

## **Appendix J – Stormwater Design Calculations**

- Water Quality Volume (WQv) Calculations -
- NYSDEC Solar Panel Construction Stormwater Permitting/SWPPP  
Guidance Memorandum -
- Maryland DEP Stormwater Design Guidance – Solar Panel Installation -
- NYSDEC Limited-Use Pervious Access Road Detail -

Note: Documents provided in this Appendix are preliminary and will be amended and finalized for the Final SWPPP prior to construction.

## **Appendix J – Water Quality Volume (WQv) Calculations**

**Client:** ConnectGen  
**Project Name:** Mill Point Solar  
**Project Number:** 443269

**Water Quality BMP Summary**

ALIGNMENT	BEGIN STA.	END STA.	SLOPE	HSG	WIDTH (FT)	
AR-100	0+25.9	1+75				TR-1
	1+75	5+85	6%	D	60	Flow Diffuser
	5+85	10+50	7%	D	60	Roadside
	10+50	12+00	6%	B	50	Flow Diffuser
	12+00	END	7%	B	50	Roadside
AR-200	0+10.7	0+50				
	0+50	1+60	1%	D	60	Roadside
	1+60	4+60	2%	B	50	Roadside
	4+60	9+50	4%	B	50	Flow Diffuser
	9+50	17+85	3%	C	58	Level Spreader
AR-201	0+50	2+00	3%	C	58	Roadside
	2+00	3+50	10%	B	75	Roadside
	3+50	7+50	6%	C	58	Roadside
	7+50	10+00	3%	D	60	Level Spreader
	10+00	11+50	3%	D	60	Roadside
	11+50	13+00				Stream Crossing
	13+00	15+50	3%	D	60	Roadside
	15+50	19+10	3%	D	60	Flow Diffuser
	19+10	22+71	6%	C	58	Roadside
AR-300	0+00	2+50	3%	C	58	Flow Diffuser
	2+50	3+30	-	-	-	Stabilized
	3+30	6+15	-	-	-	Infiltration Trench
	6+15	7+75	7%	B	50	Level Spreader
	7+75	8+40	2%	B	50	Roadside
AR-400	0+42.5	2+50	-	-	-	Infiltration
	2+50	8+50	3%	C	58	Roadside
	8+50	13+50	10%	C	86	Roadside
	13+50	17+25	1%	C	58	Flow Diffuser
	17+25	19+50	2%	C	58	Level Spreader
	19+50	21+80	1%	C	58	Flow Diffuser
	21+80	24+00	5%	C	58	Infiltration Trench
	24+00	25+19	5%	C	58	Roadside
	25+19	End	2%	C	58	Roadside
AR-500	0+28	0+75	-	-	-	-
	0+75	END	10%	C	86	Roadside

AR-501	0+00	0+60	10%	C	86	Roadside
AR-600	0+48.6	1+00	-	-	-	Exclusion Area
	1+00	7+00	5%	C	58	Roadside
	7+00	10+30	4%	B	50	Flow Diffuser
	10+30	13+00	4%	B	50	Roadside
	13+00	18+25	10%	B	75	Roadside
	18+25	19+25	-	-	-	Stabilized
	19+25	20+00	2%	C	58	Roadside
	20+00	20+70	-	-	-	Stabilized
	20+70	22+25	6%	C	58	Roadside
	23+25	24+00	-	-	-	Stabilized
AR-601	0+00	1+50	2%	B	50	Roadside
	1+50	4+50	8%	B	75	Roadside
	4+50	6+20	14%	B	100	Roadside
	6+20	11+50	3%	C	58	Roadside
	11+50	12+35	-	-	-	Stabilized
AR-602	0+00	1+00	-	-	-	Stabilized
	1+00	8+00	7%	B	50	Roadside
	8+00	9+25	-	-	-	Stabilized
	9+25	13+50	12%	B	75	Roadside
	13+50	15+25	5%	C	58	Flow Diffuser
	15+25	19+50	8%	C	58	Roadside
	19+50	24+25	4%	B	50	Flow Diffuser
	24+25	28+25	-	-	-	Infiltration
	28+25	29+50	4%	B	50	Roadside
AR-603	0+00	1+80	8%	C	58	Level Spreader
	1+80	3+25	-	-	-	Infiltration
	3+25	3+70	-	-	-	Stream Crossing
	3+70	4+35	-	-	-	Stabilized
	4+35	7+50	8%	C	58	Roadside
	7+50	9+75	5%	C	58	Flow Diffuser
	9+75	16+00	13%	B	100	Roadside
		12+00				
AR-700	0+12	1+05	-	-	-	Stabilized
	1+05	3+90	6%	B	50	Roadside
	3+90	4+40	-	-	-	Stabilized
	4+40	6+25	-	-	-	Infiltration
	6+25	6+80	-	-	-	Stabilized
	6+80	7+50	-	-	-	Infiltration
	7+50	8+25	-	-	-	Stabilized

	8+25	12+91	2%	C	58	Roadside
AR-800	0+50	9+50	5%	C	58	Roadside
	9+50	11+25	5%	C	58	Flow Diffuser
	11+25	END	5%	C	58	Roadside
AR-900	0+50	7+00	11%	C	86	Roadside
	7+00	13+00	-	-	-	Infiltration
	13+00	21+50	9%	B	75	Level Spreader
	21+50	END	2%	C	58	Flow Diffuser
AR-901	0+00	0+50	13%	B	100	Level Spreader
	0+50	9+00	11%	B	75	Roadside
	9+00	12+50	5%	B	50	Flow Difuser
	12+50	END	5%	B	50	Flow Difuser
AR-1000	0+40	9+60	10%	B	75	Roadside
	9+60	12+50	8%	C	58	Roadside
	12+50	17+00	5%	B	50	Roadside
	17+00	25+00	9%	B	75	Roadside
	25+00	30+00	4%	B	50	Roadside
	30+00	41+90	2%	C	58	Flow Diffuser
	41+90	43+40	2%	C	58	Roadside
AR-1001	0+00	8+50	6%	C	58	Roadside
	8+50	9+57	6%	C	58	Flow Diffuser
	9+57	12+00	12%	B	75	Level Spreader
	12+00	14+00	8%	B	50	Level Spreader
	14+00	END	5%	B	50	Roadside
AR-1002	0+00	0+50	15%	B	100	Level Spreader
	0+50	6+00	12%	B	75	Roadside
	6+00	END	6%	C	58	Roadside
AR-1003A	0+00	7+00	6%	B	50	Roadside
	7+00	11+00	2%	B	50	Flow Diffuser
	11+00	13+90	-	-	-	Infiltration
	13+90	22+35	-	-	-	Infiltration
	22+35	END	2%	C	58	Roadside
AR-1100	0+40	3+75	-	-	-	Infiltration
	3+75	5+15	6%	D	60	Flow Diffuser
	5+15	6+00	6%	D	60	Roadside
	6+00	7+30	10%	C	86	Roadside
	7+30	10+75	4%	B	50	Roadside
	10+75	14+00	6%	D	60	Roadside

AR-1101	0+00	0+55	2%	C	58	Roadside
	0+55	2+30	7%	B	50	Roadside
	2+30	5+75	3%	D	60	Flow Diffuser
	5+75	8+65	7%	D	60	Roadside
	8+65	12+50	3%	C	58	Roadside
	12+50	15+50	2%	C	58	Flow Diffuser
	15+50	22+15	6%	B	50	Roadside
	22+15	22+68	2%	C	58	Roadside
AR-1200	1+00	11+00	-	-	-	Infiltration Trench
	11+00	16+43	4%	C	58	Roadside
AR-1300	0+50	2+10	3%	C	58	Roadside
	2+10	3+20	-	-	-	Stabilized
AR-1301	0+35	6+32	-	-	-	Infiltration
	6+32	6+82	-	-	-	Stabilized
	6+82	8+50	-	-	-	Stream Buffer
	8+50	17+15	4%	C	58	Roadside
	17+15	17+85	-	-	-	Stabilized
	17+85	20+25	-	-	-	Infiltration
	20+25	21+18	-	-	-	Stabilized
AR-1302	0+00	1+09	3%	C	58	Roadside
AR-1303	0+00	3+30	-	-	-	Infiltration
AR-1304	0+00	0+60	-	-	-	Stabilized
	0+60	3+93	-	-	-	Infiltration
AR-1305	0+00	2+56	3%	C	58	Roadside
AR-1306	0+00	1+76	3%	D	60	Roadside
AR-1400	0+50	2+25	3%	A	50	Roadside
	2+25	4+70	-	-	-	Infiltration
	4+70	5+25	-	-	-	Stabilized
	5+25	7+68	-	-	-	Infiltration
AR-1500	0+30	2+00	2%	A	50	Roadside
	2+00	END	2%	A	50	Flow Diffuser
AR-1600	0+00	8+25	-	-	-	Infiltration
	8+25	16+15	4%	C	58	Roadside
	16+15	21+90	-	-	-	Infiltration
	21+90	22+60	-	-	-	Stream Buffer
	22+60	23+63	-	-	-	Infiltration

AR-1700	0+00	4+50	5%	C	58	Roadside
	4+50	5+20	2%	C	58	Flow Diffuser
	5+20	9+93	2%	C	58	Roadside
AR-1800	0+20	3+15	-	-	-	Infiltration
	3+15	3+65	-	-	-	Stabilized
	3+65	7+50	-	-	-	Infiltration
	7+50	14+25	11%	B	75	Roadside
	14+25	17+00	-	-	-	Infiltration
	17+00	24+50	10%	B	75	Roadside
	24+50	25+60	2%	B	50	Roadside
	25+60	26+20	-	-	-	Stabilized
	26+20	27+75	14%	B	100	Flow Diffuser
	27+75	32+50	10%	B	75	Roadside
	32+50	35+00	-	-	-	Infiltration
	35+00	43+50	5%	B	50	Roadside
	43+50	45+00	1	B	50	Flow Diffuser
	45+00	53+75	2%	B	50	Roadside
	53+75	55+25	3%	C	58	Flow Diffuser
55+25	55+77	2%	C	58	Roadside	
AR-1801	0+00	4+50	6%	B	50	Roadside
	4+50	6+00	-	-	-	Infiltration
AR-1802	0+00	0+50	2%	C	58	Roadside
	0+50	7+00	3%	C	58	Roadside
	7+00	7+50	-	-	-	Stabilized
	7+50	12+75	3%	C	58	Roadside
	12+75	13+50	-	-	-	Stabilized
	13+50	17+00	4%	C	58	Roadside
	17+00	19+25	3%	C	58	Flow Diffuser
AR-1803	0+00	0+50	-	-	-	Stabilized
	0+50	6+25	6%	B	50	Roadside
	6+25	7+88	-	-	-	Infiltration
	7+88	8+12	-	-	-	Stream Buffer
	8+12	9+34	6%	C	58	Flow Diffuser
AR-1804	0+00	0+60	6%	C	58	Flow Diffuser
	0+60	2+50	4%	C	58	Roadside
	2+50	3+00	-	-	-	Stream Buffer
	3+00	7+30	6%	C	58	Roadside
	7+30	7+83	2%	C	58	Roadside

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	4,000	sq-ft
	0.092	ac
Gravel Drive Area, A1:	2,600	sq-ft
Meadow Area, A2:	1,400	sq-ft
	0.060	ac
	0.032	ac
Percent Impervious Cover, I	0.65	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.056$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A)/12$$

**WQv = 0.002 ac-ft**  
**WQv = 73.3 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-1**

Length, L:	12	ft
Width, W:	8	ft
Depth, D:	2.5	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 96.0 cu-ft**



<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
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<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	6,840	sq-ft
	0.157	ac
Gravel Drive Area, A1:	5,700	sq-ft
Meadow Area, A2:	1,140	sq-ft
	0.131	ac
	0.026	ac
Percent Impervious Cover, I	0.83	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.058$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A)/12$$

**WQv = 0.003 ac-ft**

**WQv = 125.4 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	285	ft
Width, W:	2	ft
Depth, D:	2	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 456.0 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
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<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	5,180	sq-ft
	0.119	ac
Gravel Drive Area, A1:	4,152	sq-ft
Meadow Area, A2:	1,028	sq-ft
	0.095	ac
	0.024	ac
Percent Impervious Cover, I	0.80	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.057$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A) / 12$$

**WQv = 0.002 ac-ft**  
**WQv = 95.0 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	205	ft
Width, W:	2	ft
Depth, D:	2	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 328.0 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	5,042	sq-ft
	0.116	ac
Gravel Drive Area, A1:	4,042	sq-ft
Meadow Area, A2:	1,000	sq-ft
	0.093	ac
	0.023	ac
Percent Impervious Cover, I	0.80	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.057$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A) / 12$$

**WQv = 0.002 ac-ft**  
**WQv = 92.4 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	200	ft
Width, W:	2	ft
Depth, D:	2	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 320.0 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	12,195	sq-ft
	0.280	ac
Gravel Drive Area, A1:	8,190	sq-ft
Meadow Area, A2:	4,005	sq-ft
	0.188	ac
	0.092	ac
Percent Impervious Cover, I	0.67	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.056$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A) / 12$$

**WQv = 0.005 ac-ft**  
**WQv = 223.6 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	15	ft
Width, W:	10	ft
Depth, D:	4	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 240.0 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
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**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	7,560	sq-ft
	0.174	ac
Gravel Drive Area, A1:	2,900	sq-ft
Meadow Area, A2:	4,660	sq-ft
	0.067	ac
	0.107	ac
Percent Impervious Cover, I	0.38	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.053$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A) / 12$$

**WQv = 0.003 ac-ft**  
**WQv = 138.6 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	15	ft
Width, W:	10	ft
Depth, D:	4	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 240.0 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	4,670	sq-ft
	0.107	ac
Gravel Drive Area, A1:	3,700	sq-ft
Meadow Area, A2:	970	sq-ft
	0.085	ac
	0.022	ac
Percent Impervious Cover, I	0.79	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.057$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A) / 12$$

**WQv = 0.002 ac-ft**  
**WQv = 85.6 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	196	ft
Width, W:	2	ft
Depth, D:	2	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 313.6 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	1,750	sq-ft
	0.040	ac
Gravel Drive Area, A1:	1,400	sq-ft
Meadow Area, A2:	350	sq-ft
	0.032	ac
	0.008	ac
Percent Impervious Cover, I	0.80	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.057$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A)/12$$

**WQv = 0.001 ac-ft**  
**WQv = 32.1 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	70	ft
Width, W:	2	ft
Depth, D:	2	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 112.0 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	33,790	sq-ft
	0.776	ac
Gravel Drive Area, A1:	12,000	sq-ft
Meadow Area, A2:	21,790	sq-ft
	0.275	ac
	0.500	ac
Percent Impervious Cover, I	0.36	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.053$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A)/12$$

**WQv = 0.014 ac-ft**

**WQv = 619.5 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	30	ft
Width, W:	15	ft
Depth, D:	4	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 720.0 cu-ft**



<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	7,250	sq-ft
	0.166	ac
Gravel Drive Area, A1:	5,800	sq-ft
Meadow Area, A2:	1,450	sq-ft
	0.133	ac
	0.033	ac
Percent Impervious Cover, I	0.80	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.057$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A) / 12$$

**WQv = 0.003 ac-ft**  
**WQv = 132.9 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	300	ft
Width, W:	2	ft
Depth, D:	2	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 480.0 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	33,077	sq-ft
	0.759	ac
Gravel Drive Area, A1:	17,337	sq-ft
Meadow Area, A2:	15,740	sq-ft
	0.398	ac
	0.361	ac
Percent Impervious Cover, I	0.52	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.055$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A)/12$$

**WQv = 0.014 ac-ft**

**WQv = 606.4 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	28	ft
Width, W:	14	ft
Depth, D:	4	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 627.2 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	8,375	sq-ft
	0.192	ac
Gravel Drive Area, A1:	6,700	sq-ft
Meadow Area, A2:	1,675	sq-ft
	0.154	ac
	0.038	ac
Percent Impervious Cover, I	0.80	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.057$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A)/12$$

**WQv = 0.004 ac-ft**

**WQv = 153.5 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	335	ft
Width, W:	2	ft
Depth, D:	2	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 536.0 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	22,035	sq-ft
	0.506	ac
Gravel Drive Area, A1:	20,000	sq-ft
Meadow Area, A2:	2,035	sq-ft
	0.459	ac
	0.047	ac
Percent Impervious Cover, I	0.91	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.058$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A) / 12$$

**WQv = 0.009 ac-ft**

**WQv = 404.0 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	1020	ft
Width, W:	2	ft
Depth, D:	2	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 1,632.0 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:		14,910	sq-ft
		0.342	ac
Gravel Drive Area, A1:		11,952	sq-ft
Meadow Area, A2:	5'	2,958	sq-ft
		0.274	ac
		0.068	ac
Percent Impervious Cover, I		0.80	%
90% Rainfall depth, P:		1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.057$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A) / 12$$

**WQv = 0.006 ac-ft**  
**WQv = 273.4 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	590	ft
Width, W:	2	ft
Depth, D:	2	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 944.0 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	11,800	sq-ft
	0.271	ac
Gravel Drive Area, A1:	7,000	sq-ft
Meadow Area, A2:	4,800	sq-ft
	0.161	ac
	0.110	ac
Percent Impervious Cover, I	0.59	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.055$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A)/12$$

**WQv = 0.005 ac-ft**

**WQv = 216.3 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	20	ft
Width, W:	10	ft
Depth, D:	4	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 320.0 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	4,857	sq-ft
	0.112	ac
Gravel Drive Area, A1:	4,857	sq-ft
Meadow Area, A2:	0	sq-ft
	0.112	ac
	0.000	ac
Percent Impervious Cover, I	1.00	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.059$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A)/12$$

**WQv = 0.002 ac-ft**  
**WQv = 89.0 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	230	ft
Width, W:	2	ft
Depth, D:	2	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 368.0 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	6,677	sq-ft
	0.153	ac
Gravel Drive Area, A1:	6,677	sq-ft
Meadow Area, A2:	0	sq-ft
	0.153	ac
	0.000	ac
Percent Impervious Cover, I	1.00	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.059$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A)/12$$

**WQv = 0.003 ac-ft**

**WQv = 122.4 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	357	ft
Width, W:	2	ft
Depth, D:	2	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 571.2 cu-ft**



<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	6,150	sq-ft
	0.141	ac
Gravel Drive Area, A1:	4,900	sq-ft
Meadow Area, A2:	1,250	sq-ft
	0.112	ac
	0.029	ac
Percent Impervious Cover, I	0.80	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.057$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A)/12$$

**WQv = 0.003 ac-ft**

**WQv = 112.8 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	252	ft
Width, W:	2	ft
Depth, D:	2	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 403.2 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	6,070	sq-ft
	0.139	ac
Gravel Drive Area, A1:	4,856	sq-ft
Meadow Area, A2:	1,214	sq-ft
	0.111	ac
	0.028	ac
Percent Impervious Cover, I	0.80	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.057$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A)/12$$

**WQv = 0.003 ac-ft**

**WQv = 111.3 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	243	ft
Width, W:	2	ft
Depth, D:	2	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 388.8 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	25,880	sq-ft
	0.594	ac
Gravel Drive Area, A1:	15,500	sq-ft
Meadow Area, A2:	10,380	sq-ft
	0.356	ac
	0.238	ac
Percent Impervious Cover, I	0.60	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.055$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A) / 12$$

**WQv = 0.011 ac-ft**

**WQv = 474.5 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	25	ft
Width, W:	15	ft
Depth, D:	4	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 600.0 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	22,727	sq-ft
	0.522	ac
Gravel Drive Area, A1:	11,817	sq-ft
Meadow Area, A2:	10,910	sq-ft
	0.271	ac
	0.250	ac
Percent Impervious Cover, I	0.52	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.055$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A) / 12$$

**WQv = 0.010 ac-ft**  
**WQv = 416.7 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	25	ft
Width, W:	15	ft
Depth, D:	4	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 600.0 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	7,485	sq-ft
	0.172	ac
Gravel Drive Area, A1:	2,065	sq-ft
Meadow Area, A2:	5,420	sq-ft
	0.047	ac
	0.124	ac
Percent Impervious Cover, I	0.28	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.052$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A) / 12$$

**WQv = 0.003 ac-ft**

**WQv = 137.2 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	105	ft
Width, W:	2	ft
Depth, D:	2	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 168.0 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	7,390	sq-ft
	0.170	ac
Gravel Drive Area, A1:	5,920	sq-ft
Meadow Area, A2:	1,470	sq-ft
	0.136	ac
	0.034	ac
Percent Impervious Cover, I	0.80	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.057$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A) / 12$$

**WQv = 0.003 ac-ft**

**WQv = 135.5 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	295	ft
Width, W:	2	ft
Depth, D:	2	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 472.0 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	8,855	sq-ft
	0.203	ac
Gravel Drive Area, A1:	7,700	sq-ft
Meadow Area, A2:	1,155	sq-ft
	0.177	ac
	0.027	ac
Percent Impervious Cover, I	0.87	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.058$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A)/12$$

**WQv = 0.004 ac-ft**

**WQv = 162.3 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	385	ft
Width, W:	2	ft
Depth, D:	2	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 616.0 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	6,276	sq-ft
	0.144	ac
Gravel Drive Area, A1:	5,500	sq-ft
Meadow Area, A2:	776	sq-ft
	0.126	ac
	0.018	ac
Percent Impervious Cover, I	0.88	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.058$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A)/12$$

**WQv = 0.003 ac-ft**

**WQv = 115.1 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	255	ft
Width, W:	2	ft
Depth, D:	2	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 408.0 cu-ft**



<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	6,250	sq-ft
	0.143	ac
Gravel Drive Area, A1:	5,000	sq-ft
Meadow Area, A2:	1,250	sq-ft
	0.115	ac
	0.029	ac
Percent Impervious Cover, I	0.80	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.057$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A)/12$$

**WQv = 0.003 ac-ft**  
**WQv = 114.6 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	250	ft
Width, W:	2	ft
Depth, D:	2	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 400.0 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	5,073	sq-ft
	0.116	ac
Gravel Drive Area, A1:	3,125	sq-ft
Meadow Area, A2:	1,948	sq-ft
	0.072	ac
	0.045	ac
Percent Impervious Cover, I	0.62	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.056$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A) / 12$$

**WQv = 0.002 ac-ft**  
**WQv = 93.0 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	12	ft
Width, W:	6	ft
Depth, D:	4	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 115.2 cu-ft**

<b>Client:</b>	ConnectGen	<b>Calculated By:</b>
<b>Project Name:</b>	Mill Point Solar	<b>Checked By:</b>
<b>Project Number:</b>	443269	<b>Date:</b>

**Water Quality Volume Calculations**

NYS Stormwater Management Design Manual, Chapter 4, Section 2 - "The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating runoff from small, frequent storm events that tend to contain higher pollutant levels. The WQv is directly related to the amount of impervious cover created at a site."

**Access Drives**

Runoff from sections of the access drive will flow to roadside infiltration trenches. This BMP will provide the required water quality treatment by infiltration or evaporation.

Subcatchment Area, A3:	4,075	sq-ft
	0.094	ac
Gravel Drive Area, A1:	3,260	sq-ft
Meadow Area, A2:	815	sq-ft
	0.075	ac
	0.019	ac
Percent Impervious Cover, I	0.80	%
90% Rainfall depth, P:	1.10	in

From Figure 4.1 - NYS Stormwater Management Design Manual, January 2015

**Calculate Volumetric Runoff Coefficient, Rv**

$$Rv = 0.05 + (0.009 * I) = 0.057$$

Min. Rv = 0.2

**Rv = 0.200**

**Calculate Water Quality Volume, WQv (ac-ft)**

$$WQv = (P * Rv * A) / 12$$

**WQv = 0.002 ac-ft**  
**WQv = 74.7 cu-ft**

**Provided Water Quality Volume, WQv (cu-ft)**

These calculations demonstrate that, as designed, the proposed infiltration trench(es) will provide adequate storage and treatment for the required Water Quality Volume.

**Infiltration Trench TR-2**

Length, L:	163	ft
Width, W:	2	ft
Depth, D:	2	ft
Porosity, n:	0.4	

**Calculate Storage Volume, Vol (cu-ft)**

$$Vol = L * W * D * n$$

**Vol = 260.8 cu-ft**

**Equipment Pad**

L = 20 ft  
W = 8 ft  
Area = 160 sq ft

WQv = 14.6 cf  
CPv = 28.9 cf

**Infiltration Trench**

W = 2 ft  
Area = 128 sq ft  
Depth = 1 ft  
Voids = 0.4

Volume = 51.2 cu ft


**Appendix J – NYSDEC Solar Panel Construction Stormwater  
Permitting/SWPPP Guidance Memorandum**

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water, Bureau of Water Permits  
625 Broadway, Albany, New York 12233-3505  
P: (518) 402-8111 | F: (518) 402-9029  
www.dec.ny.gov

## MEMORANDUM

**TO:** Regional Water Engineers

**FROM:** Robert Wither, Chief, South Permit Section 

**SUBJECT:** Solar Panel Construction Stormwater Permitting/SWPPP Guidance

**DATE:** April 6, 2018

### Issue

The Department is seeing an increase in the number of solar panel construction projects across New York State. This has resulted in an increase in the number of questions on Construction General Permit (CGP) and Stormwater Pollution Prevention Plan (SWPPP) requirements from design professionals because the current CGP (GP-0-15-002) does not include a specific reference to the SWPPP requirements for solar panel projects in Tables 1 and 2 of Appendix B. To address this issue, the Division of Water (DOW) has developed the following guidance on CGP/SWPPP requirements for the different types of solar panel projects.

### Scenario 1

The DOW considers solar panel projects designed and constructed in accordance with the following criteria to be a "Land clearing and grading for the purposes of creating vegetated open space (i.e. recreational parks, lawns, meadows, fields)" type project as listed in Table 1, Appendix B of the CGP. Therefore, the SWPPP for this type of project will typically just need to address erosion and sediment controls.

1. Solar panels are constructed on post or rack systems and elevated off the ground surface,
2. The panels are spaced apart so that rain water can flow off the down gradient side of the panel and continue as sheet flow across the ground surface\*,
3. For solar panels constructed on slopes, the individual rows of solar panels are generally installed along the contour so rain water sheet flows down slope\*,
4. The ground surface below the panels consist of a well-established vegetative cover (see "Final Stabilization" definition in Appendix A of the CGP),
5. The project does not include the construction of any traditional impervious areas (i.e. buildings, substation pads, gravel access roads or parking areas, etc.),
6. Construction of the solar panels will not alter the hydrology from pre-to post development conditions (see Appendix A of the CGP, for definition of "Alter the hydrology..."). Note: The design professional shall perform the necessary site assessment/hydrology analysis to make this determination.



\*Refer to Maryland's "Stormwater Design Guidance- Solar Panel Installations" attached for guidance on panel installation.

\*\*See notes below for additional criteria.

## **Scenario 2**

If the design and construction of the solar panels meets all the criteria above, except for item 6, the project will fall under the "*All other construction activities that include the construction or reconstruction of impervious area or alter the hydrology from pre-to post development conditions, and are not listed in Table 1*" project type as listed in Table 2, Appendix B of the CGP. Therefore, the SWPPP for this type of project must address post-construction stormwater practices designed in accordance with the sizing criteria in Chapter 4 of the NYS Stormwater Management Design Manual, dated January 2015 (Note: Chapter 10 for projects in NYC EOH Watershed). The Water Quality Volume (WQv)/Runoff Reduction Volume (RRv) sizing criteria can be addressed by designing and constructing the solar panels in accordance with the criteria in items 1 – 4 above, however, the quantity control sizing criteria (Cpv, Qp and Qf) from Chapter 4 (or 10) of the Design Manual must still be addressed, unless one of the waiver criteria from Chapter 4 can be applied. \*\*See notes below for additional criteria.

## **\*\* Notes**

- **Item 1:** For solar panel projects where the panels are mounted directly to the ground (i.e. no space below panel to allow for infiltration of runoff), the SWPPP must address post-construction stormwater management controls designed in accordance with the sizing criteria in Chapter 4 of the NYS Stormwater Management Design Manual, dated January 2015 (Note: Chapter 10 for projects in NYC EOH Watershed).

- **Item 5:** For solar panel projects that include the construction of traditional impervious areas (i.e. buildings, substation pads, gravel access roads or parking areas, etc.), the SWPPP must address post-construction stormwater management controls for those areas of the project. This applies to both Scenario 1 and 2 above.

cc: Carol Lamb-Lafay, BWP  
Dave Gasper, BWP

**Appendix J – Maryland DEP Stormwater Design Guidance – Solar  
Panel Installation**





## Stormwater Design Guidance – Solar Panel Installations

Revisions to Maryland's stormwater management regulations in 2010 require that environmental site design (ESD) be used to the maximum extent practicable (MEP) to mimic natural hydrology, reduce runoff to reflect forested wooded conditions, and minimize the impact of land development on water resources. This applies to any residential, commercial, industrial, or institutional development where more than 5,000 square feet of land area is disturbed. Consequently, stormwater management must be addressed even when permeable features like solar panel installations exceed 5,000 square feet of land disturbance.

Depending on local soil conditions and proposed imperviousness, the amount of rainfall that stormwater requirements are based on varies from 1.0 to 2.6 inches. However, addressing stormwater management does not mean that structural or micro-scale practices must be constructed to capture and treat large volumes of runoff. Using nonstructural techniques like disconnecting impervious cover reduces runoff by promoting overland filtering and infiltration. Commonly used with smaller or narrower impervious areas like driveways or open roads, the Disconnection of Non-Rooftop Runoff technique (see pp. 5.61 to 5.65 of the **2000 Maryland Stormwater Design Manual**<sup>1</sup>) is a low cost alternative for treating runoff in situations like rows of solar panels.

When non-rooftop disconnection is used to treat runoff, the following factors should be considered:

- The vegetated area receiving runoff must be equal to or greater in length than the disconnected surface (e.g., width of the row of solar panels)
- Runoff must sheet flow onto and across vegetated areas to maintain the disconnection
- Disconnections should be located on gradual slopes ( $\leq 5\%$ ) to maintain sheetflow. Level spreaders, terraces, or berms may be used to maintain sheetflow conditions if the average slope is steeper than 5%. However, installations on slopes greater than 10% will require an engineered plan that ensures adequate treatment and the safe and non-erosive conveyance of runoff to the property line or downstream stormwater management practice.
- Disconnecting impervious surfaces works best in undisturbed soils. To minimize disturbance and compaction, construction vehicles and equipment should avoid areas used for disconnection during installation of the solar panels.
- Groundcover vegetation must be maintained in good condition in those areas receiving disconnected runoff. Typically this maintenance is no different than other lawn or landscaped areas. However, areas receiving runoff should be protected (e.g., planting shrubs or trees along the perimeter) from future compaction.

Depending on the layout and number of panels installed, the disconnection of non-rooftop runoff technique may address some or all of the stormwater management requirements for an individual project. Where the imperviousness is high or there is other infrastructure (e.g., access roads, transformers), additional runoff may need to be treated. In these situations, other ESD techniques or micro-scale practices may be needed to provide stormwater management for these features.

### Example 1 – Using Non-Rooftop Disconnection Where the Average Slope $\leq 5\%$

Several rows of solar panels will be installed in an existing meadow. The soils within the meadow are hydrologic soil group (HSG) B and the average slope does not exceed 5%. Each row of panels is 10 feet wide and the distance between rows is 20 feet. The rows of solar panels will be installed according to Figure 1 below. In this scenario, the disconnection length is the same as the distance between rows (20 feet) and is greater than the width of each row (10 feet). Therefore, each row of panels is adequately disconnected and the runoff from 1.0 inch of rainfall is treated.

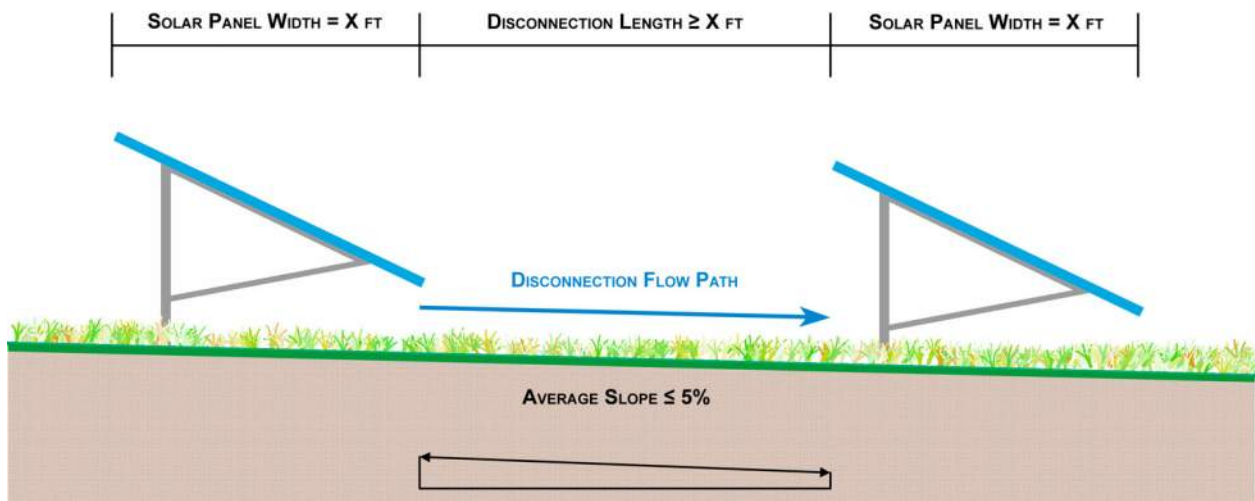


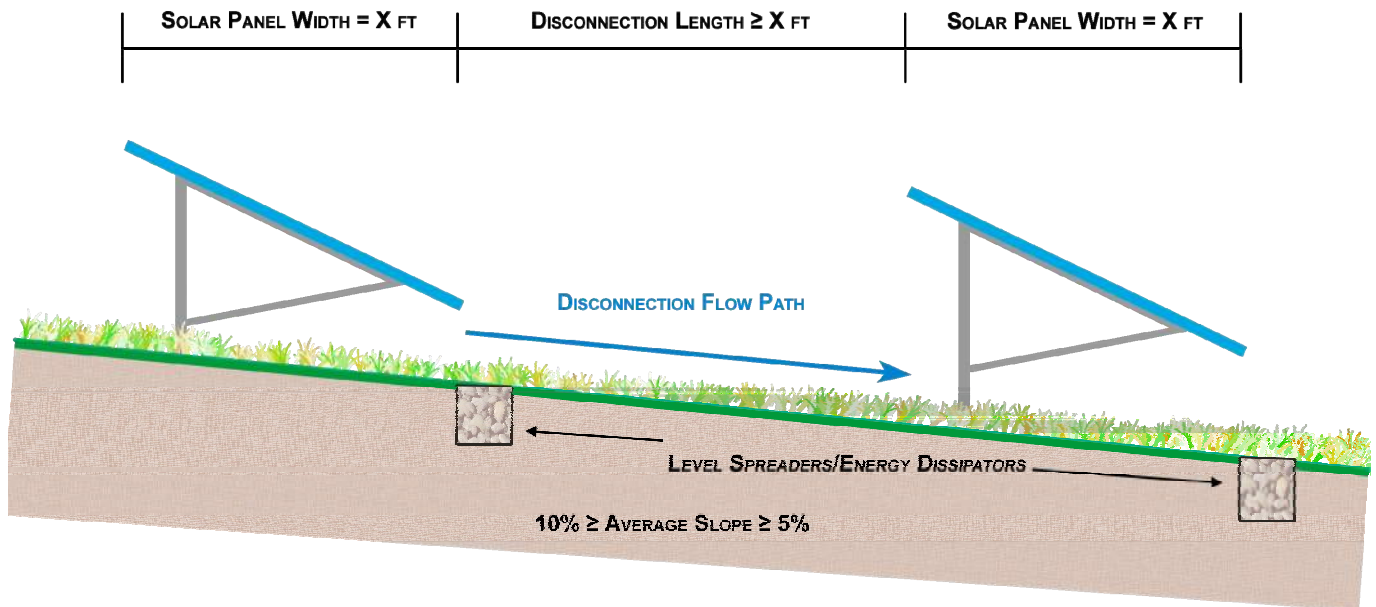
Figure 1. Typical Installation - Slope  $\leq 5\%$

### Example 2 – Using Non-Rooftop Disconnection Where the Average Slope $\geq 5\%$ but $\leq 10\%$

Several rows of solar panels will be installed in an existing meadow. The soils within the meadow are hydrologic soil group (HSG) B and the average slope is greater than 5% but less than 10%. Each row of panels is 10 feet wide and the distance between rows is 20 feet. The rows of solar panels will be installed as shown in Figure 2 below. The disconnection length is the same as the distance between rows (20 feet) and is greater than the width of each row (10 feet). However, in this example, a level spreader (typically 1 to 2-foot wide and 1 foot deep) has been located at the drip edge of each row of panels to dissipate energy and maintain sheetflow.

### Discussion

To meet State and local stormwater management requirements, ESD must be used to the MEP to reduce runoff to reflect forested conditions. While all reasonable options for implementing ESD must be investigated, minimally, the runoff from 1 inch of rainfall must be treated. In each of the examples above, there may be additional opportunities to implement ESD techniques or practices and reduce runoff that should be explored. However, simply disconnecting the runoff from the solar panel arrays captures and treats the runoff from 1.0 inch of rainfall. Where imperviousness is low and soil conditions less optimal (e.g., HSG C or D), this may be sufficient to completely address stormwater management requirements. In more dense applications or in sandy soils, additional stormwater management may be required.



**Figure 2. Typical Installation – Slope  $\geq 5\%$  but  $\leq 10\%$**

## Conclusion

The primary purpose of Maryland's stormwater management program is to mimic natural hydrologic runoff characteristics and minimize the impact of land development on water resources. Any land development project that exceeds 5,000 square feet of disturbance, including solar panel projects, must address stormwater management. However, for solar panels, stormwater management may be provided in a cost-effective manner by disconnecting each row of panels and directing runoff over the vegetated areas between the individual rows.

## Resources

<sup>1</sup> [2000 Maryland Stormwater Design Manual, Volumes I and II](http://www.mde.state.md.us/programs/Water/StormwaterManagementProgram/MarylandStormwaterDesignManual/Pages/Programs/WaterPrograms/SedimentandStormwater/stormwater_design/index.aspx), MDE, October 2000  
 ([http://www.mde.state.md.us/programs/Water/StormwaterManagementProgram/MarylandStormwaterDesignManual/Pages/Programs/WaterPrograms/SedimentandStormwater/stormwater\\_design/index.aspx](http://www.mde.state.md.us/programs/Water/StormwaterManagementProgram/MarylandStormwaterDesignManual/Pages/Programs/WaterPrograms/SedimentandStormwater/stormwater_design/index.aspx))

**Appendix J – NYSDEC Limited-Use Pervious Access Road Detail**

**From:** Gasper, David J (DEC)

**Sent:** Wednesday, May 22, 2019 9:33 AM

**To:** Adewole, Adedayo J (DEC) <[adedayo.adewole@dec.ny.gov](mailto:adedayo.adewole@dec.ny.gov)>; Banerjee, Dilip K (DEC) <[dilip.banerjee@dec.ny.gov](mailto:dilip.banerjee@dec.ny.gov)>; Barrie, Mary O (DEC) <[mary.barrie@dec.ny.gov](mailto:mary.barrie@dec.ny.gov)>; Blum, Tara M (DEC) <[tara.blum@dec.ny.gov](mailto:tara.blum@dec.ny.gov)>; Boyer, Brian C (DEC) <[brian.boyer@dec.ny.gov](mailto:brian.boyer@dec.ny.gov)>; Hourigan, Brian (DEC) <[brian.hourigan@dec.ny.gov](mailto:brian.hourigan@dec.ny.gov)>; Browne, Natalie S (DEC) <[natalie.browne@dec.ny.gov](mailto:natalie.browne@dec.ny.gov)>; Buetow, Carrie C (DEC) <[carrie.buetow@dec.ny.gov](mailto:carrie.buetow@dec.ny.gov)>; Capowski, Robert M (DEC) <[robert.capowski@dec.ny.gov](mailto:robert.capowski@dec.ny.gov)>; Carroll, Alyssa D (DEC) <[Alyssa.Carroll@dec.ny.gov](mailto:Alyssa.Carroll@dec.ny.gov)>; Chiappetta, Christina M (DEC) <[Christina.Chiappetta@dec.ny.gov](mailto:Christina.Chiappetta@dec.ny.gov)>; Cioffi, Toni (DEC) <[toni.cioffi@dec.ny.gov](mailto:toni.cioffi@dec.ny.gov)>; 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**Subject:** Acceptance of TRC's Limited Use Pervious Access Road Detail

FYI - The Department has accepted TRC's "Limited Use, Pervious Access Road Detail" with an "Issued As Final" date of 05/20/19 (see attached). This detail replaces the 10/30/18 version the Department accepted on November 13, 2018.

TRC has given us permission to release the final detail to solar array project owners, design professionals and MS4 officials. Please let me know if you have any questions.

**David Gasper, PE**

Professional Engineer 1, Division of Water

**New York State Department of Environmental Conservation**

625 Broadway, Albany, NY 12233-3505

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[www.dec.ny.gov](http://www.dec.ny.gov) |  | 

**GENERAL NOTES:**

- USE OF THIS DETAIL/CRITERION IS LIMITED TO ACCESS ROADS USED ON AN OCCASIONAL BASIS ONLY (I.E. PROVIDE ACCESS FOR MOWING, EQUIPMENT REPAIR OR MAINTENANCE, ETC.).
- LIMITED USE PERVIOUS ACCESS ROAD IS LIMITED TO LOW IMPACT IRREGULAR MAINTENANCE ACCESS ASSOCIATED WITH RENEWABLE ENERGY PROJECTS IN NEW YORK STATE.
- REMOVE STUMPS, ROCKS AND DEBRIS AS NECESSARY. FILL VOIDS TO MATCH EXISTING NATIVE SOILS AND COMPACTION LEVEL.
- REMOVED TOPSOIL MAY BE SPREAD IN ADJACENT AREAS AS DIRECTED BY THE PROJECT ENGINEER. COMPACT TO THE DEGREE OF THE NATIVE IN-SITU SOIL. DO NOT PLACE IN AN AREA THAT IMPEDES STORMWATER DRAINAGE.
- GRADE ROADWAY, WHERE NECESSARY, TO NATIVE SOIL AND DESIRED ELEVATION. MINOR GRADING FOR CROSS SLOPE CUT AND FILL MAY BE REQUIRED.
- REMOVE REFUSE SOILS AS DIRECTED BY THE PROJECT ENGINEER. DO NOT PLACE IN AN AREA THAT IMPEDES STORMWATER DRAINAGE.
- ROADWAY WIDTH TO BE DETERMINED BY CLIENT.
- THE LIMITED USE PERVIOUS ACCESS ROAD CROSS SLOPE SHALL BE 2% IN MOST CASES AND SHOULD NOT EXCEED 6%. THE LONGITUDINAL SLOPE OF THE ACCESS DRIVE SHOULD NOT EXCEED 15%.
- LIMITED USE PERVIOUS ACCESS ROAD IS NOT INTENDED TO BE UTILIZED FOR CONSTRUCTION WHICH MAY SUBJECT THE ACCESS TO SEDIMENT TRACKING. THIS SPECIFICATION IS TO BE DEVELOPED FOR POST-CONSTRUCTION USE. SOIL RESTORATION PRACTICES MAY BE APPLICABLE TO RESTORE CONSTRUCTION RELATED COMPACTION TO PRE-EXISTING CONDITIONS AND SHOULD BE VERIFIED BY SOIL PENETROMETER READINGS. THE PENETROMETER READINGS SHALL BE COMPARED TO THE RESPECTIVE RECORDED READINGS TAKEN PRIOR TO CONSTRUCTION, EVERY 100 LINEAR FEET ALONG THE PROPOSED ROADWAY.
- TO ENSURE THAT SOIL IS NOT TRACKED ONTO THE LIMITED USE PERVIOUS ACCESS ROAD, IT SHALL NOT BE USED BY CONSTRUCTION VEHICLES TRANSPORTING SOIL, FILL MATERIAL, ETC. IF THE LIMITED USE PERVIOUS ACCESS IS COMPLETED DURING THE INITIAL PHASES OF CONSTRUCTION, A STANDARD NEW YORK STATE STABILIZED CONSTRUCTION ACCESS SHALL BE CONSTRUCTED AND UTILIZED TO REMOVE SEDIMENT FROM CONSTRUCTION VEHICLES AND EQUIPMENT PRIOR TO ENTERING THE LIMITED USE PERVIOUS ACCESS ROAD FROM ANY LOCATION ON, OR OFF SITE. MAINTENANCE OF THE PERVIOUS ACCESS ROAD WILL BE REQUIRED IF SEDIMENT IS OBSERVED WITHIN THE CLEAN STONE.
- THE LIMITED USE PERVIOUS ACCESS ROAD SHALL NOT BE CONSTRUCTED OR USED UNTIL ALL AREAS SUBJECT TO RUNOFF ONTO THE PERVIOUS ACCESS HAVE ACHIEVED FINAL STABILIZATION.
- PROJECTS SHOULD AVOID INSTALLATION OF THE LIMITED USE PERVIOUS ACCESS ROAD IN POORLY DRAINED AREAS, HOWEVER IF NO ALTERNATIVE LOCATION IS AVAILABLE, THE PROJECT SHALL UTILIZE WOVEN GEOTEXTILE MATERIAL AS DETAILED IN FOLLOWING NOTES.
- THE DRAINAGE DITCH IS OFFERED IN THE DETAIL FOR CIRCUMSTANCES WHEN CONCENTRATED FLOW COULD NOT BE AVOIDED. THE INTENTION OF THIS DESIGN IS TO MINIMIZE ALTERATIONS TO HYDROLOGY. HOWEVER WHEN DEALING WITH 5%-15% GRADES NOT PARALLEL TO THE CONTOUR, A ROADSIDE DITCH MAY BE REQUIRED. THE NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROLS FOR GRASSED WATERWAYS AND VEGETATED WATERWAYS ARE APPLICABLE FOR SIZING AND STABILIZATION. DIMENSIONS FOR THE GRASSED WATERWAY SPECIFICATION WOULD BE DESIGNED FOR PROJECT SPECIFIC HYDROLOGIC RUNOFF CALCULATIONS, AND A SEPARATE DETAIL FOR THE SPECIFIC GRASSED WATERWAY WOULD BE INCLUDED IN THIS PRACTICE. RUNOFF DISCHARGES WILL BE SUBJECT TO THE OUTLET REQUIREMENTS OF THE REFERENCED STANDARD. INCREASED POST-DEVELOPMENT RUNOFF FROM THE ASSOCIATED ROADSIDE DITCH MAY REQUIRE ADDITIONAL PRACTICES TO ATTENUATE RUNOFF TO PRE-DEVELOPMENT CONDITIONS.
- IF A ROADSIDE DITCH IS NOT UTILIZED TO CAPTURE RUNOFF FROM THE ACCESS ROAD, THE PERVIOUS ACCESS ROAD WILL HAVE A WELL-ESTABLISHED PERENNIAL VEGETATIVE COVER, WHICH SHALL CONSIST OF UNIFORM VEGETATION (I.E. BUFFER), 20 FEET WIDE AND PARALLEL TO THE DOWN GRADIENT SIDE OF THE ACCESS ROAD. POST-CONSTRUCTION OPERATION AND MAINTENANCE PRACTICES WILL MAINTAIN THIS VEGETATIVE COVER TO ENSURE FINAL STABILIZATION FOR THE LIFE OF THE ACCESS ROAD.
- THE DESIGN PROFESSIONAL MUST ACCOUNT FOR THE LIMITED USE PERVIOUS ACCESS ROAD IN THEIR SITE ASSESSMENT/HYDROLOGY ANALYSIS. IF THE HYDROLOGY ANALYSIS SHOWS THAT THE HYDROLOGY HAS BEEN ALTERED FROM PRE- TO POST-DEVELOPMENT CONDITIONS (SEE APPENDIX A OF GP-0-15-002 FOR THE DEFINITION OF "ALTER THE HYDROLOGY..."), THE DESIGN MUST INCLUDE THE NECESSARY DETENTION/RETENTION PRACTICES TO ATTENUATE THE RATES (10 AND 100 YEAR EVENTS) TO PRE-DEVELOPMENT CONDITIONS.

