

3 12-B-003

563- 573 Riverside street, Portland, ME

Amendment to Plan - Six G's Coed LL

Six Gs Coed, LLC

00235post-rev

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Type III 24-hr Rainfall=4.70"

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### Subcatchment 1S: 1S

Runoff = 1.61 cfs @ 12.15 hrs, Volume= 0.129 af

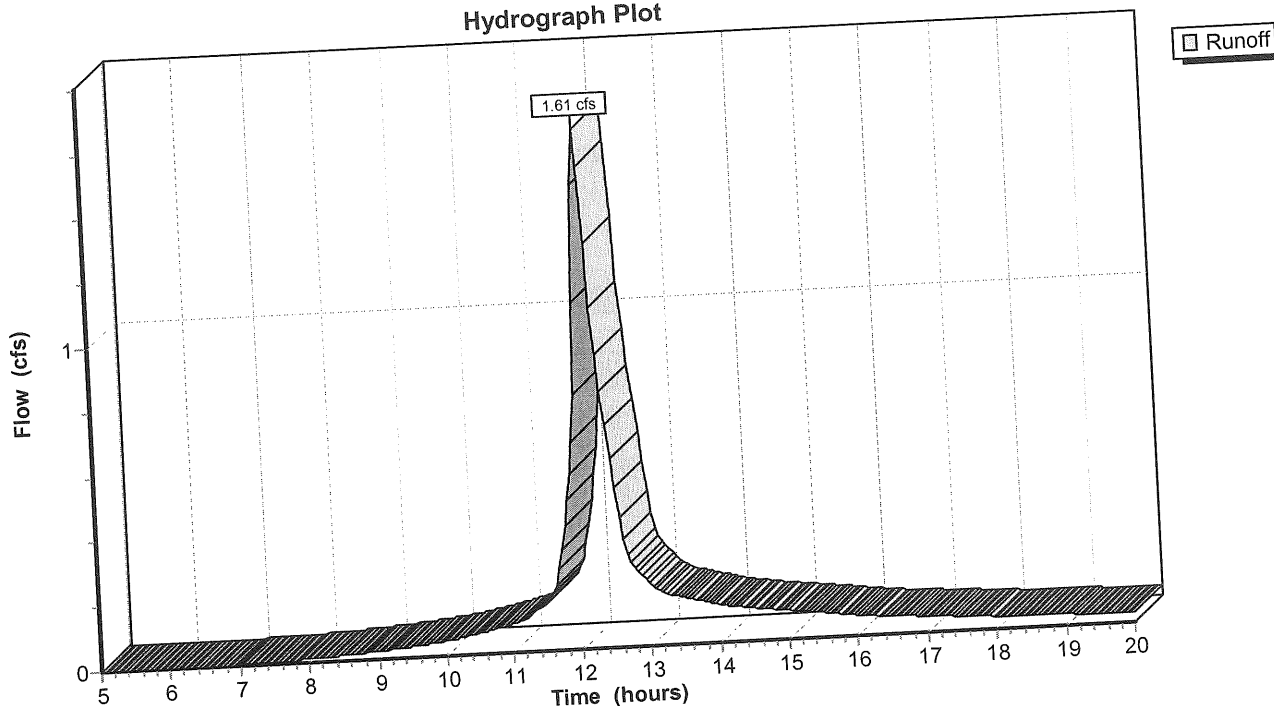
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr Rainfall=4.70"

Area (sf)	CN	Description
3,833	98	Paved parking & roofs
3,675	91	Gravel roads, HSG D
15,789	80	>75% Grass cover, Good, HSG D
23,297	85	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.7	72	0.0290	0.2		Sheet Flow, Grass: Short n= 0.150 P2= 3.00"
3.7	214	0.0190	1.0		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.7	90	0.0120	2.2		Shallow Concentrated Flow, Paved Kv= 20.3 fps
11.1	376	Total			

### Subcatchment 1S: 1S

Hydrograph Plot



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Type III 24-hr Rainfall=4.70"

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**Subcatchment 2S: 2S**

Runoff = 0.89 cfs @ 12.26 hrs, Volume= 0.084 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr Rainfall=4.70"

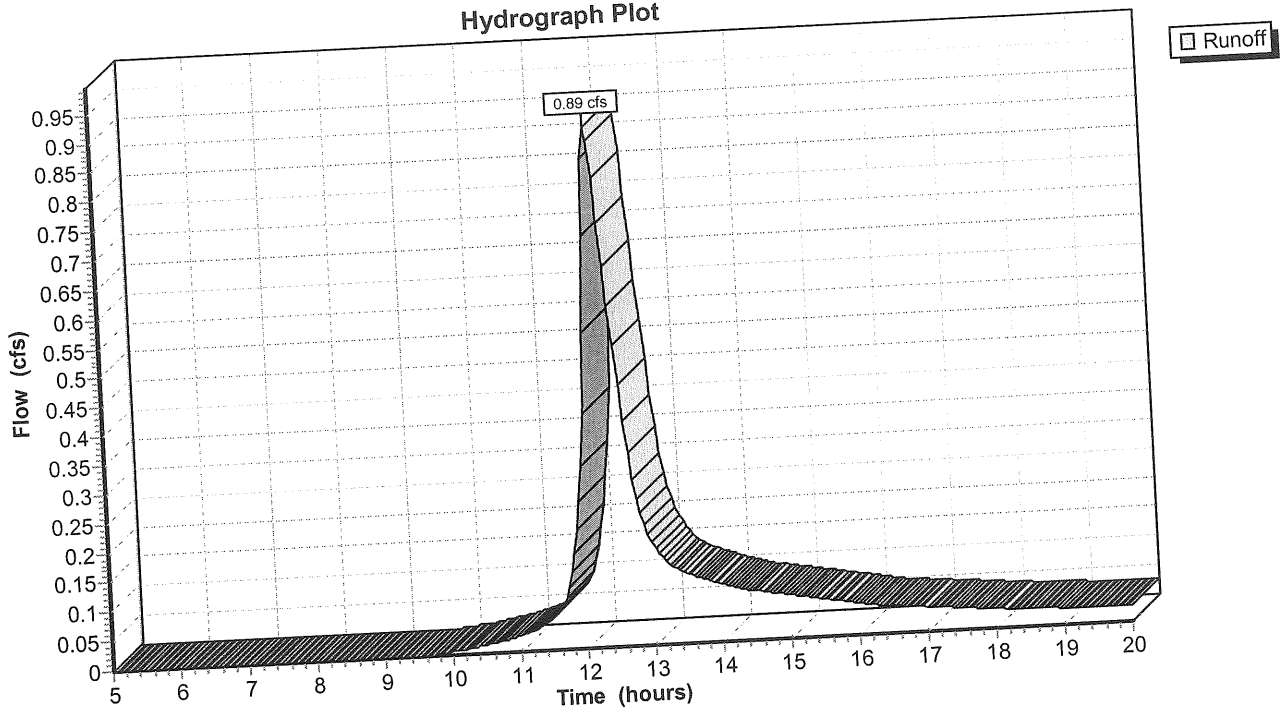
Area (sf)	CN	Description
23,382	73	Brush, Good, HSG D

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	80	0.0310	0.2		Sheet Flow, Grass: Short n= 0.150 P2= 3.00"
11.0	215	0.0170	0.3		Shallow Concentrated Flow, Forest w/Heavy Litter Kv= 2.5 fps
18.1	295	Total			

**Subcatchment 2S: 2S**

Hydrograph Plot



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Type III 24-hr Rainfall=4.70"

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### Subcatchment 3S: 3S

Runoff = 1.65 cfs @ 12.48 hrs, Volume= 0.210 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr Rainfall=4.70"

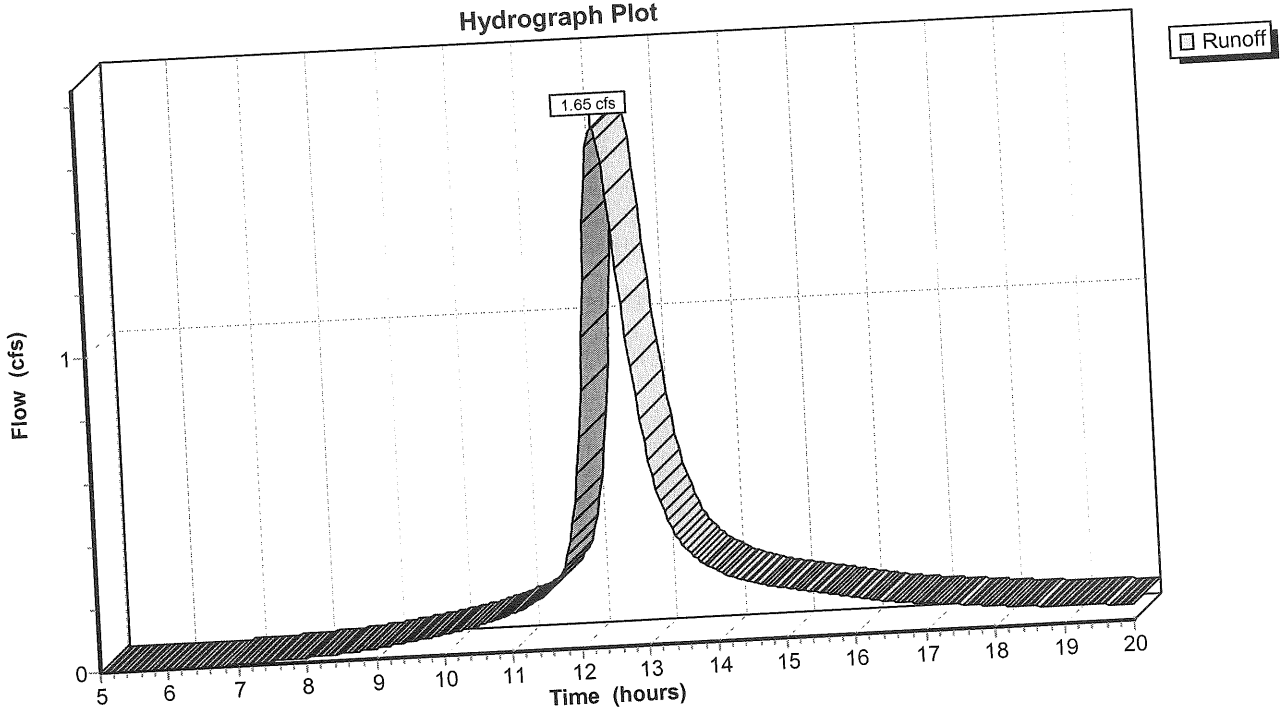
Area (sf)	CN	Description
14,669	98	Paved parking & roofs
11,509	80	>75% Grass cover, Good, HSG D
3,662	77	Woods, Good, HSG D
7,070	73	Brush, Good, HSG D
36,910	86	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.3	150	0.0230	0.1		Sheet Flow, Grass: Dense n= 0.240 P2= 3.00"
15.9	141	0.0035	0.1		Shallow Concentrated Flow, Forest w/Heavy Litter Kv= 2.5 fps
35.2	291	Total			

### Subcatchment 3S: 3S

Hydrograph Plot



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### Subcatchment 4S: 4S

Runoff = 10.42 cfs @ 12.31 hrs, Volume= 1.061 af

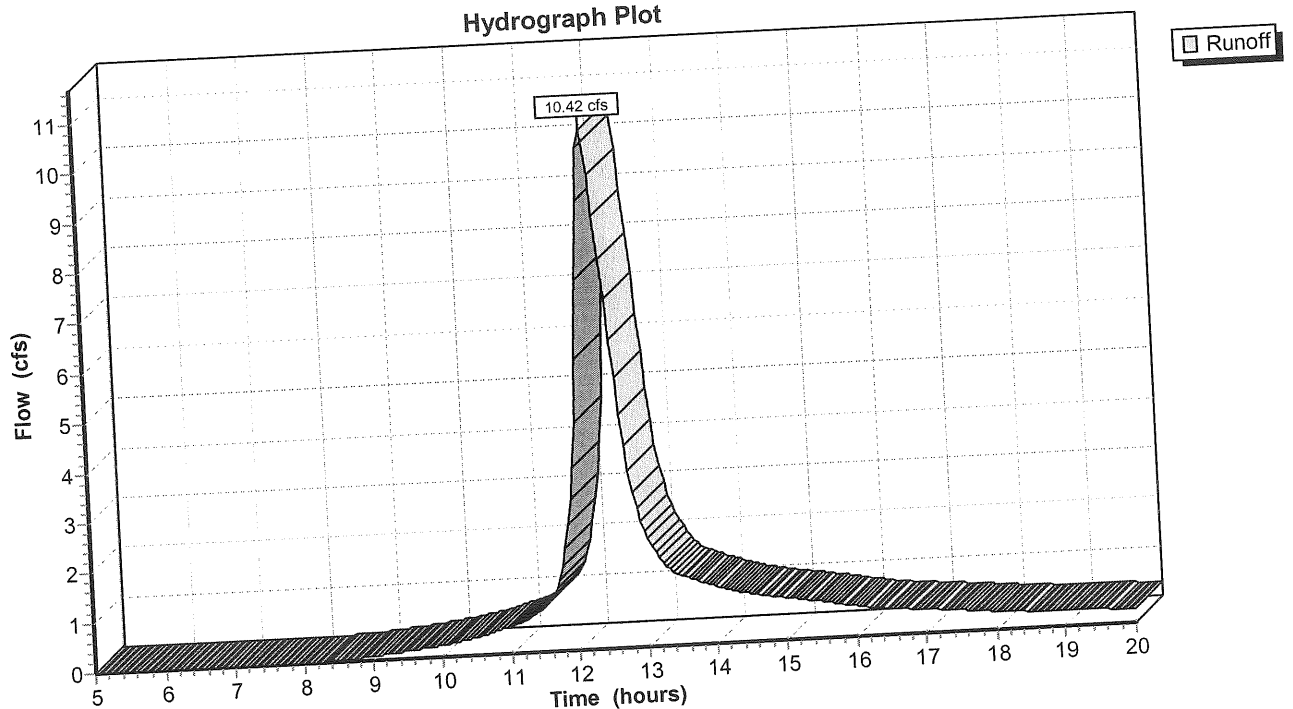
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr Rainfall=4.70"

Area (sf)	CN	Description
61,335	84	50-75% Grass cover, Fair, HSG D
149,814	77	Woods, Good, HSG D
13,259	98	Paved parking & roofs
2,636	91	Gravel roads, HSG D
227,044	80	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.1	135	0.0370	0.2		Sheet Flow, Grass: Short n= 0.150 P2= 3.00"
4.8	291	0.0045	1.0		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
7.0	215	0.0105	0.5		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
21.9	641	Total			

### Subcatchment 4S: 4S

Hydrograph Plot



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Type III 24-hr Rainfall=4.70"

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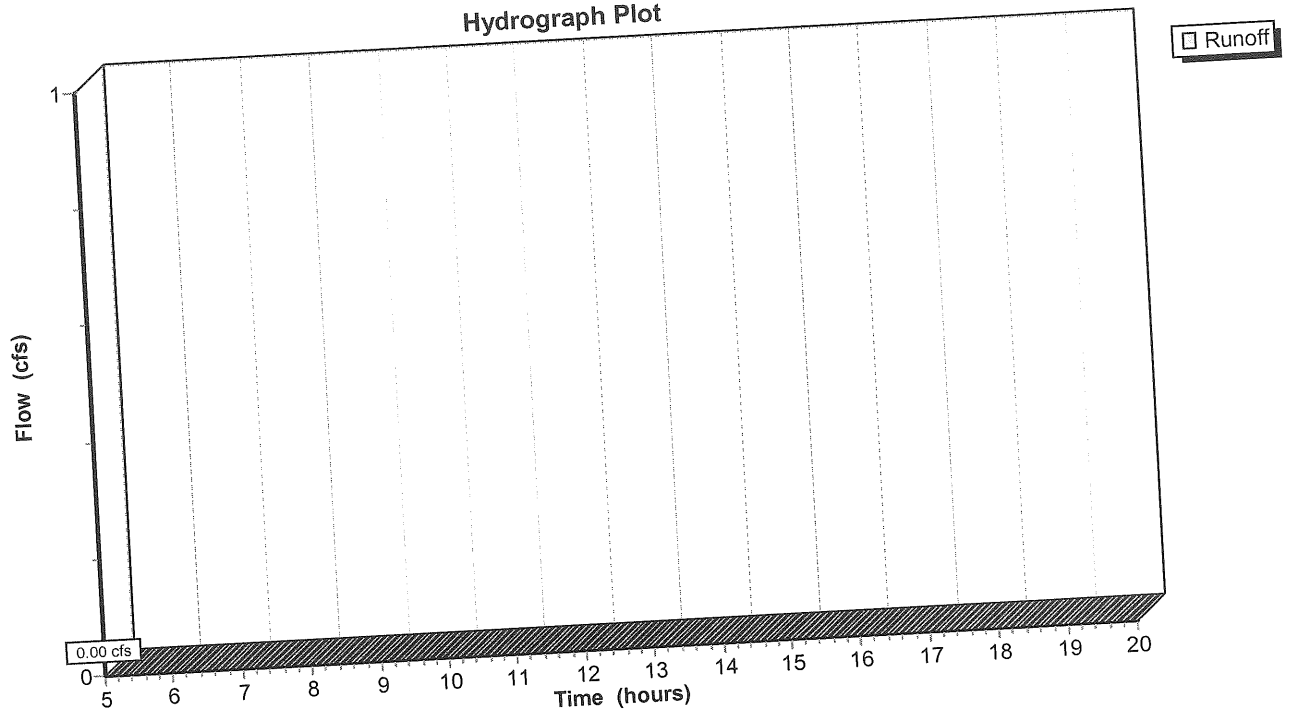
### Subcatchment 5S: (new node)

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr Rainfall=4.70"

### Subcatchment 5S: (new node)

Hydrograph Plot



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Type III 24-hr Rainfall=4.70"

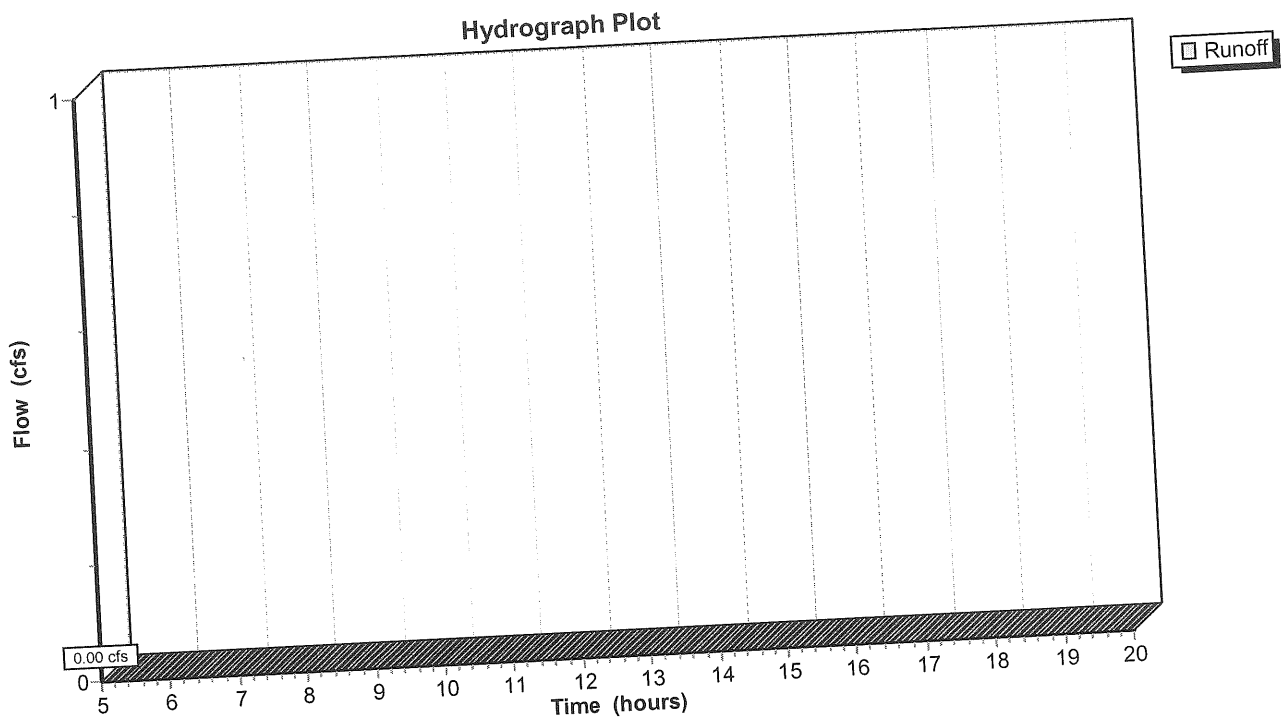
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### Subcatchment 6S: (new node)

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr Rainfall=4.70"

### Subcatchment 6S: (new node)



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### Subcatchment 7S: 7S

Runoff = 7.29 cfs @ 12.17 hrs, Volume= 0.626 af

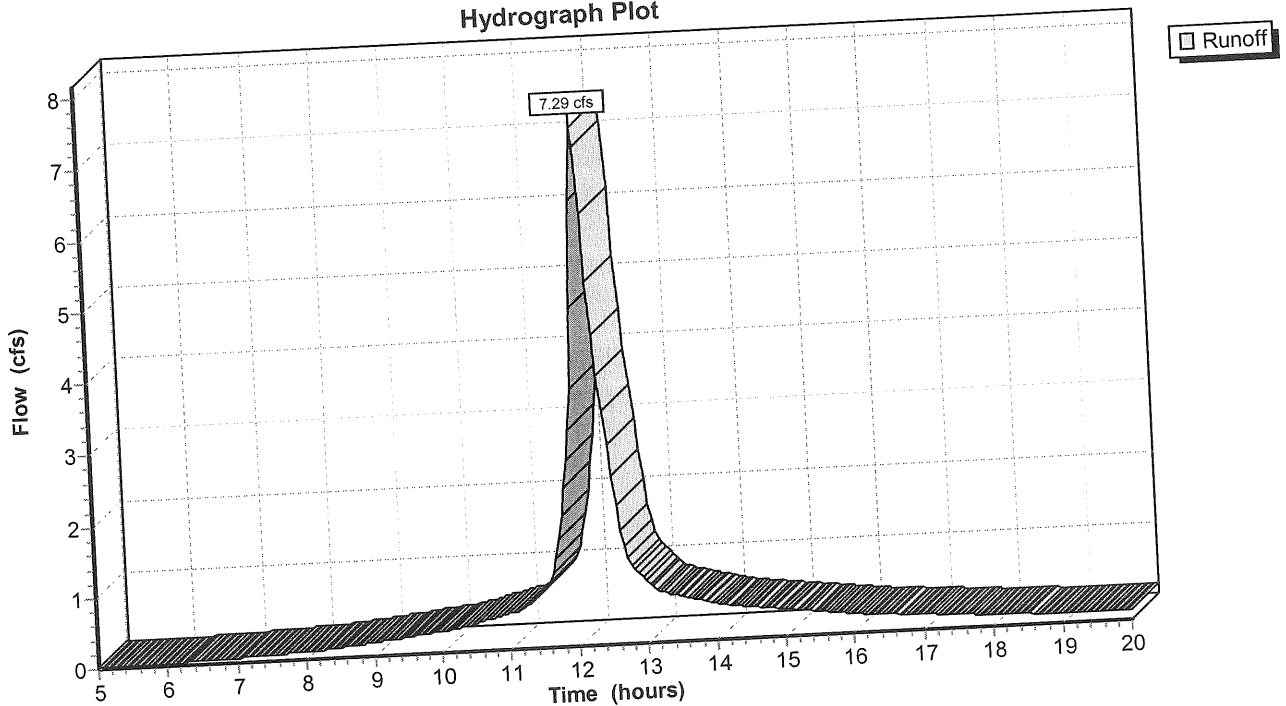
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr Rainfall=4.70"

Area (sf)	CN	Description
47,117	98	Paved parking & roofs
7,477	91	Gravel roads, HSG D
6,963	77	Woods, Good, HSG D
26,146	84	50-75% Grass cover, Fair, HSG D
6,215	80	>75% Grass cover, Good, HSG D
93,918	91	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	120	0.0208	0.2		Sheet Flow, Grass: Short n= 0.150 P2= 3.00"
0.7	70	0.0286	1.7		Shallow Concentrated Flow, Nearly Bare & Untilled Kv= 10.0 fps
0.1	17	0.0200	2.9		Shallow Concentrated Flow, Paved Kv= 20.3 fps
12.3	207	Total			

### Subcatchment 7S: 7S

Hydrograph Plot





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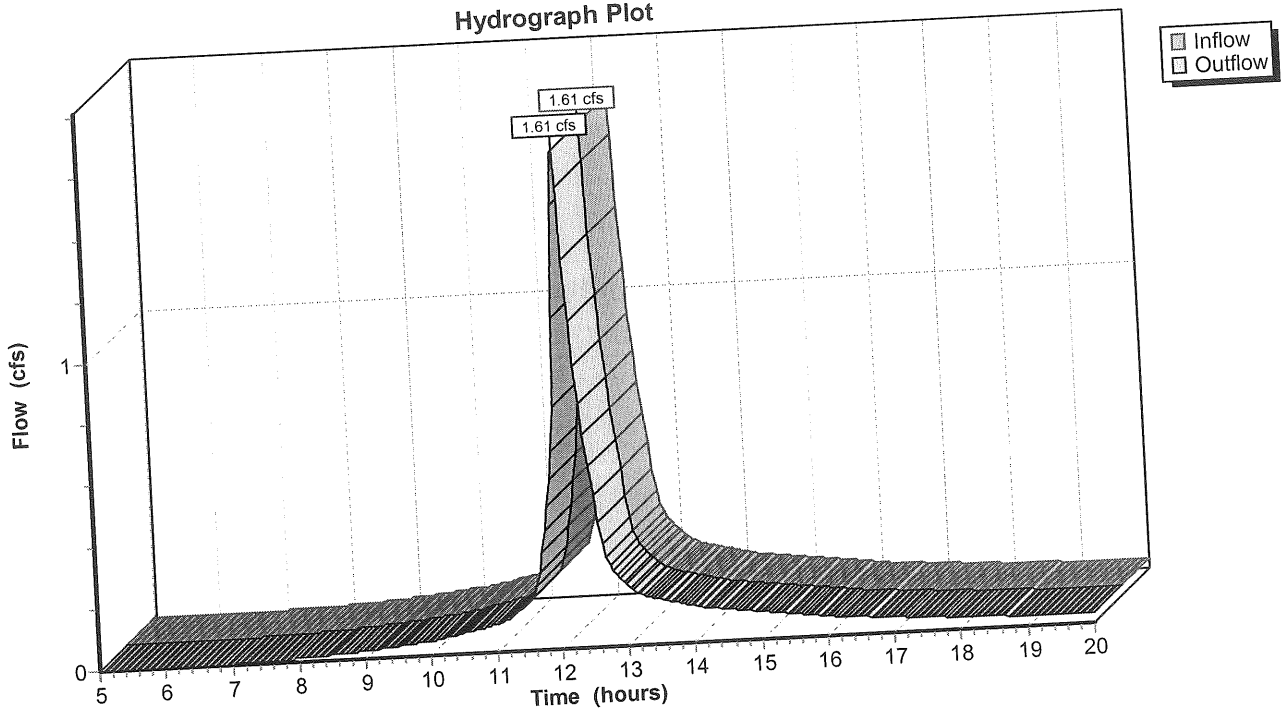
### Reach SP1: (new node)

Inflow = 1.61 cfs @ 12.15 hrs, Volume= 0.129 af  
Outflow = 1.61 cfs @ 12.15 hrs, Volume= 0.129 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Reach SP1: (new node)

Hydrograph Plot



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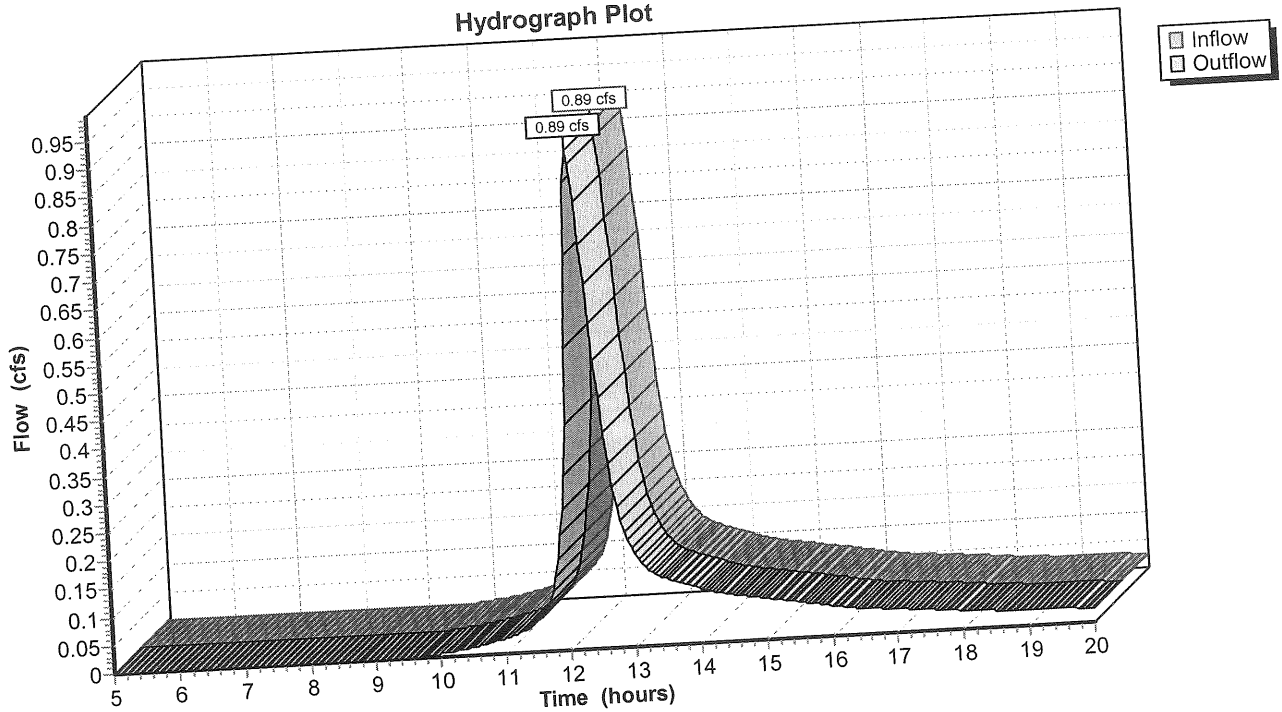
### Reach SP2: (new node)

Inflow = 0.89 cfs @ 12.26 hrs, Volume= 0.084 af  
Outflow = 0.89 cfs @ 12.26 hrs, Volume= 0.084 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Reach SP2: (new node)

Hydrograph Plot



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Type III 24-hr Rainfall=4.70"

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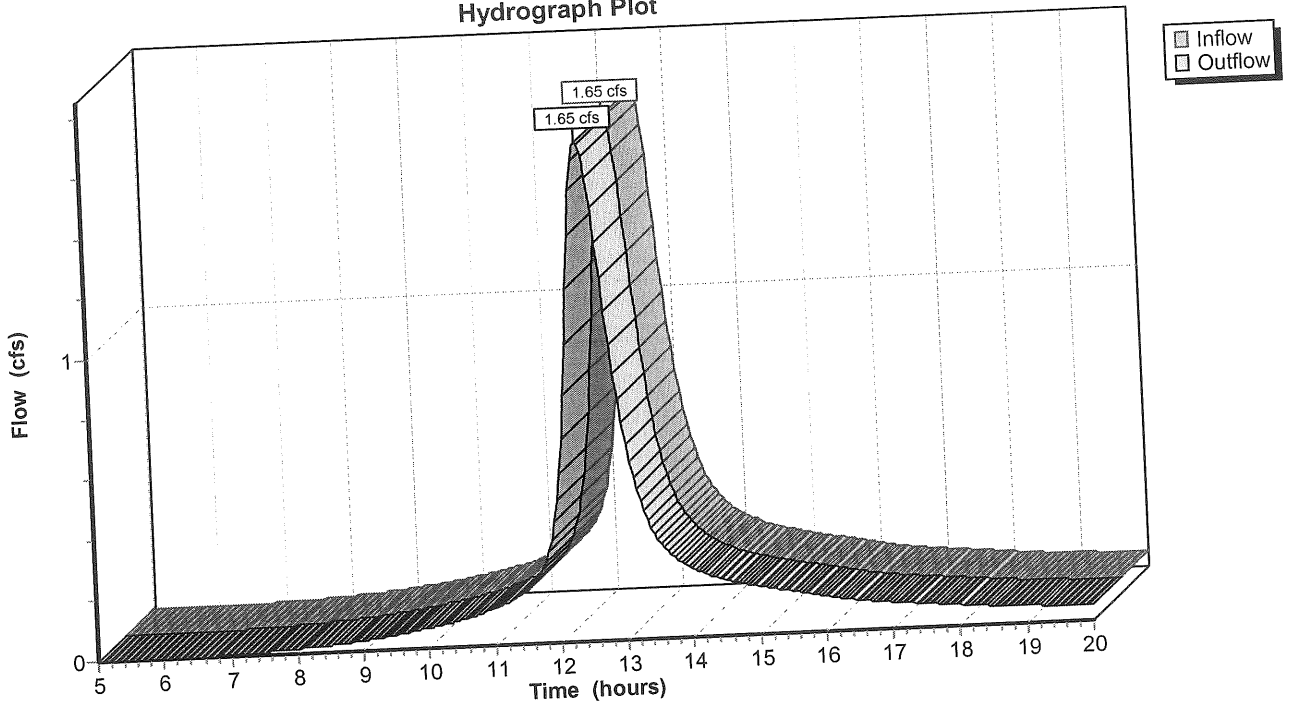
### Reach SP3: (new node)

Inflow = 1.65 cfs @ 12.48 hrs, Volume= 0.210 af  
Outflow = 1.65 cfs @ 12.48 hrs, Volume= 0.210 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Reach SP3: (new node)

Hydrograph Plot



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Type III 24-hr Rainfall=4.70"

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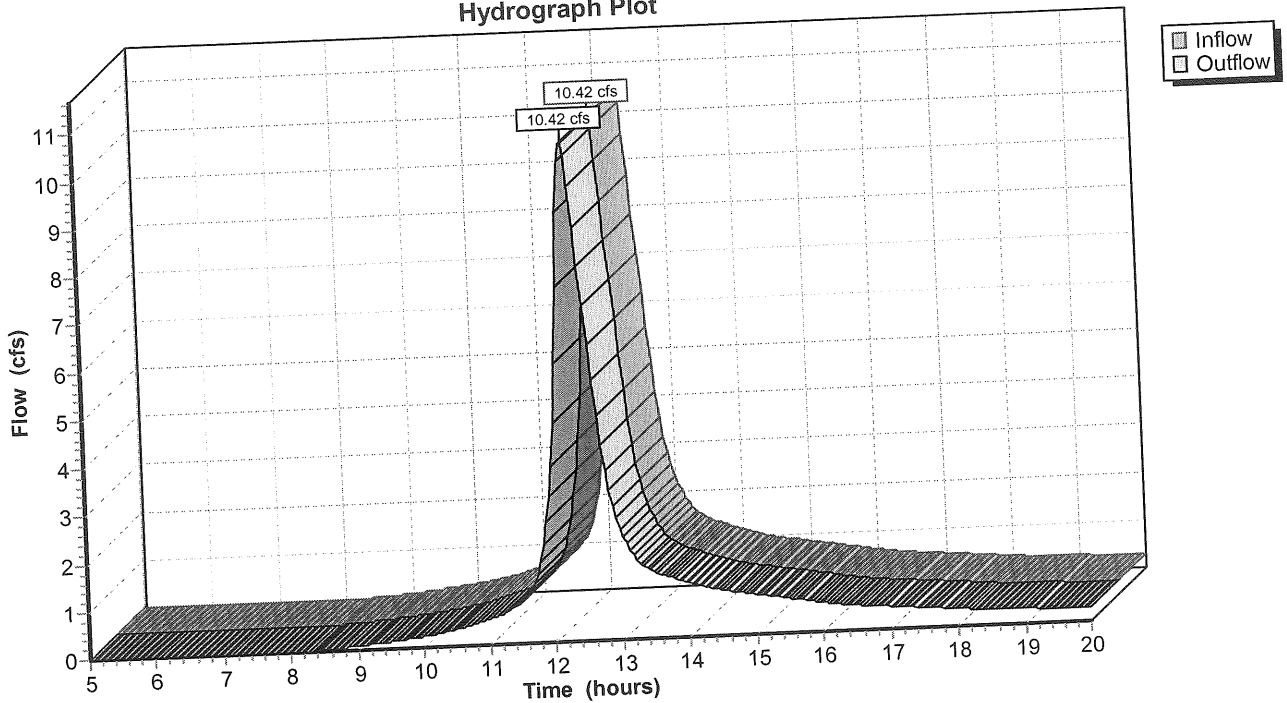
### Reach SP4: (new node)

Inflow = 10.42 cfs @ 12.31 hrs, Volume= 1.061 af  
Outflow = 10.42 cfs @ 12.31 hrs, Volume= 1.061 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Reach SP4: (new node)

Hydrograph Plot



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Type III 24-hr Rainfall=4.70"

