

Open Channel Flow Calculations

Swale #: **18**

Side slope = **3**
 Bottom width = **1**
 Manning's coefficient = **0.035**
 Slope of channel = **0.016**

Depth (ft)	Wetted Perimeter (ft)	Area (ft ²)	Hydraulic Radius (ft)	Hydraulic Depth (ft)	Flowrate (cfs)	Velocity (ft/s)	F value
0.0	1.00	0.00	0.00	0.00	0.00	#DIV/0!	1.0
0.1	1.63	0.13	0.08	0.08	0.13	1.00	1.1
0.2	2.26	0.32	0.14	0.15	0.47	1.46	1.2
0.3	2.90	0.57	0.20	0.20	1.04	1.82	1.3
0.4	3.53	0.88	0.25	0.26	1.88	2.13	1.4
0.5	4.16	1.25	0.30	0.31	3.02	2.41	1.5
0.6	4.79	1.68	0.35	0.37	4.50	2.68	1.6
0.7	5.43	2.17	0.40	0.42	6.34	2.92	1.7
0.8	6.06	2.72	0.45	0.47	8.59	3.16	1.8
0.9	6.69	3.33	0.50	0.52	11.26	3.38	1.9
1.0	7.32	4.00	0.55	0.57	14.39	3.60	2.0

Open Channel Flow Calculations

Swale #: 19

Side slope = 3
 Bottom width = 1
 Manning's coefficient = 0.035
 Slope of channel = 0.024

Depth (ft)	Wetted Perimeter (ft)	Area (ft ²)	Hydraulic Radius (ft)	Hydraulic Depth (ft)	Flowrate (cfs)	Velocity (ft/s)	F value
0.0	1.00	0.00	0.00	0.00	0.00	#DIV/0!	1.0
0.1	1.63	0.13	0.08	0.08	0.16	1.22	1.1
0.2	2.26	0.32	0.14	0.15	0.57	1.79	1.2
0.3	2.90	0.57	0.20	0.20	1.27	2.23	1.3
0.4	3.53	0.88	0.25	0.26	2.30	2.81	1.4
0.5	4.16	1.25	0.30	0.31	3.70	2.96	1.5
0.6	4.79	1.68	0.35	0.37	5.51	3.28	1.6
0.7	5.43	2.17	0.40	0.42	7.77	3.58	1.7
0.8	6.06	2.72	0.45	0.47	10.52	3.87	1.8
0.9	6.69	3.33	0.50	0.52	13.79	4.14	1.9
1.0	7.32	4.00	0.55	0.57	17.63	4.41	2.0

Open Channel Flow Calculations

Swale #: 20

Side slope = 3
 Bottom width = 1
 Manning's coefficient = 0.035
 Slope of channel = 0.0081

Depth (ft)	Wetted Perimeter (ft)	Area (ft ²)	Hydraulic Radius (ft)	Hydraulic Depth (ft)	Flowrate (cfs)	Velocity (ft/s)	F value
0.0	1.00	0.00	0.00	0.00	0.00	#DIV/0!	1.0
0.1	1.63	0.13	0.08	0.08	0.08	0.71	1.1
0.2	2.26	0.32	0.14	0.15	0.33	1.04	1.2
0.3	2.90	0.57	0.20	0.20	0.74	1.30	1.3
0.4	3.53	0.88	0.25	0.26	1.34	1.52	1.4
0.5	4.16	1.25	0.30	0.31	2.15	1.72	1.5
0.6	4.79	1.68	0.35	0.37	3.20	1.90	1.6
0.7	5.43	2.17	0.40	0.42	4.51	2.08	1.7
0.8	6.06	2.72	0.45	0.47	6.11	2.28	1.8
0.9	6.69	3.33	0.50	0.52	8.01	2.41	1.9
1.0	7.32	4.00	0.55	0.57	10.24	2.50	2.0

Open Channel Flow Calculations

Swale #: 21

Side slope = 3
 Bottom width = 1
 Manning's coefficient = 0.035
 Slope of channel = 0.0694

Depth (ft)	Wetted Perimeter (ft)	Area (ft ²)	Hydraulic Radius (ft)	Hydraulic Depth (ft)	Flowrate (cfs)	Velocity (ft/s)	F value
0.0	1.00	0.00	0.00	0.00	0.00	#DIV/0!	1.0
0.1	1.63	0.13	0.08	0.08	0.27	2.08	1.1
0.2	2.26	0.32	0.14	0.15	0.97	3.04	1.2
0.3	2.90	0.57	0.20	0.20	2.18	3.79	1.3
0.4	3.53	0.88	0.25	0.26	3.91	4.44	1.4
0.5	4.16	1.25	0.30	0.31	6.25	5.03	1.5
0.6	4.79	1.68	0.35	0.37	9.38	5.57	1.6
0.7	5.43	2.17	0.40	0.42	13.21	6.09	1.7
0.8	6.06	2.72	0.45	0.47	17.88	6.57	1.8
0.9	6.69	3.33	0.50	0.52	23.45	7.04	1.9
1.0	7.32	4.00	0.55	0.57	29.97	7.49	2.0

Open Channel Flow Calculations

Swale #: 22

Side slope = 3
 Bottom width = 1
 Manning's coefficient = 0.035
 Slope of channel = 0.0279

Depth (ft)	Wetted Perimeter (ft)	Area (ft ²)	Hydraulic Radius (ft)	Hydraulic Depth (ft)	Flowrate (cfs)	Velocity (ft/s)	F value
0.0	1.00	0.00	0.00	0.00	0.00	#DIV/0!	1.0
0.1	1.63	0.13	0.08	0.08	0.17	1.32	1.1
0.2	2.26	0.32	0.14	0.15	0.62	1.93	1.2
0.3	2.90	0.57	0.20	0.20	1.37	2.41	1.3
0.4	3.53	0.88	0.25	0.26	2.40	2.82	1.4
0.5	4.16	1.25	0.30	0.31	3.90	3.19	1.5
0.6	4.79	1.68	0.35	0.37	5.94	3.53	1.6
0.7	5.43	2.17	0.40	0.42	8.37	3.86	1.7
0.8	6.06	2.72	0.45	0.47	11.34	4.17	1.8
0.9	6.69	3.33	0.50	0.52	14.87	4.47	1.9
1.0	7.32	4.00	0.55	0.57	19.00	4.75	2.0

Open Channel Flow Calculations

Swale #: 23

Side slope = 3
 Bottom width = 1
 Manning's coefficient = 0.035
 Slope of channel = 0.0116

Depth (ft)	Wetted Perimeter (ft)	Area (ft ²)	Hydraulic Radius (ft)	Hydraulic Depth (ft)	Flowrate (cfs)	Velocity (ft/s)	F value
0.0	1.00	0.00	0.00	0.00	0.00	#DIV/0!	1.0
0.1	1.63	0.13	0.08	0.08	0.11	0.85	1.1
0.2	2.26	0.32	0.14	0.15	0.40	1.24	1.2
0.3	2.90	0.57	0.20	0.20	0.88	1.55	1.3
0.4	3.53	0.88	0.25	0.26	1.60	1.82	1.4
0.5	4.16	1.25	0.30	0.31	2.57	2.06	1.5
0.6	4.79	1.68	0.35	0.37	3.83	2.28	1.6
0.7	5.43	2.17	0.40	0.42	5.40	2.40	1.7
0.8	6.06	2.72	0.45	0.47	7.31	2.60	1.8
0.9	6.69	3.33	0.50	0.52	9.59	2.88	1.9
1.0	7.32	4.00	0.55	0.57	12.25	3.08	2.0