**GEOGRID MATERIAL NOTES:**

- THE GEOGRID, OR COMPARABLE PRODUCT, IS INTENDED FOR USE FOR ALL CONDITIONS, IN ORDER TO ASSIST IN MATERIAL SEPARATION FROM NATIVE SOILS AND PRESERVE ACCESS LOADS.
- GRAVEL FILL MATERIAL SHALL CONSIST OF 1-4" CLEAN, DURABLE, SHARP-ANGLED CRUSHED STONE OF UNIFORM QUALITY, MEETING THE SPECIFICATIONS OF NYS DOT ITEM 703-02. SIZE DESIGNATION 3-5 OF TABLE 703-4. STONE MAY BE PLACED IN FRONT OF, AND SPREAD WITH, A TRACKED VEHICLE. GRAVEL SHALL NOT BE COMPACTIONED.
- GEOGRID SHALL BE MIRAFI BXG110 OR APPROVED EQUAL. GEOGRID SHALL BE DESIGNED BASED ON EXISTING SOIL CONDITIONS AND PROPOSED HAUL ROAD SLOPES.
- IF MORE THAN ONE ROLL WIDTH IS REQUIRED, ROLLS SHOULD OVERLAP A MINIMUM OF SIX INCHES.
- REFER TO MANUFACTURER'S SPECIFICATION FOR PROPER TYING AND CONNECTIONS.
- LIMITED USE PERVIOUS ACCESS ROAD SHALL BE TOP DRESSED AS REQUIRED WITH ONLY 1-4" CRUSHED STONE MEETING NYS DOT ITEM 703-02 SPECIFICATIONS.

**BASIS OF DESIGN:** TENCATE MIRAFI BXG110 GEOGRIDS; 365 SOUTH HOLLAND DRIVE, PENDERGRASS, GA; 800-685-9990 OR 706-693-2226; WWW.MIRAFI.COM

**GEOWEB MATERIAL NOTES:**

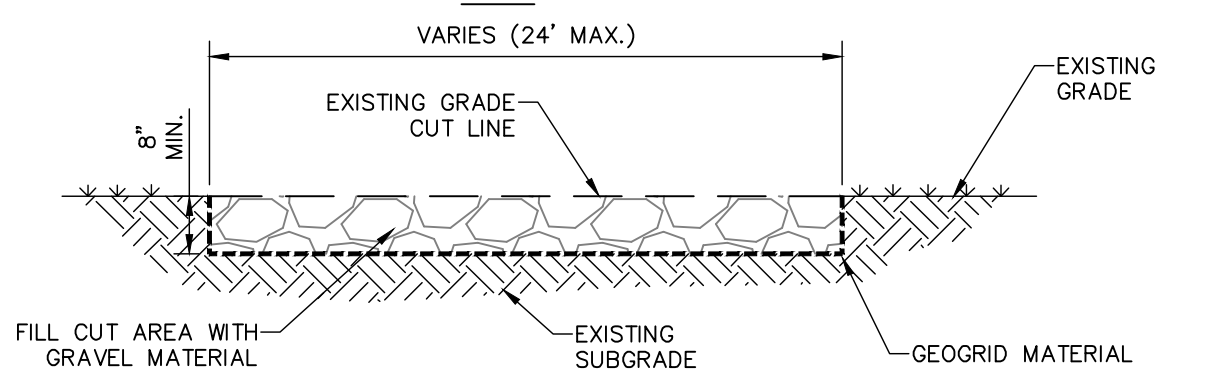
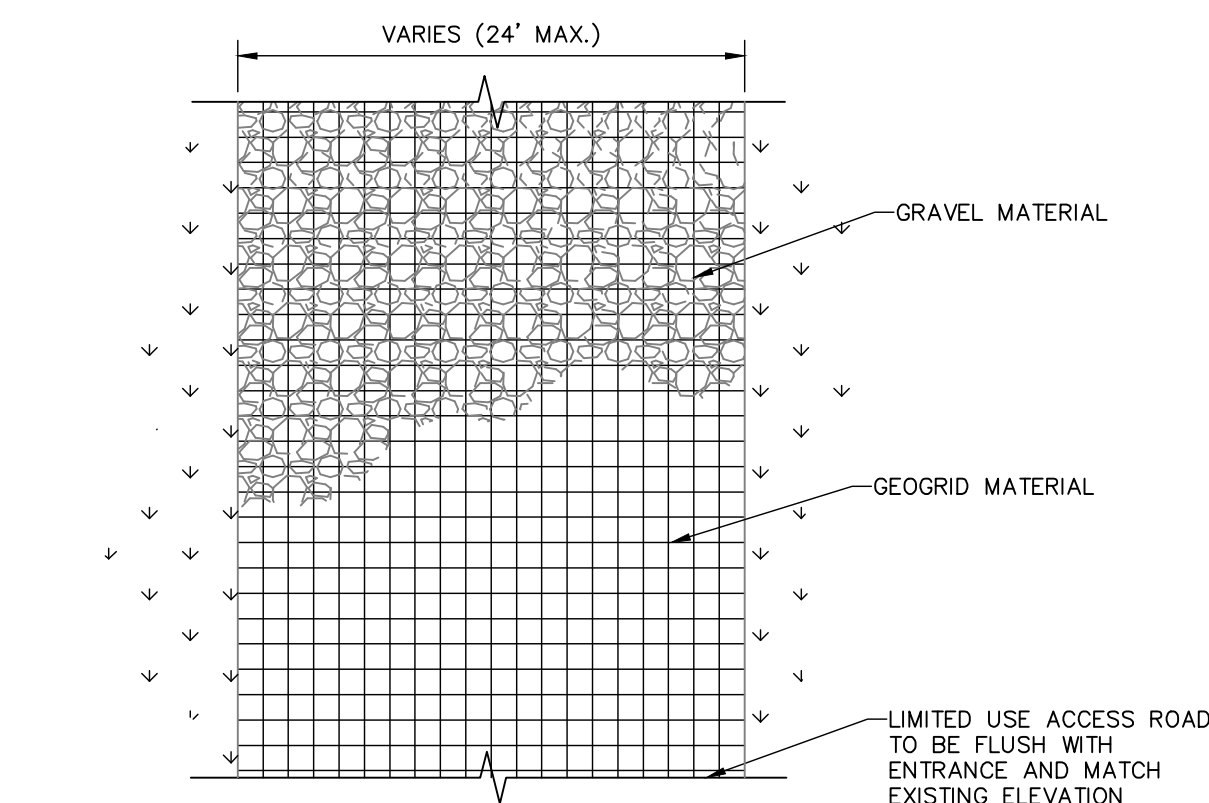
- THE GEOWEB, OR COMPARABLE PRODUCT, IS SUGGESTED FOR USE ON ROAD PROFILES EXCEEDING 10%. THE GEOWEB PRODUCT IS INTENDED TO LIMIT SHIFTING STONE MATERIAL DURING USE.
- INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- WHERE REQUIRED, A NATIVE SOIL WEDGE SHALL BE PLACED TO ACCOMMODATE ROAD CROSS SLOPE OF 2%. NATIVE SOIL SHALL BE COMPACTIONED TO MATCH EXISTING SOIL CONDITIONS.
- GRAVEL FILL MATERIAL SHALL CONSIST OF 1-4" CLEAN, DURABLE, SHARP-ANGLED CRUSHED STONE OF UNIFORM QUALITY, MEETING THE SPECIFICATIONS OF NYS DOT ITEM 703-02. SIZE DESIGNATION 3-5 OF TABLE 703-4. STONE MAY BE PLACED IN FRONT OF, AND SPREAD WITH, A TRACKED VEHICLE. GRAVEL SHALL NOT BE COMPACTIONED.
- GEOWEB SYSTEM SHALL BE PRESTO GEOSYSTEMS GEOWEB OR APPROVED EQUAL. GEOWEB SHALL BE DESIGNED BASED ON EXISTING SOIL CONDITIONS AND PROPOSED HAUL ROAD SLOPES.
- LIMITED USE PERVIOUS ACCESS ROAD SHALL BE TOP DRESSED AS REQUIRED WITH ONLY 1-4" CRUSHED STONE, SIZE 3A, MEETING NYS DOT ITEM 703-02 SPECIFICATIONS.
- THE TOP EDGES OF ADJACENT CELL WALLS SHALL BE FLUSH WHEN CONNECTING. ALIGN THE I-SLOTS FOR INTERLEAF AND END TO END CONNECTIONS. THE GEOWEB PANELS SHALL BE CONNECTED WITH ATRA KEYS AT EACH INTERLEAF AND END TO END CONNECTIONS. REFER TO MANUFACTURER'S SPECIFICATION FOR PROPER INSTALLATION, TYING AND CONNECTIONS.

**BASIS OF DESIGN:** PRESTO GEOSYSTEMS GEOWEB; 670 NORTH PERKINS STREET, APPLETON, WI; 800-548-3424 OR 920-738-1222; INFO@PRESTOGE.COM; WWW.PRESTOGE.COM

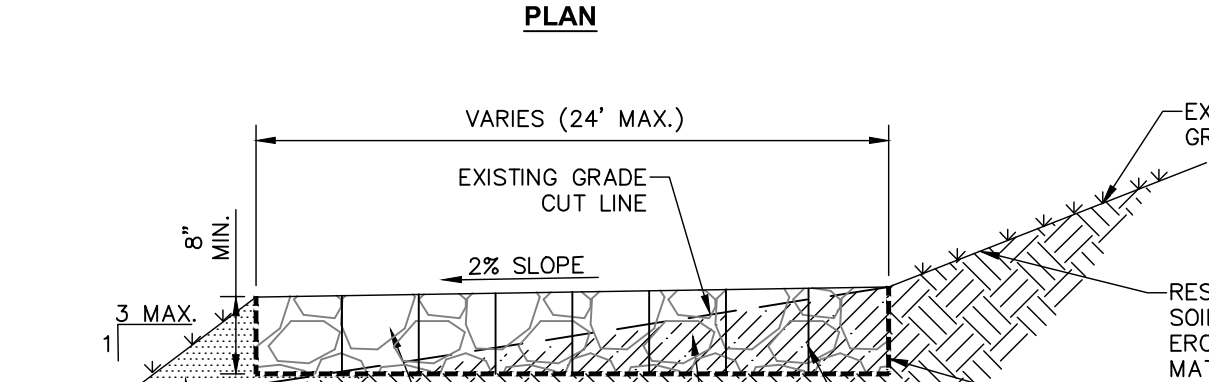
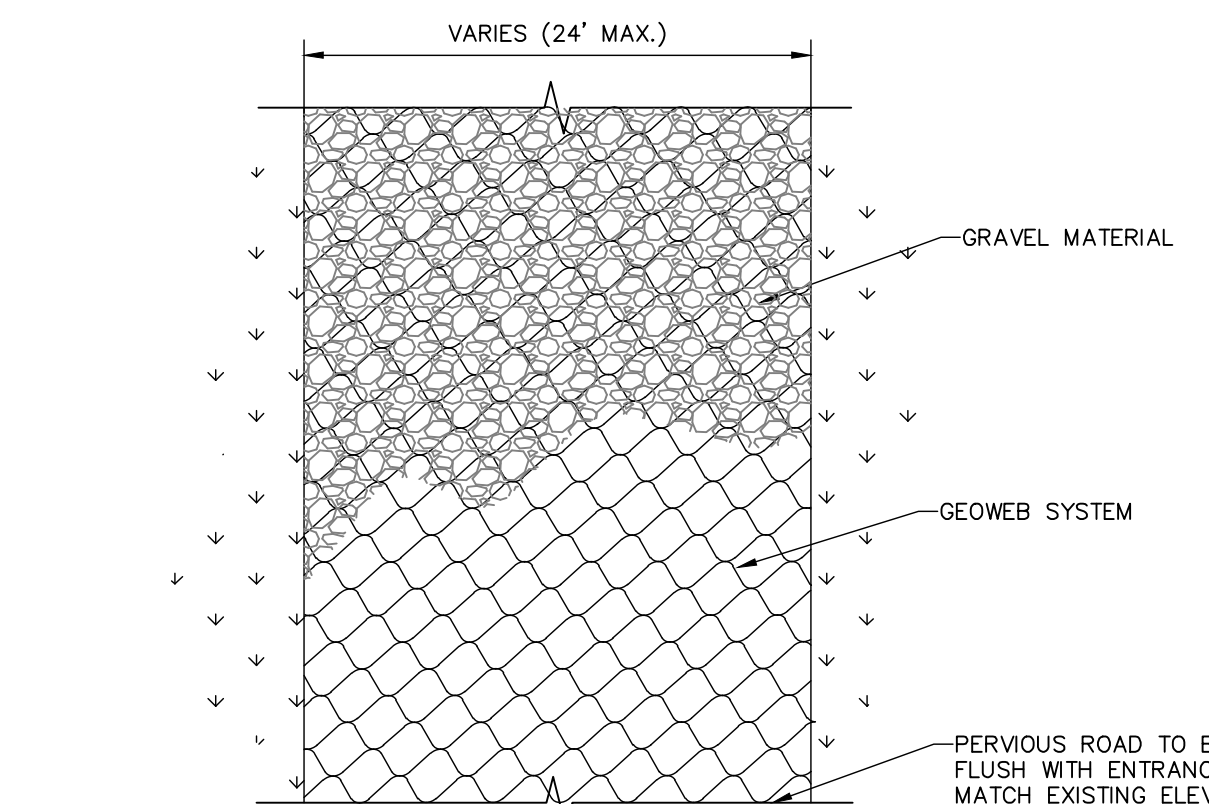
**WOVEN GEOTEXTILE MATERIAL NOTES:**

- SPECIFIED GEOTEXTILE WILL ONLY BE UTILIZED IN PLACID SOILS. PLACID SOILS CONSIST OF POORLY DRAINED SOILS COMPOSED OF FINELY TEXTURED PARTICLES AND ARE PRONE TO RUTTING. PLACID SOILS ARE TYPICALLY PRESENT IN LOW-LYING AREAS WITH HYDROLOGIC SOILS GROUP (HSG) OF C OR D, OR AS SPOICIFIED FROM AN ENVIRONMENTAL SCIENTIST, SOIL SCIENTIST, OR GEOTECHNICAL DATA.
- THE CONCERN FOR POTENTIAL REDUCTION OF NATIVE INFILTRATION RATES DUE TO THE GEOTEXTILE MATERIAL WOULD NOT BE A SIGNIFICANT CONCERN IN POORLY DRAINED SOILS WHERE SEGREGATION OF PERVIOUS STONE AND NATIVE MATERIALS IS CRUCIAL FOR LONG TERM OPERATION AND MAINTENANCE.

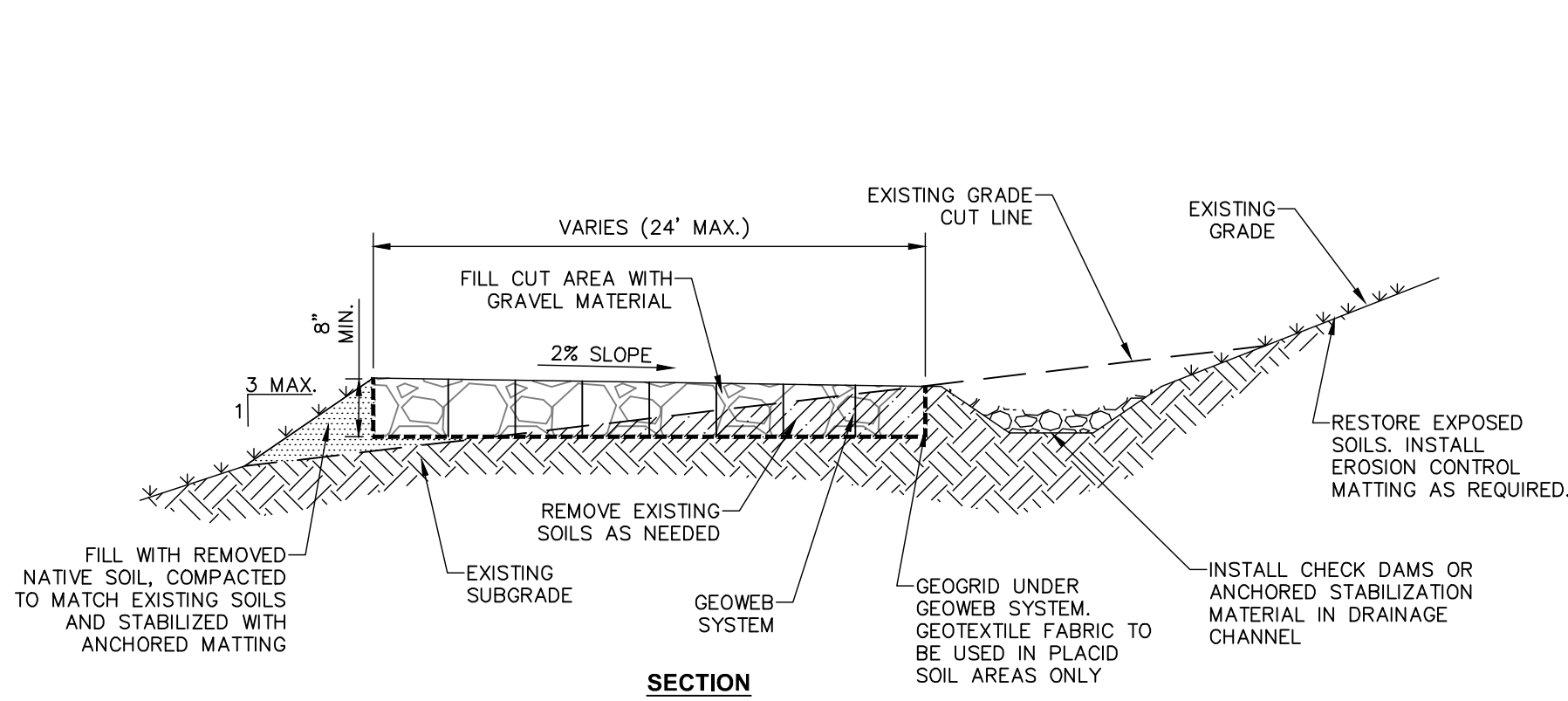
**BASIS OF DESIGN:** TENCATE MIRAFI RSI-SERIES WOVEN GEOSYNTHETICS; 365 SOUTH HOLLAND DRIVE, PENDERGRASS, GA; 800-685-9990 OR 706-693-2226; WWW.MIRAFI.COM



**1 LIMITED USE PERVIOUS ACCESS ROAD - 0% TO 10% SLOPES**  
SCALE: N.T.S.

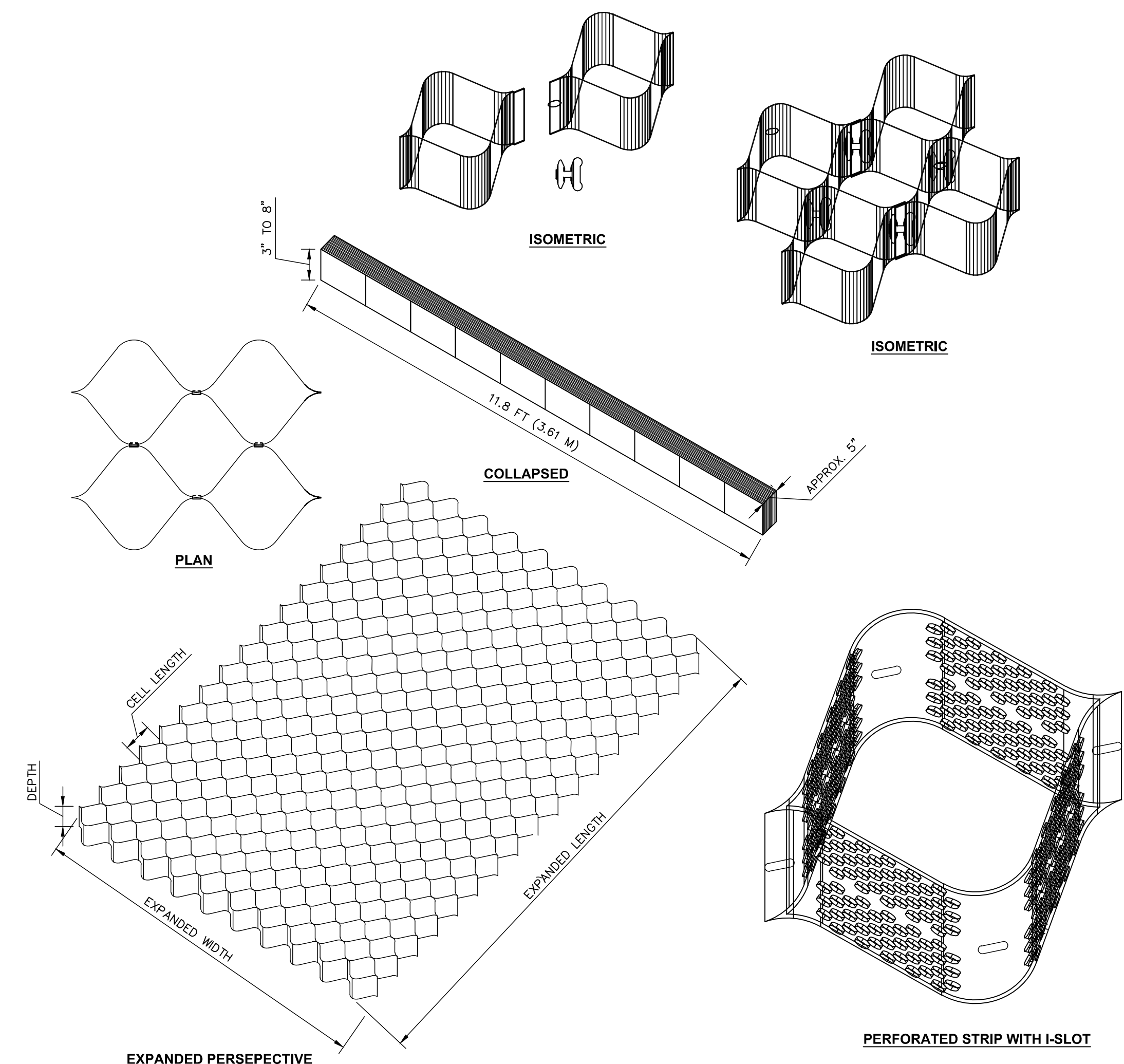


**3 LIMITED USE PERVIOUS ACCESS ROAD - 10% AND GREATER SLOPES**  
SCALE: N.T.S.



**NOTE:**  
1. THE ROADSIDE DITCH SHALL BE DESIGNED IN ACCORDANCE WITH THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROLS FOR GRASSED AND VEGETATED WATERWAYS. ADDITIONAL DETAILS WILL BE PROVIDED SPECIFIC TO THE SITE DESIGN.

**2 LIMITED USE PERVIOUS ACCESS ROAD - 10% AND GREATER SLOPES WITH DITCH**  
SCALE: N.T.S.



**4 GEOWEB SYSTEM**  
SCALE: N.T.S.

1	ISSUED AS FINAL	05/20/2019
NO.	REVISION	DATE

Client

**TRC**  
TRC Engineers, Inc.  
215 Greenfield Parkway  
Liverpool, NY 13088  
www.trccompanies.com

DRAWING TITLE:  
**LIMITED USE PERVIOUS ACCESS ROAD DETAIL**

SCALE:	N.T.S.
DATE:	05/17/2019
DRAWN BY:	CAK
CHECKED BY:	SML
PROJECT:	
DRAWING NO.:	

## **Appendix K – Pre-Development Modeling**

- Pre-Development Subcatchment Map -
- Pre-Development HydroCAD Model -

Note: Documents provided in this Appendix are preliminary and will be amended and finalized for the Final SWPPP prior to construction.

## **Appendix K – Pre-Development Subcatchment Map**

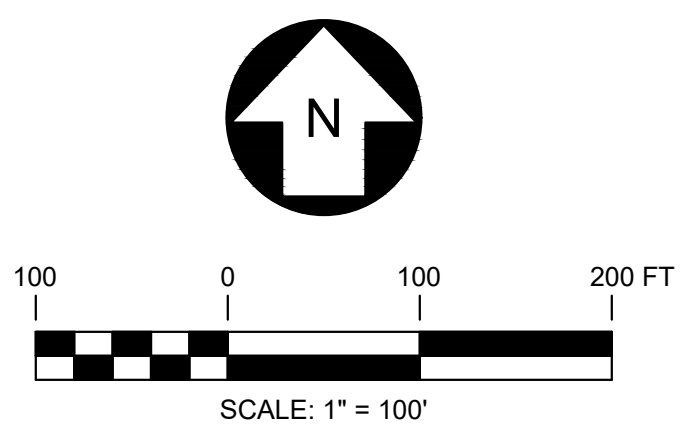
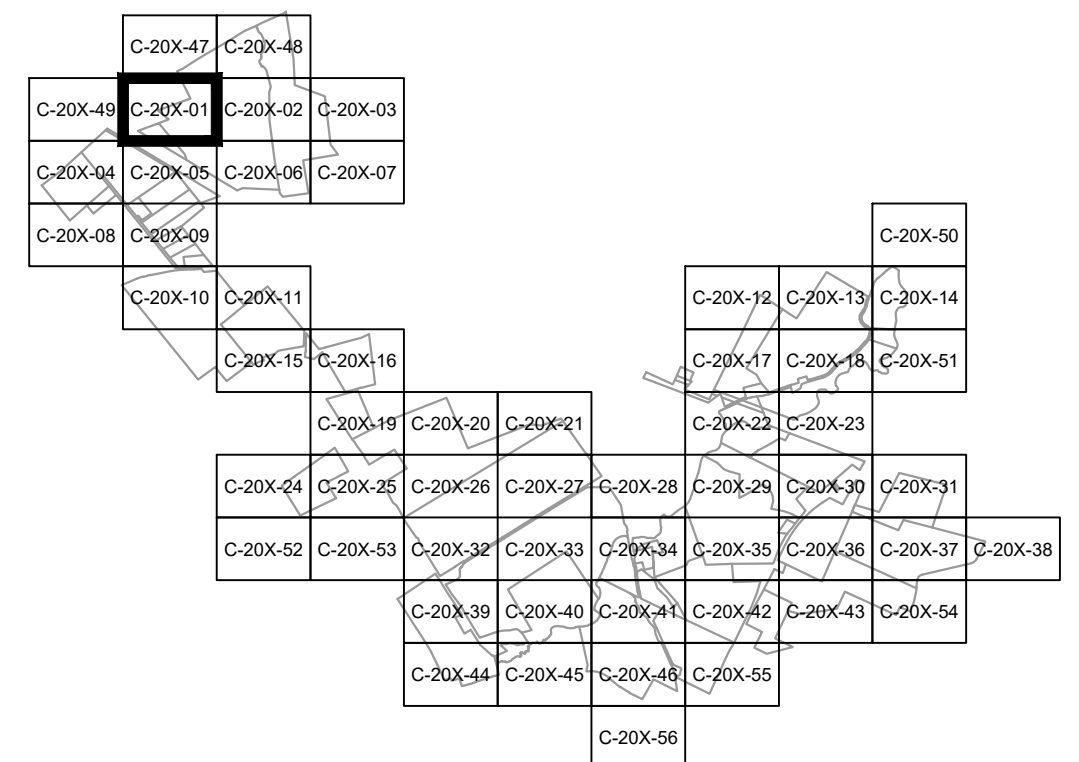
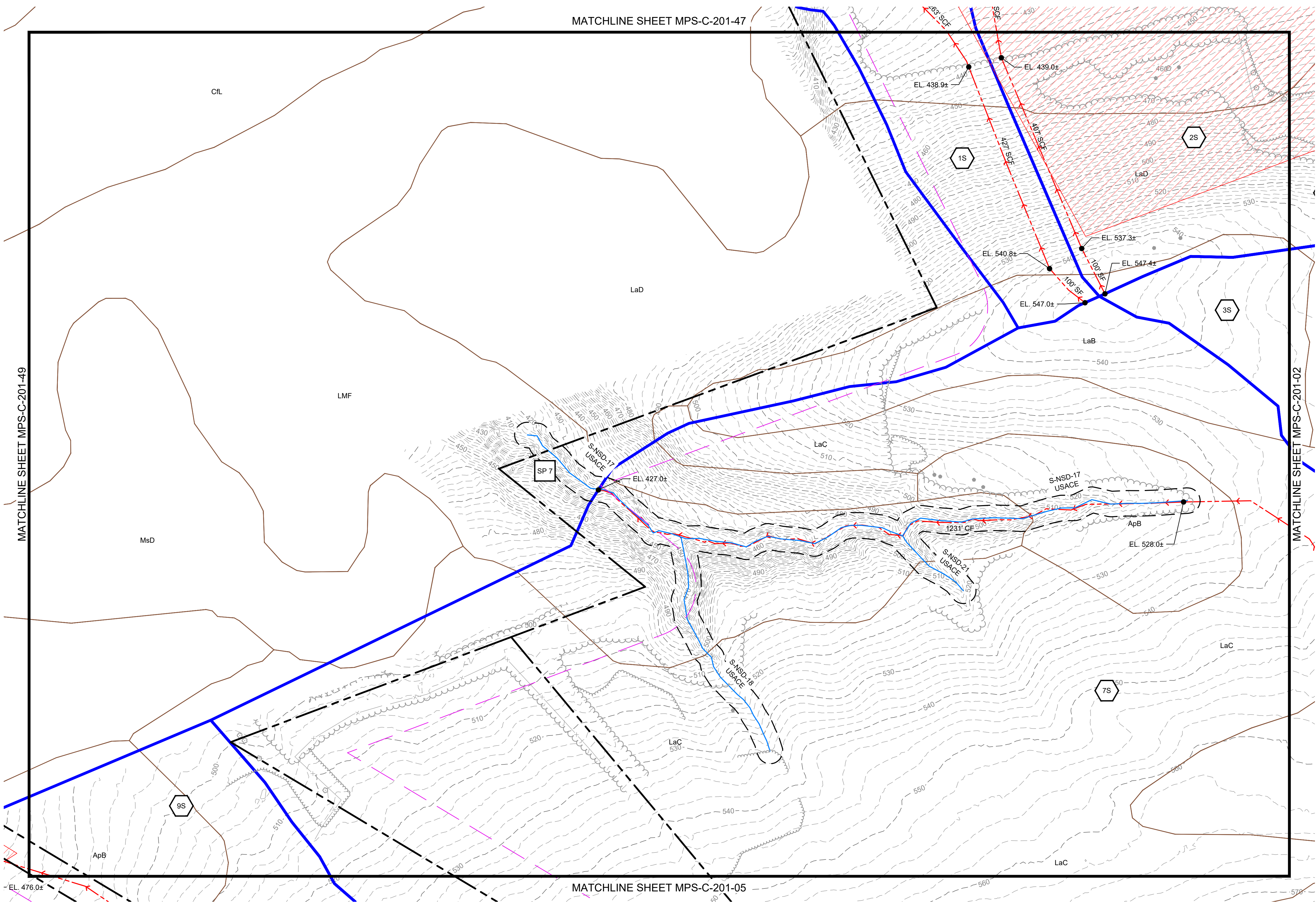


MATCHLINE SHEET MPS-C-201-47

MATCHLINE SHEET MPS-C-201-05

**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —

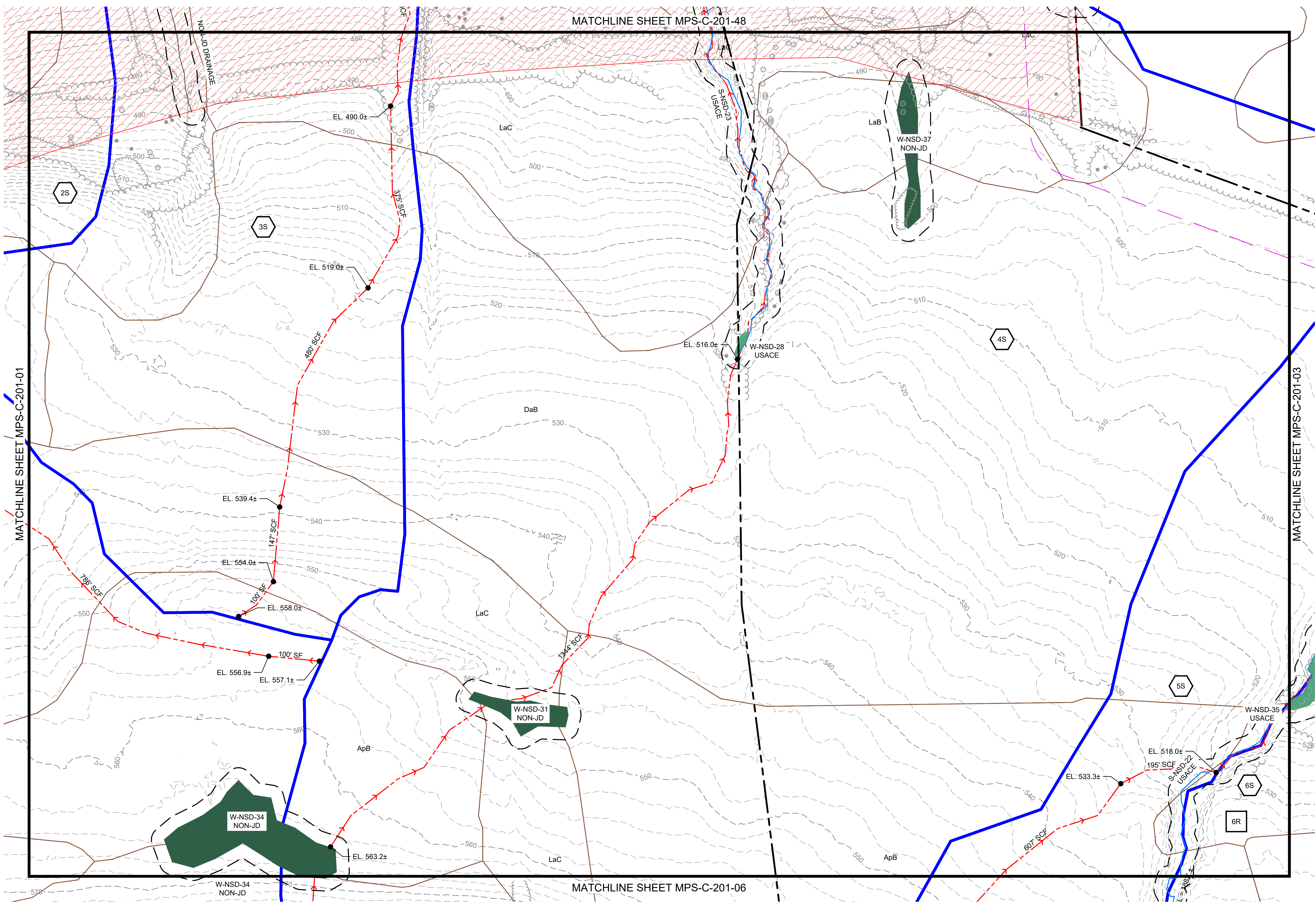


**PRELIMINARY**  
NOT FOR CONSTRUCTION



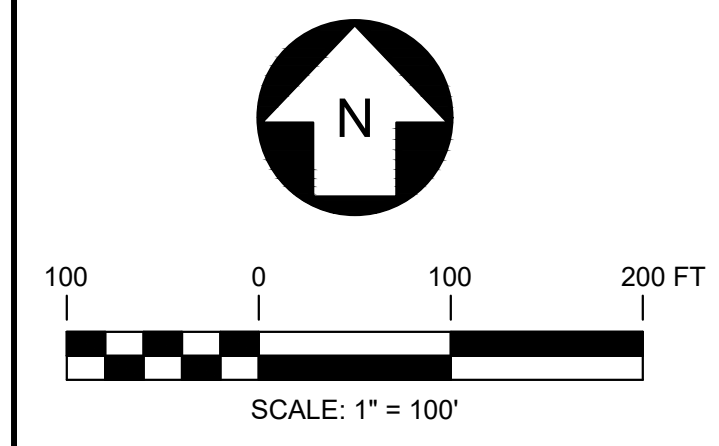
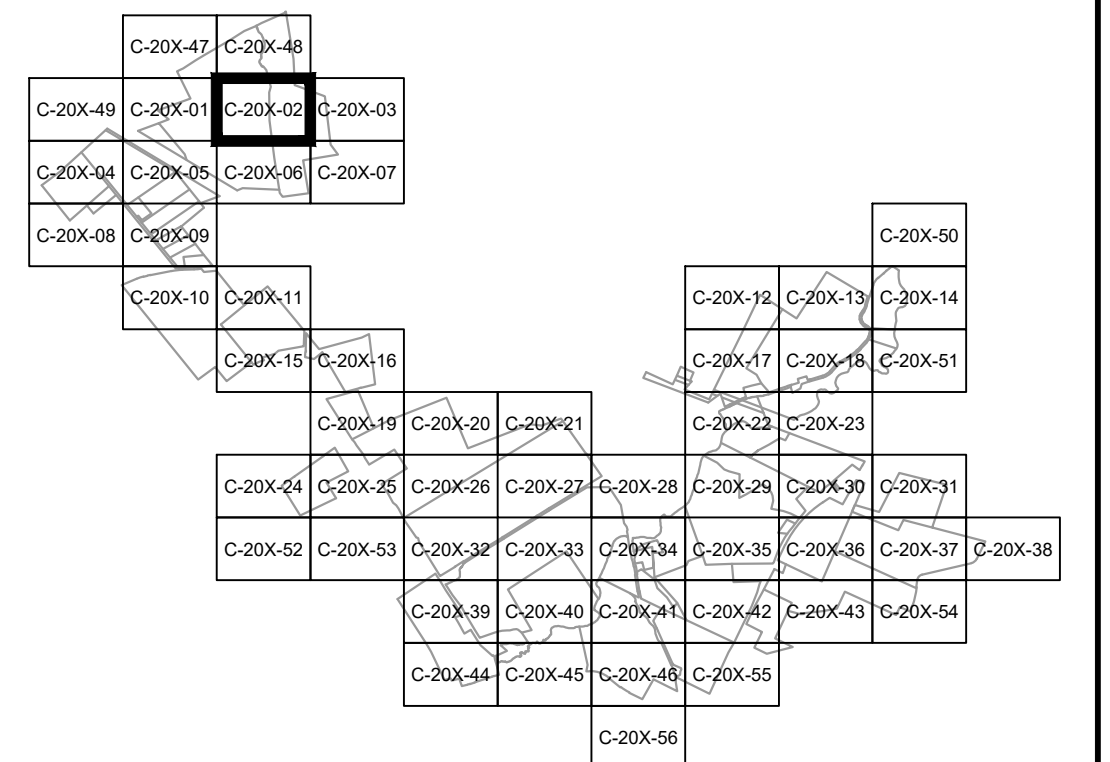
249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269				
						REV
	REFERENCE ITEMS					
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM	
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM	
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM	
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM	

PMM DESIGNED PMM DRAWN PMM CHECKED APPROVED	MILL POINT SOLAR PROJECT CONNECTGEN, LLC PRE-DEVELOPMENT STORMWATER PLAN		GLEN NEW YORK
	03/01/2023 DATE 1" = 100' SCALE		



**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue solid line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrows
- REACH: Pink dashed line with circles
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 1S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY: Dashed line