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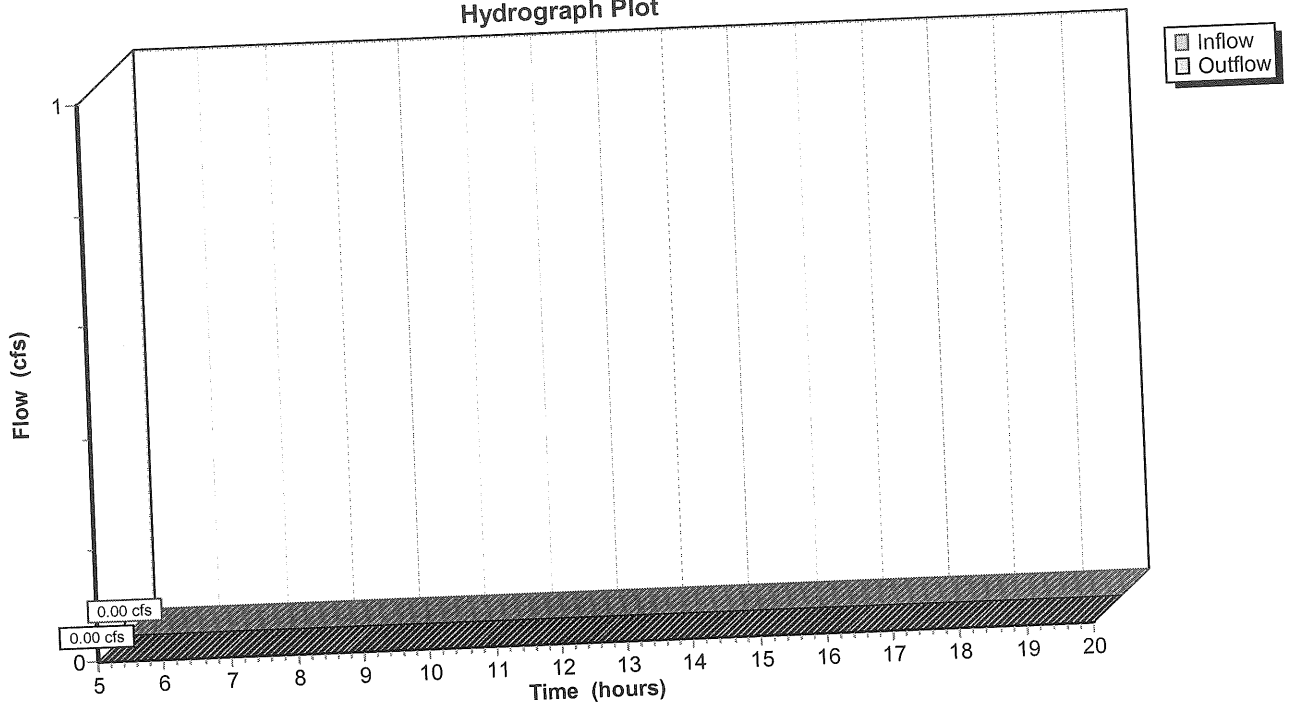
### Reach SP5: (new node)

Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af  
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Reach SP5: (new node)

Hydrograph Plot



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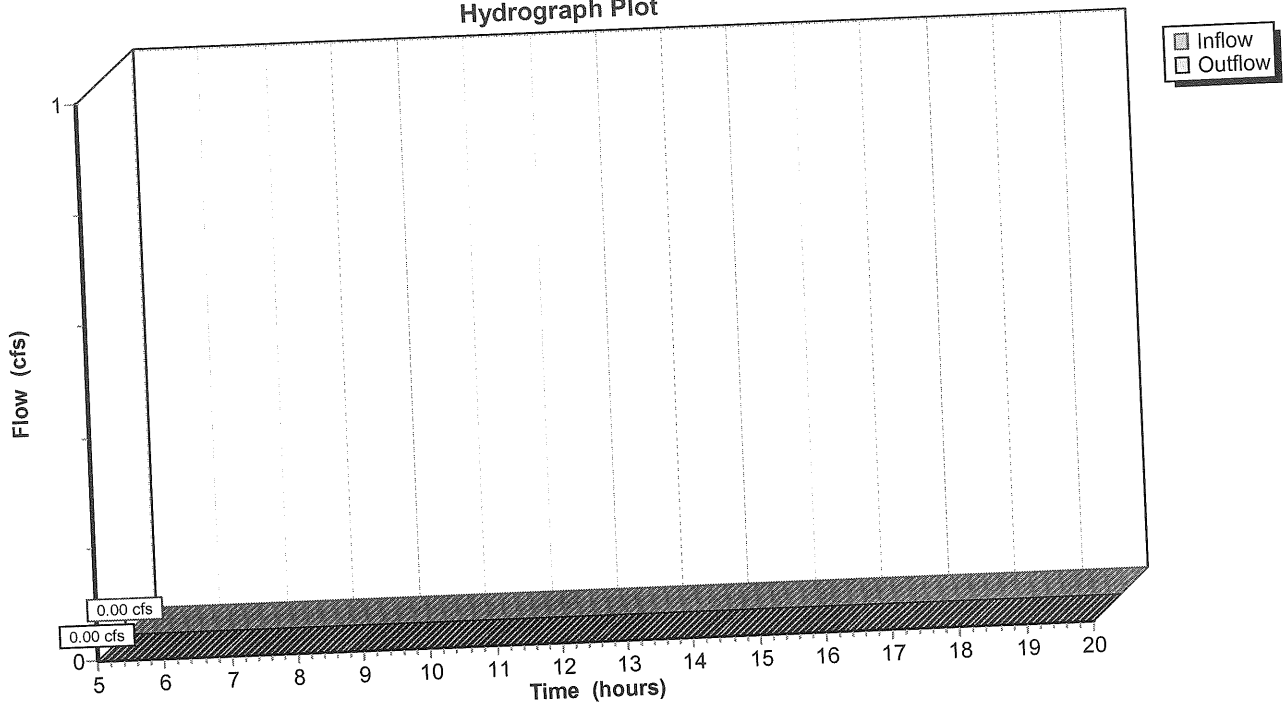
### Reach SP6: (new node)

Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af  
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Reach SP6: (new node)

Hydrograph Plot



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Type III 24-hr Rainfall=4.70"

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### Reach SP7: Site Stormdrain Network

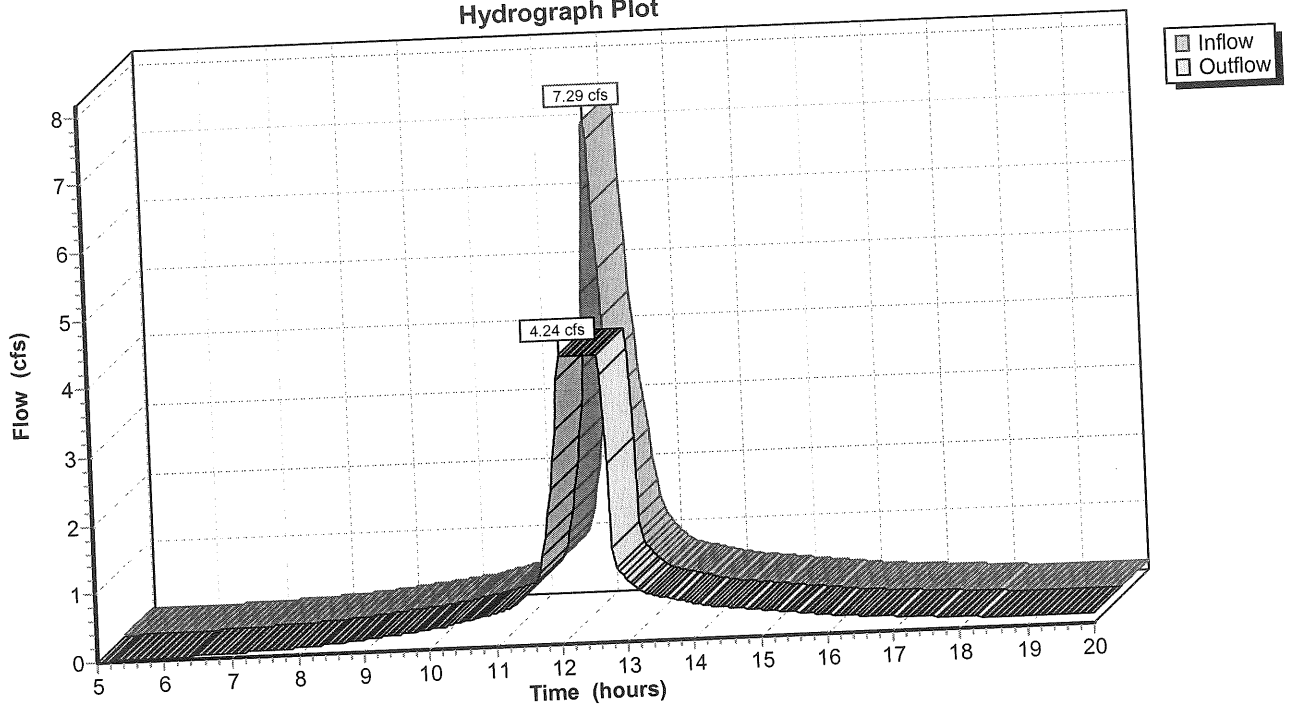
Inflow	=	7.29 cfs @ 12.17 hrs,	Volume=	0.626 af
Outflow	=	4.24 cfs @ 12.10 hrs,	Volume=	0.625 af, Atten= 42%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Max. Velocity= 6.1 fps, Min. Travel Time= 1.4 min  
Avg. Velocity = 3.0 fps, Avg. Travel Time= 2.8 min

Peak Depth= 1.00'  
Capacity at bank full= 4.21 cfs  
Inlet Invert= 93.00', Outlet Invert= 88.00'  
12.0" Diameter Pipe n= 0.011 Length= 500.0' Slope= 0.0100 '/'

### Reach SP7: Site Stormdrain Network

Hydrograph Plot



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Type III 24-hr Rainfall=5.50"  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

<b>Subcatchment 1S: 1S</b>	Tc=11.1 min CN=85 Area=23,297 sf	Runoff= 1.99 cfs 0.161 af
<b>Subcatchment 2S: 2S</b>	Tc=18.1 min CN=73 Area=23,382 sf	Runoff= 1.17 cfs 0.111 af
<b>Subcatchment 3S: 3S</b>	Tc=35.2 min CN=86 Area=36,910 sf	Runoff= 2.02 cfs 0.260 af
<b>Subcatchment 4S: 4S</b>	Tc=21.9 min CN=80 Area=227,044 sf	Runoff= 13.18 cfs 1.348 af
<b>Subcatchment 5S: (new node)</b>	Tc=0.0 min CN=0 Area=0 sf	Runoff= 0.00 cfs 0.000 af
<b>Subcatchment 6S: (new node)</b>	Tc=0.0 min CN=0 Area=0 sf	Runoff= 0.00 cfs 0.000 af
<b>Subcatchment 7S: 7S</b>	Tc=12.3 min CN=91 Area=93,918 sf	Runoff= 8.74 cfs 0.758 af
<b>Reach SP1: (new node)</b>		Inflow= 1.99 cfs 0.161 af Outflow= 1.99 cfs 0.161 af
<b>Reach SP2: (new node)</b>		Inflow= 1.17 cfs 0.111 af Outflow= 1.17 cfs 0.111 af
<b>Reach SP3: (new node)</b>		Inflow= 2.02 cfs 0.260 af Outflow= 2.02 cfs 0.260 af
<b>Reach SP4: (new node)</b>		Inflow= 13.18 cfs 1.348 af Outflow= 13.18 cfs 1.348 af
<b>Reach SP5: (new node)</b>		Inflow= 0.00 cfs 0.000 af Outflow= 0.00 cfs 0.000 af
<b>Reach SP6: (new node)</b>		Inflow= 0.00 cfs 0.000 af Outflow= 0.00 cfs 0.000 af
<b>Reach SP7: Site Stormdrain Network</b>		Inflow= 8.74 cfs 0.758 af
	Length= 500.0' Max Vel= 6.1 fps Capacity= 4.21 cfs	Outflow= 4.21 cfs 0.757 af

**Runoff Area = 9.287 ac Volume = 2.637 af Average Depth = 3.41"**



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Type III 24-hr Rainfall=5.50"

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### Subcatchment 1S: 1S

Runoff = 1.99 cfs @ 12.15 hrs, Volume= 0.161 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr Rainfall=5.50"

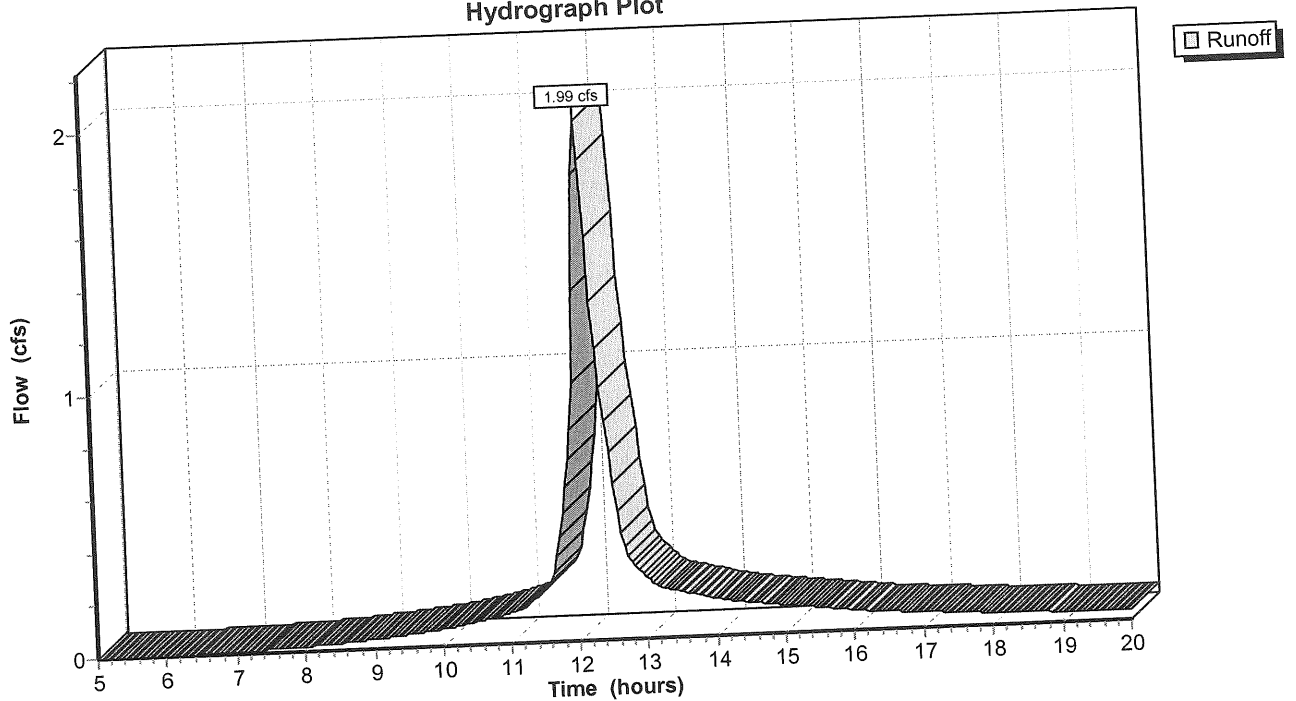
Area (sf)	CN	Description
3,833	98	Paved parking & roofs
3,675	91	Gravel roads, HSG D
15,789	80	>75% Grass cover, Good, HSG D
23,297	85	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.7	72	0.0290	0.2		Sheet Flow, Grass: Short n= 0.150 P2= 3.00"
3.7	214	0.0190	1.0		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.7	90	0.0120	2.2		Shallow Concentrated Flow, Paved Kv= 20.3 fps
11.1	376	Total			

### Subcatchment 1S: 1S

Hydrograph Plot



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Type III 24-hr Rainfall=5.50"

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**Subcatchment 2S: 2S**

Runoff = 1.17 cfs @ 12.26 hrs, Volume= 0.111 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr Rainfall=5.50"

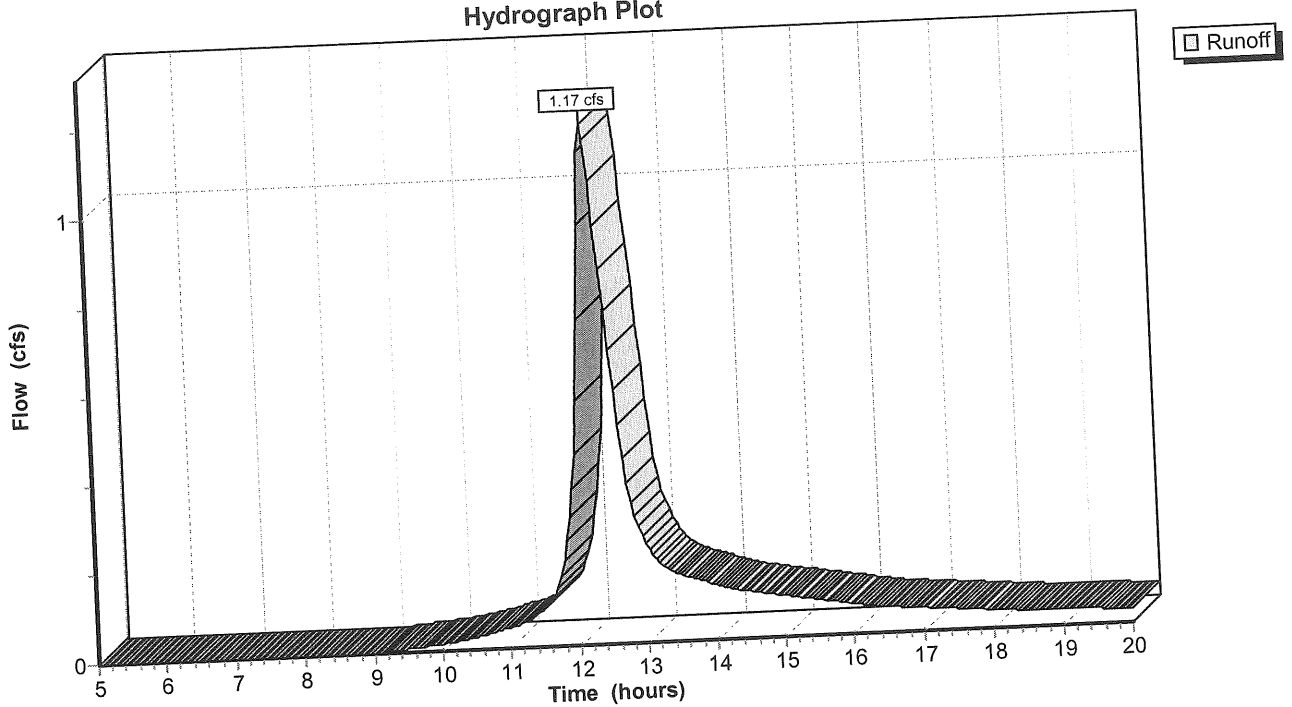
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18.1	295	Total			

**Subcatchment 2S: 2S**

Hydrograph Plot



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Type III 24-hr Rainfall=5.50"

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**Subcatchment 3S: 3S**

Runoff = 2.02 cfs @ 12.48 hrs, Volume= 0.260 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr Rainfall=5.50"

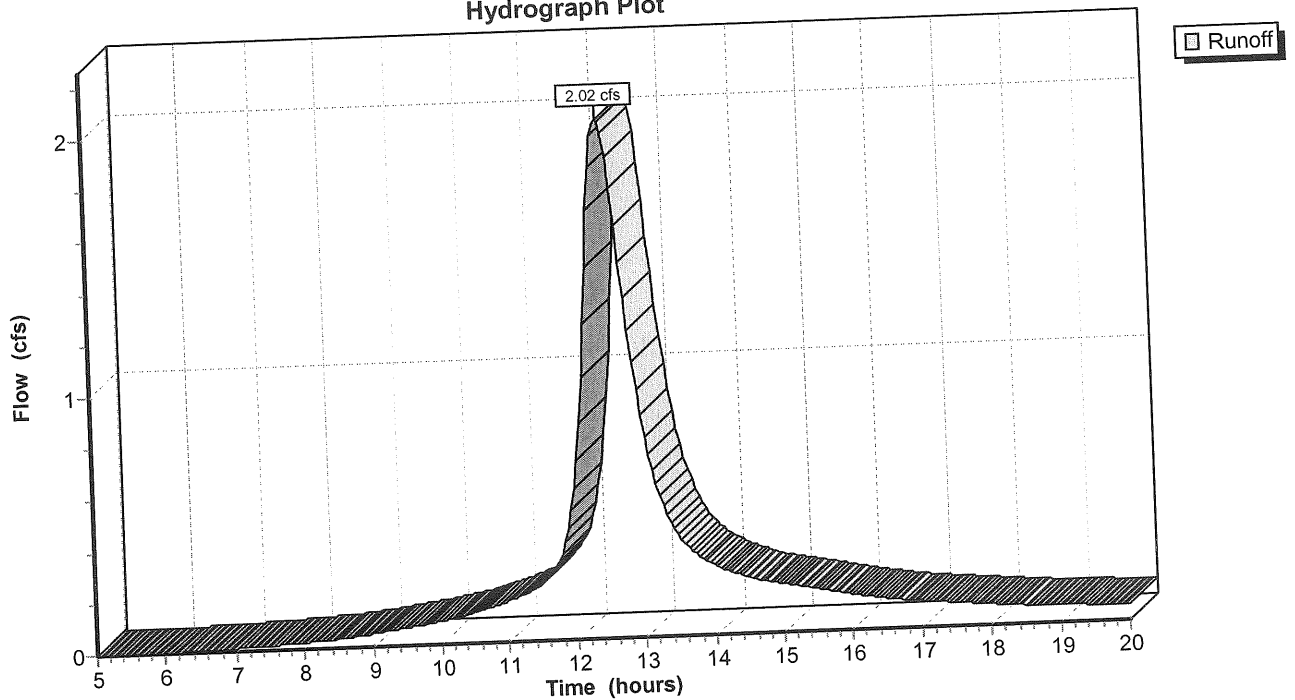
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19.3	150	0.0230	0.1		Sheet Flow, Grass: Dense n= 0.240 P2= 3.00"
15.9	141	0.0035	0.1		Shallow Concentrated Flow, Forest w/Heavy Litter Kv= 2.5 fps
35.2	291	Total			

**Subcatchment 3S: 3S**

Hydrograph Plot



**Subcatchment 4S: 4S**

Runoff = 13.18 cfs @ 12.30 hrs, Volume= 1.348 af

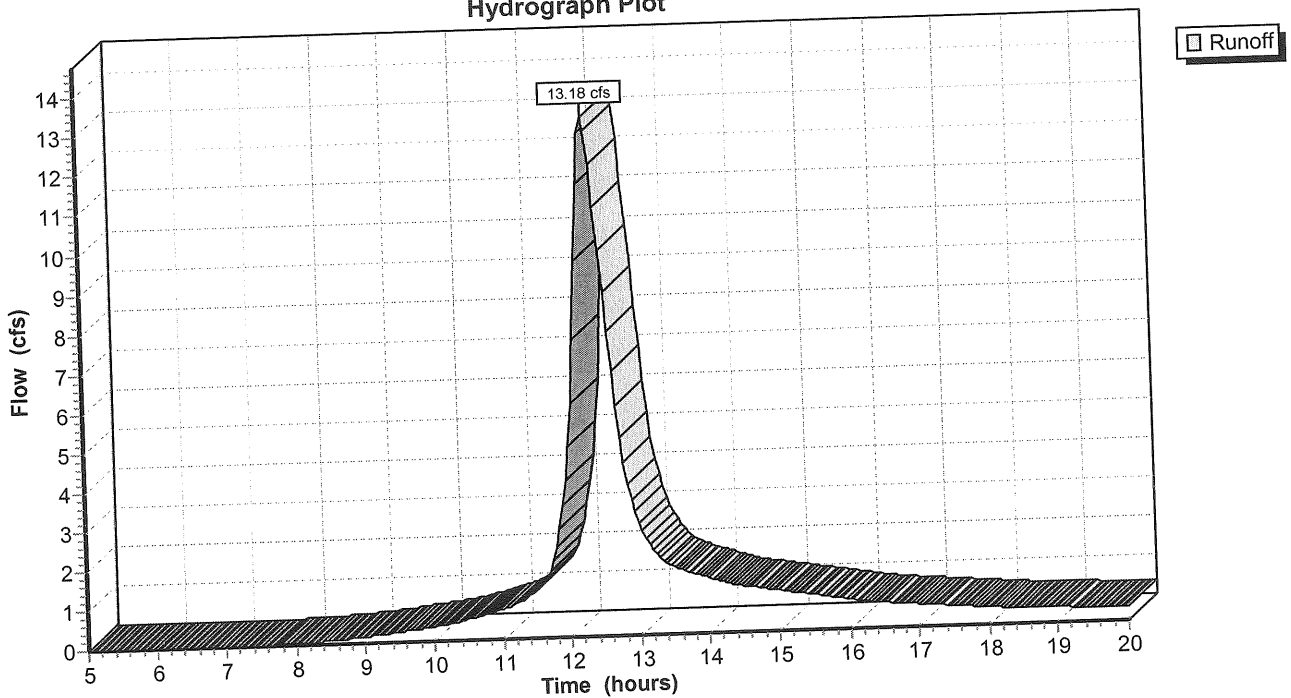
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21.9	641	Total			

**Subcatchment 4S: 4S**

Hydrograph Plot



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Type III 24-hr Rainfall=5.50"

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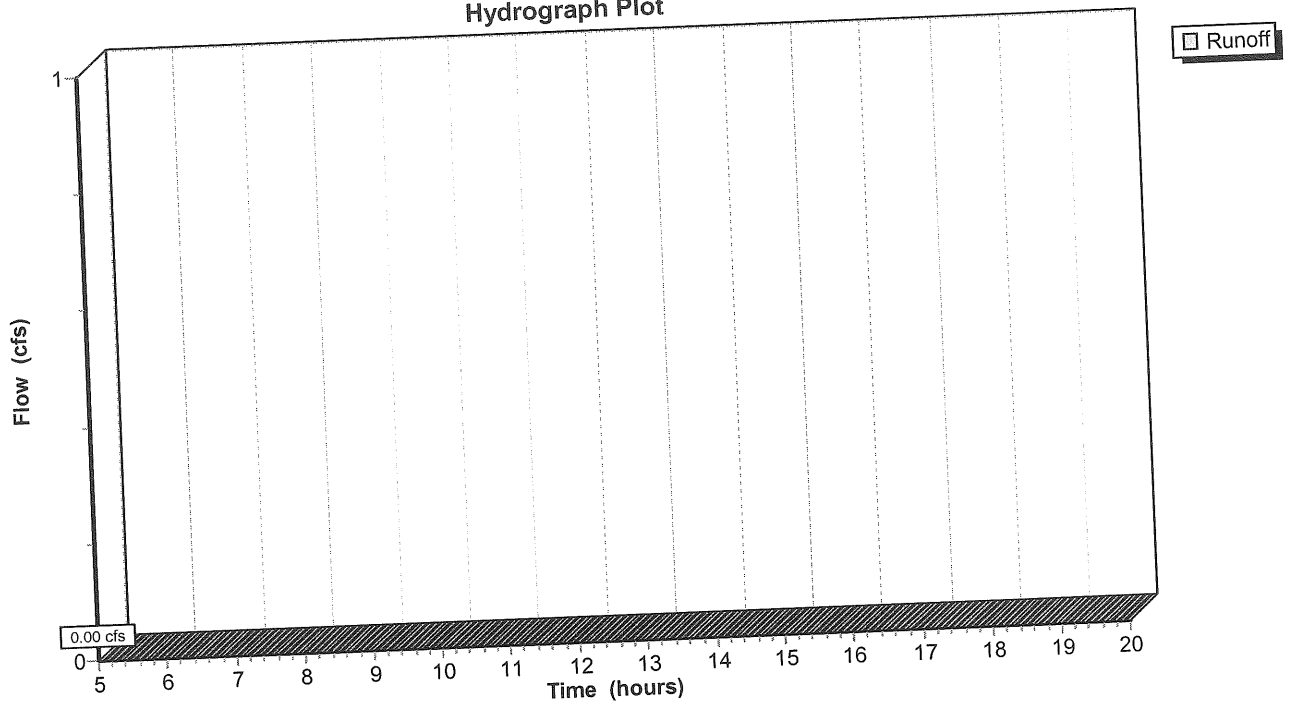
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Type III 24-hr Rainfall=5.50"

### Subcatchment 5S: (new node)

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Type III 24-hr Rainfall=5.50"

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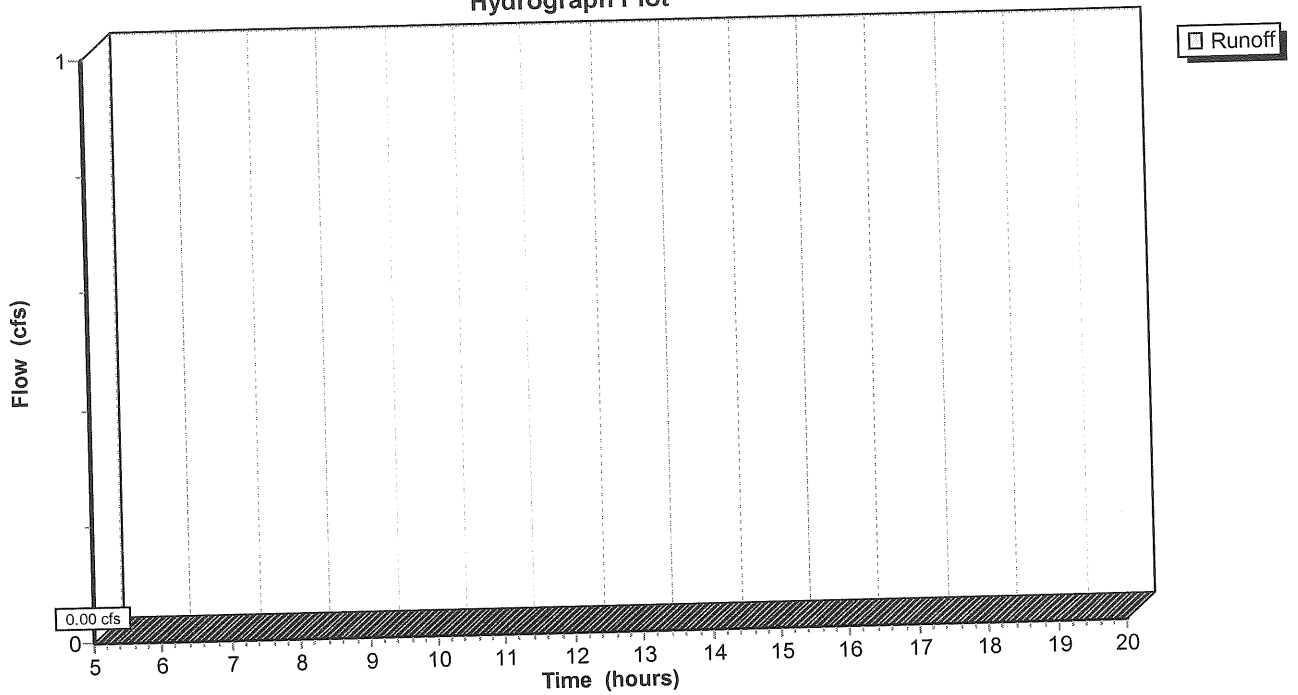
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Type III 24-hr Rainfall=5.50"

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### Subcatchment 7S: 7S

Runoff = 8.74 cfs @ 12.17 hrs, Volume= 0.758 af

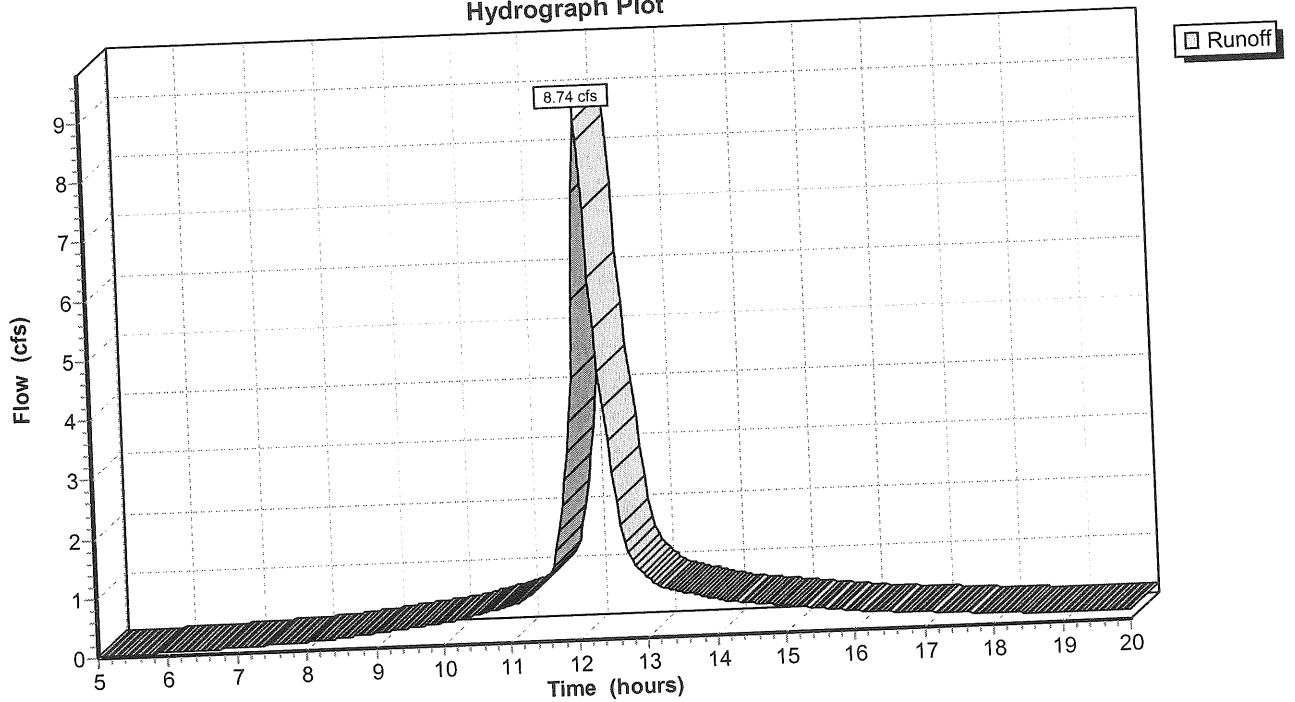
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7,477	91	Gravel roads, HSG D
6,963	77	Woods, Good, HSG D
26,146	84	50-75% Grass cover, Fair, HSG D
6,215	80	>75% Grass cover, Good, HSG D
93,918	91	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	120	0.0208	0.2		<b>Sheet Flow</b> , Grass: Short n= 0.150 P2= 3.00"
0.7	70	0.0286	1.7		<b>Shallow Concentrated Flow</b> , Nearly Bare & Untilled Kv= 10.0 fps
0.1	17	0.0200	2.9		<b>Shallow Concentrated Flow</b> , Paved Kv= 20.3 fps
12.3	207	Total			

### Subcatchment 7S: 7S

Hydrograph Plot



00235post-rev

Prepared by SEBAGO TECHNICS, INC.