Open Channel Flow Calculations

Swale #: 24

Side slope = 3
 Bottom width = 1
 Manning's coefficient = 0.035
 Slope of channel = 0.008

Depth (ft)	Wetted Perimeter (ft)	Area (ft ²)	Hydraulic Radius (ft)	Hydraulic Depth (ft)	Flowrate (cfs)	Velocity (ft/s)	F value
0.0	1.00	0.00	0.00	0.00	0.00	#DIV/0!	1.0
0.1	1.63	0.13	0.08	0.08	0.09	0.70	1.1
0.2	2.26	0.32	0.14	0.15	0.33	1.03	1.2
0.3	2.90	0.57	0.20	0.20	0.73	1.29	1.3
0.4	3.53	0.88	0.25	0.26	1.33	1.51	1.4
0.5	4.16	1.25	0.30	0.31	2.13	1.71	1.5
0.6	4.79	1.68	0.35	0.37	3.18	1.89	1.6
0.7	5.43	2.17	0.40	0.42	4.48	2.07	1.7
0.8	6.06	2.72	0.45	0.47	6.07	2.23	1.8
0.9	6.69	3.33	0.50	0.52	7.98	2.39	1.9
1.0	7.32	4.00	0.55	0.57	10.18	2.54	2.0
1.1	7.96	4.73	0.59	0.62	12.73	2.69	2.1
1.2	8.59	5.52	0.64	0.67	15.65	2.84	2.2
1.3	9.22	6.37	0.69	0.72	18.95	2.98	2.3
1.4	9.85	7.28	0.74	0.77	22.65	3.11	2.4
1.5	10.49	8.25	0.79	0.83	26.77	3.24	2.5
1.6	11.12	9.28	0.83	0.88	31.32	3.38	2.6
1.7	11.75	10.37	0.88	0.93	36.33	3.50	2.7
1.8	12.38	11.52	0.93	0.98	41.80	3.63	2.8
1.9	13.02	12.73	0.98	1.03	47.76	3.75	2.9
2.0	13.65	14.00	1.03	1.08	54.22	3.87	3.0

Open Channel Flow Calculations

Swale #: 25

Side slope = 3
 Bottom width = 1
 Manning's coefficient = 0.035
 Slope of channel = 0.0201

Depth (ft)	Wetted Perimeter (ft)	Area (ft ²)	Hydraulic Radius (ft)	Hydraulic Depth (ft)	Flowrate (cfs)	Velocity (ft/s)	F value
0.0	1.00	0.00	0.00	0.00	0.00	#DIV/0!	1.0
0.1	1.63	0.13	0.08	0.08	0.16	1.12	1.1
0.2	2.26	0.32	0.14	0.15	0.52	1.64	1.2
0.3	2.90	0.57	0.20	0.20	1.16	2.04	1.3
0.4	3.53	0.88	0.25	0.26	2.10	2.39	1.4
0.5	4.16	1.25	0.30	0.31	3.38	2.71	1.5
0.6	4.79	1.68	0.35	0.37	5.04	3.00	1.6
0.7	5.43	2.17	0.40	0.42	7.11	3.28	1.7
0.8	6.06	2.72	0.45	0.47	9.62	3.54	1.8
0.9	6.69	3.33	0.50	0.52	12.62	3.79	1.9
1.0	7.32	4.00	0.55	0.57	16.13	4.05	2.0
1.1	7.96	4.73	0.59	0.62	20.18	4.27	2.1
1.2	8.59	5.52	0.64	0.67	24.81	4.49	2.2
1.3	9.22	6.37	0.69	0.72	30.04	4.72	2.3
1.4	9.85	7.28	0.74	0.77	35.91	4.93	2.4
1.5	10.49	8.25	0.79	0.83	42.43	5.14	2.5
1.6	11.12	9.28	0.83	0.88	49.65	5.35	2.6
1.7	11.75	10.37	0.88	0.93	57.58	5.55	2.7
1.8	12.38	11.52	0.93	0.98	66.26	5.75	2.8
1.9	13.02	12.73	0.98	1.03	75.70	5.95	2.9
2.0	13.65	14.00	1.03	1.08	85.94	6.14	3.0

Open Channel Flow Calculations

Swale #: 26

Side slope = 3
 Bottom width = 1
 Manning's coefficient = 0.035
 Slope of channel = 0.0335

Depth (ft)	Wetted Perimeter (ft)	Area (ft ²)	Hydraulic Radius (ft)	Hydraulic Depth (ft)	Flowrate (cfs)	Velocity (ft/s)	F value
0.0	1.00	0.00	0.00	0.00	0.00	#DIV/0!	1.0
0.1	1.63	0.13	0.08	0.08	0.10	1.44	1.1
0.2	2.26	0.32	0.14	0.15	0.68	2.11	1.2
0.3	2.90	0.57	0.20	0.20	1.50	2.64	1.3
0.4	3.53	0.88	0.25	0.26	2.72	3.09	1.4
0.5	4.16	1.25	0.30	0.31	4.37	3.49	1.5
0.6	4.79	1.68	0.35	0.37	6.51	3.87	1.6
0.7	5.43	2.17	0.40	0.42	9.18	4.23	1.7
0.8	6.06	2.72	0.45	0.47	12.42	4.57	1.8
0.9	6.69	3.33	0.50	0.52	16.29	4.89	1.9
1.0	7.32	4.00	0.55	0.57	20.82	5.21	2.0
1.1	7.96	4.73	0.59	0.62	26.06	5.51	2.1
1.2	8.59	5.52	0.64	0.67	32.09	5.80	2.2
1.3	9.22	6.37	0.69	0.72	38.78	6.09	2.3
1.4	9.85	7.28	0.74	0.77	46.38	6.37	2.4
1.5	10.49	8.25	0.79	0.83	54.78	6.64	2.5

Open Channel Flow Calculations

Swale #: 27

Side slope = 3
 Bottom width = 1
 Manning's coefficient = 0.035
 Slope of channel = 0.008

Depth (ft)	Wetted Perimeter (ft)	Area (ft ²)	Hydraulic Radius (ft)	Hydraulic Depth (ft)	Flowrate (cfs)	Velocity (ft/s)	F value
0.0	1.00	0.00	0.00	0.00	0.00	#DIV/0!	1.0
0.1	1.63	0.13	0.08	0.08	0.09	0.70	1.1
0.2	2.26	0.32	0.14	0.15	0.33	1.03	1.2
0.3	2.90	0.57	0.20	0.20	0.73	1.29	1.3
0.4	3.53	0.88	0.25	0.26	1.33	1.51	1.4
0.5	4.16	1.25	0.30	0.31	2.13	1.71	1.5
0.6	4.79	1.68	0.35	0.37	3.18	1.89	1.6
0.7	5.43	2.17	0.40	0.42	4.48	2.07	1.7
0.8	6.06	2.72	0.45	0.47	6.07	2.23	1.8
0.9	6.69	3.33	0.50	0.52	7.96	2.39	1.9
1.0	7.32	4.00	0.55	0.57	10.18	2.54	2.0
1.1	7.96	4.73	0.59	0.62	12.73	2.69	2.1
1.2	8.59	5.52	0.64	0.67	15.65	2.84	2.2
1.3	9.22	6.37	0.69	0.72	18.95	2.98	2.3
1.4	9.85	7.28	0.74	0.77	22.65	3.11	2.4
1.5	10.49	8.25	0.79	0.83	26.77	3.24	2.5
1.6	11.12	9.28	0.83	0.88	31.32	3.38	2.6
1.7	11.75	10.37	0.88	0.93	36.33	3.50	2.7
1.8	12.38	11.52	0.93	0.98	41.80	3.63	2.8
1.9	13.02	12.73	0.98	1.03	47.76	3.75	2.9
2.0	13.65	14.00	1.03	1.08	54.22	3.87	3.0