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

03/01/2023  
DATE  
REVIEW 1  
REVIEW 2

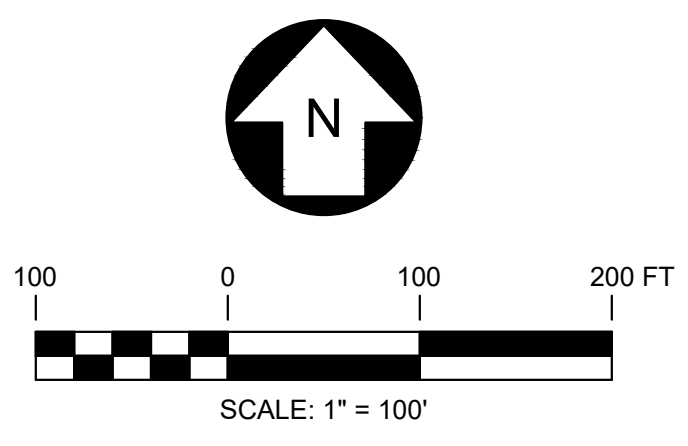
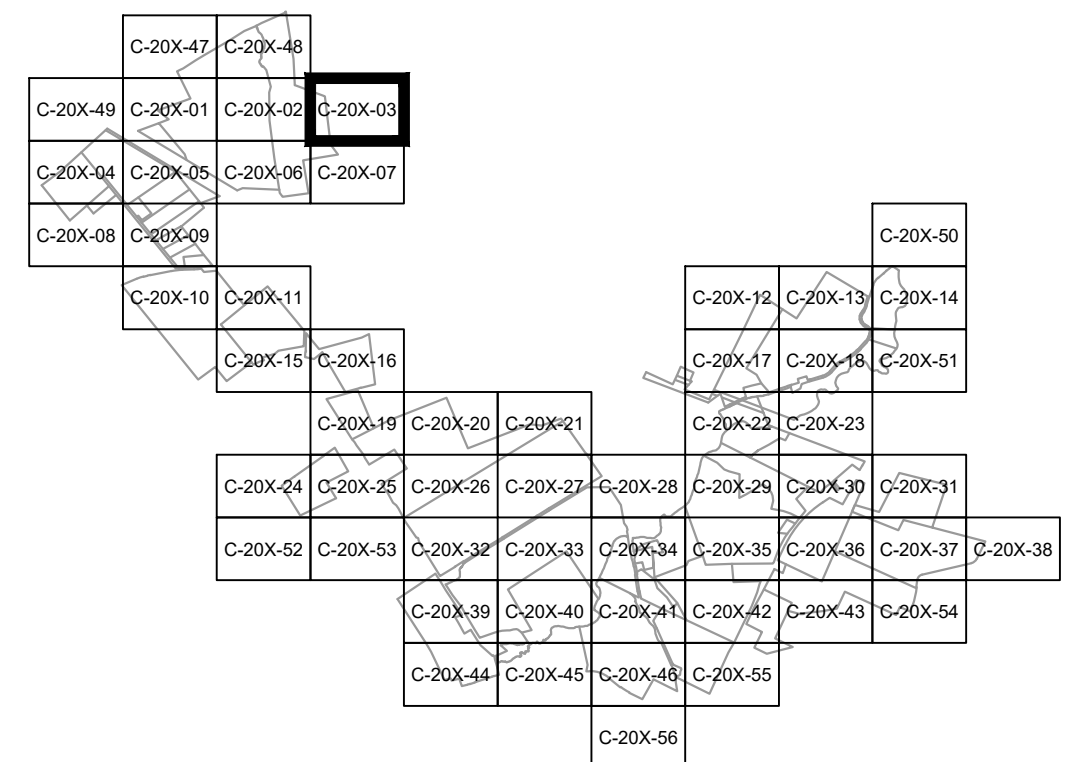
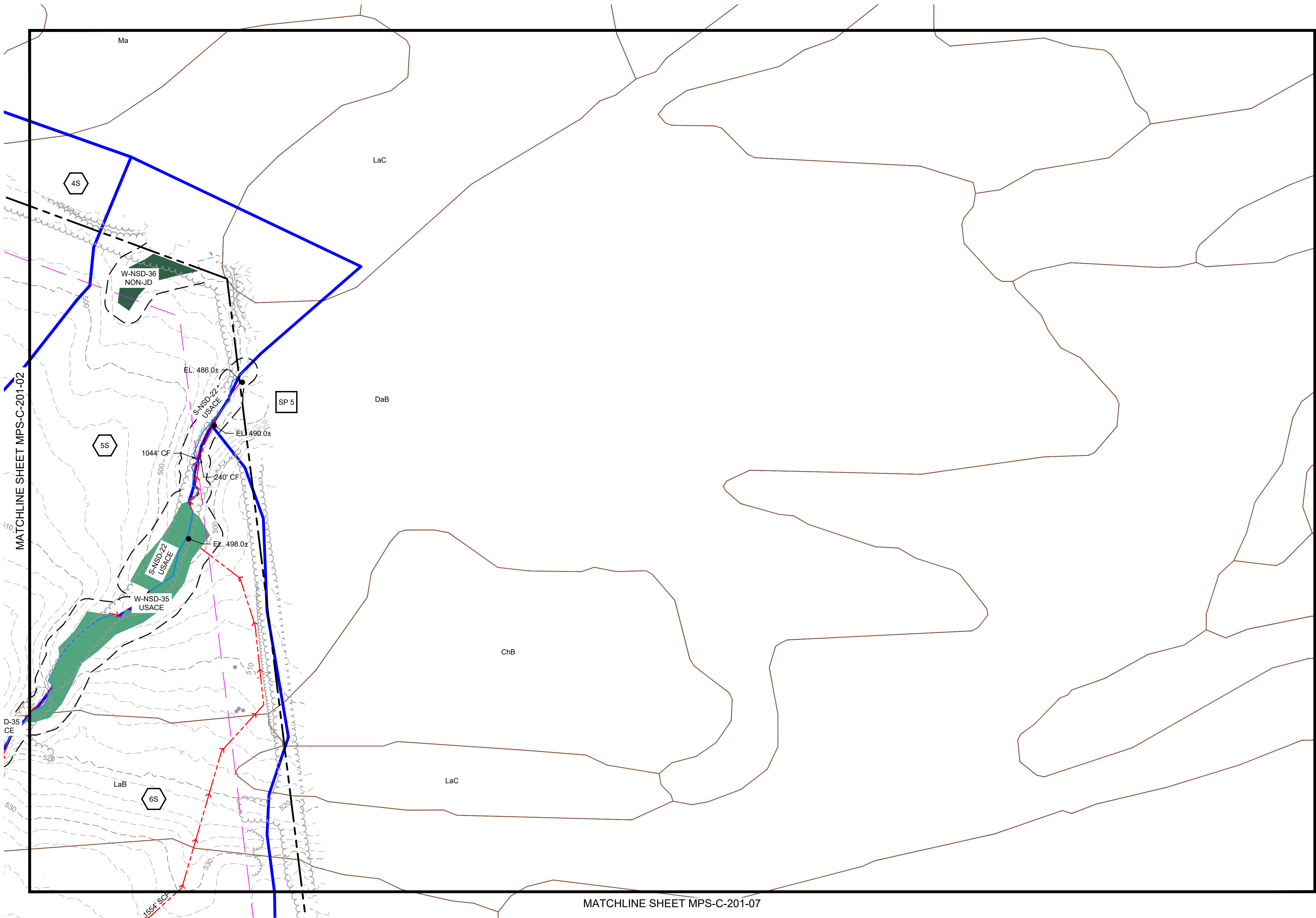


MPS-C-201-02

REV.  
C

**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —

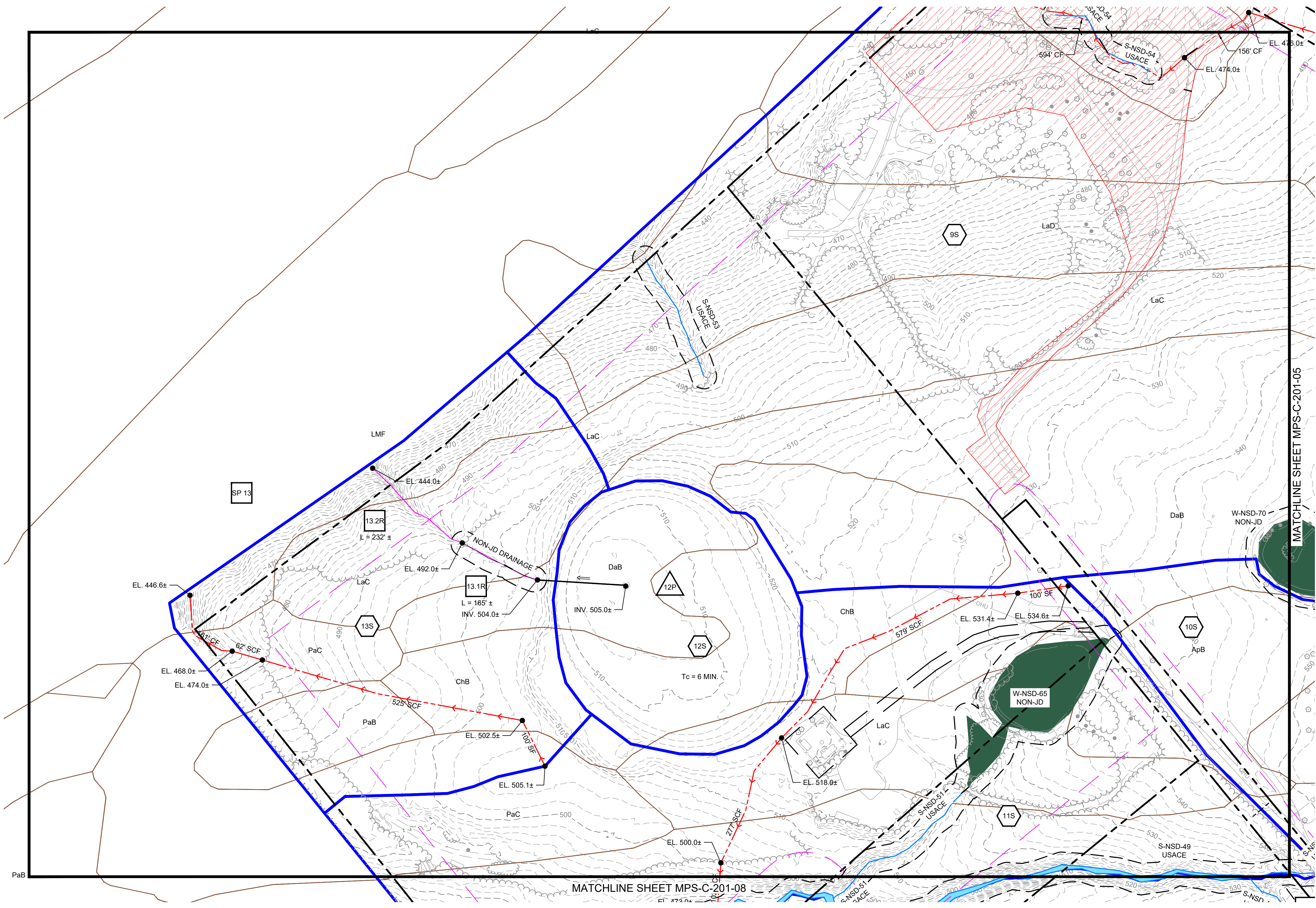


**PRELIMINARY**  
NOT FOR CONSTRUCTION



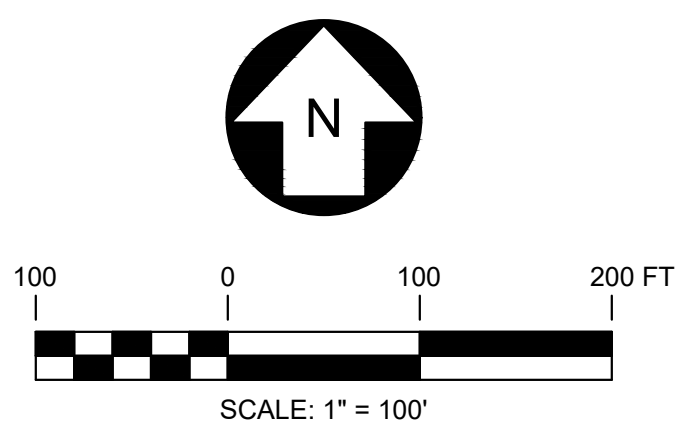
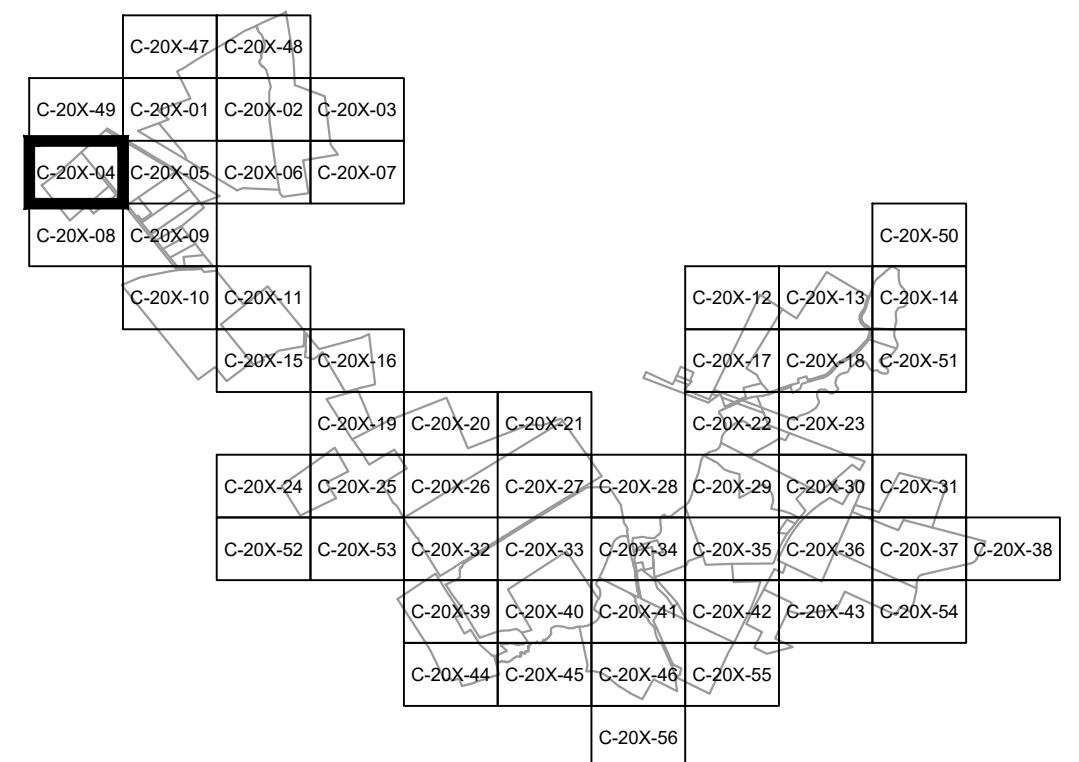
249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269				
		REV	DESCRIPTION	DATE	DES	CHK
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM	
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM	
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM	
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM	

PMM DESIGNED PMM DRAWN PMM CHECKED APPROVED	MILL POINT SOLAR PROJECT CONNECTGEN, LLC PRE-DEVELOPMENT STORMWATER PLAN		GLEN NEW YORK
	03/01/2023 DATE 1" = 100' SCALE	MPS-C-201-03	



**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrows
- REACH: Pink line with circles
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: Black dot with 'EL. 520.0±'
- REACH ID: Square with '1R'
- SUBCATCHMENT ID: Hexagon with '1S'
- POND ID: Triangle with '1P'
- STUDY POINT ID: Square with 'SP1'
- SOILS BOUNDARY: Dashed line



**PRELIMINARY**  
NOT FOR CONSTRUCTION



REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

**TRC** 249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

PMM DESIGNED	
PMM DRAWN	
PMM CHECKED	
APPROVED	
REVIEW 1	
REVIEW 2	

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

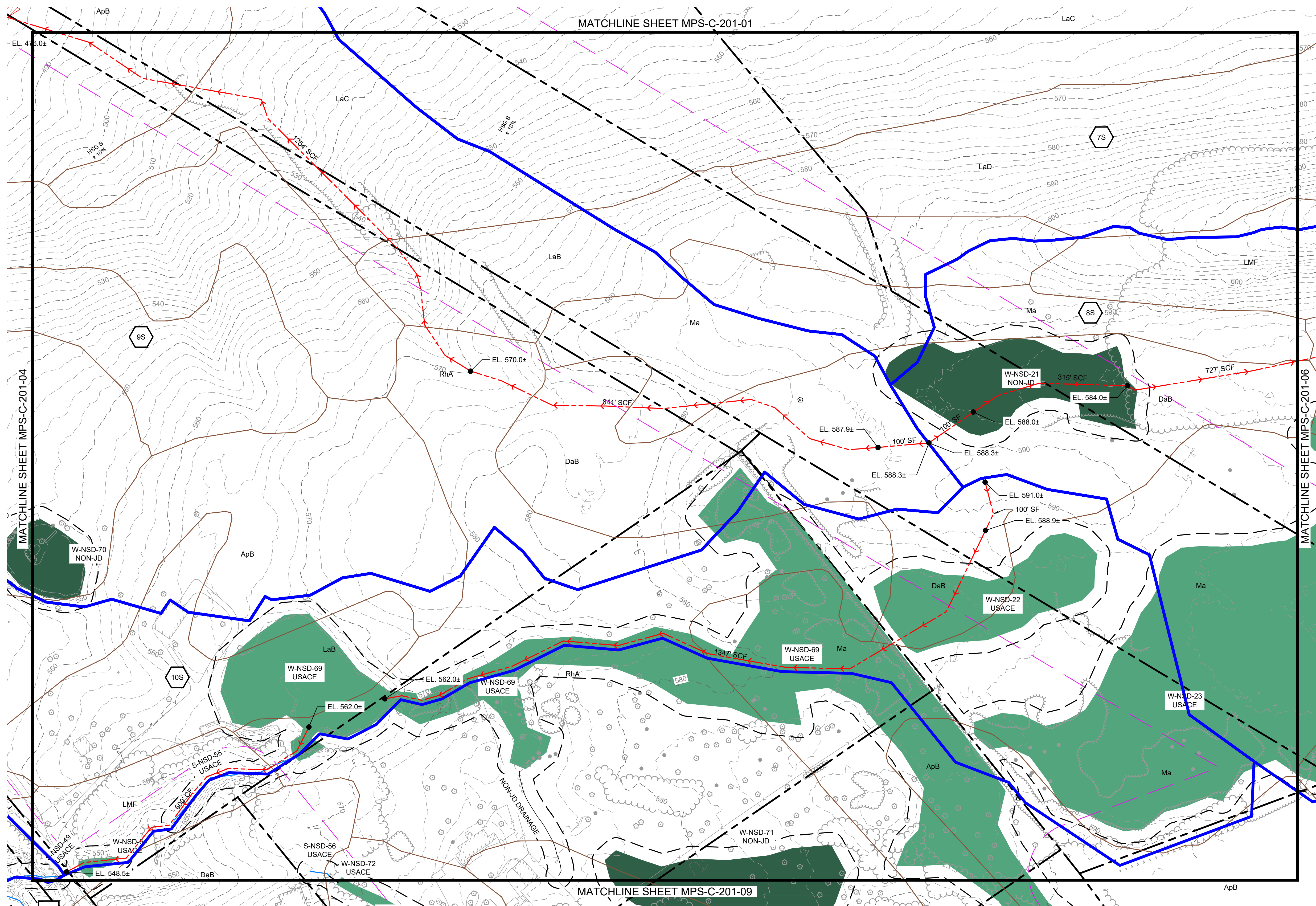
GLEN NEW YORK

03/01/2023  
DATE  
1" = 100'  
SCALE

**TRC**

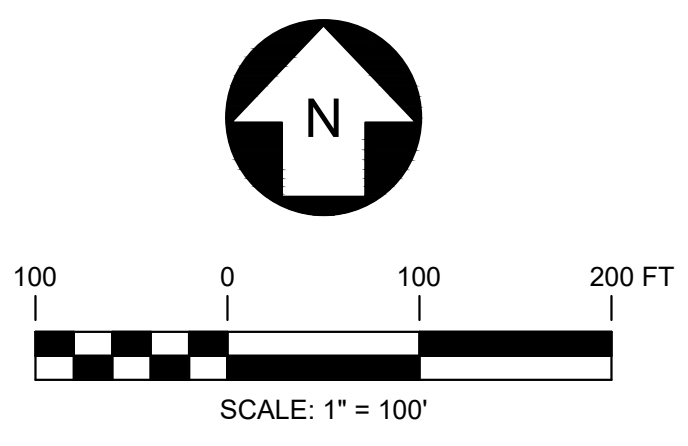
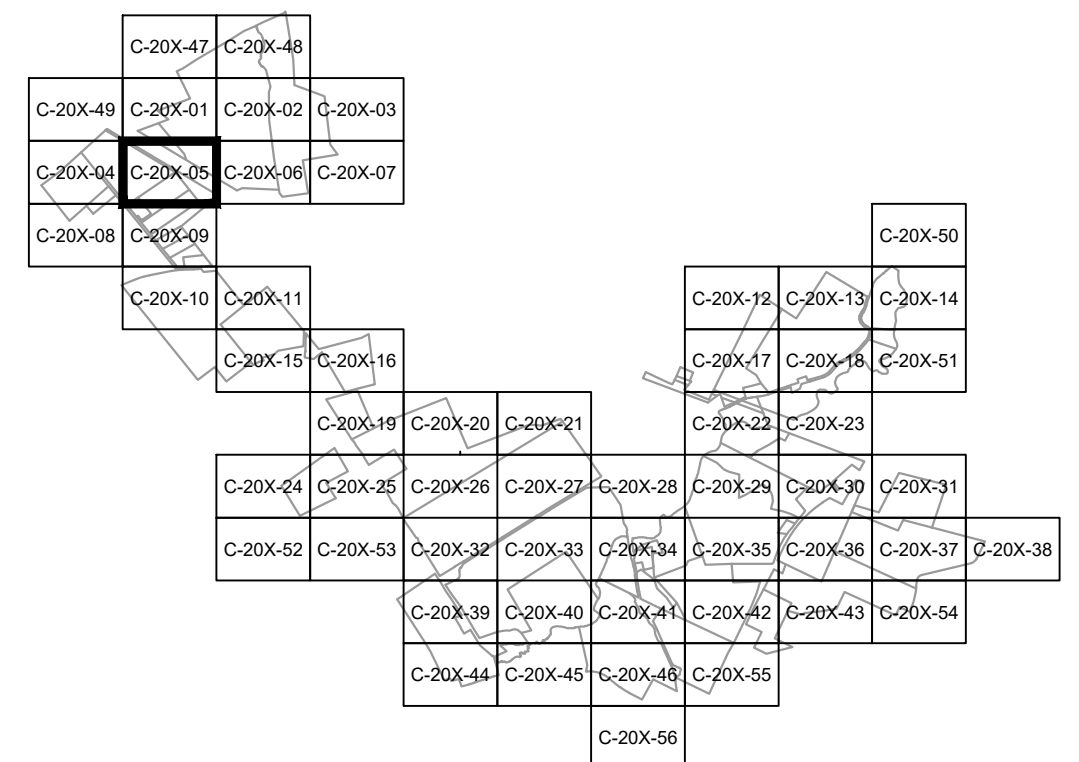
MPS-C-201-04

REV. C



**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrow
- REACH: Pink line with circles
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: Black dot with label (e.g., EL. 520.0±)
- REACH ID: Square with '1R'
- SUBCATCHMENT ID: Hexagon with '1S'
- POND ID: Triangle with '1P'
- STUDY POINT ID: Square with 'SP1'
- SOILS BOUNDARY: Brown line



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM DESIGNED  
PMM DRAWN  
PMM CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

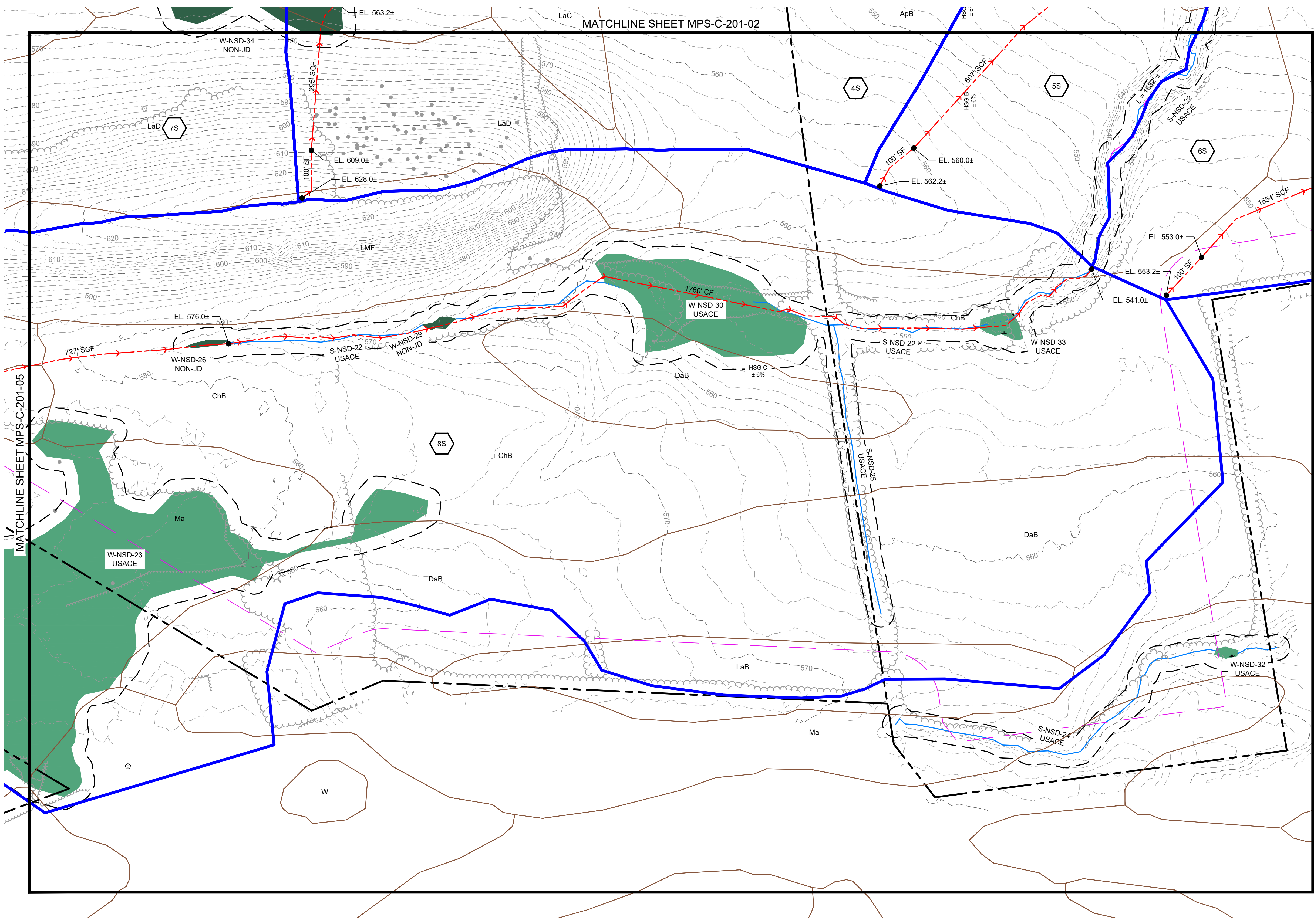
03/01/2023  
DATE



MPS-C-201-05

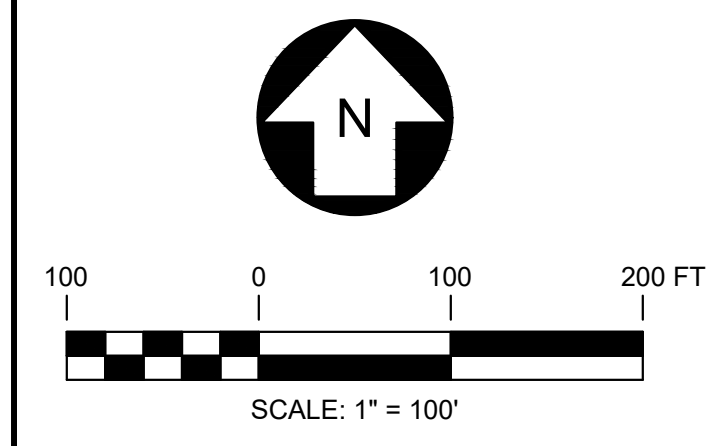
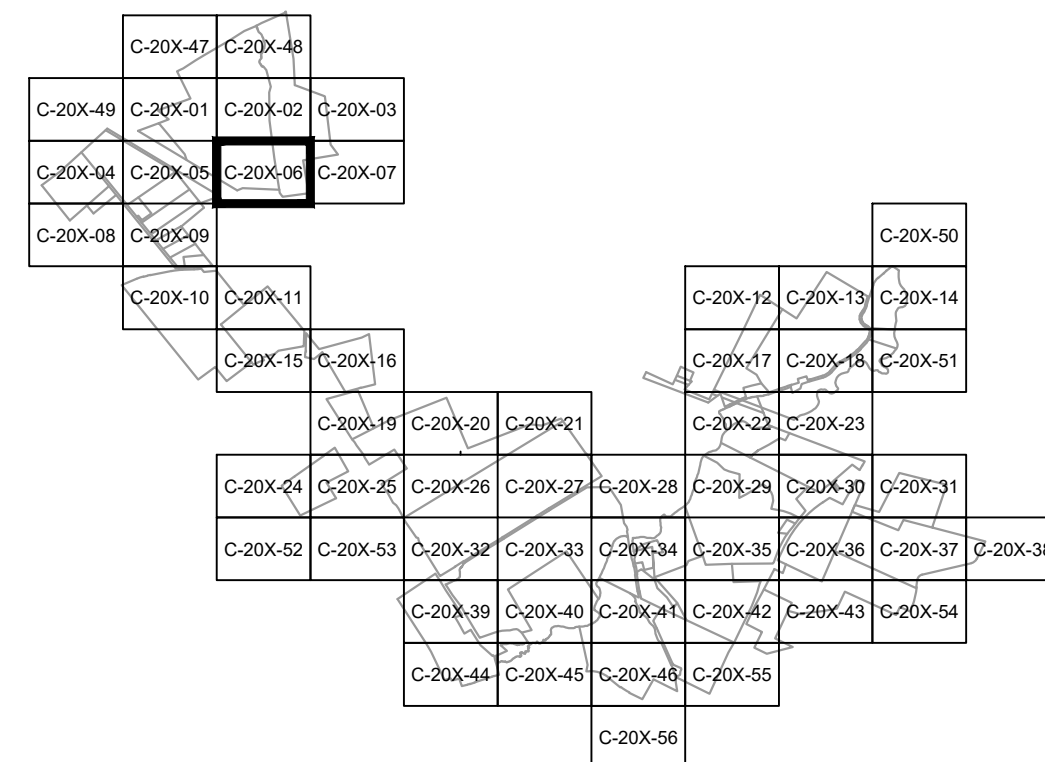
REV. C

1" = 100'  
SCALE



**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrows
- REACH: Pink dashed line with circles
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: Black dot with elevation (e.g., EL. 520.0±)
- REACH ID: Square with '1R'
- SUBCATCHMENT ID: Hexagon with '1S'
- POND ID: Triangle with '1P'
- STUDY POINT ID: Square with 'SP1'
- SOILS BOUNDARY: Brown dashed line



**PRELIMINARY**  
NOT FOR CONSTRUCTION





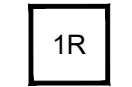
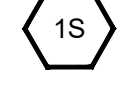





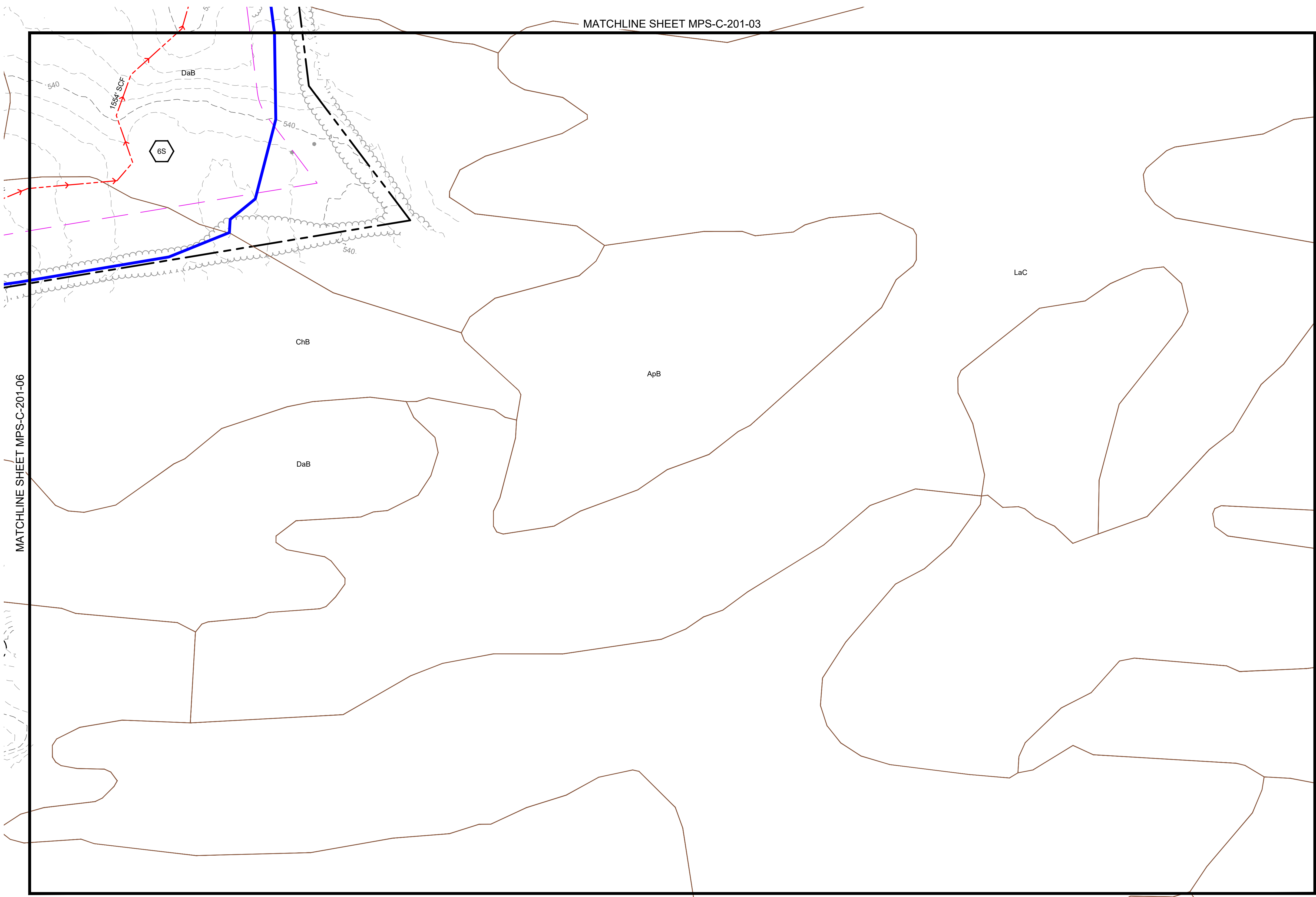
		249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269		
REV	DESCRIPTION	DATE	DES	CHK	APP	
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM	
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM	
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM	
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM	

PMM DESIGNED PMM DRAWN PMM CHECKED APPROVED	MILL POINT SOLAR PROJECT CONNECTGEN, LLC PRE-DEVELOPMENT STORMWATER PLAN		GLEN	NEW YORK
REVIEW 1 REVIEW 2	03/01/2023 DATE 1" = 100' SCALE		MPS-C-201-06	REV. C

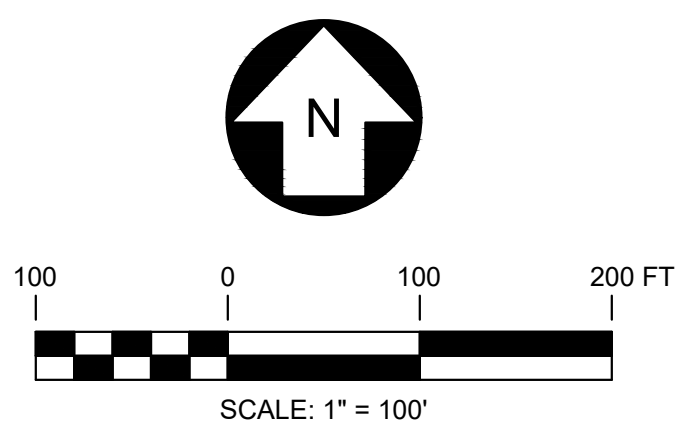
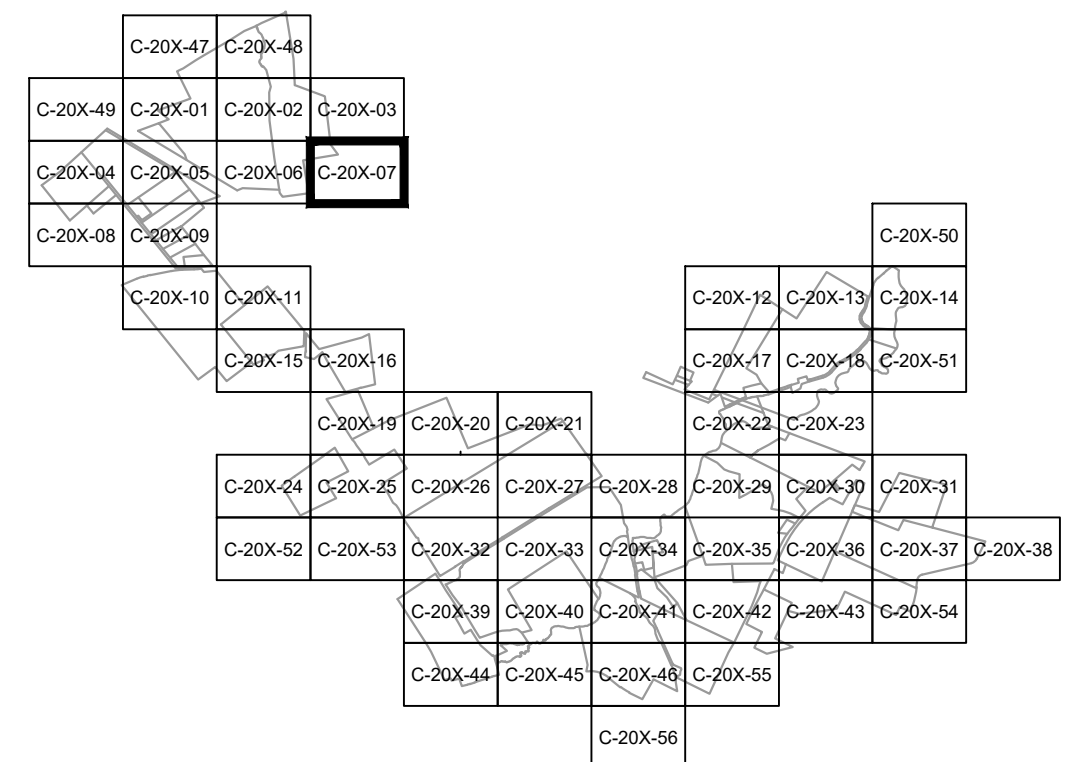
MATCHLINE SHEET MPS-C-201-03

LEGEND

- SUBCATCHMENT BOUNDARY 
- TIME OF CONCENTRATION FLOW LINE 
- REACH 
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION  EL. 520.0±
- REACH ID 
- SUBCATCHMENT ID 
- POND ID 
- STUDY POINT ID 
- SOILS BOUNDARY 





MATCHLINE SHEET MPS-C-201-06

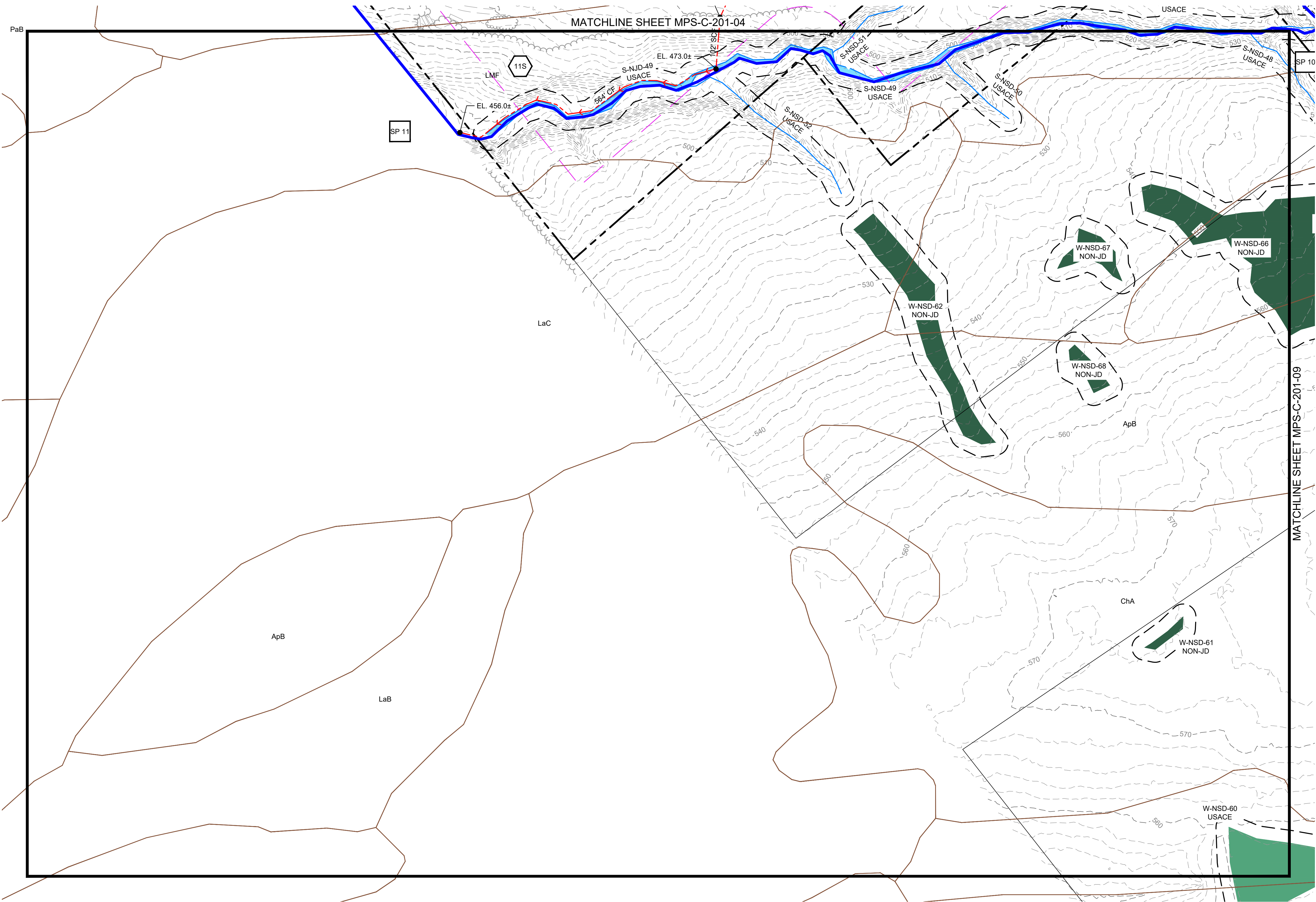


**PRELIMINARY**  
NOT FOR CONSTRUCTION



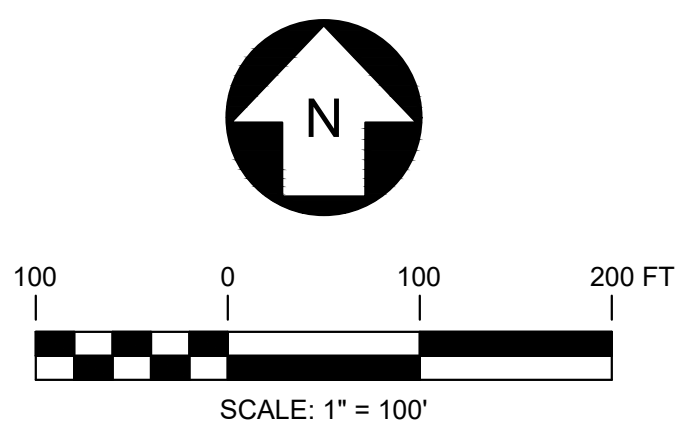
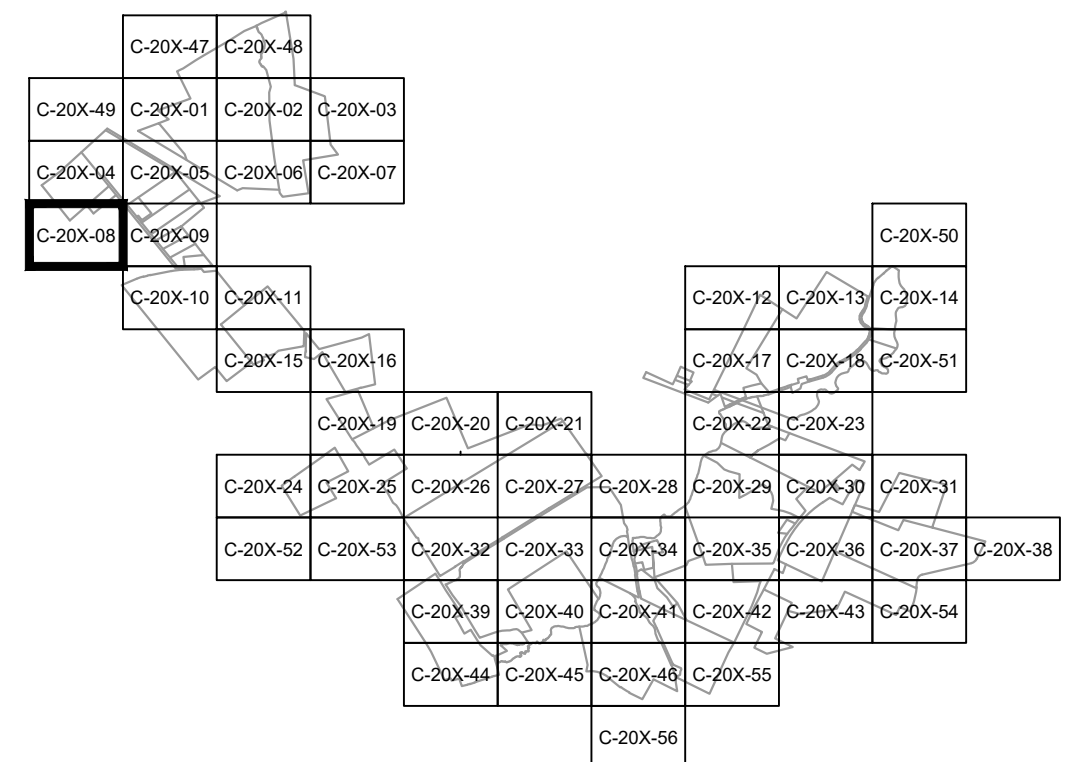
		249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269		
REV	DESCRIPTION	DATE	DES	CHK	APP	
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM	
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM	
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM	
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM	

