

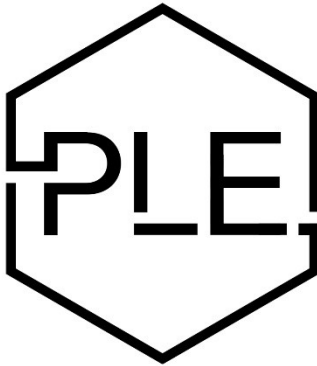
GODDARD SCHOOL OF BRYANT
PRELIMINARY DRAINAGE REPORT

Date: 03-03-2026

Located in: Bryant, Arkansas

Prepared for:
City of Bryant, Arkansas

Prepared by:




PHILLIP LEWIS ENGINEERING

Structural + Civil Consultants

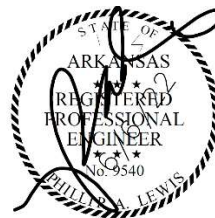
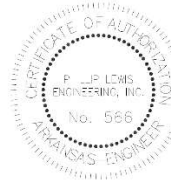
23620 Interstate 30 | Bryant, AR
PH: 501-350-9840

CERTIFICATION

I hereby state that this Final Drainage has been prepared by me or under my supervision and meets the standard of care and expertise which is usual and customary in this community of professional engineers. The analysis has been prepared utilizing procedures and practices by the City of Bryant and within the standard accepted practices.



Phillip A. Lewis, PE.



DATE: 03-03-2026

PROJECT LOCATION MAP



DESCRIPTION OF PROPERTY

The proposed project is for the construction of the Goddard School of Bryant located on Christy Lane, Alexander, AR. The proposed development is a 9,000 sq. ft. building, parking lot, and outdoor playground.

The intent of this drainage analysis is to reevaluate the previous drainage design and ensure that the completion of this development still meets the design intent and capacity of the previous constructed onsite detention facility located at the corner of Henry Avenue and Bryant Parkway.

Per previous drainage calculations performed for the construction of the existing pond, the existing ground coverage for the entire development drainage basin consisted of and partially still consists of natural vegetation (3%-8% slope), hydrologic soil group C/D (C = 0.50).

According to FEMA Flood Insurance Rate Map, Panel 05125C0240E, this property lies within Zone X, areas determined to be outside the 0.2% annual chance floodplain. A copy of the map can be found in the appendix.

DRAINAGE CRITERIA

In accordance with the requirements of the City of Bryant, the proposed developments drainage plan and this drainage report were developed with the criteria established in the Bryant Stormwater Management & Drainage Manual provided on cityofbryant.com.

All drainage calculations were performed using HydroCAD software to determine and analyze the changes in stormrunoff volume, flow rates, and design the outlet release structure. Hydraflow Express software was used to appropriately design and size all storm sewer inlets, pipes and channels.

Calculations were performed using the Rational Method, using NOAA rainfall data, and the pond volume and outlet structure was analyzed for the 100-year storm event while the outlet structure is expected to match or reduce pre-development flow rates for all storm events: 2-yr, 10-yr, 25-yr, and 100-yr storms.

DESCRIPTION OF PREVIOUS DETENTION FACILITIES

Phillip Lewis Engineering has evaluated the previously supplied drainage analysis and made site investigations to fully understand the current drainage situation.

The previous drainage analysis studied the pre vs. post scenarios as a single 8.5 acre node. Post development was studied as one node routing through the detention pond that is now constructed on the site. Due to the nature of how construction phasing has evolved, some areas were not routed to this detention pond. Some of these areas ultimately discharge to locations that bypass the detention basin. Additionally, we believe that the current pond actually was intended to capture approximately 10 acres, which encompasses the Goddard facility, Christy Lane, Summerwood Offices, and Genwealth Financial Services.

This drainage study is intended to account for these discrepancies and ensure that the detention basin is throttling appropriately for the current and proposed increases in runoff. Additionally, within this design, the intent is to capture open pipe discharges (intended for pond capture) and route them correctly through adequate storm sewer.

PROPOSED DRAINAGE SYSTEM

This development is designed to capture the majority of runoff within the parking lot curb and gutter, collecting stormwater with standard curb inlets and downspout collector pipes. New storm sewer onsite will connect to an existing storm junction box on Christy Lane, ultimately discharging into the existing detention pond. The detention pond will remain in place as constructed. This drainage analysis will provide supporting evidence to validate the previously constructed detention basin's functionality.

The detention pond was designed to detain stormwater volumes based off the 100-yr storm events with a concrete overflow spillway to release water if a rainfall event were to exceed the 100-yr storm event. The outlet control structures are detailed within this report.

Overall Pre-development and Post-development runoff/discharge rates are compared below:

Storm Event	Pre-development Discharge (cfs)	Post-development Discharge (cfs)
2-yr	13.31	11.94
5-yr	15.93	13.75
10-yr	17.95	15.03
25-yr	20.67	16.53
100-yr	24.60	18.73

Overall pre development and post development discharge rates are displayed in the following hydrographs. A final discharge link has been added to show one comparable discharge number.

PRE DEVELOPMENT HYDROGRAPH

Summary for Subcatchment PRE: Pre-Development Discharge

Runoff = 13.31 cfs @ 0.47 hrs, Volume= 23,958 cf, Depth= 0.66"

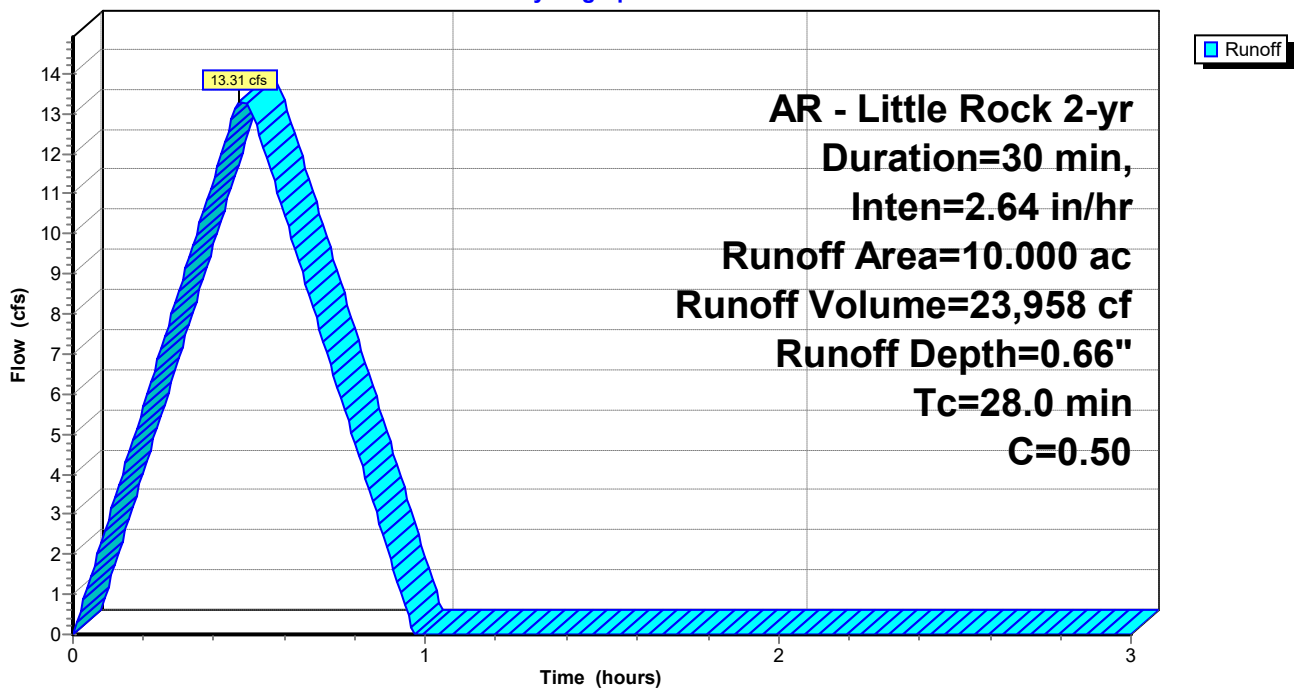
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (ac)	C	Description
10.000	0.50	Undeveloped
10.000		100.00% Pervious Area

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

Subcatchment PRE: Pre-Development Discharge

Hydrograph



Summary for Subcatchment PRE: Pre-Development Discharge

Runoff = 15.93 cfs @ 0.47 hrs, Volume= 28,677 cf, Depth= 0.79"

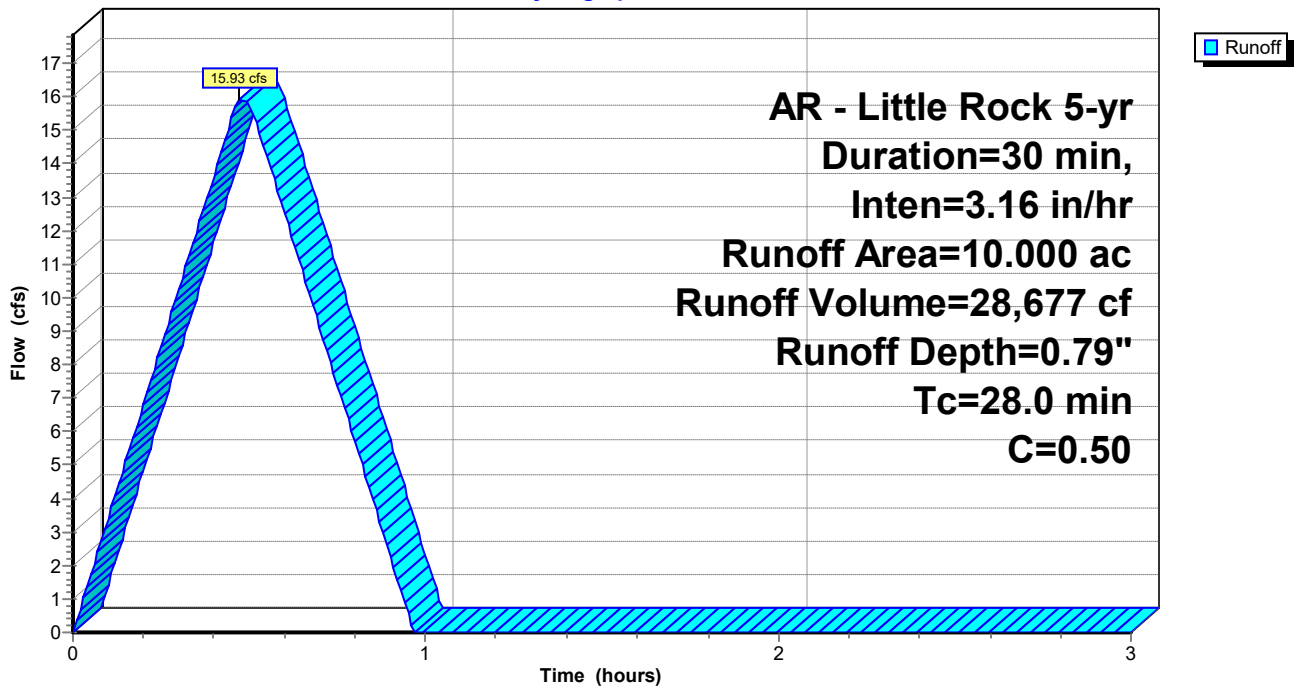
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (ac)	C	Description
10.000	0.50	Undeveloped
10.000		100.00% Pervious Area

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

Subcatchment PRE: Pre-Development Discharge

Hydrograph



Summary for Subcatchment PRE: Pre-Development Discharge

Runoff = 17.95 cfs @ 0.47 hrs, Volume= 32,307 cf, Depth= 0.89"

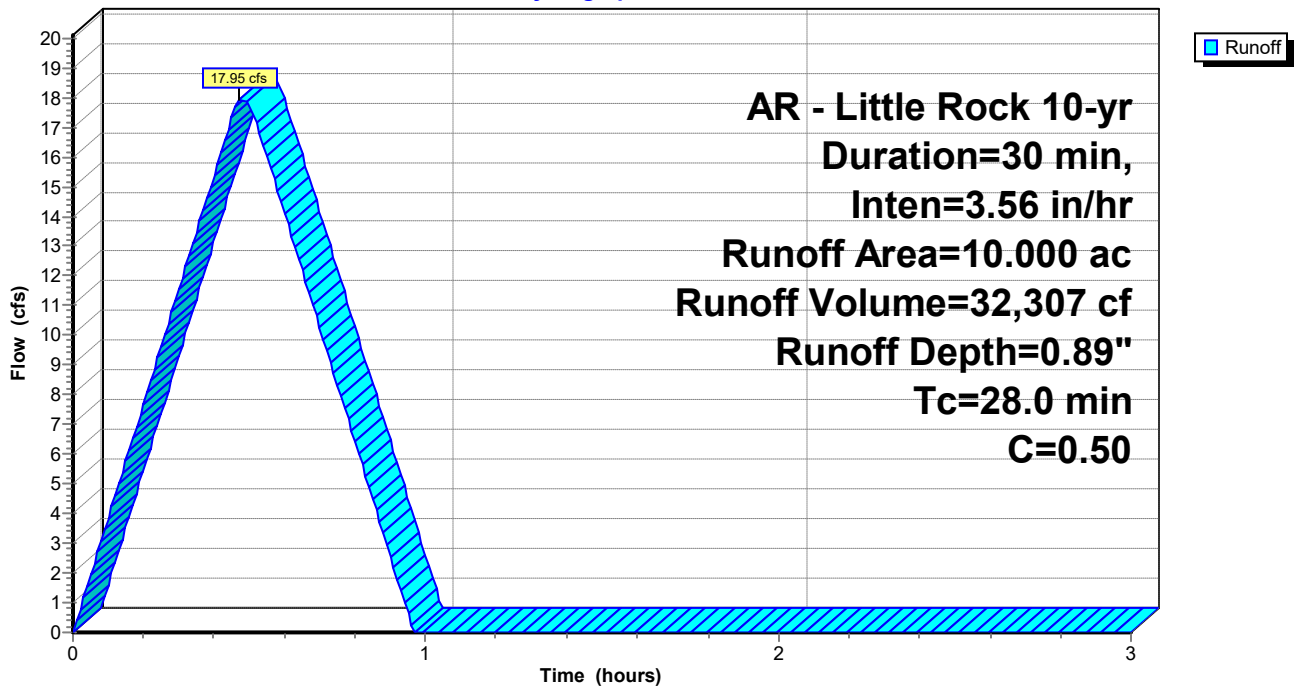
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (ac)	C	Description
10.000	0.50	Undeveloped
10.000		100.00% Pervious Area

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

Subcatchment PRE: Pre-Development Discharge

Hydrograph



Goddard

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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment PRE: Pre-Development Discharge

Runoff = 20.67 cfs @ 0.47 hrs, Volume= 37,207 cf, Depth= 1.02"

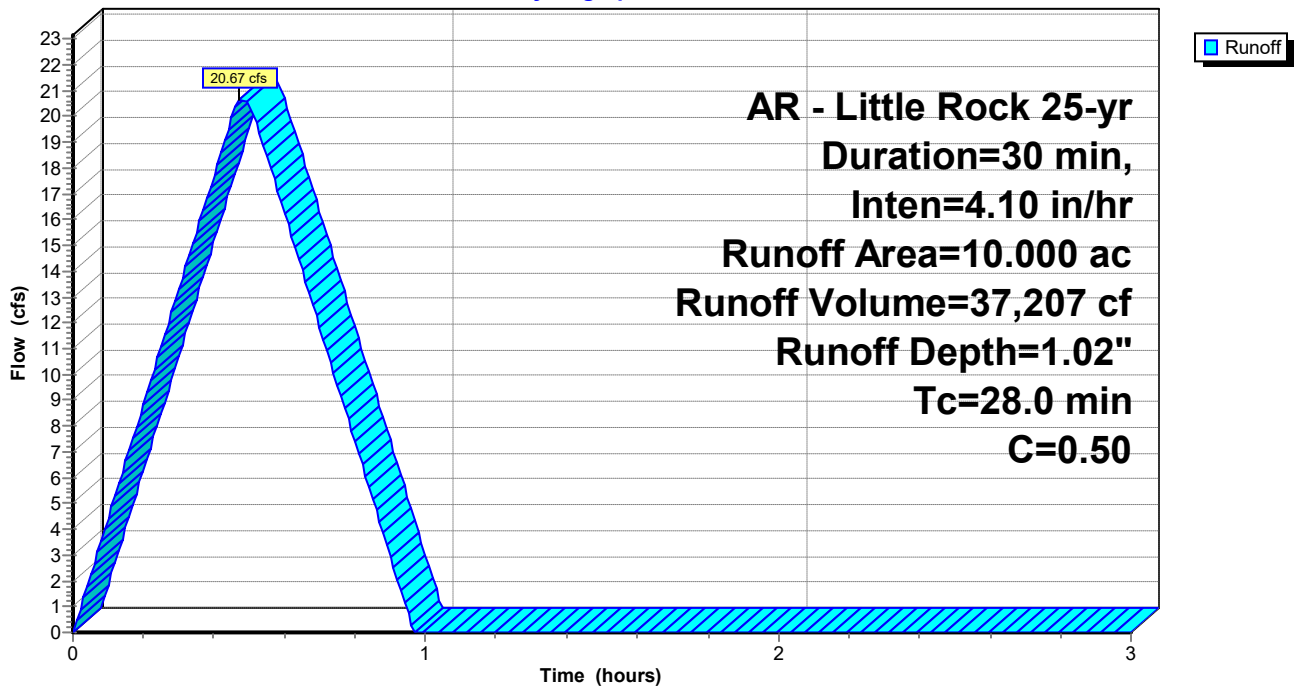
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (ac)	C	Description
10.000	0.50	Undeveloped
10.000		100.00% Pervious Area

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

Subcatchment PRE: Pre-Development Discharge

Hydrograph



Summary for Subcatchment PRE: Pre-Development Discharge

Runoff = 24.60 cfs @ 0.47 hrs, Volume= 44,286 cf, Depth= 1.22"

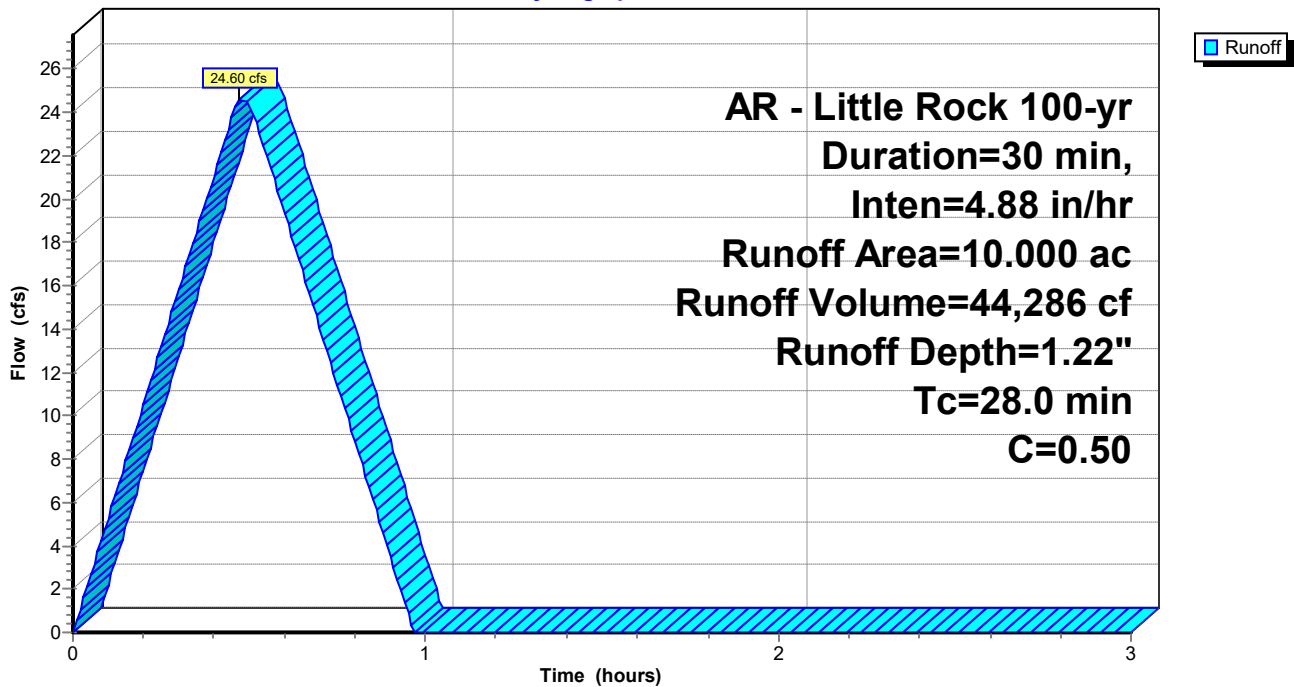
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (ac)	C	Description
10.000	0.50	Undeveloped
10.000		100.00% Pervious Area

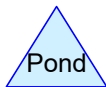
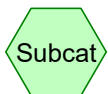
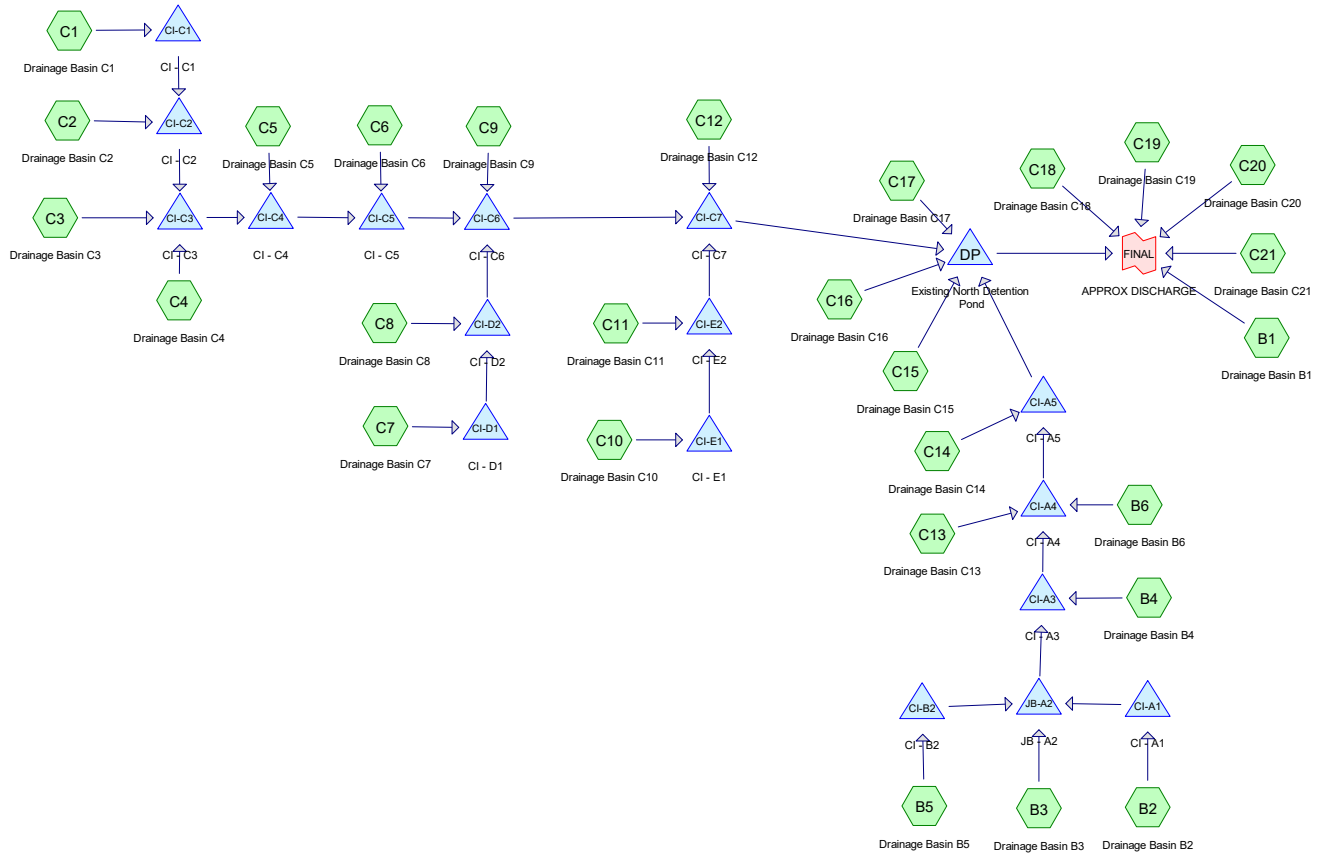
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.0					Direct Entry,

Subcatchment PRE: Pre-Development Discharge

Hydrograph



POST DEVELOPMENT HYDROGRAPHS



Routing Diagram for Goddard
 Prepared by Phillip Lewis Engineering, Printed 3/11/2026
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Summary for Subcatchment B1: Drainage Basin B1

Runoff = 0.64 cfs @ 0.10 hrs, Volume= 1,151 cf, Depth= 0.55"
 Routed to Link FINAL : APPROX DISCHARGE

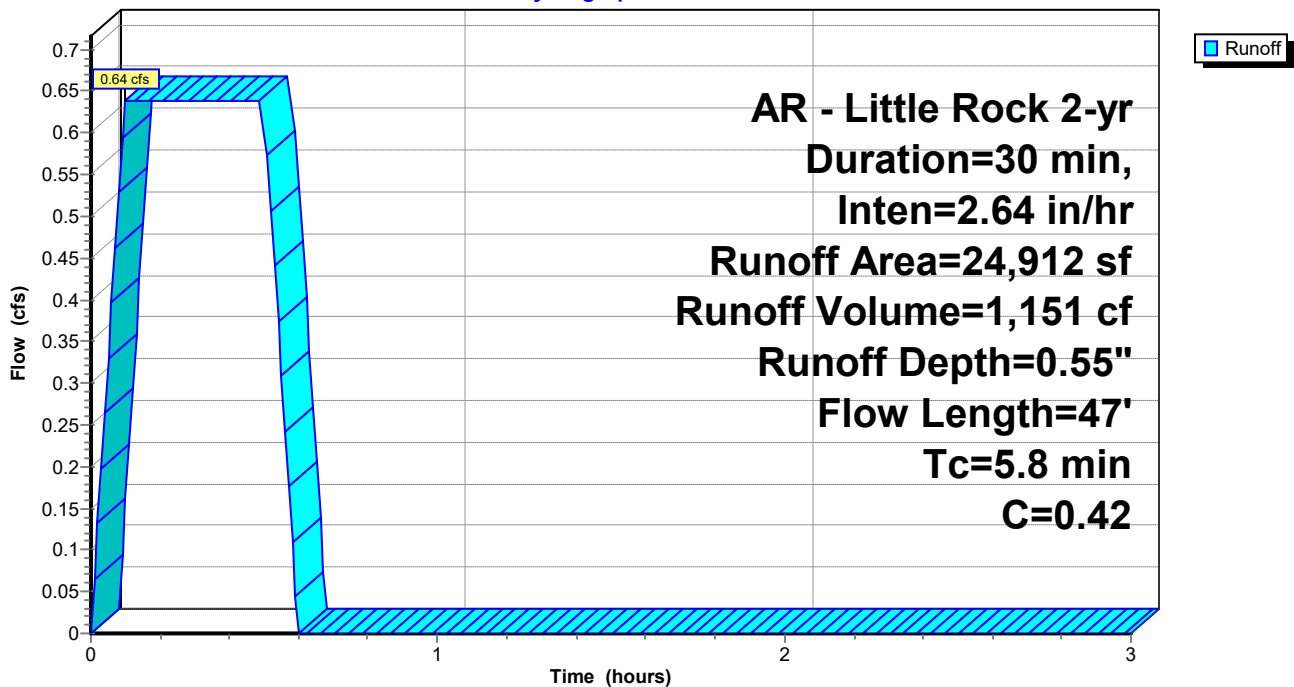
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
24,091	0.40	Sod Yard
821	0.95	Paving, Sidewalks
24,912	0.42	Weighted Average
24,091		96.70% Pervious Area
821		3.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.3	9	0.0310	0.06		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
3.5	38	0.2040	0.18		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
5.8	47	Total			

Subcatchment B1: Drainage Basin B1

Hydrograph



Goddard

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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment B2: Drainage Basin B2

Runoff = 0.96 cfs @ 0.09 hrs, Volume= 1,737 cf, Depth= 1.07"
 Routed to Pond CI-A1 : CI - A1

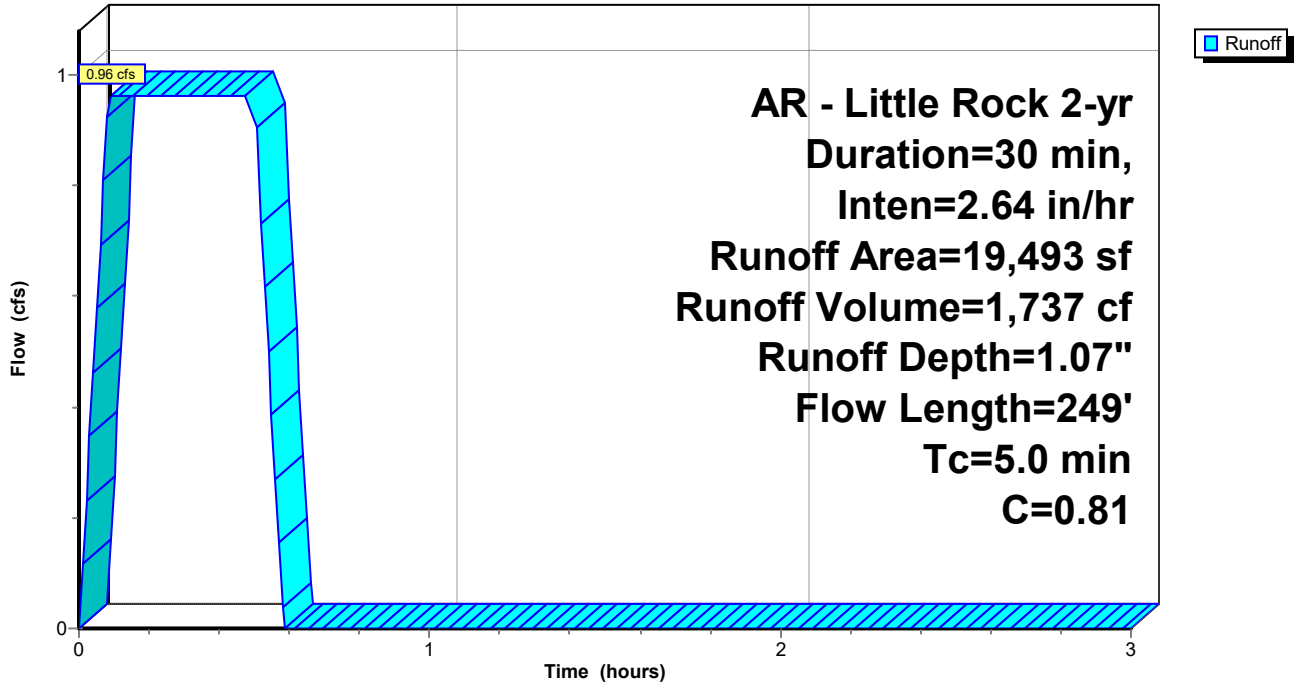
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
4,903	0.40	Sod Yard
14,590	0.95	Paving, Sidewalks
19,493	0.81	Weighted Average
4,903		25.15% Pervious Area
14,590		74.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	31	0.0230	1.32		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	18	0.0250	1.22		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.3	28	0.0450	1.69		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.4	72	0.0250	3.21		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	18	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.3	51	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	16	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	8	0.0430	4.21		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	7	0.0580	4.89		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.2					Direct Entry, Overland Concentrated Flow (Min)
5.0	249	Total			

Subcatchment B2: Drainage Basin B2

Hydrograph



Summary for Subcatchment B3: Drainage Basin B3

Runoff = 0.54 cfs @ 0.09 hrs, Volume= 969 cf, Depth= 1.25"
 Routed to Pond JB-A2 : JB - A2

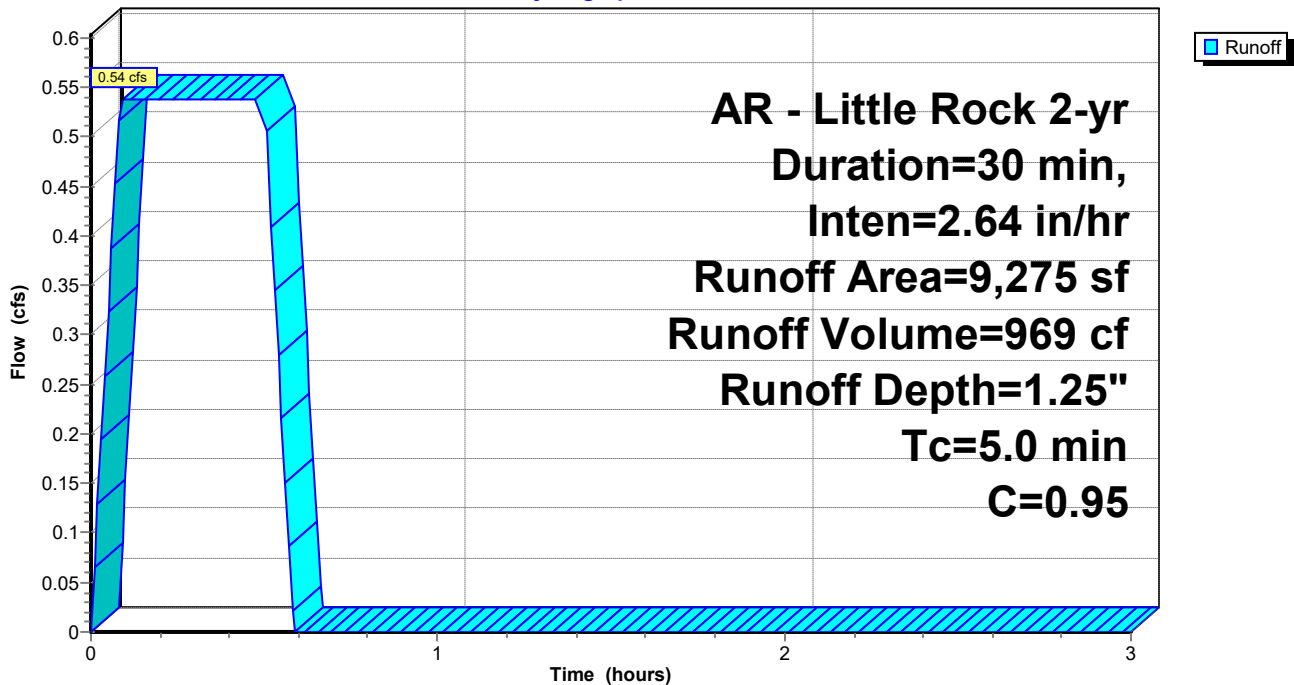
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
9,275	0.95	Roof
9,275		100.00% Impervious Area

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

Subcatchment B3: Drainage Basin B3

Hydrograph



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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment B4: Drainage Basin B4

Runoff = 0.11 cfs @ 0.09 hrs, Volume= 197 cf, Depth= 1.25"
 Routed to Pond CI-A3 : CI - A3

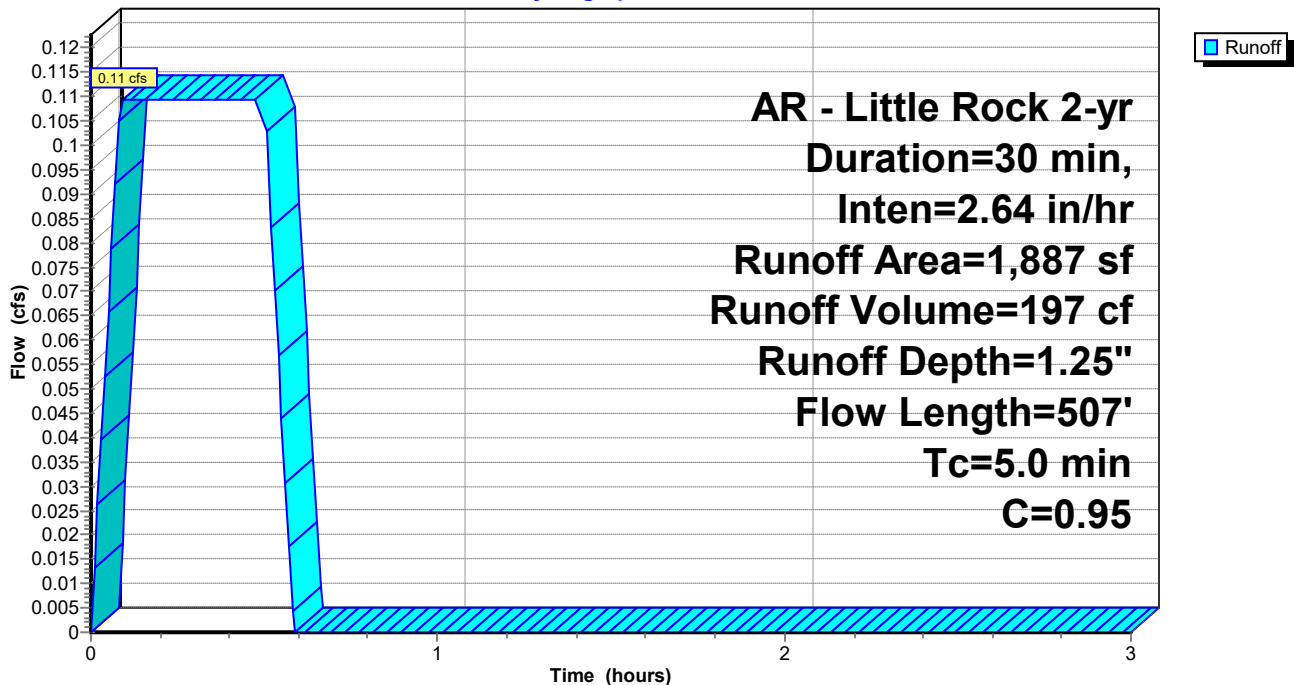
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
1,887	0.95	Paving, Sidewalks
1,887	0.95	Weighted Average
1,887		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	31	0.0230	1.32		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	18	0.0250	1.22		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.4	30	0.0240	1.33		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.0	13	0.0860	5.95		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.0	415		1.73		Direct Entry, Overland Concentrated Flow (Min)
5.0	507	Total			

Subcatchment B4: Drainage Basin B4

Hydrograph



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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment B5: Drainage Basin B5

Runoff = 0.85 cfs @ 0.17 hrs, Volume= 1,526 cf, Depth= 0.83"
 Routed to Pond CI-B2 : CI - B2

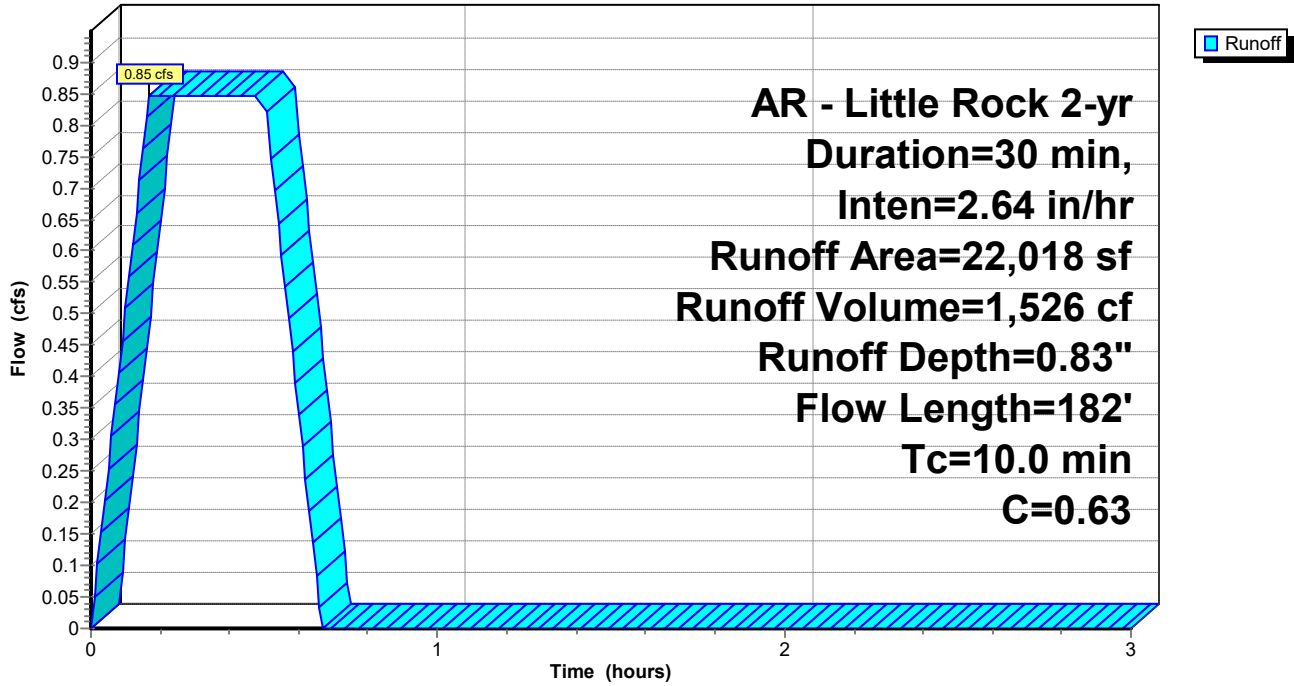
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
12,753	0.40	Sod Yard
9,265	0.95	Paving, Sidewalks
22,018	0.63	Weighted Average
12,753		57.92% Pervious Area
9,265		42.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	10	0.0150	0.89		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
9.1	93	0.0150	0.17		Sheet Flow, Sheet Flow Grass: Short n= 0.150 P2= 4.19"
0.4	40	0.0110	1.57		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	33	0.0190	2.07		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.0	6	0.0180	2.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
10.0	182	Total			

Subcatchment B5: Drainage Basin B5

Hydrograph



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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment B6: Drainage Basin B6

Runoff = 0.30 cfs @ 0.24 hrs, Volume= 540 cf, Depth= 0.69"
 Routed to Pond CI-A4 : CI - A4

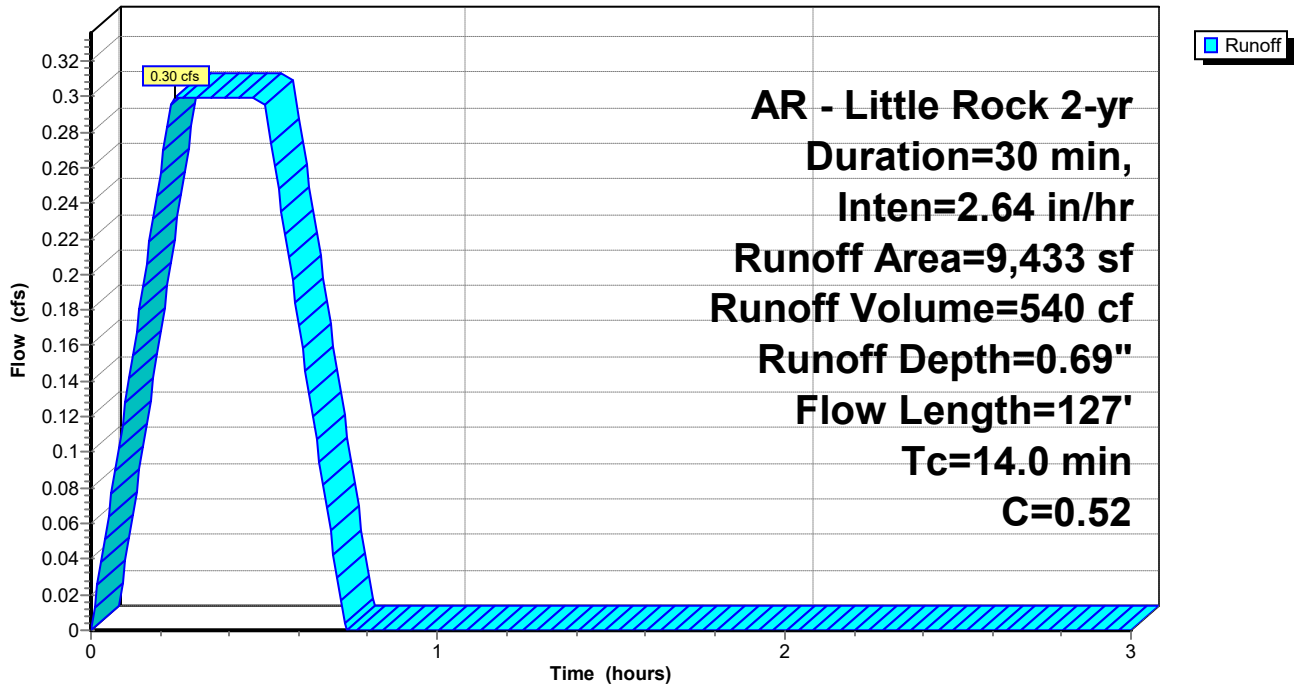
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
7,346	0.40	Sod Yard
2,087	0.95	Paving, Sidewalks
9,433	0.52	Weighted Average
7,346		77.88% Pervious Area
2,087		22.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.4	79	0.0570	0.13		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
3.5	21	0.0620	0.10		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.0	9	0.0620	3.73		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.1	18	0.1080	4.93		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
14.0	127	Total			

Subcatchment B6: Drainage Basin B6

Hydrograph



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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment C1: Drainage Basin C1

Runoff = 0.97 cfs @ 0.09 hrs, Volume= 1,745 cf, Depth= 1.03"
 Routed to Pond CI-C1 : CI - C1

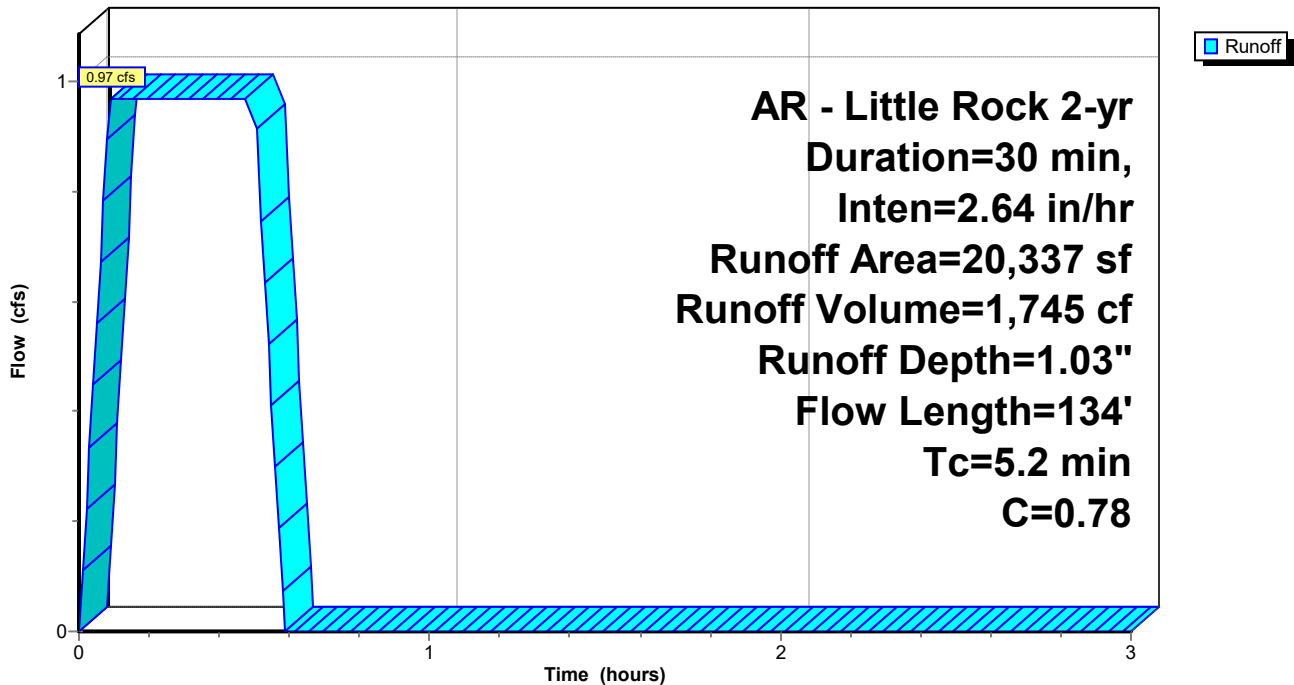
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
6,135	0.40	Sod Yard
14,202	0.95	Paving, Sidewalks
20,337	0.78	Weighted Average
6,135		30.17% Pervious Area
14,202		69.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	32	0.0660	0.11		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.4	102	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
5.2	134	Total			

Subcatchment C1: Drainage Basin C1

Hydrograph



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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment C10: Drainage Basin C10

Runoff = 0.27 cfs @ 0.09 hrs, Volume= 494 cf, Depth= 1.10"
 Routed to Pond CI-E1 : CI - E1

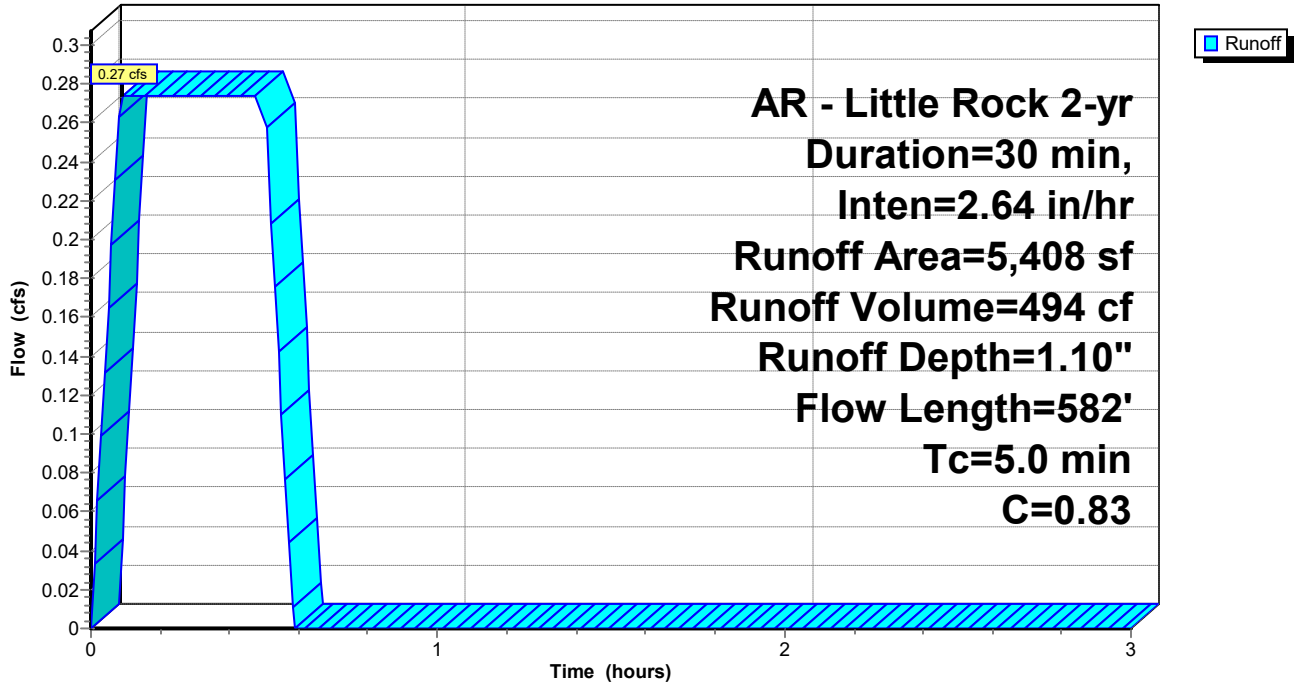
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
1,225	0.40	Sod Yard
4,183	0.95	Paving, Sidewalks
5,408	0.83	Weighted Average
1,225		22.65% Pervious Area
4,183		77.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	1.12		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	29	0.0210	2.94		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	23	0.0320	3.63		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	36	0.0320	3.63		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	48	0.0330	3.69		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	13	0.0350	3.80		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.9	415		1.77		Direct Entry, Concentrated Flow (Min)
5.0	582	Total			

Subcatchment C10: Drainage Basin C10

Hydrograph



Goddard

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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment C11: Drainage Basin C11

Runoff = 0.26 cfs @ 0.09 hrs, Volume= 469 cf, Depth= 0.91"
 Routed to Pond CI-E2 : CI - E2

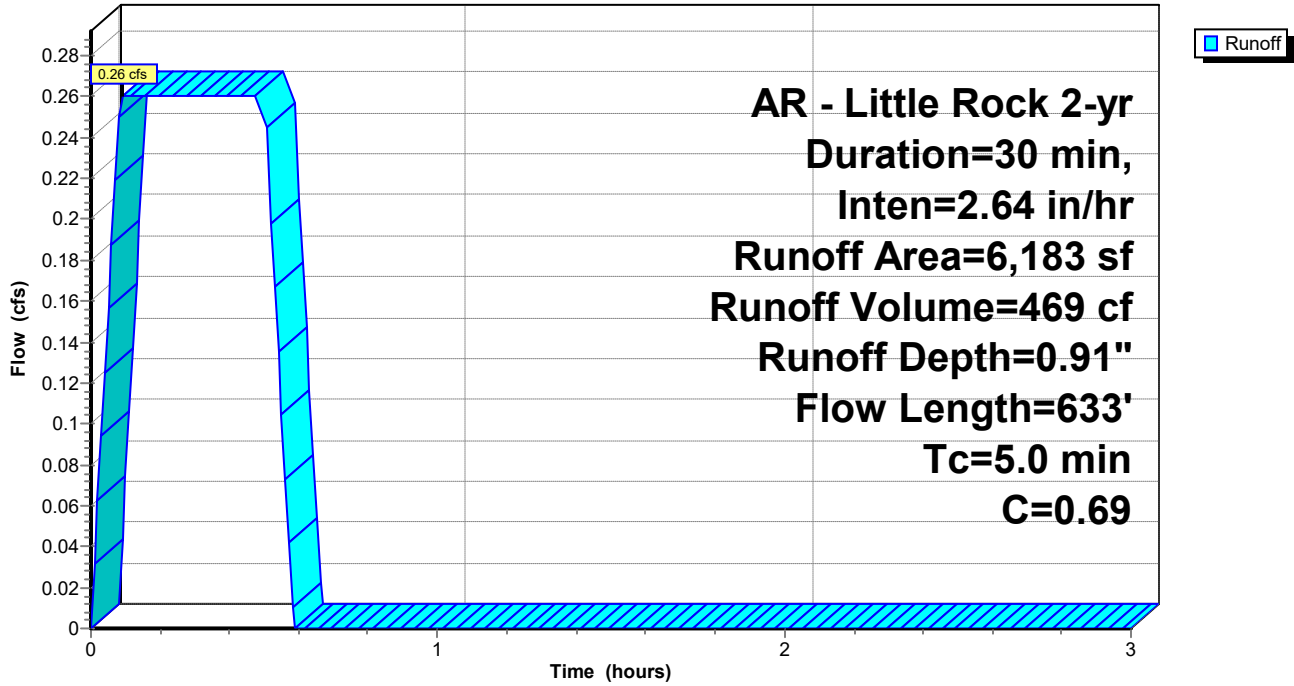
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
2,876	0.40	Sod Yard
3,307	0.95	Paving, Sidewalks
6,183	0.69	Weighted Average
2,876		46.51% Pervious Area
3,307		53.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	25	0.0200	1.19		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	33	0.0620	5.05		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	29	0.0540	4.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	47	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	47	0.0390	4.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	37	0.0420	4.16		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.0	415		1.73		Direct Entry, Concentrated Flow (Min)
5.0	633	Total			

Subcatchment C11: Drainage Basin C11

Hydrograph



Goddard

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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment C12: Drainage Basin C12

Runoff = 1.25 cfs @ 0.09 hrs, Volume= 2,258 cf, Depth= 1.06"
 Routed to Pond CI-C7 : CI - C7

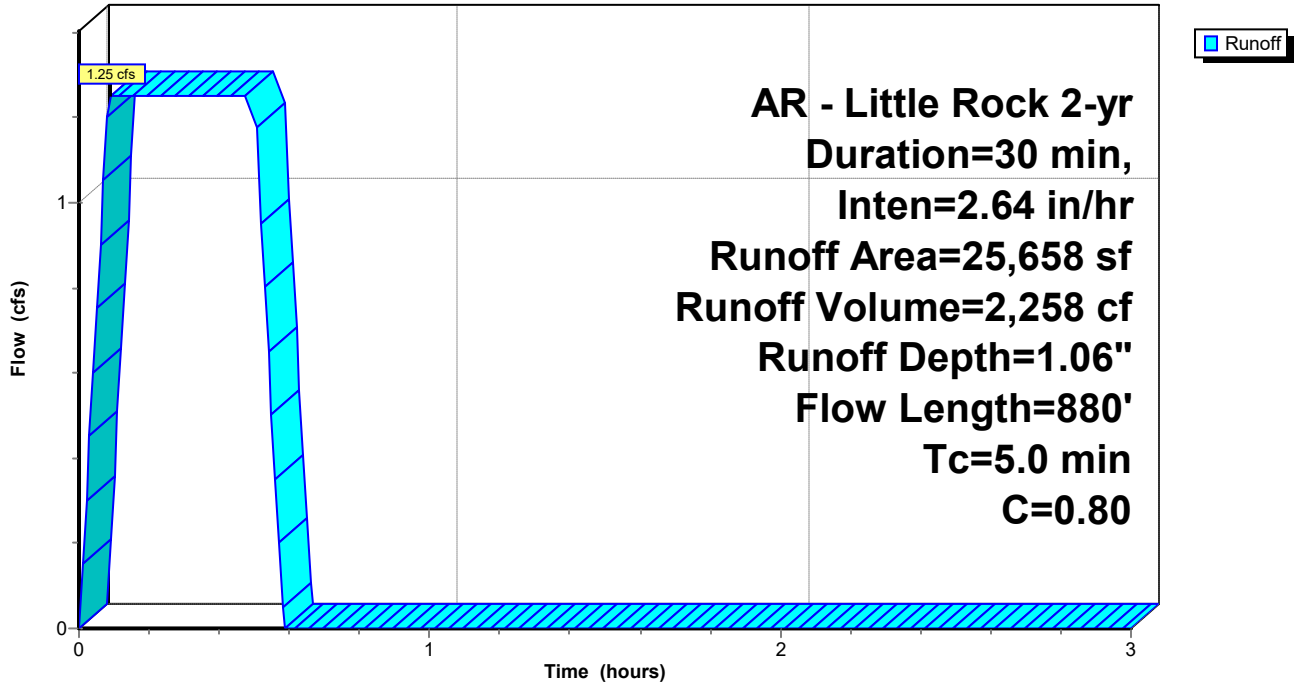
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
7,218	0.40	Sod Yard
18,440	0.95	Paving, Sidewalks
25,658	0.80	Weighted Average
7,218		28.13% Pervious Area
18,440		71.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	24	0.0360	1.50		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	5	0.0190	0.85		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	21	0.0100	2.03		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.9	49	0.0020	0.91		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.4	96	0.0330	3.69		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.3	94	0.0570	4.85		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	28	0.0560	4.80		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	25	0.0450	4.31		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	31	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	39	0.0490	4.49		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	36	0.0460	4.35		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	11	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	6	0.0440	4.26		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
2.3	415		3.01		Direct Entry, Concentrated Flow (Min)
5.0	880	Total			

Subcatchment C12: Drainage Basin C12

Hydrograph



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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment C13: Drainage Basin C13

Runoff = 0.63 cfs @ 0.09 hrs, Volume= 1,133 cf, Depth= 1.12"
 Routed to Pond CI-A4 : CI - A4

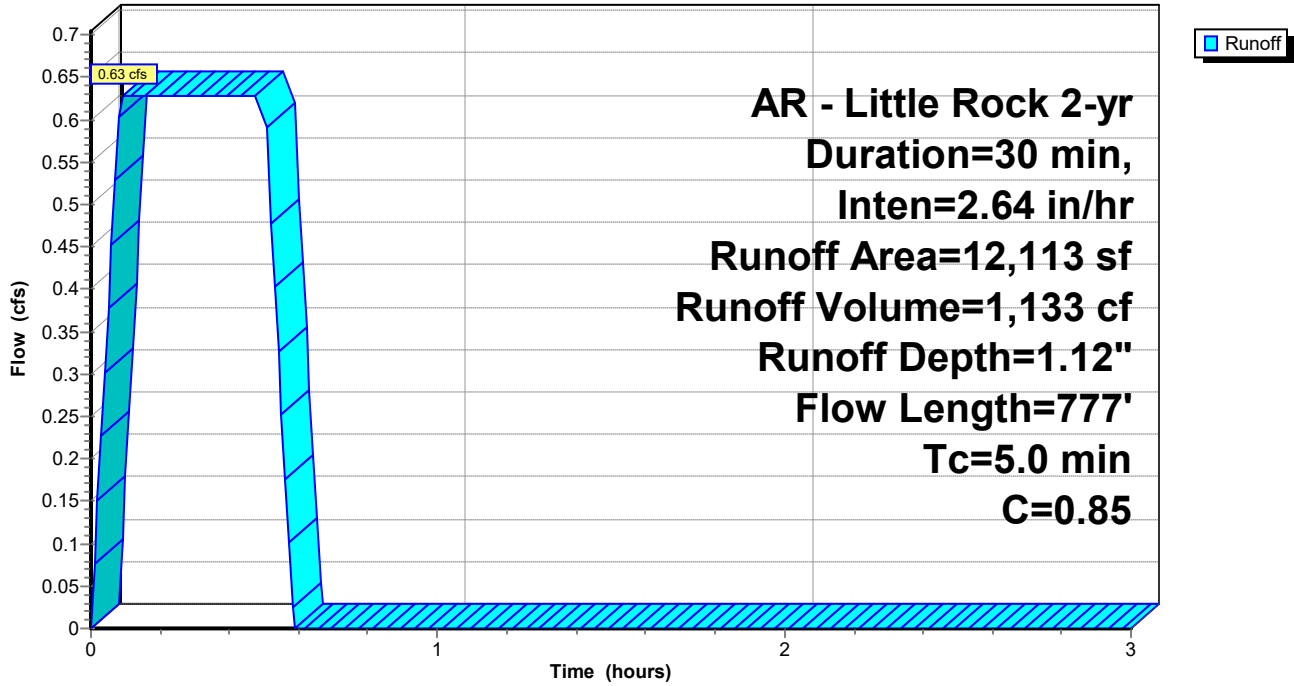
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
2,240	0.40	Sod Yard
9,873	0.95	Paving, Sidewalks
12,113	0.85	Weighted Average
2,240		18.49% Pervious Area
9,873		81.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	19	0.0200	1.13		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.3	75	0.0340	3.74		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	52	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	29	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	42	0.0730	5.48		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	74	0.0750	5.56		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	26	0.0710	5.41		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	32	0.0570	4.85		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	13	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.6	415		1.92		Direct Entry, Overland Concentrated Flow (Min)
5.0	777	Total			

Subcatchment C13: Drainage Basin C13

Hydrograph



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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment C14: Drainage Basin C14

Runoff = 1.08 cfs @ 0.27 hrs, Volume= 1,938 cf, Depth= 1.06"
 Routed to Pond CI-A5 : CI - A5

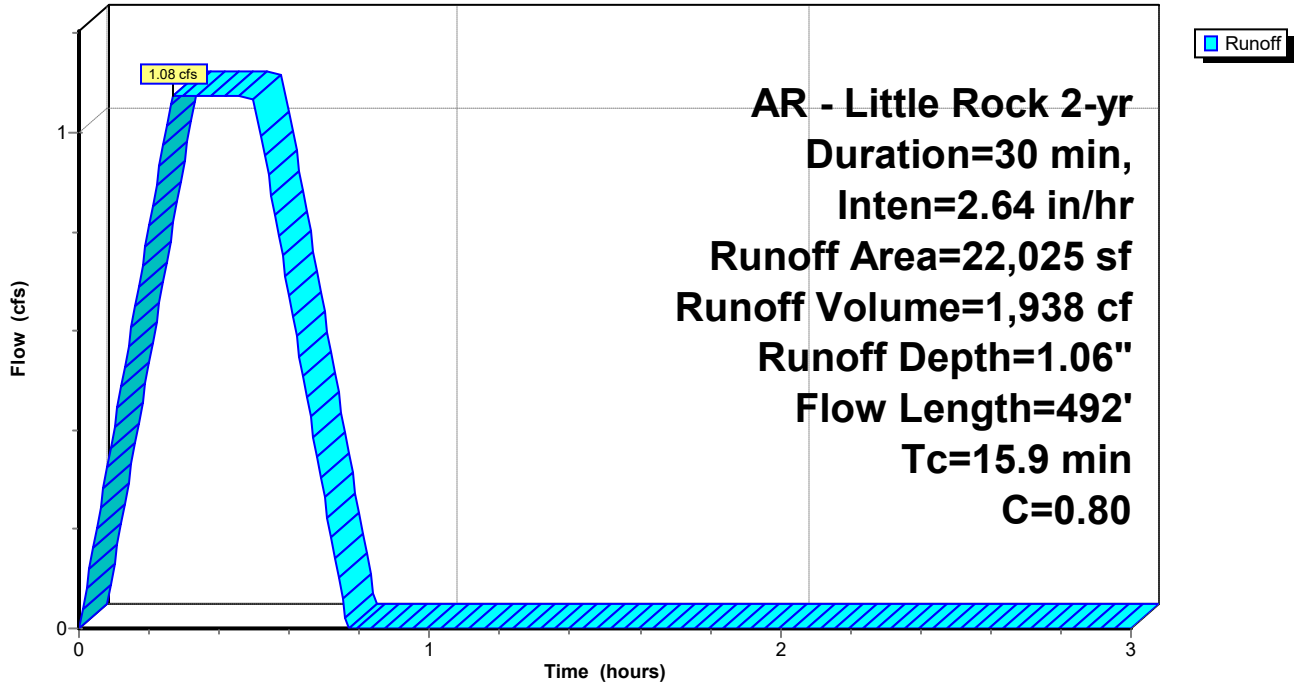
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
6,127	0.40	Sod Yard
15,898	0.95	Paving, Sidewalks
22,025	0.80	Weighted Average
6,127		27.82% Pervious Area
15,898		72.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	5	0.0310	0.06		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
9.2	45	0.0250	0.08		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
3.8	41	0.1940	0.18		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
0.1	6	0.0100	0.68		Sheet Flow, Sheet Flow
					Smooth surfaces n= 0.011 P2= 4.19"
0.1	51	0.0870	5.99		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.2	52	0.0310	3.57		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	18	0.0270	3.34		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	20	0.0400	4.06		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	34	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.2	46	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	36	0.0580	4.89		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.2	58	0.0690	5.33		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	49	0.0840	5.88		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	31	0.0690	5.33		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
15.9	492	Total			

Subcatchment C14: Drainage Basin C14

Hydrograph



Summary for Subcatchment C15: Drainage Basin C15

Runoff = 0.78 cfs @ 0.09 hrs, Volume= 1,406 cf, Depth= 1.25"

Routed to Pond DP : Existing North Detention Pond

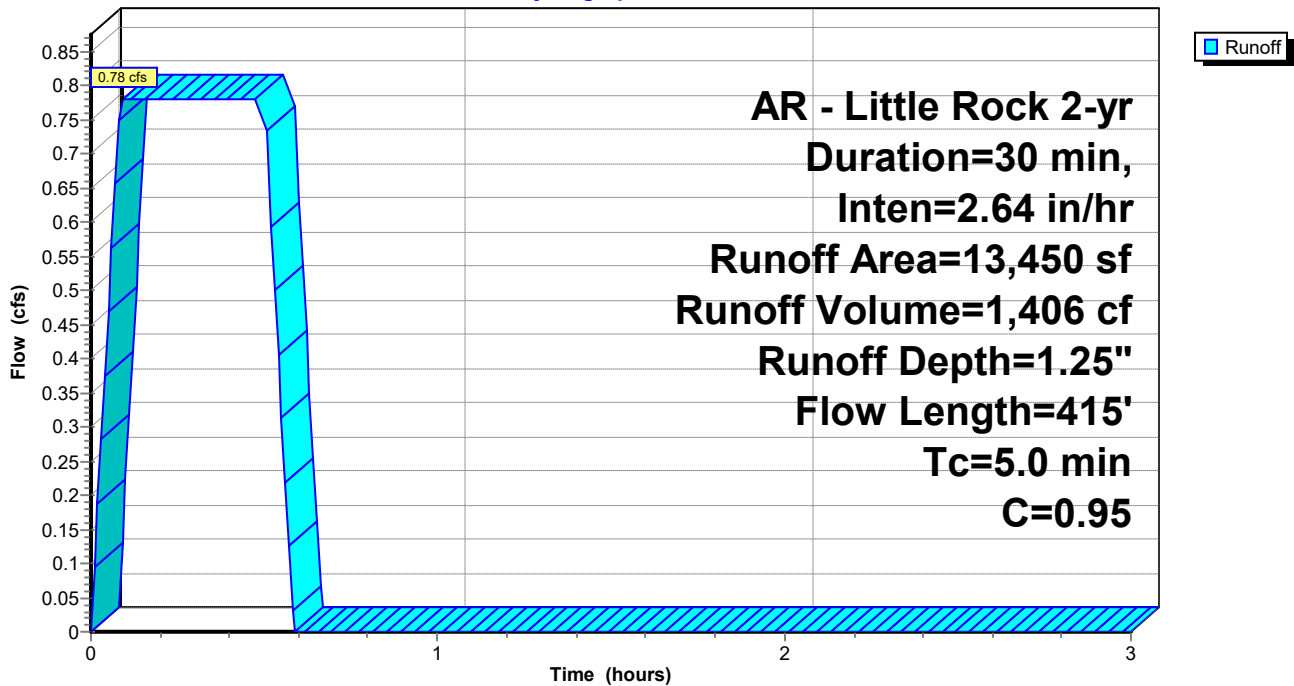
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
13,450	0.95	Paving, Sidewalks
13,450	0.95	Weighted Average
13,450		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	415		1.38		Direct Entry, Overland Concentrated Flow (Min)

Subcatchment C15: Drainage Basin C15

Hydrograph



Summary for Subcatchment C16: Drainage Basin C16

Runoff = 0.76 cfs @ 0.09 hrs, Volume= 1,360 cf, Depth= 0.74"

Routed to Pond DP : Existing North Detention Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

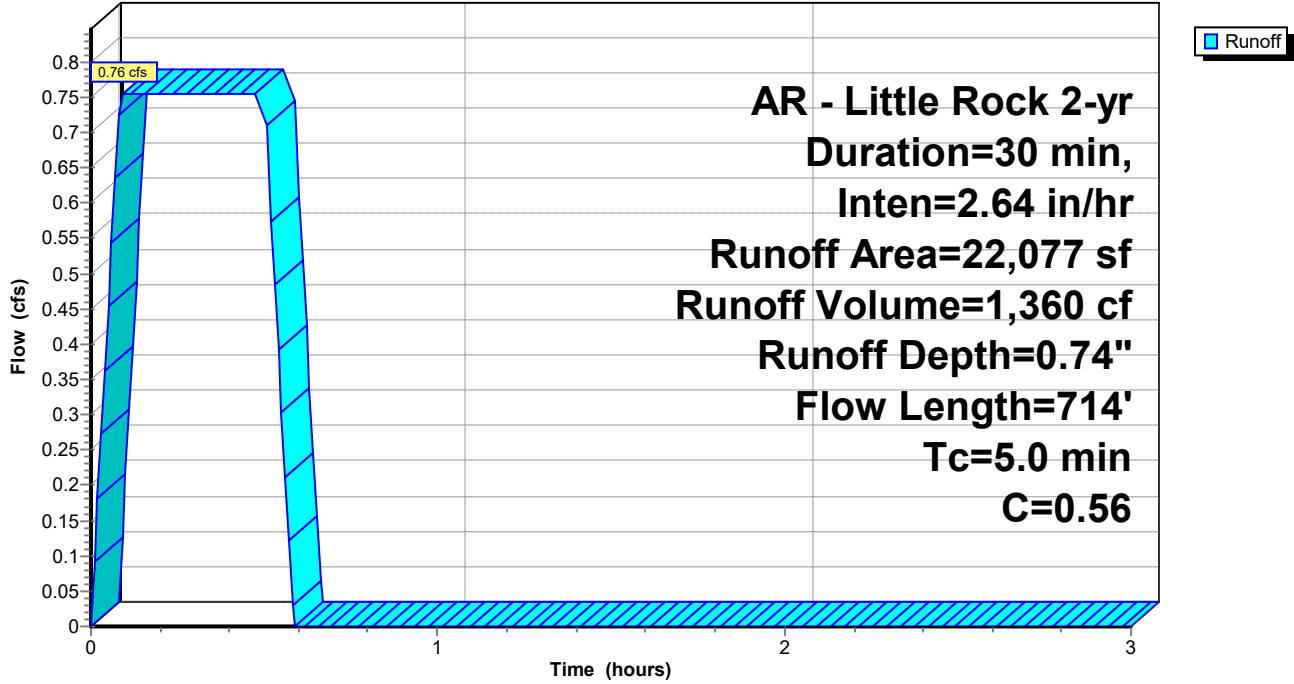
AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
15,465	0.40	Sod Yard
6,612	0.95	Paving, Sidewalks
22,077	0.56	Weighted Average
15,465		70.05% Pervious Area
6,612		29.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	26	0.0190	1.18		Sheet Flow, Sheet Flow
					Smooth surfaces n= 0.011 P2= 4.19"
0.1	5	0.0100	0.66		Sheet Flow, Sheet Flow
					Smooth surfaces n= 0.011 P2= 4.19"
0.4	51	0.0500	1.98		Sheet Flow, Sheet Flow
					Smooth surfaces n= 0.011 P2= 4.19"
0.1	12	0.1540	2.33		Sheet Flow, Sheet Flow
					Smooth surfaces n= 0.011 P2= 4.19"
0.1	50	0.1330	7.40		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	50	0.1170	6.94		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.2	46	0.0430	4.21		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.3	59	0.0370	3.90		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
3.3	415		2.10		Direct Entry, Overland Concentrated Flow (Min)
5.0	714	Total			

Subcatchment C16: Drainage Basin C16

Hydrograph



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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment C17: Drainage Basin C17

Runoff = 1.91 cfs @ 0.16 hrs, Volume= 3,433 cf, Depth= 0.73"

Routed to Pond DP : Existing North Detention Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

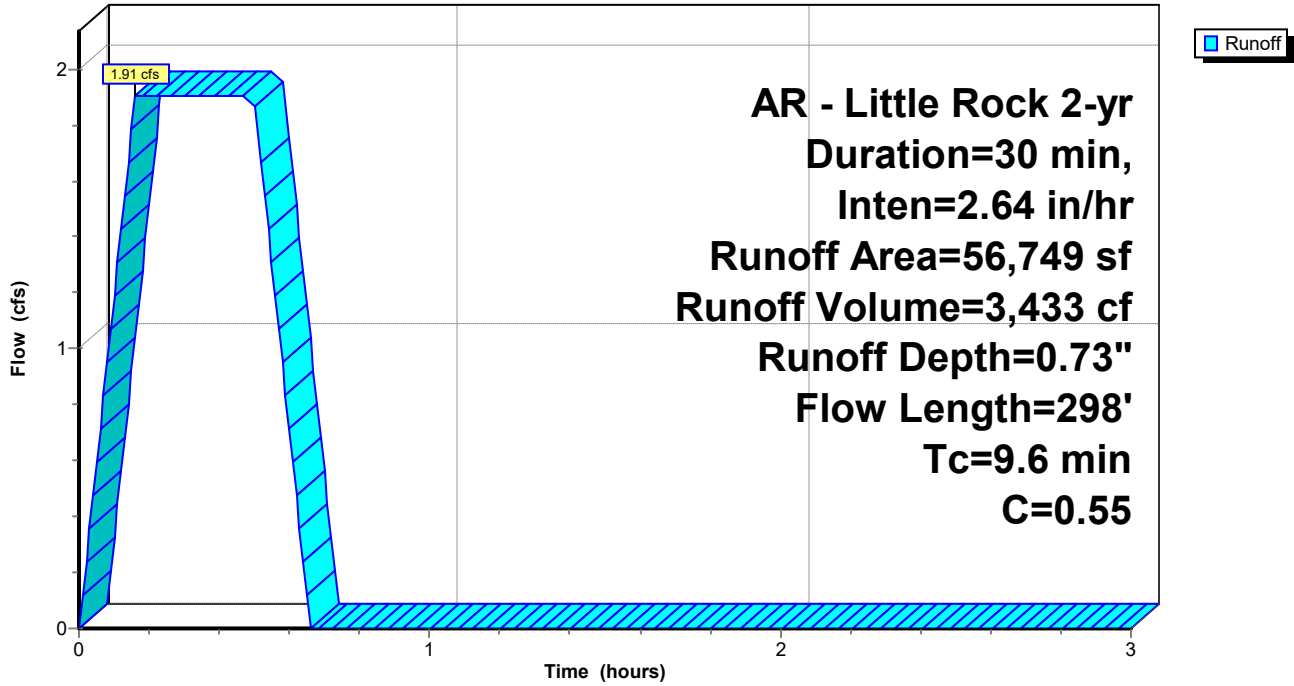
AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
40,914	0.40	Sod Yard
15,835	0.95	Paving, Sidewalks
56,749	0.55	Weighted Average
40,914		72.10% Pervious Area
15,835		27.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	43	0.0410	0.15		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
3.9	43	0.0690	0.19		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
0.1	41	0.0980	4.70		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	61	0.0730	4.05		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.2	46	0.0570	3.58		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	64	0.0450	3.18		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
9.6	298	Total			

Subcatchment C17: Drainage Basin C17

Hydrograph



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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment C18: Drainage Basin C18

Runoff = 0.89 cfs @ 0.09 hrs, Volume= 1,604 cf, Depth= 0.84"

Routed to Link FINAL : APPROX DISCHARGE

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

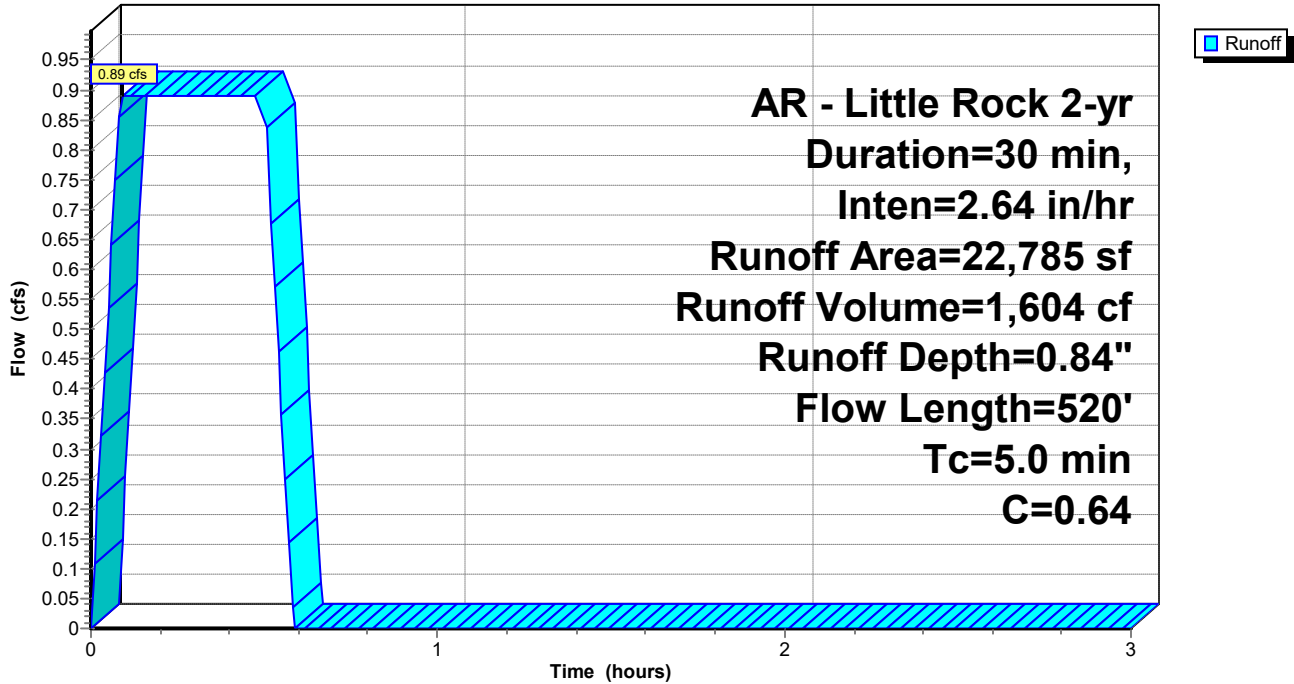
AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
12,812	0.40	Sod Yard
9,973	0.95	Paving, Sidewalks
22,785	0.64	Weighted Average
12,812		56.23% Pervious Area
9,973		43.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	5	0.2980	0.14		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.2	12	0.0130	0.87		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
3.3	8	0.0100	0.04		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.5	80	0.0210	2.94		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.4	415		17.29		Direct Entry, Concentrated Flow (Min)
5.0	520	Total			

Subcatchment C18: Drainage Basin C18

Hydrograph



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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment C19: Drainage Basin C19

Runoff = 0.54 cfs @ 0.12 hrs, Volume= 971 cf, Depth= 0.65"
 Routed to Link FINAL : APPROX DISCHARGE

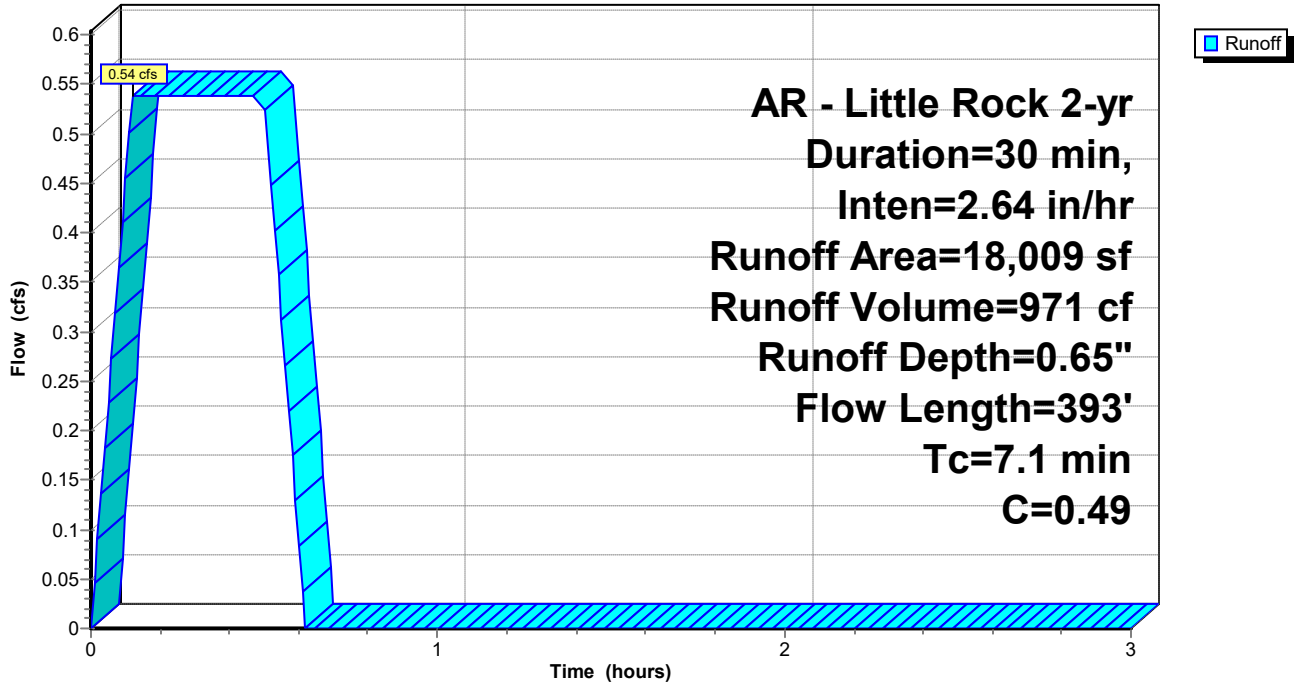
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
15,129	0.40	Sod Yard
2,880	0.95	Paving, Sidewalks
18,009	0.49	Weighted Average
15,129		84.01% Pervious Area
2,880		15.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	34	0.1110	0.21		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
3.3	66	0.2450	0.34		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
0.0	9	0.2450	7.42		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.5	106	0.0610	3.70		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.2	46	0.0800	4.24		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.1	41	0.0960	4.65		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	66	0.0680	3.91		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.0	19	0.1070	6.64		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	6	0.0750	5.56		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
7.1	393	Total			

Subcatchment C19: Drainage Basin C19

Hydrograph



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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment C2: Drainage Basin C2

Runoff = 1.62 cfs @ 0.09 hrs, Volume= 2,909 cf, Depth= 1.02"
 Routed to Pond CI-C2 : CI - C2

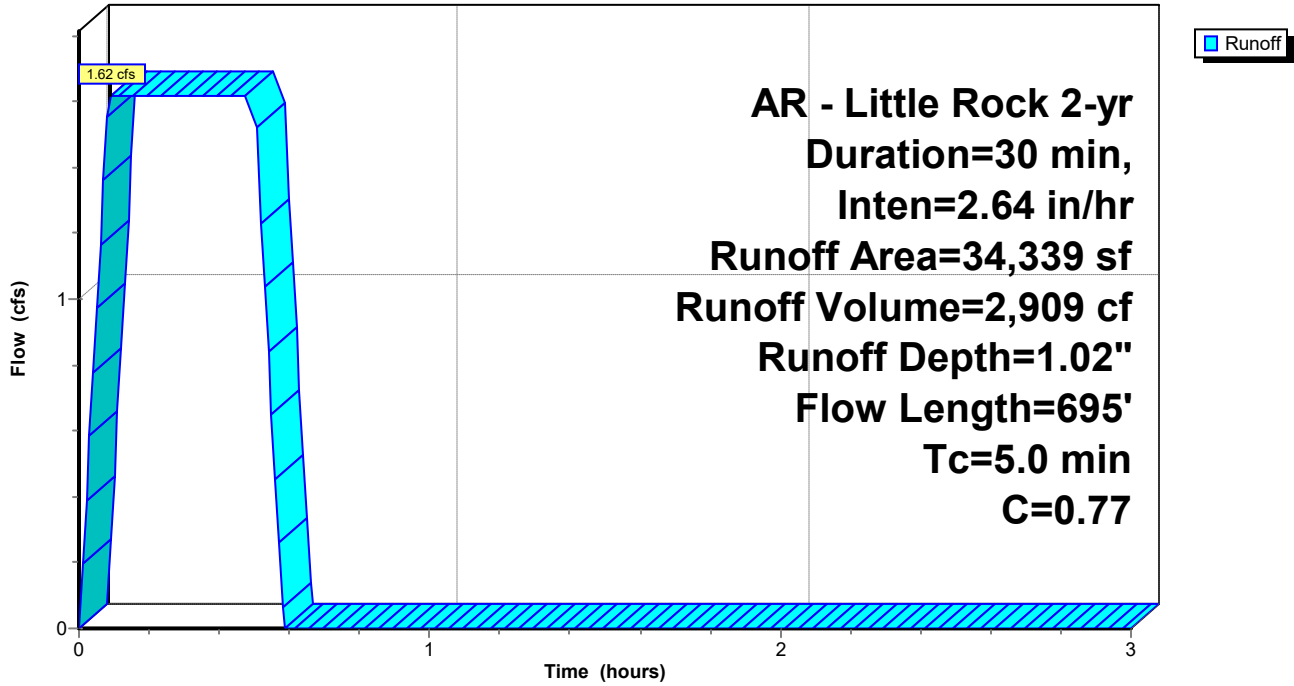
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
11,376	0.40	Sod Yard
22,963	0.95	Roof, Paving, Sidewalks
34,339	0.77	Weighted Average
11,376		33.13% Pervious Area
22,963		66.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	20	0.0200	1.14		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.4	74	0.0240	3.14		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	17	0.0710	5.41		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	21	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.6	148	0.0380	3.96		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.5	415		1.98		Direct Entry, Concentrated Flow (Min)
5.0	695	Total			

Subcatchment C2: Drainage Basin C2

Hydrograph



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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment C20: Drainage Basin C20

Runoff = 0.75 cfs @ 0.14 hrs, Volume= 1,344 cf, Depth= 0.59"
 Routed to Link FINAL : APPROX DISCHARGE

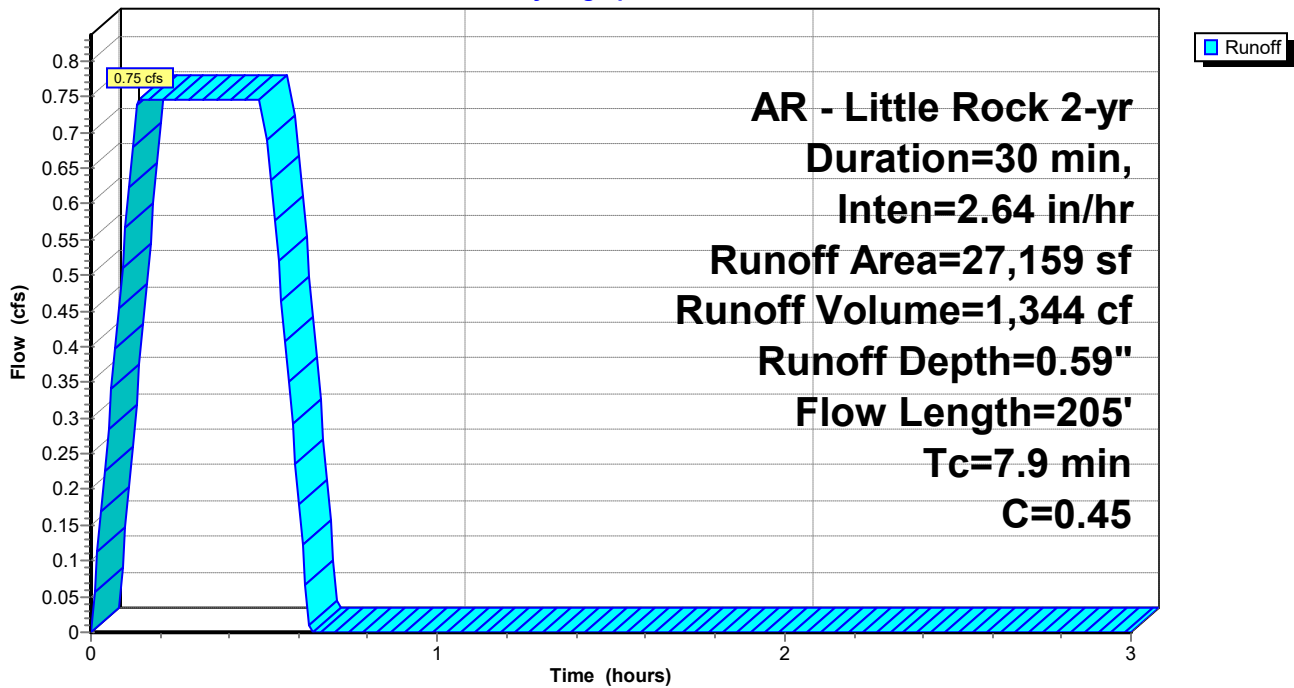
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
24,838	0.40	Sod Yard
2,321	0.95	Paving, Sidewalks
27,159	0.45	Weighted Average
24,838		91.45% Pervious Area
2,321		8.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	45	0.1430	0.25		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
4.5	55	0.0780	0.20		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
0.1	37	0.0780	4.19		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	68	0.0710	4.00		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
7.9	205	Total			

Subcatchment C20: Drainage Basin C20

Hydrograph



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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment C21: Drainage Basin C21

Runoff = 0.08 cfs @ 0.09 hrs, Volume= 149 cf, Depth= 0.83"

Routed to Link FINAL : APPROX DISCHARGE

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

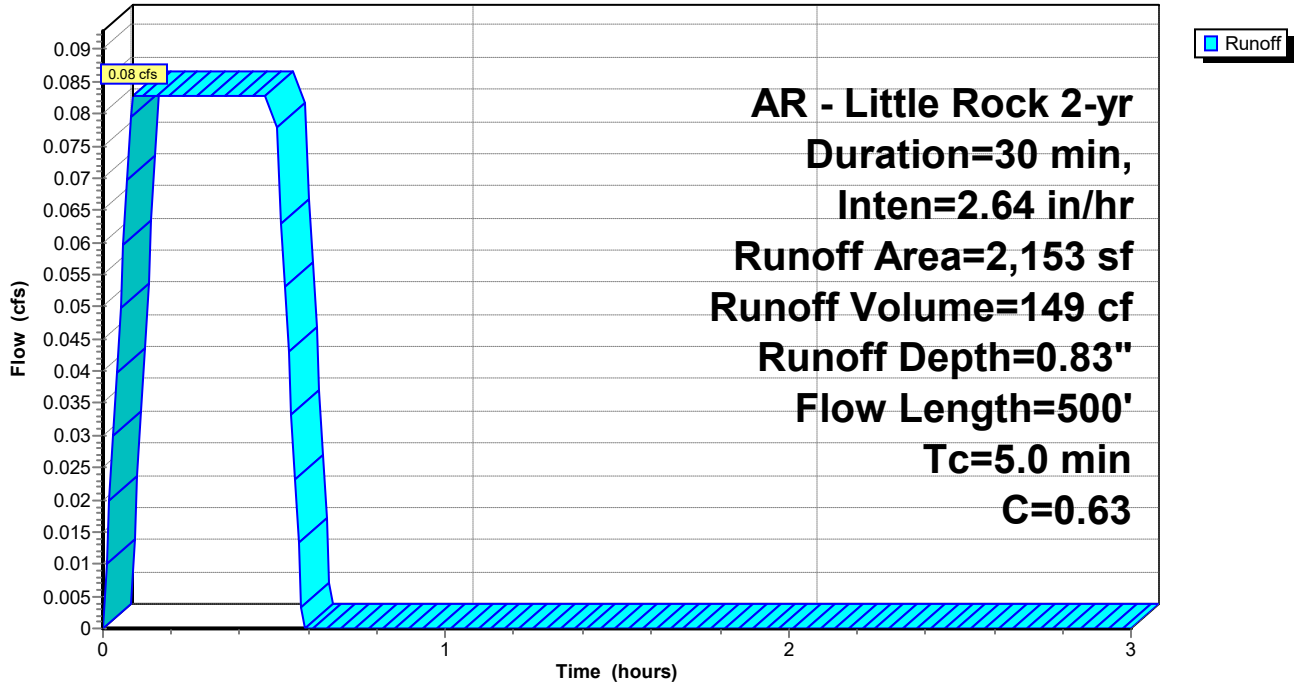
AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
1,234	0.40	Sod Yard
919	0.95	Paving, Sidewalks
2,153	0.63	Weighted Average
1,234		57.32% Pervious Area
919		42.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	2	0.2500	0.11		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
0.3	33	0.0520	1.85		Sheet Flow, Sheet Flow
					Smooth surfaces n= 0.011 P2= 4.19"
3.8	24	0.0660	0.11		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
0.1	26	0.0620	5.05		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.5	415		13.83		Direct Entry, Concentrated Flow (Min)
5.0	500	Total			

Subcatchment C21: Drainage Basin C21

Hydrograph



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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment C3: Drainage Basin C3

Runoff = 0.20 cfs @ 0.09 hrs, Volume= 364 cf, Depth= 1.25"
 Routed to Pond CI-C3 : CI - C3

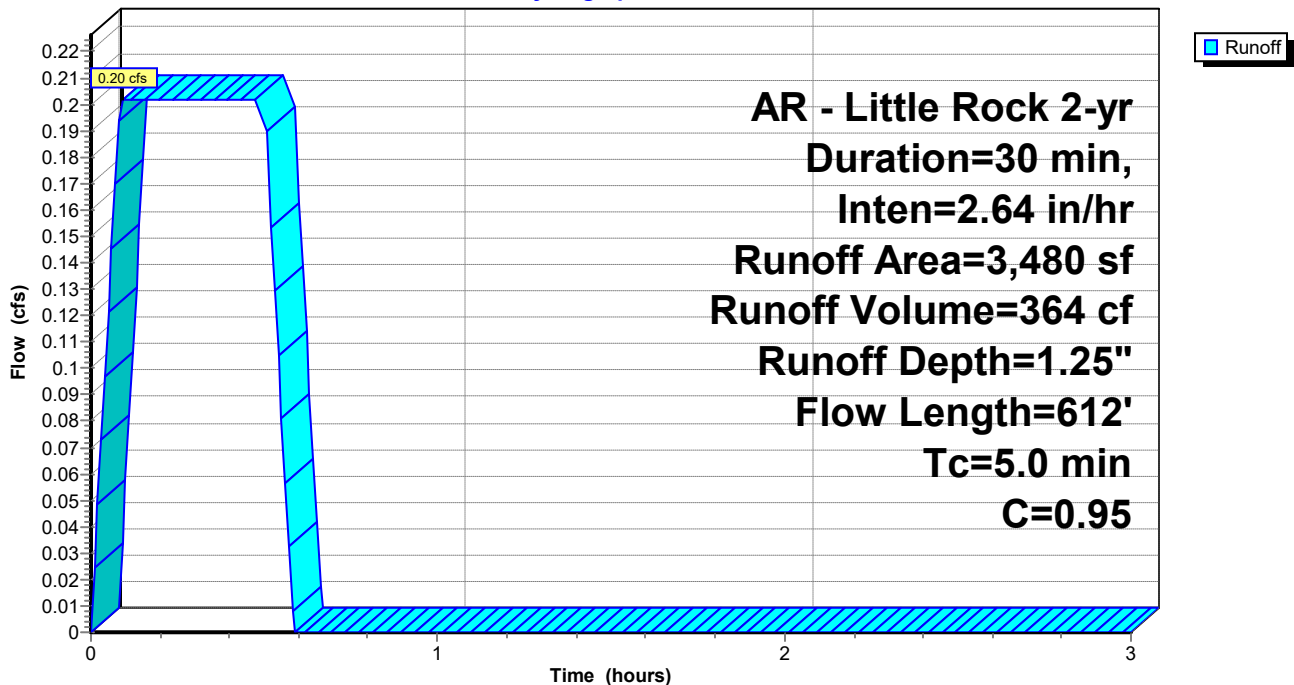
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
3,480	0.95	Paving, Sidewalks
3,480	0.95	Weighted Average
3,480		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	22	0.0200	1.16		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.0	10	0.0340	3.74		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	18	0.0390	4.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.6	147	0.0380	3.96		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.0	415		1.73		Direct Entry, Concentrated Flow (Min)
5.0	612	Total			

Subcatchment C3: Drainage Basin C3

Hydrograph



Summary for Subcatchment C4: Drainage Basin C4

Runoff = 0.39 cfs @ 0.09 hrs, Volume= 701 cf, Depth= 0.74"
 Routed to Pond CI-C3 : CI - C3

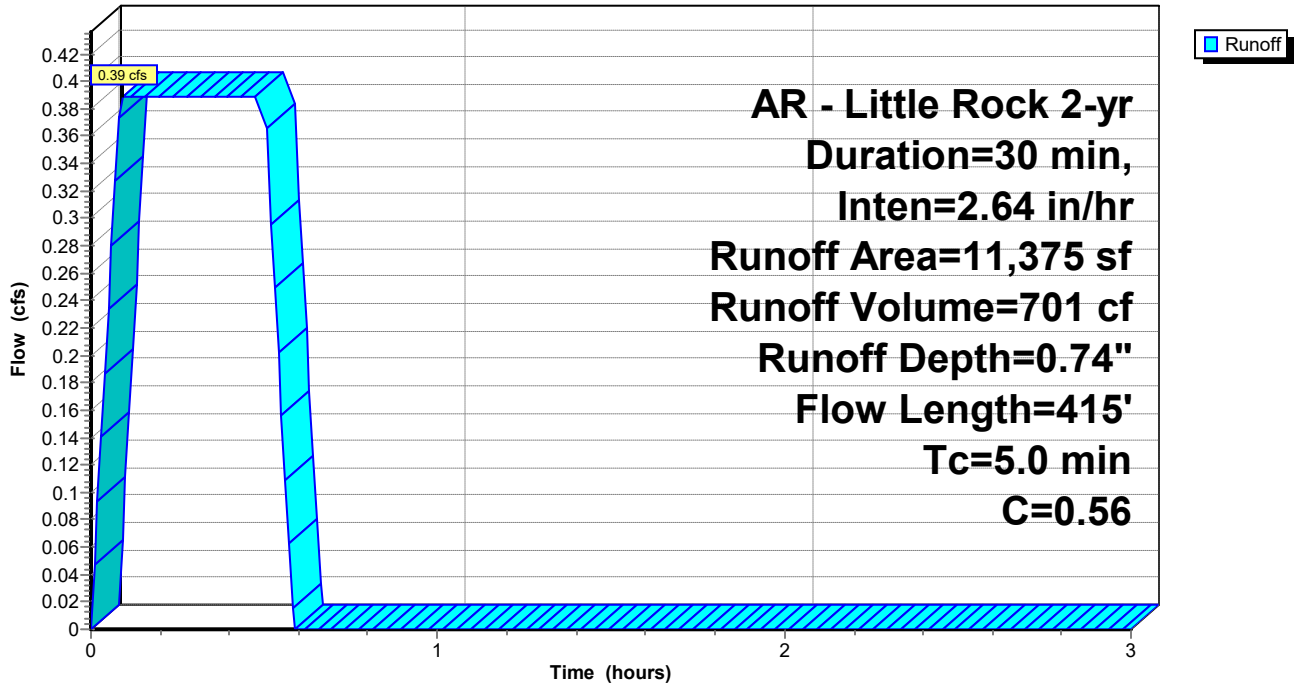
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
8,130	0.40	Sod Yard
3,245	0.95	Paving, Sidewalks
11,375	0.56	Weighted Average
8,130		71.47% Pervious Area
3,245		28.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	415		1.38		Direct Entry, Concentrated Flow (Min)

Subcatchment C4: Drainage Basin C4

Hydrograph



Goddard

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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment C5: Drainage Basin C5

Runoff = 0.34 cfs @ 0.10 hrs, Volume= 604 cf, Depth= 1.08"
 Routed to Pond CI-C4 : CI - C4

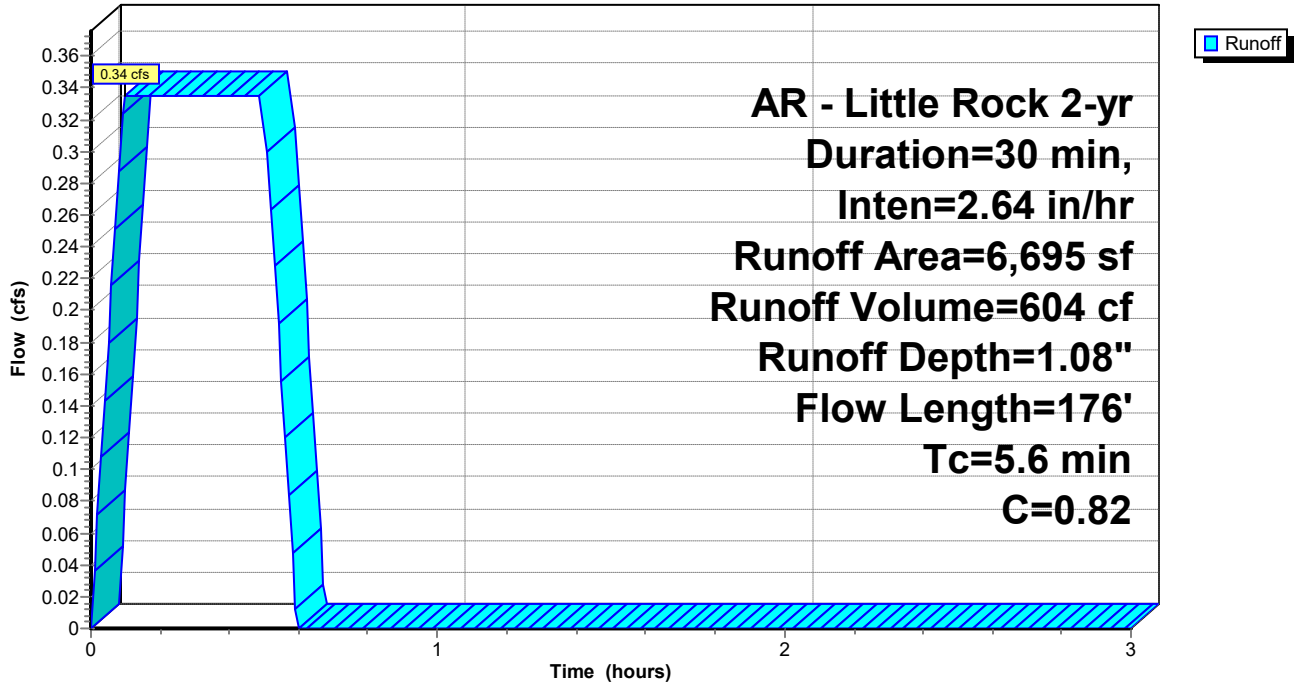
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
1,634	0.40	Sod Yard
5,061	0.95	Paving, Sidewalks
6,695	0.82	Weighted Average
1,634		24.41% Pervious Area
5,061		75.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	5	0.2990	0.14		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.2	12	0.0130	0.87		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
3.9	8	0.0070	0.03		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.5	58	0.0080	1.82		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	14	0.0280	3.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	23	0.0370	3.90		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	13	0.0940	6.22		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	13	0.0560	4.80		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	30	0.0180	2.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
5.6	176	Total			

Subcatchment C5: Drainage Basin C5

Hydrograph



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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment C6: Drainage Basin C6

Runoff = 0.16 cfs @ 0.09 hrs, Volume= 296 cf, Depth= 1.25"
 Routed to Pond CI-C5 : CI - C5

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
2,835	0.95	Paving, Sidewalks
2,835	0.95	Weighted Average
2,835		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	22	0.0200	1.16		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	19	0.0100	2.03		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	17	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	26	0.0360	3.85		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	28	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	27	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.1	415		1.69		Direct Entry, Concentrated Flow (Min)
5.0	554	Total			

Subcatchment C6: Drainage Basin C6

Hydrograph



Goddard

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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment C7: Drainage Basin C7

Runoff = 0.09 cfs @ 0.09 hrs, Volume= 167 cf, Depth= 1.25"
 Routed to Pond CI-D1 : CI - D1