HydroCAD® 6.00 s/n 000643 © 1986-2001 Applied Microcomputer Systems

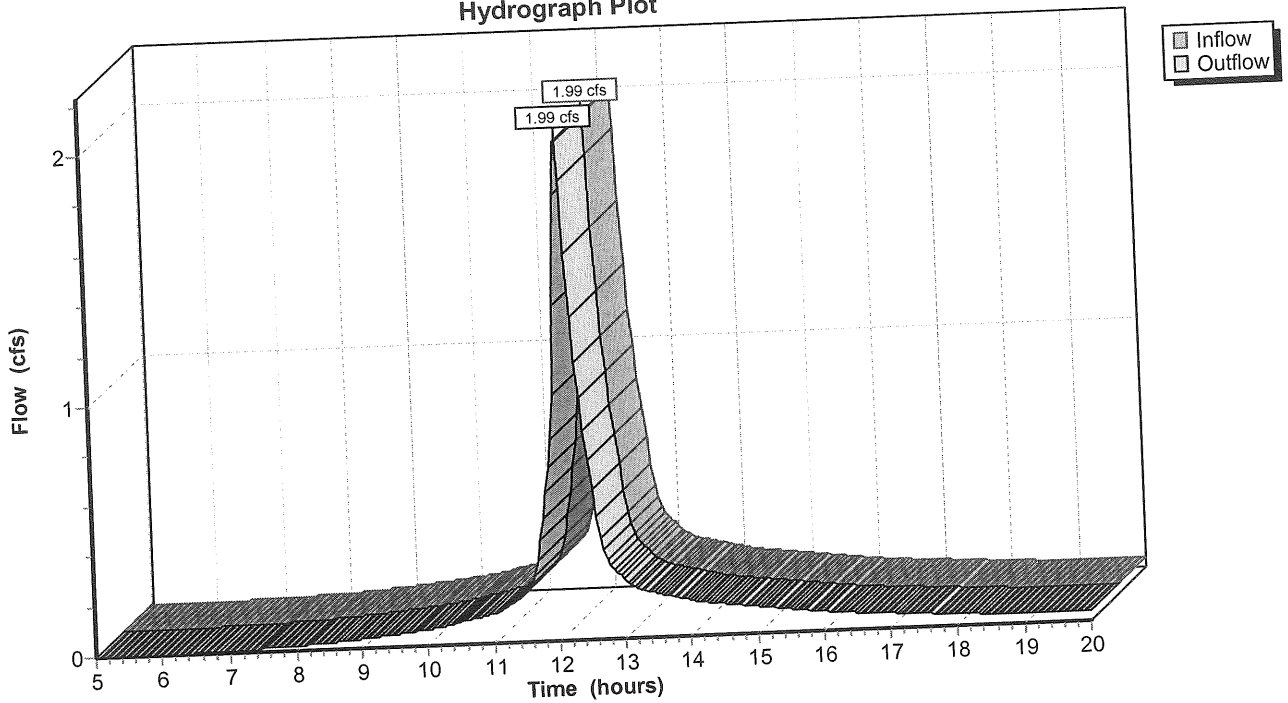
### Reach SP1: (new node)

Inflow = 1.99 cfs @ 12.15 hrs, Volume= 0.161 af  
Outflow = 1.99 cfs @ 12.15 hrs, Volume= 0.161 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Reach SP1: (new node)

Hydrograph Plot





00235post-rev

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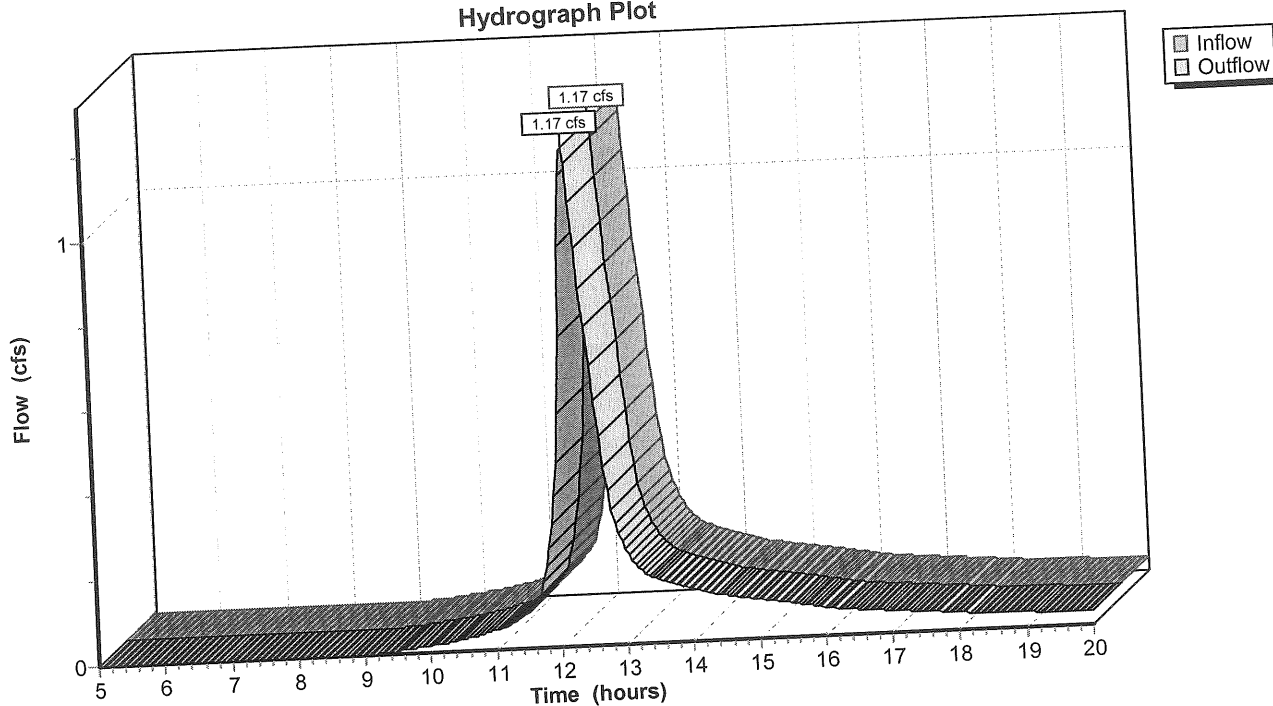
### Reach SP2: (new node)

Inflow = 1.17 cfs @ 12.26 hrs, Volume= 0.111 af  
Outflow = 1.17 cfs @ 12.26 hrs, Volume= 0.111 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Reach SP2: (new node)

Hydrograph Plot



00235post-rev

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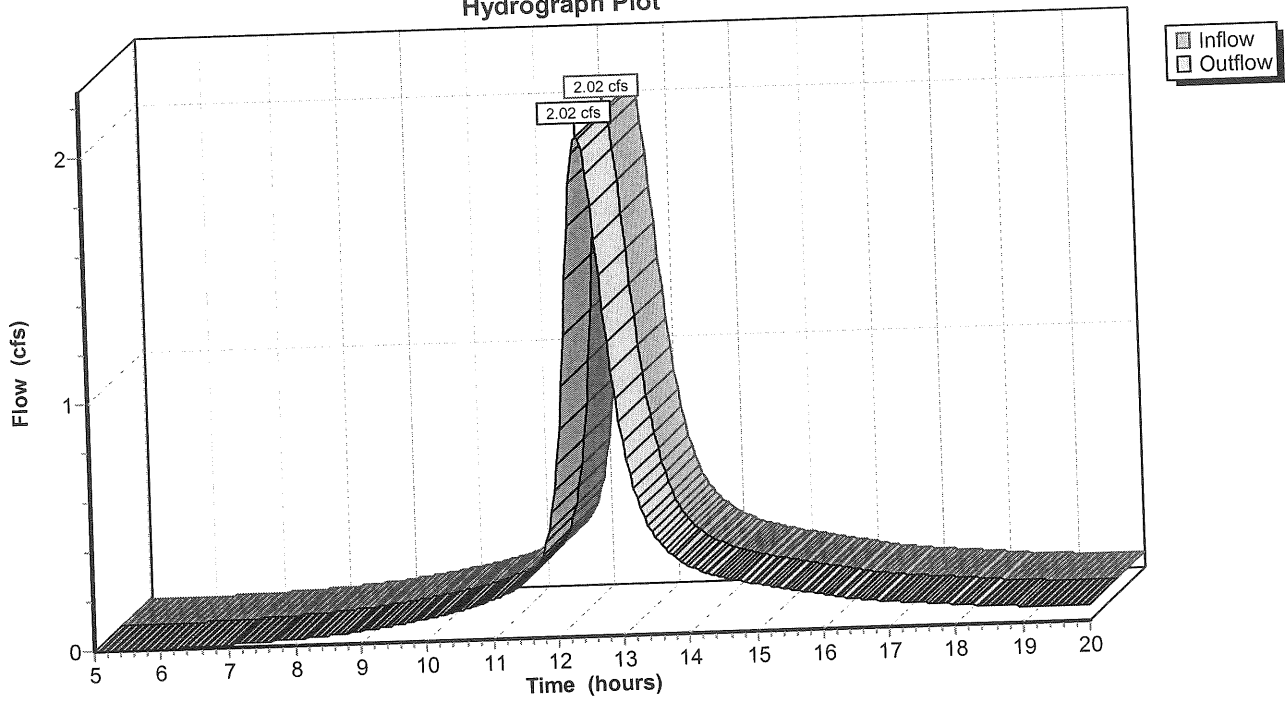
### Reach SP3: (new node)

Inflow = 2.02 cfs @ 12.48 hrs, Volume= 0.260 af  
Outflow = 2.02 cfs @ 12.48 hrs, Volume= 0.260 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Reach SP3: (new node)

Hydrograph Plot



00235post-rev

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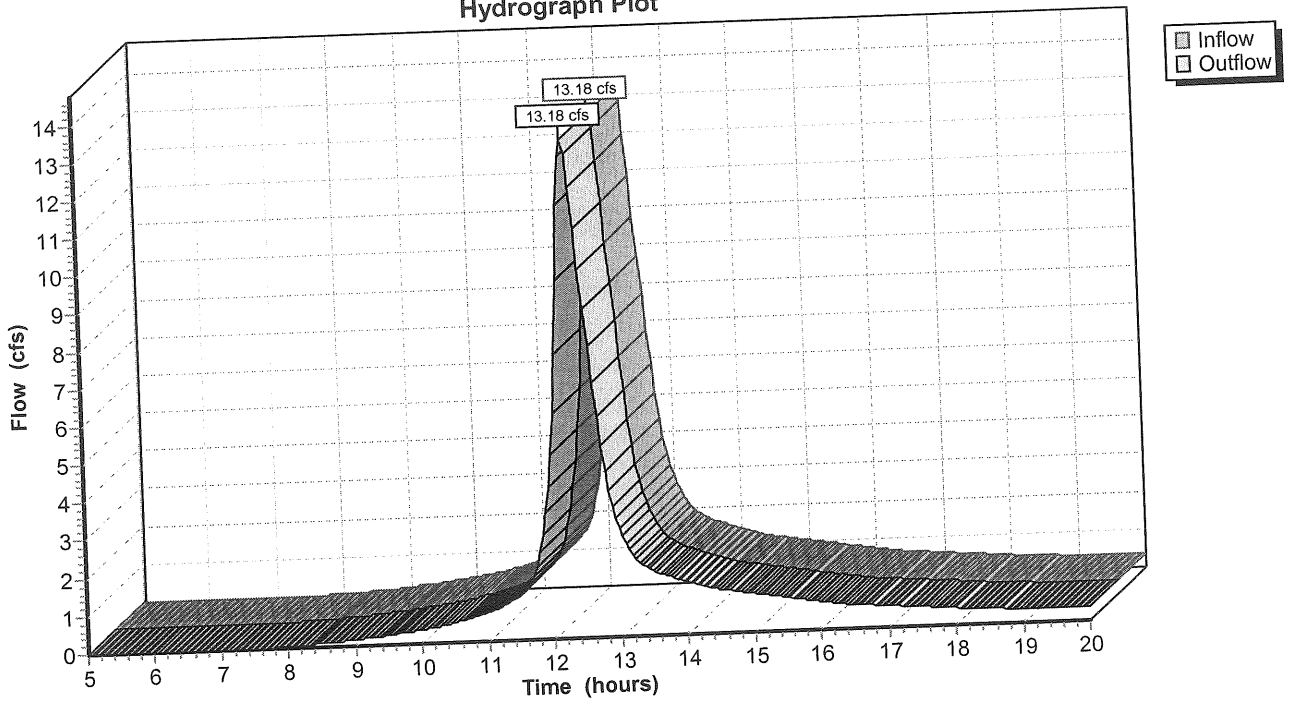
### Reach SP4: (new node)

Inflow = 13.18 cfs @ 12.30 hrs, Volume= 1.348 af  
Outflow = 13.18 cfs @ 12.30 hrs, Volume= 1.348 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Reach SP4: (new node)

Hydrograph Plot



00235post-rev

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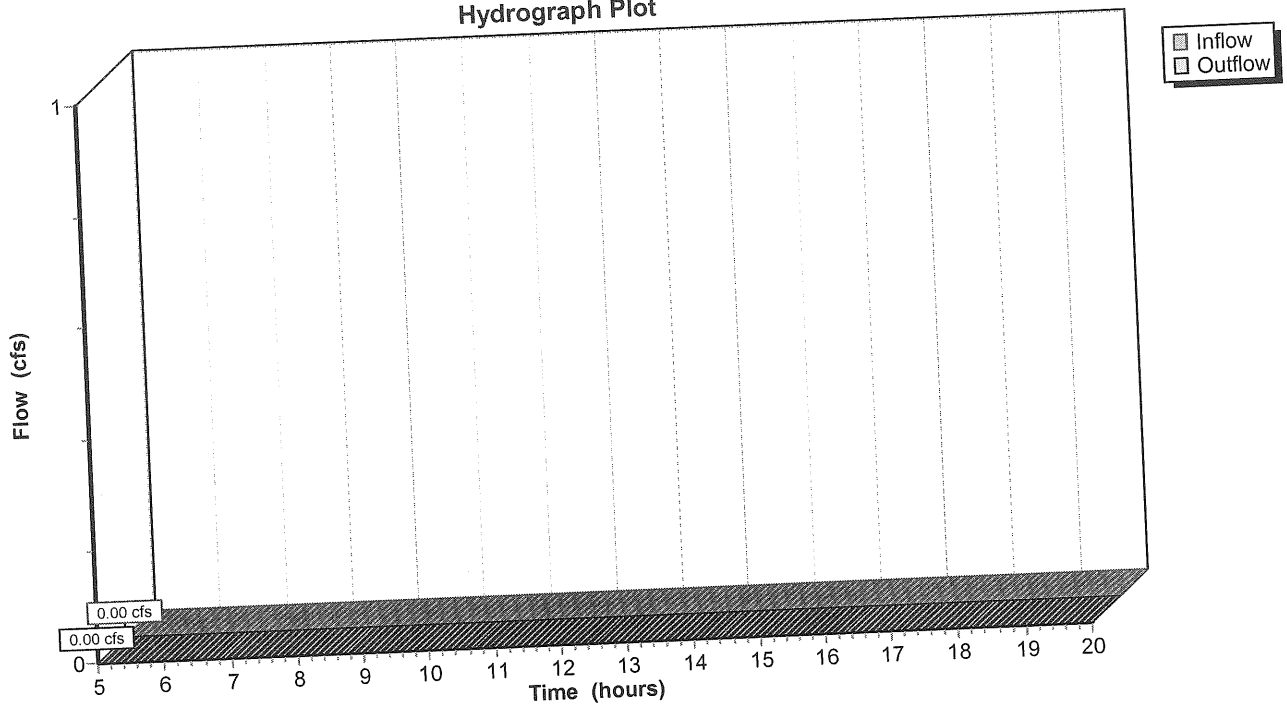
### Reach SP5: (new node)

Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af  
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Reach SP5: (new node)

Hydrograph Plot



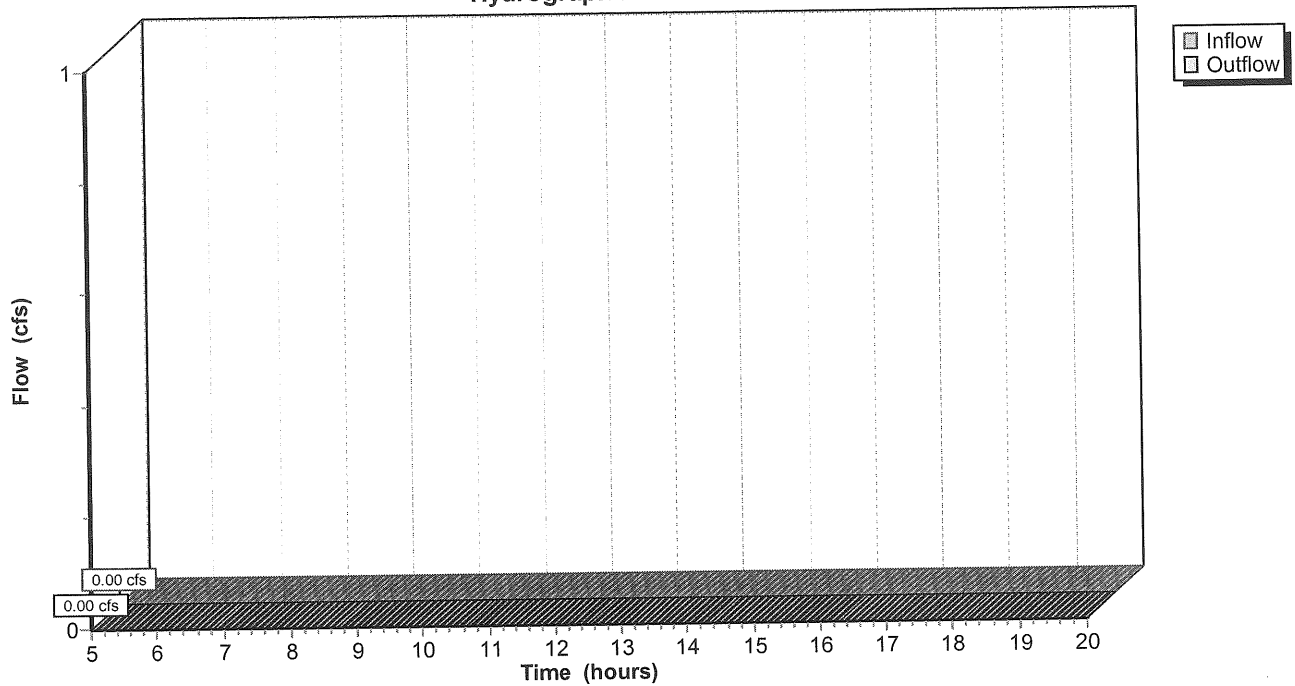
**Reach SP6: (new node)**

Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af  
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Reach SP6: (new node)**

Hydrograph Plot



00235post-rev

Prepared by SEBAGO TECHNICS, INC.  
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### Reach SP7: Site Stormdrain Network

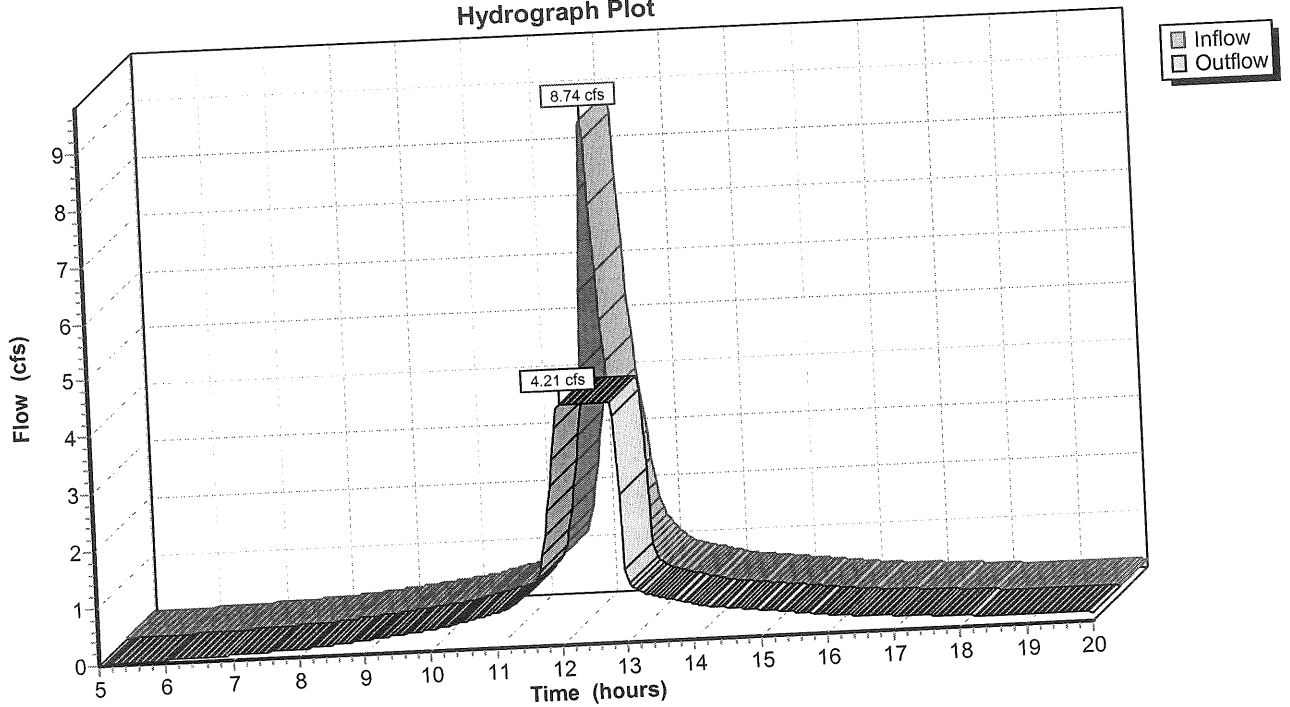
Inflow = 8.74 cfs @ 12.17 hrs, Volume= 0.758 af  
Outflow = 4.21 cfs @ 12.10 hrs, Volume= 0.757 af, Atten= 52%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Max. Velocity= 6.1 fps, Min. Travel Time= 1.4 min  
Avg. Velocity = 3.2 fps, Avg. Travel Time= 2.6 min

Peak Depth= 1.00'  
Capacity at bank full= 4.21 cfs  
Inlet Invert= 93.00', Outlet Invert= 88.00'  
12.0" Diameter Pipe n= 0.011 Length= 500.0' Slope= 0.0100 1'

### Reach SP7: Site Stormdrain Network

Hydrograph Plot



December 23, 2003  
00235

Kandice Talbot, Planner  
City of Portland  
389 Congress Street  
Portland, ME 04101

Six G's Coed, 567 Riverside Street  
ID #2003-0210, CBL#312-B-003

Dear Kandi:

This letter and the enclosed plans are provided in response to the review comments regarding the above referenced project as contained in your letter dated December 12, 2003 and the memorandum from Stephen Bushey, P.E., of DeLuca-Hoffman Associates, Inc., dated December 3, 2003.

DeLuca-Hoffman Associates, Inc.

1. The plans are substantially complete and acceptable for approval. The applicant has made provisions for adequate parking, grading, drainage and utilities to allow the development to be constructed. The following comments can be worked on the final approval drawings if necessary.

*The enclosed plans have been revised in accordance with the engineering review comments.*

2. The applicant must provide the City's plumbing inspector with the necessary completed HHE-200 forms and relevant information of adjacent properties, wells, and adjacent systems if they exist. A licensed soils evaluator must complete these materials.

*Enclosed are the required HHE-200 forms for the proposed subsurface sewage disposal system. Additionally, the system and its corresponding grading are depicted on the Grading & Utility Plan.*

3. The applicant should determine is natural gas service is available off the high-pressure gain main in Riverside Street. I don't recall if a distribution line exists in the street.

*Natural gas service is available off the 8-inch high pressure gas main in Riverside Street. The applicant will initiate the request for service from Northern Utilities.*

4. A utility easement should be provided for the sewer line crossing the Riverside Welders property.

*The 50-foot access and utility easement, which was previously proposed, has been expanded in the area where the proposed sewer will cross onto the Riverside Welders parcel, as shown on the Site Plan and the Grading & Utility Plan.*

5. The Portland Water District water main appears to fall outside of the PWD easement as it is shown on the boundary and topographic survey plan. We suggest that the District obtain new easement rights centered on the actual pipeline perhaps.

*The alignment of the PWD water main, as depicted on Sheet 3, has been assumed, based on the location of existing gate valve, which were field located. As such, it appears that a portion of the PWD main falls outside of the easement. We will provide a copy of the Sheet 3 to the PWD and coordinate any required easement realignments with them.*

6. The grading plan should contain provisions to stabilize the remaining ground surfaces that are outside the development area if they are not already grassed or graveled.

*The applicant will loam and seed those areas which are not currently stabilized. A note to this effect has been added to the Grading and Utility Plan (Sheet 3 of 4).*

7. The post development watershed plan appears to break watersheds 3S and 4S down the middle of the building (assuming a peaked roof line). The building elevations suggest a single pitched roof from front to back; therefore the entire building should be included in area 3S. The runoff computations should be rerun, although I suspect that the conclusions will remain the same.

*The HydroCAD stormwater model was revised in response to the single pitched roof from front to back. The results indicate a reduction in the peak rate of runoff at Study Point 4 and an increase at Study Point 3. This is a more desirable outcome in that a slight increase in peak rates of runoff was originally calculated at Study Point 4 and a slight decrease was calculated at Study Point 3, in comparison to the existing condition.*

City of Portland, Planning Department

1. A financial capacity letter from a bank shall be submitted.

*The applicant will obtain a letter of financial capacity and forward it to your attention immediately upon receipt.*



2. Catalogue cuts of the proposed wall pack units and a lighting photometric plan must be submitted to determine if the lighting is conformance with the lighting standards.

*A photometric plan has been submitted to a lighting supplier to prepare a photometric plan. Enclosed are the catalogue cuts for the proposed wall pack units.*

3. Attached is the Development Review Coordinator's memo for your review.

*These comments are addressed above.*

4. Chapter 25 of the City Ordinance requires that any new development install granite curb and sidewalk along the frontage of the property. It does not appear that there is existing sidewalk and granite curb along the frontage. Please address this issue.

*Granite curbing and a bituminous sidewalk are now shown to be installed along the existing edge of pavement along the Riverside Street frontage of the project site.*

5. The elevations must show proposed materials for the façade of the building.

*The enclosed building elevation drawings include the proposed building materials.*

6. Applicant must show hydrant within 500 ft. path of travel.

*The existing fire hydrant on Riverside Street has been called off on the Grading and Utility Plan. This hydrant is well within 500 feet of the proposed structure.*

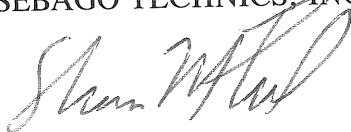
7. Fire apparatus shall have access to two sides of the structure.

*Access is now shown to be provided along two sides of the proposed building. A gravel access area will be maintained on the side of the building opposite Riverside Street.*

We are hopeful that we have adequately addressed the review comments such that the site plan application may be approved. Upon your review of the enclosed material, however, please call with any questions or comments. Thank you.

Sincerely,

SEBAGO TECHNICS, INC.



Shawn M. Frank, P.E.  
Project Manager

BGY/SMF:bgy/jc  
Enc.

cc: Dennis Waters, Patco Construction, Inc.

# SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Department of Human Services  
 Division of Health Engineering, 10 SHS  
 (207) 287-5672 Fax: (207) 287-3165

**PROPERTY LOCATION** >> CAUTION: PERMIT REQUIRED - ATTACH IN SPACE BELOW <<

City, Town, or Plantation	Portland
Street or Road	557 Riverside Street
Subdivision, Lot #	Phoenix Welding

The Subsurface Wastewater Disposal System *shall not* be installed until a Permit is attached HERE by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.

**OWNER/APPLICANT INFORMATION**

Name (last, first, MI)	<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Applicant
Riverside Welders, L.L.C.	
Mailing Address of Owner/Applicant	557 Riverside Street Portland, ME 04103
Daytime Tel. #	(207) 797-5832

Municipal Tax Map # 312/306 Lot # 1-3

**OWNER OR APPLICANT STATEMENT**  
 I state and acknowledge that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Department and/or Local Plumbing Inspector to deny a Permit.

Signature of Owner or Applicant \_\_\_\_\_ Date \_\_\_\_\_

**CAUTION: INSPECTION REQUIRED**  
 I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application.

Local Plumbing Inspector Signature \_\_\_\_\_ (1st) date approved \_\_\_\_\_  
 \_\_\_\_\_ (2nd) date approved \_\_\_\_\_

**PERMIT INFORMATION**


<b>TYPE OF APPLICATION</b> <input checked="" type="checkbox"/> 1. First Time System <input type="checkbox"/> 2. Replacement System Type replaced: _____ Year installed: _____ <input type="checkbox"/> 3. Expanded System <input type="checkbox"/> a. Minor Expansion <input type="checkbox"/> b. Major Expansion <input type="checkbox"/> 4. Experimental System <input type="checkbox"/> 5. Seasonal Conversion	<b>THIS APPLICATION REQUIRES</b> <input checked="" type="checkbox"/> 1. No Rule Variance <input type="checkbox"/> 2. First Time System Variance <input type="checkbox"/> a. Local Plumbing Inspector Approval <input type="checkbox"/> b. State & Local Plumbing Inspector Approval <input type="checkbox"/> 3. Replacement System Variance <input type="checkbox"/> a. Local Plumbing Inspector Approval <input type="checkbox"/> b. State & Local Plumbing Inspector Approval <input type="checkbox"/> 4. Minimum Lot Size Variance <input type="checkbox"/> 5. Seasonal Conversion Permit	<b>DISPOSAL SYSTEM COMPONENTS</b> <input checked="" type="checkbox"/> 1. Complete Non-engineered System <input type="checkbox"/> 2. Primitive System (graywater & alt. toilet) <input type="checkbox"/> 3. Alternative Toilet, specify: _____ <input type="checkbox"/> 4. Non-engineered Treatment Tank (only) <input type="checkbox"/> 5. Holding Tank, _____ gallons <input type="checkbox"/> 6. Non-engineered Disposal Field (only) <input type="checkbox"/> 7. Separated Laundry System <input type="checkbox"/> 8. Complete Engineered System (2000 gpd or more) <input type="checkbox"/> 9. Engineered Treatment Tank (only) <input type="checkbox"/> 10. Engineered Disposal Field (only) <input type="checkbox"/> 11. Pre-treatment, specify: _____ <input type="checkbox"/> 12. Miscellaneous Components
<b>SIZE OF PROPERTY</b> 86± <input type="checkbox"/> SQ. FT. <input checked="" type="checkbox"/> ACRES	<b>DISPOSAL SYSTEM TO SERVE</b> <input type="checkbox"/> 1. Single Family Dwelling Unit, No. of Bedrooms: _____ <input type="checkbox"/> 2. Multiple Family Dwelling, No. of Units: _____ <input checked="" type="checkbox"/> 3. Other: <u>Manufacturing/Offices</u> (specify) Current Use <input type="checkbox"/> Seasonal <input type="checkbox"/> Year Round <input checked="" type="checkbox"/> Undeveloped	<b>TYPE OF WATER SUPPLY</b> <input type="checkbox"/> 1. Drilled Well <input type="checkbox"/> 2. Dug Well <input type="checkbox"/> 3. Private <input checked="" type="checkbox"/> 4. Public <input type="checkbox"/> 5. Other
<b>SHORELAND ZONING</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

**DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)**

<b>TREATMENT TANK</b> <input checked="" type="checkbox"/> 1. Concrete <input checked="" type="checkbox"/> a. Regular <input type="checkbox"/> b. Low Profile <input type="checkbox"/> 2. Plastic <input type="checkbox"/> 3. Other: _____ CAPACITY: <u>1500</u> GAL.	<b>DISPOSAL FIELD TYPE &amp; SIZE</b> <input checked="" type="checkbox"/> 1. Stone Bed <input type="checkbox"/> 2. Stone Trench <input type="checkbox"/> 3. Proprietary Device <input type="checkbox"/> a. cluster array <input type="checkbox"/> c. Linear <input type="checkbox"/> b. regular load <input type="checkbox"/> d. H-20 load <input type="checkbox"/> 4. Other: _____ SIZE: <u>2550</u> <input checked="" type="checkbox"/> sq. ft. <input type="checkbox"/> lin. ft.	<b>GARBAGE DISPOSAL UNIT</b> <input checked="" type="checkbox"/> 1. No <input type="checkbox"/> 2. Yes <input type="checkbox"/> 3. Maybe If Yes or Maybe, specify one below: <input type="checkbox"/> a. multi-compartment tank <input type="checkbox"/> b. ___ tanks in series <input type="checkbox"/> c. increase in tank capacity <input type="checkbox"/> d. Filter on Tank Outlet	<b>DESIGN FLOW</b> <u>960</u> gallons per day BASED ON: <input type="checkbox"/> 1. Table 501.1 (dwelling unit(s)) <input checked="" type="checkbox"/> 2. Table 501.2 (other facilities) SHOW CALCULATIONS --- for other facilities ---  64 employees @ 15 gpd/ea = (no showers) 960 gpd
<b>SOIL DATA &amp; DESIGN CLASS</b> PROFILE <u>5</u> / CONDITION <u>D</u> / DESIGN <u>3</u> at Observation Hole # <u>TP-647</u> Depth <u>12</u> " of Most Limiting Soil Factor	<b>DISPOSAL FIELD SIZING</b> <input type="checkbox"/> 1. Small---2.0 sq. ft. / gpd <input checked="" type="checkbox"/> 2. Medium---2.6 sq. ft. / gpd <input type="checkbox"/> 3. Medium---Large 3.3 sq. ft. / gpd <input type="checkbox"/> 4. Large---4.1 sq. ft. / gpd <input type="checkbox"/> 5. Extra Large---5.0 sq. ft. / gpd	<b>EFFLUENT/EJECTOR PUMP</b> <input type="checkbox"/> 1. Not Required <input checked="" type="checkbox"/> 2. May Be Required <input type="checkbox"/> 3. Required Specify only for engineered systems: DOSE: _____ gallons	<input type="checkbox"/> 3. Section 503.0 (meter readings) ATTACH WATER METER DATA

**SITE EVALUATOR STATEMENT**

I certify that on 10-8-03 (date) I completed a site evaluation on this property and state that the data reported are accurate and that the proposed system is in compliance with the State of Maine Subsurface Wastewater Disposal Rules (10-144A CMR 241).

_____ Site Evaluator Signature  Gary M. Fullerton Site Evaluator Name Printed	_____ SE #  (207) 856-0277 Telephone Number	_____ Date  11-12-03 E-mail Address gfullerton@sebagotech.com	 Engineering Expertise You Can Build On
-------------------------------------------------------------------------------------------	---------------------------------------------------------	------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------

**Note: Changes to or deviations from the design should be confirmed with the Site Evaluator.**

# SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Department of Human Services  
 Division of Health Engineering, 10 SHS  
 (207) 287-5672 FAX (207) 287-3165

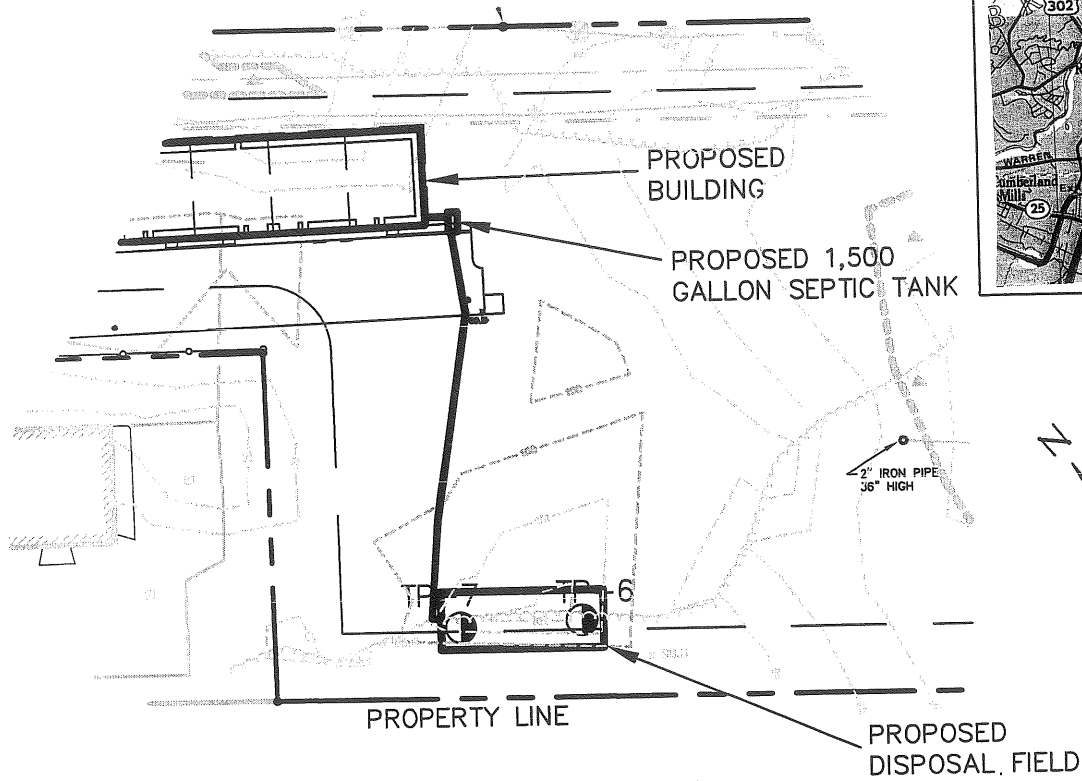
Town, City, Plantation  
**Portland**

Street, Road, Subdivision  
**557 Riverside Street**

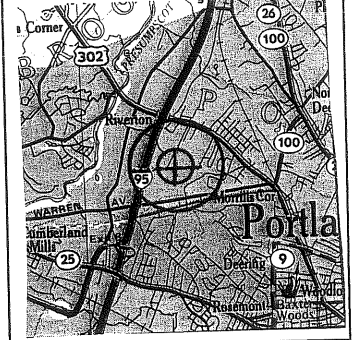
Owner or Applicant Name  
**Riverside Welders, L.L.C.**

## SITE PLAN

Scale 1" = 100 Ft.  
 or as shown



## SITE LOCATION PLAN



## SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole TP-6  Test pit  Boring  
 1-2 " Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
LOAMY SAND	FRIABLE	BROWN	
FINE SAND		GRAY	COMMON & DISTINCT
DEPTH OF TEST PIT = 38"			

Soil Classification <u>5</u> Profile	Slope <u>0-3</u> %	Limiting Factor <u>12</u> "	<input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock <input type="checkbox"/> Pit Depth
<u>D</u> Condition			

Observation Hole TP-7  Test pit  Boring  
 1-2 " Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
LOAMY SAND	FRIABLE	BROWN	
FINE SAND	DISCONT. 2" LAYER CEMENTED SAND	GRAY	COMMON & DISTINCT
	FRIABLE		
DEPTH OF TEST PIT = 40"			

Soil Classification <u>5</u> Profile	Slope <u>0-3</u> %	Limiting Factor <u>12</u> "	<input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock <input type="checkbox"/> Pit Depth
<u>D</u> Condition			

*[Signature]*  
 Site Evaluator Signature

355  
 SE #

11-12-03  
 Date

Maine Department of Human Services  
 Division of Health Engineering, 10 SHS  
 (207) 287-5672 FAX (207) 287-3165

# SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Town, City, Plantation  
**Portland**

Street, Road, Subdivision  
**557 Riverside Street**

Owner or Applicant Name  
**Riverside Welders, L.L.C.**

## SUBSURFACE WASTEWATER DISPOSAL PLAN

Scale 1" = 40 FT.

