REACH 48)

Area Listing (selected nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
63,601	74	>75% Grass cover, Good, HSG C (4S, 6S)
15,080	98	Paved parking, HSG C (4S)
15,400	98	Roofs, HSG C (4S)
9,771	70	Woods, Good, HSG C (4S, 6S)
103,852	**81**	**TOTAL AREA**

IMPERVIOUS AREA TO POND 4

DESIGN POINT DP 14 (REACH 48)

Stage-Area-Storage for Pond FB4: FB4

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
462.00	166	0
462.10	169	17
462.20	171	34
462.30	174	51
462.40	177	69
462.50	180	86
462.60	183	105
462.70	185	123
462.80	188	142
462.90	191	161
463.00	194	180
463.10	196	199
463.20	199	219
463.30	202	239
463.40	204	259
463.50	207	280
463.60	210	301
463.70	213	322
463.80	216	343
463.90	218	365
464.00	**221**	**387**

FOREBAY WEIR EELVATION

FOREBAY STORAGE TABLE-POND 4

DESIGN POINT DP 14 (REACH 48)

Stage-Area-Storage for Pond POND 4: POND 4

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
462.00	2,451	0
462.10	2,521	249
462.20	2,591	504
462.30	2,661	767
462.40	2,730	1,036
462.50	2,800	1,313
462.60	2,870	1,596
462.70	2,940	1,887
462.80	3,010	2,184
462.90	3,080	2,489
463.00	3,150	2,800
463.10	3,219	3,119
463.20	3,289	3,444
463.30	3,359	3,777
463.40	3,429	4,116
463.50	3,499	4,462
463.60	3,569	4,816
463.70	3,638	5,176
463.80	3,708	5,543
463.90	3,778	5,918
464.00	3,848	6,299
464.10	3,930	6,688
464.20	4,011	7,085
464.30	4,093	7,490
464.40	4,175	7,904
464.50	4,256	8,325
464.60	4,338	8,755
464.70	4,420	9,193
464.80	4,501	9,639
464.90	4,583	10,093
465.00	4,665	10,555
465.10	4,746	11,026
465.20	4,828	11,504
465.30	4,909	11,991
465.40	4,991	12,486
465.50	5,073	12,990
465.60	5,154	13,501
465.70	5,236	14,020
465.80	5,318	14,548
465.90	5,399	15,084
466.00	5,481	15,628
466.10	5,574	16,181
466.20	5,666	16,743
466.30	5,759	17,314
466.40	5,852	17,895
466.50	5,944	18,484
466.60	6,037	19,083
466.70	6,130	19,692
466.80	6,222	20,309
466.90	6,315	20,936
467.00	6,408	21,572
467.10	6,500	22,218
467.20	6,593	22,872
467.30	6,685	23,536
467.40	6,778	24,209
467.50	6,871	24,892
467.60	6,963	25,584
467.70	7,056	26,284
467.80	7,149	26,995
467.90	7,241	27,714
468.00	**7,334**	**28,443**

STATIC STORAGE; VOLUME BELOW LOWEST BASIN OUTLET

WQV AND RECHARGE POND 4

DESIGN POINT DP 14 (REACH 48)

RECHARGE POND #5					
	Paved	Roof	Total Imp		Recharge Required
B Soils			0		0
C Soils	58,987	45,974	104,961		2187
D Soils	0	0	0		0
				Total	**2187**
Total Impv	**104,961**	sf			
	2.41	AC			
Basin 8P		Elevation	430.5	Lowest Outlet-storage below	
		Storage	**4685**	cf	
Dewatering		Rate	1.02	in/hr	
		surface area	9063	sf	
		Volume to Recharge	4685	cf	
		Time to dewater	6.08	HRS	
Capture Area Adjustment-AP5					
Minium required			0.65	of Impervious Coverage	
Total Impv			**104,961**	sf	
Impv Directed to BMP			104,961		
Ratio Sent to BMP			1.00	>	65 OK

WATER QUALITY DESIGN -POND #5			
Water Quality Volume (WQV)			
Water Quality Depth	0.5	inches	
Impervious Area	104,961	sf	
WQV	**4,373**	cf	
Infiltration BMP	**4,685**	>	4,373
		OK	
Sizing of Forebay			
vol. required	0.1	x impv	
impervious area to BMP	104,961		
Forebay Size Required	**875**	cf	
Forebay Spillway elev			430.7
Forebay Storage Below Spillway		cf	1020
	1,020	**>**	**875** **OK**

WQV AND RECHARGE CALCS POND 5

Area Listing (selected nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
269,048	74	>75% Grass cover, Good, HSG C (5S)
58,987	98	Paved parking, HSG C (5S)
45,974	98	Roofs, HSG C (5S)
98,718	70	Woods, Good, HSG C (5S)
472,727	**78**	**TOTAL AREA**

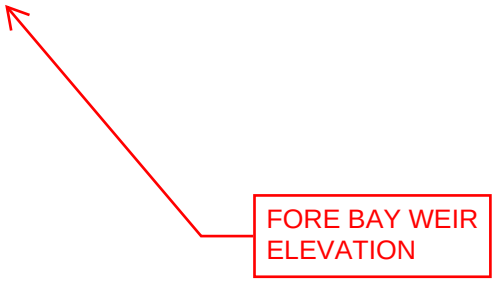
IMPERVIOUS AREA TO POND 5

USED FOR REQUIRED RECHARGE

TOTAL IMPERVIOUS AREA TO POND 5

Stage-Area-Storage for Pond FB5: FOREBAY 5

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
430.00	1,349	0
430.10	1,380	136
430.20	1,411	276
430.30	1,441	419
430.40	1,472	564
430.50	1,503	713
430.60	1,534	865
430.70	1,565	1,020
430.80	1,595	1,178
430.90	1,626	1,339
431.00	1,657	1,503
431.10	1,688	1,670
431.20	1,719	1,841
431.30	1,749	2,014
431.40	1,780	2,190
431.50	1,811	2,370
431.60	1,842	2,553
431.70	1,873	2,738
431.80	1,903	2,927
431.90	1,934	3,119
432.00	**1,965**	**3,314**



FOREBAY STORAGE TABLE-POND 5

Stage-Area-Storage for Pond POND5: POND5

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
430.00	9,063	0
430.02	9,088	182
430.04	9,112	364
430.06	9,137	546
430.08	9,161	729
430.10	9,186	912
430.12	9,210	1,096
430.14	9,235	1,281
430.16	9,260	1,466
430.18	9,284	1,651
430.20	9,309	1,837
430.22	9,333	2,024
430.24	9,358	2,211
430.26	9,383	2,398
430.28	9,407	2,586
430.30	9,432	2,774
430.32	9,456	2,963
430.34	9,481	3,152
430.36	9,505	3,342
430.38	9,530	3,533
430.40	9,555	3,724
430.42	9,579	3,915
430.44	9,604	4,107
430.46	9,628	4,299
430.48	9,653	4,492
430.50	9,678	4,685
430.52	9,702	4,879
430.54	9,727	5,073
430.56	9,751	5,268
430.58	9,776	5,463
430.60	9,800	5,659
430.62	9,825	5,855
430.64	9,850	6,052
430.66	9,874	6,249
430.68	9,899	6,447
430.70	9,923	6,645
430.72	9,948	6,844
430.74	9,972	7,043
430.76	9,997	7,243
430.78	10,022	7,443
430.80	10,046	7,644
430.82	10,071	7,845
430.84	10,095	8,047
430.86	10,120	8,249
430.88	10,145	8,451
430.90	10,169	8,654
430.92	10,194	8,858
430.94	10,218	9,062
430.96	10,243	9,267
430.98	10,267	9,472
431.00	10,292	9,678
431.02	10,317	9,884
431.04	10,341	10,090
431.06	10,366	10,297
431.08	10,390	10,505
431.10	10,415	10,713
431.12	10,439	10,921
431.14	10,464	11,130
431.16	10,489	11,340
431.18	10,513	11,550
431.20	10,538	11,760
431.22	10,562	11,971
431.24	10,587	12,183
431.26	10,612	12,395
431.28	10,636	12,607
431.30	10,661	12,820
431.32	10,685	13,034
431.34	10,710	13,248
431.36	10,734	13,462
431.38	10,759	13,677
431.40	10,784	13,893
431.42	10,808	14,109
431.44	10,833	14,325
431.46	10,857	14,542
431.48	10,882	14,759
431.50	10,907	14,977
431.52	10,931	15,196
431.54	10,956	15,414
431.56	10,980	15,634
431.58	11,005	15,854
431.60	11,029	16,074
431.62	11,05	
431.64	11,07	
431.66	11,10	
431.68	11,12	
431.70	11,15	
431.72	11,177	17,406
431.74	11,201	17,630
431.76	11,226	17,854
431.78	11,251	18,079
431.80	11,275	18,304
431.82	11,300	18,530
431.84	11,324	18,756
431.86	11,349	18,983
431.88	11,374	19,210
431.90	11,398	19,438
431.92	11,423	19,666
431.94	11,447	19,895
431.96	11,472	20,124
431.98	11,496	20,354
432.00	11,521	20,584
432.02	11,548	20,815
432.04	11,575	21,046
432.06	11,602	21,278

STATIC STORAGE; VOLUME BELOW LOWEST BASIN OUTLET

WQV AND RECHARGE BMP POND 5

FOX HOLLOW
NORTHBRIDGE, MA
NOVEMBER 2025

RECHARGE POND #6

	Paved	Roof	Total Imp	Recharge Required
B Soils			0	0
C Soils	31,068	27,380	58,448	1218
D Soils	0	0	0	0
			Total	**1218**

Total Impv **58,448** sf
1.34 AC

Basin 8P
Elevation 394.3 Lowest Outlet-storage below
Storage **3685** cf

Dewatering
Rate 0.52 in/hr
surface area 11693 sf
Volume to Recharge 3685 cf

Time to dewater 7.27 HRS

Capture Area Adjustment-AP5
Minium required 0.65 of Impervious Coverage

Total Impv **58,448** sf
Impv Directed to BMP 58,448

Ratio Sent to BMP 1.00 > 65 OK

WATER QUALITY POND #6

Water Quality Volume (WQV)
Water Quality Depth 0.5 inches
Impervious Area 58,448 sf
WQV **2,435** cf

Infiltration BMP **3,685** > 2,435
OK

Sizing of Forebay
vol. required 0.1 x impv
impervious area to BMP 58,448
Forebay Size Required **487** cf

Forebay Spillway elev 394.5
Forebay Storage Below Spillway cf 643

643 > 487 OK

WQV AND
RECHARGE CALCS
POND 6

Area Listing (selected nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
162,119	74	>75% Grass cover, Good, HSG C (8S)
31,068	98	Paved parking, HSG C (8S)
27,380	98	Roofs, HSG C (8S)
71,277	70	Woods, Good, HSG C (8S)
291,844	**78**	**TOTAL AREA**

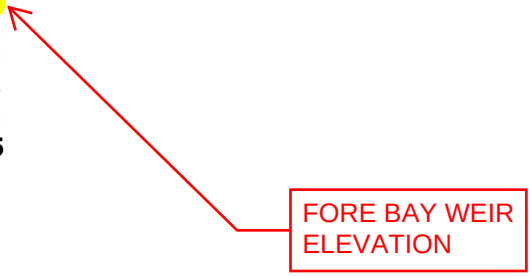
IMPERVIOUS AREA

USED FOR REQUIRED RECHARGE

TOTAL IMPERVIOUS AREA TO POND 6

Stage-Area-Storage for Pond FB6: FOREBAY 6

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
394.00	1,109	0
394.10	1,180	114
394.20	1,251	236
394.30	1,322	365
394.40	1,393	500
394.50	1,465	643
394.60	1,536	793
394.70	1,607	950
394.80	1,678	1,115
394.90	1,749	1,286
395.00	**1,820**	**1,465**



FOREBAY STORAGE TABLE-POND 6

Stage-Area-Storage for Pond POND6: POND 6

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
394.00	11,693	0
394.10	12,087	1,189
394.20	12,481	2,417
394.30	12,875	3,685
394.40	13,269	4,992
394.50	13,664	6,339
394.60	14,058	7,725
394.70	14,452	9,151
394.80	14,846	10,616
394.90	15,240	12,120
395.00	15,634	13,664
395.10	16,028	15,247
395.20	16,422	16,869
395.30	16,816	18,531
395.40	17,210	20,232
395.50	17,605	21,973
395.60	17,999	23,753
395.70	18,393	25,573
395.80	18,787	27,432
395.90	19,181	29,330
396.00	19,575	31,268
396.10	19,759	33,235
396.20	19,942	35,220
396.30	20,126	37,223
396.40	20,310	39,245
396.50	20,494	41,285
396.60	20,678	43,344
396.70	20,861	45,421
396.80	21,045	47,516
396.90	21,229	49,630
397.00	21,413	51,762
397.10	21,596	53,912
397.20	21,780	56,081
397.30	21,964	58,268
397.40	22,147	60,474
397.50	22,331	62,698
397.60	22,515	64,940
397.70	22,699	67,201
397.80	22,883	69,480
397.90	23,066	71,777
398.00	23,250	74,093
398.10	23,442	76,428
398.20	23,635	78,781
398.30	23,827	81,155
398.40	24,020	83,547
398.50	24,212	85,959
398.60	24,404	88,389
398.70	24,597	90,839
398.80	24,789	93,309
398.90	24,982	95,797
399.00	**25,174**	**98,305**

STATIC STORAGE
RECHARGE/TREATMENT VOLUME
BELOW LOWEST OUTLET

WQV AND RECHARGE
BMP POND 6

FOX HOLLOW
NORTHBRIDGE, MA
NOVEMBER 2025

RECHARGE POND #7					
	Paved	Roof	Total Imp		Recharge Required
B Soils			0		0
C Soils	72,836	55,328	128,164		2670
D Soils	0	0	0		0
				Total	**2670**
Total Impv	**128,164** sf				
	2.94 AC				
Basin 8P		Elevation	372.5	Lowest Outlet-storage below	
		Storage	**9084** cf		
Dewatering		Rate	1.02 in/hr		
		surface area	17671 sf		
		Volume to Recharge	9084 cf		
		Time to dewater	6.05 HRS		
Capture Area Adjustment-AP5					
Minium required			0.65	of Impervious Coverage	
Total Impv			**128,164** sf		
Impv Directed to BMP			128,164		
Ratio Sent to BMP			1.00	>	65 OK

WATER QUALITY POND #7				
Water Quality Volume (WQV)				
Water Quality Depth	0.5	inches		
Impervious Area	128,164	sf		
WQV	**5,340**	cf		
Infiltration BMP	**9,084**	>	5,340	
		ok		
Sizing of Forebay FB7N				
vol. required	0.1	x impv		
impervious area to BMP	111,000			
Forebay Size Required	**925**	cf		
Forebay Spillway elev			473.2	
Forebay Storage Below Spillway		cf	**976**	
	976	>	**925**	**OK**
Sizing of Forebay FB7S				
vol. required	0.1	x impv		
impervious area to BMP	18,000			
Forebay Size Required	**150**	cf		
Forebay Spillway elev			372.5	
Forebay Storage Below Spillway		cf	**239**	
	239	>	**150**	**OK**

WQV AND
RECHARGE CALCS
POND 7

Area Listing (selected nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
221,676	74	>75% Grass cover, Good, HSG C (7S)
72,836	98	Paved parking, HSG C (7S)
55,328	98	Roofs, HSG C (7S)
150,985	70	Woods, Good, HSG C (7S)
500,825	**79**	**TOTAL AREA**

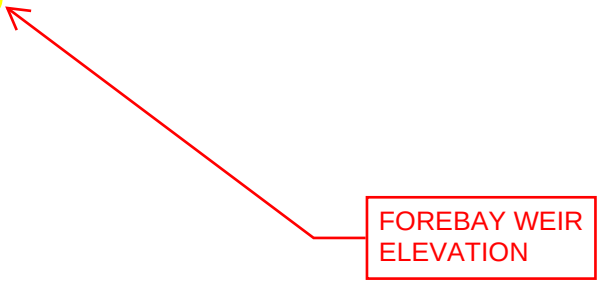
IMPERVIOUS AREA

USED FOR REQUIRED RECHARGE

TOTAL IMPERVIOUS AREA TO POND 7

Stage-Area-Storage for Pond FB7S: FB7S

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
372.00	402	0
372.10	432	42
372.20	463	86
372.30	493	134
372.40	523	185
372.50	554	239
372.60	584	296
372.70	614	356
372.80	644	419
372.90	675	485
373.00	705	554
373.10	735	626
373.20	766	701
373.30	796	779
373.40	826	860
373.50	857	944
373.60	887	1,031
373.70	917	1,121
373.80	947	1,214
373.90	978	1,311
374.00	**1,008**	**1,410**



FOREBAY SOUTH
STORAGE
TABLE-POND 7

Stage-Area-Storage for Pond FB7N: FB7N

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
372.00	586	0
372.10	624	60
372.20	662	125
372.30	700	193
372.40	738	265
372.50	776	340
372.60	814	420
372.70	852	503
372.80	890	590
372.90	928	681
373.00	966	776
373.10	1,003	874
373.20	1,041	976
373.30	1,079	1,082
373.40	1,117	1,192
373.50	1,155	1,306
373.60	1,193	1,423
373.70	1,231	1,545
373.80	1,269	1,670
373.90	1,307	1,798
374.00	**1,345**	**1,931**

FOREBAY WEIR ELEVATION

FOREBAY NORTH STORAGE TABLE-POND 7

Stage-Area-Storage for Pond POND7: POND7

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
372.00	17,671	0
372.10	17,869	1,777
372.20	18,068	3,574
372.30	18,266	5,391
372.40	18,465	7,227
372.50	18,663	9,084
372.60	18,862	10,960
372.70	19,060	12,856
372.80	19,259	14,772
372.90	19,457	16,708
373.00	19,656	18,663
373.10	19,854	20,639
373.20	20,052	22,634
373.30	20,251	24,649
373.40	20,449	26,684
373.50	20,648	28,739
373.60	20,846	30,814
373.70	21,045	32,908
373.80	21,243	35,023
373.90	21,442	37,157
374.00	21,640	39,311
374.10	21,850	41,485
374.20	22,059	43,681
374.30	22,269	45,897
374.40	22,479	48,135
374.50	22,689	50,393
374.60	22,898	52,672
374.70	23,108	54,973
374.80	23,318	57,294
374.90	23,527	59,636
375.00	23,737	62,000
375.10	23,947	64,384
375.20	24,156	66,789
375.30	24,366	69,215
375.40	24,576	71,662
375.50	24,786	74,130
375.60	24,995	76,619
375.70	25,205	79,129
375.80	25,415	81,660
375.90	25,624	84,212
376.00	25,834	86,785
376.10	26,055	89,379
376.20	26,276	91,996
376.30	26,497	94,635
376.40	26,718	97,295
376.50	26,940	99,978
376.60	27,161	102,683
376.70	27,382	105,410
376.80	27,603	108,160
376.90	27,824	110,931
377.00	28,045	113,725
377.10	28,266	116,540
377.20	28,487	119,378
377.30	28,708	122,237
377.40	28,929	125,119
377.50	29,151	128,023
377.60	29,372	130,949
377.70	29,593	133,898
377.80	29,814	136,868
377.90	30,035	139,860
378.00	**30,256**	**142,875**