Open Channel Flow Calculations

Swale #: **28**

Side slope = **3**
 Bottom width = **1**
 Manning's coefficient = **0.035**
 Slope of channel = **0.0341**

Depth (ft)	Wetted Perimeter (ft)	Area (ft ²)	Hydraulic Radius (ft)	Hydraulic Depth (ft)	Flowrate (cfs)	Velocity (ft/s)	F value
0.0	1.00	0.00	0.00	0.00	0.00	#DIV/0!	1.0
0.1	1.63	0.13	0.08	0.08	0.19	1.46	1.1
0.2	2.26	0.32	0.14	0.15	0.68	2.13	1.2
0.3	2.90	0.57	0.20	0.20	1.52	2.66	1.3
0.4	3.53	0.88	0.25	0.26	2.74	3.11	1.4
0.5	4.16	1.25	0.30	0.31	4.41	3.55	1.5
0.6	4.79	1.68	0.35	0.37	6.56	3.91	1.6
0.7	5.43	2.17	0.40	0.42	9.26	4.27	1.7
0.8	6.06	2.72	0.45	0.47	12.54	4.61	1.8
0.9	6.69	3.33	0.50	0.52	16.44	4.94	1.9
1.0	7.32	4.00	0.55	0.57	21.01	5.25	2.0
1.1	7.96	4.73	0.59	0.62	26.29	5.56	2.1
1.2	8.59	5.52	0.64	0.67	32.32	5.85	2.2
1.3	9.22	6.37	0.69	0.72	39.13	6.14	2.3
1.4	9.85	7.28	0.74	0.77	46.77	6.42	2.4
1.5	10.49	8.25	0.79	0.83	55.27	6.70	2.5

Open Channel Flow Calculations

Swale #: 29

Side slope = 3
 Bottom width = 1
 Manning's coefficient = 0.035
 Slope of channel = 0.0213

Depth (ft)	Wetted Perimeter (ft)	Area (ft ²)	Hydraulic Radius (ft)	Hydraulic Depth (ft)	Flowrate (cfs)	Velocity (ft/s)	F value
0.0	1.00	0.00	0.00	0.00	0.00	#DIV/0!	1.0
0.1	1.63	0.13	0.08	0.08	0.15	1.15	1.1
0.2	2.26	0.32	0.14	0.15	0.54	1.60	1.2
0.3	2.90	0.57	0.20	0.20	1.20	2.10	1.3
0.4	3.53	0.88	0.25	0.26	2.17	2.46	1.4
0.5	4.16	1.25	0.30	0.31	3.48	2.75	1.5
0.6	4.79	1.68	0.35	0.37	5.19	3.09	1.6
0.7	5.43	2.17	0.40	0.42	7.32	3.37	1.7
0.8	6.06	2.72	0.45	0.47	9.91	3.64	1.8
0.9	6.69	3.33	0.50	0.52	12.99	3.90	1.9
1.0	7.32	4.00	0.55	0.57	16.60	4.15	2.0
1.1	7.96	4.73	0.59	0.62	20.78	4.39	2.1
1.2	8.59	5.52	0.64	0.67	25.54	4.63	2.2
1.3	9.22	6.37	0.69	0.72	30.93	4.85	2.3
1.4	9.85	7.28	0.74	0.77	36.96	5.08	2.4
1.5	10.49	8.25	0.79	0.83	43.68	5.29	2.5

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:		1		Total Area =		49,391 S.F.	
						1.13 Acres	
Surface				C	N		
Structures	2.5	@	4000	=	10,000 S.F.	=	0.23 Ac.
Pavement				=	8,894 S.F.	=	0.20 Ac.
Drives	5	@	700	=	3,500 S.F.	=	0.08 Ac.
Patios	0	@	100	=	0 S.F.	=	0.00 Ac.
Sidewalks				=	0 S.F.	=	0.00 Ac.
Lawn (0-2%)				=	0 S.F.	=	0.00 Ac.
Lawn (2-5%)				=	0 S.F.	=	0.00 Ac.
Lawn (5-10%)				=	26,997 S.F.	=	0.62 Ac.
Lawn (>10%)				=	0 S.F.	=	0.00 Ac.
Water				=	0 S.F.	=	0.00 Ac.
Misc.				=	0 S.F.	=	0.00 Ac.

Weighted c =	0.636
Weighted N =	0.228
Sheet Flow	
L =	300 Ft.
H =	11.9 Ft.
S =	0.0396 Ft./Ft.
t1 =	12.64 Minutes
(Min. 5 minutes)	
Shallow Concentrated Flow	
L =	331 Ft.
H =	10.0 Ft.
S =	0.0303 Ft./Ft.
v =	3.40 Ft./sec.
t2 =	1.62 Minutes
(From HERPIC Figure 3.4.5)	
tc =	14.26 Minutes
I(10) =	In./Hr.
I(25) =	5.165 In./Hr.
I(50) =	In./Hr.
I(100) =	6.332 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	3.72 CFS
Q(50) =	0.00 CFS
Q(100) =	4.56 CFS

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:		2		Total Area =		105,666 S.F.	
						2.43 Acres	
Surface				C	N		
Structures	3	@	4000	=	12,000 S.F.	=	0.28 Ac.
Pavement				=	13,089 S.F.	=	0.30 Ac.
Drives	3	@	700	=	2,100 S.F.	=	0.05 Ac.
Patios	3	@	100	=	300 S.F.	=	0.01 Ac.
Sidewalks				=	0 S.F.	=	0.00 Ac.
Lawn (0-2%)				=	0 S.F.	=	0.00 Ac.
Lawn (2-5%)				=	0 S.F.	=	0.00 Ac.
Lawn (5-10%)				=	12,600 S.F.	=	0.29 Ac.
Lawn (>10%)				=	65,577 S.F.	=	1.51 Ac.
Woods (>10%)				=	0 S.F.	=	0.00 Ac.
Water				=	0 S.F.	=	0.00 Ac.
Misc.				=	0 S.F.	=	0.00 Ac.

Weighted c =	0.628
Weighted N =	0.301
Sheet Flow	
L =	300 Ft.
H =	13.2 Ft.
S =	0.0439 Ft./Ft.
t1 =	14.06 Minutes
(Min. 5 minutes)	
Shallow Concentrated Flow	
L =	285 Ft.
H =	8.6 Ft.
S =	0.0302 Ft./Ft.
v =	3.45 Ft./sec.
t2 =	1.38 Minutes
(From HERPIC Figure 3.4.5)	
tc =	15.43 Minutes
I(10) =	In./Hr.
I(25) =	4.993 In./Hr.
I(50) =	In./Hr.
I(100) =	6.148 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	7.61 CFS
Q(50) =	0.00 CFS
Q(100) =	9.37 CFS