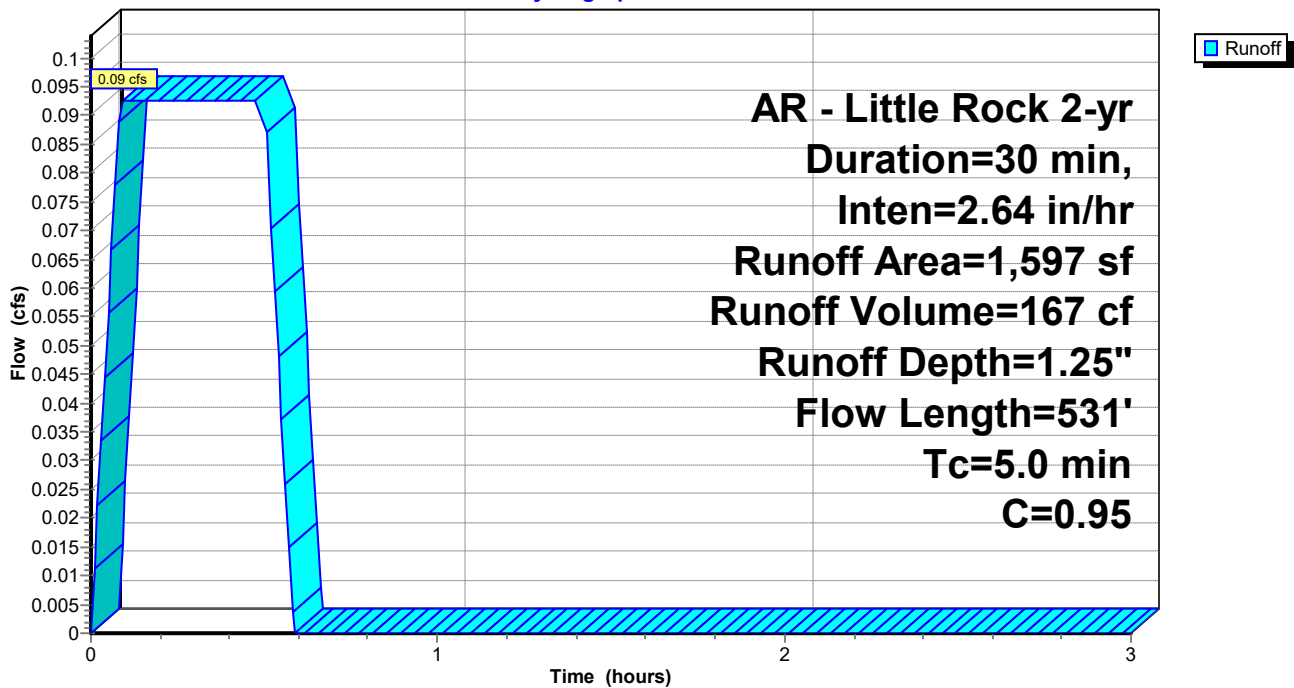
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
1,597	0.95	Paving, Sidewalks
1,597	0.95	Weighted Average
1,597		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	19	0.0200	1.13		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	16	0.0540	4.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.3	81	0.0580	4.89		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.3	415		1.61		Direct Entry, Concentrated Flow (Min)
5.0	531	Total			

Subcatchment C7: Drainage Basin C7

Hydrograph



Summary for Subcatchment C8: Drainage Basin C8

Runoff = 0.09 cfs @ 0.09 hrs, Volume= 162 cf, Depth= 1.25"
 Routed to Pond CI-D2 : CI - D2

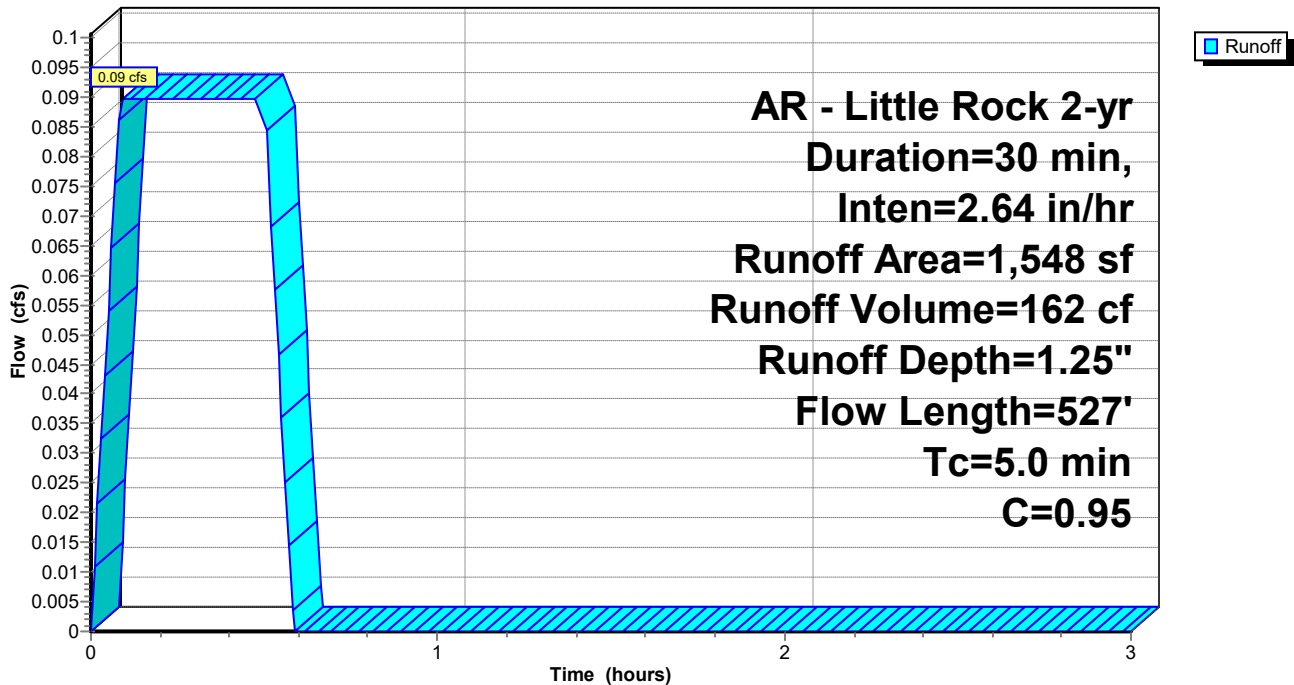
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
1,548	0.95	Paving, Sidewalks
1,548	0.95	Weighted Average
1,548		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	1.12		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.3	94	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.4	415		1.57		Direct Entry, Concentrated Flow (Min)
5.0	527	Total			

Subcatchment C8: Drainage Basin C8

Hydrograph



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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Subcatchment C9: Drainage Basin C9

Runoff = 0.65 cfs @ 0.09 hrs, Volume= 1,170 cf, Depth= 1.02"
 Routed to Pond CI-C6 : CI - C6

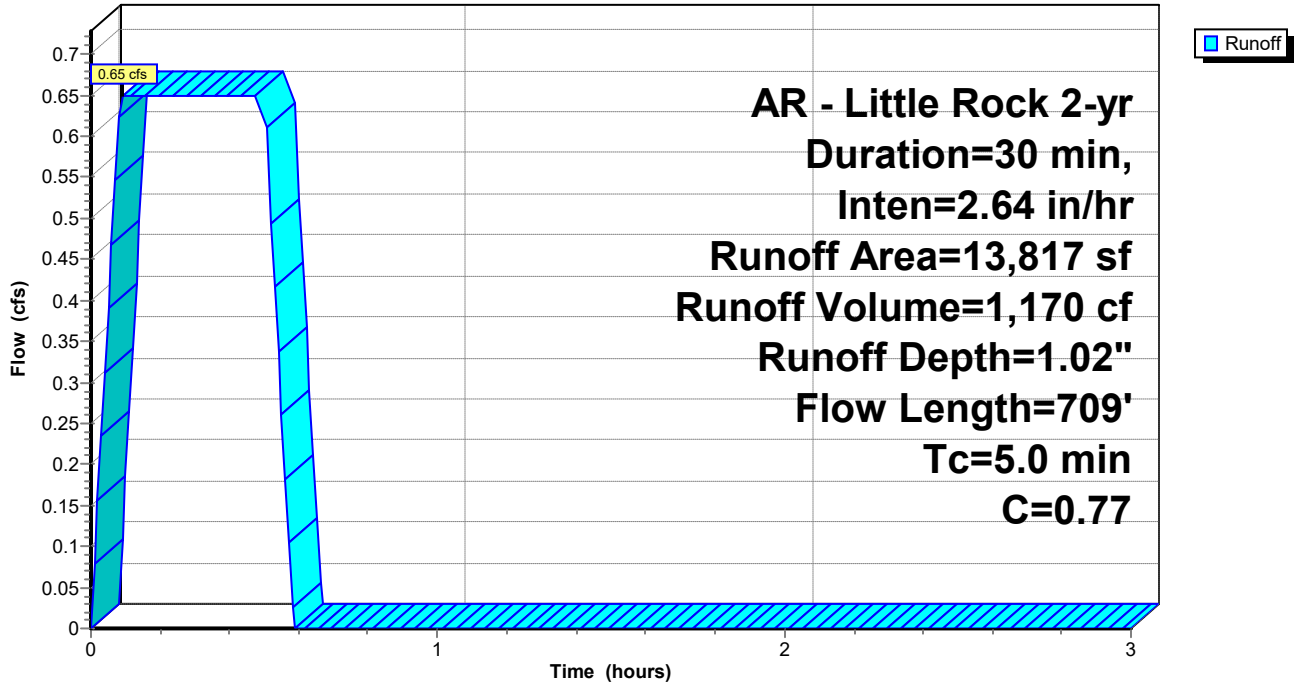
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

Area (sf)	C	Description
4,456	0.40	Sod Yard
9,361	0.95	Paving, Sidewalks
13,817	0.77	Weighted Average
4,456		32.25% Pervious Area
9,361		67.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0140	1.36		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	13	0.0150	2.49		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	23	0.0160	2.57		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	7	0.0050	1.44		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	8	0.0100	2.03		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	41	0.0420	4.16		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	41	0.0540	4.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	61	0.0520	4.63		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
2.9	415		2.39		Direct Entry, Concentrated Flow (Min)
5.0	709	Total			

Subcatchment C9: Drainage Basin C9

Hydrograph



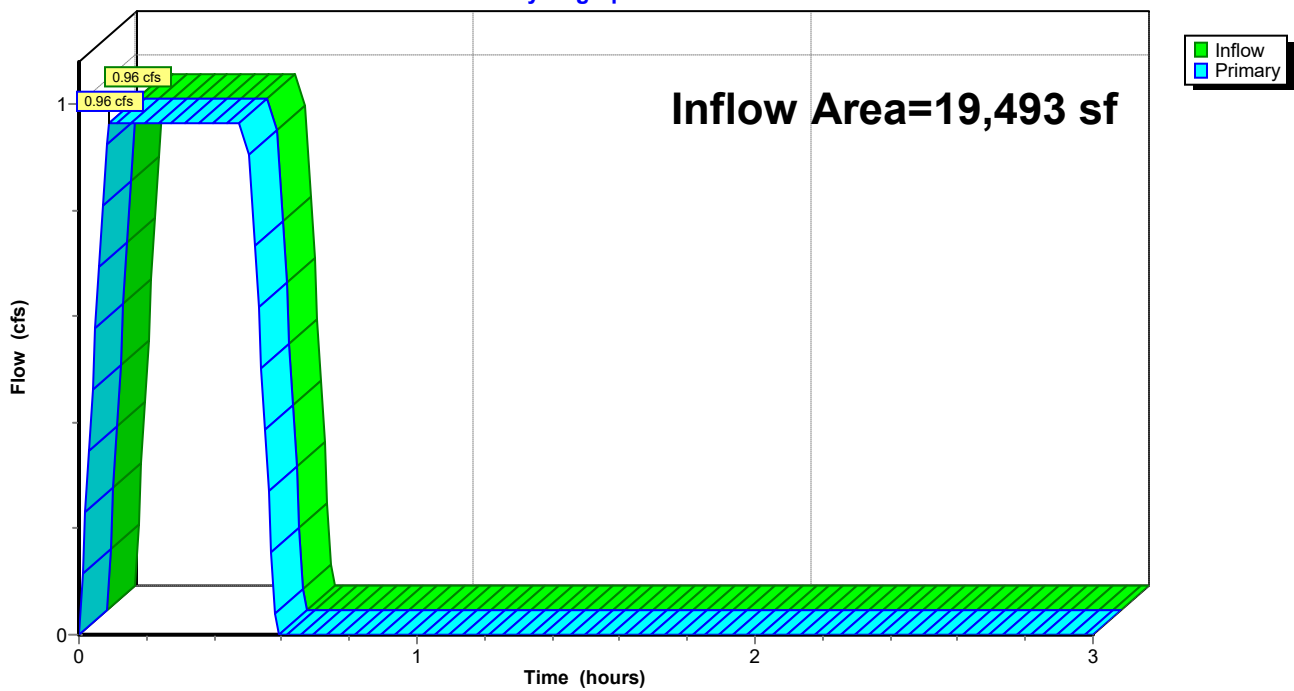
Summary for Pond CI-A1: CI - A1

Inflow Area = 19,493 sf, 74.85% Impervious, Inflow Depth = 1.07" for 2-yr event
Inflow = 0.96 cfs @ 0.09 hrs, Volume= 1,737 cf
Primary = 0.96 cfs @ 0.09 hrs, Volume= 1,737 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond JB-A2 : JB - A2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A1: CI - A1

Hydrograph



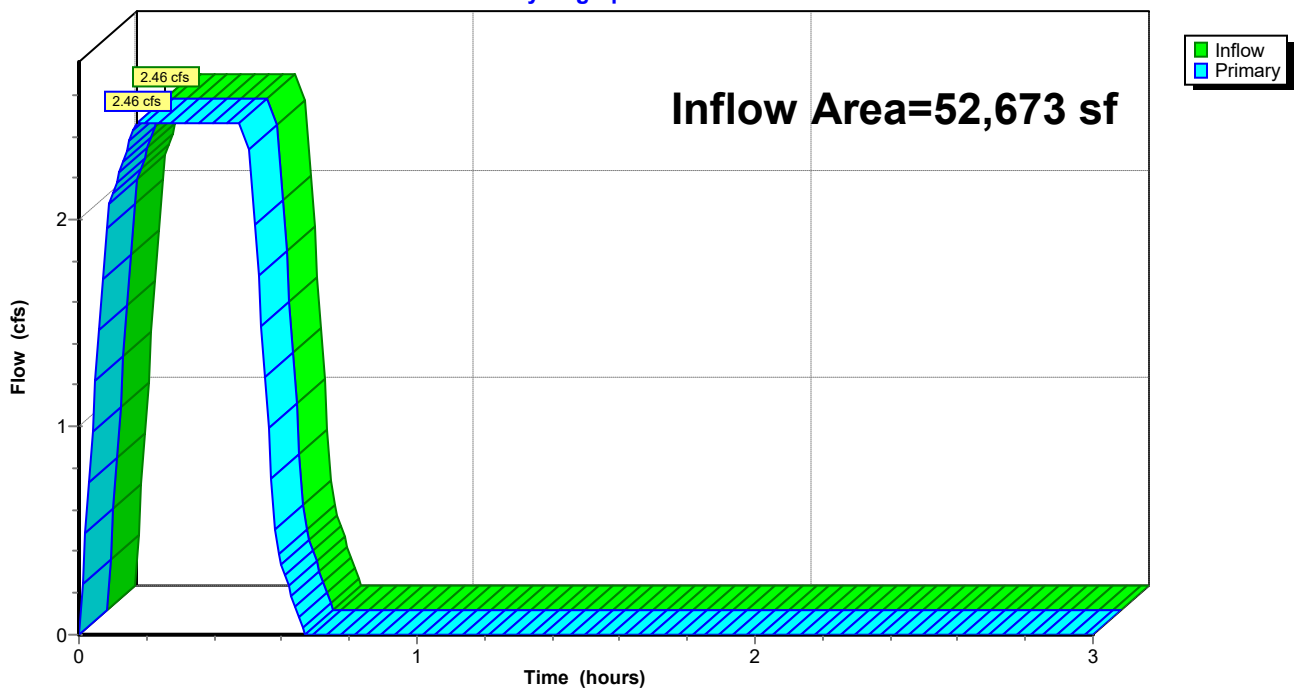
Summary for Pond CI-A3: CI - A3

Inflow Area = 52,673 sf, 66.48% Impervious, Inflow Depth = 1.01" for 2-yr event
Inflow = 2.46 cfs @ 0.17 hrs, Volume= 4,429 cf
Primary = 2.46 cfs @ 0.17 hrs, Volume= 4,429 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-A4 : CI - A4

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A3: CI - A3

Hydrograph



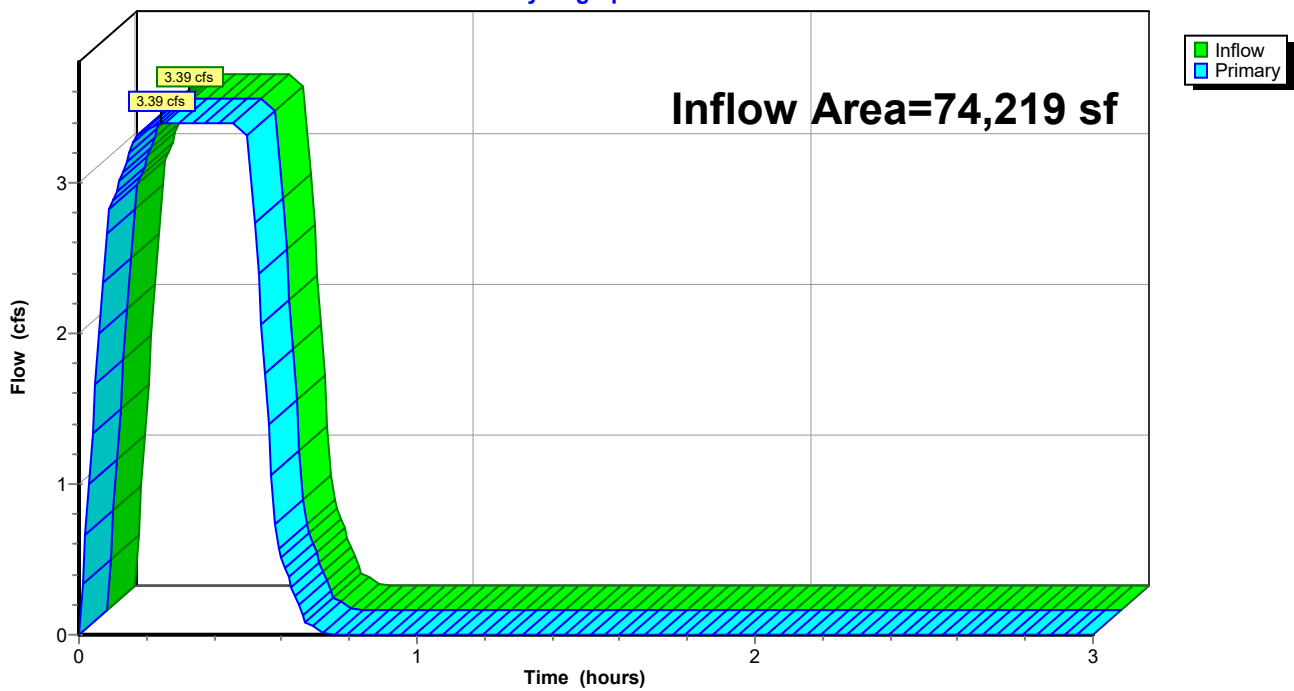
Summary for Pond CI-A4: CI - A4

Inflow Area = 74,219 sf, 63.30% Impervious, Inflow Depth = 0.99" for 2-yr event
Inflow = 3.39 cfs @ 0.24 hrs, Volume= 6,101 cf
Primary = 3.39 cfs @ 0.24 hrs, Volume= 6,101 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-A5 : CI - A5

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A4: CI - A4

Hydrograph



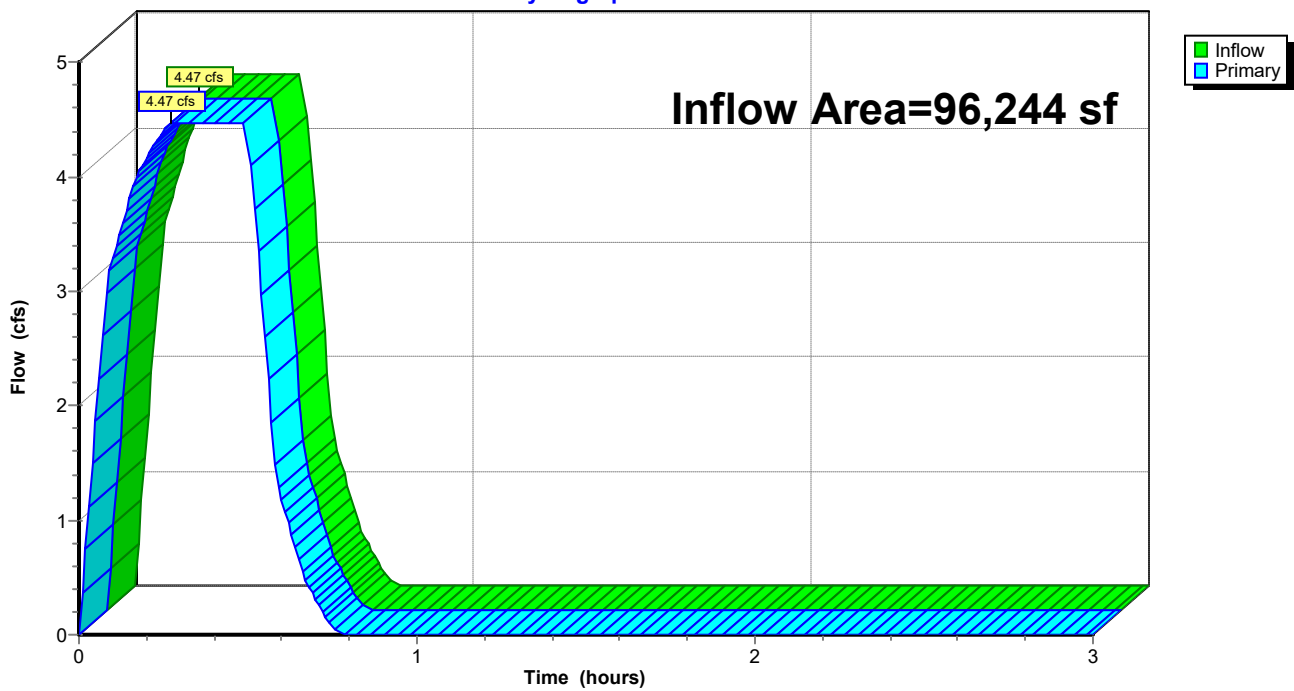
Summary for Pond CI-A5: CI - A5

Inflow Area = 96,244 sf, 65.33% Impervious, Inflow Depth = 1.00" for 2-yr event
Inflow = 4.47 cfs @ 0.27 hrs, Volume= 8,039 cf
Primary = 4.47 cfs @ 0.27 hrs, Volume= 8,039 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond DP : Existing North Detention Pond

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A5: CI - A5

Hydrograph



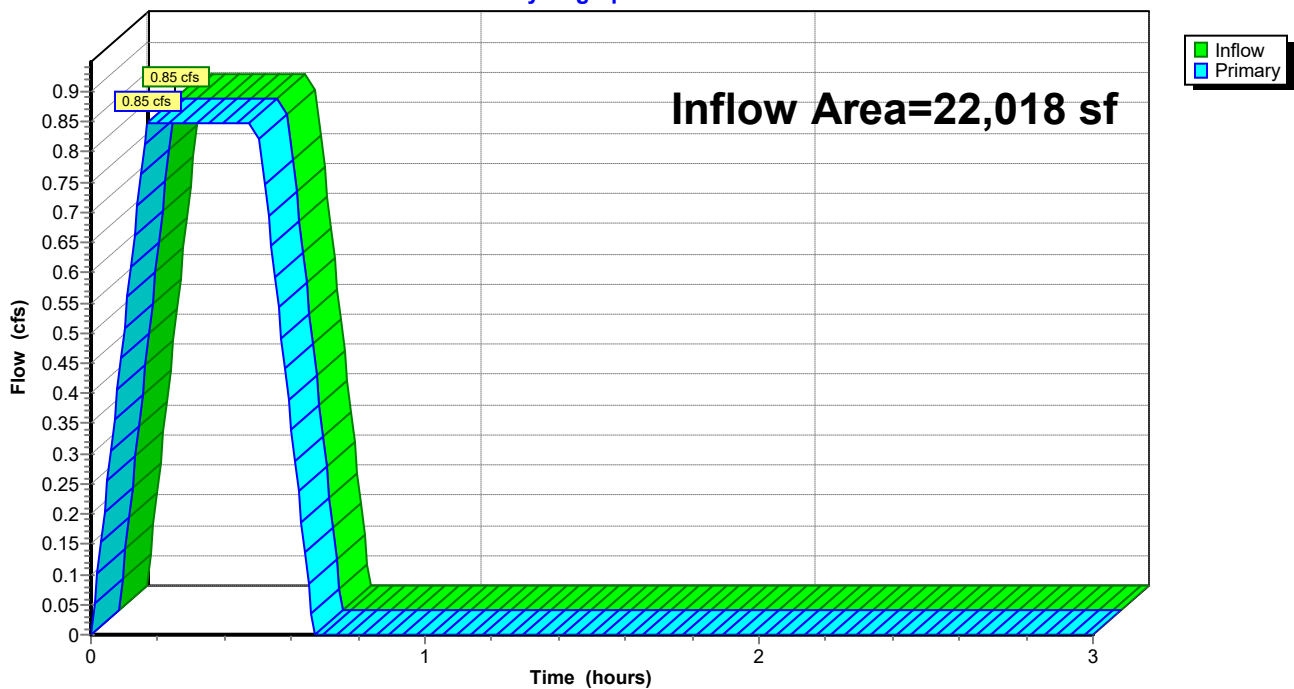
Summary for Pond CI-B2: CI - B2

Inflow Area = 22,018 sf, 42.08% Impervious, Inflow Depth = 0.83" for 2-yr event
Inflow = 0.85 cfs @ 0.17 hrs, Volume= 1,526 cf
Primary = 0.85 cfs @ 0.17 hrs, Volume= 1,526 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond JB-A2 : JB - A2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-B2: CI - B2

Hydrograph



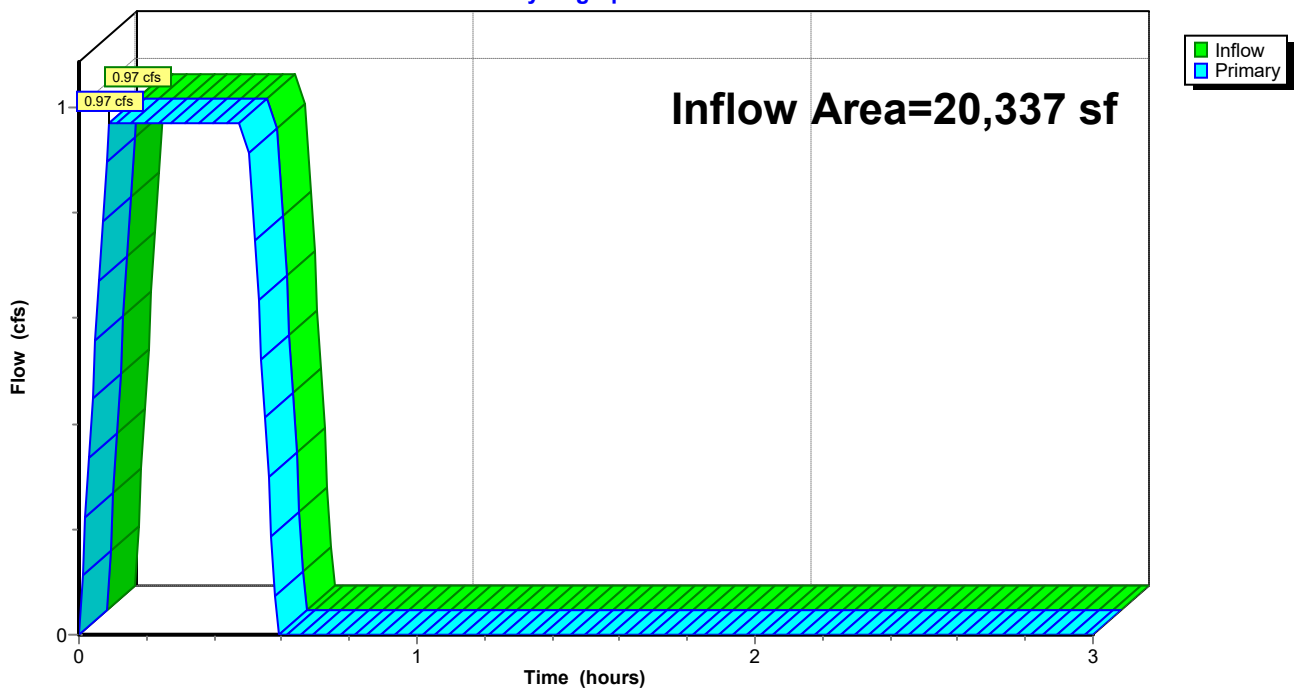
Summary for Pond CI-C1: CI - C1

Inflow Area = 20,337 sf, 69.83% Impervious, Inflow Depth = 1.03" for 2-yr event
Inflow = 0.97 cfs @ 0.09 hrs, Volume= 1,745 cf
Primary = 0.97 cfs @ 0.09 hrs, Volume= 1,745 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C2 : CI - C2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C1: CI - C1

Hydrograph



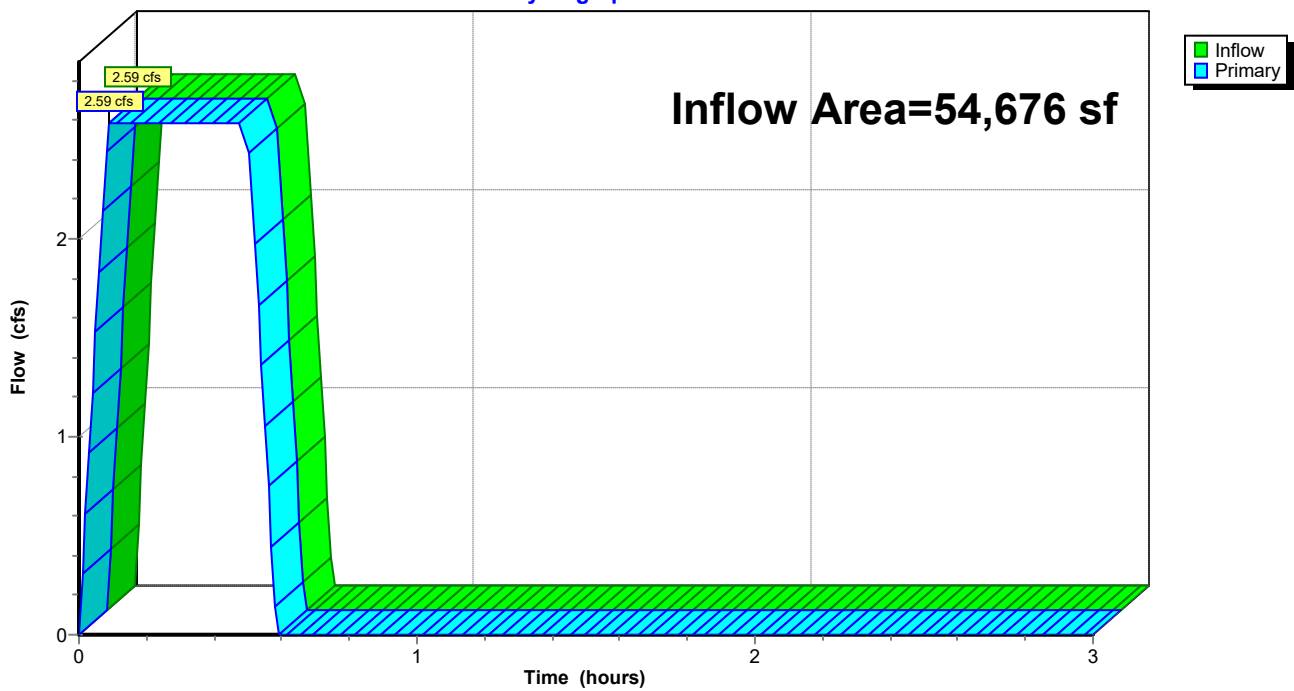
Summary for Pond CI-C2: CI - C2

Inflow Area = 54,676 sf, 67.97% Impervious, Inflow Depth = 1.02" for 2-yr event
Inflow = 2.59 cfs @ 0.09 hrs, Volume= 4,653 cf
Primary = 2.59 cfs @ 0.09 hrs, Volume= 4,653 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C3 : CI - C3

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C2: CI - C2

Hydrograph



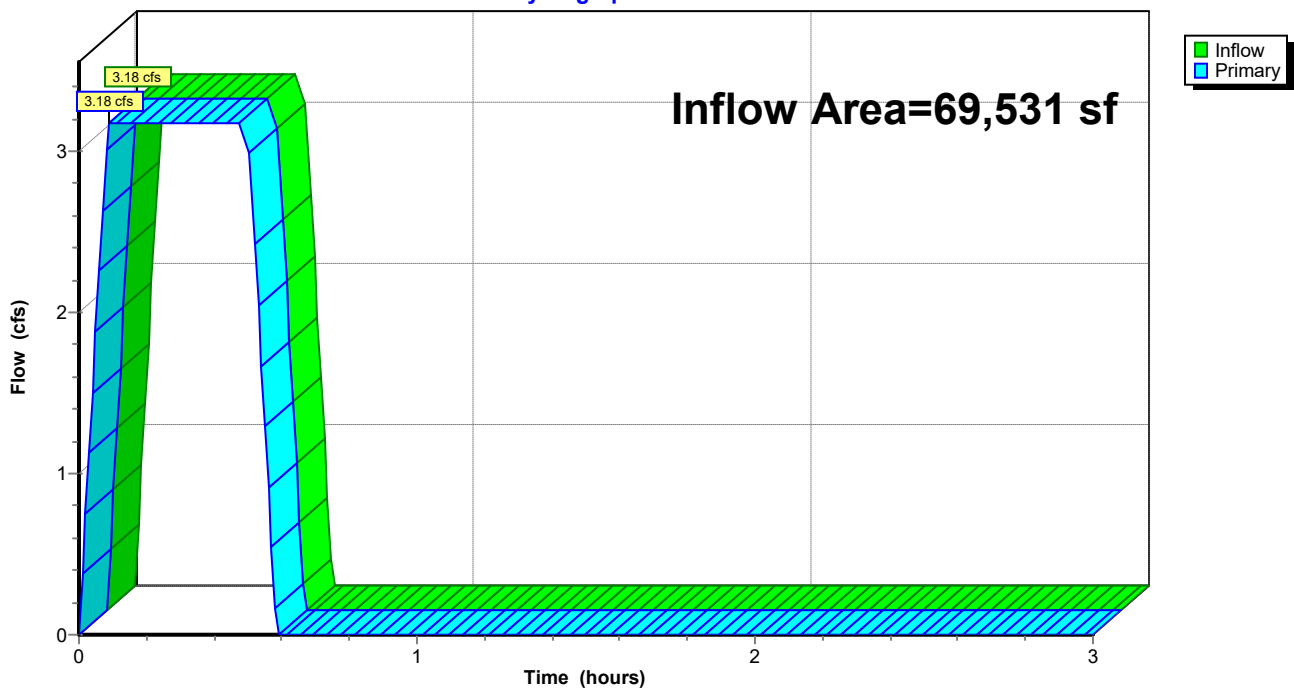
Summary for Pond CI-C3: CI - C3

Inflow Area = 69,531 sf, 63.12% Impervious, Inflow Depth = 0.99" for 2-yr event
Inflow = 3.18 cfs @ 0.09 hrs, Volume= 5,718 cf
Primary = 3.18 cfs @ 0.09 hrs, Volume= 5,718 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C4 : CI - C4

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C3: CI - C3

Hydrograph



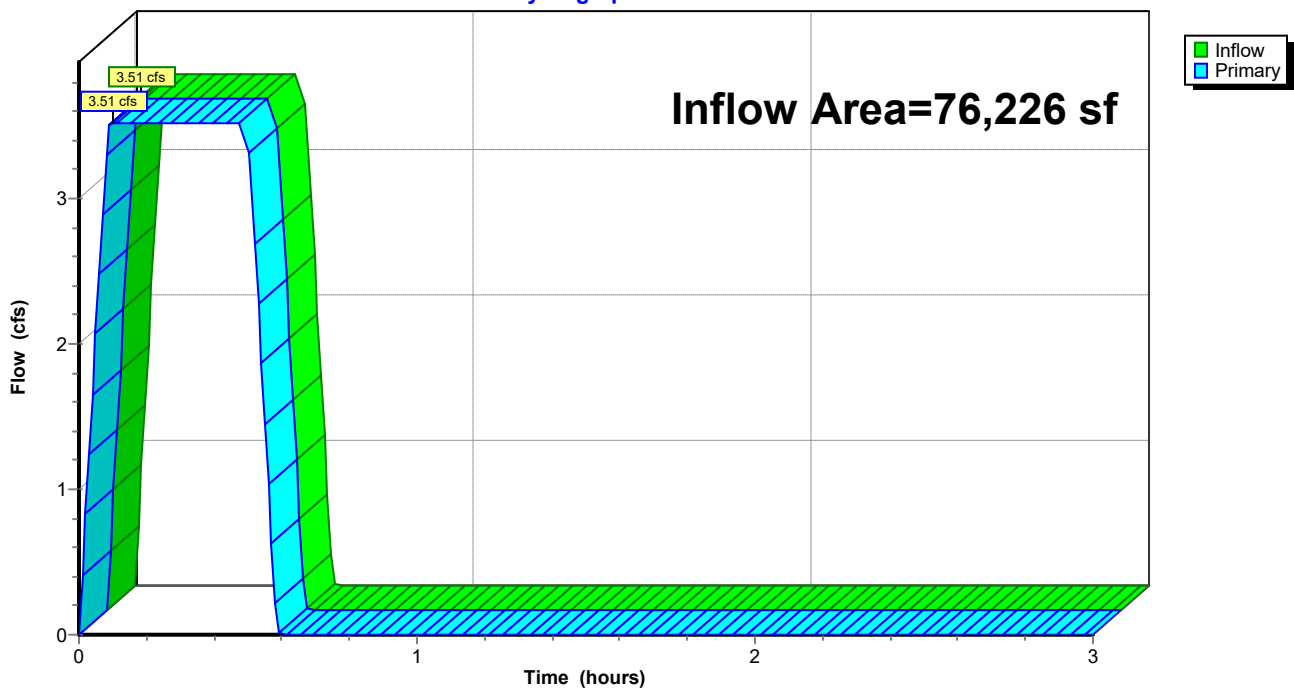
Summary for Pond CI-C4: CI - C4

Inflow Area = 76,226 sf, 64.22% Impervious, Inflow Depth = 1.00" for 2-yr event
Inflow = 3.51 cfs @ 0.10 hrs, Volume= 6,322 cf
Primary = 3.51 cfs @ 0.10 hrs, Volume= 6,322 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C5 : CI - C5

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C4: CI - C4

Hydrograph



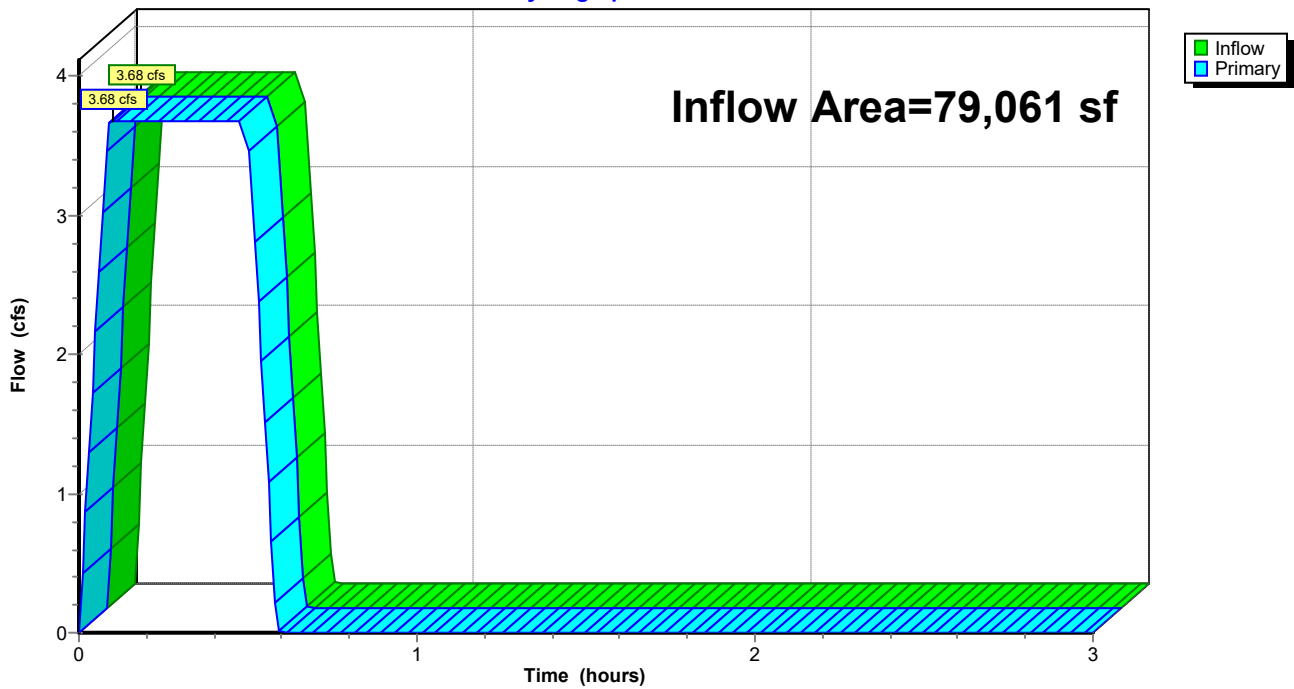
Summary for Pond CI-C5: CI - C5

Inflow Area = 79,061 sf, 65.50% Impervious, Inflow Depth = 1.00" for 2-yr event
Inflow = 3.68 cfs @ 0.10 hrs, Volume= 6,618 cf
Primary = 3.68 cfs @ 0.10 hrs, Volume= 6,618 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C6 : CI - C6

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C5: CI - C5

Hydrograph



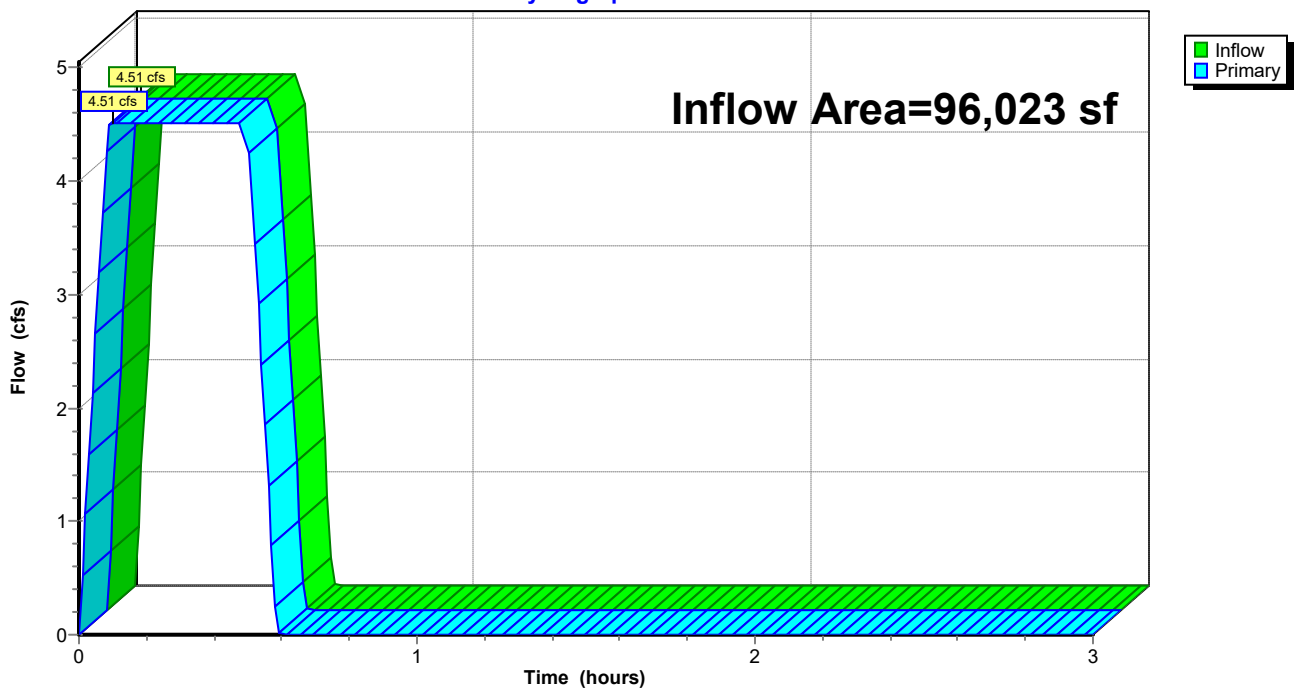
Summary for Pond CI-C6: CI - C6

Inflow Area = 96,023 sf, 66.95% Impervious, Inflow Depth = 1.01" for 2-yr event
Inflow = 4.51 cfs @ 0.10 hrs, Volume= 8,117 cf
Primary = 4.51 cfs @ 0.10 hrs, Volume= 8,117 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C7 : CI - C7

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C6: CI - C6

Hydrograph



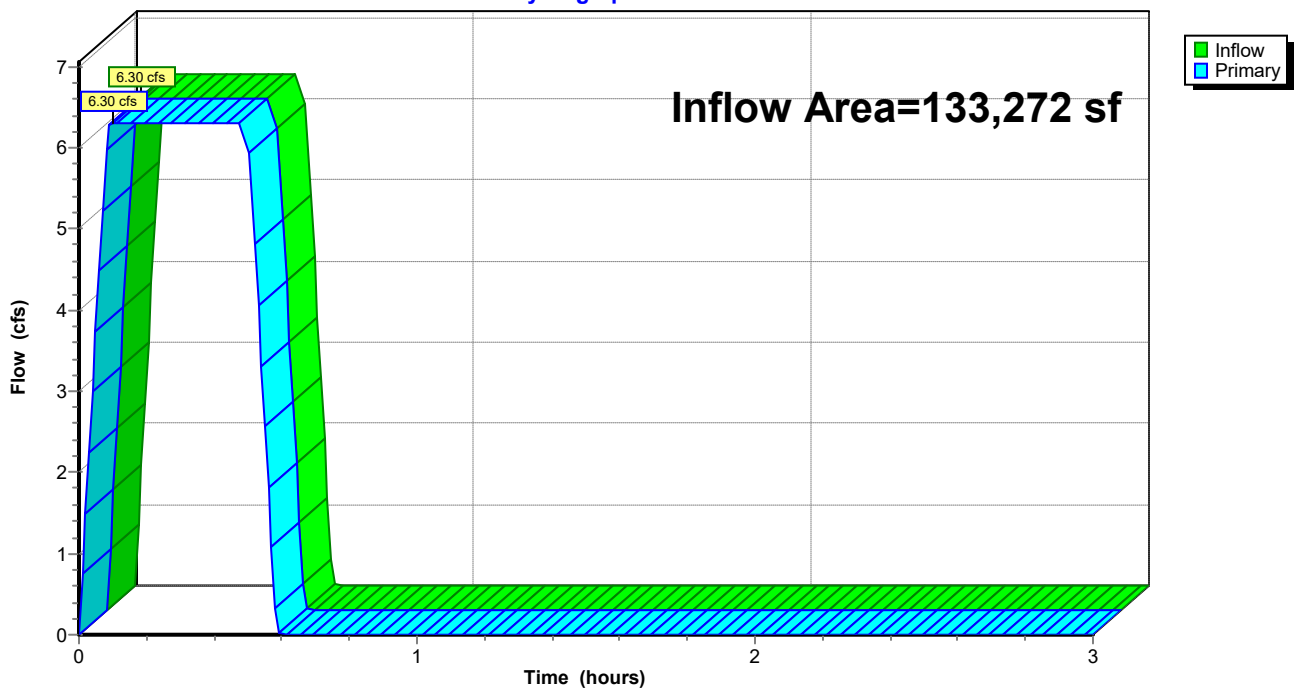
Summary for Pond CI-C7: CI - C7

Inflow Area = 133,272 sf, 67.70% Impervious, Inflow Depth = 1.02" for 2-yr event
Inflow = 6.30 cfs @ 0.10 hrs, Volume= 11,338 cf
Primary = 6.30 cfs @ 0.10 hrs, Volume= 11,338 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond DP : Existing North Detention Pond

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C7: CI - C7

Hydrograph



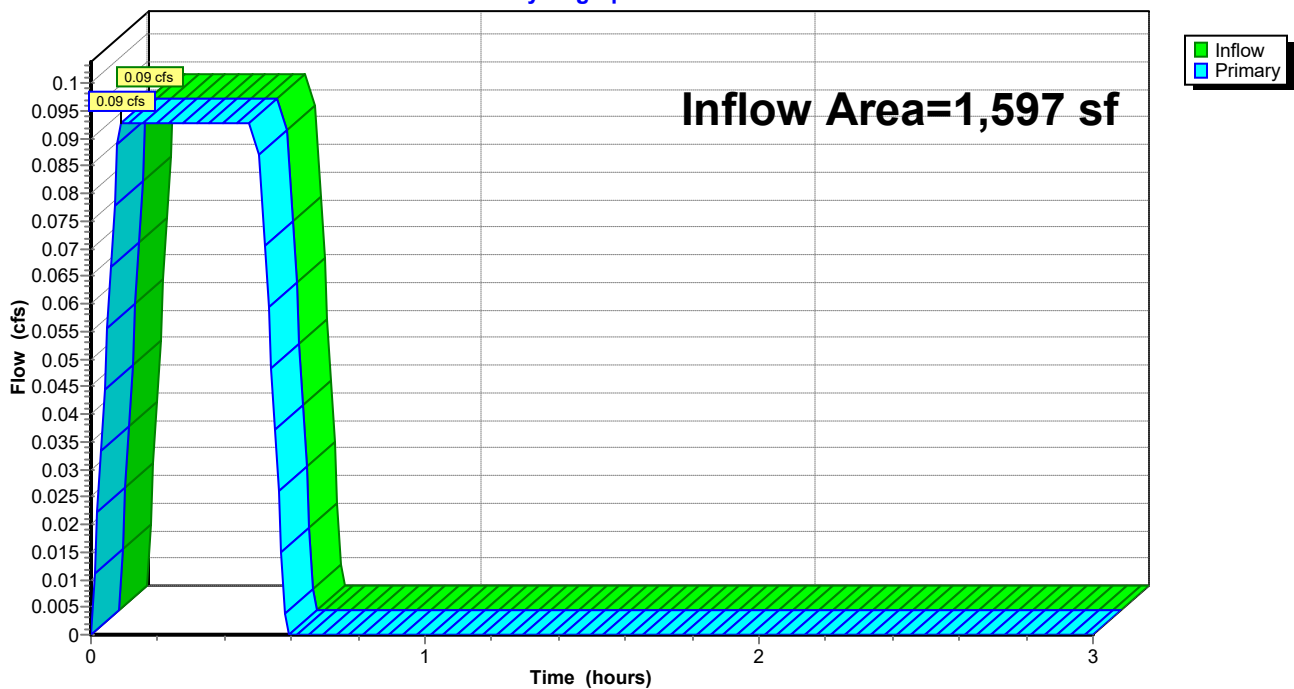
Summary for Pond CI-D1: CI - D1

Inflow Area = 1,597 sf, 100.00% Impervious, Inflow Depth = 1.25" for 2-yr event
Inflow = 0.09 cfs @ 0.09 hrs, Volume= 167 cf
Primary = 0.09 cfs @ 0.09 hrs, Volume= 167 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-D2 : CI - D2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-D1: CI - D1

Hydrograph



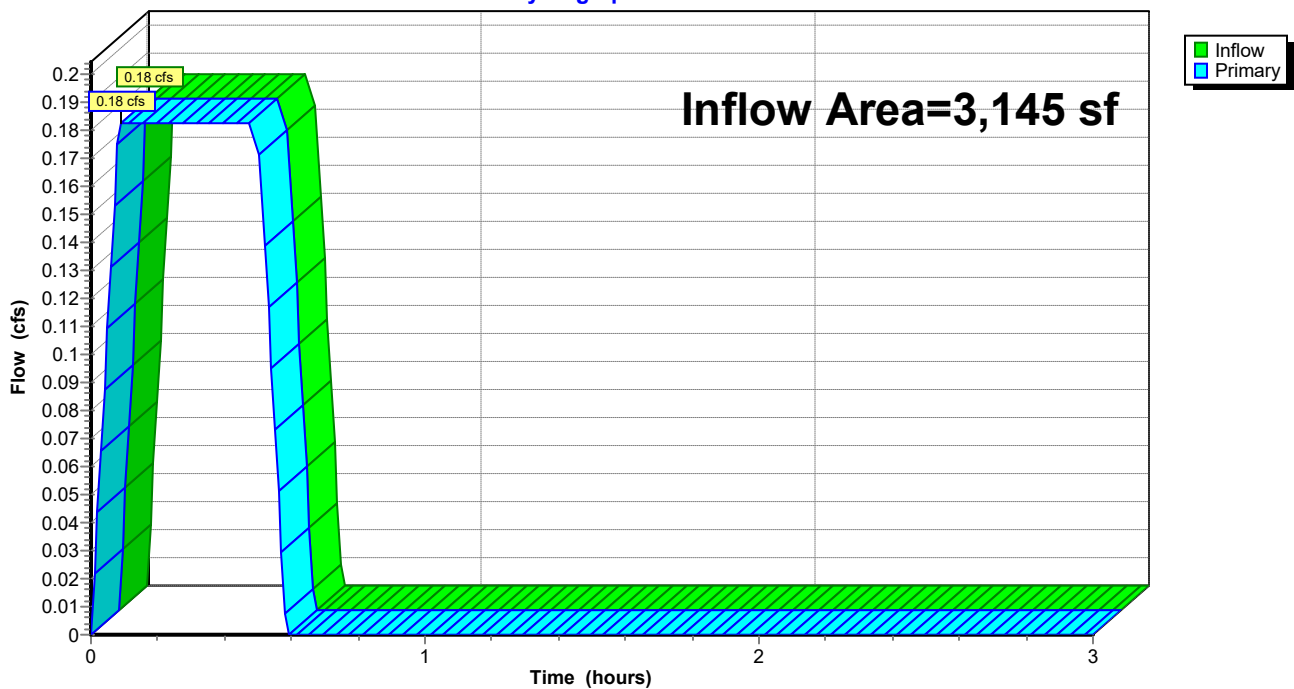
Summary for Pond CI-D2: CI - D2

Inflow Area = 3,145 sf, 100.00% Impervious, Inflow Depth = 1.25" for 2-yr event
Inflow = 0.18 cfs @ 0.09 hrs, Volume= 329 cf
Primary = 0.18 cfs @ 0.09 hrs, Volume= 329 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C6 : CI - C6

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-D2: CI - D2

Hydrograph



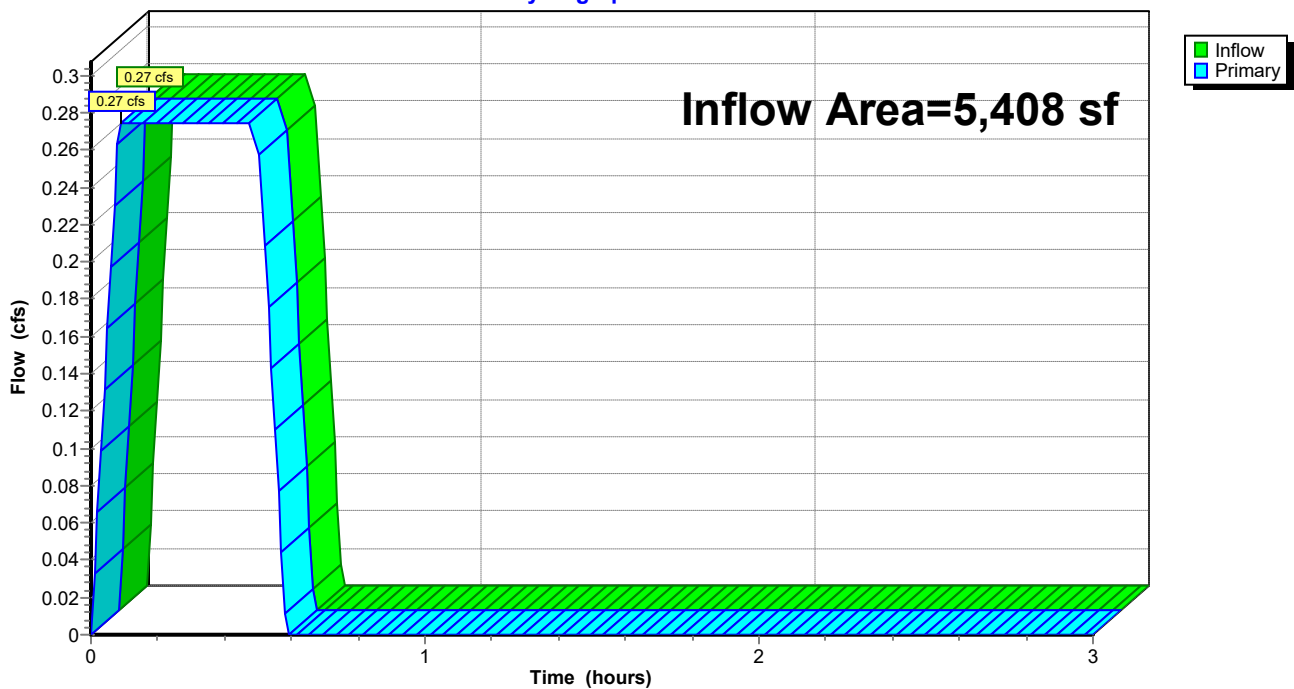
Summary for Pond CI-E1: CI - E1

Inflow Area = 5,408 sf, 77.35% Impervious, Inflow Depth = 1.10" for 2-yr event
Inflow = 0.27 cfs @ 0.09 hrs, Volume= 494 cf
Primary = 0.27 cfs @ 0.09 hrs, Volume= 494 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-E2 : CI - E2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-E1: CI - E1

Hydrograph



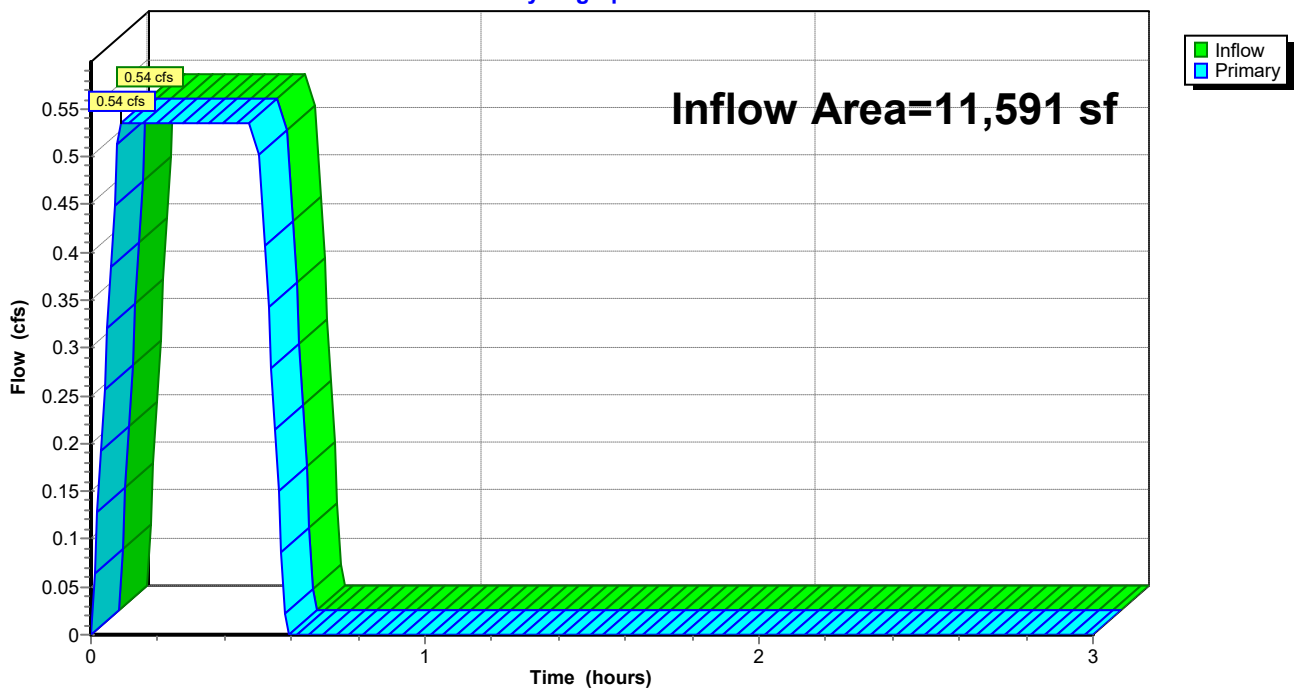
Summary for Pond CI-E2: CI - E2

Inflow Area = 11,591 sf, 64.62% Impervious, Inflow Depth = 1.00" for 2-yr event
Inflow = 0.54 cfs @ 0.09 hrs, Volume= 963 cf
Primary = 0.54 cfs @ 0.09 hrs, Volume= 963 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C7 : CI - C7

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-E2: CI - E2

Hydrograph



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AR - Little Rock 2-yr Duration=30 min, Inten=2.64 in/hr

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Summary for Pond DP: Existing North Detention Pond

Inflow Area = 321,792 sf, 58.73% Impervious, Inflow Depth = 0.95" for 2-yr event
 Inflow = 14.21 cfs @ 0.27 hrs, Volume= 25,576 cf
 Outflow = 9.16 cfs @ 0.54 hrs, Volume= 25,576 cf, Atten= 36%, Lag= 15.9 min
 Primary = 9.16 cfs @ 0.54 hrs, Volume= 25,576 cf
 Routed to Link FINAL : APPROX DISCHARGE

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 Peak Elev= 382.77' @ 0.54 hrs Storage= 12,374 cf

Plug-Flow detention time= 17.0 min calculated for 25,576 cf (100% of inflow)
 Center-of-Mass det. time= 16.9 min (35.3 - 18.5)

Volume	Invert	Avail.Storage	Storage Description
#1	381.17'	72,742 cf	Custom Stage Data Listed below

Elevation (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
381.17	0	0
381.50	200	200
382.00	1,825	2,025
382.50	5,265	7,290
383.00	9,300	16,590
383.50	13,733	30,323
384.00	18,578	48,901
384.50	23,841	72,742

Device	Routing	Invert	Outlet Devices
#1	Primary	384.16'	5.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#2	Primary	381.17'	1.7' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

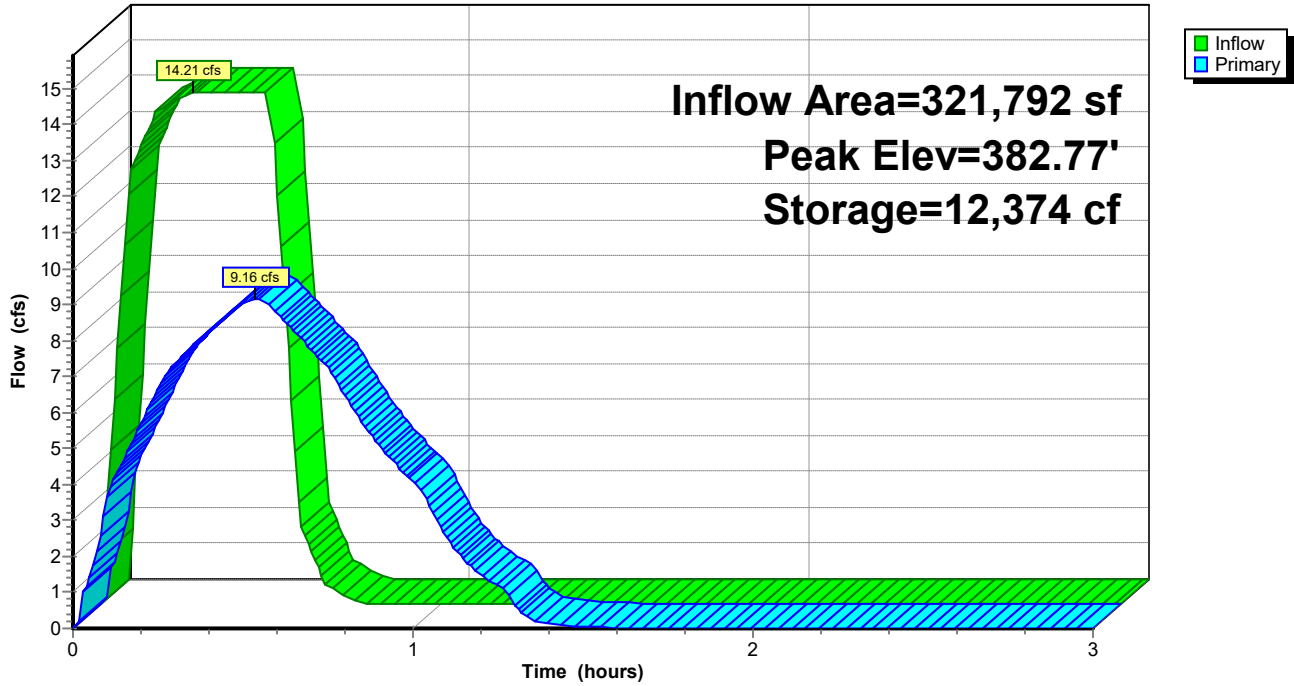
Primary OutFlow Max=9.15 cfs @ 0.54 hrs HW=382.77' (Free Discharge)

↑ **1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

└ **2=Sharp-Crested Rectangular Weir** (Weir Controls 9.15 cfs @ 4.14 fps)

Pond DP: Existing North Detention Pond

Hydrograph



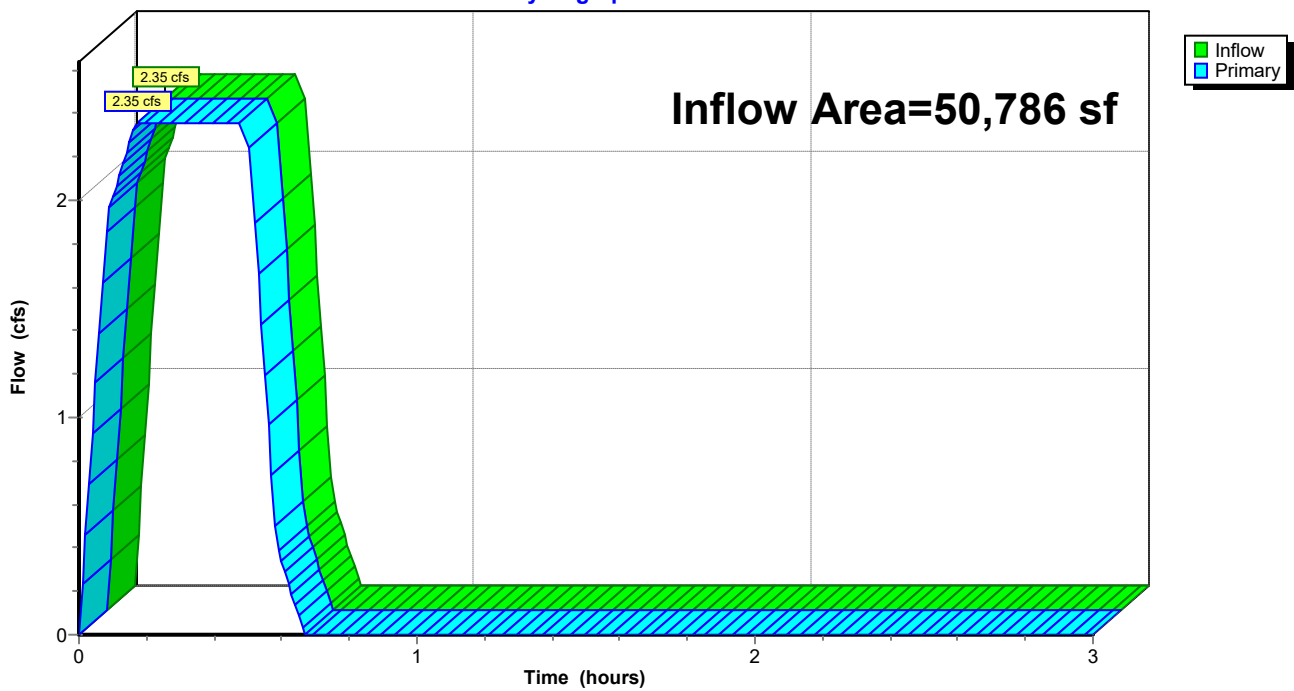
Summary for Pond JB-A2: JB - A2

Inflow Area = 50,786 sf, 65.23% Impervious, Inflow Depth = 1.00" for 2-yr event
Inflow = 2.35 cfs @ 0.17 hrs, Volume= 4,232 cf
Primary = 2.35 cfs @ 0.17 hrs, Volume= 4,232 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-A3 : CI - A3

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond JB-A2: JB - A2

Hydrograph



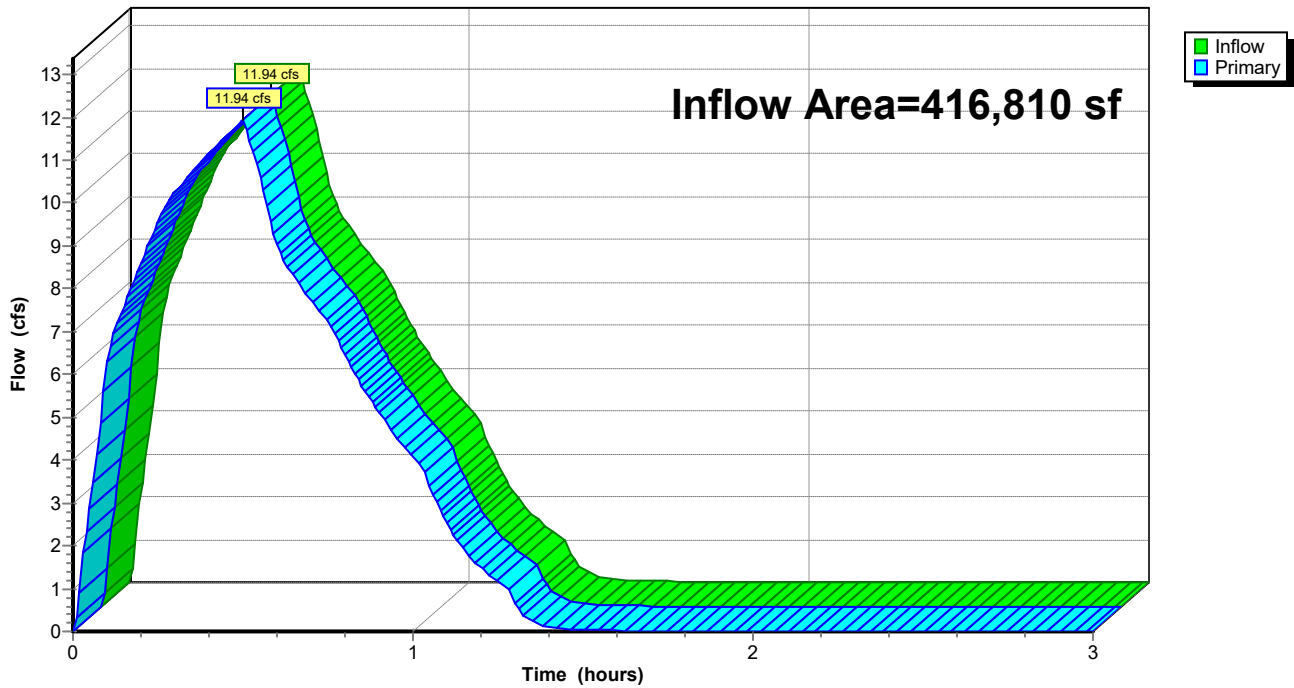
Summary for Link FINAL: APPROX DISCHARGE

Inflow Area = 416,810 sf, 49.40% Impervious, Inflow Depth = 0.89" for 2-yr event
Inflow = 11.94 cfs @ 0.50 hrs, Volume= 30,795 cf
Primary = 11.94 cfs @ 0.50 hrs, Volume= 30,795 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Link FINAL: APPROX DISCHARGE

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment B1: Drainage Basin B1

Runoff = 0.77 cfs @ 0.10 hrs, Volume= 1,378 cf, Depth= 0.66"
 Routed to Link FINAL : APPROX DISCHARGE

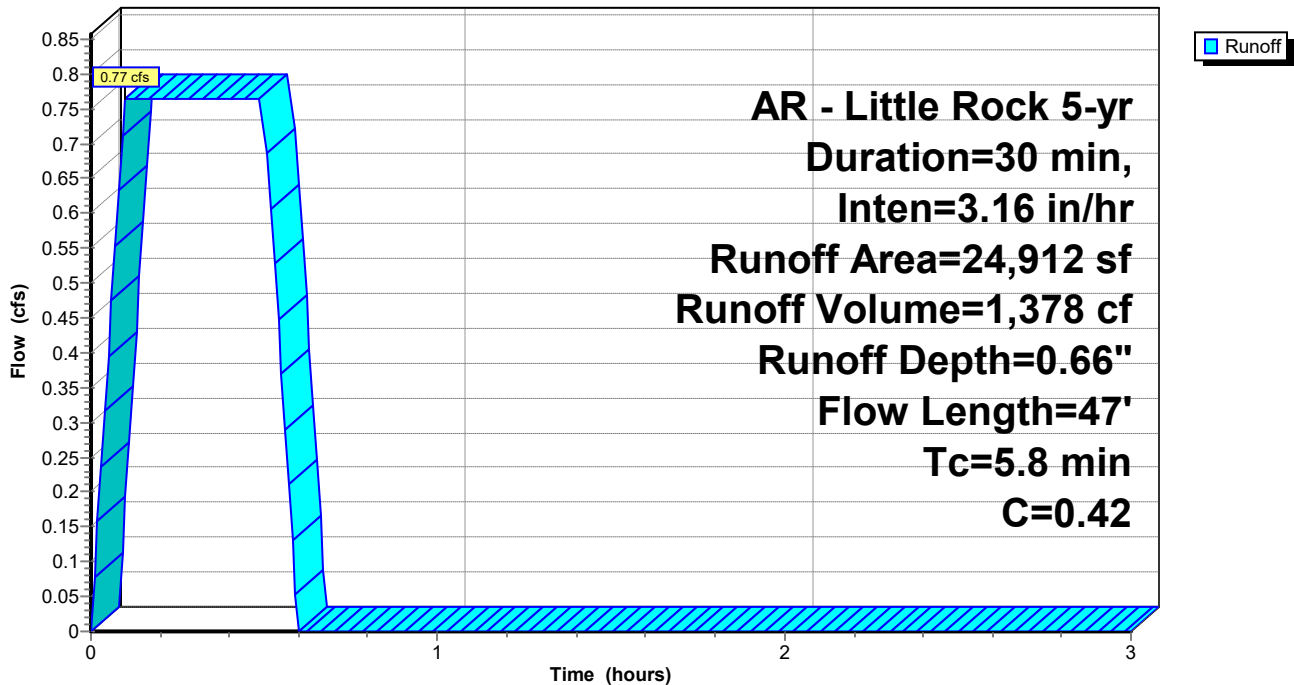
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
24,091	0.40	Sod Yard
821	0.95	Paving, Sidewalks
24,912	0.42	Weighted Average
24,091		96.70% Pervious Area
821		3.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.3	9	0.0310	0.06		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
3.5	38	0.2040	0.18		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
5.8	47	Total			

Subcatchment B1: Drainage Basin B1

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment B2: Drainage Basin B2

Runoff = 1.15 cfs @ 0.09 hrs, Volume= 2,079 cf, Depth= 1.28"
 Routed to Pond CI-A1 : CI - A1

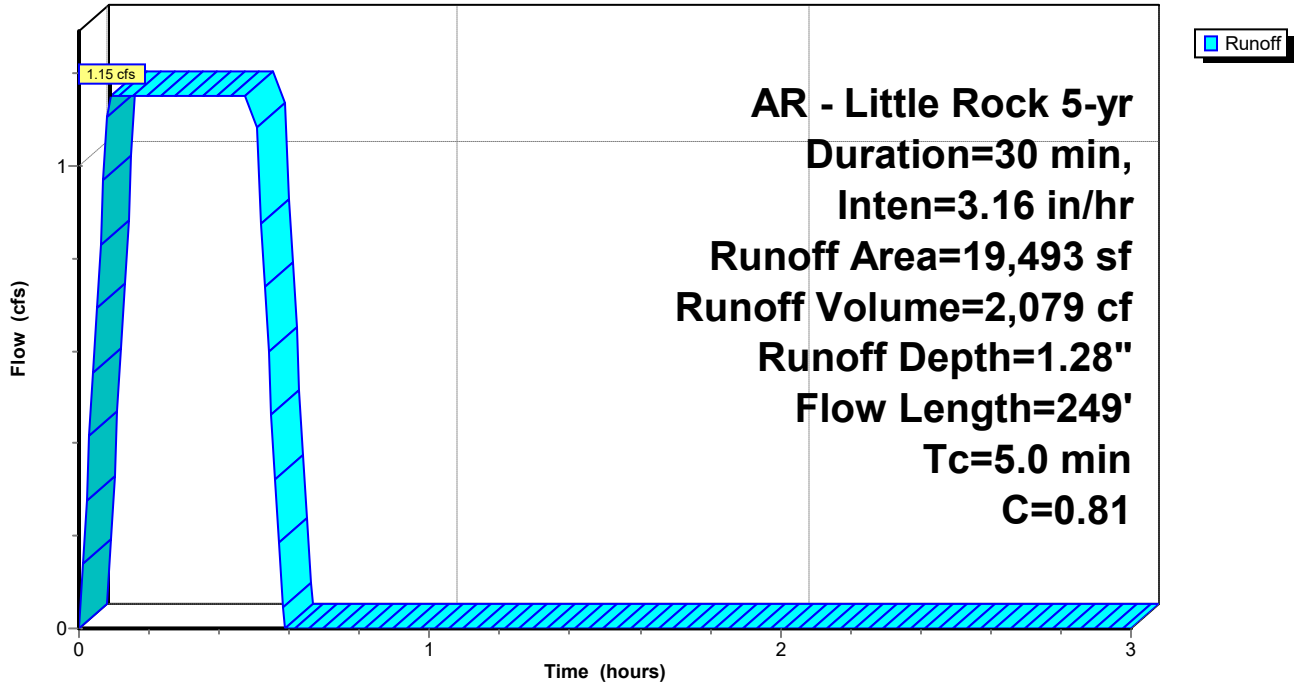
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
4,903	0.40	Sod Yard
14,590	0.95	Paving, Sidewalks
19,493	0.81	Weighted Average
4,903		25.15% Pervious Area
14,590		74.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	31	0.0230	1.32		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	18	0.0250	1.22		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.3	28	0.0450	1.69		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.4	72	0.0250	3.21		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	18	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.3	51	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	16	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	8	0.0430	4.21		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	7	0.0580	4.89		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.2					Direct Entry, Overland Concentrated Flow (Min)
5.0	249	Total			

Subcatchment B2: Drainage Basin B2

Hydrograph



Summary for Subcatchment B3: Drainage Basin B3

Runoff = 0.64 cfs @ 0.09 hrs, Volume= 1,160 cf, Depth= 1.50"
 Routed to Pond JB-A2 : JB - A2

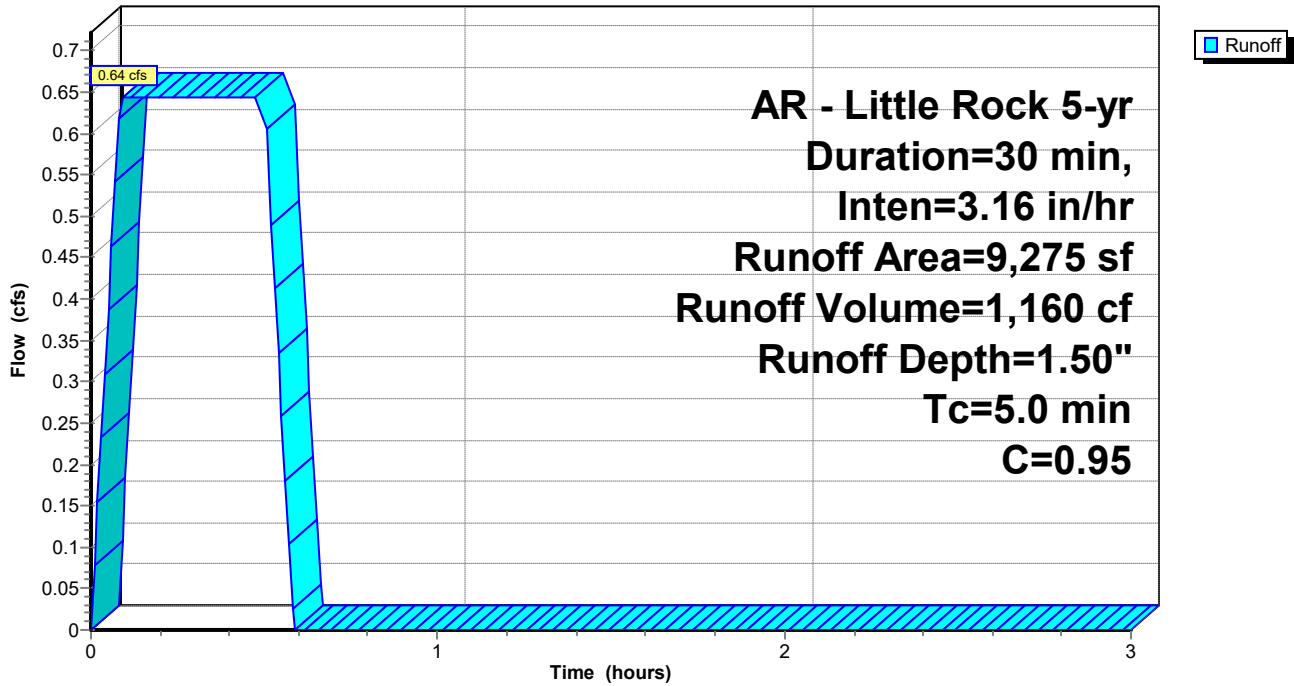
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
9,275	0.95	Roof
9,275		100.00% Impervious Area

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

Subcatchment B3: Drainage Basin B3

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment B4: Drainage Basin B4

Runoff = 0.13 cfs @ 0.09 hrs, Volume= 236 cf, Depth= 1.50"
 Routed to Pond CI-A3 : CI - A3

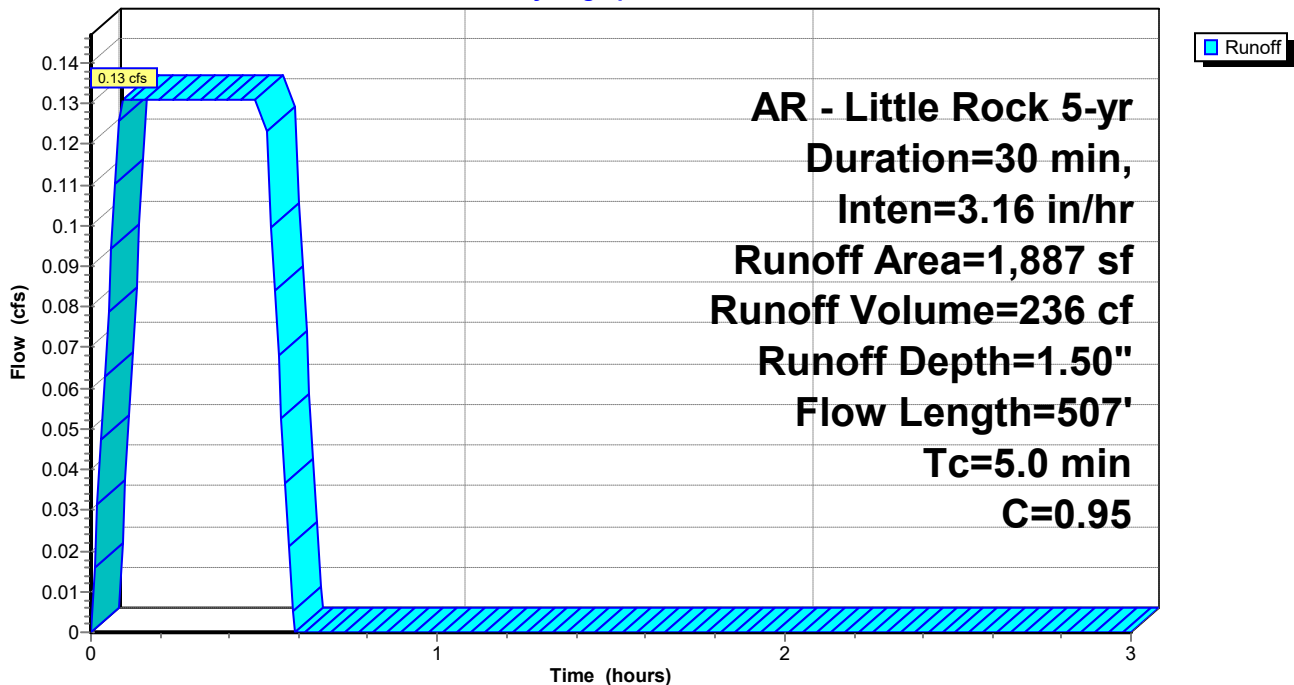
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
1,887	0.95	Paving, Sidewalks
1,887	0.95	Weighted Average
1,887		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	31	0.0230	1.32		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	18	0.0250	1.22		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.4	30	0.0240	1.33		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.0	13	0.0860	5.95		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.0	415		1.73		Direct Entry, Overland Concentrated Flow (Min)
5.0	507	Total			

Subcatchment B4: Drainage Basin B4

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment B5: Drainage Basin B5

Runoff = 1.01 cfs @ 0.17 hrs, Volume= 1,826 cf, Depth= 1.00"
 Routed to Pond CI-B2 : CI - B2

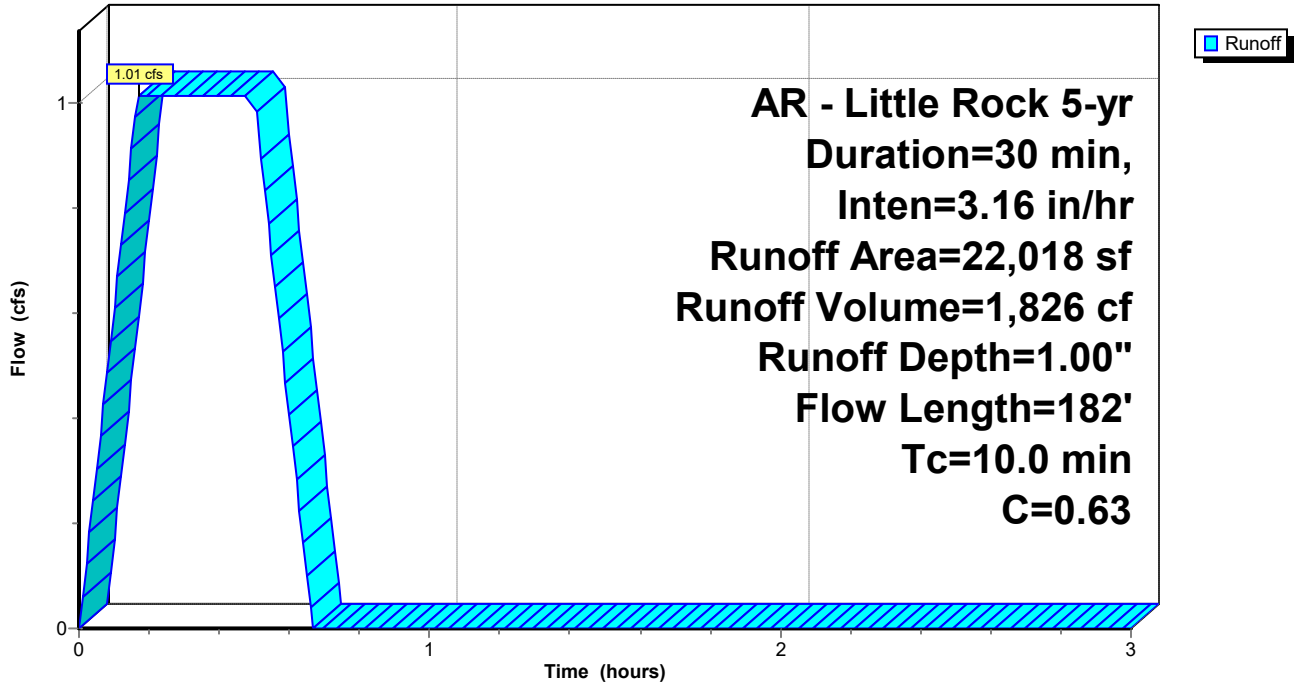
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
12,753	0.40	Sod Yard
9,265	0.95	Paving, Sidewalks
22,018	0.63	Weighted Average
12,753		57.92% Pervious Area
9,265		42.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	10	0.0150	0.89		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
9.1	93	0.0150	0.17		Sheet Flow, Sheet Flow Grass: Short n= 0.150 P2= 4.19"
0.4	40	0.0110	1.57		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	33	0.0190	2.07		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.0	6	0.0180	2.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
10.0	182	Total			

Subcatchment B5: Drainage Basin B5

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment B6: Drainage Basin B6

Runoff = 0.36 cfs @ 0.24 hrs, Volume= 646 cf, Depth= 0.82"
 Routed to Pond CI-A4 : CI - A4

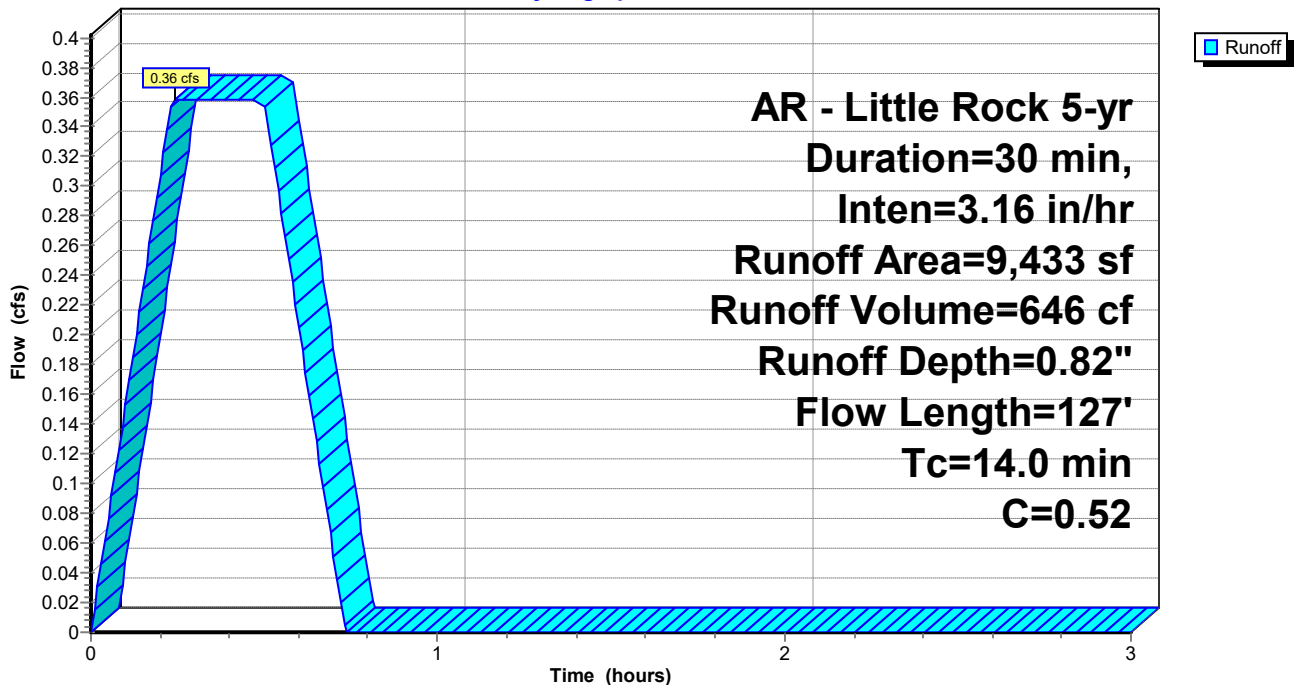
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
7,346	0.40	Sod Yard
2,087	0.95	Paving, Sidewalks
9,433	0.52	Weighted Average
7,346		77.88% Pervious Area
2,087		22.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.4	79	0.0570	0.13		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
3.5	21	0.0620	0.10		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.0	9	0.0620	3.73		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.1	18	0.1080	4.93		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
14.0	127	Total			

Subcatchment B6: Drainage Basin B6

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment C1: Drainage Basin C1

Runoff = 1.16 cfs @ 0.09 hrs, Volume= 2,089 cf, Depth= 1.23"
 Routed to Pond CI-C1 : CI - C1

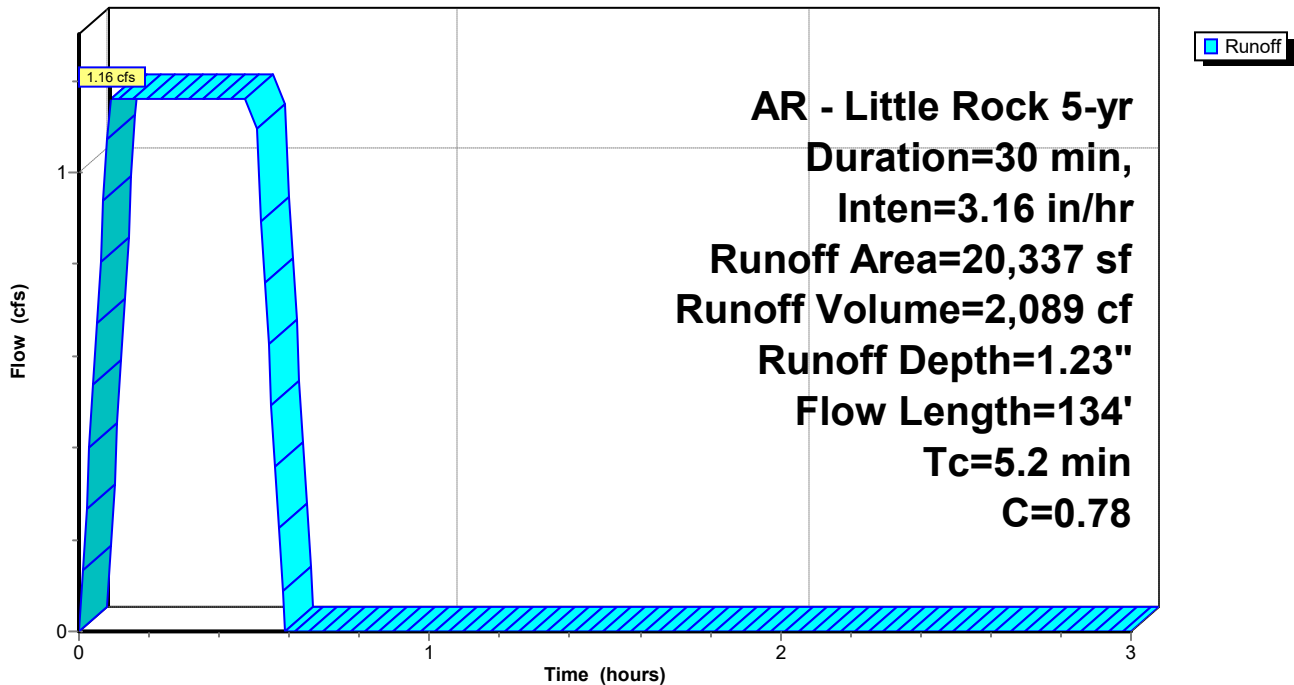
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
6,135	0.40	Sod Yard
14,202	0.95	Paving, Sidewalks
20,337	0.78	Weighted Average
6,135		30.17% Pervious Area
14,202		69.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	32	0.0660	0.11		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.4	102	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
5.2	134	Total			

Subcatchment C1: Drainage Basin C1

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment C10: Drainage Basin C10

Runoff = 0.33 cfs @ 0.09 hrs, Volume= 591 cf, Depth= 1.31"
 Routed to Pond CI-E1 : CI - E1

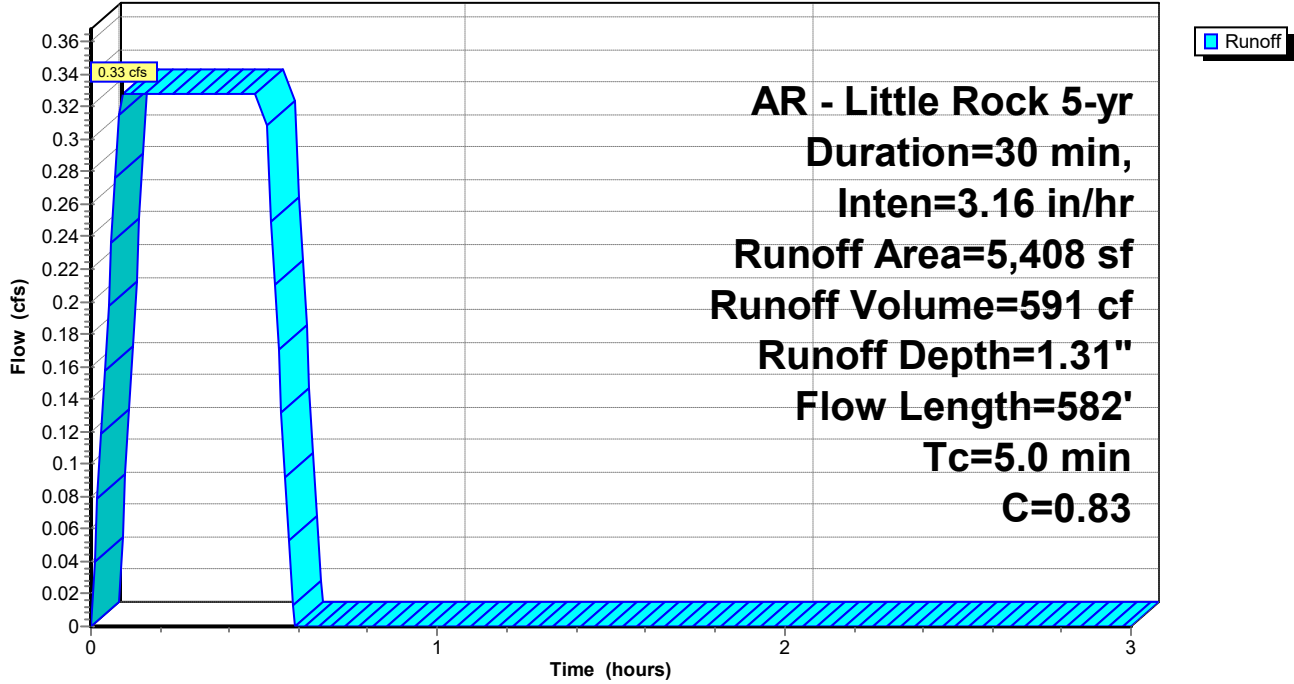
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
1,225	0.40	Sod Yard
4,183	0.95	Paving, Sidewalks
5,408	0.83	Weighted Average
1,225		22.65% Pervious Area
4,183		77.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	1.12		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	29	0.0210	2.94		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	23	0.0320	3.63		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	36	0.0320	3.63		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	48	0.0330	3.69		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	13	0.0350	3.80		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.9	415		1.77		Direct Entry, Concentrated Flow (Min)
5.0	582	Total			

Subcatchment C10: Drainage Basin C10

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment C11: Drainage Basin C11

Runoff = 0.31 cfs @ 0.09 hrs, Volume= 562 cf, Depth= 1.09"
 Routed to Pond CI-E2 : CI - E2

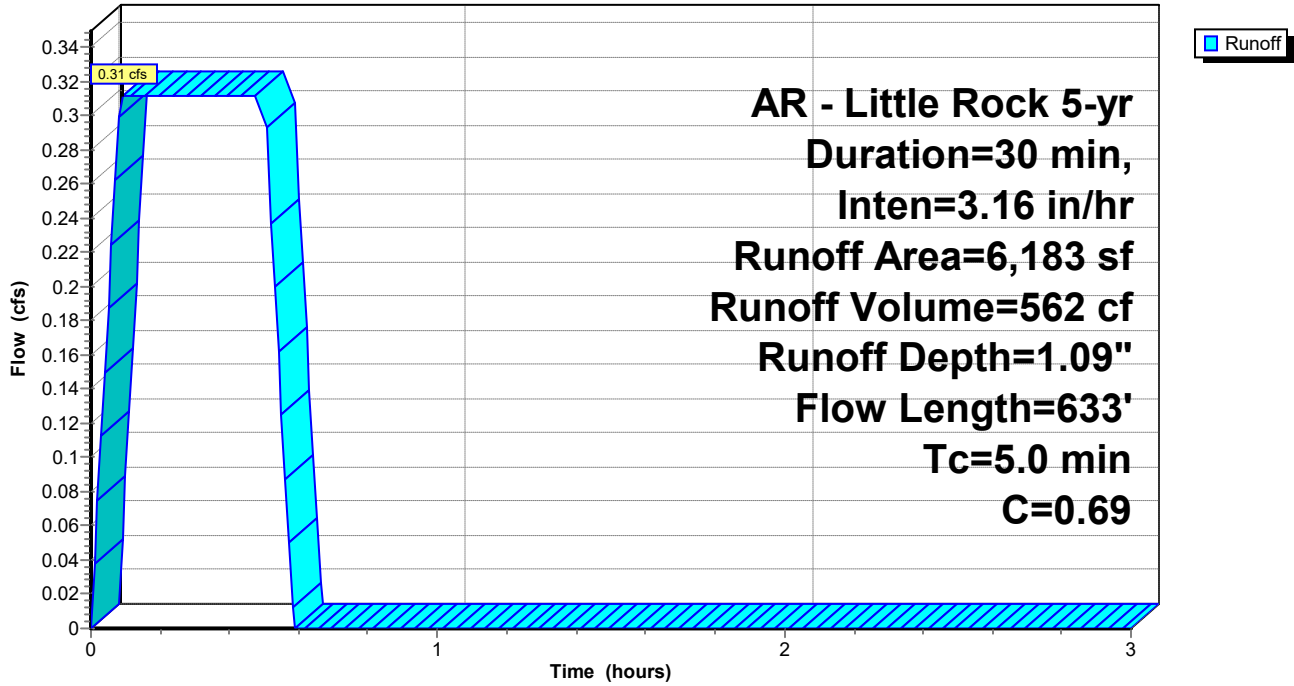
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
2,876	0.40	Sod Yard
3,307	0.95	Paving, Sidewalks
6,183	0.69	Weighted Average
2,876		46.51% Pervious Area
3,307		53.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	25	0.0200	1.19		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	33	0.0620	5.05		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	29	0.0540	4.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	47	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	47	0.0390	4.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	37	0.0420	4.16		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.0	415		1.73		Direct Entry, Concentrated Flow (Min)
5.0	633	Total			

Subcatchment C11: Drainage Basin C11

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment C12: Drainage Basin C12

Runoff = 1.50 cfs @ 0.09 hrs, Volume= 2,703 cf, Depth= 1.26"
 Routed to Pond CI-C7 : CI - C7

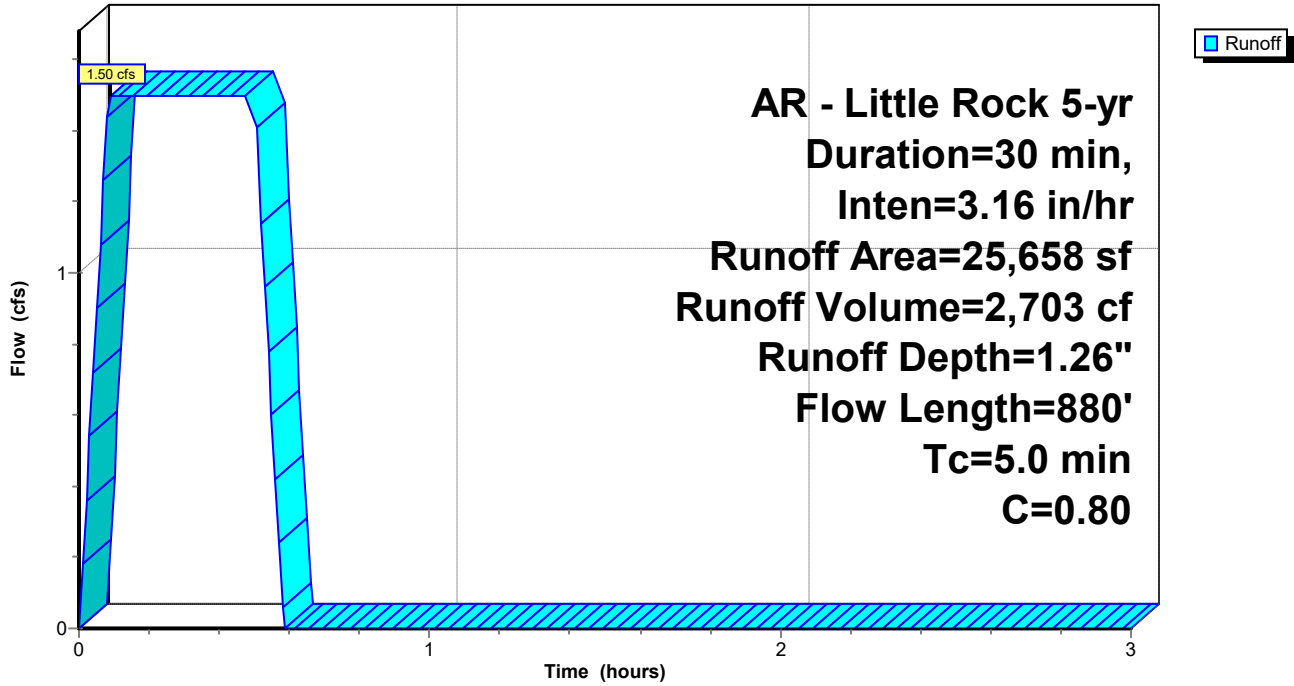
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
7,218	0.40	Sod Yard
18,440	0.95	Paving, Sidewalks
25,658	0.80	Weighted Average
7,218		28.13% Pervious Area
18,440		71.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	24	0.0360	1.50		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	5	0.0190	0.85		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	21	0.0100	2.03		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.9	49	0.0020	0.91		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.4	96	0.0330	3.69		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.3	94	0.0570	4.85		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	28	0.0560	4.80		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	25	0.0450	4.31		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	31	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	39	0.0490	4.49		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	36	0.0460	4.35		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	11	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	6	0.0440	4.26		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
2.3	415		3.01		Direct Entry, Concentrated Flow (Min)
5.0	880	Total			