STATIC STORAGE
RECHARGE/TREATMENT VOLUME
BELOW LOWEST OUTLET

WQV AND RECHARGE
BMP POND 7

FOX HOLLOW
NORTHBRIDGE, MA
NOVEMBER 2025

RECHARGE POND 8

	Paved	Roof	Total Imp	Recharge Required
B Soils			0	0
C Soils	14,631	24,152	38,783	808
D Soils	0	0	0	0
			Total	**808**

Total Impv **38,783** sf
0.89 AC

Basin 8P
Elevation 322.5 Lowest Outlet-storage below
Storage **3568** cf

Dewatering
Rate 1.02 in/hr
surface area 6928 sf
Volume to Recharge 3568 cf

Time to dewater 6.06 HRS

Capture Area Adjustment-AP5
Minium required 0.65 of Impervious Coverage

Total Impv **38,783** sf
Impv Directed to BMP **38,783**

Ratio Sent to BMP 1.00 > 65 OK

WATER QUALITY -POND #8

Water Quality Volume (WQV)
Water Quality Depth 0.5 inches
Impervious Area 38,783 sf
WQV **1,616** cf

Infiltration BMP **3,568** > 1,616
ok

Sizing of Forebay
vol. required 0.1 x impv
impervious area to BMP 38,783
Forebay Size Required **323** cf

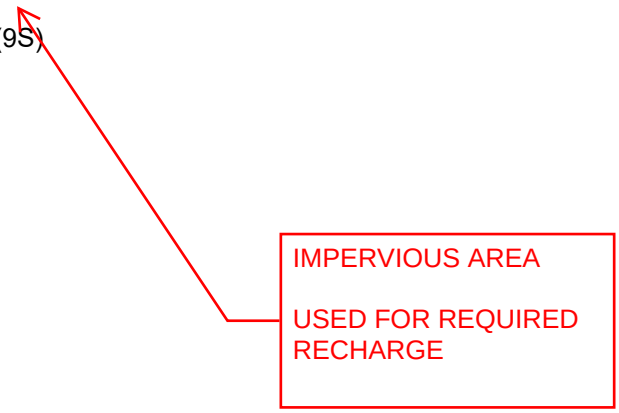
Forebay Spillway elev 322.5
Forebay Storage Below Spillway 357 CF

357 **>** **323** **OK**

WQV AND
RECHARGE CALCS
POND 8

Area Listing (selected nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
168,825	74	>75% Grass cover, Good, HSG C (9S)
24,152	98	Paved parking, HSG C (9S)
14,631	98	Roofs, HSG C (9S)
176,206	70	Woods, Good, HSG C (9S)
383,814	**75**	**TOTAL AREA**



TOTAL IMPERVIOUS AREA TO POND 8

Stage-Area-Storage for Pond FB8: FB8

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
322.00	612	0
322.10	653	63
322.20	694	131
322.30	734	202
322.40	775	277
322.50	816	357
322.60	857	441
322.70	898	528
322.80	938	620
322.90	979	716
323.00	1,020	816
323.10	1,061	920
323.20	1,102	1,028
323.30	1,142	1,140
323.40	1,183	1,257
323.50	1,224	1,377
323.60	1,265	1,501
323.70	1,306	1,630
323.80	1,346	1,763
323.90	1,387	1,899
324.00	**1,428**	**2,040**

FOREBAY WEIR ELEVATION

FOREBAY STORAGE TABLE-POND 8

Stage-Area-Storage for Pond 8P: Pond 8

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
322.00	6,928	0
322.10	7,011	697
322.20	7,095	1,402
322.30	7,178	2,116
322.40	7,262	2,838
322.50	7,345	3,568
322.60	7,429	4,307
322.70	7,512	5,054
322.80	7,596	5,809
322.90	7,679	6,573
323.00	7,763	7,345
323.10	7,846	8,126
323.20	7,929	8,914
323.30	8,013	9,712
323.40	8,096	10,517
323.50	8,180	11,331
323.60	8,263	12,153
323.70	8,347	12,983
323.80	8,430	13,822
323.90	8,514	14,669
324.00	8,597	15,525
324.10	8,691	16,389
324.20	8,784	17,263
324.30	8,878	18,146
324.40	8,972	19,039
324.50	9,066	19,941
324.60	9,160	20,852
324.70	9,253	21,773
324.80	9,347	22,703
324.90	9,441	23,642
325.00	9,535	24,591
325.10	9,628	25,549
325.20	9,722	26,516
325.30	9,816	27,493
325.40	9,909	28,480
325.50	10,003	29,475
325.60	10,097	30,480
325.70	10,191	31,495
325.80	10,285	32,518
325.90	10,378	33,551
326.00	10,472	34,594
326.10	10,574	35,646
326.20	10,677	36,709
326.30	10,779	37,782
326.40	10,881	38,865
326.50	10,984	39,958
326.60	11,086	41,061
326.70	11,188	42,175
326.80	11,291	43,299
326.90	11,393	44,433
327.00	11,496	45,578
327.10	11,598	46,732
327.20	11,700	47,897
327.30	11,803	49,072
327.40	11,905	50,258
327.50	12,007	51,453
327.60	12,110	52,659
327.70	12,212	53,875
327.80	12,314	55,102
327.90	12,417	56,338
328.00	**12,519**	**57,585**

STATIC STORAGE
RECHARGE/TREATMENT VOLUME
BELOW LOWEST OUTLET

WQV AND RECHARGE
BMP POND 8

FOX HOLLOW
NORTHBRIDGE, MA
NOVEMBER 2025

RECHARGE POND #9

	Paved	Roof	Total Imp	Recharge Required
B Soils			0	0
C Soils	50,331	41,195	91,526	1907
D Soils	0	0	0	0
			Total	**1907**

Total Impv **91,526** sf
2.10 AC

Basin 8P
Elevation 457.5 Lowest Outlet-storage below
Storage **40172** cf

Dewatering
Rate 1.02 in/hr
surface area 8799 sf
Volume to Recharge 40172 cf

Time to dewater 53.71 HRS

Capture Area Adjustment-AP5
Minium required 0.65 of Impervious Coverage

Total Impv **91,526** sf
Impv Directed to BMP **91,526**

Ratio Sent to BMP 1.00 > 65 OK

WATER QUALITY POND #9

Water Quality Volume (WQV)
Water Quality Depth 0.5 inches
Impervious Area 91,526 sf
WQV **3,814** cf

Infiltration BMP **40,172** > 3,814
ok

Sizing of Forebay
vol. required 0.1 x impv
impervious area to BMP 91,526
Forebay Size Required **763** cf

Forebay Spillway elev 454.8
Forebay Storage Below Spillway cf 854

854 **>** **763** **OK**

WQV AND
RECHARGE CALCS
POND 9

Area Listing (selected nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
145,685	74	>75% Grass cover, Good, HSG C (11S)
50,331	98	Paved parking, HSG C (11S)
41,195	98	Roofs, HSG C (11S)
11,665	70	Woods, Good, HSG C (11S)
248,876	**83**	**TOTAL AREA**

IMPERVIOUS AREA

USED FOR REQUIRED RECHARGE

TOTAL IMPERVIOUS AREA TO POND 9

Soil Listing (selected nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
248,876	HSG C	11S
0	HSG D	
0	Other	
248,876		**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Su Nu
0	0	145,685	0	0	145,685	>75% Grass cover, Good	
0	0	50,331	0	0	50,331	Paved parking	
0	0	41,195	0	0	41,195	Roofs	
0	0	11,665	0	0	11,665	Woods, Good	
0	**0**	**248,876**	**0**	**0**	**248,876**	**TOTAL AREA**	

Stage-Area-Storage for Pond FP9: FOREBAY 9

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
454.00	1,051	0
454.10	1,055	105
454.20	1,059	211
454.30	1,063	317
454.40	1,067	424
454.50	1,071	531
454.60	1,075	638
454.70	1,079	746
454.80	1,083	854
454.90	1,087	962
455.00	1,092	1,071
455.10	1,096	1,181
455.20	1,100	1,290
455.30	1,104	1,401
455.40	1,108	1,511
455.50	1,112	1,622
455.60	1,116	1,733
455.70	1,120	1,845
455.80	1,124	1,957
455.90	1,128	2,070
456.00	**1,132**	**2,183**

FOREBAY
STORAGE
TABLE-POND 9

Stage-Area-Storage for Pond 9P: POND9

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
454.00	8,799	0
454.10	8,950	887
454.20	9,101	1,790
454.30	9,252	2,708
454.40	9,403	3,640
454.50	9,554	4,588
454.60	9,705	5,551
454.70	9,856	6,529
454.80	10,007	7,522
454.90	10,158	8,531
455.00	10,309	9,554
455.10	10,460	10,592
455.20	10,611	11,646
455.30	10,762	12,715
455.40	10,913	13,798
455.50	11,064	14,897
455.60	11,215	16,011
455.70	11,366	17,140
455.80	11,517	18,284
455.90	11,668	19,444
456.00	11,819	20,618
456.10	11,981	21,808
456.20	12,143	23,014
456.30	12,306	24,237
456.40	12,468	25,475
456.50	12,630	26,730
456.60	12,793	28,001
456.70	12,955	29,289
456.80	13,117	30,592
456.90	13,279	31,912
457.00	13,442	33,248
457.10	13,604	34,601
457.20	13,766	35,969
457.30	13,928	37,354
457.40	14,090	38,755
457.50	14,253	40,172
457.60	14,415	41,605
457.70	14,577	43,055
457.80	14,740	44,521
457.90	14,902	46,003
458.00	15,064	47,501
458.10	15,238	49,016
458.20	15,411	50,549
458.30	15,585	52,098
458.40	15,758	53,665
458.50	15,932	55,250
458.60	16,106	56,852
458.70	16,279	58,471
458.80	16,453	60,108
458.90	16,626	61,762
459.00	16,800	63,433
459.10	16,974	65,122
459.20	17,147	66,828
459.30	17,321	68,551
459.40	17,494	70,292
459.50	17,668	72,050
459.60	17,842	73,825
459.70	18,015	75,618
459.80	18,189	77,429
459.90	18,362	79,256
460.00	**18,536**	**81,101**

STATIC STORAGE; VOLUME BELOW LOWEST BASIN OUTLET

WQV AND RECHARGE POND 9

PART IV – TSS Removal

INSTRUCTIONS:
1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
2. Select BMP from Drop Down Menu
3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Version 1, Automated: Mar. 4, 2008

Location: Basin #2

TSS Removal Calculation Worksheet

B BMP[1]	C TSS Removal Rate[1]	D Starting TSS Load*	E Amount Removed (C*D)	F Remaining Load (D-E)
Deep Sump and Hooded Catch Basin	0.25	1.00	0.25	0.75
Sediment Forebay	0.25	0.75	0.19	0.56
Infiltration Basin	0.80	0.56	0.45	0.11
	0.00	0.11	0.00	0.11
	0.00	0.11	0.00	0.11

Total TSS Removal = 89%

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project: Fox Hollow
Prepared By: JAB
Date: 11/17/2025

*Equals remaining load from previous BMP (E) which enters the BMP

Non-automated TSS Calculation Sheet must be used if Proprietary BMP Proposed

1. From MassDEP Stormwater Handbook Vol. 1

INSTRUCTIONS:

Non-automated: Mar. 4, 2008

1. Sheet is nonautomated. Print sheet and complete using hand calculations. Column A and B: See MassDEP Structural BMP Table
2. The calculations must be completed using the Column Headings specified in Chart and Not the Excel Column Headings
3. To complete Chart Column D, multiple Column B value within Row x Column C value within Row
4. To complete Chart Column E value, subtract Column D value within Row from Column C within Row
5. Total TSS Removal = Sum All Values in Column D

Location: Basin #3

TSS Removal Calculation Worksheet

A BMP[1]	B TSS Removal Rate[1]	C Starting TSS Load*	D Amount Removed (B*C)	E Remaining Load (C-D)
DEEP SUMP CB	.25	1.00	.25	.75
HYDROWORKS WQU	0.86	.75	.645	.105
FOREBEAY	.25	.105	0.02625	0.079

Total TSS Removal = .92

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project: Fox Hollow

Prepared By: JAB

Date: 11/17/25

*Equals remaining load from previous BMP (E) which enters the BMP

Non-automated TSS Calculation Sheet must be used if Proprietary BMP Proposed

1. From MassDEP Stormwater Handbook Vol. 1

Hydroworks Sizing Summary

234 Tessier Lane (WQU)

Northbridge, MA

11-12-2025

Recommended Size: HydroDome HD 4

Hydroworks Sizing Program Version 5.8.5

A HydroDome HD 4 is recommended to provide 86 % annual TSS removal based on a drainage area of 1.7 (ac) with an imperviousness of 35 % and Worcester Wso Ap, Massachusetts rainfall for the NJDEP particle size distribution.

The recommended HydroDome HD 4 treats 100 % of the annual runoff and provides 86 % annual TSS removal for the Worcester Wso Ap rainfall records and NJDEP particle size distribution.

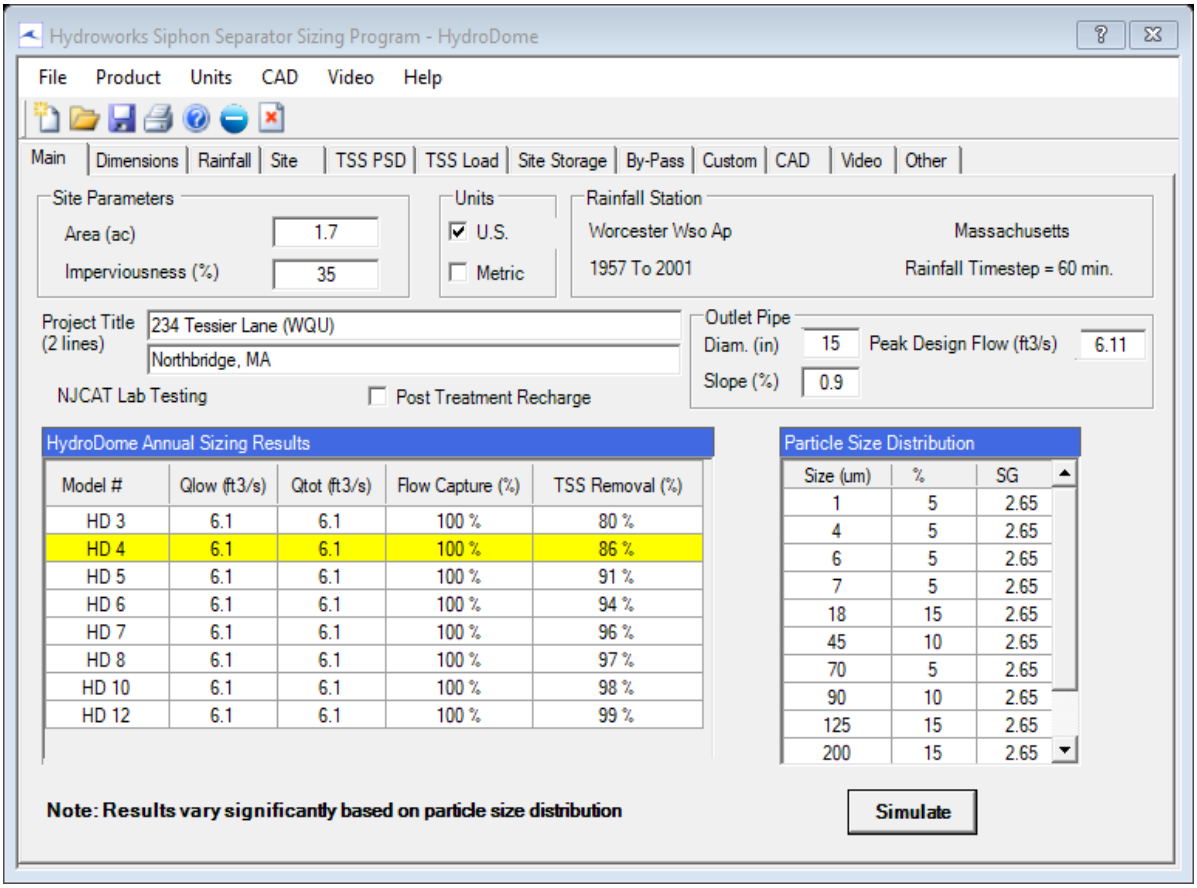
The HydroDome has a siphon which creates a discontinuity in headloss. The given peak flow of 6.11 (ft3/s) Is less than the full pipe flow of 6.13 (ft3/s) indicating free flow in the pipe during the peak flow assuming no tailwater condition. Partial pipe flow was assumed for the headloss calculations. The headloss was calculated to be 15 (in) above the crown of the 15 (in) outlet pipe.

This summary report provides the main parameters that were used for sizing. These parameters are shown on the summary tables and graphs provided in this report.