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:	3		Total Area =		22,525 S.F.		
					0.52 Acres		
Surface				C	N		
Structures	0.5	@	4000 =	2,000 S.F. =	0.05 Ac.	0.92	0.02
Pavement			=	0 S.F. =	0.00 Ac.	0.92	0.02
Drives	0	@	700 =	0 S.F. =	0.00 Ac.	0.92	0.02
Patios	1	@	100 =	100 S.F. =	0.00 Ac.	0.92	0.02
Sidewalks			=	0 S.F. =	0.00 Ac.	0.92	0.02
Lawn (0-2%)				0 S.F. =	0.00 Ac.	0.15	0.40
Lawn (2-5%)				0 S.F. =	0.00 Ac.	0.25	0.40
Lawn (5-10%)				8,000 S.F. =	0.18 Ac.	0.40	0.40
Lawn (>10%)				12,425 S.F. =	0.29 Ac.	0.55	0.40
Water				0 S.F. =	0.00 Ac.	1.00	0.00
Misc.				0 S.F. =	0.00 Ac.	0.92	0.02

Weighted c =	0.531
Weighted N =	0.365
Sheet Flow	
L =	237 Ft.
H =	29.0 Ft.
S =	0.1224 Ft./Ft.
t1 =	10.84 Minutes
(Min. 5 minutes)	
Shallow Concentrated Flow	
L =	0 Ft.
H =	0.0 Ft.
S =	#DIV/0! Ft./Ft.
v =	0.00 Ft./sec.
t2 =	0.00 Minutes
(From HERPICC Figure 3.4.5)	
tc =	10.84 Minutes
I(10) =	In./Hr.
I(25) =	5.776 In./Hr.
I(50) =	In./Hr.
I(100) =	6.970 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	1.59 CFS
Q(50) =	0.00 CFS
Q(100) =	1.91 CFS

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:	4		Total Area =		41,224 S.F.		
					0.95 Acres		
Surface				C	N		
Structures	2.25	@	4000 =	9,000 S.F. =	0.21 Ac.	0.92	0.02
Pavement			=	8,025 S.F. =	0.18 Ac.	0.92	0.02
Drives	4.5	@	700 =	3,150 S.F. =	0.07 Ac.	0.92	0.02
Patios	0	@	100 =	0 S.F. =	0.00 Ac.	0.92	0.02
Sidewalks			=	0 S.F. =	0.00 Ac.	0.92	0.02
Lawn (0-2%)				0 S.F. =	0.00 Ac.	0.15	0.40
Lawn (2-5%)				0 S.F. =	0.00 Ac.	0.25	0.40
Lawn (5-10%)				21,049 S.F. =	0.48 Ac.	0.40	0.40
Lawn (>10%)				0 S.F. =	0.00 Ac.	0.55	0.40
Woods (>10%)				0 S.F. =	0.00 Ac.	0.48	0.60
Water				0 S.F. =	0.00 Ac.	1.00	0.00
Misc.				0 S.F. =	0.00 Ac.	0.92	0.02

Weighted c =	0.654
Weighted N =	0.214
Sheet Flow	
L =	300 Ft.
H =	10.4 Ft.
S =	0.0345 Ft./Ft.
t1 =	12.68 Minutes
(Min. 5 minutes)	
Shallow Concentrated Flow	
L =	253 Ft.
H =	15.8 Ft.
S =	0.0624 Ft./Ft.
v =	5.00 Ft./sec.
t2 =	0.84 Minutes
(From HERPICC Figure 3.4.5)	
tc =	13.52 Minutes
I(10) =	In./Hr.
I(25) =	5.297 In./Hr.
I(50) =	In./Hr.
I(100) =	6.470 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	3.28 CFS
Q(50) =	0.00 CFS
Q(100) =	4.01 CFS

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:	5		Total Area =	103,169 S.F.			
				2.37 Acres			
Surface					C	N	
Structures	3.5	@	4000 =	14,000 S.F. =	0.32 Ac.	0.92	0.02
Pavement			=	8,102 S.F. =	0.19 Ac.	0.92	0.02
Drives	4	@	700 =	2,800 S.F. =	0.06 Ac.	0.92	0.02
Patios	3	@	100 =	300 S.F. =	0.01 Ac.	0.92	0.02
Sidewalks			=	0 S.F. =	0.00 Ac.	0.92	0.02
Lawn (0-2%)			0 S.F. =		0.00 Ac.	0.15	0.40
Lawn (2-5%)			0 S.F. =		0.00 Ac.	0.25	0.40
Lawn (5-10%)			20,000 S.F. =		0.46 Ac.	0.40	0.40
Lawn (>10%)			57,967 S.F. =		1.33 Ac.	0.55	0.40
Water			0 S.F. =		0.00 Ac.	1.00	0.00
Misc.			0 S.F. =		0.00 Ac.	0.92	0.02

Weighted c =	0.611
Weighted N =	0.307
Sheet Flow	
L =	300 Ft.
H =	10.2 Ft.
S =	0.0341 Ft./Ft.
t1 =	15.05 Minutes
(Min. 5 minutes)	
Shallow Concentrated Flow	
L =	260 Ft.
H =	16.0 Ft.
S =	0.0617 Ft./Ft.
v =	5.00 Ft./sec.
t2 =	0.87 Minutes
(From HRPICCC Figure 3.4.5)	
tc =	15.92 Minutes
I(10) =	In./Hr.
I(25) =	4.948 In./Hr.
I(50) =	In./Hr.
I(100) =	6.097 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	7.16 CFS
Q(50) =	0.00 CFS
Q(100) =	8.83 CFS

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:	6		Total Area =	12,228 S.F.			
				0.28 Acres			
Surface					C	N	
Structures	0.75	@	4000 =	3,000 S.F. =	0.07 Ac.	0.92	0.02
Pavement			=	2,599 S.F. =	0.06 Ac.	0.92	0.02
Drives	1.5	@	700 =	1,050 S.F. =	0.02 Ac.	0.92	0.02
Patios	0	@	100 =	0 S.F. =	0.00 Ac.	0.92	0.02
Sidewalks			=	0 S.F. =	0.00 Ac.	0.92	0.02
Lawn (0-2%)			0 S.F. =		0.00 Ac.	0.15	0.40
Lawn (2-5%)			0 S.F. =		0.00 Ac.	0.25	0.40
Lawn (5-10%)			5,579 S.F. =		0.13 Ac.	0.40	0.40
Lawn (>10%)			0 S.F. =		0.00 Ac.	0.55	0.40
Woods (>10%)			0 S.F. =		0.00 Ac.	0.48	0.60
Water			0 S.F. =		0.00 Ac.	1.00	0.00
Misc.			0 S.F. =		0.00 Ac.	0.92	0.02

Weighted c =	0.683
Weighted N =	0.193
Sheet Flow	
L =	211 Ft.
H =	15.0 Ft.
S =	0.0711 Ft./Ft.
t1 =	8.67 Minutes
(Min. 5 minutes)	
Shallow Concentrated Flow	
L =	0 Ft.
H =	0.0 Ft.
S =	#DIV/0! Ft./Ft.
v =	0.00 Ft./sec.
t2 =	0.00 Minutes
(From HRPICCC Figure 3.4.5)	
tc =	8.67 Minutes
I(10) =	In./Hr.
I(25) =	6.267 In./Hr.
I(50) =	In./Hr.
I(100) =	7.484 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	1.20 CFS
Q(50) =	0.00 CFS
Q(100) =	1.43 CFS

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:	7		Total Area =	19,186 S.F.	
				0.44 Acres	
Surface			C	N	
Structures	0.5	@ 4000 =	2,000 S.F. =	0.05 Ac.	0.92
Pavement			2,070 S.F. =	0.05 Ac.	0.92
Drives	0.5	@ 700 =	350 S.F. =	0.01 Ac.	0.92
Patios	0.5	@ 100 =	50 S.F. =	0.00 Ac.	0.92
Sidewalks			0 S.F. =	0.00 Ac.	0.92
Lawn (0-2%)		0 S.F. =		0.00 Ac.	0.15
Lawn (2-5%)		0 S.F. =		0.00 Ac.	0.25
Lawn (5-10%)		14,716 S.F. =		0.34 Ac.	0.40
Lawn (>10%)		0 S.F. =		0.00 Ac.	0.55
Water		0 S.F. =		0.00 Ac.	1.00
Misc.		0 S.F. =		0.00 Ac.	0.92