PMM DESIGNED	MILL POINT SOLAR PROJECT		
PMM DRAWN	CONNECTGEN, LLC		
PMM CHECKED	PRE-DEVELOPMENT STORMWATER PLAN		
APPROVED	GLEN	NEW YORK	
REVIEW 1	03/01/2023 DATE		MPS-C-201-07
REVIEW 2	1" = 100' SCALE		REV. C



**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue dashed line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrow
- REACH: Pink dashed line with circles
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: Black dot with label (e.g., EL. 520.0±)
- REACH ID: Square symbol (e.g., 1R)
- SUBCATCHMENT ID: Hexagon symbol (e.g., 1S)
- POND ID: Triangle symbol (e.g., 1P)
- STUDY POINT ID: Square symbol (e.g., SP1)
- SOILS BOUNDARY: Brown dashed line



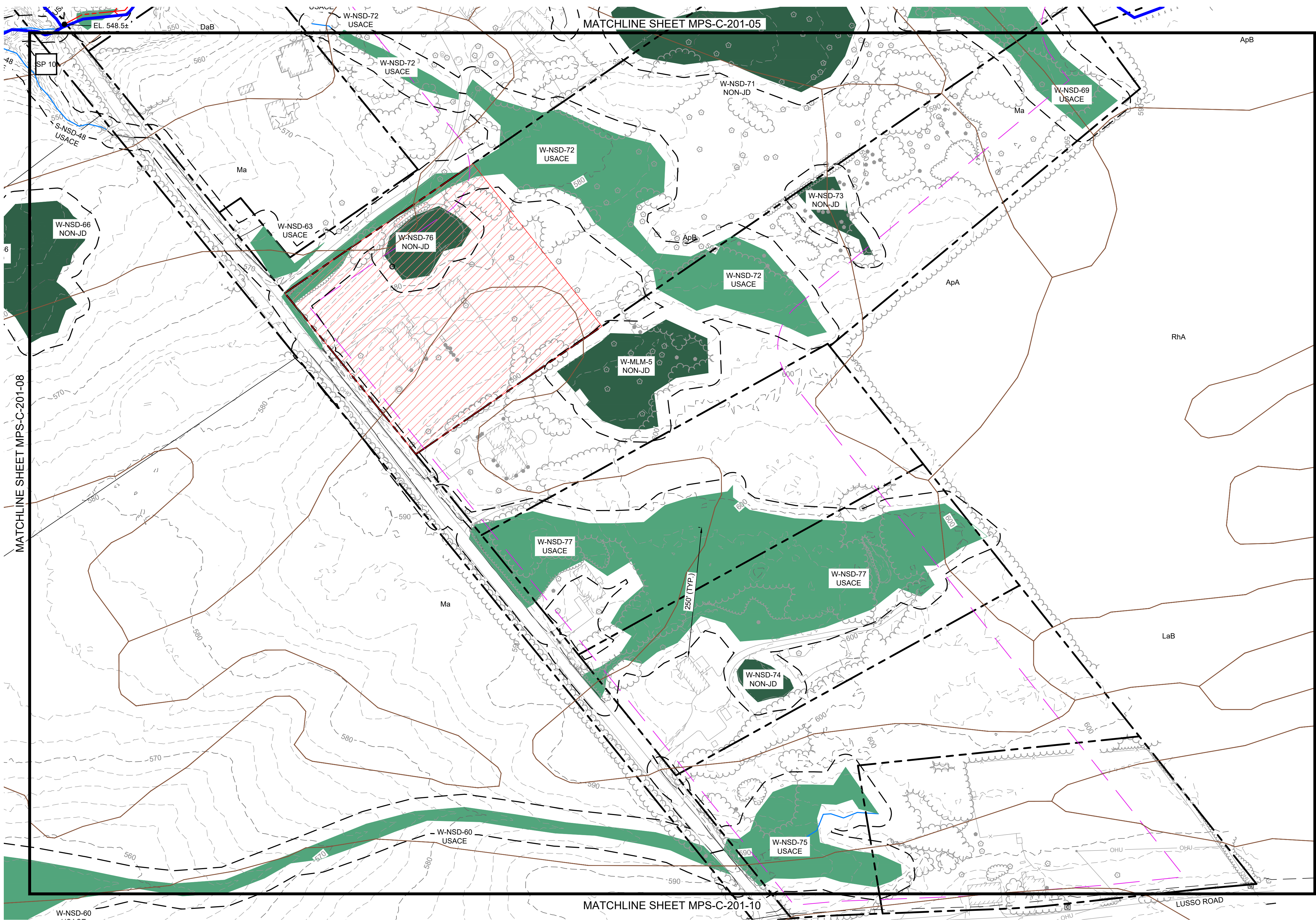
**PRELIMINARY**  
NOT FOR CONSTRUCTION



		249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269		
REV	DESCRIPTION	DATE	DES	CHK	APP	
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM	
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM	
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM	
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM	

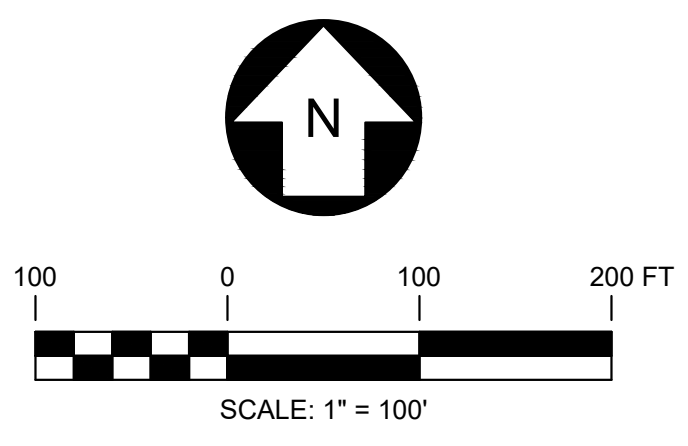
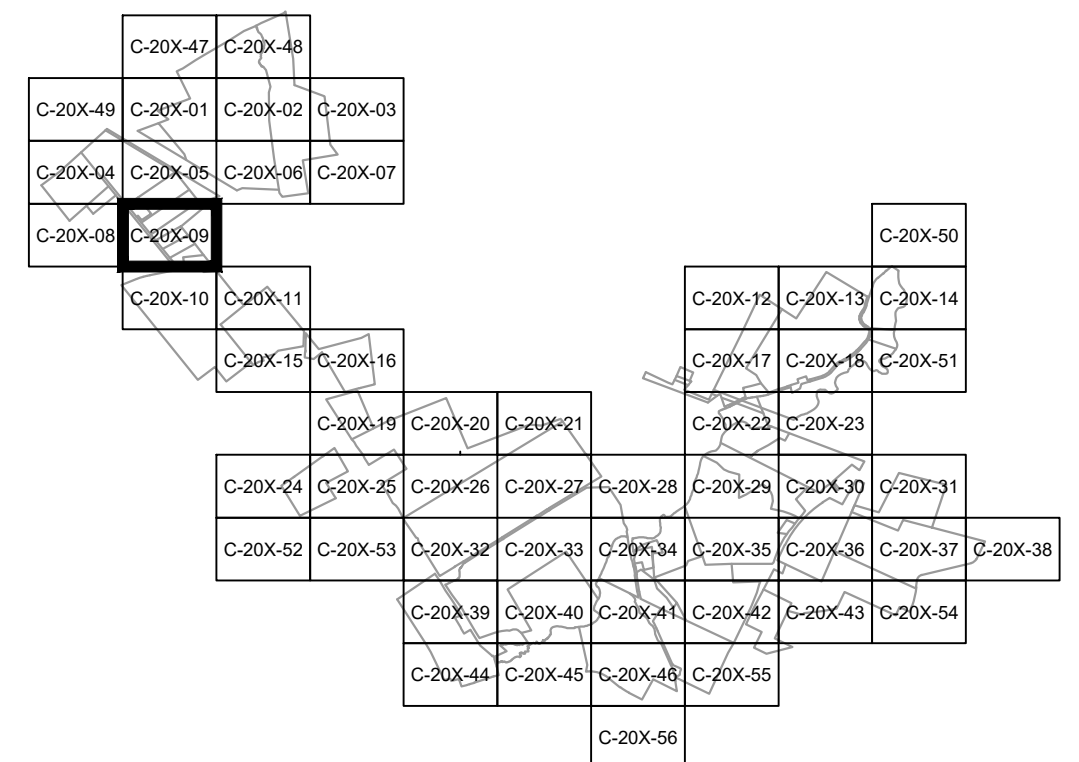
PMM DESIGNED PMM DRAWN PMM CHECKED APPROVED	<b>MILL POINT SOLAR PROJECT</b> <b>CONNECTGEN, LLC</b> <b>PRE-DEVELOPMENT STORMWATER PLAN</b>		GLEN	NEW YORK
REVIEW 1 REVIEW 2	03/01/2023 DATE 1" = 100' SCALE		MPS-C-201-08	REV. C





**LEGEND**

- SUBCATCHMENT BOUNDARY:
- TIME OF CONCENTRATION FLOW LINE:
- REACH:
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 1S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY:



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

REFERENCE ITEMS	REV	DESCRIPTION	DATE	DES	CHK	APP
	D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
	C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
	B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
	A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN  
GLEN NEW YORK

REVIEW 1  
REVIEW 2

03/01/2023  
DATE  
1" = 100'  
SCALE





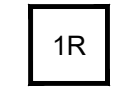
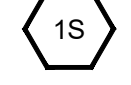
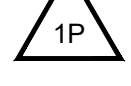




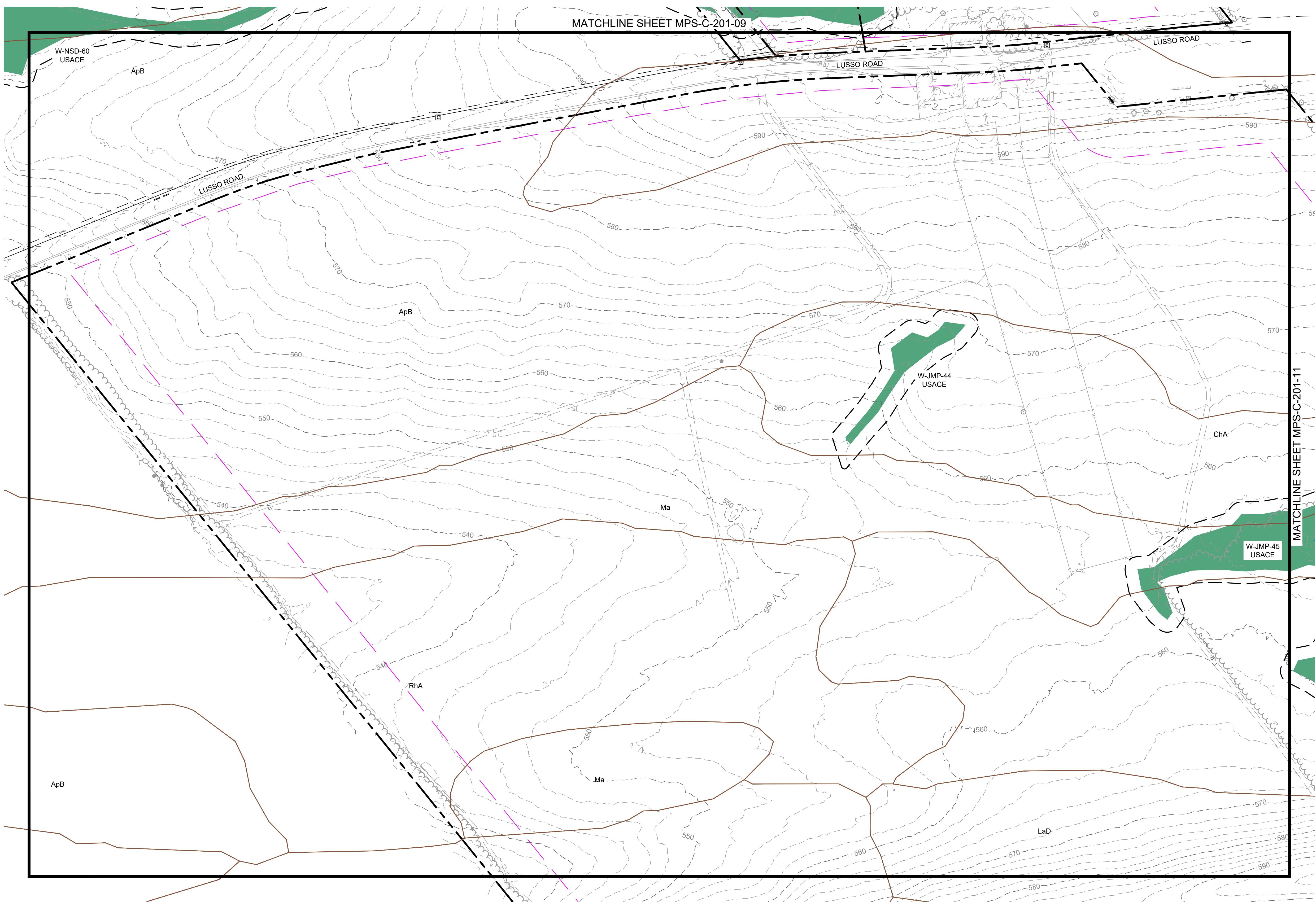
MPS-C-201-09

REV.  
C

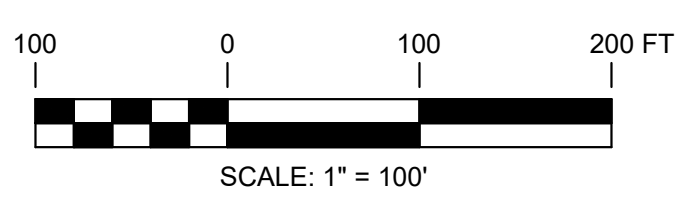
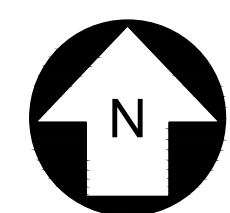
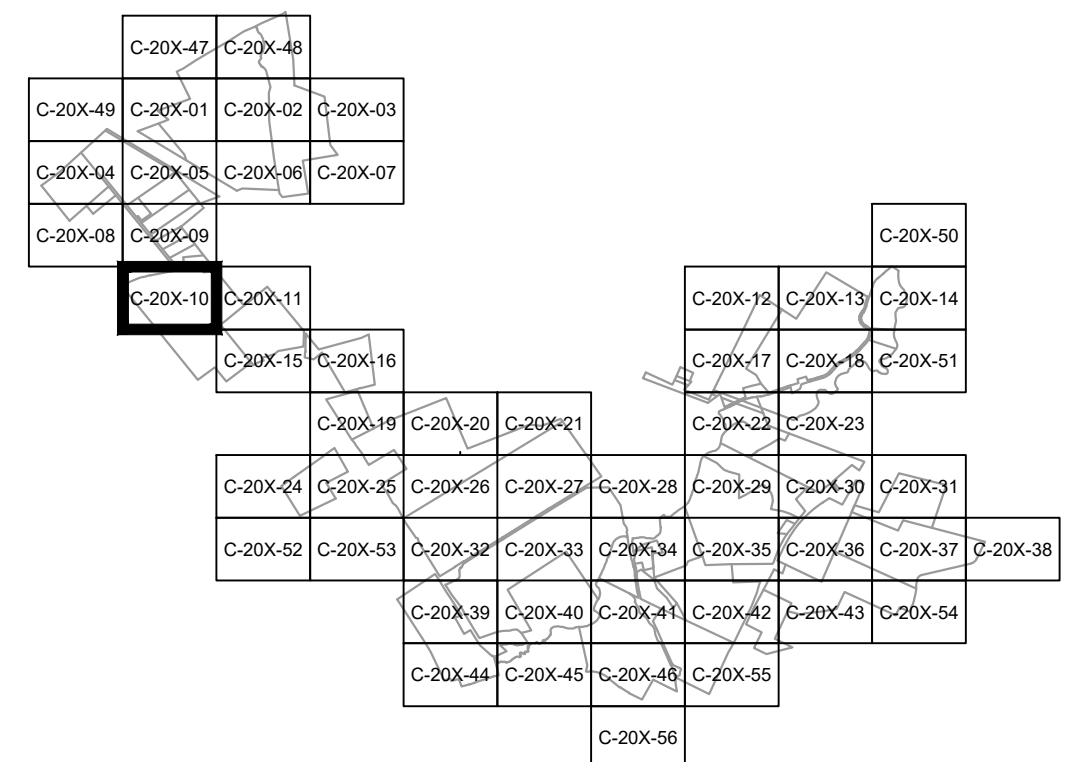
MATCHLINE SHEET MPS-C-201-09

LEGEND

- SUBCATCHMENT BOUNDARY 
- TIME OF CONCENTRATION FLOW LINE 
- REACH 
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION  EL. 520.0±
- REACH ID 
- SUBCATCHMENT ID 
- POND ID 
- STUDY POINT ID 
- SOILS BOUNDARY 



MATCHLINE SHEET MPS-C-201-11



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN

NEW YORK

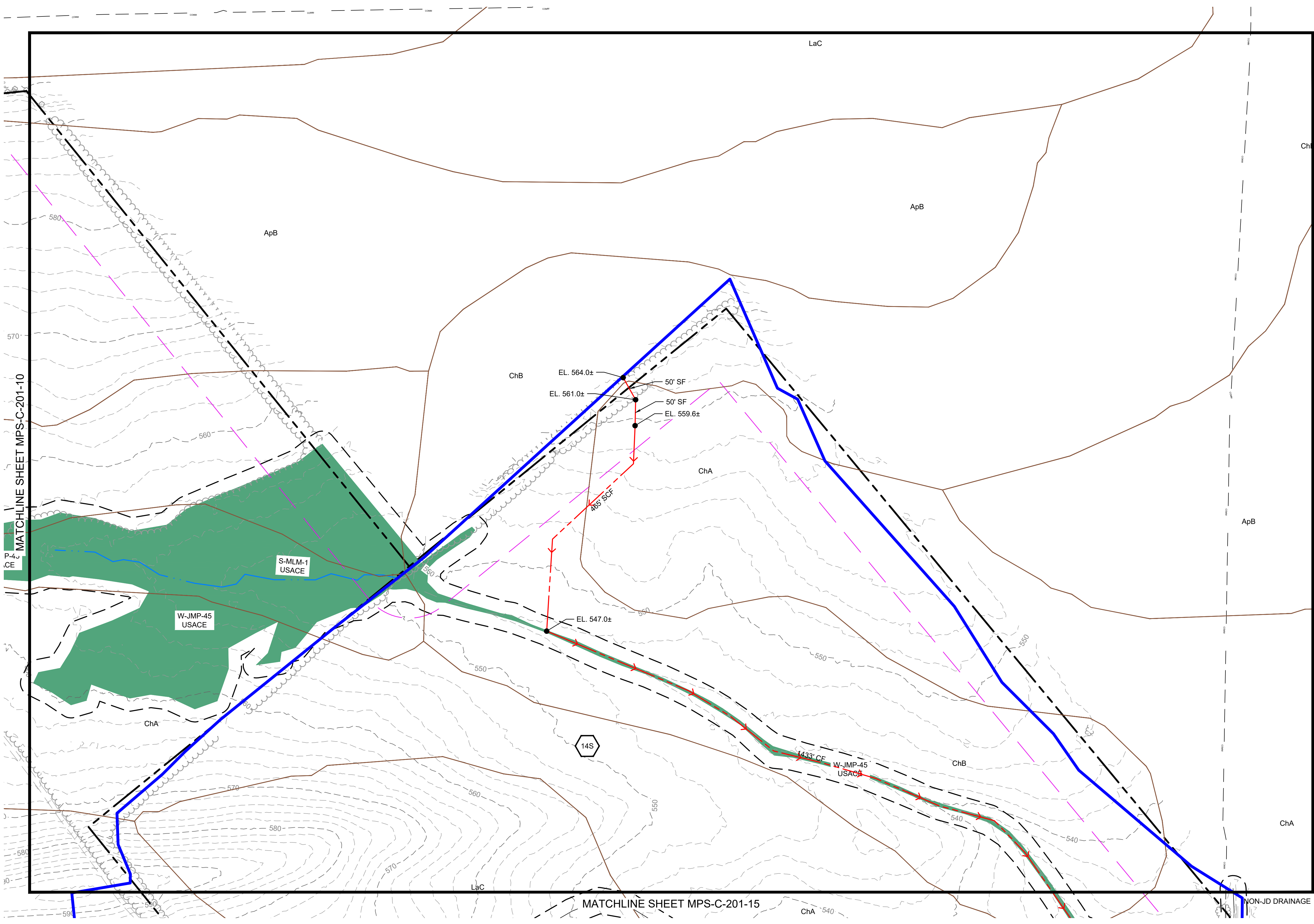
03/01/2023  
DATE

1" = 100'  
SCALE



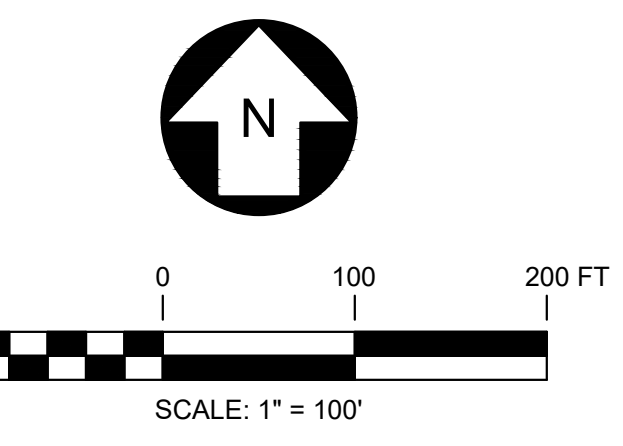
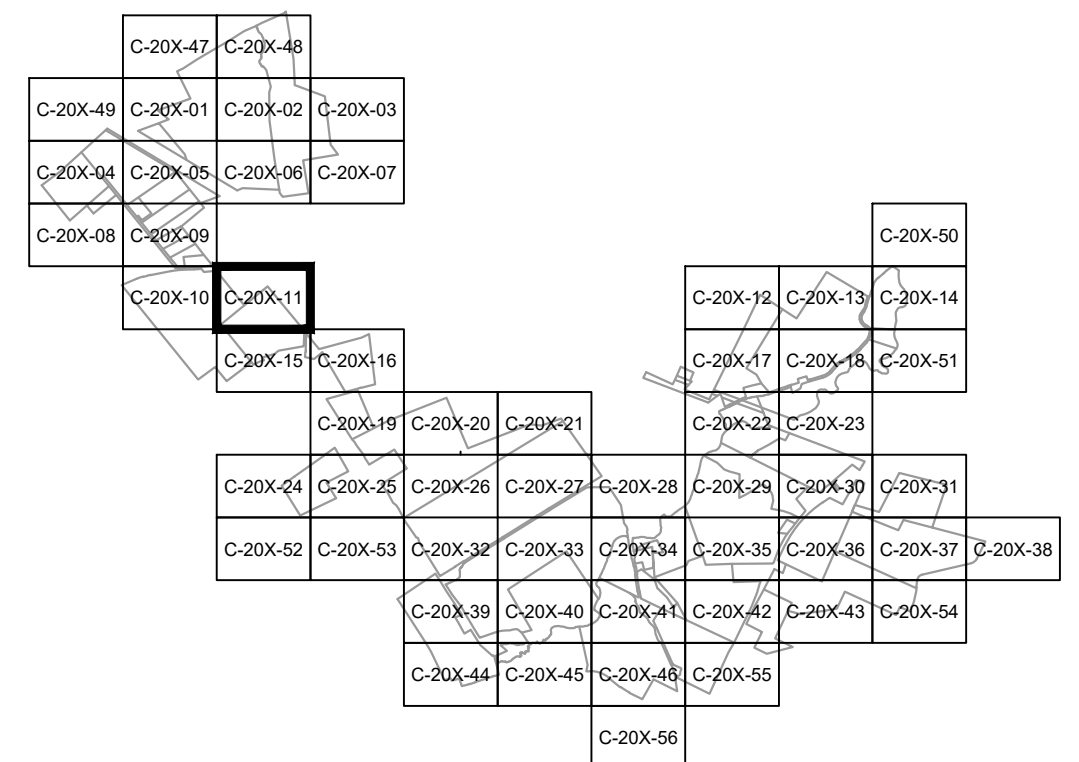
MPS-C-201-10

REV.  
C



**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



**PRELIMINARY**  
NOT FOR CONSTRUCTION



REV	DESCRIPTION	DATE	DES	CHK	APP

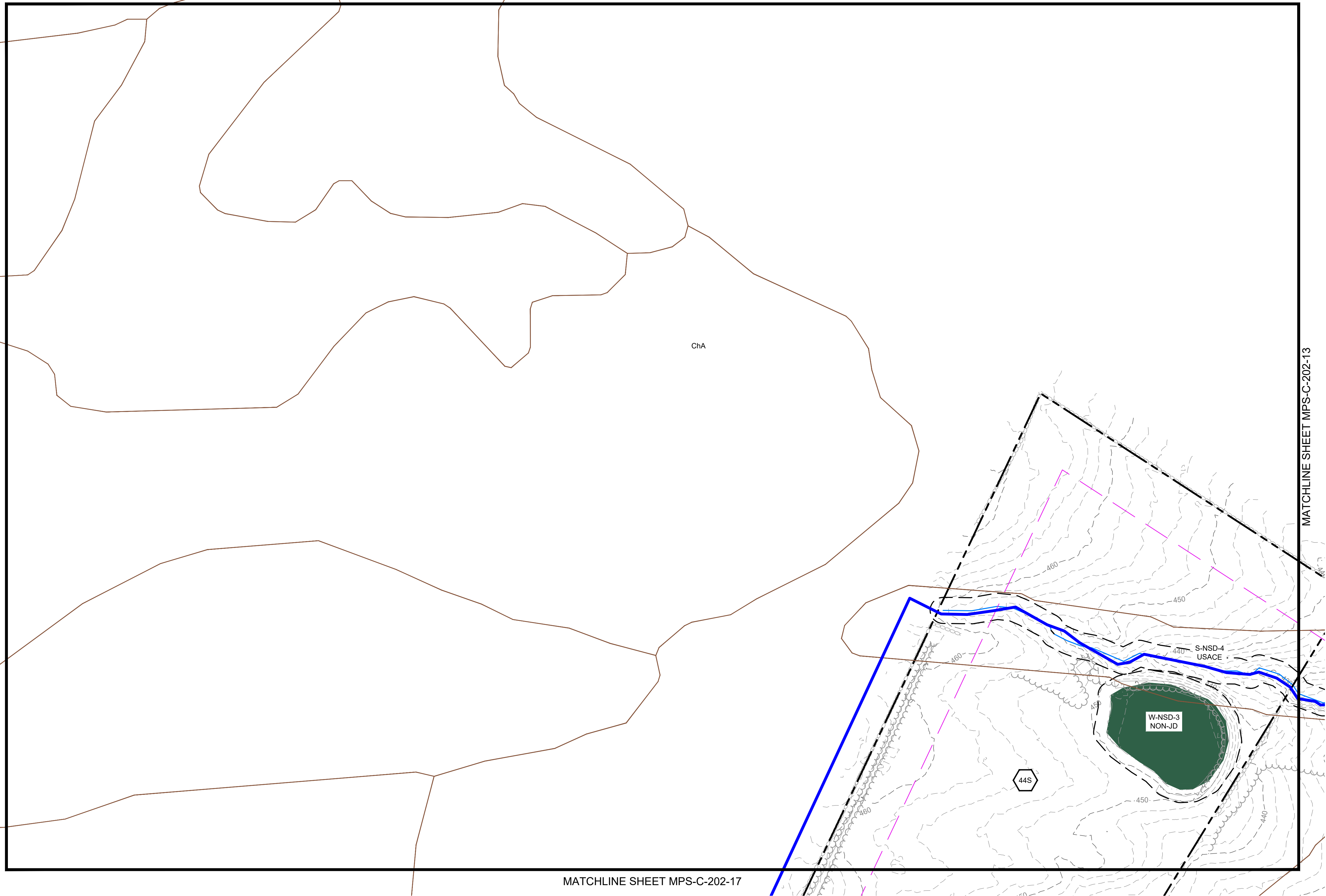
<b>TRC</b>	249 Western Avenue Augusta, ME 04330	PROJECT NO: 443269

PMM DESIGNED
PMM DRAWN
PMM CHECKED
APPROVED

MILL POINT SOLAR PROJECT CONNECTGEN, LLC PRE-DEVELOPMENT STORMWATER PLAN	
GLEN	NEW YORK
REVIEW 1	REVIEW 2
03/01/2023 DATE	1" = 100' SCALE
<b>TRC</b>	MPS-C-201-11
REV. C	

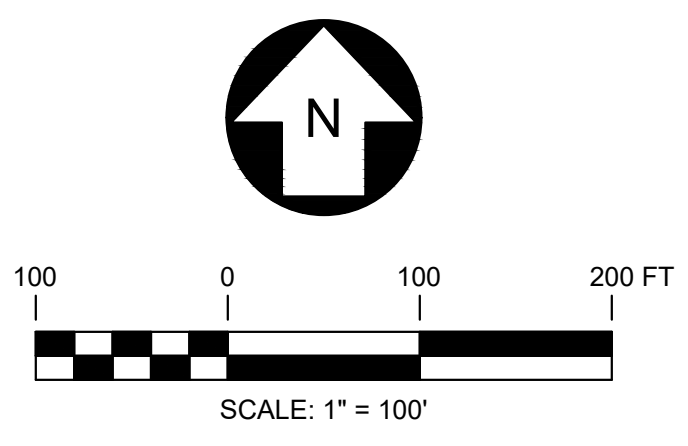
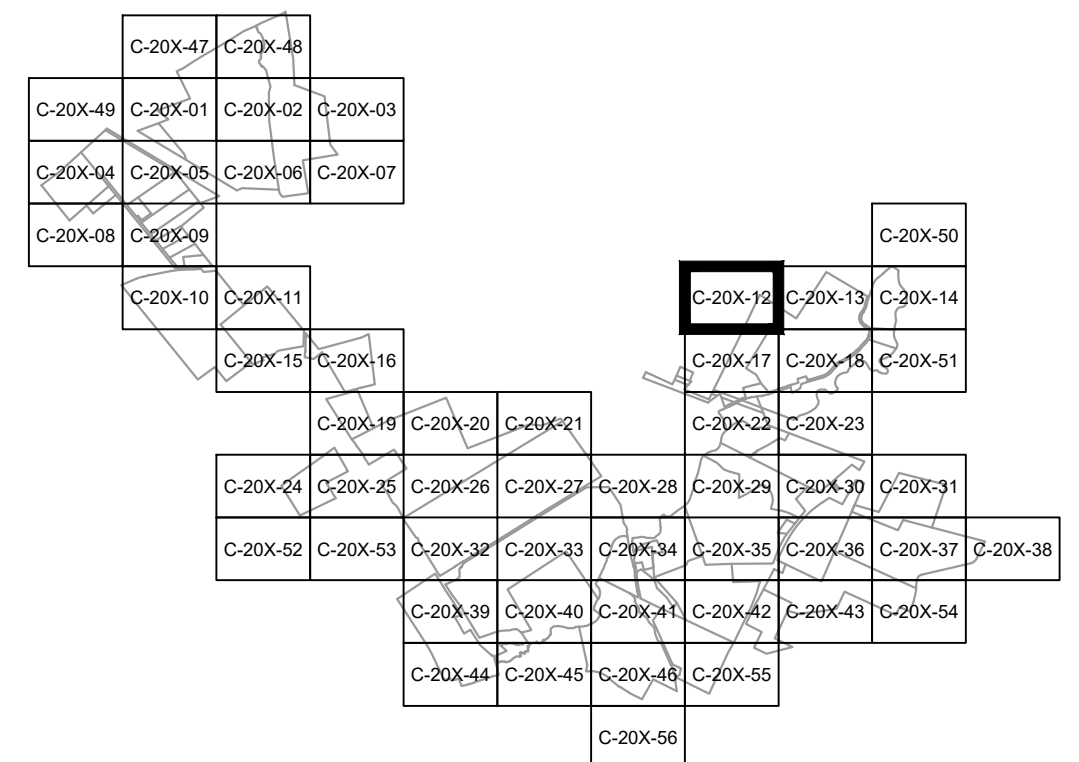
**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



MATCHLINE SHEET MPS-C-202-13

MATCHLINE SHEET MPS-C-202-17



**PRELIMINARY**  
NOT FOR CONSTRUCTION



REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

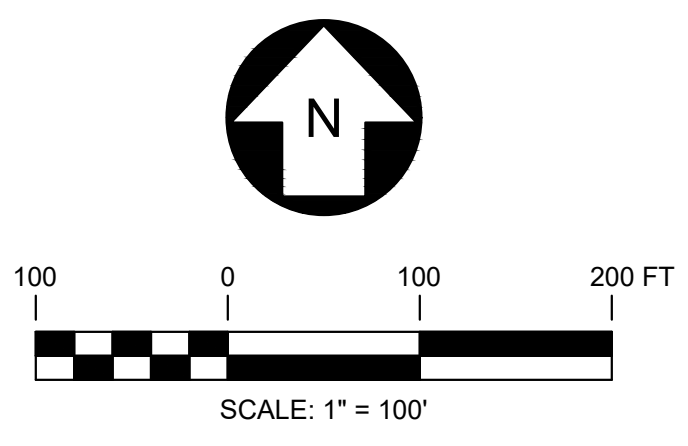
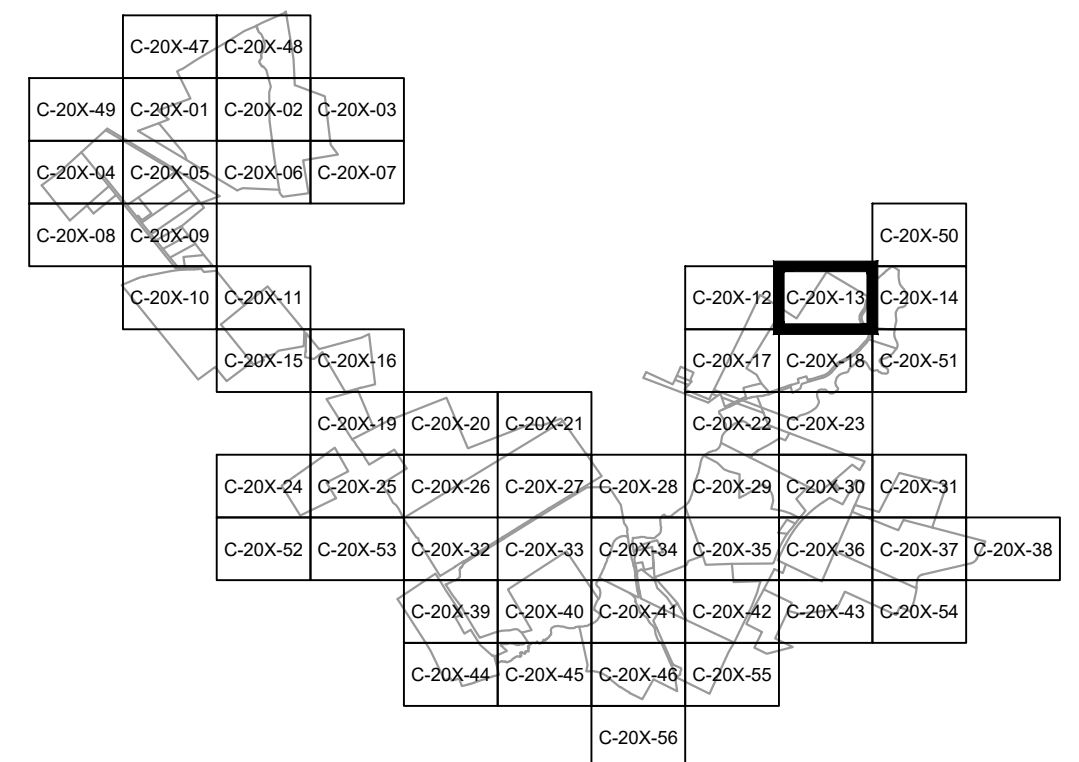
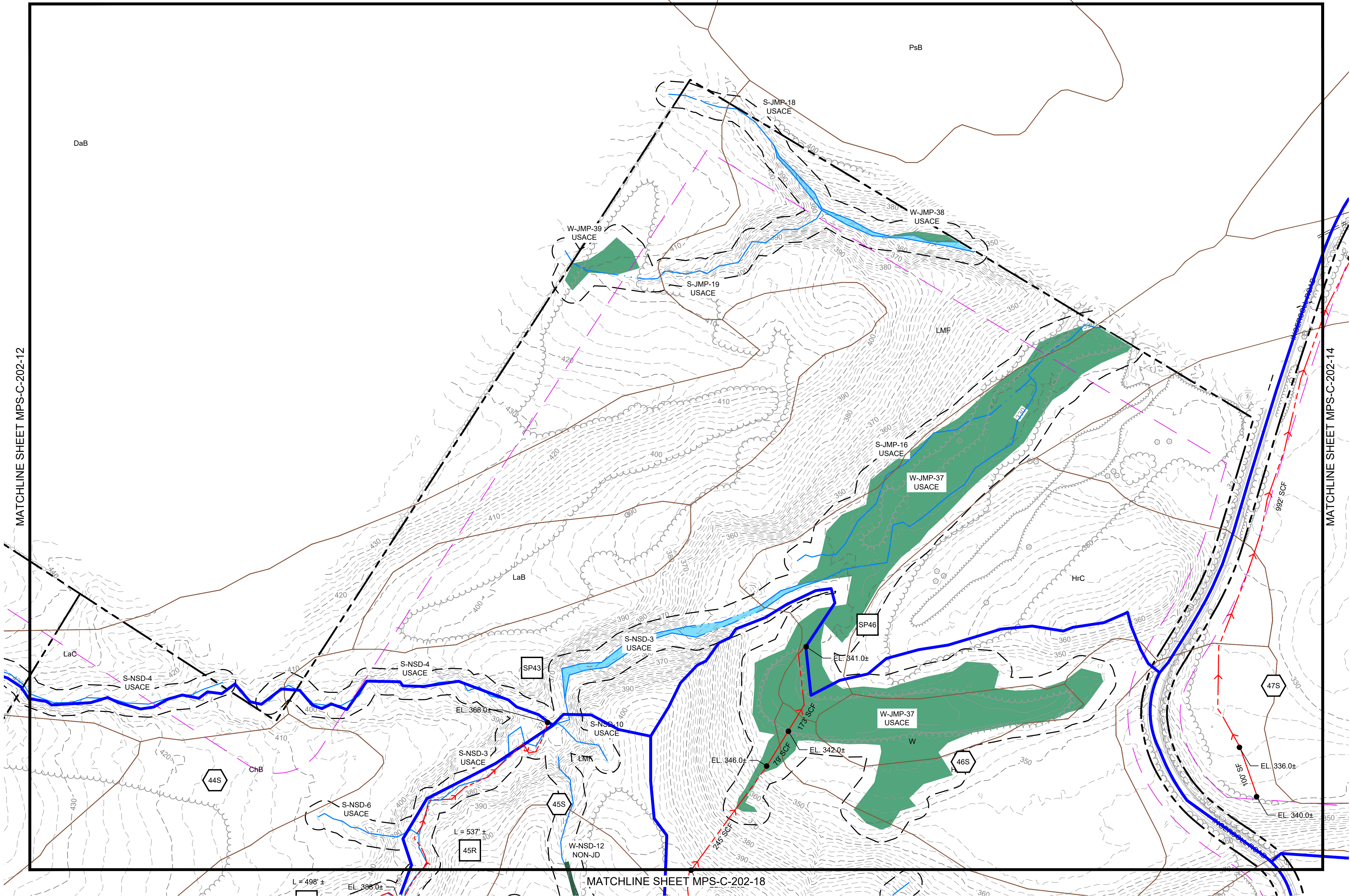
249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

PMM DESIGNED PMM DRAWN PMM CHECKED APPROVED	<b>MILL POINT SOLAR PROJECT</b> <b>CONNECTGEN, LLC</b> <b>PRE-DEVELOPMENT STORMWATER PLAN</b>	
GLEN	NEW YORK	
REVIEW 1 REVIEW 2	03/01/2023 DATE 1" = 100' SCALE	<b>MPS-C-201-12</b>
		REV. C

**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

03/01/2023  
DATE






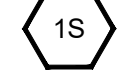





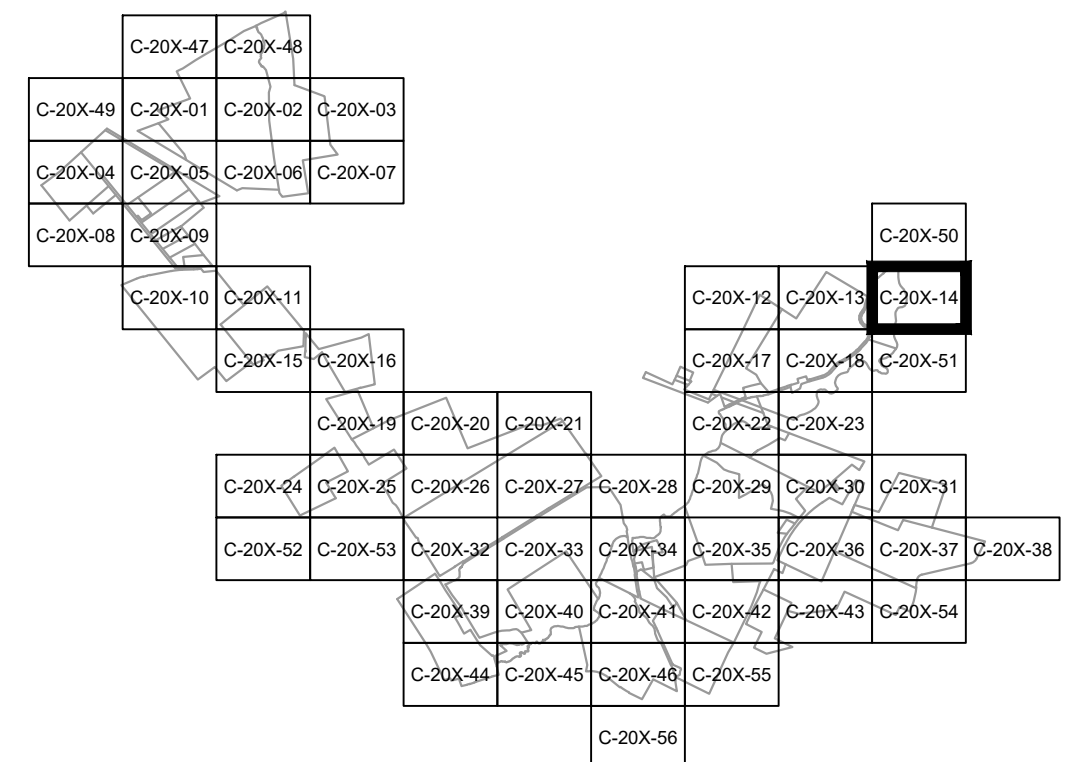
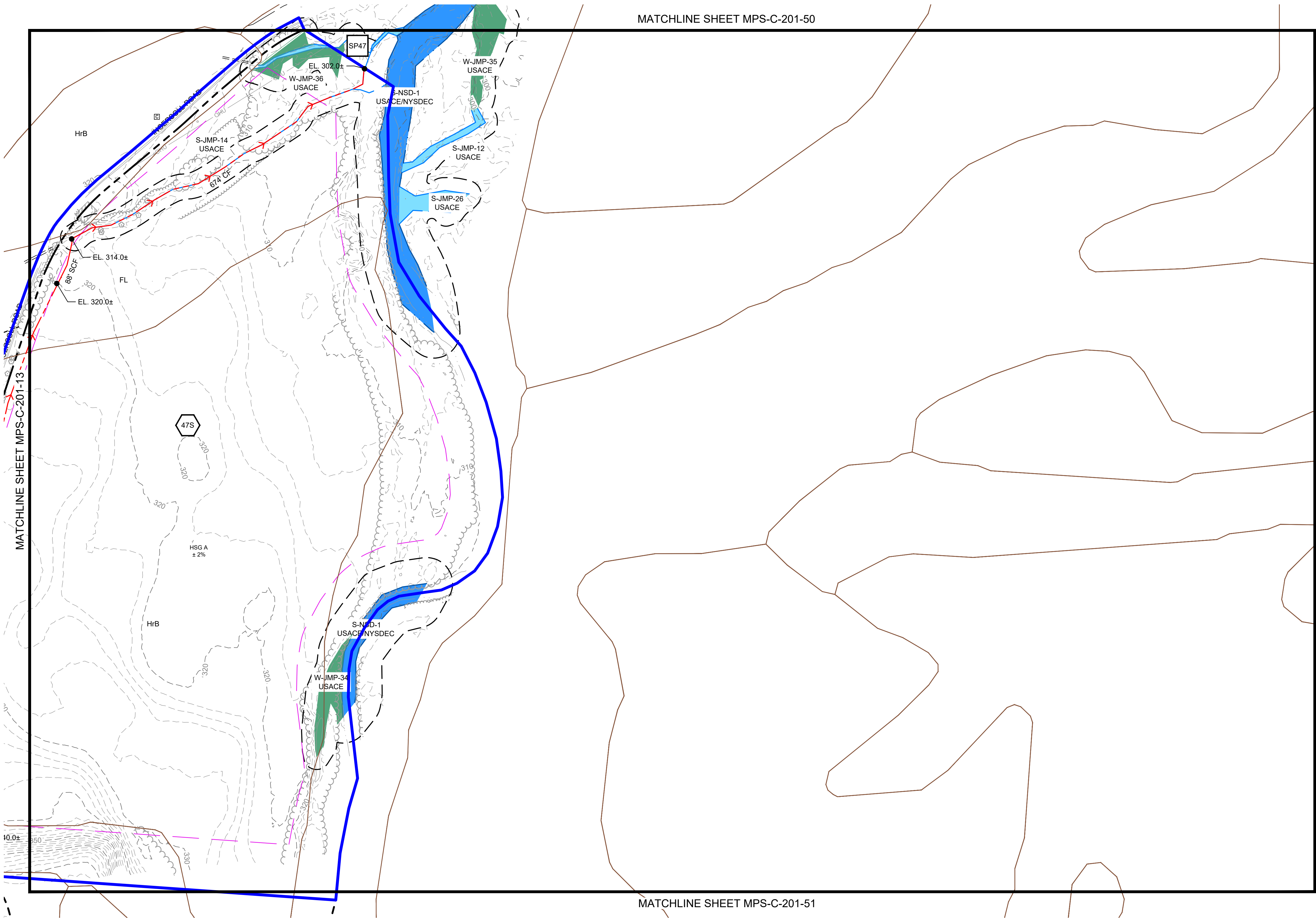
MPS-C-201-13