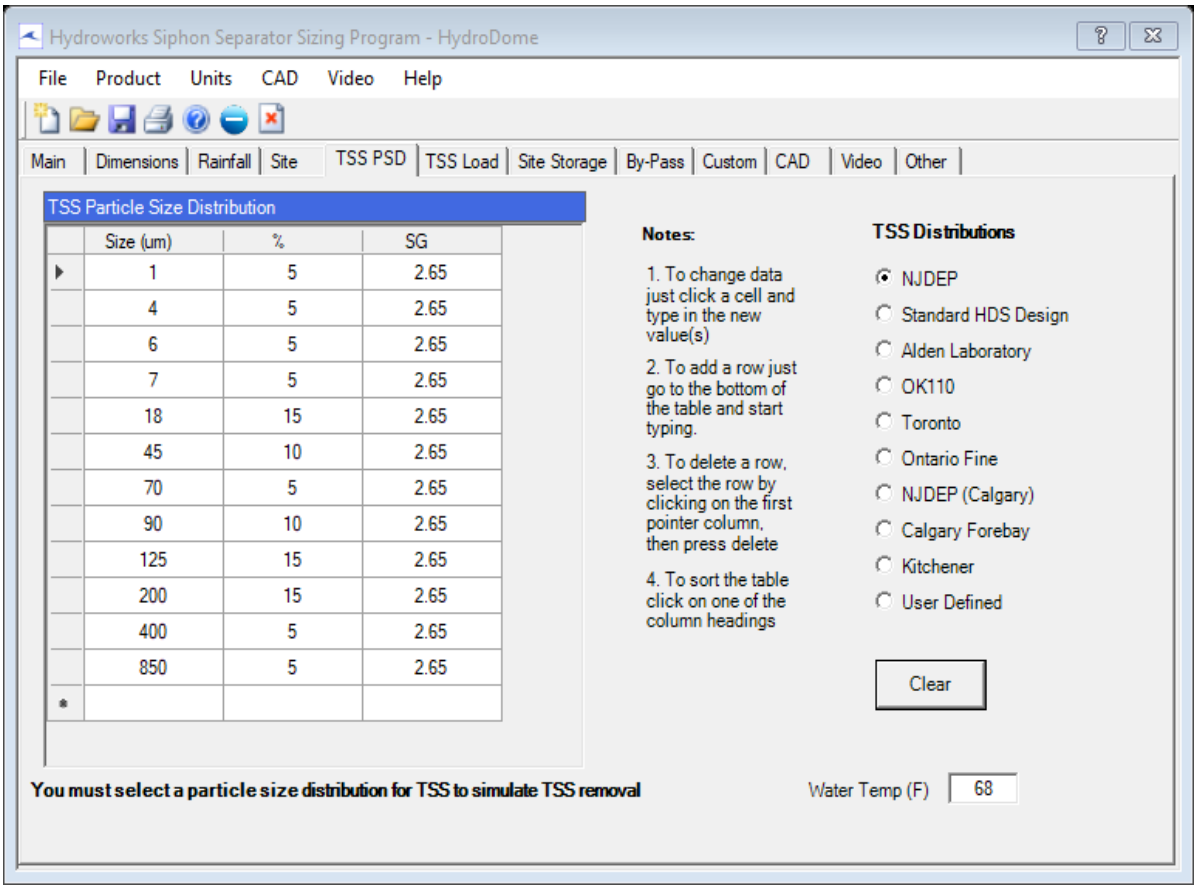
If you have any questions regarding this sizing summary please do not hesitate to contact Hydroworks at 888-290-7900 or email us at support@hydroworks.com.

The sizing program is for sizing purposes only and does not address any site specific parameters such as hydraulic gradeline, tailwater submergence, groundwater, soils bearing capacity, etc. Headloss calculations are not a hydraulic gradeline calculation since this requires a starting water level and an analysis of the entire system downstream of the HydroDome .

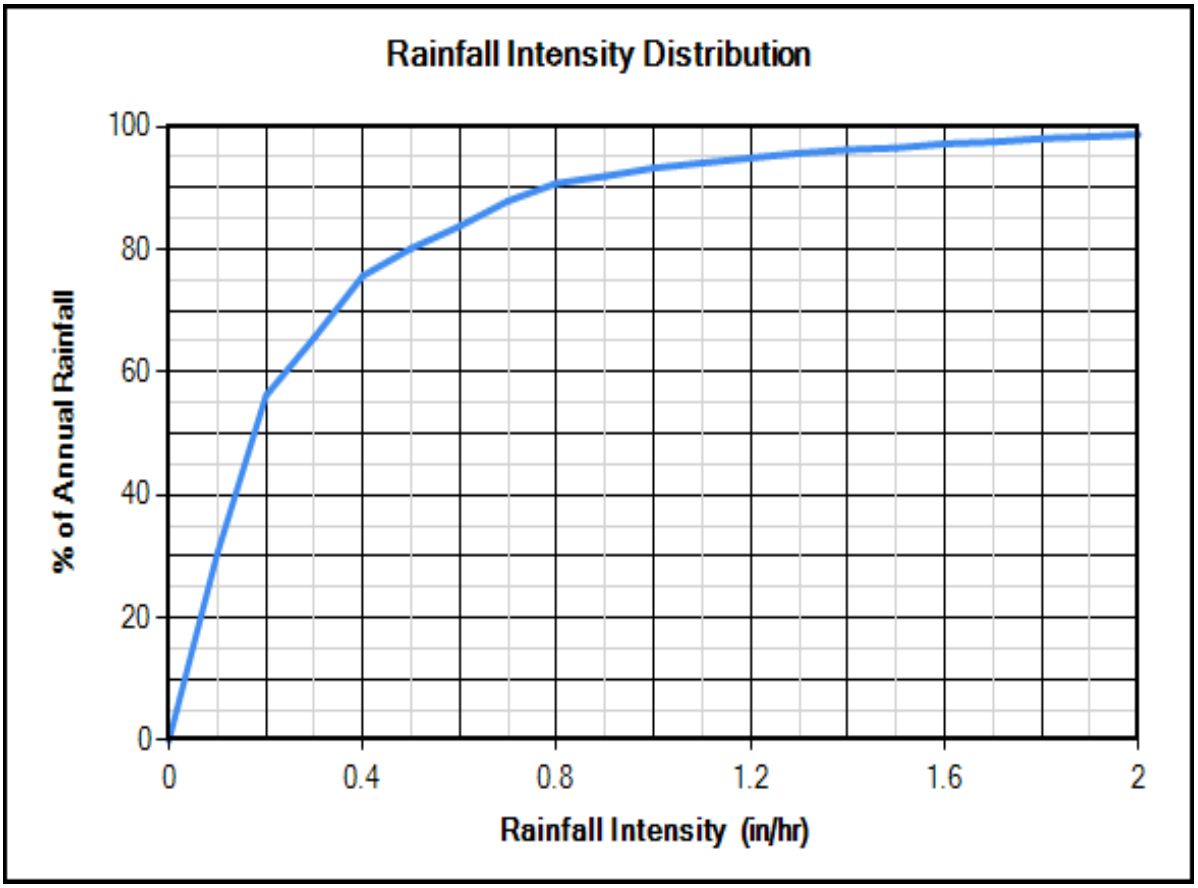
TSS Removal Sizing Summary



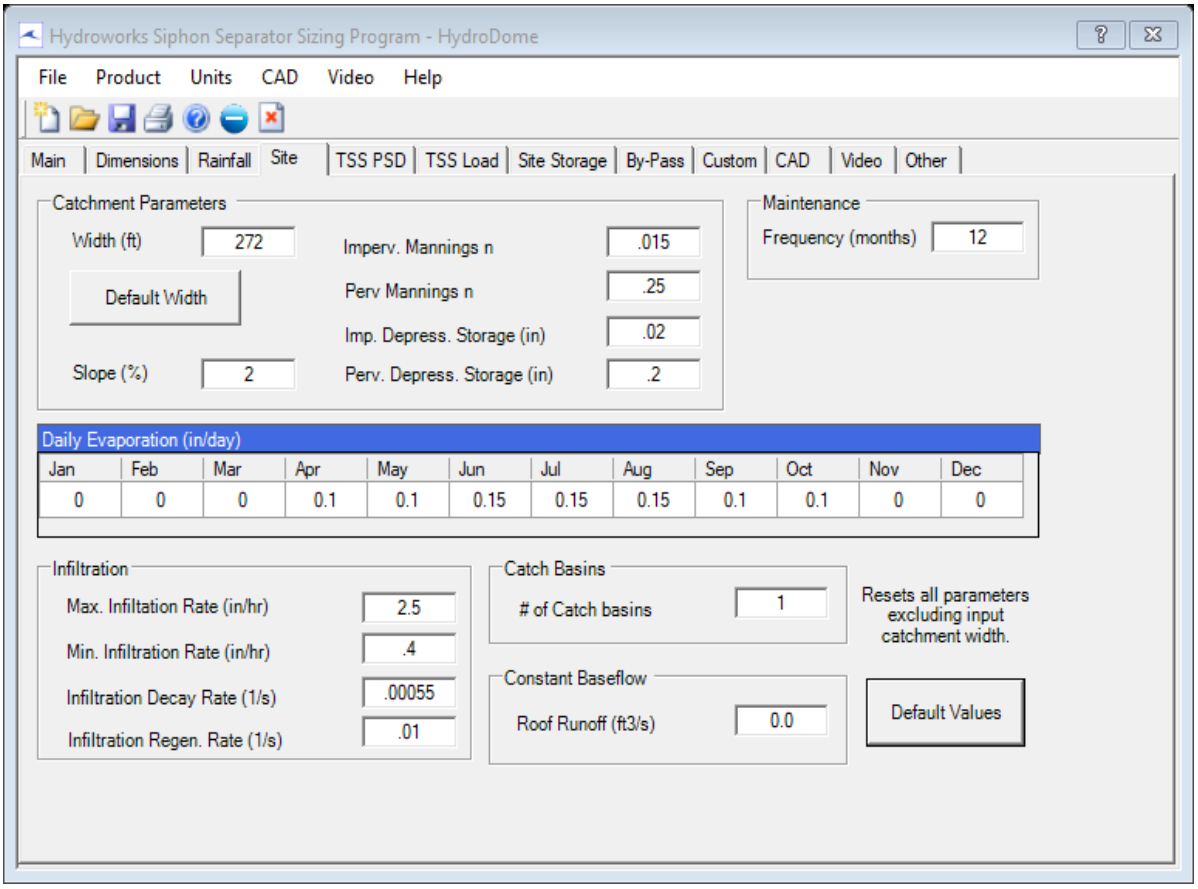
TSS Particle Size Distribution



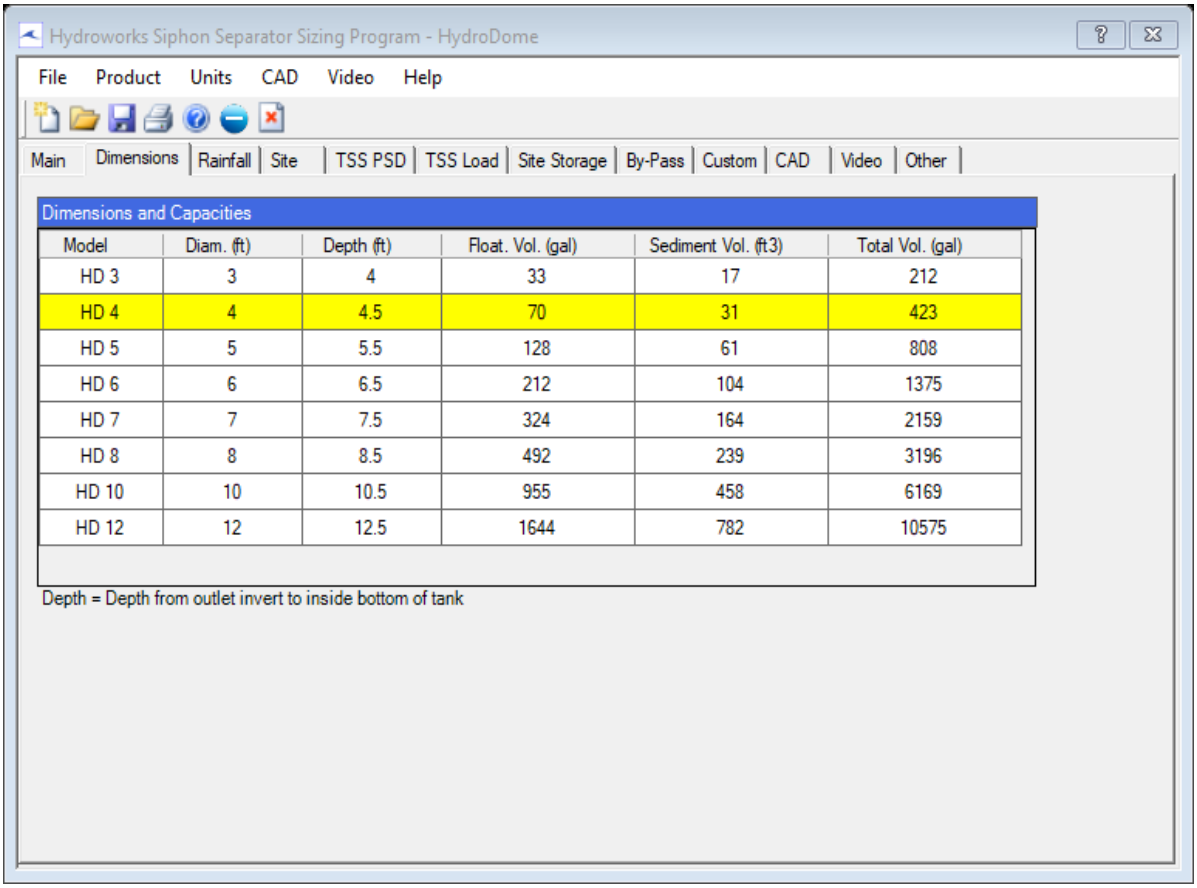
Rainfall Station - Worcester Wso Ap, Massachusetts(1957 To 2001)



Site Physical Characteristics



Dimensions And Capacities

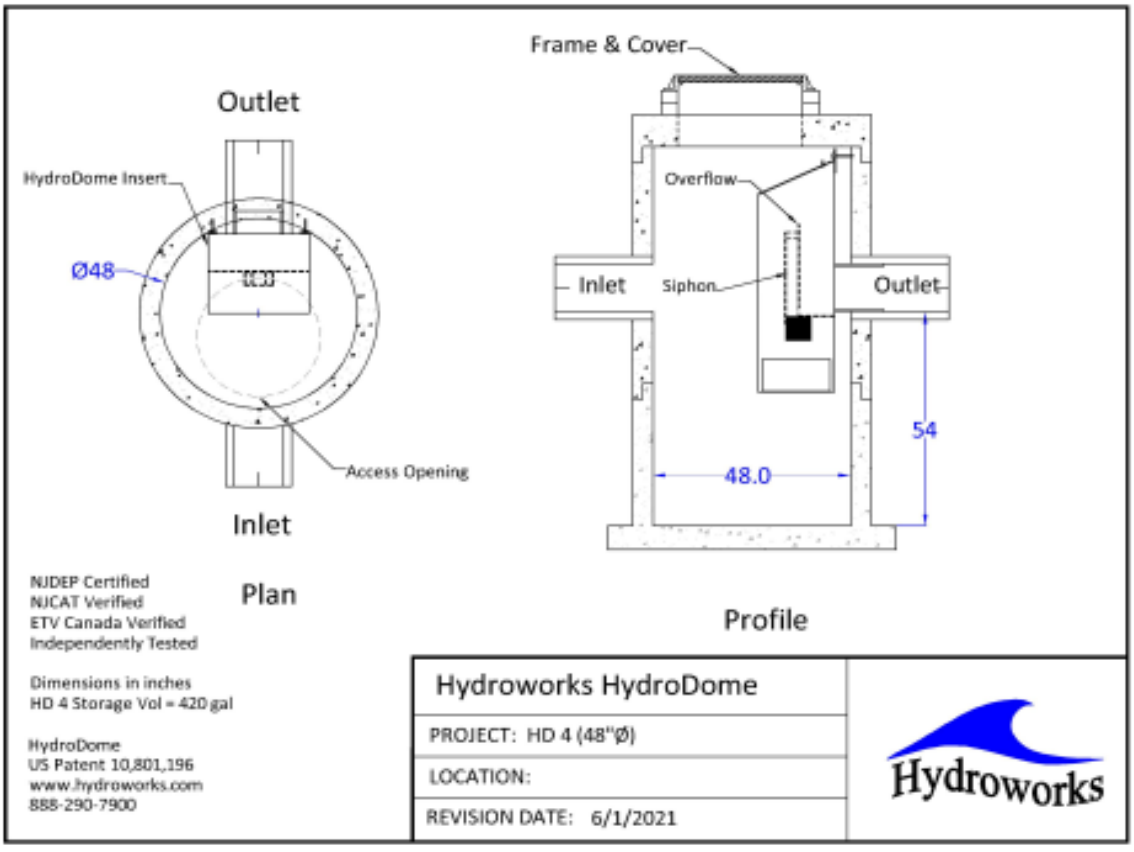


Dimensions and Capacities

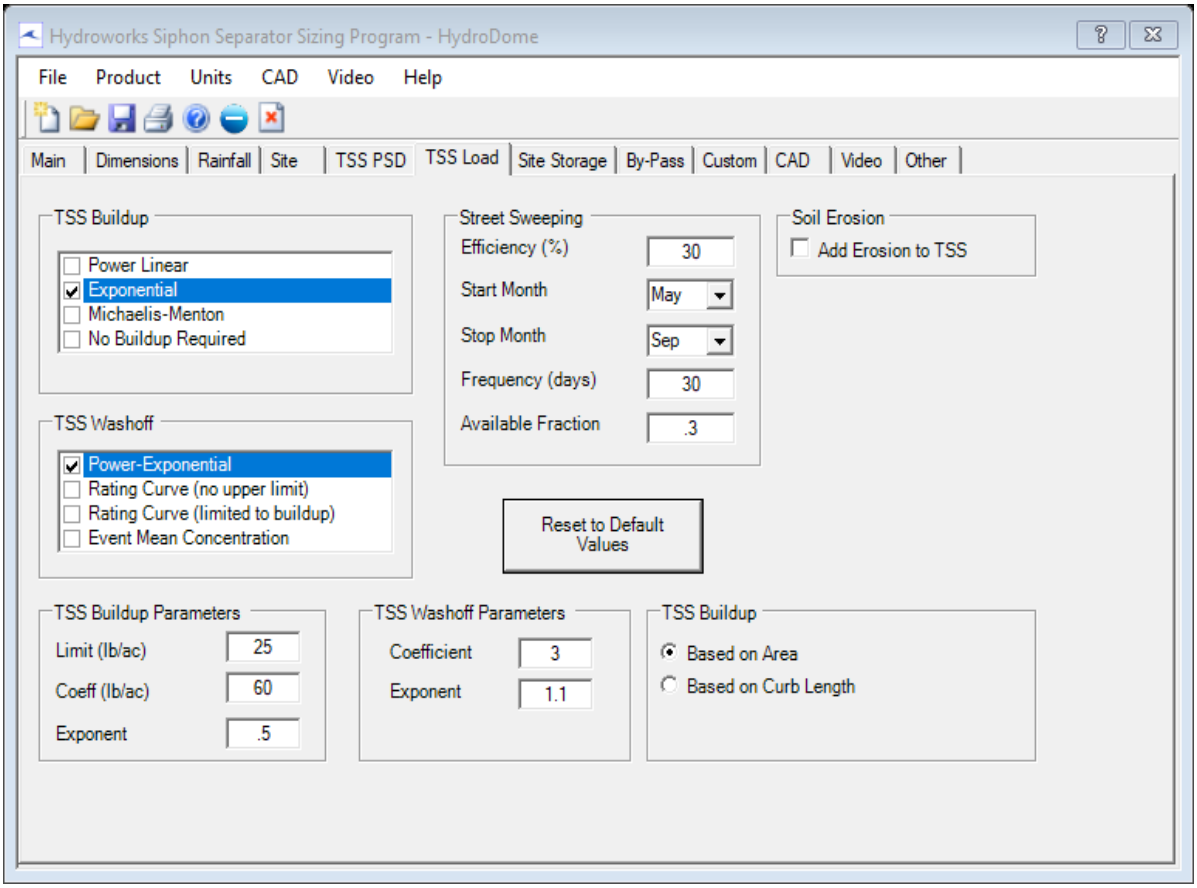
Model	Diam. (ft)	Depth (ft)	Float. Vol. (gal)	Sediment Vol. (ft3)	Total Vol. (gal)
HD 3	3	4	33	17	212
HD 4	4	4.5	70	31	423
HD 5	5	5.5	128	61	808
HD 6	6	6.5	212	104	1375
HD 7	7	7.5	324	164	2159
HD 8	8	8.5	492	239	3196
HD 10	10	10.5	955	458	6169
HD 12	12	12.5	1644	782	10575