Weighted c =	0.521
Weighted N =	0.311
Sheet Flow	
L =	154 Ft.
H =	10.9 Ft.
S =	0.0705 Ft./Ft.
t1 =	9.36 Minutes
Shallow Concentrated Flow	
L =	0 Ft.
H =	0.0 Ft.
S =	#DIV/0! Ft./Ft.
v =	0.00 Ft./sec.
t2 =	0.00 Minutes
tc =	9.36 Minutes
I(10) =	In./Hr.
I(25) =	6.088 In./Hr.
I(50) =	In./Hr.
I(100) =	7.297 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	1.40 CFS
Q(50) =	0.00 CFS
Q(100) =	1.67 CFS

(Min. 5 minutes)

(From HERPICC Figure 3.4.5)

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:	8		Total Area =	39,555 S.F.	
				0.91 Acres	
Surface			C	N	
Structures	1.75	@ 4000 =	7,000 S.F. =	0.16 Ac.	0.92
Pavement			3,637 S.F. =	0.08 Ac.	0.92
Drives	2.5	@ 700 =	1,750 S.F. =	0.04 Ac.	0.92
Patios	1	@ 100 =	100 S.F. =	0.00 Ac.	0.92
Sidewalks			0 S.F. =	0.00 Ac.	0.92
Lawn (0-2%)		0 S.F. =		0.00 Ac.	0.15
Lawn (2-5%)		0 S.F. =		0.00 Ac.	0.25
Lawn (5-10%)		27,068 S.F. =		0.62 Ac.	0.40
Lawn (>10%)		0 S.F. =		0.00 Ac.	0.55
Woods (>10%)		0 S.F. =		0.00 Ac.	0.48
Water		0 S.F. =		0.00 Ac.	1.00
Misc.		0 S.F. =		0.00 Ac.	0.92

Weighted c =	0.564
Weighted N =	0.280
Sheet Flow	
L =	254 Ft.
H =	7.3 Ft.
S =	0.0287 Ft./Ft.
t1 =	13.89 Minutes
Shallow Concentrated Flow	
L =	0 Ft.
H =	0.0 Ft.
S =	#DIV/0! Ft./Ft.
v =	0.00 Ft./sec.
t2 =	0.00 Minutes
tc =	13.89 Minutes
I(10) =	In./Hr.
I(25) =	5.231 In./Hr.
I(50) =	In./Hr.
I(100) =	6.401 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	2.68 CFS
Q(50) =	0.00 CFS
Q(100) =	3.28 CFS

(Min. 5 minutes)

(From HERPICC Figure 3.4.5)

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:		9		Total Area =		100,998 S.F.	
						2.32 Acres	
Surface				C	N		
Structures	2.25	@	3500	=	7,875 S.F.	=	0.18 Ac.
Pavement				=	0 S.F.	=	0.00 Ac.
Drives		@	700	=	0 S.F.	=	0.00 Ac.
Patios	4.5	@	100	=	450 S.F.	=	0.01 Ac.
Sidewalks				=	0 S.F.	=	0.00 Ac.
Lawn (0-2%)				=	0 S.F.	=	0.00 Ac.
Lawn (2-5%)				=	0 S.F.	=	0.00 Ac.
Lawn (5-10%)				=	92,673 S.F.	=	2.13 Ac.
Lawn (>10%)				=	0 S.F.	=	0.00 Ac.
Water				=	0 S.F.	=	0.00 Ac.
Misc.				=	0 S.F.	=	0.00 Ac.

Weighted c =	0.443
Weighted N =	0.369
Sheet Flow	
L =	292 Ft.
H =	16.6 Ft.
S =	0.0568 Ft./Ft.
t1 =	14.36 Minutes
Open Channel Flow	
L =	164 Ft.
H =	0.8 Ft.
S =	0.0050 Ft./Ft.
v =	1.80 Ft./sec.
t2 =	1.52 Minutes
tc =	15.88 Minutes
I(10) =	In./Hr.
I(25) =	4.952 In./Hr.
I(50) =	In./Hr.
I(100) =	6.101 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	5.08 CFS
Q(50) =	0.00 CFS
Q(100) =	6.26 CFS

(Min. 5 minutes)

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:		10		Total Area =		26,257 S.F.	
						0.60 Acres	
Surface				C	N		
Structures	1.5	@	3000	=	4,500 S.F.	=	0.10 Ac.
Pavement				=	6,621 S.F.	=	0.15 Ac.
Drives	.3	@	700	=	2,100 S.F.	=	0.05 Ac.
Patios	0	@	100	=	0 S.F.	=	0.00 Ac.
Sidewalks				=	0 S.F.	=	0.00 Ac.
Lawn (0-2%)				=	0 S.F.	=	0.00 Ac.
Lawn (2-5%)				=	0 S.F.	=	0.00 Ac.
Lawn (5-10%)				=	13,036 S.F.	=	0.30 Ac.
Lawn (>10%)				=	0 S.F.	=	0.00 Ac.
Woods (>10%)				=	0 S.F.	=	0.00 Ac.
Water				=	0 S.F.	=	0.00 Ac.
Misc.				=	0 S.F.	=	0.00 Ac.

Weighted c =	0.662
Weighted N =	0.209
Sheet Flow	
L =	300 Ft.
H =	3.5 Ft.
S =	0.0118 Ft./Ft.
t1 =	16.10 Minutes
Shallow Concentrated Flow	
L =	0 Ft.
H =	0.0 Ft.
S =	#DIV/0! Ft./Ft.
v =	0.00 Ft./sec.
t2 =	0.00 Minutes
tc =	16.10 Minutes
I(10) =	In./Hr.
I(25) =	4.932 In./Hr.
I(50) =	In./Hr.
I(100) =	6.078 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	1.97 CFS
Q(50) =	0.00 CFS
Q(100) =	2.42 CFS

(Min. 5 minutes)

(From HERPICC Figure 3.4.5)

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:		11		Total Area =		24,965 S.F.	
						0.57 Acres	
Surface				C		N	
Structures	1.5	@	3000	=	4,500 S.F.	=	0.10 Ac.
Pavement				=	5,603 S.F.	=	0.13 Ac.
Drives	3	@	700	=	2,100 S.F.	=	0.05 Ac.
Patios	0	@	100	=	0 S.F.	=	0.00 Ac.
Sidewalks				=	0 S.F.	=	0.00 Ac.
Lawn (0-2%)				=	0 S.F.	=	0.00 Ac.
Lawn (2-5%)				=	12,762 S.F.	=	0.29 Ac.
Lawn (5-10%)				=	0 S.F.	=	0.00 Ac.
Lawn (>10%)				=	0 S.F.	=	0.00 Ac.
Water				=	0 S.F.	=	0.00 Ac.
Misc.				=	0 S.F.	=	0.00 Ac.