REV.  
C

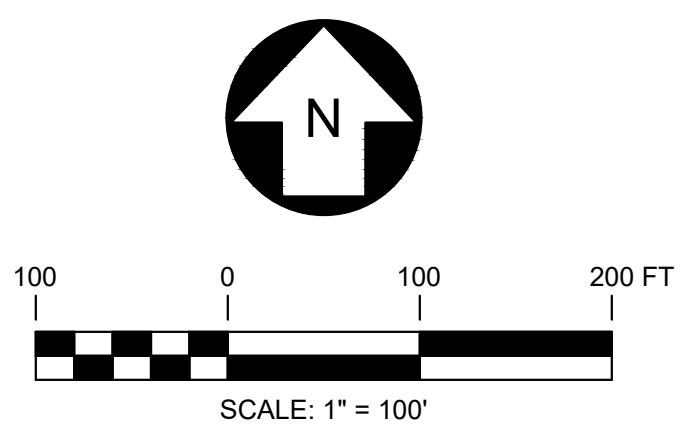
MATCHLINE SHEET MPS-C-201-50

LEGEND

- SUBCATCHMENT BOUNDARY 
- TIME OF CONCENTRATION FLOW LINE 
- REACH 
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION  EL. 520.0±
- REACH ID 
- SUBCATCHMENT ID 
- POND ID 
- STUDY POINT ID 
- SOILS BOUNDARY 





MATCHLINE SHEET MPS-C-201-51

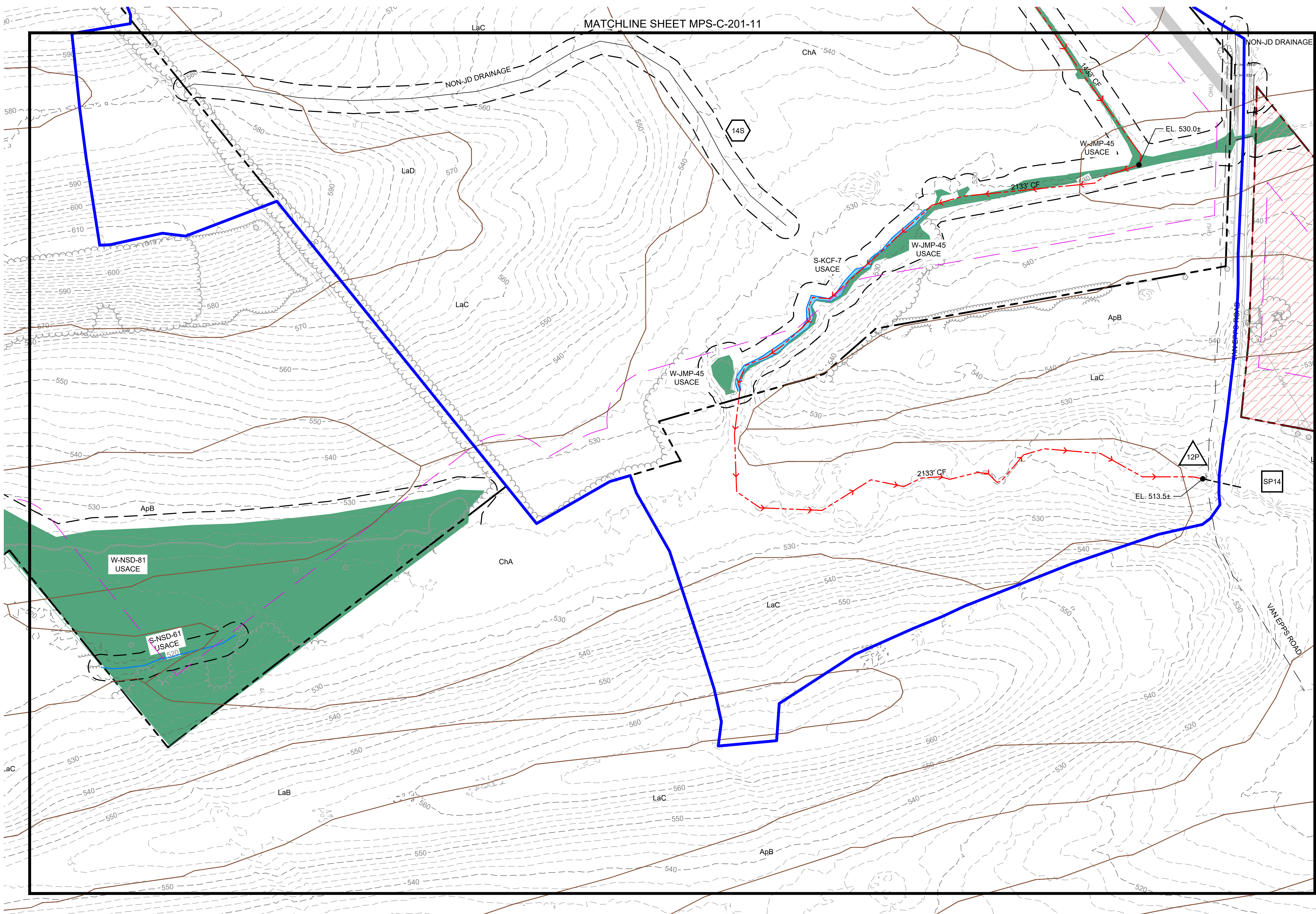


**PRELIMINARY**  
NOT FOR CONSTRUCTION



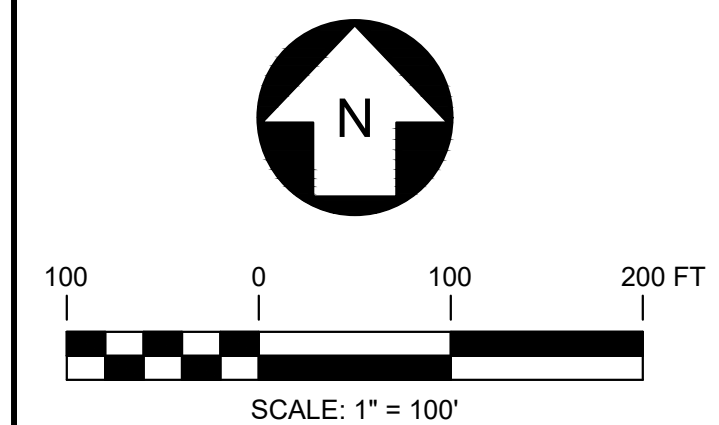
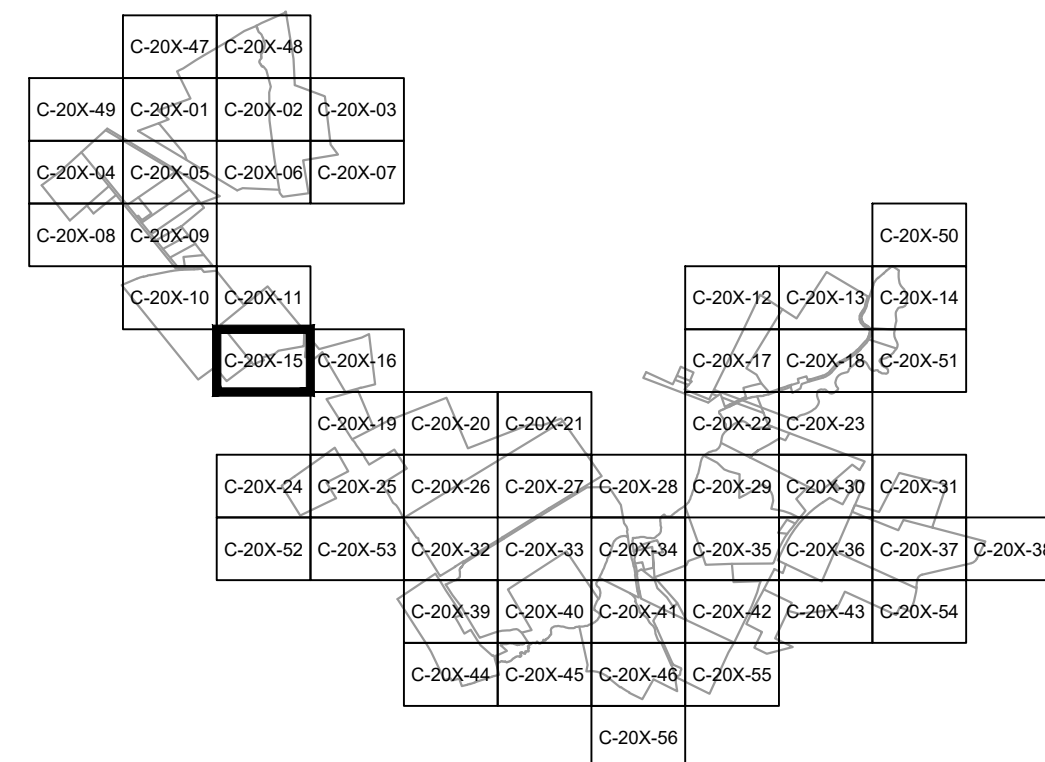
 249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269			
REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM DESIGNED	MILL POINT SOLAR PROJECT	
PMM DRAWN	CONNECTGEN, LLC	
PMM CHECKED	PRE-DEVELOPMENT STORMWATER PLAN	
APPROVED	GLEN	NEW YORK
REVIEW 1	03/01/2023 DATE	
REVIEW 2	1" = 100' SCALE	
	MPS-C-201-14	REV. C



**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrows
- REACH: Pink line with circles
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: Black dot with 'EL. 520.0±'
- REACH ID: Box with '1R'
- SUBCATCHMENT ID: Hexagon with '1S'
- POND ID: Triangle with '1P'
- STUDY POINT ID: Box with 'SP1'
- SOILS BOUNDARY: Brown line



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

REFERENCE ITEMS	REV	DESCRIPTION	DATE	DES	CHK	APP
	D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
	C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
	B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
	A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

03/01/2023  
DATE  
1" = 100'  
SCALE

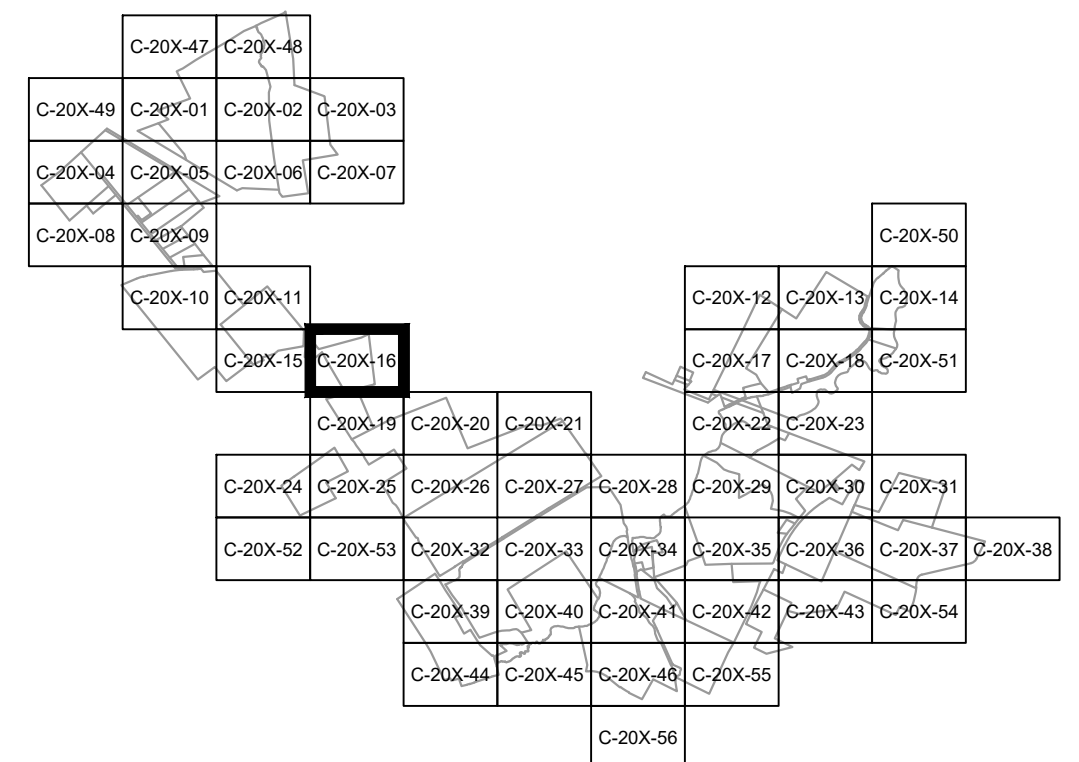
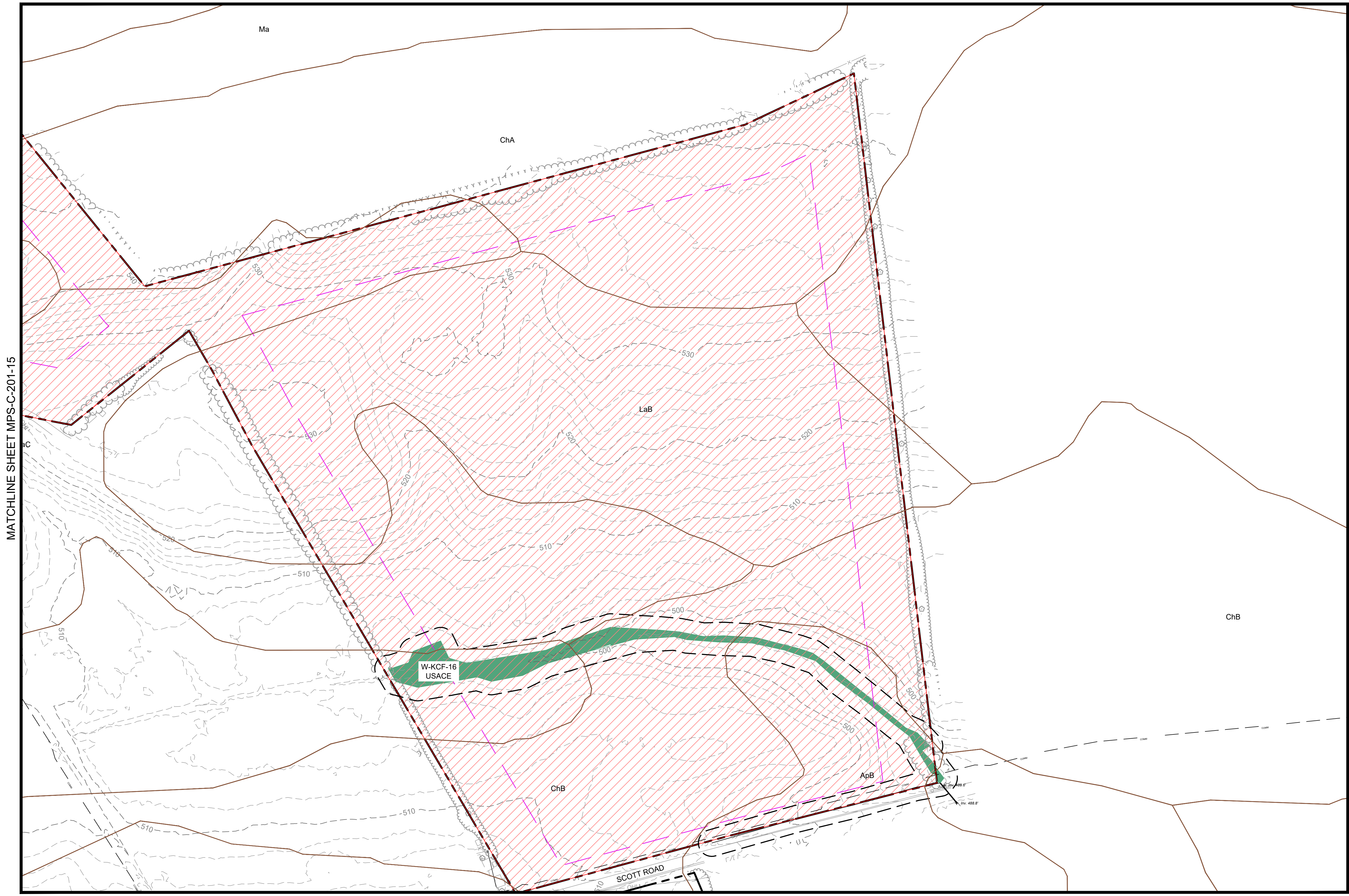
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MPS-C-201-15

REV. C

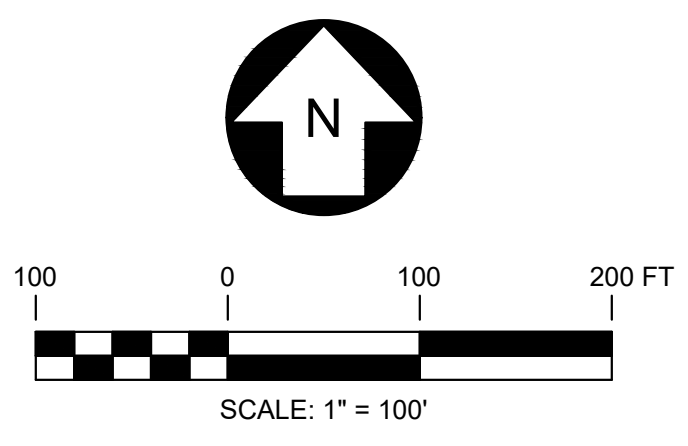
**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



MATCHLINE SHEET MPS-C-201-15

MATCHLINE SHEET MPS-C-201-19



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269				
		REV	DESCRIPTION	DATE	DES	CHK
	D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
	C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
	B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
	A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

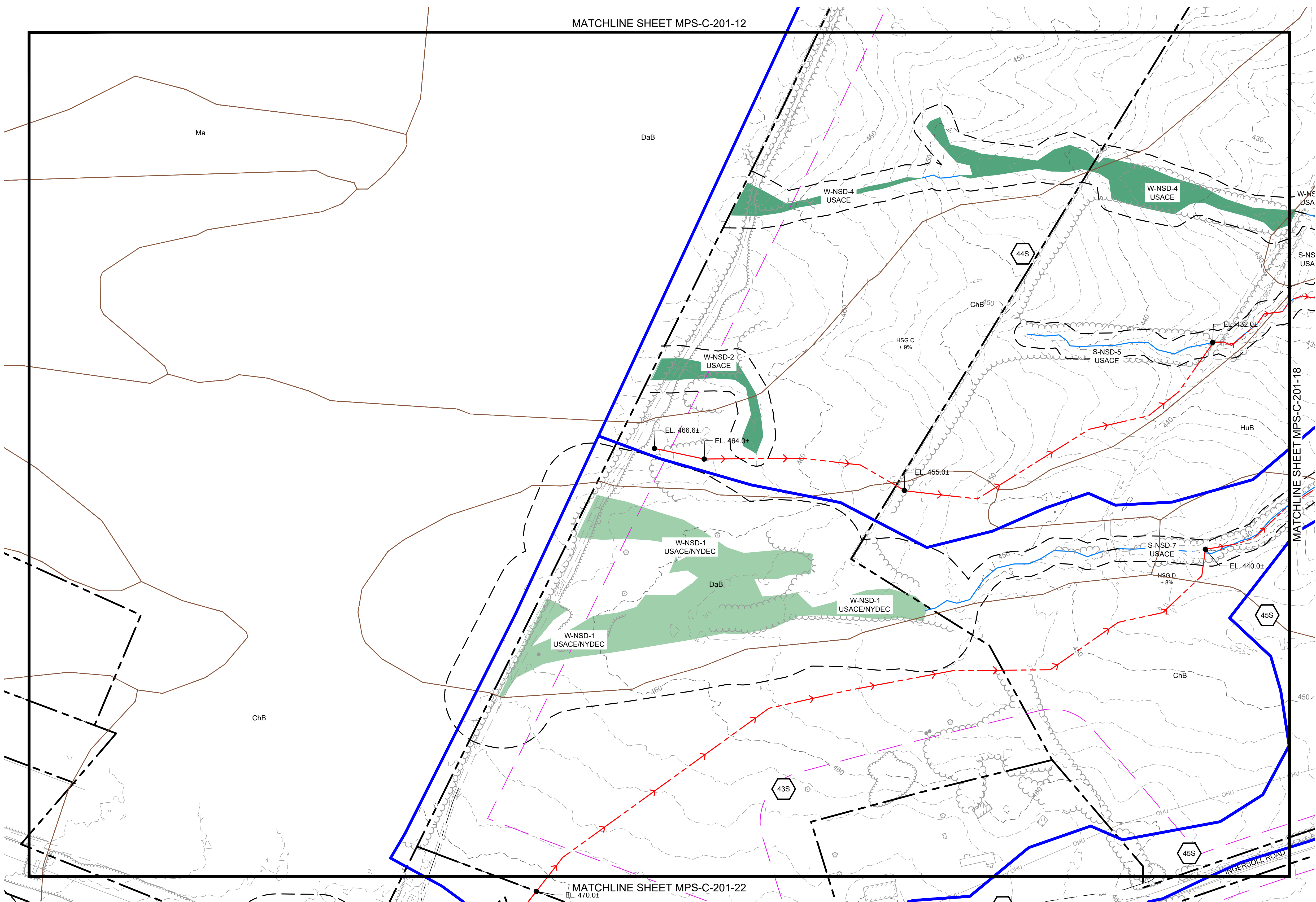
PMM DESIGNED PMM DRAWN PMM CHECKED APPROVED	<b>MILL POINT SOLAR PROJECT</b> CONNECTGEN, LLC PRE-DEVELOPMENT STORMWATER PLAN	GLEN NEW YORK
REVIEW 1 REVIEW 2	03/01/2023 DATE 1" = 100' SCALE	MPS-C-201-16
		REV. C



MATCHLINE SHEET MPS-C-201-12

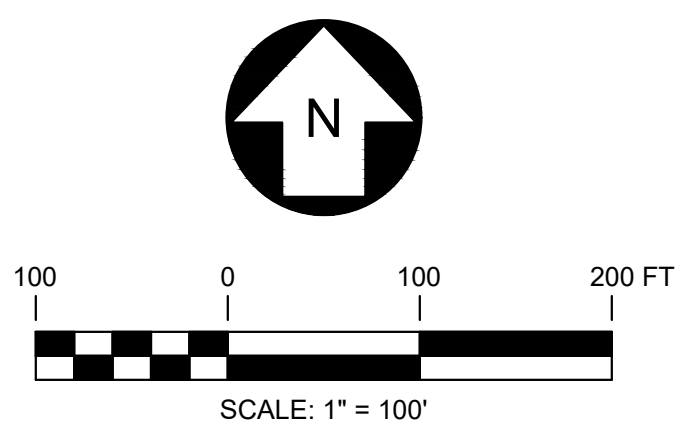
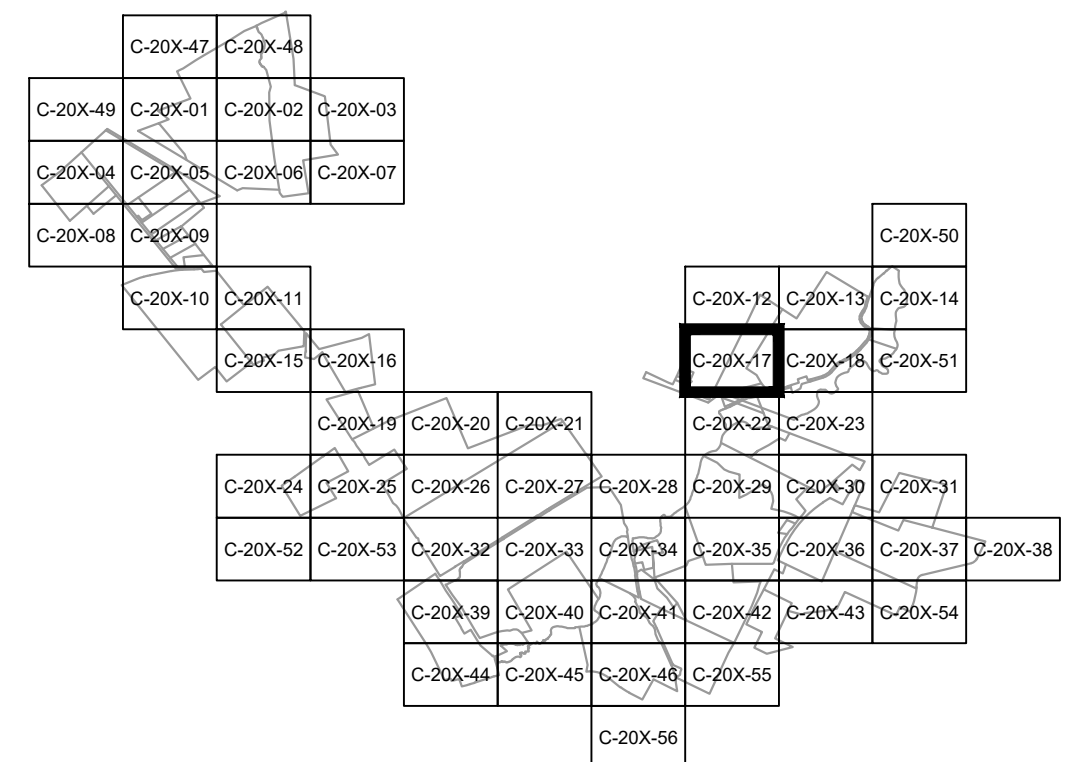
LEGEND

- SUBCATCHMENT BOUNDARY
- TIME OF CONCENTRATION FLOW LINE
- REACH
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY



MATCHLINE SHEET MPS-C-201-18

MATCHLINE SHEET MPS-C-201-22



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

REFERENCE ITEMS	REV	DESCRIPTION	DATE	DES	CHK	APP
	D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
	C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
	B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
	A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

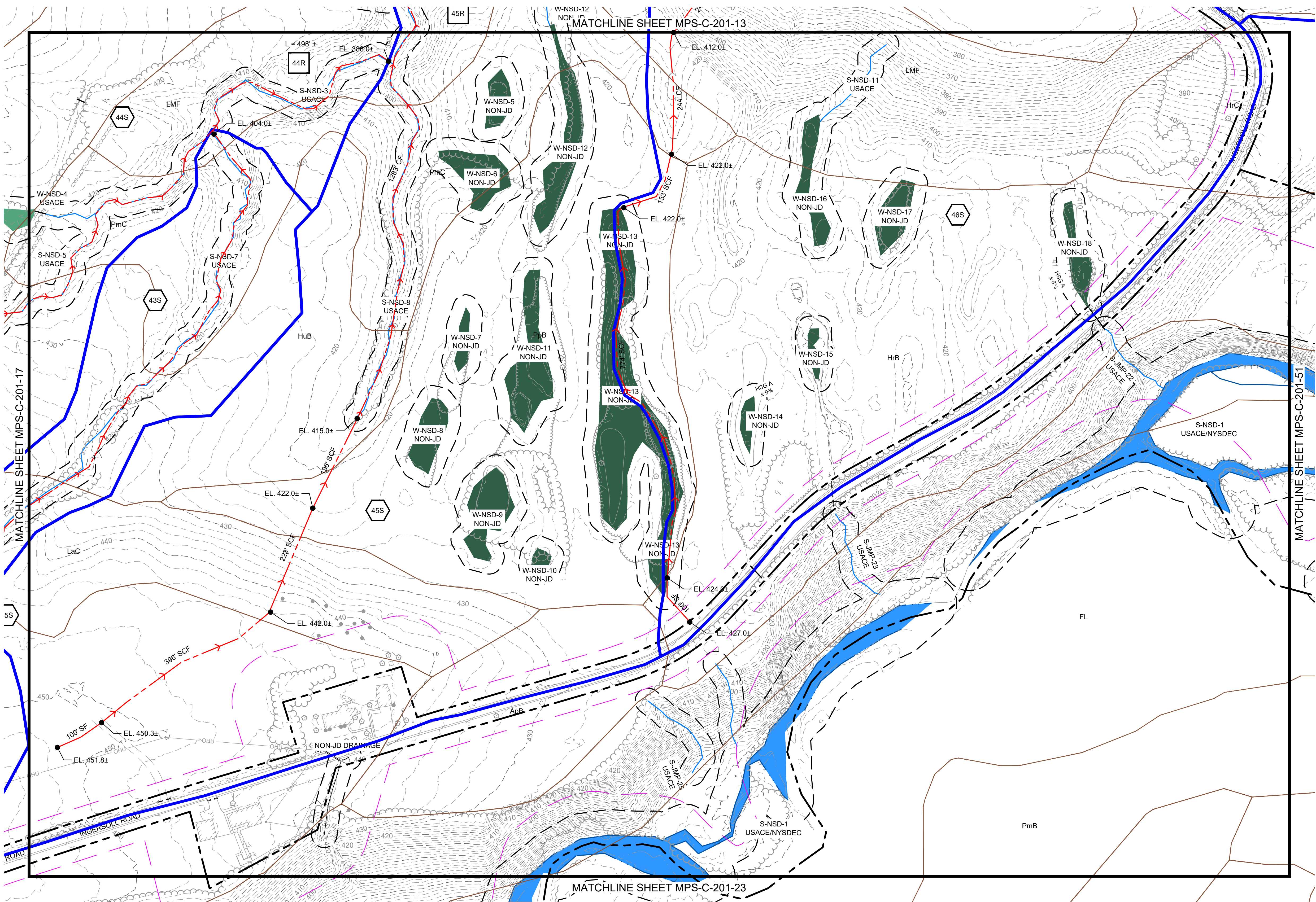
03/01/2023  
DATE



MPS-C-201-17

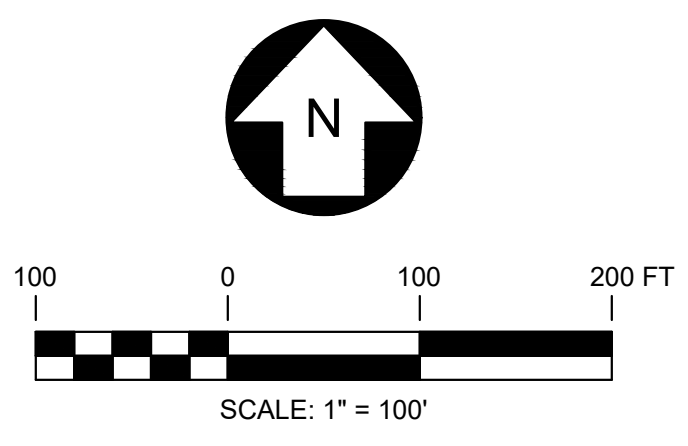
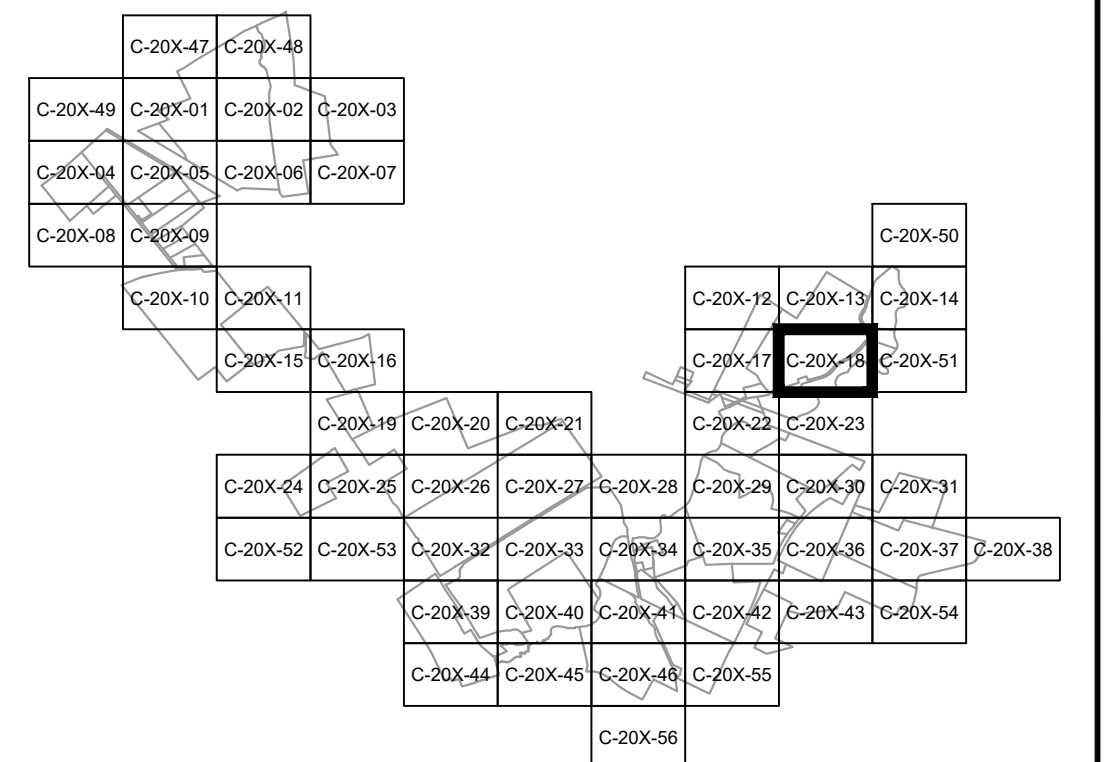
REV.  
C

1" = 100'  
SCALE



**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue solid line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrows
- REACH: Pink dashed line with circles
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: Black dot with 'EL. 520.0±'
- REACH ID: Square with '1R'
- SUBCATCHMENT ID: Hexagon with '1S'
- POND ID: Triangle with '1P'
- STUDY POINT ID: Square with 'SP1'
- SOILS BOUNDARY: Brown dashed line



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM DESIGNED  
PMM DRAWN  
PMM CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN  
GLEN NEW YORK

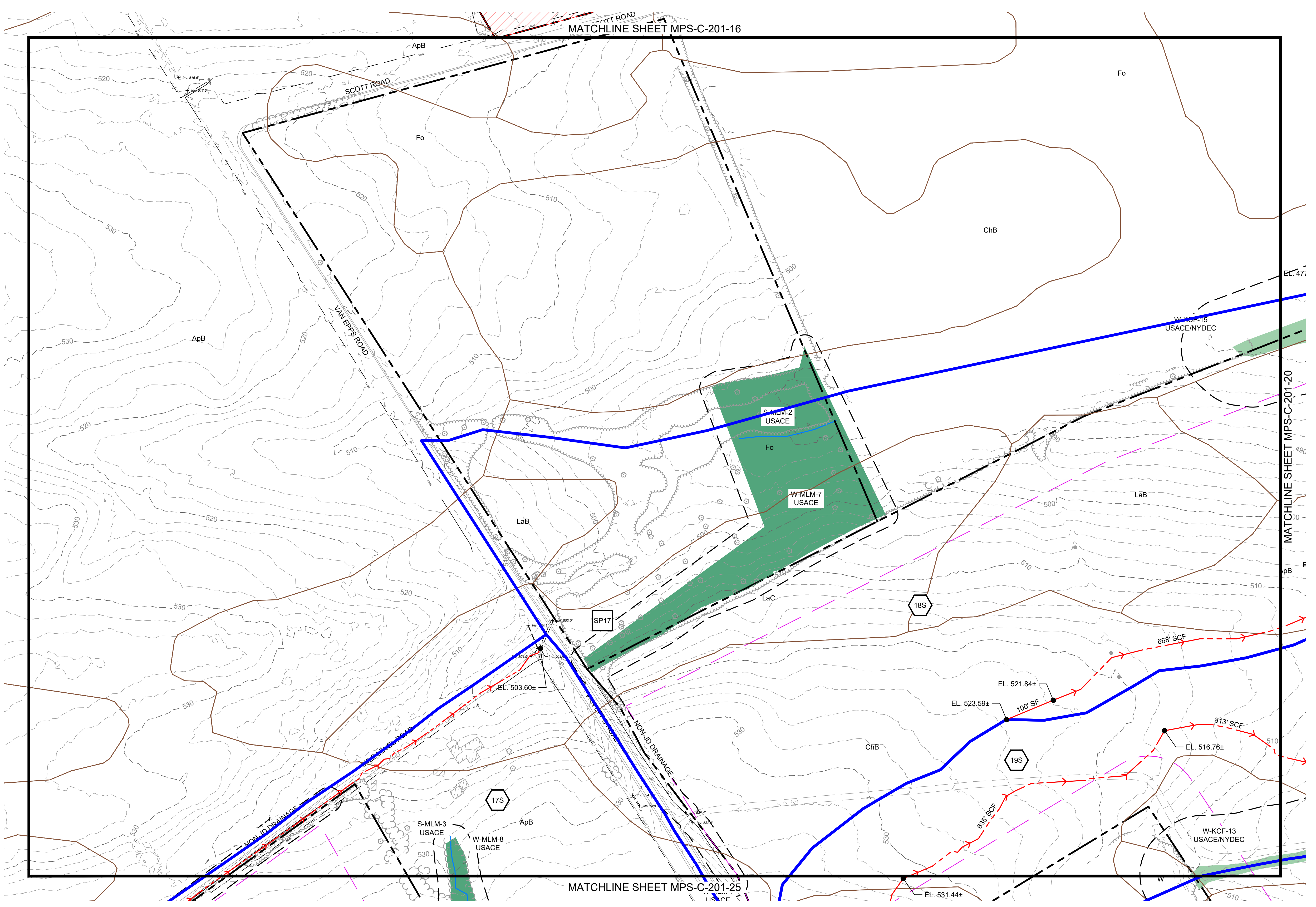
REVIEW 1  
REVIEW 2

03/01/2023  
DATE  
1" = 100'  
SCALE



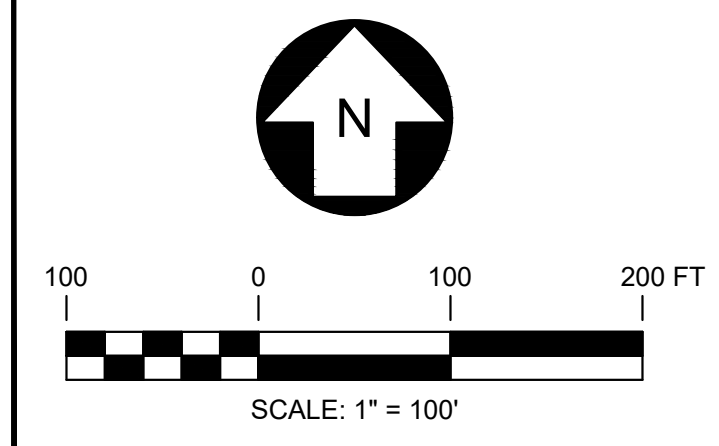
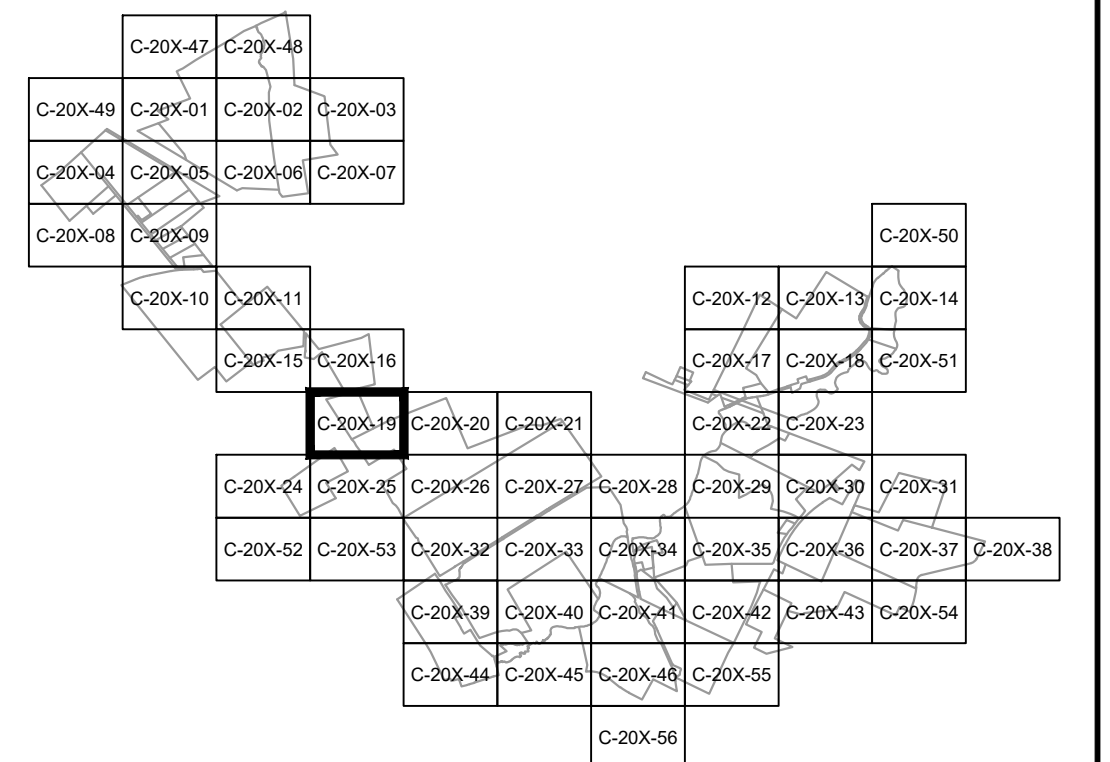
MPS-C-201-18

REV. C



**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrows
- REACH: Pink line with circles
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: Black dot with 'EL. 520.0±'
- REACH ID: Box with '1R'
- SUBCATCHMENT ID: Hexagon with '1S'
- POND ID: Triangle with '1P'
- STUDY POINT ID: Box with 'SP1'
- SOILS BOUNDARY: Brown line