Subcatchment C12: Drainage Basin C12

Hydrograph



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Summary for Subcatchment C13: Drainage Basin C13

Runoff = 0.75 cfs @ 0.09 hrs, Volume= 1,356 cf, Depth= 1.34"
 Routed to Pond CI-A4 : CI - A4

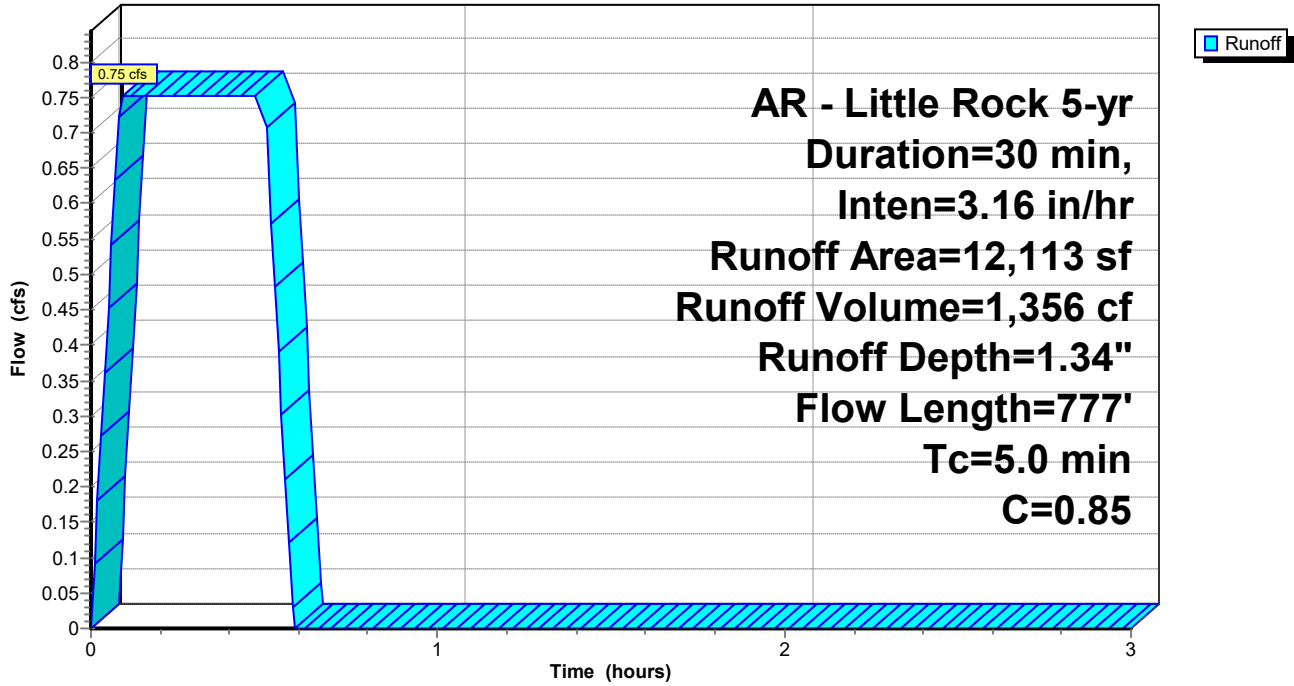
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
2,240	0.40	Sod Yard
9,873	0.95	Paving, Sidewalks
12,113	0.85	Weighted Average
2,240		18.49% Pervious Area
9,873		81.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	19	0.0200	1.13		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.3	75	0.0340	3.74		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	52	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	29	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	42	0.0730	5.48		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	74	0.0750	5.56		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	26	0.0710	5.41		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	32	0.0570	4.85		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	13	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.6	415		1.92		Direct Entry, Overland Concentrated Flow (Min)
5.0	777	Total			

Subcatchment C13: Drainage Basin C13

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment C14: Drainage Basin C14

Runoff = 1.29 cfs @ 0.27 hrs, Volume= 2,320 cf, Depth= 1.26"
 Routed to Pond CI-A5 : CI - A5

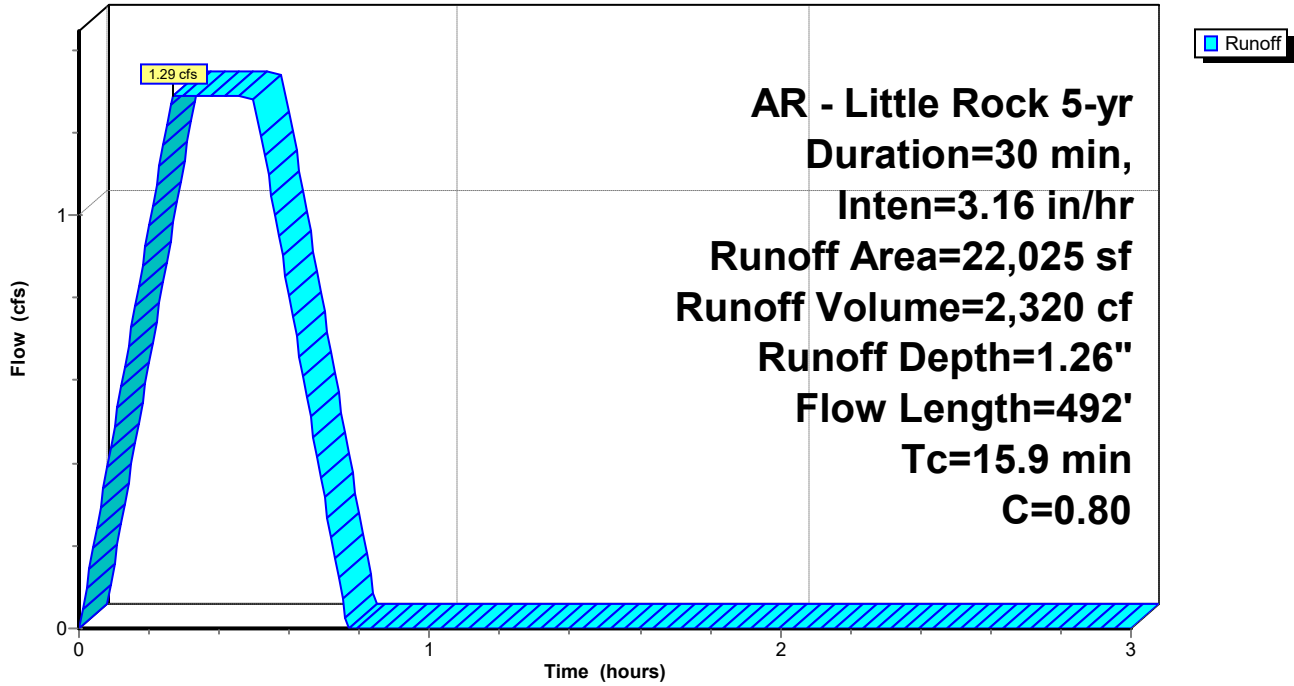
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
6,127	0.40	Sod Yard
15,898	0.95	Paving, Sidewalks
22,025	0.80	Weighted Average
6,127		27.82% Pervious Area
15,898		72.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	5	0.0310	0.06		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
9.2	45	0.0250	0.08		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
3.8	41	0.1940	0.18		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
0.1	6	0.0100	0.68		Sheet Flow, Sheet Flow
					Smooth surfaces n= 0.011 P2= 4.19"
0.1	51	0.0870	5.99		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.2	52	0.0310	3.57		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	18	0.0270	3.34		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	20	0.0400	4.06		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	34	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.2	46	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	36	0.0580	4.89		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.2	58	0.0690	5.33		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	49	0.0840	5.88		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	31	0.0690	5.33		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
15.9	492	Total			

Subcatchment C14: Drainage Basin C14

Hydrograph



Summary for Subcatchment C15: Drainage Basin C15

Runoff = 0.93 cfs @ 0.09 hrs, Volume= 1,682 cf, Depth= 1.50"

Routed to Pond DP : Existing North Detention Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

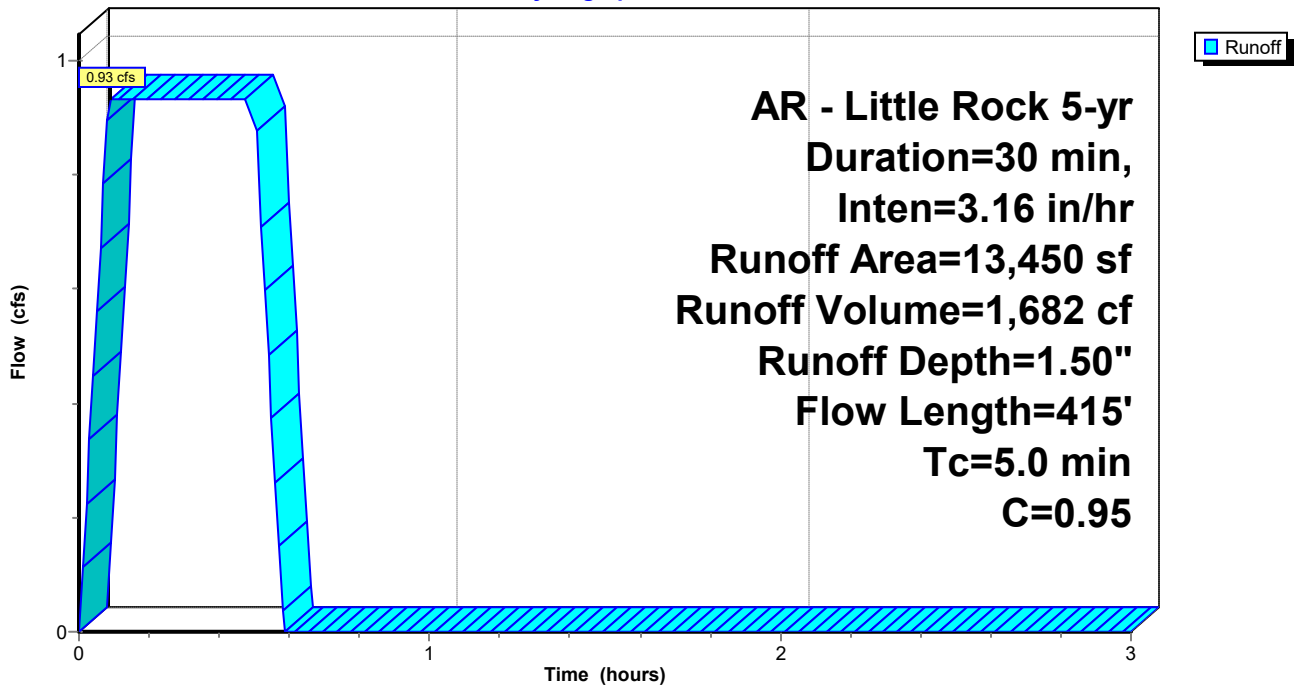
AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
13,450	0.95	Paving, Sidewalks
13,450	0.95	Weighted Average
13,450		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	415		1.38		Direct Entry, Overland Concentrated Flow (Min)

Subcatchment C15: Drainage Basin C15

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment C16: Drainage Basin C16

Runoff = 0.90 cfs @ 0.09 hrs, Volume= 1,628 cf, Depth= 0.88"

Routed to Pond DP : Existing North Detention Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

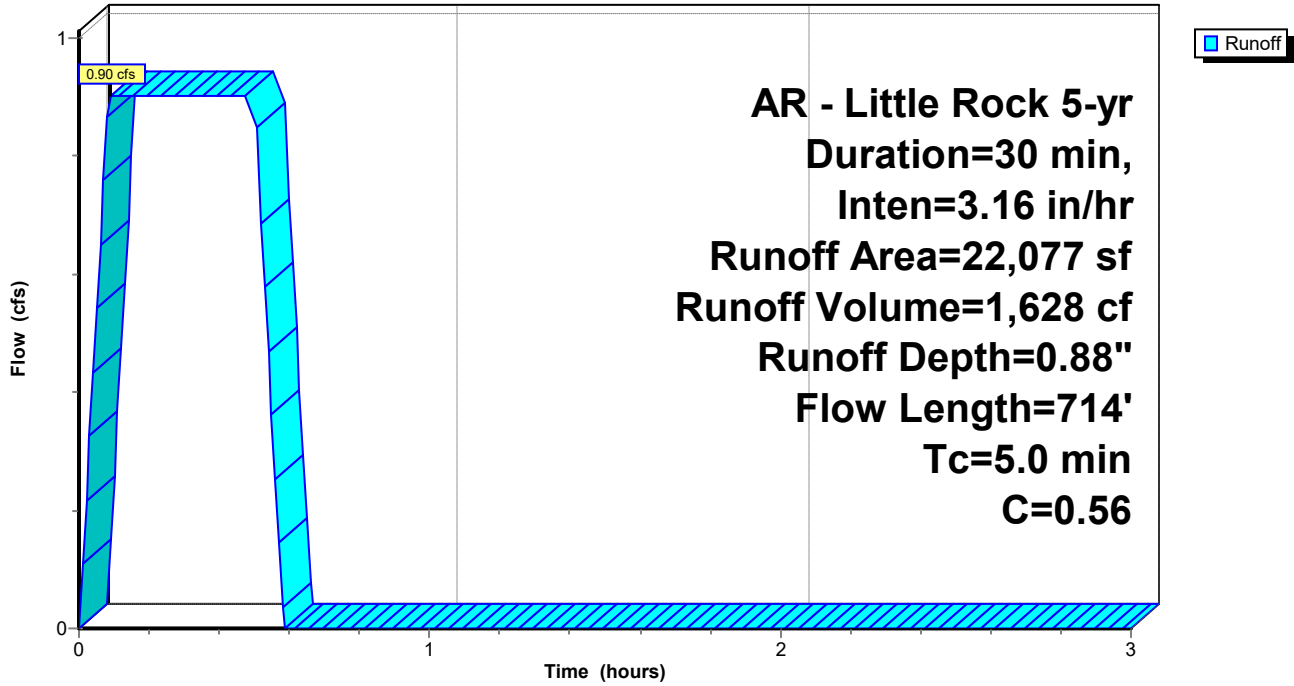
AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
15,465	0.40	Sod Yard
6,612	0.95	Paving, Sidewalks
22,077	0.56	Weighted Average
15,465		70.05% Pervious Area
6,612		29.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	26	0.0190	1.18		Sheet Flow, Sheet Flow
					Smooth surfaces n= 0.011 P2= 4.19"
0.1	5	0.0100	0.66		Sheet Flow, Sheet Flow
					Smooth surfaces n= 0.011 P2= 4.19"
0.4	51	0.0500	1.98		Sheet Flow, Sheet Flow
					Smooth surfaces n= 0.011 P2= 4.19"
0.1	12	0.1540	2.33		Sheet Flow, Sheet Flow
					Smooth surfaces n= 0.011 P2= 4.19"
0.1	50	0.1330	7.40		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	50	0.1170	6.94		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.2	46	0.0430	4.21		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.3	59	0.0370	3.90		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
3.3	415		2.10		Direct Entry, Overland Concentrated Flow (Min)
5.0	714	Total			

Subcatchment C16: Drainage Basin C16

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment C17: Drainage Basin C17

Runoff = 2.28 cfs @ 0.16 hrs, Volume= 4,110 cf, Depth= 0.87"

Routed to Pond DP : Existing North Detention Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

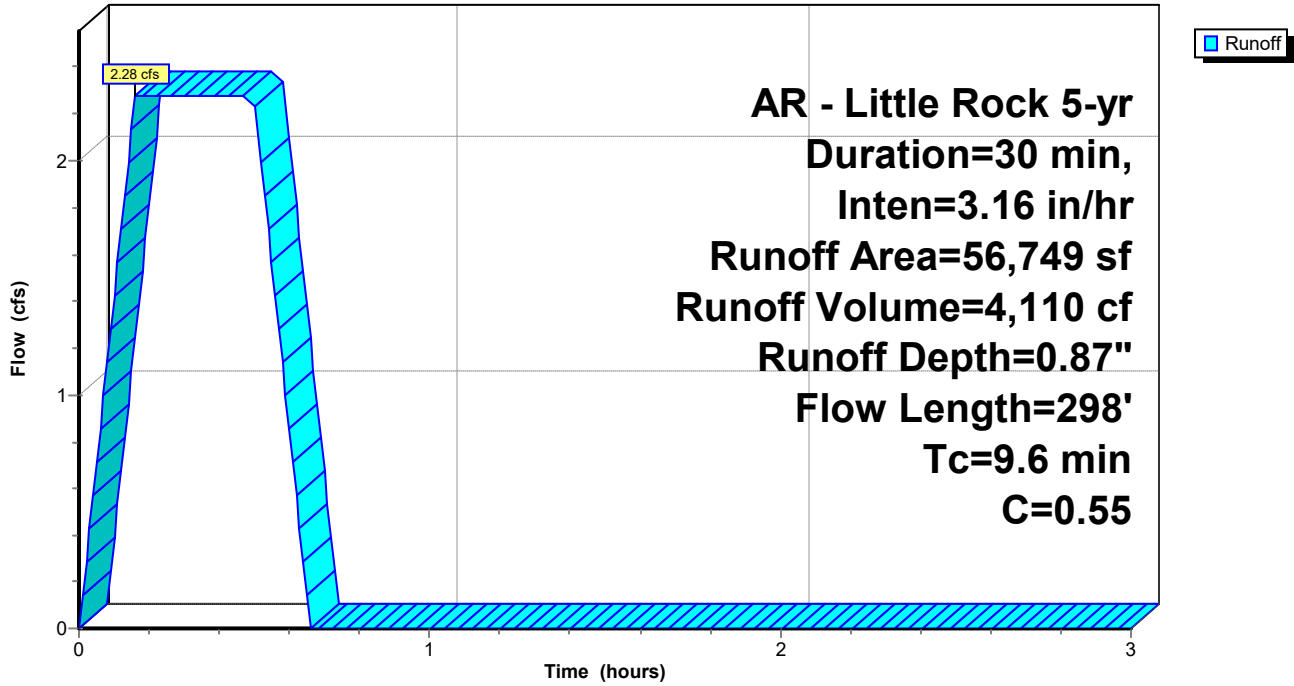
AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
40,914	0.40	Sod Yard
15,835	0.95	Paving, Sidewalks
56,749	0.55	Weighted Average
40,914		72.10% Pervious Area
15,835		27.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	43	0.0410	0.15		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
3.9	43	0.0690	0.19		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
0.1	41	0.0980	4.70		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	61	0.0730	4.05		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.2	46	0.0570	3.58		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	64	0.0450	3.18		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
9.6	298	Total			

Subcatchment C17: Drainage Basin C17

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment C18: Drainage Basin C18

Runoff = 1.07 cfs @ 0.09 hrs, Volume= 1,920 cf, Depth= 1.01"

Routed to Link FINAL : APPROX DISCHARGE

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

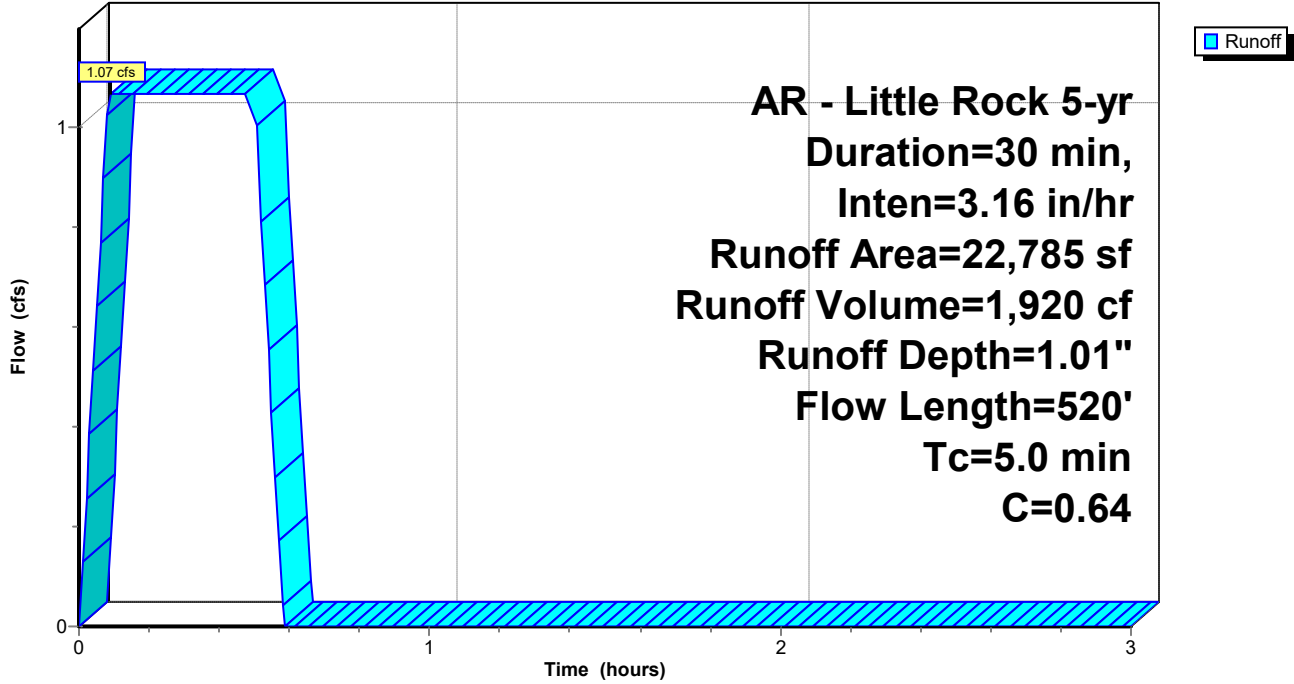
AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
12,812	0.40	Sod Yard
9,973	0.95	Paving, Sidewalks
22,785	0.64	Weighted Average
12,812		56.23% Pervious Area
9,973		43.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	5	0.2980	0.14		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.2	12	0.0130	0.87		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
3.3	8	0.0100	0.04		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.5	80	0.0210	2.94		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.4	415		17.29		Direct Entry, Concentrated Flow (Min)
5.0	520	Total			

Subcatchment C18: Drainage Basin C18

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment C19: Drainage Basin C19

Runoff = 0.65 cfs @ 0.12 hrs, Volume= 1,162 cf, Depth= 0.77"
 Routed to Link FINAL : APPROX DISCHARGE

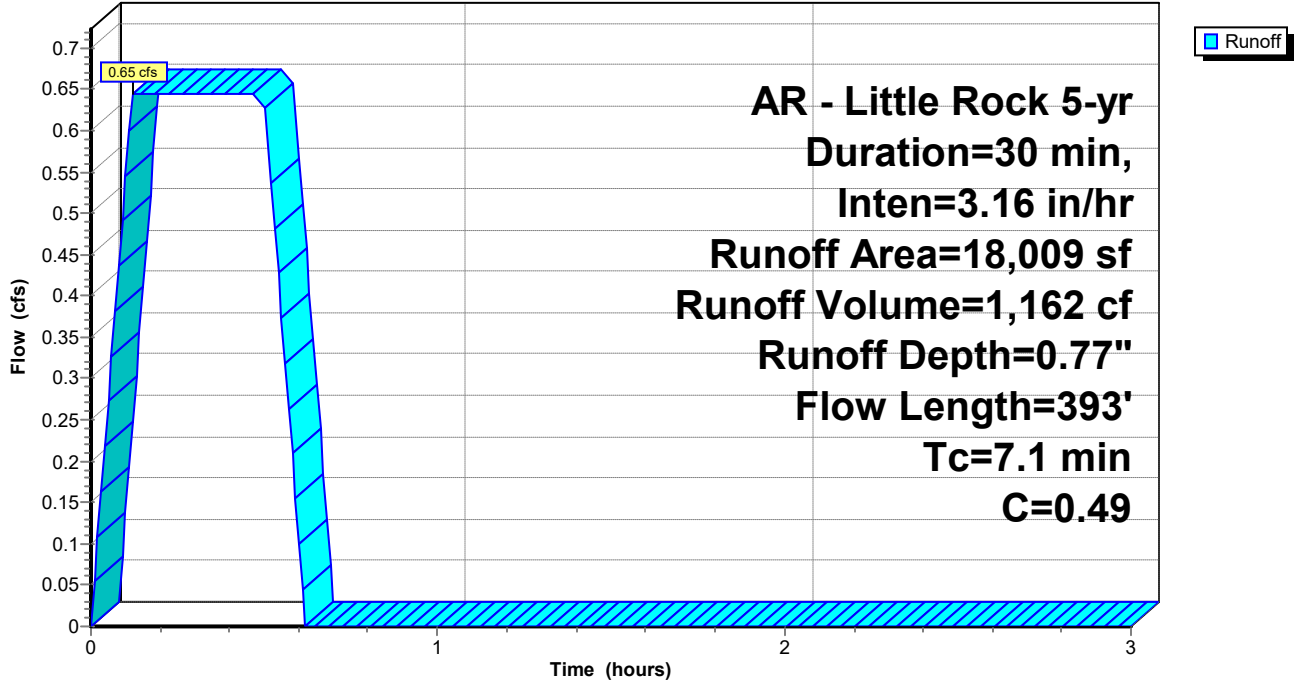
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
15,129	0.40	Sod Yard
2,880	0.95	Paving, Sidewalks
18,009	0.49	Weighted Average
15,129		84.01% Pervious Area
2,880		15.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	34	0.1110	0.21		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
3.3	66	0.2450	0.34		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
0.0	9	0.2450	7.42		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.5	106	0.0610	3.70		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.2	46	0.0800	4.24		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.1	41	0.0960	4.65		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	66	0.0680	3.91		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.0	19	0.1070	6.64		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	6	0.0750	5.56		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
7.1	393	Total			

Subcatchment C19: Drainage Basin C19

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment C2: Drainage Basin C2

Runoff = 1.93 cfs @ 0.09 hrs, Volume= 3,481 cf, Depth= 1.22"
 Routed to Pond CI-C2 : CI - C2

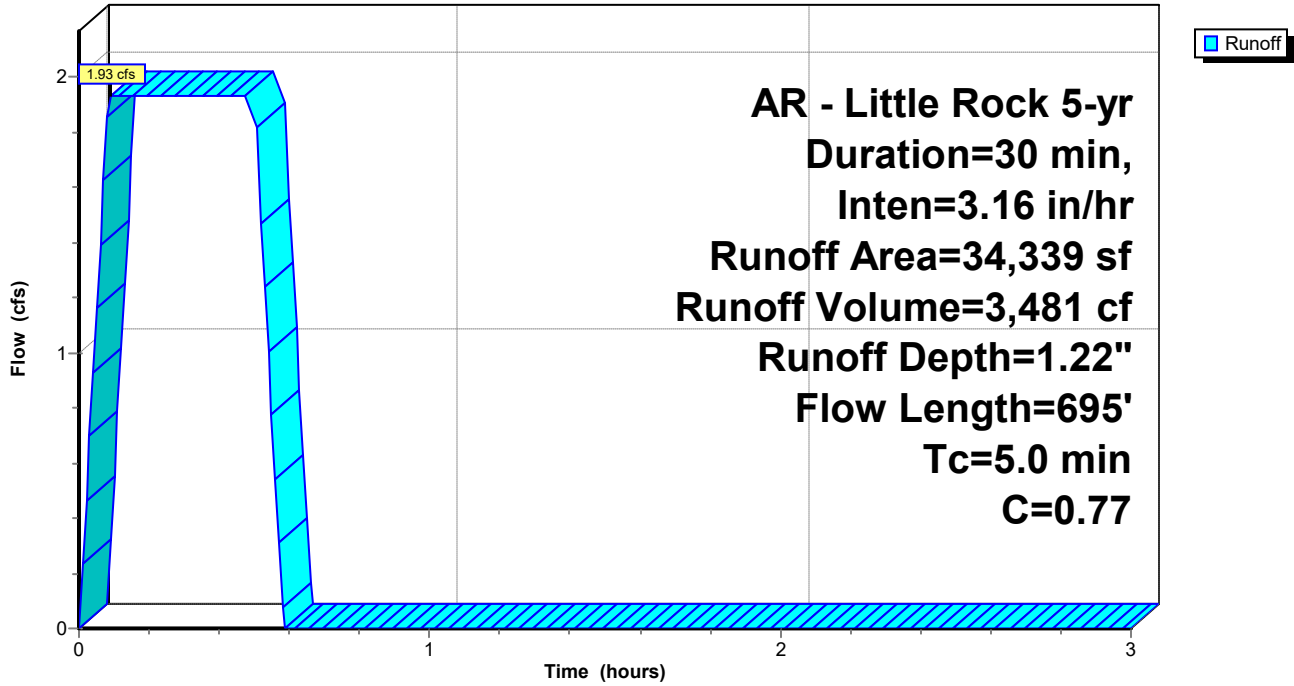
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
11,376	0.40	Sod Yard
22,963	0.95	Roof, Paving, Sidewalks
34,339	0.77	Weighted Average
11,376		33.13% Pervious Area
22,963		66.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	20	0.0200	1.14		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.4	74	0.0240	3.14		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	17	0.0710	5.41		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	21	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.6	148	0.0380	3.96		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.5	415		1.98		Direct Entry, Concentrated Flow (Min)
5.0	695	Total			

Subcatchment C2: Drainage Basin C2

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment C20: Drainage Basin C20

Runoff = 0.89 cfs @ 0.14 hrs, Volume= 1,609 cf, Depth= 0.71"
 Routed to Link FINAL : APPROX DISCHARGE

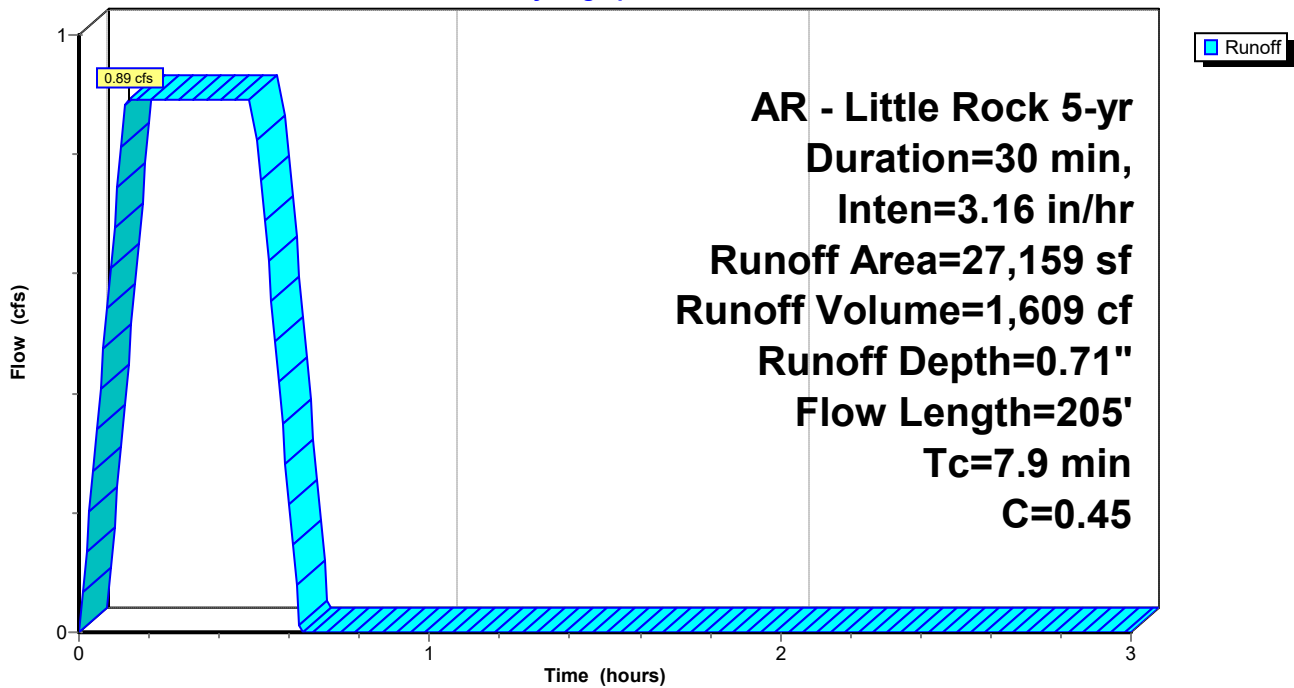
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
24,838	0.40	Sod Yard
2,321	0.95	Paving, Sidewalks
27,159	0.45	Weighted Average
24,838		91.45% Pervious Area
2,321		8.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	45	0.1430	0.25		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
4.5	55	0.0780	0.20		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
0.1	37	0.0780	4.19		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	68	0.0710	4.00		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
7.9	205	Total			

Subcatchment C20: Drainage Basin C20

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment C21: Drainage Basin C21

Runoff = 0.10 cfs @ 0.09 hrs, Volume= 179 cf, Depth= 1.00"

Routed to Link FINAL : APPROX DISCHARGE

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

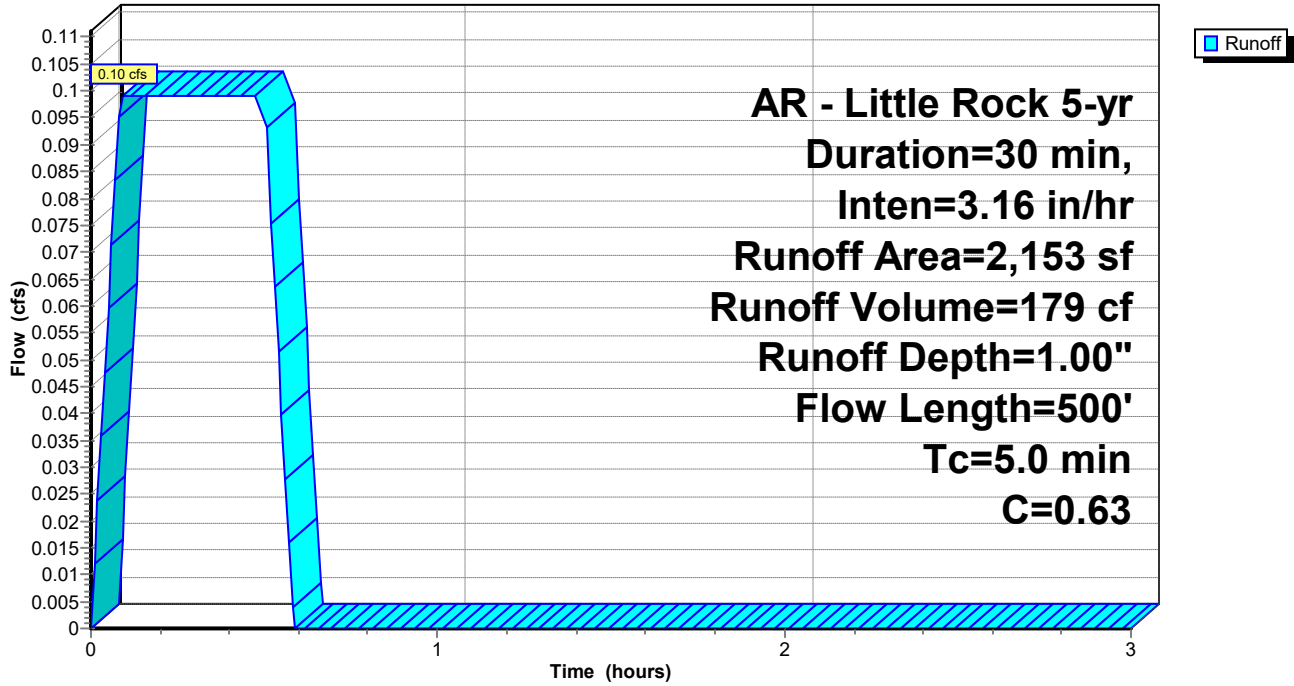
AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
1,234	0.40	Sod Yard
919	0.95	Paving, Sidewalks
2,153	0.63	Weighted Average
1,234		57.32% Pervious Area
919		42.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	2	0.2500	0.11		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
0.3	33	0.0520	1.85		Sheet Flow, Sheet Flow
					Smooth surfaces n= 0.011 P2= 4.19"
3.8	24	0.0660	0.11		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
0.1	26	0.0620	5.05		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.5	415		13.83		Direct Entry, Concentrated Flow (Min)
5.0	500	Total			

Subcatchment C21: Drainage Basin C21

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment C3: Drainage Basin C3

Runoff = 0.24 cfs @ 0.09 hrs, Volume= 435 cf, Depth= 1.50"
 Routed to Pond CI-C3 : CI - C3

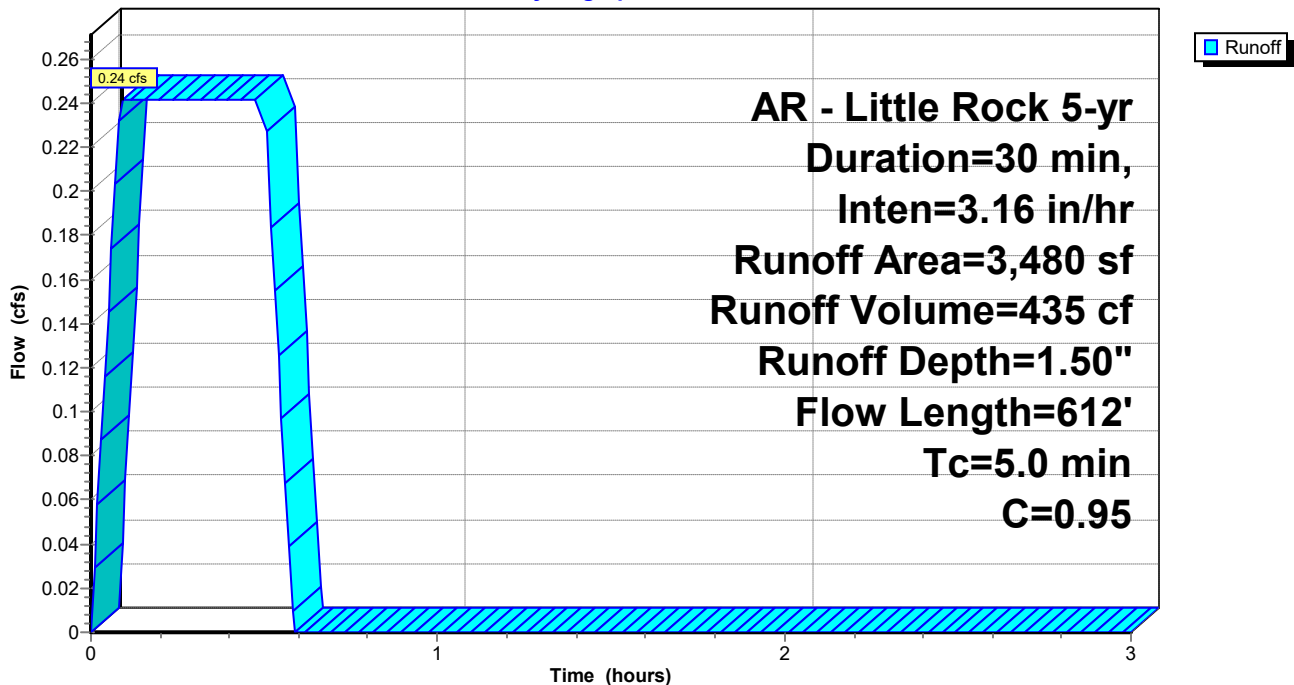
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
3,480	0.95	Paving, Sidewalks
3,480	0.95	Weighted Average
3,480		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	22	0.0200	1.16		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.0	10	0.0340	3.74		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	18	0.0390	4.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.6	147	0.0380	3.96		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.0	415		1.73		Direct Entry, Concentrated Flow (Min)
5.0	612	Total			

Subcatchment C3: Drainage Basin C3

Hydrograph



Summary for Subcatchment C4: Drainage Basin C4

Runoff = 0.47 cfs @ 0.09 hrs, Volume= 839 cf, Depth= 0.88"
 Routed to Pond CI-C3 : CI - C3

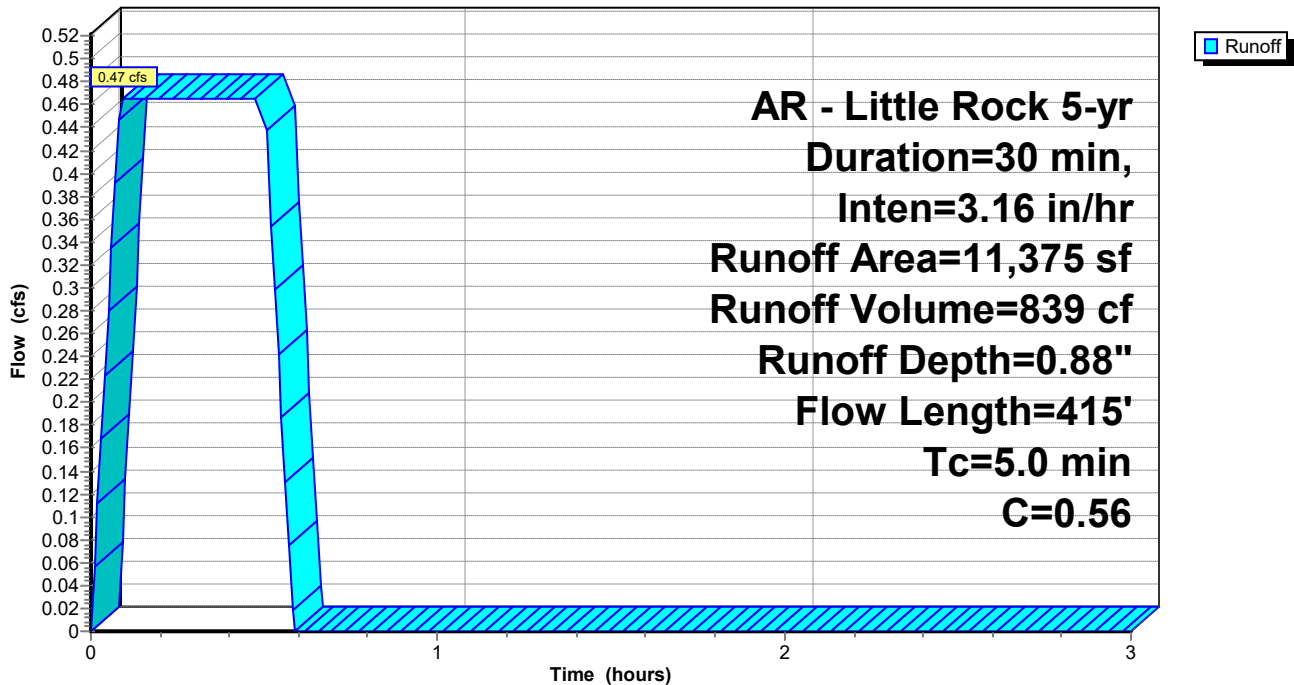
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
8,130	0.40	Sod Yard
3,245	0.95	Paving, Sidewalks
11,375	0.56	Weighted Average
8,130		71.47% Pervious Area
3,245		28.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	415		1.38		Direct Entry, Concentrated Flow (Min)

Subcatchment C4: Drainage Basin C4

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment C5: Drainage Basin C5

Runoff = 0.40 cfs @ 0.10 hrs, Volume= 723 cf, Depth= 1.30"
 Routed to Pond CI-C4 : CI - C4

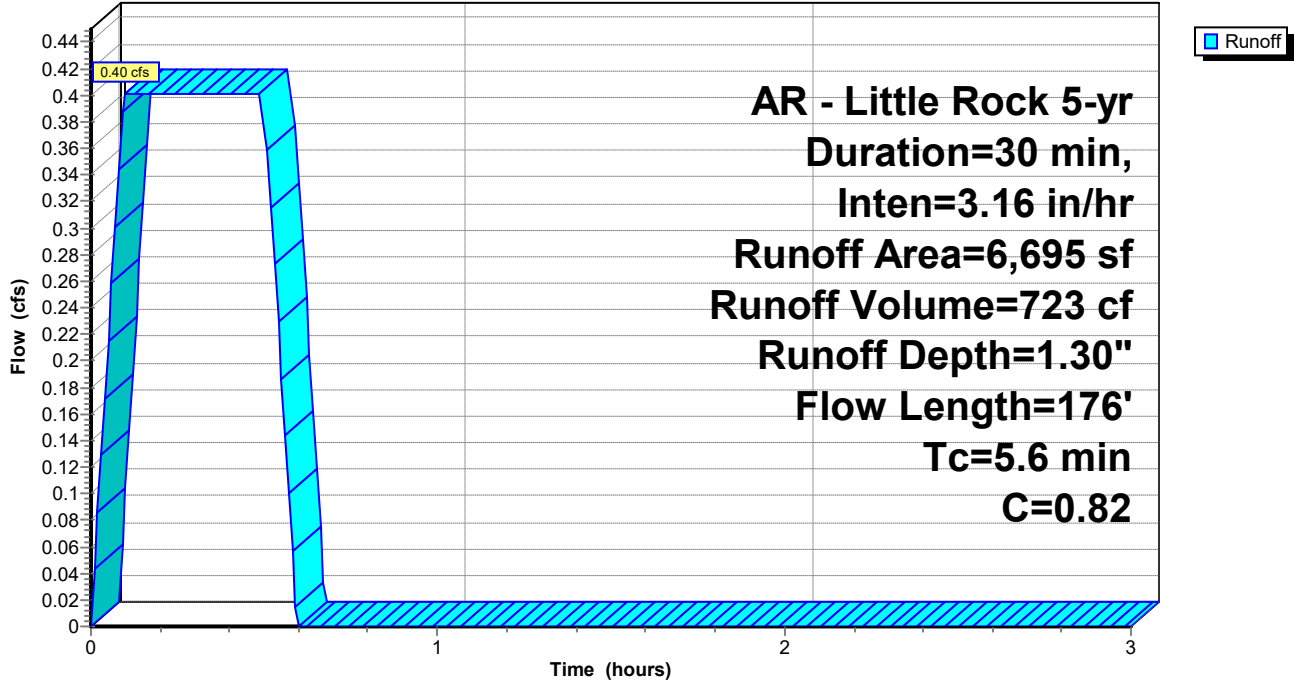
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
1,634	0.40	Sod Yard
5,061	0.95	Paving, Sidewalks
6,695	0.82	Weighted Average
1,634		24.41% Pervious Area
5,061		75.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	5	0.2990	0.14		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.2	12	0.0130	0.87		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
3.9	8	0.0070	0.03		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.5	58	0.0080	1.82		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	14	0.0280	3.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	23	0.0370	3.90		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	13	0.0940	6.22		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	13	0.0560	4.80		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	30	0.0180	2.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
5.6	176	Total			

Subcatchment C5: Drainage Basin C5

Hydrograph



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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment C6: Drainage Basin C6

Runoff = 0.20 cfs @ 0.09 hrs, Volume= 355 cf, Depth= 1.50"
 Routed to Pond CI-C5 : CI - C5

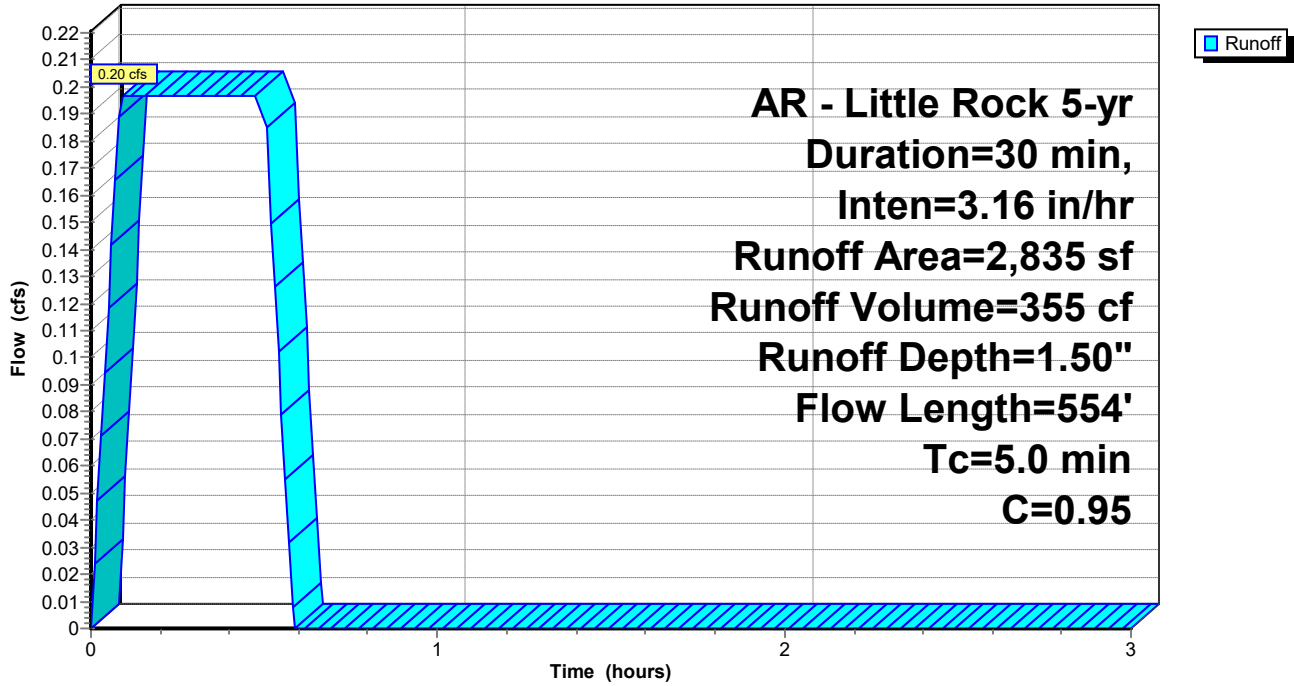
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
2,835	0.95	Paving, Sidewalks
2,835	0.95	Weighted Average
2,835		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	22	0.0200	1.16		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	19	0.0100	2.03		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	17	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	26	0.0360	3.85		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	28	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	27	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.1	415		1.69		Direct Entry, Concentrated Flow (Min)
5.0	554	Total			

Subcatchment C6: Drainage Basin C6

Hydrograph



Goddard

Prepared by Phillip Lewis Engineering

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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment C7: Drainage Basin C7

Runoff = 0.11 cfs @ 0.09 hrs, Volume= 200 cf, Depth= 1.50"
 Routed to Pond CI-D1 : CI - D1

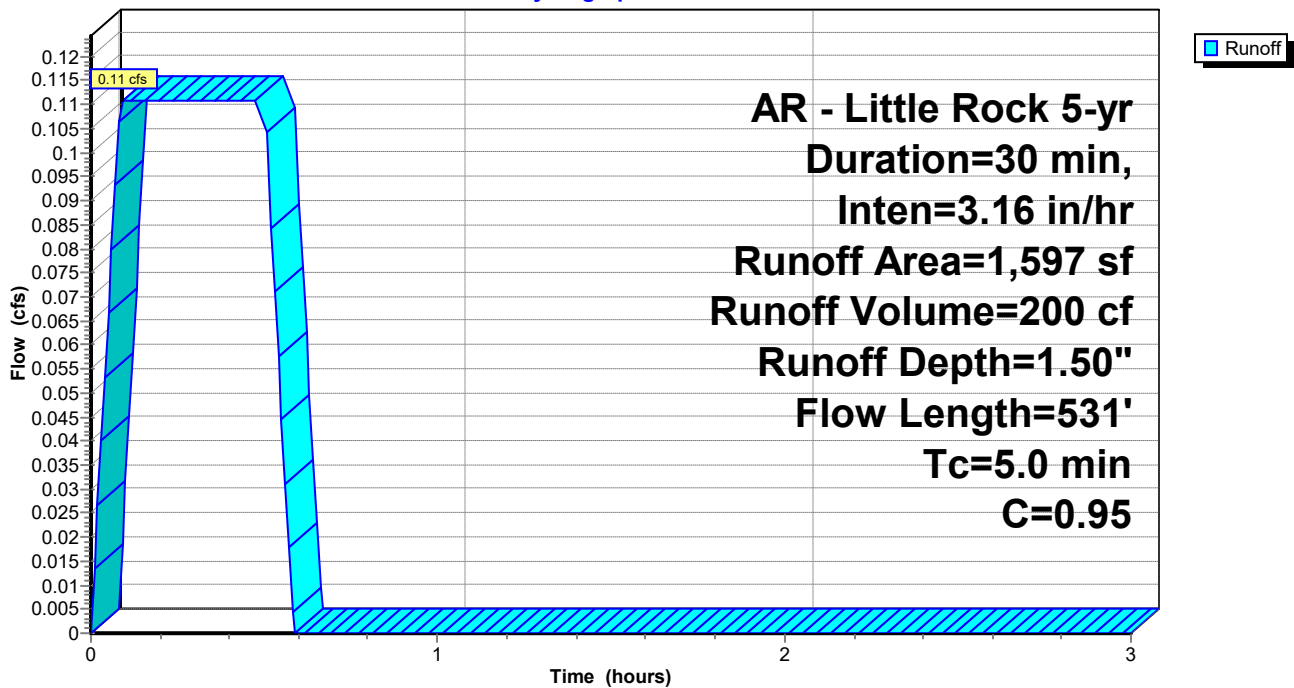
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
1,597	0.95	Paving, Sidewalks
1,597	0.95	Weighted Average
1,597		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	19	0.0200	1.13		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	16	0.0540	4.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.3	81	0.0580	4.89		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.3	415		1.61		Direct Entry, Concentrated Flow (Min)
5.0	531	Total			

Subcatchment C7: Drainage Basin C7

Hydrograph



Summary for Subcatchment C8: Drainage Basin C8

Runoff = 0.11 cfs @ 0.09 hrs, Volume= 194 cf, Depth= 1.50"
 Routed to Pond CI-D2 : CI - D2

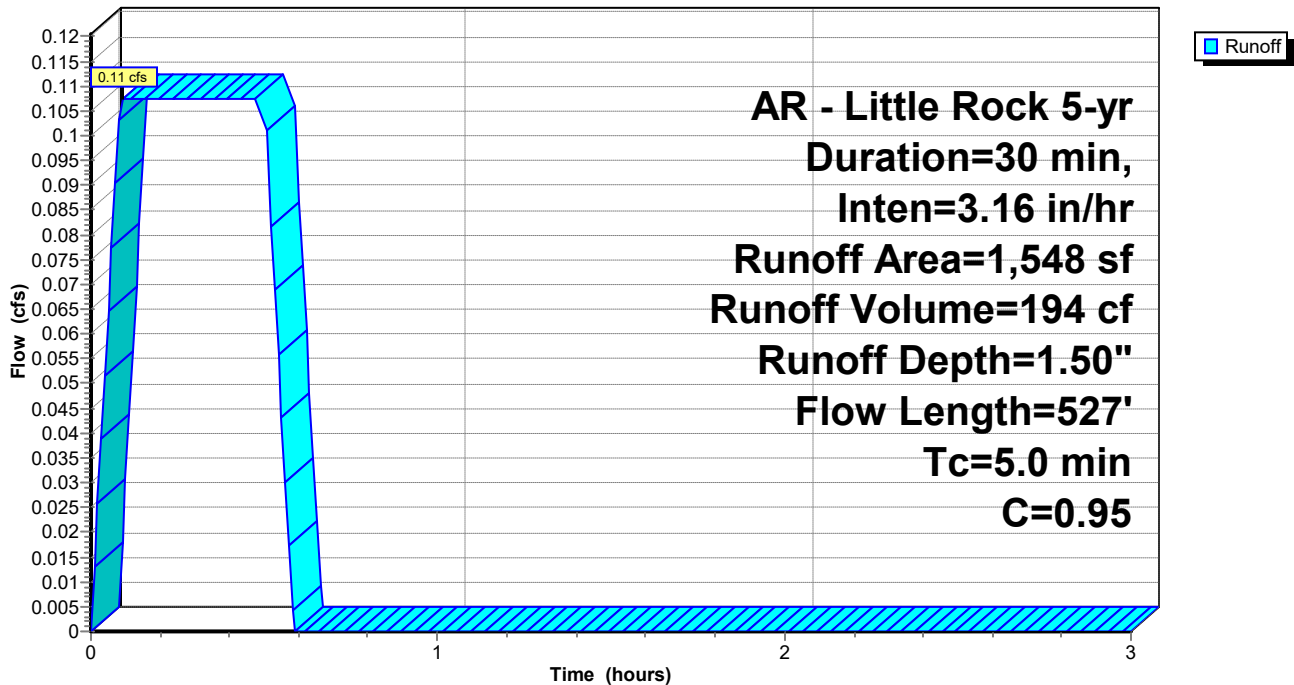
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
1,548	0.95	Paving, Sidewalks
1,548	0.95	Weighted Average
1,548		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	1.12		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.3	94	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.4	415		1.57		Direct Entry, Concentrated Flow (Min)
5.0	527	Total			

Subcatchment C8: Drainage Basin C8

Hydrograph



Goddard

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AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Subcatchment C9: Drainage Basin C9

Runoff = 0.78 cfs @ 0.09 hrs, Volume= 1,401 cf, Depth= 1.22"
 Routed to Pond CI-C6 : CI - C6

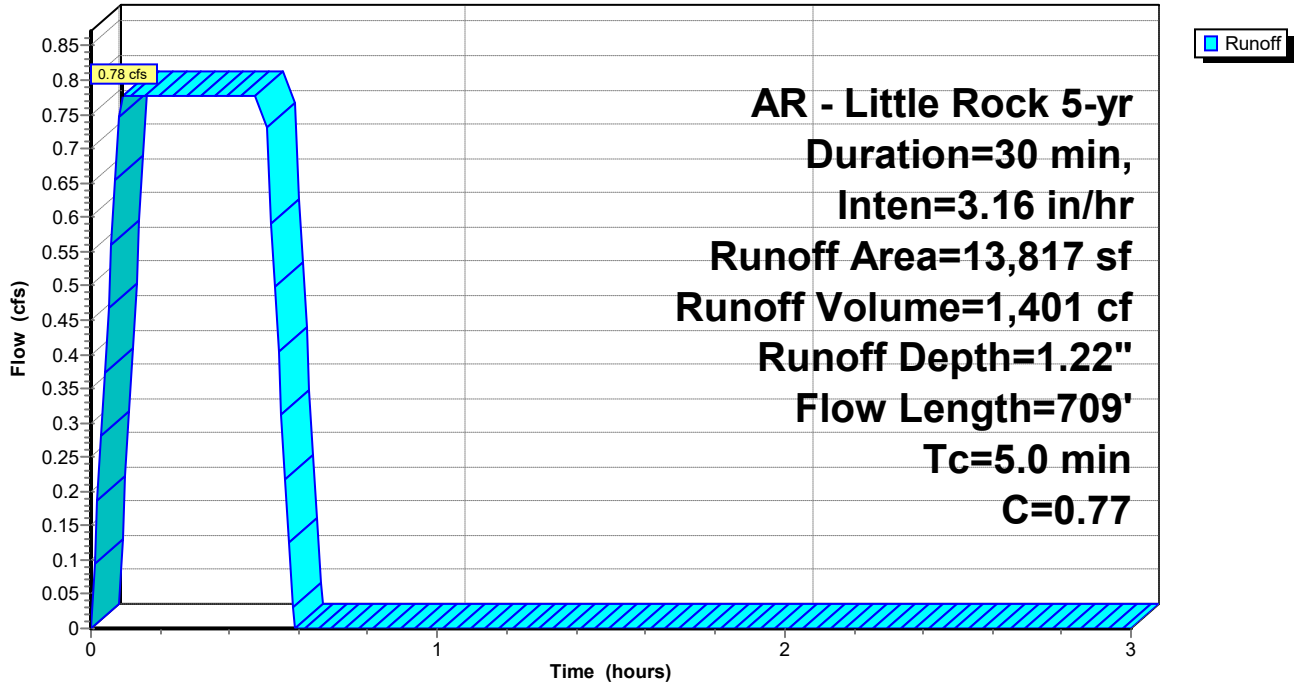
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

Area (sf)	C	Description
4,456	0.40	Sod Yard
9,361	0.95	Paving, Sidewalks
13,817	0.77	Weighted Average
4,456		32.25% Pervious Area
9,361		67.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0140	1.36		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	13	0.0150	2.49		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	23	0.0160	2.57		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	7	0.0050	1.44		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	8	0.0100	2.03		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	41	0.0420	4.16		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	41	0.0540	4.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	61	0.0520	4.63		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
2.9	415		2.39		Direct Entry, Concentrated Flow (Min)
5.0	709	Total			

Subcatchment C9: Drainage Basin C9

Hydrograph



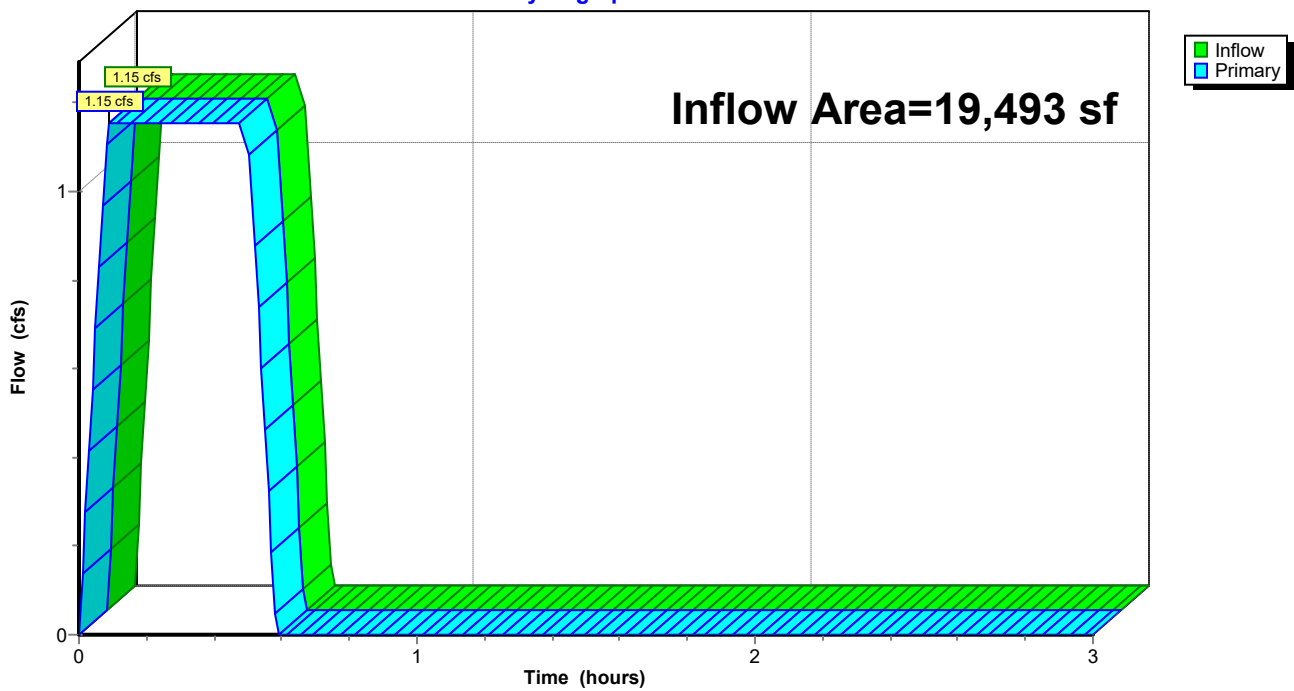
Summary for Pond CI-A1: CI - A1

Inflow Area = 19,493 sf, 74.85% Impervious, Inflow Depth = 1.28" for 5-yr event
Inflow = 1.15 cfs @ 0.09 hrs, Volume= 2,079 cf
Primary = 1.15 cfs @ 0.09 hrs, Volume= 2,079 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond JB-A2 : JB - A2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A1: CI - A1

Hydrograph



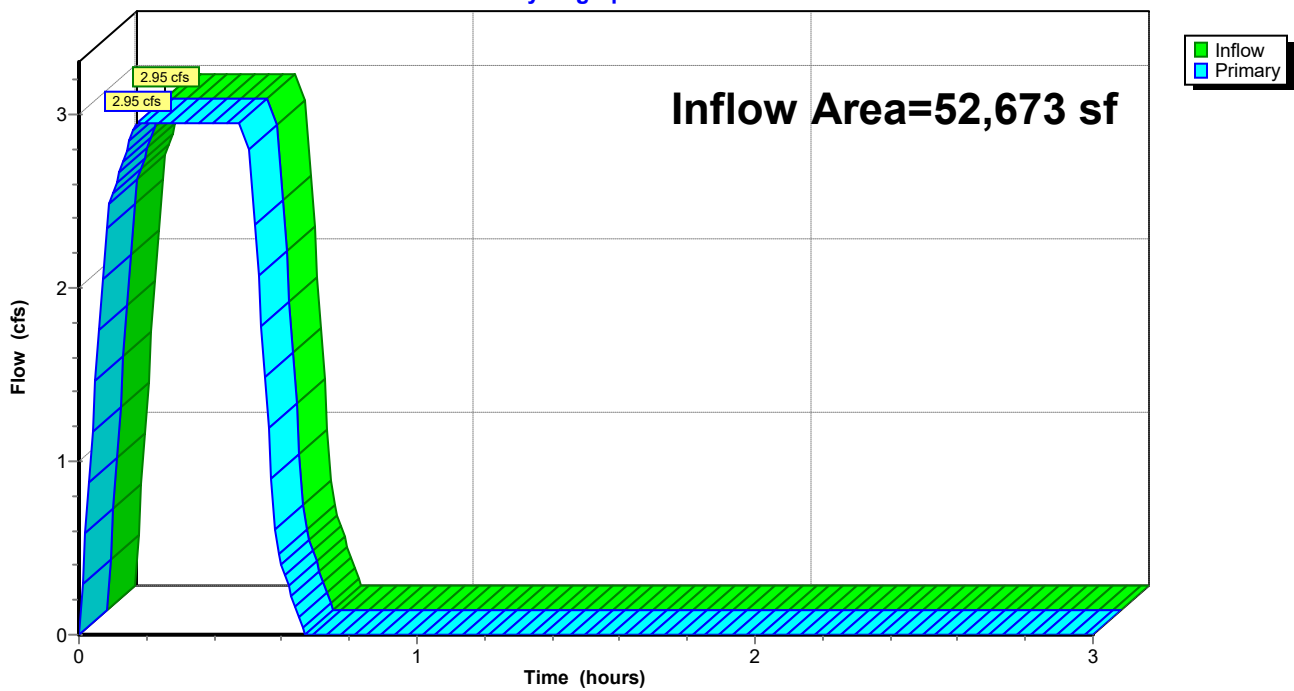
Summary for Pond CI-A3: CI - A3

Inflow Area = 52,673 sf, 66.48% Impervious, Inflow Depth = 1.21" for 5-yr event
Inflow = 2.95 cfs @ 0.17 hrs, Volume= 5,302 cf
Primary = 2.95 cfs @ 0.17 hrs, Volume= 5,302 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-A4 : CI - A4

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A3: CI - A3

Hydrograph



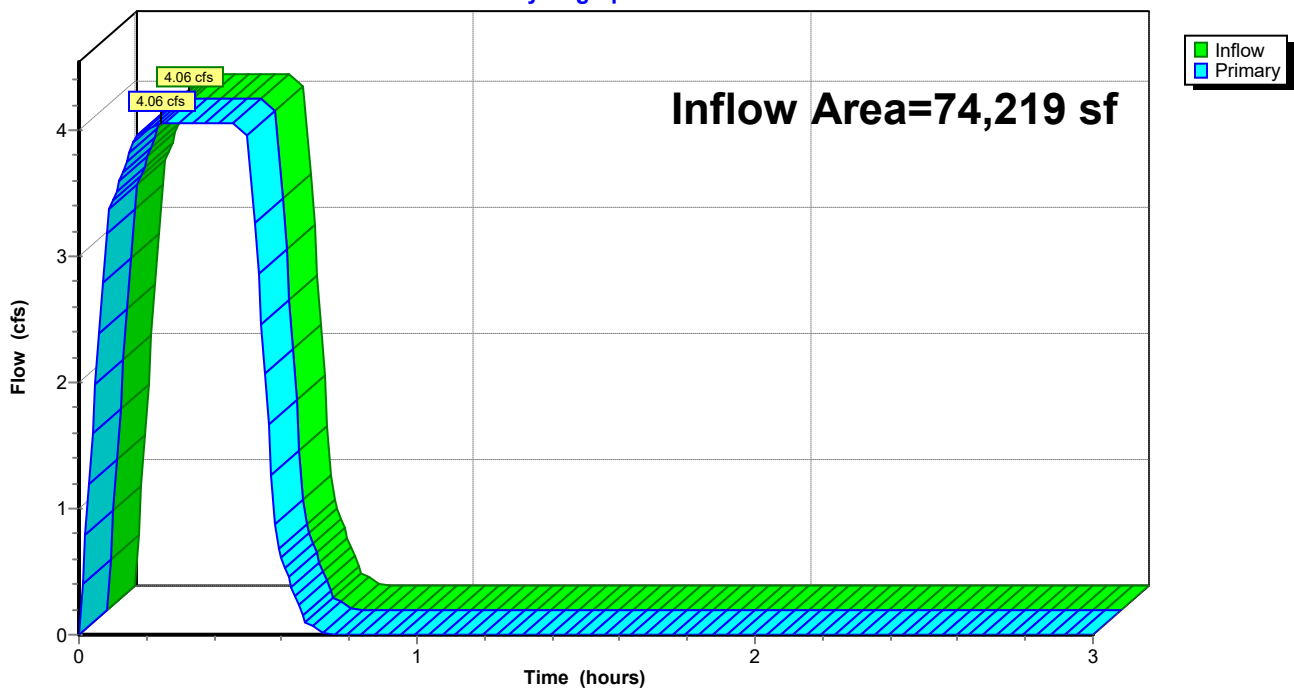
Summary for Pond CI-A4: CI - A4

Inflow Area = 74,219 sf, 63.30% Impervious, Inflow Depth = 1.18" for 5-yr event
Inflow = 4.06 cfs @ 0.24 hrs, Volume= 7,303 cf
Primary = 4.06 cfs @ 0.24 hrs, Volume= 7,303 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-A5 : CI - A5

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A4: CI - A4

Hydrograph



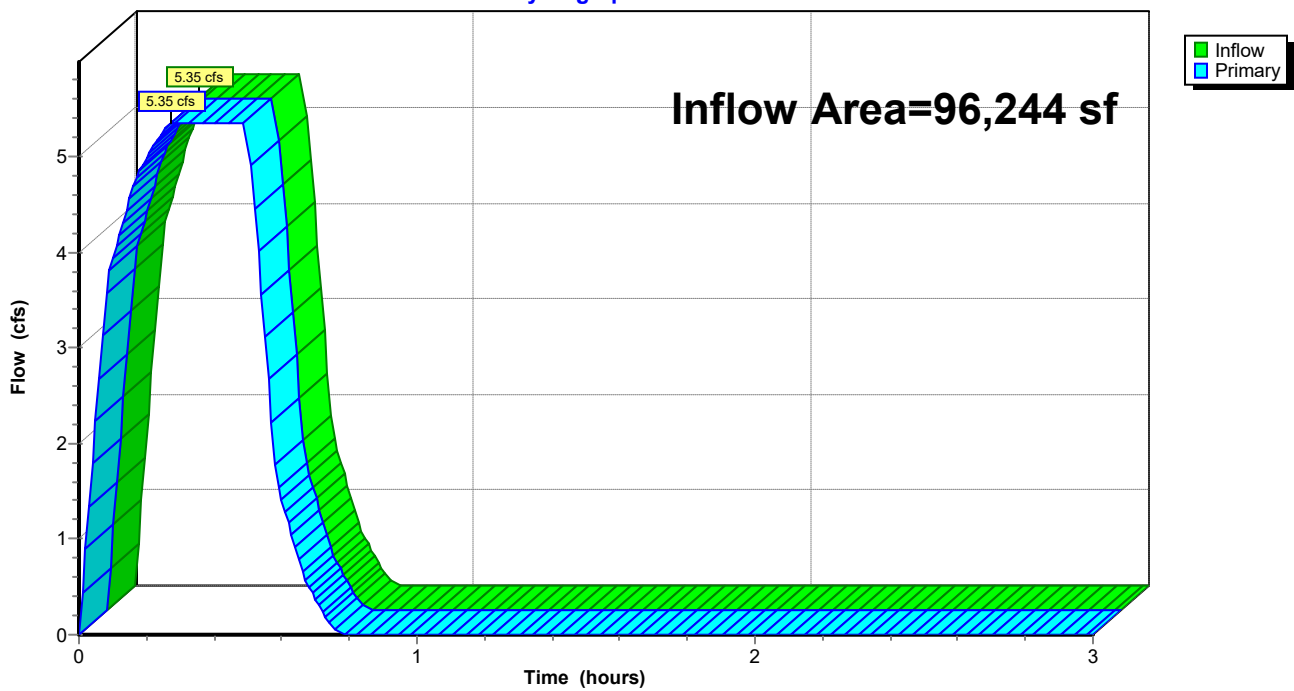
Summary for Pond CI-A5: CI - A5

Inflow Area = 96,244 sf, 65.33% Impervious, Inflow Depth = 1.20" for 5-yr event
Inflow = 5.35 cfs @ 0.27 hrs, Volume= 9,623 cf
Primary = 5.35 cfs @ 0.27 hrs, Volume= 9,623 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond DP : Existing North Detention Pond

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A5: CI - A5

Hydrograph



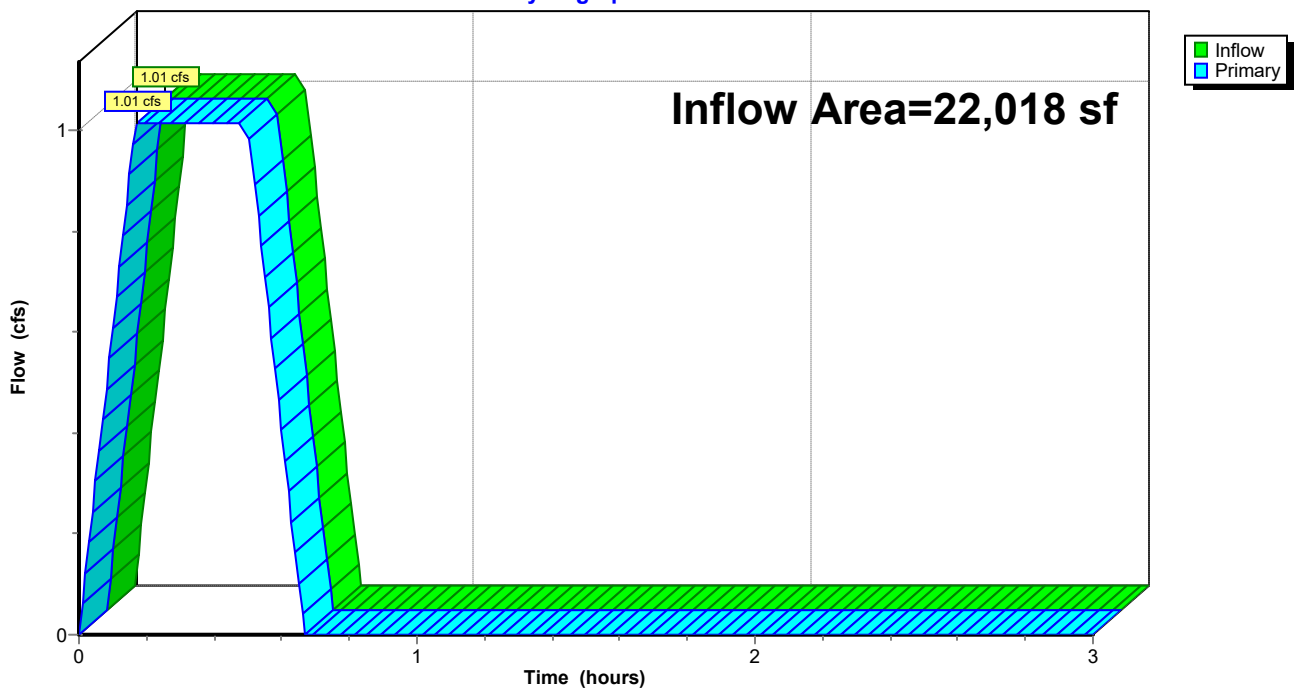
Summary for Pond CI-B2: CI - B2

Inflow Area = 22,018 sf, 42.08% Impervious, Inflow Depth = 1.00" for 5-yr event
Inflow = 1.01 cfs @ 0.17 hrs, Volume= 1,826 cf
Primary = 1.01 cfs @ 0.17 hrs, Volume= 1,826 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond JB-A2 : JB - A2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-B2: CI - B2

Hydrograph



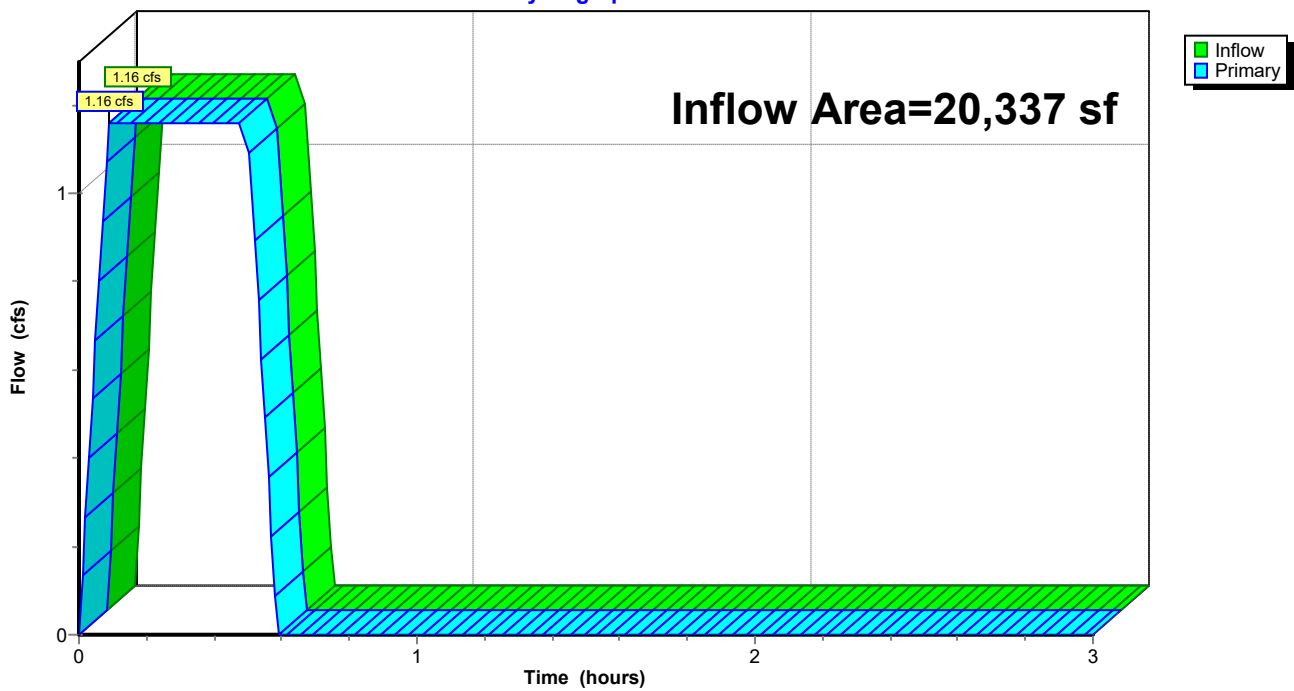
Summary for Pond CI-C1: CI - C1

Inflow Area = 20,337 sf, 69.83% Impervious, Inflow Depth = 1.23" for 5-yr event
Inflow = 1.16 cfs @ 0.09 hrs, Volume= 2,089 cf
Primary = 1.16 cfs @ 0.09 hrs, Volume= 2,089 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C2 : CI - C2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C1: CI - C1

Hydrograph



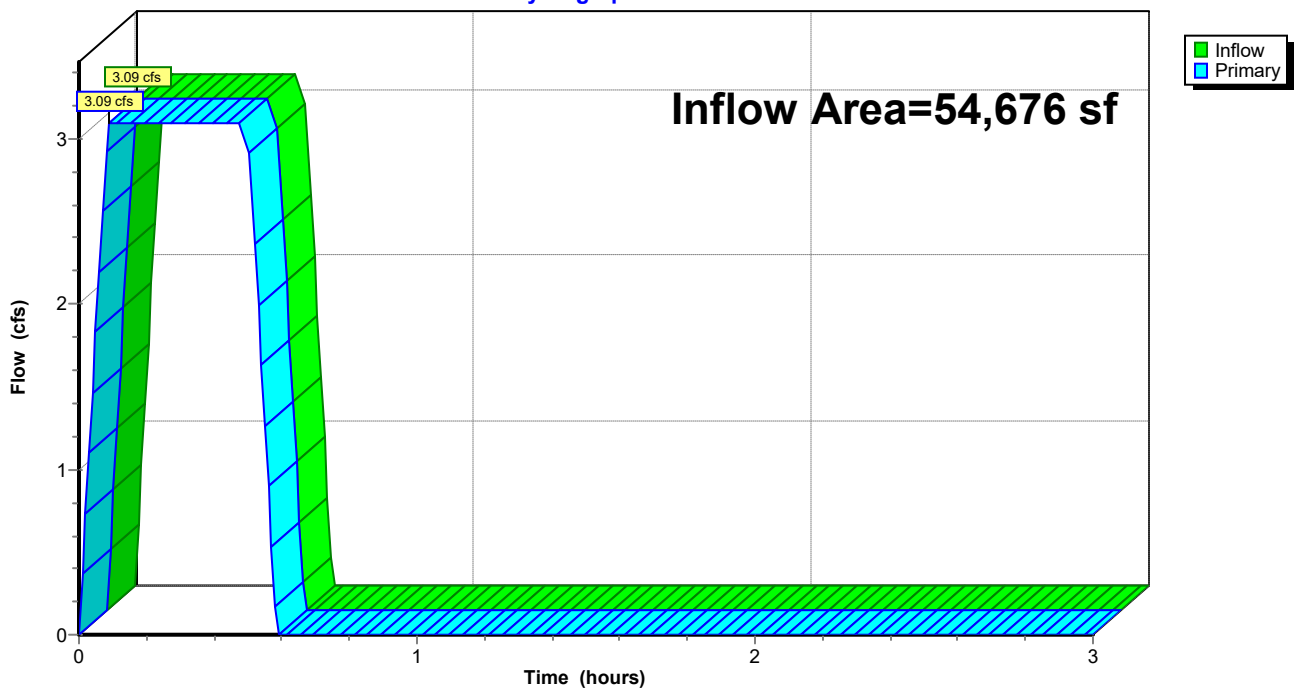
Summary for Pond CI-C2: CI - C2

Inflow Area = 54,676 sf, 67.97% Impervious, Inflow Depth = 1.22" for 5-yr event
Inflow = 3.09 cfs @ 0.09 hrs, Volume= 5,570 cf
Primary = 3.09 cfs @ 0.09 hrs, Volume= 5,570 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C3 : CI - C3

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C2: CI - C2

Hydrograph



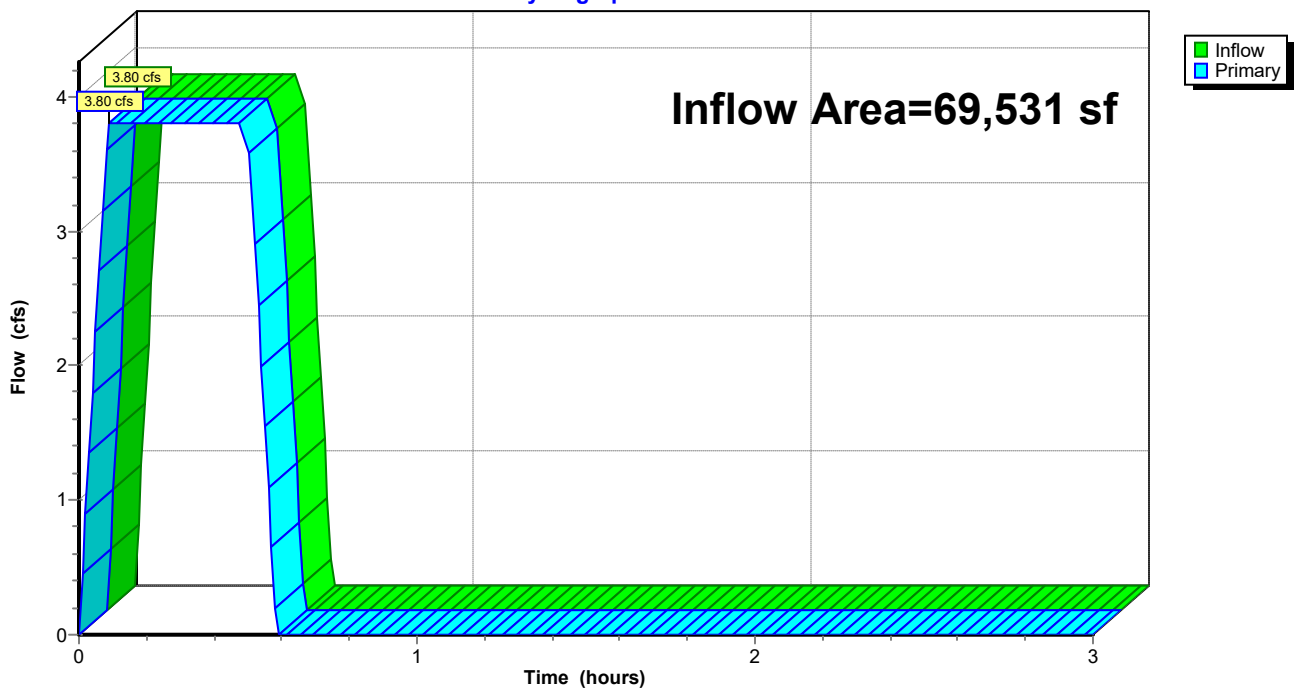
Summary for Pond CI-C3: CI - C3

Inflow Area = 69,531 sf, 63.12% Impervious, Inflow Depth = 1.18" for 5-yr event
Inflow = 3.80 cfs @ 0.09 hrs, Volume= 6,844 cf
Primary = 3.80 cfs @ 0.09 hrs, Volume= 6,844 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C4 : CI - C4

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C3: CI - C3

Hydrograph



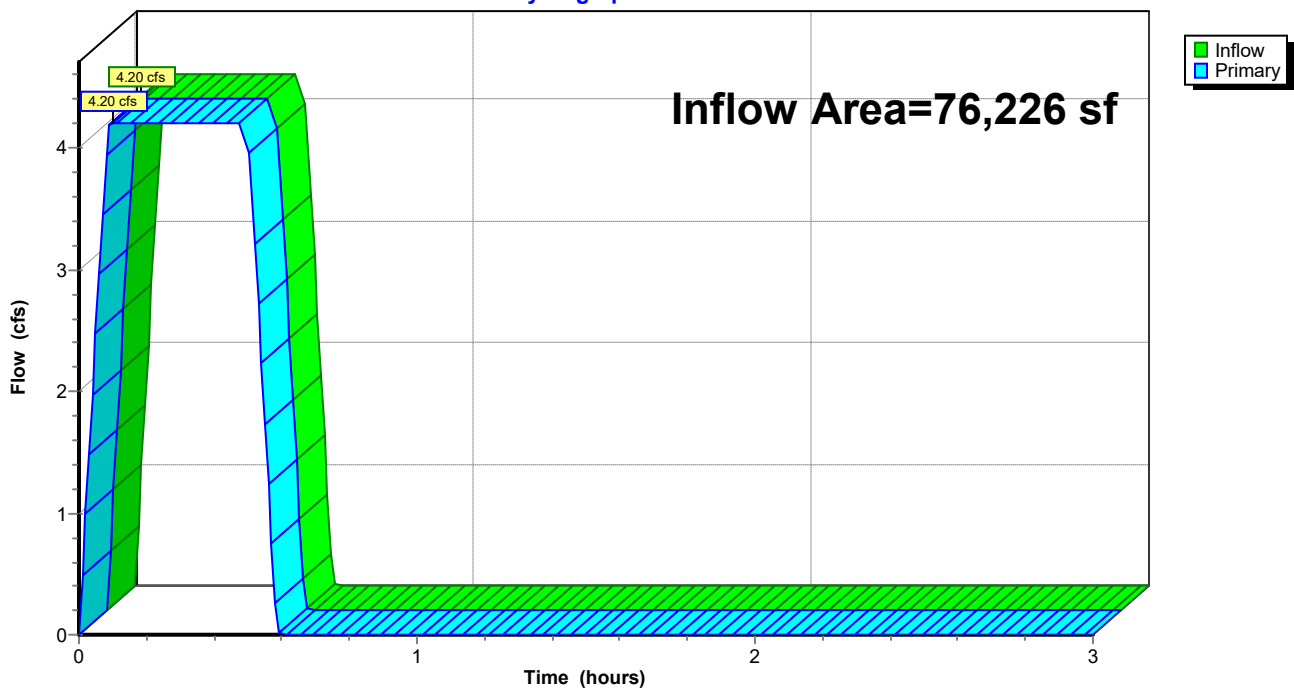
Summary for Pond CI-C4: CI - C4

Inflow Area = 76,226 sf, 64.22% Impervious, Inflow Depth = 1.19" for 5-yr event
Inflow = 4.20 cfs @ 0.10 hrs, Volume= 7,567 cf
Primary = 4.20 cfs @ 0.10 hrs, Volume= 7,567 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C5 : CI - C5

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C4: CI - C4

Hydrograph



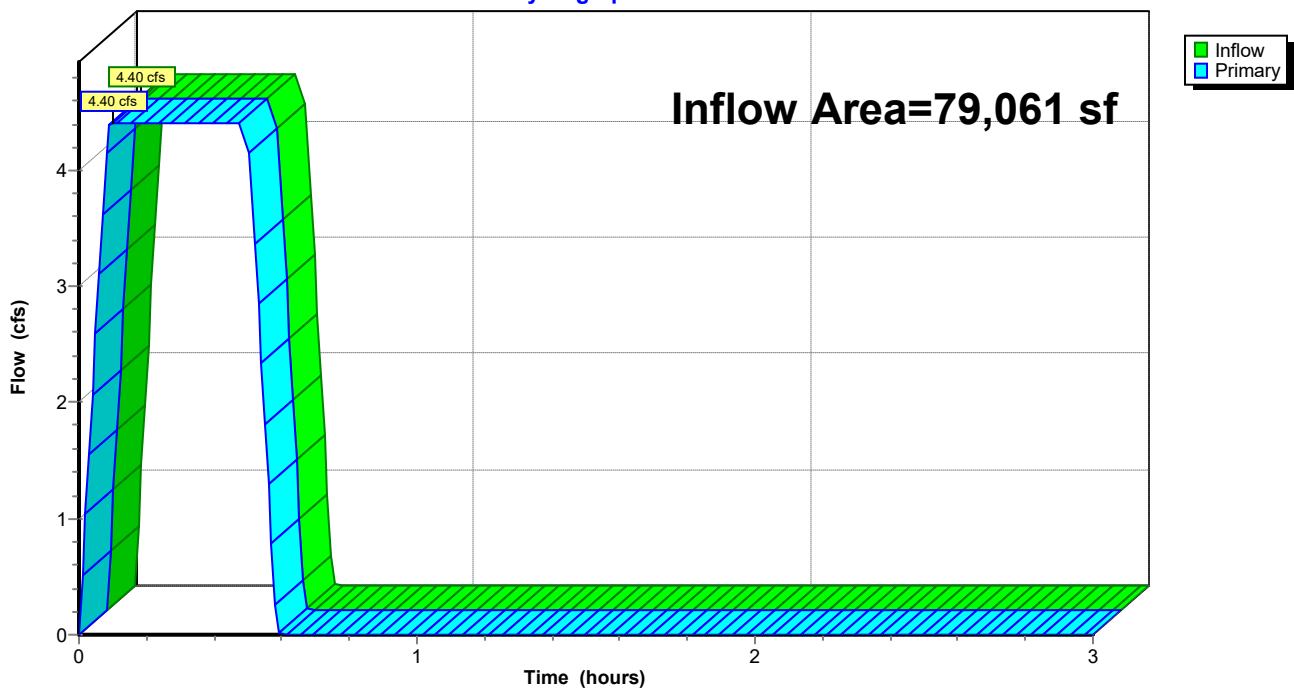
Summary for Pond CI-C5: CI - C5

Inflow Area = 79,061 sf, 65.50% Impervious, Inflow Depth = 1.20" for 5-yr event
Inflow = 4.40 cfs @ 0.10 hrs, Volume= 7,921 cf
Primary = 4.40 cfs @ 0.10 hrs, Volume= 7,921 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C6 : CI - C6

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C5: CI - C5

Hydrograph



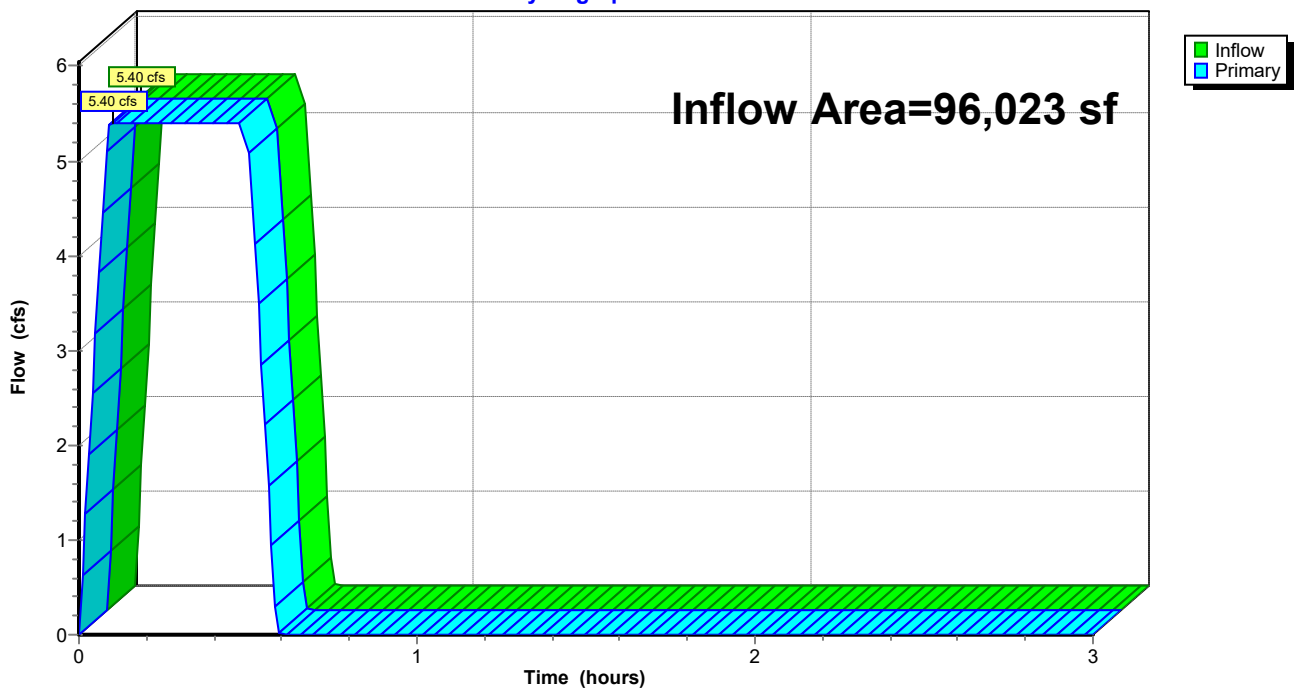
Summary for Pond CI-C6: CI - C6

Inflow Area = 96,023 sf, 66.95% Impervious, Inflow Depth = 1.21" for 5-yr event
Inflow = 5.40 cfs @ 0.10 hrs, Volume= 9,716 cf
Primary = 5.40 cfs @ 0.10 hrs, Volume= 9,716 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C7 : CI - C7

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C6: CI - C6

Hydrograph



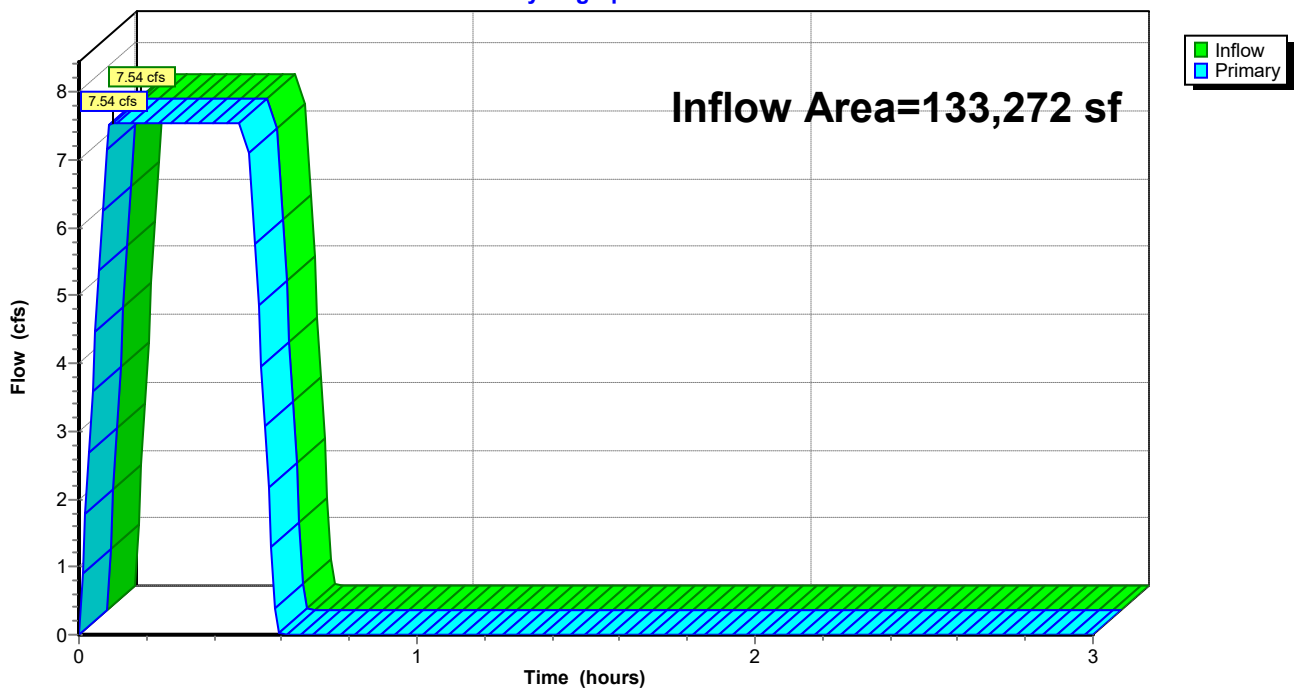
Summary for Pond CI-C7: CI - C7

Inflow Area = 133,272 sf, 67.70% Impervious, Inflow Depth = 1.22" for 5-yr event
Inflow = 7.54 cfs @ 0.10 hrs, Volume= 13,571 cf
Primary = 7.54 cfs @ 0.10 hrs, Volume= 13,571 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond DP : Existing North Detention Pond

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C7: CI - C7

Hydrograph



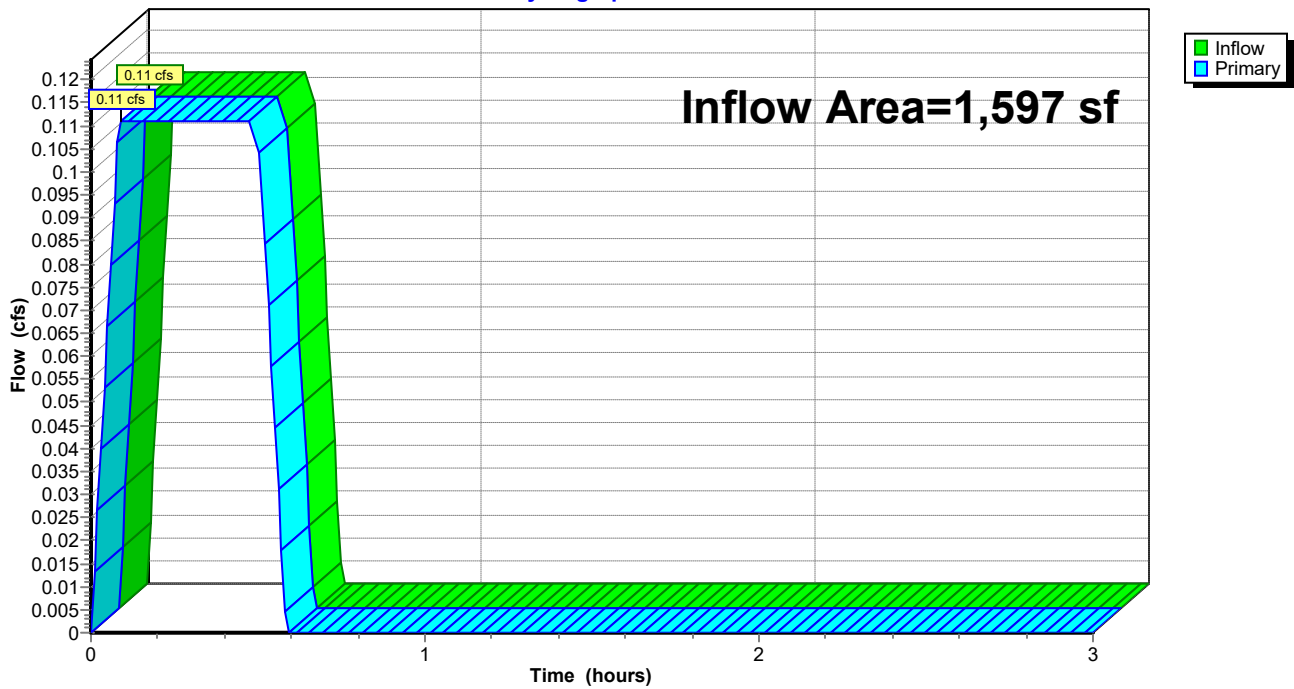
Summary for Pond CI-D1: CI - D1

Inflow Area = 1,597 sf, 100.00% Impervious, Inflow Depth = 1.50" for 5-yr event
Inflow = 0.11 cfs @ 0.09 hrs, Volume= 200 cf
Primary = 0.11 cfs @ 0.09 hrs, Volume= 200 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-D2 : CI - D2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-D1: CI - D1

Hydrograph



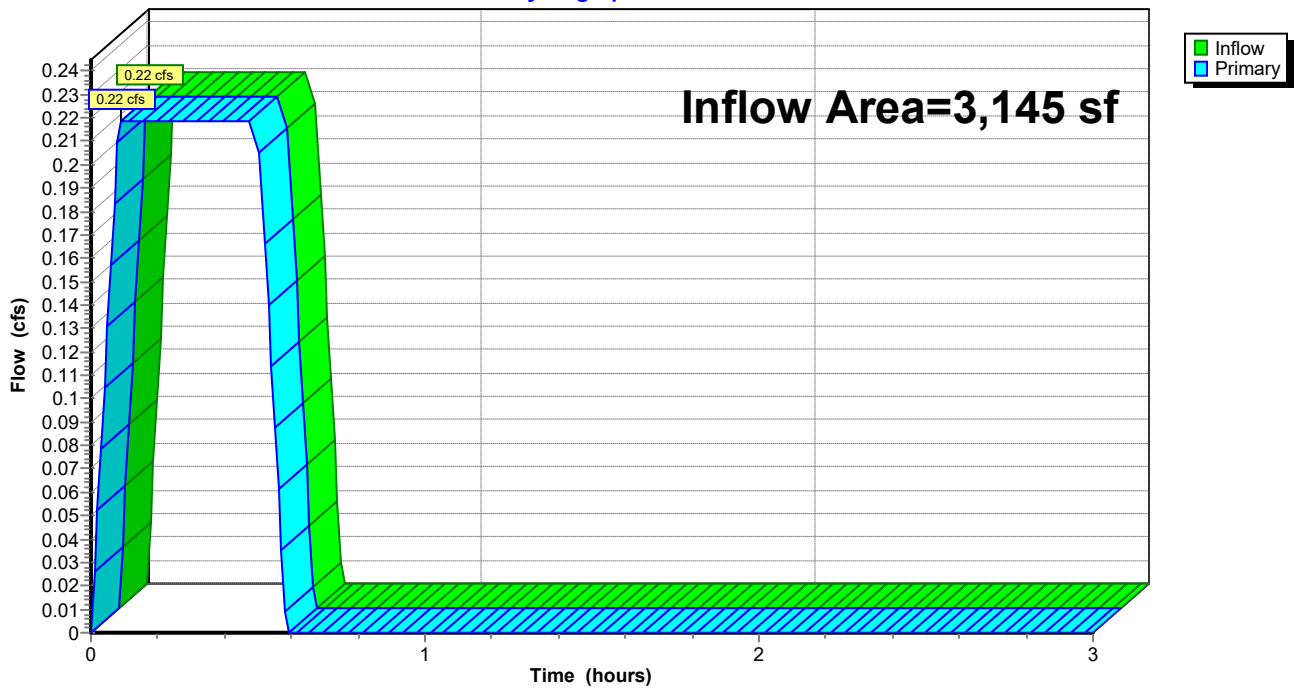
Summary for Pond CI-D2: CI - D2

Inflow Area = 3,145 sf, 100.00% Impervious, Inflow Depth = 1.50" for 5-yr event
Inflow = 0.22 cfs @ 0.09 hrs, Volume= 393 cf
Primary = 0.22 cfs @ 0.09 hrs, Volume= 393 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C6 : CI - C6

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-D2: CI - D2

Hydrograph



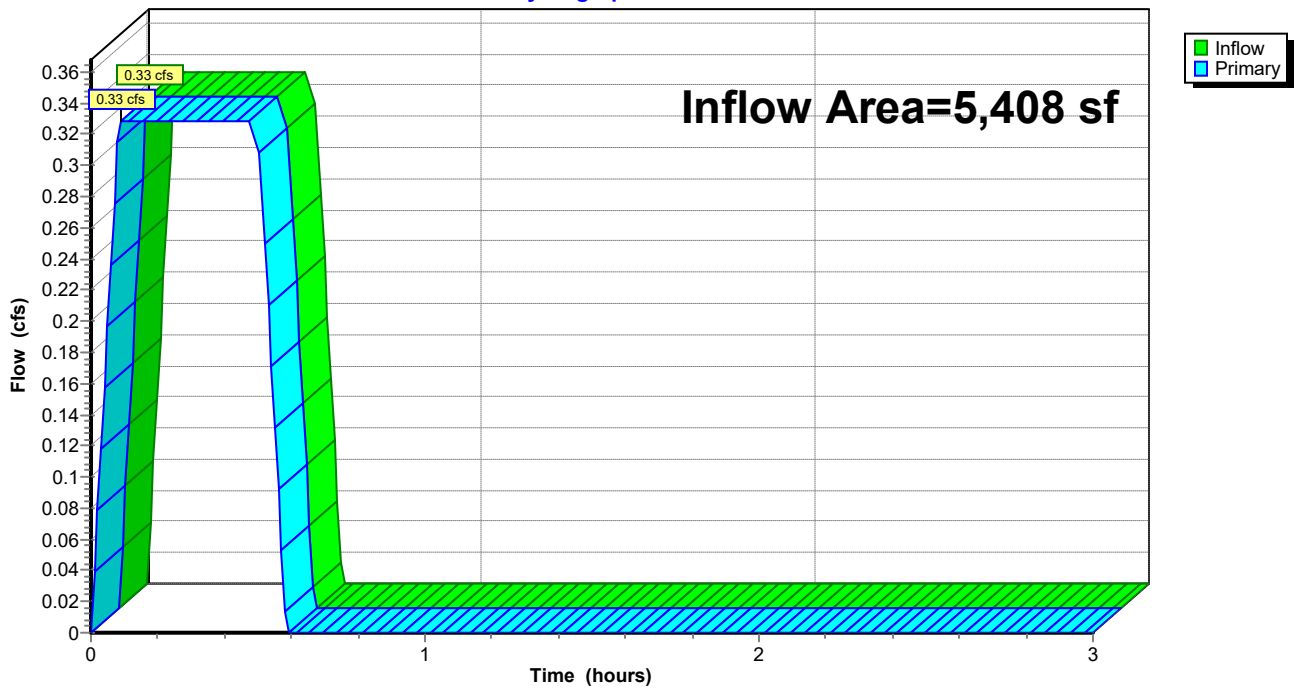
Summary for Pond CI-E1: CI - E1

Inflow Area = 5,408 sf, 77.35% Impervious, Inflow Depth = 1.31" for 5-yr event
Inflow = 0.33 cfs @ 0.09 hrs, Volume= 591 cf
Primary = 0.33 cfs @ 0.09 hrs, Volume= 591 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-E2 : CI - E2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-E1: CI - E1