NOTE: ALLOW FOR POSITIVE DRAINAGE AROUND THE LEACHFIELD.

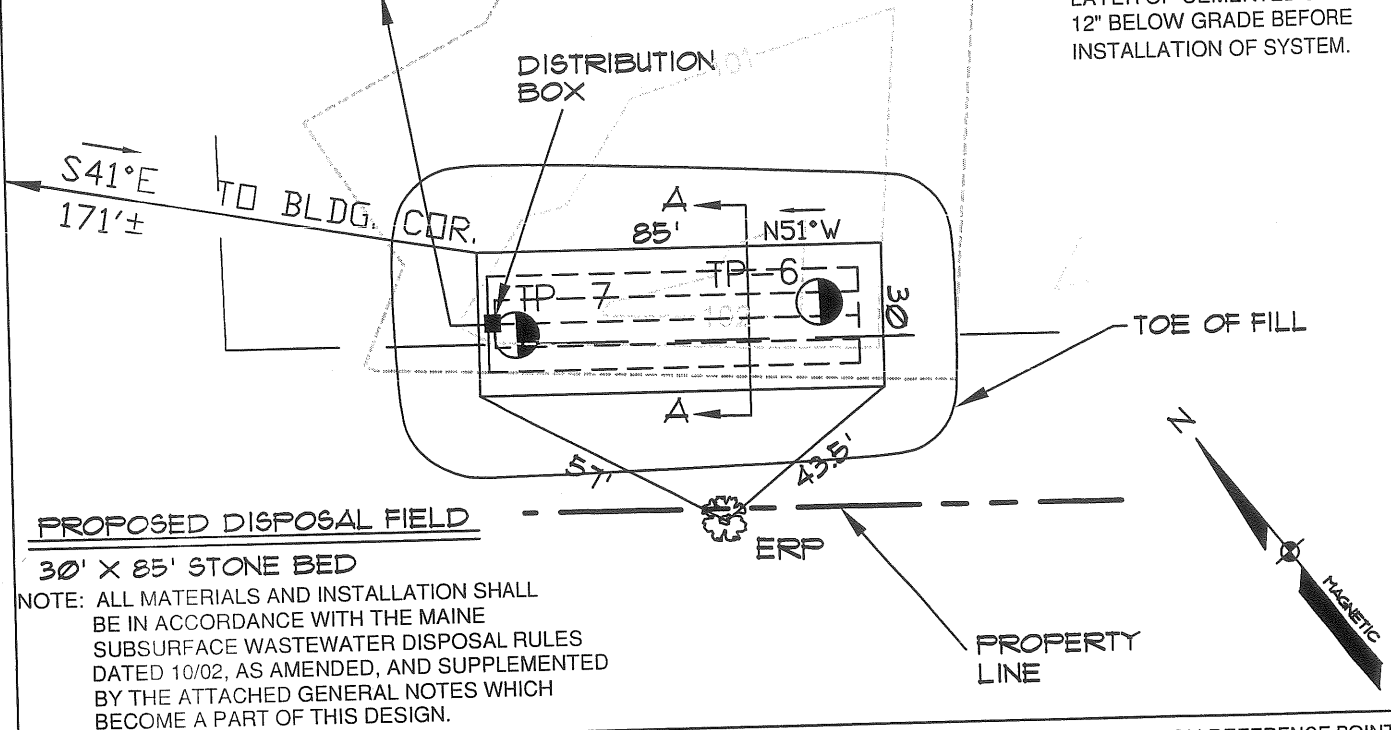
NOTE: CONTRACTOR SHALL VERIFY A MINIMUM OF 15' TO PROPERTY LINE TO MAINTAIN A 4:1 SLOPE ON TOE OF FILL.

NOTE: IF A GARBAGE DISPOSAL IS USED, THEN CHANGES TO THIS DESIGN ARE NECESSARY.

IPF = IRON PIN FOUND  
 TP = TEST PIT

TO 1,500 GALLON SEPTIC TANK

NOTE: CONTRACTOR SHALL REMOVE LAYER OF CEMENTED SAND AT 12" BELOW GRADE BEFORE INSTALLATION OF SYSTEM.



### PROPOSED DISPOSAL FIELD

30' X 85' STONE BED

NOTE: ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE MAINE SUBSURFACE WASTEWATER DISPOSAL RULES DATED 10/02, AS AMENDED, AND SUPPLEMENTED BY THE ATTACHED GENERAL NOTES WHICH BECOME A PART OF THIS DESIGN.

### BACKFILL REQUIREMENTS

Depth of Fill (Upslope) 36"  
 Depth of Fill (Downslope) (varies) 43"-48"

### CONSTRUCTION ELEVATIONS

Finished Grade Elevation	-16"
Top of Distribution Pipe or Proprietary Device	-29"
Bottom of Disposal Area (Bottom of Stone)	-40"

### ELEVATION REFERENCE POINT

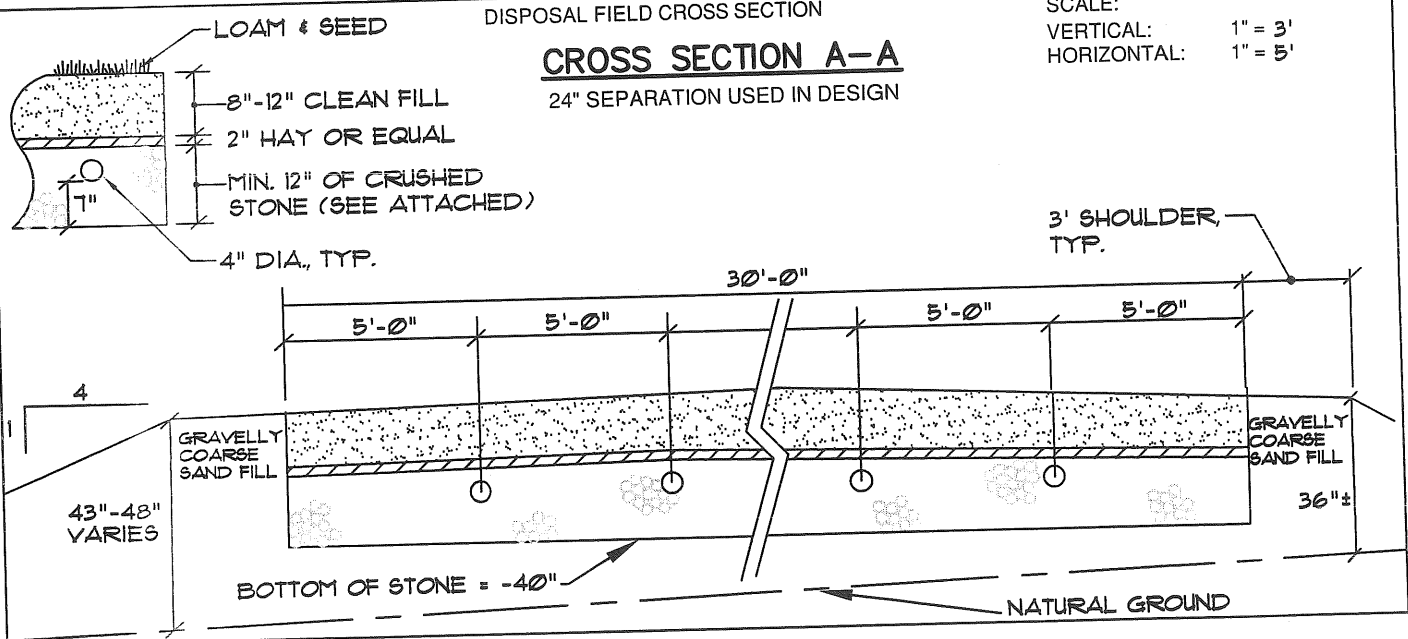
Location & Description Nail up  
 53" in a 13" dia. Aspen  
 Reference Elevation 0"

### DISPOSAL FIELD CROSS SECTION

#### CROSS SECTION A-A

24" SEPARATION USED IN DESIGN

SCALE:  
 VERTICAL: 1" = 3"  
 HORIZONTAL: 1" = 5"



*[Signature]*  
 Site Evaluator Signature

355  
 SE #

11-12-03  
 Date

General Notes  
(attachment to form HHE-200)  
<1,000 gpd Septic System

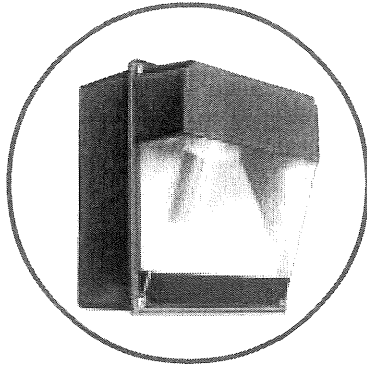
1. The nature of the site evaluation profession is one of interpretation of soil and site conditions. We, in the field, attempt to both provide a satisfactory service to the client, and comply by the rules by which we are bound - The Maine Subsurface Wastewater Disposal Rules. If at any time you, the client, are not satisfied with the service provided or the results found, it is your right to hire another site evaluator for a second opinion.
2. Property information is supplied by the owner, applicant or representative. Such information presented herein shall be verified as correct by the owner or applicant prior to signing this application.
3. All work shall be in accordance with the Maine Subsurface Wastewater Disposal Rules dated 6/00, as amended.
4. All work should be performed under dry conditions only (for disposal area).
5. No vehicular or equipment traffic to be allowed on disposal area. Disposal field shall be constructed from outside the corner stakes located in the field. The downslope area is also to be protected in the same manner.
6. Backfill, if required, is to be gravelly coarse sand to coarse sand texture and to be free of foreign debris. If backfill is coarser than original soil, then mix top 4" of backfill and original soil with rototiller.
7. No neighboring wells are apparent (unless so indicated) within 100' of disposal area. Owner or applicant shall verify this prior to signing the application.
8. The disposal field stone shall be clean, uniform in size and free of fines, dust, ashes, or clay. It shall be no smaller than 3/4 inch and no larger than 2 1/2 inches in size (per Section 805.2.3 of the Maine Subsurface Wastewater Disposal Rules).
9. Minimum separation distances required (unless reduced by variance or special circumstance).
  - a) wells with water usage of 2000 or more gpd or public water supply wells:

Disposal Fields:	300'
Septic Tanks and Holding Tanks:	100'
  - b) any well to disposal area: 100'
  - c) any well to septic tank: 100'
  - d) septic tank or disposal area to lake, river, stream or brook: 100' for major watercourse, 50' for minor watercourse
  - e) house to treatment tank: 8'
  - f) house to disposal area: 20'
  - For all other separation distances, use separations for less than 1,000 gpd per Maine Subsurface Wastewater Disposal Rules Table 700.2.
9. Location of septic system near a wetland may require a separate permit. As such, the owner, prior to construction of the septic system, shall hire a professional to evaluate proximity of adjacent wetlands and prepare necessary permit applications.
10. Garbage disposals are not recommended and, if installed, are done so at the owner's risk. The additional wastewater load requires increased maintenance frequency, higher potential for failure, and larger septic tanks.
11. Pump stations, when required, shall be installed watertight to prevent infiltration of ground and/or surface water.
12. Force mains and pressure lines shall be flushed of any foreign material and pumps shall be checked for proper on/off cycle before being put into service.
13. Force mains, pump stations, and/or gravity piping subject to freezing shall be installed below frost line and adequately insulated.

# MINI-ROCKFORD

Catalog Number

Type



Square luminaire for walls, fast food lots, parking garages, entrances, and loading docks.

## Features

- Cast aluminum housing. Surface wall mount with outlet box cover plate. Side entry for 1/2" NPT surface conduit.
- Frameless, injection-molded polycarbonate lens. Gasketed and secured with four captive screws.
- Formed, anodized aluminum reflector for horizontal lamp, provides forward throw light pattern with minimal light above horizontal plane.
- Medium porcelain socket, pulse rated, with spring loaded, nickel plated center contact and reinforced lamp grip screw shell.
- NPF, HR or Reactor type ballast, starting rated at -20°F (-40°F for HPS).
- TGIC thermoset dark bronze polyester powder paint finish.
- UL and CSA listed for wet locations.

## Ordering Information

Order No.    ①        ②        ③        ④        ⑤  
 Example    MRK - S100 - MT - PE - DBZ

① Model  
MRK

② Lamp Types/Watts  
PULSE START METAL HALIDE  
 M50PS (ED-17)  
 M70PS (ED-17)  
 M100PS (ED-17)  
HIGH PRESSURE SODIUM  
 S50 (ED-17)  
 S70 (ED-17)  
 S100 (ED-17)  
 S150 (ED-17)

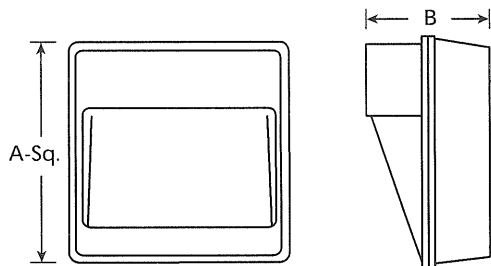
③ Voltage  
 MT - multi-tap<sup>1</sup>  
 (120/208/240/277v)

④ Option  
 PE - photoelectric button cell (120-277v)

⑤ Color  
STANDARD  
 DBZ - dark bronze

<sup>1</sup>Factory wired for 277 volt unless specified.

## Dimensions



	A	B*	Wt./Lbs.
MRK	10"	6.12"	12
*7.6" for 150w			

SPAULDING

December 30, 2003  
00235

Kandice Talbot, Planner  
City of Portland  
389 Congress Street  
Portland, ME 04101

**Six G's Coed, 567 Riverside Street**  
**ID #2003-0210, CBL#312-B-003**

Dear Kandi:

This letter and the enclosed plans are provided in response to the review comments regarding the above referenced project as contained in your letter dated December 12, 2003 and the memorandum from Stephen Bushey, P.E., of DeLuca-Hoffman Associates, Inc., dated December 3, 2003.

**DeLuca-Hoffman Associates, Inc.**

1. The plans are substantially complete and acceptable for approval. The applicant has made provisions for adequate parking, grading, drainage and utilities to allow the development to be constructed. The following comments can be worked on the final approval drawings if necessary.

*The enclosed plans have been revised in accordance with the engineering review comments.*

2. The applicant must provide the City's plumbing inspector with the necessary completed HHE-200 forms and relevant information of adjacent properties, wells, and adjacent systems if they exist. A licensed soils evaluator must complete these materials.

*Enclosed are the required HHE-200 forms for the proposed subsurface sewage disposal system. Additionally, the system and its corresponding grading are depicted on the Grading & Utility Plan.*

3. The applicant should determine is natural gas service is available off the high-pressure gain main in Riverside Street. I don't recall if a distribution line exists in the street.

*Natural gas service is available off the 8-inch high pressure gas main in Riverside Street. The applicant will initiate the request for service from Northern Utilities.*

4. A utility easement should be provided for the sewer line crossing the Riverside Welders property.

*The 50-foot access and utility easement, which was previously proposed, has been expanded in the area where the proposed sewer will cross onto the Riverside Welders parcel, as shown on the Site Plan and the Grading & Utility Plan.*

5. The Portland Water District water main appears to fall outside of the PWD easement as it is shown on the boundary and topographic survey plan. We suggest that the District obtain new easement rights centered on the actual pipeline perhaps.

*The alignment of the PWD water main, as depicted on Sheet 3, has been assumed, based on the location of existing gate valve, which was field located. As such, it appears that a portion of the PWD main falls outside of the easement. We will provide a copy of the Sheet 3 to the PWD and coordinate any required easement realignments with them.*

6. The grading plan should contain provisions to stabilize the remaining ground surfaces that are outside the development area if they are not already grassed or graveled.

*The applicant will loam and seed those areas which are not currently stabilized. A note to this effect has been added to the Grading and Utility Plan (Sheet 3 of 4).*

7. The post development watershed plan appears to break watersheds 3S and 4S down the middle of the building (assuming a peaked roof line). The building elevations suggest a single pitched roof from front to back; therefore the entire building should be included in area 3S. The runoff computations should be rerun, although I suspect that the conclusions will remain the same.

*The HydroCAD stormwater model was revised in response to the single pitched roof from front to back. The results indicate a reduction in the peak rate of runoff at Study Point 4 and an increase at Study Point 3. This is a more desirable outcome in that a slight increase in peak rates of runoff was originally calculated at Study Point 4 and a slight decrease was calculated at Study Point 3, in comparison to the existing condition.*

#### City of Portland, Planning Department

1. A financial capacity letter from a bank shall be submitted.

*The applicant will obtain a letter of financial capacity and forward it to your attention immediately upon receipt.*

2. Catalogue cuts of the proposed wall pack units and a lighting photometric plan must be submitted to determine if the lighting is conformance with the lighting standards.

*A photometric plan has been submitted to a lighting supplier to prepare a photometric plan. Enclosed are the catalogue cuts for the proposed wall pack units.*



3. Attached is the Development Review Coordinator's memo for your review.

*These comments are addressed above.*

4. Chapter 25 of the City Ordinance requires that any new development install granite curb and sidewalk along the frontage of the property. It does not appear that there is existing sidewalk and granite curb along the frontage. Please address this issue.

*Granite curbing and bituminous sidewalk currently exist along Riverside Street in front of the project site. The drawings have been revised to show these as existing features. As such, the applicant shall utilize the existing curb cut for access/egress at the project site.*

5. The elevations must show proposed materials for the façade of the building.

*The enclosed building elevation drawings include the proposed building materials.*

6. Applicant must show hydrant within 500 ft. path of travel.

*The existing fire hydrant on Riverside Street has been called off on the Grading and Utility Plan. This hydrant is well within 500 feet of the proposed structure.*

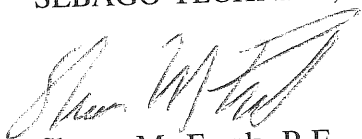
7. Fire apparatus shall have access to two sides of the structure.

*Access is now shown to be provided along two sides of the proposed building. A gravel access area will be maintained on the side of the building opposite Riverside Street.*

We are hopeful that we have adequately addressed the review comments such that the site plan application may be approved. Upon your review of the enclosed material, however, please call with any questions or comments. Thank you.

Sincerely,

SEBAGO TECHNICS, INC.

  
Shawn M. Frank, P.E.  
Project Manager

BGY/SMF:bgj/jc  
Enc.

cc: Dennis Waters, Patco Construction, Inc.

# SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

>> CAUTION: PERMIT REQUIRED - ATTACH IN SPACE BELOW <<

PROPERTY LOCATION	
City, Town, or Plantation	Portland
Street or Road	557 Riverside Street
Subdivision, Lot #	Phoenix Welding

The Subsurface Wastewater Disposal System **shall not** be installed until a Permit is attached HERE by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.

OWNER/APPLICANT INFORMATION	
Name (last, first, MI)	<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Applicant Riverside Welders, LLC.
Mailing Address of Owner/Applicant	557 Riverside Street Portland, ME 04103
Daytime Tel. #	(207) 797-5832

Municipal Tax Map # 312/306 Lot # 1-3

OWNER OR APPLICANT STATEMENT	
I state and acknowledge that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Department and/or Local Plumbing Inspector to deny a Permit.	
Signature of Owner or Applicant	Date

**CAUTION: INSPECTION REQUIRED**  
I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application.  
(1st) date approved \_\_\_\_\_  
(2nd) date approved \_\_\_\_\_  
Local Plumbing Inspector Signature \_\_\_\_\_

## PERMIT INFORMATION

TYPE OF APPLICATION	
<input checked="" type="checkbox"/> 1. First Time System	
<input type="checkbox"/> 2. Replacement System	Type replaced: _____ Year installed: _____
<input type="checkbox"/> 3. Expanded System	<input type="checkbox"/> a. Minor Expansion <input type="checkbox"/> b. Major Expansion
<input type="checkbox"/> 4. Experimental System	
<input type="checkbox"/> 5. Seasonal Conversion	

THIS APPLICATION REQUIRES	
<input checked="" type="checkbox"/> 1. No Rule Variance	
<input type="checkbox"/> 2. First Time System Variance	<input type="checkbox"/> a. Local Plumbing Inspector Approval <input type="checkbox"/> b. State & Local Plumbing Inspector Approval
<input type="checkbox"/> 3. Replacement System Variance	<input type="checkbox"/> a. Local Plumbing Inspector Approval <input type="checkbox"/> b. State & Local Plumbing Inspector Approval
<input type="checkbox"/> 4. Minimum Lot Size Variance	
<input type="checkbox"/> 5. Seasonal Conversion Permit	

DISPOSAL SYSTEM COMPONENTS	
<input checked="" type="checkbox"/> 1. Complete Non-engineered System	
<input type="checkbox"/> 2. Primitive System (graywater & alt. toilet)	
<input type="checkbox"/> 3. Alternative Toilet, specify: _____	
<input type="checkbox"/> 4. Non-engineered Treatment Tank (only)	
<input type="checkbox"/> 5. Holding Tank, _____ gallons	
<input type="checkbox"/> 6. Non-engineered Disposal Field (only)	
<input type="checkbox"/> 7. Separated Laundry System	
<input type="checkbox"/> 8. Complete Engineered System (2000 gpd or more)	
<input type="checkbox"/> 9. Engineered Treatment Tank (only)	
<input type="checkbox"/> 10. Engineered Disposal Field (only)	
<input type="checkbox"/> 11. Pre-treatment, specify: _____	
<input type="checkbox"/> 12. Miscellaneous Components	

SIZE OF PROPERTY	
86±	<input type="checkbox"/> SQ. FT. <input checked="" type="checkbox"/> ACRES
SHORELAND ZONING	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

DISPOSAL SYSTEM TO SERVE	
<input type="checkbox"/> 1. Single Family Dwelling Unit, No. of Bedrooms: _____	
<input type="checkbox"/> 2. Multiple Family Dwelling, No. of Units: _____	
<input checked="" type="checkbox"/> 3. Other: <u>Manufacturing/Office</u>	(specify)
Current Use	<input type="checkbox"/> Seasonal <input type="checkbox"/> Year Round <input checked="" type="checkbox"/> Undeveloped

TYPE OF WATER SUPPLY	
<input type="checkbox"/> 1. Drilled Well	<input type="checkbox"/> 2. Dug Well <input type="checkbox"/> 3. Private
<input checked="" type="checkbox"/> 4. Public	<input type="checkbox"/> 5. Other

## DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)

TREATMENT TANK	
<input checked="" type="checkbox"/> 1. Concrete	
<input checked="" type="checkbox"/> a. Regular	
<input type="checkbox"/> b. Low Profile	
<input type="checkbox"/> 2. Plastic	
<input type="checkbox"/> 3. Other: _____	
CAPACITY: <u>1500</u> GAL.	

DISPOSAL FIELD TYPE & SIZE	
<input checked="" type="checkbox"/> 1. Stone Bed	<input type="checkbox"/> 2. Stone Trench
<input type="checkbox"/> 3. Proprietary Device	<input type="checkbox"/> a. cluster array <input type="checkbox"/> c. Linear
<input type="checkbox"/> b. regular load	<input type="checkbox"/> d. H-20 load
<input type="checkbox"/> 4. Other: _____	
SIZE: <u>2550</u> sq. ft. <input checked="" type="checkbox"/> sq. ft. <input type="checkbox"/> lin. ft.	

GARBAGE DISPOSAL UNIT	
<input checked="" type="checkbox"/> 1. No	<input type="checkbox"/> 2. Yes <input type="checkbox"/> 3. Maybe
If Yes or Maybe, specify one below:	
<input type="checkbox"/> a. multi-compartment tank	
<input type="checkbox"/> b. _____ tanks in series	
<input type="checkbox"/> c. increase in tank capacity	
<input type="checkbox"/> d. Filter on Tank Outlet	

DESIGN FLOW	
<u>960</u> gallons per day	
BASED ON:	
<input type="checkbox"/> 1. Table 501.1 (dwelling unit(s))	
<input checked="" type="checkbox"/> 2. Table 501.2 (other facilities)	
SHOW CALCULATIONS for other facilities _____	

SOIL DATA & DESIGN CLASS		
PROFILE	CONDITION	DESIGN
<u>5</u>	<u>D</u>	<u>3</u>
at Observation Hole # <u>TP-647</u>		
Depth <u>12</u> "		
of Most Limiting Soil Factor		

DISPOSAL FIELD SIZING	
<input type="checkbox"/> 1. Small—2.0 sq. ft. / gpd	
<input checked="" type="checkbox"/> 2. Medium—2.6 sq. ft. / gpd	
<input type="checkbox"/> 3. Medium—Large 3.3 sq. ft. / gpd	
<input type="checkbox"/> 4. Large—4.1 sq. ft. / gpd	
<input type="checkbox"/> 5. Extra Large—5.0 sq. ft. / gpd	

EFFLUENT/EJECTOR PUMP	
<input type="checkbox"/> 1. Not Required	
<input checked="" type="checkbox"/> 2. May Be Required	
<input type="checkbox"/> 3. Required	
Specify only for engineered systems:	
DOSE: _____	gallons

64 employees @ 15 gpd/ea =  
(no showers) 960 gpd  
 3. Section 503.0 (meter readings)  
ATTACH WATER METER DATA

## SITE EVALUATOR STATEMENT

I certify that on 10-8-03 (date) I completed a site evaluation on this property and state that the data reported are accurate and that the proposed system is in compliance with the State of Maine Subsurface Wastewater Disposal Rules (10-144A CMR 241).

Gary M. Fullerton  
Site Evaluator Signature  
  
Gary M. Fullerton  
Site Evaluator Name Printed

355  
SE #  
  
(207) 856-0271  
Telephone Number

11-12-03  
Date  
  
gfullerton@sebagotech.com  
E-mail Address



Note: Changes to or deviations from the design should be confirmed with the Site Evaluator. HHE-200 Rev. 10/02

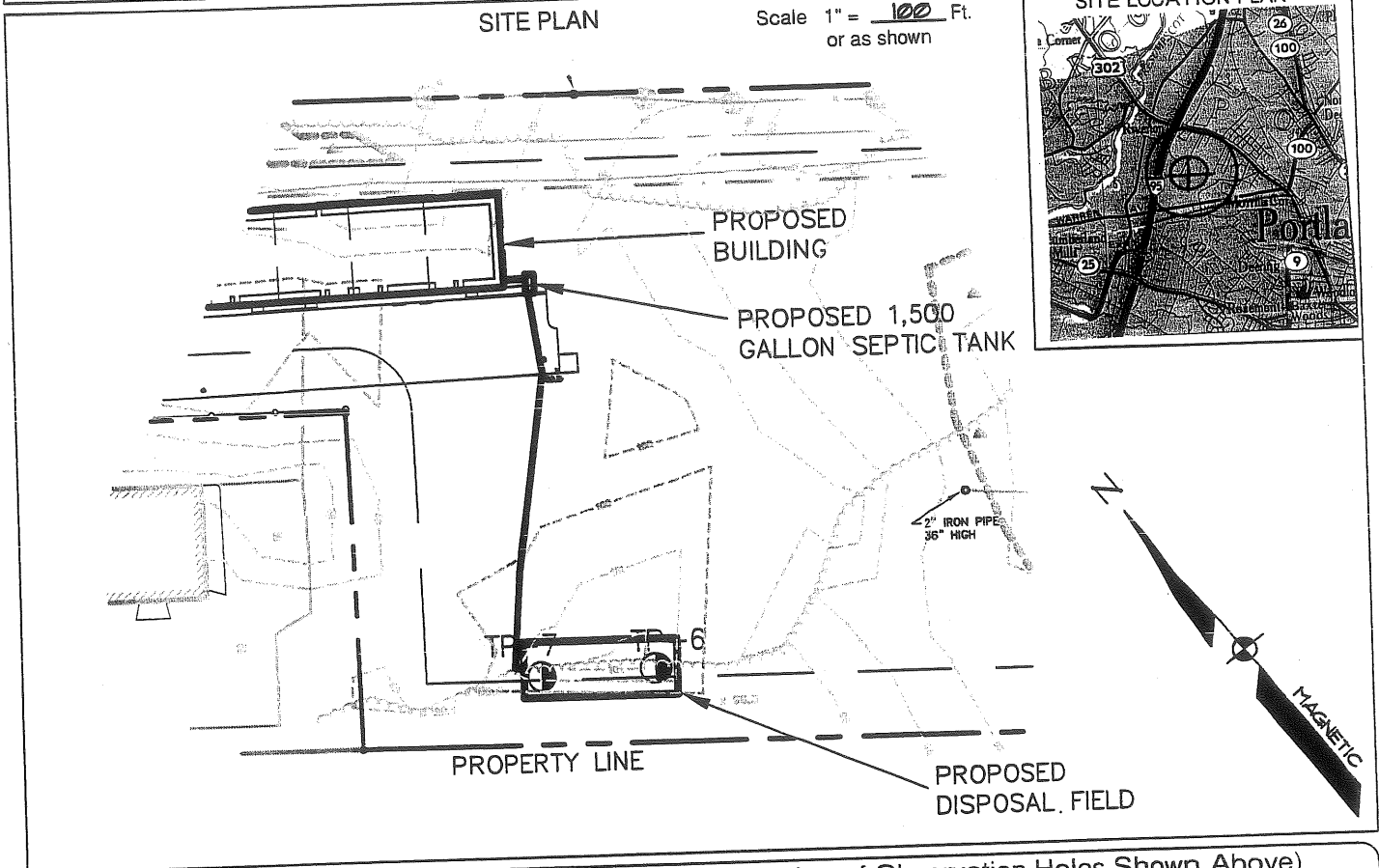
# SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

City of Portland, Department of Human Services  
 Division of Health Engineering, 10 SHS  
 (207) 287-5672 FAX (207) 287-3165

Town, City, Plantation  
**Portland**

Street, Road, Subdivision  
**557 Riverside Street**

Owner or Applicant Name  
**Riverside Welders, LLC.**



## SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole TP-6  Test pit  Boring

1-2 " Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
LOAMY SAND	FRIABLE	BROWN	
FINE SAND		GRAY	COMMON & DISTINCT
DEPTH OF TEST PIT = 38"			

Soil Classification <b>S</b> Profile	Slope <b>D</b> Condition	Limiting Factor <b>12</b> "	<input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock <input type="checkbox"/> Pit Depth
	<b>0-3</b> %		

Observation Hole TP-7  Test pit  Boring

1-2 " Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
LOAMY SAND	FRIABLE	BROWN	
FINE SAND	DISCONT. 2" LAYER CEMENTED SAND	GRAY	COMMON & DISTINCT
	FRIABLE		
DEPTH OF TEST PIT = 40"			

Soil Classification <b>S</b> Profile	Slope <b>D</b> Condition	Limiting Factor <b>12</b> "	<input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock <input type="checkbox"/> Pit Depth
	<b>0-3</b> %		

*[Signature]*  
 Site Evaluator Signature

355  
 SE #

11-12-03  
 Date

Page 2 of 3  
 HHE-200 Rev. 10/02

# SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Town, City, Plantation  
**Portland**

Street, Road, Subdivision  
**557 Riverside Street**

Owner or Applicant Name  
**Riverside Welders, LLC.**

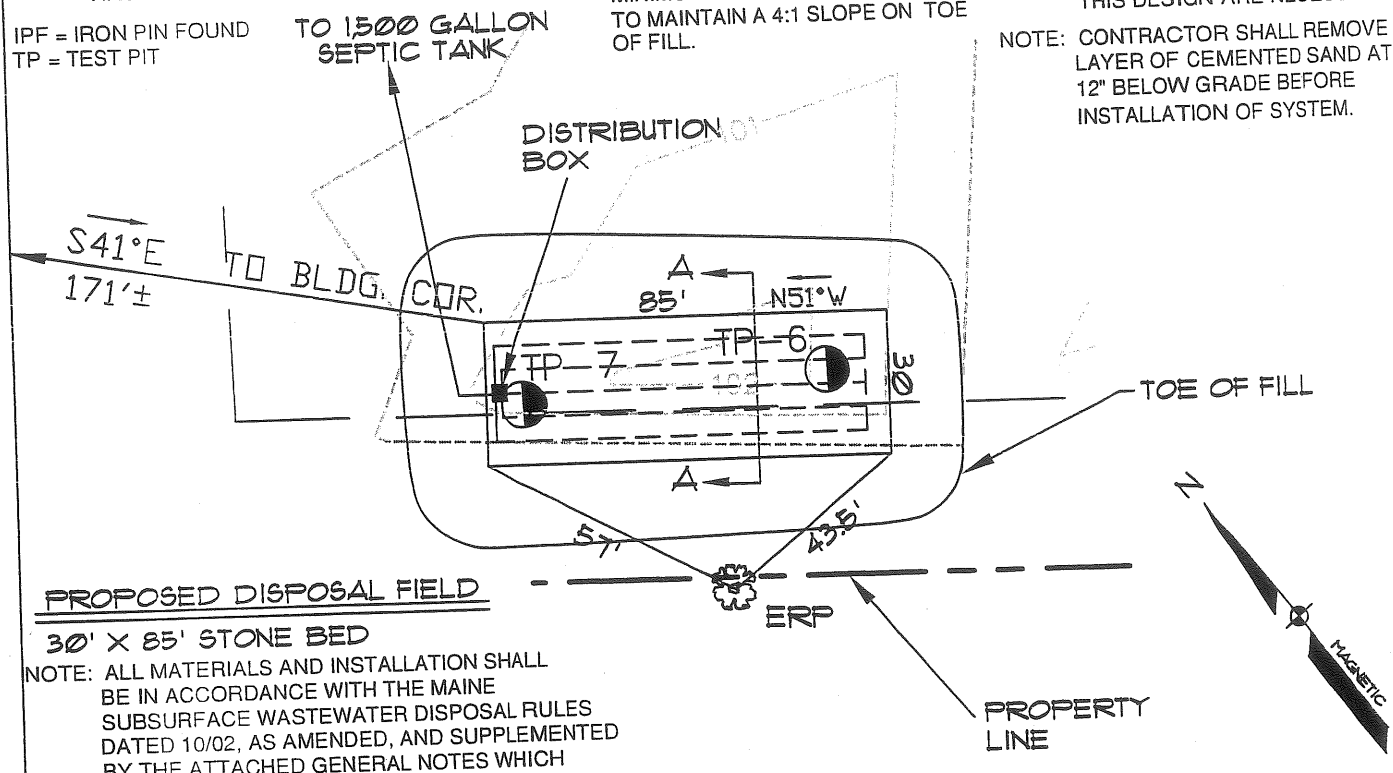
Scale 1" = 40 FT.

NOTE: ALLOW FOR POSITIVE DRAINAGE  
 AROUND THE LEACHFIELD.

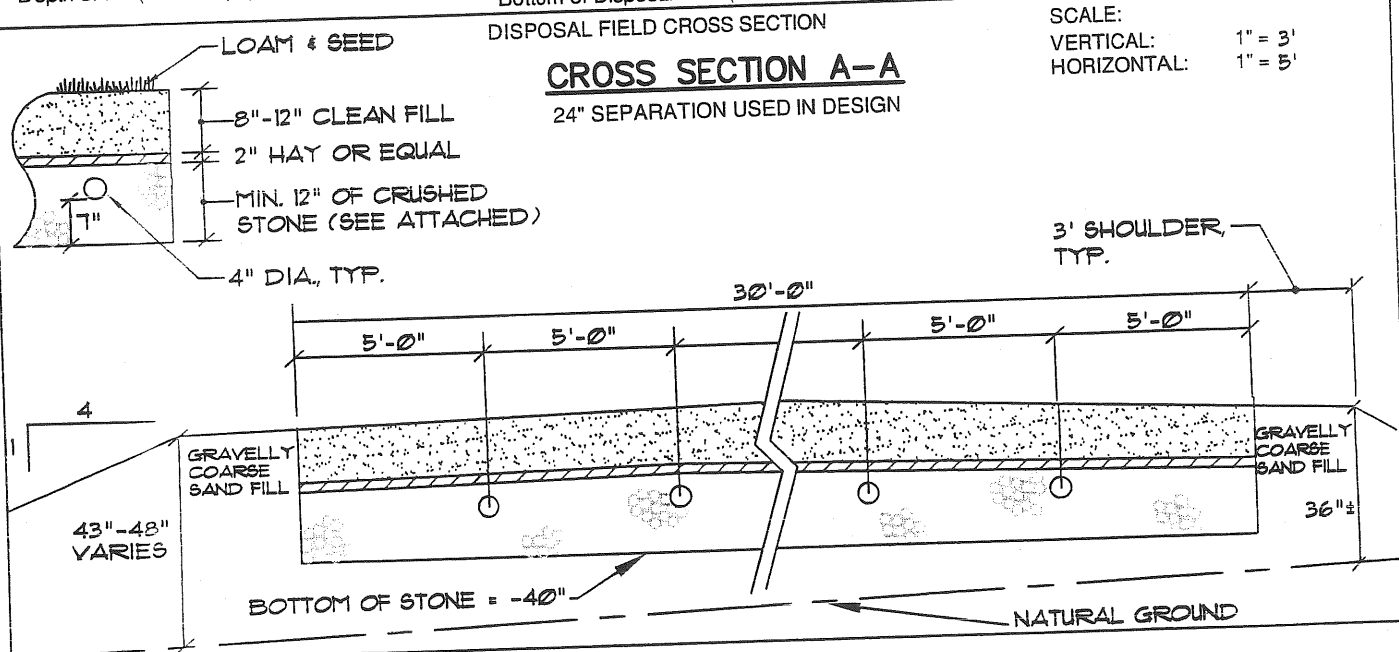
NOTE: CONTRACTOR SHALL VERIFY A  
 MINIMUM OF 15' TO PROPERTY LINE  
 TO MAINTAIN A 4:1 SLOPE ON TOE  
 OF FILL.