**PRELIMINARY**  
NOT FOR CONSTRUCTION

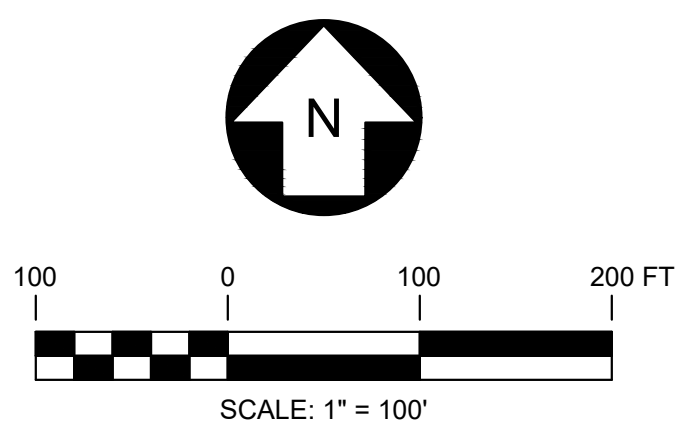
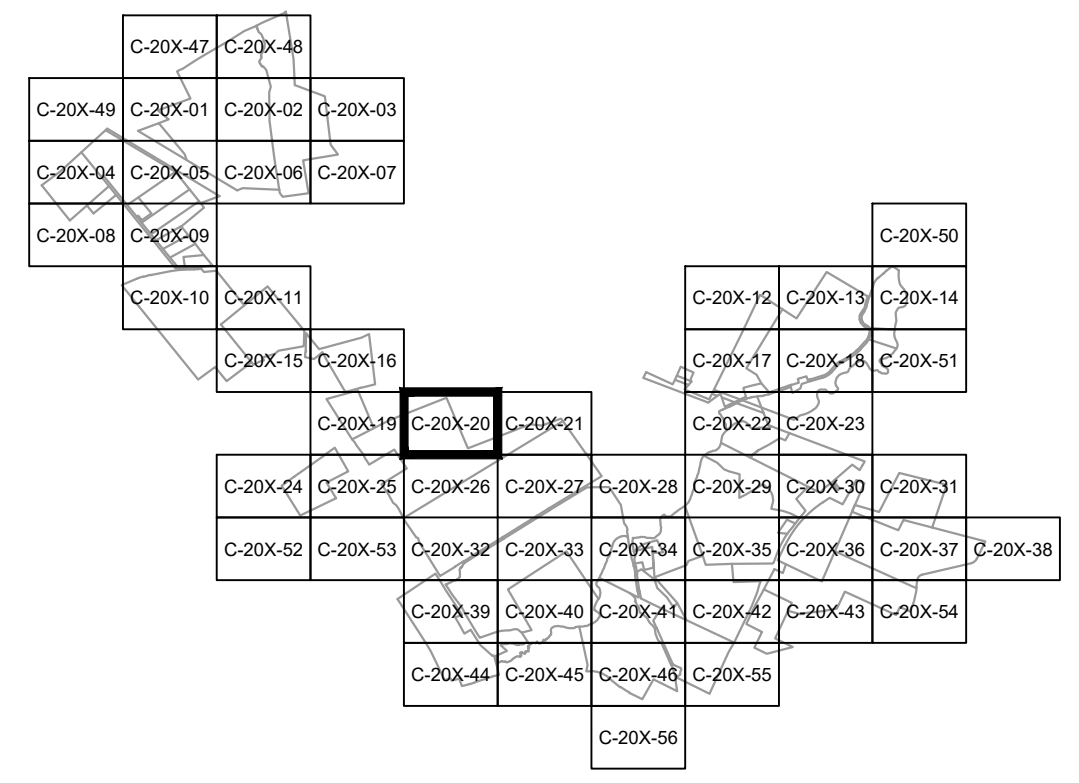
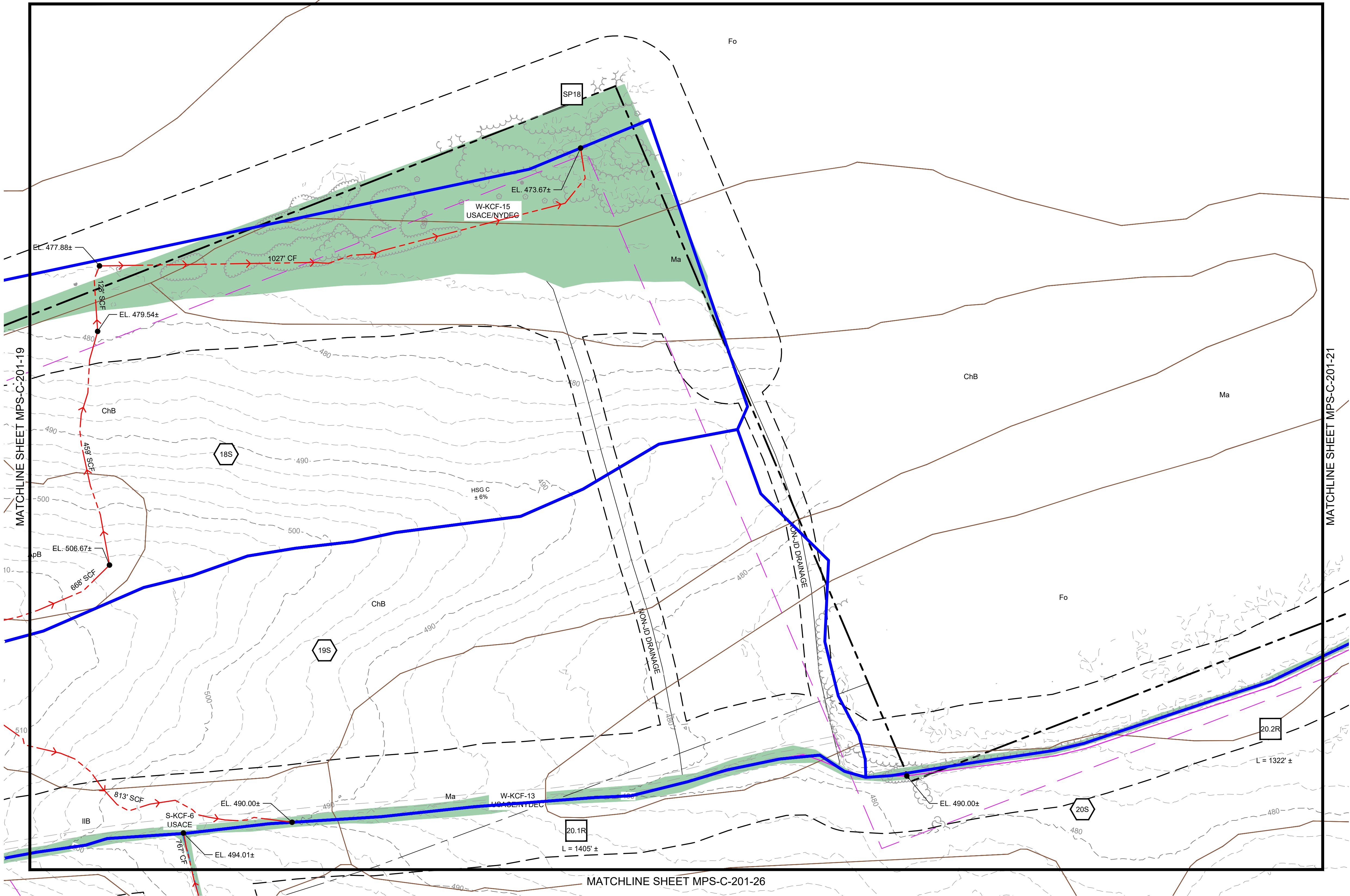


249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269			
REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM DESIGNED PMM DRAWN PMM CHECKED APPROVED	<b>MILL POINT SOLAR PROJECT</b> <b>CONNECTGEN, LLC</b> <b>PRE-DEVELOPMENT STORMWATER PLAN</b>		GLEN NEW YORK
	03/01/2023 DATE 1" = 100' SCALE		

**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

**MILL POINT SOLAR PROJECT**  
**CONNECTGEN, LLC**  
**PRE-DEVELOPMENT STORMWATER PLAN**

GLENNEW YORK

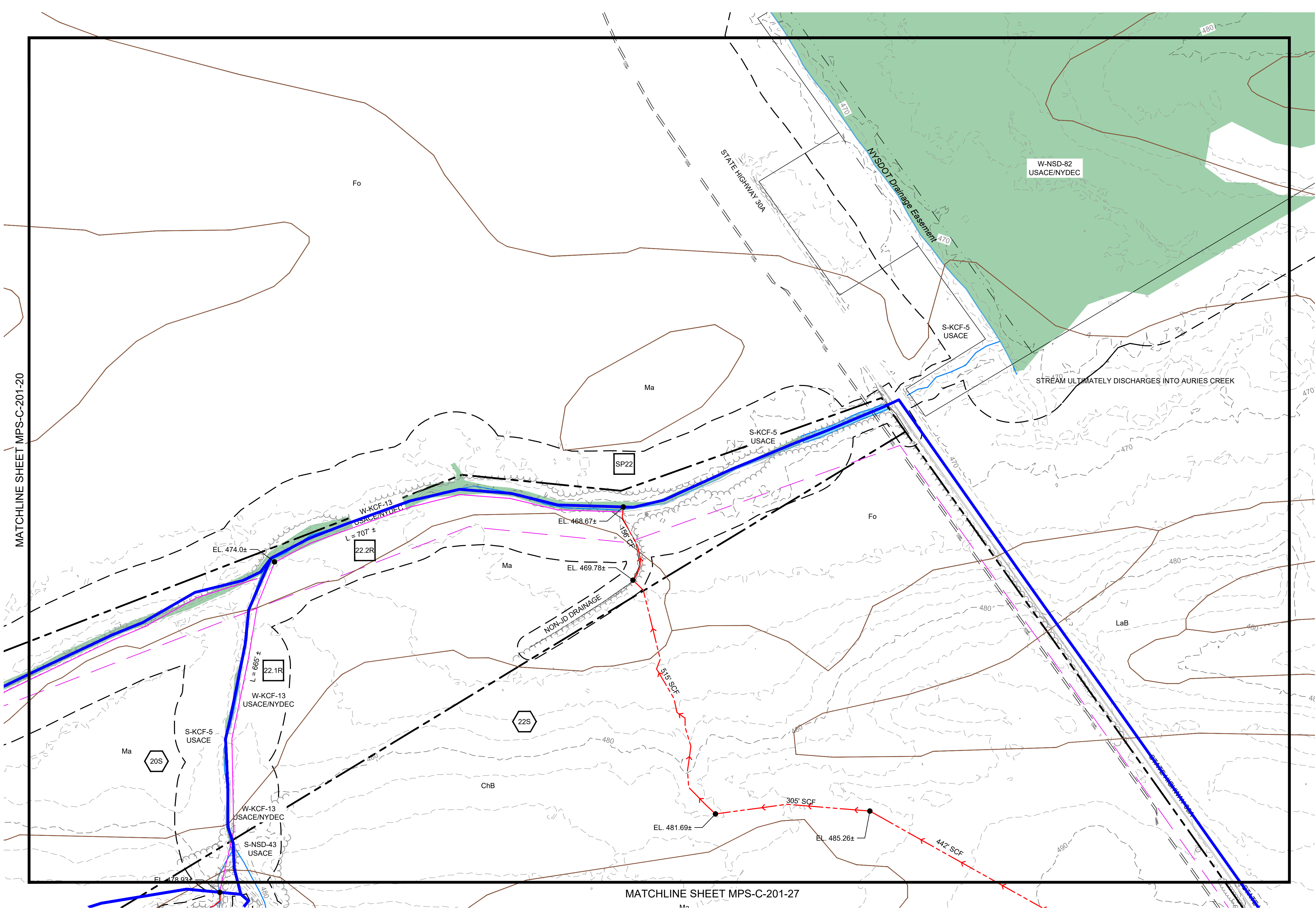
REVIEW 1  
REVIEW 2

03/01/2023  
DATE  
1" = 100'  
SCALE



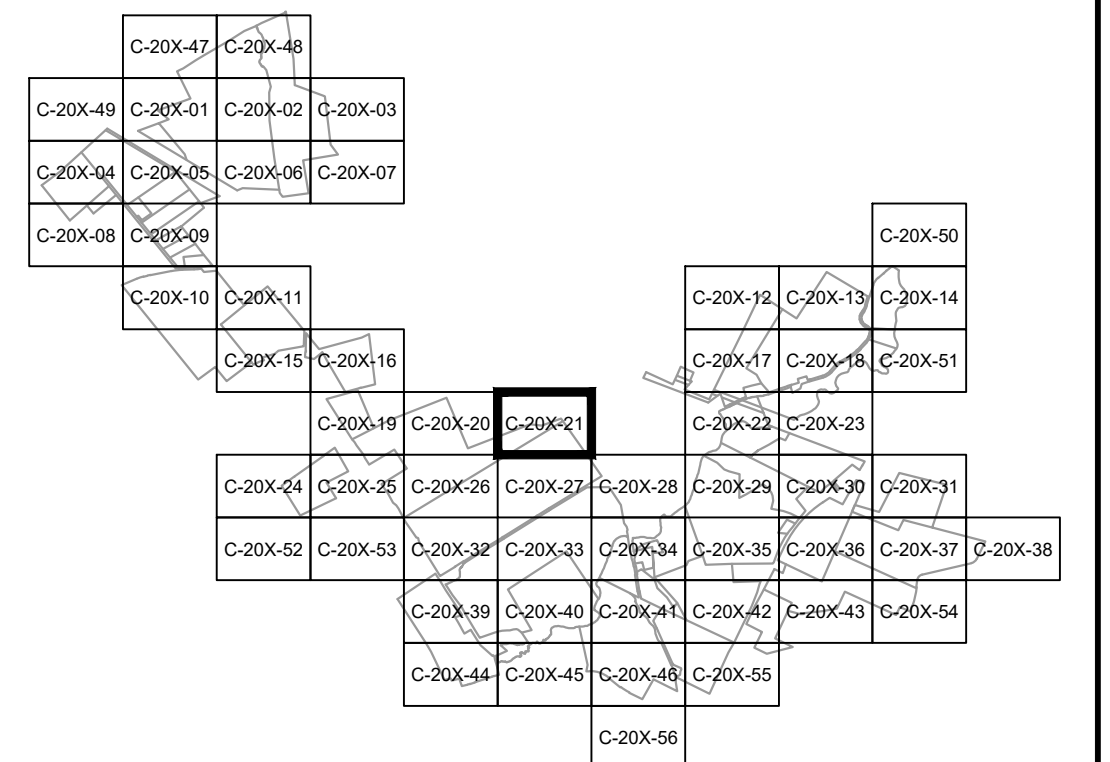
MPS-C-201-20

REV.  
C



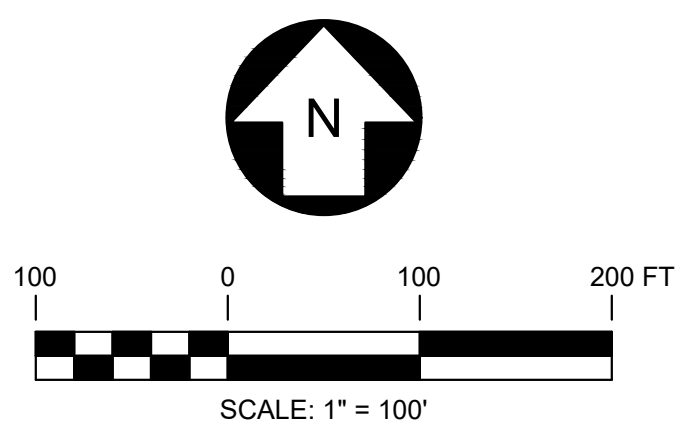
**LEGEND**

SUBCATCHMENT BOUNDARY	
TIME OF CONCENTRATION FLOW LINE	
REACH	
SHEET FLOW	100' SF
SHALLOW CONCENTRATED FLOW	100' SCF
CHANNEL FLOW	100' CF
SPOT ELEVATION	EL. 520.0±
REACH ID	1R
SUBCATCHMENT ID	1S
POND ID	1P
STUDY POINT ID	SP1
SOILS BOUNDARY	



MATCHLINE SHEET MPS-C-201-20

MATCHLINE SHEET MPS-C-201-27

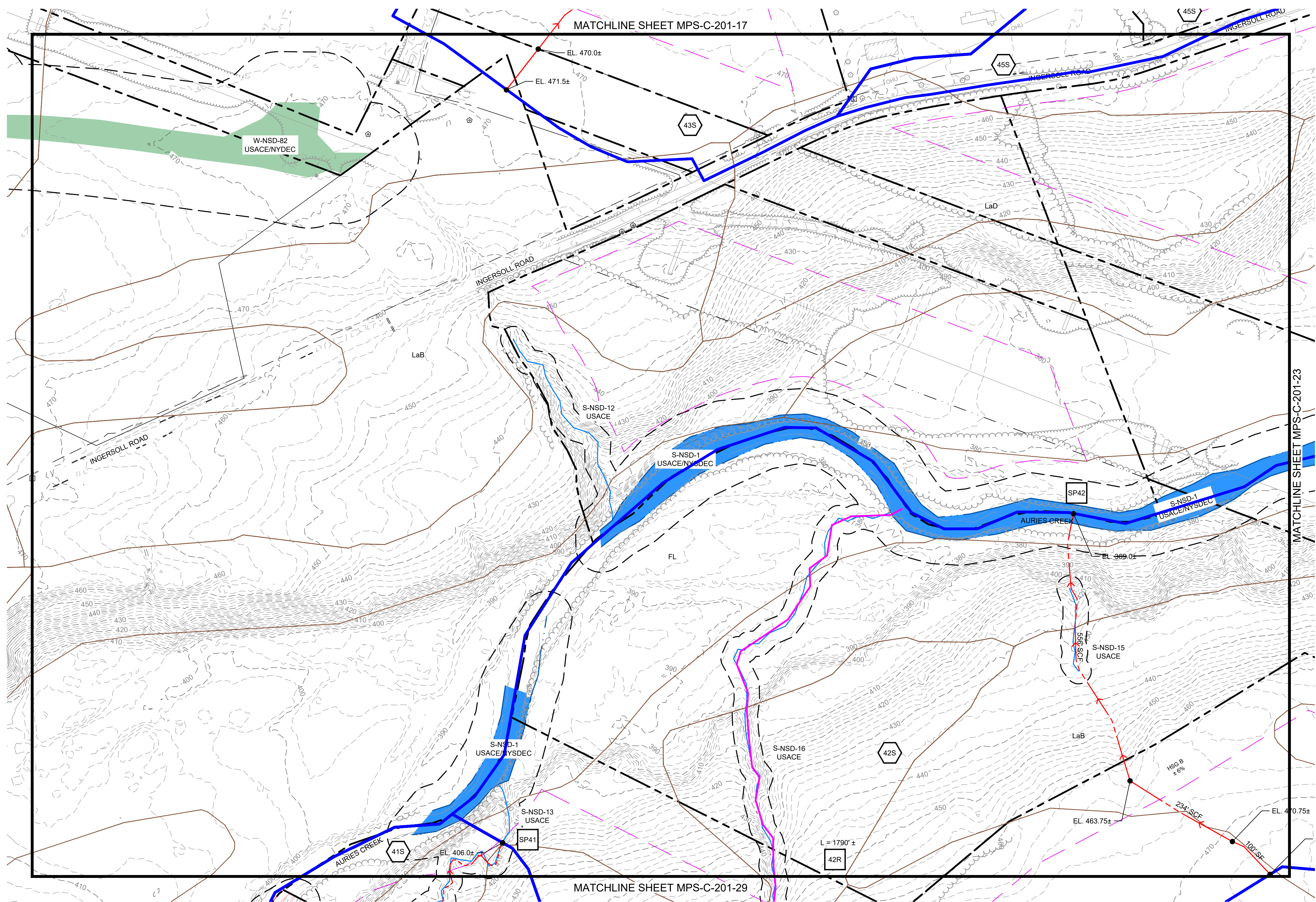


**PRELIMINARY**  
NOT FOR CONSTRUCTION



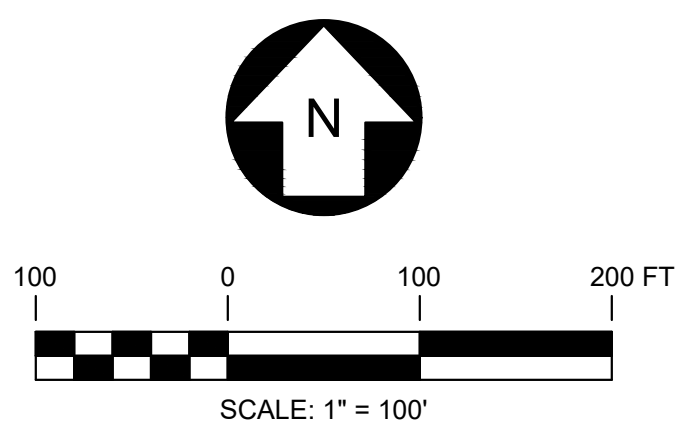
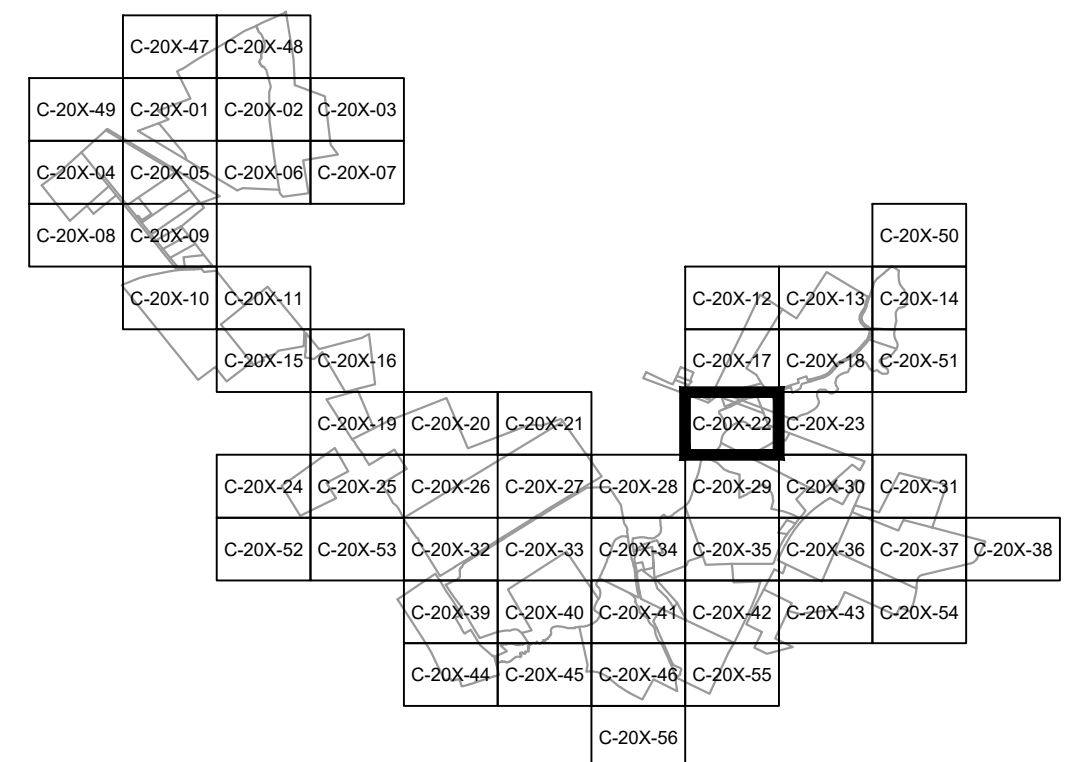
249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269			
REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM DESIGNED	MILL POINT SOLAR PROJECT CONNECTGEN, LLC PRE-DEVELOPMENT STORMWATER PLAN	GLEN NEW YORK
PMM DRAWN		
PMM CHECKED		
APPROVED		
REVIEW 1	03/01/2023	
REVIEW 2	DATE	
SCALE: 1" = 100'		MPS-C-201-21 REV. C



**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue solid line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrow
- REACH: Magenta dashed line with circles
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: Black dot with label (e.g., EL. 520.0±)
- REACH ID: Square symbol (e.g., 1R)
- SUBCATCHMENT ID: Hexagon symbol (e.g., 1S)
- POND ID: Triangle symbol (e.g., 1P)
- STUDY POINT ID: Square symbol (e.g., SP1)
- SOILS BOUNDARY: Brown dashed line



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

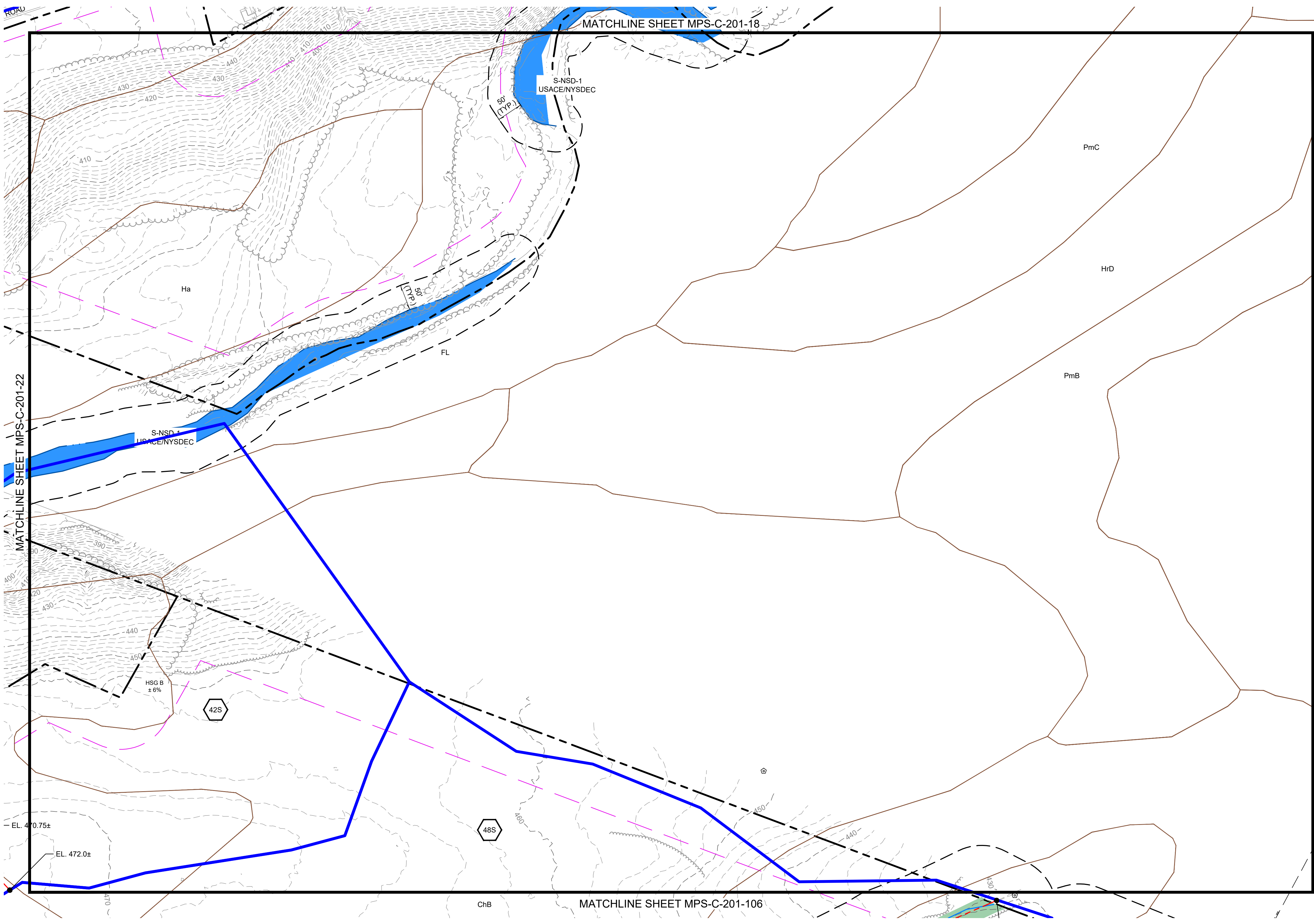
GLEN NEW YORK

03/01/2023  
DATE



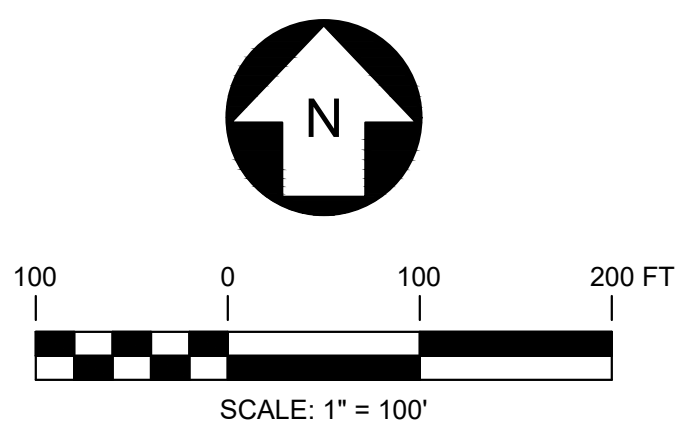
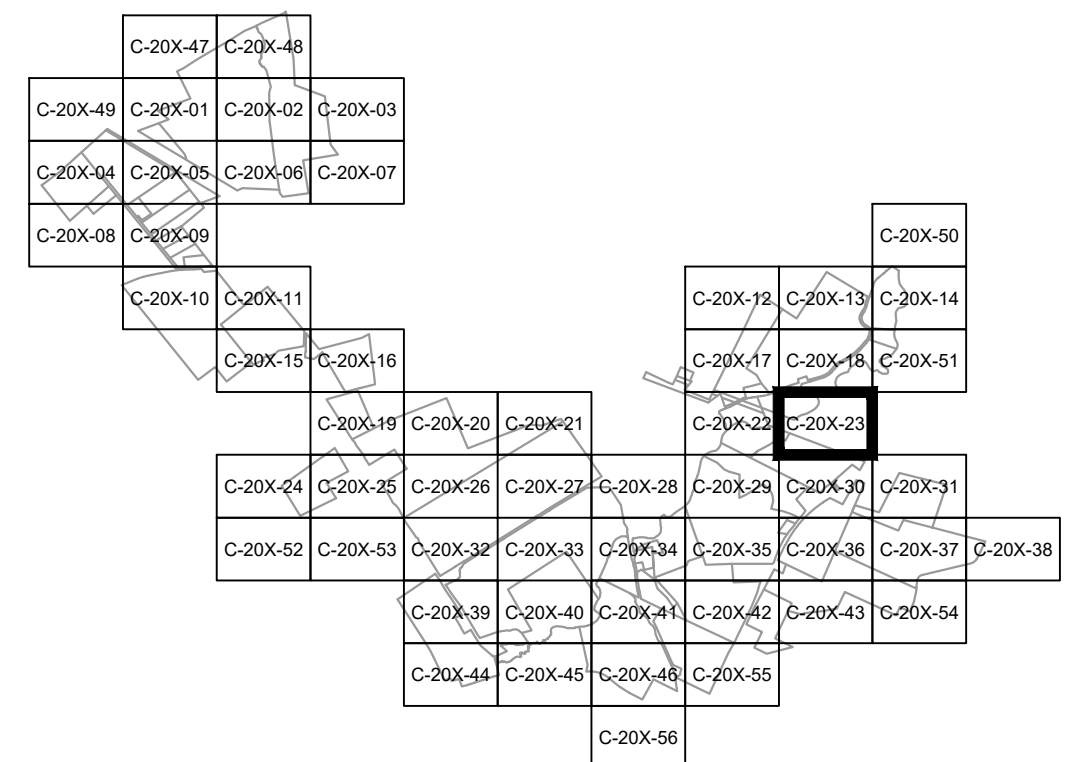
MPS-C-201-22

REV.  
C



**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



**PRELIMINARY**  
NOT FOR CONSTRUCTION

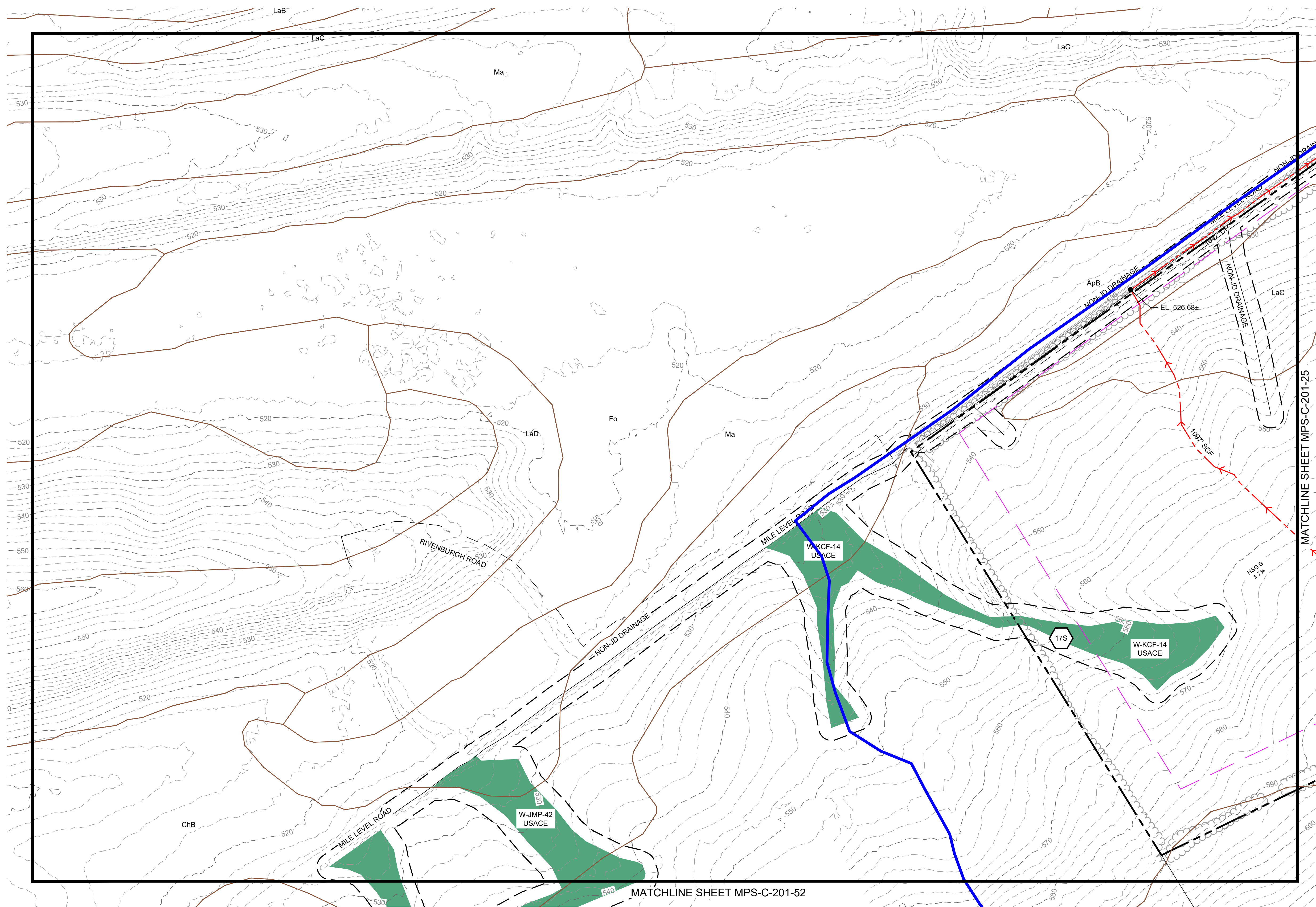


REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

249 Western Avenue  
Augusta, ME 04330

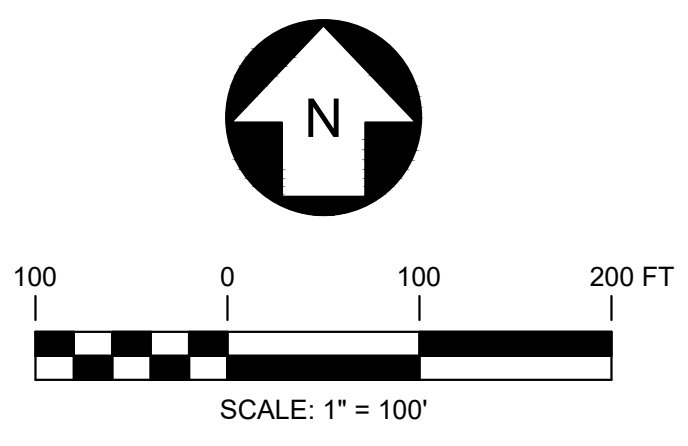
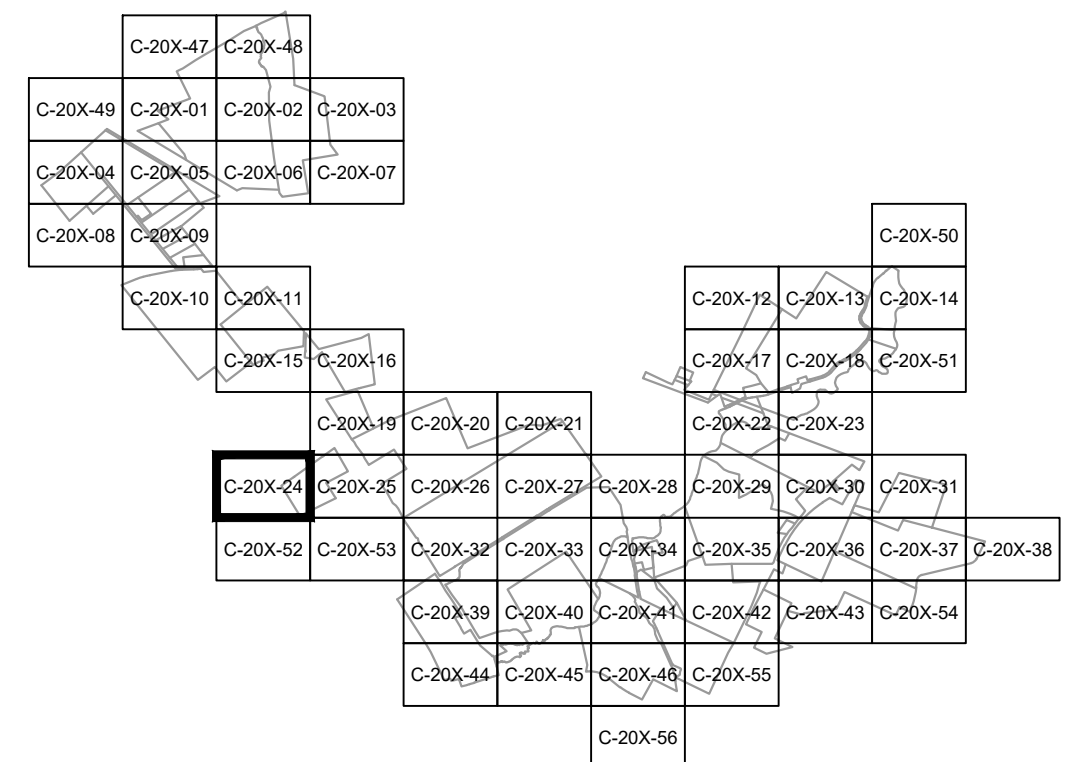
PROJECT NO: 443269

PMM DESIGNED PMM DRAWN PMM CHECKED - APPROVED	<b>MILL POINT SOLAR PROJECT</b> <b>CONNECTGEN, LLC</b> <b>PRE-DEVELOPMENT STORMWATER PLAN</b>	NEW YORK
GLEN	03/01/2023 DATE 1" = 100' SCALE	
- REVIEW 1 - REVIEW 2	MPS-C-201-23	REV. C



**LEGEND**

SUBCATCHMENT BOUNDARY	
TIME OF CONCENTRATION FLOW LINE	
REACH	
SHEET FLOW	100' SF
SHALLOW CONCENTRATED FLOW	100' SCF
CHANNEL FLOW	100' CF
SPOT ELEVATION	EL. 520.0±
REACH ID	
SUBCATCHMENT ID	
POND ID	
STUDY POINT ID	
SOILS BOUNDARY	



**PRELIMINARY**  
NOT FOR CONSTRUCTION



REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

**TRC** 249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

03/01/2023  
DATE

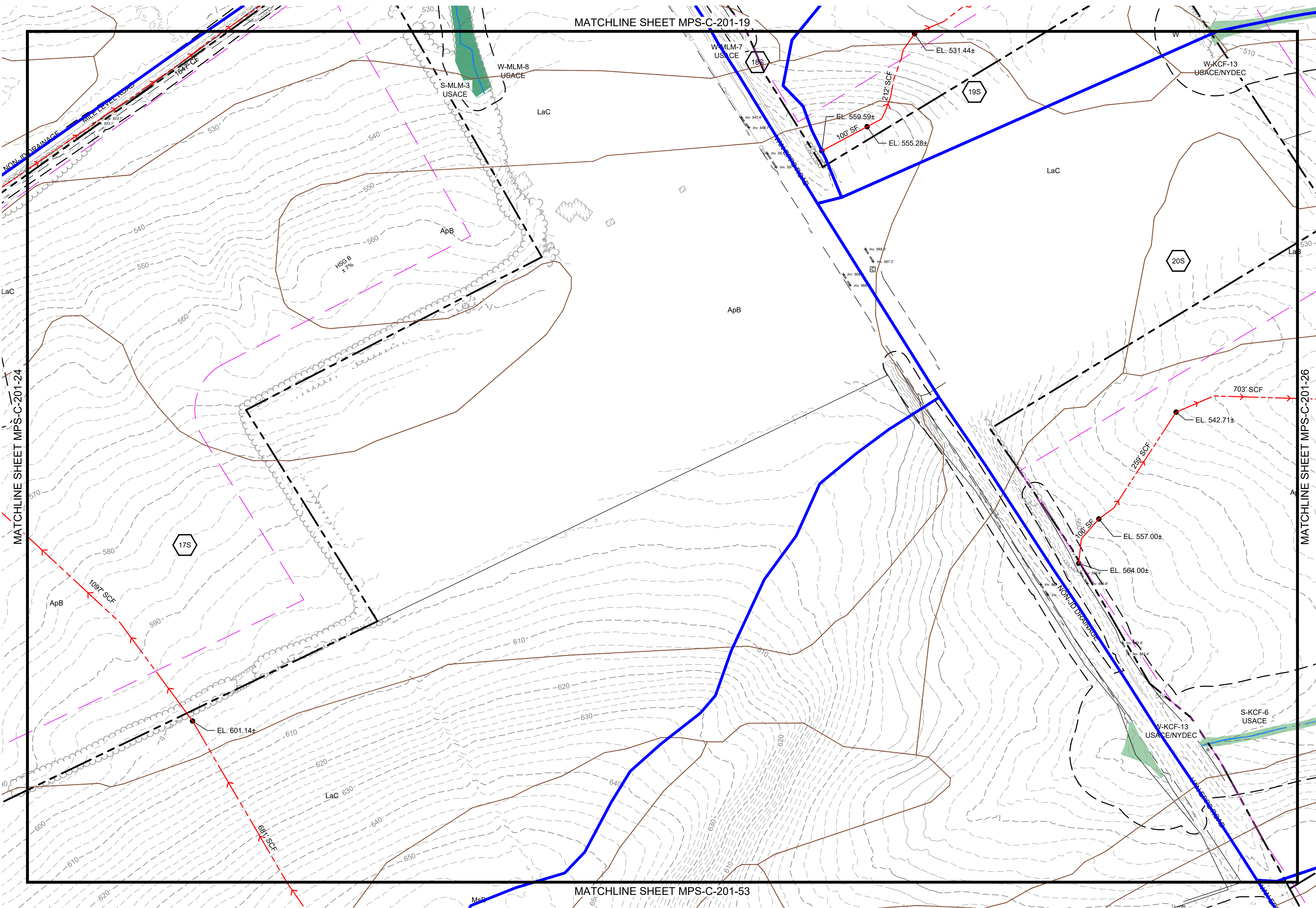
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SCALE