Hydrograph



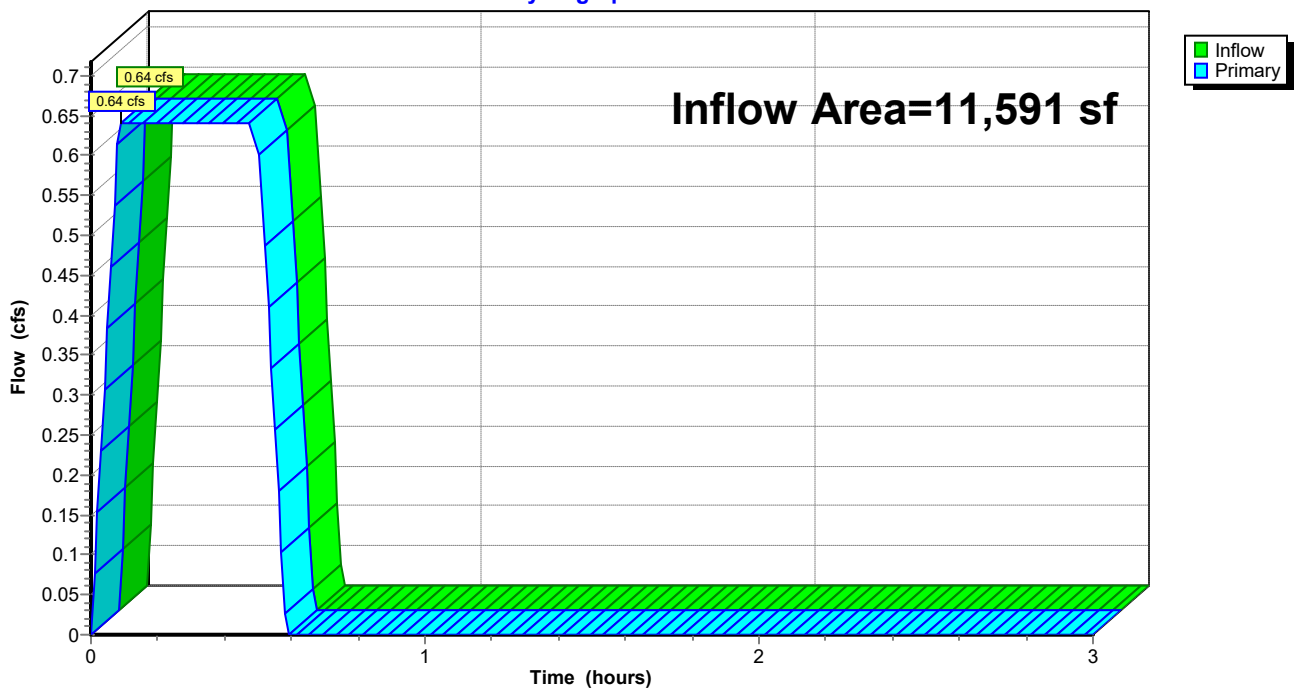
Summary for Pond CI-E2: CI - E2

Inflow Area = 11,591 sf, 64.62% Impervious, Inflow Depth = 1.19" for 5-yr event
Inflow = 0.64 cfs @ 0.09 hrs, Volume= 1,153 cf
Primary = 0.64 cfs @ 0.09 hrs, Volume= 1,153 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C7 : CI - C7

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-E2: CI - E2

Hydrograph



Goddard

AR - Little Rock 5-yr Duration=30 min, Inten=3.16 in/hr

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Summary for Pond DP: Existing North Detention Pond

Inflow Area = 321,792 sf, 58.73% Impervious, Inflow Depth = 1.14" for 5-yr event
 Inflow = 17.01 cfs @ 0.27 hrs, Volume= 30,614 cf
 Outflow = 10.45 cfs @ 0.54 hrs, Volume= 30,614 cf, Atten= 39%, Lag= 16.1 min
 Primary = 10.45 cfs @ 0.54 hrs, Volume= 30,614 cf
 Routed to Link FINAL : APPROX DISCHARGE

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 Peak Elev= 382.95' @ 0.54 hrs Storage= 15,693 cf

Plug-Flow detention time= 18.9 min calculated for 30,614 cf (100% of inflow)
 Center-of-Mass det. time= 18.7 min (37.2 - 18.5)

Volume	Invert	Avail.Storage	Storage Description
#1	381.17'	72,742 cf	Custom Stage Data Listed below

Elevation (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
381.17	0	0
381.50	200	200
382.00	1,825	2,025
382.50	5,265	7,290
383.00	9,300	16,590
383.50	13,733	30,323
384.00	18,578	48,901
384.50	23,841	72,742

Device	Routing	Invert	Outlet Devices
#1	Primary	384.16'	5.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#2	Primary	381.17'	1.7' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

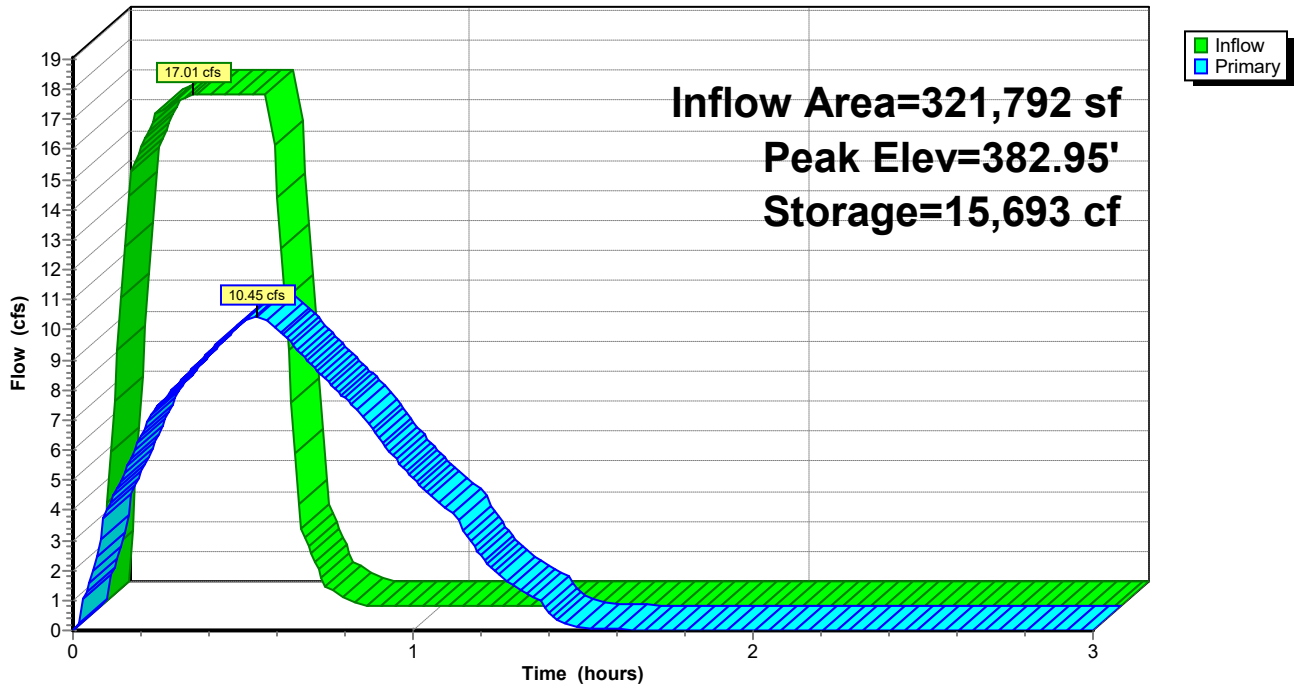
Primary OutFlow Max=10.45 cfs @ 0.54 hrs HW=382.95' (Free Discharge)

↑ **1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

└ **2=Sharp-Crested Rectangular Weir** (Weir Controls 10.45 cfs @ 4.36 fps)

Pond DP: Existing North Detention Pond

Hydrograph



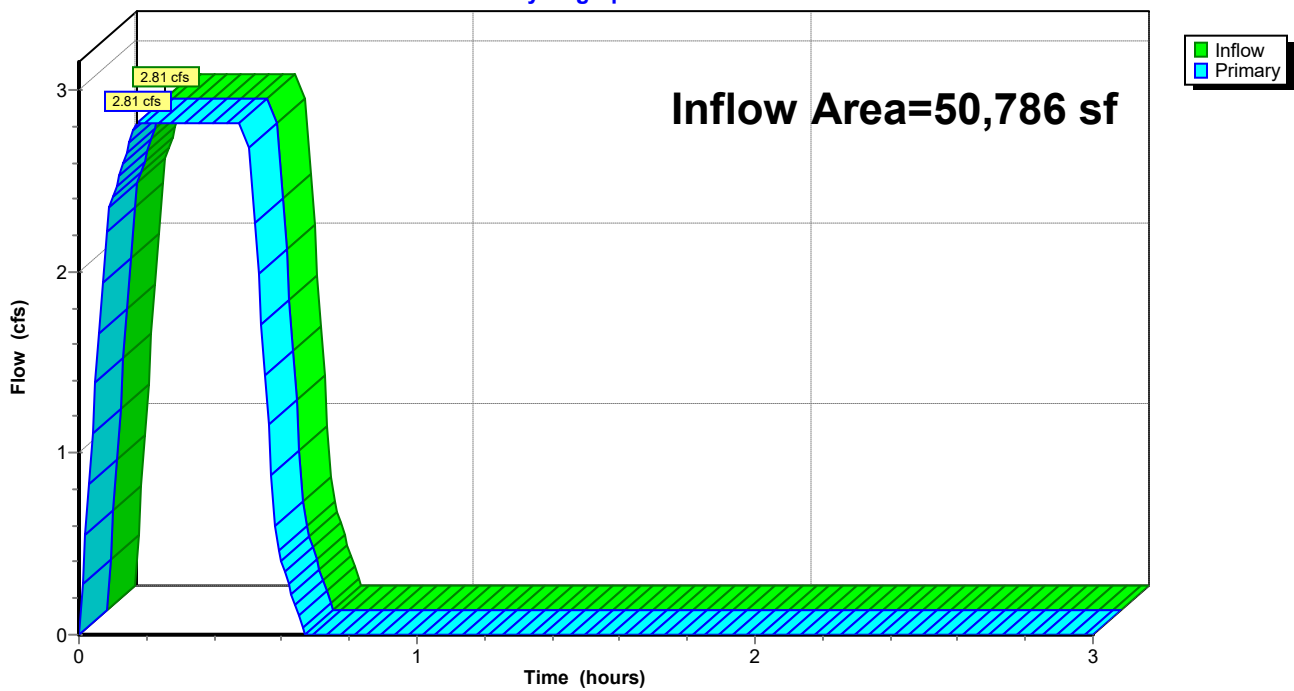
Summary for Pond JB-A2: JB - A2

Inflow Area = 50,786 sf, 65.23% Impervious, Inflow Depth = 1.20" for 5-yr event
Inflow = 2.81 cfs @ 0.17 hrs, Volume= 5,065 cf
Primary = 2.81 cfs @ 0.17 hrs, Volume= 5,065 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-A3 : CI - A3

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond JB-A2: JB - A2

Hydrograph



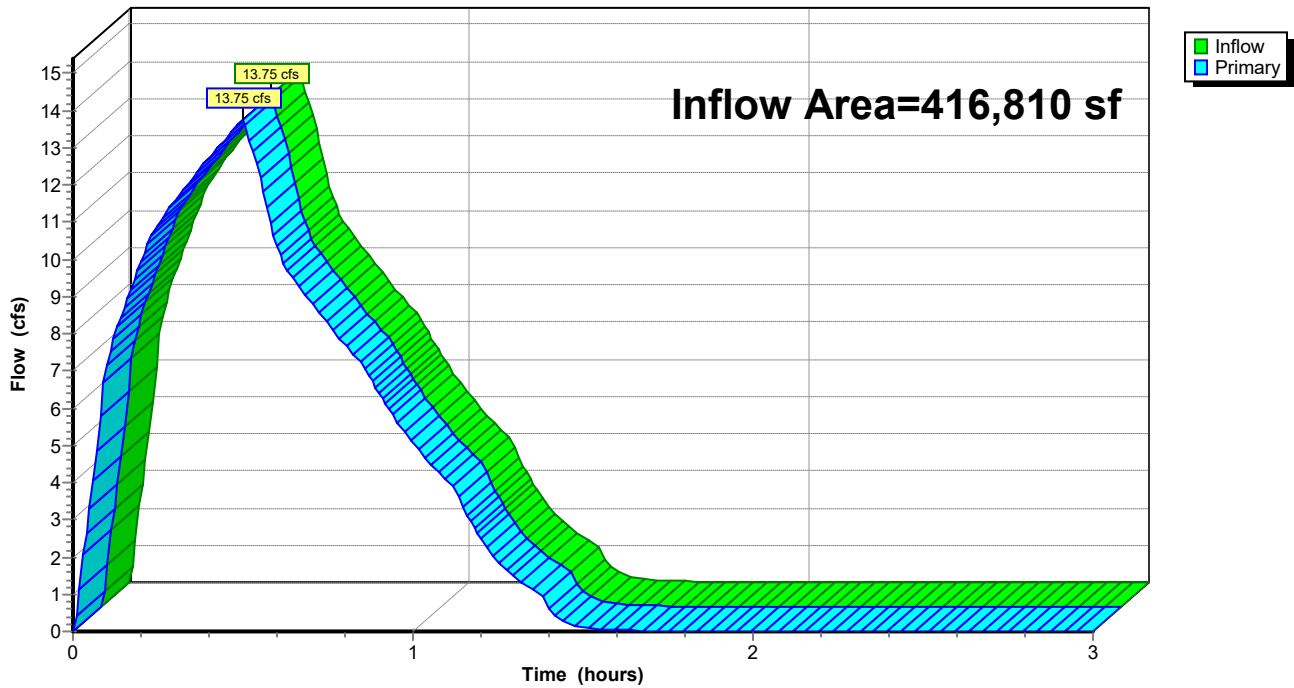
Summary for Link FINAL: APPROX DISCHARGE

Inflow Area = 416,810 sf, 49.40% Impervious, Inflow Depth = 1.06" for 5-yr event
Inflow = 13.75 cfs @ 0.50 hrs, Volume= 36,861 cf
Primary = 13.75 cfs @ 0.50 hrs, Volume= 36,861 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Link FINAL: APPROX DISCHARGE

Hydrograph



Summary for Subcatchment B1: Drainage Basin B1

Runoff = 0.86 cfs @ 0.10 hrs, Volume= 1,552 cf, Depth= 0.75"
 Routed to Link FINAL : APPROX DISCHARGE

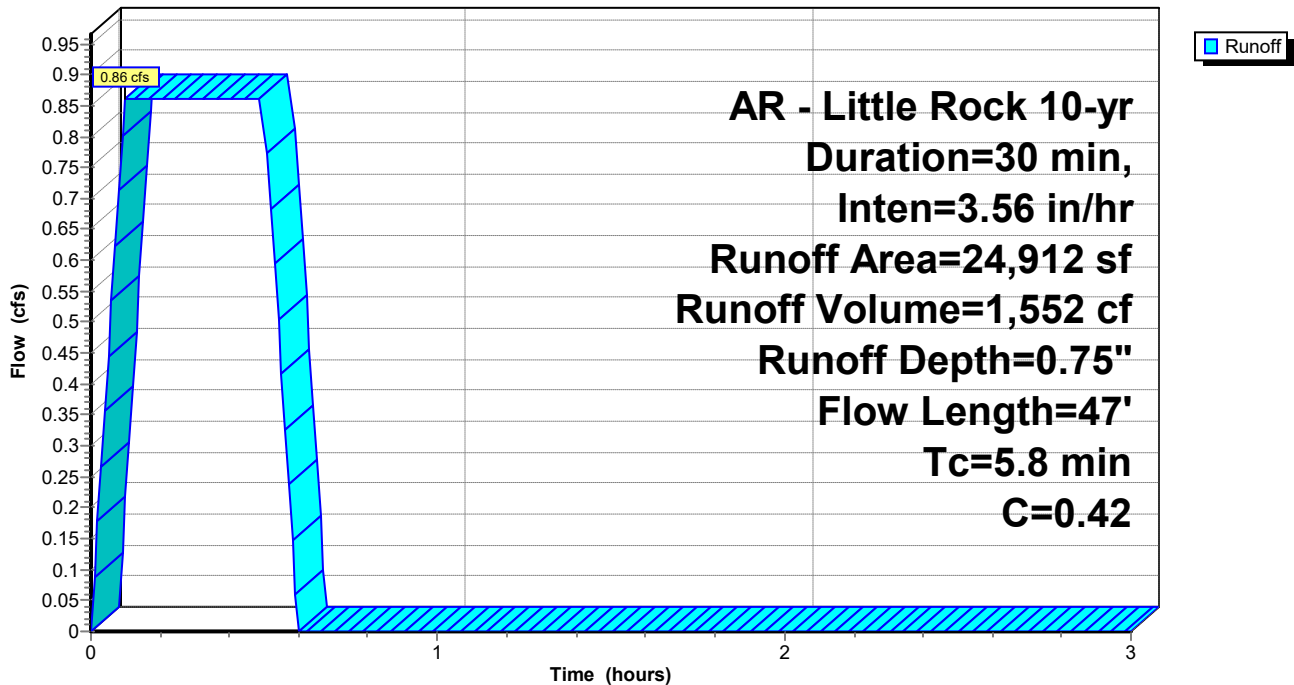
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
24,091	0.40	Sod Yard
821	0.95	Paving, Sidewalks
24,912	0.42	Weighted Average
24,091		96.70% Pervious Area
821		3.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.3	9	0.0310	0.06		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
3.5	38	0.2040	0.18		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
5.8	47	Total			

Subcatchment B1: Drainage Basin B1

Hydrograph



Goddard

Prepared by Phillip Lewis Engineering

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AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Subcatchment B2: Drainage Basin B2

Runoff = 1.30 cfs @ 0.09 hrs, Volume= 2,342 cf, Depth= 1.44"
 Routed to Pond CI-A1 : CI - A1

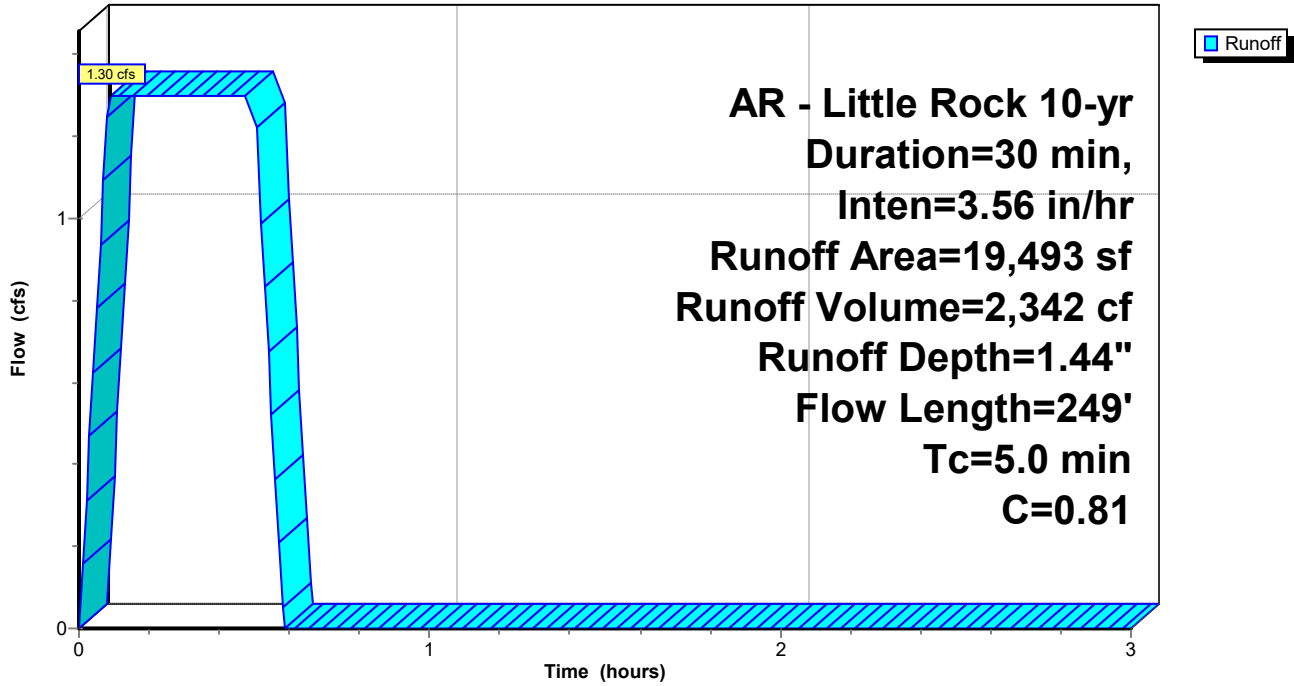
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
4,903	0.40	Sod Yard
14,590	0.95	Paving, Sidewalks
19,493	0.81	Weighted Average
4,903		25.15% Pervious Area
14,590		74.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	31	0.0230	1.32		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	18	0.0250	1.22		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.3	28	0.0450	1.69		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.4	72	0.0250	3.21		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	18	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.3	51	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	16	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	8	0.0430	4.21		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	7	0.0580	4.89		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.2					Direct Entry, Overland Concentrated Flow (Min)
5.0	249	Total			

Subcatchment B2: Drainage Basin B2

Hydrograph



Summary for Subcatchment B3: Drainage Basin B3

Runoff = 0.73 cfs @ 0.09 hrs, Volume= 1,307 cf, Depth= 1.69"
 Routed to Pond JB-A2 : JB - A2

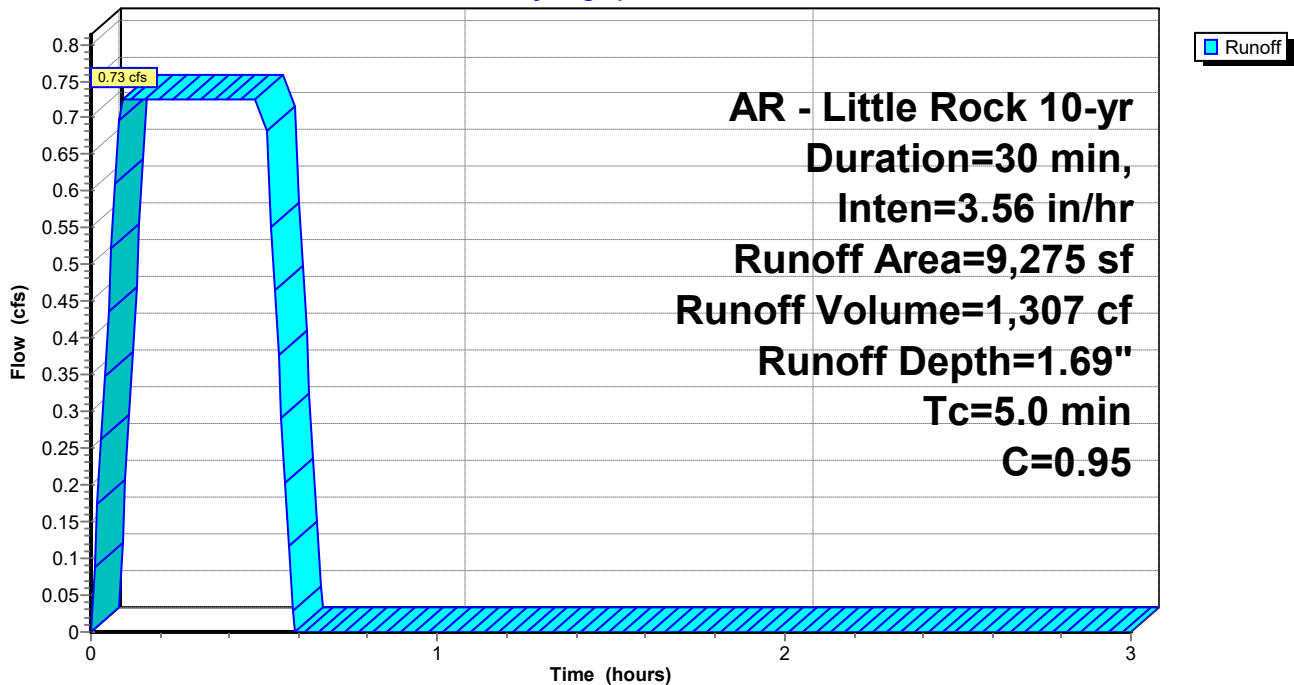
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
9,275	0.95	Roof
9,275		100.00% Impervious Area

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

Subcatchment B3: Drainage Basin B3

Hydrograph



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AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Subcatchment B4: Drainage Basin B4

Runoff = 0.15 cfs @ 0.09 hrs, Volume= 266 cf, Depth= 1.69"
 Routed to Pond CI-A3 : CI - A3

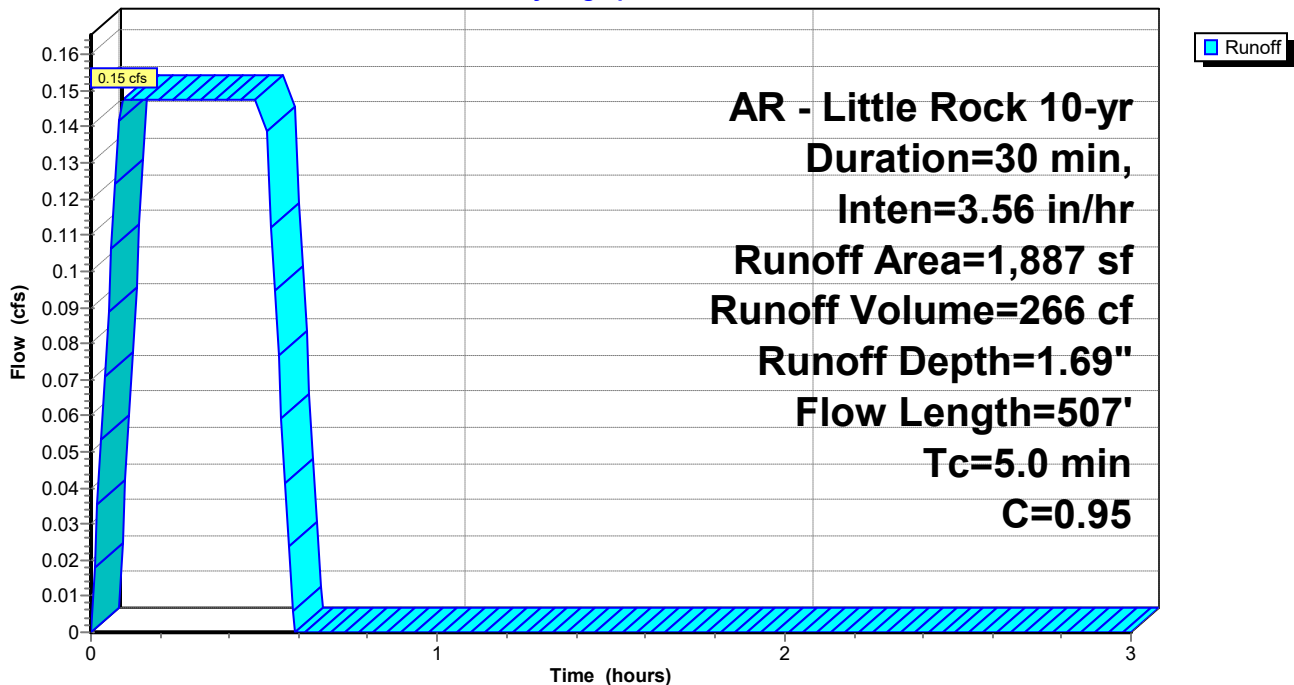
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
1,887	0.95	Paving, Sidewalks
1,887	0.95	Weighted Average
1,887		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	31	0.0230	1.32		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	18	0.0250	1.22		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.4	30	0.0240	1.33		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.0	13	0.0860	5.95		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.0	415		1.73		Direct Entry, Overland Concentrated Flow (Min)
5.0	507	Total			

Subcatchment B4: Drainage Basin B4

Hydrograph



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AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Subcatchment B5: Drainage Basin B5

Runoff = 1.14 cfs @ 0.17 hrs, Volume= 2,058 cf, Depth= 1.12"
 Routed to Pond CI-B2 : CI - B2

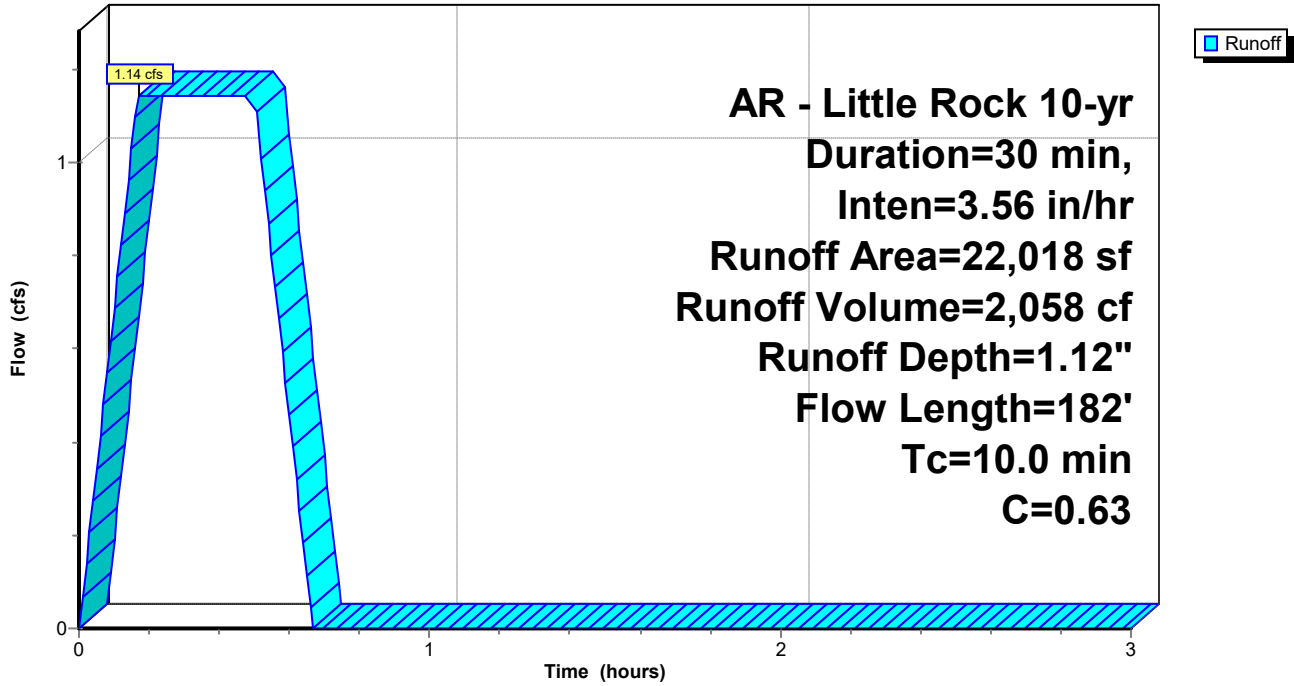
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
12,753	0.40	Sod Yard
9,265	0.95	Paving, Sidewalks
22,018	0.63	Weighted Average
12,753		57.92% Pervious Area
9,265		42.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	10	0.0150	0.89		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
9.1	93	0.0150	0.17		Sheet Flow, Sheet Flow Grass: Short n= 0.150 P2= 4.19"
0.4	40	0.0110	1.57		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	33	0.0190	2.07		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.0	6	0.0180	2.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
10.0	182	Total			

Subcatchment B5: Drainage Basin B5

Hydrograph



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AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Subcatchment B6: Drainage Basin B6

Runoff = 0.40 cfs @ 0.24 hrs, Volume= 728 cf, Depth= 0.93"
 Routed to Pond CI-A4 : CI - A4

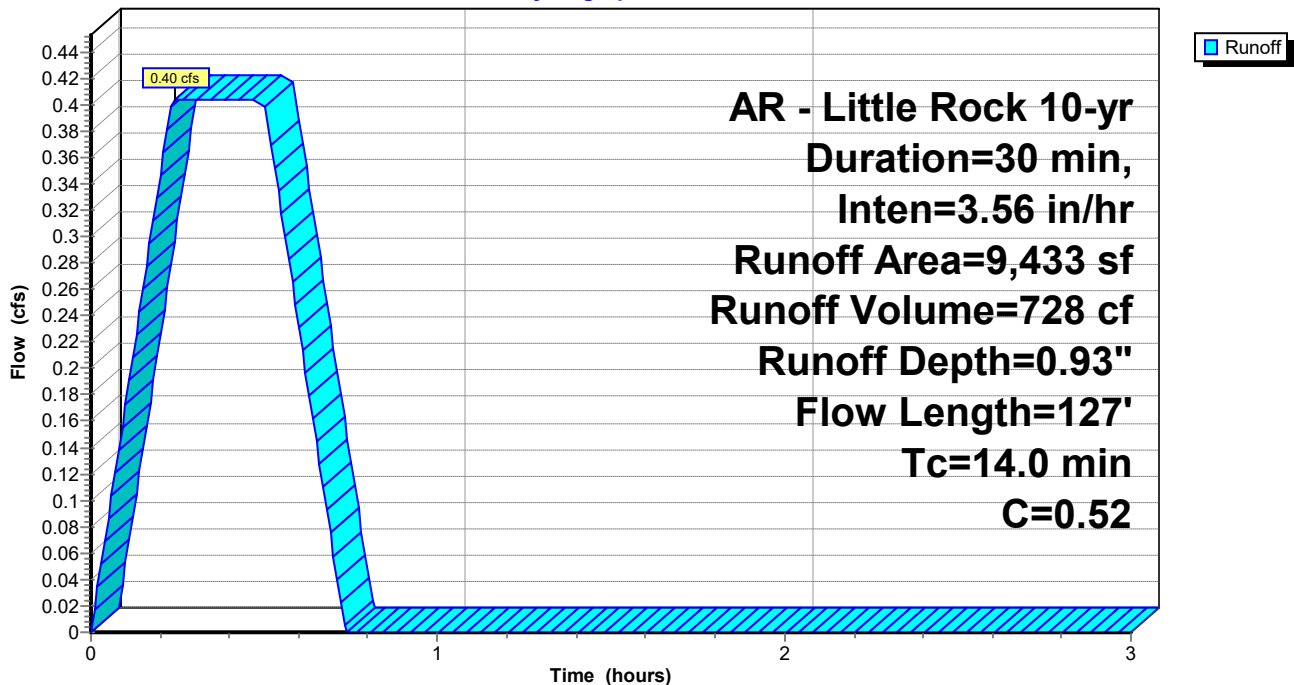
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
7,346	0.40	Sod Yard
2,087	0.95	Paving, Sidewalks
9,433	0.52	Weighted Average
7,346		77.88% Pervious Area
2,087		22.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.4	79	0.0570	0.13		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
3.5	21	0.0620	0.10		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.0	9	0.0620	3.73		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.1	18	0.1080	4.93		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
14.0	127	Total			

Subcatchment B6: Drainage Basin B6

Hydrograph



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AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Subcatchment C1: Drainage Basin C1

Runoff = 1.31 cfs @ 0.09 hrs, Volume= 2,353 cf, Depth= 1.39"
 Routed to Pond CI-C1 : CI - C1

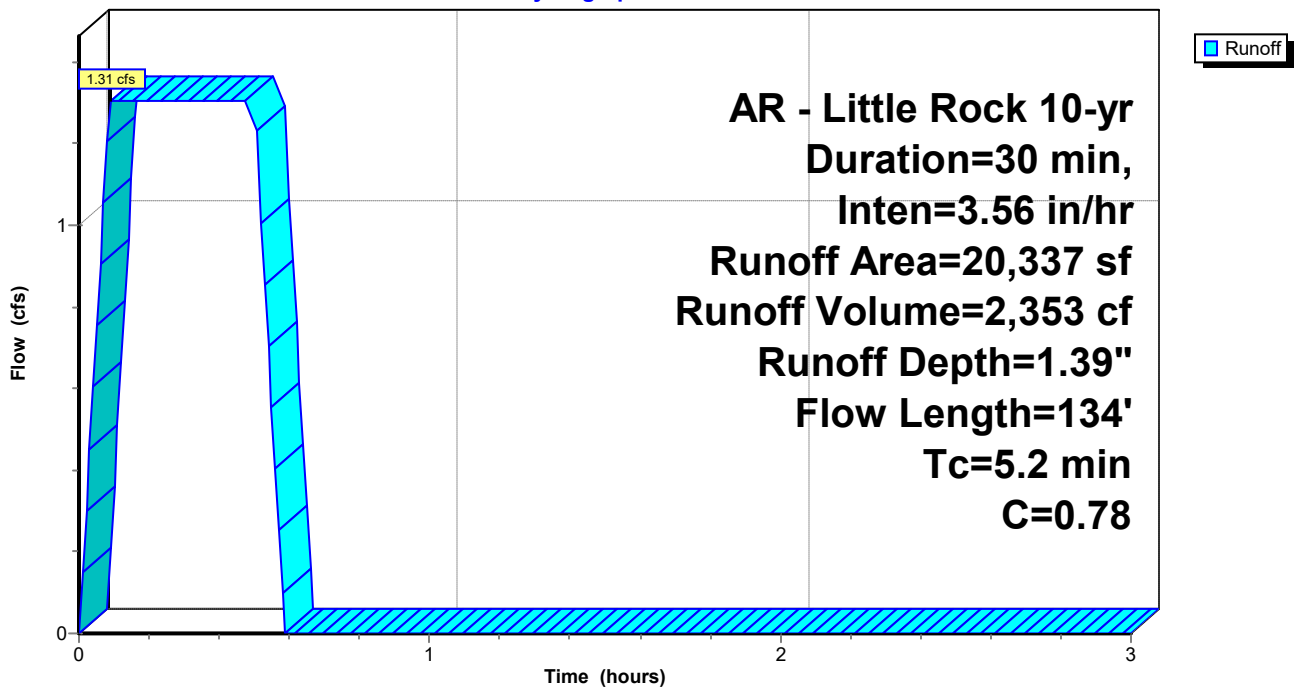
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
6,135	0.40	Sod Yard
14,202	0.95	Paving, Sidewalks
20,337	0.78	Weighted Average
6,135		30.17% Pervious Area
14,202		69.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	32	0.0660	0.11		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.4	102	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
5.2	134	Total			

Subcatchment C1: Drainage Basin C1

Hydrograph



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AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Subcatchment C10: Drainage Basin C10

Runoff = 0.37 cfs @ 0.09 hrs, Volume= 666 cf, Depth= 1.48"
 Routed to Pond CI-E1 : CI - E1

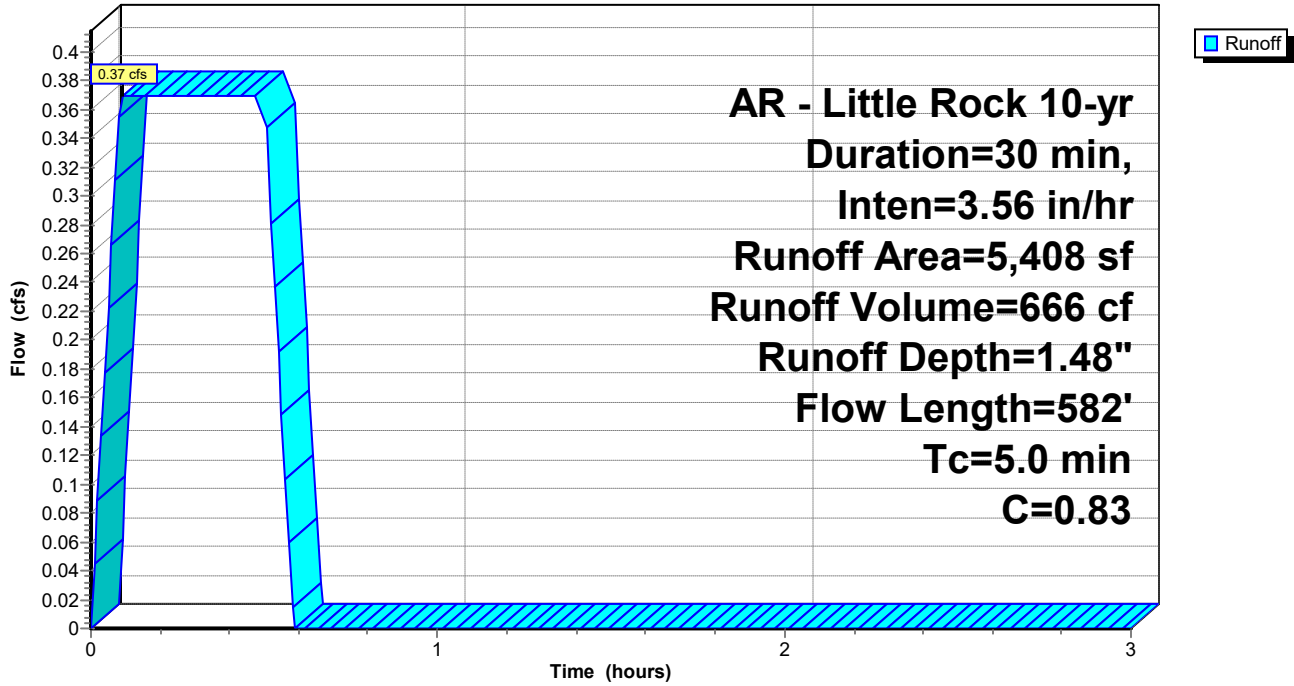
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
1,225	0.40	Sod Yard
4,183	0.95	Paving, Sidewalks
5,408	0.83	Weighted Average
1,225		22.65% Pervious Area
4,183		77.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	1.12		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	29	0.0210	2.94		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	23	0.0320	3.63		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	36	0.0320	3.63		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	48	0.0330	3.69		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	13	0.0350	3.80		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.9	415		1.77		Direct Entry, Concentrated Flow (Min)
5.0	582	Total			

Subcatchment C10: Drainage Basin C10

Hydrograph



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AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Subcatchment C11: Drainage Basin C11

Runoff = 0.35 cfs @ 0.09 hrs, Volume= 633 cf, Depth= 1.23"
 Routed to Pond CI-E2 : CI - E2

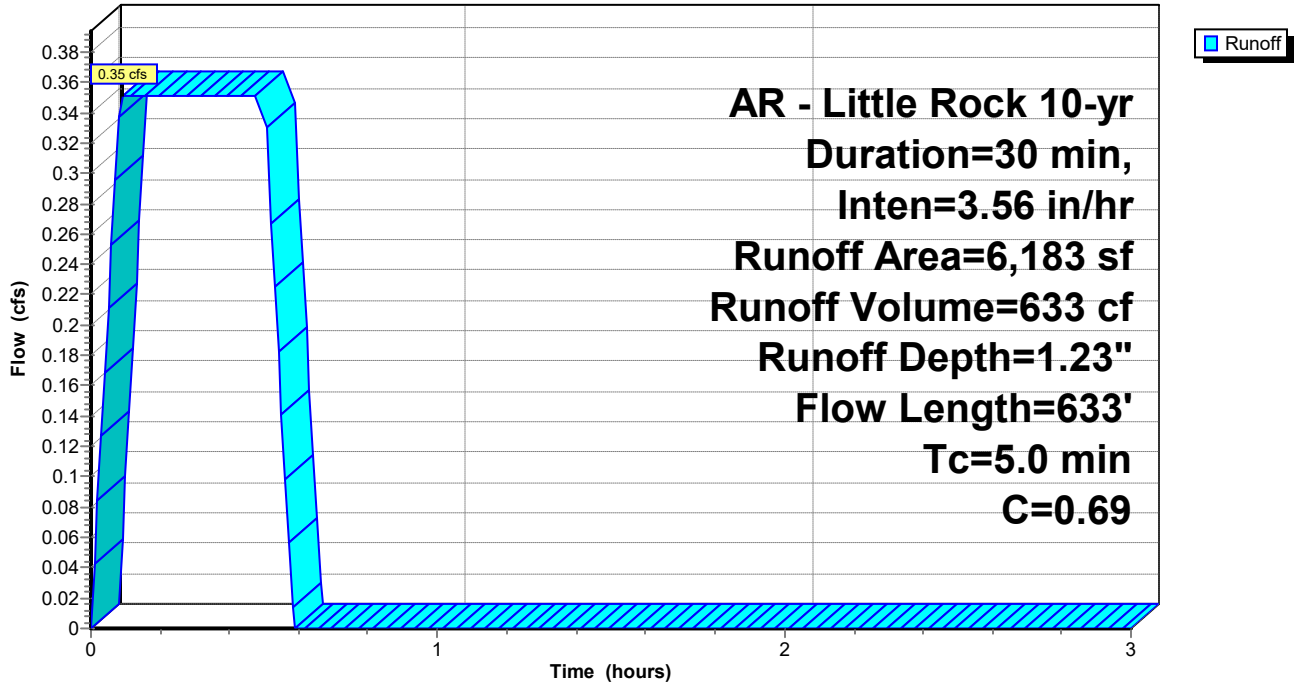
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
2,876	0.40	Sod Yard
3,307	0.95	Paving, Sidewalks
6,183	0.69	Weighted Average
2,876		46.51% Pervious Area
3,307		53.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	25	0.0200	1.19		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	33	0.0620	5.05		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	29	0.0540	4.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	47	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	47	0.0390	4.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	37	0.0420	4.16		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.0	415		1.73		Direct Entry, Concentrated Flow (Min)
5.0	633	Total			

Subcatchment C11: Drainage Basin C11

Hydrograph



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AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Subcatchment C12: Drainage Basin C12

Runoff = 1.69 cfs @ 0.09 hrs, Volume= 3,045 cf, Depth= 1.42"
 Routed to Pond CI-C7 : CI - C7

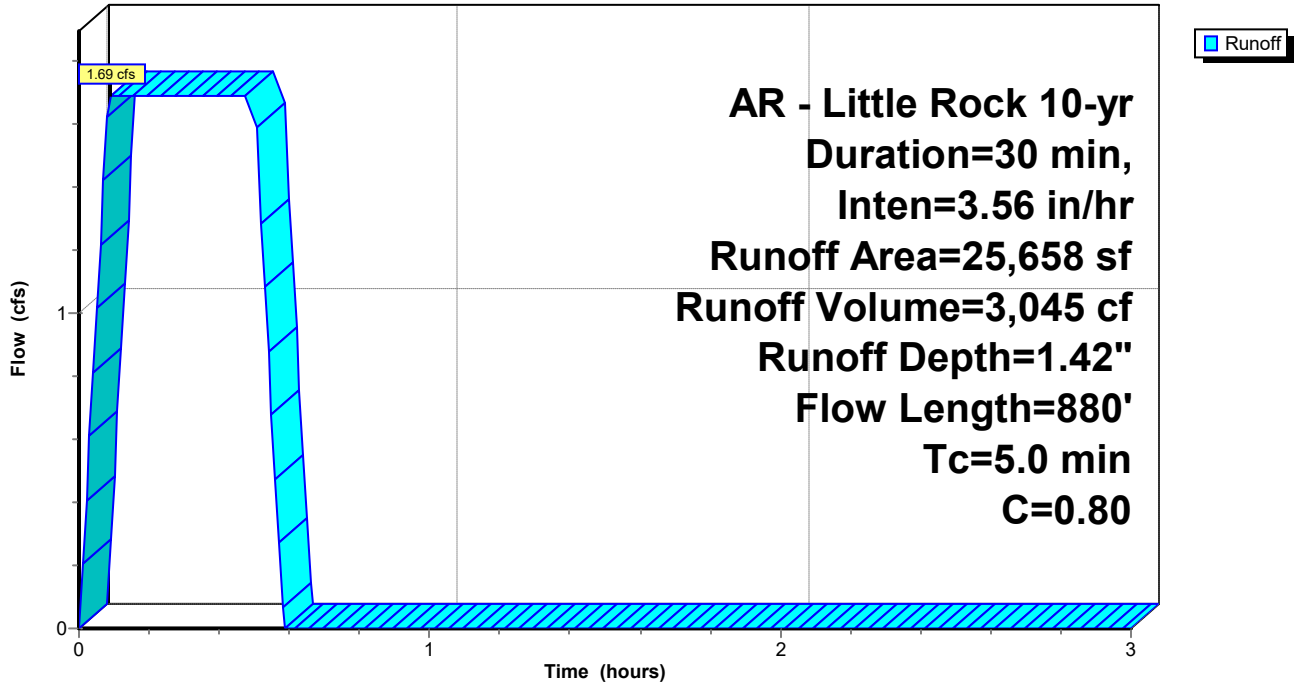
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
7,218	0.40	Sod Yard
18,440	0.95	Paving, Sidewalks
25,658	0.80	Weighted Average
7,218		28.13% Pervious Area
18,440		71.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	24	0.0360	1.50		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	5	0.0190	0.85		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	21	0.0100	2.03		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.9	49	0.0020	0.91		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.4	96	0.0330	3.69		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.3	94	0.0570	4.85		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	28	0.0560	4.80		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	25	0.0450	4.31		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	31	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	39	0.0490	4.49		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	36	0.0460	4.35		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	11	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	6	0.0440	4.26		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
2.3	415		3.01		Direct Entry, Concentrated Flow (Min)
5.0	880	Total			

Subcatchment C12: Drainage Basin C12

Hydrograph



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Summary for Subcatchment C13: Drainage Basin C13

Runoff = 0.85 cfs @ 0.09 hrs, Volume= 1,527 cf, Depth= 1.51"
 Routed to Pond CI-A4 : CI - A4

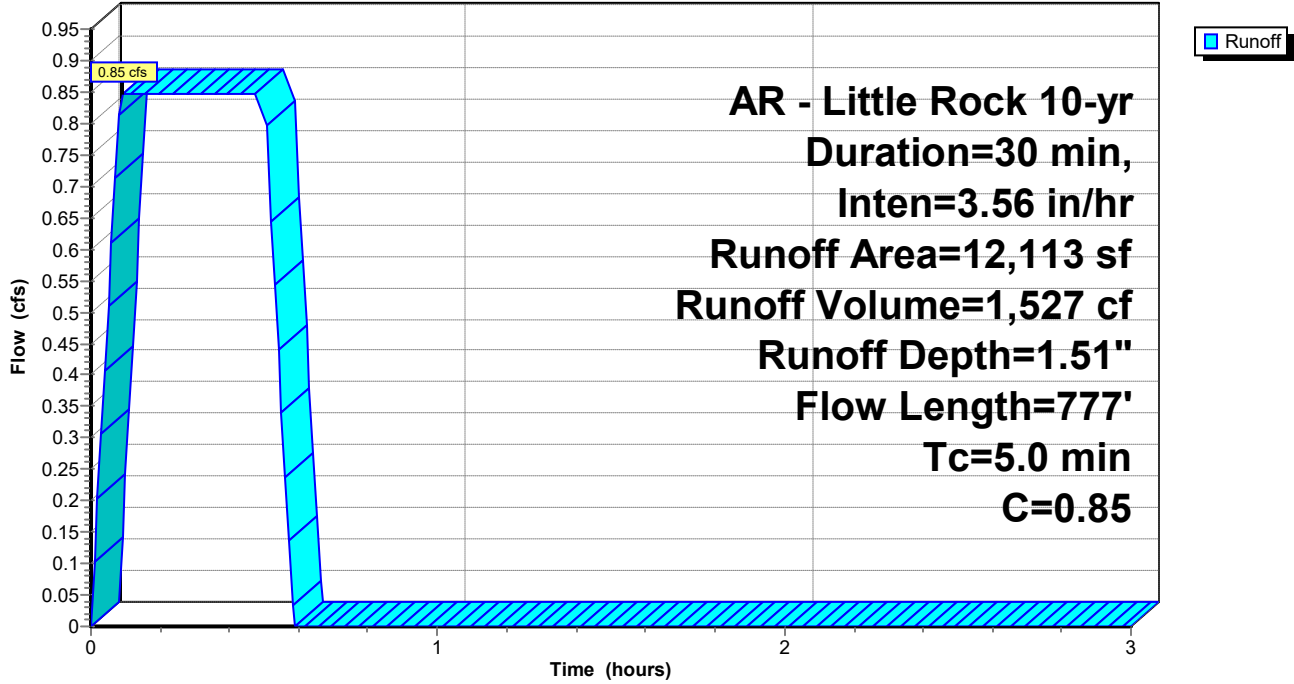
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
2,240	0.40	Sod Yard
9,873	0.95	Paving, Sidewalks
12,113	0.85	Weighted Average
2,240		18.49% Pervious Area
9,873		81.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	19	0.0200	1.13		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.3	75	0.0340	3.74		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	52	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	29	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	42	0.0730	5.48		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	74	0.0750	5.56		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	26	0.0710	5.41		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	32	0.0570	4.85		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	13	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.6	415		1.92		Direct Entry, Overland Concentrated Flow (Min)
5.0	777	Total			

Subcatchment C13: Drainage Basin C13

Hydrograph



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AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Subcatchment C14: Drainage Basin C14

Runoff = 1.45 cfs @ 0.27 hrs, Volume= 2,614 cf, Depth= 1.42"
 Routed to Pond CI-A5 : CI - A5

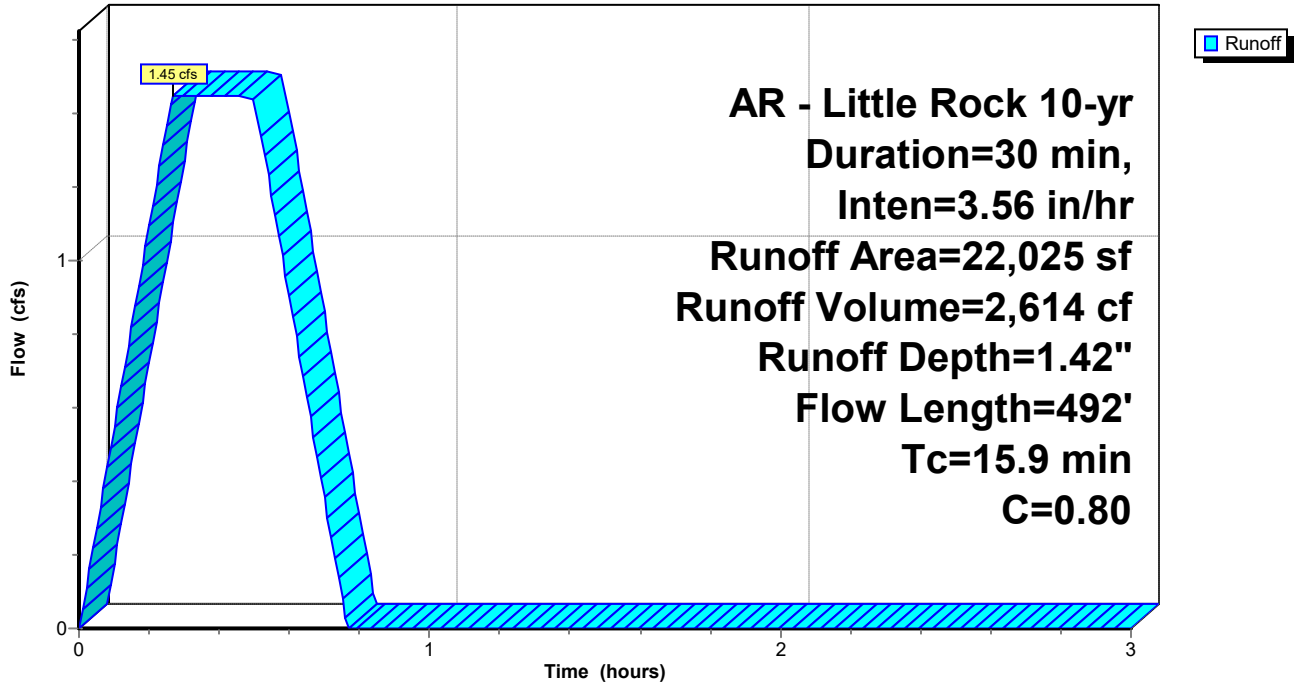
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
6,127	0.40	Sod Yard
15,898	0.95	Paving, Sidewalks
22,025	0.80	Weighted Average
6,127		27.82% Pervious Area
15,898		72.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	5	0.0310	0.06		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
9.2	45	0.0250	0.08		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
3.8	41	0.1940	0.18		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
0.1	6	0.0100	0.68		Sheet Flow, Sheet Flow
					Smooth surfaces n= 0.011 P2= 4.19"
0.1	51	0.0870	5.99		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.2	52	0.0310	3.57		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	18	0.0270	3.34		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	20	0.0400	4.06		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	34	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.2	46	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	36	0.0580	4.89		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.2	58	0.0690	5.33		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	49	0.0840	5.88		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	31	0.0690	5.33		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
15.9	492	Total			

Subcatchment C14: Drainage Basin C14

Hydrograph



Summary for Subcatchment C15: Drainage Basin C15

Runoff = 1.05 cfs @ 0.09 hrs, Volume= 1,895 cf, Depth= 1.69"

Routed to Pond DP : Existing North Detention Pond

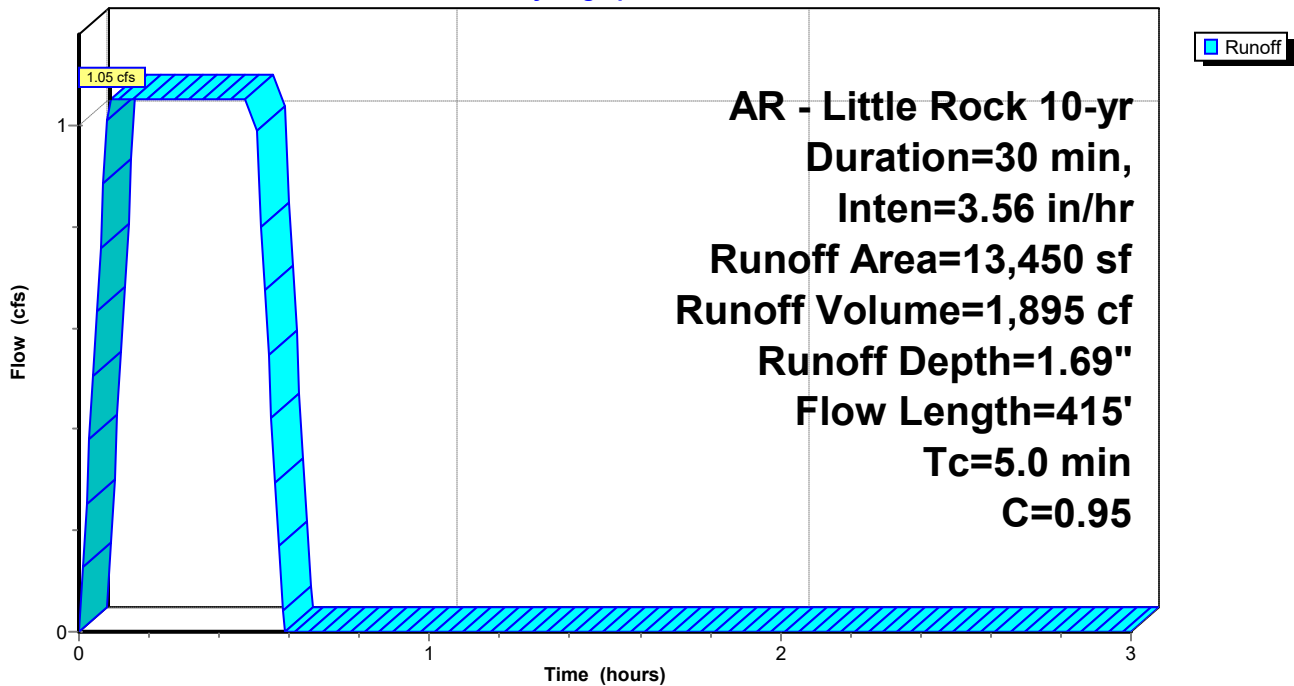
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
13,450	0.95	Paving, Sidewalks
13,450	0.95	Weighted Average
13,450		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	415		1.38		Direct Entry, Overland Concentrated Flow (Min)

Subcatchment C15: Drainage Basin C15

Hydrograph



Summary for Subcatchment C16: Drainage Basin C16

Runoff = 1.02 cfs @ 0.09 hrs, Volume= 1,834 cf, Depth= 1.00"

Routed to Pond DP : Existing North Detention Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

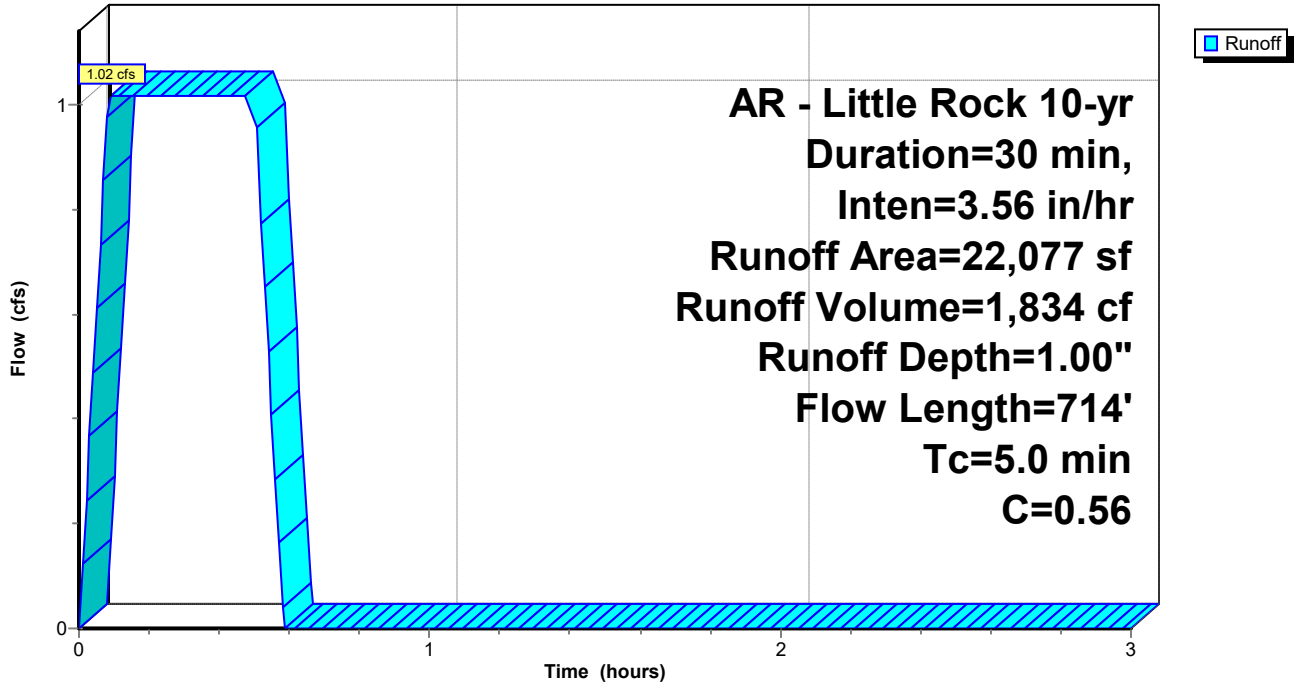
AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
15,465	0.40	Sod Yard
6,612	0.95	Paving, Sidewalks
22,077	0.56	Weighted Average
15,465		70.05% Pervious Area
6,612		29.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	26	0.0190	1.18		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	5	0.0100	0.66		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.4	51	0.0500	1.98		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	12	0.1540	2.33		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	50	0.1330	7.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	50	0.1170	6.94		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	46	0.0430	4.21		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.3	59	0.0370	3.90		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.3	415		2.10		Direct Entry, Overland Concentrated Flow (Min)
5.0	714	Total			

Subcatchment C16: Drainage Basin C16

Hydrograph



Summary for Subcatchment C17: Drainage Basin C17

Runoff = 2.57 cfs @ 0.16 hrs, Volume= 4,630 cf, Depth= 0.98"

Routed to Pond DP : Existing North Detention Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

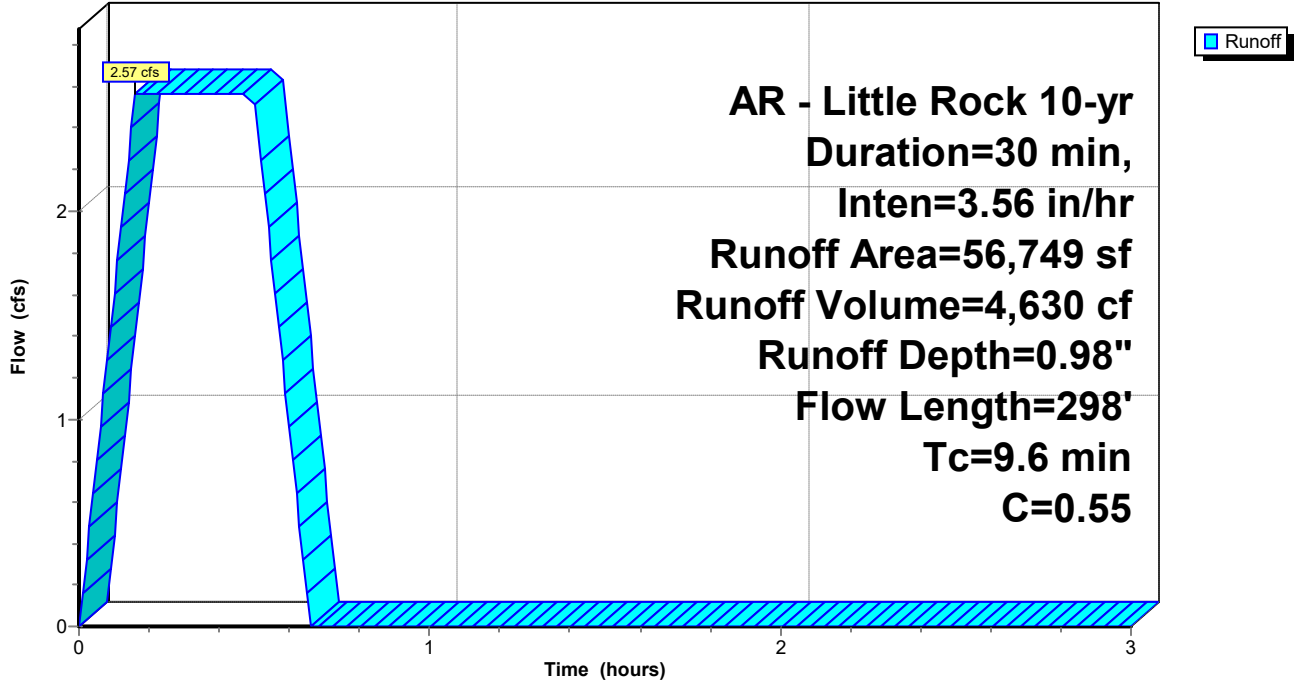
AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
40,914	0.40	Sod Yard
15,835	0.95	Paving, Sidewalks
56,749	0.55	Weighted Average
40,914		72.10% Pervious Area
15,835		27.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	43	0.0410	0.15		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
3.9	43	0.0690	0.19		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
0.1	41	0.0980	4.70		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	61	0.0730	4.05		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.2	46	0.0570	3.58		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	64	0.0450	3.18		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
9.6	298	Total			

Subcatchment C17: Drainage Basin C17

Hydrograph



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AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Subcatchment C18: Drainage Basin C18

Runoff = 1.20 cfs @ 0.09 hrs, Volume= 2,163 cf, Depth= 1.14"

Routed to Link FINAL : APPROX DISCHARGE

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

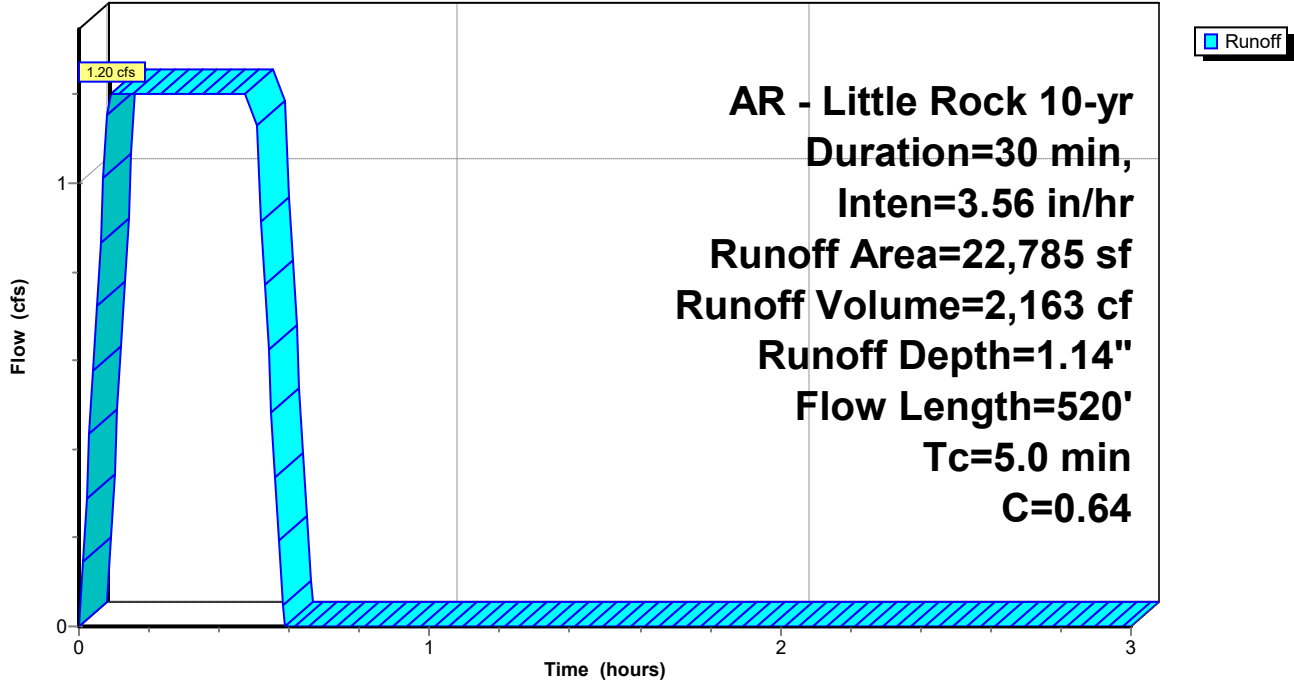
AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
12,812	0.40	Sod Yard
9,973	0.95	Paving, Sidewalks
22,785	0.64	Weighted Average
12,812		56.23% Pervious Area
9,973		43.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	5	0.2980	0.14		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.2	12	0.0130	0.87		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
3.3	8	0.0100	0.04		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.5	80	0.0210	2.94		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.4	415		17.29		Direct Entry, Concentrated Flow (Min)
5.0	520	Total			

Subcatchment C18: Drainage Basin C18

Hydrograph



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AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Subcatchment C19: Drainage Basin C19

Runoff = 0.73 cfs @ 0.12 hrs, Volume= 1,309 cf, Depth= 0.87"
 Routed to Link FINAL : APPROX DISCHARGE

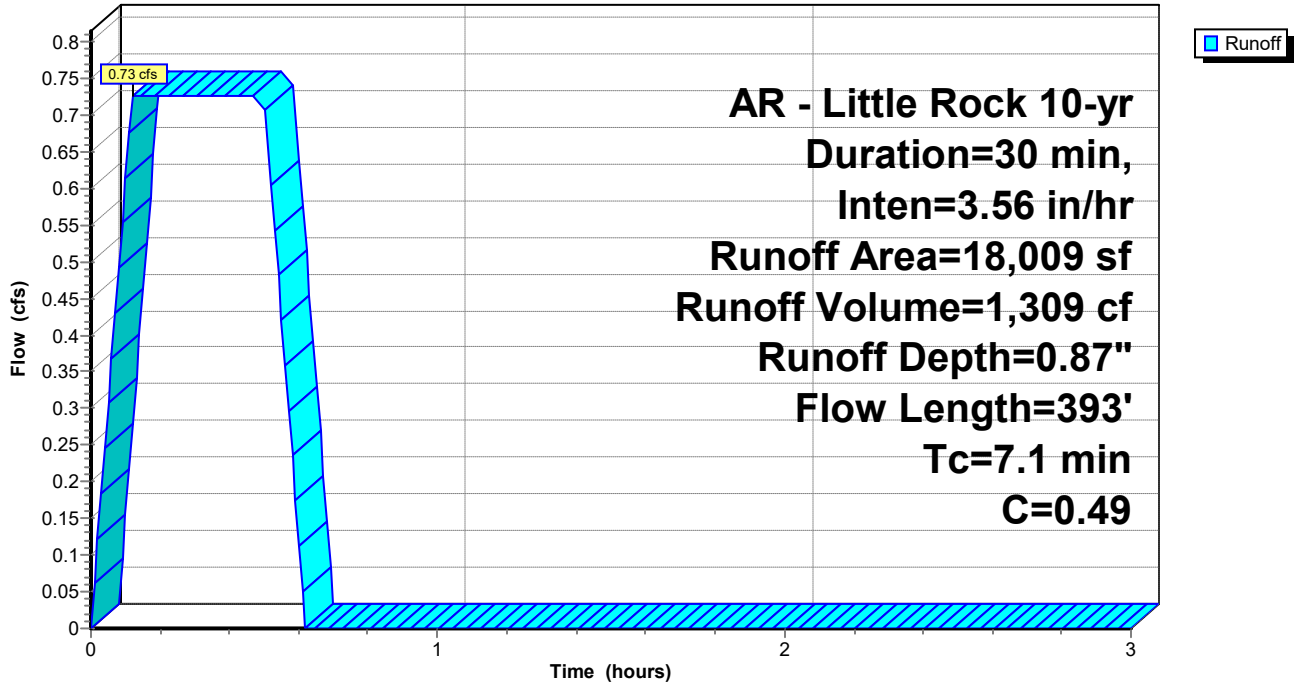
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
15,129	0.40	Sod Yard
2,880	0.95	Paving, Sidewalks
18,009	0.49	Weighted Average
15,129		84.01% Pervious Area
2,880		15.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	34	0.1110	0.21		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
3.3	66	0.2450	0.34		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
0.0	9	0.2450	7.42		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.5	106	0.0610	3.70		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.2	46	0.0800	4.24		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.1	41	0.0960	4.65		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	66	0.0680	3.91		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.0	19	0.1070	6.64		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	6	0.0750	5.56		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
7.1	393	Total			

Subcatchment C19: Drainage Basin C19

Hydrograph



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AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Subcatchment C2: Drainage Basin C2

Runoff = 2.18 cfs @ 0.09 hrs, Volume= 3,922 cf, Depth= 1.37"
Routed to Pond CI-C2 : CI - C2

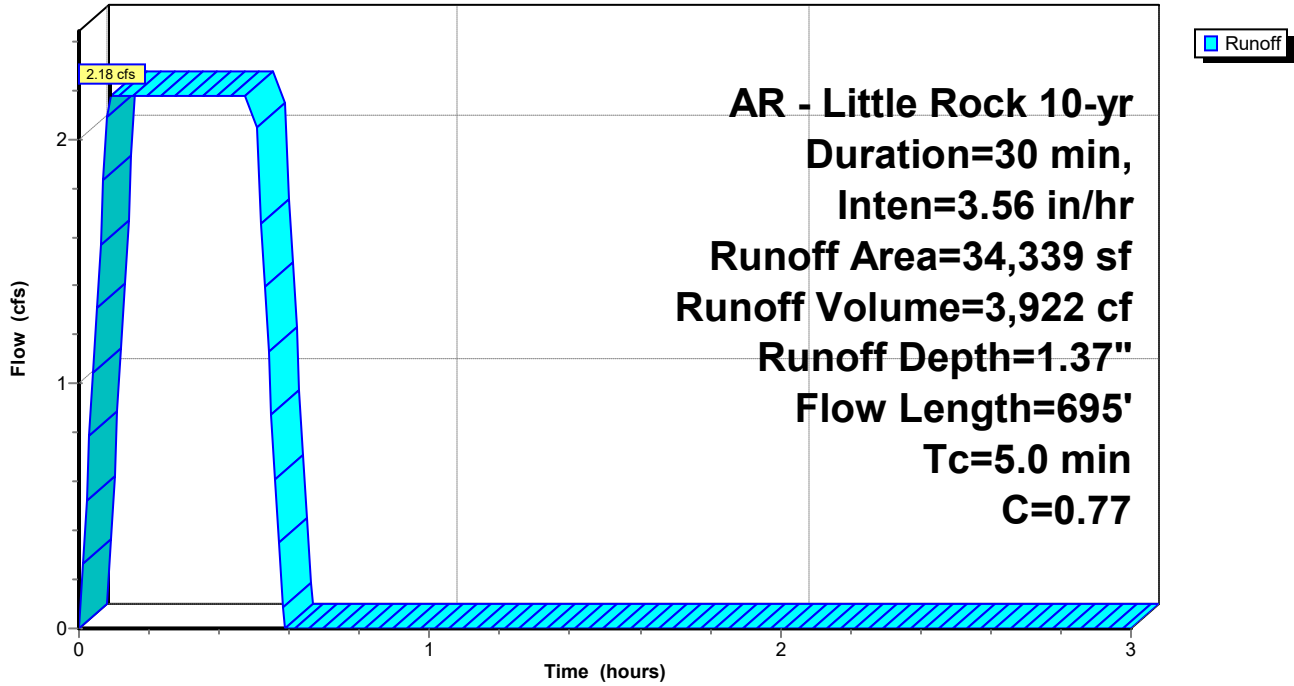
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
11,376	0.40	Sod Yard
22,963	0.95	Roof, Paving, Sidewalks
34,339	0.77	Weighted Average
11,376		33.13% Pervious Area
22,963		66.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	20	0.0200	1.14		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.4	74	0.0240	3.14		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	17	0.0710	5.41		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	21	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.6	148	0.0380	3.96		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.5	415		1.98		Direct Entry, Concentrated Flow (Min)
5.0	695	Total			

Subcatchment C2: Drainage Basin C2

Hydrograph



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AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Subcatchment C20: Drainage Basin C20

Runoff = 1.01 cfs @ 0.14 hrs, Volume= 1,813 cf, Depth= 0.80"
 Routed to Link FINAL : APPROX DISCHARGE

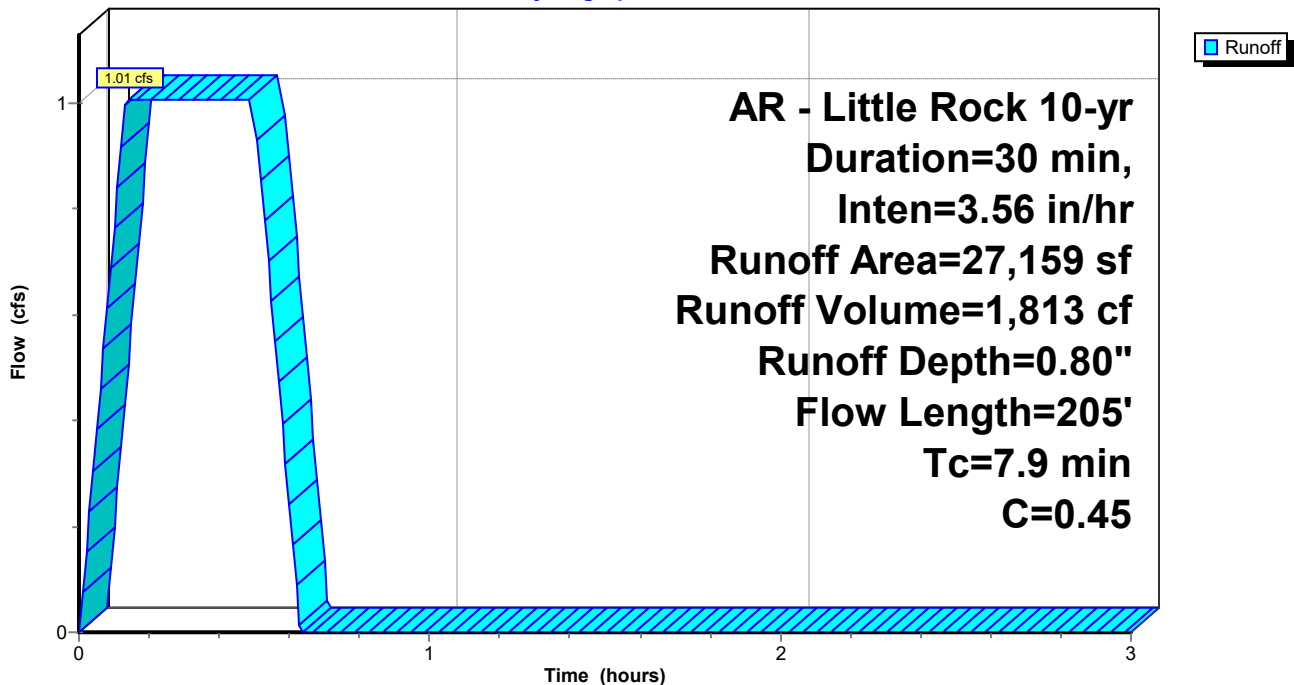
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
24,838	0.40	Sod Yard
2,321	0.95	Paving, Sidewalks
27,159	0.45	Weighted Average
24,838		91.45% Pervious Area
2,321		8.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	45	0.1430	0.25		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
4.5	55	0.0780	0.20		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
0.1	37	0.0780	4.19		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	68	0.0710	4.00		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
7.9	205	Total			

Subcatchment C20: Drainage Basin C20

Hydrograph



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AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Subcatchment C21: Drainage Basin C21

Runoff = 0.11 cfs @ 0.09 hrs, Volume= 201 cf, Depth= 1.12"

Routed to Link FINAL : APPROX DISCHARGE

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

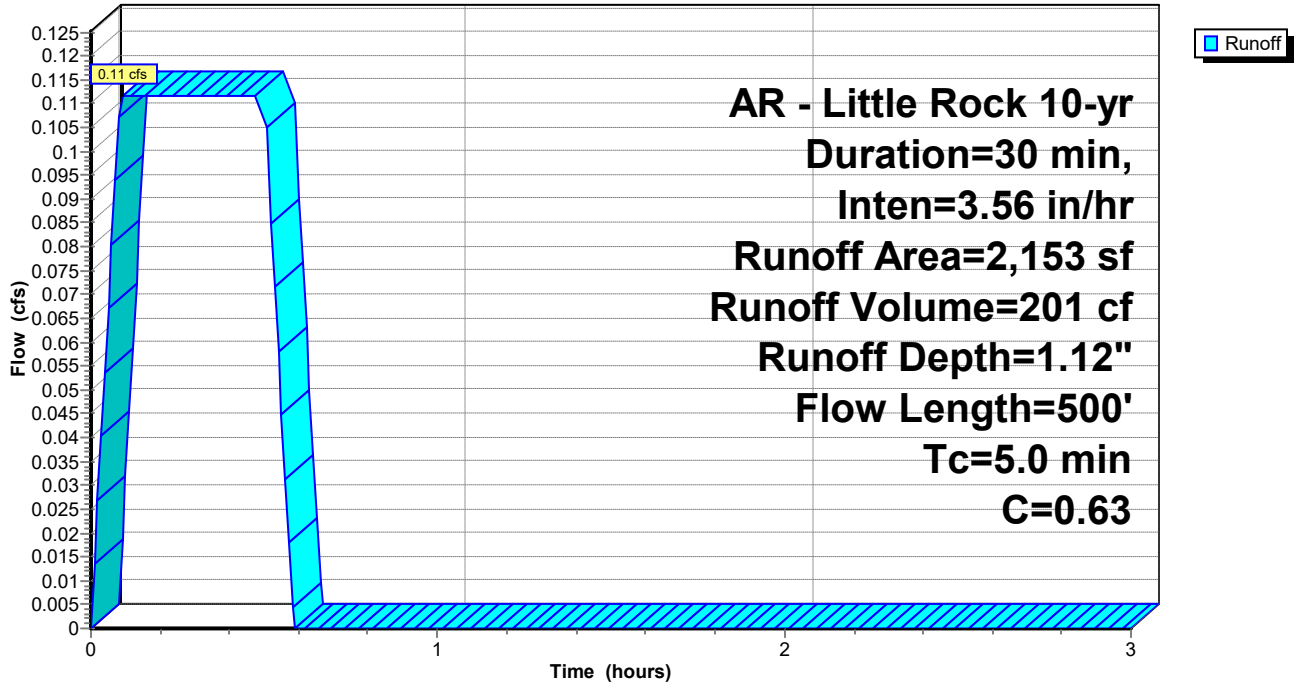
AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
1,234	0.40	Sod Yard
919	0.95	Paving, Sidewalks
2,153	0.63	Weighted Average
1,234		57.32% Pervious Area
919		42.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	2	0.2500	0.11		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
0.3	33	0.0520	1.85		Sheet Flow, Sheet Flow
					Smooth surfaces n= 0.011 P2= 4.19"
3.8	24	0.0660	0.11		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
0.1	26	0.0620	5.05		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.5	415		13.83		Direct Entry, Concentrated Flow (Min)
5.0	500	Total			

Subcatchment C21: Drainage Basin C21

Hydrograph



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AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Subcatchment C3: Drainage Basin C3

Runoff = 0.27 cfs @ 0.09 hrs, Volume= 490 cf, Depth= 1.69"
 Routed to Pond CI-C3 : CI - C3

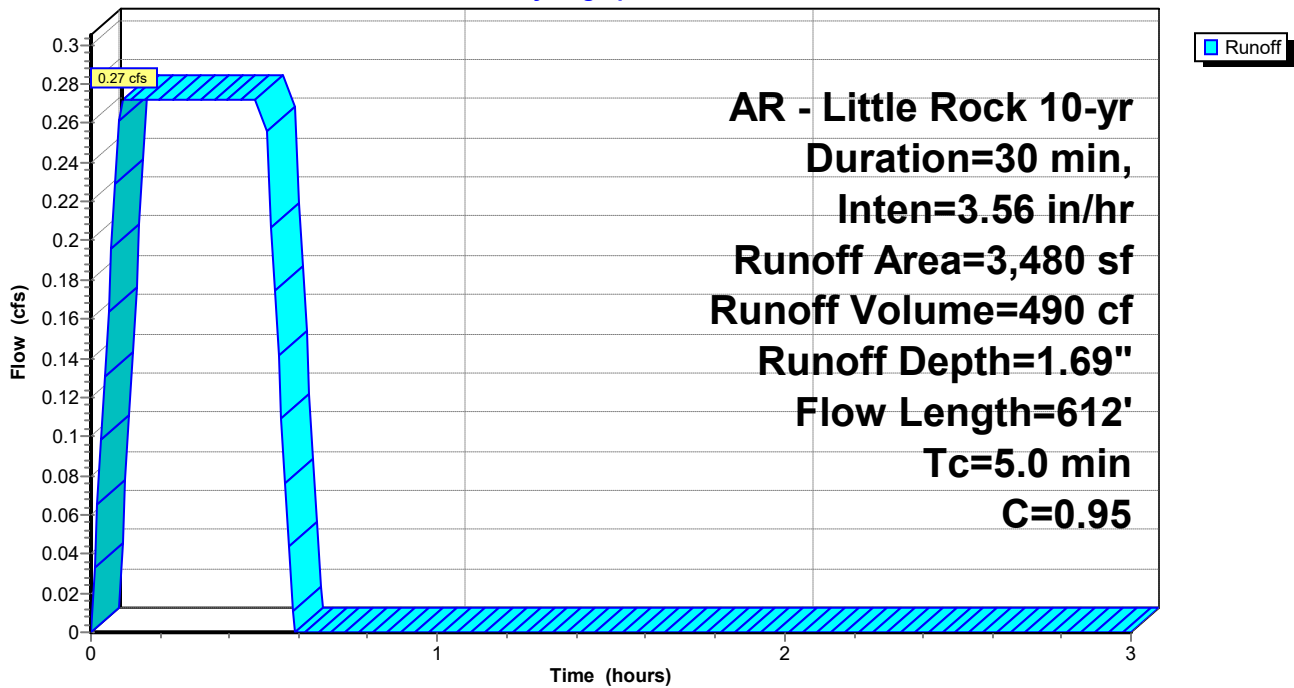
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
3,480	0.95	Paving, Sidewalks
3,480	0.95	Weighted Average
3,480		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	22	0.0200	1.16		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.0	10	0.0340	3.74		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	18	0.0390	4.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.6	147	0.0380	3.96		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.0	415		1.73		Direct Entry, Concentrated Flow (Min)
5.0	612	Total			

Subcatchment C3: Drainage Basin C3

Hydrograph



Summary for Subcatchment C4: Drainage Basin C4

Runoff = 0.52 cfs @ 0.09 hrs, Volume= 945 cf, Depth= 1.00"
 Routed to Pond CI-C3 : CI - C3

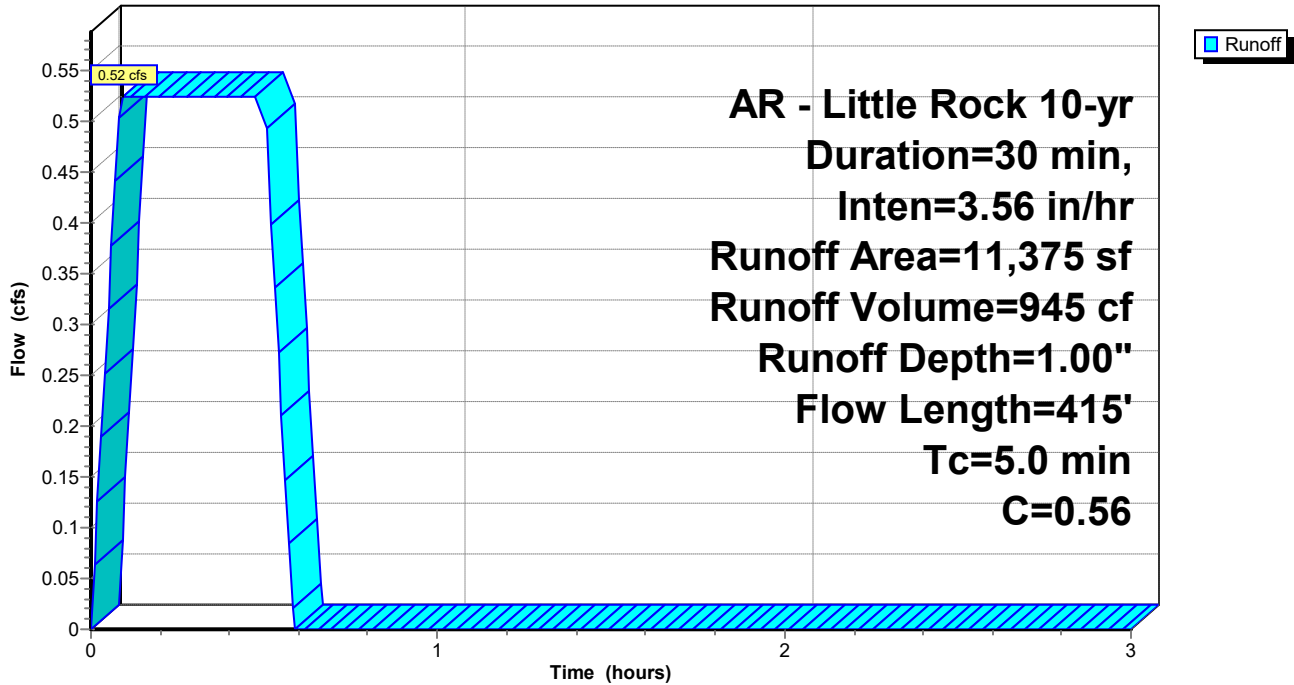
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
8,130	0.40	Sod Yard
3,245	0.95	Paving, Sidewalks
11,375	0.56	Weighted Average
8,130		71.47% Pervious Area
3,245		28.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	415		1.38		Direct Entry, Concentrated Flow (Min)

Subcatchment C4: Drainage Basin C4

Hydrograph



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AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Subcatchment C5: Drainage Basin C5

Runoff = 0.45 cfs @ 0.10 hrs, Volume= 814 cf, Depth= 1.46"
 Routed to Pond CI-C4 : CI - C4

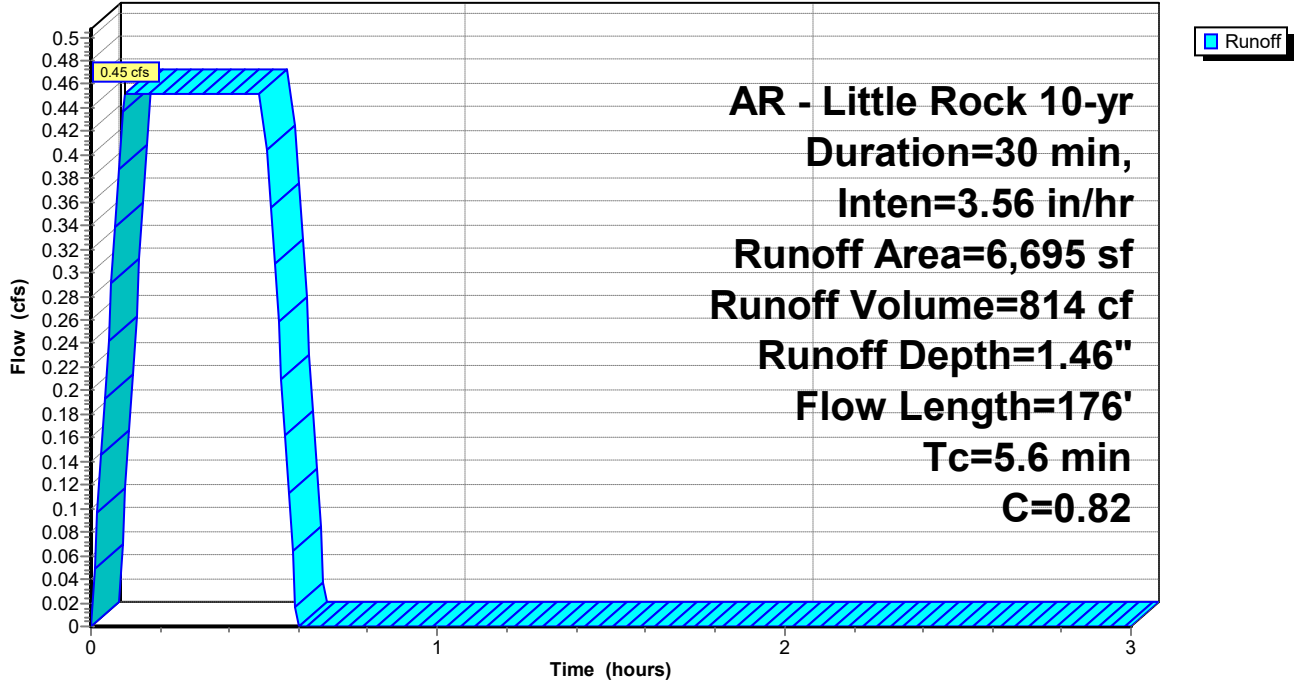
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
1,634	0.40	Sod Yard
5,061	0.95	Paving, Sidewalks
6,695	0.82	Weighted Average
1,634		24.41% Pervious Area
5,061		75.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	5	0.2990	0.14		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.2	12	0.0130	0.87		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
3.9	8	0.0070	0.03		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.5	58	0.0080	1.82		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	14	0.0280	3.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	23	0.0370	3.90		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	13	0.0940	6.22		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	13	0.0560	4.80		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	30	0.0180	2.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
5.6	176	Total			

Subcatchment C5: Drainage Basin C5

Hydrograph



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AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Subcatchment C6: Drainage Basin C6

Runoff = 0.22 cfs @ 0.09 hrs, Volume= 399 cf, Depth= 1.69"
 Routed to Pond CI-C5 : CI - C5

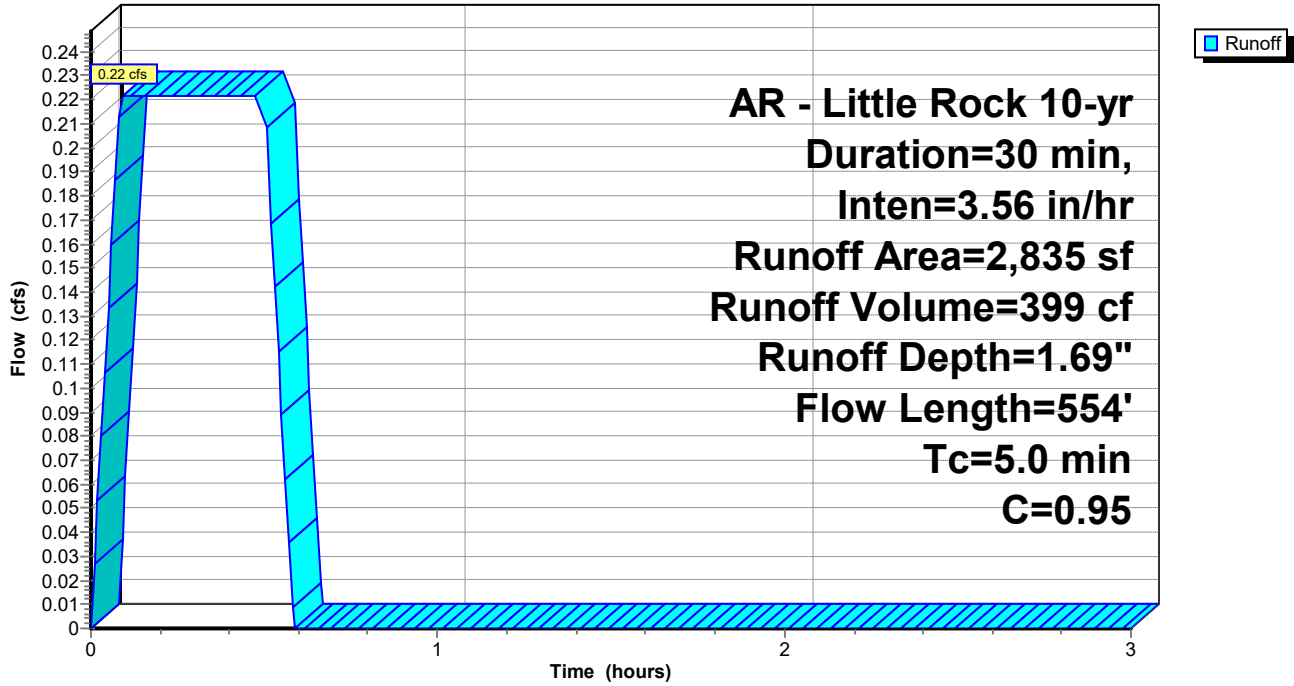
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
2,835	0.95	Paving, Sidewalks
2,835	0.95	Weighted Average
2,835		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	22	0.0200	1.16		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	19	0.0100	2.03		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	17	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	26	0.0360	3.85		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	28	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	27	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.1	415		1.69		Direct Entry, Concentrated Flow (Min)
5.0	554	Total			

Subcatchment C6: Drainage Basin C6

Hydrograph



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AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Subcatchment C7: Drainage Basin C7

Runoff = 0.13 cfs @ 0.09 hrs, Volume= 225 cf, Depth= 1.69"
 Routed to Pond CI-D1 : CI - D1

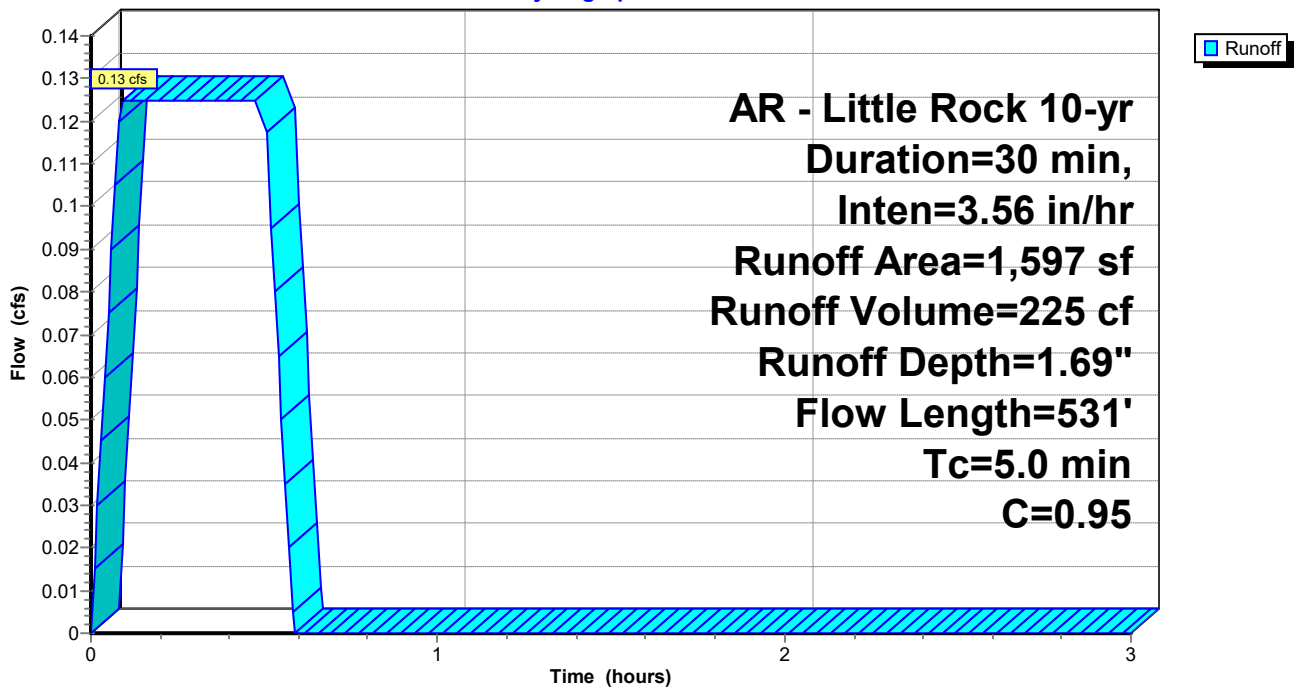
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
1,597	0.95	Paving, Sidewalks
1,597	0.95	Weighted Average
1,597		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	19	0.0200	1.13		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	16	0.0540	4.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.3	81	0.0580	4.89		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.3	415		1.61		Direct Entry, Concentrated Flow (Min)
5.0	531	Total			

Subcatchment C7: Drainage Basin C7

Hydrograph



Summary for Subcatchment C8: Drainage Basin C8

Runoff = 0.12 cfs @ 0.09 hrs, Volume= 218 cf, Depth= 1.69"
 Routed to Pond CI-D2 : CI - D2

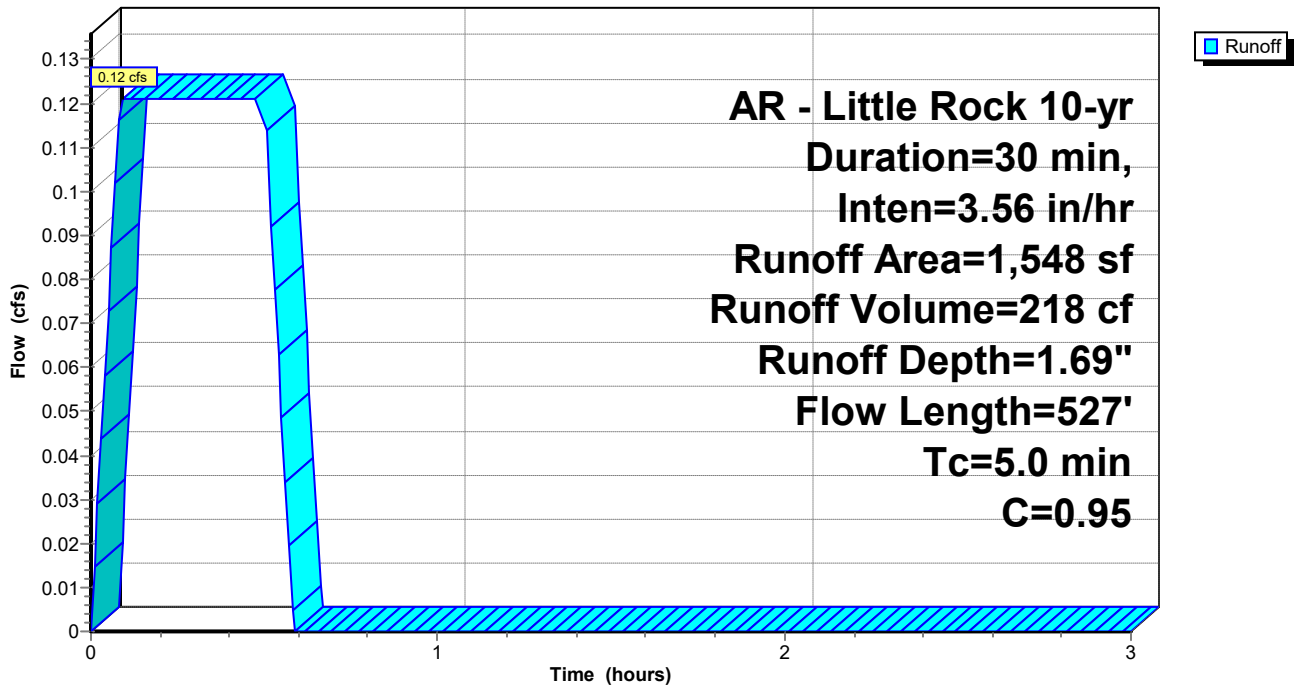
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
1,548	0.95	Paving, Sidewalks
1,548	0.95	Weighted Average
1,548		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	1.12		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.3	94	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.4	415		1.57		Direct Entry, Concentrated Flow (Min)
5.0	527	Total			