NOTE: IF A GARBAGE DISPOSAL IS  
 USED, THEN CHANGES TO  
 THIS DESIGN ARE NECESSARY.

NOTE: CONTRACTOR SHALL REMOVE  
 LAYER OF CEMENTED SAND AT  
 12" BELOW GRADE BEFORE  
 INSTALLATION OF SYSTEM.



BACKFILL REQUIREMENTS	CONSTRUCTION ELEVATIONS	ELEVATION REFERENCE POINT
Depth of Fill (Upslope) <u>36"</u>	Finished Grade Elevation <u>-16"</u>	Location & Description <b>Nail up</b>
Depth of Fill (Downslope) (varies) <u>43"-48"</u>	Top of Distribution Pipe or Proprietary Device <u>-29"</u>	<b>53" in a 13" dia. Aspen</b>
	Bottom of Disposal Area (Bottom of Stone) <u>-40"</u>	Reference Elevation <b>0"</b>



*[Signature]*  
 Site Evaluator Signature

355  
 SE #

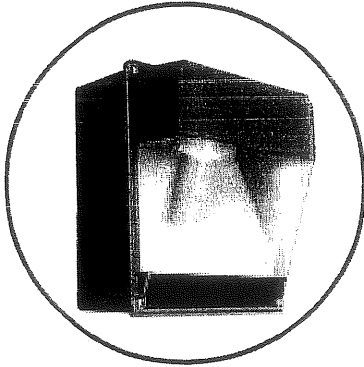
11-12-03  
 Date

1. The nature of the site evaluation profession is one of interpretation of soil and site conditions. We, in the field, attempt to both provide a satisfactory service to the client, and comply by the rules by which we are bound - The Maine Subsurface Wastewater Disposal Rules. If at any time you, the client, are not satisfied with the service provided or the results found, it is your right to hire another site evaluator for a second opinion.
2. Property information is supplied by the owner, applicant or representative. Such information presented herein shall be verified as correct by the owner or applicant prior to signing this application.
3. All work shall be in accordance with the Maine Subsurface Wastewater Disposal Rules dated 6/00, as amended.
4. All work should be performed under dry conditions only (for disposal area).
5. No vehicular or equipment traffic to be allowed on disposal area. Disposal field shall be constructed from outside the corner stakes located in the field. The downslope area is also to be protected in the same manner.
6. Backfill, if required, is to be gravelly coarse sand to coarse sand texture and to be free of foreign debris. If backfill is coarser than original soil, then mix top 4" of backfill and original soil with rototiller.
7. No neighboring wells are apparent (unless so indicated) within 100' of disposal area. Owner or applicant shall verify this prior to signing the application.
8. The disposal field stone shall be clean, uniform in size and free of fines, dust, ashes, or clay. It shall be no smaller than  $\frac{3}{4}$  inch and no larger than  $2\frac{1}{2}$  inches in size (per Section 805.2.3 of the Maine Subsurface Wastewater Disposal Rules).
9. Minimum separation distances required (unless reduced by variance or special circumstance).
  - a) wells with water usage of 2000 or more gpd or public water supply wells:

Disposal Fields:	300'
Septic Tanks and Holding Tanks:	100'
  - b) any well to disposal area: 100'
  - c) any well to septic tank: 100'
  - d) septic tank or disposal area to lake, river, stream or brook: 100' for major watercourse, 50' for minor watercourse
  - e) house to treatment tank: 8'
  - f) house to disposal area: 20'
- For all other separation distances, use separations for less than 1,000 gpd per Maine Subsurface Wastewater Disposal Rules Table 700.2.
9. Location of septic system near a wetland may require a separate permit. As such, the owner, prior to construction of the septic system, shall hire a professional to evaluate proximity of adjacent wetlands and prepare necessary permit applications.
10. Garbage disposals are not recommended and, if installed, are done so at the owner's risk. The additional wastewater load requires increased maintenance frequency, higher potential for failure, and larger septic tanks.
11. Pump stations, when required, shall be installed watertight to prevent infiltration of ground and/or surface water.
12. Force mains and pressure lines shall be flushed of any foreign material and pumps shall be checked for proper on/off cycle before being put into service.
13. Force mains, pump stations, and/or gravity piping subject to freezing shall be installed below frost line and adequately insulated.

# MINI-ROCKFORD

Catalog Number	Type
----------------	------



Square luminaire for walls, fast food lots, parking garages, entrances, and loading docks.

## Features

- Cast aluminum housing. Surface wall mount with outlet box cover plate. Side entry for 1/2" NPT surface conduit.
- Frameless, injection-molded polycarbonate lens. Gasketed and secured with four captive screws.
- Formed, anodized aluminum reflector for horizontal lamp, provides forward throw light pattern with minimal light above horizontal plane.
- Medium porcelain socket, pulse rated, with spring loaded, nickel plated center contact and reinforced lamp grip screw shell.
- NPF, HR or Reactor type ballast, starting rated at -20°F (-40°F for HPS).
- TGIC thermoset dark bronze polyester powder paint finish.
- UL and CSA listed for wet locations.

## Ordering Information

Order No.      ①      ②      ③      ④      ⑤  
 Example      MRK - S100 - MT - PE - DBZ

① Model  
MRK

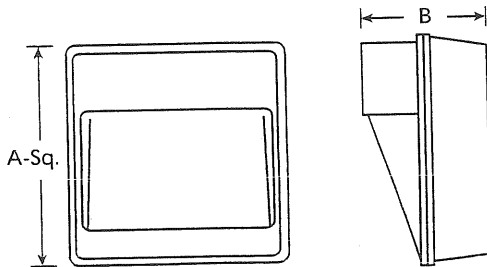
② Lamp Types/Watts  
PULSE START METAL HALIDE  
 M50PS (ED-17)  
 M70PS (ED-17)  
 M100PS (ED-17)  
HIGH PRESSURE SODIUM  
 S50 (ED-17)  
 S70 (ED-17)  
 S100 (ED-17)  
 S150 (ED-17)

③ Voltage  
 MT - multi-tap<sup>1</sup>  
 (120/208/240/277v)

④ Option  
 PE - photoelectric button cell (120-277v)  
 ⑤ Color  
STANDARD  
 DBZ - dark bronze

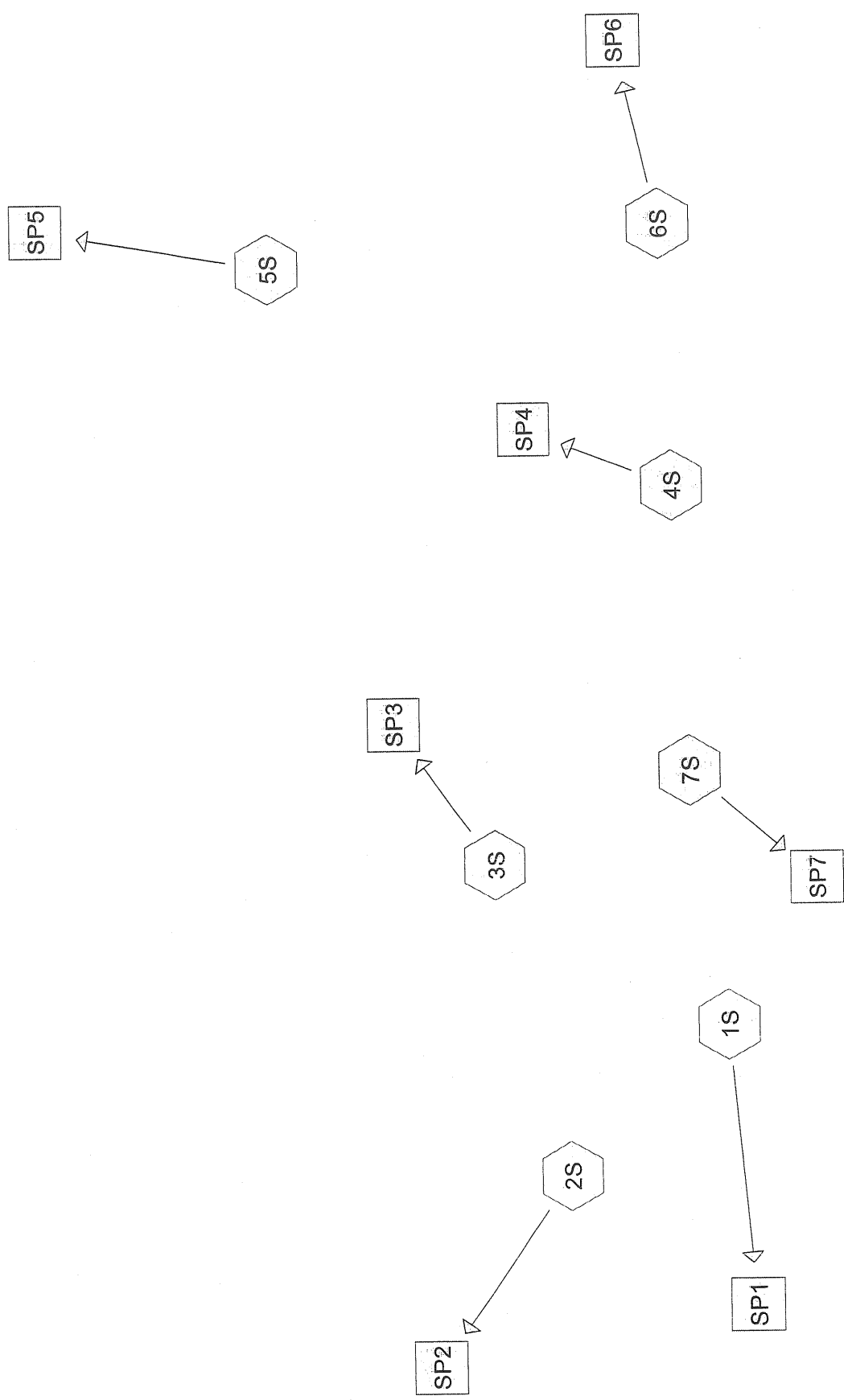
<sup>1</sup>Factory wired for 277 volt unless specified.

## Dimensions



	A	B*	Wt./Lbs.
MRK	10"	6.12"	12
		*7.6" for 150w	

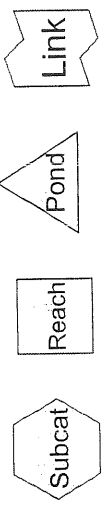
SPAULDING



**Drainage Diagram for 00235post-rev**

Prepared by SEBAGO TECHNICS, INC. 12/17/2003

HydroCAD® 6.00 s/n 000643 © 1986-2001 Applied Microcomputer Systems



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
 Runoff by SCS TR-20 method, UH=SCS, Type III 24-hr Rainfall=3.00"  
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

<b>Subcatchment 1S: 1S</b>	Tc=11.1 min CN=85 Area=23,297 sf Runoff= 0.83 cfs 0.066 af
<b>Subcatchment 2S: 2S</b>	Tc=18.1 min CN=73 Area=23,382 sf Runoff= 0.34 cfs 0.035 af
<b>Subcatchment 3S: 3S</b>	Tc=35.2 min CN=86 Area=36,910 sf Runoff= 0.87 cfs 0.108 af
<b>Subcatchment 4S: 4S</b>	Tc=21.9 min CN=80 Area=227,044 sf Runoff= 4.85 cfs 0.497 af
<b>Subcatchment 5S: (new node)</b>	Tc=0.0 min CN=0 Area=0 sf Runoff= 0.00 cfs 0.000 af
<b>Subcatchment 6S: (new node)</b>	Tc=0.0 min CN=0 Area=0 sf Runoff= 0.00 cfs 0.000 af
<b>Subcatchment 7S: 7S</b>	Tc=12.3 min CN=91 Area=93,918 sf Runoff= 4.19 cfs 0.350 af
<b>Reach SP1: (new node)</b>	Inflow= 0.83 cfs 0.066 af Outflow= 0.83 cfs 0.066 af
<b>Reach SP2: (new node)</b>	Inflow= 0.34 cfs 0.035 af Outflow= 0.34 cfs 0.035 af
<b>Reach SP3: (new node)</b>	Inflow= 0.87 cfs 0.108 af Outflow= 0.87 cfs 0.108 af
<b>Reach SP4: (new node)</b>	Inflow= 4.85 cfs 0.497 af Outflow= 4.85 cfs 0.497 af
<b>Reach SP5: (new node)</b>	Inflow= 0.00 cfs 0.000 af Outflow= 0.00 cfs 0.000 af
<b>Reach SP6: (new node)</b>	Inflow= 0.00 cfs 0.000 af Outflow= 0.00 cfs 0.000 af
<b>Reach SP7: Site Stormdrain Network</b>	Inflow= 4.19 cfs 0.350 af Length= 500.0' Max Vel= 6.1 fps Capacity= 4.21 cfs Outflow= 4.05 cfs 0.349 af

**Runoff Area = 9.287 ac Volume = 1.056 af Average Depth = 1.36"**



**Subcatchment 1S: 1S**

Runoff = 0.83 cfs @ 12.16 hrs, Volume= 0.066 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr Rainfall=3.00"

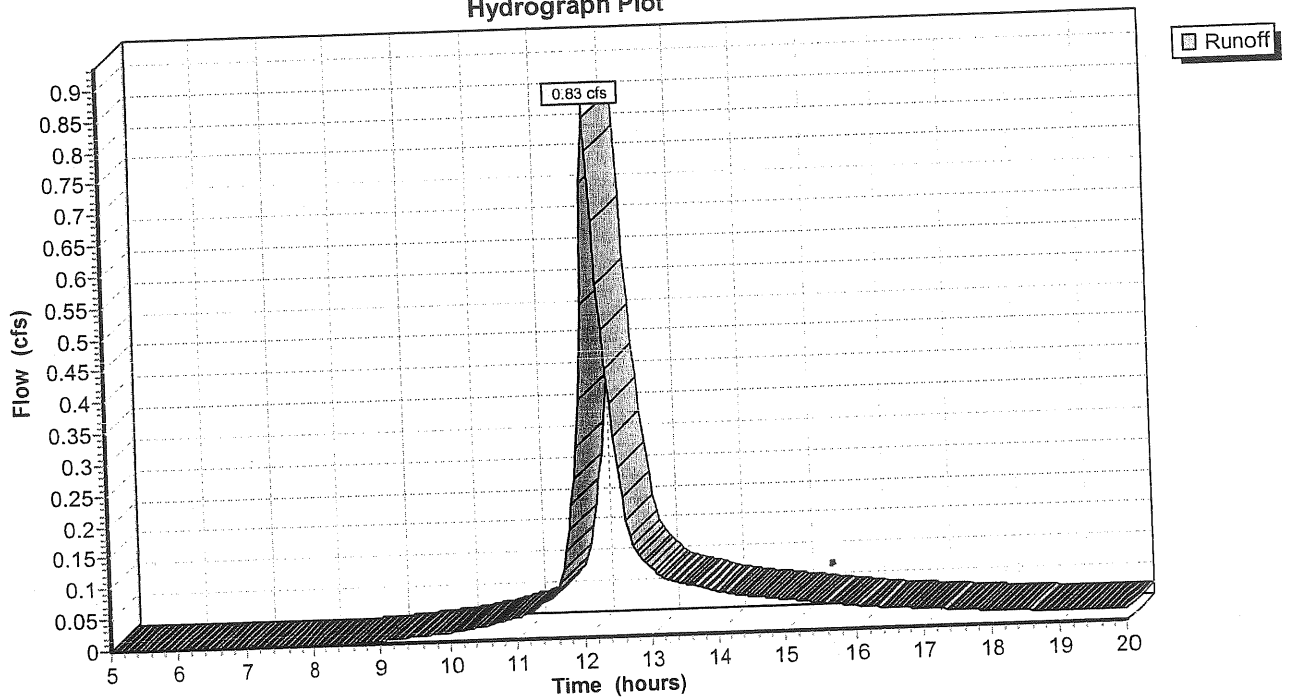
Area (sf)	CN	Description
3,833	98	Paved parking & roofs
3,675	91	Gravel roads, HSG D
15,789	80	>75% Grass cover, Good, HSG D
23,297	85	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.7	72	0.0290	0.2		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.00"
3.7	214	0.0190	1.0		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.7	90	0.0120	2.2		<b>Shallow Concentrated Flow,</b> Paved Kv= 20.3 fps
11.1	376	Total			

**Subcatchment 1S: 1S**

Hydrograph Plot



**Subcatchment 2S: 2S**

Runoff = 0.34 cfs @ 12.28 hrs, Volume= 0.035 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr Rainfall=3.00"

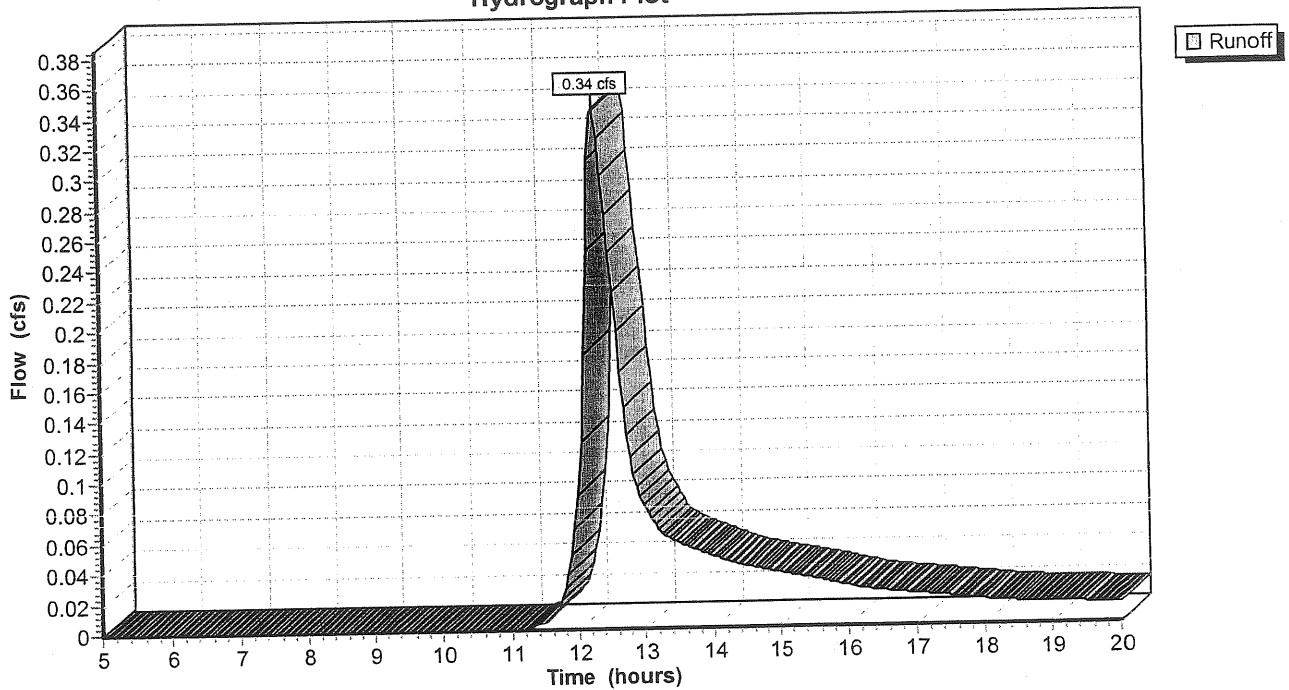
Area (sf)	CN	Description
23,382	73	Brush, Good, HSG D

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	80	0.0310	0.2		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.00"
11.0	215	0.0170	0.3		<b>Shallow Concentrated Flow,</b> Forest w/Heavy Litter Kv= 2.5 fps
18.1	295	Total			

**Subcatchment 2S: 2S**

Hydrograph Plot



**Subcatchment 3S: 3S**

Runoff = 0.87 cfs @ 12.49 hrs, Volume= 0.108 af

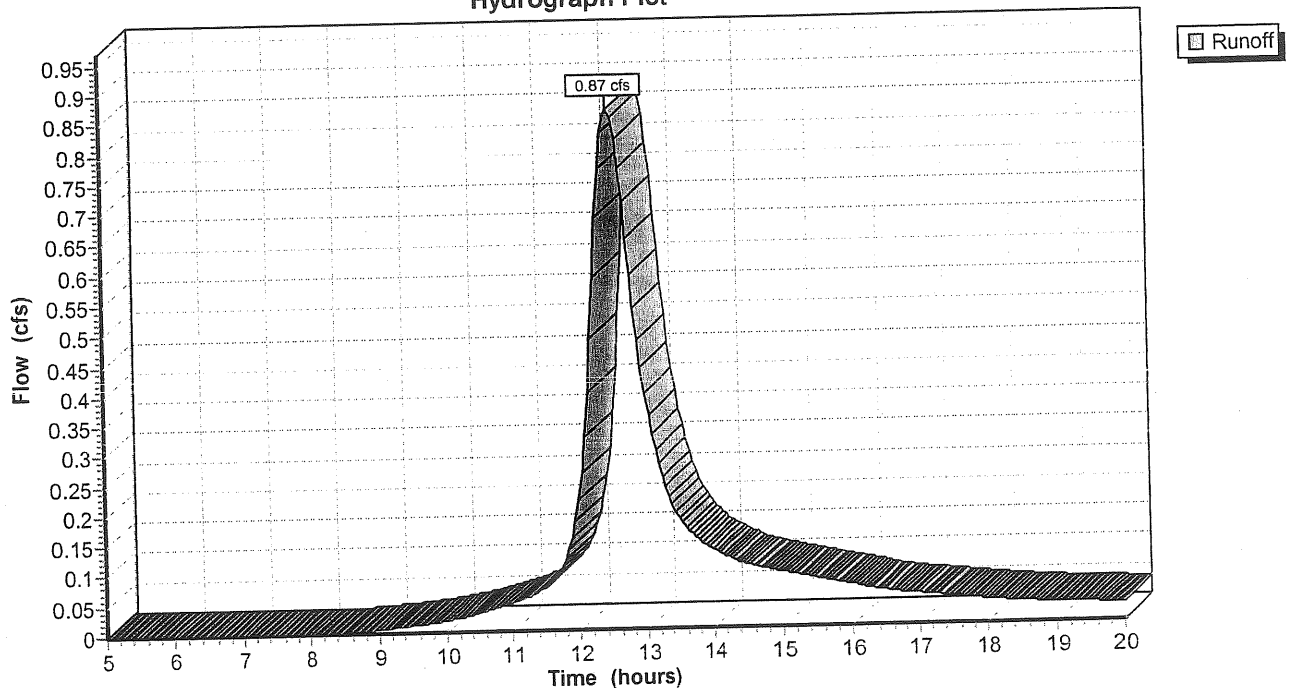
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr Rainfall=3.00"

Area (sf)	CN	Description
14,669	98	Paved parking & roofs
11,509	80	>75% Grass cover, Good, HSG D
3,662	77	Woods, Good, HSG D
7,070	73	Brush, Good, HSG D
36,910	86	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.3	150	0.0230	0.1		<b>Sheet Flow,</b> Grass: Dense n= 0.240 P2= 3.00"
15.9	141	0.0035	0.1		<b>Shallow Concentrated Flow,</b> Forest w/Heavy Litter Kv= 2.5 fps
35.2	291	Total			

**Subcatchment 3S: 3S**

Hydrograph Plot



**Subcatchment 4S: 4S**

Runoff = 4.85 cfs @ 12.32 hrs, Volume= 0.497 af

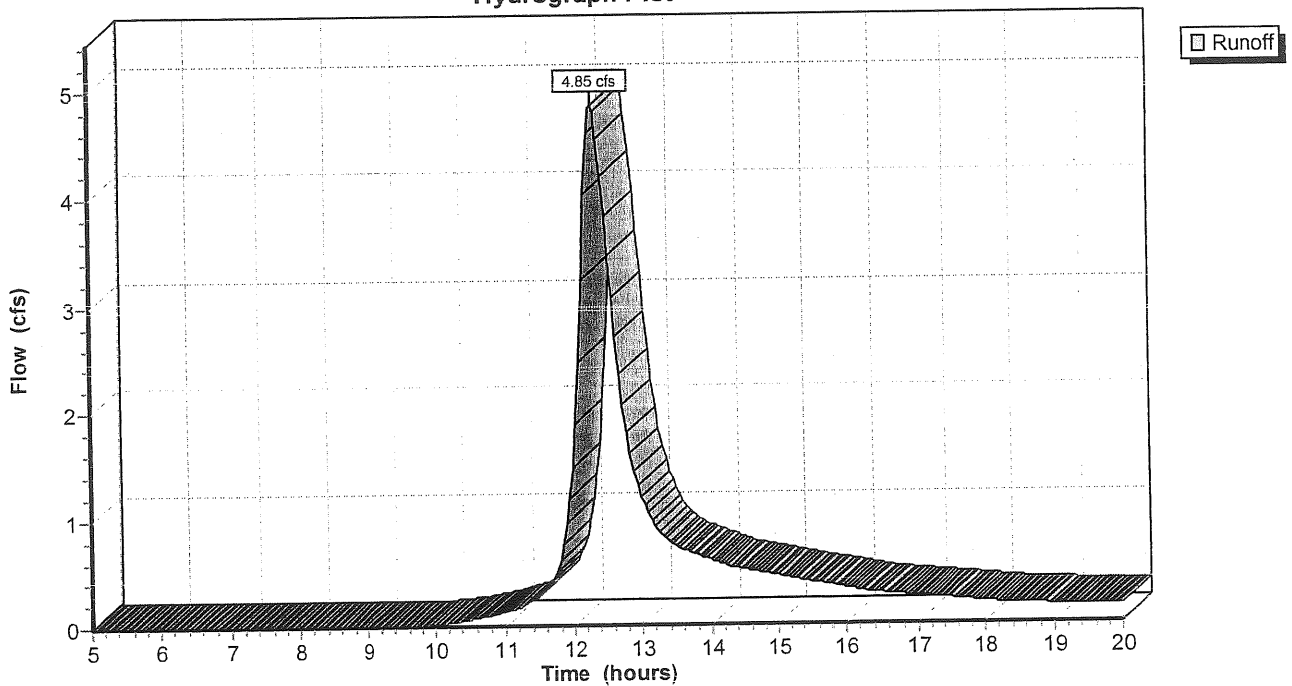
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr Rainfall=3.00"

Area (sf)	CN	Description
61,335	84	50-75% Grass cover, Fair, HSG D
149,814	77	Woods, Good, HSG D
13,259	98	Paved parking & roofs
2,636	91	Gravel roads, HSG D
227,044	80	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.1	135	0.0370	0.2		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.00"
4.8	291	0.0045	1.0		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
7.0	215	0.0105	0.5		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
21.9	641	Total			

**Subcatchment 4S: 4S**

Hydrograph Plot



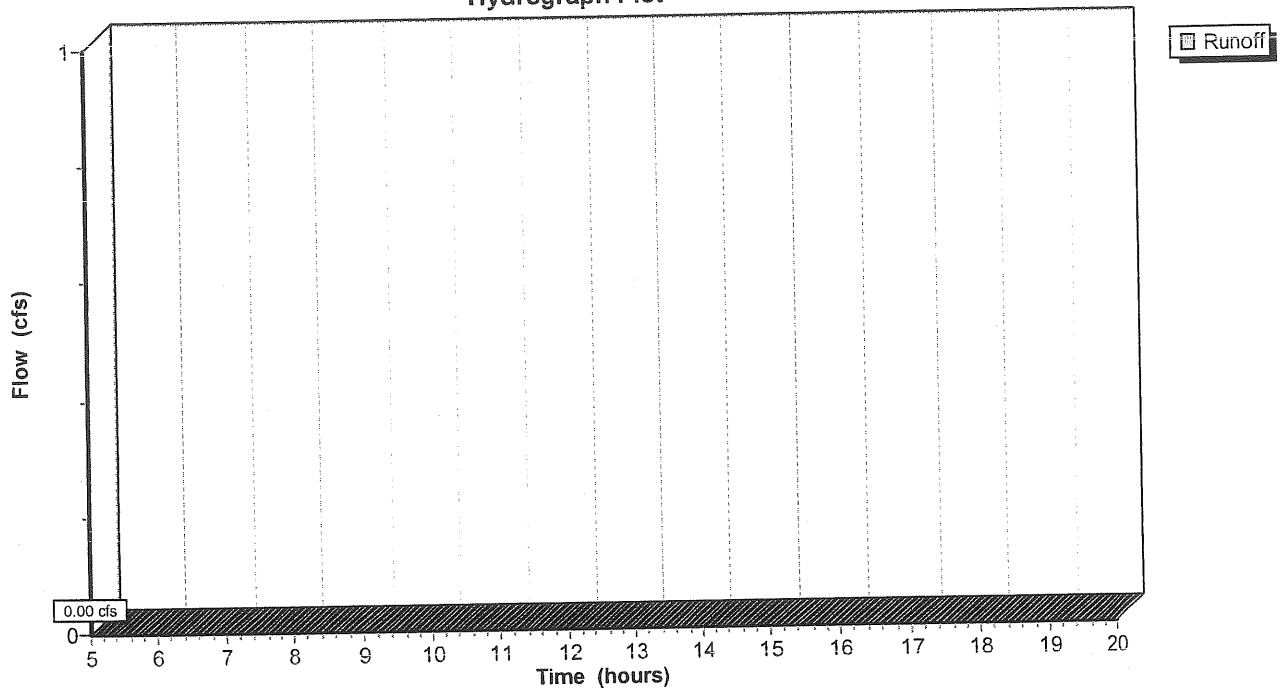
### Subcatchment 5S: (new node)

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr Rainfall=3.00"

### Subcatchment 5S: (new node)

Hydrograph Plot



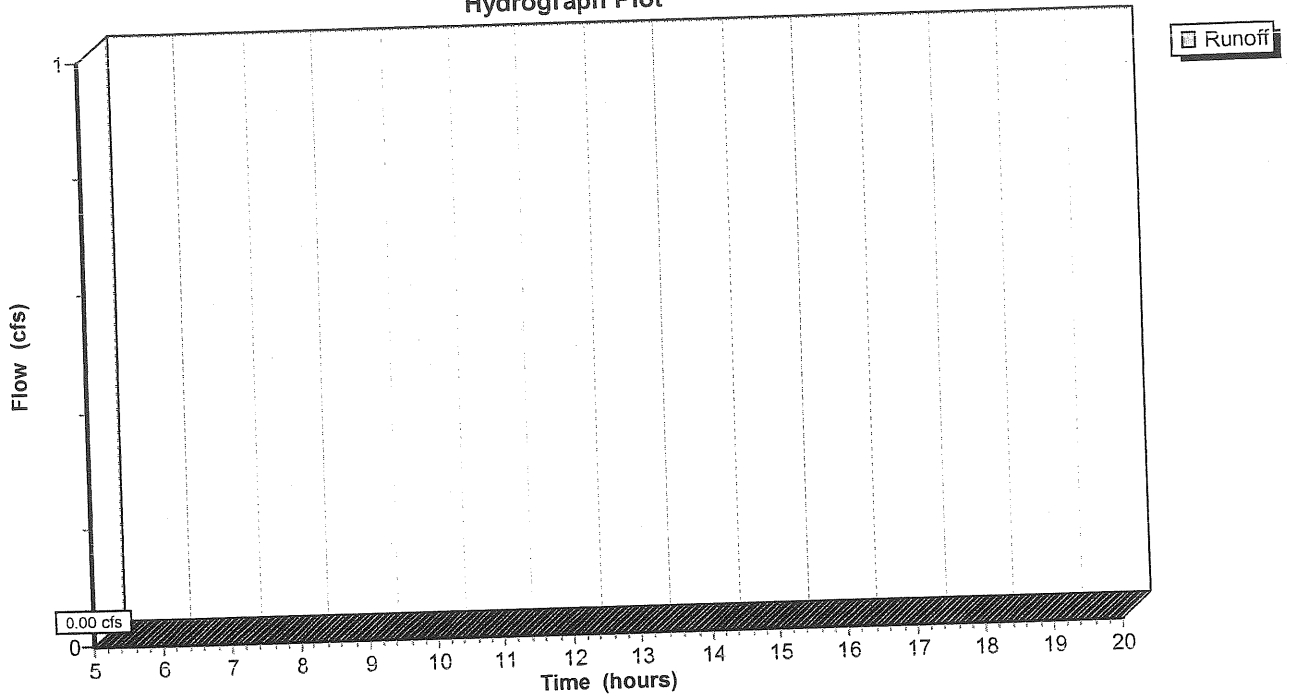
**Subcatchment 6S: (new node)**

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr Rainfall=3.00"

**Subcatchment 6S: (new node)**

Hydrograph Plot



**Subcatchment 7S: 7S**

Runoff = 4.19 cfs @ 12.17 hrs, Volume= 0.350 af

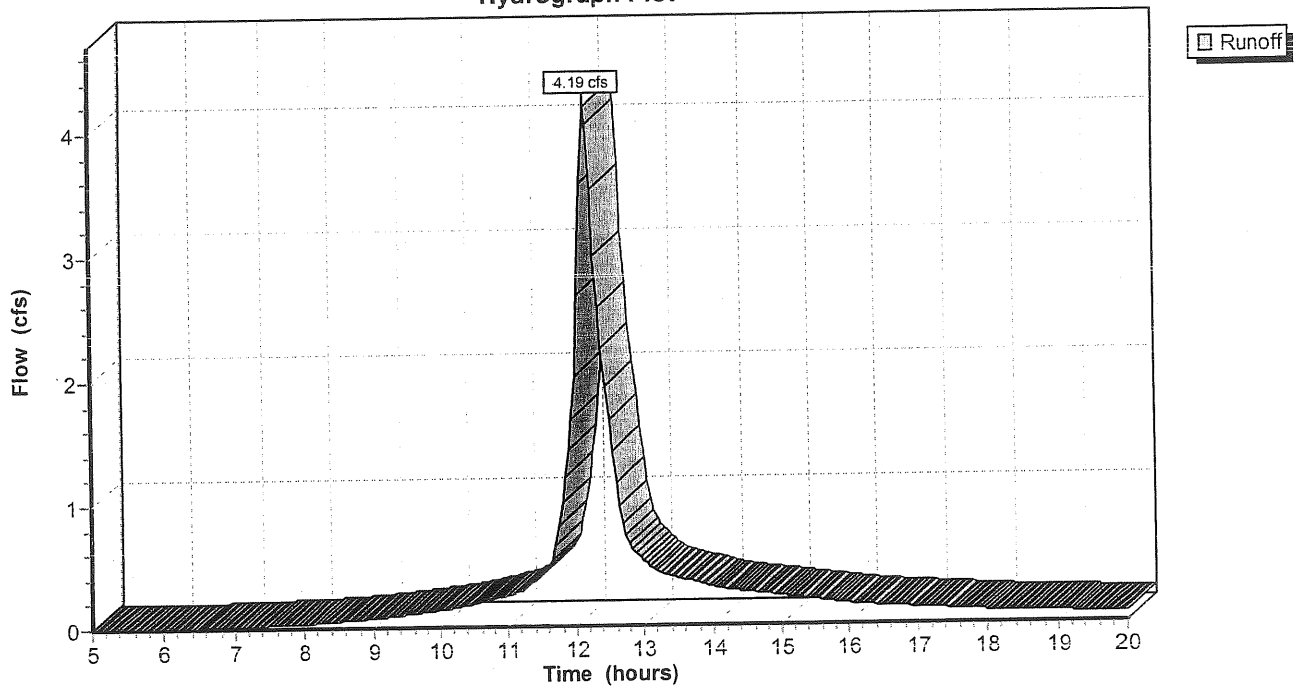
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr Rainfall=3.00"

Area (sf)	CN	Description
47,117	98	Paved parking & roofs
7,477	91	Gravel roads, HSG D
6,963	77	Woods, Good, HSG D
26,146	84	50-75% Grass cover, Fair, HSG D
6,215	80	>75% Grass cover, Good, HSG D
93,918	91	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	120	0.0208	0.2		Sheet Flow, Grass: Short n= 0.150 P2= 3.00"
0.7	70	0.0286	1.7		Shallow Concentrated Flow, Nearly Bare & Untilled Kv= 10.0 fps
0.1	17	0.0200	2.9		Shallow Concentrated Flow, Paved Kv= 20.3 fps
12.3	207	Total			