**TRC**

MPS-C-201-24

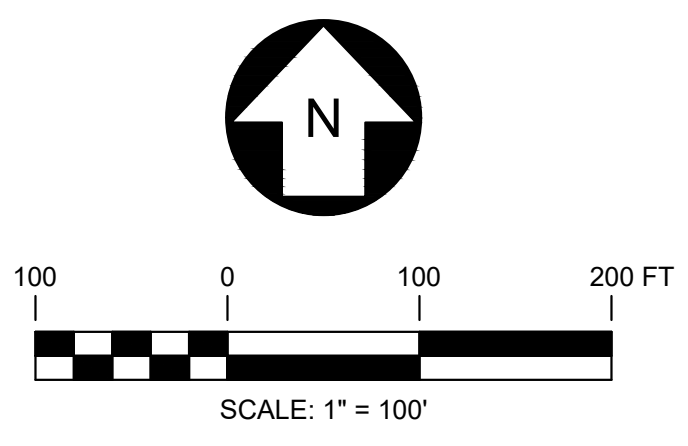
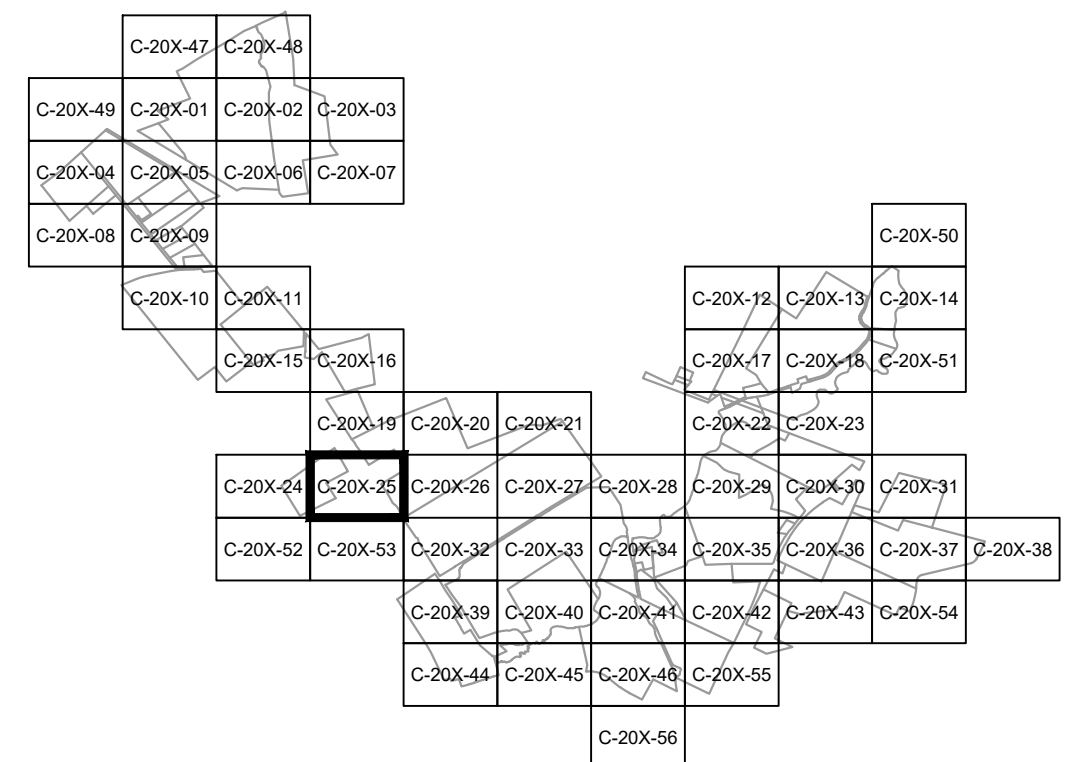
REV. C





**LEGEND**

- SUBCATCHMENT BOUNDARY:
- TIME OF CONCENTRATION FLOW LINE:
- REACH:
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 1S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY:



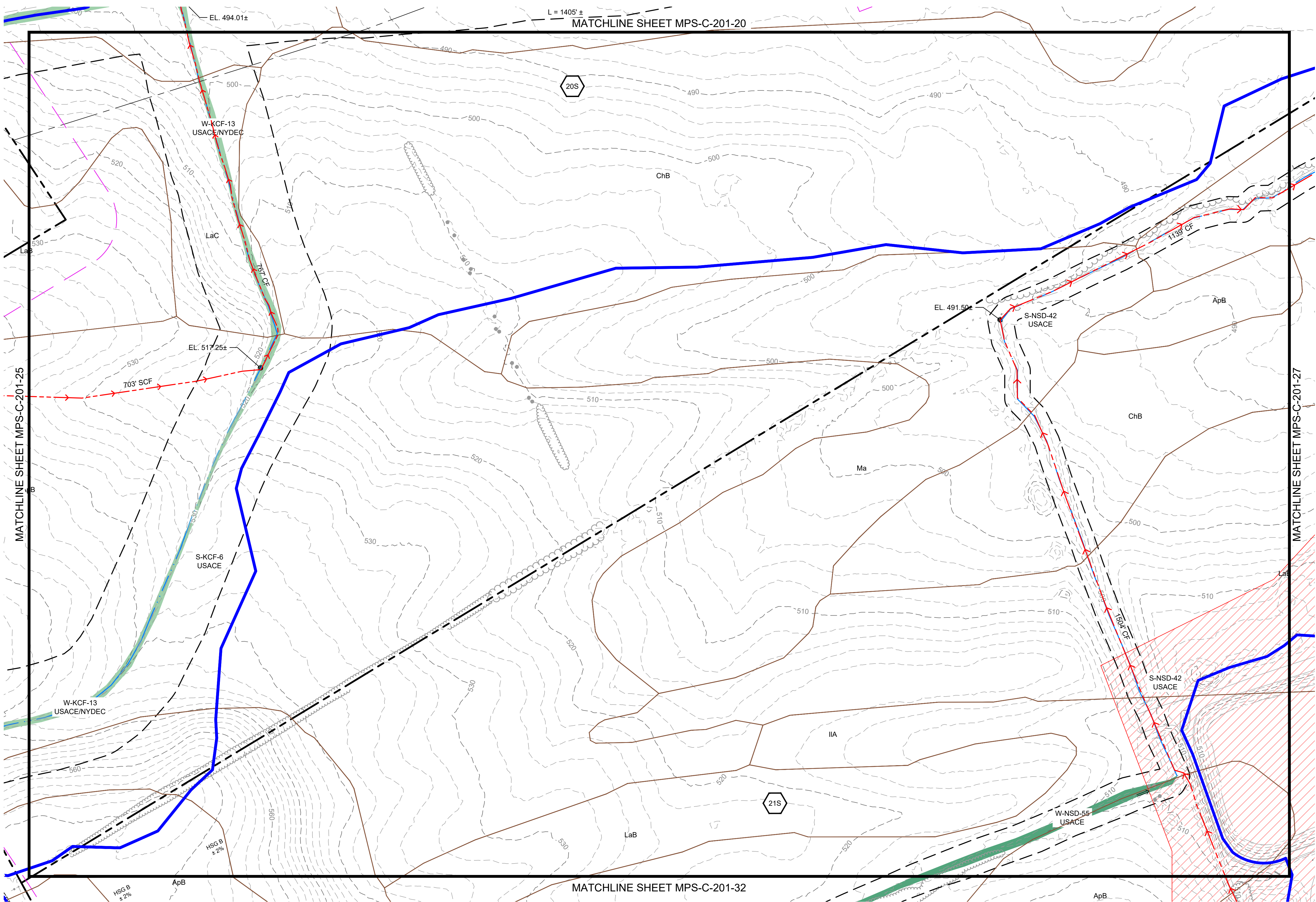
**PRELIMINARY**  
NOT FOR CONSTRUCTION



		249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269		
REV	DESCRIPTION	DATE	DES	CHK	APP	
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM	
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM	
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM	
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM	

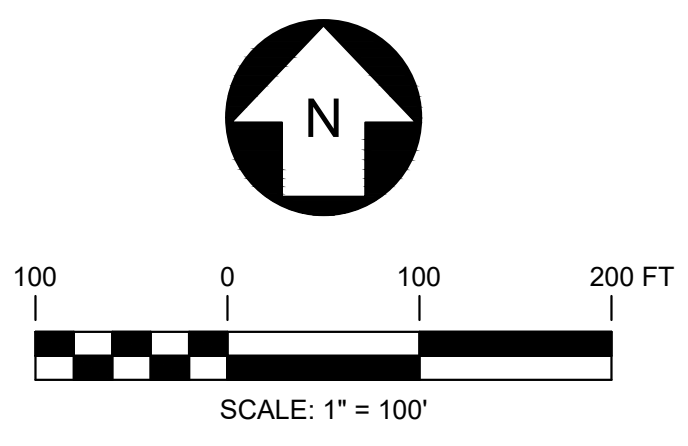
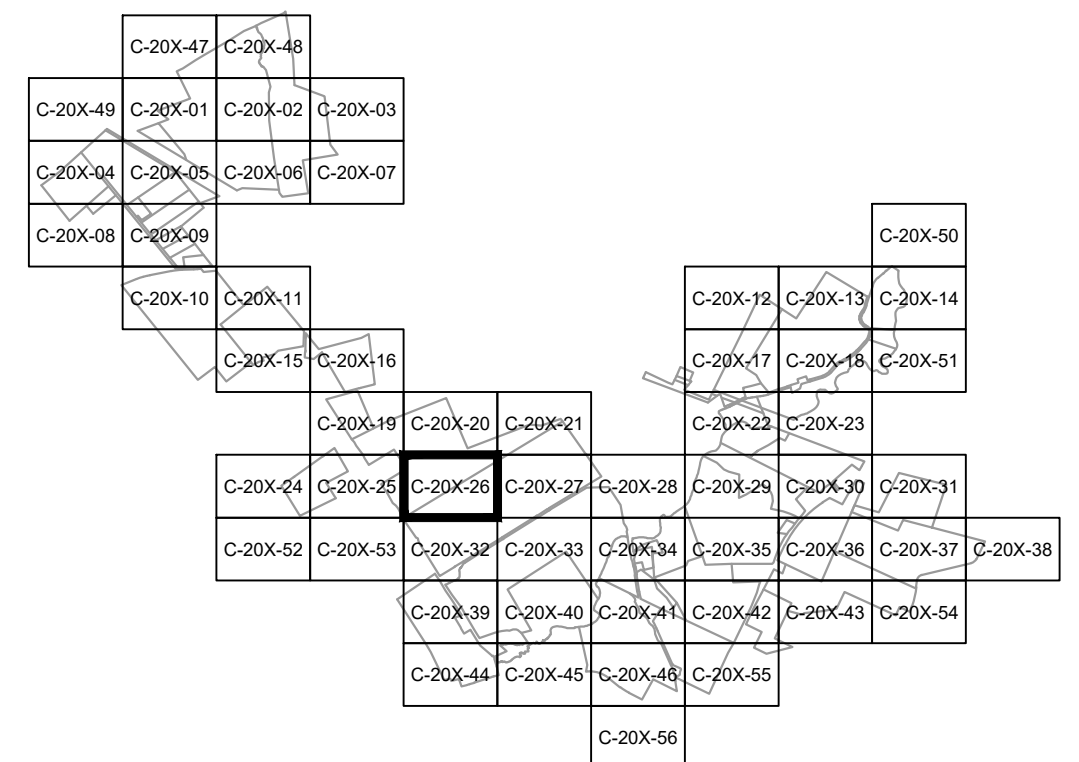
PMM DESIGNED PMM DRAWN PMM CHECKED APPROVED	MILL POINT SOLAR PROJECT CONNECTGEN, LLC PRE-DEVELOPMENT STORMWATER PLAN		GLEN	NEW YORK
REVIEW 1 REVIEW 2	03/01/2023 DATE 1" = 100' SCALE		MPS-C-201-25	REV. C

REFERENCE ITEMS



**LEGEND**

- SUBCATCHMENT BOUNDARY:
- TIME OF CONCENTRATION FLOW LINE:
- REACH:
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 1S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY:



**PRELIMINARY**  
NOT FOR CONSTRUCTION



REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

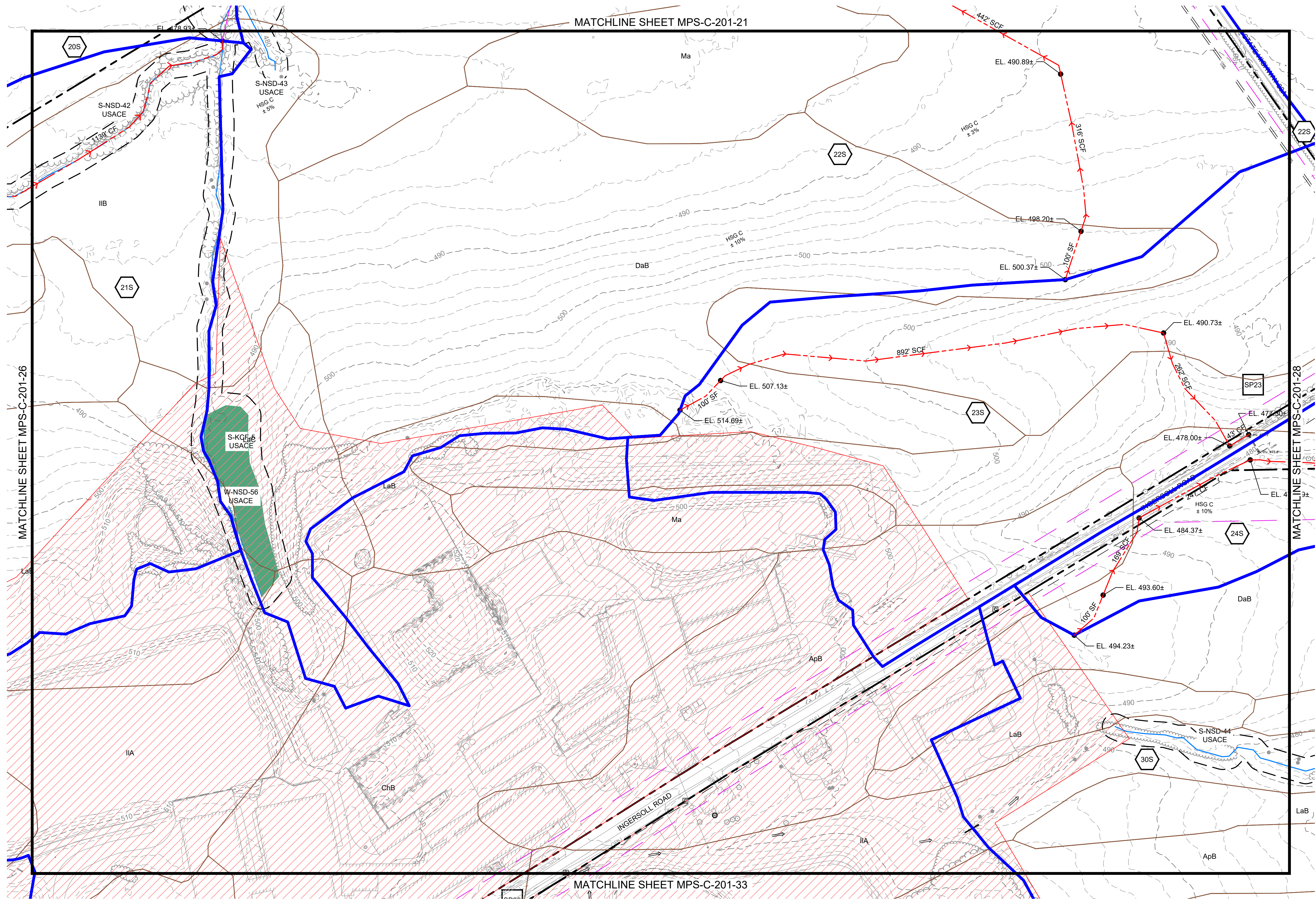
GLEN NEW YORK

03/01/2023  
DATE



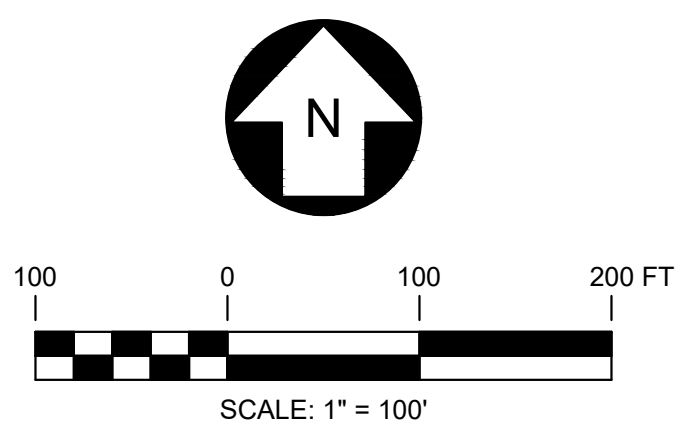
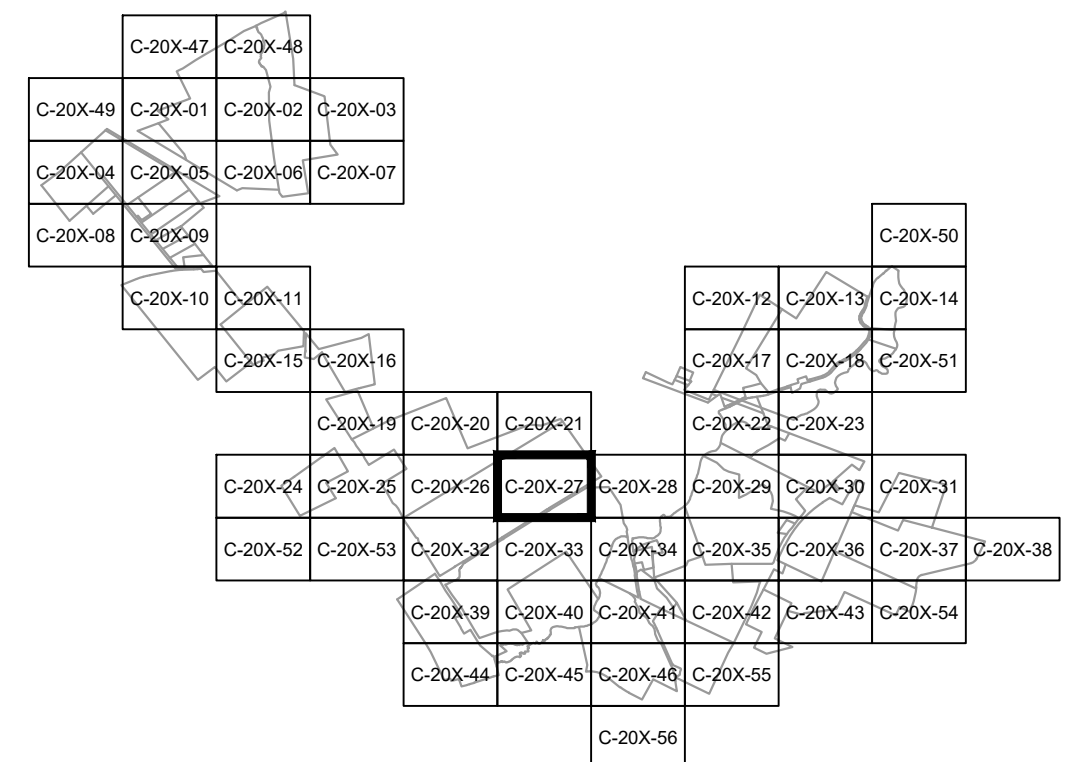
MPS-C-201-26

REV.  
C



**LEGEND**

SUBCATCHMENT BOUNDARY	
TIME OF CONCENTRATION FLOW LINE	
REACH	
SHEET FLOW	100' SF
SHALLOW CONCENTRATED FLOW	100' SCF
CHANNEL FLOW	100' CF
SPOT ELEVATION	EL. 520.0±
REACH ID	
SUBCATCHMENT ID	
POND ID	
STUDY POINT ID	
SOILS BOUNDARY	



**PRELIMINARY**  
NOT FOR CONSTRUCTION

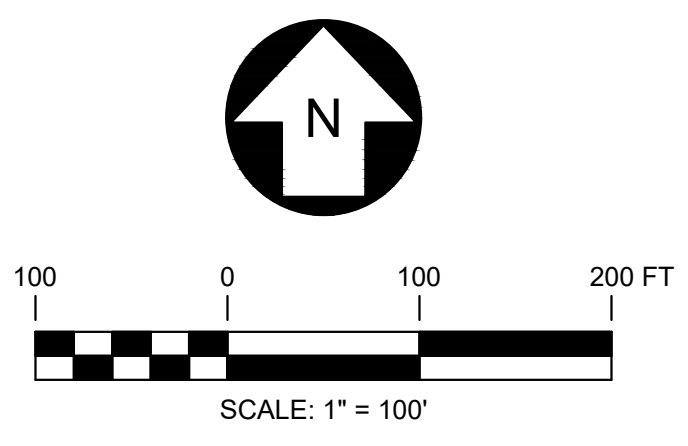
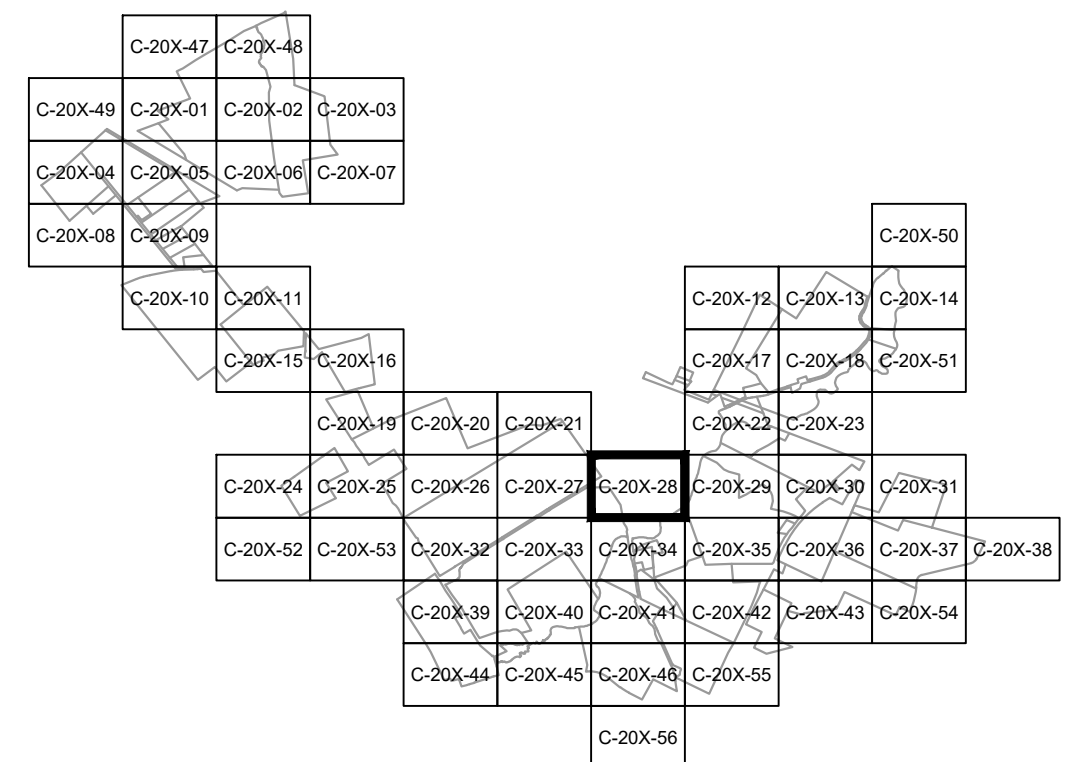
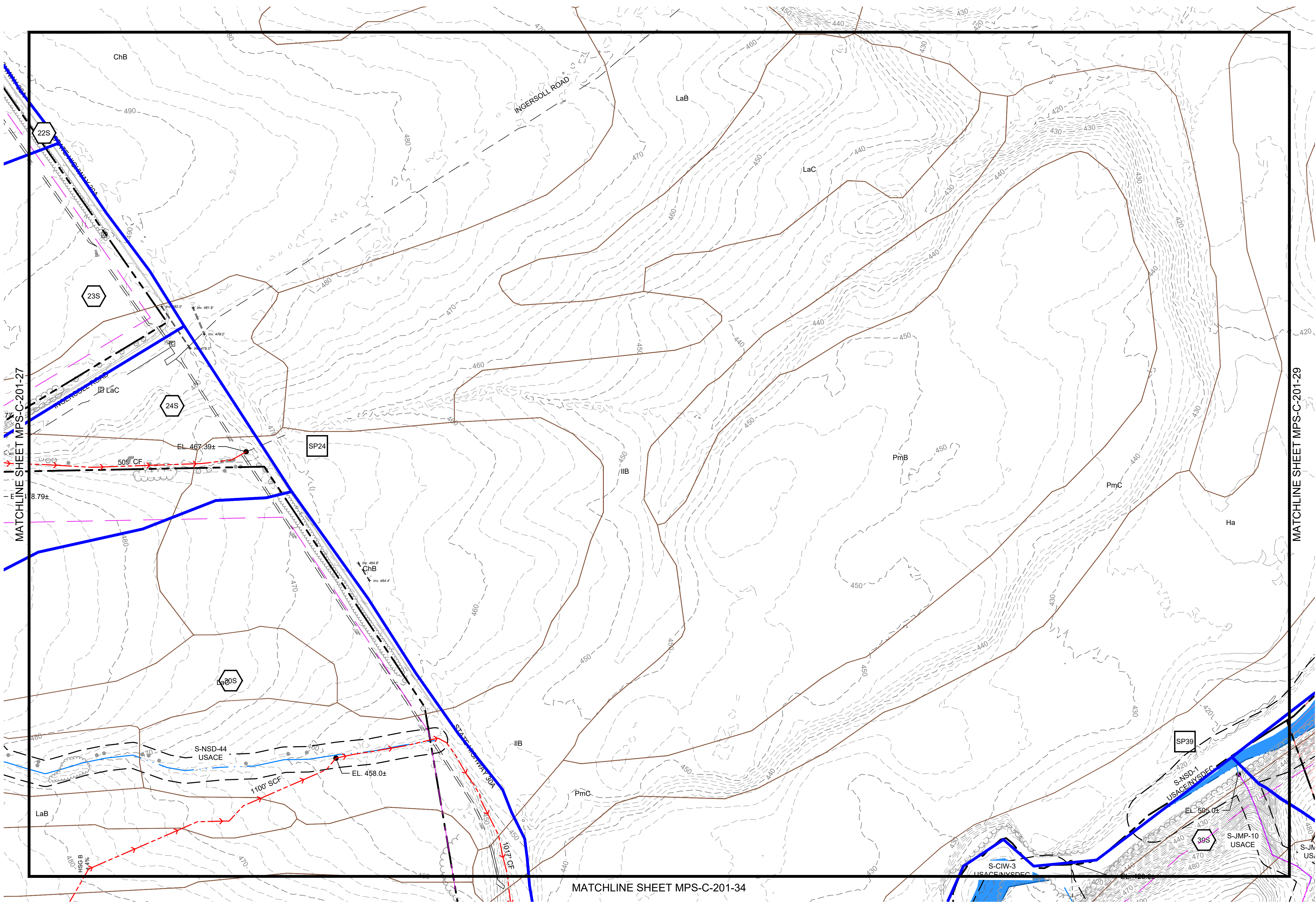
REFERENCE ITEMS		REV	DESCRIPTION	DATE	DES	CHK	APP
		D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
		C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
		B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
		A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

**TRC** 249 Western Avenue  
Augusta, ME 04330  
PROJECT NO: 443269

PMM DESIGNED	GLEN	MILL POINT SOLAR PROJECT CONNECTGEN, LLC PRE-DEVELOPMENT STORMWATER PLAN	NEW YORK
PMM DRAWN			
PMM CHECKED			
PMM APPROVED			
REVIEW 1	03/01/2023	<b>TRC</b>	MPS-C-201-27
REVIEW 2	DATE 1" = 100' SCALE		

**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —

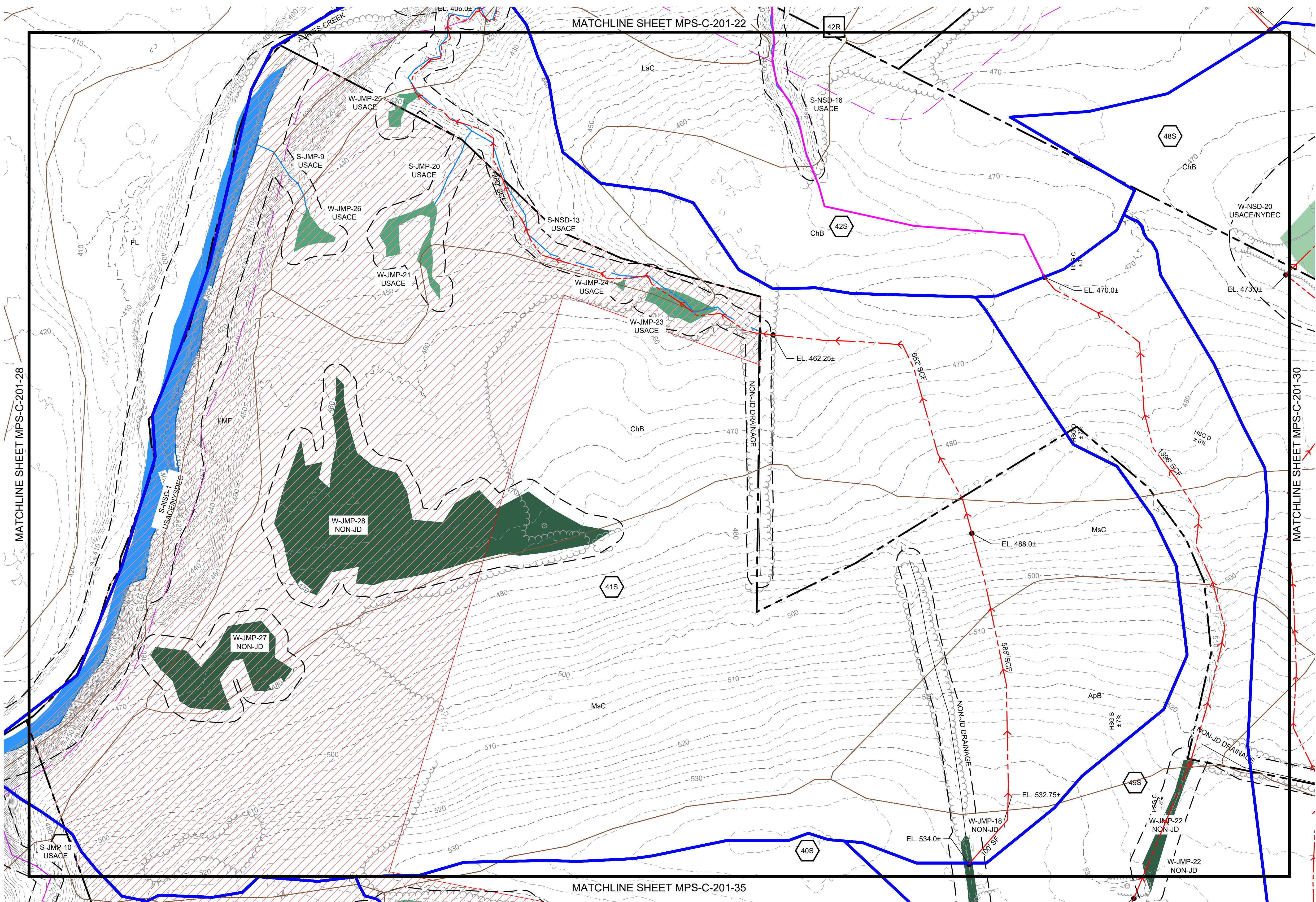


**PRELIMINARY**  
NOT FOR CONSTRUCTION



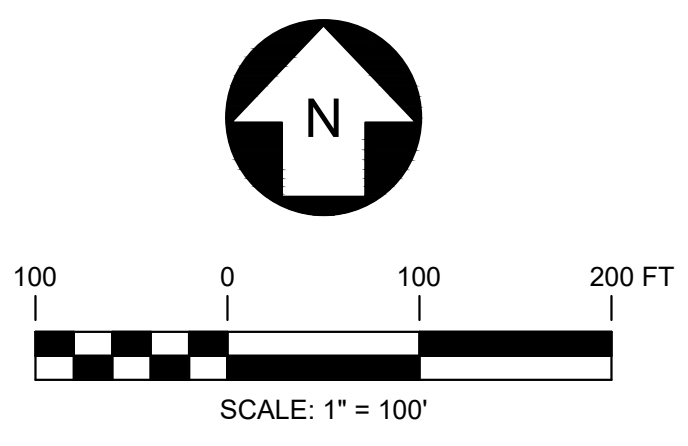
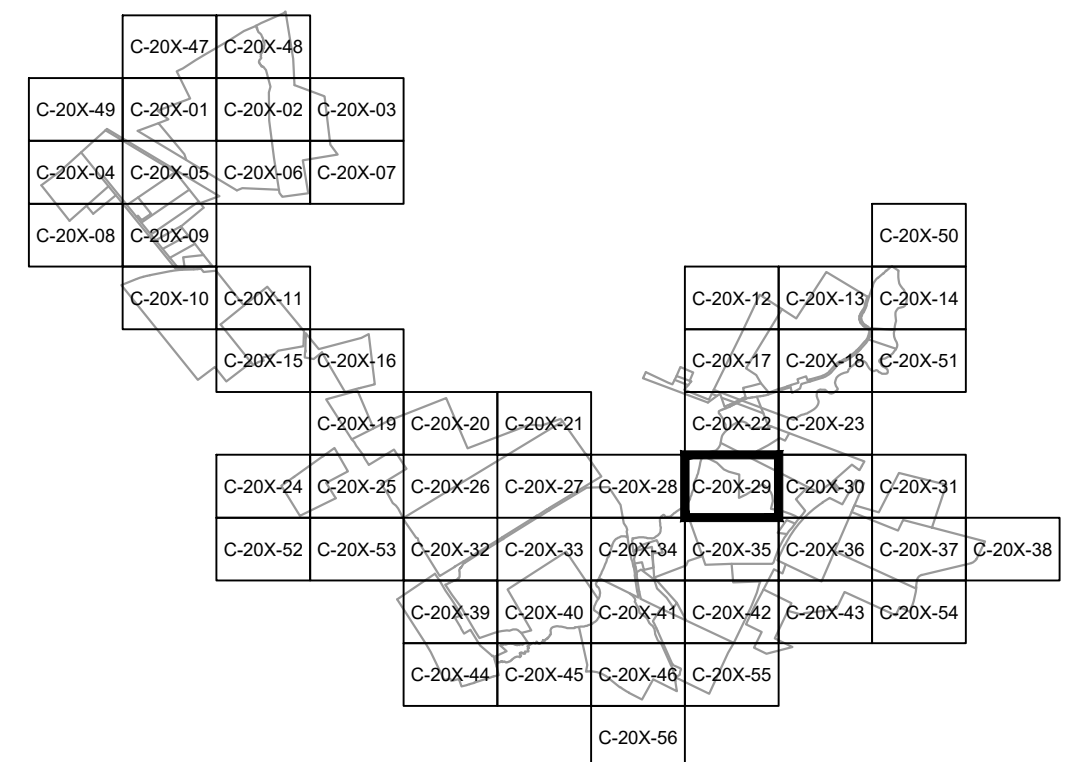
<b>TRC</b>		249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269		
REV	DESCRIPTION	DATE	DES	CHK	APP	
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM	
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM	
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM	
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM	

MILL POINT SOLAR PROJECT CONNECTGEN, LLC PRE-DEVELOPMENT STORMWATER PLAN		GLEN	NEW YORK
PMM DESIGNED	PMM DRAWN	PMM CHECKED	PMM APPROVED
REVIEW 1	REVIEW 2	DATE 03/01/2023	SCALE 1" = 100'
<b>TRC</b>		MPS-C-201-28	REV. C



**LEGEND**

- SUBCATCHMENT BOUNDARY: —
- TIME OF CONCENTRATION FLOW LINE: - - -
- REACH: —
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 1S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY: —



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

03/01/2023  
DATE



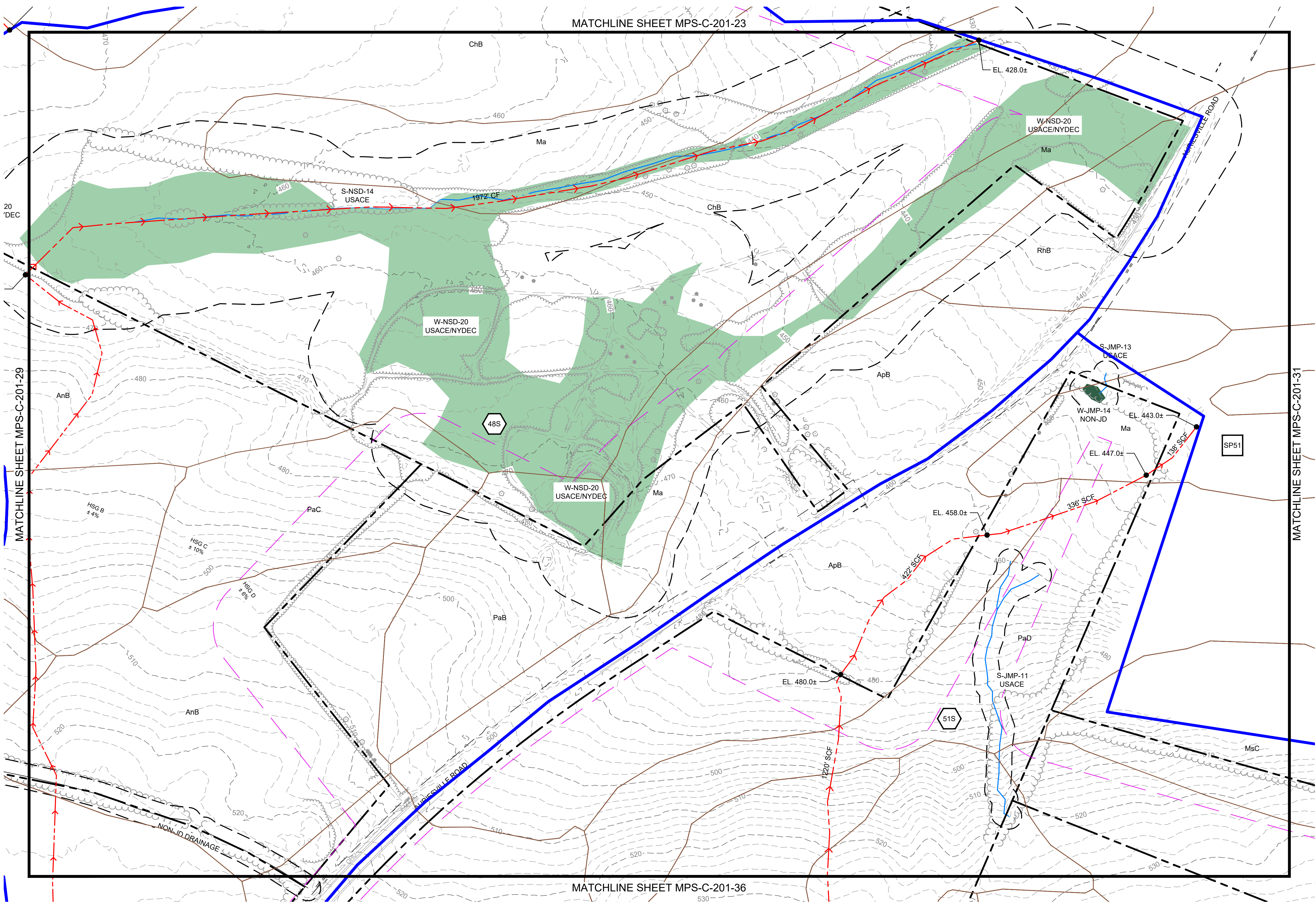
MPS-C-201-29

REV.  
C

MATCHLINE SHEET MPS-C-201-23

LEGEND

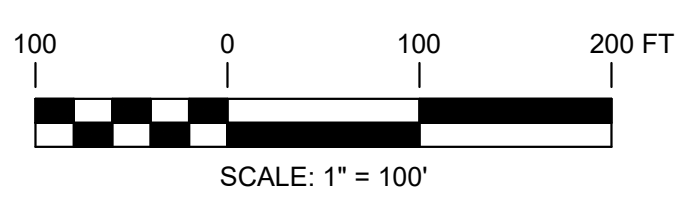
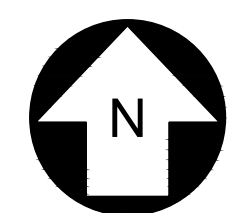
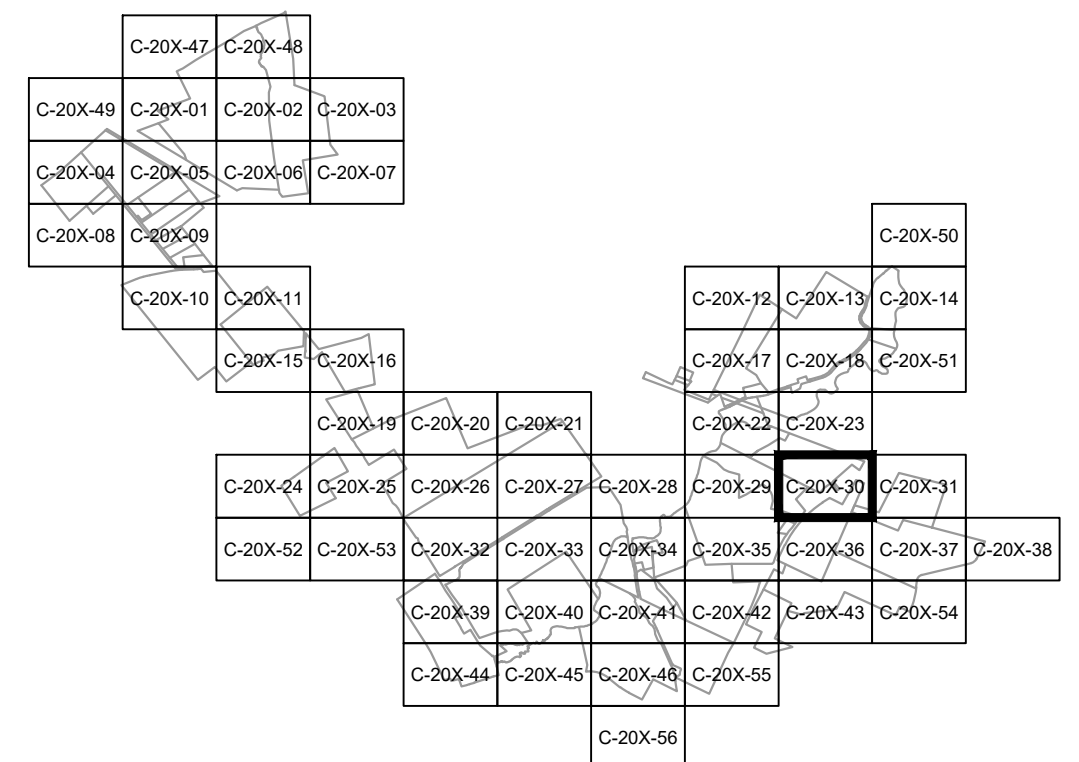
- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