Weighted c =	0.577
Weighted N =	0.214
Sheet Flow	
L =	300 Ft.
H =	8.7 Ft.
S =	0.0288 Ft./Ft.
t1 =	13.23 Minutes
(Min. 5 minutes)	
Shallow Concentrated Flow	
L =	89 Ft.
H =	2.3 Ft.
S =	0.0263 Ft./Ft.
v =	3.25 Ft./sec.
t2 =	0.46 Minutes
(From HERPICC Figure 3.4.5)	
tc =	13.68 Minutes
I(10) =	In./Hr.
I(25) =	5.268 In./Hr.
I(50) =	In./Hr.
I(100) =	6.439 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	1.74 CFS
Q(50) =	0.00 CFS
Q(100) =	2.13 CFS

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:		12		Total Area =		23,029 S.F.	
						0.53 Acres	
Surface				C		N	
Structures	1.5	@	3000	=	4,500 S.F.	=	0.10 Ac.
Pavement				=	4,052 S.F.	=	0.09 Ac.
Drives	3	@	700	=	2,100 S.F.	=	0.05 Ac.
Patios	0	@	100	=	0 S.F.	=	0.00 Ac.
Sidewalks				=	0 S.F.	=	0.00 Ac.
Lawn (0-2%)				=	0 S.F.	=	0.00 Ac.
Lawn (2-5%)				=	12,377 S.F.	=	0.28 Ac.
Lawn (5-10%)				=	0 S.F.	=	0.00 Ac.
Lawn (>10%)				=	0 S.F.	=	0.00 Ac.
Woods (>10%)				=	0 S.F.	=	0.00 Ac.
Water				=	0 S.F.	=	0.00 Ac.
Misc.				=	0 S.F.	=	0.00 Ac.

Weighted c =	0.560
Weighted N =	0.224
Sheet Flow	
L =	300 Ft.
H =	3.8 Ft.
S =	0.0126 Ft./Ft.
t1 =	16.39 Minutes
(Min. 5 minutes)	
Shallow Concentrated Flow	
L =	35 Ft.
H =	0.5 Ft.
S =	0.0129 Ft./Ft.
v =	2.35 Ft./sec.
t2 =	0.25 Minutes
(From HERPICC Figure 3.4.5)	
tc =	16.64 Minutes
I(10) =	In./Hr.
I(25) =	4.881 In./Hr.
I(50) =	In./Hr.
I(100) =	6.020 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	1.44 CFS
Q(50) =	0.00 CFS
Q(100) =	1.78 CFS

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:		13		Total Area =		3,390 S.F.	
						0.08 Acres	
Surface						C	N
Structures	0	@	3000	=	0 S.F.	=	0.00 Ac.
Pavement				=	0 S.F.	=	0.00 Ac.
Drives	0	@	700	=	0 S.F.	=	0.00 Ac.
Patios	0	@	100	=	0 S.F.	=	0.00 Ac.
Sidewalks				=	0 S.F.	=	0.00 Ac.
Lawn (0-2%)			0 S.F.	=	0.00 Ac.	=	0.15
Lawn (2-5%)			0 S.F.	=	0.00 Ac.	=	0.25
Lawn (5-10%)			3,390 S.F.	=	0.08 Ac.	=	0.40
Lawn (>10%)			0 S.F.	=	0.00 Ac.	=	0.55
Water			0 S.F.	=	0.00 Ac.	=	1.00
Misc.			0 S.F.	=	0.00 Ac.	=	0.92

Weighted c =	0.400
Weighted N =	0.400
Sheet Flow	
L =	9.4 Ft.
H =	1.0 Ft.
S =	0.0106 Ft./Ft.
t1 =	13.00 Minutes
Shallow Concentrated Flow	
L =	0 Ft.
H =	0.0 Ft.
S =	#DIV/0! Ft./Ft.
v =	0.00 Ft./sec.
t2 =	0.00 Minutes
tc =	13.00 Minutes
I(10) =	In./Hr.
I(25) =	5.390 In./Hr.
I(50) =	In./Hr.
I(100) =	6.567 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	0.17 CFS
Q(50) =	0.00 CFS
Q(100) =	0.20 CFS

(Min. 5 minutes)

(From HERPICC Figure 3.4.5)

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:		14		Total Area =		62,054 S.F.	
						1.42 Acres	
Surface						C	N
Structures	3.5	@	3000	=	10,500 S.F.	=	0.24 Ac.
Pavement				=	0 S.F.	=	0.00 Ac.
Drives	0	@	700	=	0 S.F.	=	0.00 Ac.
Patios	7	@	100	=	700 S.F.	=	0.02 Ac.
Sidewalks				=	0 S.F.	=	0.00 Ac.
Lawn (0-2%)			0 S.F.	=	0.00 Ac.	=	0.15
Lawn (2-5%)			25,400 S.F.	=	0.58 Ac.	=	0.25
Lawn (5-10%)			25,454 S.F.	=	0.58 Ac.	=	0.40
Lawn (>10%)			0 S.F.	=	0.00 Ac.	=	0.55
Woods (>10%)			0 S.F.	=	0.00 Ac.	=	0.48
Water			0 S.F.	=	0.00 Ac.	=	1.00
Misc.			0 S.F.	=	0.00 Ac.	=	0.92

Weighted c =	0.432
Weighted N =	0.331
Sheet Flow	
L =	95 Ft.
H =	1.8 Ft.
S =	0.0184 Ft./Ft.
t1 =	10.52 Minutes
Open Channel Flow	
L =	173 Ft.
H =	2.8 Ft.
S =	0.0162 Ft./Ft.
v =	2.50 Ft./sec.
t2 =	1.15 Minutes
tc =	11.68 Minutes
I(10) =	In./Hr.
I(25) =	5.626 In./Hr.
I(50) =	In./Hr.
I(100) =	6.813 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	3.47 CFS
Q(50) =	0.00 CFS
Q(100) =	4.20 CFS

(Min. 5 minutes)

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:		15		Total Area =		33,312 S.F.	
						0.76 Acres	
Surface				C	N		
Structures	2	@	3000	=	6,000 S.F.	=	0.14 Ac.
Pavement				=	9,621 S.F.	=	0.22 Ac.
Drives	4	@	700	=	2,800 S.F.	=	0.06 Ac.
Patios	0	@	100	=	0 S.F.	=	0.00 Ac.
Sidewalks				=	0 S.F.	=	0.00 Ac.
Lawn (0-2%)			0	S.F.	=	0.00 Ac.	0.15
Lawn (2-5%)			14,891	S.F.	=	0.34 Ac.	0.25
Lawn (5-10%)			0	S.F.	=	0.00 Ac.	0.40
Lawn (>10%)			0	S.F.	=	0.00 Ac.	0.55
Water			0	S.F.	=	0.00 Ac.	1.00
Misc.			0	S.F.	=	0.00 Ac.	0.92

Weighted c =	0.620
Weighted N =	0.190
Sheet Flow	
L =	300 Ft.
H =	5.1 Ft.
S =	0.0170 Ft./Ft.
t1 =	14.14 Minutes
Shallow Concentrated Flow	
L =	113 Ft.
H =	1.9 Ft.
S =	0.0171 Ft./Ft.
v =	2.60 Ft./sec.
t2 =	0.72 Minutes
tc =	14.87 Minutes
I(10) =	In./Hr.
I(25) =	5.057 In./Hr.
I(50) =	In./Hr.
I(100) =	6.219 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	2.40 CFS
Q(50) =	0.00 CFS
Q(100) =	2.95 CFS

(Min. 5 minutes)

(From HERPICC Figure 3.4.5)