Depth = Depth from outlet invert to inside bottom of tank

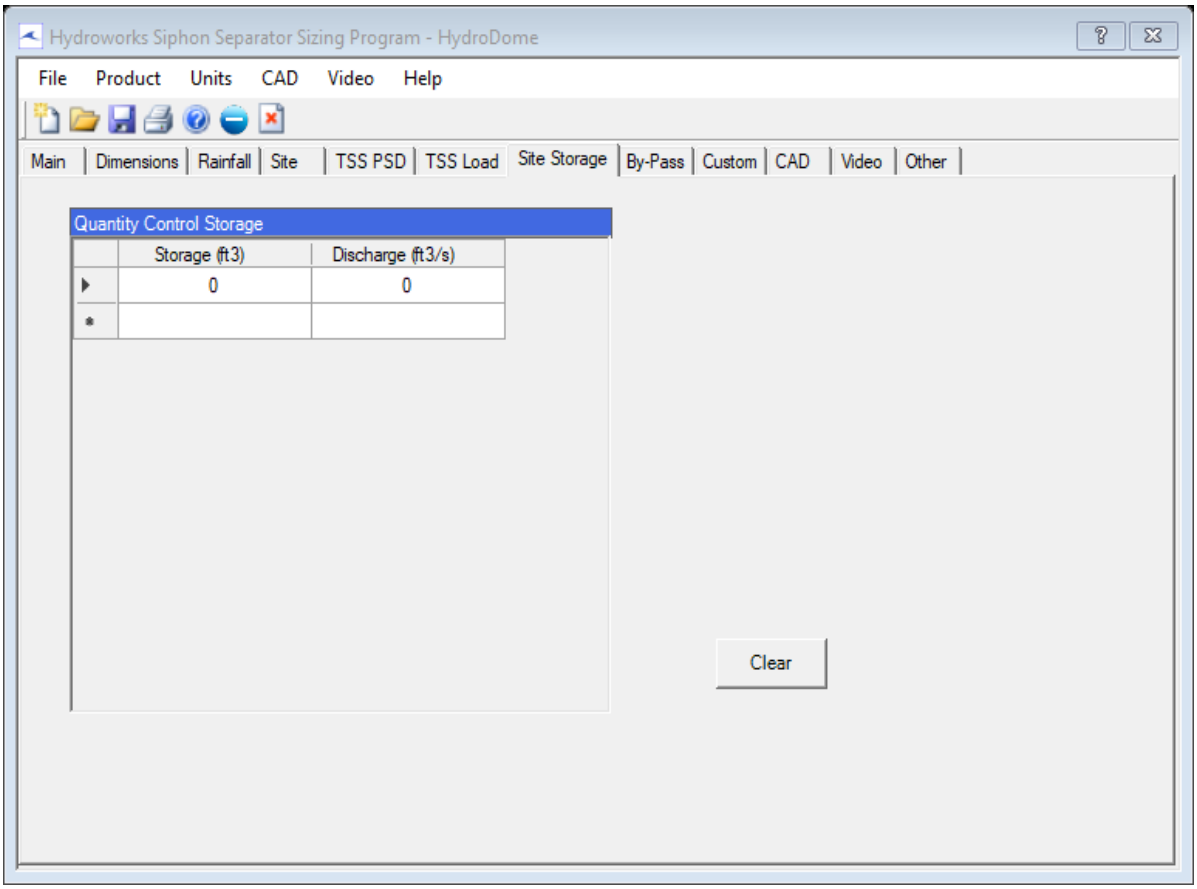
Generic HD 4 CAD Drawing



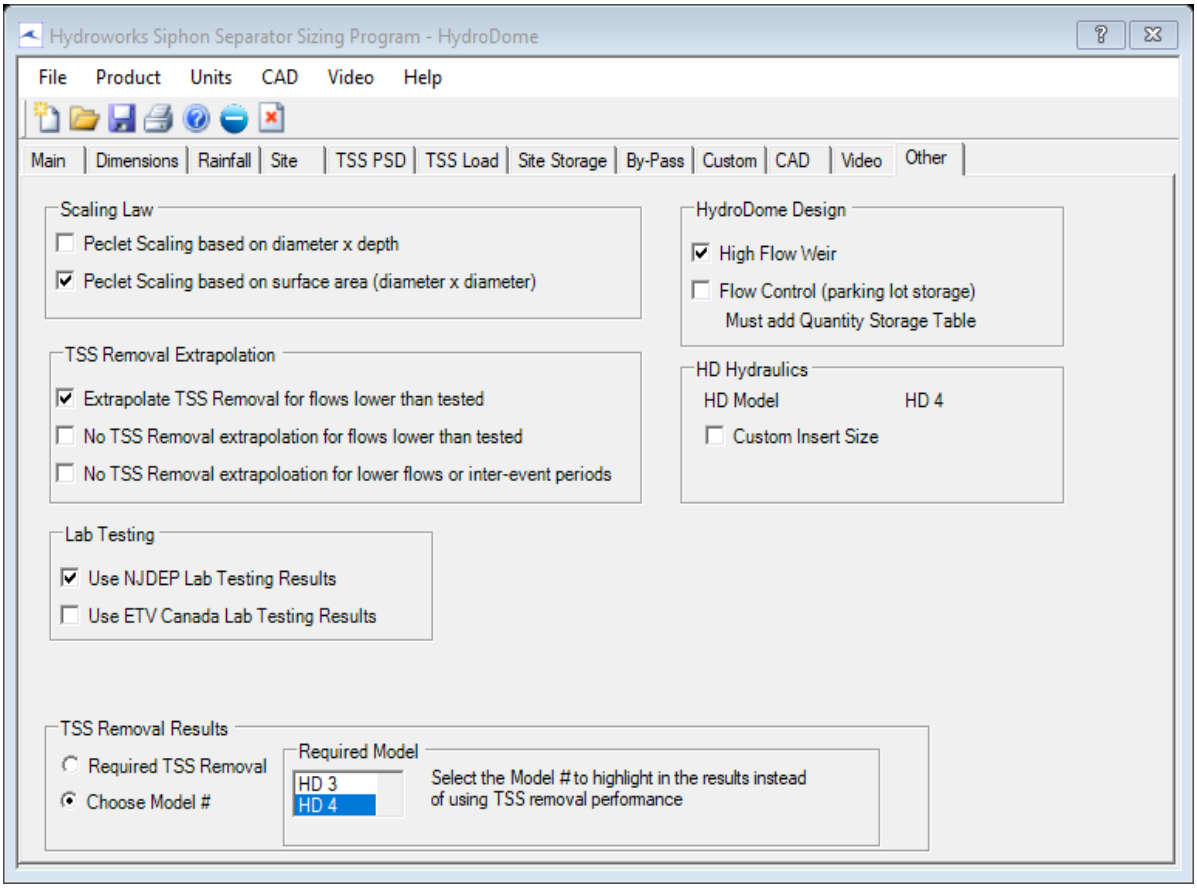
TSS Buildup And Washoff



Upstream Quantity Storage



Other Parameters



Flagged Issues

If there is underground detention storage upstream of the HydroDome please contact Hydroworks to ensure it has been modeled correctly.

Hydroworks Sizing Program - Version 5.8.5

1-800-290-7900
www.hydroworks.com

INSTRUCTIONS:
1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
2. Select BMP from Drop Down Menu
3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Version 1, Automated: Mar. 4, 2008

Location: Basin #4

TSS Removal Calculation Worksheet

B BMP[1]	C TSS Removal Rate[1]	D Starting TSS Load*	E Amount Removed (C*D)	F Remaining Load (D-E)
Deep Sump and Hooded Catch Basin	0.25	1.00	0.25	0.75
Sediment Forebay	0.25	0.75	0.19	0.56
Infiltration Basin	0.80	0.56	0.45	0.11
	0.00	0.11	0.00	0.11
	0.00	0.11	0.00	0.11

Total TSS Removal = 89%

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project: Fox Hollow
Prepared By: JAB
Date: 11/17/2025

*Equals remaining load from previous BMP (E) which enters the BMP

Non-automated TSS Calculation Sheet must be used if Proprietary BMP Proposed

1. From MassDEP Stormwater Handbook Vol. 1

INSTRUCTIONS:
1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
2. Select BMP from Drop Down Menu
3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Version 1, Automated: Mar. 4, 2008

Location: Basin #5

TSS Removal Calculation Worksheet

B BMP[1]	C TSS Removal Rate[1]	D Starting TSS Load*	E Amount Removed (C*D)	F Remaining Load (D-E)
Deep Sump and Hooded Catch Basin	0.25	1.00	0.25	0.75
Sediment Forebay	0.25	0.75	0.19	0.56
Infiltration Basin	0.80	0.56	0.45	0.11
	0.00	0.11	0.00	0.11
	0.00	0.11	0.00	0.11

Total TSS Removal = 89%

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project: Fox Hollow
Prepared By: JAB
Date: 11/17/2025

*Equals remaining load from previous BMP (E) which enters the BMP

Non-automated TSS Calculation Sheet must be used if Proprietary BMP Proposed

1. From MassDEP Stormwater Handbook Vol. 1

INSTRUCTIONS:
1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
2. Select BMP from Drop Down Menu
3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Version 1, Automated: Mar. 4, 2008

Location: Basin #6

TSS Removal Calculation Worksheet

B BMP[1]	C TSS Removal Rate[1]	D Starting TSS Load*	E Amount Removed (C*D)	F Remaining Load (D-E)
Deep Sump and Hooded Catch Basin	0.25	1.00	0.25	0.75
Sediment Forebay	0.25	0.75	0.19	0.56
Infiltration Basin	0.80	0.56	0.45	0.11
	0.00	0.11	0.00	0.11
	0.00	0.11	0.00	0.11

Total TSS Removal = 89%

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project: Fox Hollow
Prepared By: JAB
Date: 11/17/2025

*Equals remaining load from previous BMP (E) which enters the BMP

Non-automated TSS Calculation Sheet must be used if Proprietary BMP Proposed

1. From MassDEP Stormwater Handbook Vol. 1

INSTRUCTIONS:
1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
2. Select BMP from Drop Down Menu
3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Version 1, Automated: Mar. 4, 2008

Location: Basin #7

TSS Removal Calculation Worksheet

B BMP[1]	C TSS Removal Rate[1]	D Starting TSS Load*	E Amount Removed (C*D)	F Remaining Load (D-E)
Deep Sump and Hooded Catch Basin	0.25	1.00	0.25	0.75
Sediment Forebay	0.25	0.75	0.19	0.56
Infiltration Basin	0.80	0.56	0.45	0.11
	0.00	0.11	0.00	0.11
	0.00	0.11	0.00	0.11

Total TSS Removal = 89%

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project: Fox Hollow
Prepared By: JAB
Date: 11/17/2025

*Equals remaining load from previous BMP (E) which enters the BMP

Non-automated TSS Calculation Sheet must be used if Proprietary BMP Proposed

1. From MassDEP Stormwater Handbook Vol. 1

INSTRUCTIONS:
1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
2. Select BMP from Drop Down Menu
3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Version 1, Automated: Mar. 4, 2008

Location: Basin #8

TSS Removal Calculation Worksheet

B BMP[1]	C TSS Removal Rate[1]	D Starting TSS Load*	E Amount Removed (C*D)	F Remaining Load (D-E)
Deep Sump and Hooded Catch Basin	**0.25**	**1.00**	**0.25**	**0.75**
Sediment Forebay	**0.25**	**0.75**	**0.19**	**0.56**
Infiltration Basin	**0.80**	**0.56**	**0.45**	**0.11**
	0.00	**0.11**	**0.00**	**0.11**
	0.00	**0.11**	**0.00**	**0.11**

Total TSS Removal = **89%**

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project: Fox Hollow
Prepared By: JAB
Date: 11/17/2025

*Equals remaining load from previous BMP (E) which enters the BMP

Non-automated TSS Calculation Sheet must be used if Proprietary BMP Proposed

1. From MassDEP Stormwater Handbook Vol. 1

INSTRUCTIONS:
1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
2. Select BMP from Drop Down Menu
3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Version 1, Automated: Mar. 4, 2008

Location: Basin #9

TSS Removal Calculation Worksheet

B BMP[1]	C TSS Removal Rate[1]	D Starting TSS Load*	E Amount Removed (C*D)	F Remaining Load (D-E)
Deep Sump and Hooded Catch Basin	0.25	1.00	0.25	0.75
Sediment Forebay	0.25	0.75	0.19	0.56
Infiltration Basin	0.80	0.56	0.45	0.11
	0.00	0.11	0.00	0.11
	0.00	0.11	0.00	0.11

Total TSS Removal = 89%

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project: Fox Hollow
Prepared By: JAB
Date: 11/17/2025

*Equals remaining load from previous BMP (E) which enters the BMP

Non-automated TSS Calculation Sheet must be used if Proprietary BMP Proposed

1. From MassDEP Stormwater Handbook Vol. 1

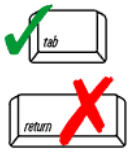
PART V – Supplemental Documentation

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

A. Introduction

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the Massachusetts Stormwater Handbook. The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.[1] This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8[2]
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

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[1] The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

[2] For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

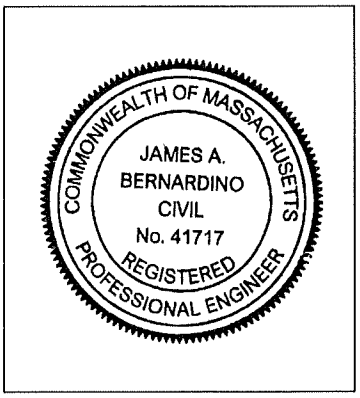
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



Signature and Date

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

☒ New development

☐ Redevelopment

☐ Mix of New Development and Redevelopment

Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- ☐ No disturbance to any Wetland Resource Areas
- ☐ Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- ☐ Reduced Impervious Area (Redevelopment Only)
- ☒ Minimizing disturbance to existing trees and shrubs
- ☐ LID Site Design Credit Requested:
  - ☐ Credit 1
  - ☐ Credit 2
  - ☐ Credit 3
- ☐ Use of “country drainage” versus curb and gutter conveyance and pipe
- ☐ Bioretention Cells (includes Rain Gardens)
- ☐ Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- ☐ Treebox Filter
- ☐ Water Quality Swale
- ☐ Grass Channel
- ☐ Green Roof
- ☐ Other (describe): _____

Standard 1: No New Untreated Discharges

- ☒ No new untreated discharges
- ☒ Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- ☒ Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.

Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

☐ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.

☐ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.

☒ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

☒ Soil Analysis provided.

☒ Required Recharge Volume calculation provided.

☐ Required Recharge volume reduced through use of the LID site Design Credits.

☒ Sizing the infiltration, BMPs is based on the following method: Check the method used.

☒ Static ☐ Simple Dynamic ☐ Dynamic Field[1]

☐ Runoff from all impervious areas at the site discharging to the infiltration BMP.

☒ Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.

☒ Recharge BMPs have been sized to infiltrate the Required Recharge Volume.

☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:

- ☐ Site is comprised solely of C and D soils and/or bedrock at the land surface
- ☐ M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
- ☐ Solid Waste Landfill pursuant to 310 CMR 19.000
- ☐ Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.

☒ Calculations showing that the infiltration BMPs will drain in 72 hours are provided.

☐ Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

---

[1] 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.

Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

☐ The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.

☒ Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
- Provisions for storing materials and waste products inside or under cover;
- Vehicle washing controls;
- Requirements for routine inspections and maintenance of stormwater BMPs;
- Spill prevention and response plans;
- Provisions for maintenance of lawns, gardens, and other landscaped areas;
- Requirements for storage and use of fertilizers, herbicides, and pesticides;
- Pet waste management provisions;
- Provisions for operation and management of septic systems;
- Provisions for solid waste management;
- Snow disposal and plowing plans relative to Wetland Resource Areas;
- Winter Road Salt and/or Sand Use and Storage restrictions;
- Street sweeping schedules;
- Provisions for prevention of illicit discharges to the stormwater management system;
- Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
- Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
- List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.

☒ A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.

☐ Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:

- ☐ is within the Zone II or Interim Wellhead Protection Area
- ☐ is near or to other critical areas
- ☐ is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
- ☐ involves runoff from land uses with higher potential pollutant loads.

☐ The Required Water Quality Volume is reduced through use of the LID site Design Credits.

☒ Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.

Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

☒ The BMP is sized (and calculations provided) based on:

- ☒ The ½" or 1" Water Quality Volume or
- ☐ The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.

☐ The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.

☐ A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

☐ The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.

☐ The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted ***prior to*** the discharge of stormwater to the post-construction stormwater BMPs.

☐ The NPDES Multi-Sector General Permit does ***not*** cover the land use.

☐ LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.

☐ All exposure has been eliminated.

☐ All exposure has ***not*** been eliminated and all BMPs selected are on MassDEP LUHPPL list.

☐ The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

☐ The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.

☐ Critical areas and BMPs are identified in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

☐ The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:

- ☐ Limited Project
- ☐ Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
- ☐ Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
- ☐ Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
- ☐ Bike Path and/or Foot Path
- ☐ Redevelopment Project
- ☐ Redevelopment portion of mix of new and redevelopment.

☐ Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.

☐ The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
- Construction Period Operation and Maintenance Plan;
- Names of Persons or Entity Responsible for Plan Compliance;
- Construction Period Pollution Prevention Measures;
- Erosion and Sedimentation Control Plan Drawings;
- Detail drawings and specifications for erosion control BMPs, including sizing calculations;
- Vegetation Planning;
- Site Development Plan;
- Construction Sequencing Plan;
- Sequencing of Erosion and Sedimentation Controls;
- Operation and Maintenance of Erosion and Sedimentation Controls;
- Inspection Schedule;
- Maintenance Schedule;
- Inspection and Maintenance Log Form.

☒ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has ***not*** been included in the Stormwater Report but will be submitted ***before*** land disturbance begins.

☐ The project is ***not*** covered by a NPDES Construction General Permit.

☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.

☒ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

☒ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:

- ☒ Name of the stormwater management system owners;
- ☒ Party responsible for operation and maintenance;
- ☒ Schedule for implementation of routine and non-routine maintenance tasks;
- ☒ Plan showing the location of all stormwater BMPs maintenance access areas;
- ☒ Description and delineation of public safety features;
- ☒ Estimated operation and maintenance budget; and
- ☒ Operation and Maintenance Log Form.