Subcatchment C8: Drainage Basin C8

Hydrograph



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AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Subcatchment C9: Drainage Basin C9

Runoff = 0.88 cfs @ 0.09 hrs, Volume= 1,578 cf, Depth= 1.37"
 Routed to Pond CI-C6 : CI - C6

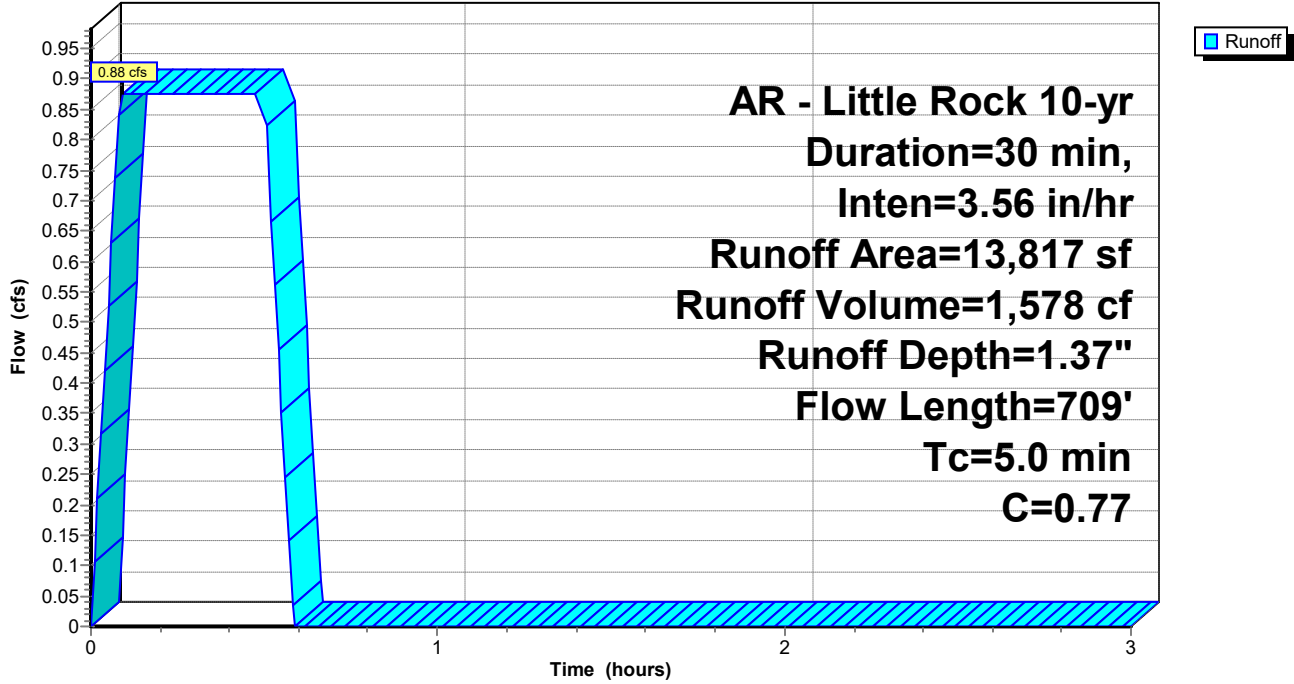
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

Area (sf)	C	Description
4,456	0.40	Sod Yard
9,361	0.95	Paving, Sidewalks
13,817	0.77	Weighted Average
4,456		32.25% Pervious Area
9,361		67.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0140	1.36		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	13	0.0150	2.49		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	23	0.0160	2.57		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	7	0.0050	1.44		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	8	0.0100	2.03		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	41	0.0420	4.16		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	41	0.0540	4.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	61	0.0520	4.63		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
2.9	415		2.39		Direct Entry, Concentrated Flow (Min)
5.0	709	Total			

Subcatchment C9: Drainage Basin C9

Hydrograph



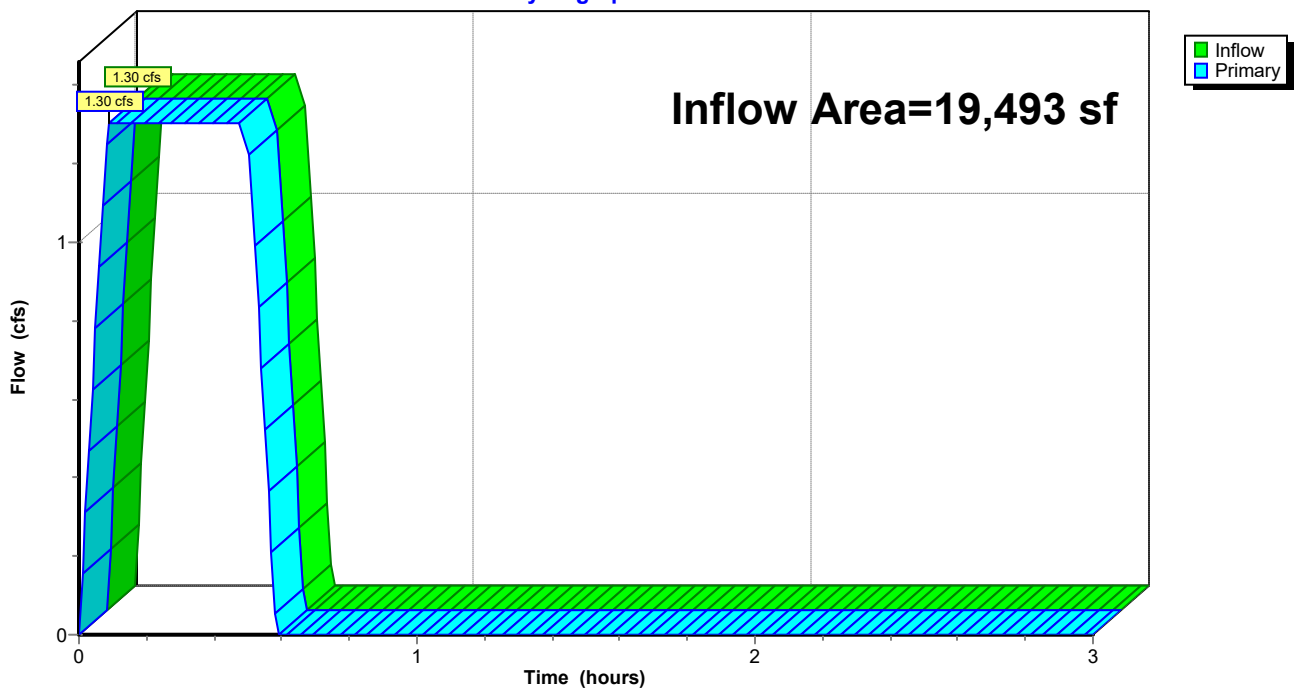
Summary for Pond CI-A1: CI - A1

Inflow Area = 19,493 sf, 74.85% Impervious, Inflow Depth = 1.44" for 10-yr event
Inflow = 1.30 cfs @ 0.09 hrs, Volume= 2,342 cf
Primary = 1.30 cfs @ 0.09 hrs, Volume= 2,342 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond JB-A2 : JB - A2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A1: CI - A1

Hydrograph



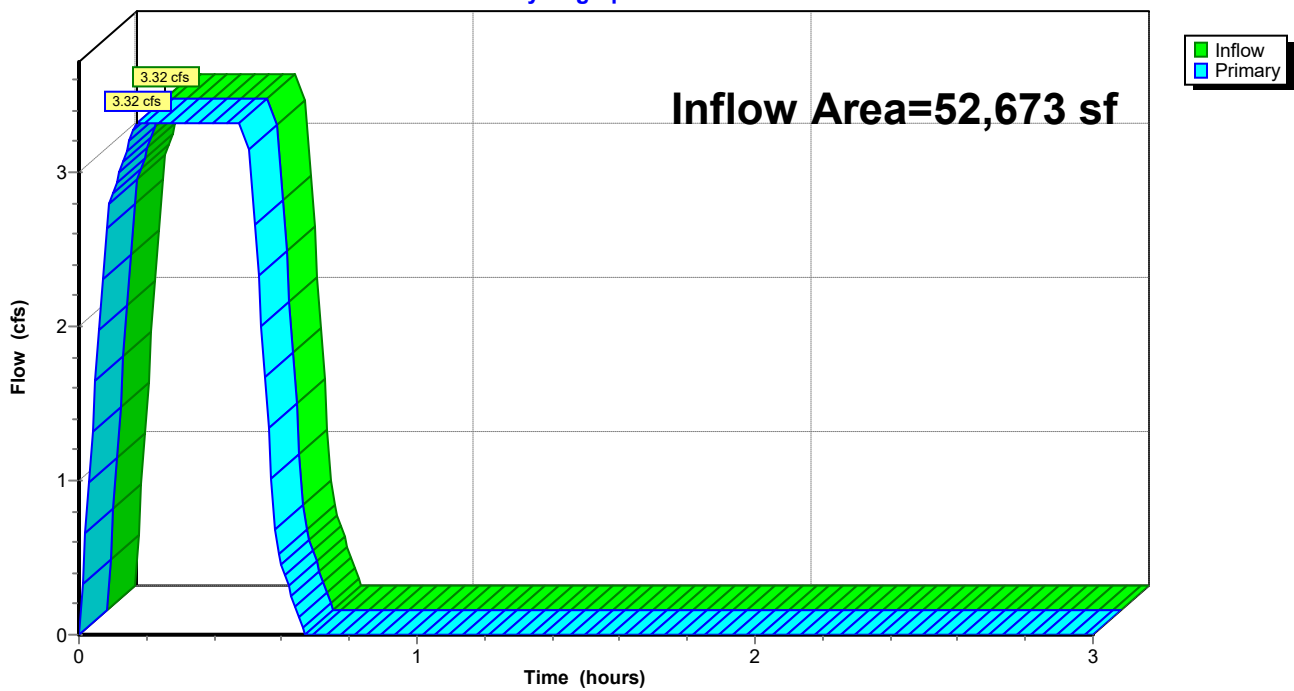
Summary for Pond CI-A3: CI - A3

Inflow Area = 52,673 sf, 66.48% Impervious, Inflow Depth = 1.36" for 10-yr event
Inflow = 3.32 cfs @ 0.17 hrs, Volume= 5,973 cf
Primary = 3.32 cfs @ 0.17 hrs, Volume= 5,973 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-A4 : CI - A4

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A3: CI - A3

Hydrograph



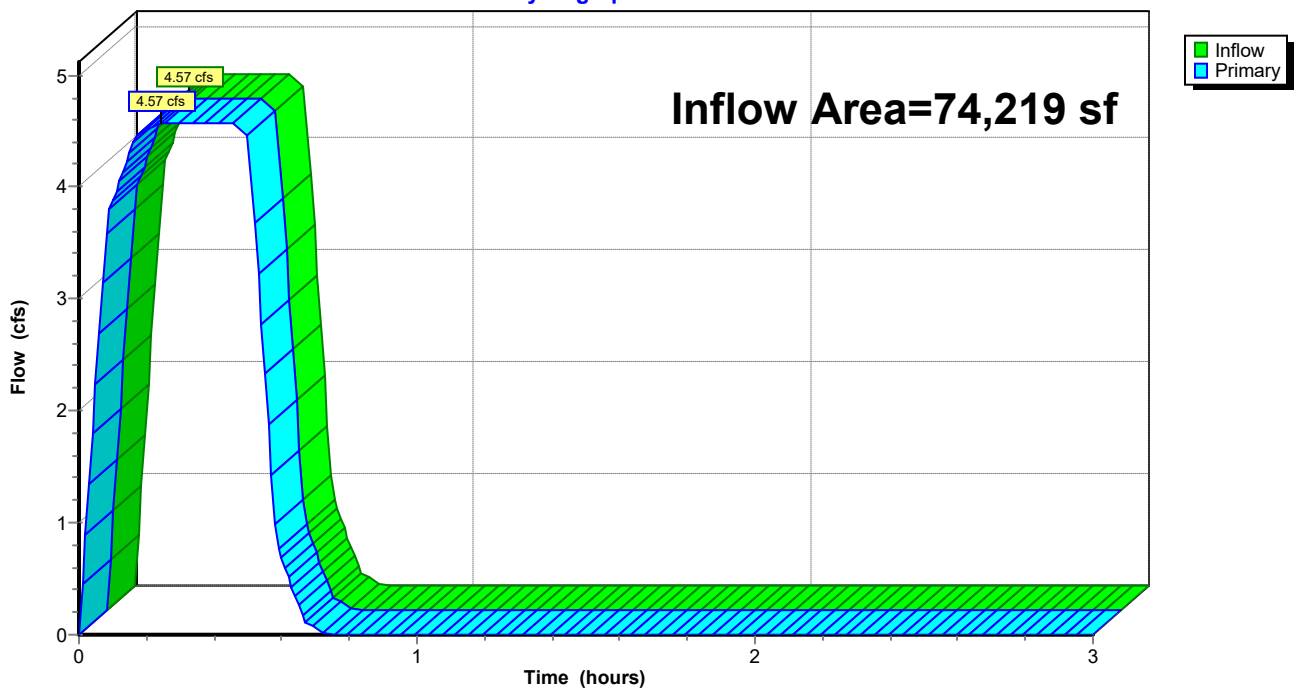
Summary for Pond CI-A4: CI - A4

Inflow Area = 74,219 sf, 63.30% Impervious, Inflow Depth = 1.33" for 10-yr event
Inflow = 4.57 cfs @ 0.24 hrs, Volume= 8,227 cf
Primary = 4.57 cfs @ 0.24 hrs, Volume= 8,227 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-A5 : CI - A5

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A4: CI - A4

Hydrograph



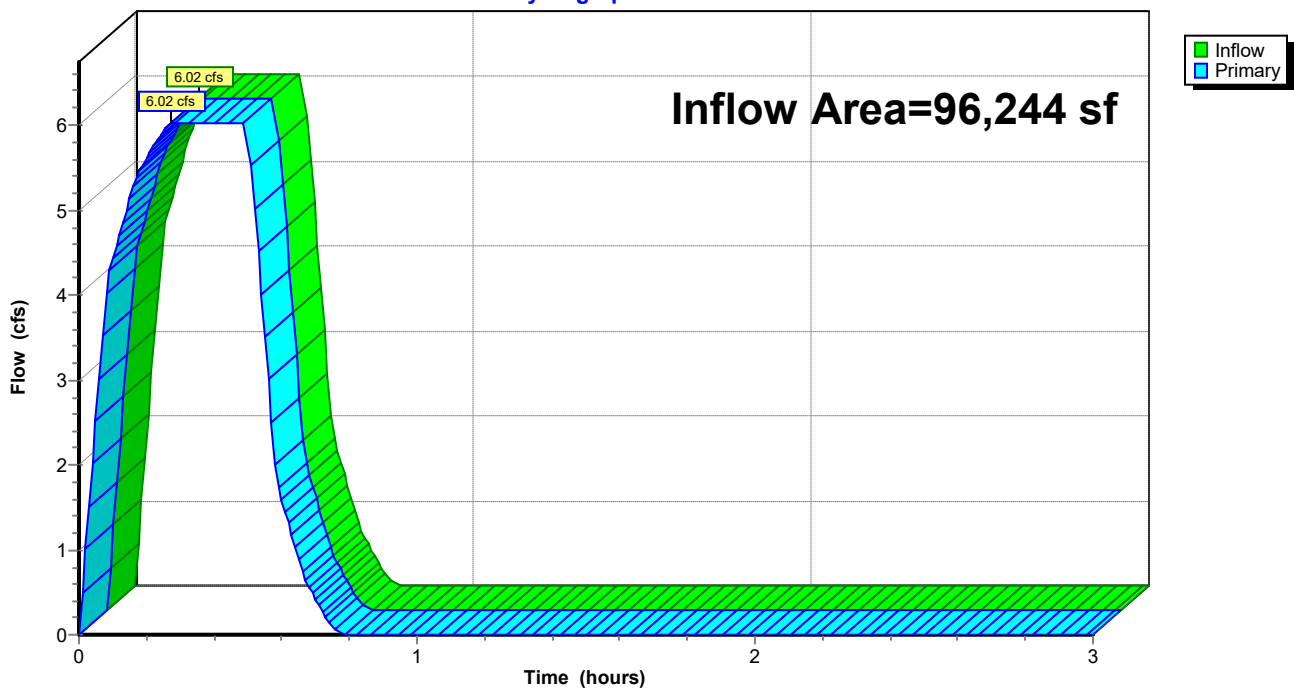
Summary for Pond CI-A5: CI - A5

Inflow Area = 96,244 sf, 65.33% Impervious, Inflow Depth = 1.35" for 10-yr event
Inflow = 6.02 cfs @ 0.27 hrs, Volume= 10,841 cf
Primary = 6.02 cfs @ 0.27 hrs, Volume= 10,841 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond DP : Existing North Detention Pond

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A5: CI - A5

Hydrograph



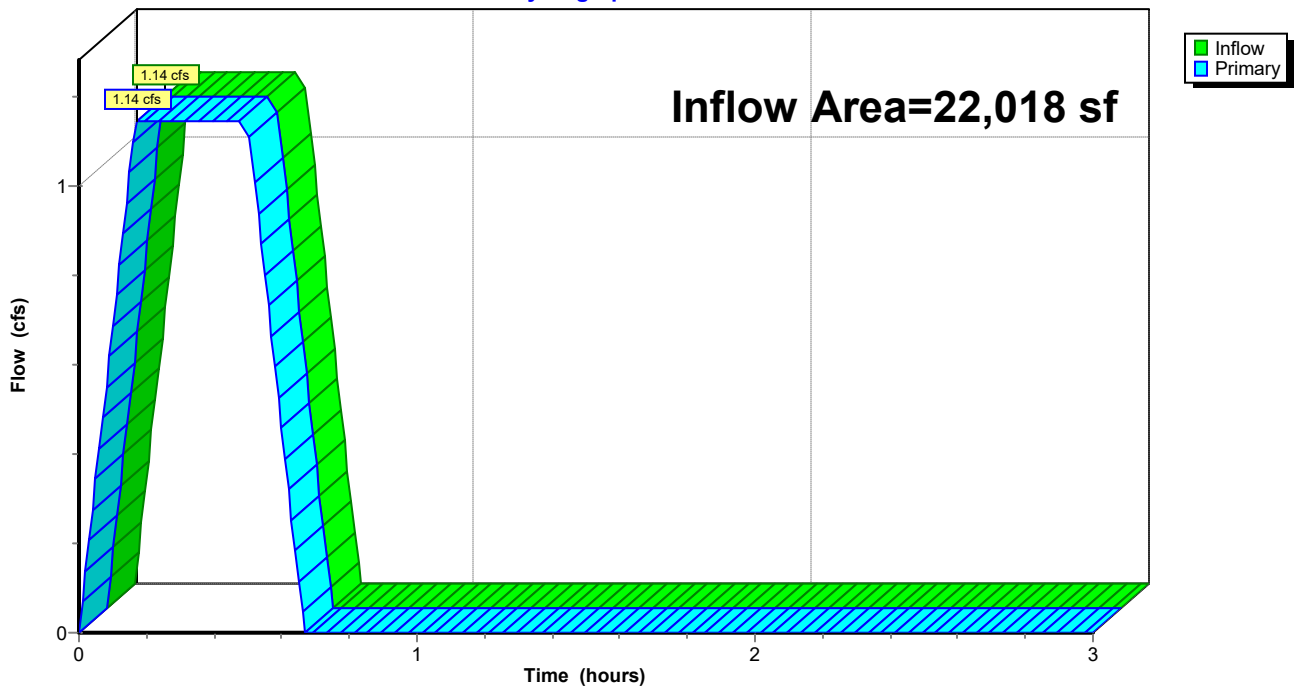
Summary for Pond CI-B2: CI - B2

Inflow Area = 22,018 sf, 42.08% Impervious, Inflow Depth = 1.12" for 10-yr event
Inflow = 1.14 cfs @ 0.17 hrs, Volume= 2,058 cf
Primary = 1.14 cfs @ 0.17 hrs, Volume= 2,058 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond JB-A2 : JB - A2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-B2: CI - B2

Hydrograph



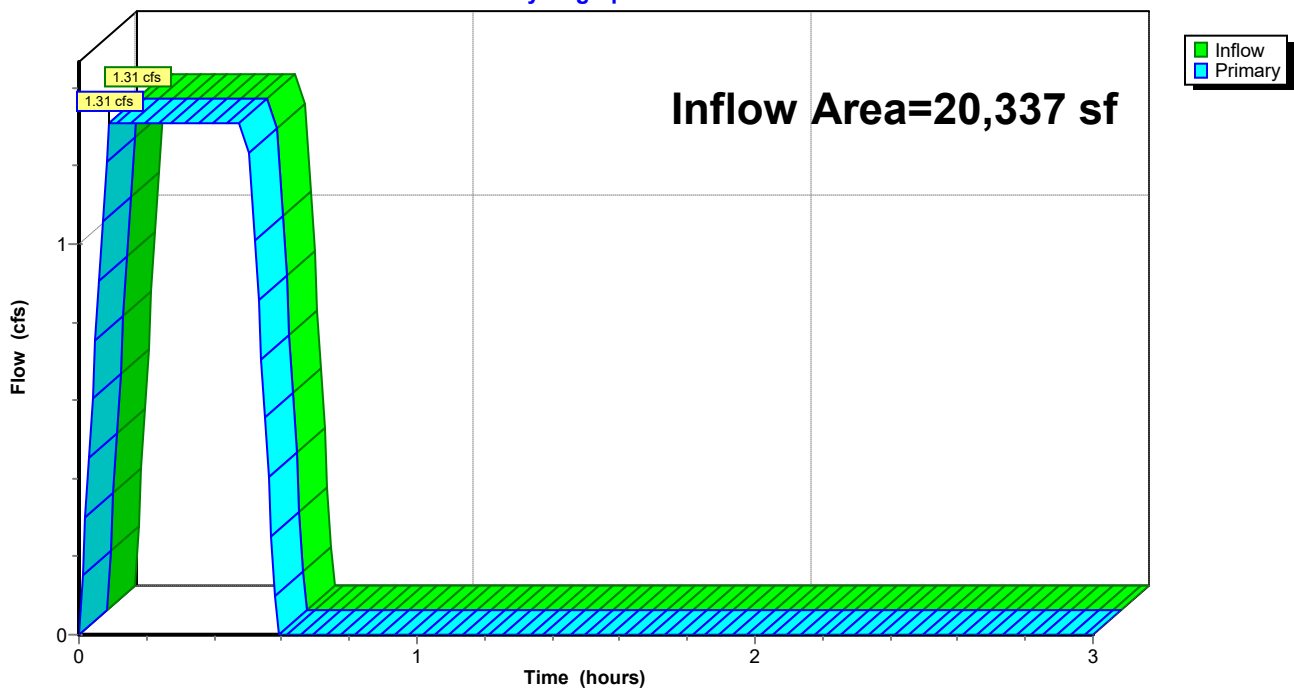
Summary for Pond CI-C1: CI - C1

Inflow Area = 20,337 sf, 69.83% Impervious, Inflow Depth = 1.39" for 10-yr event
Inflow = 1.31 cfs @ 0.09 hrs, Volume= 2,353 cf
Primary = 1.31 cfs @ 0.09 hrs, Volume= 2,353 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C2 : CI - C2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C1: CI - C1

Hydrograph



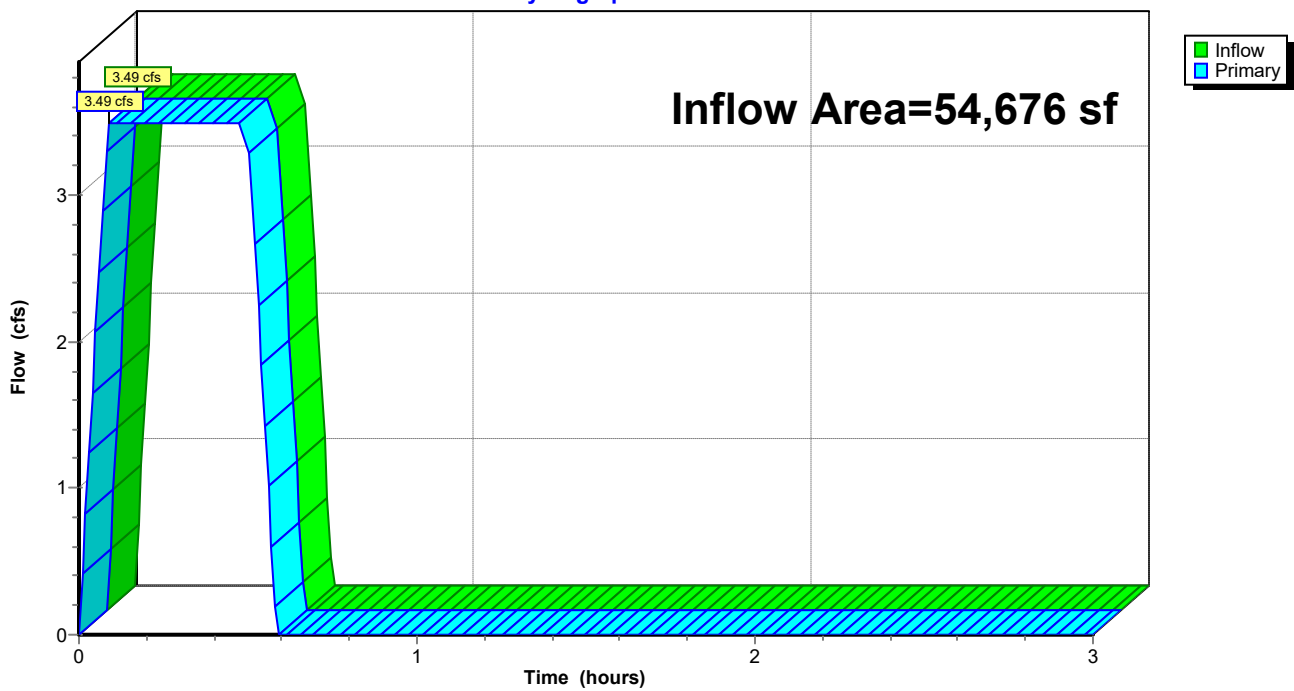
Summary for Pond CI-C2: CI - C2

Inflow Area = 54,676 sf, 67.97% Impervious, Inflow Depth = 1.38" for 10-yr event
Inflow = 3.49 cfs @ 0.09 hrs, Volume= 6,275 cf
Primary = 3.49 cfs @ 0.09 hrs, Volume= 6,275 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C3 : CI - C3

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C2: CI - C2

Hydrograph



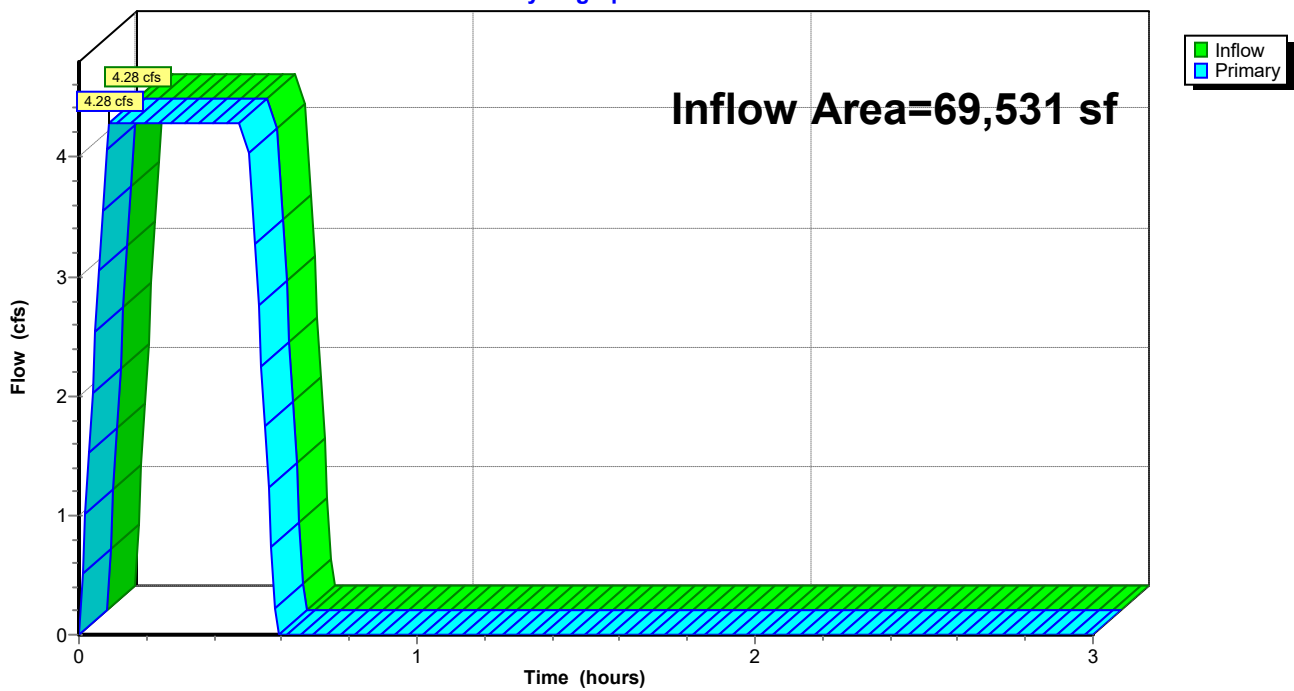
Summary for Pond CI-C3: CI - C3

Inflow Area = 69,531 sf, 63.12% Impervious, Inflow Depth = 1.33" for 10-yr event
Inflow = 4.28 cfs @ 0.09 hrs, Volume= 7,710 cf
Primary = 4.28 cfs @ 0.09 hrs, Volume= 7,710 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C4 : CI - C4

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C3: CI - C3

Hydrograph



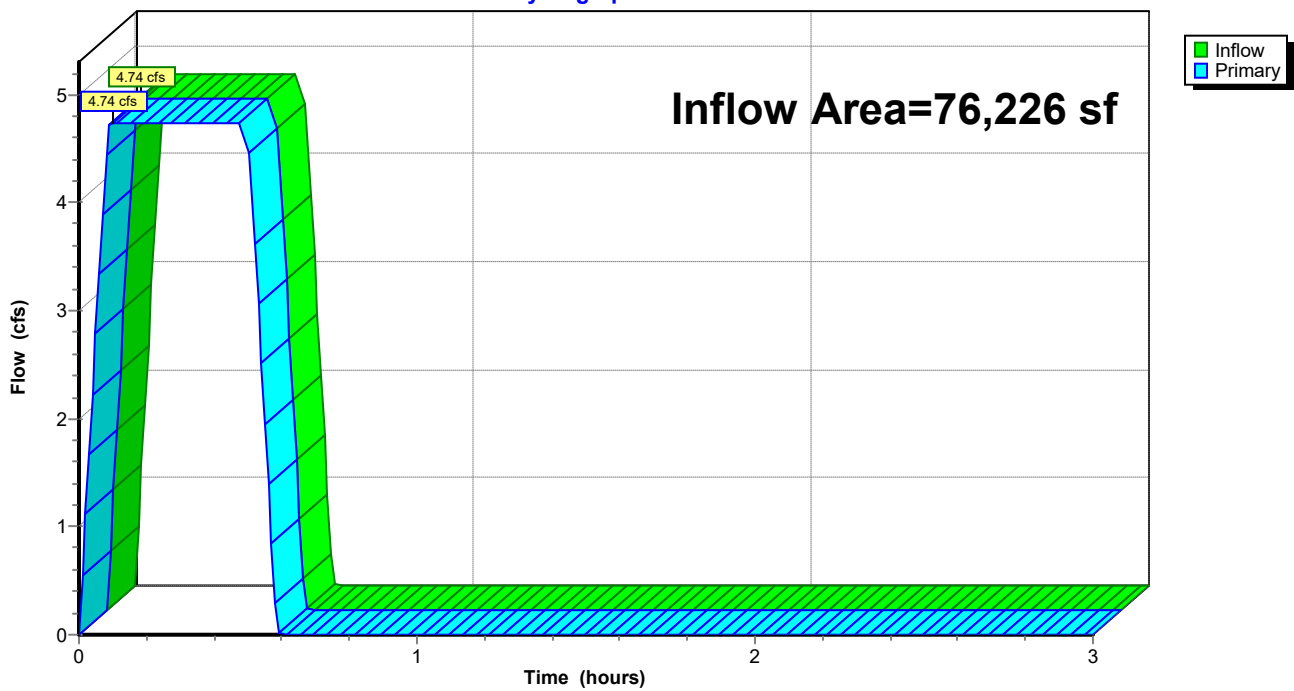
Summary for Pond CI-C4: CI - C4

Inflow Area = 76,226 sf, 64.22% Impervious, Inflow Depth = 1.34" for 10-yr event
Inflow = 4.74 cfs @ 0.10 hrs, Volume= 8,525 cf
Primary = 4.74 cfs @ 0.10 hrs, Volume= 8,525 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C5 : CI - C5

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C4: CI - C4

Hydrograph



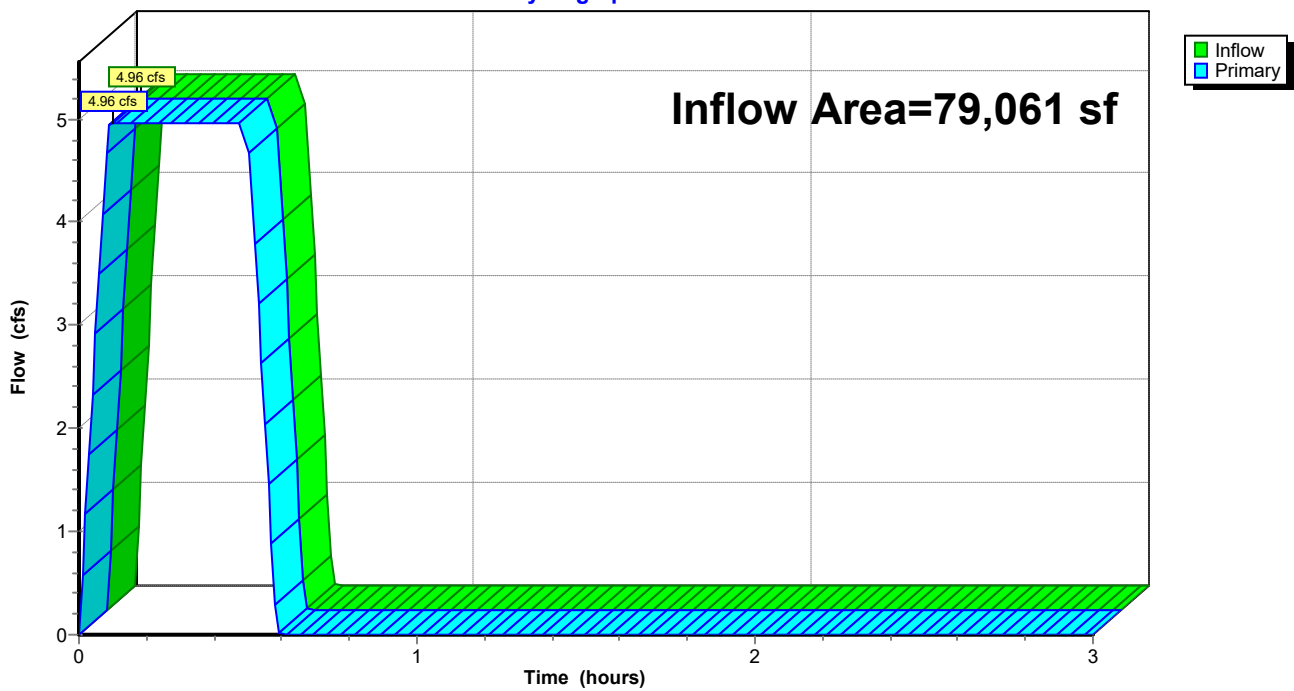
Summary for Pond CI-C5: CI - C5

Inflow Area = 79,061 sf, 65.50% Impervious, Inflow Depth = 1.35" for 10-yr event
Inflow = 4.96 cfs @ 0.10 hrs, Volume= 8,924 cf
Primary = 4.96 cfs @ 0.10 hrs, Volume= 8,924 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C6 : CI - C6

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C5: CI - C5

Hydrograph



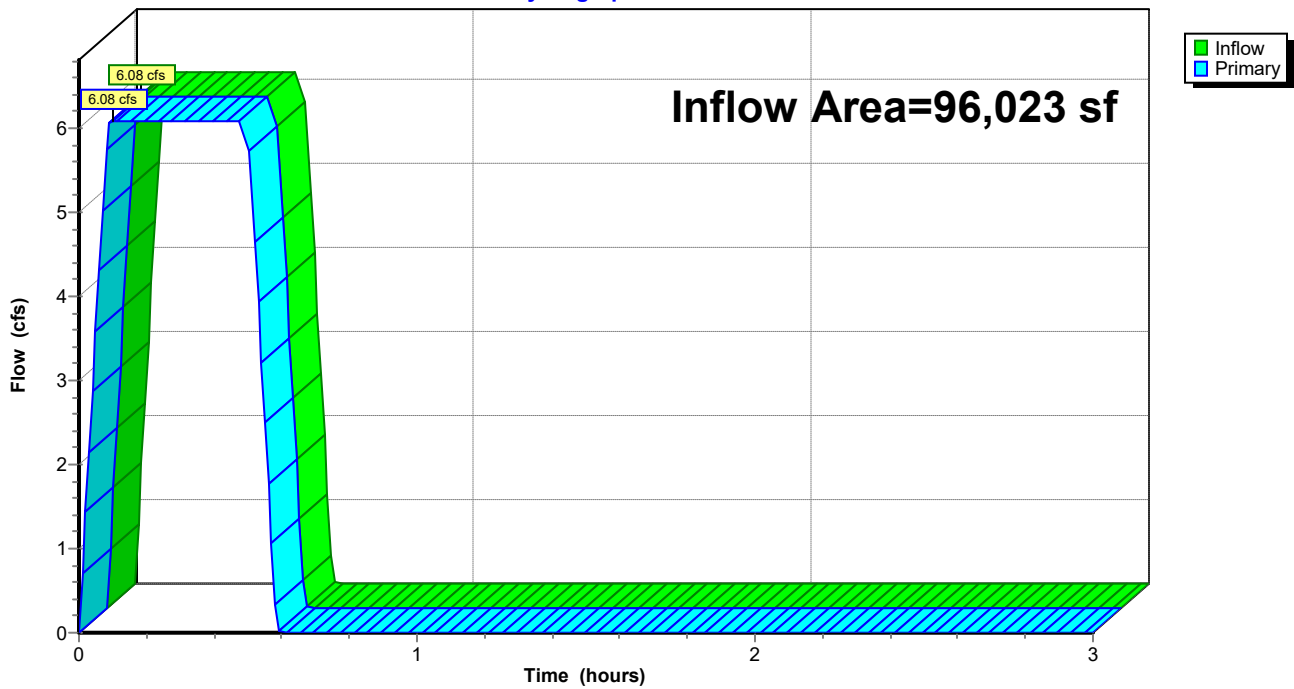
Summary for Pond CI-C6: CI - C6

Inflow Area = 96,023 sf, 66.95% Impervious, Inflow Depth = 1.37" for 10-yr event
Inflow = 6.08 cfs @ 0.10 hrs, Volume= 10,945 cf
Primary = 6.08 cfs @ 0.10 hrs, Volume= 10,945 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C7 : CI - C7

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C6: CI - C6

Hydrograph



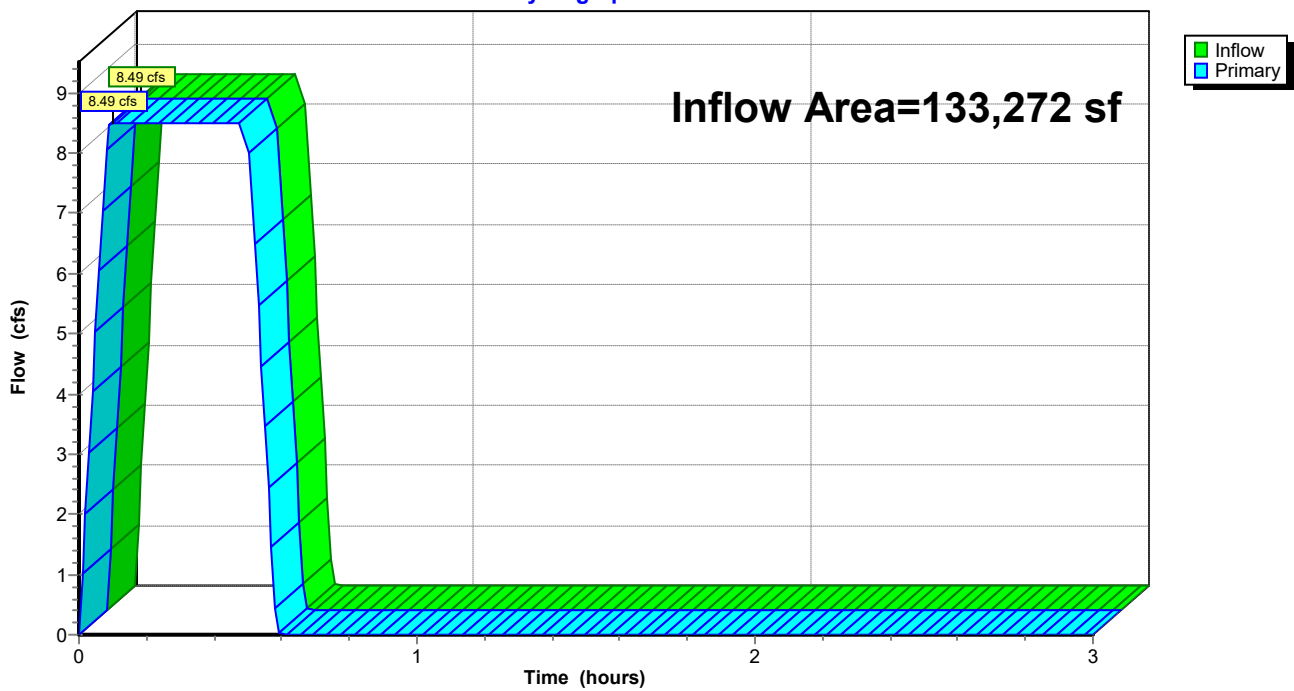
Summary for Pond CI-C7: CI - C7

Inflow Area = 133,272 sf, 67.70% Impervious, Inflow Depth = 1.38" for 10-yr event
Inflow = 8.49 cfs @ 0.10 hrs, Volume= 15,289 cf
Primary = 8.49 cfs @ 0.10 hrs, Volume= 15,289 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond DP : Existing North Detention Pond

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C7: CI - C7

Hydrograph



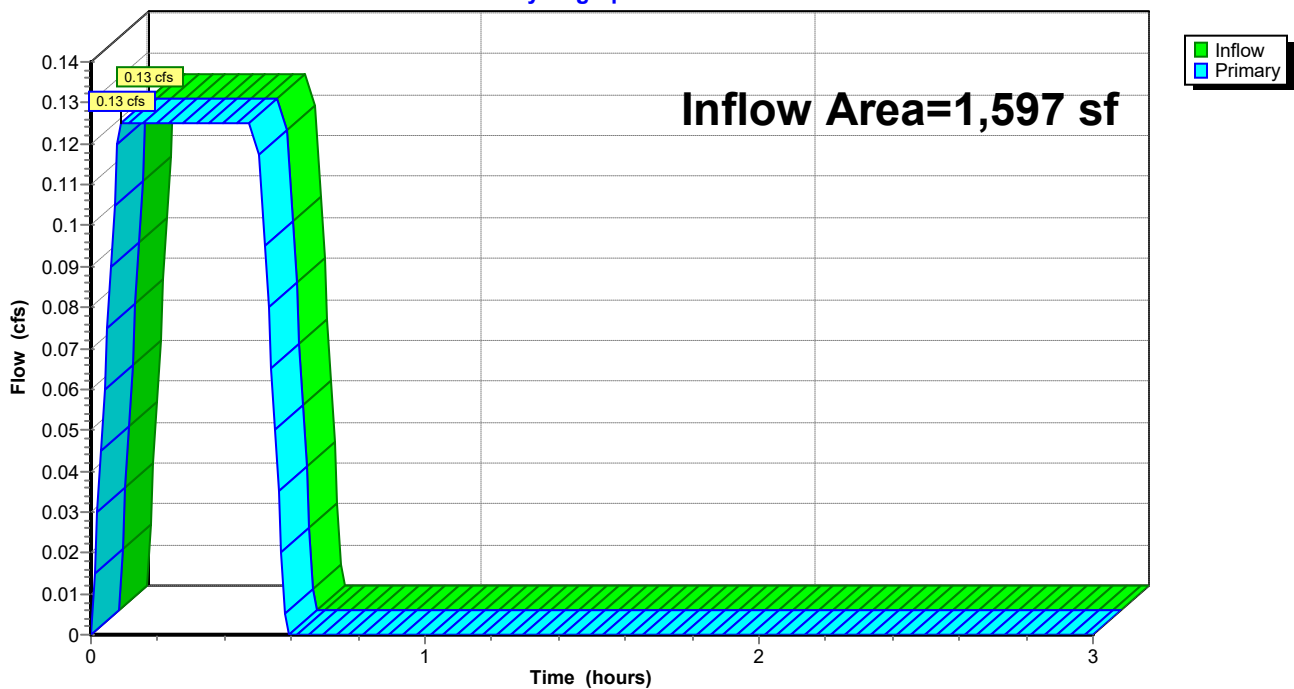
Summary for Pond CI-D1: CI - D1

Inflow Area = 1,597 sf, 100.00% Impervious, Inflow Depth = 1.69" for 10-yr event
Inflow = 0.13 cfs @ 0.09 hrs, Volume= 225 cf
Primary = 0.13 cfs @ 0.09 hrs, Volume= 225 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-D2 : CI - D2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-D1: CI - D1

Hydrograph



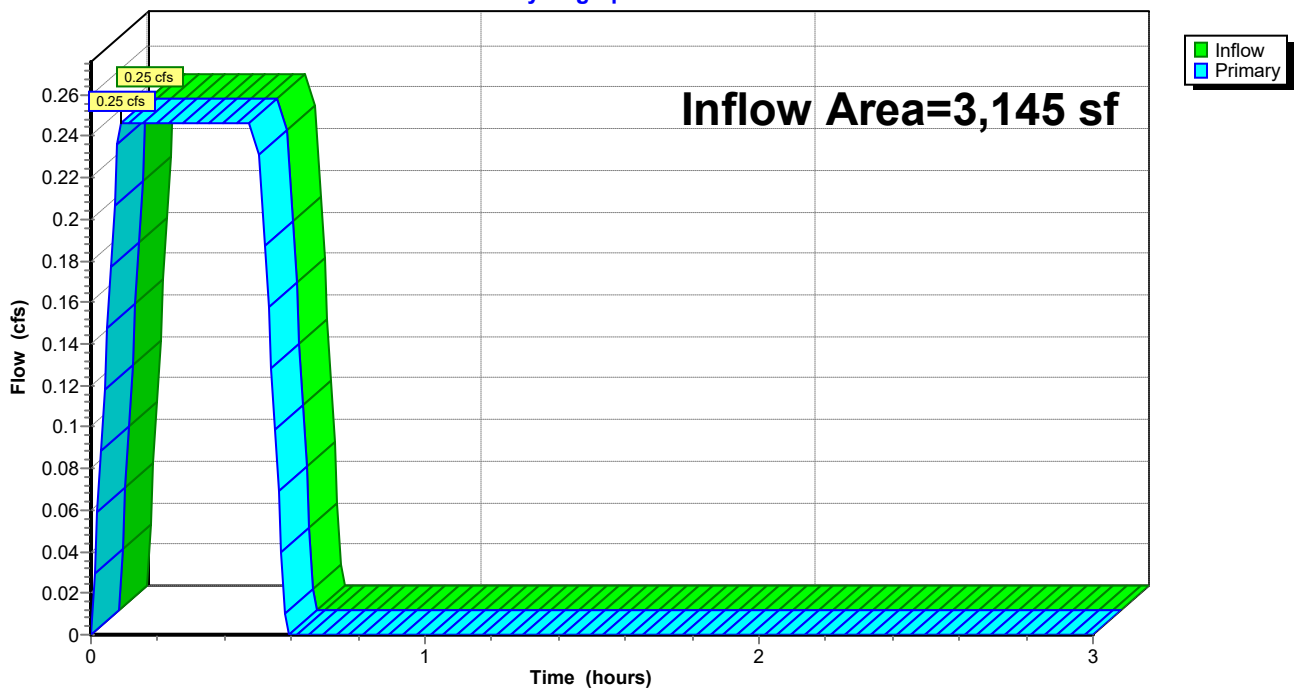
Summary for Pond CI-D2: CI - D2

Inflow Area = 3,145 sf, 100.00% Impervious, Inflow Depth = 1.69" for 10-yr event
Inflow = 0.25 cfs @ 0.09 hrs, Volume= 443 cf
Primary = 0.25 cfs @ 0.09 hrs, Volume= 443 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C6 : CI - C6

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-D2: CI - D2

Hydrograph



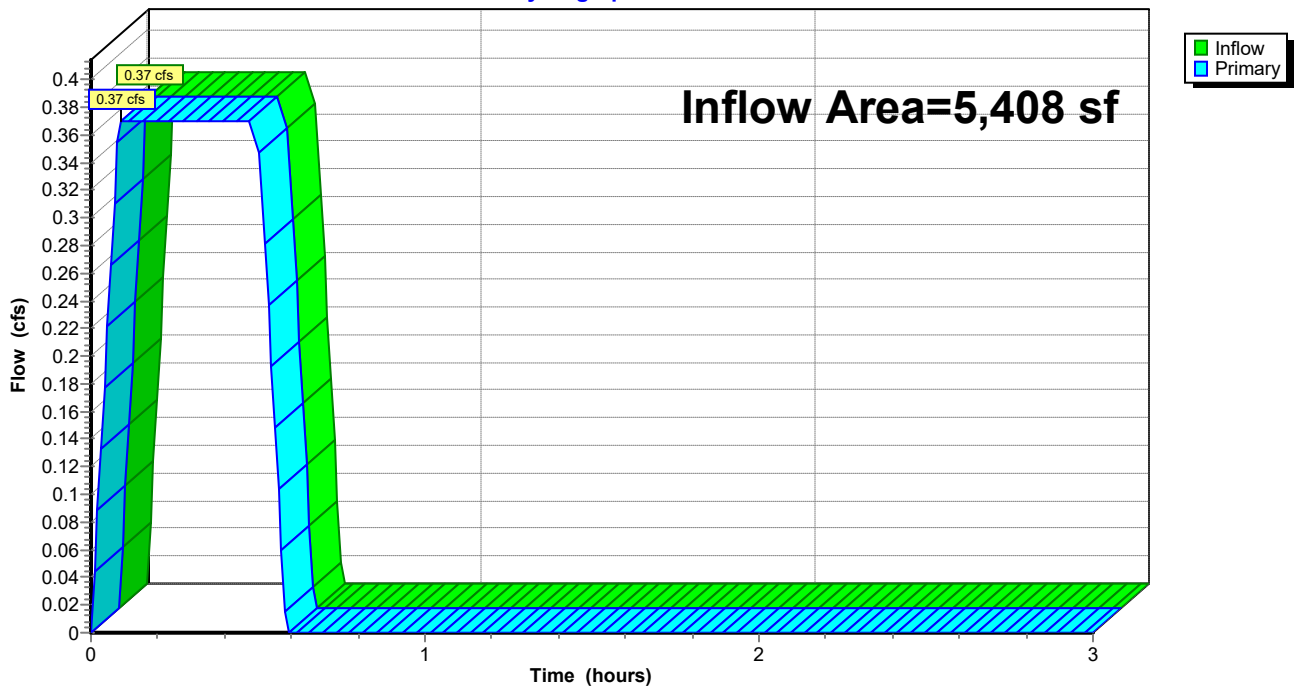
Summary for Pond CI-E1: CI - E1

Inflow Area = 5,408 sf, 77.35% Impervious, Inflow Depth = 1.48" for 10-yr event
Inflow = 0.37 cfs @ 0.09 hrs, Volume= 666 cf
Primary = 0.37 cfs @ 0.09 hrs, Volume= 666 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-E2 : CI - E2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-E1: CI - E1

Hydrograph



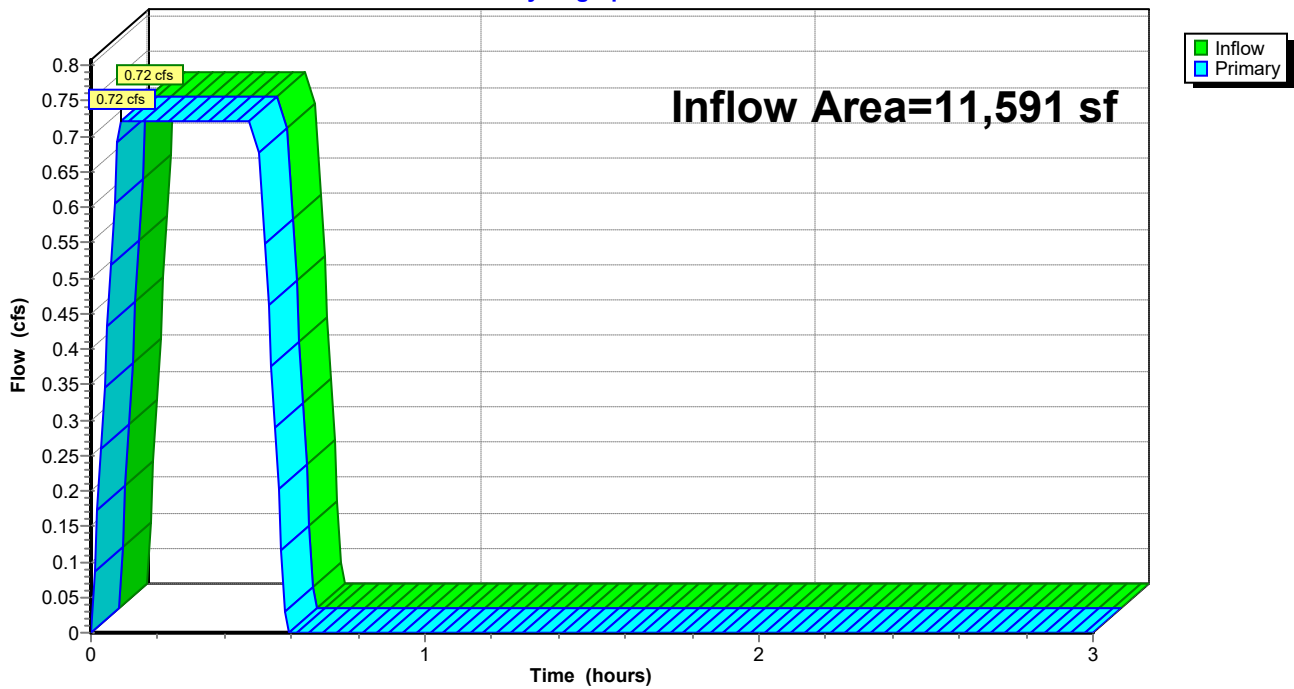
Summary for Pond CI-E2: CI - E2

Inflow Area = 11,591 sf, 64.62% Impervious, Inflow Depth = 1.34" for 10-yr event
Inflow = 0.72 cfs @ 0.09 hrs, Volume= 1,299 cf
Primary = 0.72 cfs @ 0.09 hrs, Volume= 1,299 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C7 : CI - C7

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-E2: CI - E2

Hydrograph



Goddard

AR - Little Rock 10-yr Duration=30 min, Inten=3.56 in/hr

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Summary for Pond DP: Existing North Detention Pond

Inflow Area = 321,792 sf, 58.73% Impervious, Inflow Depth = 1.29" for 10-yr event
 Inflow = 19.16 cfs @ 0.27 hrs, Volume= 34,489 cf
 Outflow = 11.25 cfs @ 0.54 hrs, Volume= 34,489 cf, Atten= 41%, Lag= 16.3 min
 Primary = 11.25 cfs @ 0.54 hrs, Volume= 34,489 cf
 Routed to Link FINAL : APPROX DISCHARGE

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 Peak Elev= 383.06' @ 0.54 hrs Storage= 18,315 cf

Plug-Flow detention time= 20.2 min calculated for 34,489 cf (100% of inflow)
 Center-of-Mass det. time= 20.1 min (38.6 - 18.5)

Volume	Invert	Avail.Storage	Storage Description
#1	381.17'	72,742 cf	Custom Stage Data Listed below

Elevation (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
381.17	0	0
381.50	200	200
382.00	1,825	2,025
382.50	5,265	7,290
383.00	9,300	16,590
383.50	13,733	30,323
384.00	18,578	48,901
384.50	23,841	72,742

Device	Routing	Invert	Outlet Devices
#1	Primary	384.16'	5.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#2	Primary	381.17'	1.7' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

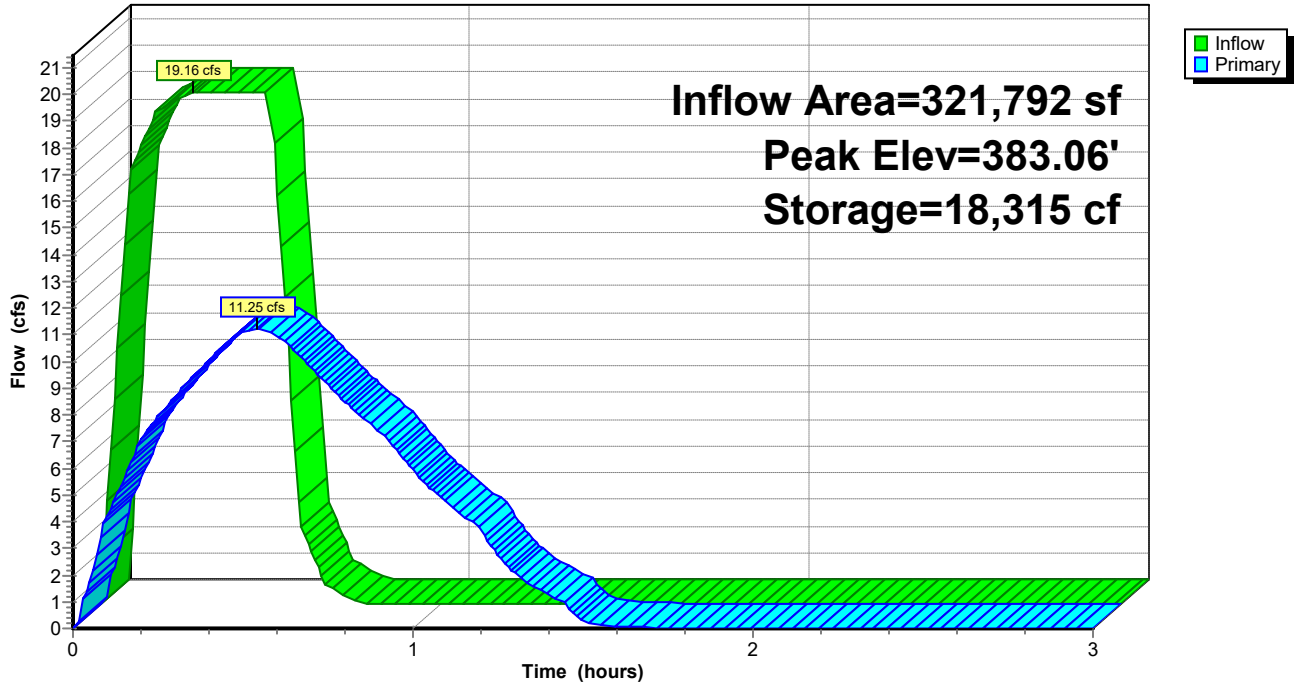
Primary OutFlow Max=11.25 cfs @ 0.54 hrs HW=383.06' (Free Discharge)

↑ **1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

└ **2=Sharp-Crested Rectangular Weir** (Weir Controls 11.25 cfs @ 4.50 fps)

Pond DP: Existing North Detention Pond

Hydrograph



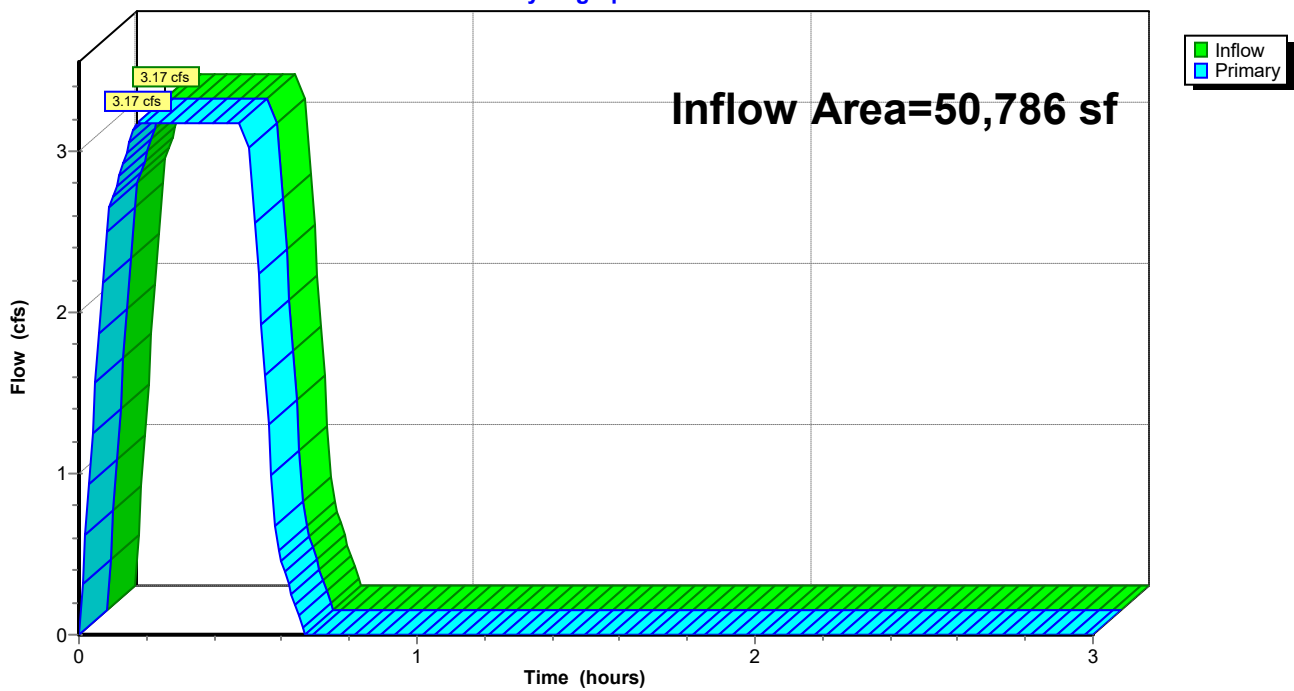
Summary for Pond JB-A2: JB - A2

Inflow Area = 50,786 sf, 65.23% Impervious, Inflow Depth = 1.35" for 10-yr event
Inflow = 3.17 cfs @ 0.17 hrs, Volume= 5,707 cf
Primary = 3.17 cfs @ 0.17 hrs, Volume= 5,707 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-A3 : CI - A3

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond JB-A2: JB - A2

Hydrograph



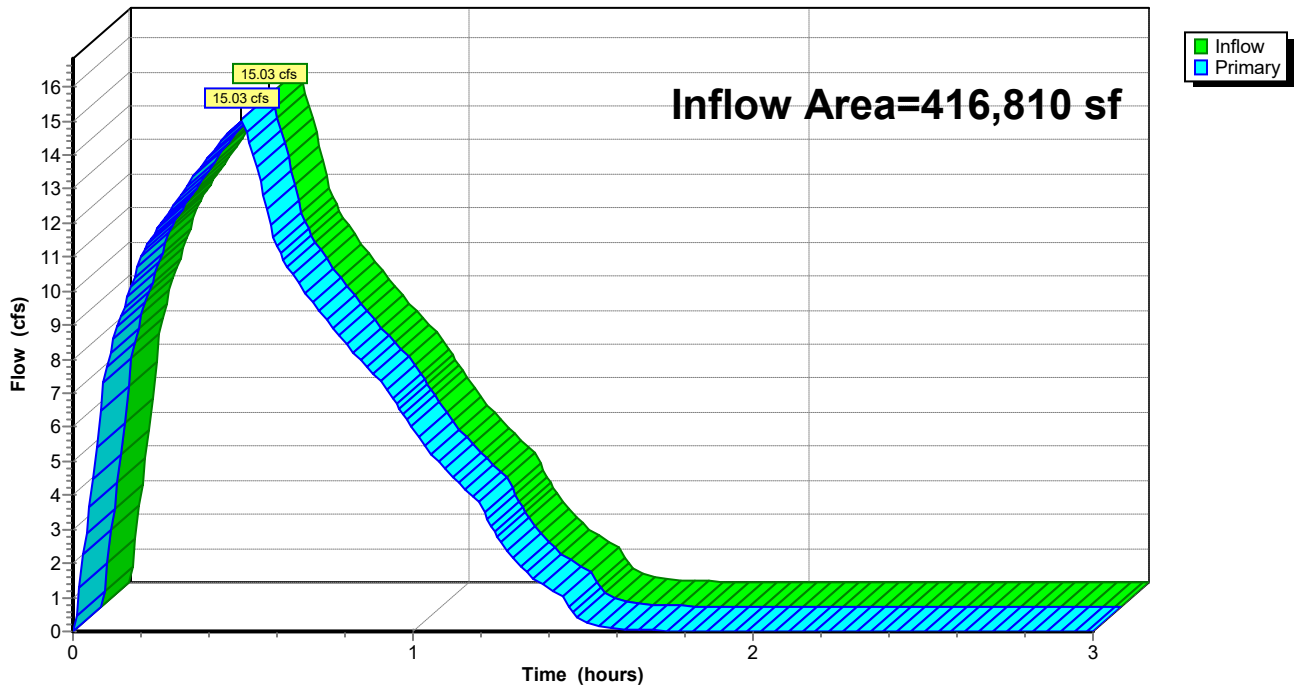
Summary for Link FINAL: APPROX DISCHARGE

Inflow Area = 416,810 sf, 49.40% Impervious, Inflow Depth = 1.20" for 10-yr event
Inflow = 15.03 cfs @ 0.50 hrs, Volume= 41,527 cf
Primary = 15.03 cfs @ 0.50 hrs, Volume= 41,527 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Link FINAL: APPROX DISCHARGE

Hydrograph



Summary for Subcatchment B1: Drainage Basin B1

Runoff = 0.99 cfs @ 0.10 hrs, Volume= 1,787 cf, Depth= 0.86"
 Routed to Link FINAL : APPROX DISCHARGE

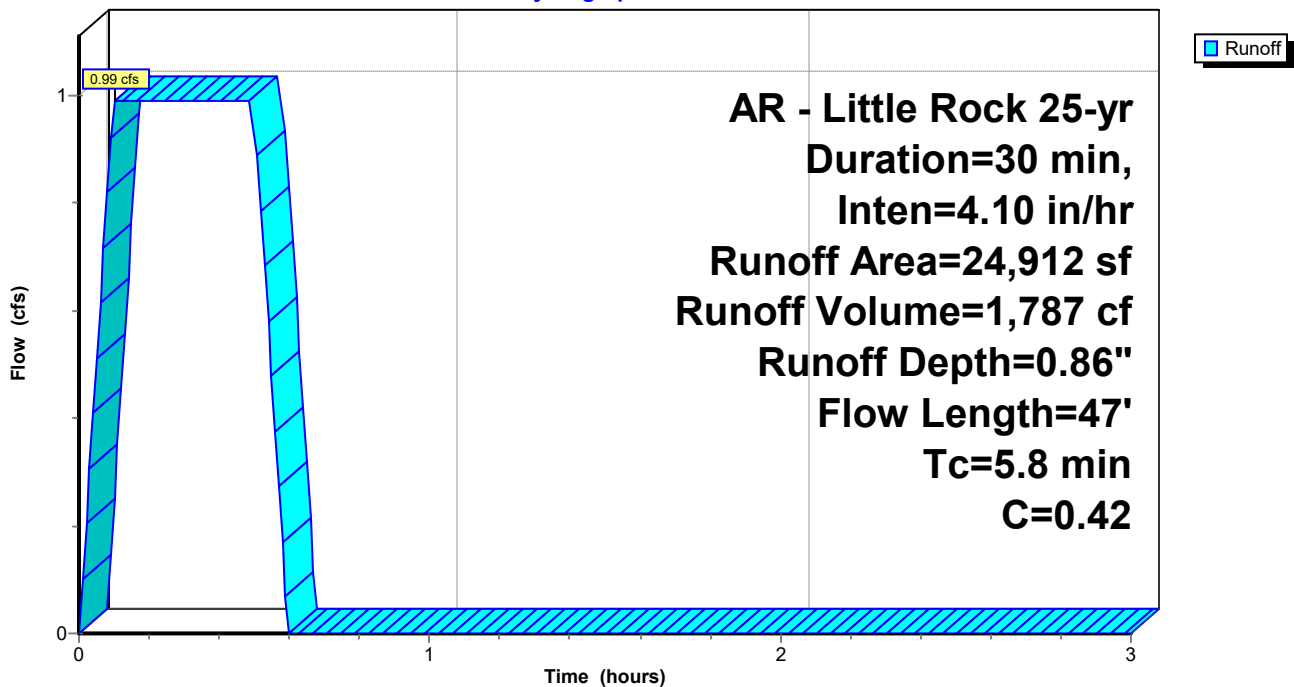
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
24,091	0.40	Sod Yard
821	0.95	Paving, Sidewalks
24,912	0.42	Weighted Average
24,091		96.70% Pervious Area
821		3.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.3	9	0.0310	0.06		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
3.5	38	0.2040	0.18		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
5.8	47	Total			

Subcatchment B1: Drainage Basin B1

Hydrograph



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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment B2: Drainage Basin B2

Runoff = 1.50 cfs @ 0.09 hrs, Volume= 2,697 cf, Depth= 1.66"
 Routed to Pond CI-A1 : CI - A1

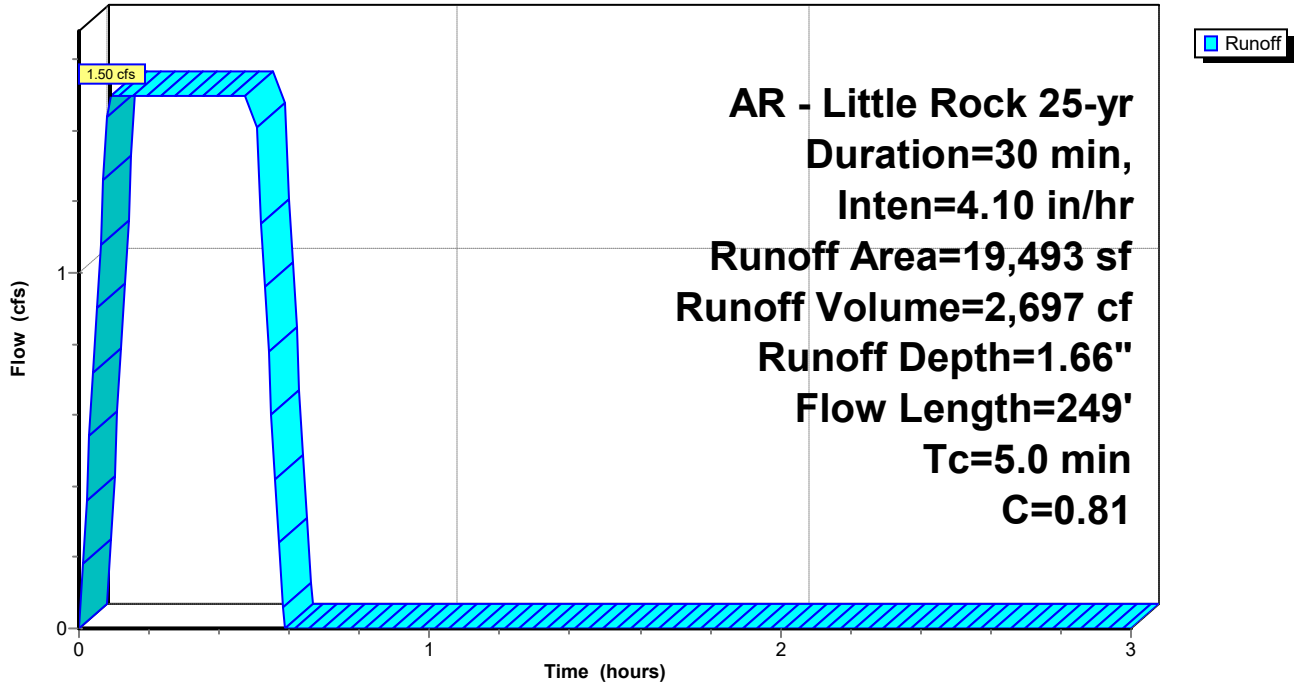
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
4,903	0.40	Sod Yard
14,590	0.95	Paving, Sidewalks
19,493	0.81	Weighted Average
4,903		25.15% Pervious Area
14,590		74.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	31	0.0230	1.32		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	18	0.0250	1.22		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.3	28	0.0450	1.69		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.4	72	0.0250	3.21		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	18	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.3	51	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	16	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	8	0.0430	4.21		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	7	0.0580	4.89		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.2					Direct Entry, Overland Concentrated Flow (Min)
5.0	249	Total			

Subcatchment B2: Drainage Basin B2

Hydrograph



Summary for Subcatchment B3: Drainage Basin B3

Runoff = 0.84 cfs @ 0.09 hrs, Volume= 1,505 cf, Depth= 1.95"
 Routed to Pond JB-A2 : JB - A2

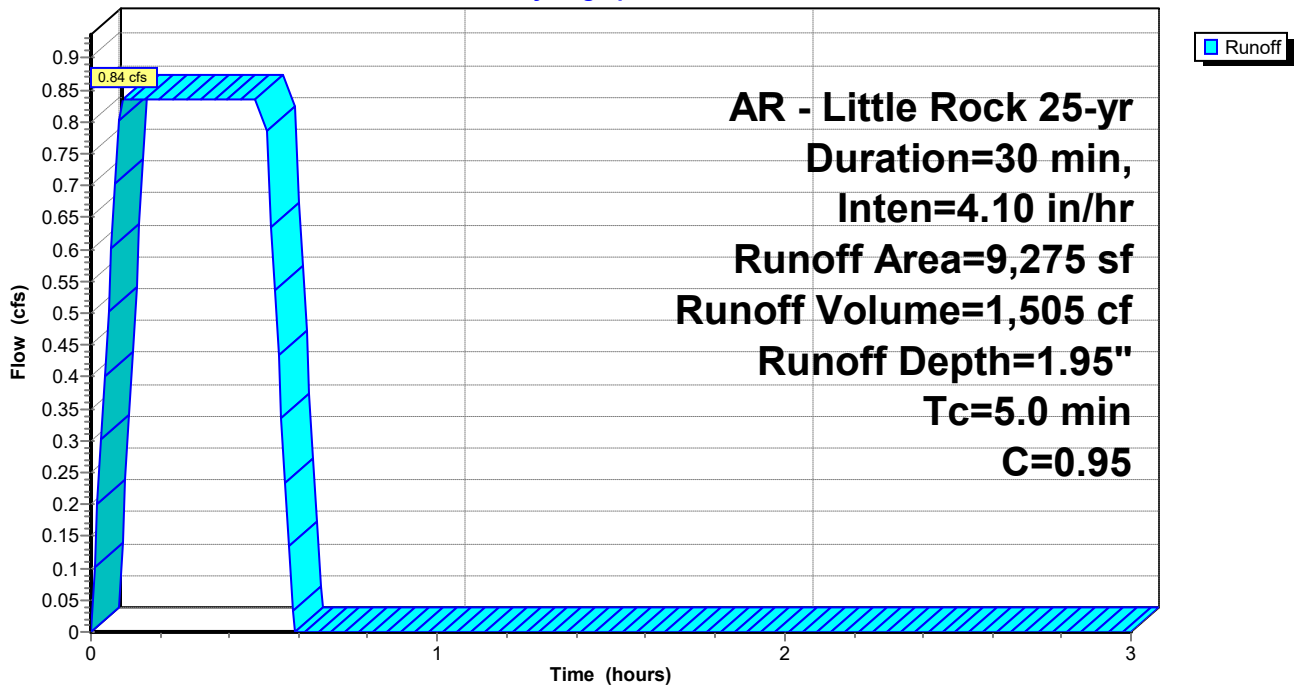
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
9,275	0.95	Roof
9,275		100.00% Impervious Area

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

Subcatchment B3: Drainage Basin B3

Hydrograph



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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment B4: Drainage Basin B4

Runoff = 0.17 cfs @ 0.09 hrs, Volume= 306 cf, Depth= 1.95"
 Routed to Pond CI-A3 : CI - A3

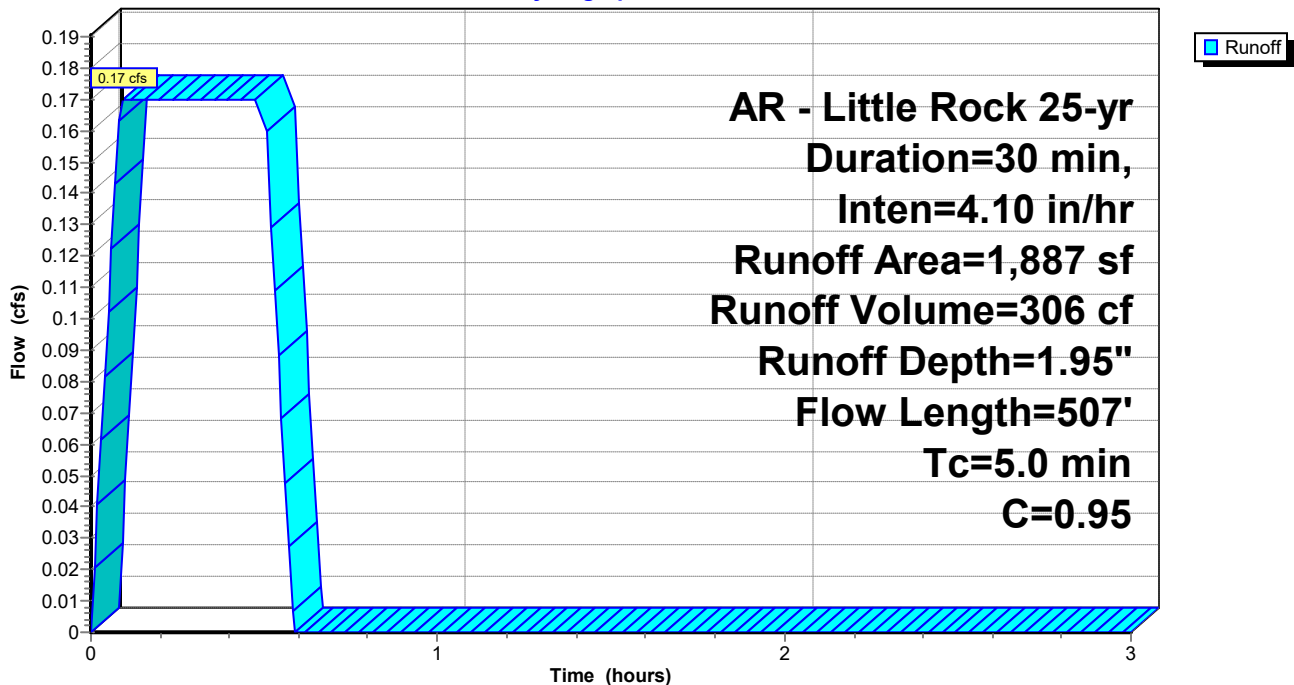
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
1,887	0.95	Paving, Sidewalks
1,887	0.95	Weighted Average
1,887		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	31	0.0230	1.32		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	18	0.0250	1.22		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.4	30	0.0240	1.33		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.0	13	0.0860	5.95		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.0	415		1.73		Direct Entry, Overland Concentrated Flow (Min)
5.0	507	Total			

Subcatchment B4: Drainage Basin B4

Hydrograph



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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment B5: Drainage Basin B5

Runoff = 1.32 cfs @ 0.17 hrs, Volume= 2,370 cf, Depth= 1.29"
 Routed to Pond CI-B2 : CI - B2

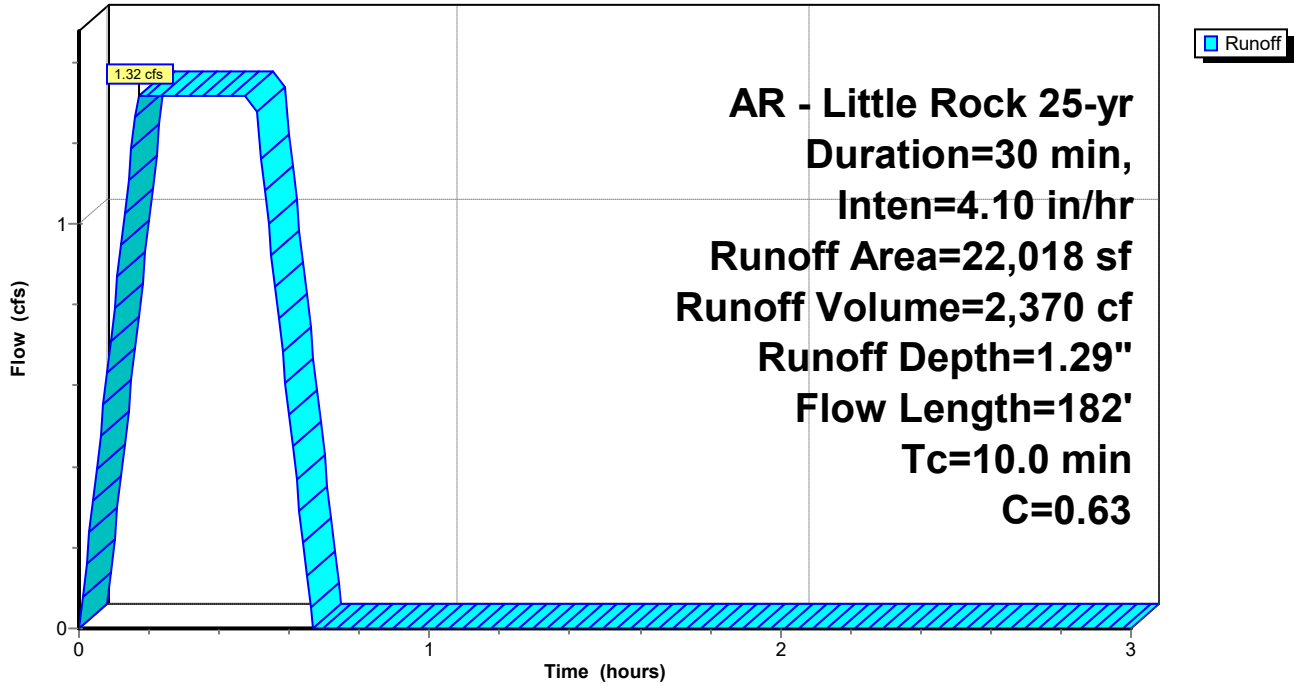
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
12,753	0.40	Sod Yard
9,265	0.95	Paving, Sidewalks
22,018	0.63	Weighted Average
12,753		57.92% Pervious Area
9,265		42.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	10	0.0150	0.89		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
9.1	93	0.0150	0.17		Sheet Flow, Sheet Flow Grass: Short n= 0.150 P2= 4.19"
0.4	40	0.0110	1.57		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	33	0.0190	2.07		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.0	6	0.0180	2.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
10.0	182	Total			

Subcatchment B5: Drainage Basin B5

Hydrograph



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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment B6: Drainage Basin B6

Runoff = 0.47 cfs @ 0.24 hrs, Volume= 838 cf, Depth= 1.07"
 Routed to Pond CI-A4 : CI - A4

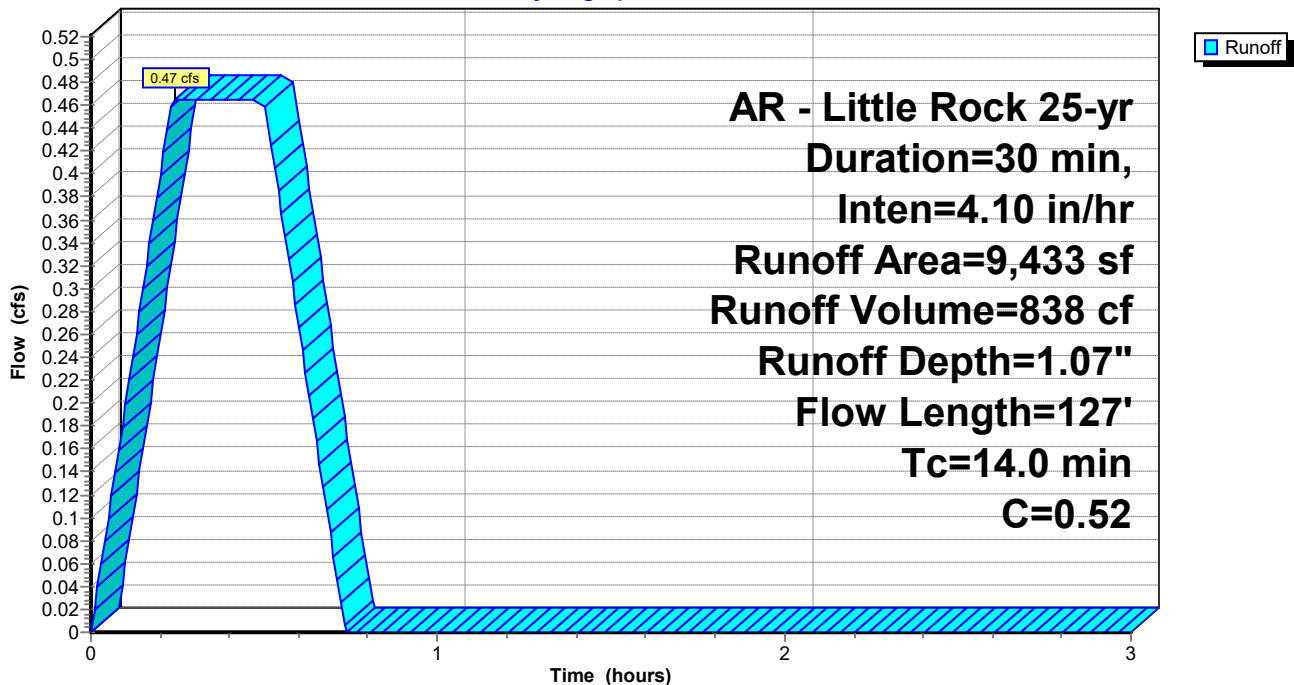
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
7,346	0.40	Sod Yard
2,087	0.95	Paving, Sidewalks
9,433	0.52	Weighted Average
7,346		77.88% Pervious Area
2,087		22.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.4	79	0.0570	0.13		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
3.5	21	0.0620	0.10		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.0	9	0.0620	3.73		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.1	18	0.1080	4.93		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
14.0	127	Total			

Subcatchment B6: Drainage Basin B6

Hydrograph



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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment C1: Drainage Basin C1

Runoff = 1.51 cfs @ 0.09 hrs, Volume= 2,710 cf, Depth= 1.60"
 Routed to Pond CI-C1 : CI - C1

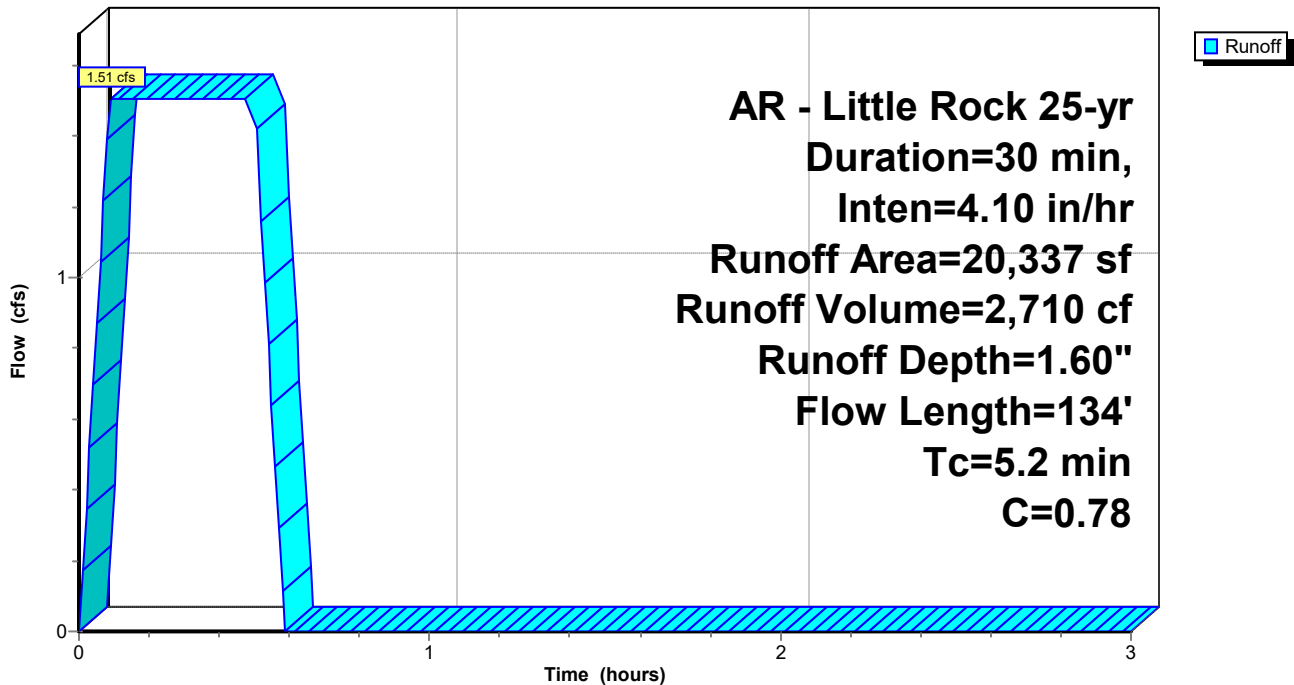
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
6,135	0.40	Sod Yard
14,202	0.95	Paving, Sidewalks
20,337	0.78	Weighted Average
6,135		30.17% Pervious Area
14,202		69.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	32	0.0660	0.11		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.4	102	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
5.2	134	Total			

Subcatchment C1: Drainage Basin C1

Hydrograph



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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment C10: Drainage Basin C10

Runoff = 0.43 cfs @ 0.09 hrs, Volume= 767 cf, Depth= 1.70"
 Routed to Pond CI-E1 : CI - E1

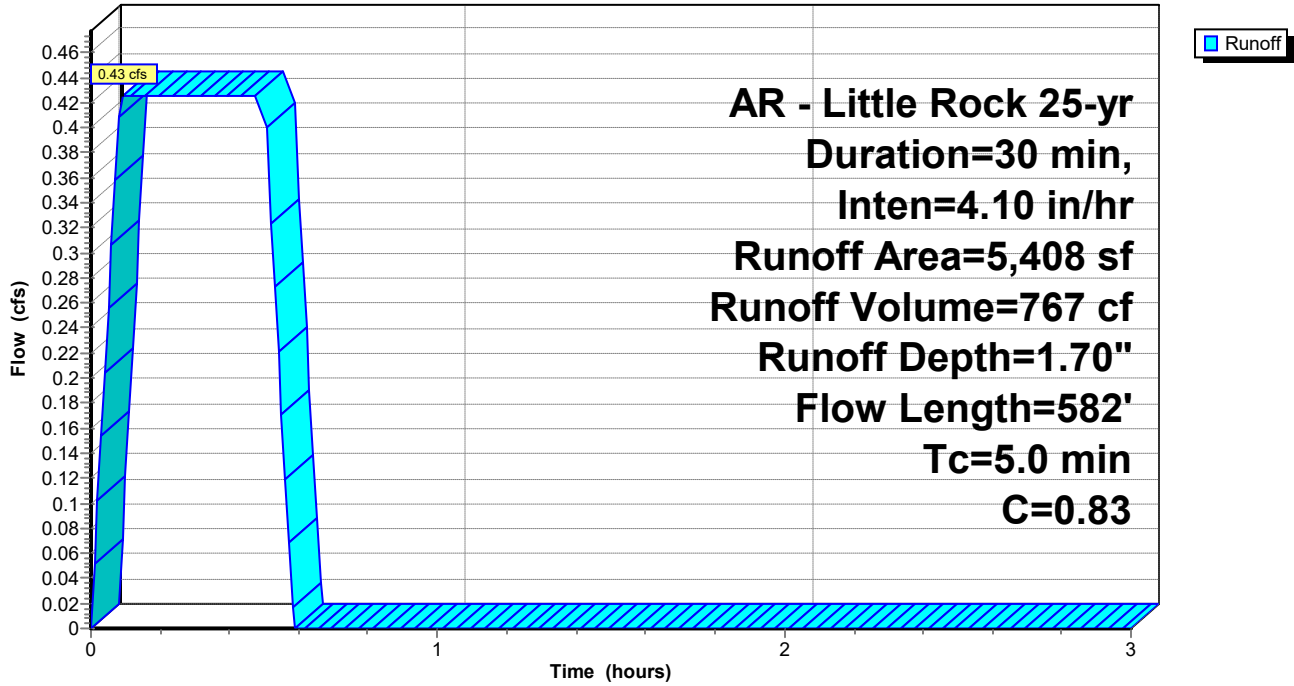
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
1,225	0.40	Sod Yard
4,183	0.95	Paving, Sidewalks
5,408	0.83	Weighted Average
1,225		22.65% Pervious Area
4,183		77.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	1.12		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	29	0.0210	2.94		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	23	0.0320	3.63		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	36	0.0320	3.63		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	48	0.0330	3.69		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	13	0.0350	3.80		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.9	415		1.77		Direct Entry, Concentrated Flow (Min)
5.0	582	Total			

Subcatchment C10: Drainage Basin C10

Hydrograph



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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment C11: Drainage Basin C11

Runoff = 0.40 cfs @ 0.09 hrs, Volume= 729 cf, Depth= 1.41"
 Routed to Pond CI-E2 : CI - E2

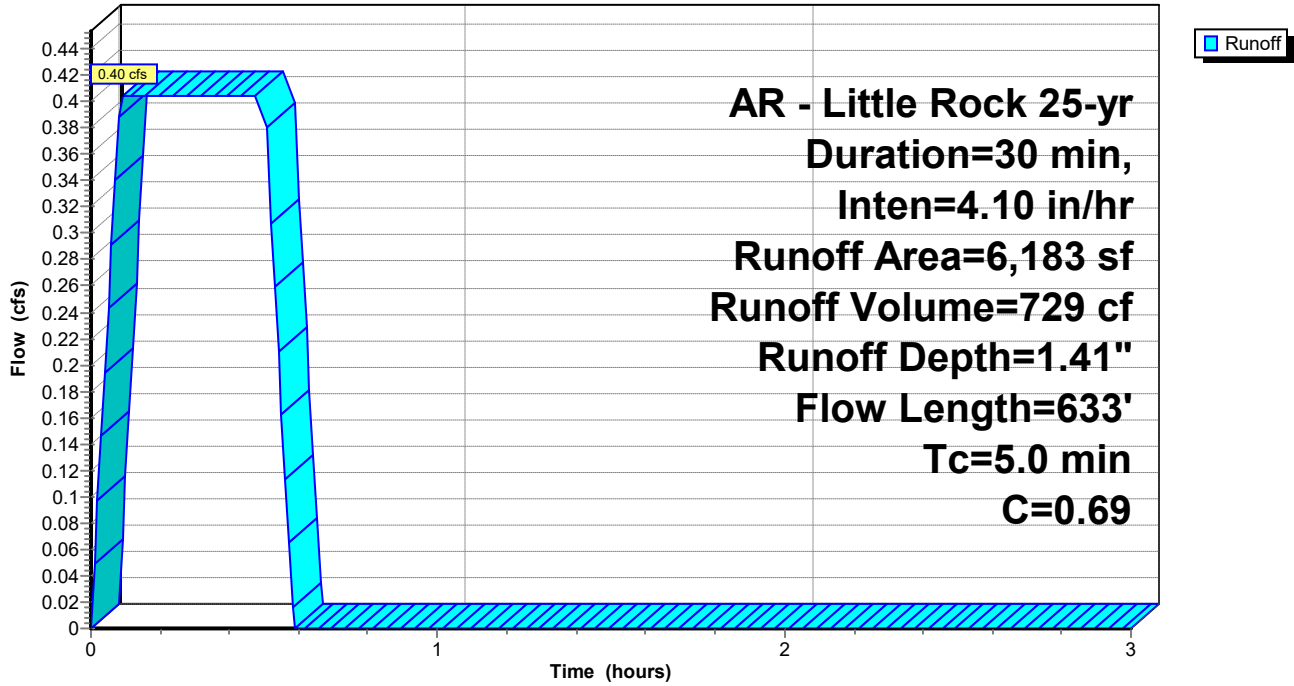
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
2,876	0.40	Sod Yard
3,307	0.95	Paving, Sidewalks
6,183	0.69	Weighted Average
2,876		46.51% Pervious Area
3,307		53.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	25	0.0200	1.19		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	33	0.0620	5.05		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	29	0.0540	4.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	47	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	47	0.0390	4.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	37	0.0420	4.16		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.0	415		1.73		Direct Entry, Concentrated Flow (Min)
5.0	633	Total			

Subcatchment C11: Drainage Basin C11

Hydrograph



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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment C12: Drainage Basin C12

Runoff = 1.95 cfs @ 0.09 hrs, Volume= 3,507 cf, Depth= 1.64"
 Routed to Pond CI-C7 : CI - C7

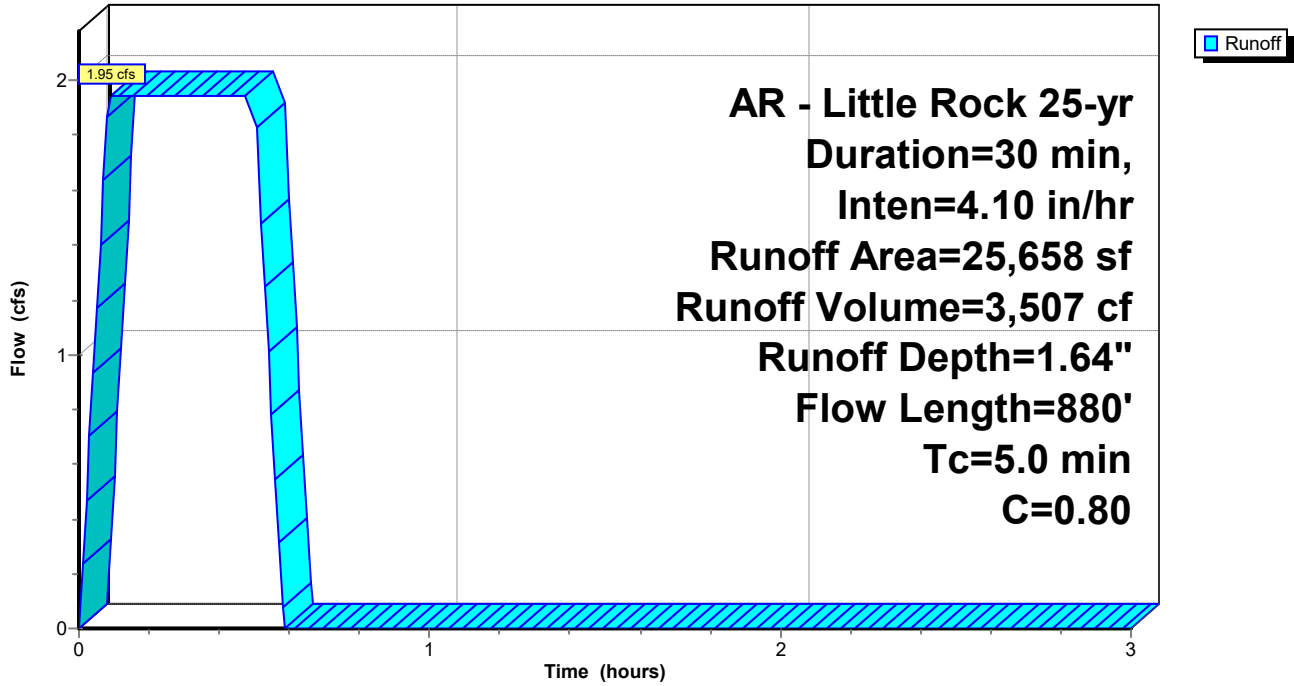
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
7,218	0.40	Sod Yard
18,440	0.95	Paving, Sidewalks
25,658	0.80	Weighted Average
7,218		28.13% Pervious Area
18,440		71.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	24	0.0360	1.50		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	5	0.0190	0.85		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	21	0.0100	2.03		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.9	49	0.0020	0.91		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.4	96	0.0330	3.69		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.3	94	0.0570	4.85		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	28	0.0560	4.80		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	25	0.0450	4.31		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	31	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	39	0.0490	4.49		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	36	0.0460	4.35		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	11	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	6	0.0440	4.26		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
2.3	415		3.01		Direct Entry, Concentrated Flow (Min)
5.0	880	Total			

Subcatchment C12: Drainage Basin C12

Hydrograph



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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment C13: Drainage Basin C13

Runoff = 0.98 cfs @ 0.09 hrs, Volume= 1,759 cf, Depth= 1.74"
 Routed to Pond CI-A4 : CI - A4

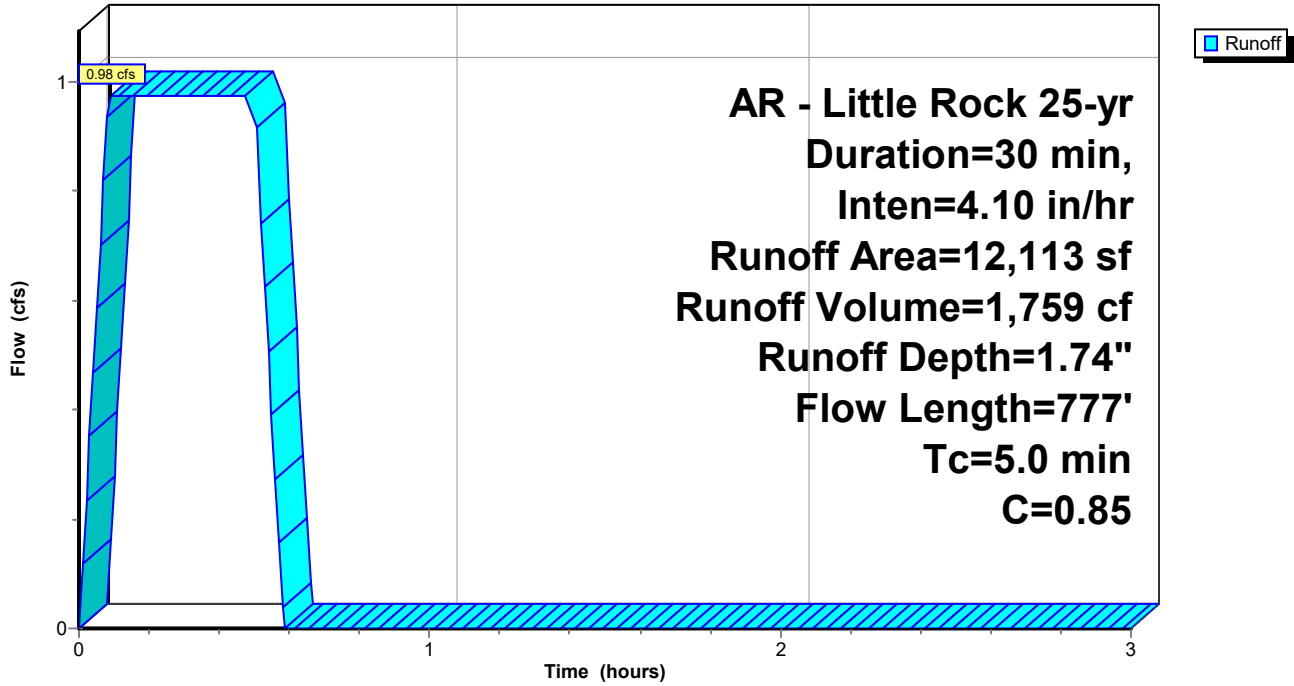
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
2,240	0.40	Sod Yard
9,873	0.95	Paving, Sidewalks
12,113	0.85	Weighted Average
2,240		18.49% Pervious Area
9,873		81.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	19	0.0200	1.13		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.3	75	0.0340	3.74		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	52	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	29	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	42	0.0730	5.48		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	74	0.0750	5.56		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	26	0.0710	5.41		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	32	0.0570	4.85		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	13	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.6	415		1.92		Direct Entry, Overland Concentrated Flow (Min)
5.0	777	Total			

Subcatchment C13: Drainage Basin C13

Hydrograph



Summary for Subcatchment C14: Drainage Basin C14

Runoff = 1.67 cfs @ 0.27 hrs, Volume= 3,010 cf, Depth= 1.64"
 Routed to Pond CI-A5 : CI - A5

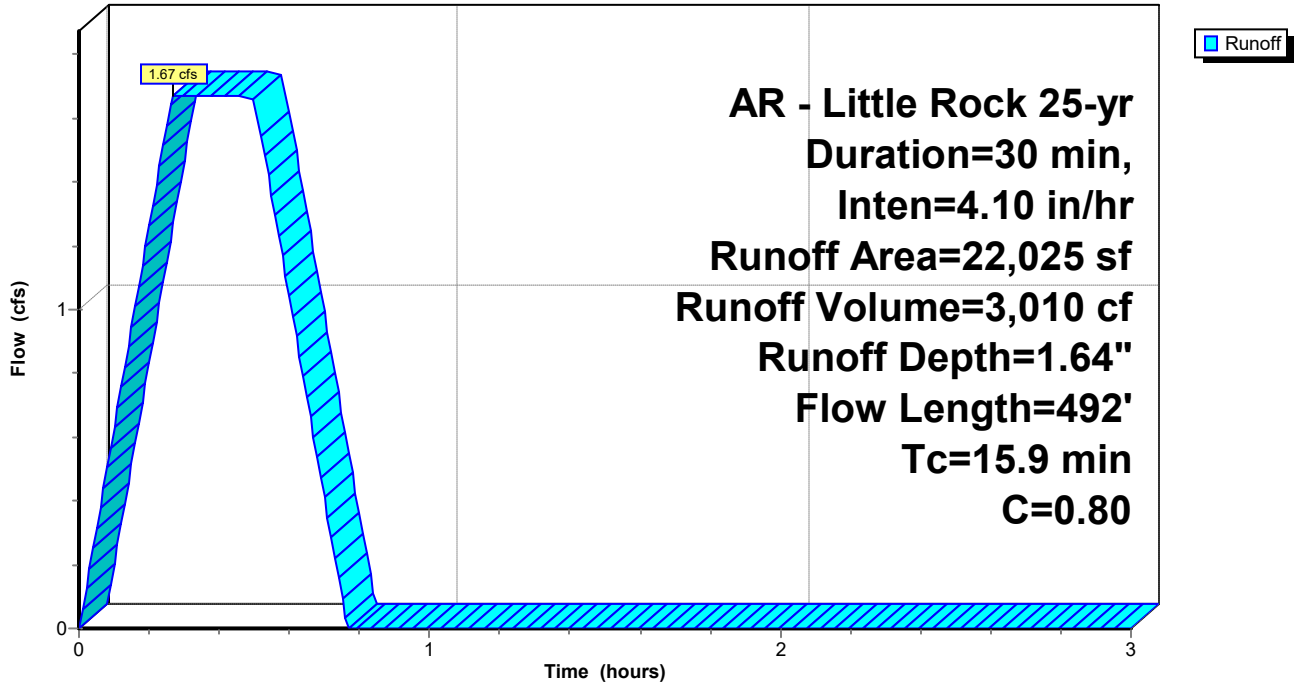
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
6,127	0.40	Sod Yard
15,898	0.95	Paving, Sidewalks
22,025	0.80	Weighted Average
6,127		27.82% Pervious Area
15,898		72.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	5	0.0310	0.06		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
9.2	45	0.0250	0.08		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
3.8	41	0.1940	0.18		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
0.1	6	0.0100	0.68		Sheet Flow, Sheet Flow
					Smooth surfaces n= 0.011 P2= 4.19"
0.1	51	0.0870	5.99		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.2	52	0.0310	3.57		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	18	0.0270	3.34		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	20	0.0400	4.06		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	34	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.2	46	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	36	0.0580	4.89		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.2	58	0.0690	5.33		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	49	0.0840	5.88		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	31	0.0690	5.33		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
15.9	492	Total			