**Subcatchment 7S: 7S**

Hydrograph Plot



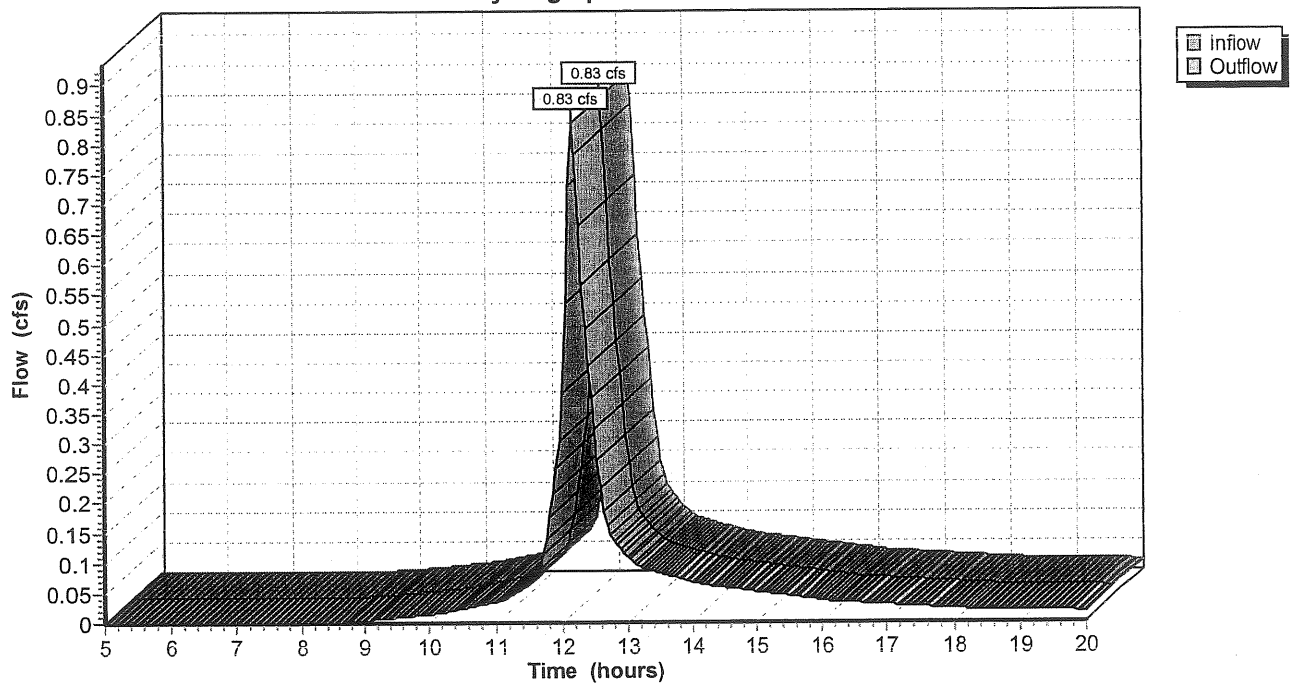
**Reach SP1: (new node)**

Inflow = 0.83 cfs @ 12.16 hrs, Volume= 0.066 af  
Outflow = 0.83 cfs @ 12.16 hrs, Volume= 0.066 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Reach SP1: (new node)**

**Hydrograph Plot**





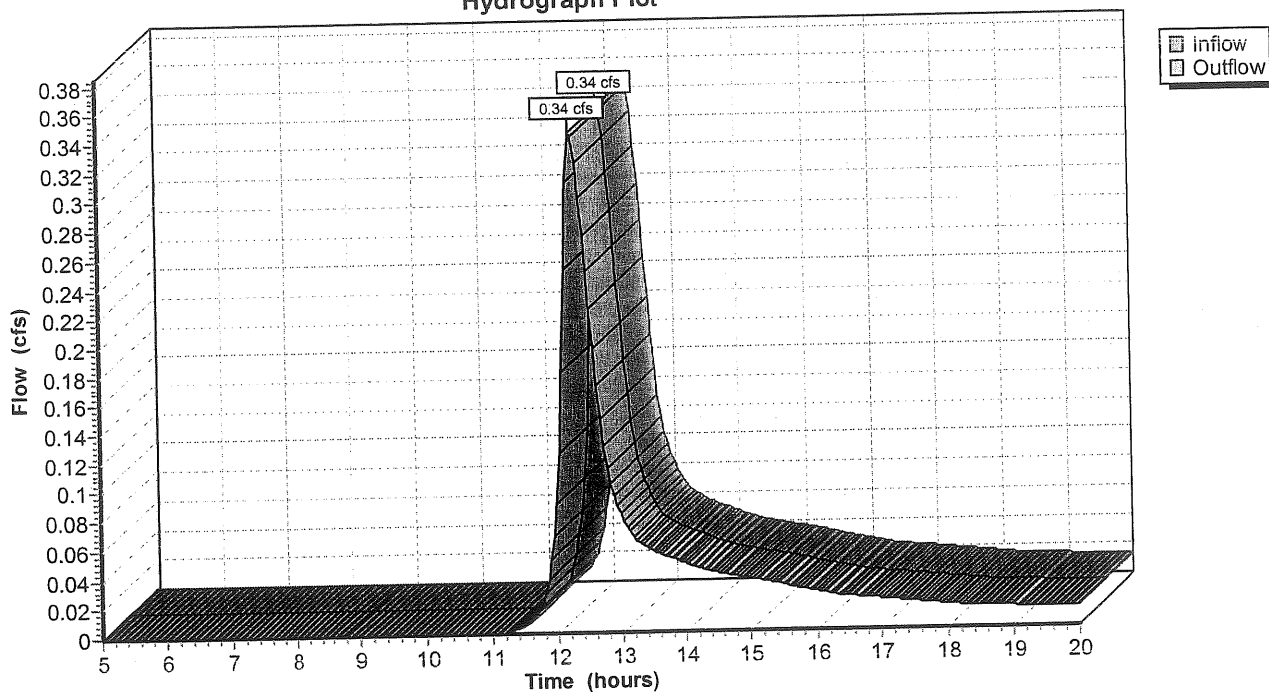
### Reach SP2: (new node)

Inflow = 0.34 cfs @ 12.28 hrs, Volume= 0.035 af  
Outflow = 0.34 cfs @ 12.28 hrs, Volume= 0.035 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Reach SP2: (new node)

Hydrograph Plot



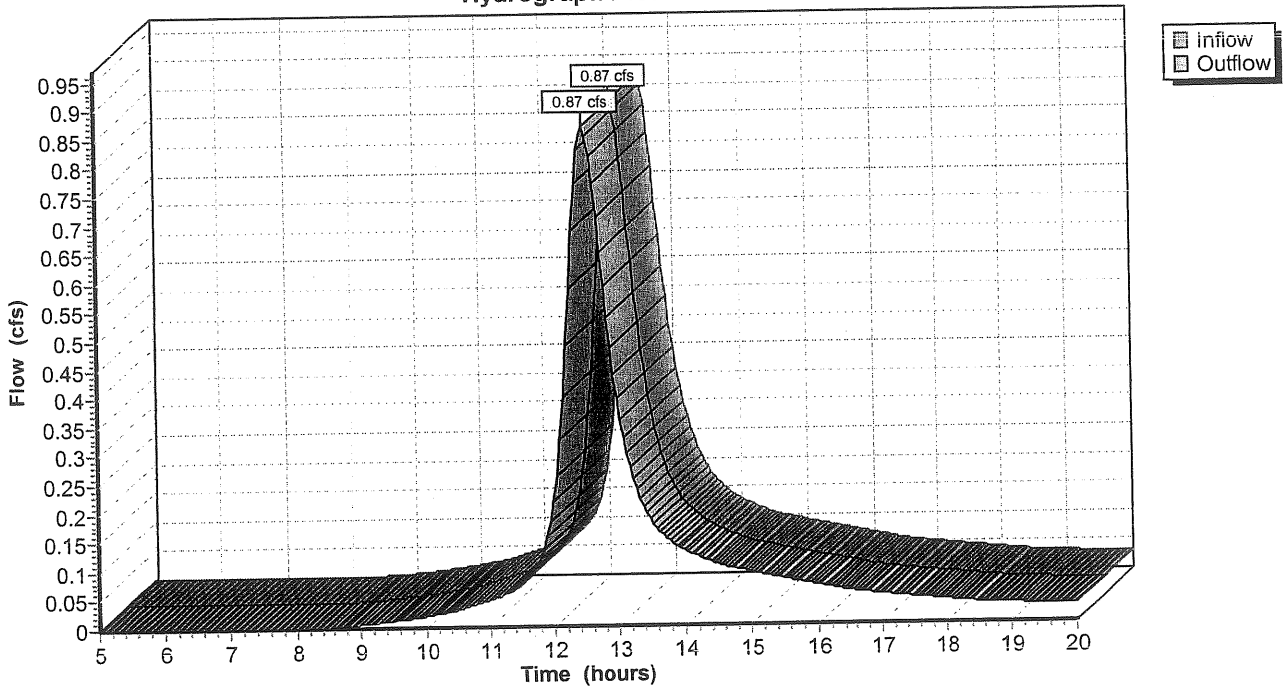
**Reach SP3: (new node)**

Inflow = 0.87 cfs @ 12.49 hrs, Volume= 0.108 af  
Outflow = 0.87 cfs @ 12.49 hrs, Volume= 0.108 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Reach SP3: (new node)**

Hydrograph Plot



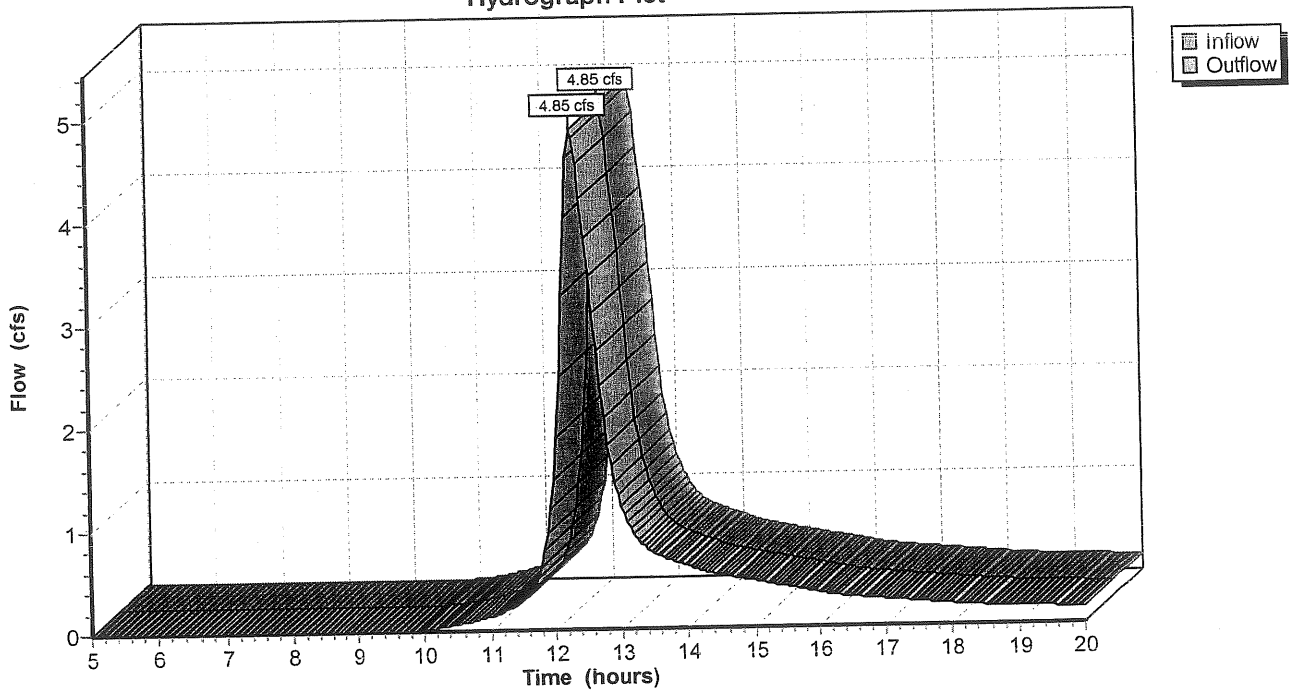
**Reach SP4: (new node)**

Inflow = 4.85 cfs @ 12.32 hrs, Volume= 0.497 af  
Outflow = 4.85 cfs @ 12.32 hrs, Volume= 0.497 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Reach SP4: (new node)**

Hydrograph Plot



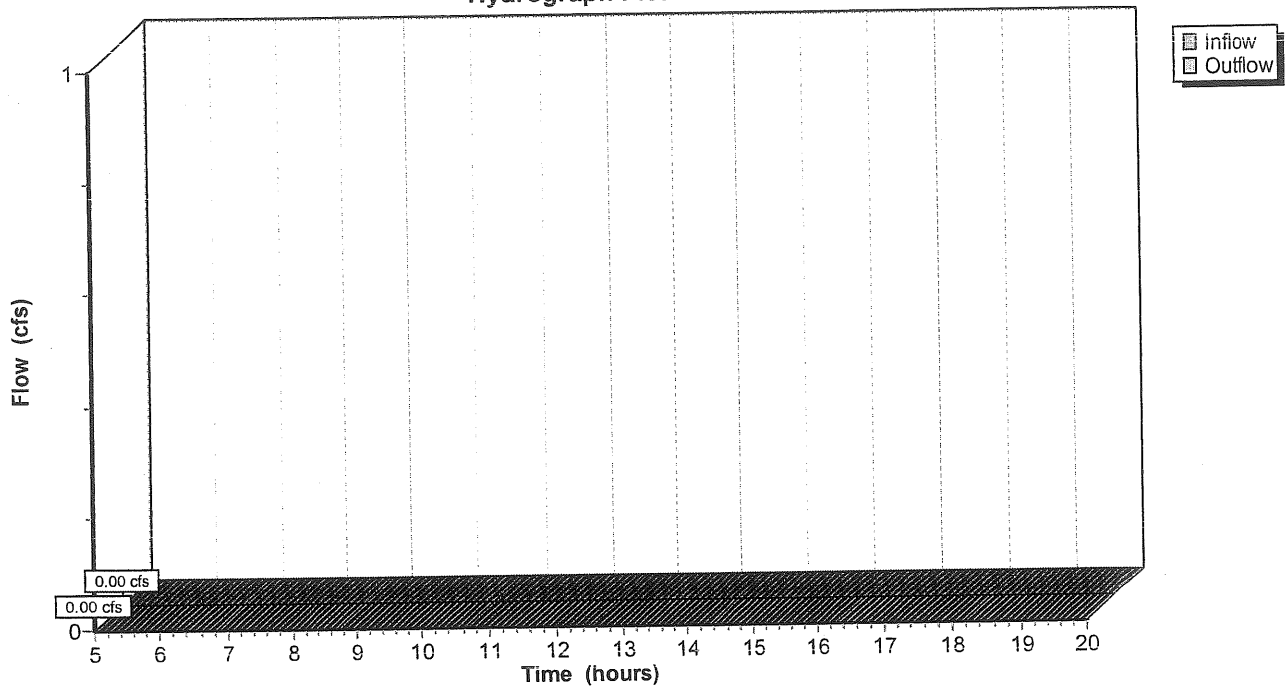
**Reach SP5: (new node)**

Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af  
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Reach SP5: (new node)**

**Hydrograph Plot**



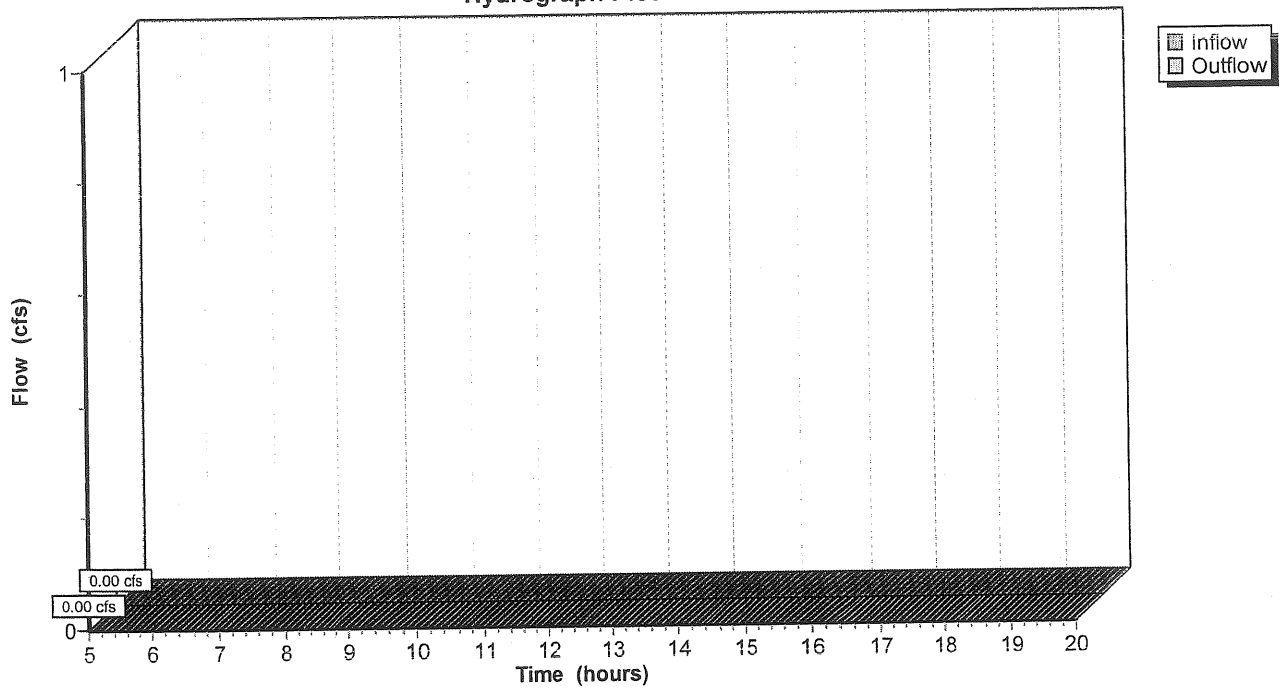
**Reach SP6: (new node)**

Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af  
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Reach SP6: (new node)**

Hydrograph Plot



### Reach SP7: Site Stormdrain Network

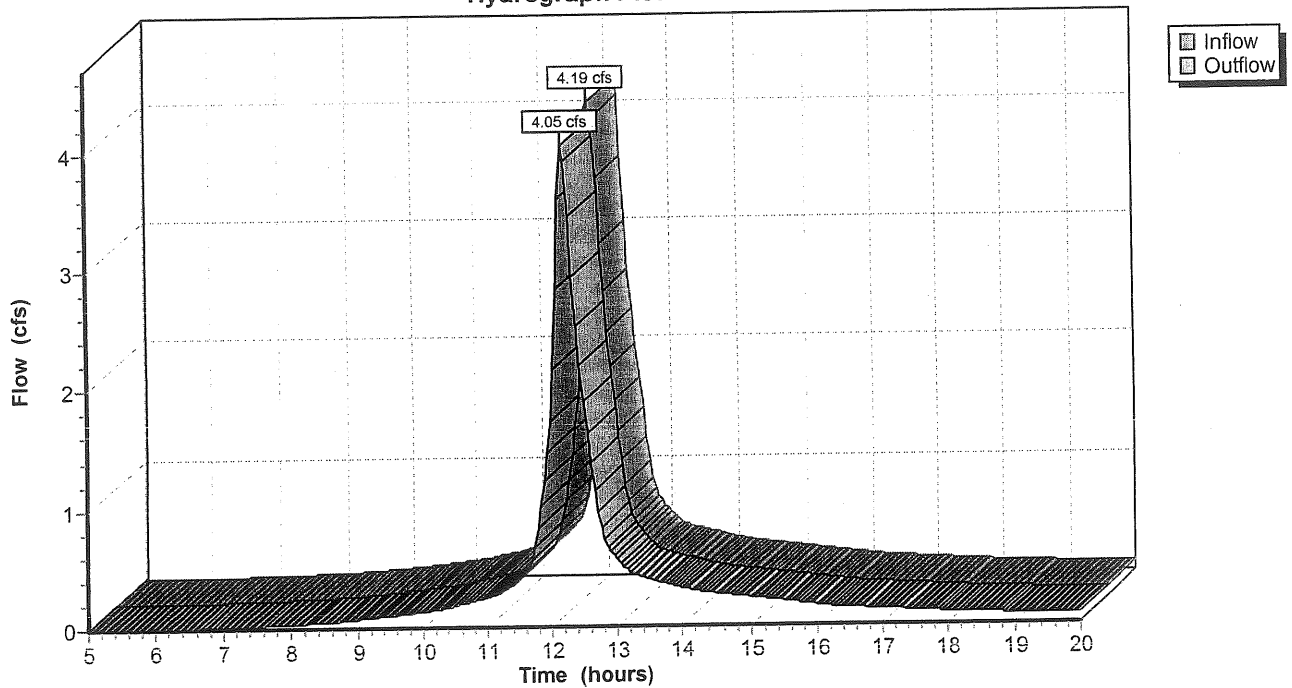
Inflow = 4.19 cfs @ 12.17 hrs, Volume= 0.350 af  
Outflow = 4.05 cfs @ 12.21 hrs, Volume= 0.349 af, Atten= 3%, Lag= 2.8 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Max. Velocity= 6.1 fps, Min. Travel Time= 1.4 min  
Avg. Velocity = 2.5 fps, Avg. Travel Time= 3.3 min

Peak Depth= 0.80'  
Capacity at bank full= 4.21 cfs  
Inlet Invert= 93.00', Outlet Invert= 88.00'  
12.0" Diameter Pipe n= 0.011 Length= 500.0' Slope= 0.0100 '/'

### Reach SP7: Site Stormdrain Network

Hydrograph Plot



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
 Runoff by SCS TR-20 method, UH=SCS, Type III 24-hr Rainfall=4.70"  
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

<b>Subcatchment 1S: 1S</b>	Tc=11.1 min CN=85 Area=23,297 sf Runoff= 1.61 cfs 0.129 af
<b>Subcatchment 2S: 2S</b>	Tc=18.1 min CN=73 Area=23,382 sf Runoff= 0.89 cfs 0.084 af
<b>Subcatchment 3S: 3S</b>	Tc=35.2 min CN=86 Area=36,910 sf Runoff= 1.65 cfs 0.210 af
<b>Subcatchment 4S: 4S</b>	Tc=21.9 min CN=80 Area=227,044 sf Runoff= 10.42 cfs 1.061 af
<b>Subcatchment 5S: (new node)</b>	Tc=0.0 min CN=0 Area=0 sf Runoff= 0.00 cfs 0.000 af
<b>Subcatchment 6S: (new node)</b>	Tc=0.0 min CN=0 Area=0 sf Runoff= 0.00 cfs 0.000 af
<b>Subcatchment 7S: 7S</b>	Tc=12.3 min CN=91 Area=93,918 sf Runoff= 7.29 cfs 0.626 af
<b>Reach SP1: (new node)</b>	Inflow= 1.61 cfs 0.129 af Outflow= 1.61 cfs 0.129 af
<b>Reach SP2: (new node)</b>	Inflow= 0.89 cfs 0.084 af Outflow= 0.89 cfs 0.084 af
<b>Reach SP3: (new node)</b>	Inflow= 1.65 cfs 0.210 af Outflow= 1.65 cfs 0.210 af
<b>Reach SP4: (new node)</b>	Inflow= 10.42 cfs 1.061 af Outflow= 10.42 cfs 1.061 af
<b>Reach SP5: (new node)</b>	Inflow= 0.00 cfs 0.000 af Outflow= 0.00 cfs 0.000 af
<b>Reach SP6: (new node)</b>	Inflow= 0.00 cfs 0.000 af Outflow= 0.00 cfs 0.000 af
<b>Reach SP7: Site Stormdrain Network</b>	Inflow= 7.29 cfs 0.626 af Length= 500.0' Max Vel= 6.1 fps Capacity= 4.21 cfs Outflow= 4.24 cfs 0.625 af

**Runoff Area = 9.287 ac Volume = 2.110 af Average Depth = 2.73"**

**Subcatchment 1S: 1S**

Runoff = 1.61 cfs @ 12.15 hrs, Volume= 0.129 af

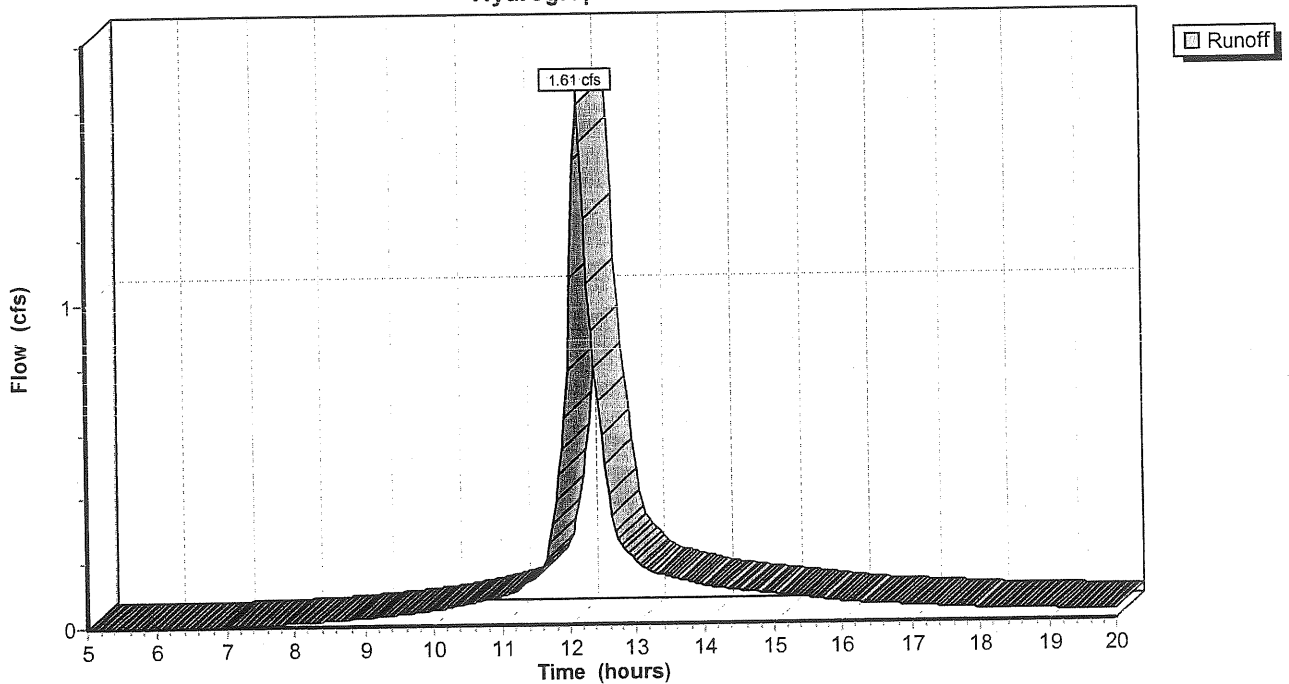
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr Rainfall=4.70"

Area (sf)	CN	Description
3,833	98	Paved parking & roofs
3,675	91	Gravel roads, HSG D
15,789	80	>75% Grass cover, Good, HSG D
23,297	85	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.7	72	0.0290	0.2		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.00"
3.7	214	0.0190	1.0		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.7	90	0.0120	2.2		<b>Shallow Concentrated Flow,</b> Paved Kv= 20.3 fps
11.1	376	Total			

**Subcatchment 1S: 1S**

Hydrograph Plot





**Subcatchment 2S: 2S**

Runoff = 0.89 cfs @ 12.26 hrs, Volume= 0.084 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr Rainfall=4.70"

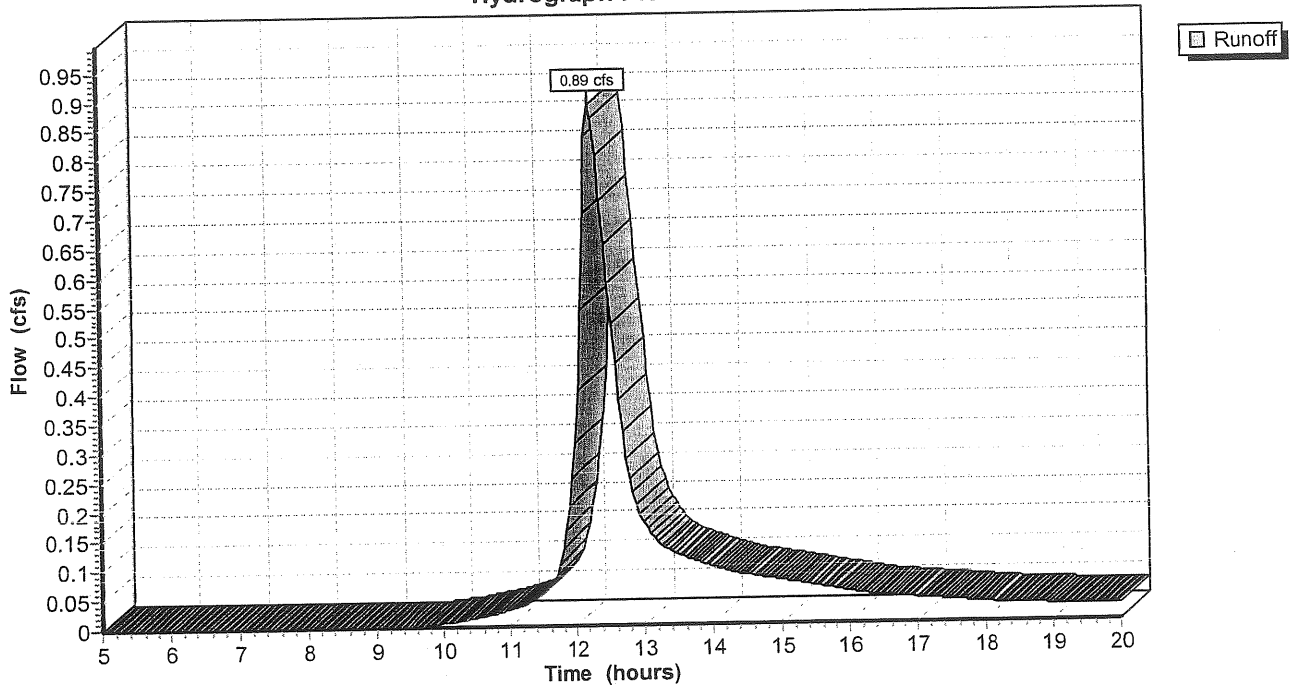
Area (sf)	CN	Description
23,382	73	Brush, Good, HSG D

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	80	0.0310	0.2		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.00"
11.0	215	0.0170	0.3		<b>Shallow Concentrated Flow,</b> Forest w/Heavy Litter Kv= 2.5 fps
18.1	295	Total			

**Subcatchment 2S: 2S**

Hydrograph Plot



**Subcatchment 3S: 3S**

Runoff = 1.65 cfs @ 12.48 hrs, Volume= 0.210 af

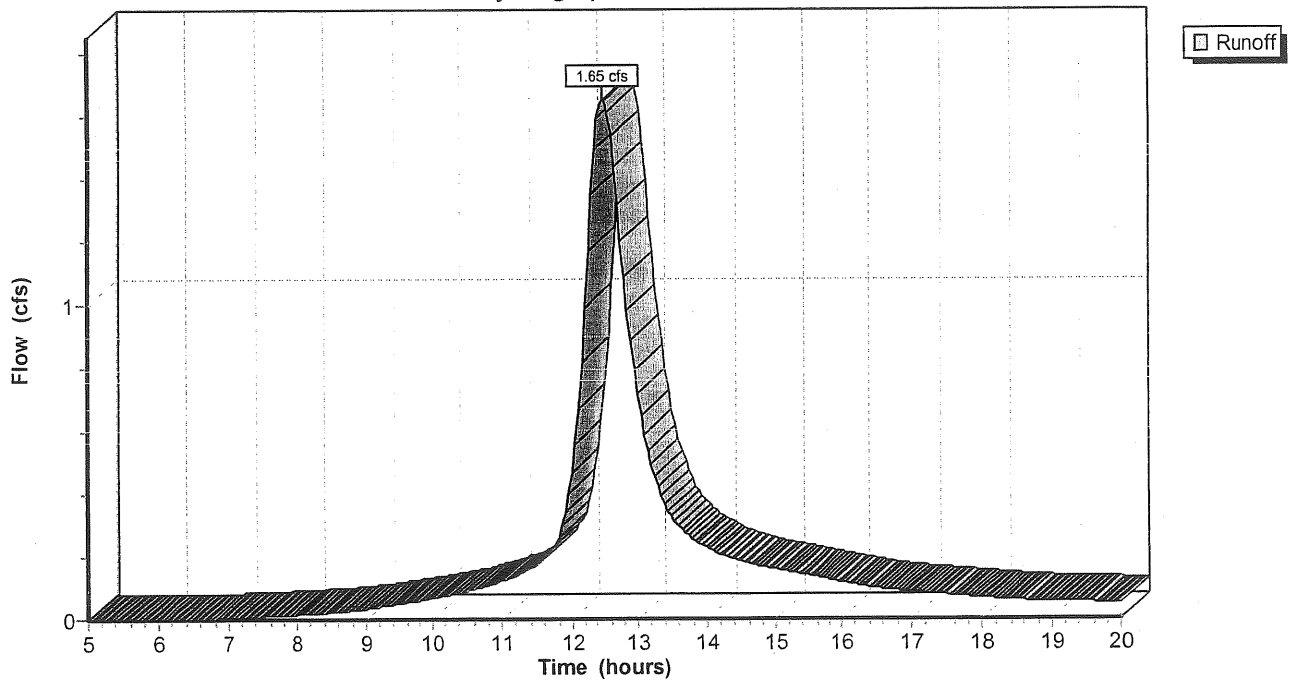
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr Rainfall=4.70"

Area (sf)	CN	Description
14,669	98	Paved parking & roofs
11,509	80	>75% Grass cover, Good, HSG D
3,662	77	Woods, Good, HSG D
7,070	73	Brush, Good, HSG D
36,910	86	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.3	150	0.0230	0.1		Sheet Flow, Grass: Dense n= 0.240 P2= 3.00"
15.9	141	0.0035	0.1		Shallow Concentrated Flow, Forest w/Heavy Litter Kv= 2.5 fps
35.2	291	Total			

**Subcatchment 3S: 3S**

Hydrograph Plot



**Subcatchment 4S: 4S**

Runoff = 10.42 cfs @ 12.31 hrs, Volume= 1.061 af

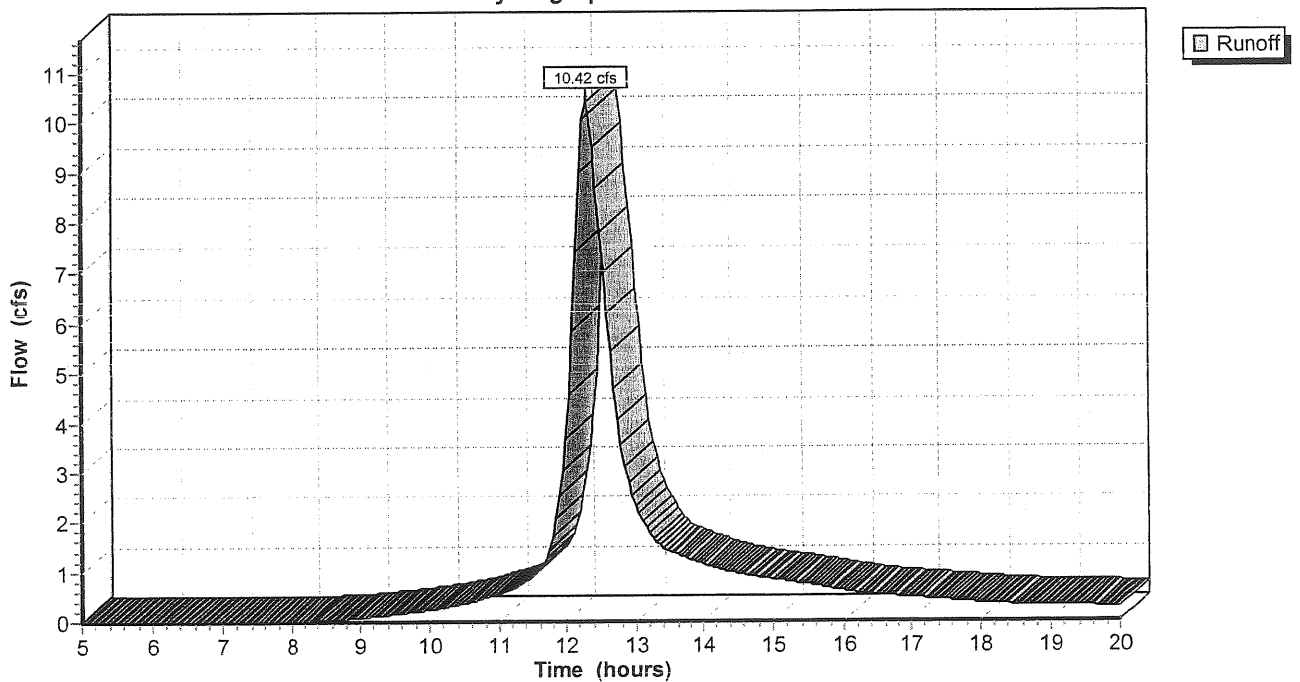
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr Rainfall=4.70"

Area (sf)	CN	Description
61,335	84	50-75% Grass cover, Fair, HSG D
149,814	77	Woods, Good, HSG D
13,259	98	Paved parking & roofs
2,636	91	Gravel roads, HSG D
227,044	80	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.1	135	0.0370	0.2		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.00"
4.8	291	0.0045	1.0		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
7.0	215	0.0105	0.5		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
21.9	641	Total			