☐ The responsible party is ***not*** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:

- ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
- ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

☒ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;

☒ An Illicit Discharge Compliance Statement is attached;

☐ NO Illicit Discharge Compliance Statement is attached but will be submitted ***prior to*** the discharge of any stormwater to post-construction BMPs.

Custom Soil Resource Report
Soil Map

Map Scale: 1:11,800 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

FOX HOLLOW
RATIONAL CALULATIONS
NOVEMBER 17, 2025

From	To	Area (SF.) IMPERV.	Area (SF.) GRASS	Area (SF.) TOTAL	Area (AC.) TOTAL	Weighted Runoff Coefficient "C"	Pipe Length (Feet)	Flow Time (min) To Inlet	Flow Time (min) In Channel	Design Storm (Year)	Intensity (IN/HR)	Q (CFS)	Size (IN)	Slope (FT/FT)	Mannings n	Full Capacity (cfs)	Full Velocity (fps)	Upper End Rim	Upper End Invert	Lower End Rim	Lower End Invert
TO BASIN #3																					
CB1	DMH1	10,048	14,090	24,138	0.55	0.61	11.00	6.00	0.02	25	6.30	2.12	8	0.0455	0.012	2.79	8.00	436.65	432.80	436.13	432.30
DCB2	DMH1	7,231	28,396	35,627	0.82	0.50	11.00	6.00	0.02	25	6.30	2.58	8	0.0455	0.012	2.79	8.00	436.65	432.80	436.13	432.30
DMH1	DMH2	17,279	42,486	59,765	1.37	0.54	255.00	6.02	0.33	25	6.30	4.71	12	0.0667	0.0120	9.97	12.69	436.13	432.00	420.30	415.00
CB3	DMH2	4,957	2,093	7,050	0.16	0.75	17.00	6.00	0.06	25	6.30	0.77	8	0.0147	0.012	1.59	4.55	432.80	415.50	420.30	415.25
DMH 2	WQU1	22,236	44,579	66,815	1.53	0.57	16.00	6.36	0.04	25	6.25	5.43	12	0.0219	0.0120	5.71	7.27	420.30	415.00	419.79	414.65
CB4	WQU1	3,682	3,486	7,168	0.16	0.66	17.00	6.00	0.04	25	6.30	0.68	8	0.0353	0.012	2.46	7.05	419.32	415.25	420.60	414.65
WQU1	FES1	25,918	48,065	73,983	1.70	0.58	28.00	6.39	0.09	25	6.25	6.11	15	0.0089	0.0120	6.61	5.39	420.60	414.40		414.15
BASIN3	FES #2						72.00			100 yr			8	0.0070		2.70	7.75		414.00		413.50
TO BASIN #1																					
CB5	DMH3	6,493	9,375	15,868	0.36	0.60	9.00	6.00	0.02	25	6.30	1.39	8	0.0667	0.012	3.38	9.68	467.66	463.90	467.05	463.30
CB6	DMH3	7,324	17,563	24,887	0.57	0.55	14.00	6.00	0.03	25	6.30	1.97	8	0.0429	0.012	2.71	7.76	467.66	463.90	467.05	463.30
DMH3	DMH4	13,817	26,938	40,755	0.94	0.57	162.00	6.03	0.19	25	6.30	3.36	12	0.0833	0.0120	11.14	14.19	467.05	463.00	453.82	449.50
CB7	DMH4	7,047	12,653	19,700	0.45	0.58	9.00	6.00	0.02	25	6.30	1.65	8	0.0667	0.012	3.38	9.68	454.44	450.60	453.82	450.00
DCB8	DMH4	9,931	24,620	34,551	0.79	0.54	13.00	6.00	0.03	25	6.30	2.72	8	0.0462	0.012	2.81	8.06	454.44	450.60	453.82	450.00
DHM4	DMH5	30,795	53,876	81,510	1.87	0.58	148.00	6.22	0.18	25	6.30	6.86	12	0.0804	0.0120	10.94	13.93	453.82	449.40	441.69	437.50
DMH5	DMH6	28,188	57,154	85,342	1.96	0.57	87.00	6.40	0.16	25	6.25	6.92	12	0.0333	0.0120	7.05	8.97	441.69	437.40	440.00	434.50
DMH6	FES3	30,795	64,211	95,006	2.18	0.56	40.00	6.56	0.09	25	6.25	7.66	15	0.0188	0.0120	9.58	7.81	444.00	429.75		429.00
TO BASIN #2																					
SEE HYDRO CAD																					
TO BASIN #4																					
CB9	DMH7	11,953	9,546	21,499	0.49	0.68	7.00	6.00	0.01	25	6.30	2.11	8	0.0500	0.012	2.93	8.39	475.15	471.35	475.96	471.00
DCB10	DMH7	16,866	24,554	41,420	0.95	0.60	15.00	6.00	0.03	25	6.30	3.62	12	0.0233	0.012	5.90	7.51	475.15	471.00	475.96	470.65
DMH7	DMH8	28,819	34,100	62,919	1.44	0.63	239.00	6.01	0.81	25	6.30	5.72	15	0.0074	0.0120	6.04	4.92	475.96	468.28	474.00	466.50
DMH8	FES5	28,819	34,100	62,919	1.44	0.63	23.00	6.82	0.08	25	6.10	5.54	15	0.0065	0.0120	5.65	4.61	474.00	465.15	474.00	465.00
OCS4	DMH9A						47.00	0.00	0.08	25		7.60	12	0.0426	0.0120	7.96	10.14		462.00	463.50	460.00
DMH9A	DMH9B						35.00	0.00	0.04			7.60	12	0.0929	0.0120	11.76	14.98	463.50	451.25	451.80	448.00
DMH9B	DMH9C						105.00					7.60	12	0.0667	0.0120	9.97	12.69	451.80	448.00	444.50	441.00
DMH9C	FES6						40.00					7.60	15	0.0125	0.0120	7.82	6.38	444.50	430.50		430.00

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From	To	Area (SF.) IMPERV.	Area (SF.) GRASS	Area (SF.) TOTAL	Area (AC.) TOTAL	Weighted Runoff Coefficient "C"	Pipe Length (Feet)	Flow Time (min) To Inlet	Flow Time (min) In Channel	Design Storm (Year)	Intensity (IN/HR)	Q (CFS)	Size (IN)	Slope (FT/FT)	Mannings n	Full Capacity (cfs)	Full Velocity (fps)	Upper End Rim	Upper End Invert	Lower End Rim	Lower End Invert
TO BASIN #9																					
CB11	DMH10	11,930	7,509	19,439	0.45	0.71	9.00	6.00	0.02	25	6.30	1.99	8	0.0444	0.012	2.76	7.91	478.18	474.50	477.78	474.10
CB12	DMH10	11,208	8,301	19,509	0.45	0.69	14.00	6.00	0.04	25	6.30	1.94	8	0.0286	0.012	2.21	6.34	478.18	474.50	477.78	474.10
DMH10	DMH11	23,138	15,810	38,948	0.89	0.70	206.00	6.04	0.32	25	6.30	3.93	12	0.0473	0.0120	8.40	10.69	477.78	473.75	467.97	464.00
DMH11	DMH12	23,138	15,810	38,948	0.89	0.70	86.00	6.36	0.24	25	6.25	3.90	12	0.0145	0.0120	4.65	5.92	467.97	464.00	466.77	462.75
DI1	DMH13	11,746	55,346	67,092	1.54	0.49	141.00	6.00	0.57	25	6.30	4.73	15	0.0053	0.012	5.10	4.16	467.50	463.50	467.19	462.75
DMH13	DMH12	11,746	55,346	67,092	1.54	0.49	31.00	6.57	0.10	25	6.25	4.69	15	0.0081	0.012	6.28	5.12	467.19	462.75	466.77	462.50
DMH12	DMH14	34,884	71,156	106,040	2.43	0.56	16.00	6.60	0.04	25	6.25	8.59	15	0.0156	0.0120	8.75	7.13	466.77	462.50	466.76	462.25
DCB13	DMH14	25,437	20,324	45,761	1.05	0.68	9.00	6.00	0.02	25	6.30	4.49	12	0.0222	0.012	5.75	7.33	466.58	462.50	466.76	462.30
DCB14	DMH14	17,454	22,574	40,028	0.92	0.62	13.00	6.00	0.04	25	6.30	3.58	12	0.0154	0.012	4.79	6.10	466.58	462.50	466.76	462.30
DMH14	DMH15	77,775	114,054	191,829	4.40	0.60	52.00	6.64	0.09	25	6.20	16.46	18	0.0240	0.0120	17.64	9.98	466.76	462.00	467.70	460.75
CB15	DMH16	5,157	3,277	8,434	0.19	0.71	9.00	6.00	0.02	25	6.30	0.86	8	0.0278	0.012	2.18	6.25	470.43	466.75	470.38	466.50
CB16	DMH16	5,975	10,175	16,150	0.37	0.58	14.00	6.00	0.05	25	6.30	1.37	8	0.0179	0.012	1.75	5.01	470.43	466.75	470.38	466.50
DMH16	DMH15	11,132	13,452	24,584	0.56	0.63	152.00	6.72	0.38	25	6.15	2.17	12	0.0181	0.012	5.19	6.61	470.38	466.25	467.70	463.50
DMH15	FES8	88,907	127,506	216,413	4.97	0.61	47.00	7.11	0.10	25	6.05	18.20	24	0.0106	0.012	25.28	8.05	467.70	455.50	468.00	455.00
TO BASIN #5																					
CB17	DMH17	7,291	7,258	14,549	0.33	0.65	9.00	6.00	0.02	25	6.30	1.37	8	0.0278	0.012	2.18	6.25	471.40	467.70	471.36	467.45
CB18	DMH17	10,175	8,228	18,403	0.42	0.68	13.00	6.00	0.04	25	6.30	1.80	8	0.0192	0.012	1.82	5.20	471.40	467.70	471.36	467.45
DMH17	DMH18	17,466	15,486	32,952	0.76	0.67	111.00	6.04	0.27	25	6.30	3.17	12	0.0198	0.0120	5.43	6.92	471.36	467.20	469.07	465.00
CB19	DMH19	4,606	4,645	9,251	0.21	0.65	8.00	6.00	0.03	25	6.30	0.87	8	0.0187	0.012	1.79	5.14	469.08	465.40	469.12	465.25
CB20	DMH19	5,061	10,989	16,050	0.37	0.56	13.00	6.00	0.05	25	6.30	1.29	8	0.0115	0.012	1.41	4.03	469.08	465.40	469.12	465.25
DMH19	DMH18	9,667	15,634	25,301	0.58	0.59	21.00	6.31	0.10	25	6.25	2.15	12	0.0048	0.012	2.66	3.39	469.12	465.00	469.07	464.90
DMH18	DMH20	27,133	31,120	58,253	1.34	0.63	142.00	6.41	0.34	25	6.25	5.29	12	0.0204	0.012	5.52	7.02	469.07	464.90	466.16	462.00
CB21	DMH20	4,838	7,000	11,838	0.27	0.60	9.00	6.00	0.02	25	6.30	1.03	8	0.0274	0.012	2.17	6.21	466.18	462.50	466.16	462.25
DCB22	DMH20	12,885	39,709	52,594	1.21	0.52	13.00	6.00	0.04	25	6.30	3.97	12	0.0115	0.012	4.15	5.28	466.18	462.15	466.16	462.00
DMH20	DMH21	44,856	77,829	122,685	2.82	0.58	252.00	6.75	0.50	25	6.15	10.09	15	0.0218	0.012	10.34	8.42	466.16	461.75	461.02	456.25
CB23	DMH21	10,969	6,790	17,759	0.41	0.71	8.00	6.00	0.02	25	6.30	1.82	8	0.0438	0.012	2.74	7.84	461.02	457.35	461.02	457.00
CB24	DMH21	11,110	9,437	20,547	0.47	0.67	13.00	6.00	0.04	25	6.30	1.99	8	0.0269	0.012	2.15	6.15	461.02	457.35	461.02	457.00
DMH21	DMH22	66,935	94,056	160,991	3.70	0.61	210.00	7.25	0.39	25	6.00	13.48	18	0.0195	0.012	15.90	9.00	461.02	456.00	457.01	451.90
CB25	DMH22	14,132	12,805	26,937	0.62	0.66	10.00	6.00	0.03	25	6.30	2.58	12	0.0100	0.012	3.86	4.91	456.24	452.50	457.01	452.40
CB26	DMH22	14,182	12,420	26,602	0.61	0.67	14.00	6.00	0.06	25	6.30	2.56	12	0.0071	0.012	3.26	4.15	456.24	452.50	457.01	452.40
DMH22	DMH23	95,249	119,281	214,530	4.92	0.62	51.00	7.64	0.08	25	6.00	18.38	18	0.0275	0.012	18.85	10.67	457.01	451.90	458.10	450.50
DMH23	DMH24	95,249	119,281	214,530	4.92	0.62	151.00	7.72	0.17	25	5.90	18.07	18	0.0543	0.012	26.52	15.01	458.10	450.00	450.80	441.80
DMH24	DMH25			214,530	4.92	0.62	174.00	7.88	0.23	25	5.90	18.07	18	0.0391	0.012	22.50	12.73	450.80	441.80	453.50	435.00
DMH25	FES10			214,530	4.92	0.62	211.00	8.11	0.38	25	5.90	18.07	24	0.0142	0.012	29.22	9.30	453.50	435.00		432.00
							.														
BASIN5	FES11			MODELED IN HYDROCAD																	
BASIN5	FES12			MODELED IN HYDROCAD																	

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From	To	Area (SF.) IMPERV.	Area (SF.) GRASS	Area (SF.) TOTAL	Area (AC.) TOTAL	Weighted Runoff Coefficient "C"	Pipe Length (Feet)	Flow Time (min) To Inlet	Flow Time (min) In Channel	Design Storm (Year)	Intensity (IN/HR)	Q (CFS)	Size (IN)	Slope (FT/FT)	Mannings n	Full Capacity (cfs)	Full Velocity (fps)	Upper End Rim	Upper End Invert	Lower End Rim	Lower End Invert
TO BASIN #6																					
CB27	DMH26	5,678	4,023	9,701	0.22	0.69	13.00	6.00	0.05	25	6.30	0.97	8	0.0154	0.012	1.62	4.65	458.57	454.90	458.46	454.70
CB28	DMH26	7,261	6,794	14,055	0.32	0.66	9.00	6.00	0.03	25	6.30	1.34	8	0.0222	0.012	1.95	5.59	458.57	454.90	458.46	454.70
DMH26	DMH26A	12,939	10,817	23,756	0.55	0.67	40.00	6.05	0.10	25	6.30	2.31	12	0.0200	0.0120	5.46	6.95	458.46	454.30	457.54	453.50
DMH26A	DMH27				0.55	0.67	63.00	6.03	0.16	25	6.30	2.31	12	0.0175	0.0120	5.10	6.49	457.54	453.40	457.13	452.30
DCB29	DMH27	9,602	58,551	68,153	1.56	0.47	10.00	6.00	0.02	25	6.30	4.64	12	0.0200	0.012	5.46	6.95	456.94	452.90	457.13	452.70
CB30	DMH27	8,216	9,510	17,726	0.41	0.63	5.00	6.00	0.01	25	6.30	1.62	8	0.0400	0.012	2.62	7.50	456.94	452.90	457.13	452.70
DMH27	DMH28	30,757	78,878	109,635	2.52	0.54	88.00	6.14	0.30	25	6.30	8.57	18	0.0057	0.0120	8.58	4.85	457.13	452.50	458.36	452.00
CB31	DMH28	5,797	13,149	18,946	0.43	0.55	12.00	6.00	0.03	25	6.30	1.52	8	0.0250	0.012	2.07	5.93	457.98	454.30	458.36	454.00
CB32	DMH28	13,161	10,101	23,262	0.53	0.68	8.00	6.00	0.02	25	6.30	2.30	8	0.0375	0.012	2.54	7.26	457.98	454.30	458.36	454.00
DMH28	DMH29	49,715	102,128	151,843	3.49	0.56	89.00	6.44	0.21	25	6.25	12.28	18	0.0118	0.0120	12.36	6.99	458.36	451.90	459.14	450.85
DCB33	DMH29	7,468	39,267	46,735	1.07	0.48	12.00	6.02	0.02	25	6.30	3.24	12	0.0333	0.012	7.05	8.97	459.02	455.00	459.14	454.60
DMH29	DMH30	57,183	141,395	198,578	4.56	0.54	191.00	6.66	0.21	25	6.20	15.38	18	0.0542	0.0120	26.49	14.99	459.14	449.70	448.50	439.35
DMH30	DMH31						126.00	6.66	0.14	25	6.20	15.38	18	0.0540	0.0120	26.44	14.96	448.50	435.30	433.00	428.50
DMH31	DMH32						118.00	6.87	0.13	25	6.10	15.38	18	0.0542	0.0120	26.50	15.00	433.00	416.90	415.00	410.50
DMH32	DMH33						117.00	6.80	0.13	25	6.15	15.38	18	0.0543	0.0120	26.51	15.00	415.00	404.35	402.60	398.00
DMH33	FES13						19.00	6.93	0.04	25	6.10	15.38	18	0.0184	0.0120	15.45	8.74	402.60	396.35		396.00
TO BASIN #7																					
DCB34	DMH34	15,241	31,870	47,111	1.08	0.56	12.00	6.00	0.02	25	6.30	3.83	12	0.0417	0.012	7.88	10.03	450.00	446.00	449.51	445.50
CB35	DMH34	11,265	8,226	19,491	0.45	0.69	9.00	6.00	0.02	25	6.30	1.94	8	0.0611	0.012	3.24	9.27	450.00	446.30	449.51	445.75
DMH34	DMH35	26,506	40,096	66,602	1.53	0.60	240.00	6.02	0.32	25	6.30	5.77	12	0.0667	0.0120	9.97	12.69	449.51	445.50	433.53	429.50
DCB36	DMH35	15,942	50,603	66,545	1.53	0.52	12.00	8.00	0.02	25	5.90	4.68	12	0.0417	0.012	7.88	10.03	434.05	430.00	433.53	429.50
CB37	DMH35	10,793	9,309	20,102	0.46	0.67	9.00	6.00	0.02	25	6.30	1.94	8	0.0667	0.012	3.38	9.68	434.05	430.35	433.53	429.75
DMH35	DMH36	53,241	100,008	153,249	3.52	0.57	243.00	8.02	0.27	25	5.90	11.91	15	0.0691	0.0120	18.40	14.99	433.53	428.70	416.16	411.90
DCB38	DMH36	15,080	39,565	54,645	1.25	0.54	12.00	8.00	0.02	25	5.90	3.98	12	0.0458	0.012	8.26	10.52	416.70	412.70	416.16	412.15
CB39	DMH36	11,548	8,590	20,138	0.46	0.69	9.00	6.00	0.02	25	6.30	2.00	8	0.0611	0.012	3.24	9.27	416.70	412.95	416.16	412.40
DMH36	DMH37	79,869	148,163	228,032	5.23	0.58	103.00	8.29	0.11	25	5.90	17.76	15	0.0689	0.0120	18.37	14.97	416.16	411.20	408.43	404.10
DMH37	DMH38				5.23	0.58	143.00	8.40	0.16	25	5.90	17.76	15	0.0692	0.0120	18.41	15.00	408.43	403.50	397.88	393.60
DCB40	DMH38	9,448	28,889	38,337	0.88	0.52	17.00	8.00	0.03	25	5.90	2.72	8	0.0471	0.012	2.84	8.14	398.84	395.00	397.88	394.20
CB41	DMH38	11,090	9,621	20,711	0.48	0.67	14.00	6.00	0.03	25	6.30	2.00	8	0.0571	0.012	3.13	8.97	398.84	395.00	397.88	394.20
DI2	DMH38	1,758	94,070	95,828	2.20	0.41	34.00	6.00	0.08	25	6.30	5.67	12	0.0235	0.012	5.92	7.54	399.00	394.75	397.88	393.95
DMH38	DMH39	102,165	280,743	382,908	8.79	0.53	143.00	8.56	0.16	25	5.80	27.20	24	0.0367	0.0120	46.96	14.95	397.88	391.25	391.04	386.00
DMH39	DMH40				8.79	0.53	69.00	8.72	0.08	25	5.80	27.20	24	0.0362	0.0120	46.65	14.85	391.04	385.90	388.40	383.40
CB42	DMH40	4,356	17,138	21,494	0.49	0.50	16.00	14.30	0.04	25	4.60	1.14	8	0.0344	0.012	2.43	6.95	388.96	385.25	388.40	384.70
CB43	DMH40	4,553	7,287	11,840	0.27	0.59	10.00	6.00	0.02	25	6.30	1.01	8	0.0550	0.012	3.07	8.80	388.96	385.25	388.40	384.70
DMH40	DMH41	111,074	305,168	416,242	9.56	0.53	53.00	14.34	0.10	25	4.60	23.45	24	0.0132	0.0120	28.17	8.97	388.40	383.40	387.80	382.70
DMH41	FES#16			416,242	9.56	0.53	61.00	14.44	0.13	25	4.60	23.45	24	0.0098	0.0120	24.31	7.74	387.70	374.60		374.00
CB44	DMH42	4,172	14,138	18,310	0.42	0.51	13.00	6.00	0.05	25	6.30	1.36	8	0.0115	0.012	1.41	4.03	384.75	381.00	384.72	380.85
CB45	DMH42	2,677	3,529	6,206	0.14	0.62	9.00	6.00	0.03	25	6.30	0.55	8	0.0167	0.012	1.69	4.84	384.75	381.00	384.72	380.85
DMH42	DMH43	6,849	17,667	24,516	0.56	0.54	157.00	6.05	0.34	25	6.30	1.91	12	0.0242	0.012	6.00	7.65	384.72	380.70	381.00	376.90
CB46	DMH44	7,881	15,249	23,130	0.53	0.57	13.00	6.00	0.04	25	6.30	1.91	8	0.0231	0.012	1.99	5.70	379.60	375.90	379.98	375.60
CB47	DMH44	3,270	3,033	6,303	0.14	0.66	9.00	6.00	0.02	25	6.30	0.60	8	0.0333	0.012	2.39	6.85	379.60	375.90	379.98	375.60
DMH44	DMH43	11,151	18,282	29,433	0.68	0.59	79.00	6.40	0.38	25	6.25	2.49	12	0.0051	0.012	2.75	3.50	379.98	375.30	381.00	374.90
DMH43	FES17	18,000	35,949	53,949	1.24	0.57	29.00	6.77	0.04	25	6.15	4.32	12	0.0655	0.012	9.88	12.58	381.00	374.90		373.00
OCS7	FES18						80.00				12.20		18	0.0125	0.012	12.72	7.20		372.00		371.00