Subcatchment C14: Drainage Basin C14

Hydrograph



Summary for Subcatchment C15: Drainage Basin C15

Runoff = 1.21 cfs @ 0.09 hrs, Volume= 2,183 cf, Depth= 1.95"

Routed to Pond DP : Existing North Detention Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

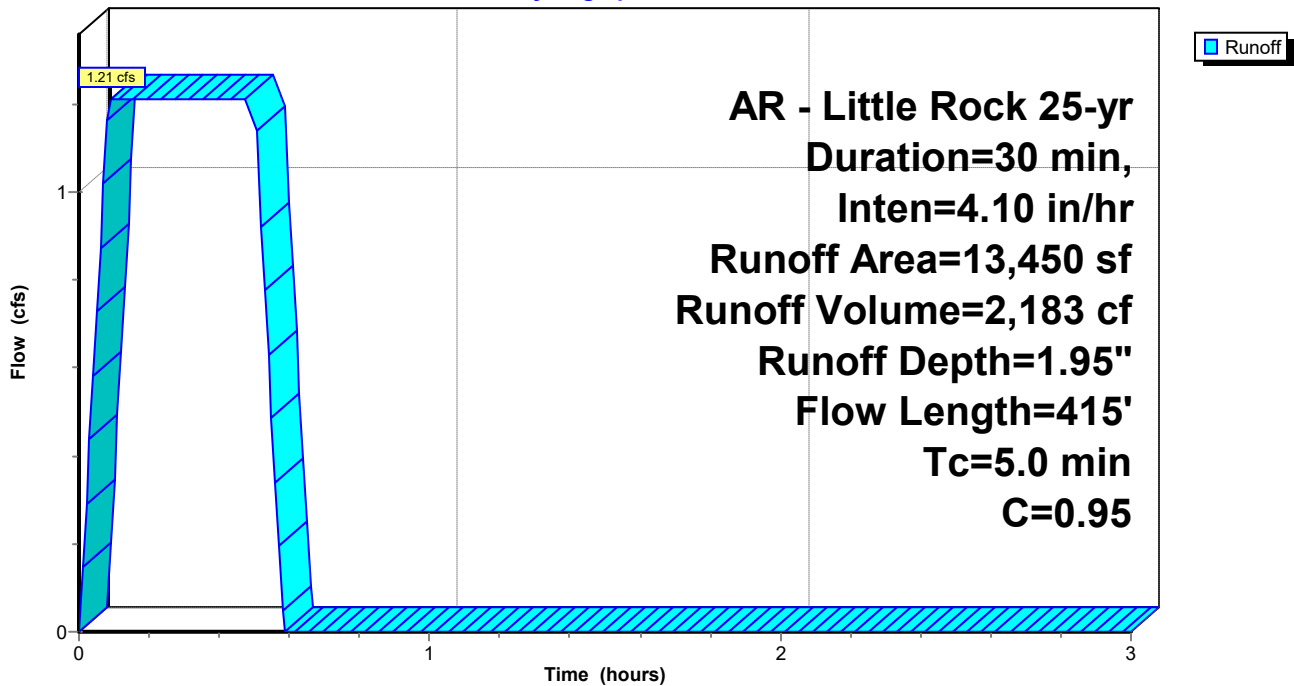
AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
13,450	0.95	Paving, Sidewalks
13,450	0.95	Weighted Average
13,450		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	415		1.38		Direct Entry, Overland Concentrated Flow (Min)

Subcatchment C15: Drainage Basin C15

Hydrograph



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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment C16: Drainage Basin C16

Runoff = 1.17 cfs @ 0.09 hrs, Volume= 2,112 cf, Depth= 1.15"

Routed to Pond DP : Existing North Detention Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

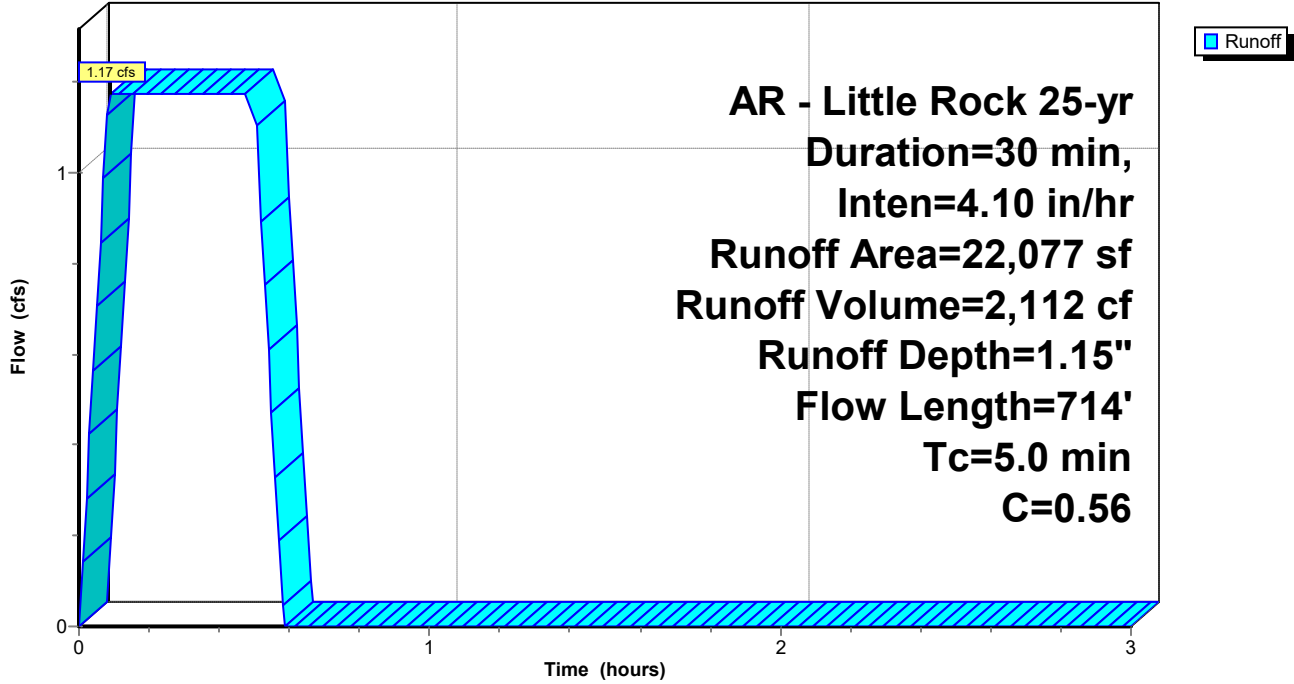
AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
15,465	0.40	Sod Yard
6,612	0.95	Paving, Sidewalks
22,077	0.56	Weighted Average
15,465		70.05% Pervious Area
6,612		29.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	26	0.0190	1.18		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	5	0.0100	0.66		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.4	51	0.0500	1.98		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	12	0.1540	2.33		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	50	0.1330	7.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	50	0.1170	6.94		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	46	0.0430	4.21		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.3	59	0.0370	3.90		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.3	415		2.10		Direct Entry, Overland Concentrated Flow (Min)
5.0	714	Total			

Subcatchment C16: Drainage Basin C16

Hydrograph



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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment C17: Drainage Basin C17

Runoff = 2.96 cfs @ 0.16 hrs, Volume= 5,332 cf, Depth= 1.13"

Routed to Pond DP : Existing North Detention Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

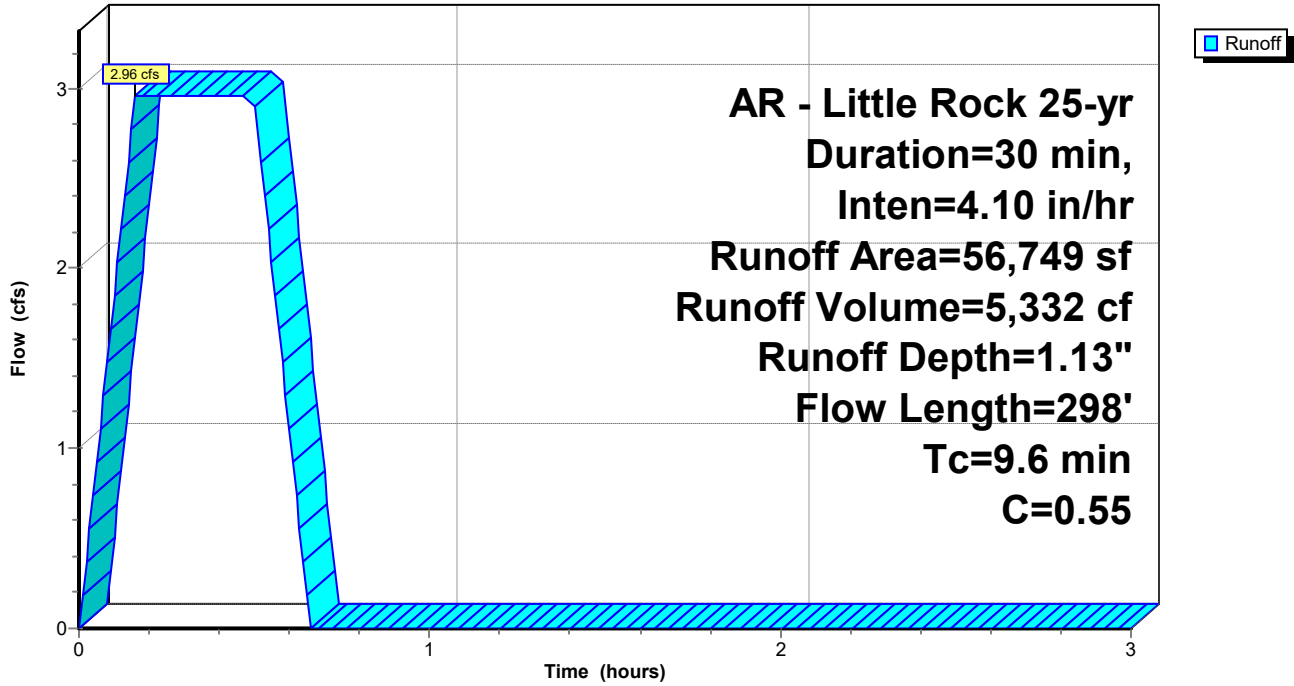
AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
40,914	0.40	Sod Yard
15,835	0.95	Paving, Sidewalks
56,749	0.55	Weighted Average
40,914		72.10% Pervious Area
15,835		27.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	43	0.0410	0.15		Sheet Flow, Sheet Flow
					Grass: Dense n= 0.240 P2= 4.19"
3.9	43	0.0690	0.19		Sheet Flow, Sheet Flow
					Grass: Dense n= 0.240 P2= 4.19"
0.1	41	0.0980	4.70		Shallow Concentrated Flow, Concentrated Flow
					Grassed Waterway Kv= 15.0 fps
0.3	61	0.0730	4.05		Shallow Concentrated Flow, Concentrated Flow
					Grassed Waterway Kv= 15.0 fps
0.2	46	0.0570	3.58		Shallow Concentrated Flow, Concentrated Flow
					Grassed Waterway Kv= 15.0 fps
0.3	64	0.0450	3.18		Shallow Concentrated Flow, Concentrated Flow
					Grassed Waterway Kv= 15.0 fps
9.6	298	Total			

Subcatchment C17: Drainage Basin C17

Hydrograph



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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment C18: Drainage Basin C18

Runoff = 1.38 cfs @ 0.09 hrs, Volume= 2,491 cf, Depth= 1.31"

Routed to Link FINAL : APPROX DISCHARGE

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

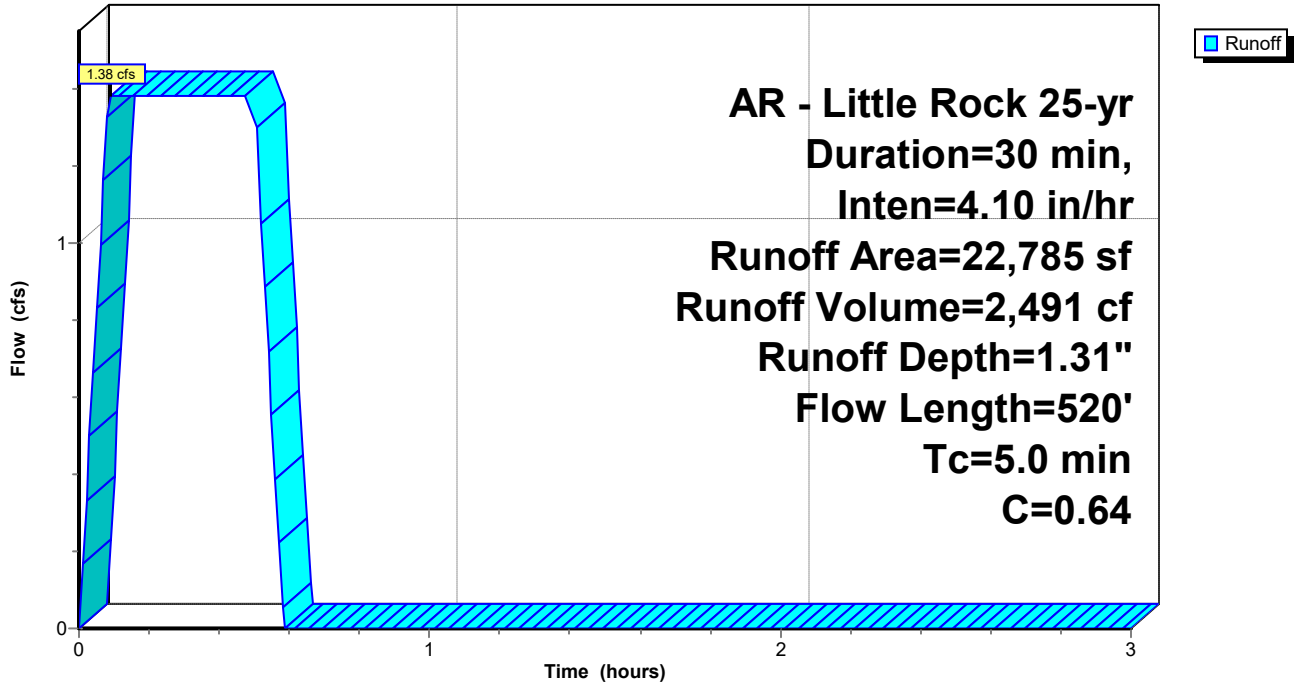
AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
12,812	0.40	Sod Yard
9,973	0.95	Paving, Sidewalks
22,785	0.64	Weighted Average
12,812		56.23% Pervious Area
9,973		43.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	5	0.2980	0.14		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.2	12	0.0130	0.87		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
3.3	8	0.0100	0.04		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.5	80	0.0210	2.94		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.4	415		17.29		Direct Entry, Concentrated Flow (Min)
5.0	520	Total			

Subcatchment C18: Drainage Basin C18

Hydrograph



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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment C19: Drainage Basin C19

Runoff = 0.84 cfs @ 0.12 hrs, Volume= 1,508 cf, Depth= 1.00"
 Routed to Link FINAL : APPROX DISCHARGE

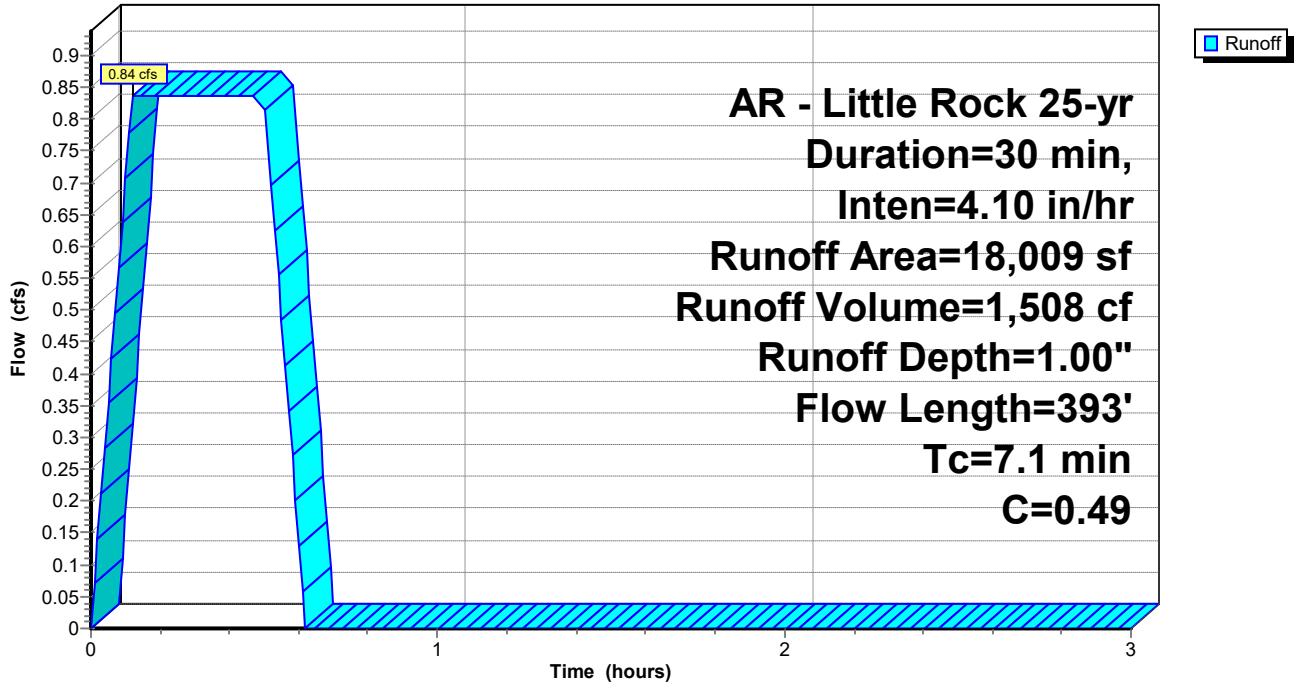
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
15,129	0.40	Sod Yard
2,880	0.95	Paving, Sidewalks
18,009	0.49	Weighted Average
15,129		84.01% Pervious Area
2,880		15.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	34	0.1110	0.21		Sheet Flow, Sheet Flow
					Grass: Dense n= 0.240 P2= 4.19"
3.3	66	0.2450	0.34		Sheet Flow, Sheet Flow
					Grass: Dense n= 0.240 P2= 4.19"
0.0	9	0.2450	7.42		Shallow Concentrated Flow, Concentrated Flow
					Grassed Waterway Kv= 15.0 fps
0.5	106	0.0610	3.70		Shallow Concentrated Flow, Concentrated Flow
					Grassed Waterway Kv= 15.0 fps
0.2	46	0.0800	4.24		Shallow Concentrated Flow, Concentrated Flow
					Grassed Waterway Kv= 15.0 fps
0.1	41	0.0960	4.65		Shallow Concentrated Flow, Concentrated Flow
					Grassed Waterway Kv= 15.0 fps
0.3	66	0.0680	3.91		Shallow Concentrated Flow, Concentrated Flow
					Grassed Waterway Kv= 15.0 fps
0.0	19	0.1070	6.64		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.0	6	0.0750	5.56		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
7.1	393	Total			

Subcatchment C19: Drainage Basin C19

Hydrograph



Goddard

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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment C2: Drainage Basin C2

Runoff = 2.51 cfs @ 0.09 hrs, Volume= 4,517 cf, Depth= 1.58"
 Routed to Pond CI-C2 : CI - C2

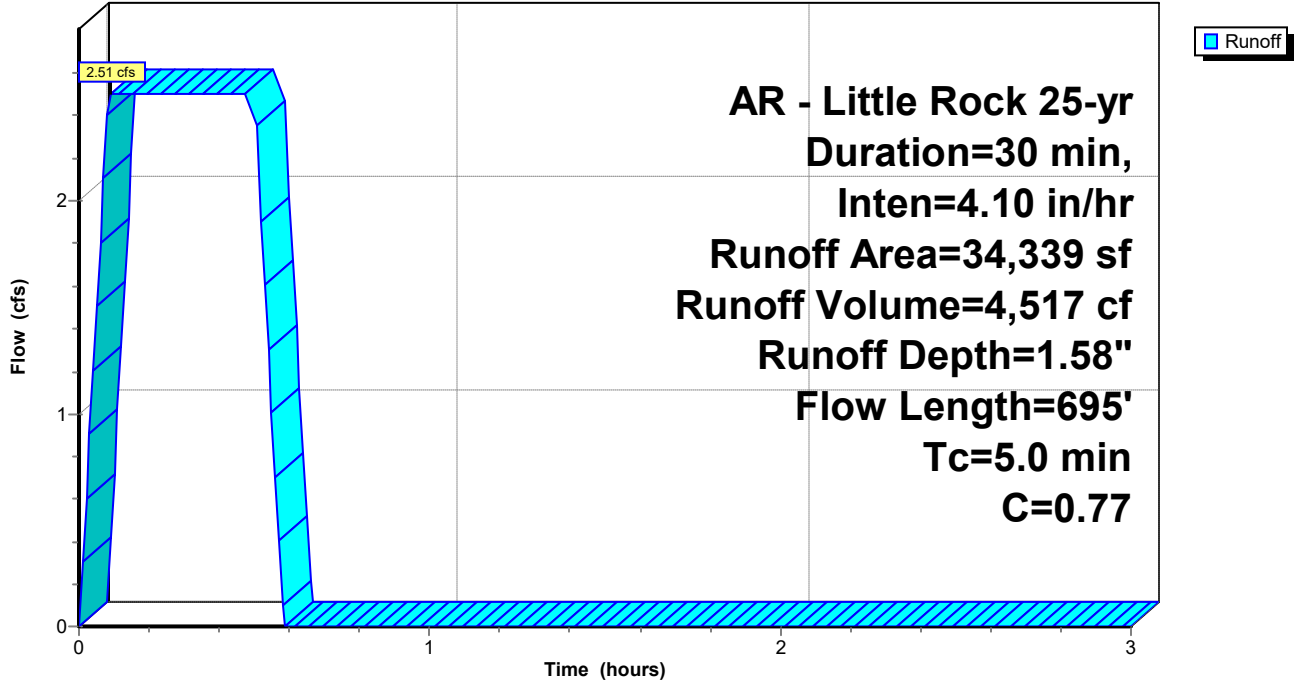
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
11,376	0.40	Sod Yard
22,963	0.95	Roof, Paving, Sidewalks
34,339	0.77	Weighted Average
11,376		33.13% Pervious Area
22,963		66.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	20	0.0200	1.14		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.4	74	0.0240	3.14		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	17	0.0710	5.41		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	21	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.6	148	0.0380	3.96		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.5	415		1.98		Direct Entry, Concentrated Flow (Min)
5.0	695	Total			

Subcatchment C2: Drainage Basin C2

Hydrograph



Goddard

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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment C20: Drainage Basin C20

Runoff = 1.16 cfs @ 0.14 hrs, Volume= 2,088 cf, Depth= 0.92"
 Routed to Link FINAL : APPROX DISCHARGE

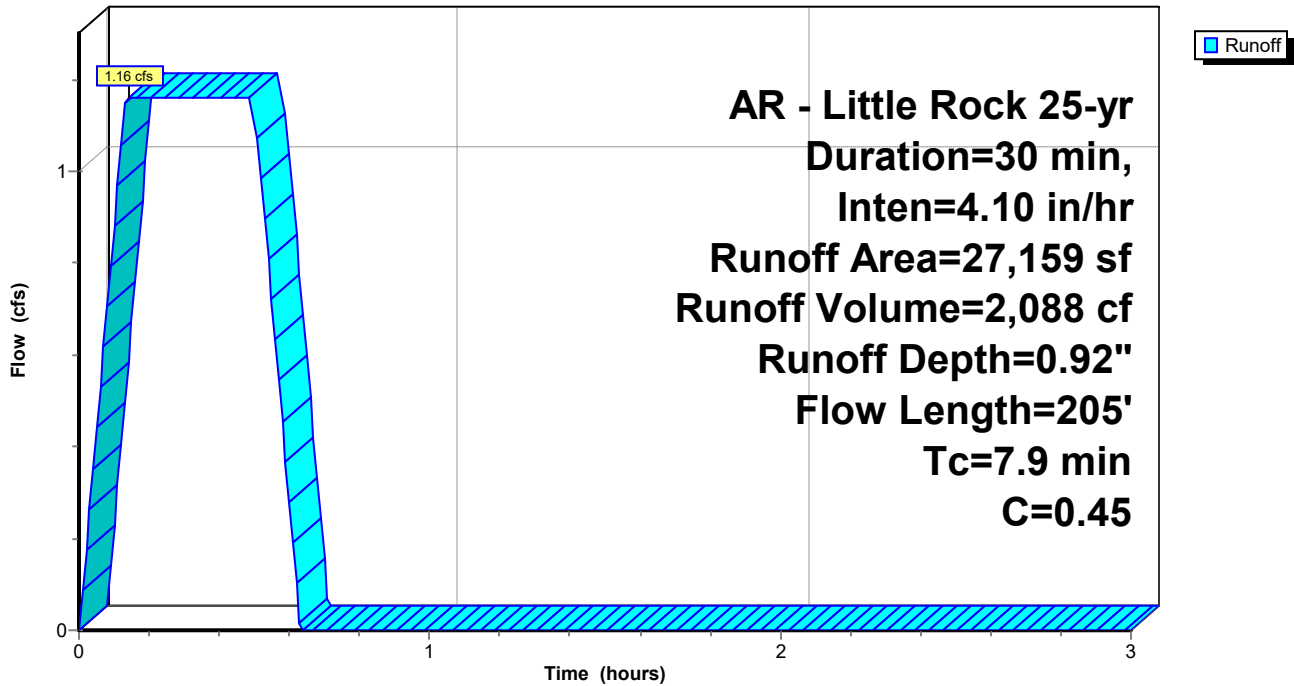
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
24,838	0.40	Sod Yard
2,321	0.95	Paving, Sidewalks
27,159	0.45	Weighted Average
24,838		91.45% Pervious Area
2,321		8.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	45	0.1430	0.25		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
4.5	55	0.0780	0.20		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
0.1	37	0.0780	4.19		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	68	0.0710	4.00		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
7.9	205	Total			

Subcatchment C20: Drainage Basin C20

Hydrograph



Goddard

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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment C21: Drainage Basin C21

Runoff = 0.13 cfs @ 0.09 hrs, Volume= 232 cf, Depth= 1.29"

Routed to Link FINAL : APPROX DISCHARGE

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

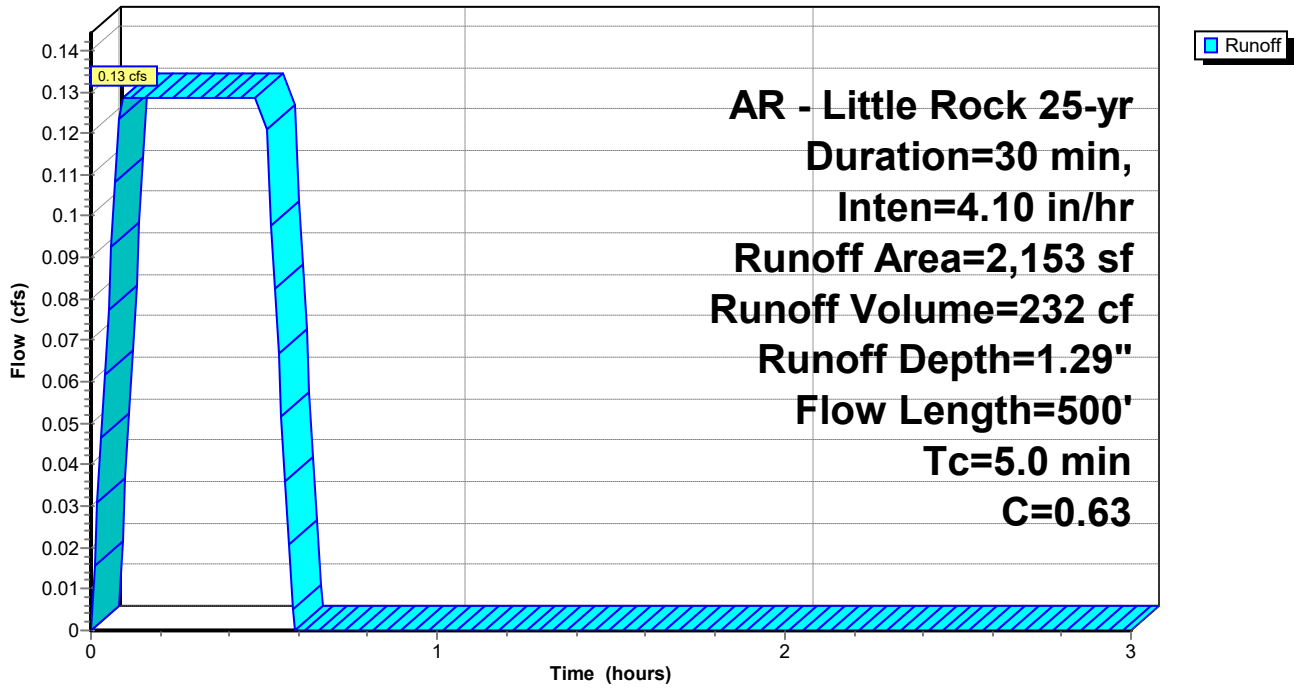
AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
1,234	0.40	Sod Yard
919	0.95	Paving, Sidewalks
2,153	0.63	Weighted Average
1,234		57.32% Pervious Area
919		42.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	2	0.2500	0.11		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.3	33	0.0520	1.85		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
3.8	24	0.0660	0.11		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.1	26	0.0620	5.05		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.5	415		13.83		Direct Entry, Concentrated Flow (Min)
5.0	500	Total			

Subcatchment C21: Drainage Basin C21

Hydrograph



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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment C3: Drainage Basin C3

Runoff = 0.31 cfs @ 0.09 hrs, Volume= 565 cf, Depth= 1.95"
 Routed to Pond CI-C3 : CI - C3

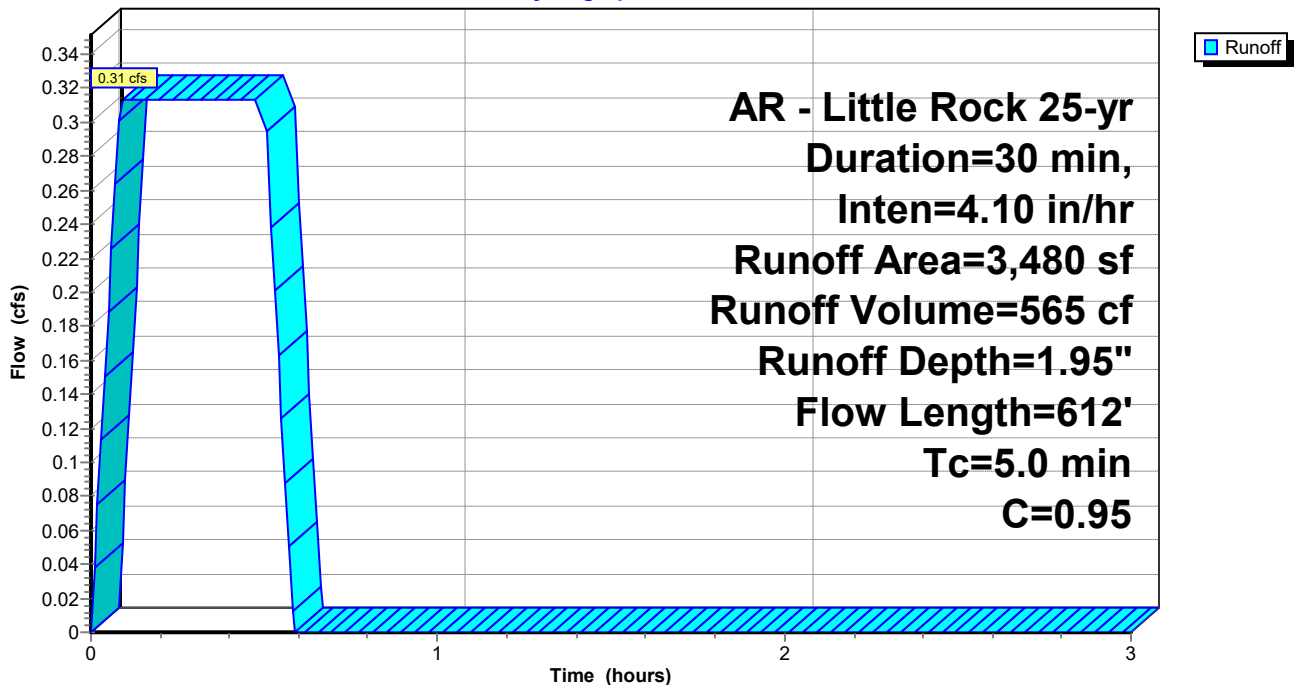
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
3,480	0.95	Paving, Sidewalks
3,480	0.95	Weighted Average
3,480		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	22	0.0200	1.16		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.0	10	0.0340	3.74		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	18	0.0390	4.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.6	147	0.0380	3.96		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.0	415		1.73		Direct Entry, Concentrated Flow (Min)
5.0	612	Total			

Subcatchment C3: Drainage Basin C3

Hydrograph



Summary for Subcatchment C4: Drainage Basin C4

Runoff = 0.60 cfs @ 0.09 hrs, Volume= 1,088 cf, Depth= 1.15"
 Routed to Pond CI-C3 : CI - C3

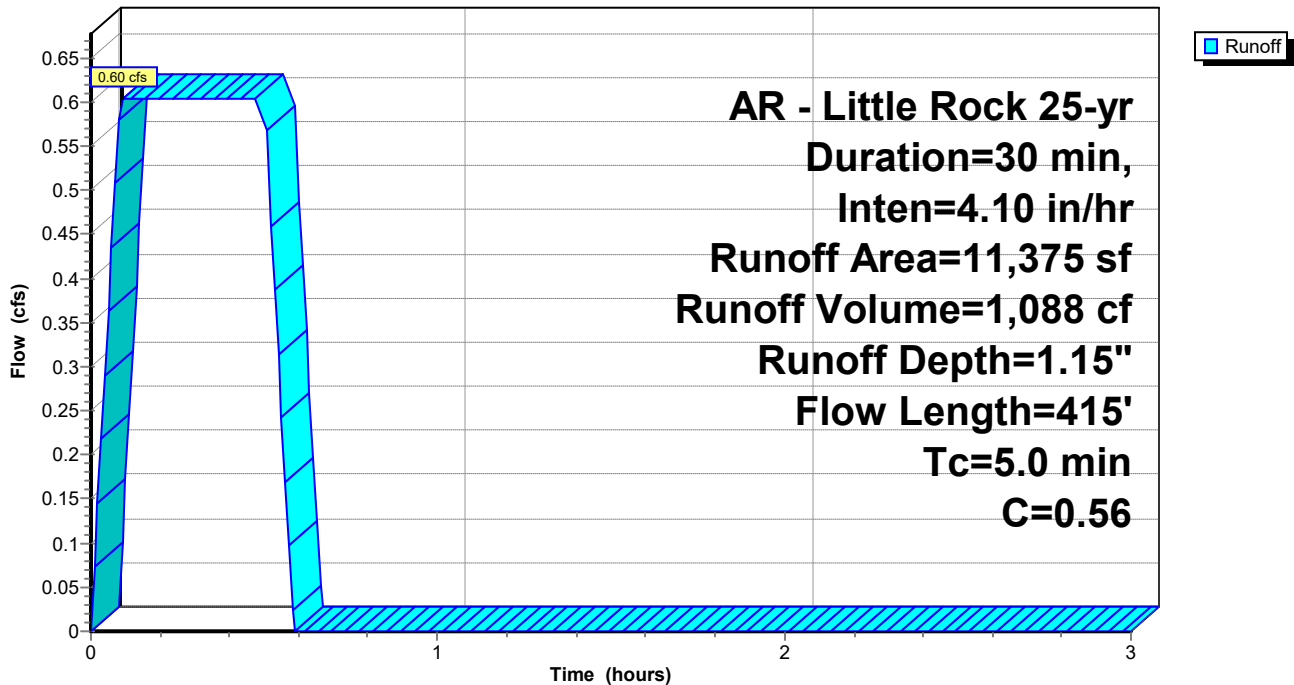
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
8,130	0.40	Sod Yard
3,245	0.95	Paving, Sidewalks
11,375	0.56	Weighted Average
8,130		71.47% Pervious Area
3,245		28.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	415		1.38		Direct Entry, Concentrated Flow (Min)

Subcatchment C4: Drainage Basin C4

Hydrograph



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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment C5: Drainage Basin C5

Runoff = 0.52 cfs @ 0.10 hrs, Volume= 938 cf, Depth= 1.68"
 Routed to Pond CI-C4 : CI - C4

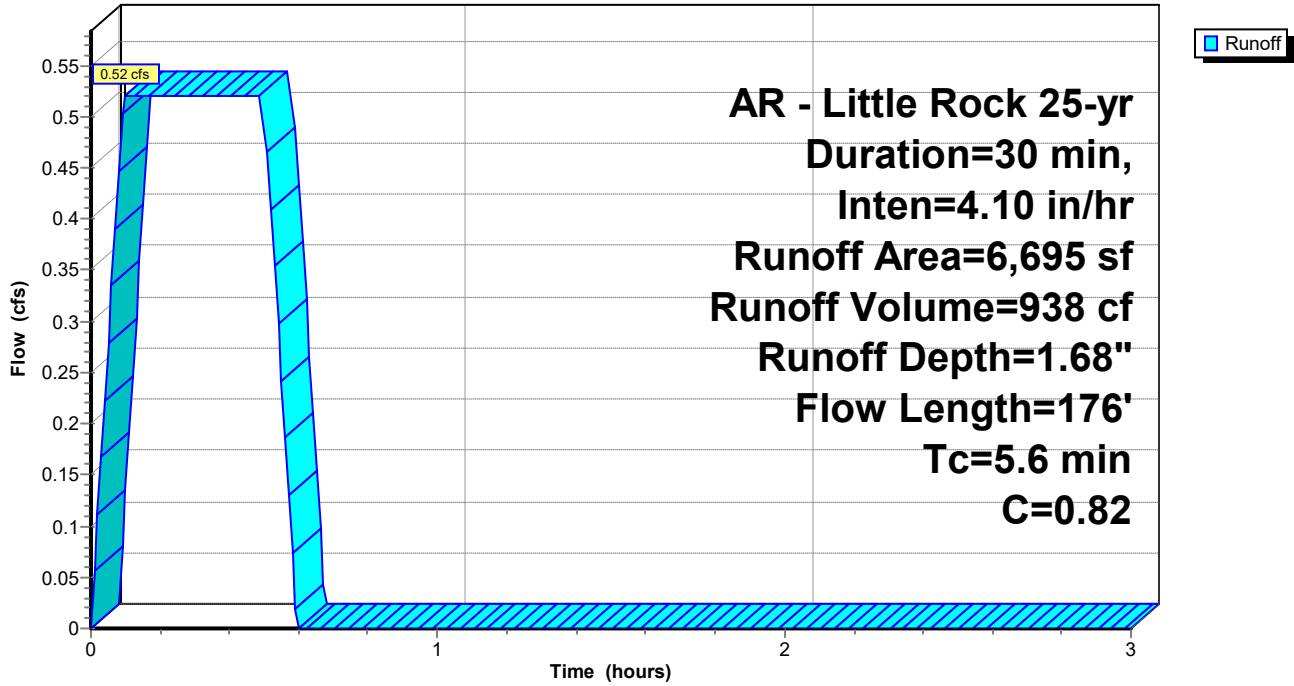
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
1,634	0.40	Sod Yard
5,061	0.95	Paving, Sidewalks
6,695	0.82	Weighted Average
1,634		24.41% Pervious Area
5,061		75.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	5	0.2990	0.14		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.2	12	0.0130	0.87		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
3.9	8	0.0070	0.03		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.5	58	0.0080	1.82		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	14	0.0280	3.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	23	0.0370	3.90		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	13	0.0940	6.22		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	13	0.0560	4.80		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	30	0.0180	2.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
5.6	176	Total			

Subcatchment C5: Drainage Basin C5

Hydrograph



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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment C6: Drainage Basin C6

Runoff = 0.26 cfs @ 0.09 hrs, Volume= 460 cf, Depth= 1.95"
 Routed to Pond CI-C5 : CI - C5

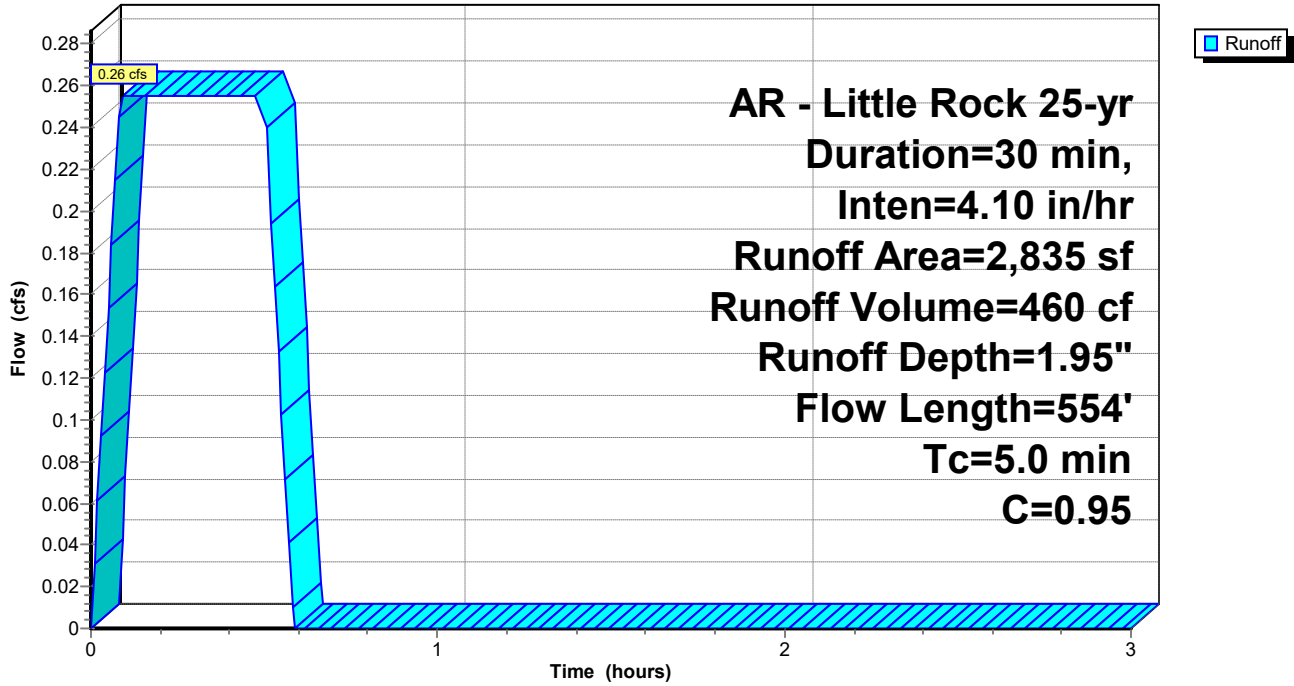
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
2,835	0.95	Paving, Sidewalks
2,835	0.95	Weighted Average
2,835		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	22	0.0200	1.16		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	19	0.0100	2.03		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	17	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	26	0.0360	3.85		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	28	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	27	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.1	415		1.69		Direct Entry, Concentrated Flow (Min)
5.0	554	Total			

Subcatchment C6: Drainage Basin C6

Hydrograph



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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment C7: Drainage Basin C7

Runoff = 0.14 cfs @ 0.09 hrs, Volume= 259 cf, Depth= 1.95"
 Routed to Pond CI-D1 : CI - D1

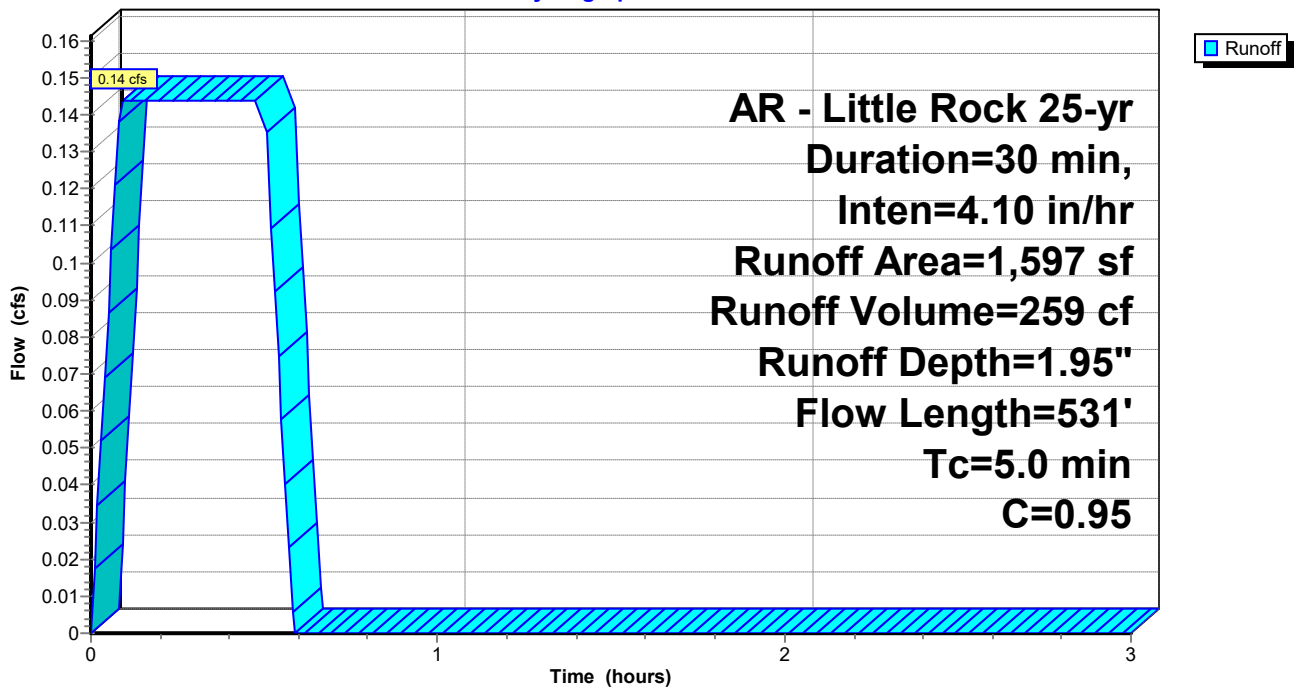
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
1,597	0.95	Paving, Sidewalks
1,597	0.95	Weighted Average
1,597		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	19	0.0200	1.13		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	16	0.0540	4.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.3	81	0.0580	4.89		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.3	415		1.61		Direct Entry, Concentrated Flow (Min)
5.0	531	Total			

Subcatchment C7: Drainage Basin C7

Hydrograph



Summary for Subcatchment C8: Drainage Basin C8

Runoff = 0.14 cfs @ 0.09 hrs, Volume= 251 cf, Depth= 1.95"
 Routed to Pond CI-D2 : CI - D2

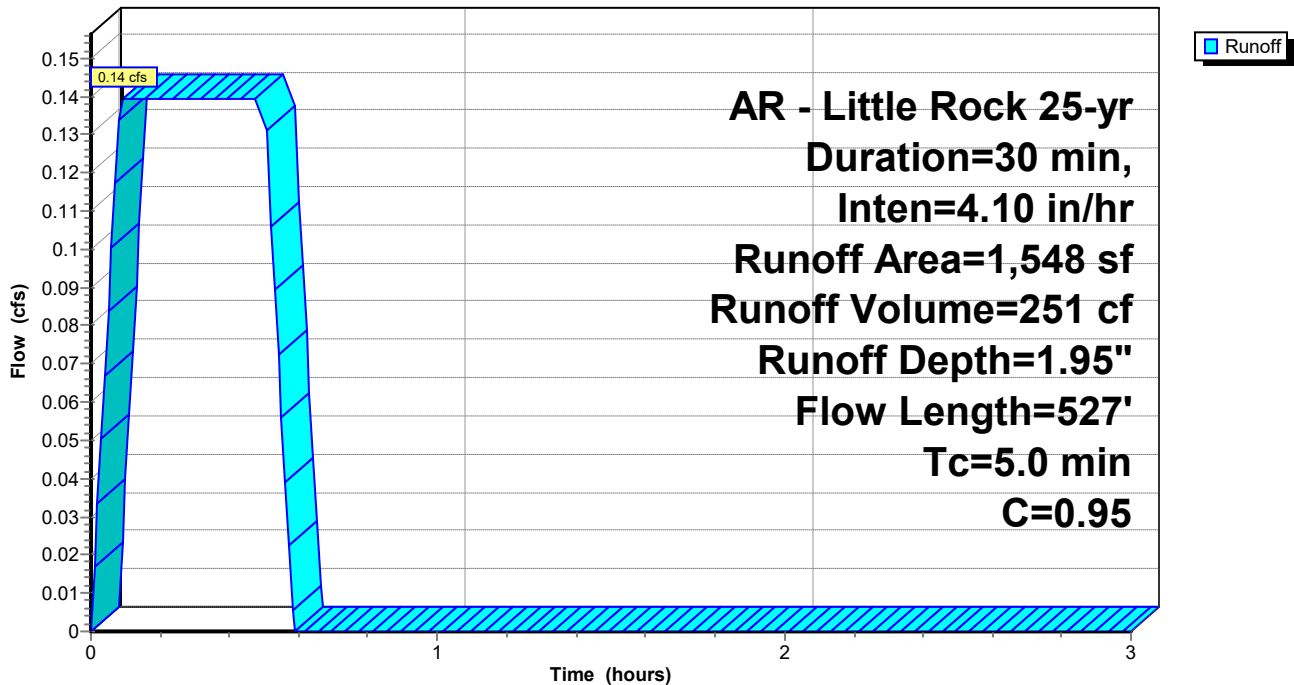
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
1,548	0.95	Paving, Sidewalks
1,548	0.95	Weighted Average
1,548		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	1.12		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.3	94	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.4	415		1.57		Direct Entry, Concentrated Flow (Min)
5.0	527	Total			

Subcatchment C8: Drainage Basin C8

Hydrograph



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AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Subcatchment C9: Drainage Basin C9

Runoff = 1.01 cfs @ 0.09 hrs, Volume= 1,818 cf, Depth= 1.58"
 Routed to Pond CI-C6 : CI - C6

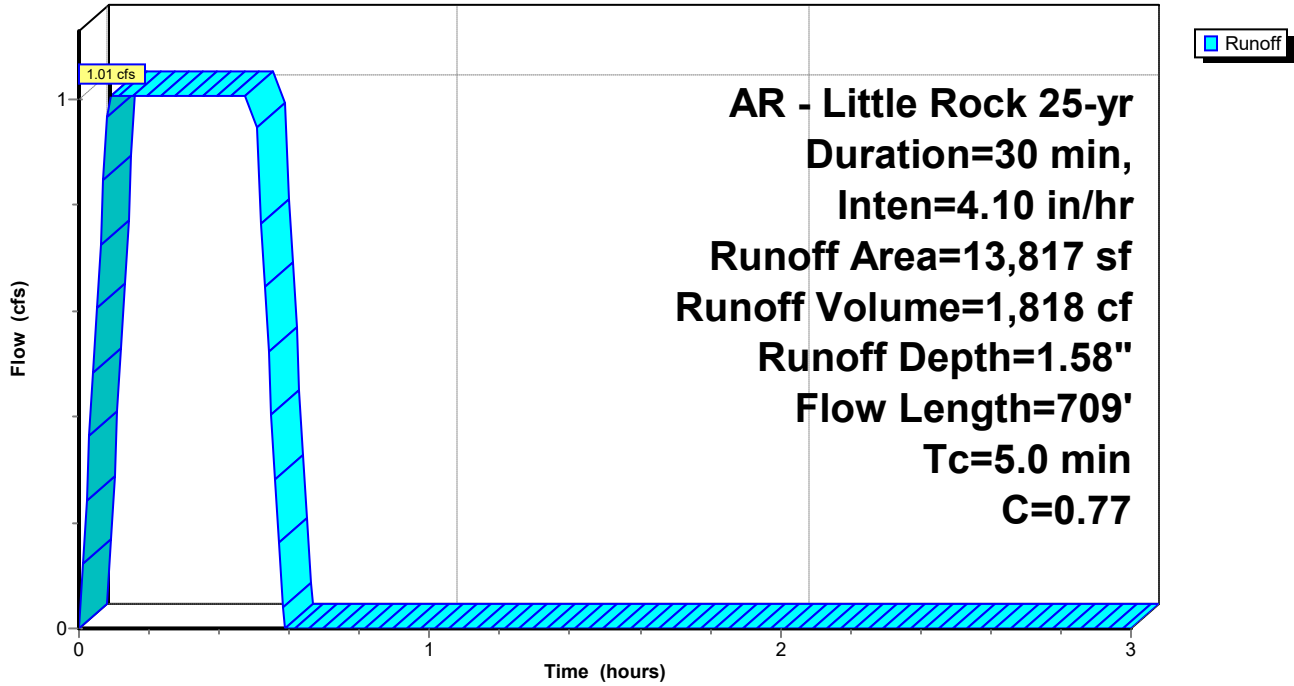
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

Area (sf)	C	Description
4,456	0.40	Sod Yard
9,361	0.95	Paving, Sidewalks
13,817	0.77	Weighted Average
4,456		32.25% Pervious Area
9,361		67.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0140	1.36		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	13	0.0150	2.49		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	23	0.0160	2.57		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	7	0.0050	1.44		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	8	0.0100	2.03		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	41	0.0420	4.16		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	41	0.0540	4.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	61	0.0520	4.63		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
2.9	415		2.39		Direct Entry, Concentrated Flow (Min)
5.0	709	Total			

Subcatchment C9: Drainage Basin C9

Hydrograph



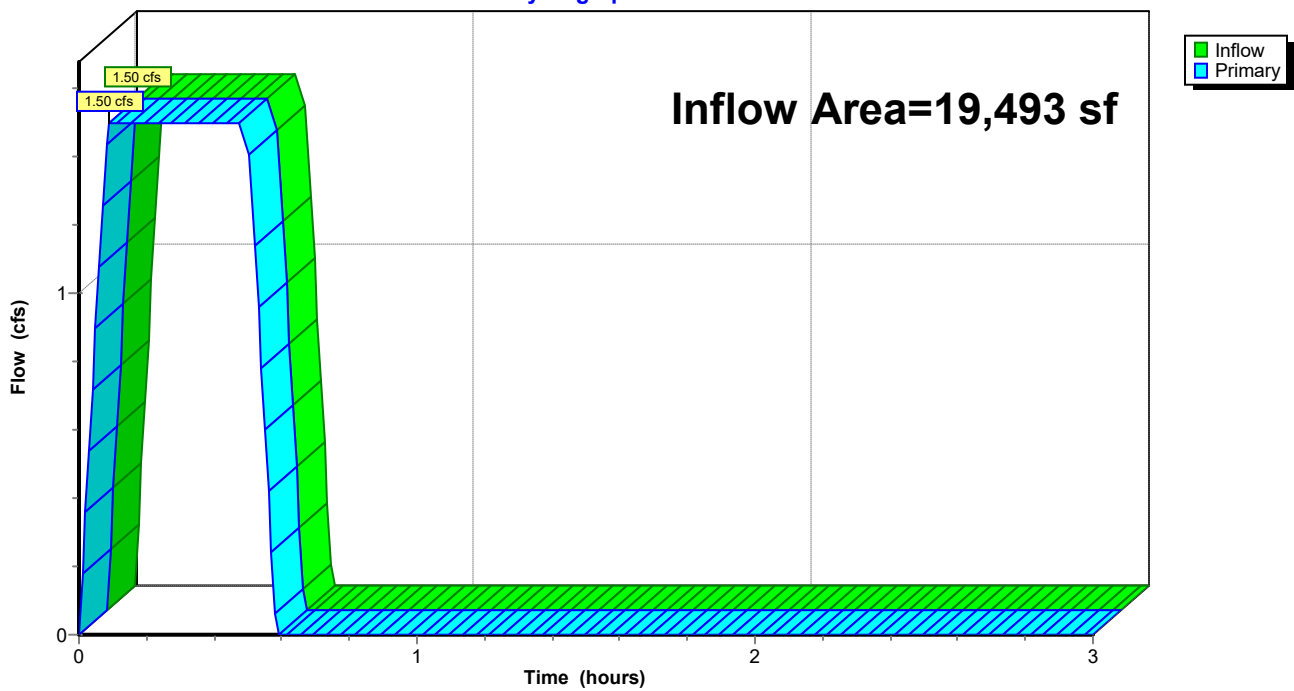
Summary for Pond CI-A1: CI - A1

Inflow Area = 19,493 sf, 74.85% Impervious, Inflow Depth = 1.66" for 25-yr event
Inflow = 1.50 cfs @ 0.09 hrs, Volume= 2,697 cf
Primary = 1.50 cfs @ 0.09 hrs, Volume= 2,697 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond JB-A2 : JB - A2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A1: CI - A1

Hydrograph



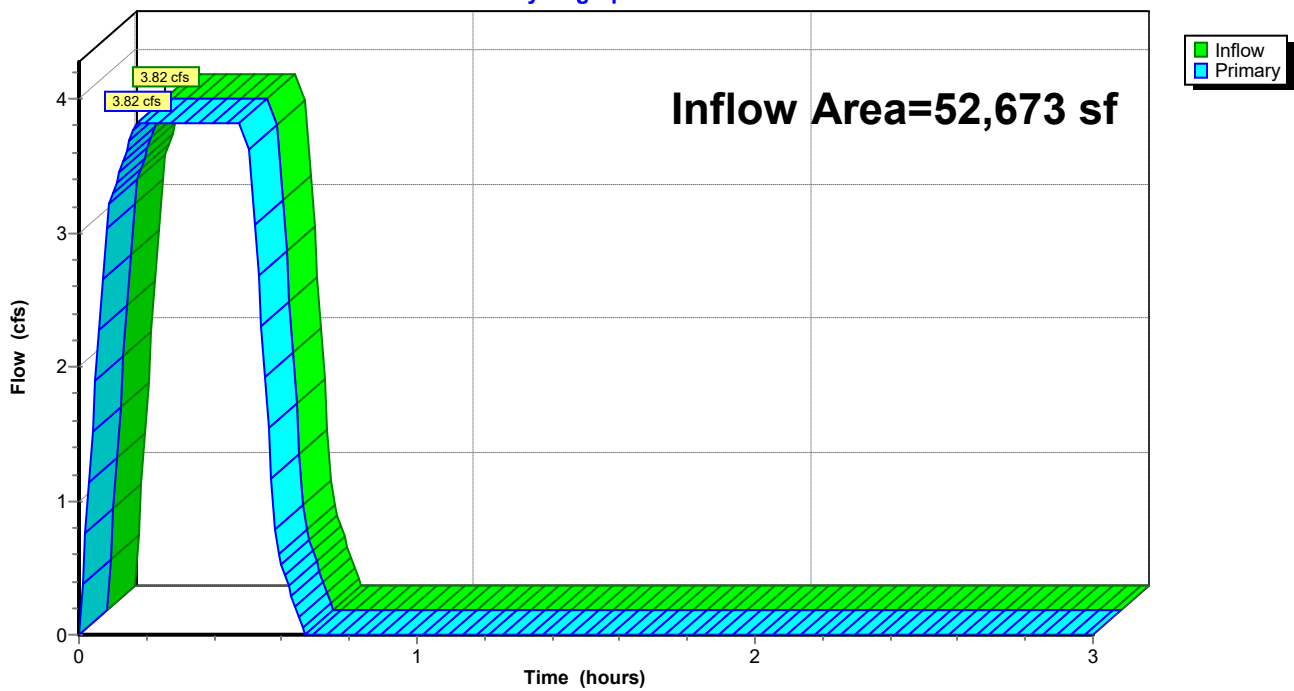
Summary for Pond CI-A3: CI - A3

Inflow Area = 52,673 sf, 66.48% Impervious, Inflow Depth = 1.57" for 25-yr event
Inflow = 3.82 cfs @ 0.17 hrs, Volume= 6,879 cf
Primary = 3.82 cfs @ 0.17 hrs, Volume= 6,879 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-A4 : CI - A4

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A3: CI - A3

Hydrograph



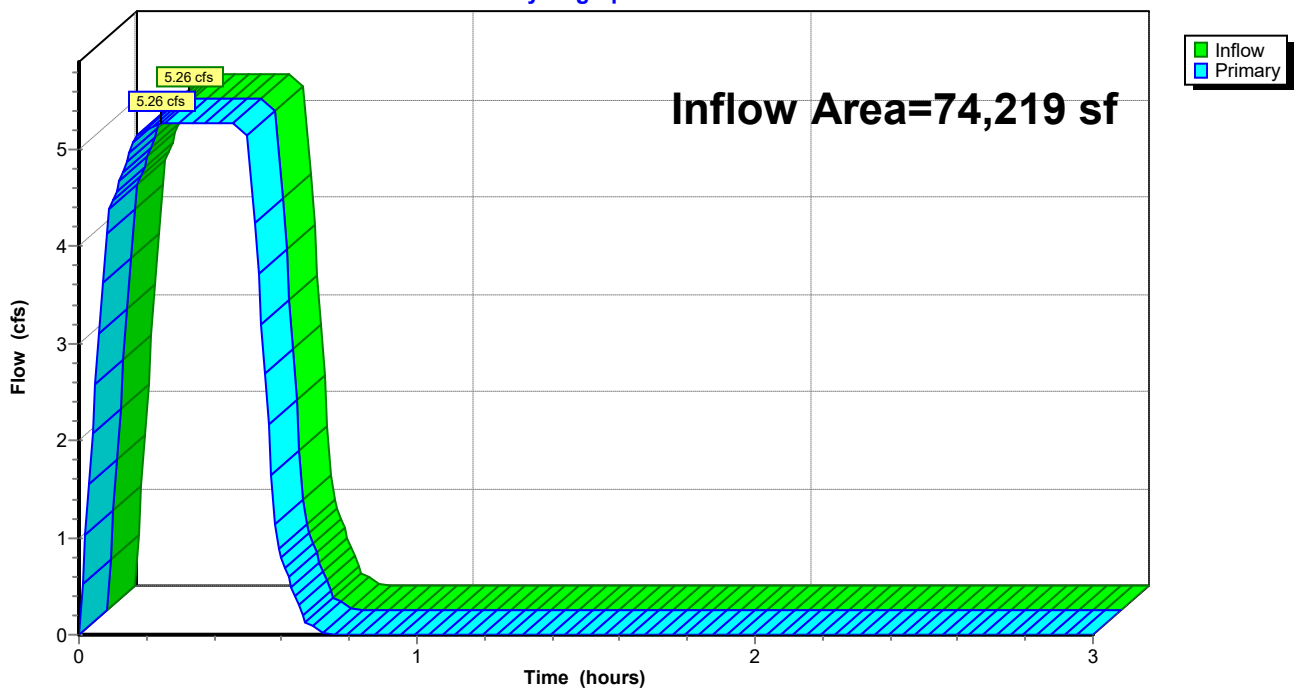
Summary for Pond CI-A4: CI - A4

Inflow Area = 74,219 sf, 63.30% Impervious, Inflow Depth = 1.53" for 25-yr event
Inflow = 5.26 cfs @ 0.24 hrs, Volume= 9,475 cf
Primary = 5.26 cfs @ 0.24 hrs, Volume= 9,475 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-A5 : CI - A5

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A4: CI - A4

Hydrograph



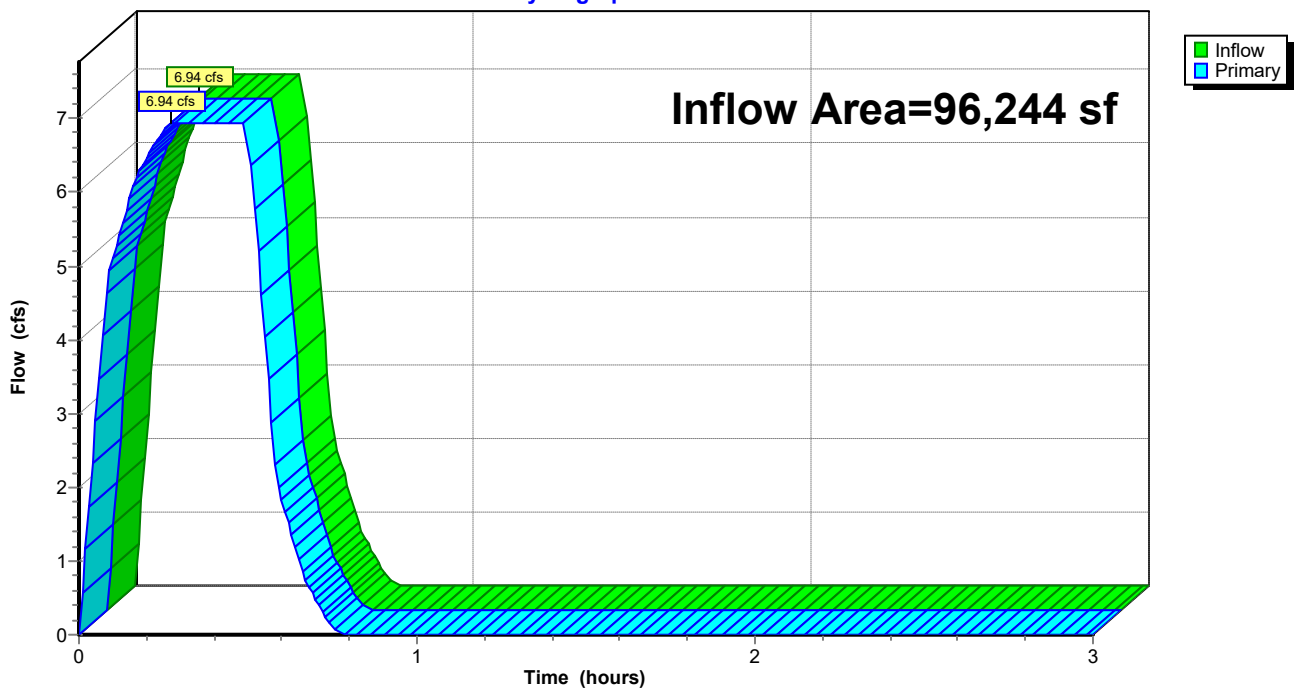
Summary for Pond CI-A5: CI - A5

Inflow Area = 96,244 sf, 65.33% Impervious, Inflow Depth = 1.56" for 25-yr event
Inflow = 6.94 cfs @ 0.27 hrs, Volume= 12,485 cf
Primary = 6.94 cfs @ 0.27 hrs, Volume= 12,485 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond DP : Existing North Detention Pond

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A5: CI - A5

Hydrograph



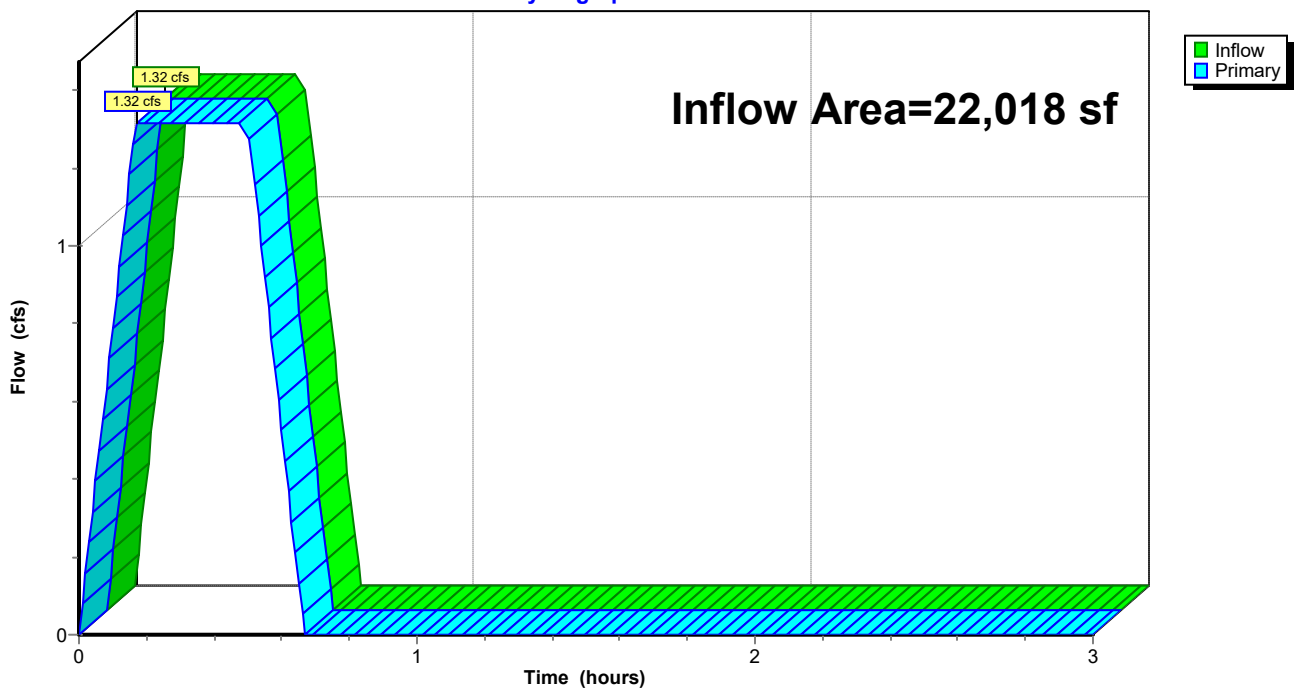
Summary for Pond CI-B2: CI - B2

Inflow Area = 22,018 sf, 42.08% Impervious, Inflow Depth = 1.29" for 25-yr event
Inflow = 1.32 cfs @ 0.17 hrs, Volume= 2,370 cf
Primary = 1.32 cfs @ 0.17 hrs, Volume= 2,370 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond JB-A2 : JB - A2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-B2: CI - B2

Hydrograph



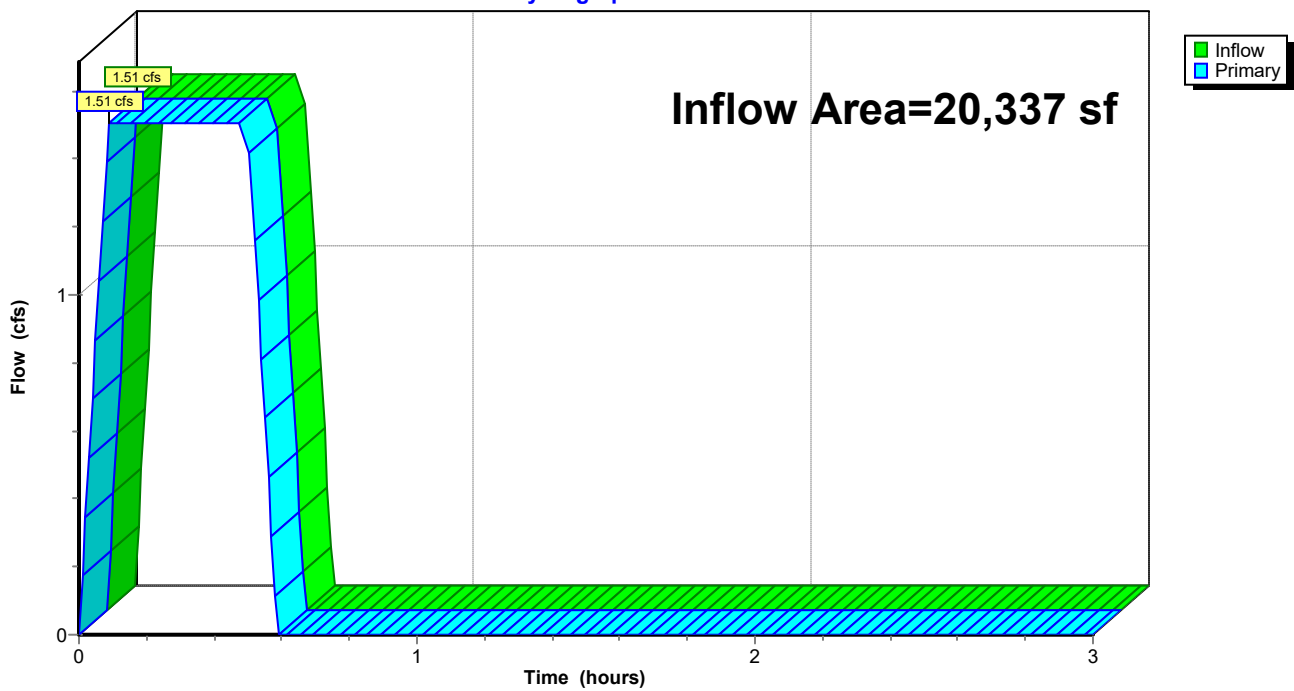
Summary for Pond CI-C1: CI - C1

Inflow Area = 20,337 sf, 69.83% Impervious, Inflow Depth = 1.60" for 25-yr event
Inflow = 1.51 cfs @ 0.09 hrs, Volume= 2,710 cf
Primary = 1.51 cfs @ 0.09 hrs, Volume= 2,710 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C2 : CI - C2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C1: CI - C1

Hydrograph



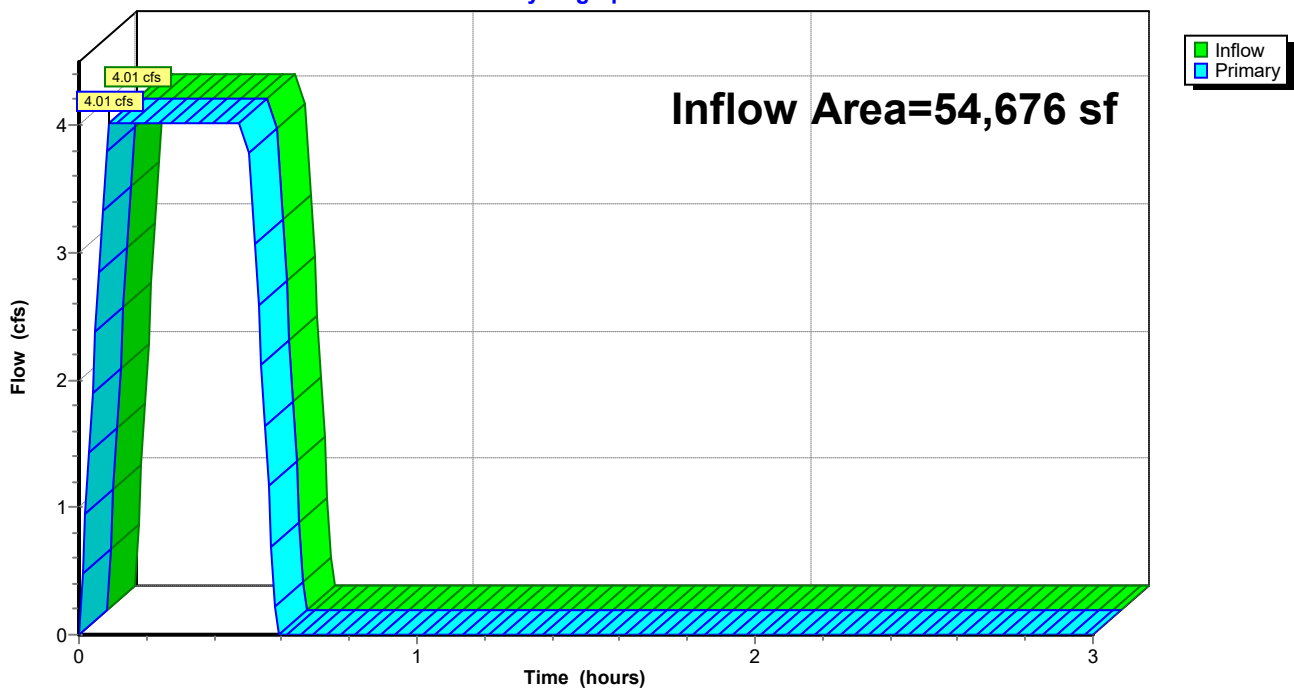
Summary for Pond CI-C2: CI - C2

Inflow Area = 54,676 sf, 67.97% Impervious, Inflow Depth = 1.59" for 25-yr event
Inflow = 4.01 cfs @ 0.09 hrs, Volume= 7,227 cf
Primary = 4.01 cfs @ 0.09 hrs, Volume= 7,227 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C3 : CI - C3

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C2: CI - C2

Hydrograph



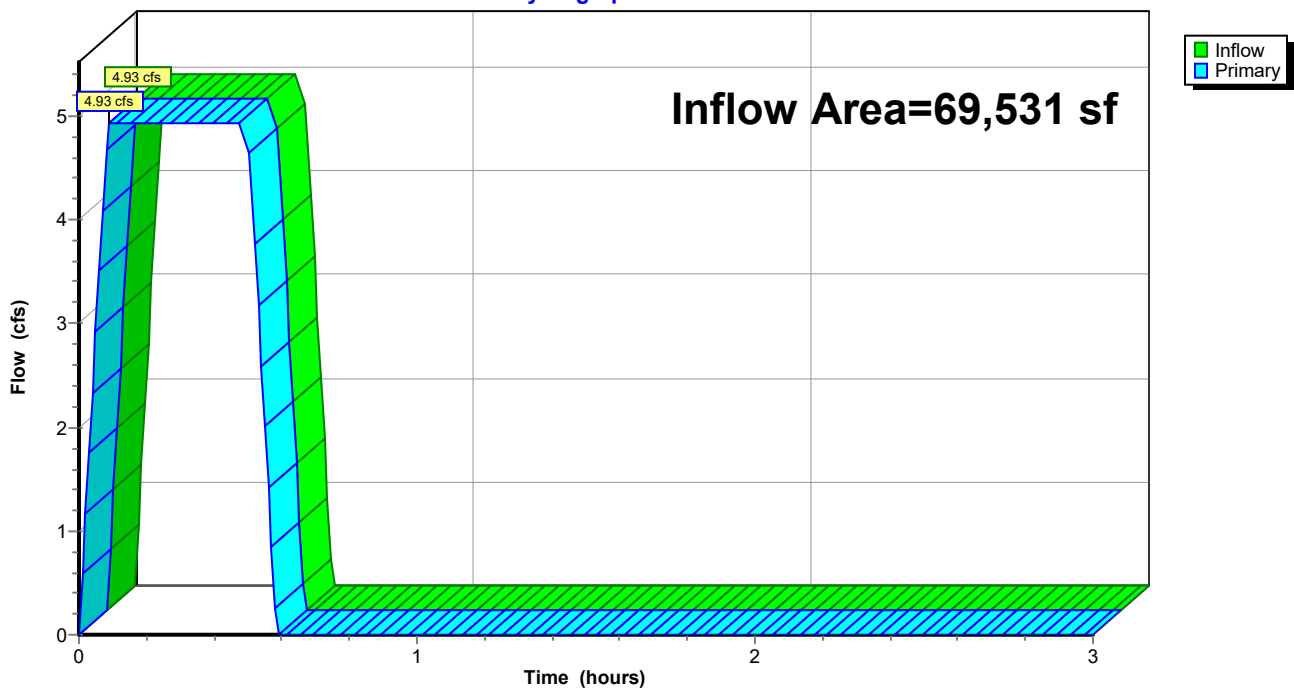
Summary for Pond CI-C3: CI - C3

Inflow Area = 69,531 sf, 63.12% Impervious, Inflow Depth = 1.53" for 25-yr event
Inflow = 4.93 cfs @ 0.09 hrs, Volume= 8,880 cf
Primary = 4.93 cfs @ 0.09 hrs, Volume= 8,880 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C4 : CI - C4

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C3: CI - C3

Hydrograph



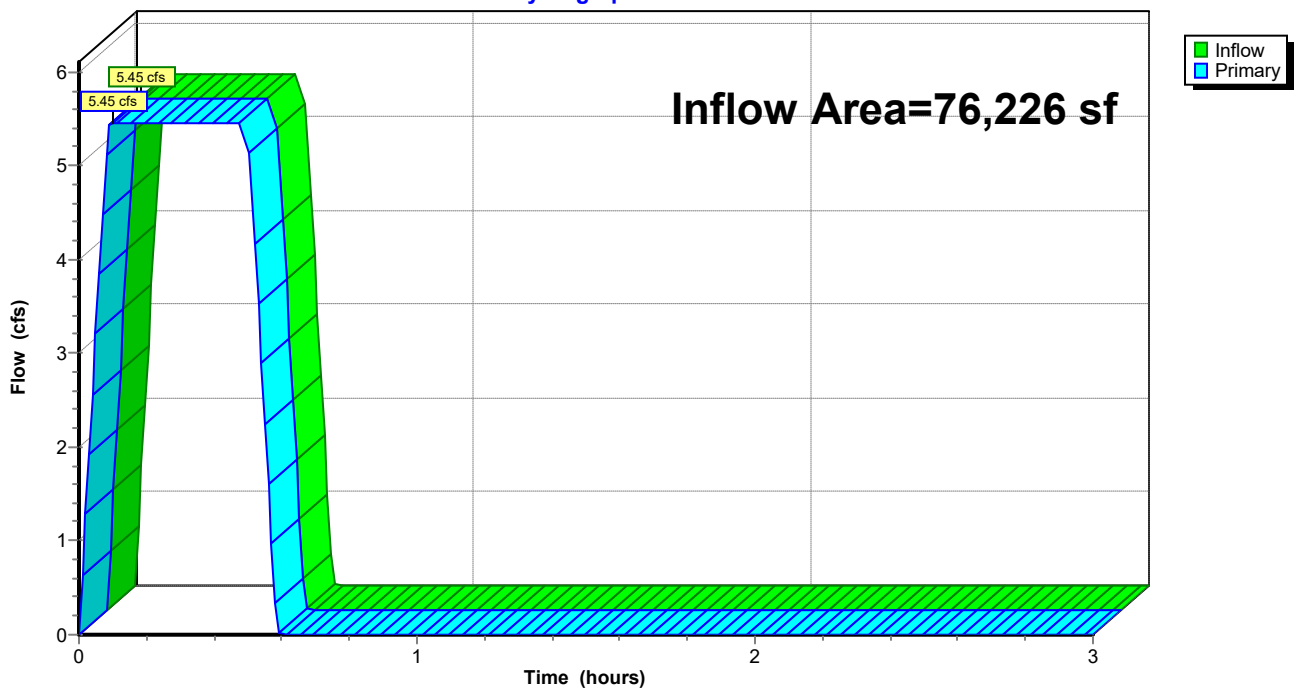
Summary for Pond CI-C4: CI - C4

Inflow Area = 76,226 sf, 64.22% Impervious, Inflow Depth = 1.55" for 25-yr event
Inflow = 5.45 cfs @ 0.10 hrs, Volume= 9,818 cf
Primary = 5.45 cfs @ 0.10 hrs, Volume= 9,818 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C5 : CI - C5

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C4: CI - C4

Hydrograph



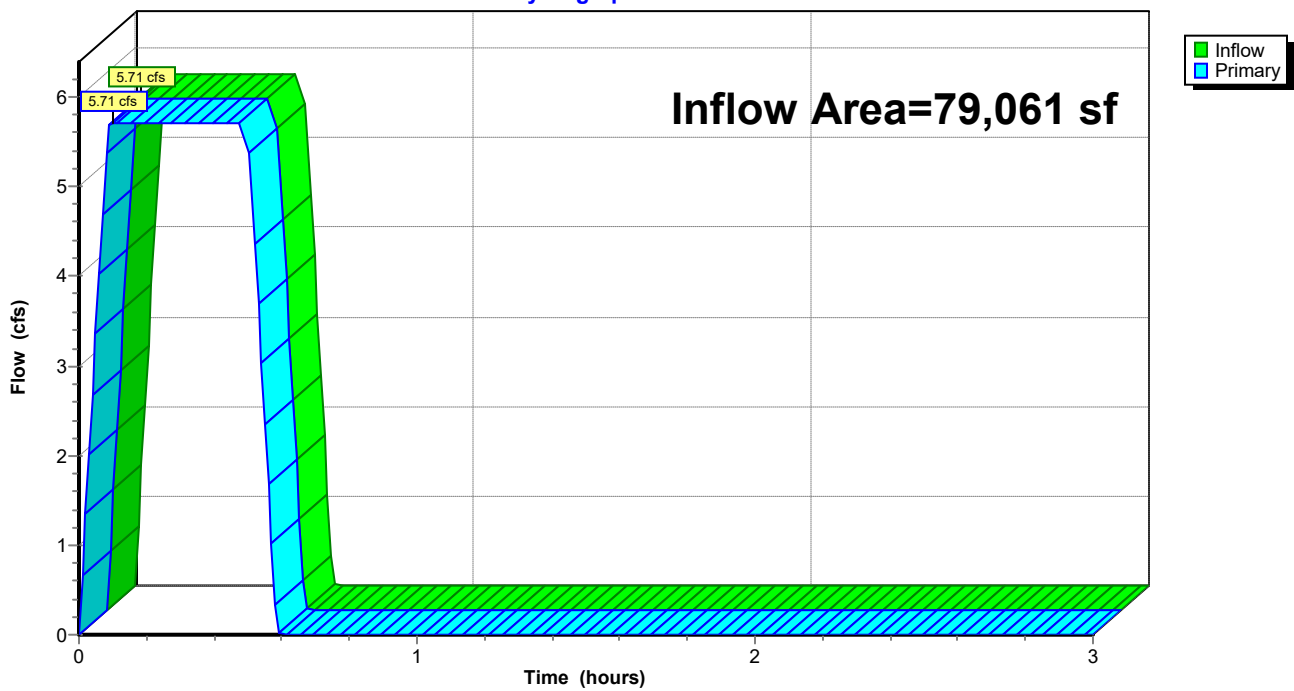
Summary for Pond CI-C5: CI - C5

Inflow Area = 79,061 sf, 65.50% Impervious, Inflow Depth = 1.56" for 25-yr event
Inflow = 5.71 cfs @ 0.10 hrs, Volume= 10,278 cf
Primary = 5.71 cfs @ 0.10 hrs, Volume= 10,278 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C6 : CI - C6

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C5: CI - C5

Hydrograph



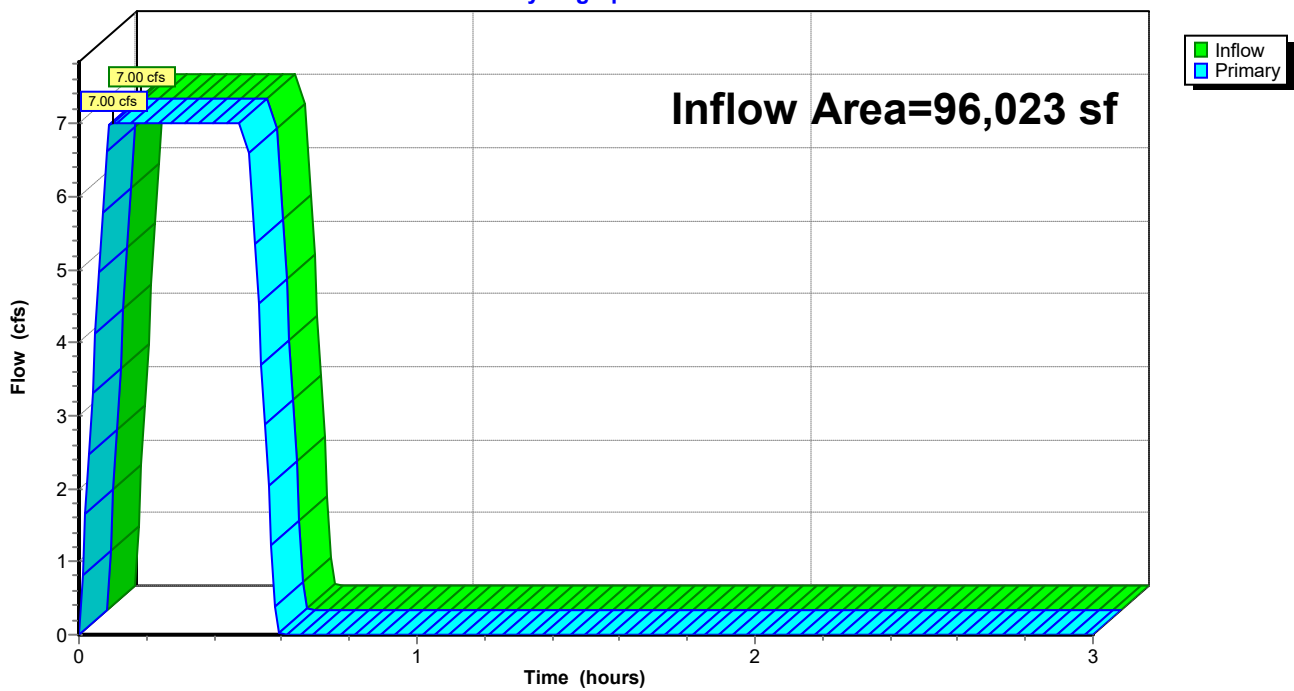
Summary for Pond CI-C6: CI - C6

Inflow Area = 96,023 sf, 66.95% Impervious, Inflow Depth = 1.58" for 25-yr event
Inflow = 7.00 cfs @ 0.10 hrs, Volume= 12,606 cf
Primary = 7.00 cfs @ 0.10 hrs, Volume= 12,606 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C7 : CI - C7

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C6: CI - C6

Hydrograph



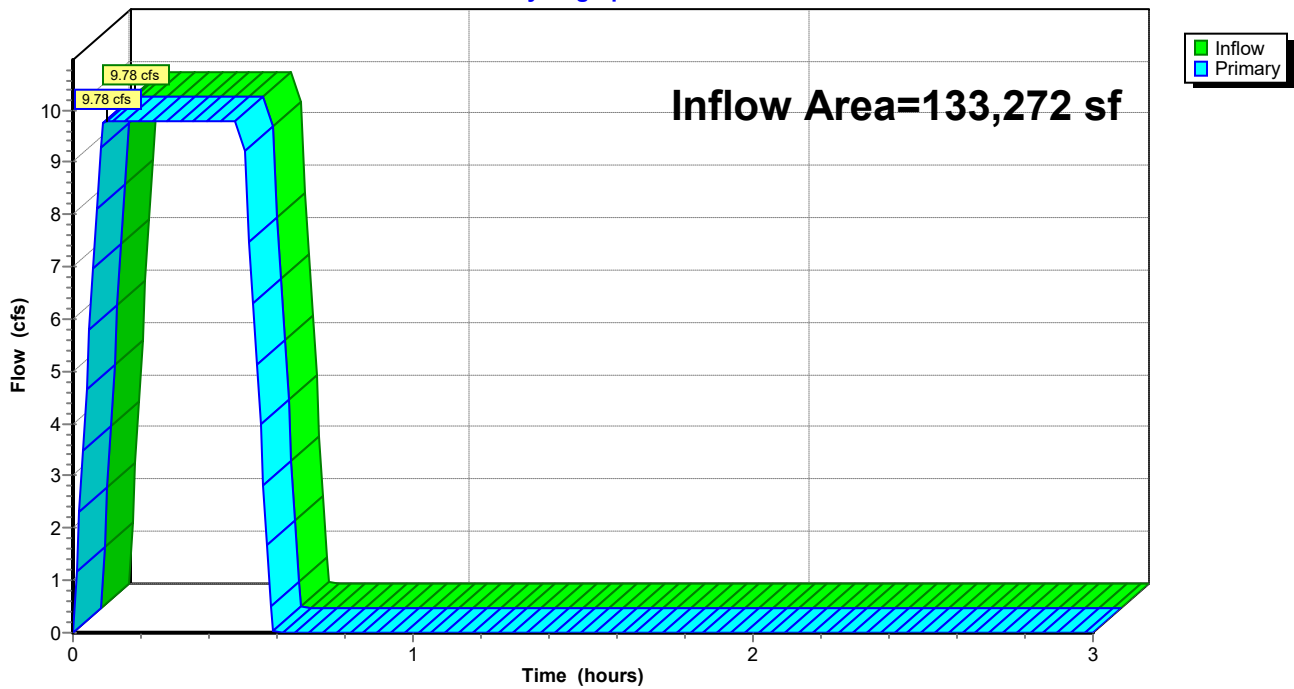
Summary for Pond CI-C7: CI - C7

Inflow Area = 133,272 sf, 67.70% Impervious, Inflow Depth = 1.59" for 25-yr event
Inflow = 9.78 cfs @ 0.10 hrs, Volume= 17,608 cf
Primary = 9.78 cfs @ 0.10 hrs, Volume= 17,608 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond DP : Existing North Detention Pond

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C7: CI - C7

Hydrograph



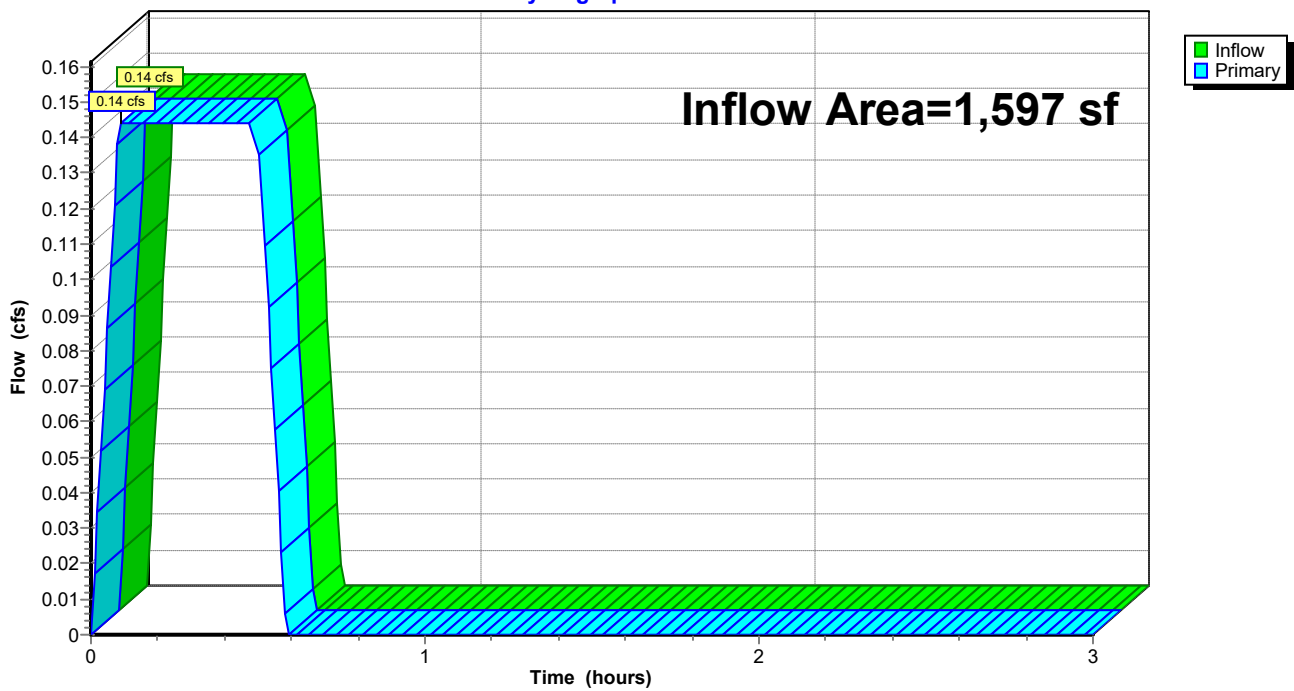
Summary for Pond CI-D1: CI - D1

Inflow Area = 1,597 sf, 100.00% Impervious, Inflow Depth = 1.95" for 25-yr event
Inflow = 0.14 cfs @ 0.09 hrs, Volume= 259 cf
Primary = 0.14 cfs @ 0.09 hrs, Volume= 259 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-D2 : CI - D2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-D1: CI - D1

Hydrograph



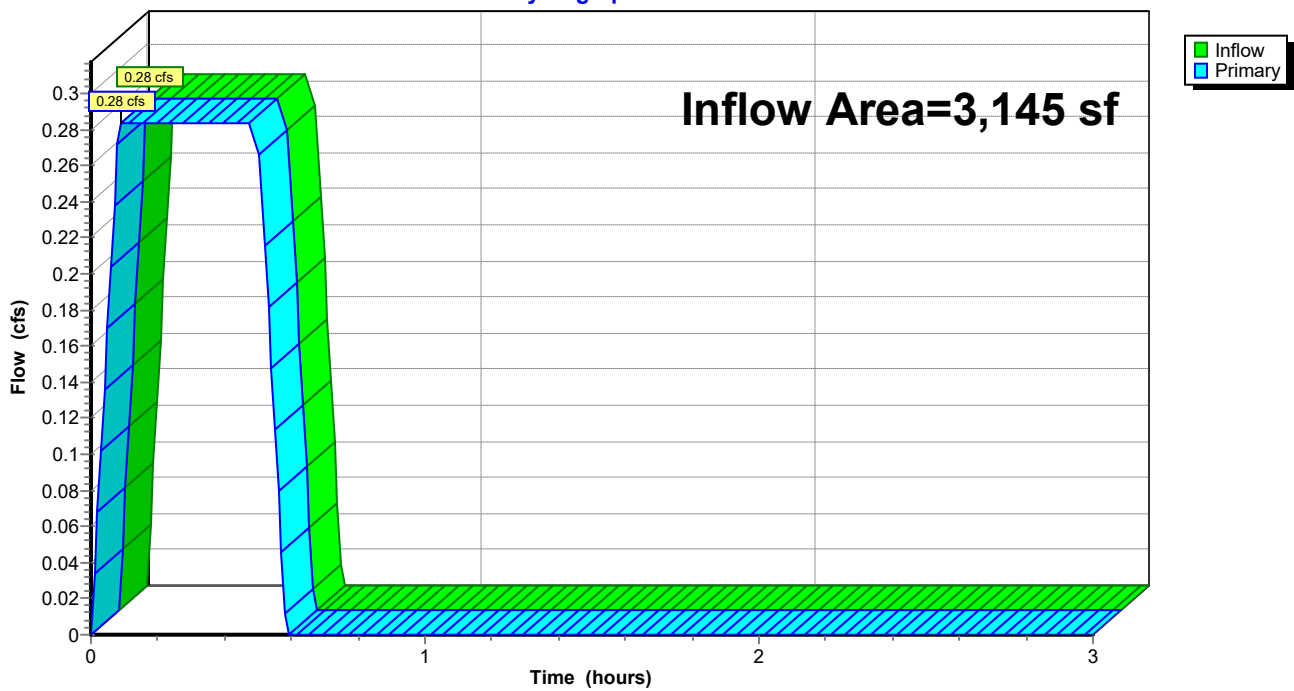
Summary for Pond CI-D2: CI - D2

Inflow Area = 3,145 sf, 100.00% Impervious, Inflow Depth = 1.95" for 25-yr event
Inflow = 0.28 cfs @ 0.09 hrs, Volume= 510 cf
Primary = 0.28 cfs @ 0.09 hrs, Volume= 510 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C6 : CI - C6

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-D2: CI - D2

Hydrograph



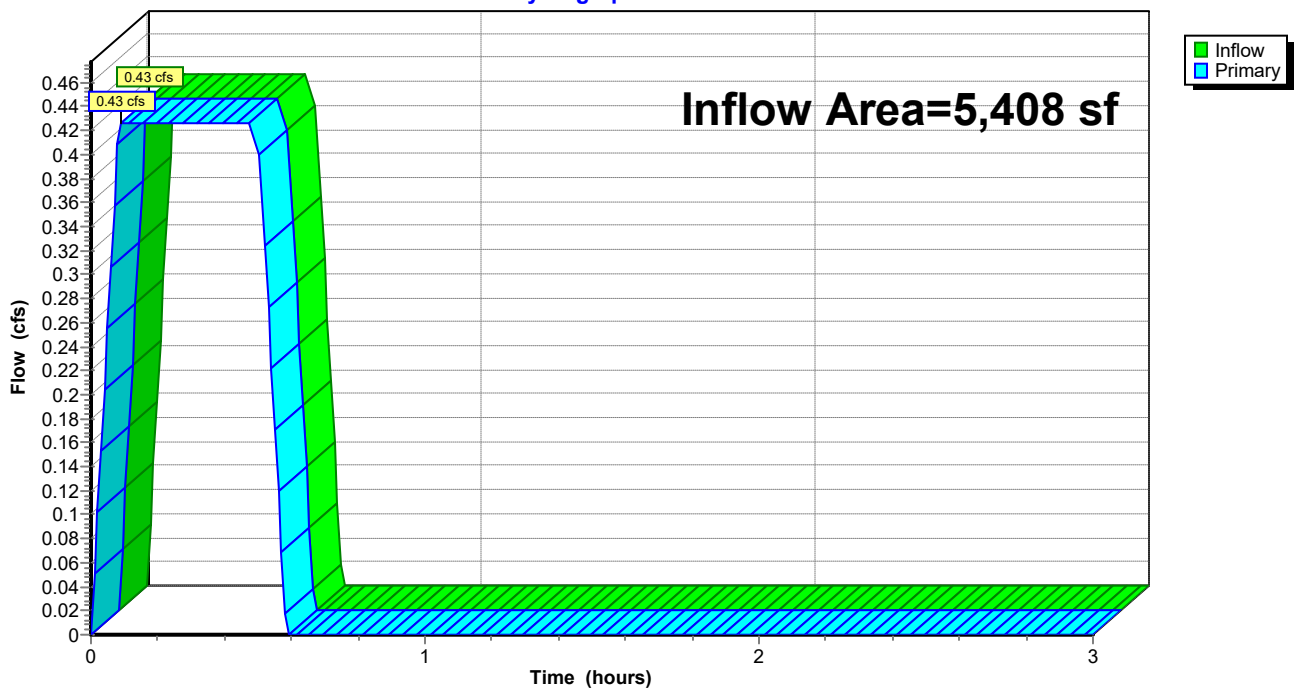
Summary for Pond CI-E1: CI - E1

Inflow Area = 5,408 sf, 77.35% Impervious, Inflow Depth = 1.70" for 25-yr event
Inflow = 0.43 cfs @ 0.09 hrs, Volume= 767 cf
Primary = 0.43 cfs @ 0.09 hrs, Volume= 767 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-E2 : CI - E2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-E1: CI - E1

Hydrograph



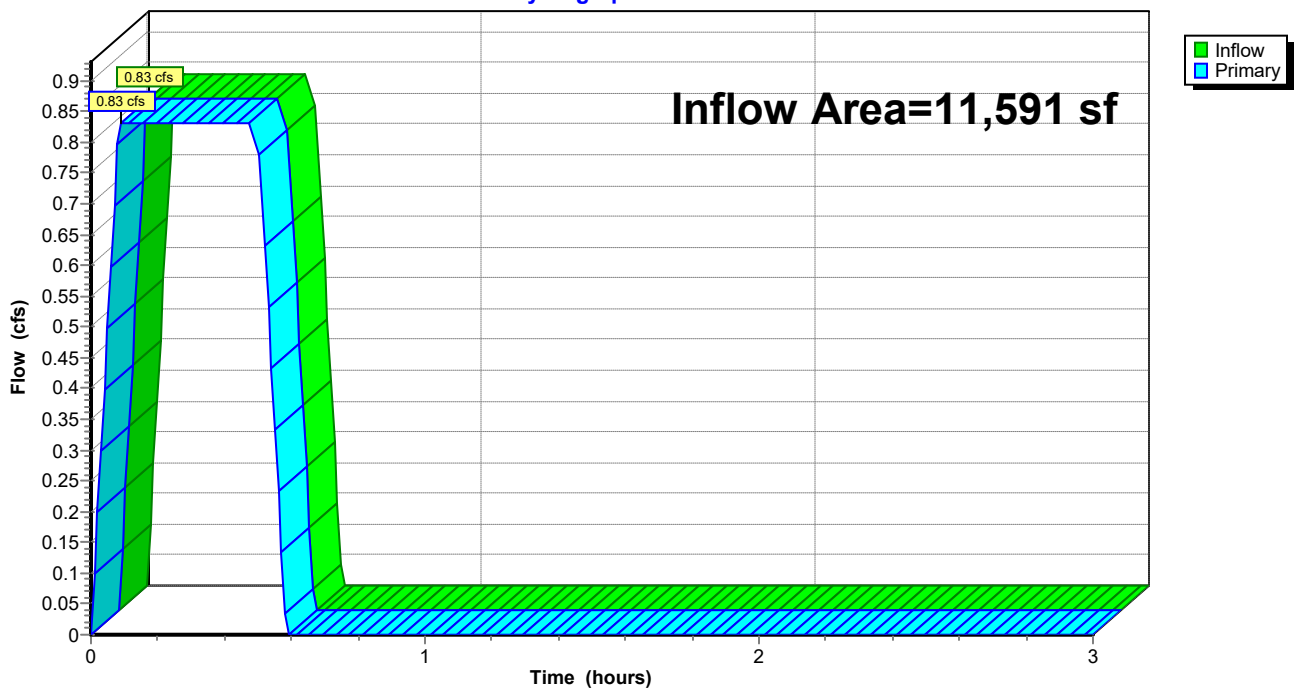
Summary for Pond CI-E2: CI - E2

Inflow Area = 11,591 sf, 64.62% Impervious, Inflow Depth = 1.55" for 25-yr event
Inflow = 0.83 cfs @ 0.09 hrs, Volume= 1,496 cf
Primary = 0.83 cfs @ 0.09 hrs, Volume= 1,496 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C7 : CI - C7

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-E2: CI - E2

Hydrograph



Goddard

AR - Little Rock 25-yr Duration=30 min, Inten=4.10 in/hr

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Summary for Pond DP: Existing North Detention Pond