**Subcatchment 4S: 4S**

Hydrograph Plot



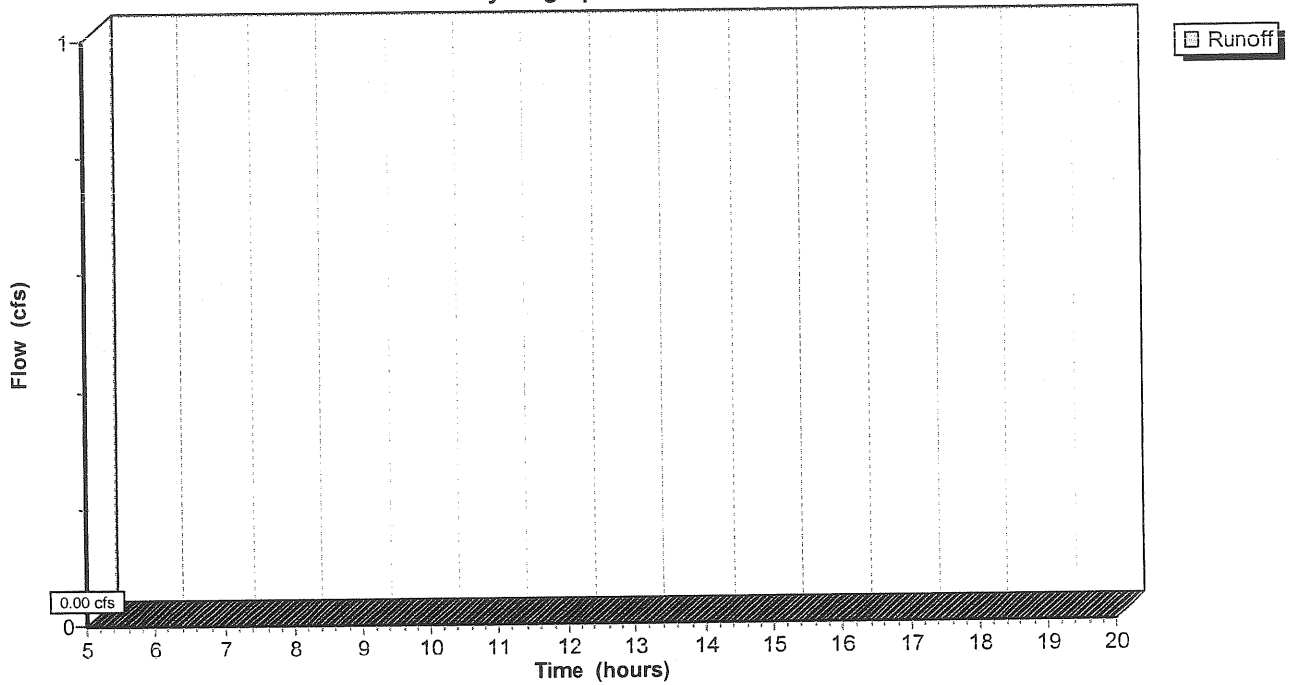
**Subcatchment 5S: (new node)**

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr Rainfall=4.70"

**Subcatchment 5S: (new node)**

Hydrograph Plot



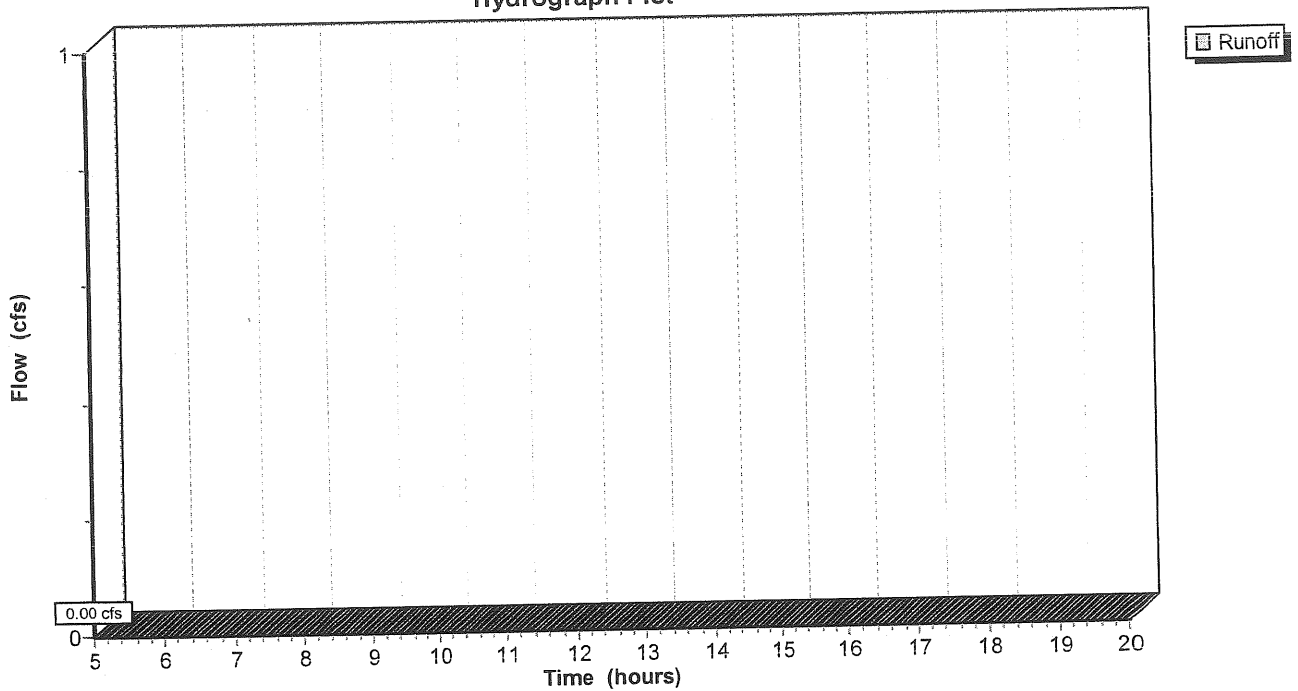
**Subcatchment 6S: (new node)**

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr Rainfall=4.70"

**Subcatchment 6S: (new node)**

Hydrograph Plot



**Subcatchment 7S: 7S**

Runoff = 7.29 cfs @ 12.17 hrs, Volume= 0.626 af

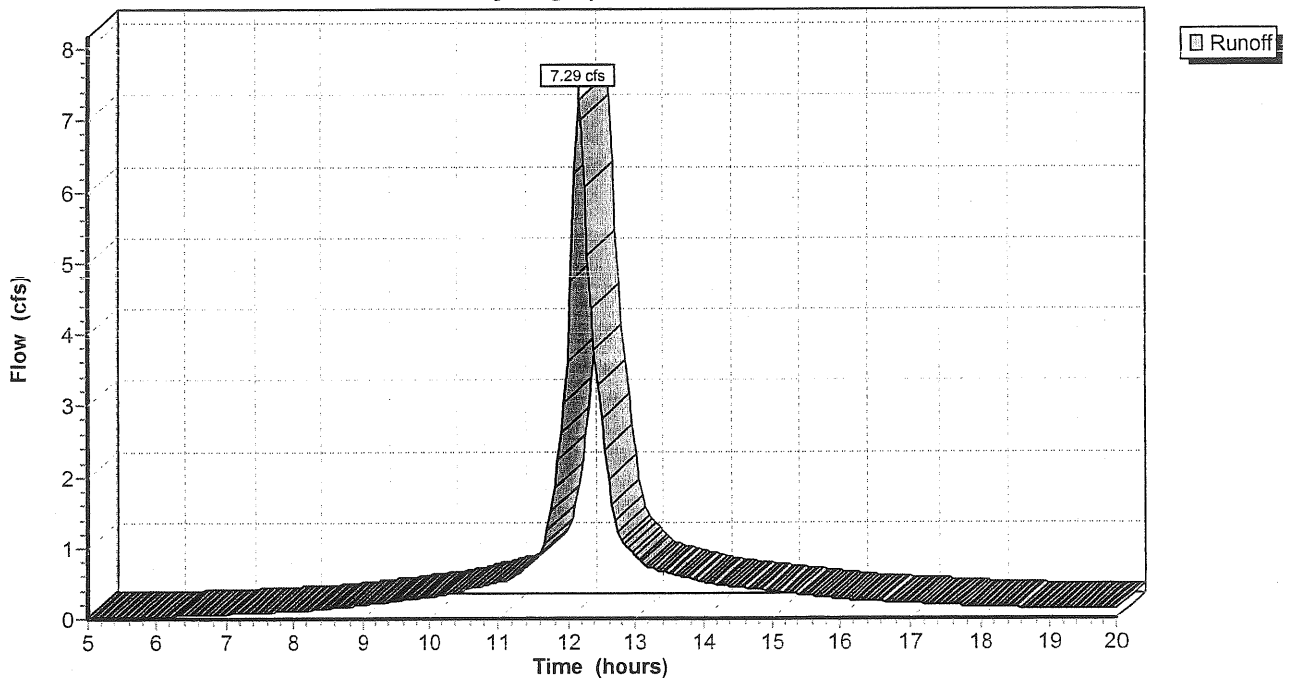
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr Rainfall=4.70"

Area (sf)	CN	Description
47,117	98	Paved parking & roofs
7,477	91	Gravel roads, HSG D
6,963	77	Woods, Good, HSG D
26,146	84	50-75% Grass cover, Fair, HSG D
6,215	80	>75% Grass cover, Good, HSG D
93,918	91	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	120	0.0208	0.2		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.00"
0.7	70	0.0286	1.7		<b>Shallow Concentrated Flow,</b> Nearly Bare & Untilled Kv= 10.0 fps
0.1	17	0.0200	2.9		<b>Shallow Concentrated Flow,</b> Paved Kv= 20.3 fps
12.3	207	Total			

**Subcatchment 7S: 7S**

Hydrograph Plot



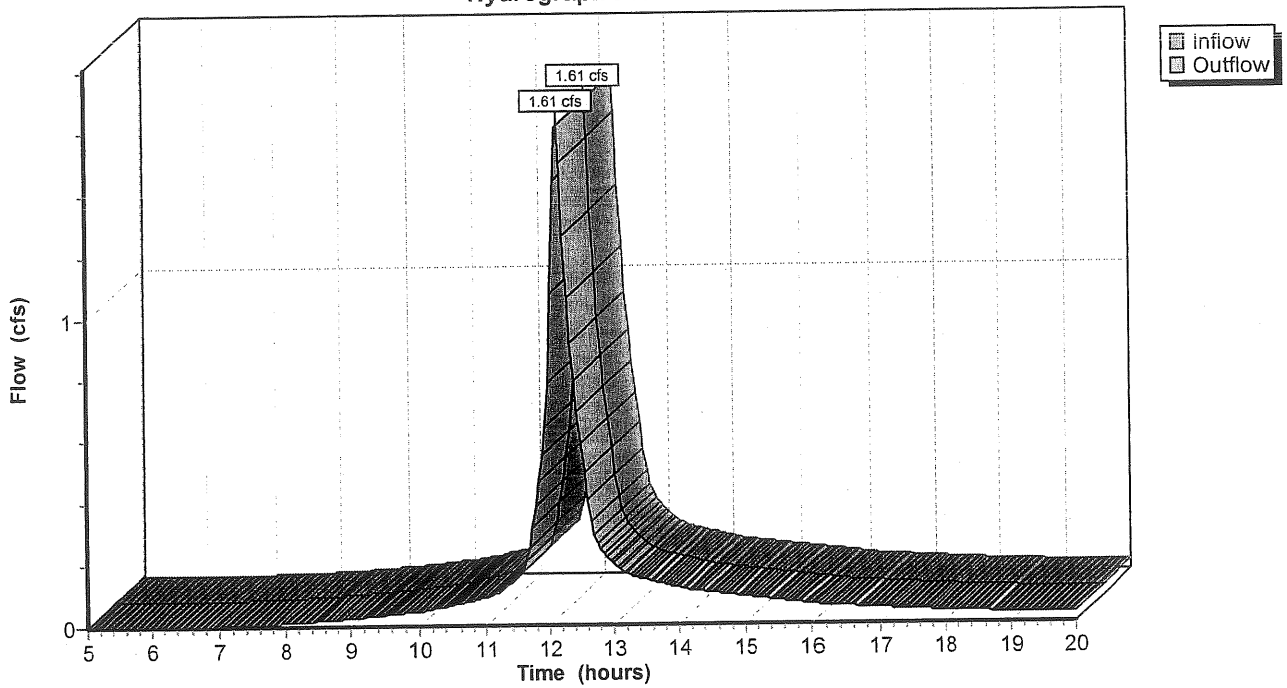
**Reach SP1: (new node)**

Inflow = 1.61 cfs @ 12.15 hrs, Volume= 0.129 af  
Outflow = 1.61 cfs @ 12.15 hrs, Volume= 0.129 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Reach SP1: (new node)**

Hydrograph Plot



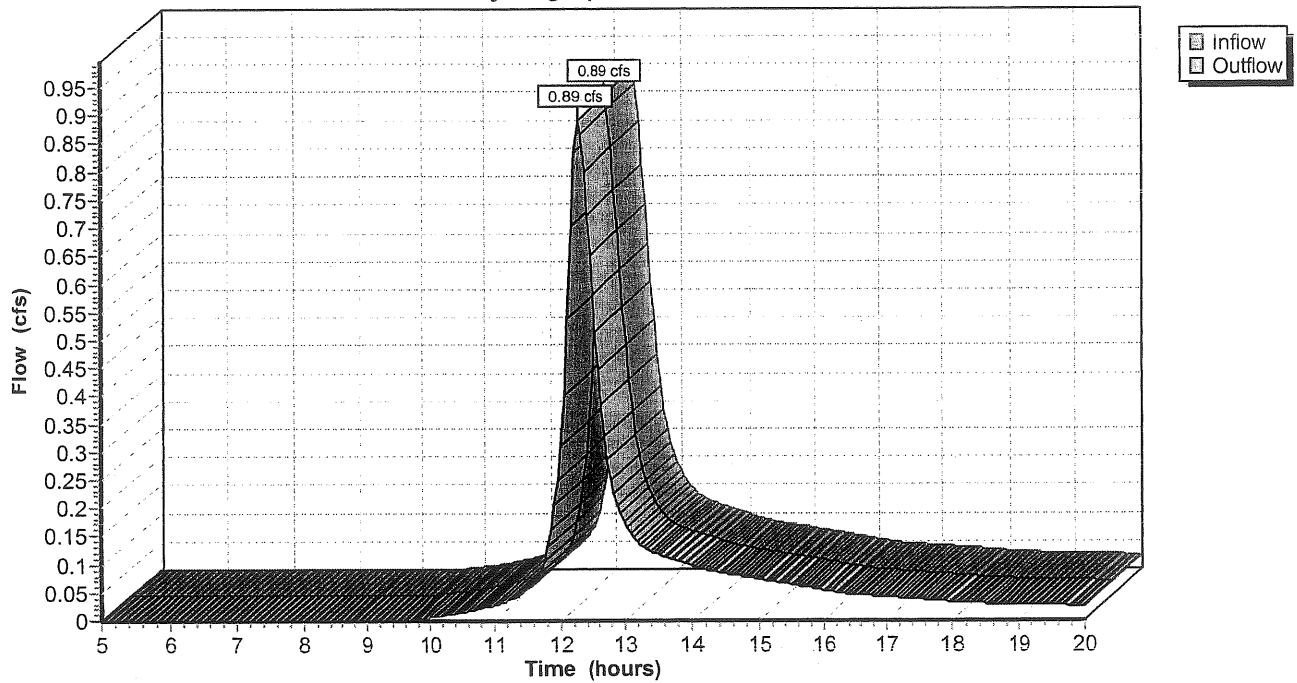
**Reach SP2: (new node)**

Inflow = 0.89 cfs @ 12.26 hrs, Volume= 0.084 af  
Outflow = 0.89 cfs @ 12.26 hrs, Volume= 0.084 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Reach SP2: (new node)**

**Hydrograph Plot**





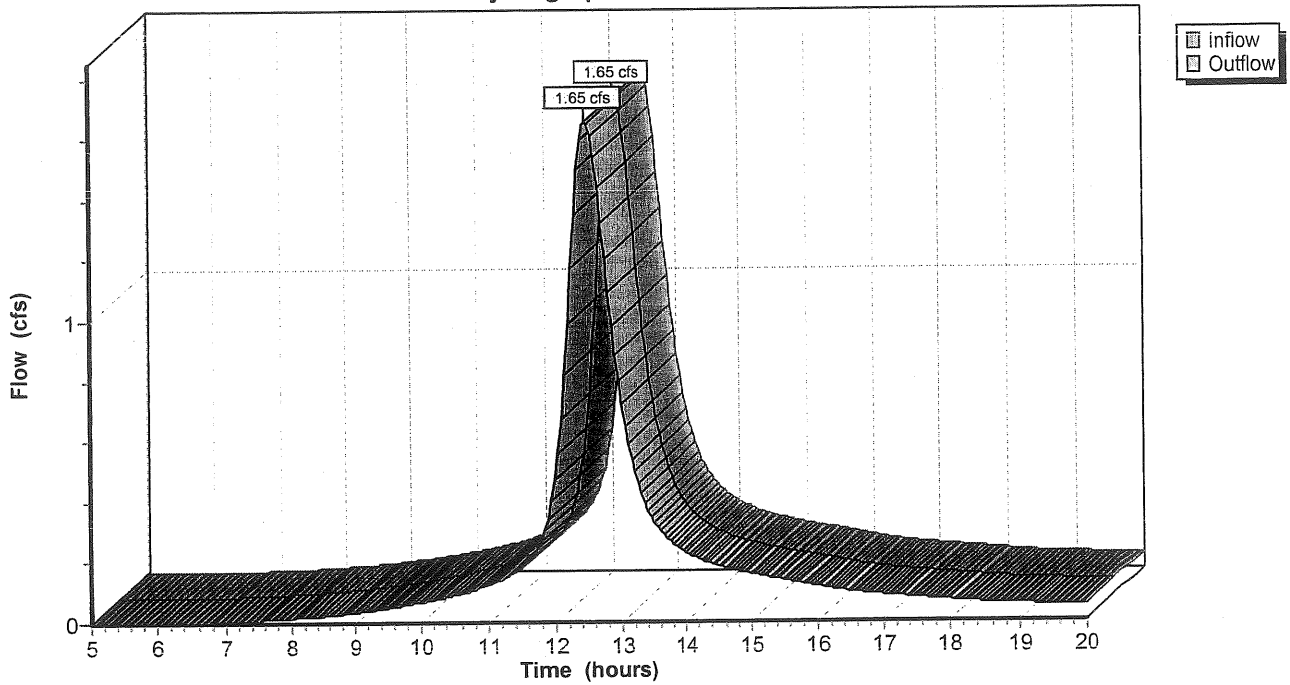
**Reach SP3: (new node)**

Inflow = 1.65 cfs @ 12.48 hrs, Volume= 0.210 af  
Outflow = 1.65 cfs @ 12.48 hrs, Volume= 0.210 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Reach SP3: (new node)**

Hydrograph Plot



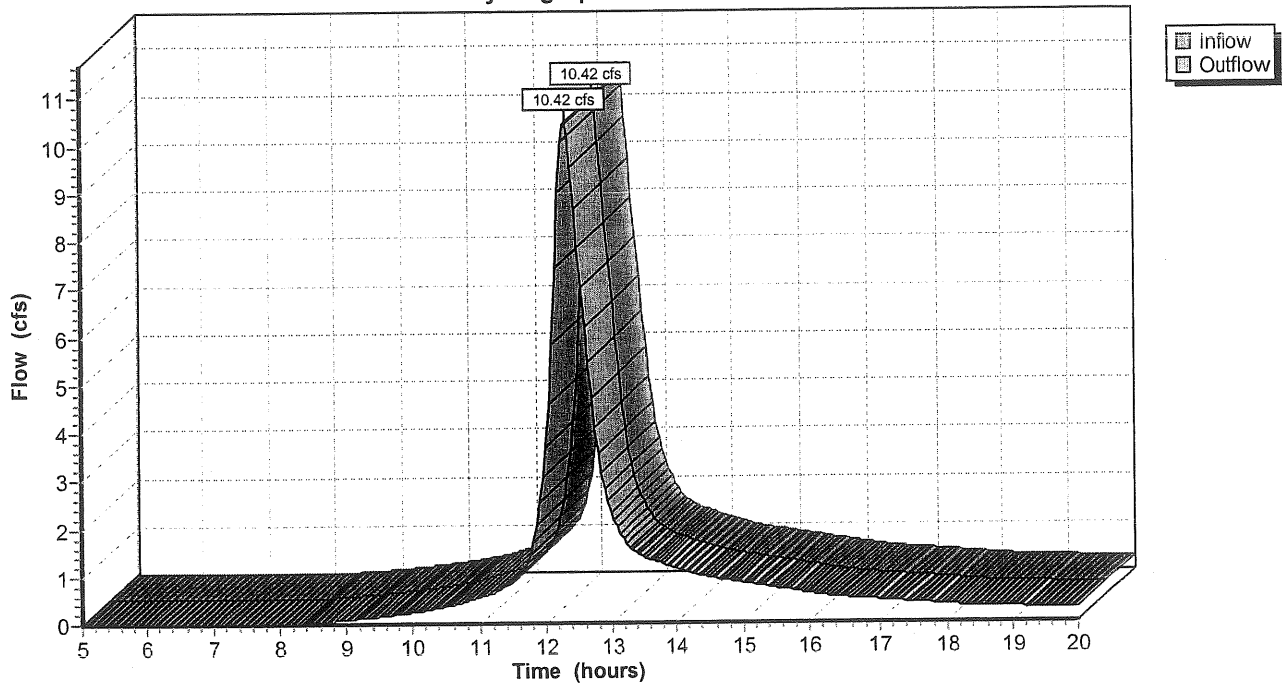
**Reach SP4: (new node)**

Inflow = 10.42 cfs @ 12.31 hrs, Volume= 1.061 af  
Outflow = 10.42 cfs @ 12.31 hrs, Volume= 1.061 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Reach SP4: (new node)**

**Hydrograph Plot**



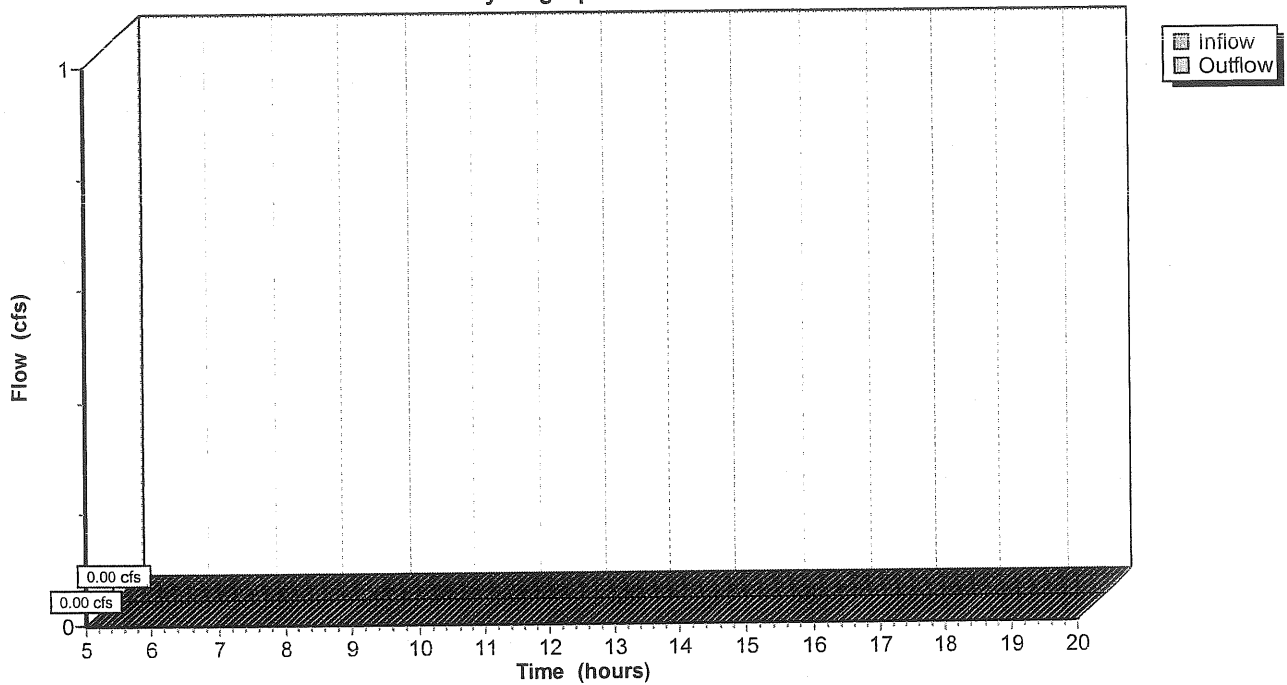
**Reach SP5: (new node)**

Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af  
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Reach SP5: (new node)**

Hydrograph Plot



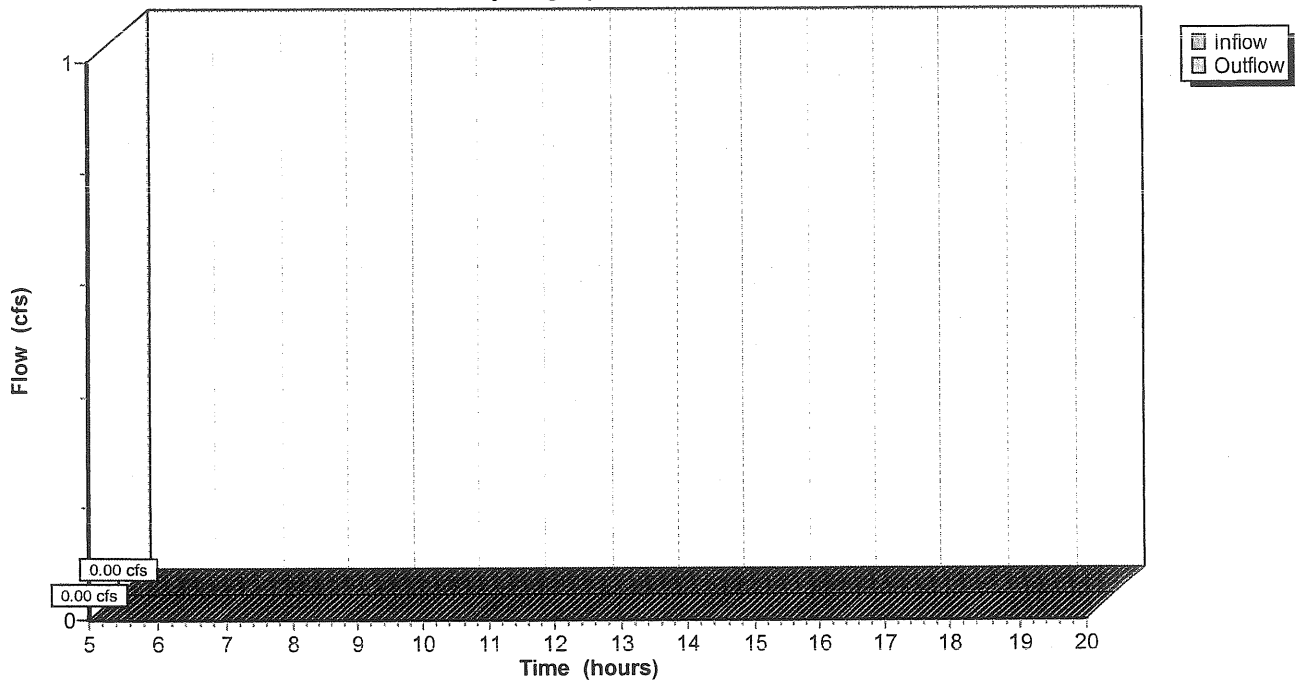
**Reach SP6: (new node)**

Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af  
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Reach SP6: (new node)**

Hydrograph Plot



### Reach SP7: Site Stormdrain Network

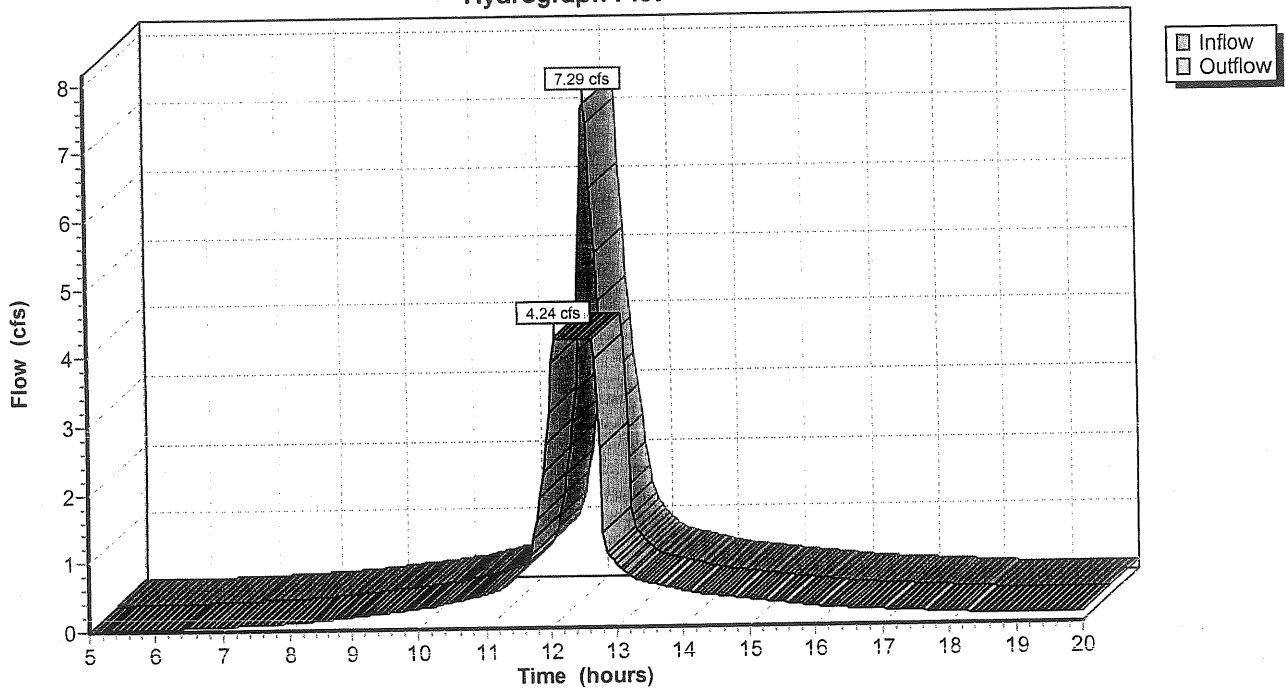
Inflow = 7.29 cfs @ 12.17 hrs, Volume= 0.626 af  
Outflow = 4.24 cfs @ 12.10 hrs, Volume= 0.625 af, Atten= 42%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Max. Velocity= 6.1 fps, Min. Travel Time= 1.4 min  
Avg. Velocity = 3.0 fps, Avg. Travel Time= 2.8 min

Peak Depth= 1.00'  
Capacity at bank full= 4.21 cfs  
Inlet Invert= 93.00', Outlet Invert= 88.00'  
12.0" Diameter Pipe n= 0.011 Length= 500.0' Slope= 0.0100 '/'

### Reach SP7: Site Stormdrain Network

Hydrograph Plot



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
 Runoff by SCS TR-20 method, UH=SCS, Type III 24-hr Rainfall=5.50"  
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 1S: 1S**

Tc=11.1 min CN=85 Area=23,297 sf Runoff= 1.99 cfs 0.161 af

**Subcatchment 2S: 2S**

Tc=18.1 min CN=73 Area=23,382 sf Runoff= 1.17 cfs 0.111 af

**Subcatchment 3S: 3S**

Tc=35.2 min CN=86 Area=36,910 sf Runoff= 2.02 cfs 0.260 af

**Subcatchment 4S: 4S**

Tc=21.9 min CN=80 Area=227,044 sf Runoff= 13.18 cfs 1.348 af

**Subcatchment 5S: (new node)**

Tc=0.0 min CN=0 Area=0 sf Runoff= 0.00 cfs 0.000 af

**Subcatchment 6S: (new node)**

Tc=0.0 min CN=0 Area=0 sf Runoff= 0.00 cfs 0.000 af

**Subcatchment 7S: 7S**

Tc=12.3 min CN=91 Area=93,918 sf Runoff= 8.74 cfs 0.758 af

**Reach SP1: (new node)**Inflow= 1.99 cfs 0.161 af  
Outflow= 1.99 cfs 0.161 af**Reach SP2: (new node)**Inflow= 1.17 cfs 0.111 af  
Outflow= 1.17 cfs 0.111 af**Reach SP3: (new node)**Inflow= 2.02 cfs 0.260 af  
Outflow= 2.02 cfs 0.260 af**Reach SP4: (new node)**Inflow= 13.18 cfs 1.348 af  
Outflow= 13.18 cfs 1.348 af**Reach SP5: (new node)**Inflow= 0.00 cfs 0.000 af  
Outflow= 0.00 cfs 0.000 af**Reach SP6: (new node)**Inflow= 0.00 cfs 0.000 af  
Outflow= 0.00 cfs 0.000 af**Reach SP7: Site Stormdrain Network**Inflow= 8.74 cfs 0.758 af  
Length= 500.0' Max Vel= 6.1 fps Capacity= 4.21 cfs Outflow= 4.21 cfs 0.757 af**Runoff Area = 9.287 ac Volume = 2.637 af Average Depth = 3.41"**

**Subcatchment 1S: 1S**

Runoff = 1.99 cfs @ 12.15 hrs, Volume= 0.161 af

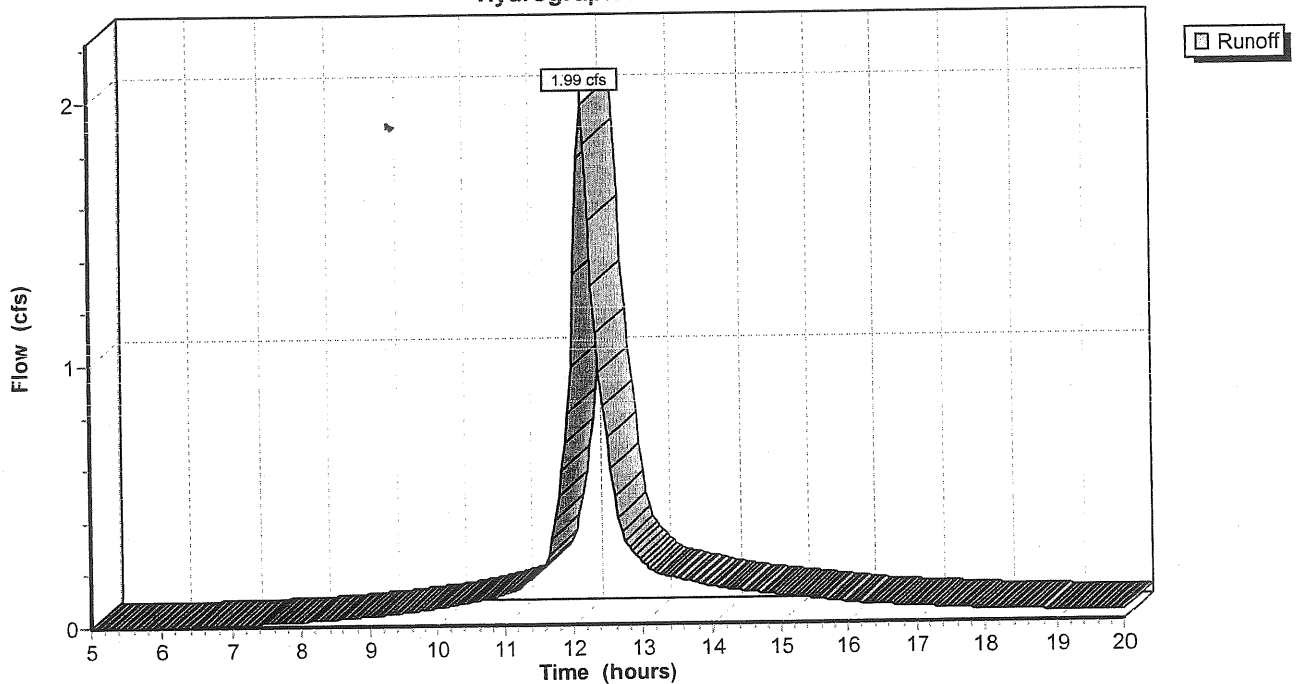
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr Rainfall=5.50"

Area (sf)	CN	Description
3,833	98	Paved parking & roofs
3,675	91	Gravel roads, HSG D
15,789	80	>75% Grass cover, Good, HSG D
23,297	85	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.7	72	0.0290	0.2		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.00"
3.7	214	0.0190	1.0		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.7	90	0.0120	2.2		<b>Shallow Concentrated Flow,</b> Paved Kv= 20.3 fps
11.1	376	Total			

**Subcatchment 1S: 1S**

Hydrograph Plot



**Subcatchment 2S: 2S**

Runoff = 1.17 cfs @ 12.26 hrs, Volume= 0.111 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr Rainfall=5.50"