FOX HOLLOW
RATIONAL CALULATIONS
NOVEMBER 17, 2025

From	To	Area (SF.) IMPERV.	Area (SF.) GRASS	Area (SF.) TOTAL	Area (AC.) TOTAL	Weighted Runoff Coefficient "C"	Pipe Length (Feet)	Flow Time (min) To Inlet	Flow Time (min) In Channel	Design Storm (Year)	Intensity (IN/HR)	Q (CFS)	Size (IN)	Slope (FT/FT)	Mannings n	Full Capacity (cfs)	Full Velocity (fps)	Upper End Rim	Upper End Invert	Lower End Rim	Lower End Invert
TO BASIN #8																					
DCB48	DMH45	8,276	36,229	44,505	1.02	0.49	13.00	6.00	0.02	25	6.30	3.17	12	0.0346	0.012	7.18	9.14	366.79	362.70	366.27	362.25
CB49	DMH45	3,258	2,943	6,201	0.14	0.66	9.00	6.00	0.02	25	6.30	0.59	8	0.0500	0.012	2.93	8.39	366.79	362.70	366.27	362.25
DMH45	DMH46	11,534	39,172	50,706	1.16	0.51	245.00	6.02	0.31	25	6.30	3.77	12	0.0704	0.012	10.24	13.04	366.27	362.00	348.77	344.75
DCB50	DMH46	6,422	48,972	55,394	1.27	0.46	14.00	6.00	0.02	25	6.30	3.67	12	0.0393	0.012	7.65	9.74	349.29	345.30	348.77	344.75
CB51	DMH46	3,230	3,013	6,243	0.14	0.66	9.00	6.00	0.01	25	6.30	0.59	8	0.0944	0.012	4.02	11.53	349.29	345.60	348.77	344.75
DMH46	DMH47	21,186	91,157	112,343	2.58	0.49	94.00	6.34	0.12	25	6.25	7.97	12	0.0739	0.012	10.50	13.36	348.77	344.45	341.85	337.50
DCB52	DMH47	9,897	45,368	55,265	1.27	0.49	14.00	6.00	0.04	25	6.30	3.91	12	0.0143	0.012	4.61	5.87	341.71	337.70	341.85	337.50
DMH47	DMH48	31,083	136,525	167,608	3.85	0.49	85.00	6.45	0.09	25	6.25	11.85	15	0.0688	0.012	18.36	14.96	341.85	336.25	334.67	330.40
HW1	DMH48	2,863	111,380	114,243	2.62	0.41	122.00	6.00	0.14	25	6.30	6.82	12	0.0930	0.012	11.77	14.99		342.00	334.67	330.65
DMH48	DMH49	33,946	247,905	281,851	6.47	0.46	20.00	6.55	0.02	25	6.25	18.61	18	0.0500	0.012	25.45	14.40	334.67	330.00	333.82	329.00
CB53	DMH50	4,433	23,916	28,349	0.65	0.48	13.00	6.00	0.04	25	6.30	1.96	12	0.0115	0.012	4.15	5.28	330.29	326.15	331.25	326.00
CB54	DMH50	3,130	3,484	6,614	0.15	0.64	9.00	6.00	0.02	25	6.30	0.61	12	0.0167	0.012	4.98	6.34	330.29	326.15	331.25	326.00
DMH50	DMH49	7,563	27,400	34,963	0.80	0.51	29.00	6.57	0.12	25	6.25	2.55	12	0.0069	0.012	3.21	4.08	331.25	326.00	333.82	325.80
DMH49	FES19	41,509	275,305	316,814	7.27	0.47	123.00	6.69	0.30	25	6.20	20.99	24	0.0077	0.012	21.54	6.86	333.82	324.95		324.00
OCS8	FES20						67.00				24.90		24	0.0112	0.012	25.93	8.25		316.00		315.25

FOX HOLLOW
RATIONAL CALULATIONS
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From	To	Area (SF.) IMPERV.	Area (SF.) GRASS	Area (SF.) TOTAL	Area (AC.) TOTAL	Weighted Runoff Coefficient "C"	Pipe Length (Feet)	Flow Time (min) To Inlet	Flow Time (min) In Channel	Design Storm (Year)	Intensity (IN/HR)	Q (CFS)	Size (IN)	Slope (FT/FT)	Mannings n	Full Capacity (cfs)	Full Velocity (fps)	Upper End Rim	Upper End Invert	Lower End Rim	Lower End Invert
TESSIER LANE TO S. TESSIER																					
HW2	DMH51	7,703	148,627	156,330	3.59	0.42	28.00	6.00	0.03	25	6.30	9.60	15	0.0625	0.012	17.50	14.26		312.75	315.52	311.00
DCB55	DMH51	8,190	30,474	38,664	0.89	0.51	9.00	6.00	0.01	25	6.30	2.83	8	0.1111	0.012	4.36	12.50	316.23	312.50	315.52	311.50
DMH51	DMH52	15,893	179,101	194,994	4.48	0.44	106.00	6.03	0.12	25	6.30	12.43	15	0.0689	0.012	18.36	14.97	315.52	309.70	306.72	302.40
CB56	DMH52	3,711	0	3,711	0.09	0.90	13.00	6.00	0.02	25	6.30	0.48	8	0.0577	0.012	3.14	9.01	307.43	303.75	306.72	303.00
CB57	DMH52	4,301	3,648	7,949	0.18	0.67	9.00	6.00	0.01	25	6.30	0.77	8	0.0833	0.012	3.78	10.83	307.34	303.75	306.72	303.00
DMH52	DMH53	23,905	182,749	206,654	4.74	0.46	162.00	6.02	0.18	25	6.30	13.68	15	0.0685	0.012	18.32	14.93	306.72	301.60	294.84	290.50
DMH53	DMH54	23,905	182,749	206,654	4.74	0.46	113.00	6.20	0.14	25	6.30	13.68	15	0.0575	0.012	16.78	13.68	294.84	290.50	288.60	284.00
CB58	DMH54	3,623	0	3,623	0.08	0.90	13.00	6.00	0.03	25	6.30	0.47	8	0.0385	0.012	2.57	7.36	288.92	285.00	288.60	284.50
CB59	DMH54	5,050	1,416	6,466	0.15	0.79	9.00	6.00	0.02	25	6.30	0.74	8	0.0556	0.012	3.09	8.84	288.92	285.00	288.60	284.50
DMH54	DMH55	32,578	184,165	216,743	4.98	0.48	17.00	6.34	0.03	25	6.25	14.78	18	0.0294	0.012	19.52	11.04	288.60	283.50	288.42	283.00
CB60	EX DMH	3,164	2,238	5,402	0.12	0.69	21.00	6.00	0.03	25	6.30	0.54	15	0.0500	0.012	15.65	12.75	293.60	287.90	292.70	286.85
CB61	EX DMH	5,501	13,550	19,051	0.44	0.54	21.00	6.00	0.03	25	6.30	1.50	15	0.0595	0.012	17.07	13.91	293.60	288.10	292.70	286.85
		8,665	15,788	24,453	0.56	0.58		6.00	#DIV/0!	25	6.30	2.04									
25 YR HDYROCAD FLOW OUT OF EX. BASIN 1P												4.30									
EX DMH	DMH55						73.00	6.00	0.10	25	6.30	6.34	15	0.0425	0.012	14.42	11.75	292.70	286.85	288.42	283.75
DMH55	DMH56	41,243	199,953	241,196	5.54	0.49		6.00	#DIV/0!	25	6.30	16.94									
DMH55	DMH56						59.00					23.28	18	0.0542	0.012	26.50	15.00	288.42	282.30	283.65	279.10
OCS#10	DMH56		25 YR HDYROCAD FLOW - PRIMARY OUTLET				15.00					38.51	36	0.0200	0.012	102.19	14.46		278.80	283.65	278.50
DMH56	DMH57						27.00					61.79	36	0.0185	0.012	98.33	13.91	283.65	275.00	281.00	274.50
CB62	DMH57	8,138	14,447	22,585	0.52	0.58	80.00	6.00	0.33	25	6.30	1.90	12	0.0069	0.012	3.20	4.07	278.80	275.55	281.00	275.00
DMH57	DMH 58						35.00	6.33	0.04	25	6.25	63.68	36	0.0214	0.012	105.77	14.96	281.00	268.75	273.00	268.00
DMH 58	FES#						139.00	6.37	0.14	25	6.25	65.58	36	0.0259	0.012	116.28	16.45	273.00	263.60		260.00

RIP RAP SIZING
FOX HOLLOW
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FES#1	15" FROM WQU1	BASIN	3				
D	Inside Pipe Diameter			in	15		
Q	Flow			cfs	6.6	25 yr Rational	
La	Length of Pad			ft	18	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	4	(3D)	
W2	width down grade			Ft	22	(3D+La)	
VELOCITY at DISCHARGE		5.39	FPS	25 yr Rational			
MIN. RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		6.6	cfs	100 YR.	
	D	Diameter of outlet		1.25	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.49	FT	6	INCHES
MAX	1.5*d50			0.7	FT	9	INCHES

FES#2	8" FES FROM	BASIN	3				
D	Inside Pipe Diameter			in	8		
Q	Flow			cfs	2.7	100 YR.-HydroCAD	
La	Length of Pad			ft	14	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	2	(3D)	
W2	width down grade			Ft	16	(3D+La)	
VELOCITY at DISCHARGE		7.75	FPS	100 YR.-HydroCAD			
MEDIAN RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		2.7	cfs	100 YR.	
	D	Diameter of outlet		0.666666667	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.46	FT	5	INCHES
MAX	1.5*d50			0.7	FT	8	INCHES

FES#3	FROM DMH#6	BASIN	1				
D	Inside Pipe Diameter			in	15		
Q	Flow			cfs	7.7	PER 25 YR. RATIONAL	
La	Length of Pad			ft	19	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	4	(3D)	
W2	width down grade			Ft	23	(3D+La)	
VELOCITY at DISCHARGE		7.81	FPS	PER 25 YR. RATIONAL			
MEDIAN RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		7.7	cfs	100 YR.	
	D	Diameter of outlet		1.25	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.57	FT	7	INCHES
MAX	1.5*d50			0.8	FT	10	INCHES

RIP RAP SIZING
FOX HOLLOW
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FES#4A B	From Basin 1	Basin	2				
D	Inside Pipe Diameter			in	10		
Q	Flow			cfs	4.3	PER 25 YR. RATIONAL	
La	Length of Pad			ft	16	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	3	(3D)	
W2	width down grade			Ft	19	(3D+La)	
VELOCITY at DISCHARGE		3.95	FPS	PER 25 YR. RATIONAL			
MEDIAN RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		4.3	cfs	100 YR.	
	D	Diameter of outlet		0.833333333	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.54	FT	7	INCHES
MAX	1.5*d50			0.8	FT	10	INCHES

FES#5	FROM DMH8	BASIN	4				
D	Inside Pipe Diameter			in	15		
Q	Flow			cfs	5.5	25 YR RATIONAL	
La	Length of Pad			ft	17	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	4	(3D)	
W2	width down grade			Ft	20	(3D+La)	
VELOCITY at DISCHARGE		4.61	FPS	25 YR RATIONAL			
MEDIAN RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		5.5	cfs	100 YR.	
	D	Diameter of outlet		1.25	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.41	FT	5	INCHES
MAX	1.5*d50			0.6	FT	7	INCHES

FES#6	OUT FROM DMH 9C	BASIN	24				
D	Inside Pipe Diameter			in	24		
Q	Flow			cfs	13	PER 25 YR. RATIONAL	
La	Length of Pad			ft	24	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	6	(3D)	
W2	width down grade			Ft	30	(3D+La)	
VELOCITY at DISCHARGE		8.75	FPS	100 YR			
MEDIAN RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		12.5	cfs	100 YR.	
	D	Diameter of outlet		2	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.49	FT	6	INCHES
MAX	1.5*d50			0.7	FT	9	INCHES

FES#7	OUT FROM OCS#4	BASIN	4				
D	Inside Pipe Diameter			in	24		
Q	Flow			cfs	19.2	100 YR.-HydroCAD	
La	Length of Pad			ft	28	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	6	(3D)	
W2	width down grade			Ft	34	(3D+La)	
VELOCITY at DISCHARGE		7.8	FPS	PER RATIONAL-100 YR. FLOW			
MEDIAN RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		19.2	cfs	100 YR.	
	D	Diameter of outlet		2	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.75	FT	9	INCHES
MAX	1.5*d50			1.1	FT	14	INCHES

RIP RAP SIZING
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FES#8	**FROM DMH 15**	BASIN	9				
ROAD H							
D	Inside Pipe Diameter			in	24		
Q	Flow			cfs	19.0	PER 25 YR. RATIONAL	
La	Length of Pad			ft	27	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	6	(3D)	
W2	width down grade			Ft	33	(3D+La)	
VELOCITY at DISCHARGE		8.05	FPS	PER RATIONAL-25 YR.			
MEDIAN RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		19.0	cfs	25 YR.	
	D	Diameter of outlet		2	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.74	FT	9	INCHES
MAX	1.5*d50			1.1	FT	13	INCHES

FES#9	**OUT FROM OCS#9**	**BASIN 9**					
D	Inside Pipe Diameter			in	15		
Q	CP			cfs	7.9	PER 25 YR. RATIONAL	
La	Length of Pad			ft	20	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	4	(3D)	
W2	width down grade			Ft	23	(3D+La)	
VELOCITY at DISCHARGE		8.4	FPS	PER RATIONAL-25 YR.			
MEDIAN RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		7.9	cfs	25YR RATIONAL	
	D	Diameter of outlet		1.25	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.58	FT	7	INCHES
MAX	1.5*d50			0.9	FT	10	INCHES

FES#10	FROM 24" culvert	**Basin #5**					
D	Inside Pipe Diameter			in	24		
Q	Flow	m		cfs	18.1	25 rational	
La	Length of Pad			ft	27	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	6	(3D)	
W2	width down grade			Ft	33	(3D+La)	
VELOCITY at DISCHARGE		9.3	FPS	PER RATIONAL-100 YR. FLOW			
MEDIAN RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		18.1	cfs	100 YR.	
	D	Diameter of outlet		2	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.71	FT	9	INCHES
MAX	1.5*d50			1.1	FT	13	INCHES

FES11	FROM 15" culvert	**Basin #5**					
D	Inside Pipe Diameter			in	15		
Q	Flow			cfs	8.8	100 yr hydrocad	
La	Length of Pad			ft	21	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	4	(3D)	
W2	width down grade			Ft	24	(3D+La)	
VELOCITY at DISCHARGE		7.18	FPS	PER RATIONAL-100 YR. FLOW			
MEDIAN RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		8.8	cfs	25YR RATIONAL	
	D	Diameter of outlet		1.25	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.65	FT	8	INCHES
MAX	1.5*d50			1.0	FT	12	INCHES