Inflow Area = 321,792 sf, 58.73% Impervious, Inflow Depth = 1.48" for 25-yr event
 Inflow = 22.07 cfs @ 0.27 hrs, Volume= 39,720 cf
 Outflow = 12.22 cfs @ 0.54 hrs, Volume= 39,720 cf, Atten= 45%, Lag= 16.5 min
 Primary = 12.22 cfs @ 0.54 hrs, Volume= 39,720 cf
 Routed to Link FINAL : APPROX DISCHARGE

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 Peak Elev= 383.20' @ 0.54 hrs Storage= 22,005 cf

Plug-Flow detention time= 22.0 min calculated for 39,720 cf (100% of inflow)
 Center-of-Mass det. time= 21.9 min (40.4 - 18.5)

Volume	Invert	Avail.Storage	Storage Description
#1	381.17'	72,742 cf	Custom Stage Data Listed below

Elevation (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
381.17	0	0
381.50	200	200
382.00	1,825	2,025
382.50	5,265	7,290
383.00	9,300	16,590
383.50	13,733	30,323
384.00	18,578	48,901
384.50	23,841	72,742

Device	Routing	Invert	Outlet Devices
#1	Primary	384.16'	5.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#2	Primary	381.17'	1.7' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

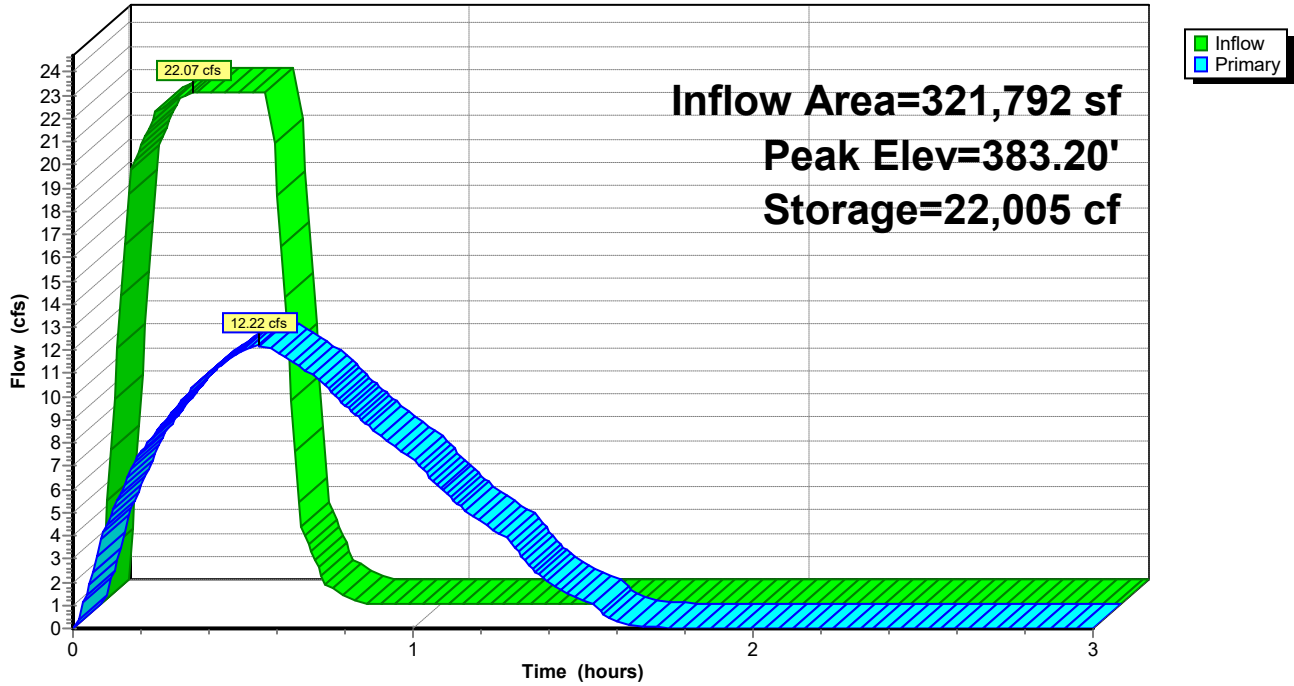
Primary OutFlow Max=12.22 cfs @ 0.54 hrs HW=383.20' (Free Discharge)

↑ **1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

└ **2=Sharp-Crested Rectangular Weir** (Weir Controls 12.22 cfs @ 4.66 fps)

Pond DP: Existing North Detention Pond

Hydrograph



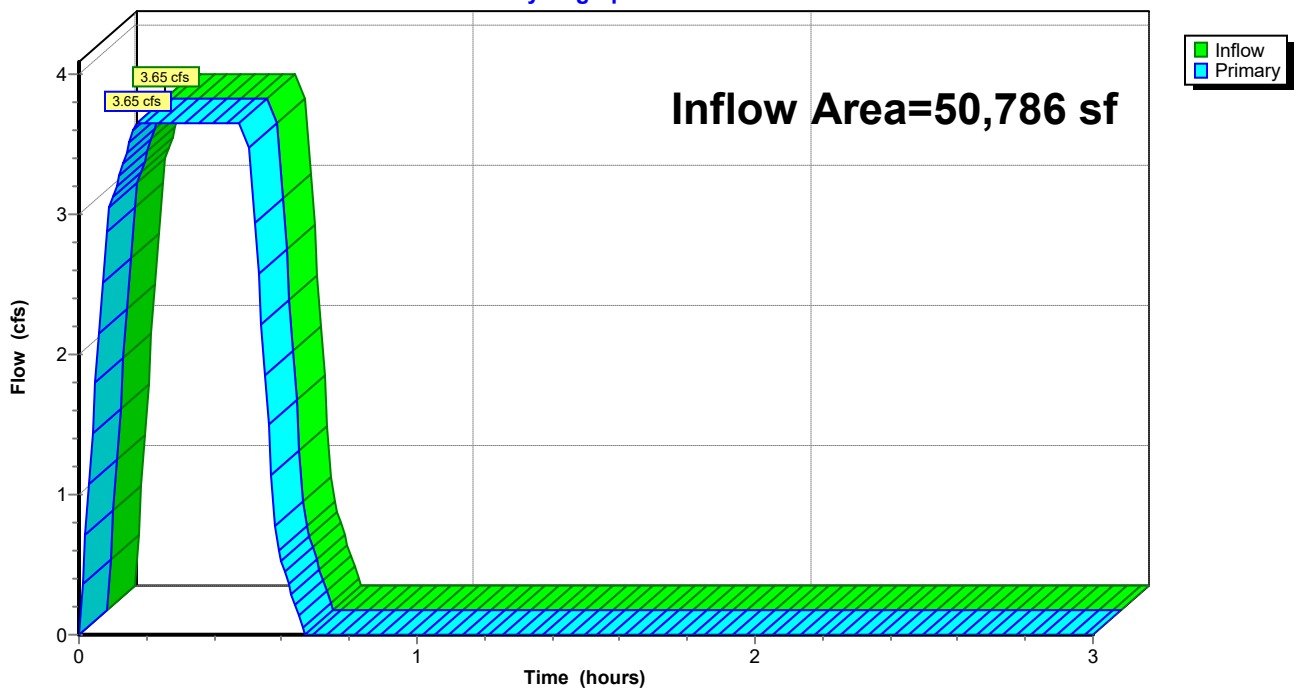
Summary for Pond JB-A2: JB - A2

Inflow Area = 50,786 sf, 65.23% Impervious, Inflow Depth = 1.55" for 25-yr event
Inflow = 3.65 cfs @ 0.17 hrs, Volume= 6,572 cf
Primary = 3.65 cfs @ 0.17 hrs, Volume= 6,572 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-A3 : CI - A3

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond JB-A2: JB - A2

Hydrograph



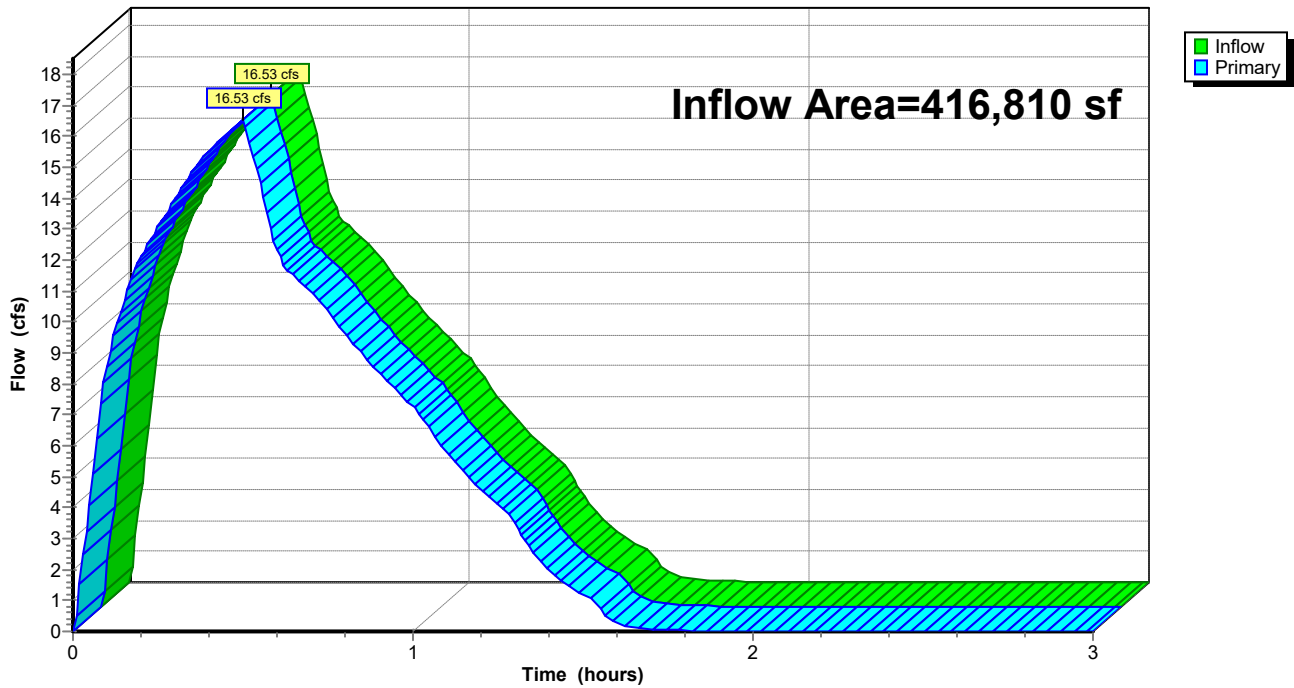
Summary for Link FINAL: APPROX DISCHARGE

Inflow Area = 416,810 sf, 49.40% Impervious, Inflow Depth = 1.38" for 25-yr event
Inflow = 16.53 cfs @ 0.50 hrs, Volume= 47,826 cf
Primary = 16.53 cfs @ 0.50 hrs, Volume= 47,826 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Link FINAL: APPROX DISCHARGE

Hydrograph



Summary for Subcatchment B1: Drainage Basin B1

Runoff = 1.18 cfs @ 0.10 hrs, Volume= 2,127 cf, Depth= 1.02"
 Routed to Link FINAL : APPROX DISCHARGE

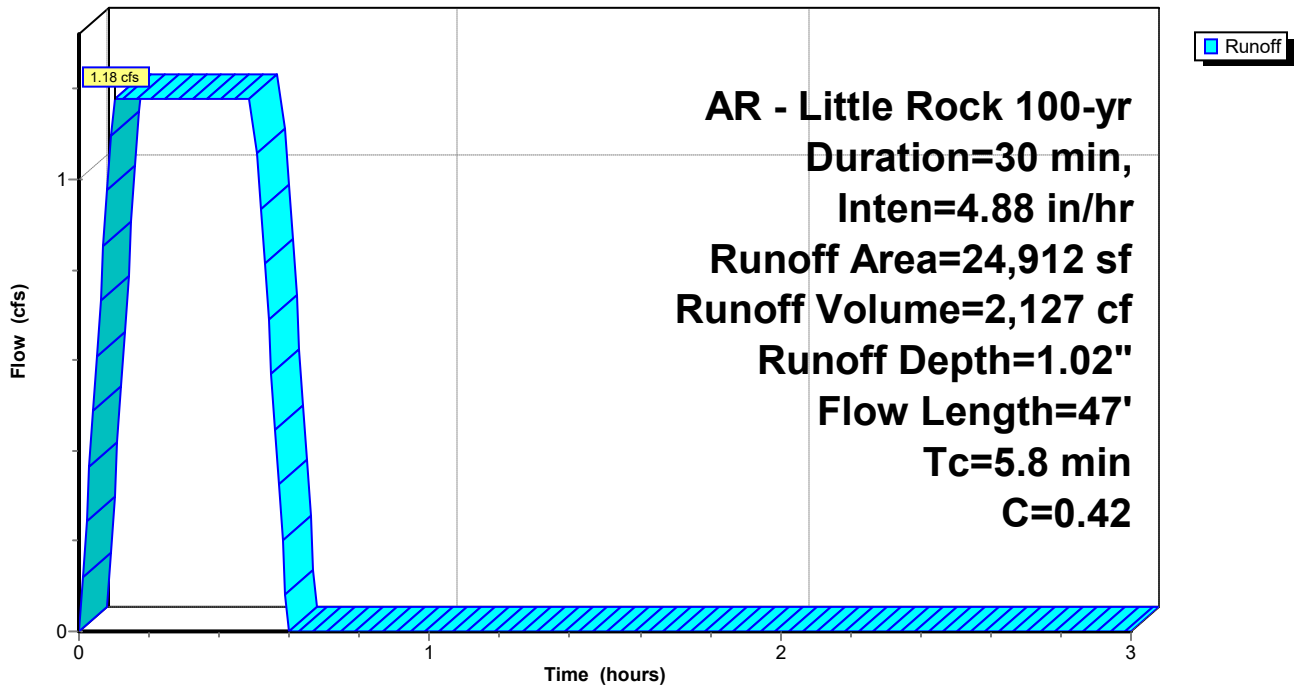
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
24,091	0.40	Sod Yard
821	0.95	Paving, Sidewalks
24,912	0.42	Weighted Average
24,091		96.70% Pervious Area
821		3.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.3	9	0.0310	0.06		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
3.5	38	0.2040	0.18		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
5.8	47	Total			

Subcatchment B1: Drainage Basin B1

Hydrograph



Summary for Subcatchment B2: Drainage Basin B2

Runoff = 1.78 cfs @ 0.09 hrs, Volume= 3,210 cf, Depth= 1.98"
 Routed to Pond CI-A1 : CI - A1

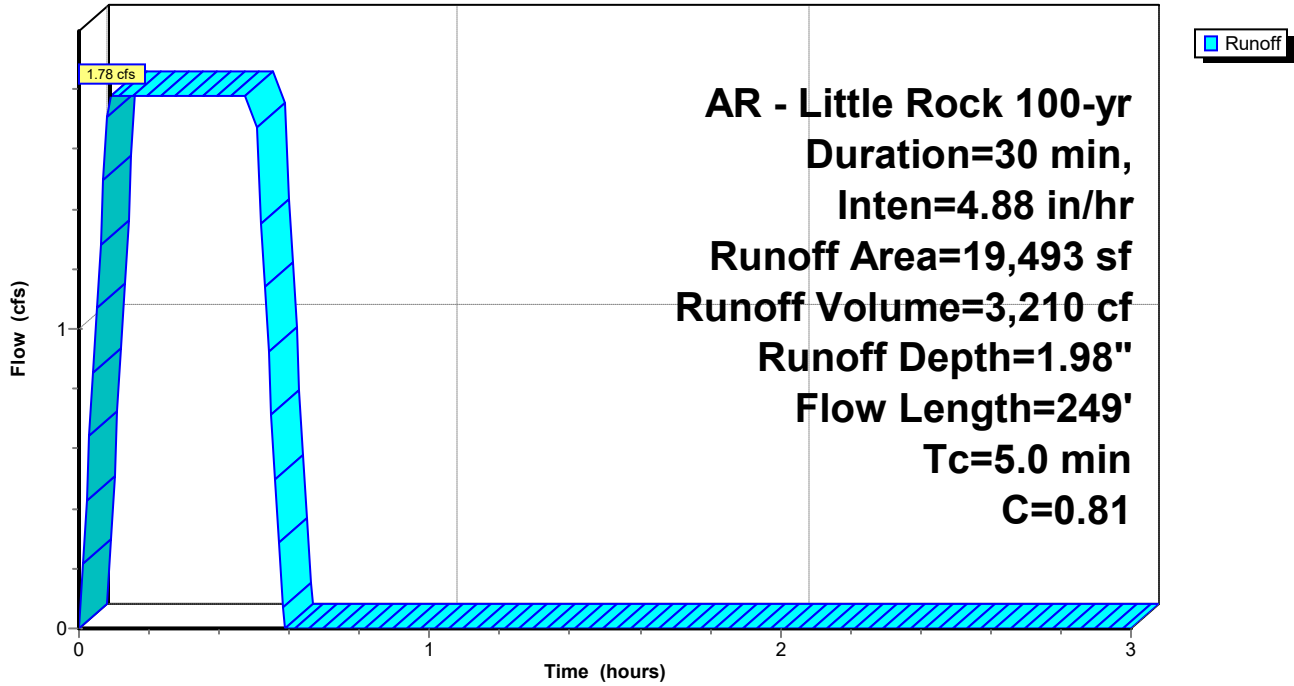
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
4,903	0.40	Sod Yard
14,590	0.95	Paving, Sidewalks
19,493	0.81	Weighted Average
4,903		25.15% Pervious Area
14,590		74.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	31	0.0230	1.32		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	18	0.0250	1.22		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.3	28	0.0450	1.69		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.4	72	0.0250	3.21		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	18	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.3	51	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	16	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	8	0.0430	4.21		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	7	0.0580	4.89		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.2					Direct Entry, Overland Concentrated Flow (Min)
5.0	249	Total			

Subcatchment B2: Drainage Basin B2

Hydrograph



Summary for Subcatchment B3: Drainage Basin B3

Runoff = 1.00 cfs @ 0.09 hrs, Volume= 1,792 cf, Depth= 2.32"
 Routed to Pond JB-A2 : JB - A2

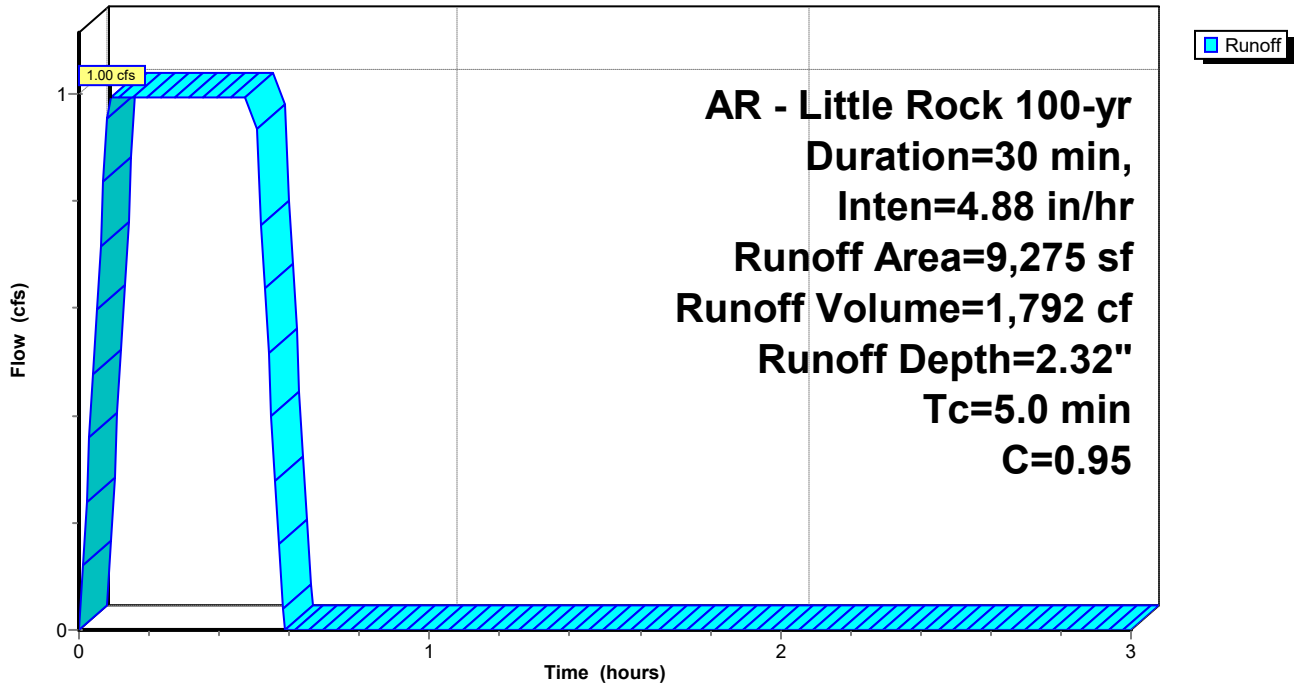
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
9,275	0.95	Roof
9,275		100.00% Impervious Area

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

Subcatchment B3: Drainage Basin B3

Hydrograph



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AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

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Summary for Subcatchment B4: Drainage Basin B4

Runoff = 0.20 cfs @ 0.09 hrs, Volume= 365 cf, Depth= 2.32"
 Routed to Pond CI-A3 : CI - A3

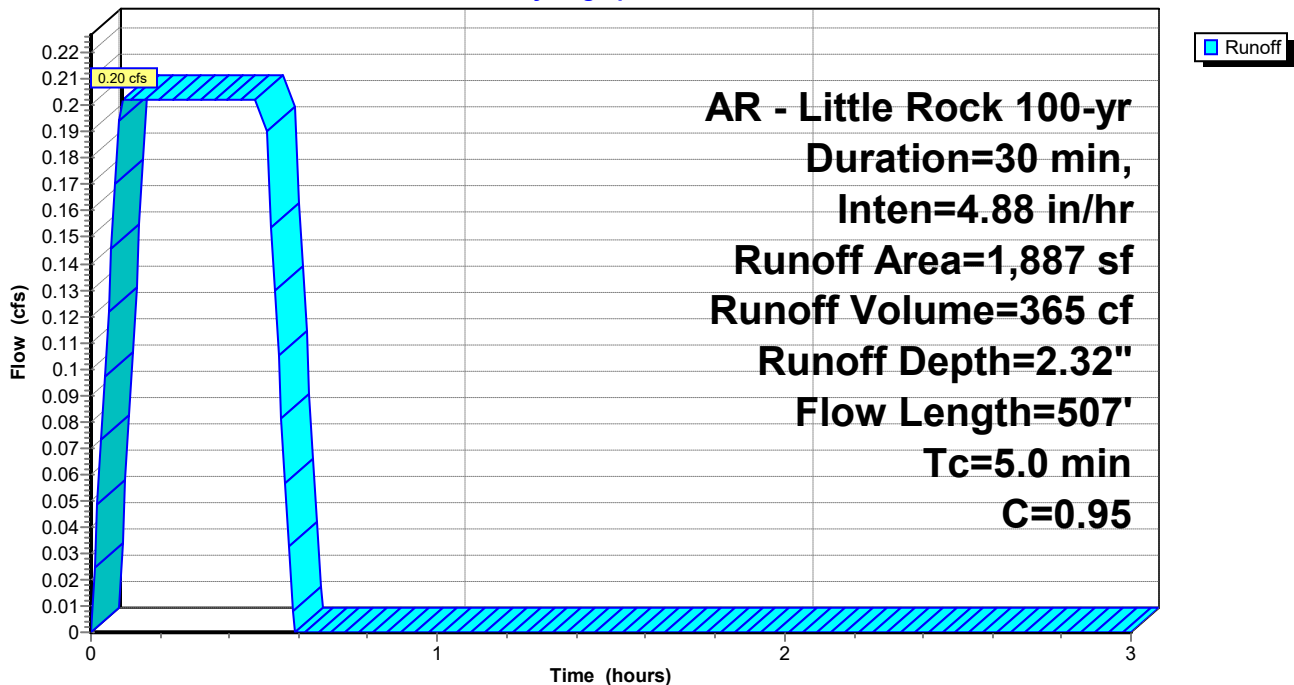
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
1,887	0.95	Paving, Sidewalks
1,887	0.95	Weighted Average
1,887		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	31	0.0230	1.32		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	18	0.0250	1.22		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.4	30	0.0240	1.33		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.0	13	0.0860	5.95		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.0	415		1.73		Direct Entry, Overland Concentrated Flow (Min)
5.0	507	Total			

Subcatchment B4: Drainage Basin B4

Hydrograph



Summary for Subcatchment B5: Drainage Basin B5

Runoff = 1.57 cfs @ 0.17 hrs, Volume= 2,821 cf, Depth= 1.54"
 Routed to Pond CI-B2 : CI - B2

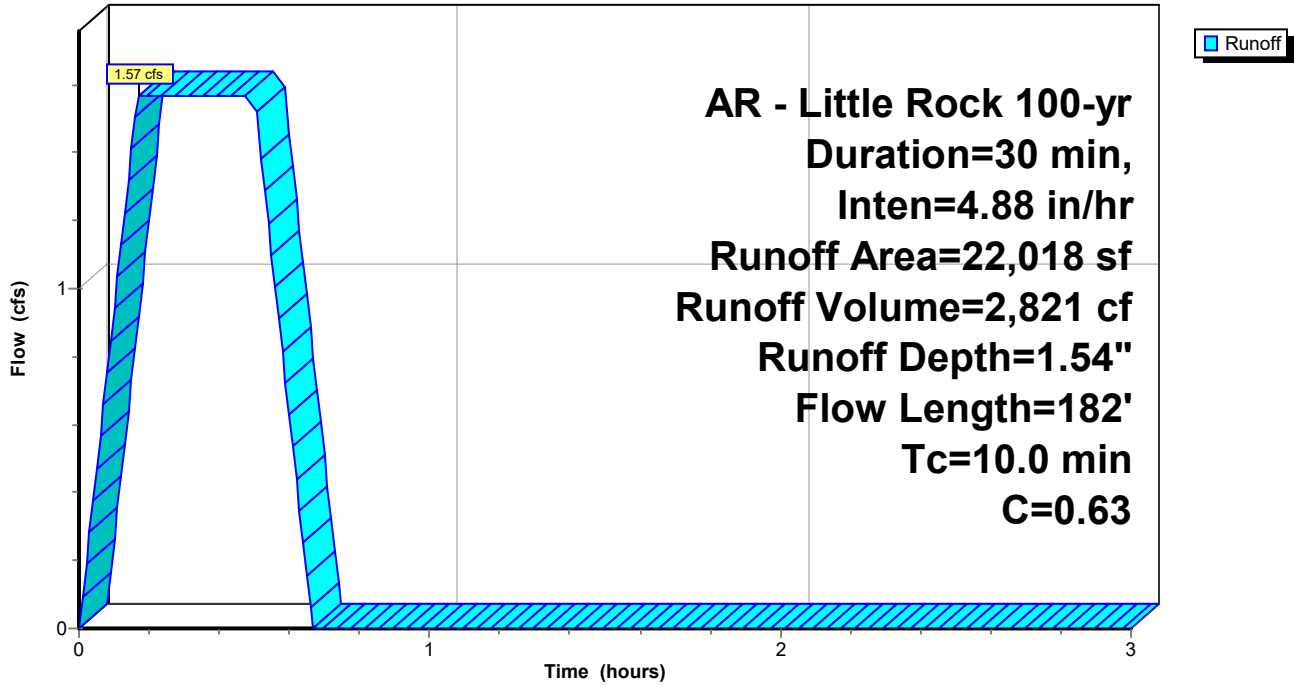
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
12,753	0.40	Sod Yard
9,265	0.95	Paving, Sidewalks
22,018	0.63	Weighted Average
12,753		57.92% Pervious Area
9,265		42.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	10	0.0150	0.89		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
9.1	93	0.0150	0.17		Sheet Flow, Sheet Flow Grass: Short n= 0.150 P2= 4.19"
0.4	40	0.0110	1.57		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	33	0.0190	2.07		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.0	6	0.0180	2.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
10.0	182	Total			

Subcatchment B5: Drainage Basin B5

Hydrograph



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AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

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Summary for Subcatchment B6: Drainage Basin B6

Runoff = 0.55 cfs @ 0.24 hrs, Volume= 997 cf, Depth= 1.27"
 Routed to Pond CI-A4 : CI - A4

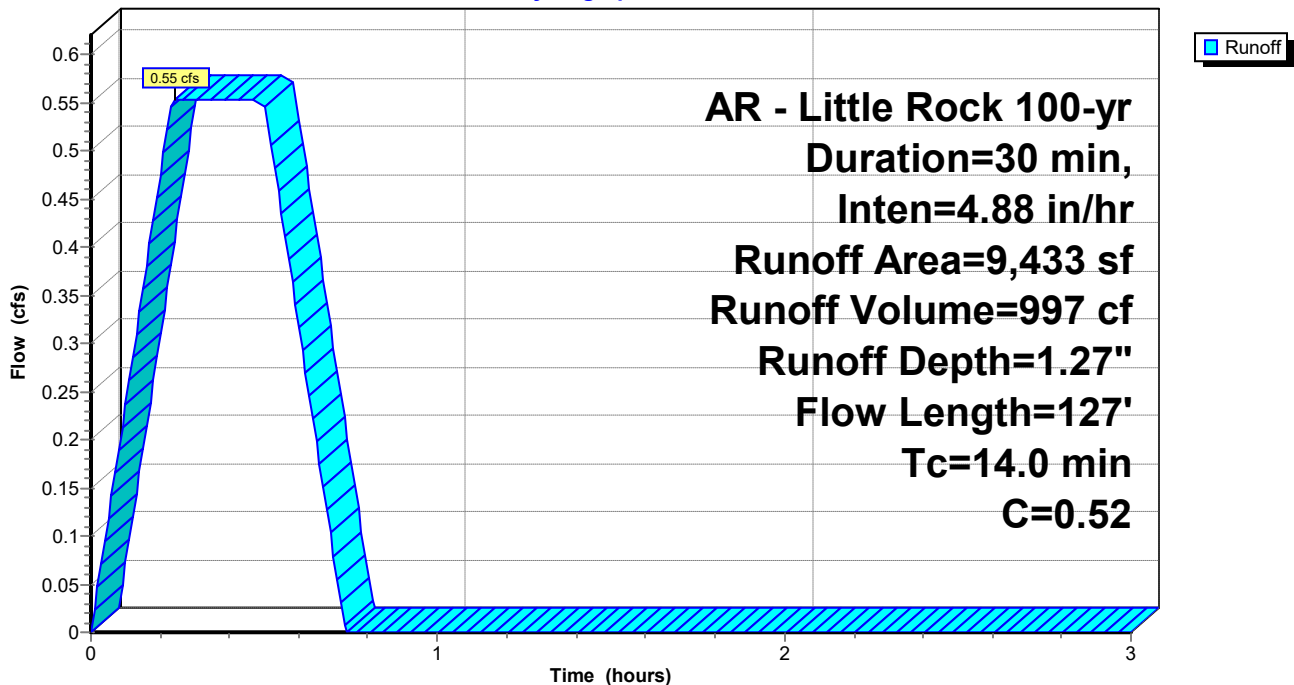
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
7,346	0.40	Sod Yard
2,087	0.95	Paving, Sidewalks
9,433	0.52	Weighted Average
7,346		77.88% Pervious Area
2,087		22.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.4	79	0.0570	0.13		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
3.5	21	0.0620	0.10		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.0	9	0.0620	3.73		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.1	18	0.1080	4.93		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
14.0	127	Total			

Subcatchment B6: Drainage Basin B6

Hydrograph



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AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

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Summary for Subcatchment C1: Drainage Basin C1

Runoff = 1.79 cfs @ 0.09 hrs, Volume= 3,225 cf, Depth= 1.90"
 Routed to Pond CI-C1 : CI - C1

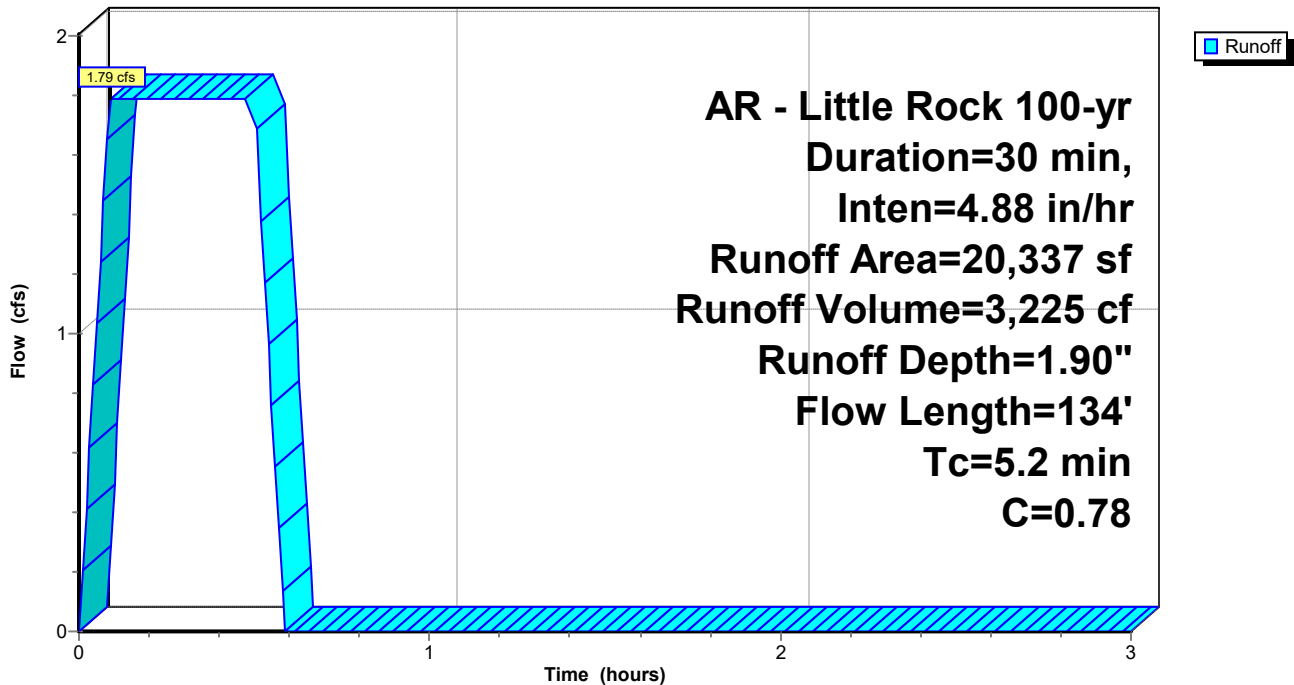
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
6,135	0.40	Sod Yard
14,202	0.95	Paving, Sidewalks
20,337	0.78	Weighted Average
6,135		30.17% Pervious Area
14,202		69.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	32	0.0660	0.11		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.4	102	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
5.2	134	Total			

Subcatchment C1: Drainage Basin C1

Hydrograph



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AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

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Summary for Subcatchment C10: Drainage Basin C10

Runoff = 0.51 cfs @ 0.09 hrs, Volume= 913 cf, Depth= 2.03"
 Routed to Pond CI-E1 : CI - E1

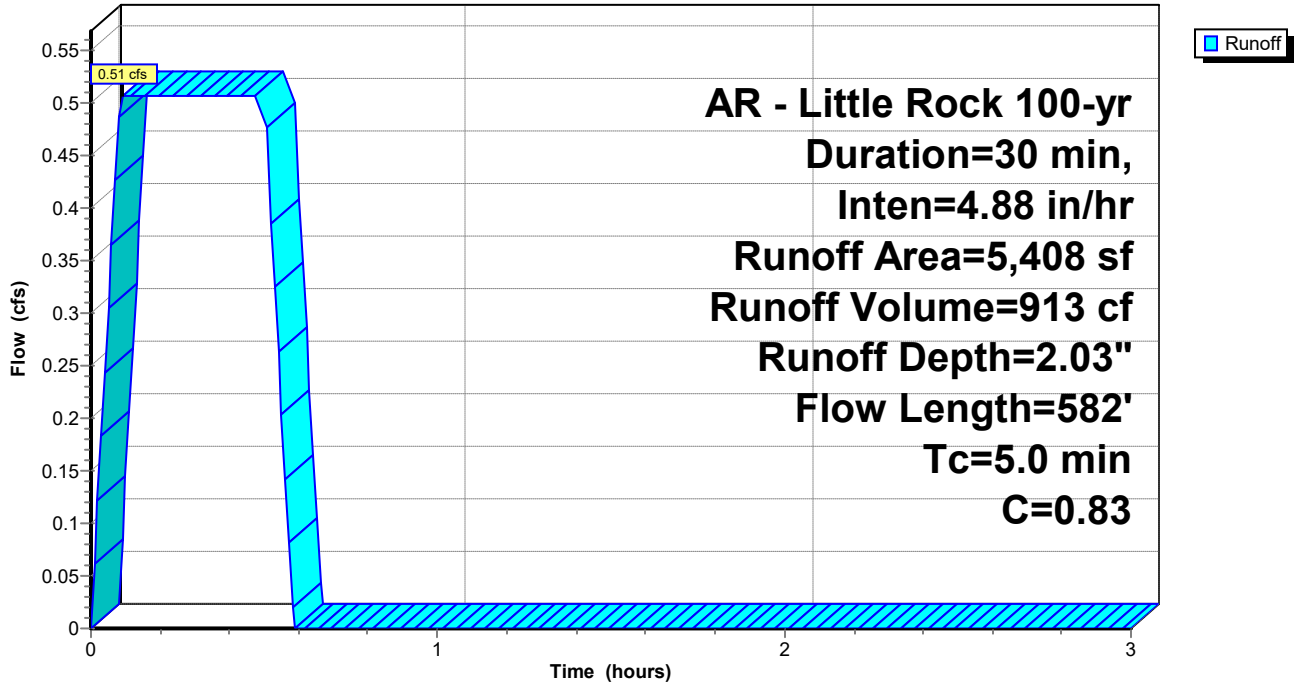
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
1,225	0.40	Sod Yard
4,183	0.95	Paving, Sidewalks
5,408	0.83	Weighted Average
1,225		22.65% Pervious Area
4,183		77.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	1.12		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	29	0.0210	2.94		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	23	0.0320	3.63		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	36	0.0320	3.63		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	48	0.0330	3.69		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	13	0.0350	3.80		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.9	415		1.77		Direct Entry, Concentrated Flow (Min)
5.0	582	Total			

Subcatchment C10: Drainage Basin C10

Hydrograph



Goddard

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AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

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Summary for Subcatchment C11: Drainage Basin C11

Runoff = 0.48 cfs @ 0.09 hrs, Volume= 867 cf, Depth= 1.68"
 Routed to Pond CI-E2 : CI - E2

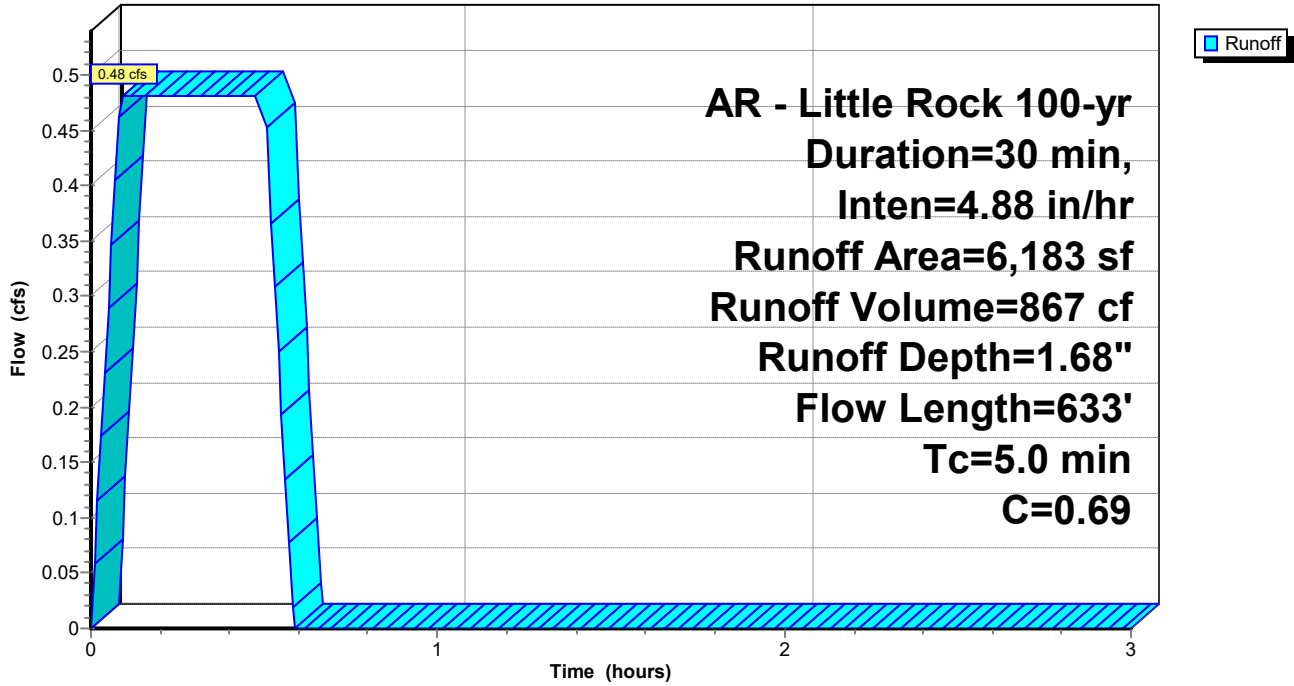
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
2,876	0.40	Sod Yard
3,307	0.95	Paving, Sidewalks
6,183	0.69	Weighted Average
2,876		46.51% Pervious Area
3,307		53.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	25	0.0200	1.19		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	33	0.0620	5.05		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	29	0.0540	4.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	47	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	47	0.0390	4.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	37	0.0420	4.16		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.0	415		1.73		Direct Entry, Concentrated Flow (Min)
5.0	633	Total			

Subcatchment C11: Drainage Basin C11

Hydrograph



Goddard

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AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

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Summary for Subcatchment C12: Drainage Basin C12

Runoff = 2.32 cfs @ 0.09 hrs, Volume= 4,174 cf, Depth= 1.95"
 Routed to Pond CI-C7 : CI - C7

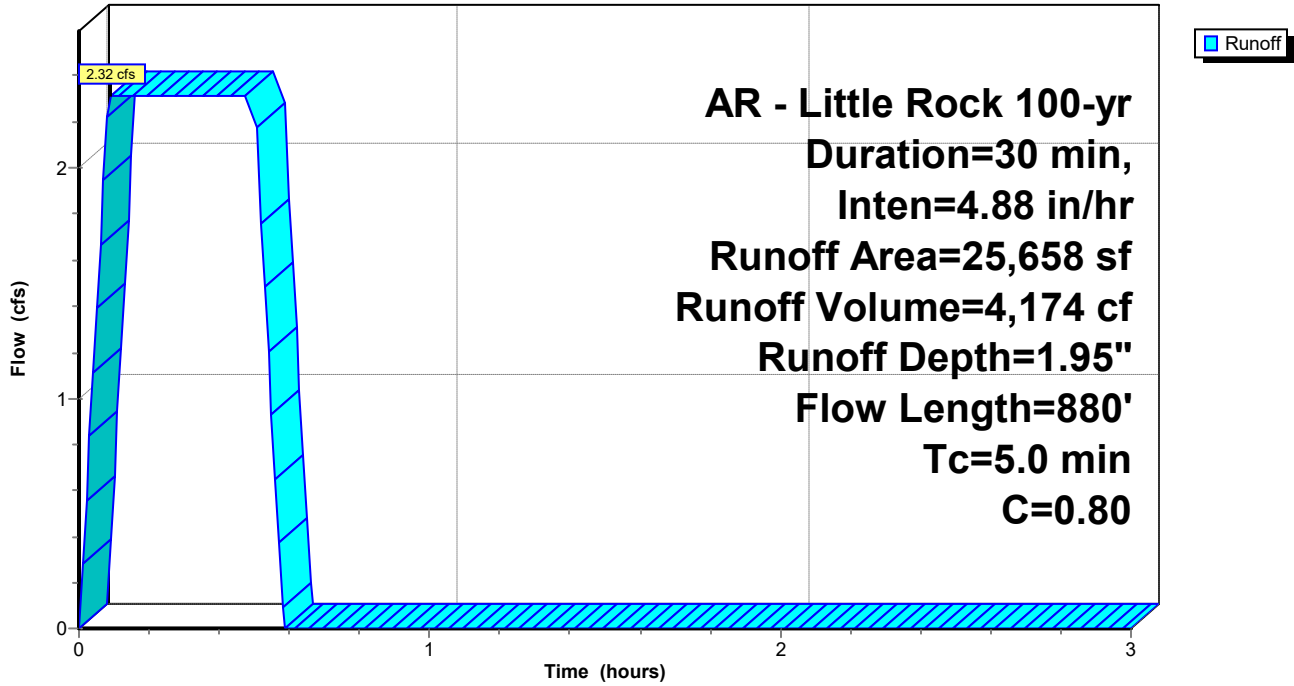
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
7,218	0.40	Sod Yard
18,440	0.95	Paving, Sidewalks
25,658	0.80	Weighted Average
7,218		28.13% Pervious Area
18,440		71.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	24	0.0360	1.50		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	5	0.0190	0.85		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	21	0.0100	2.03		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.9	49	0.0020	0.91		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.4	96	0.0330	3.69		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.3	94	0.0570	4.85		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	28	0.0560	4.80		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	25	0.0450	4.31		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	31	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	39	0.0490	4.49		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	36	0.0460	4.35		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	11	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	6	0.0440	4.26		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
2.3	415		3.01		Direct Entry, Concentrated Flow (Min)
5.0	880	Total			

Subcatchment C12: Drainage Basin C12

Hydrograph



Goddard

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AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

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Summary for Subcatchment C13: Drainage Basin C13

Runoff = 1.16 cfs @ 0.09 hrs, Volume= 2,094 cf, Depth= 2.07"
 Routed to Pond CI-A4 : CI - A4

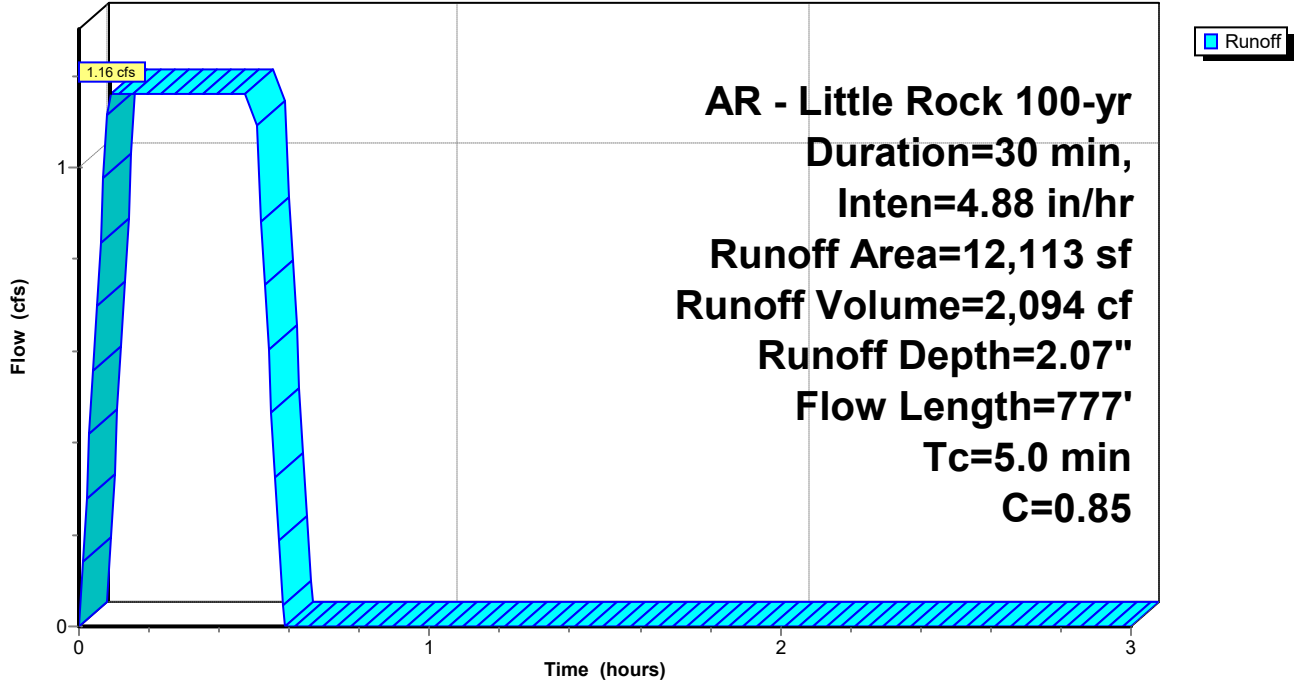
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
2,240	0.40	Sod Yard
9,873	0.95	Paving, Sidewalks
12,113	0.85	Weighted Average
2,240		18.49% Pervious Area
9,873		81.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	19	0.0200	1.13		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.3	75	0.0340	3.74		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	52	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	29	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	42	0.0730	5.48		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	74	0.0750	5.56		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	26	0.0710	5.41		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	32	0.0570	4.85		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	13	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.6	415		1.92		Direct Entry, Overland Concentrated Flow (Min)
5.0	777	Total			

Subcatchment C13: Drainage Basin C13

Hydrograph



Summary for Subcatchment C14: Drainage Basin C14

Runoff = 1.99 cfs @ 0.27 hrs, Volume= 3,583 cf, Depth= 1.95"
 Routed to Pond CI-A5 : CI - A5

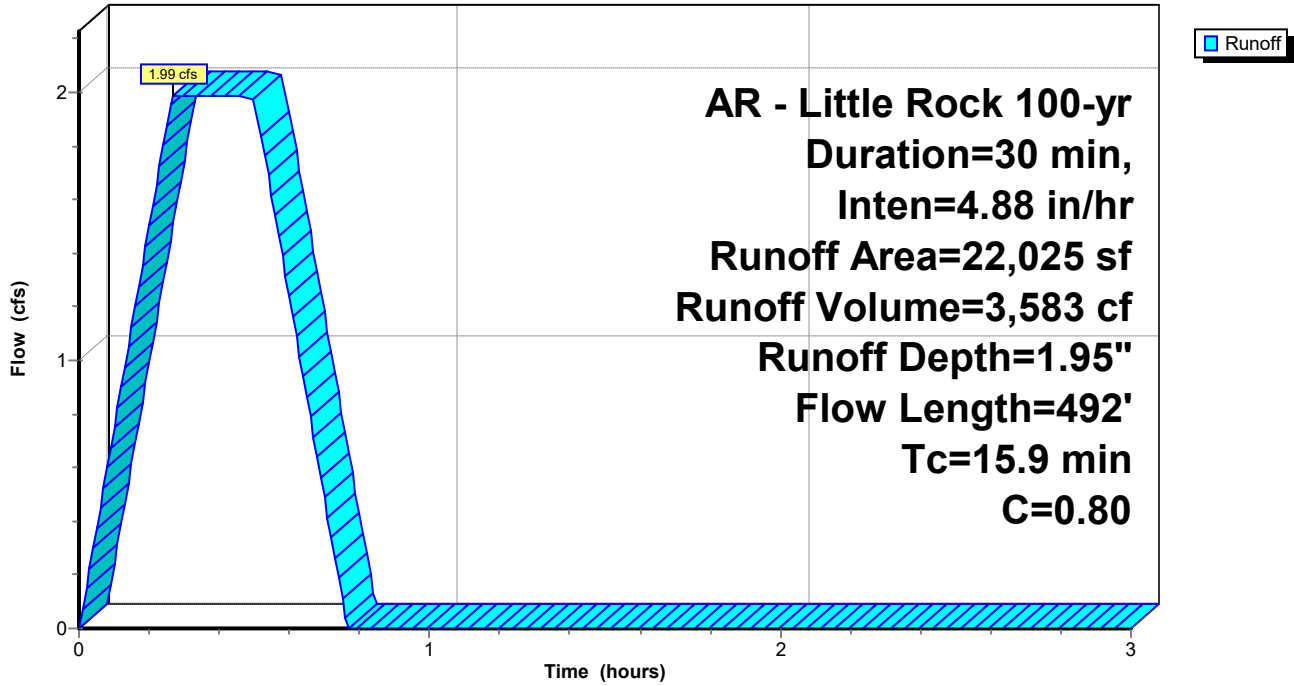
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
6,127	0.40	Sod Yard
15,898	0.95	Paving, Sidewalks
22,025	0.80	Weighted Average
6,127		27.82% Pervious Area
15,898		72.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	5	0.0310	0.06		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
9.2	45	0.0250	0.08		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
3.8	41	0.1940	0.18		Sheet Flow, Sheet Flow
					Grass: Bermuda n= 0.410 P2= 4.19"
0.1	6	0.0100	0.68		Sheet Flow, Sheet Flow
					Smooth surfaces n= 0.011 P2= 4.19"
0.1	51	0.0870	5.99		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.2	52	0.0310	3.57		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	18	0.0270	3.34		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	20	0.0400	4.06		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	34	0.0410	4.11		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.2	46	0.0470	4.40		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	36	0.0580	4.89		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.2	58	0.0690	5.33		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	49	0.0840	5.88		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
0.1	31	0.0690	5.33		Shallow Concentrated Flow, Concentrated Flow
					Paved Kv= 20.3 fps
15.9	492	Total			

Subcatchment C14: Drainage Basin C14

Hydrograph



Summary for Subcatchment C15: Drainage Basin C15

Runoff = 1.44 cfs @ 0.09 hrs, Volume= 2,598 cf, Depth= 2.32"

Routed to Pond DP : Existing North Detention Pond

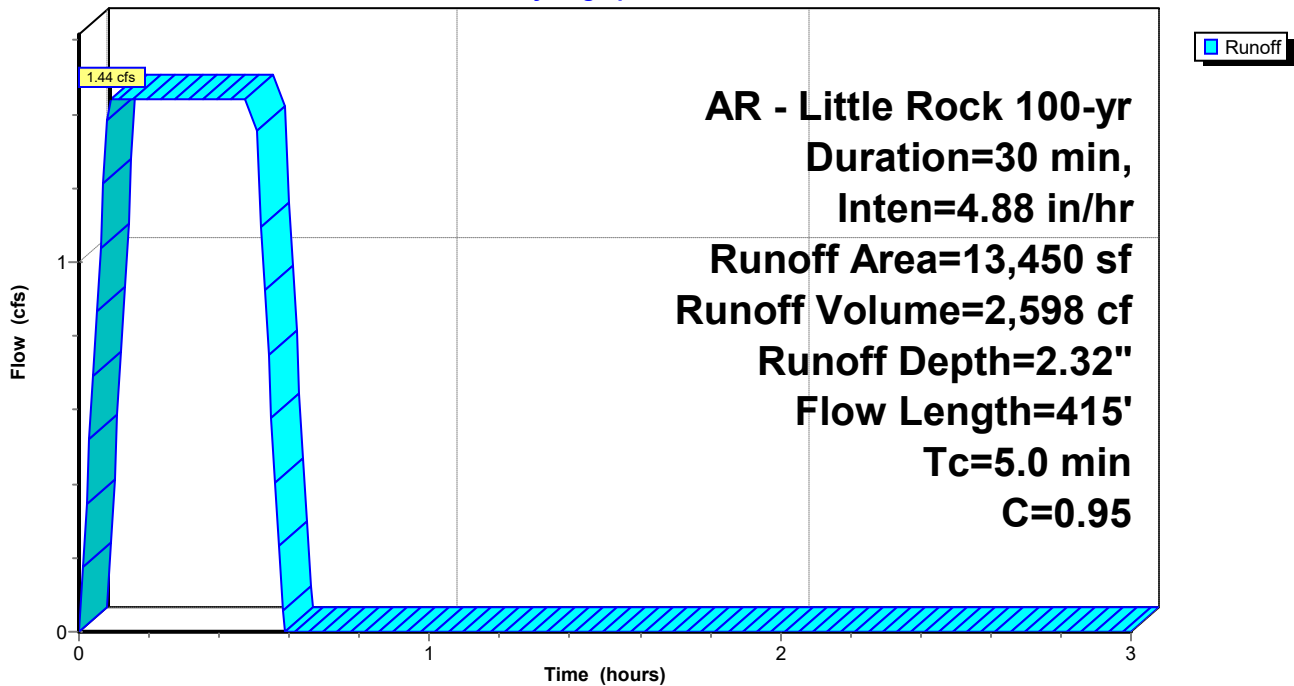
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
13,450	0.95	Paving, Sidewalks
13,450	0.95	Weighted Average
13,450		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	415		1.38		Direct Entry, Overland Concentrated Flow (Min)

Subcatchment C15: Drainage Basin C15

Hydrograph



Summary for Subcatchment C16: Drainage Basin C16

Runoff = 1.40 cfs @ 0.09 hrs, Volume= 2,514 cf, Depth= 1.37"

Routed to Pond DP : Existing North Detention Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

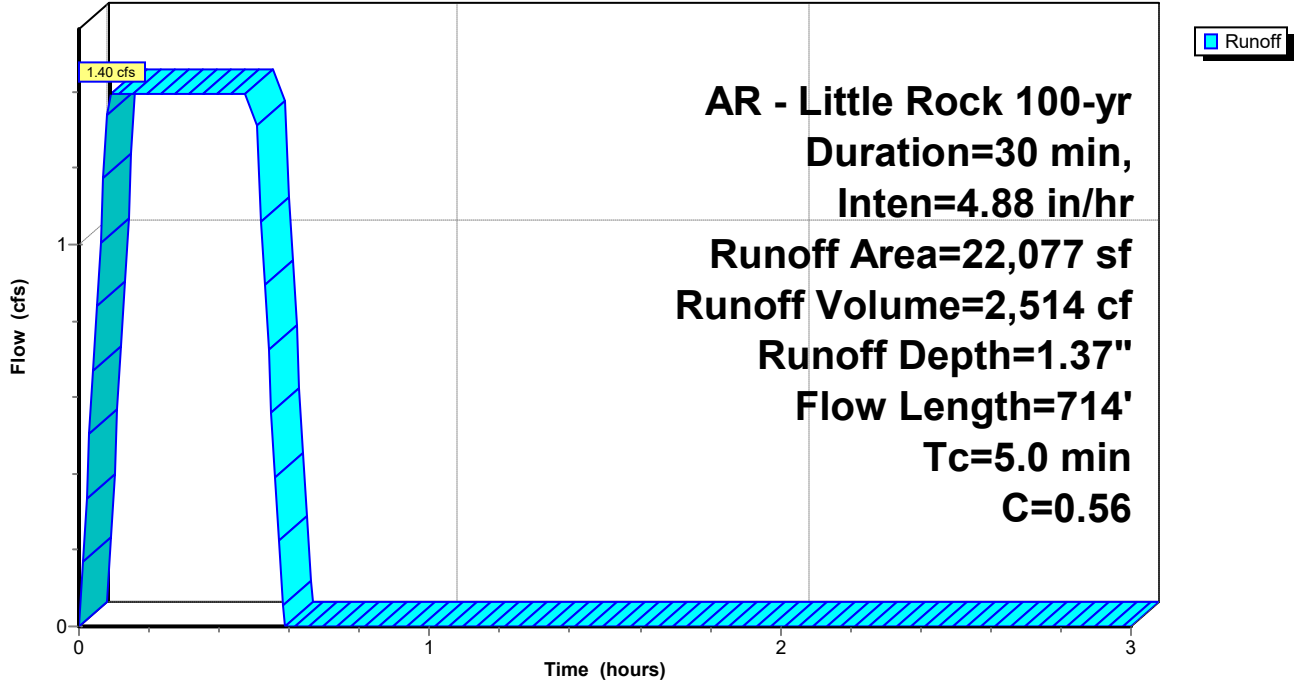
AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
15,465	0.40	Sod Yard
6,612	0.95	Paving, Sidewalks
22,077	0.56	Weighted Average
15,465		70.05% Pervious Area
6,612		29.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	26	0.0190	1.18		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	5	0.0100	0.66		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.4	51	0.0500	1.98		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	12	0.1540	2.33		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	50	0.1330	7.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	50	0.1170	6.94		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	46	0.0430	4.21		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.3	59	0.0370	3.90		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.3	415		2.10		Direct Entry, Overland Concentrated Flow (Min)
5.0	714	Total			

Subcatchment C16: Drainage Basin C16

Hydrograph



Summary for Subcatchment C17: Drainage Basin C17

Runoff = 3.53 cfs @ 0.16 hrs, Volume= 6,346 cf, Depth= 1.34"

Routed to Pond DP : Existing North Detention Pond

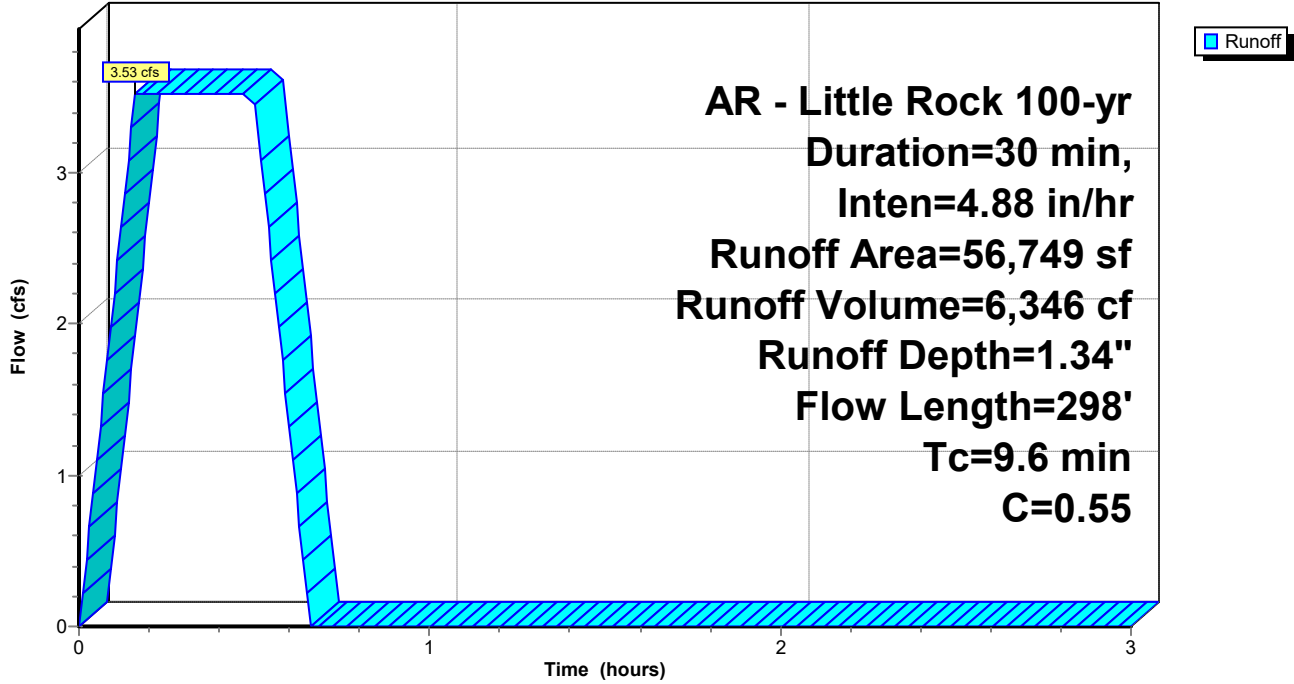
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
40,914	0.40	Sod Yard
15,835	0.95	Paving, Sidewalks
56,749	0.55	Weighted Average
40,914		72.10% Pervious Area
15,835		27.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	43	0.0410	0.15		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
3.9	43	0.0690	0.19		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
0.1	41	0.0980	4.70		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	61	0.0730	4.05		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.2	46	0.0570	3.58		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	64	0.0450	3.18		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
9.6	298	Total			

Subcatchment C17: Drainage Basin C17

Hydrograph



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AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

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Summary for Subcatchment C18: Drainage Basin C18

Runoff = 1.65 cfs @ 0.09 hrs, Volume= 2,965 cf, Depth= 1.56"

Routed to Link FINAL : APPROX DISCHARGE

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

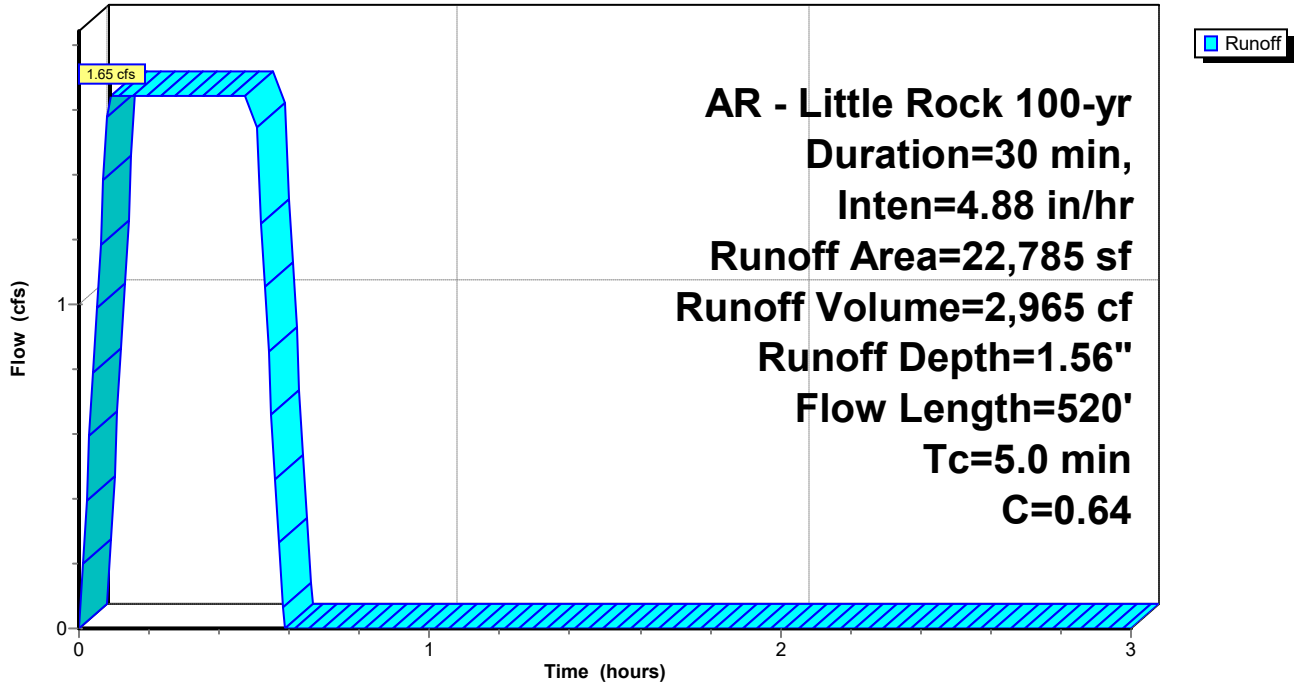
AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
12,812	0.40	Sod Yard
9,973	0.95	Paving, Sidewalks
22,785	0.64	Weighted Average
12,812		56.23% Pervious Area
9,973		43.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	5	0.2980	0.14		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.2	12	0.0130	0.87		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
3.3	8	0.0100	0.04		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.5	80	0.0210	2.94		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.4	415		17.29		Direct Entry, Concentrated Flow (Min)
5.0	520	Total			

Subcatchment C18: Drainage Basin C18

Hydrograph



Summary for Subcatchment C19: Drainage Basin C19

Runoff = 1.00 cfs @ 0.12 hrs, Volume= 1,794 cf, Depth= 1.20"
 Routed to Link FINAL : APPROX DISCHARGE

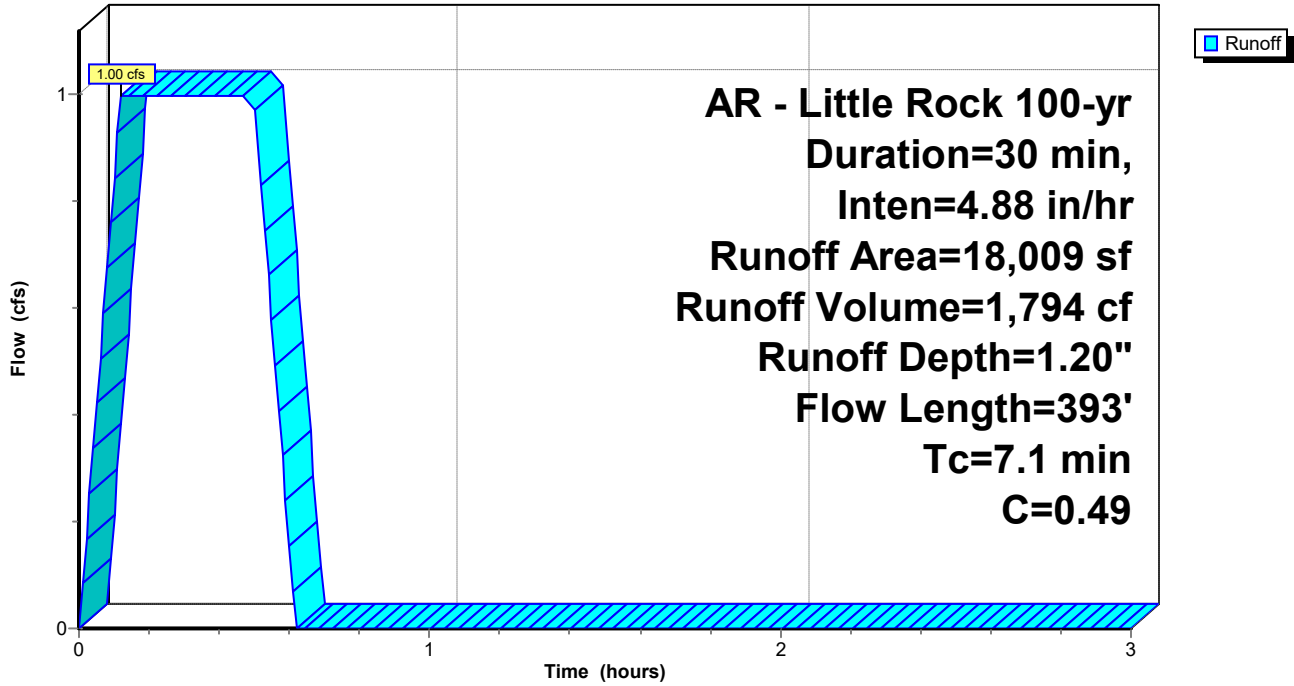
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
15,129	0.40	Sod Yard
2,880	0.95	Paving, Sidewalks
18,009	0.49	Weighted Average
15,129		84.01% Pervious Area
2,880		15.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	34	0.1110	0.21		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
3.3	66	0.2450	0.34		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
0.0	9	0.2450	7.42		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.5	106	0.0610	3.70		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.2	46	0.0800	4.24		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.1	41	0.0960	4.65		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	66	0.0680	3.91		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.0	19	0.1070	6.64		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	6	0.0750	5.56		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
7.1	393	Total			

Subcatchment C19: Drainage Basin C19

Hydrograph



Goddard

AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

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Summary for Subcatchment C2: Drainage Basin C2

Runoff = 2.99 cfs @ 0.09 hrs, Volume= 5,376 cf, Depth= 1.88"
 Routed to Pond CI-C2 : CI - C2

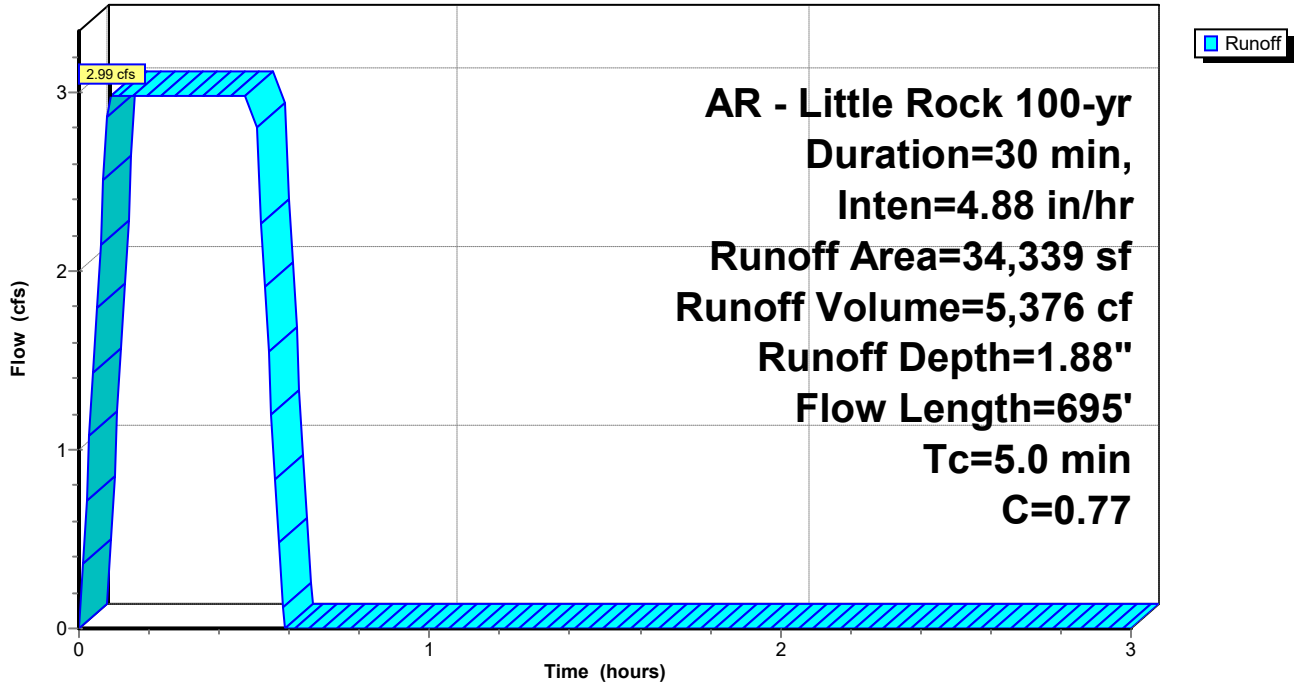
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
11,376	0.40	Sod Yard
22,963	0.95	Roof, Paving, Sidewalks
34,339	0.77	Weighted Average
11,376		33.13% Pervious Area
22,963		66.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	20	0.0200	1.14		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.4	74	0.0240	3.14		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	17	0.0710	5.41		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	21	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.6	148	0.0380	3.96		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
3.5	415		1.98		Direct Entry, Concentrated Flow (Min)
5.0	695	Total			

Subcatchment C2: Drainage Basin C2

Hydrograph



Goddard

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AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

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Summary for Subcatchment C20: Drainage Basin C20

Runoff = 1.38 cfs @ 0.14 hrs, Volume= 2,485 cf, Depth= 1.10"
 Routed to Link FINAL : APPROX DISCHARGE

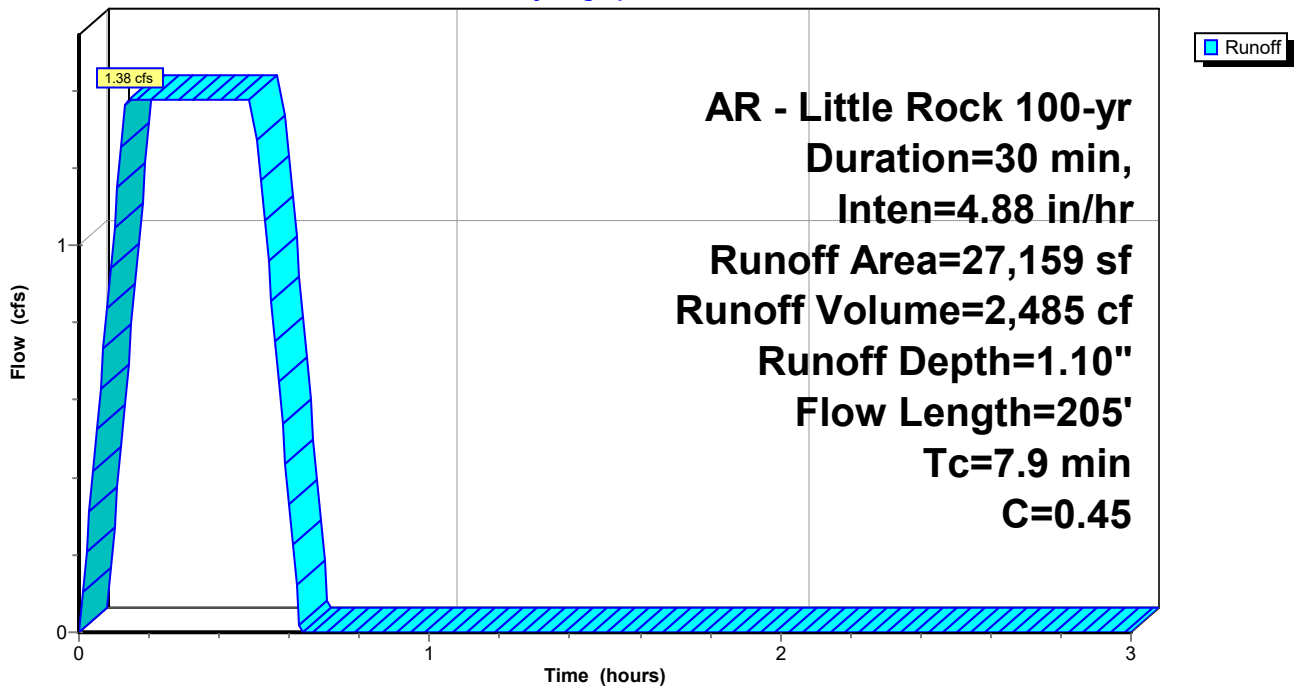
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
24,838	0.40	Sod Yard
2,321	0.95	Paving, Sidewalks
27,159	0.45	Weighted Average
24,838		91.45% Pervious Area
2,321		8.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	45	0.1430	0.25		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
4.5	55	0.0780	0.20		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 4.19"
0.1	37	0.0780	4.19		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
0.3	68	0.0710	4.00		Shallow Concentrated Flow, Concentrated Flow Grassed Waterway Kv= 15.0 fps
7.9	205	Total			

Subcatchment C20: Drainage Basin C20

Hydrograph



Summary for Subcatchment C21: Drainage Basin C21

Runoff = 0.15 cfs @ 0.09 hrs, Volume= 276 cf, Depth= 1.54"
 Routed to Link FINAL : APPROX DISCHARGE

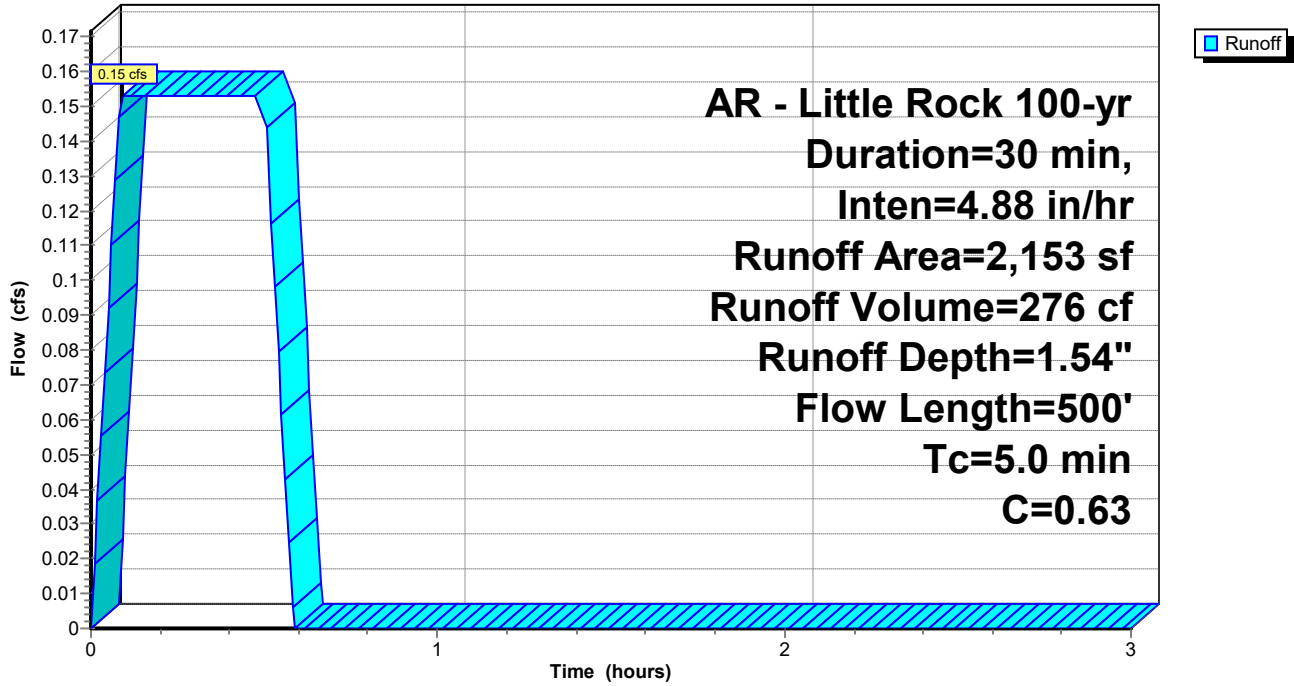
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
1,234	0.40	Sod Yard
919	0.95	Paving, Sidewalks
2,153	0.63	Weighted Average
1,234		57.32% Pervious Area
919		42.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	2	0.2500	0.11		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.3	33	0.0520	1.85		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
3.8	24	0.0660	0.11		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.1	26	0.0620	5.05		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.5	415		13.83		Direct Entry, Concentrated Flow (Min)
5.0	500	Total			

Subcatchment C21: Drainage Basin C21

Hydrograph



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AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

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Summary for Subcatchment C3: Drainage Basin C3

Runoff = 0.37 cfs @ 0.09 hrs, Volume= 672 cf, Depth= 2.32"
 Routed to Pond CI-C3 : CI - C3

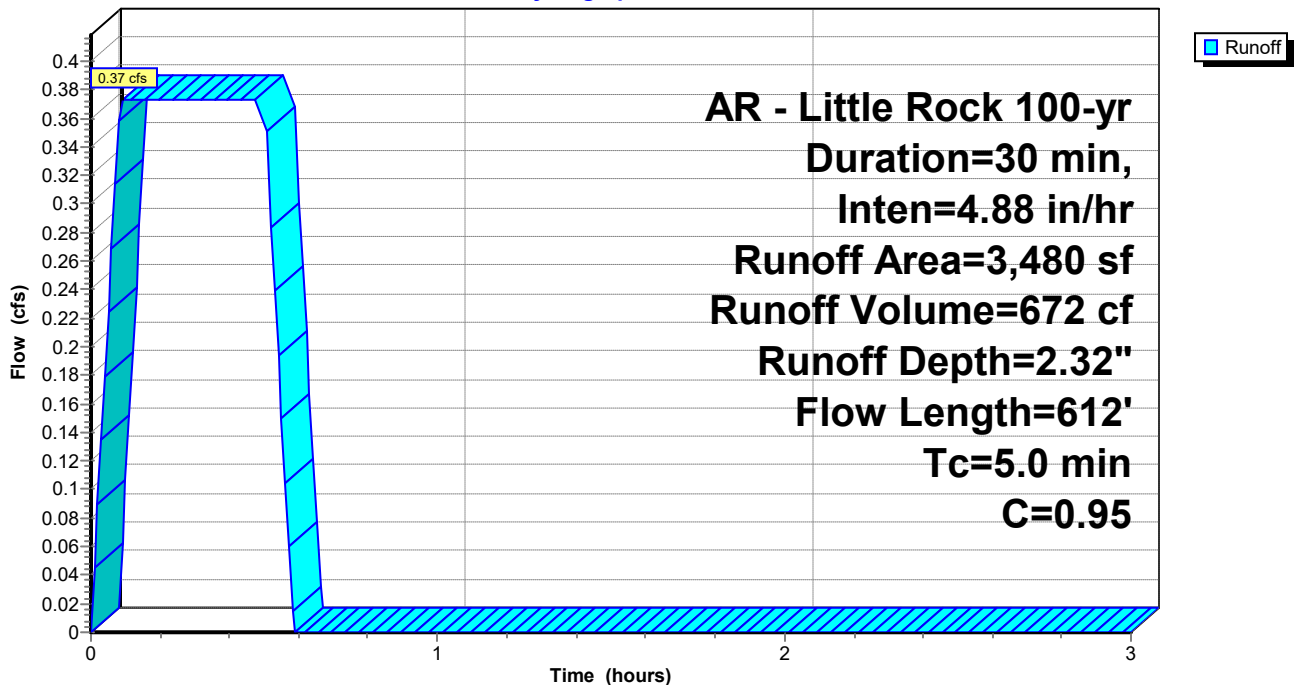
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
3,480	0.95	Paving, Sidewalks
3,480	0.95	Weighted Average
3,480		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	22	0.0200	1.16		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.0	10	0.0340	3.74		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	18	0.0390	4.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.6	147	0.0380	3.96		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.0	415		1.73		Direct Entry, Concentrated Flow (Min)
5.0	612	Total			

Subcatchment C3: Drainage Basin C3

Hydrograph



Summary for Subcatchment C4: Drainage Basin C4

Runoff = 0.72 cfs @ 0.09 hrs, Volume= 1,295 cf, Depth= 1.37"
 Routed to Pond CI-C3 : CI - C3

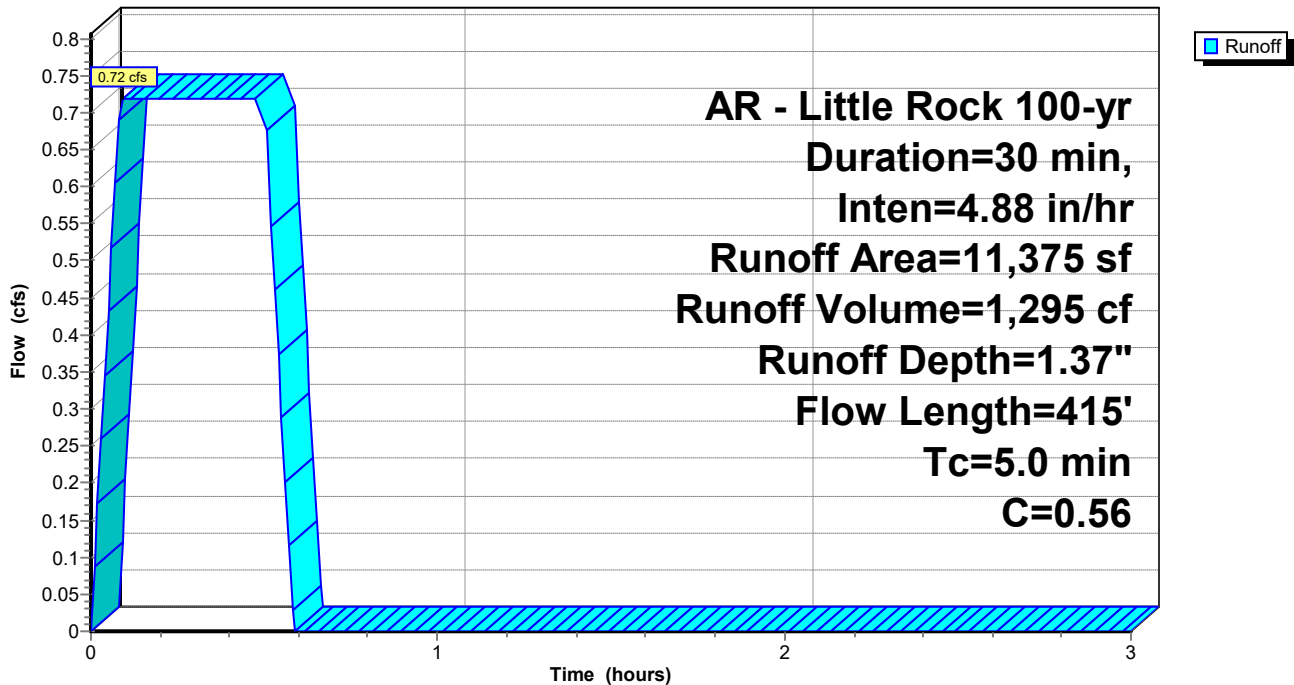
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
8,130	0.40	Sod Yard
3,245	0.95	Paving, Sidewalks
11,375	0.56	Weighted Average
8,130		71.47% Pervious Area
3,245		28.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	415		1.38		Direct Entry, Concentrated Flow (Min)

Subcatchment C4: Drainage Basin C4

Hydrograph



Summary for Subcatchment C5: Drainage Basin C5

Runoff = 0.62 cfs @ 0.10 hrs, Volume= 1,116 cf, Depth= 2.00"
 Routed to Pond CI-C4 : CI - C4

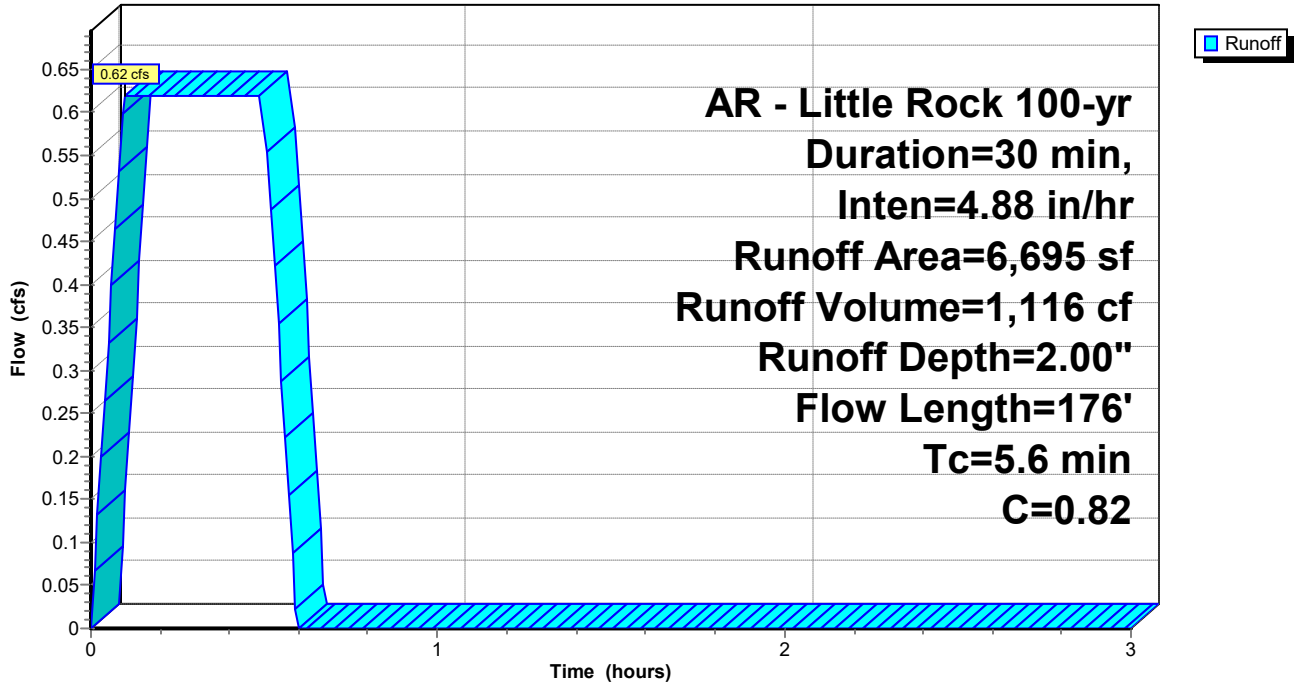
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
1,634	0.40	Sod Yard
5,061	0.95	Paving, Sidewalks
6,695	0.82	Weighted Average
1,634		24.41% Pervious Area
5,061		75.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	5	0.2990	0.14		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.2	12	0.0130	0.87		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
3.9	8	0.0070	0.03		Sheet Flow, Sheet Flow Grass: Bermuda n= 0.410 P2= 4.19"
0.5	58	0.0080	1.82		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	14	0.0280	3.40		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	23	0.0370	3.90		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	13	0.0940	6.22		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.0	13	0.0560	4.80		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	30	0.0180	2.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
5.6	176	Total			

Subcatchment C5: Drainage Basin C5

Hydrograph



Summary for Subcatchment C6: Drainage Basin C6

Runoff = 0.30 cfs @ 0.09 hrs, Volume= 548 cf, Depth= 2.32"
 Routed to Pond CI-C5 : CI - C5

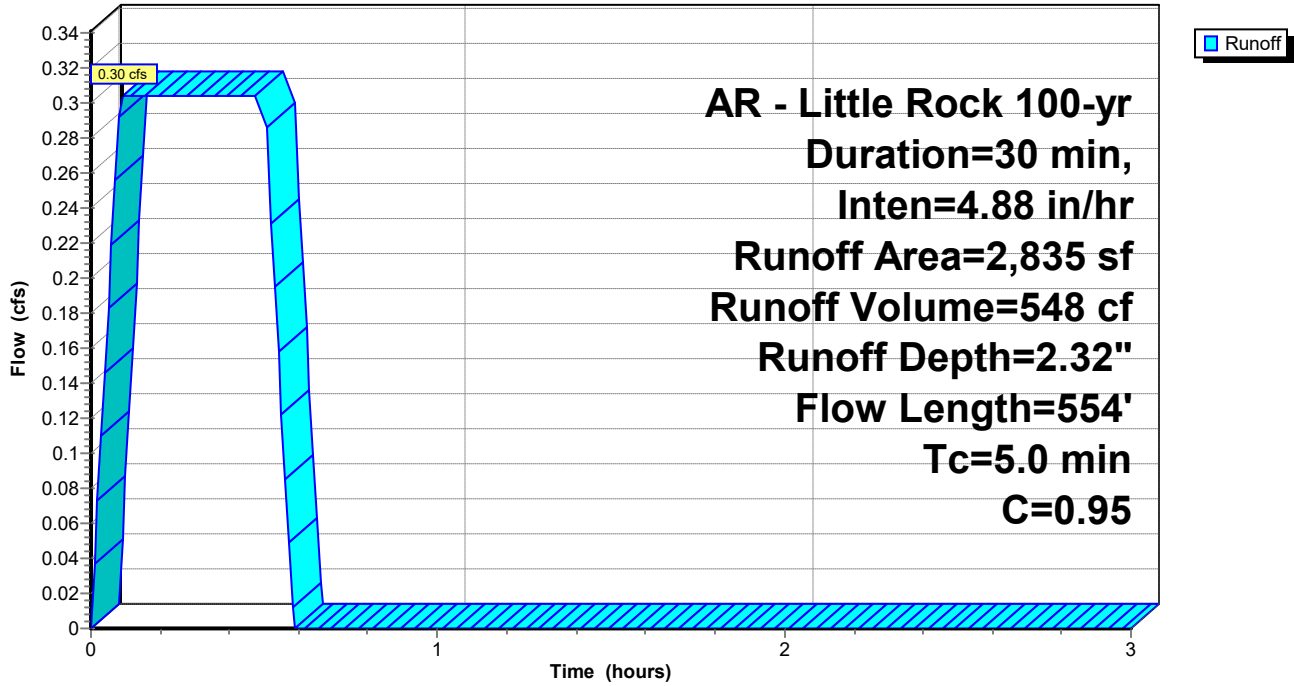
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
2,835	0.95	Paving, Sidewalks
2,835	0.95	Weighted Average
2,835		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	22	0.0200	1.16		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.2	19	0.0100	2.03		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	17	0.0170	2.65		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	26	0.0360	3.85		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	28	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	27	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.1	415		1.69		Direct Entry, Concentrated Flow (Min)
5.0	554	Total			

Subcatchment C6: Drainage Basin C6

Hydrograph



Goddard

Prepared by Phillip Lewis Engineering

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AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

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Summary for Subcatchment C7: Drainage Basin C7

Runoff = 0.17 cfs @ 0.09 hrs, Volume= 308 cf, Depth= 2.32"
 Routed to Pond CI-D1 : CI - D1

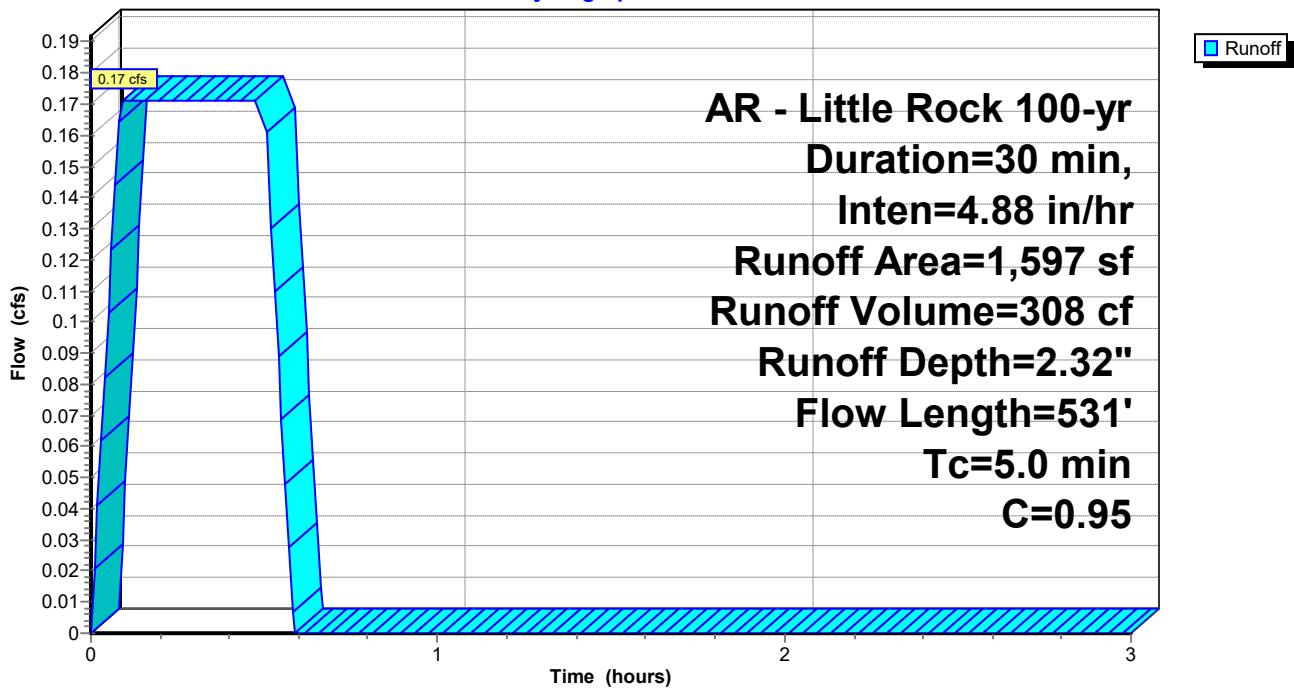
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
1,597	0.95	Paving, Sidewalks
1,597	0.95	Weighted Average
1,597		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	19	0.0200	1.13		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	16	0.0540	4.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.3	81	0.0580	4.89		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.3	415		1.61		Direct Entry, Concentrated Flow (Min)
5.0	531	Total			

Subcatchment C7: Drainage Basin C7

Hydrograph



Summary for Subcatchment C8: Drainage Basin C8

Runoff = 0.17 cfs @ 0.09 hrs, Volume= 299 cf, Depth= 2.32"
 Routed to Pond CI-D2 : CI - D2

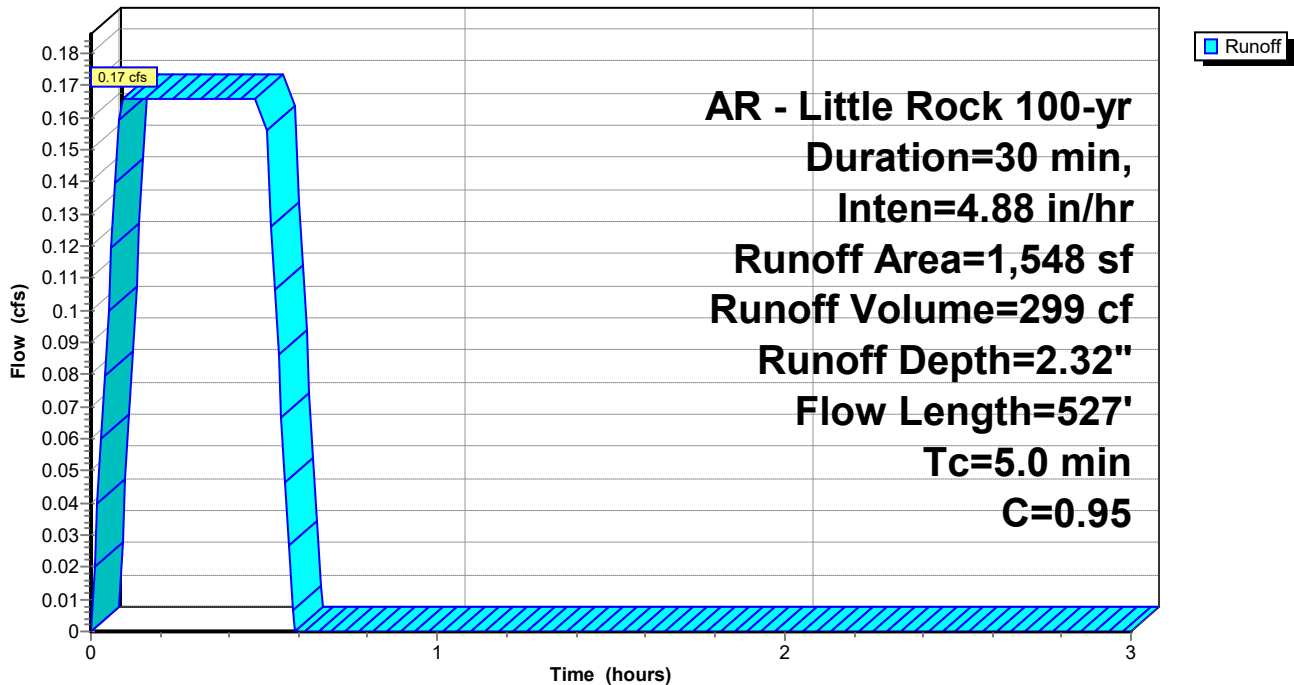
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
0	0.40	Sod Yard
1,548	0.95	Paving, Sidewalks
1,548	0.95	Weighted Average
1,548		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	1.12		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.3	94	0.0610	5.01		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
4.4	415		1.57		Direct Entry, Concentrated Flow (Min)
5.0	527	Total			

Subcatchment C8: Drainage Basin C8

Hydrograph



Goddard

Prepared by Phillip Lewis Engineering

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AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

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Summary for Subcatchment C9: Drainage Basin C9

Runoff = 1.20 cfs @ 0.09 hrs, Volume= 2,163 cf, Depth= 1.88"
 Routed to Pond CI-C6 : CI - C6

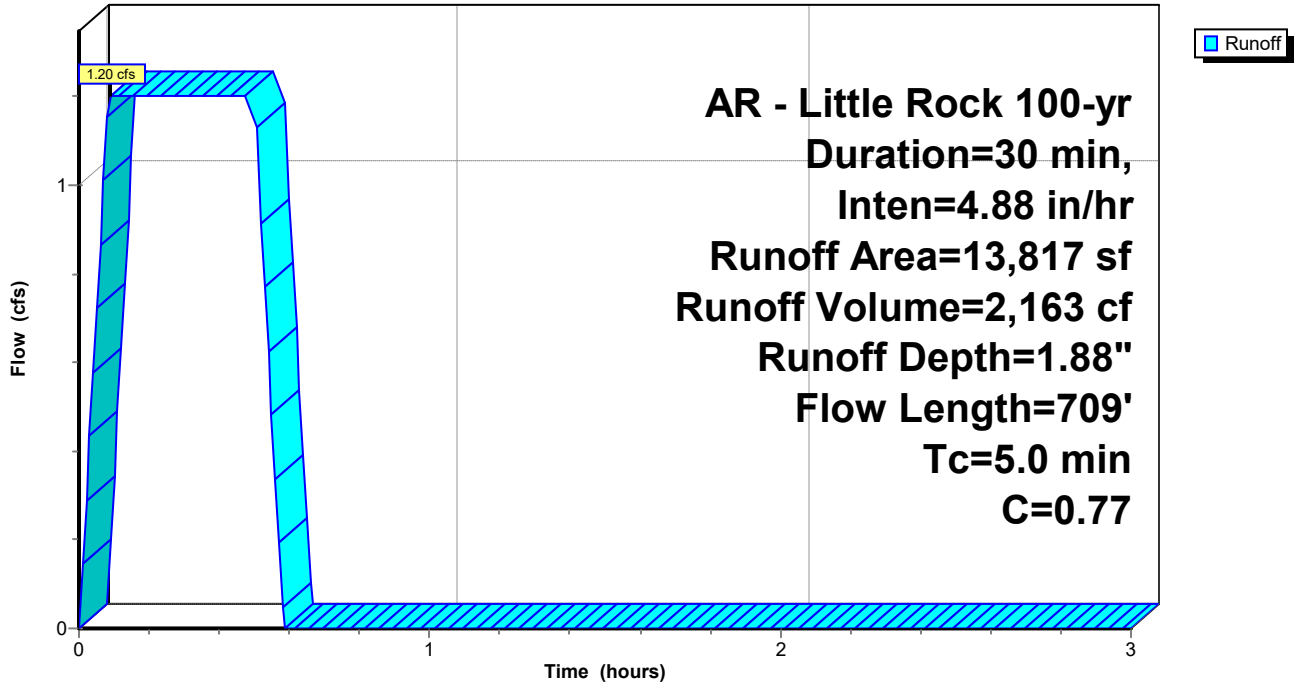
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Area (sf)	C	Description
4,456	0.40	Sod Yard
9,361	0.95	Paving, Sidewalks
13,817	0.77	Weighted Average
4,456		32.25% Pervious Area
9,361		67.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0140	1.36		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 4.19"
0.1	13	0.0150	2.49		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	23	0.0160	2.57		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	7	0.0050	1.44		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	8	0.0100	2.03		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	41	0.0420	4.16		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.1	41	0.0540	4.72		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
0.2	61	0.0520	4.63		Shallow Concentrated Flow, Concentrated Flow Paved Kv= 20.3 fps
2.9	415		2.39		Direct Entry, Concentrated Flow (Min)
5.0	709	Total			