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:		16		Total Area =		57,504 S.F.	
						1.32 Acres	
Surface				C	N		
Structures	5	@	3000	=	15,000 S.F.	=	0.34 Ac.
Pavement				=	10,087 S.F.	=	0.23 Ac.
Drives	10	@	700	=	7,000 S.F.	=	0.16 Ac.
Patios	0	@	100	=	0 S.F.	=	0.00 Ac.
Sidewalks				=	0 S.F.	=	0.00 Ac.
Lawn (0-2%)			0	S.F.	=	0.00 Ac.	0.15
Lawn (2-5%)			25,417	S.F.	=	0.58 Ac.	0.25
Lawn (5-10%)			0	S.F.	=	0.00 Ac.	0.40
Lawn (>10%)			0	S.F.	=	0.00 Ac.	0.55
Woods (>10%)			0	S.F.	=	0.00 Ac.	0.48
Water			0	S.F.	=	0.00 Ac.	1.00
Misc.			0	S.F.	=	0.00 Ac.	0.92

Weighted c =	0.624
Weighted N =	0.188
Sheet Flow	
L =	300 Ft.
H =	5.5 Ft.
S =	0.0184 Ft./Ft.
t1 =	13.81 Minutes
Shallow Concentrated Flow	
L =	183 Ft.
H =	2.1 Ft.
S =	0.0112 Ft./Ft.
v =	2.11 Ft./sec.
t2 =	1.45 Minutes
tc =	15.26 Minutes
I(10) =	In./Hr.
I(25) =	5.009 In./Hr.
I(50) =	In./Hr.
I(100) =	6.166 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	4.13 CFS
Q(50) =	0.00 CFS
Q(100) =	5.08 CFS

(Min. 5 minutes)

(From HERPICC Figure 3.4.5)

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:	17		Total Area =	129,515 S.F.		
				2.97 Acres		
Surface				C	N	
Structures	2.5	@ 3000	= 7,500 S.F. =	0.17 Ac.	0.92	0.02
Pavement			= 0 S.F. =	0.00 Ac.	0.92	0.02
Drives	0	@ 700	= 0 S.F. =	0.00 Ac.	0.92	0.02
Patios	5	@ 100	= 500 S.F. =	0.01 Ac.	0.92	0.02
Sidewalks			= 0 S.F. =	0.00 Ac.	0.92	0.02
Lawn (0-2%)		0 S.F.	=	0.00 Ac.	0.15	0.40
Lawn (2-5%)		0 S.F.	=	0.00 Ac.	0.25	0.40
Lawn (5-10%)		69,697 S.F.	=	1.60 Ac.	0.40	0.40
Lawn (>10%)		19,550 S.F.	=	0.45 Ac.	0.55	0.40
Water		32,268 S.F.	=	0.74 Ac.	1.00	0.00
Misc.		0 S.F.	=	0.00 Ac.	0.92	0.02

Weighted c =	0.604
Weighted N =	0.277
Sheet Flow	
L =	174 Ft.
H =	6.4 Ft.
S =	0.0516 Ft./Ft.
t1 =	8.61 Minutes
(Min. 5 minutes)	
Shallow Concentrated Flow	
L =	0 Ft.
H =	0.0 Ft.
S =	#DIV/0! Ft./Ft.
v =	0.00 Ft./sec.
t2 =	0.00 Minutes
(From HRPICC Figure 3.4.5)	
tc =	8.61 Minutes
I(10) =	In./Hr.
I(25) =	6.280 In./Hr.
I(50) =	In./Hr.
I(100) =	7.498 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	11.28 CFS
Q(50) =	0.00 CFS
Q(100) =	13.47 CFS

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:	18		Total Area =	60,892 S.F.		
				1.40 Acres		
Surface				C	N	
Structures	3.5	@ 3000	= 10,500 S.F. =	0.24 Ac.	0.92	0.02
Pavement			= 7,446 S.F. =	0.17 Ac.	0.92	0.02
Drives	4	@ 700	= 2,800 S.F. =	0.06 Ac.	0.92	0.02
Patios	3	@ 100	= 300 S.F. =	0.01 Ac.	0.92	0.02
Sidewalks			= 0 S.F. =	0.00 Ac.	0.92	0.02
Lawn (0-2%)		0 S.F.	=	0.00 Ac.	0.15	0.40
Lawn (2-5%)		0 S.F.	=	0.00 Ac.	0.25	0.40
Lawn (5-10%)		39,846 S.F.	=	0.91 Ac.	0.40	0.40
Lawn (>10%)		0 S.F.	=	0.00 Ac.	0.55	0.40
Woods (>10%)		0 S.F.	=	0.00 Ac.	0.48	0.60
Water		0 S.F.	=	0.00 Ac.	1.00	0.00
Misc.		0 S.F.	=	0.00 Ac.	0.92	0.02

Weighted c =	0.580
Weighted N =	0.269
Sheet Flow	
L =	300 Ft.
H =	10.7 Ft.
S =	0.0358 Ft./Ft.
t1 =	13.98 Minutes
(Min. 5 minutes)	
Shallow Concentrated Flow	
L =	192 Ft.
H =	2.5 Ft.
S =	0.0132 Ft./Ft.
v =	2.25 Ft./sec.
t2 =	1.42 Minutes
(From HRPICC Figure 3.4.5)	
tc =	15.40 Minutes
I(10) =	In./Hr.
I(25) =	4.996 In./Hr.
I(50) =	In./Hr.
I(100) =	6.152 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	4.05 CFS
Q(50) =	0.00 CFS
Q(100) =	4.99 CFS

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.: OS-4A

Total Area = 661,758 S.F.
15.19 Acres

Surface					C	N		
Structures	=	9,978	S.F. =	0.23	Ac.	0.92	0.02	
Pavement	=	8,431	S.F. =	0.19	Ac.	0.92	0.02	
Gravel	=	9,886	S.F. =	0.23	Ac.	0.65	0.15	
Concrete	=	776	S.F. =	0.02	Ac.	0.92	0.02	
Sidewalks	=	0	S.F. =	0.00	Ac.	0.92	0.02	
Lawn (5-10%)		142,150	S.F.		3.26	Ac.	0.40	0.40
Pasture (2-5%)		66,434	S.F.		1.53	Ac.	0.24	0.40
Pasture (>10%)		319,467	S.F.		7.33	Ac.	0.65	0.40
Woods (>10%)		82,754	S.F.		1.90	Ac.	0.48	0.60
Water		21,882	S.F.		0.50	Ac.	1.00	0.00
Misc.		0	S.F.		0.00	Ac.	0.92	0.02

Weighted c =	0.553
Weighted N =	0.397
Sheet Flow	
L =	300 Ft.
H =	32.0 Ft.
S =	0.1067 Ft./Ft.
t1 =	13.00 Minutes
Shallow Concentrated Flow	
L =	300 Ft.
H =	12.0 Ft.
S =	0.0400 Ft./Ft.
v =	6.00 Ft./sec.
t2 =	0.83 Minutes
Open Channel Flow	
L =	185 Ft.
H =	6.0 Ft.
S =	0.0324 Ft./Ft.
v =	6.20 Ft./sec.
t3 =	0.50 Minutes
tc =	14.33 Minutes
I(10) =	In./Hr.
I(25) =	5.152 In./Hr.
I(50) =	In./Hr.
I(100) =	6.319 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	43.31 CFS
Q(50) =	0.00 CFS
Q(100) =	53.11 CFS

(Min. 5 minutes)

(From HERPICC Figure 3.4.5)