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FES12	FROM 15" culvert	**Basin #5**					
D	Inside Pipe Diameter			in	15		
Q	Flow			cfs	11.6	100 YR.-HydroCAD	
La	Length of Pad			ft	24	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	4	(3D)	
W2	width down grade			Ft	28	(3D+La)	
VELOCITY at DISCHARGE		9.47	FPS	100 YR.-HydroCAD			
MEDIAN RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		11.6	cfs	100 YR.	
	D	Diameter of outlet		1.25	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.85	FT	10	INCHES
MAX	1.5*d50			1.3	FT	15	INCHES

FES13	**DMH33**	**BASIN 6**					
D	Inside Pipe Diameter			in	18		
Q	Flow			cfs	15.3	25 YR RATIONAL	
La	Length of Pad			ft	26	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	5	(3D)	
W2	width down grade			Ft	31	(3D+La)	
VELOCITY at DISCHARGE		8.74	FPS	25 YR RATIONAL			
MEDIAN RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		15.3	cfs	100 YR.	
	D	Diameter of outlet		1.5	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.88	FT	11	INCHES
MAX	1.5*d50			1.3	FT	16	INCHES

FES14	**FROM CULVERT**	**BASIN 6**					
D	Inside Pipe Diameter			in	8		
Q	Flow			cfs	2.4	100 YR HDYROCAD	
La	Length of Pad			ft	13	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	2	(3D)	
W2	width down grade			Ft	15	(3D+La)	
VELOCITY at DISCHARGE		6.91	FPS	100 YR HDYROCAD			
MEDIAN RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		2.4	cfs	25YR RATIONAL	
	D	Diameter of outlet		0.666666667	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.41	FT	5	INCHES
MAX	1.5*d50			0.6	FT	7	INCHES

FES15	**FROM CULVERT**	**BASIN 6**					
D	Inside Pipe Diameter			in	8		
Q	Flow			cfs	1.2	100 YR.-HydroCAD	
La	Length of Pad			ft	9	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	2	(3D)	
W2	width down grade			Ft	11	(3D+La)	
VELOCITY at DISCHARGE		3.31	FPS	PER RATIONAL-100 YR. FLOW			
MEDIAN RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		1.2	cfs	100 YR.	
	D	Diameter of outlet		0.666666667	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.20	FT	2	INCHES
MAX	1.5*d50			0.3	FT	4	INCHES

RIP RAP SIZING
FOX HOLLOW
NOVEMBER 17, 2025

FES#16	FROM DMH41	BASIN7					
D	Inside Pipe Diameter			in	24		
Q	Flow			cfs	23.5	25YR RATIONAL	
La	Length of Pad			ft	30	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	6	(3D)	
W2	width down grade			Ft	36	(3D+La)	
VELOCITY at DISCHARGE		7.74	FPS	25YR RATIONAL			
MEDIAN RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		23.5	cfs	100 YR.	
	D	Diameter of outlet		2	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.92	FT	11	INCHES
MAX	1.5*d50			1.4	FT	17	INCHES

FES17	YD#17	TO BASIN #7					
D	Inside Pipe Diameter			in	15		
Q	Flow			cfs	4.4	25YR RATIONAL	
La	Length of Pad			ft	15	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	4	(3D)	
W2	width down grade			Ft	19	(3D+La)	
VELOCITY at DISCHARGE		8.16	FPS	PER RATIONAL-25 YR. FLOW			
MEDIAN RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		4.4	cfs	25YR RATIONAL	
	D	Diameter of outlet		1.25	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.32	FT	4	INCHES
MAX	1.5*d50			0.5	FT	6	INCHES

FES18	FROM OCS7	FES					
D	Inside Pipe Diameter			in	18		
Q	Flow			cfs	12.2	100 yr hydro cad	
La	Length of Pad			ft	23	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	5	(3D)	
W2	width down grade			Ft	28	(3D+La)	
VELOCITY at DISCHARGE		7.2	FPS	RATIONAL USING 100 YR FLOW			
MEDIAN RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		12.2	cfs	25YR RATIONAL	
	D	Diameter of outlet		1.5	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.70	FT	8	INCHES
MAX	1.5*d50			1.1	FT	13	INCHES

RIP RAP SIZING
FOX HOLLOW
NOVEMBER 17, 2025

FES19	FROM DMH 49	TO BASIN 8					
D	Inside Pipe Diameter			in	24		
Q	Flow			cfs	20.9	25 YR RATIONAL	
La	Length of Pad			ft	29	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	6	(3D)	
W2	width down grade			Ft	35	(3D+La)	
VELOCITY at DISCHARGE		8.61	FPS	25 YEAR RATIONAL			
MEDIAN RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		20.9	cfs	100YR HYDRO CAD	
	D	Diameter of outlet		2	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.82	FT	10	INCHES
MAX	1.5*d50			1.2	FT	15	INCHES

FES20	FROM OSC#8	FES#20 BASIN 8					
D	Inside Pipe Diameter			in	24		
Q	Flow			cfs	24.9	100 TR HYDRO CAD	
La	Length of Pad			ft	31	La=(1.7Q/Do^1.5) + 8D	
W1	Width of pad at outlet			ft	6	(3D)	
W2	width down grade			Ft	37	(3D+La)	
VELOCITY at DISCHARGE		8.25	FPS	PER RATIONAL-100 YR. FLOW			
MEDIAN RIP RAP SIZE				d50=.2D[Q/(g^.5*D^2.5)]^4/3[D/tw]			
	Q	Flow		24.9	cfs	25YR RATIONAL	
	D	Diameter of outlet		2	ft		
	TW	Tail Water		0.2	ft	no Tail water expected; use 0.2	
	g	Gravity		32.2	ft/sec^2		
d50	MEDIAN RIP RAP SIZE			0.98	FT	12	INCHES
MAX	1.5*d50			1.5	FT	18	INCHES

100 YR FLOW FROM BASIN

Summary for Reach 2R: SWALE -MIN SLOPE ALLOWED

Inflow Area = 500,825 sf, 25.59% Impervious, Inflow Depth = 3.86" for 100-Year event
Inflow = 12.2 cfs @ 12.71 hrs, Volume= 161,099 cf
Outflow = 10.6 cfs @ 12.90 hrs, Volume= 161,099 cf, Atten= 13%, Lag= 11.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Max. Velocity= 3.09 fps, Min. ~~Travel Time= 10.8 min~~
Avg. Velocity = 1.16 fps, Avg. ~~Travel Time= 28.8 min~~

VOID LENGTH- INPUT TO OBTAIN MIN SLOPE

Peak Storage= 6,883 cf @ 12.90 hrs
Average Depth at Peak Storage= 0.79'
Bank-Full Depth= 1.00' Flow Area= 5.0 sf, Capacity= 17.6 cfs

MAX SLOPE (BASED ON STRAIGHT LINE TO DESIGN POINT

2.00' x 1.00' deep channel, n= 0.030 Earth, grassed & winding
Side Slope Z-value= 3.0 '/' Top Width= 8.00'
Length= 2,000.0' Slope= 0.0100 '/'
Inlet Invert= 370.00', Outlet Invert= 350.00'

‡

VOID LENGTH- INPUT TO OBTAIN MIN SLOPE

SWALE FROM POND 7 MINIMUM ALLOWED SLOPE

100 YR FLOW FROM BASIN

Summary for Reach 1R: SWALE -MAX SLOPE-STRAIGHT LINE

Inflow Area = 500,825 sf, 25.59% Impervious, Inflow Depth = 3.86" for 100-Year event
Inflow = 12.2 cfs @ 12.71 hrs, Volume= 161,099 cf
Outflow = 12.2 cfs @ 12.72 hrs, Volume= 161,099 cf, Atten= 0%, Lag= 0.5 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.04 hrs
Max. Velocity= 6.72 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 3.27 fps, Avg. Travel Time= 1.4 min

Peak Storage= 482 cf @ 12.72 hrs
Average Depth at Peak Storage= 0.51'
Bank-Full Depth= 1.00' Flow Area= 5.0 sf, Capacity= 48.4 cfs

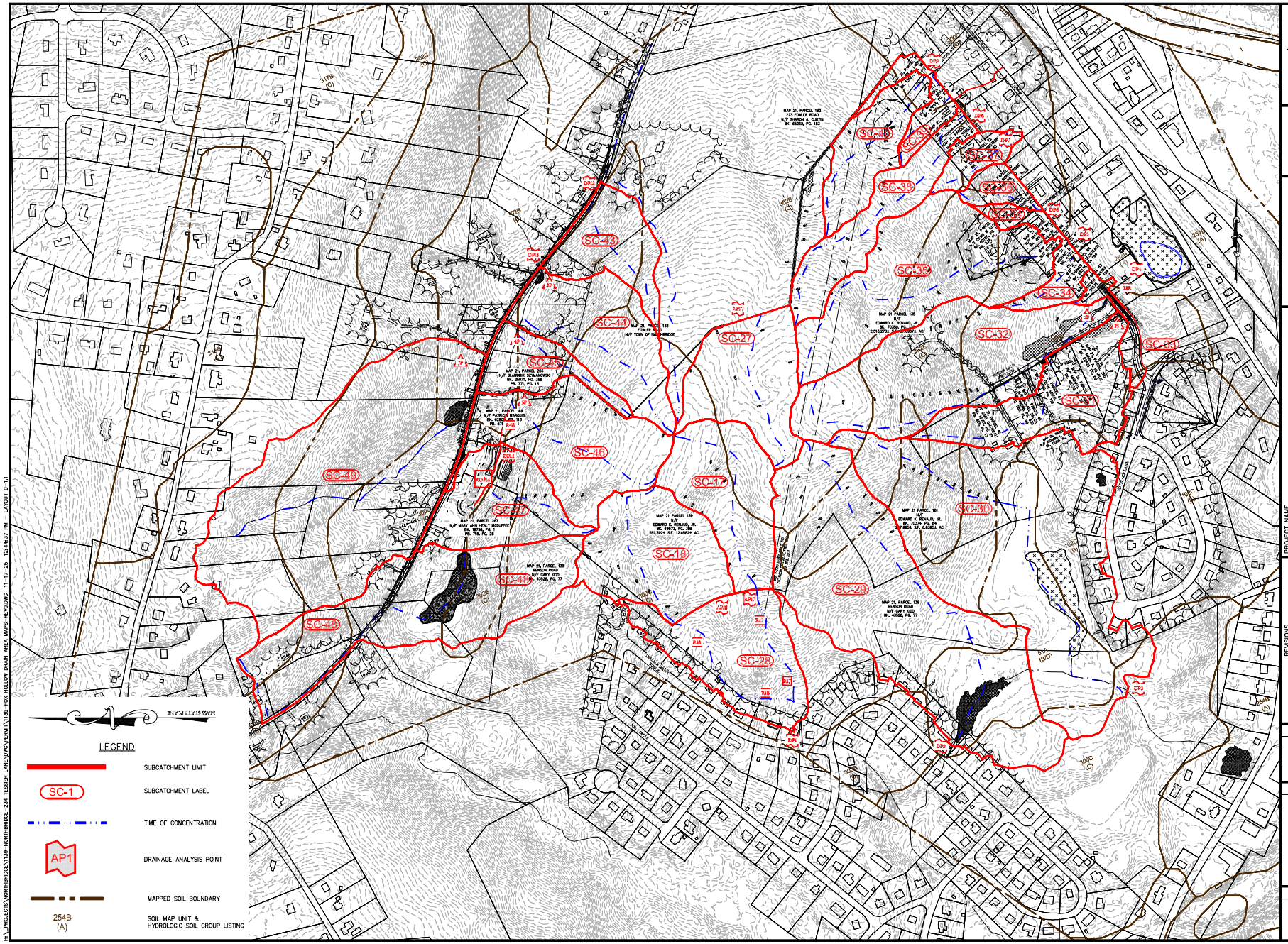
2.00' x 1.00' deep channel, n= 0.030 Earth, grassed & winding
Side Slope Z-value= 3.0 '/' Top Width= 8.00'
Length= 265.0' Slope= 0.0755 '/'
Inlet Invert= 370.00', Outlet Invert= 350.00'

MAX SLOPE (BASED ON STRAIGHT LINE TO DESIGN POINT

‡

SWALE FROM POND 7
MAXIMUM ALLOWED SLOPE

PART VI – Maps



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PROJECT NAME

FOX HOLLOW

DEFINITIVE SUBDIVIONS

#0 ASHWORTH DRIVE & #191 SOUTHBRIDGE ROAD
ASSESSOR'S MAP 3 LOT A05 AND MAP 6 LOT A01
OXFORD, MASSACHUSETTS

PREPARED FOR

Eastland Partners, Inc.
907 Millbury Street
Worcester, MA 01607

Eastland

REVISIONS		
REV.	DATE	DESCRIPTION

PROJECT NO.	TPE-1001D
DESIGNED BY	JAB, TRB
CHECKED BY	JAB
DATE	NOVEMBER 17, 2025
CAD FILE	H:\PERMIT\1139-DRAINAGE MAP

GRAPHIC SCALE

200 0 100 200 400
(IN FEET)
1 inch = 200 feet

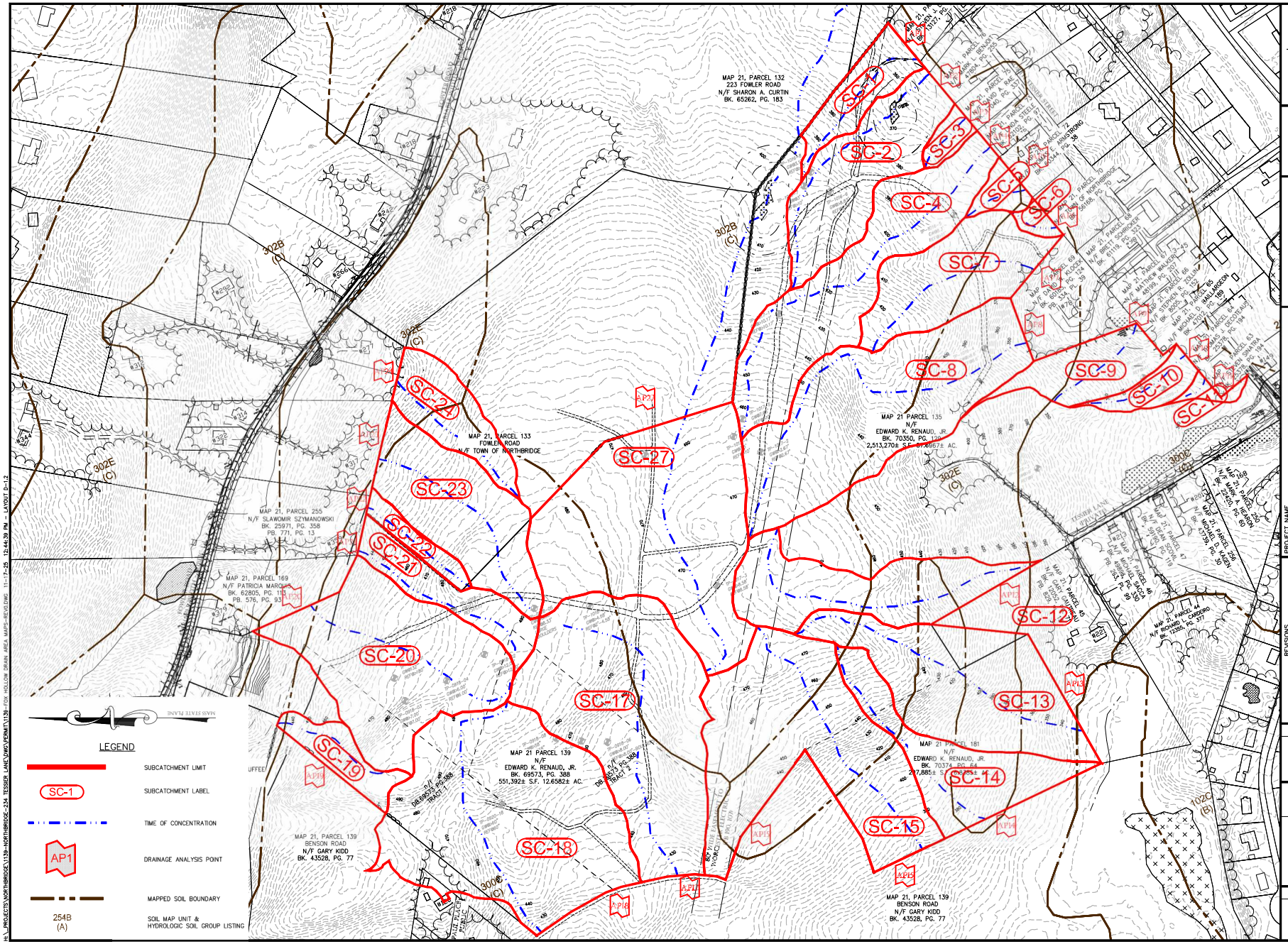
SHEET TITLE

PRE-DEVELOPMENT
DRAINAGE MAP
OVERALL

SHEET NO.

D-1.1

H:_PROJECTS\NORTHBRIDGE\1139-NORTHBRIDGE-234 TESSIER LANE\DWG\PDMAT\1139-FOX HOLLOW DRAIN AREA MAPS-REVD.DWG 11-17-25 12:44:37 PM - LAYOUT D-1.1



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597 Millbury Street
Worcester, MA 01607

PROJECT NAME

REVISIONS

REV.	DATE	DESCRIPTION

PROJECT NO.	TPE-1001D
DESIGNED BY	JAB, TRB
CHECKED BY	JAB
DATE	NOVEMBER 17, 2025
CAD FILE	H:\PERMIT\1139-DRAINAGE.MXD

GRAPHIC SCALE

120 0 60 120 240
(IN FEET)
1 inch = 120 feet

SHEET TITLE

PRE-DEVELOPMENT
DRAINAGE MAP
TO ABUTTERS

SHEET NO.