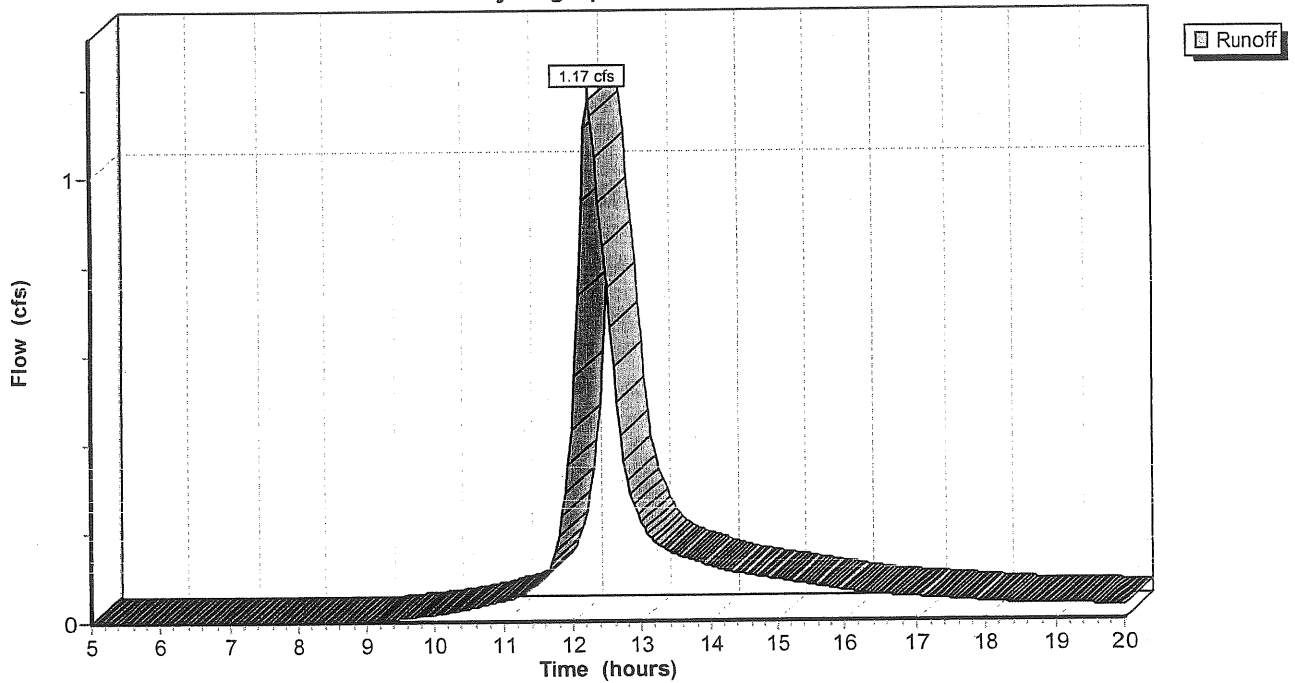
Area (sf)	CN	Description
23,382	73	Brush, Good, HSG D

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	80	0.0310	0.2		Sheet Flow, Grass: Short n= 0.150 P2= 3.00"
11.0	215	0.0170	0.3		Shallow Concentrated Flow, Forest w/Heavy Litter Kv= 2.5 fps
18.1	295	Total			

**Subcatchment 2S: 2S**

Hydrograph Plot





**Subcatchment 3S: 3S**

Runoff = 2.02 cfs @ 12.48 hrs, Volume= 0.260 af

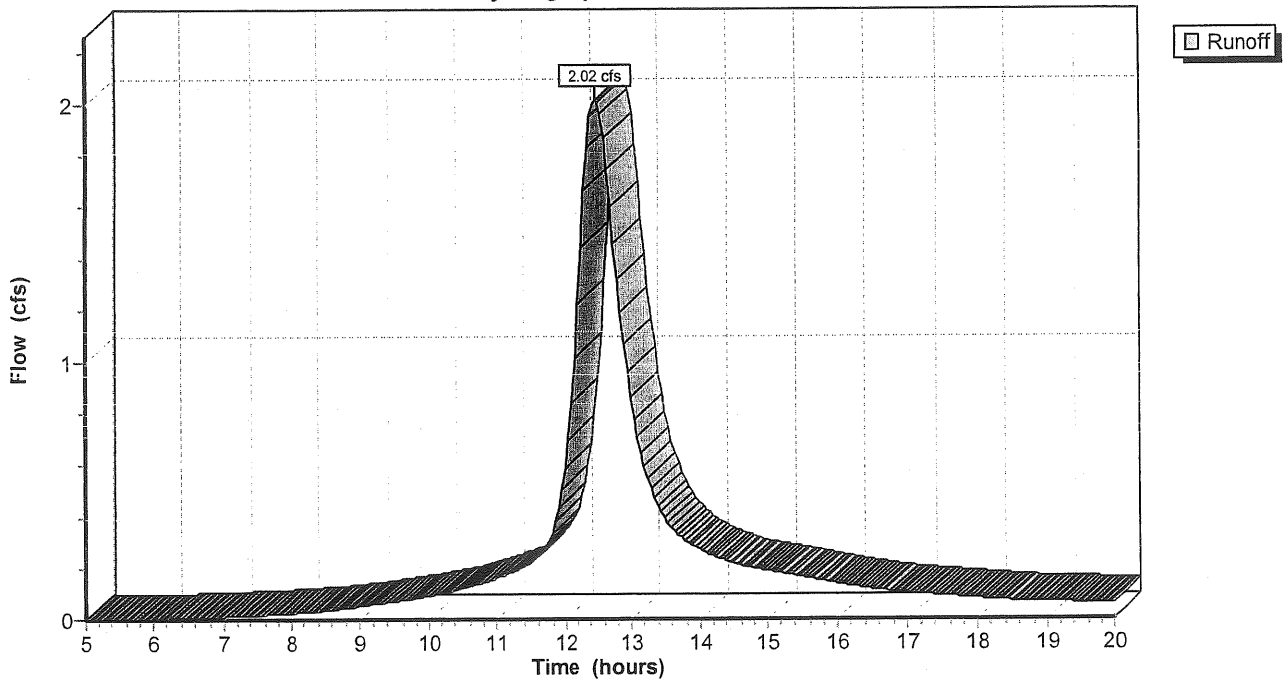
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr Rainfall=5.50"

Area (sf)	CN	Description
14,669	98	Paved parking & roofs
11,509	80	>75% Grass cover, Good, HSG D
3,662	77	Woods, Good, HSG D
7,070	73	Brush, Good, HSG D
36,910	86	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.3	150	0.0230	0.1		<b>Sheet Flow,</b> Grass: Dense n= 0.240 P2= 3.00"
15.9	141	0.0035	0.1		<b>Shallow Concentrated Flow,</b> Forest w/Heavy Litter Kv= 2.5 fps
35.2	291	Total			

**Subcatchment 3S: 3S**

Hydrograph Plot



**Subcatchment 4S: 4S**

Runoff = 13.18 cfs @ 12.30 hrs, Volume= 1.348 af

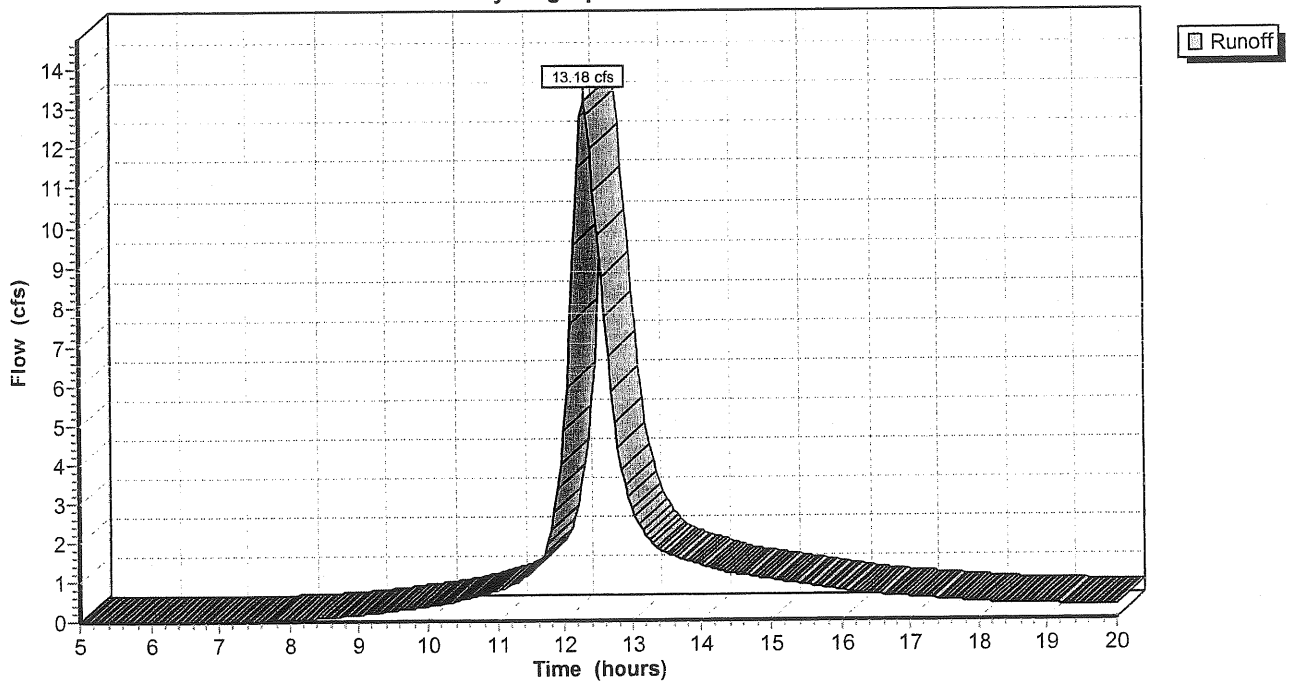
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr Rainfall=5.50"

Area (sf)	CN	Description
61,335	84	50-75% Grass cover, Fair, HSG D
149,814	77	Woods, Good, HSG D
13,259	98	Paved parking & roofs
2,636	91	Gravel roads, HSG D
227,044	80	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.1	135	0.0370	0.2		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.00"
4.8	291	0.0045	1.0		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
7.0	215	0.0105	0.5		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
21.9	641	Total			

**Subcatchment 4S: 4S**

Hydrograph Plot



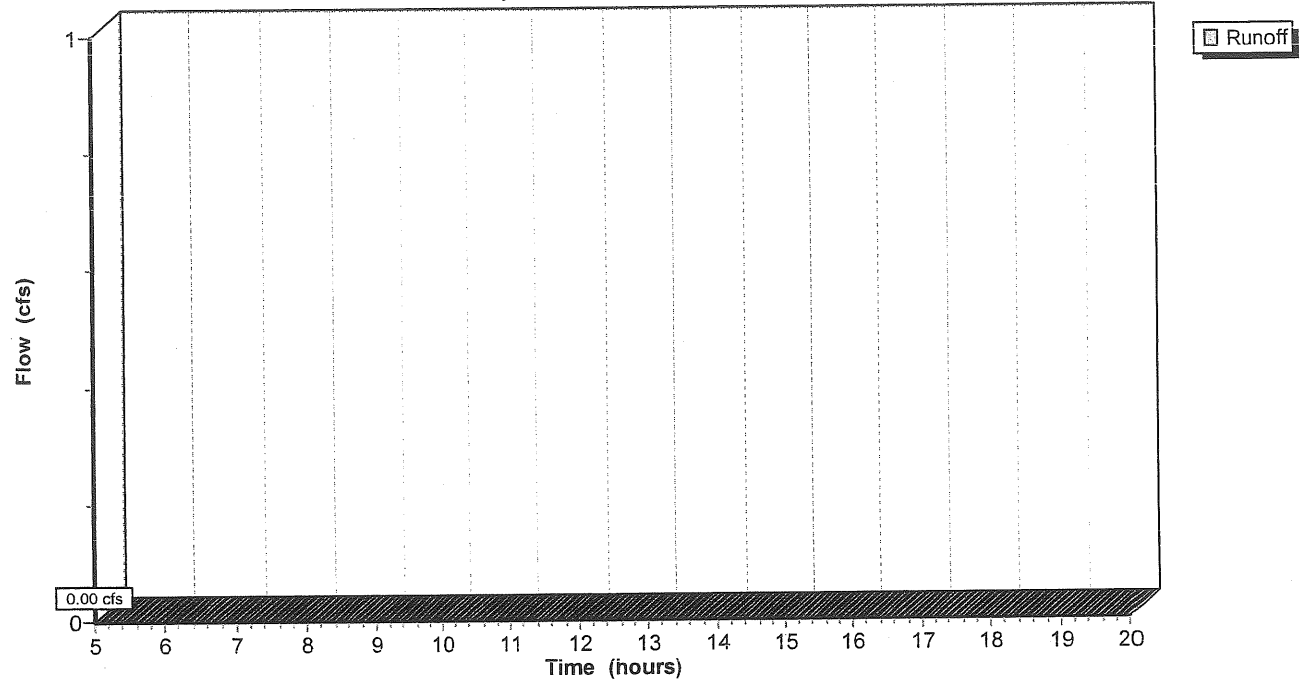
**Subcatchment 5S: (new node)**

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr Rainfall=5.50"

**Subcatchment 5S: (new node)**

Hydrograph Plot



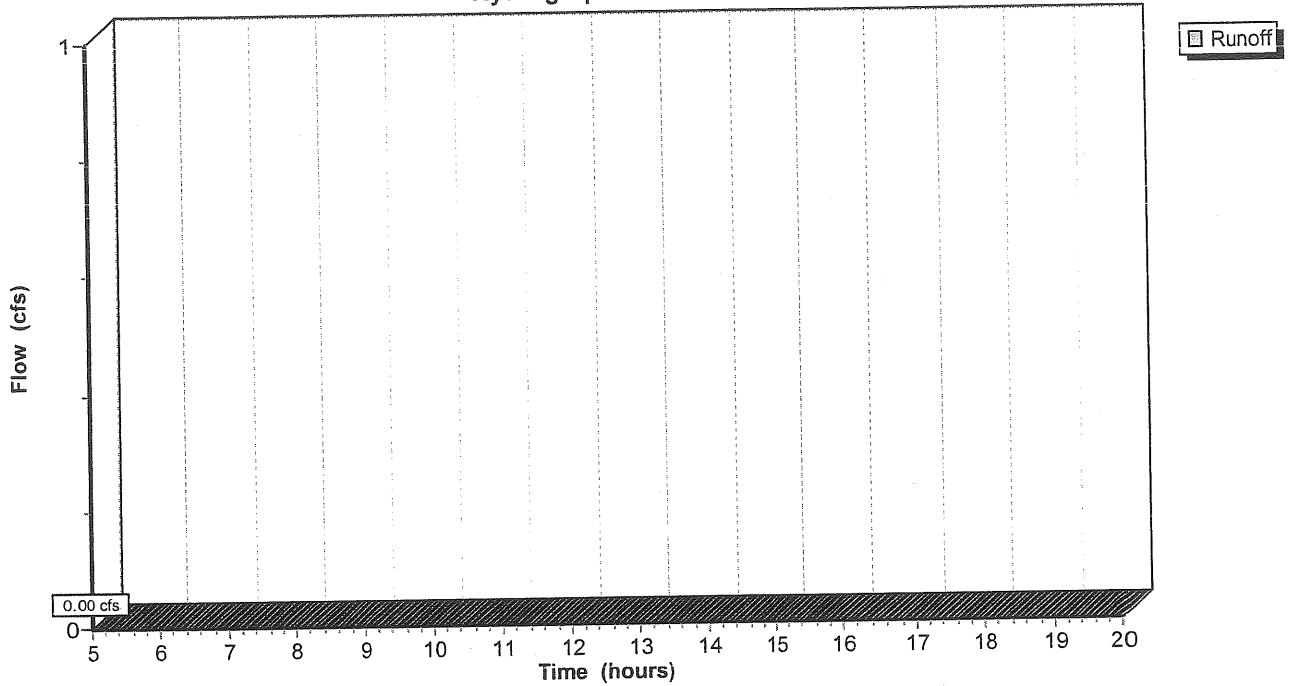
**Subcatchment 6S: (new node)**

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr Rainfall=5.50"

**Subcatchment 6S: (new node)**

Hydrograph Plot



**Subcatchment 7S: 7S**

Runoff = 8.74 cfs @ 12.17 hrs, Volume= 0.758 af

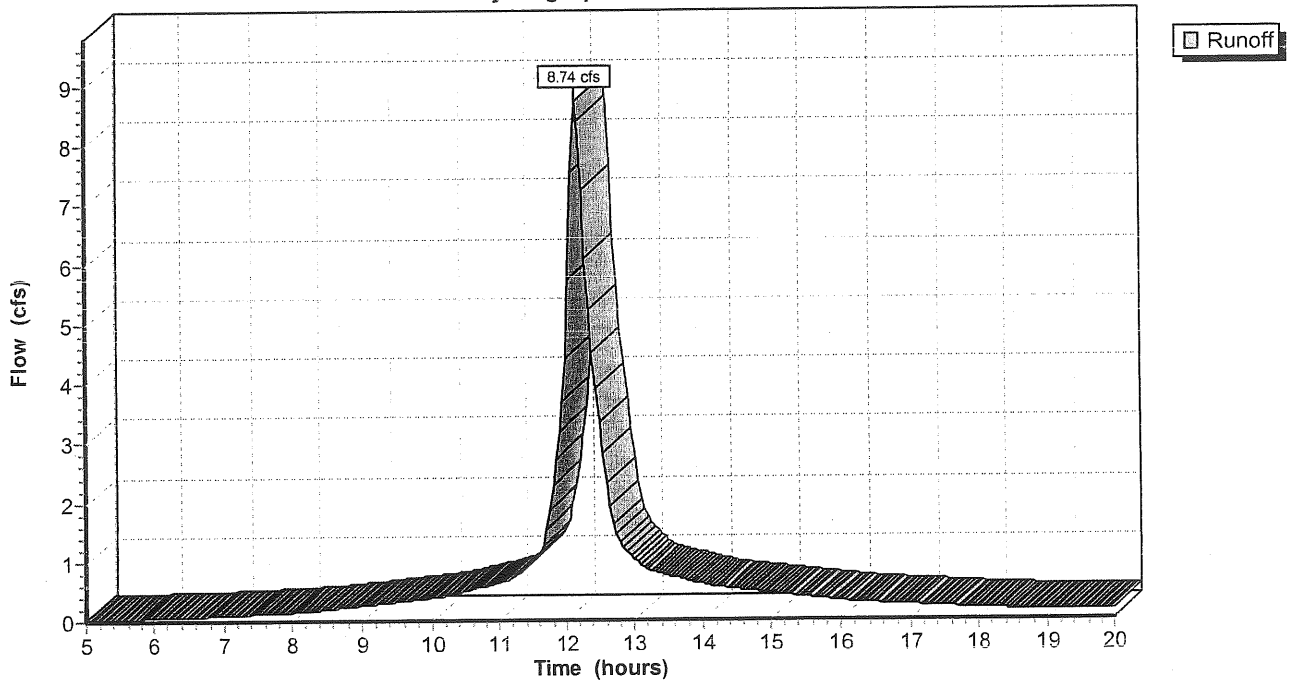
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr Rainfall=5.50"

Area (sf)	CN	Description
47,117	98	Paved parking & roofs
7,477	91	Gravel roads, HSG D
6,963	77	Woods, Good, HSG D
26,146	84	50-75% Grass cover, Fair, HSG D
6,215	80	>75% Grass cover, Good, HSG D
93,918	91	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	120	0.0208	0.2		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.00"
0.7	70	0.0286	1.7		<b>Shallow Concentrated Flow,</b> Nearly Bare & Untilled Kv= 10.0 fps
0.1	17	0.0200	2.9		<b>Shallow Concentrated Flow,</b> Paved Kv= 20.3 fps
12.3	207	Total			

**Subcatchment 7S: 7S**

Hydrograph Plot



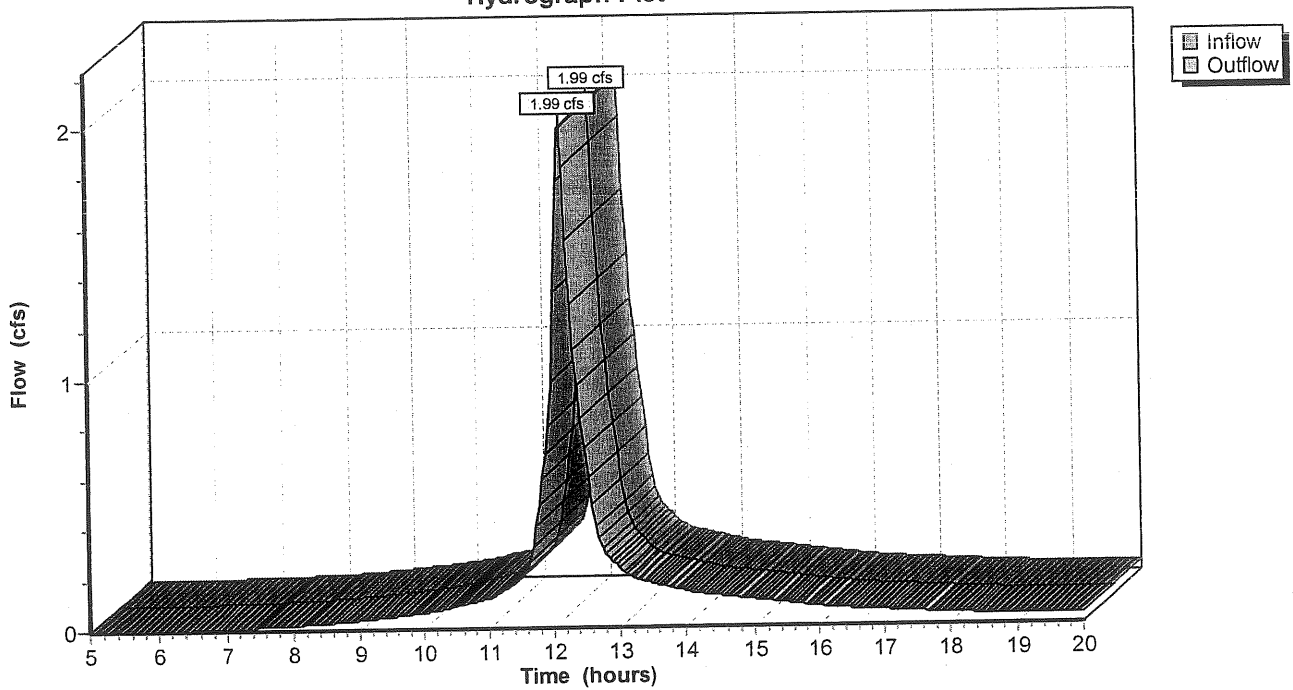
**Reach SP1: (new node)**

Inflow = 1.99 cfs @ 12.15 hrs, Volume= 0.161 af  
Outflow = 1.99 cfs @ 12.15 hrs, Volume= 0.161 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Reach SP1: (new node)**

Hydrograph Plot



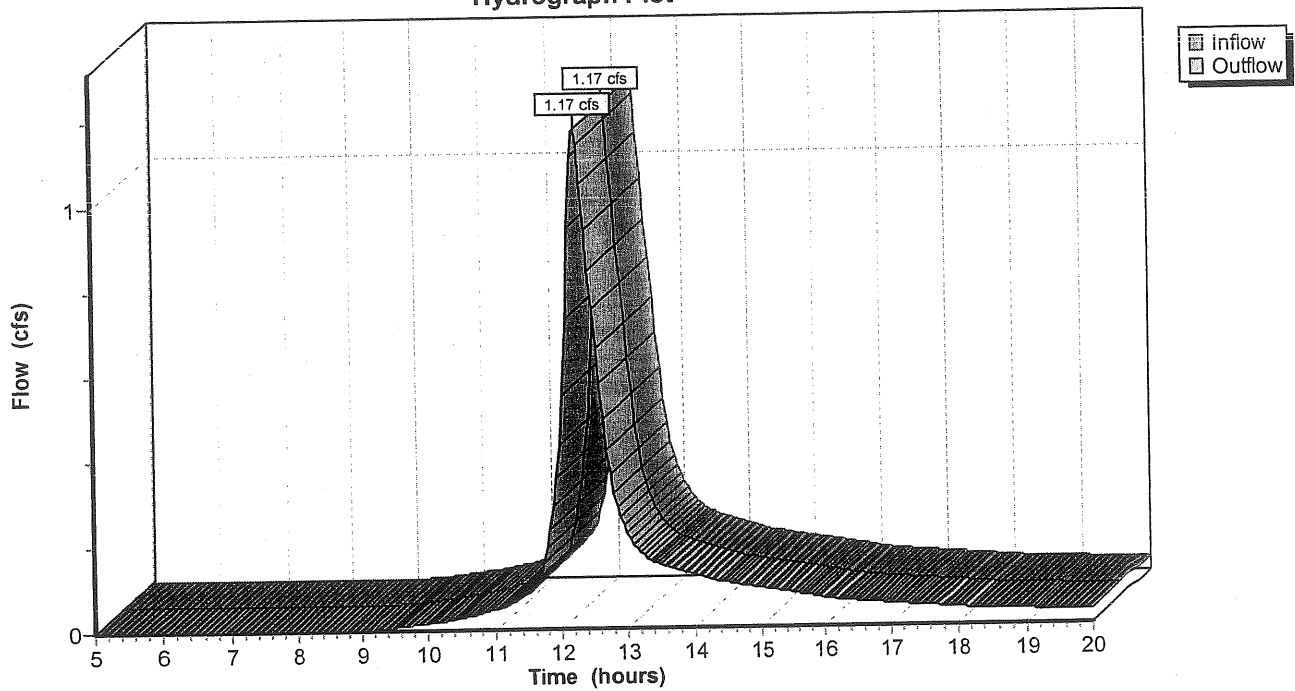
**Reach SP2: (new node)**

Inflow = 1.17 cfs @ 12.26 hrs, Volume= 0.111 af  
Outflow = 1.17 cfs @ 12.26 hrs, Volume= 0.111 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Reach SP2: (new node)**

Hydrograph Plot



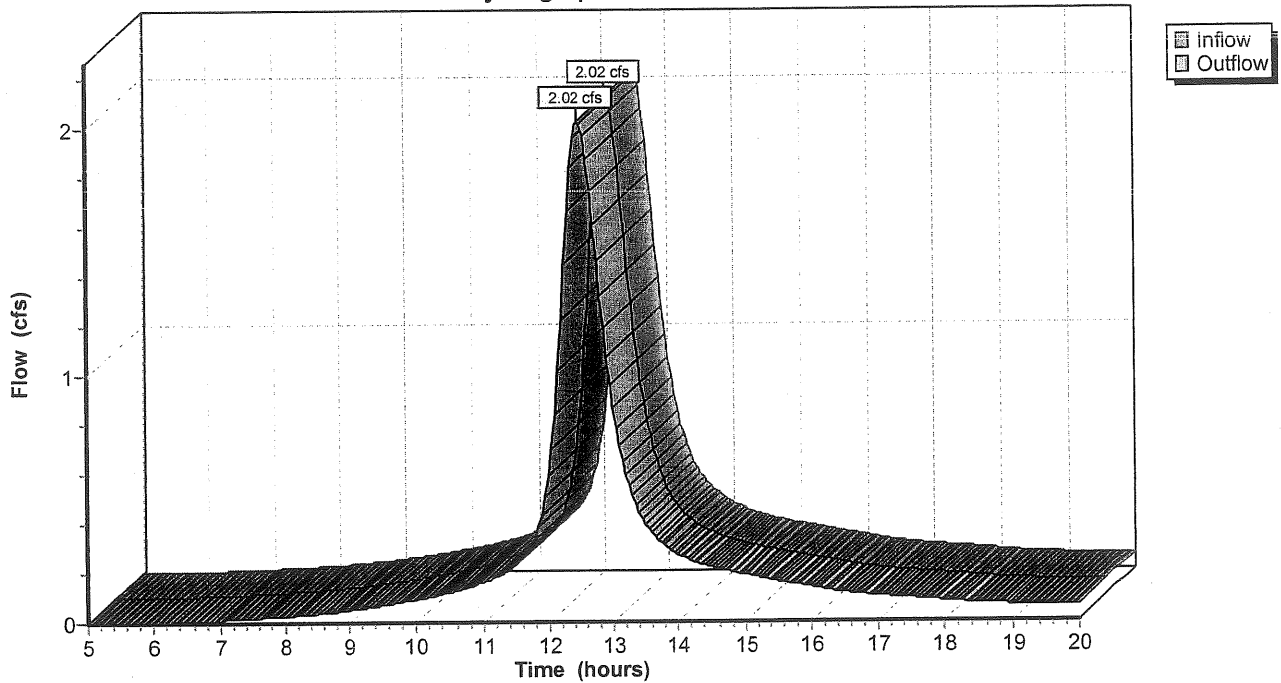
**Reach SP3: (new node)**

Inflow = 2.02 cfs @ 12.48 hrs, Volume= 0.260 af  
Outflow = 2.02 cfs @ 12.48 hrs, Volume= 0.260 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Reach SP3: (new node)**

**Hydrograph Plot**





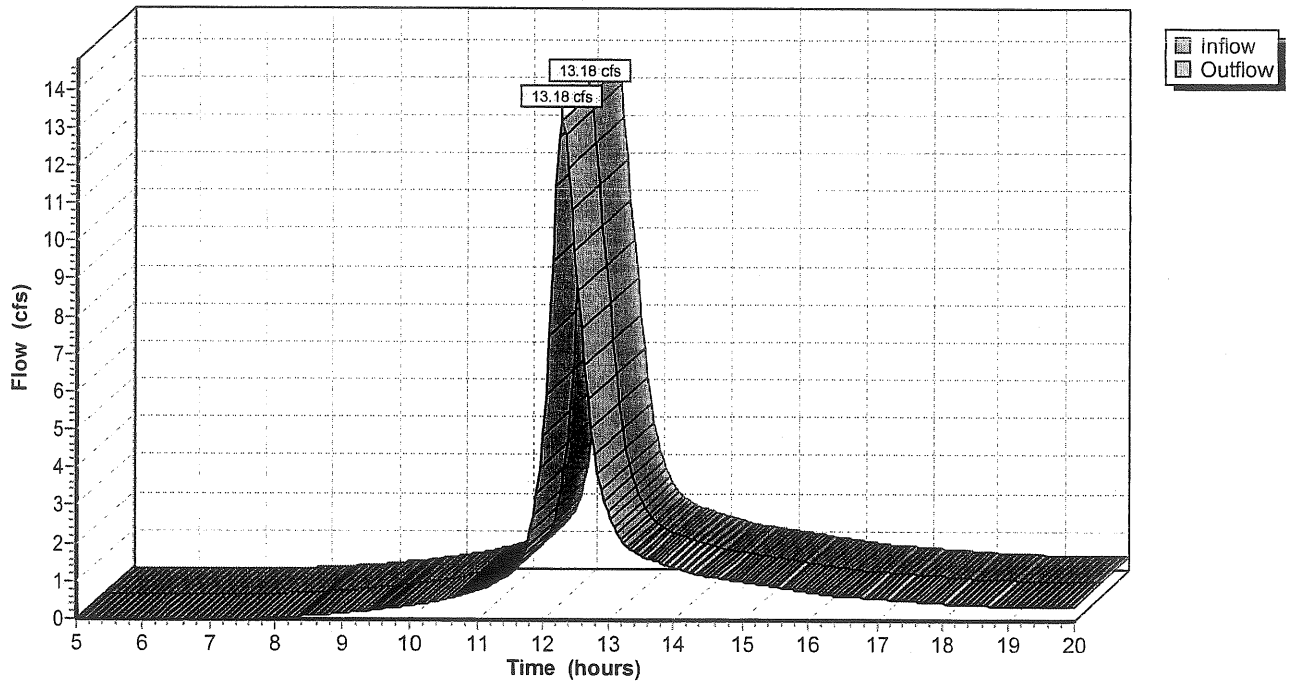
**Reach SP4: (new node)**

Inflow = 13.18 cfs @ 12.30 hrs, Volume= 1.348 af  
Outflow = 13.18 cfs @ 12.30 hrs, Volume= 1.348 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Reach SP4: (new node)**

Hydrograph Plot



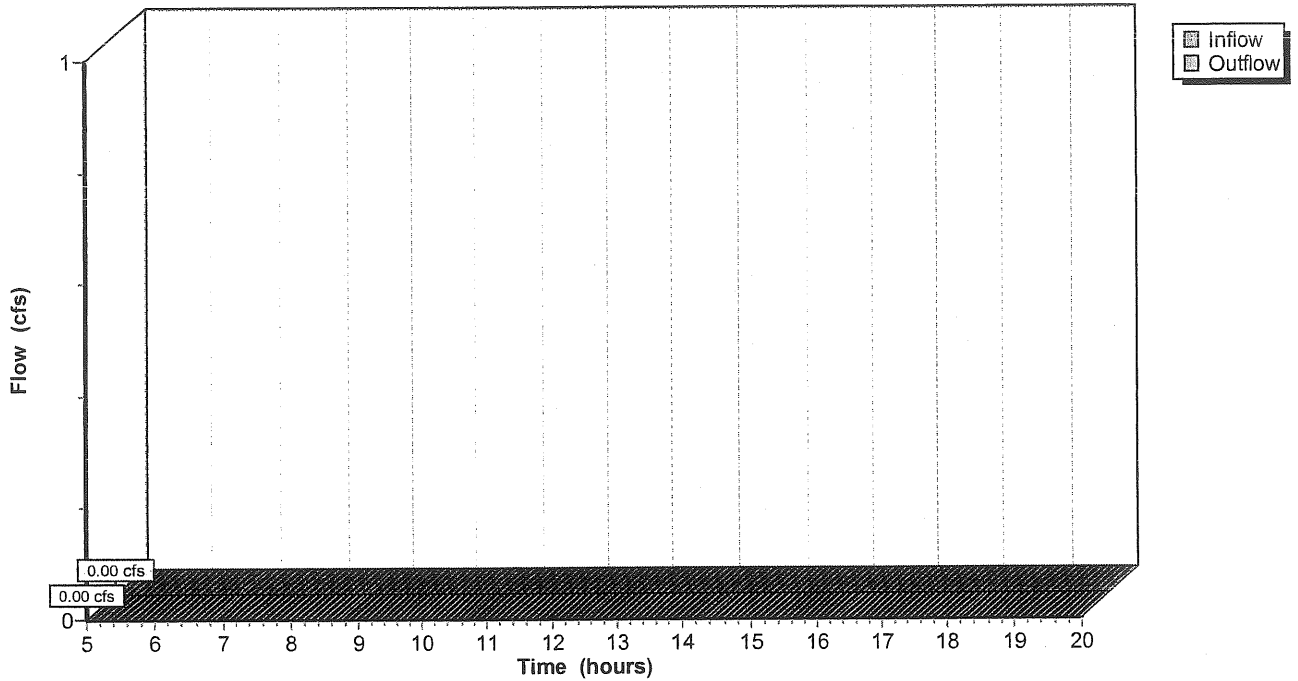
**Reach SP5: (new node)**

Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af  
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Reach SP5: (new node)**

**Hydrograph Plot**



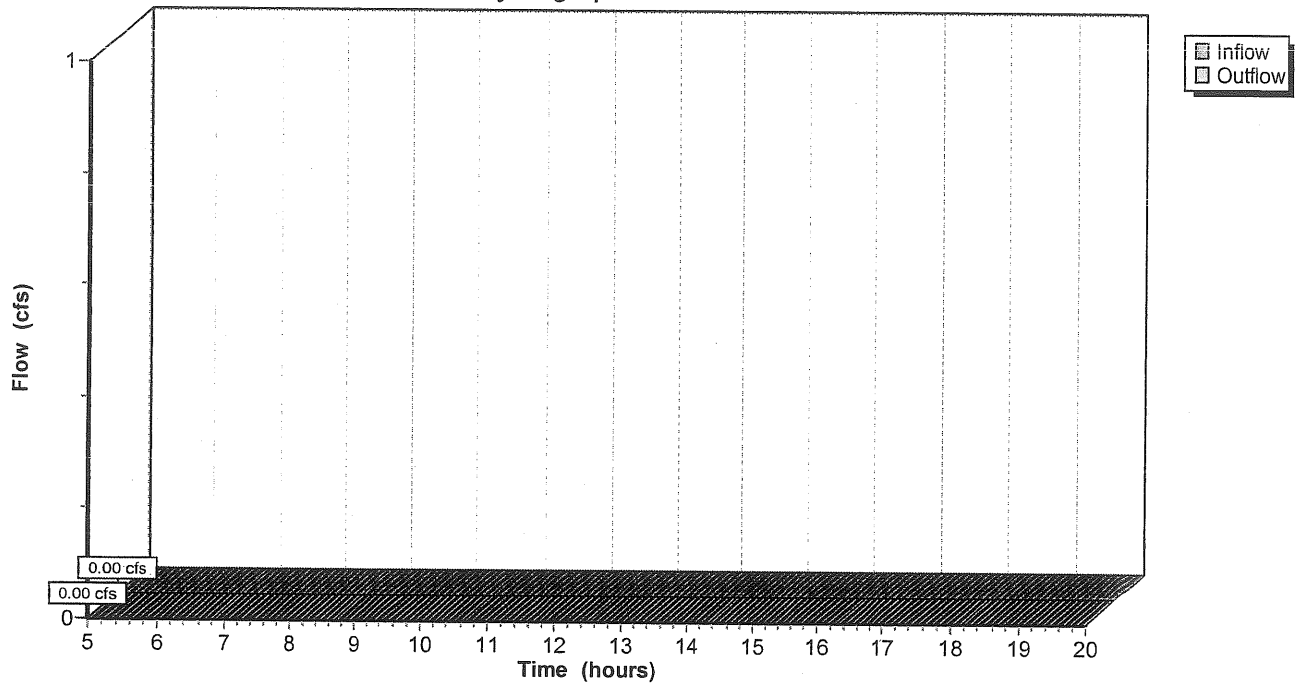
**Reach SP6: (new node)**

Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af  
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Reach SP6: (new node)**

Hydrograph Plot



### Reach SP7: Site Stormdrain Network

Inflow = 8.74 cfs @ 12.17 hrs, Volume= 0.758 af  
Outflow = 4.21 cfs @ 12.10 hrs, Volume= 0.757 af, Atten= 52%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Max. Velocity= 6.1 fps, Min. Travel Time= 1.4 min  
Avg. Velocity = 3.2 fps, Avg. Travel Time= 2.6 min

Peak Depth= 1.00'  
Capacity at bank full= 4.21 cfs  
Inlet Invert= 93.00', Outlet invert= 88.00'  
12.0" Diameter Pipe n= 0.011 Length= 500.0' Slope= 0.0100 1'

### Reach SP7: Site Stormdrain Network

Hydrograph Plot