Subcatchment C9: Drainage Basin C9

Hydrograph



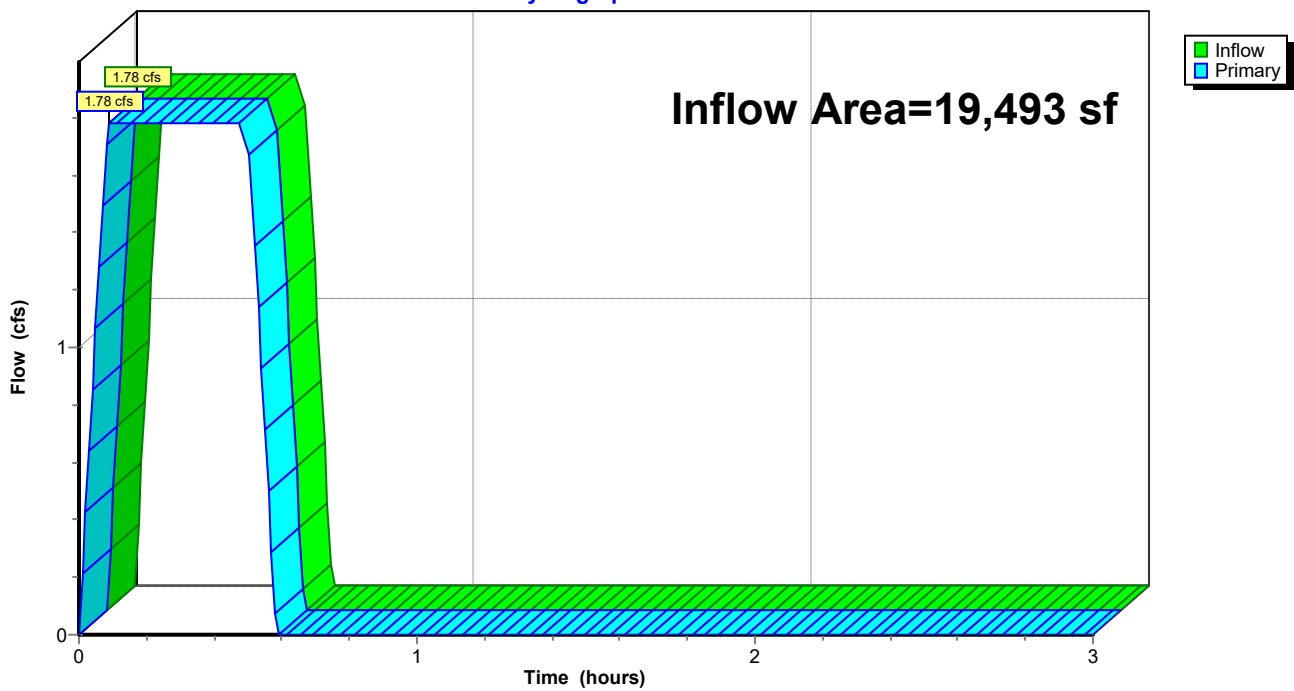
Summary for Pond CI-A1: CI - A1

Inflow Area = 19,493 sf, 74.85% Impervious, Inflow Depth = 1.98" for 100-yr event
Inflow = 1.78 cfs @ 0.09 hrs, Volume= 3,210 cf
Primary = 1.78 cfs @ 0.09 hrs, Volume= 3,210 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond JB-A2 : JB - A2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A1: CI - A1

Hydrograph



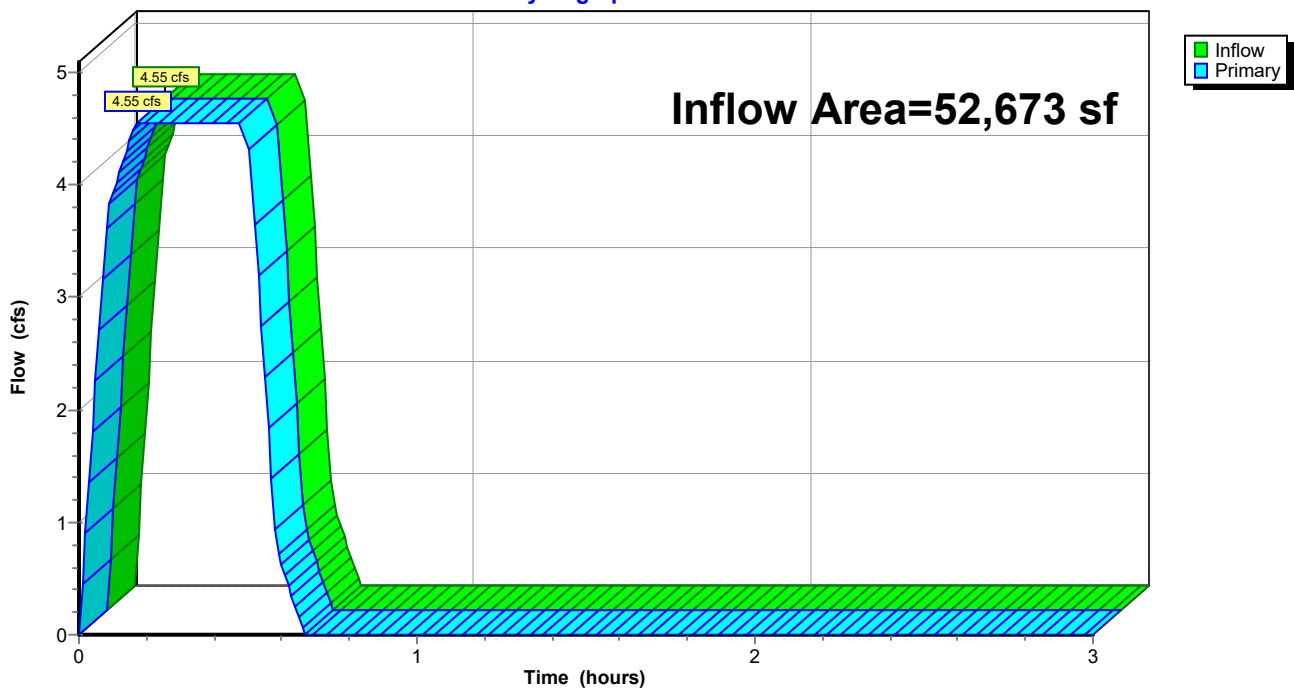
Summary for Pond CI-A3: CI - A3

Inflow Area = 52,673 sf, 66.48% Impervious, Inflow Depth = 1.87" for 100-yr event
Inflow = 4.55 cfs @ 0.17 hrs, Volume= 8,187 cf
Primary = 4.55 cfs @ 0.17 hrs, Volume= 8,187 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-A4 : CI - A4

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A3: CI - A3

Hydrograph



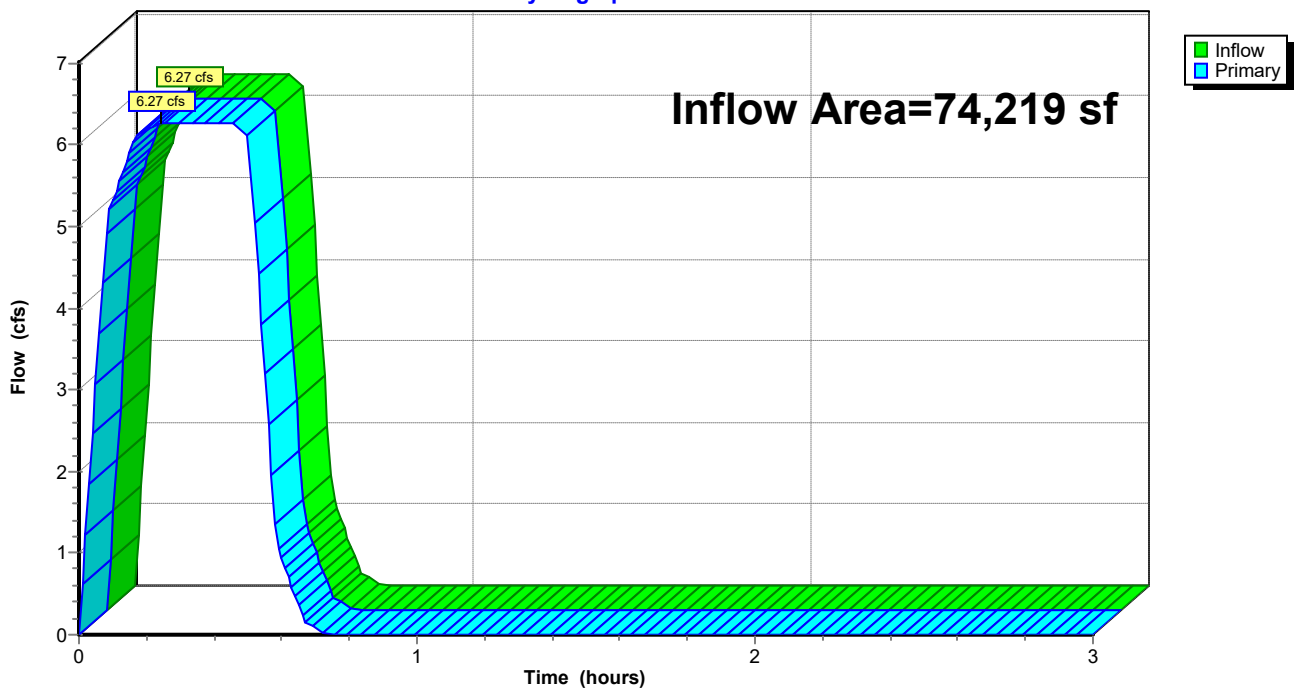
Summary for Pond CI-A4: CI - A4

Inflow Area = 74,219 sf, 63.30% Impervious, Inflow Depth = 1.82" for 100-yr event
Inflow = 6.27 cfs @ 0.24 hrs, Volume= 11,278 cf
Primary = 6.27 cfs @ 0.24 hrs, Volume= 11,278 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-A5 : CI - A5

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A4: CI - A4

Hydrograph



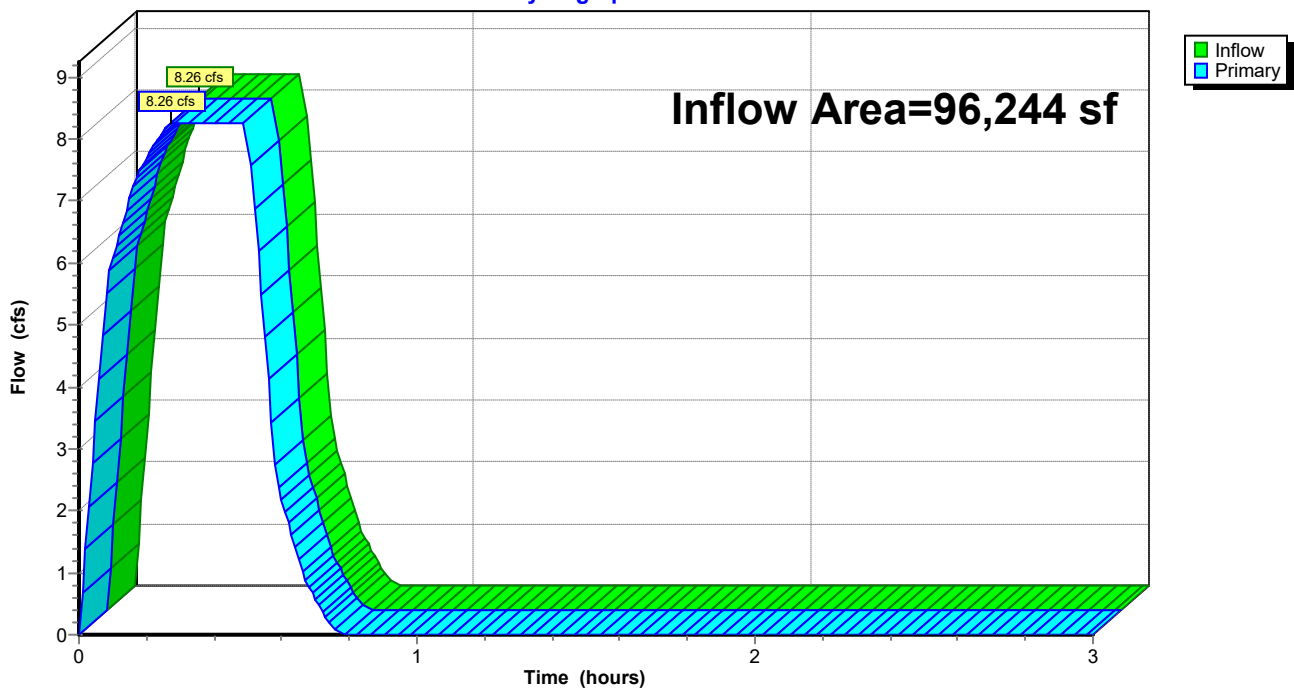
Summary for Pond CI-A5: CI - A5

Inflow Area = 96,244 sf, 65.33% Impervious, Inflow Depth = 1.85" for 100-yr event
Inflow = 8.26 cfs @ 0.27 hrs, Volume= 14,861 cf
Primary = 8.26 cfs @ 0.27 hrs, Volume= 14,861 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond DP : Existing North Detention Pond

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-A5: CI - A5

Hydrograph



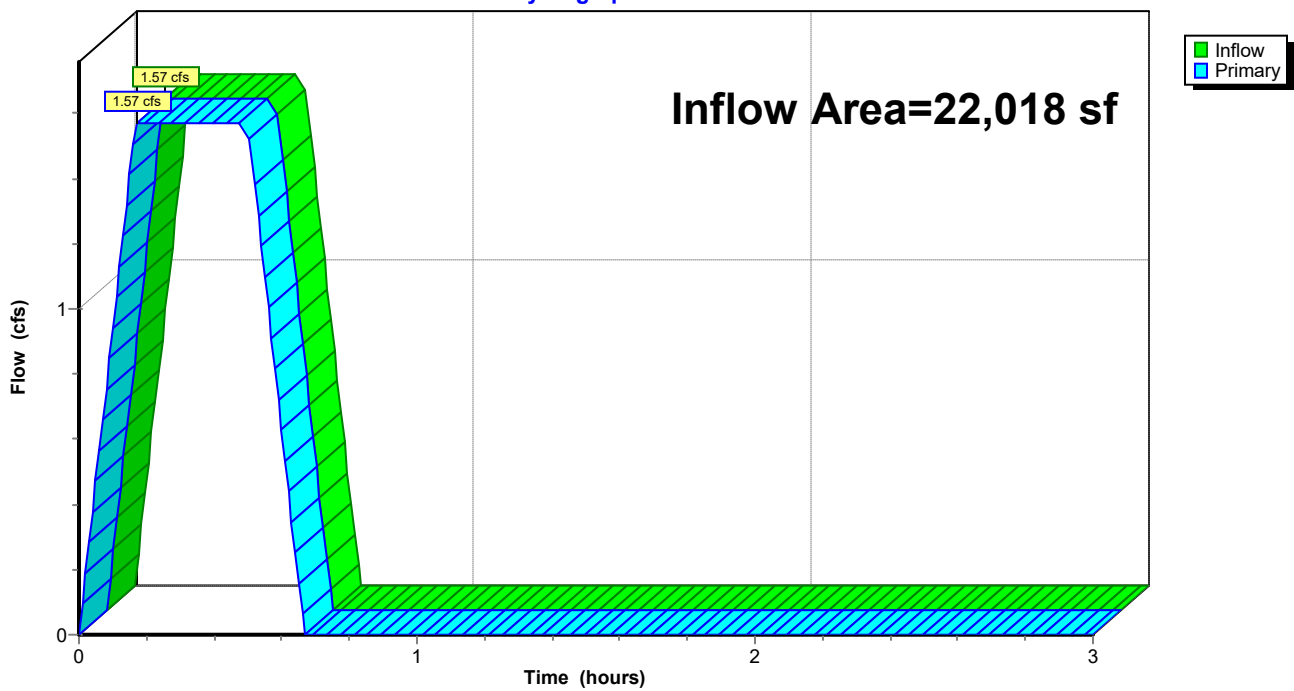
Summary for Pond CI-B2: CI - B2

Inflow Area = 22,018 sf, 42.08% Impervious, Inflow Depth = 1.54" for 100-yr event
Inflow = 1.57 cfs @ 0.17 hrs, Volume= 2,821 cf
Primary = 1.57 cfs @ 0.17 hrs, Volume= 2,821 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond JB-A2 : JB - A2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-B2: CI - B2

Hydrograph



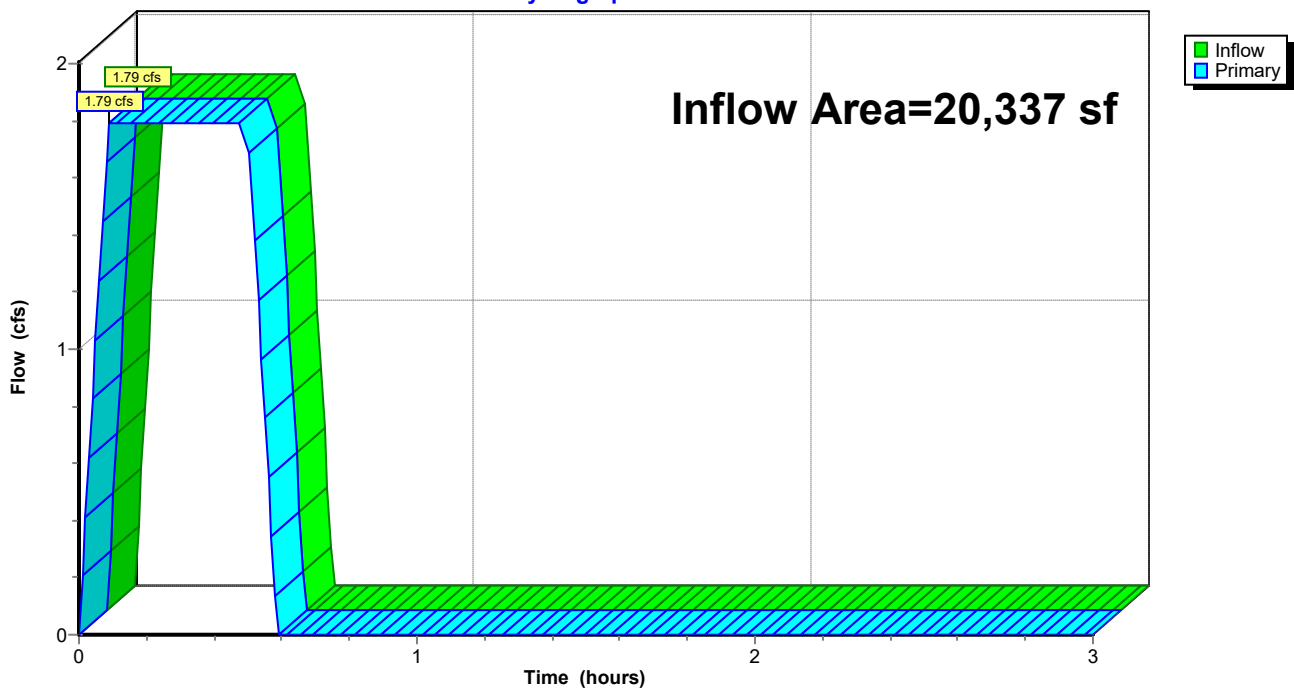
Summary for Pond CI-C1: CI - C1

Inflow Area = 20,337 sf, 69.83% Impervious, Inflow Depth = 1.90" for 100-yr event
Inflow = 1.79 cfs @ 0.09 hrs, Volume= 3,225 cf
Primary = 1.79 cfs @ 0.09 hrs, Volume= 3,225 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C2 : CI - C2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C1: CI - C1

Hydrograph



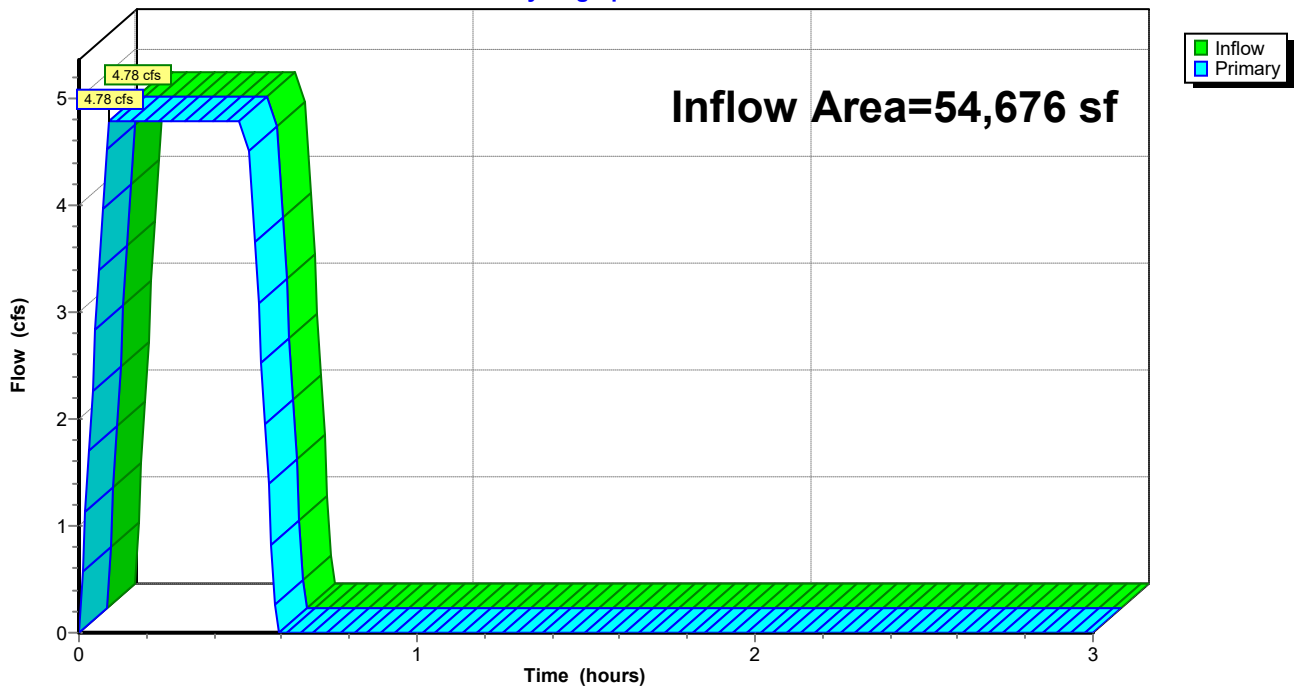
Summary for Pond CI-C2: CI - C2

Inflow Area = 54,676 sf, 67.97% Impervious, Inflow Depth = 1.89" for 100-yr event
Inflow = 4.78 cfs @ 0.09 hrs, Volume= 8,602 cf
Primary = 4.78 cfs @ 0.09 hrs, Volume= 8,602 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C3 : CI - C3

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C2: CI - C2

Hydrograph



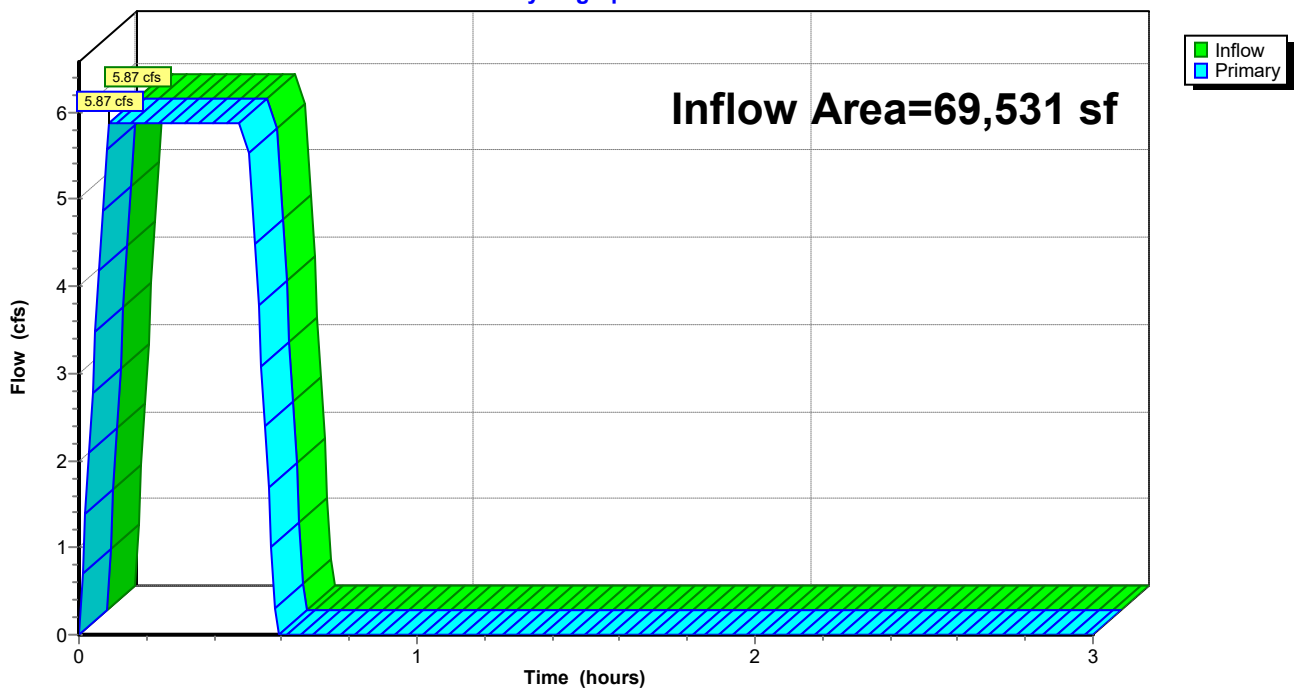
Summary for Pond CI-C3: CI - C3

Inflow Area = 69,531 sf, 63.12% Impervious, Inflow Depth = 1.82" for 100-yr event
Inflow = 5.87 cfs @ 0.09 hrs, Volume= 10,569 cf
Primary = 5.87 cfs @ 0.09 hrs, Volume= 10,569 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C4 : CI - C4

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C3: CI - C3

Hydrograph



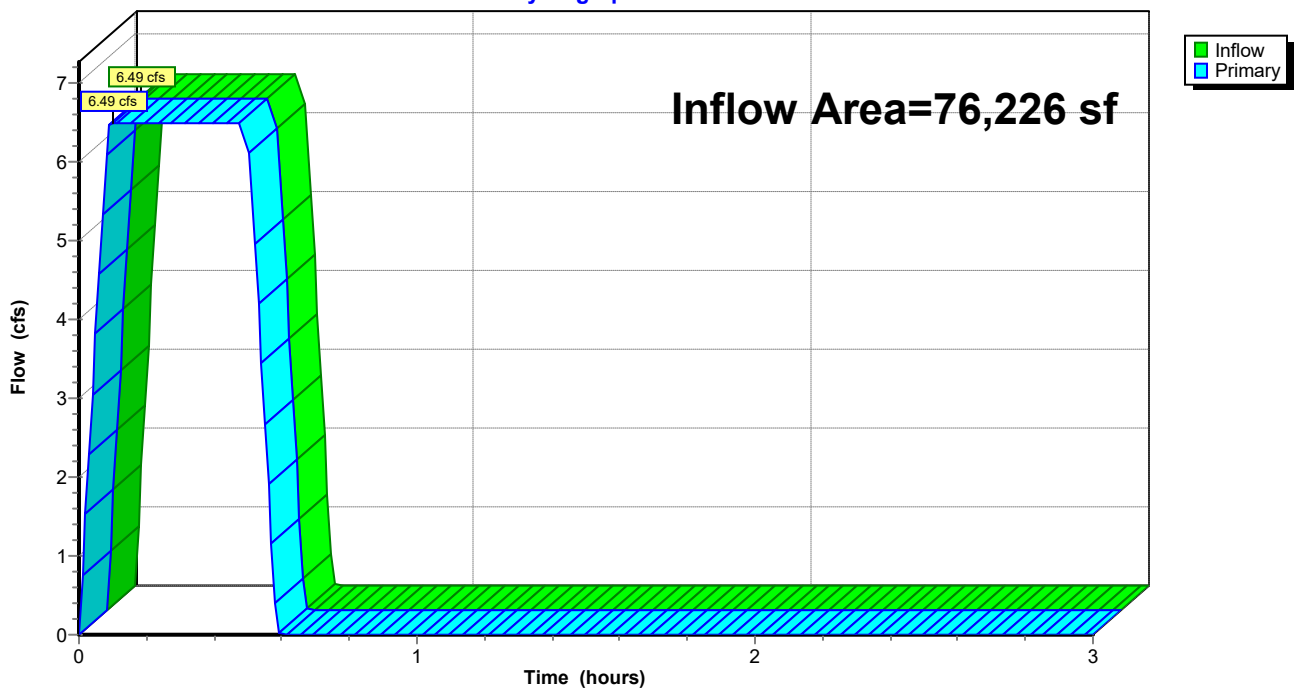
Summary for Pond CI-C4: CI - C4

Inflow Area = 76,226 sf, 64.22% Impervious, Inflow Depth = 1.84" for 100-yr event
Inflow = 6.49 cfs @ 0.10 hrs, Volume= 11,686 cf
Primary = 6.49 cfs @ 0.10 hrs, Volume= 11,686 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C5 : CI - C5

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C4: CI - C4

Hydrograph



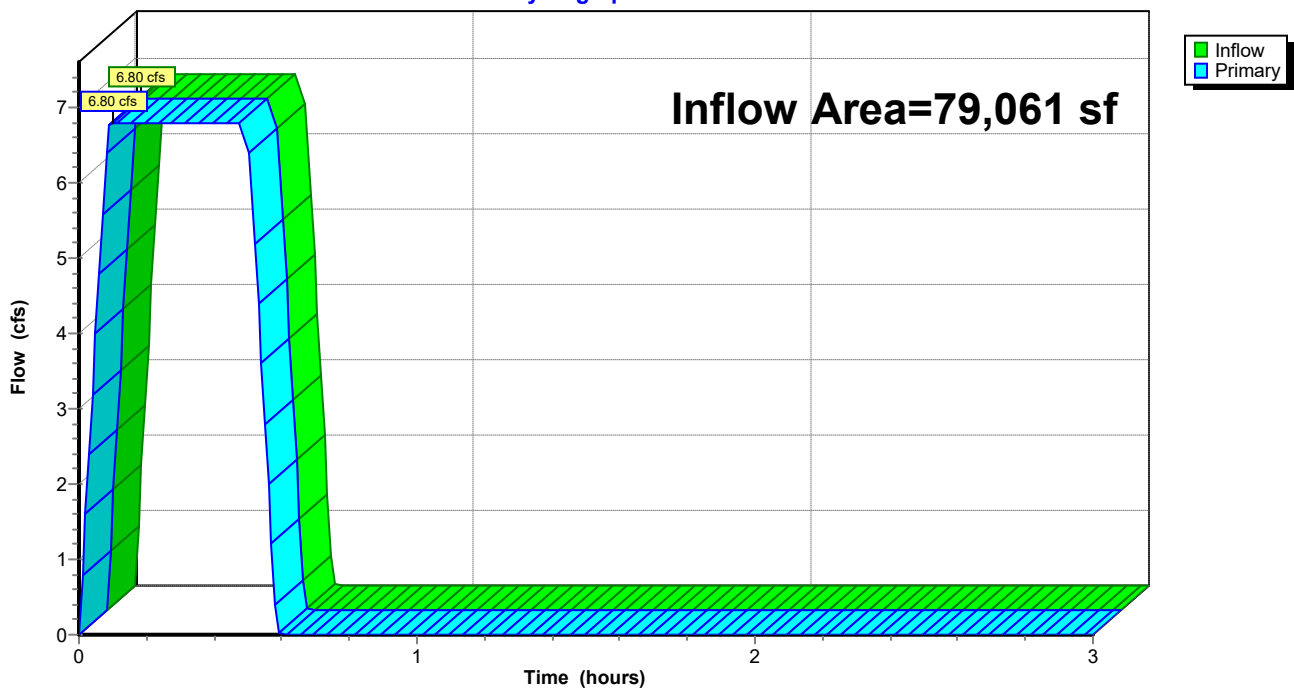
Summary for Pond CI-C5: CI - C5

Inflow Area = 79,061 sf, 65.50% Impervious, Inflow Depth = 1.86" for 100-yr event
Inflow = 6.80 cfs @ 0.10 hrs, Volume= 12,233 cf
Primary = 6.80 cfs @ 0.10 hrs, Volume= 12,233 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C6 : CI - C6

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C5: CI - C5

Hydrograph



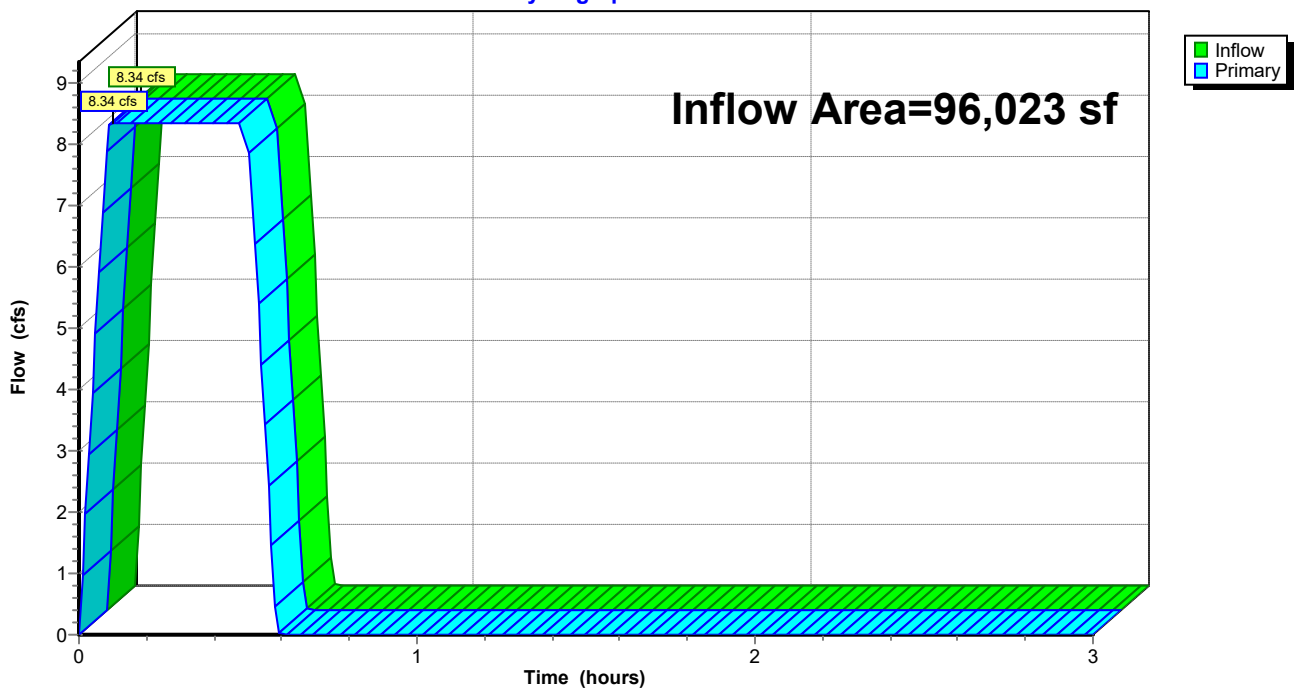
Summary for Pond CI-C6: CI - C6

Inflow Area = 96,023 sf, 66.95% Impervious, Inflow Depth = 1.88" for 100-yr event
Inflow = 8.34 cfs @ 0.10 hrs, Volume= 15,004 cf
Primary = 8.34 cfs @ 0.10 hrs, Volume= 15,004 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C7 : CI - C7

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C6: CI - C6

Hydrograph



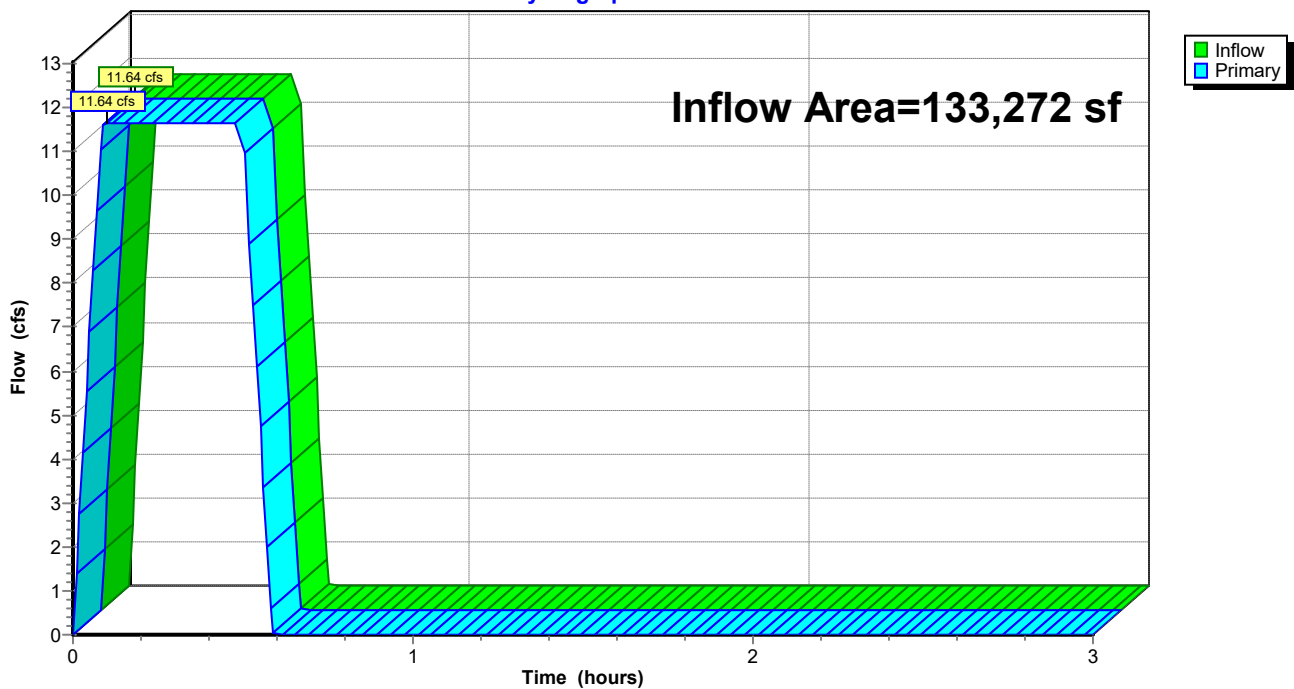
Summary for Pond CI-C7: CI - C7

Inflow Area = 133,272 sf, 67.70% Impervious, Inflow Depth = 1.89" for 100-yr event
Inflow = 11.64 cfs @ 0.10 hrs, Volume= 20,958 cf
Primary = 11.64 cfs @ 0.10 hrs, Volume= 20,958 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond DP : Existing North Detention Pond

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-C7: CI - C7

Hydrograph



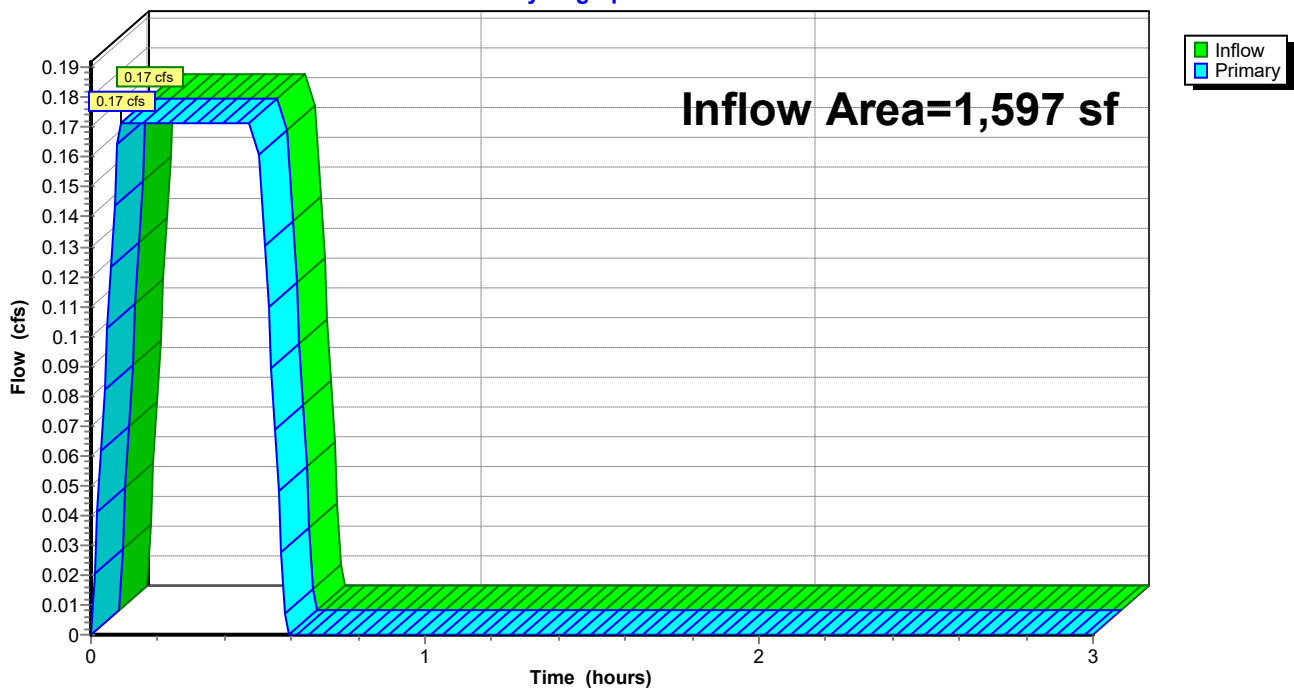
Summary for Pond CI-D1: CI - D1

Inflow Area = 1,597 sf, 100.00% Impervious, Inflow Depth = 2.32" for 100-yr event
Inflow = 0.17 cfs @ 0.09 hrs, Volume= 308 cf
Primary = 0.17 cfs @ 0.09 hrs, Volume= 308 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-D2 : CI - D2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-D1: CI - D1

Hydrograph



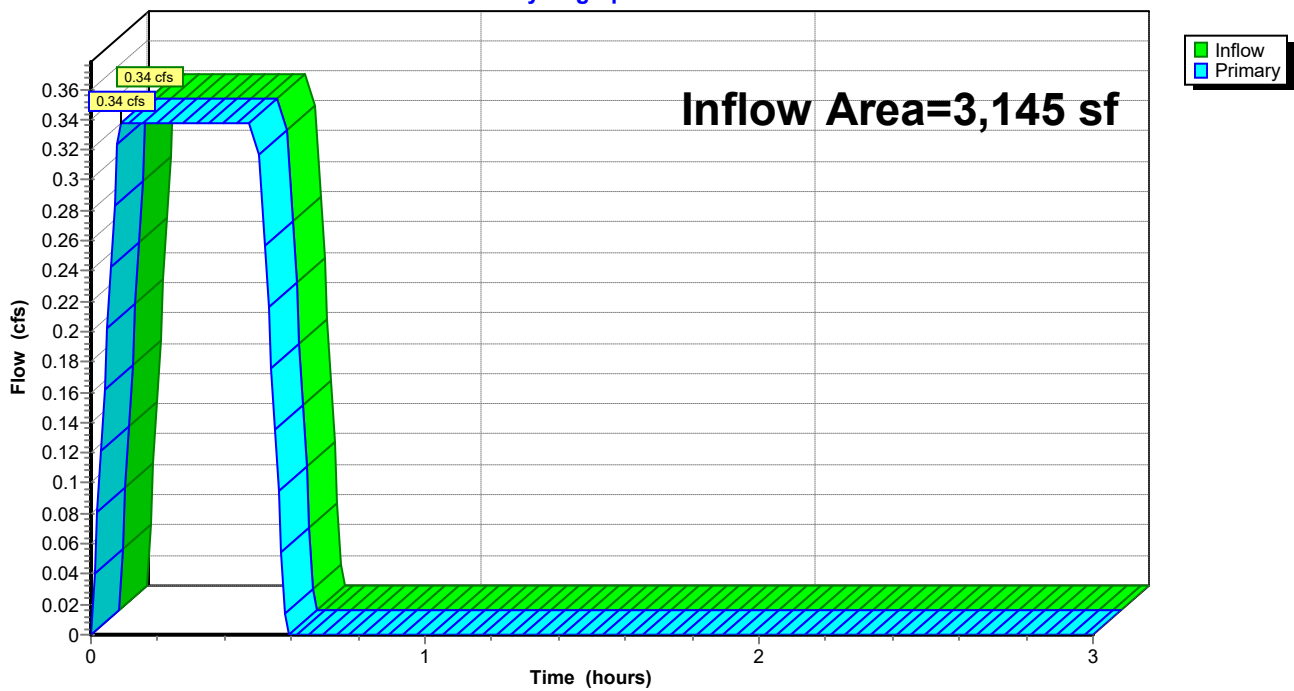
Summary for Pond CI-D2: CI - D2

Inflow Area = 3,145 sf, 100.00% Impervious, Inflow Depth = 2.32" for 100-yr event
Inflow = 0.34 cfs @ 0.09 hrs, Volume= 608 cf
Primary = 0.34 cfs @ 0.09 hrs, Volume= 608 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C6 : CI - C6

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-D2: CI - D2

Hydrograph



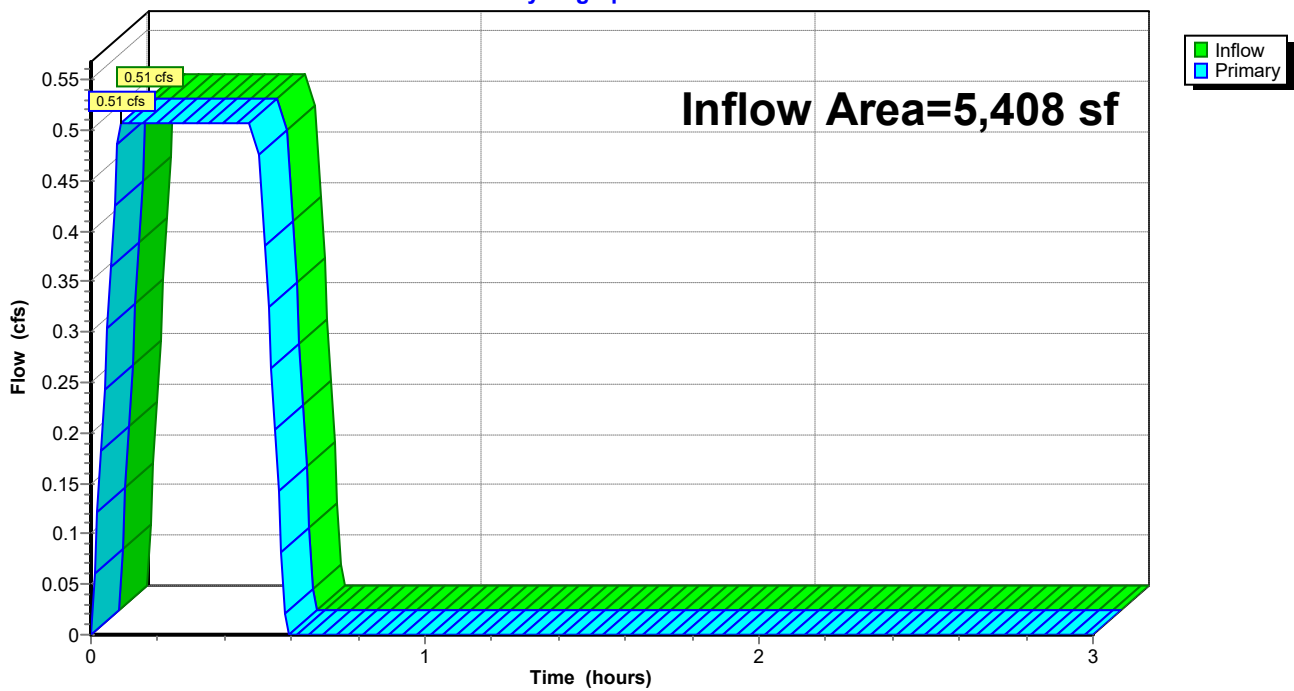
Summary for Pond CI-E1: CI - E1

Inflow Area = 5,408 sf, 77.35% Impervious, Inflow Depth = 2.03" for 100-yr event
Inflow = 0.51 cfs @ 0.09 hrs, Volume= 913 cf
Primary = 0.51 cfs @ 0.09 hrs, Volume= 913 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-E2 : CI - E2

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-E1: CI - E1

Hydrograph



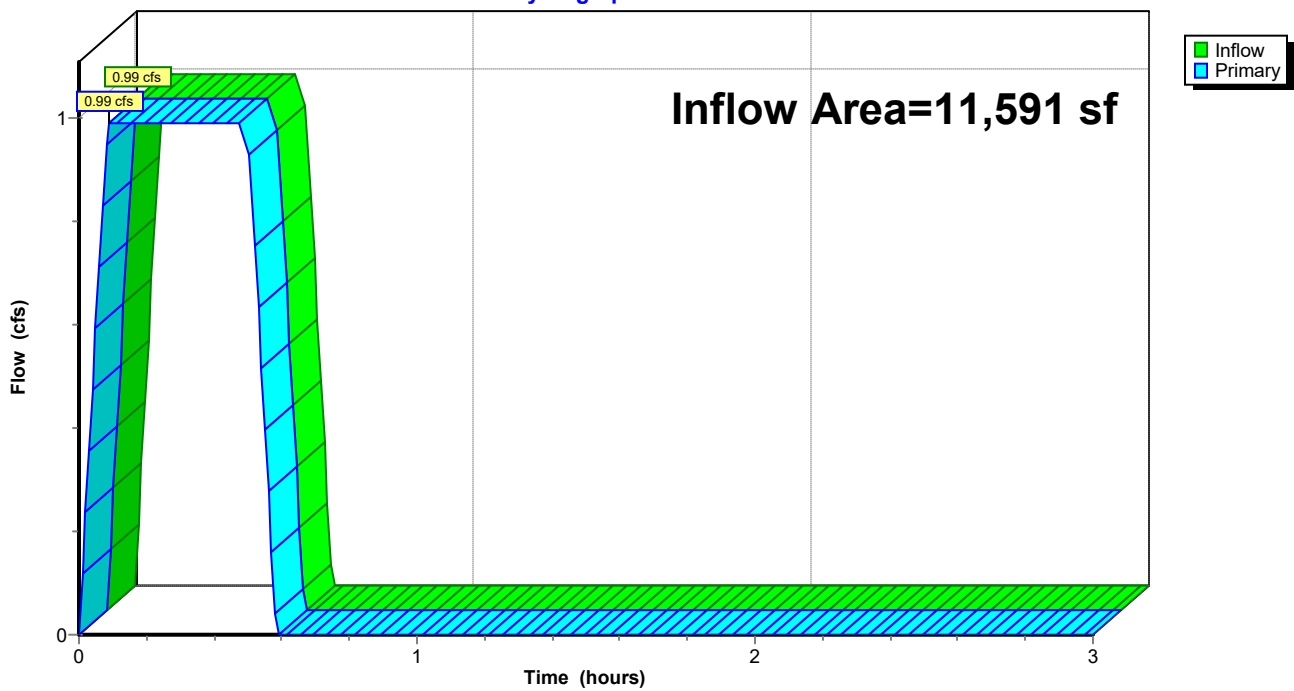
Summary for Pond CI-E2: CI - E2

Inflow Area = 11,591 sf, 64.62% Impervious, Inflow Depth = 1.84" for 100-yr event
Inflow = 0.99 cfs @ 0.09 hrs, Volume= 1,780 cf
Primary = 0.99 cfs @ 0.09 hrs, Volume= 1,780 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-C7 : CI - C7

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond CI-E2: CI - E2

Hydrograph



Goddard

AR - Little Rock 100-yr Duration=30 min, Inten=4.88 in/hr

Prepared by Phillip Lewis Engineering

Printed 3/11/2026

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Summary for Pond DP: Existing North Detention Pond

Inflow Area = 321,792 sf, 58.73% Impervious, Inflow Depth = 1.76" for 100-yr event
 Inflow = 26.26 cfs @ 0.27 hrs, Volume= 47,277 cf
 Outflow = 13.63 cfs @ 0.55 hrs, Volume= 47,277 cf, Atten= 48%, Lag= 16.7 min
 Primary = 13.63 cfs @ 0.55 hrs, Volume= 47,277 cf
 Routed to Link FINAL : APPROX DISCHARGE

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 Peak Elev= 383.40' @ 0.55 hrs Storage= 27,495 cf

Plug-Flow detention time= 24.2 min calculated for 47,120 cf (100% of inflow)
 Center-of-Mass det. time= 24.3 min (42.8 - 18.5)

Volume	Invert	Avail.Storage	Storage Description
#1	381.17'	72,742 cf	Custom Stage Data Listed below

Elevation (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
381.17	0	0
381.50	200	200
382.00	1,825	2,025
382.50	5,265	7,290
383.00	9,300	16,590
383.50	13,733	30,323
384.00	18,578	48,901
384.50	23,841	72,742

Device	Routing	Invert	Outlet Devices
#1	Primary	384.16'	5.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#2	Primary	381.17'	1.7' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

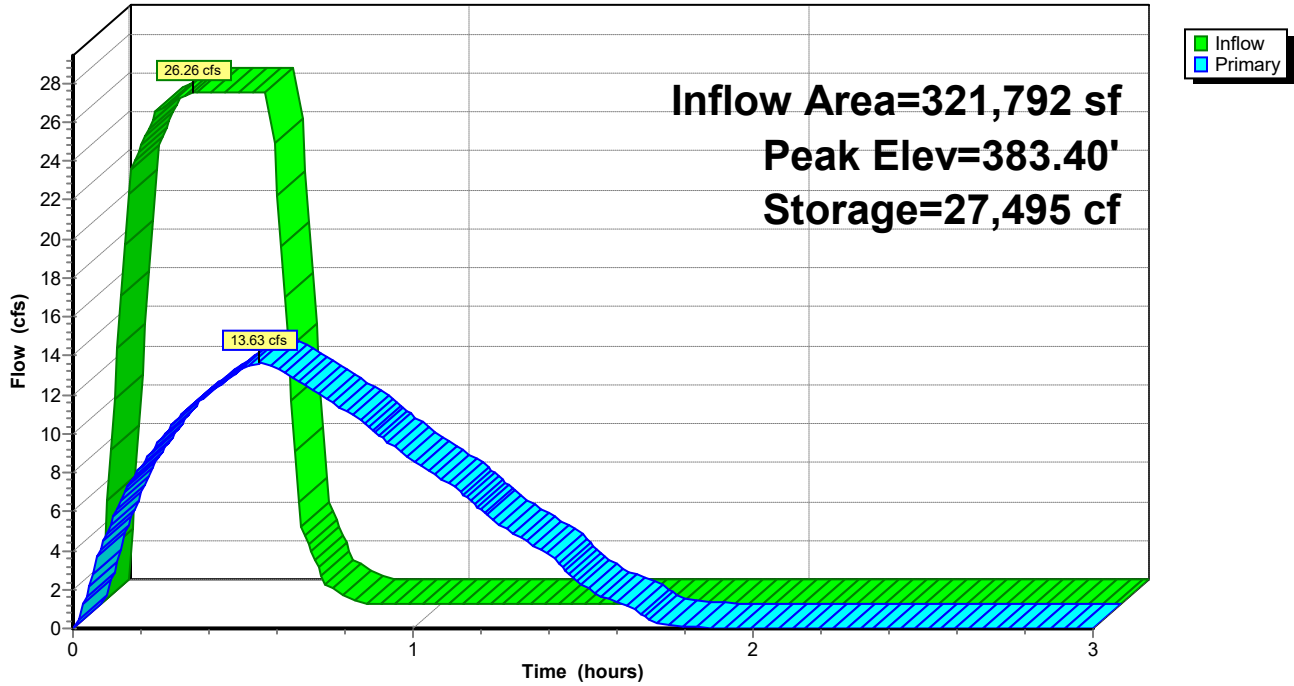
Primary OutFlow Max=13.63 cfs @ 0.55 hrs HW=383.40' (Free Discharge)

↑ **1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

└ **2=Sharp-Crested Rectangular Weir** (Weir Controls 13.63 cfs @ 4.88 fps)

Pond DP: Existing North Detention Pond

Hydrograph



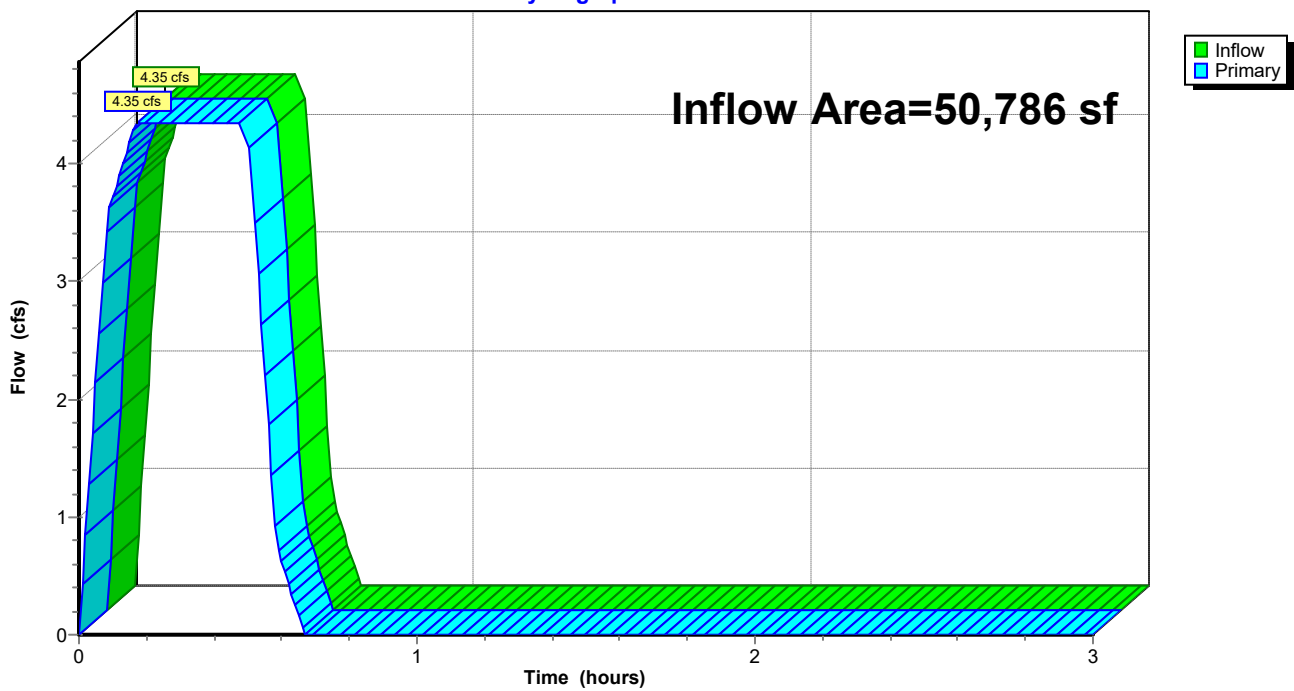
Summary for Pond JB-A2: JB - A2

Inflow Area = 50,786 sf, 65.23% Impervious, Inflow Depth = 1.85" for 100-yr event
Inflow = 4.35 cfs @ 0.17 hrs, Volume= 7,823 cf
Primary = 4.35 cfs @ 0.17 hrs, Volume= 7,823 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond CI-A3 : CI - A3

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Pond JB-A2: JB - A2

Hydrograph



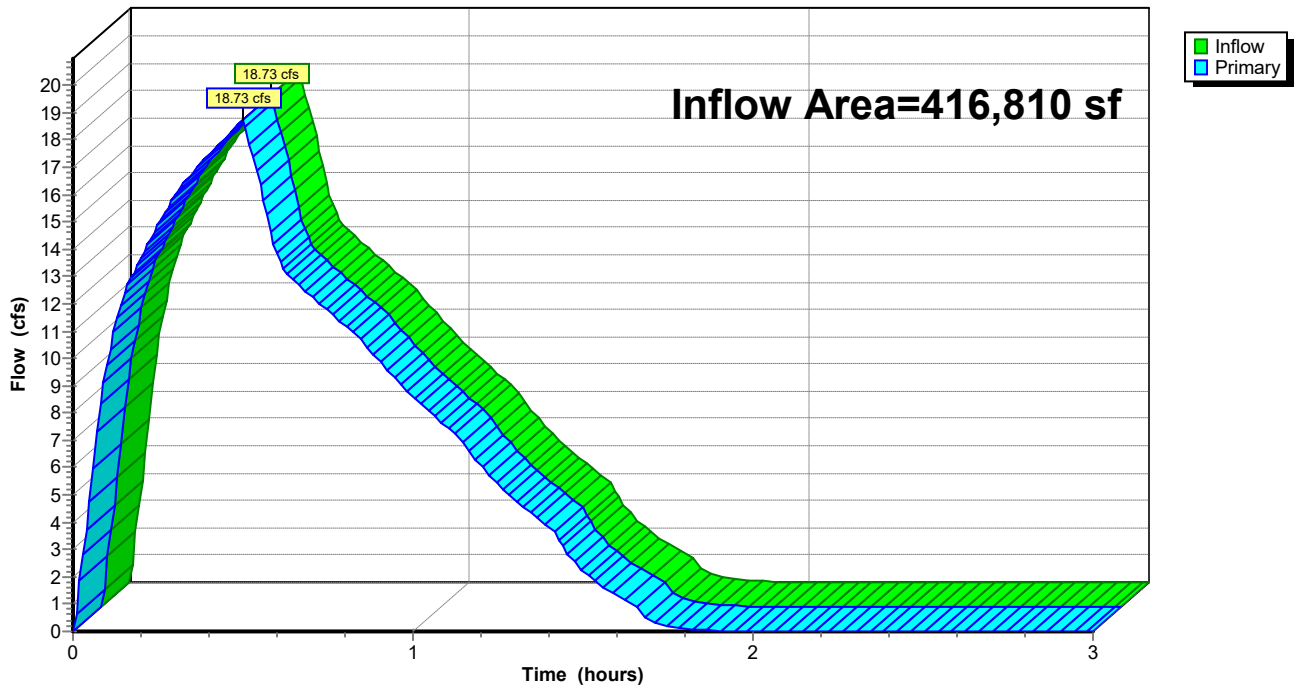
Summary for Link FINAL: APPROX DISCHARGE

Inflow Area = 416,810 sf, 49.40% Impervious, Inflow Depth = 1.64" for 100-yr event
Inflow = 18.73 cfs @ 0.50 hrs, Volume= 56,925 cf
Primary = 18.73 cfs @ 0.50 hrs, Volume= 56,925 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Link FINAL: APPROX DISCHARGE

Hydrograph



STORM SEWER SIZING

Inlet Report

JB-A1 (100 yr)

Curb Inlet

Location	= Sag
Curb Length (ft)	= 4.00
Throat Height (in)	= 6.00
Grate Area (sqft)	= -0-
Grate Width (ft)	= -0-
Grate Length (ft)	= -0-

Gutter

Slope, Sw (ft/ft)	= 0.033
Slope, Sx (ft/ft)	= 0.060
Local Depr (in)	= -0-
Gutter Width (ft)	= 1.50
Gutter Slope (%)	= -0-
Gutter n-value	= -0-

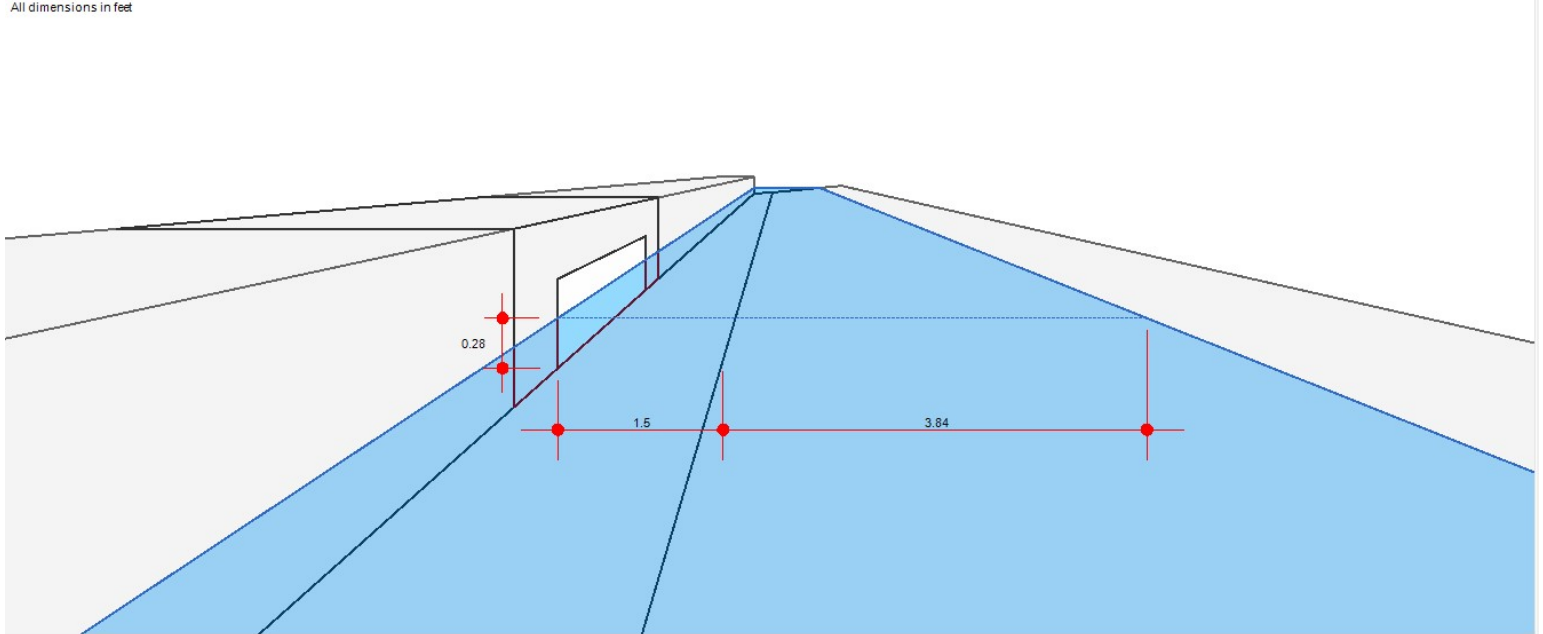
Calculations

Compute by:	Known Q
Q (cfs)	= 1.78

Highlighted

Q Total (cfs)	= 1.78
Q Capt (cfs)	= 1.78
Q Bypass (cfs)	= -0-
Depth at Inlet (in)	= 3.36
Efficiency (%)	= 100
Gutter Spread (ft)	= 5.34
Gutter Vel (ft/s)	= -0-
Bypass Spread (ft)	= -0-
Bypass Depth (in)	= -0-

All dimensions in feet



Inlet Report

JB-A3 (100 yr)

Curb Inlet

Location	= Sag
Curb Length (ft)	= 4.00
Throat Height (in)	= 6.00
Grate Area (sqft)	= -0-
Grate Width (ft)	= -0-
Grate Length (ft)	= -0-

Gutter

Slope, Sw (ft/ft)	= 0.033
Slope, Sx (ft/ft)	= 0.060
Local Depr (in)	= -0-
Gutter Width (ft)	= 1.50
Gutter Slope (%)	= -0-
Gutter n-value	= -0-

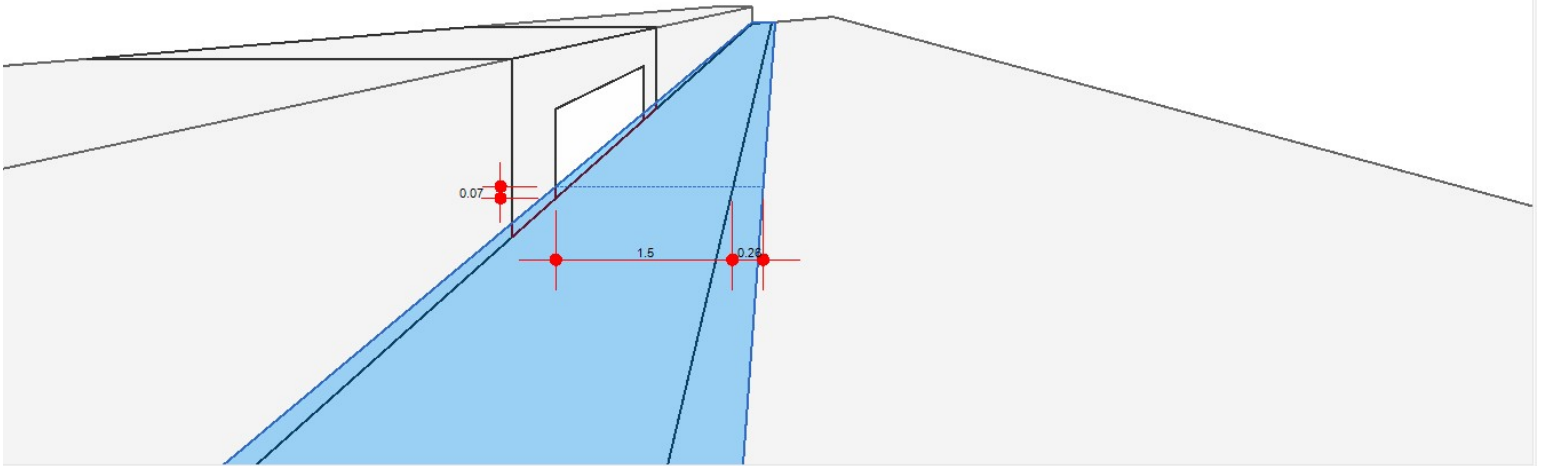
Calculations

Compute by:	Known Q
Q (cfs)	= 0.20

Highlighted

Q Total (cfs)	= 0.20
Q Capt (cfs)	= 0.20
Q Bypass (cfs)	= -0-
Depth at Inlet (in)	= 0.78
Efficiency (%)	= 100
Gutter Spread (ft)	= 1.76
Gutter Vel (ft/s)	= -0-
Bypass Spread (ft)	= -0-
Bypass Depth (in)	= -0-

All dimensions in feet



Channel Report

Pipe-A1

Circular

Diameter (ft) = 1.50

Invert Elev (ft) = 392.62

Slope (%) = 0.50

N-Value = 0.015

Calculations

Compute by: Known Q

Known Q (cfs) = 1.78

Highlighted

Depth (ft) = 0.54

Q (cfs) = 1.780

Area (sqft) = 0.58

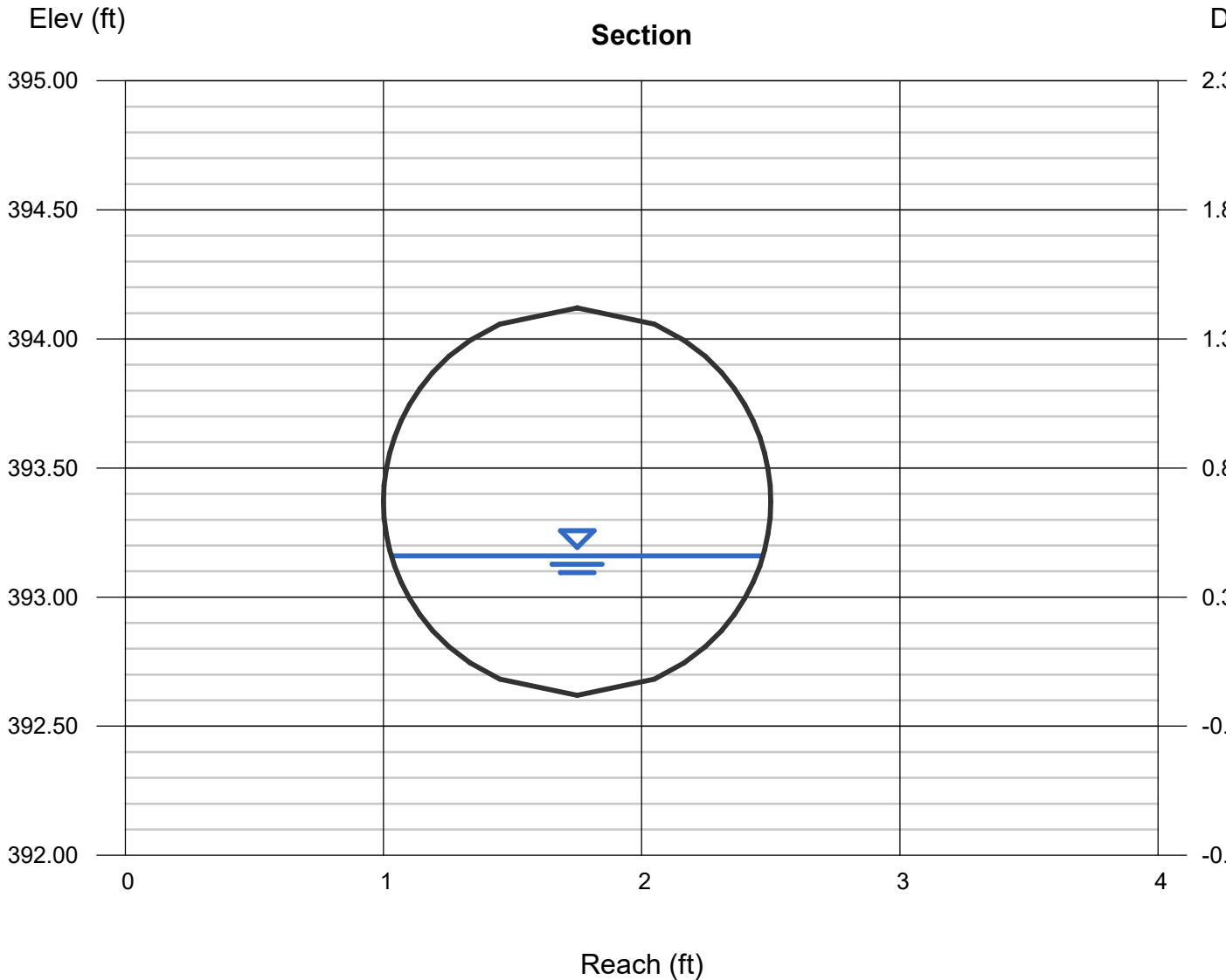
Velocity (ft/s) = 3.09

Wetted Perim (ft) = 1.93

Crit Depth, Y_c (ft) = 0.50

Top Width (ft) = 1.44

EGL (ft) = 0.69



Channel Report

Pipe-A2

Circular

Diameter (ft) = 1.50

Invert Elev (ft) = 391.60

Slope (%) = 0.50

N-Value = 0.015

Calculations

Compute by: Known Q

Known Q (cfs) = 4.35

Highlighted

Depth (ft) = 0.91

Q (cfs) = 4.350

Area (sqft) = 1.13

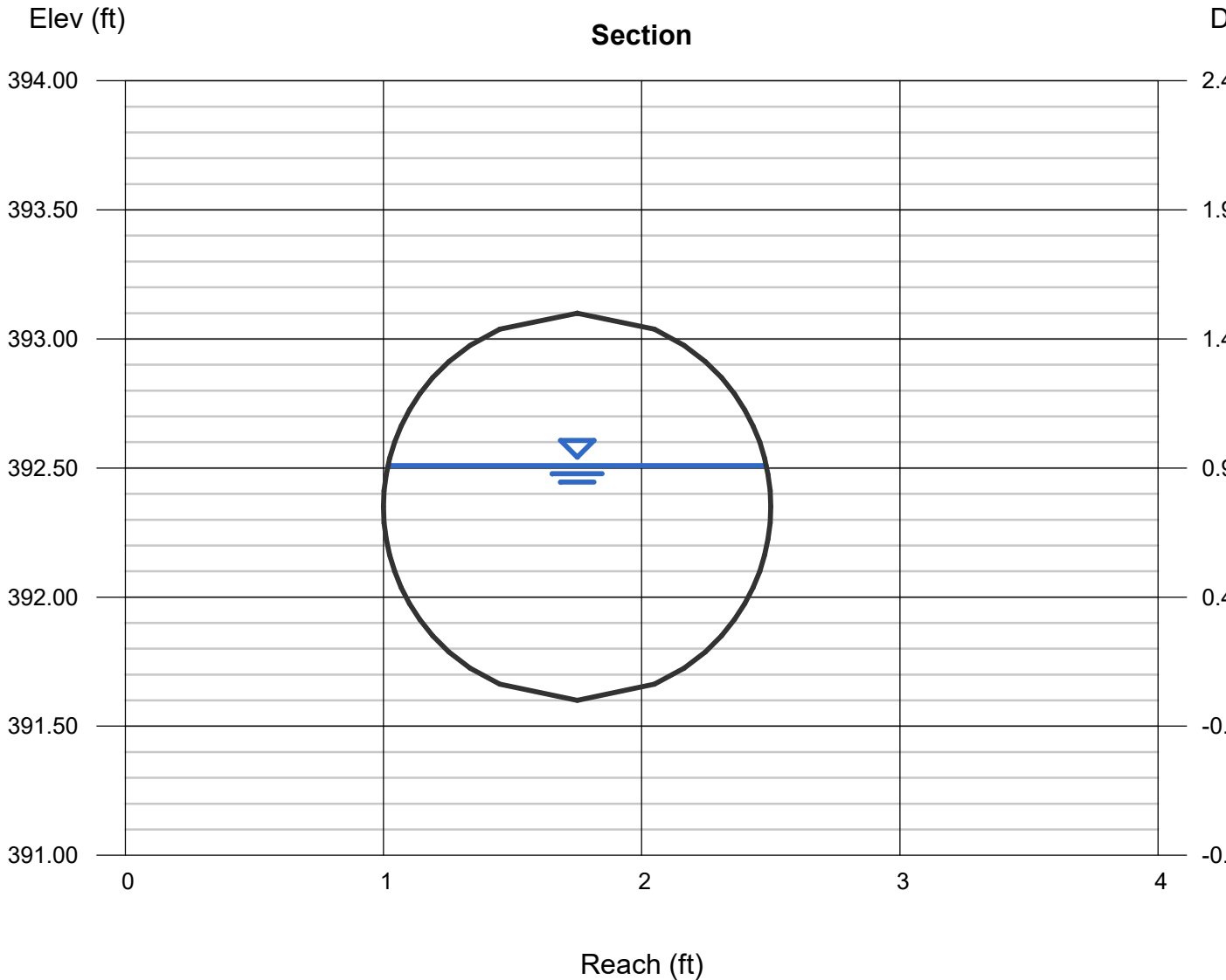
Velocity (ft/s) = 3.86

Wetted Perim (ft) = 2.68

Crit Depth, Y_c (ft) = 0.80

Top Width (ft) = 1.46

EGL (ft) = 1.14



Channel Report

Pipe-A3

Circular

Diameter (ft) = 1.50

Invert Elev (ft) = 391.29

Slope (%) = 6.20

N-Value = 0.015

Calculations

Compute by: Known Q

Known Q (cfs) = 4.55

Highlighted

Depth (ft) = 0.46

Q (cfs) = 4.550

Area (sqft) = 0.46

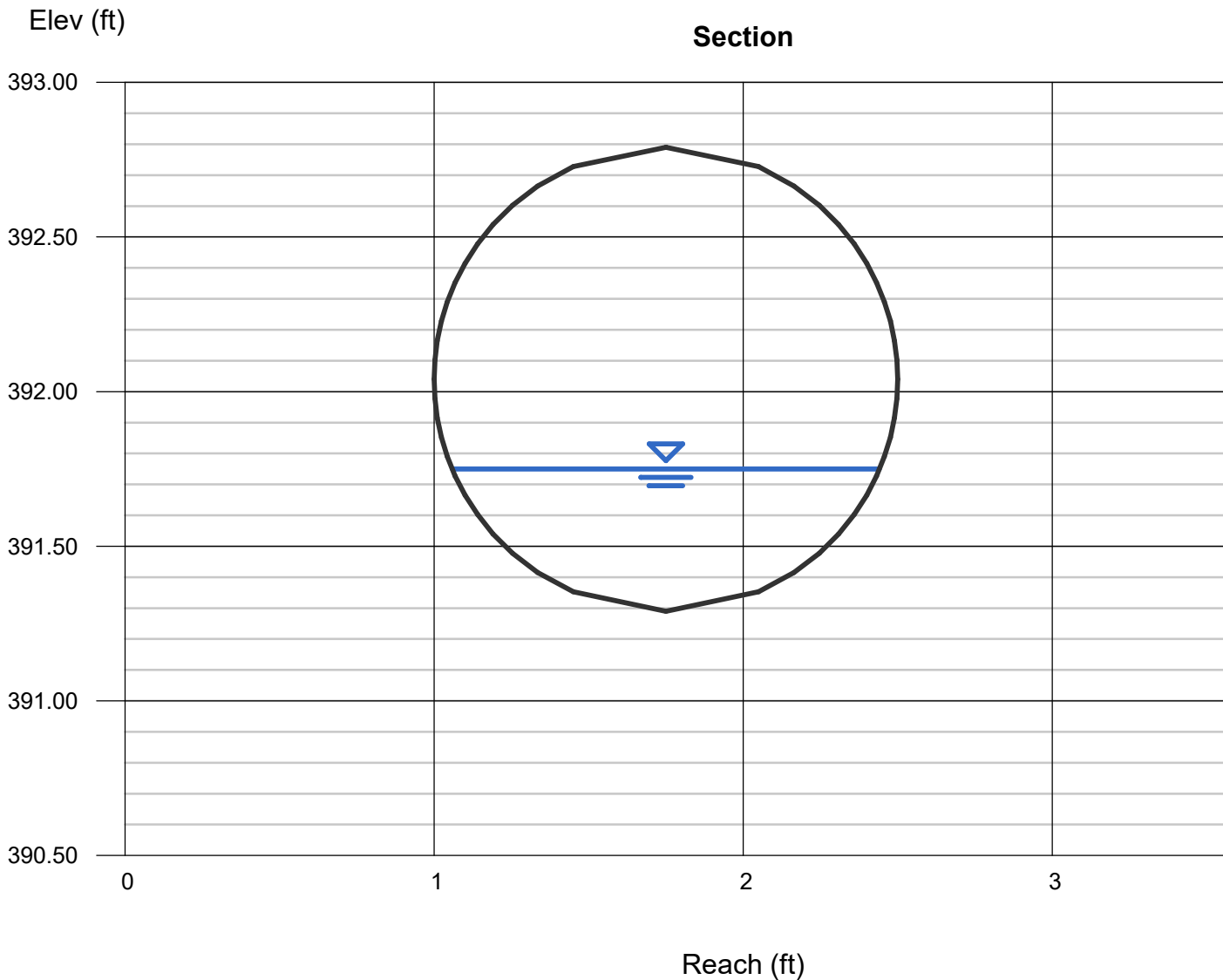
Velocity (ft/s) = 9.87

Wetted Perim (ft) = 1.76

Crit Depth, Y_c (ft) = 0.82

Top Width (ft) = 1.38

EGL (ft) = 1.98



Channel Report

Pipe-B1

Circular

Diameter (ft) = 1.00

Invert Elev (ft) = 397.00

Slope (%) = 4.92

N-Value = 0.015

Calculations

Compute by: Known Q

Known Q (cfs) = 1.57

Highlighted

Depth (ft) = 0.33

Q (cfs) = 1.570

Area (sqft) = 0.23

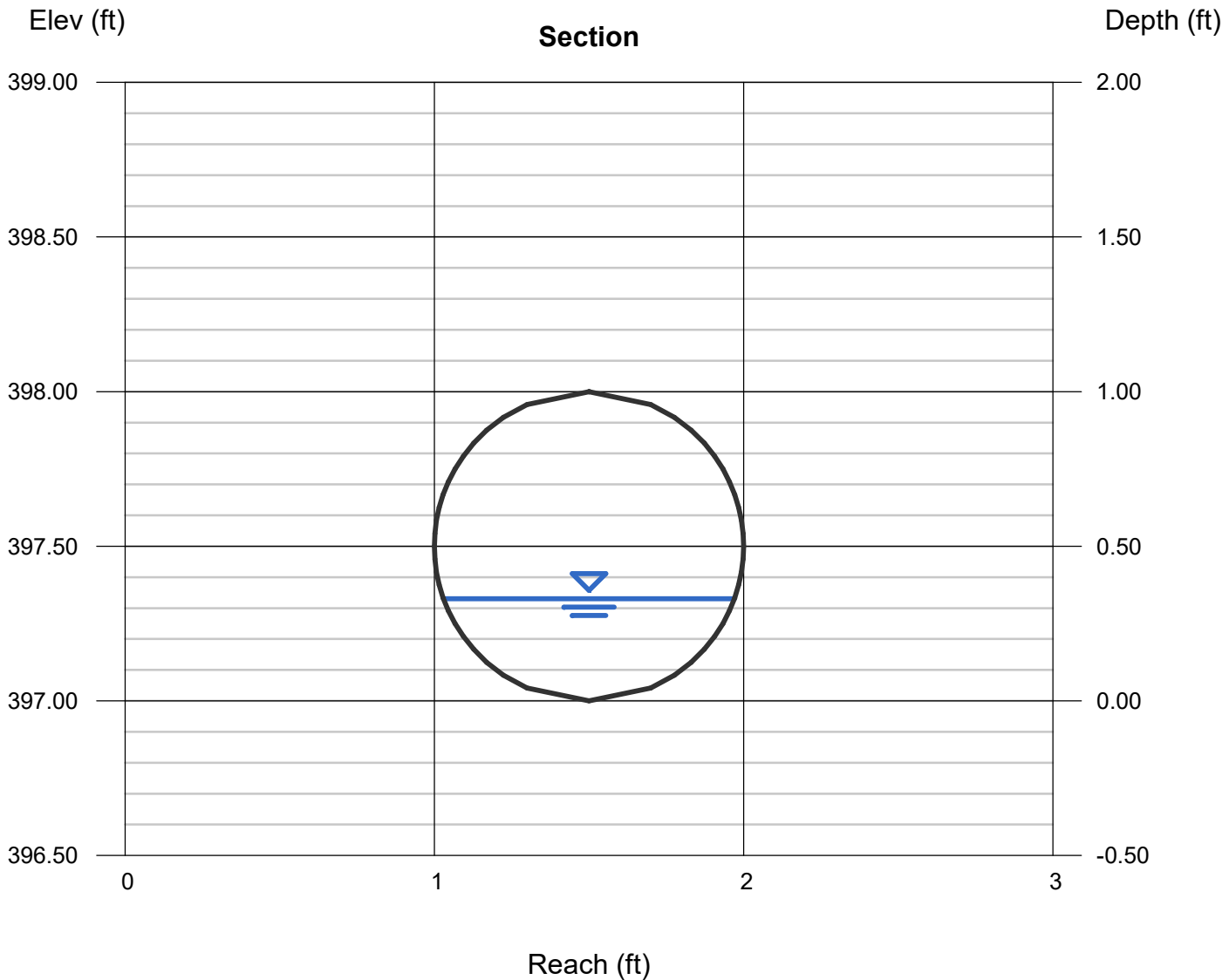
Velocity (ft/s) = 6.93

Wetted Perim (ft) = 1.22

Crit Depth, Yc (ft) = 0.53

Top Width (ft) = 0.94

EGL (ft) = 1.08



DRAINAGE BASIN MAPS



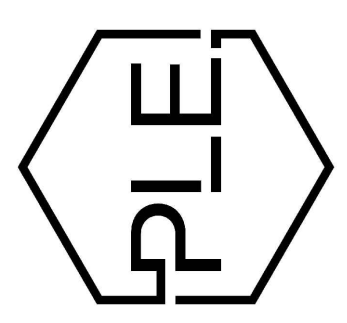
PRE DRAINAGE PLAN

SCALE 1" = 20'

GENERAL CONSTRUCTION NOTES

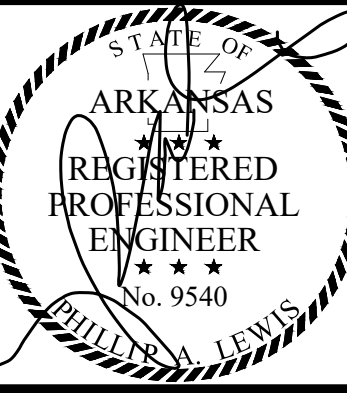
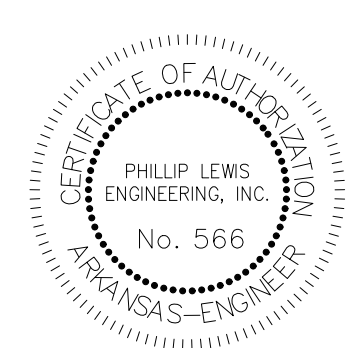
- A. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR DAMAGES OCCURRING TO ANY PROPERTY DURING THE CONSTRUCTION OF THIS PROJECT. SAID CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT PROPERTY DAMAGE.
- B. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL SOLELY AND COMPLETELY BE RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND WILL NOT BE LIMITED TO NORMAL WORKING HOURS.
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- C. ALL WATER AND SEWER IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST REVISION TO THE CITY OF BRYANT'S WATER AND WASTEWATER (SANITARY SEWER) STANDARD SPECIFICATIONS.
- D. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF ALL UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLAN.
- E. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH, AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
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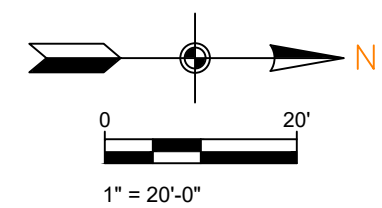
SHEET ISSUE DATE:
03-11-2026

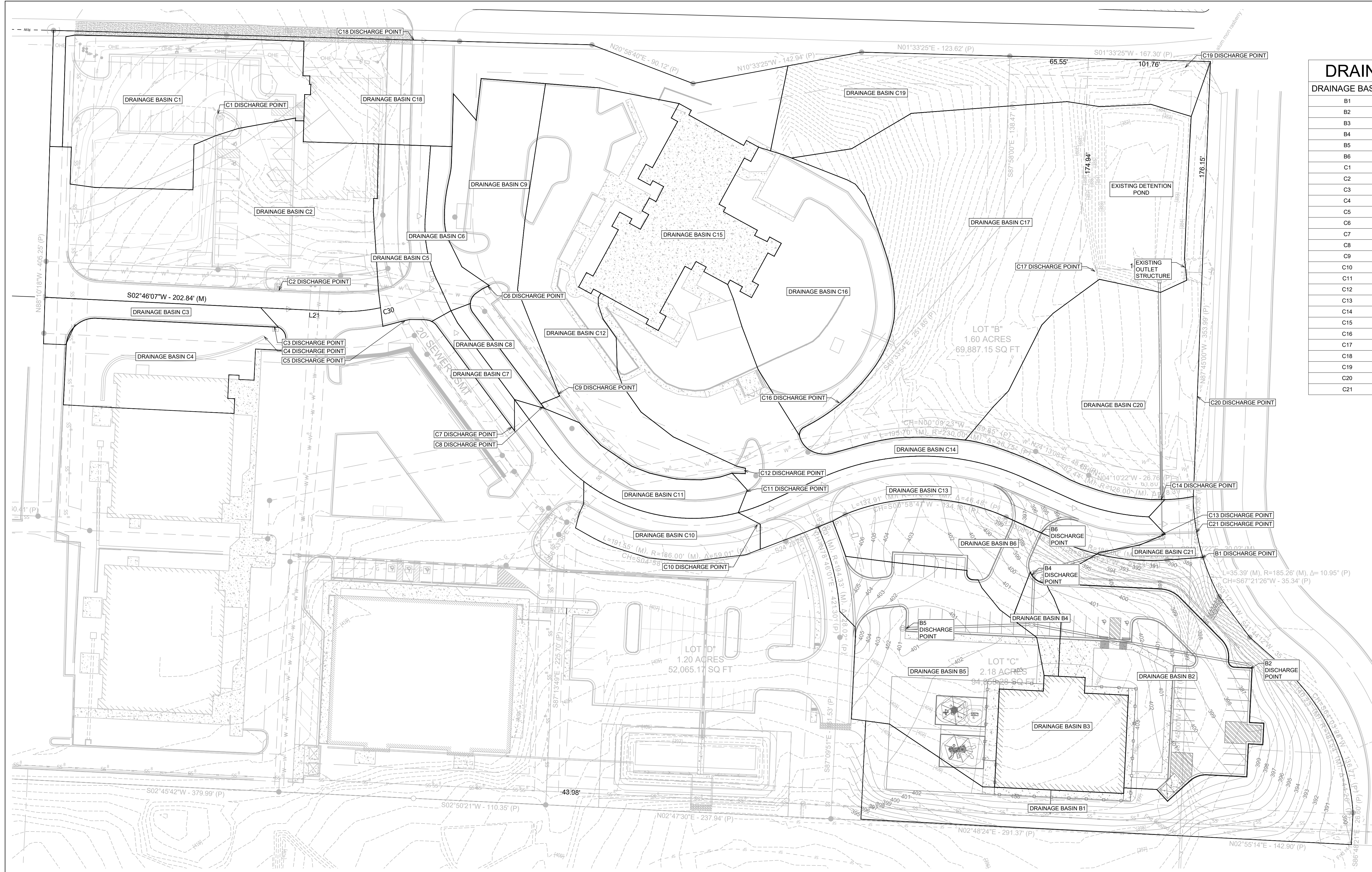
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PRE DRAINAGE PLAN

SHEET NUMBER:

C1.5



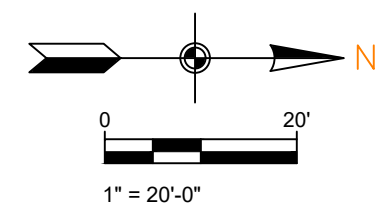


DRAINAGE BASINS AREAS

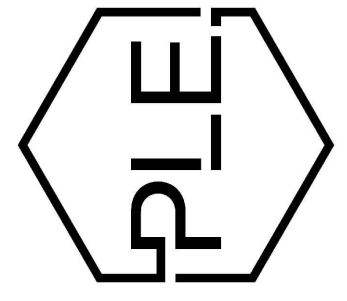
DRAINAGE BASIN	PERVIOUS	IMPERVIOUS
B1	28,665	770
B2	4,916	14,577
B3	0	9,275
B4	0	1,887
B5	12,580	8,589
B6	7,516	2,763
C1	6,135	14,202
C2	11,376	22,963
C3	0	3,480
C4	8,130	3,245
C5	1,634	5,061
C6	0	2,835
C7	0	1,597
C8	0	1,548
C9	4,456	9,361
C10	1,225	4,183
C11	2,876	3,307
C12	7,218	18,440
C13	2,240	9,873
C14	6,127	15,898
C15	0	13,450
C16	15,465	6,612
C17	40,914	15,835
C18	12,812	9,973
C19	15,129	2,880
C20	24,838	2,321
C21	1,234	919

OVERALL DRAINAGE PLAN

SCALE 1" = 20'

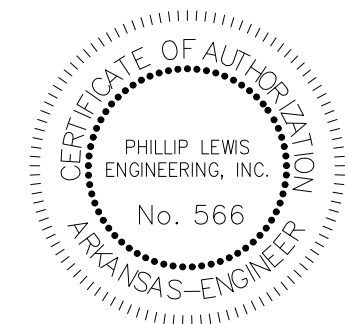


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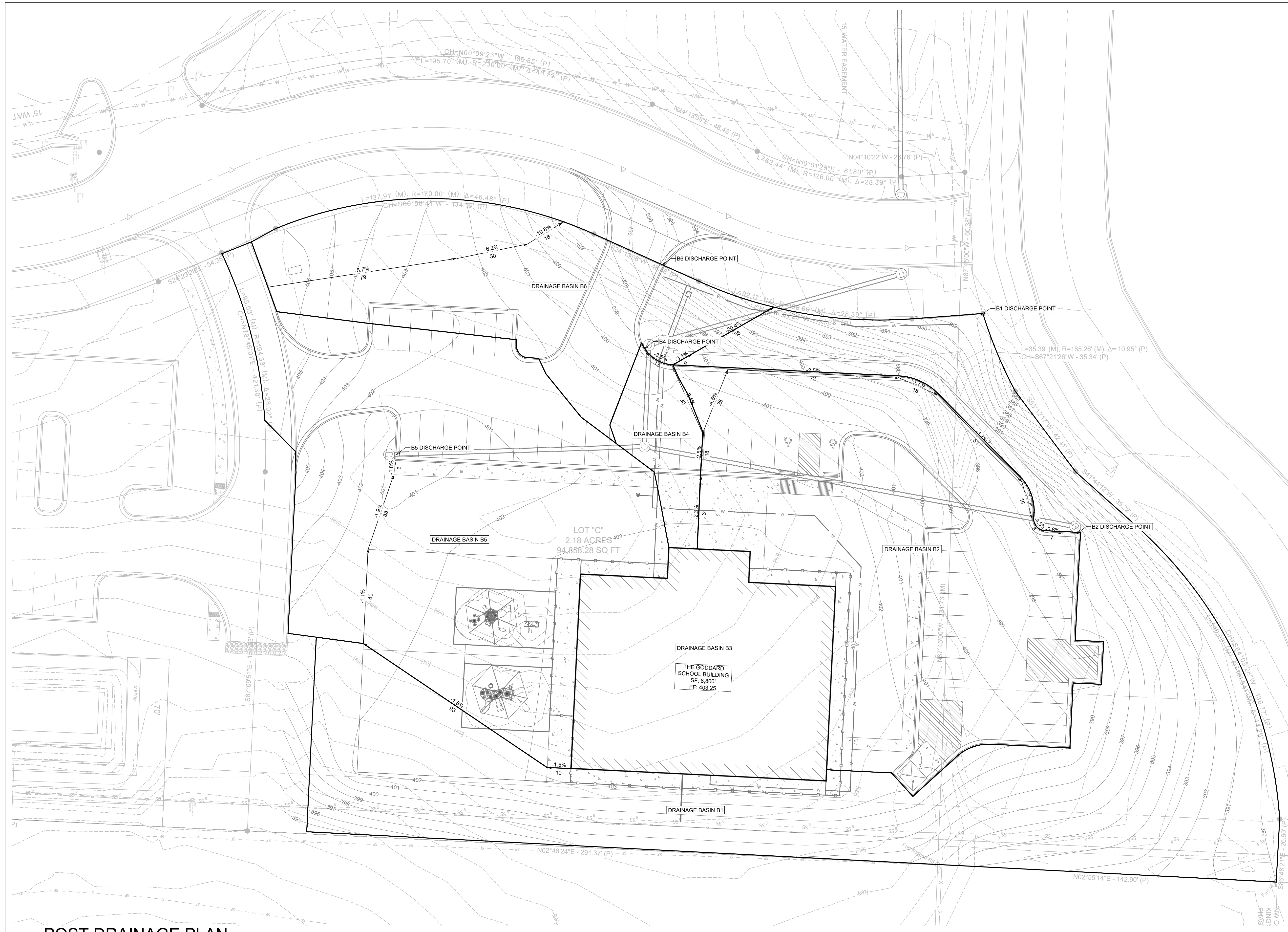
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OVERALL DRAINAGE PLAN

SHEET NUMBER:

C1.6

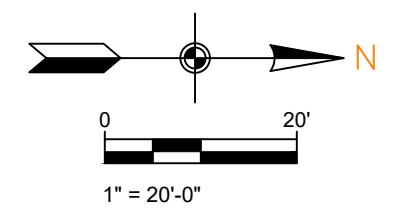
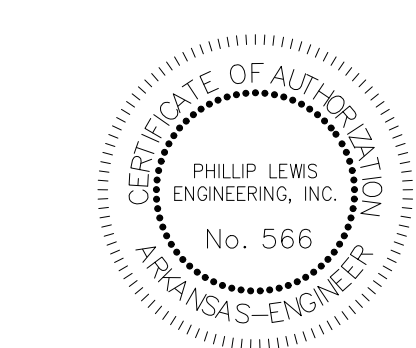


GENERAL CONSTRUCTION NOTES

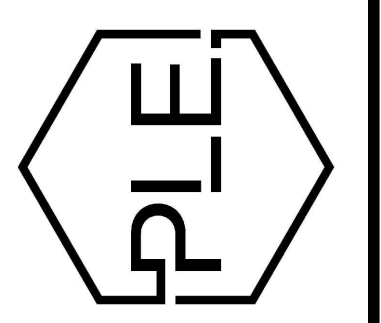
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POST DRAINAGE PLAN

SCALE 1" = 20'



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PAGE TITLE:

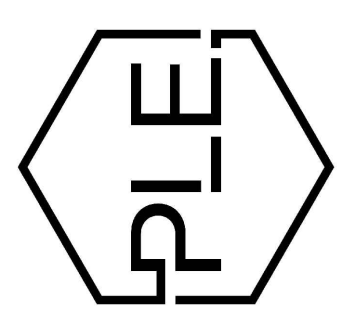
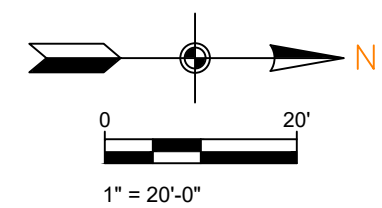
POST DRAINAGE PLAN

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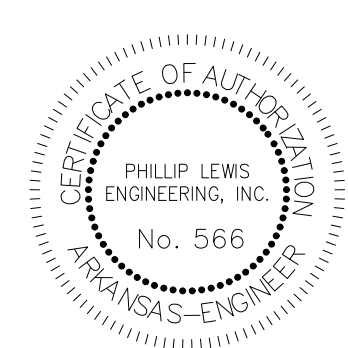
OVERALL DRAINAGE PLAN (2)

SCALE 1" = 20'



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BRYANT, ARKANSAS



PROJECT NUMBER:

SHEET ISSUE DATE:
03-11-2026

PAGE TITLE:

**OVERALL
DRAINAGE
PLAN (2)**

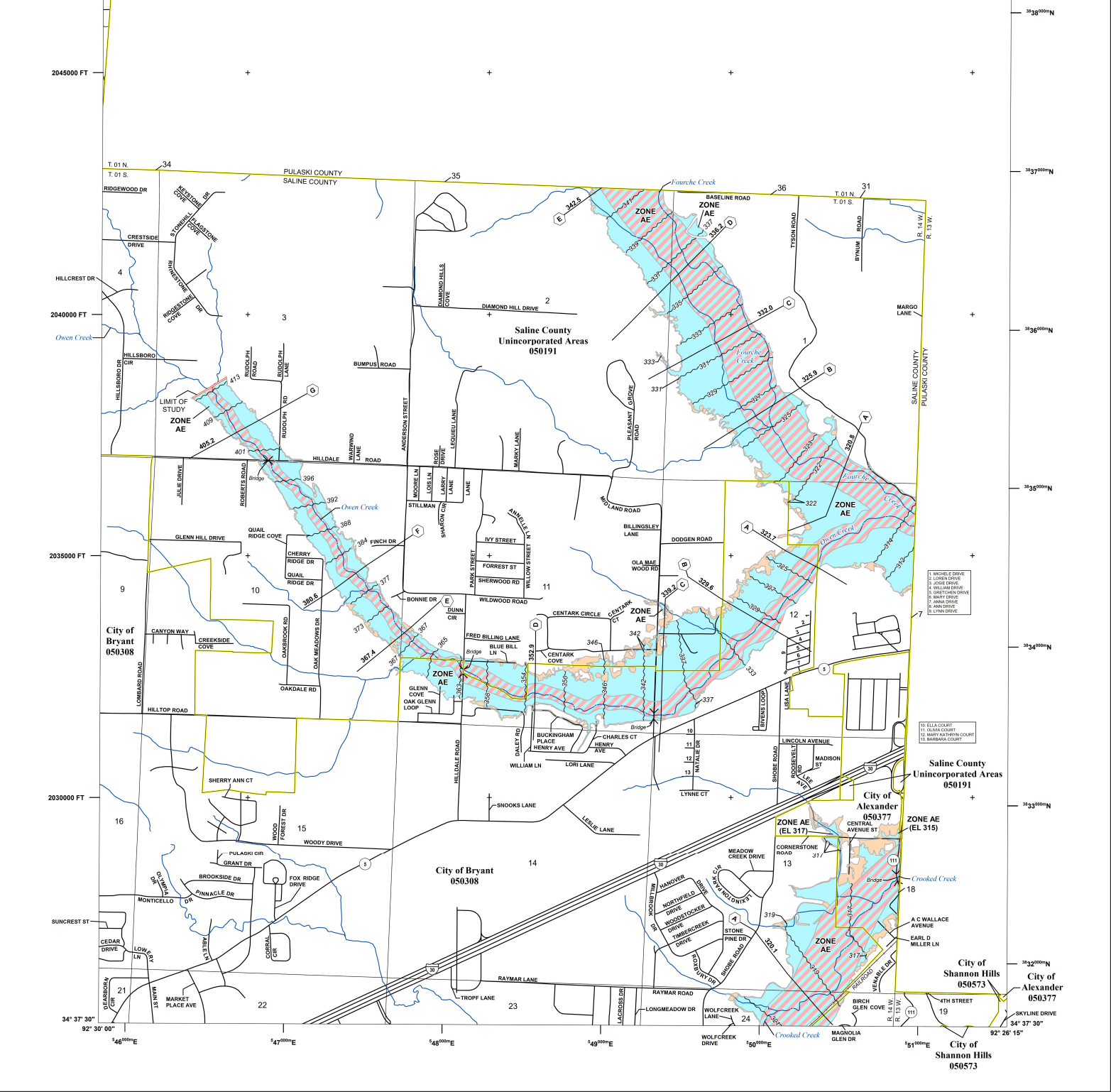
SHEET NUMBER:

C1.8

DETENTION BASIN OUTLET STRUCTURES



FEMA FLOOD INSURANCE RATE MAP



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING
DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT
[HTTPS://MSC.FEMA.GOV](https://msc.fema.gov)

	Without Base Flood Elevation (BFE) Zone A, V, A99
	With BFE or Depth Zone AE, AO, AH, VE, AR
	Regulatory Floodway
	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee See Notes. Zone X
	Area with Flood Risk due to Levee Zone D
	NO SCREEN Area of Minimal Flood Hazard Zone X
	Area of Undetermined Flood Hazard Zone D
	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall
	Cross Sections with 1% Annual Chance Water Surface Elevation

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information Exchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at <https://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

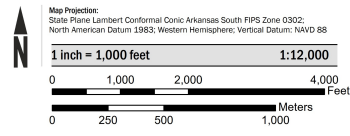
Communities assessing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be obtained directly from the Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction.

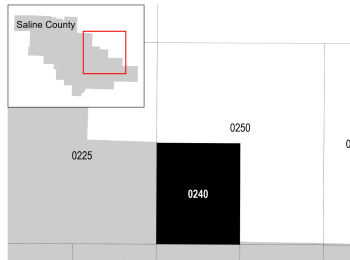
To determine if flood insurance is available in the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-438-8620.

Base map information shown on this FIRM was derived from U.S. Census Bureau TIGER files, dated 2015, and digital data provided by the Arkansas Geographic Information Office, dated 2015.

SCALE



PANEL LOCATOR



National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

SALINE COUNTY, ARKANSAS
and Incorporated Areas

PANEL 240 OF 575

FEDERAL EMERGENCY MANAGEMENT AGENCY

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
ALEXANDER, CITY OF	050377	0240	E
BRANT, CITY OF	050308	0240	E
SALINE COUNTY	050191	0240	E
SHANNON HILLS, CITY OF	050573	0240	E