D-1.2

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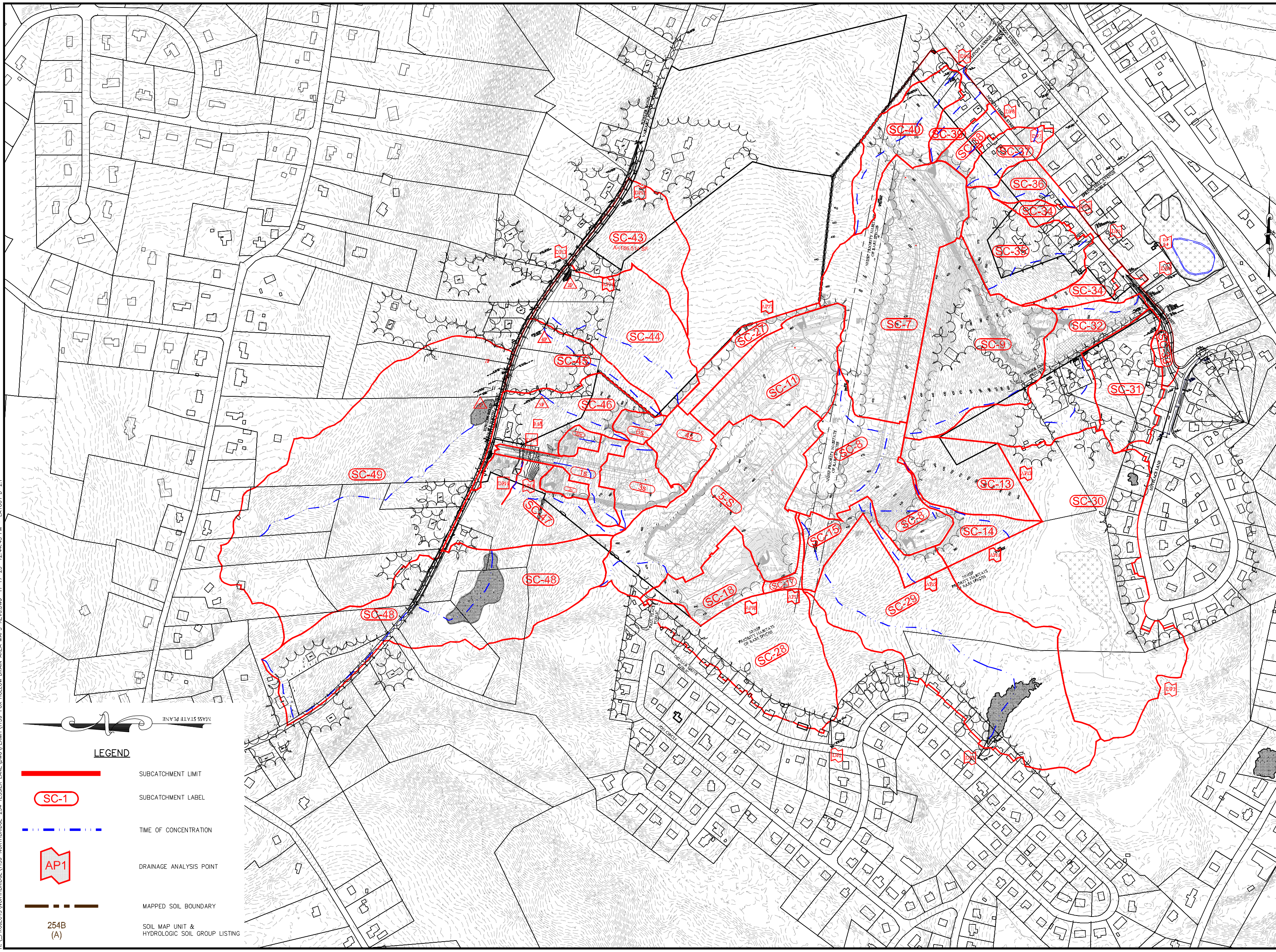

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APPROVAL UNDER SUBDIVSION CONTROL LAW
NORTHBRIDGE PLANNING BOARD

BEING A MAJORITY

APPROVAL DATE:______________
ENDORSEMENT DATE:______________

PROJECT NAME

FOX HOLLOW

DEFINITIVE SUBDIVIONS

#0 ASHWORTH DRIVE & #191 SOUTHBRIDGE ROAD
ASSESSOR'S MAP 3 LOT A05 AND MAP 6 LOT A01
OXFORD, MASSACHUSETTS

PREPARED FOR

Eastland

Eastland Partners, Inc.
997 Millbury Street
Worcester, MA 01607

REVISIONS

REV.	DATE	DESCRIPTION

PROJECT NO.	TPE-1001D
DESIGNED BY	JAB, TRB
CHECKED BY	JAB
DATE	NOVEMBER 17, 2025
CAD FILE	H:\PERMIT\1139-DRAINAGE MAP

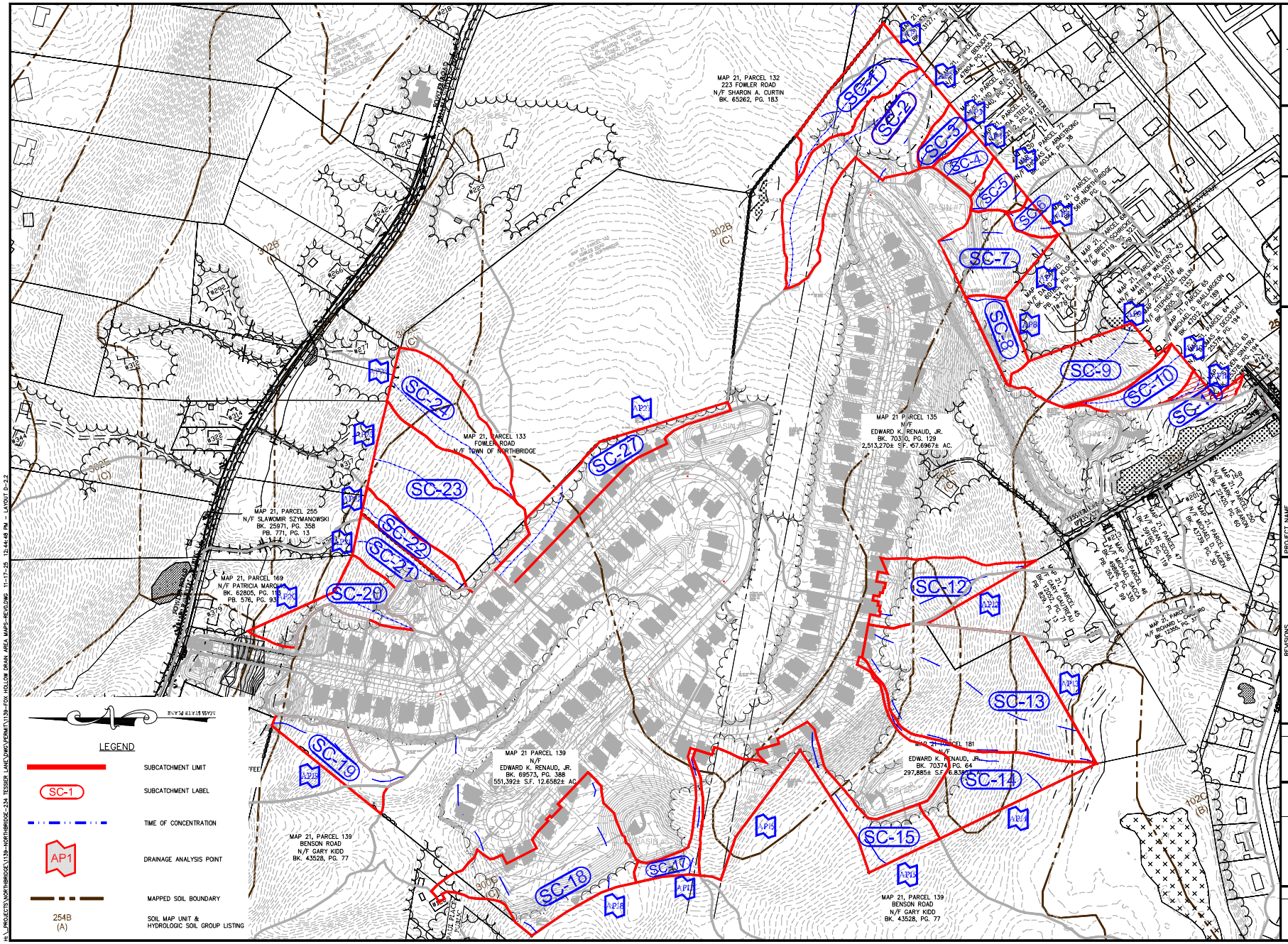
GRAPHIC SCALE
200 0 100 200 400
(IN FEET)
1 inch = 200 feet

SHEET TITLE

POST-DEVELOPMENT
DRAINAGE MAP
OVERALL

SHEET NO.

D-2.1



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APPROVAL DATE:

ENDORSEMENT DATE:

PROJECT NAME

FOX HOLLOW

DEFINITIVE SUBDIVIONS

#0 ASHWORTH DRIVE & #191 SOUTHBRIDGE ROAD
ASSESSOR'S MAP 3 LOT A05 AND MAP 6 LOT A01
OXFORD, MASSACHUSETTS

PREPARED FOR

Eastland Partners, Inc.
907 Millbury Street
Worcester, MA 01607

Eastland

REVISIONS		
REV.	DATE	DESCRIPTION

PROJECT NO.	TPE-1001D
DESIGNED BY	JAB, TRB
CHECKED BY	JAB
DATE	NOVEMBER 17, 2025
CAD FILE	H:\PERMIT\1139-DRAINAGE MAP

GRAPHIC SCALE

120 0 60 120 240
(IN FEET)
1 inch = 120 feet

SHEET TITLE

POST-DEVELOPMENT
DRAINAGE MAP
TO ABUTTERS

SHEET NO.

D-2.2

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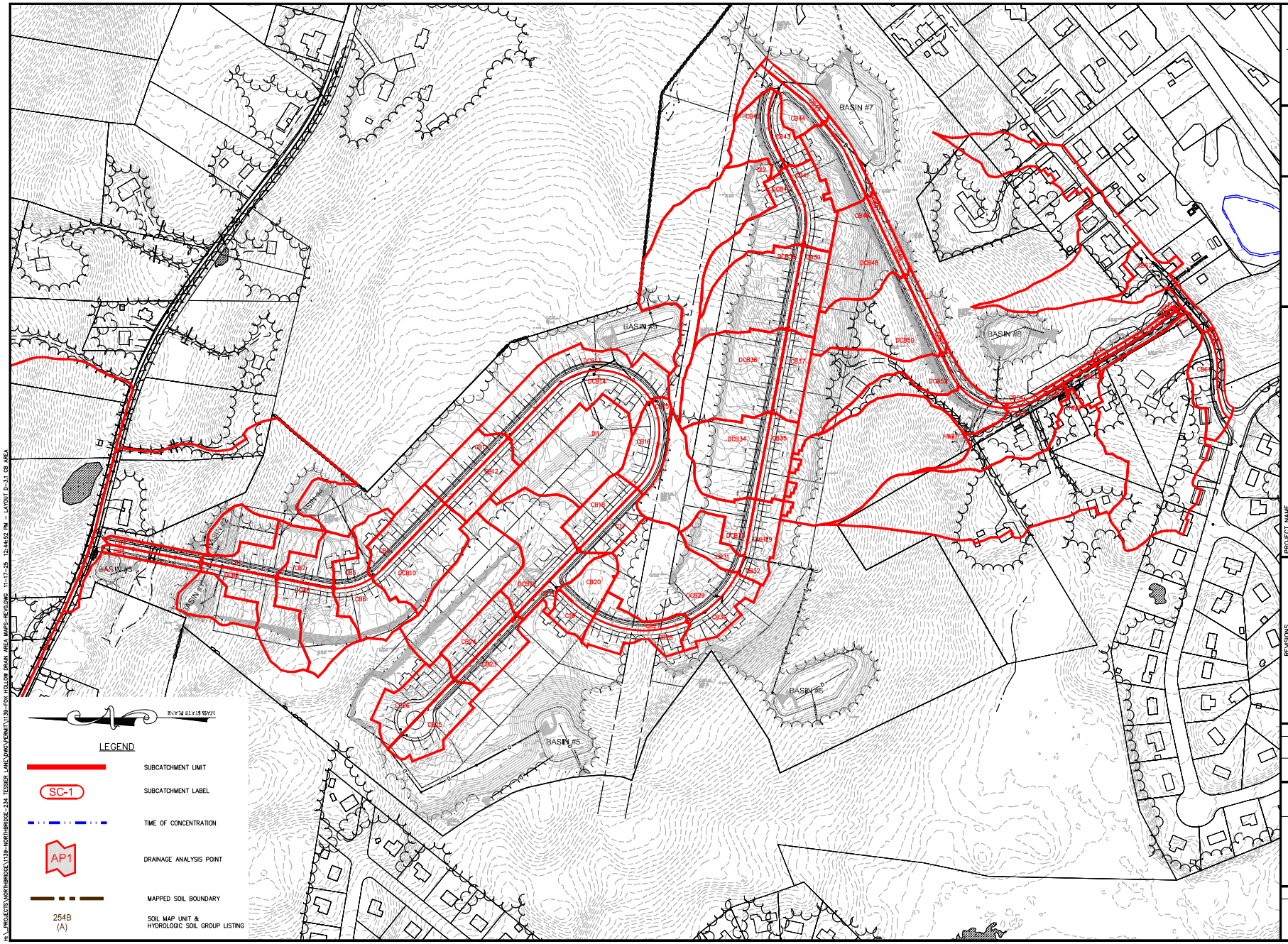

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NORTHBRIDGE PLANNING BOARD

BEING A MAJORITY

APPROVAL DATE: _____

ENDORSEMENT DATE: _____

PROJECT NAME
FOX HOLLOW
DEFINITIVE SUBDIVIONS
#0 ASHWORTH DRIVE & #191 SOUTHBRIDGE ROAD
ASSESSOR'S MAP 3 LOT A05 AND MAP 6 LOT A01
OXFORD, MASSACHUSETTS

PREPARED FOR
Eastland Partners, Inc.
907 Millbury Street
Worcester, MA 01607

REVISIONS		
REV.	DATE	DESCRIPTION

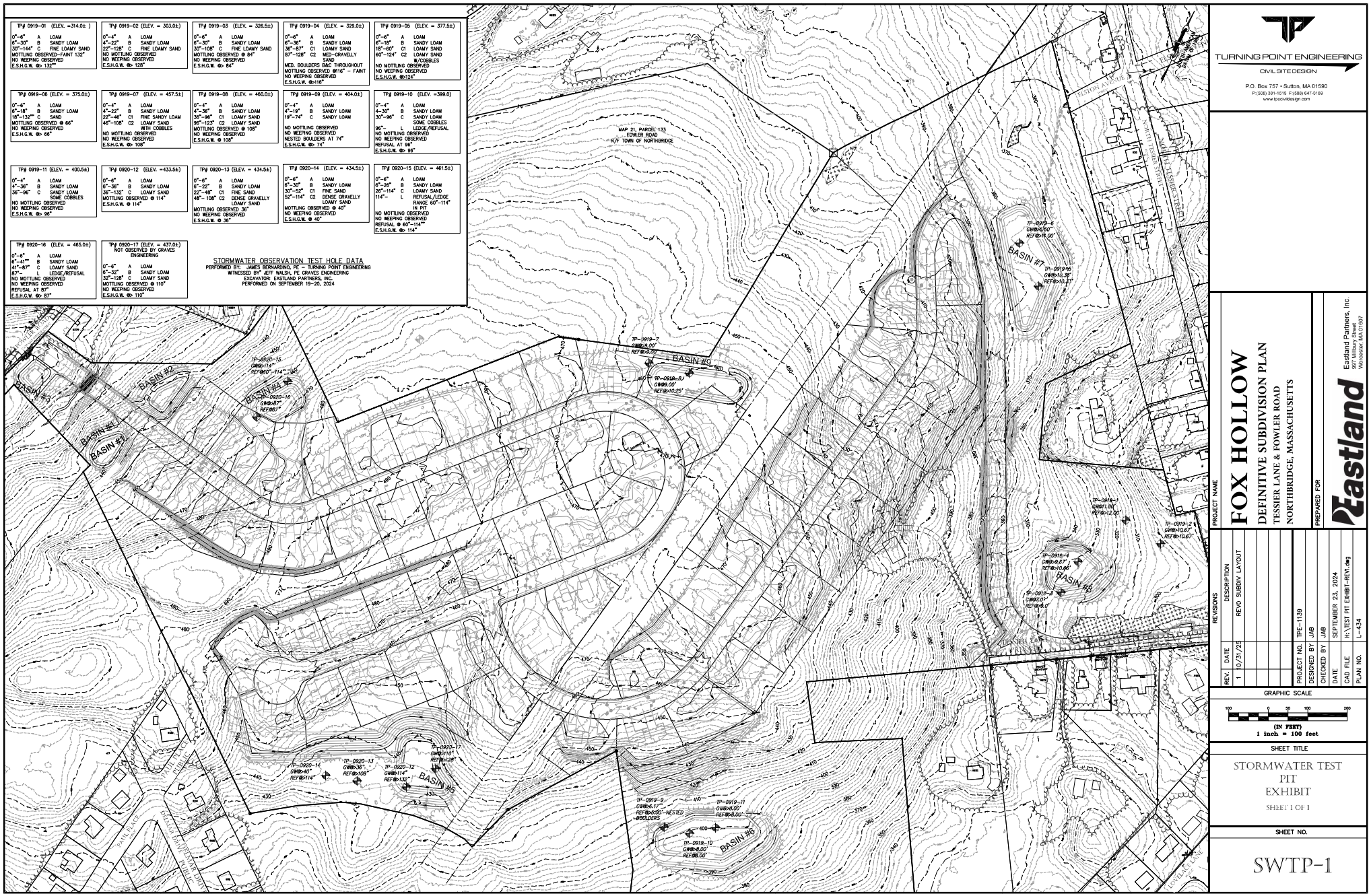
PROJECT NO.	TPE-1001D
DESIGNED BY	JAB, TRB
CHECKED BY	JAB
DATE	NOVEMBER 17, 2025
CAD FILE	H:\PERMIT\1139-DRAINAGE MAP

GRAPHIC SCALE
200 0 100 200 400
(IN FEET)
1 inch = 200 feet

SHEET TITLE
CATCH BASIN
DRAINAGE AREA MAP
SHEET 1 OF X

SHEET NO.
D-3.1

H:_PROJECTS\NORTHBRIDGE\1139-NORTHBRIDGE_234 TESSIER LANE\DWG\PERMIT\1139-FOX HOLLOW DRAIN AREA MAPS-REV2.DWG 11-17-25 12:44:52 PM - LAYOUT D-3.1 CB AREA



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PROJECT NAME

FOX HOLLOW

DEFINITIVE SUBDIVISION PLAN

TESSIER LANE & FOWLER ROAD
NORTHBRIDGE, MASSACHUSETTS

PREPARED FOR

Eastland
Eastland Partners, Inc.
997 Millbury Street
Worcester MA 01607

REVISIONS

REV.	DATE	DESCRIPTION
1	10/31/25	REVD SUBDIV LAYOUT

PROJECT NO.	TPE–1139
DESIGNED BY	JAB
CHECKED BY	JAB
DATE	SEPTEMBER 23, 2024
CAD FILE	H:\TEST PIT EXHIBIT–REVI.dwg
PLAN NO.	L–434

GRAPHIC SCALE

100 0 50 100 200
(IN FEET)
1 inch = 100 feet

SHEET TITLE

STORMWATER TEST PIT EXHIBIT

SHEET 1 OF 1

SHEET NO.

SWTP-1