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.: OS-4B		Total Area = 48,442 S.F.			
		1.11 Acres			
Surface			C	N	
Structures	=	0 S.F. =	0.00 Ac.	0.92	0.02
Pavement	=	0 S.F. =	0.00 Ac.	0.92	0.02
Gravel	=	0 S.F. =	0.00 Ac.	0.92	0.15
Concrete	=	0 S.F. =	0.00 Ac.	0.92	0.02
Sidewalks	=	0 S.F. =	0.00 Ac.	0.92	0.02
Lawn (5-10%)	=	8,316 S.F. =	0.19 Ac.	0.40	0.40
Cultivated Field (5-10%)	=	0 S.F. =	0.00 Ac.	0.50	0.20
Cultivated Field (>10%)	=	0 S.F. =	0.00 Ac.	0.65	0.20
Woods (>10%)	=	40,126 S.F. =	0.92 Ac.	0.48	0.60
Water	=	0 S.F. =	0.00 Ac.	1.00	0.00
Misc.	=	0 S.F. =	0.00 Ac.	0.92	0.02

Weighted c =	0.466
Weighted N =	0.566
Sheet Flow	
L =	300 Ft.
H =	24.0 Ft.
S =	0.0800 Ft./Ft.
t1 =	16.40 Minutes
Shallow Concentrated Flow	
L =	176 Ft.
H =	24.0 Ft.
S =	0.1364 Ft./Ft.
v =	6.00 Ft./sec.
t2 =	0.49 Minutes
Open Channel Flow	
L =	0 Ft.
H =	0.0 Ft.
S =	#DIV/0! Ft./Ft.
v =	5.37 Ft./sec.
t3 =	0.00 Minutes
tc =	16.89 Minutes
I(10) =	In./Hr.
I(25) =	4.858 In./Hr.
I(50) =	In./Hr.
I(100) =	5.994 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	2.52 CFS
Q(50) =	0.00 CFS
Q(100) =	3.11 CFS

(Min. 5 minutes)

(From HETPICC Figure 3.4.5)

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:	43	Total Area =	50,183 S.F.	
			1.15 Acres	
Surface			C	N
Structures	4.5 @ 3000	= 13,500 S.F. =	0.31 Ac.	0.92 0.02
Pavement		= 8,350 S.F. =	0.19 Ac.	0.92 0.02
Drives	9 @ 700	= 6,300 S.F. =	0.14 Ac.	0.92 0.02
Patios	0 @ 100	= 0 S.F. =	0.00 Ac.	0.92 0.02
Sidewalks		= 0 S.F. =	0.00 Ac.	0.92 0.02
Lawn (0-2%)	0 S.F. =		0.00 Ac.	0.15 0.40
Lawn (2-5%)	22,033 S.F. =		0.51 Ac.	0.25 0.40
Lawn (5-10%)	0 S.F. =		0.00 Ac.	0.40 0.40
Lawn (>10%)	0 S.F. =		0.00 Ac.	0.55 0.40
Water	0 S.F. =		0.00 Ac.	1.00 0.00
Misc.	0 S.F. =		0.00 Ac.	0.92 0.02

Weighted c =	0.626
Weighted N =	0.187
Sheet Flow	
L =	300 Ft.
H =	2.2 Ft.
S =	0.0075 Ft./Ft.
t1 =	17.01 Minutes
Shallow Concentrated Flow	
L =	80 Ft.
H =	0.4 Ft.
S =	0.0051 Ft./Ft.
v =	1.50 Ft./sec.
t2 =	0.89 Minutes
tc =	17.90 Minutes
I(10) =	In./Hr.
I(25) =	4.765 In./Hr.
I(50) =	In./Hr.
I(100) =	5.887 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	3.44 CFS
Q(50) =	0.00 CFS
Q(100) =	4.24 CFS

(Min. 5 minutes)

(From HERPICC Figure 3.4.5)

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.:	44	Total Area =	286,586 S.F.	
			6.58 Acres	
Surface			C	N
Structures	11.5 @ 3000	= 34,500 S.F. =	0.79 Ac.	0.92 0.02
Pavement		= 0 S.F. =	0.00 Ac.	0.92 0.02
Drives	0 @ 700	= 0 S.F. =	0.00 Ac.	0.92 0.02
Patios	23 @ 100	= 2,300 S.F. =	0.05 Ac.	0.92 0.02
Sidewalks		= 0 S.F. =	0.00 Ac.	0.92 0.02
Lawn (0-2%)	0 S.F. =		0.00 Ac.	0.15 0.40
Lawn (2-5%)	0 S.F. =		0.00 Ac.	0.25 0.40
Lawn (5-10%)	249,786 S.F. =		5.73 Ac.	0.40 0.40
Lawn (>10%)	0 S.F. =		0.00 Ac.	0.55 0.40
Woods (>10%)	0 S.F. =		0.00 Ac.	0.48 0.60
Water	0 S.F. =		0.00 Ac.	1.00 0.00
Misc.	0 S.F. =		0.00 Ac.	0.92 0.02

Weighted c =	0.467
Weighted N =	0.351
Sheet Flow	
L =	220 Ft.
H =	4.1 Ft.
S =	0.0186 Ft./Ft.
t1 =	15.96 Minutes
Open Channel Flow	
L =	0 Ft.
H =	0.0 Ft.
S =	#DIV/0! Ft./Ft.
v =	4.09 Ft./sec.
t2 =	0.00 Minutes
tc =	15.96 Minutes
I(10) =	In./Hr.
I(25) =	4.944 In./Hr.
I(50) =	In./Hr.
I(100) =	6.092 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	15.18 CFS
Q(50) =	0.00 CFS
Q(100) =	18.71 CFS

(Min. 5 minutes)

DEVELOPED DRAINAGE BASIN CALCULATIONS

Basin No.: 45

Total Area = 634,345 S.F.
14.56 Acres

Surface							C	N	
Structures	8.25	@	4000	=	33,000 S.F.	=	0.76 Ac.	0.92	0.02
Pavement				=	9,007 S.F.	=	0.21 Ac.	0.92	0.02
Drives	2	@	700	=	1,400 S.F.	=	0.03 Ac.	0.92	0.02
Patios	15	@	100	=	1,500 S.F.	=	0.03 Ac.	0.92	0.02
Sidewalks				=	0 S.F.	=	0.00 Ac.	0.92	0.02
Lawn (0-2%)				=	0 S.F.	=	0.00 Ac.	0.15	0.40
Lawn (2-5%)				=	0 S.F.	=	0.00 Ac.	0.25	0.40
Lawn (5-10%)				=	30,000 S.F.	=	0.69 Ac.	0.40	0.40
Woods (>10%)				=	559,438 S.F.	=	12.84 Ac.	0.48	0.60
Water				=	0 S.F.	=	0.00 Ac.	1.00	0.00
Misc.				=	0 S.F.	=	0.00 Ac.	0.92	0.02

Weighted c =	0.507
Weighted N =	0.549
Sheet Flow	
L =	300 Ft.
H =	40.0 Ft.
S =	0.1333 Ft./Ft.
t1 =	14.36 Minutes
Shallow Concentrated Flow	
L =	300 Ft.
H =	10.0 Ft.
S =	0.0333 Ft./Ft.
v =	2.90 Ft./sec.
t2 =	1.72 Minutes
Open Channel Flow	
L =	882 Ft.
H =	20.0 Ft.
S =	0.0227 Ft./Ft.
v =	5.15 Ft./sec.
t3 =	2.85 Minutes
tc =	18.94 Minutes
I(10) =	In./Hr.
I(25) =	4.669 In./Hr.
I(50) =	In./Hr.
I(100) =	5.777 In./Hr.
Q(10) =	0.00 CFS
Q(25) =	34.49 CFS
Q(50) =	0.00 CFS
Q(100) =	42.69 CFS

(Min. 5 minutes)

(From HIERPICC Figure 3.4.5)