MATCHLINE SHEET MPS-C-201-29

MATCHLINE SHEET MPS-C-201-31

MATCHLINE SHEET MPS-C-201-36



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM DESIGNED	GLEN
PMM DRAWN	
PMM CHECKED	
PMM APPROVED	

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

NEW YORK

03/01/2023  
DATE

1" = 100'  
SCALE

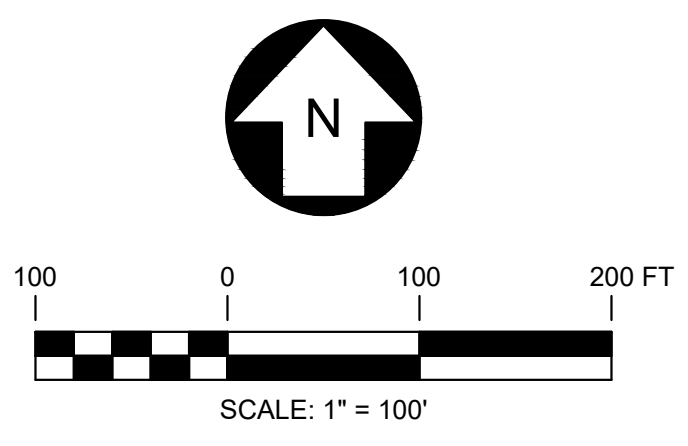
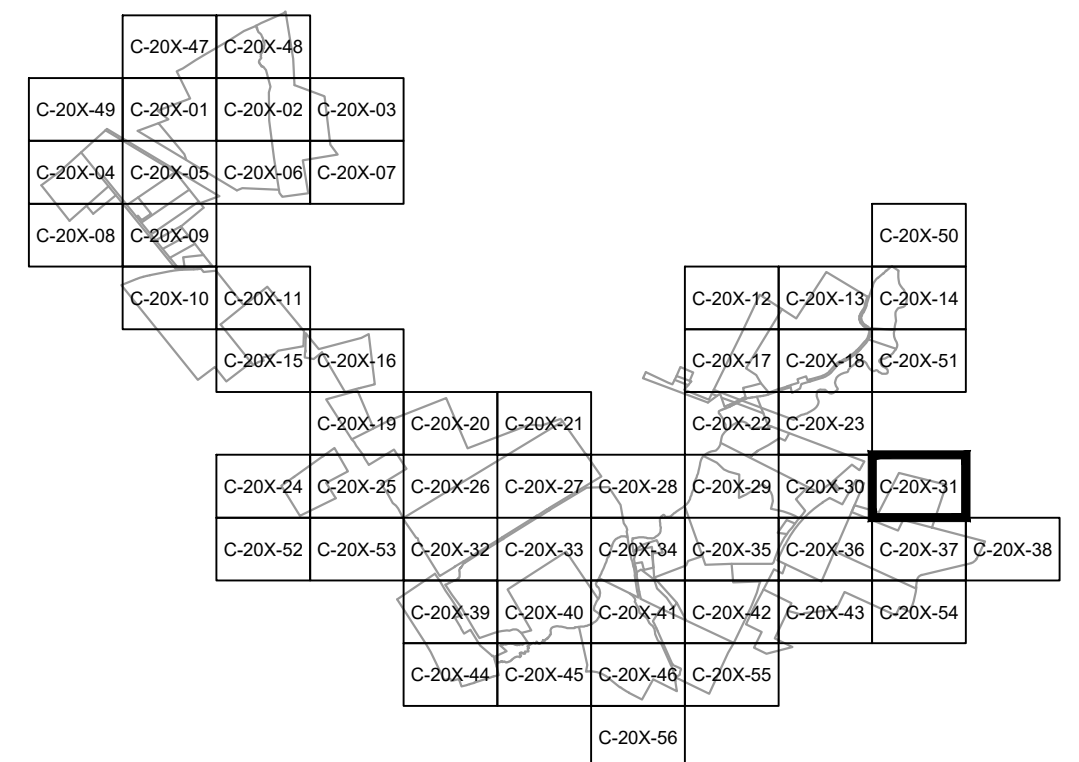
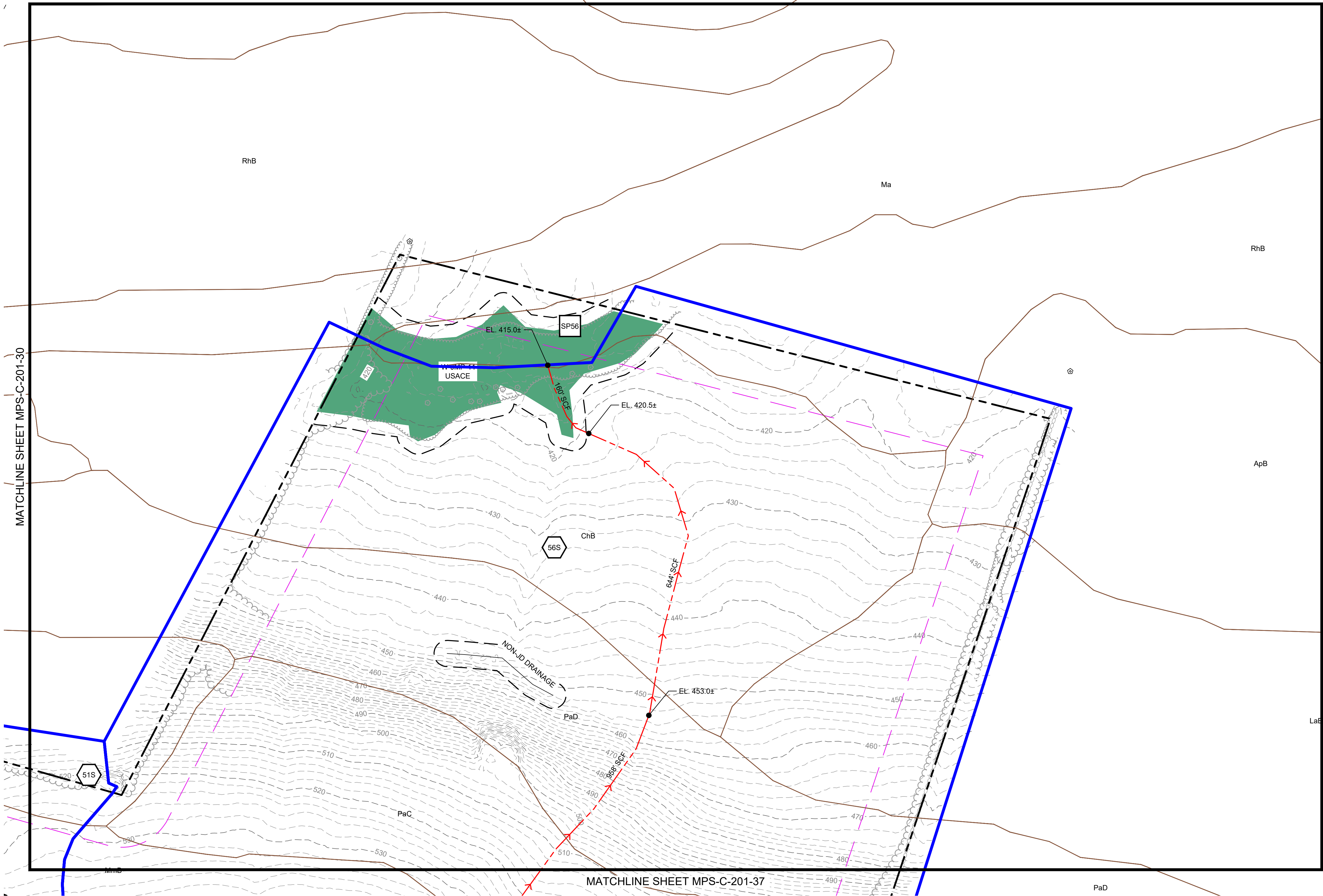
**TRC**

MPS-C-201-30

REV. C

**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



**PRELIMINARY**  
NOT FOR CONSTRUCTION

<b>TRC</b>		249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269		
REV	DESCRIPTION	DATE	DES	CHK	APP	
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM	
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM	
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM	
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM	

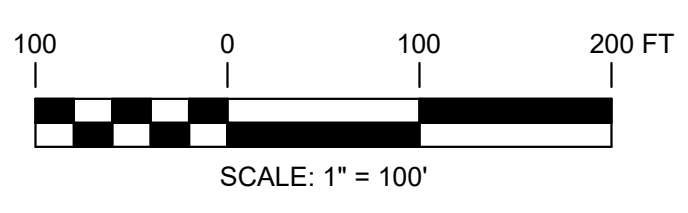
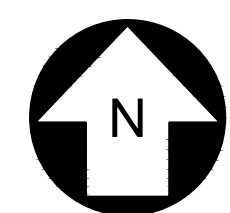
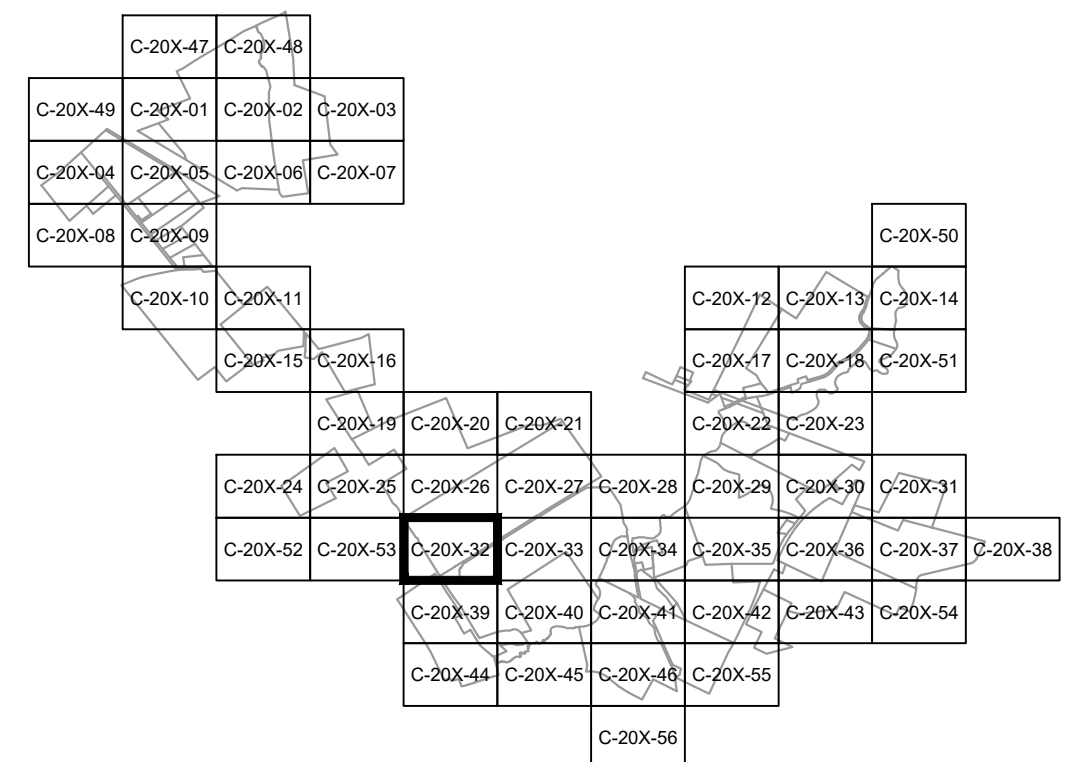
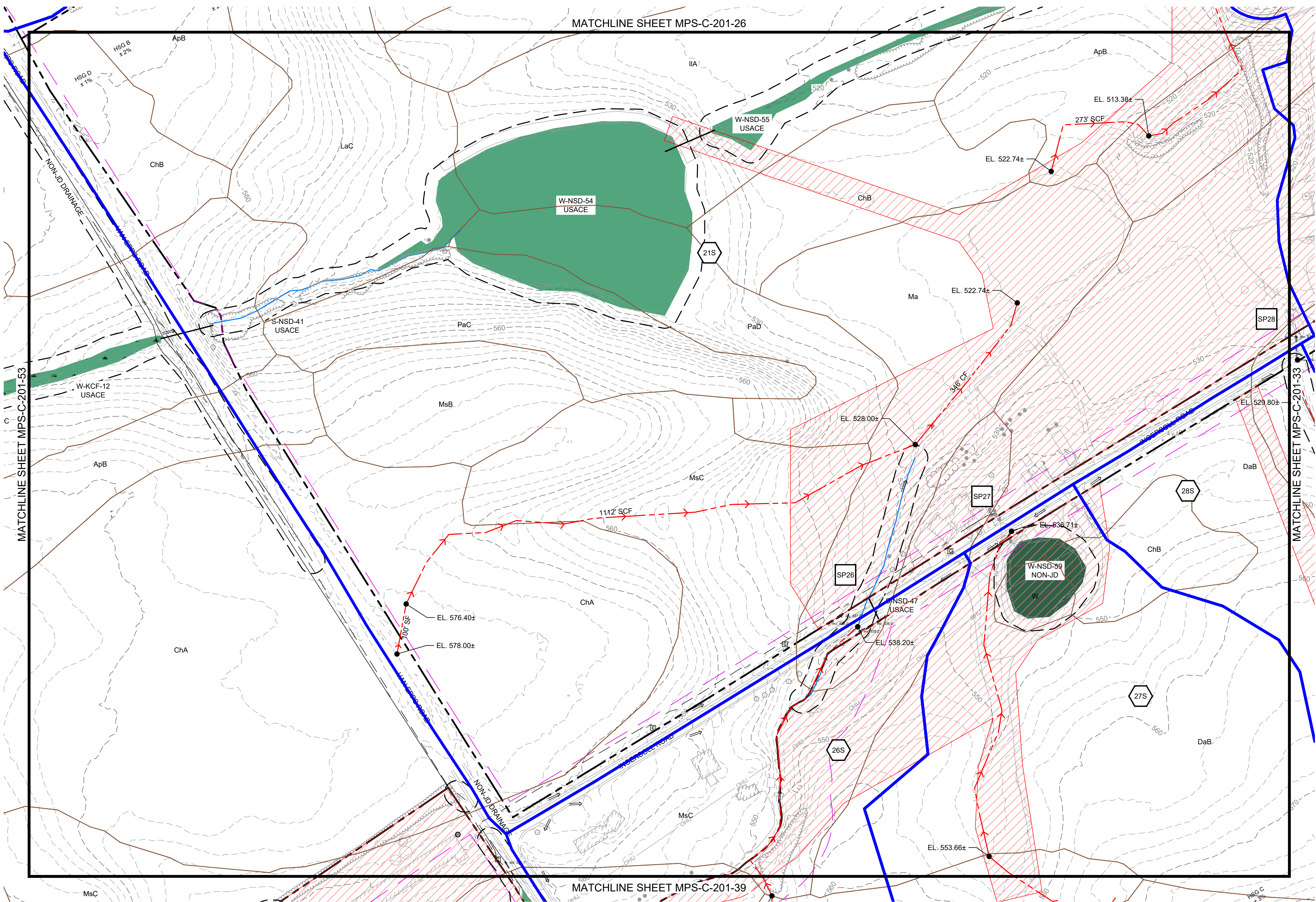
PMM DESIGNED PMM DRAWN PMM CHECKED - APPROVED	<b>MILL POINT SOLAR PROJECT</b> CONNECTGEN, LLC PRE-DEVELOPMENT STORMWATER PLAN	GLEN NEW YORK	
- REVIEW 1 - REVIEW 2	03/01/2023 DATE 1" = 100' SCALE		MPS-C-201-31 REV. C

MATCHLINE SHEET MPS-C-201-26

MATCHLINE SHEET MPS-C-201-39

LEGEND

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
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B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN

NEW YORK

03/01/2023  
DATE

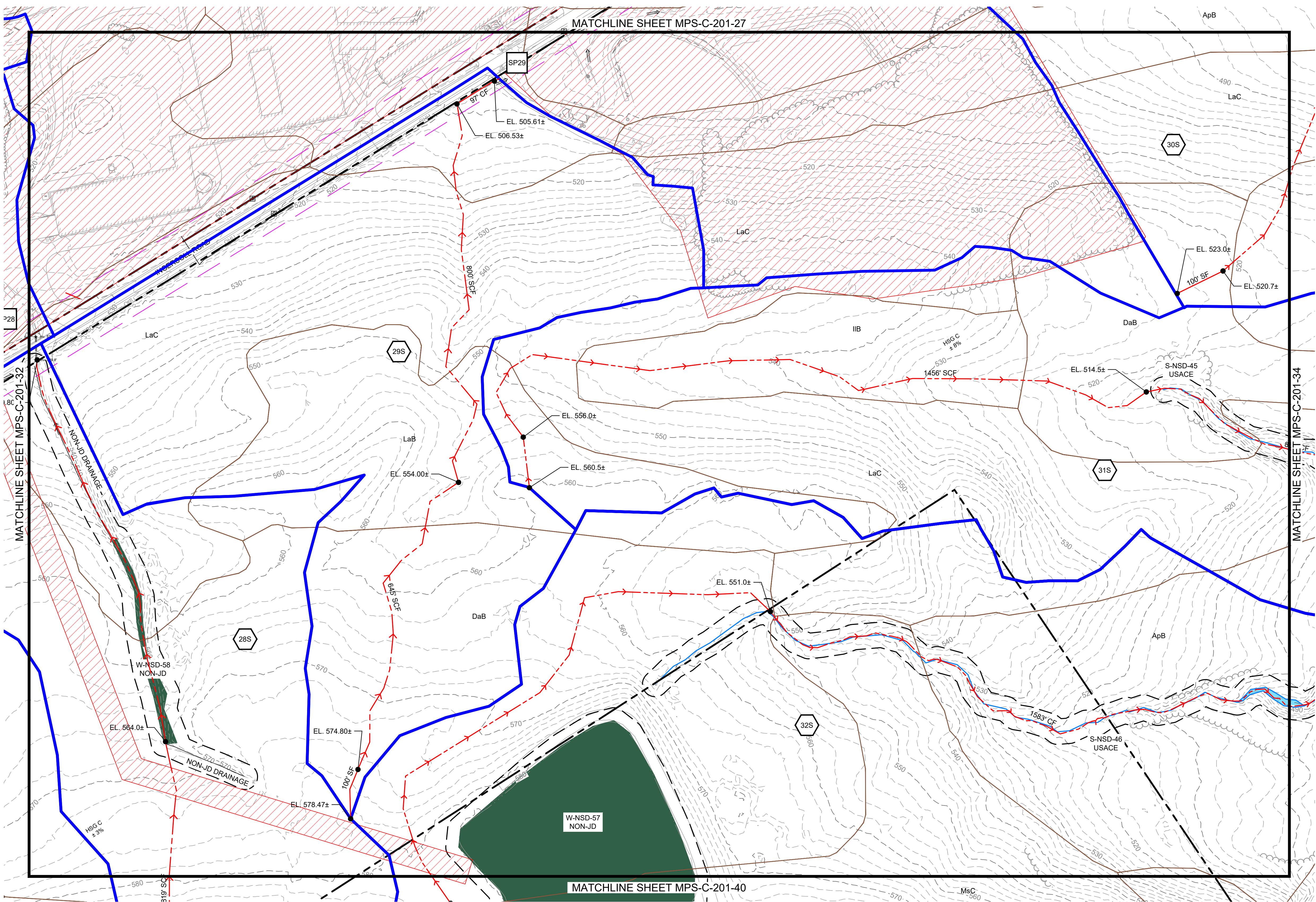
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SCALE



MPS-C-201-32

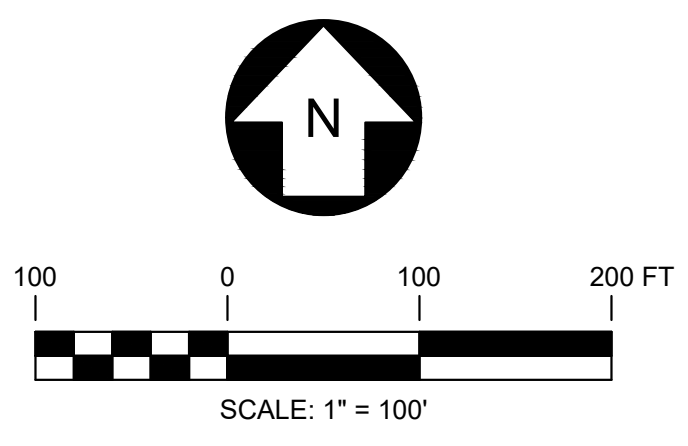
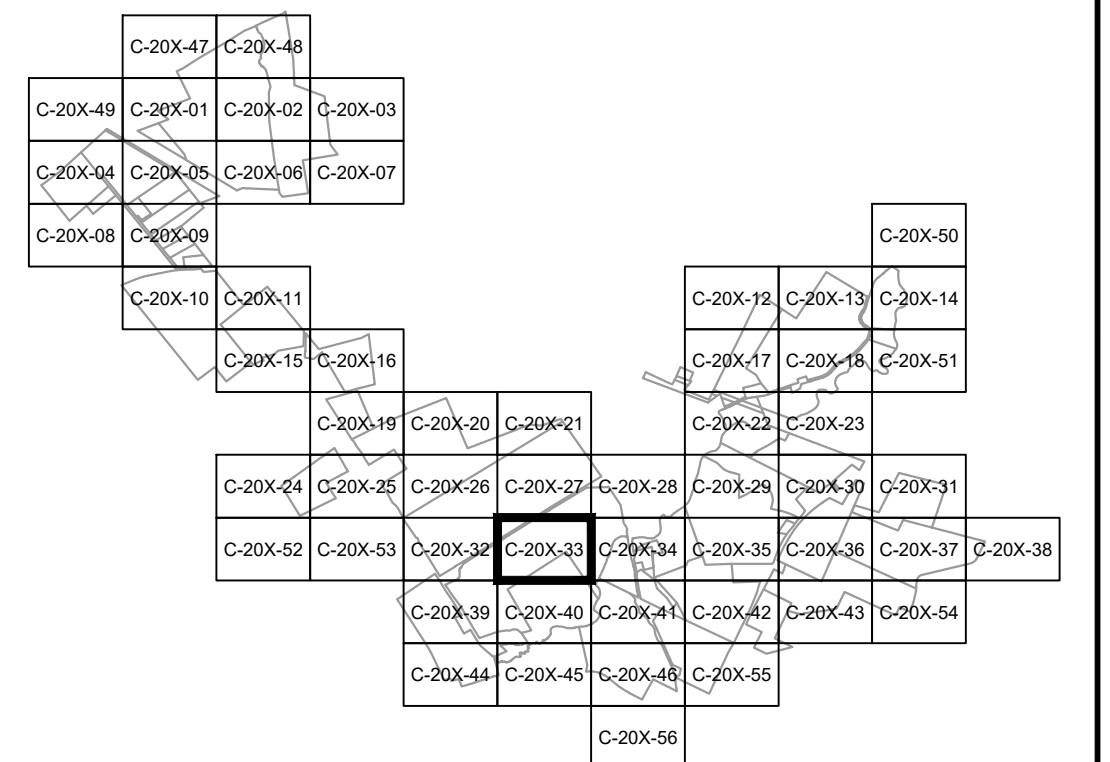
REV.  
C





**LEGEND**

SUBCATCHMENT BOUNDARY	
TIME OF CONCENTRATION FLOW LINE	
REACH	
SHEET FLOW	100' SF
SHALLOW CONCENTRATED FLOW	100' SCF
CHANNEL FLOW	100' CF
SPOT ELEVATION	EL. 520.0±
REACH ID	1R
SUBCATCHMENT ID	1S
POND ID	1P
STUDY POINT ID	SP1
SOILS BOUNDARY	



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM DESIGNED	
PMM DRAWN	
PMM CHECKED	
APPROVED	
REVIEW 1	
REVIEW 2	

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

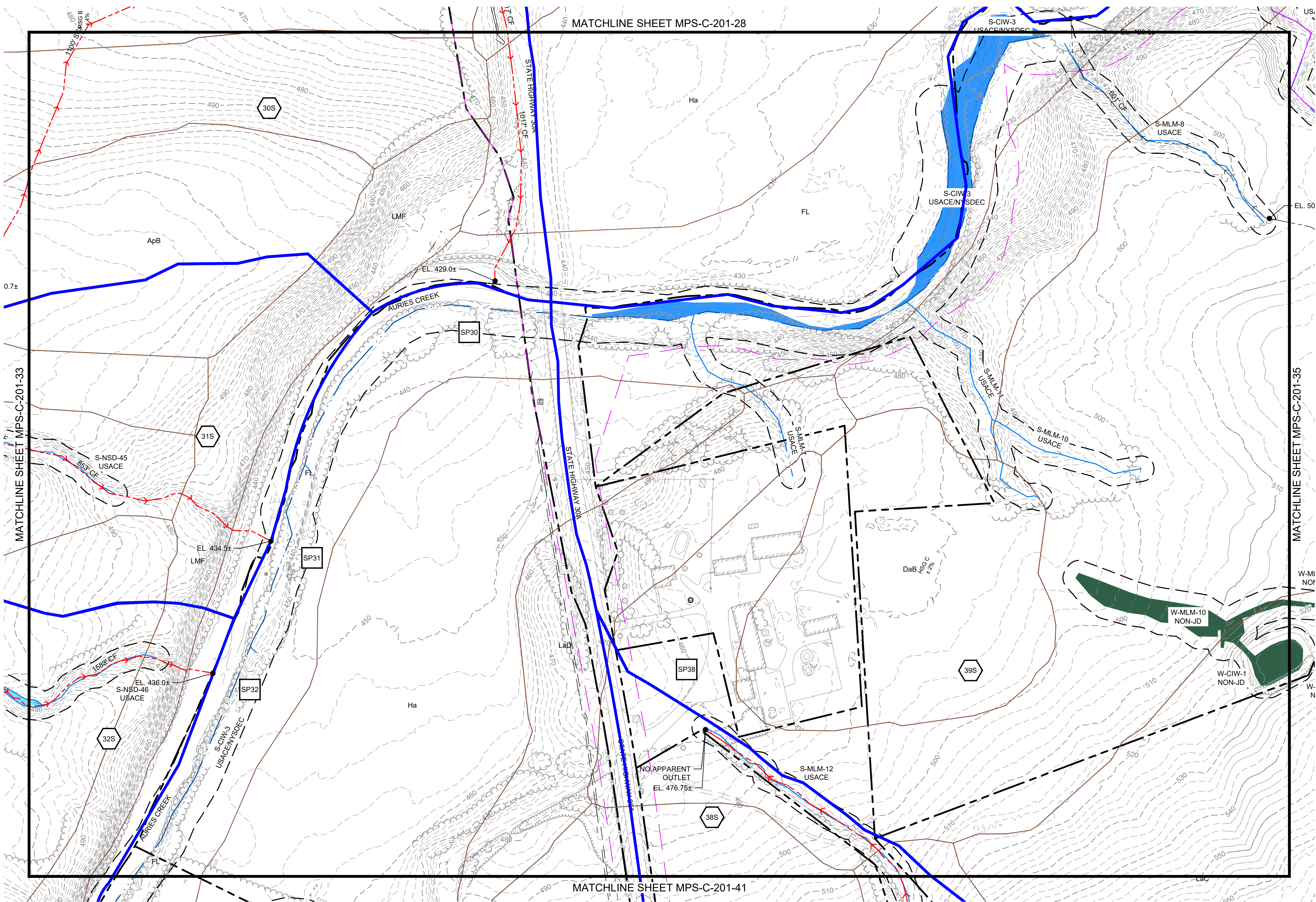
GLEN NEW YORK

03/01/2023  
DATE



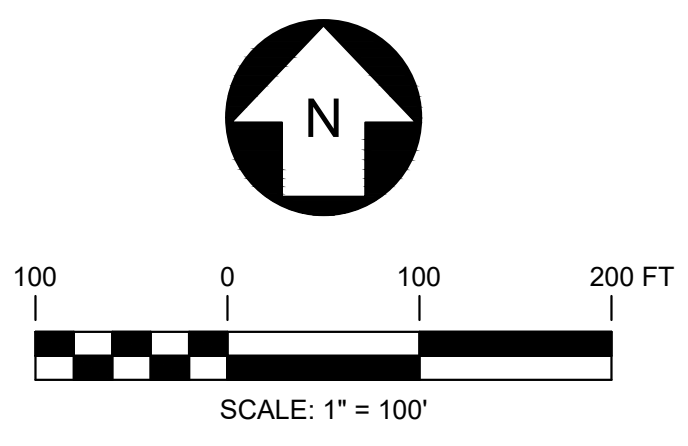
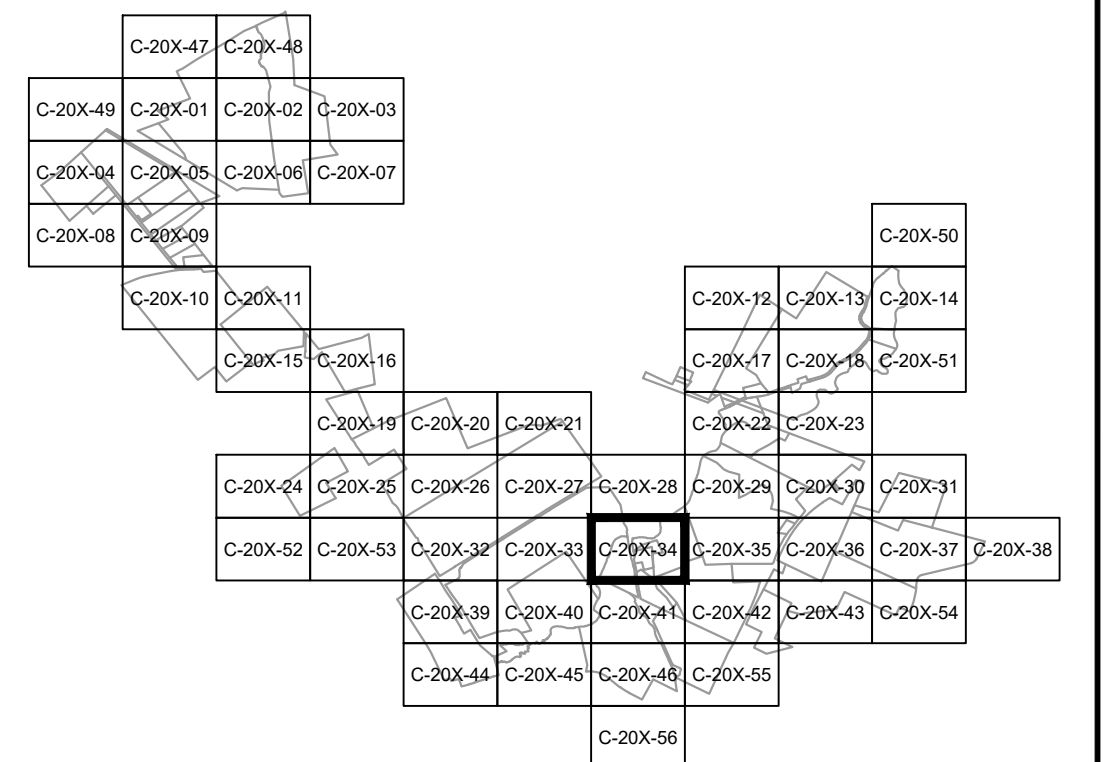
MPS-C-201-33

REV. C



**LEGEND**

SUBCATCHMENT BOUNDARY	
TIME OF CONCENTRATION FLOW LINE	
REACH	
SHEET FLOW	100' SF
SHALLOW CONCENTRATED FLOW	100' SCF
CHANNEL FLOW	100' CF
SPOT ELEVATION	EL. 520.0±
REACH ID	1R
SUBCATCHMENT ID	1S
POND ID	1P
STUDY POINT ID	SP1
SOILS BOUNDARY	



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

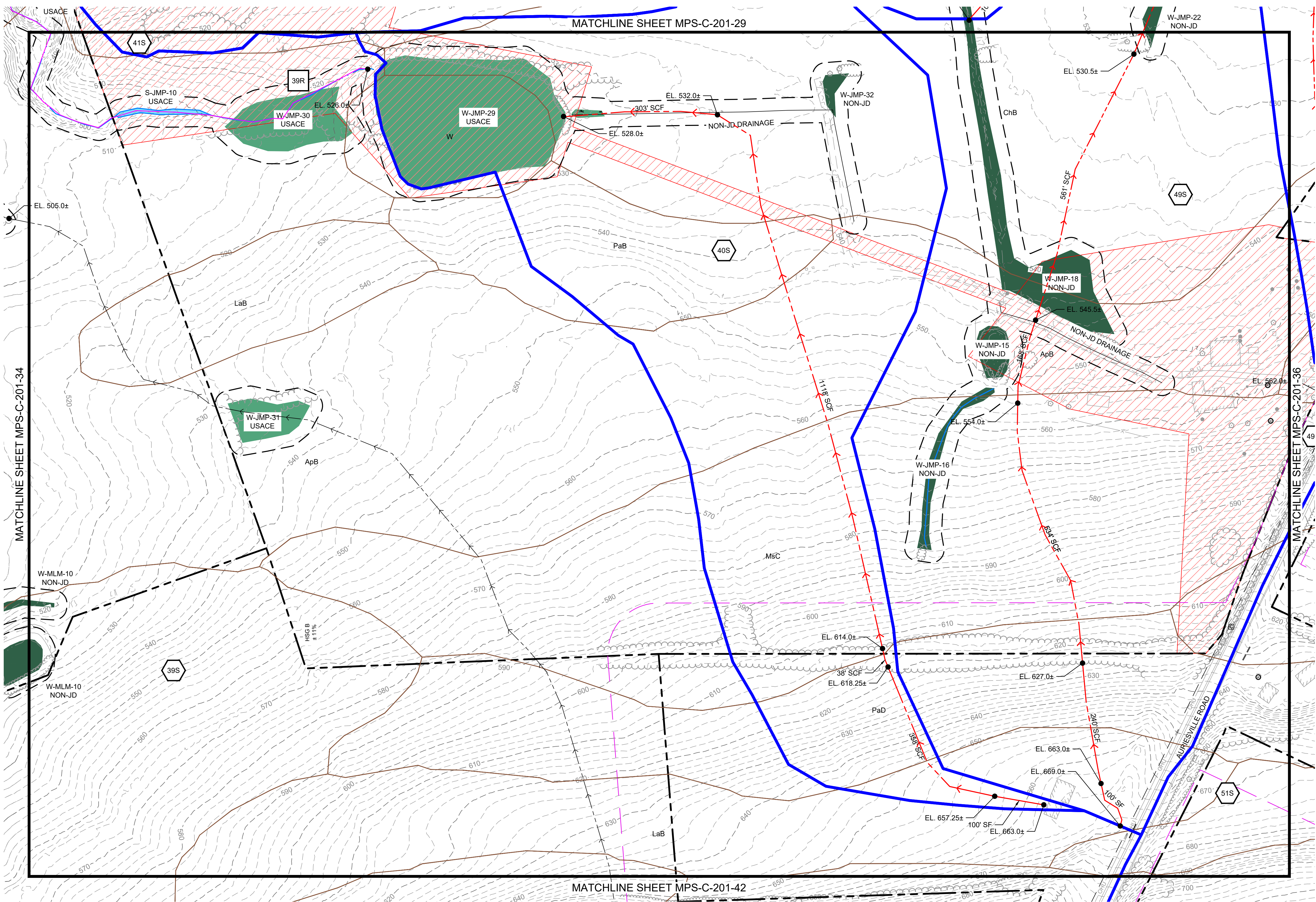
GLEN NEW YORK

03/01/2023  
DATE



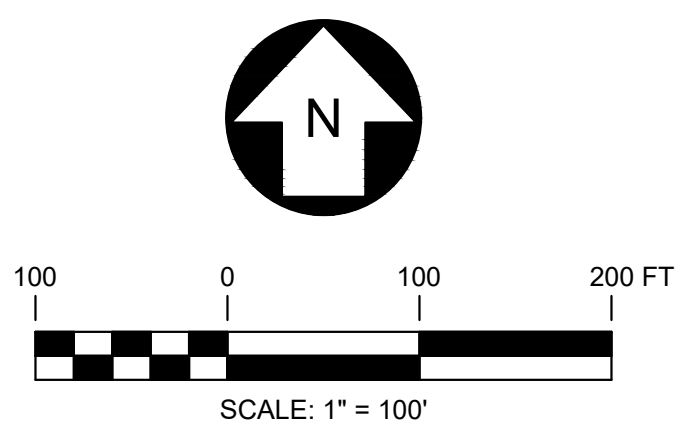
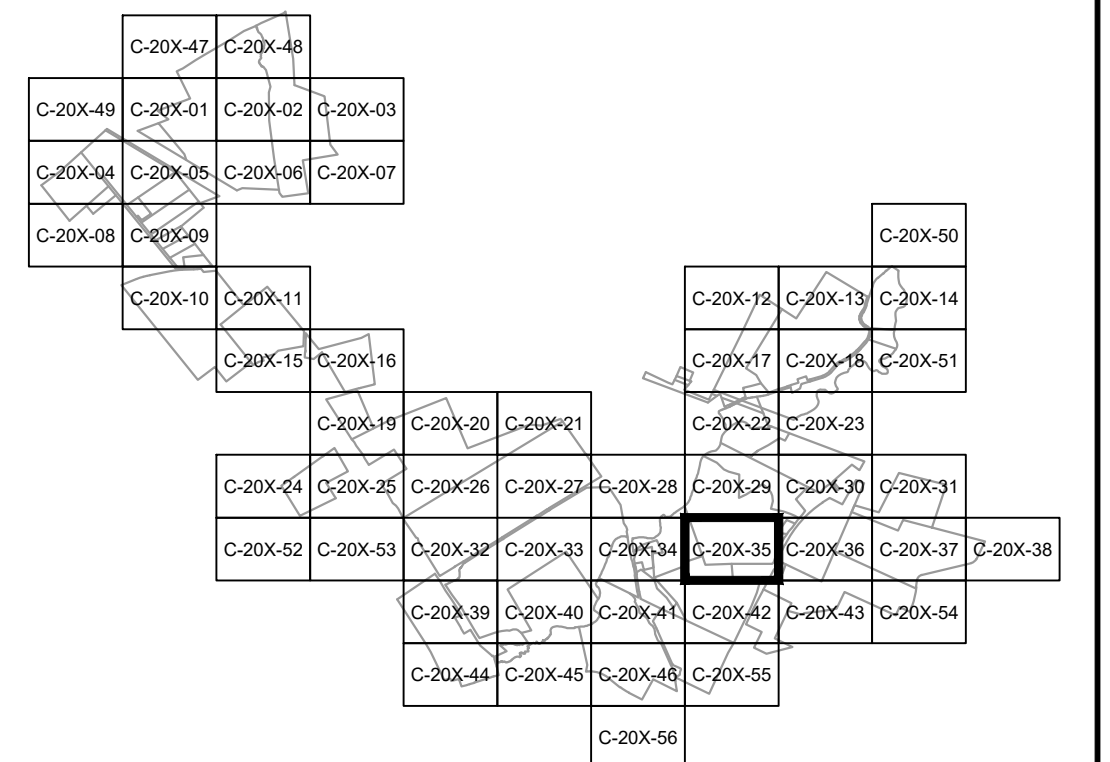
MPS-C-201-34

REV.  
C



**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrow
- REACH: Pink line with circles
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: Black dot with label (e.g., EL. 520.0±)
- REACH ID: Square with '1R'
- SUBCATCHMENT ID: Hexagon with '1S'
- POND ID: Triangle with '1P'
- STUDY POINT ID: Square with 'SP1'
- SOILS BOUNDARY: Brown line



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM DESIGNED  
PMM DRAWN  
PMM CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

03/01/2023  
DATE



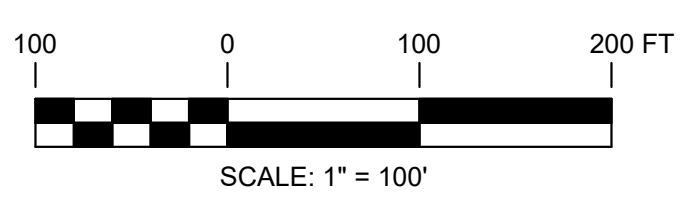
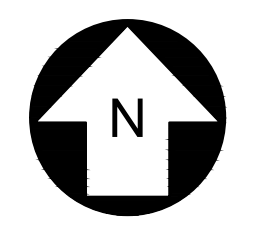
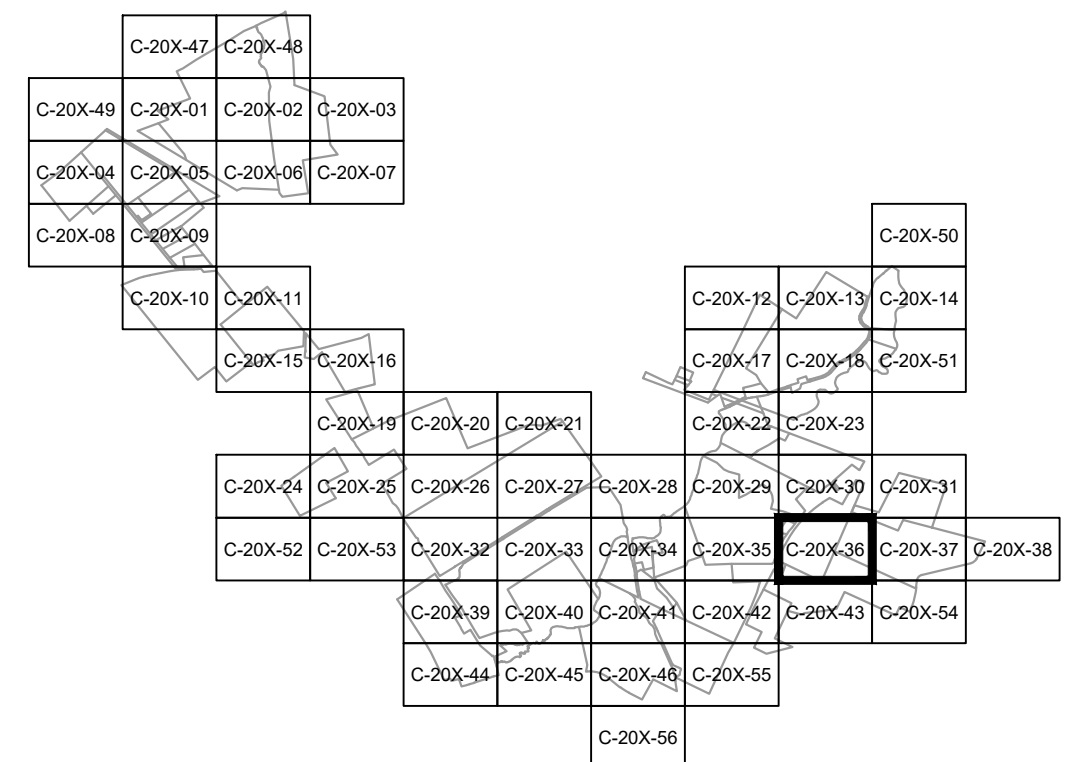
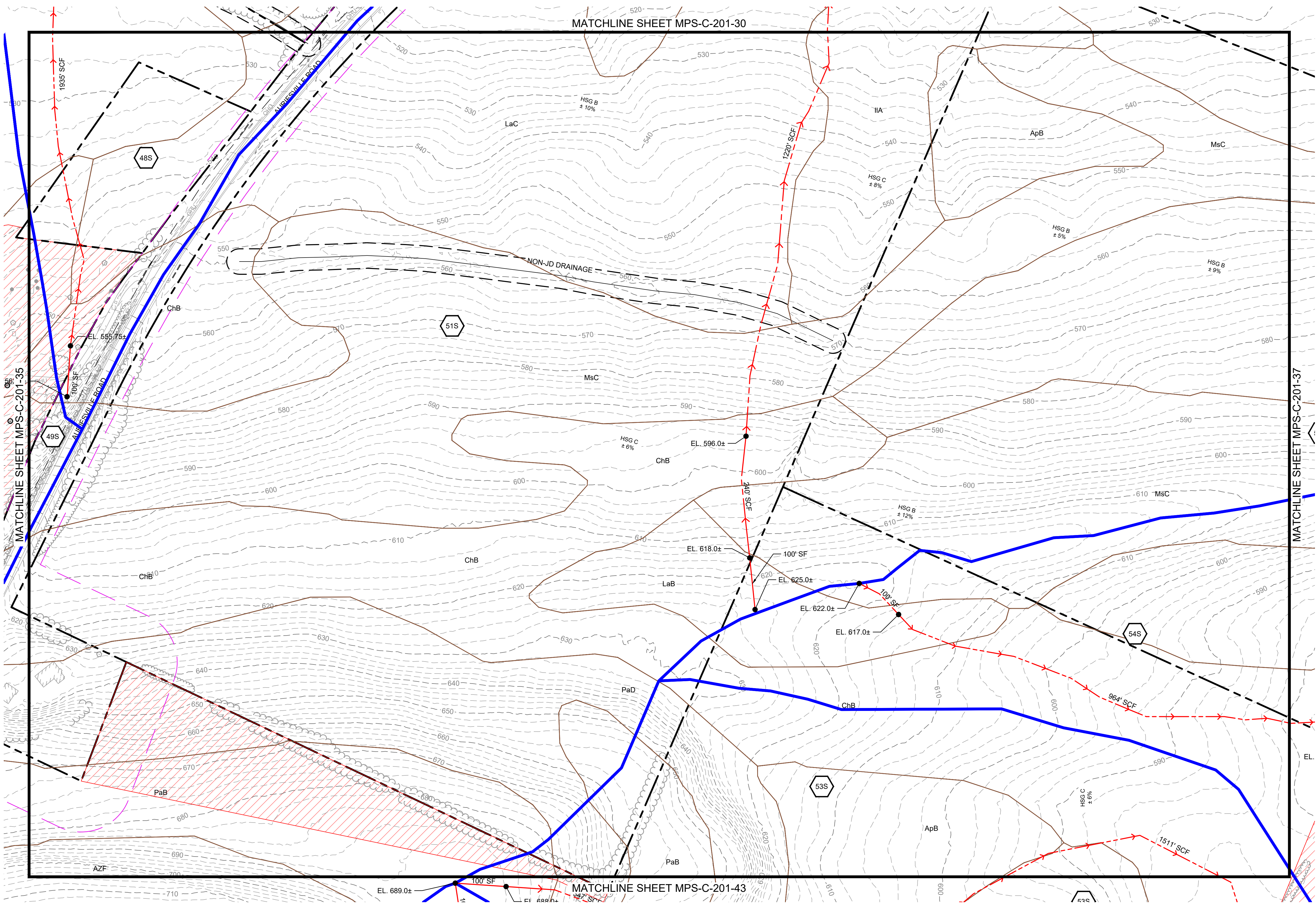
MPS-C-201-35

REV. C

MATCHLINE SHEET MPS-C-201-30

LEGEND

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

REFERENCE ITEMS	REV	DESCRIPTION	DATE	DES	CHK	APP
	D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
	C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
	B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
	A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

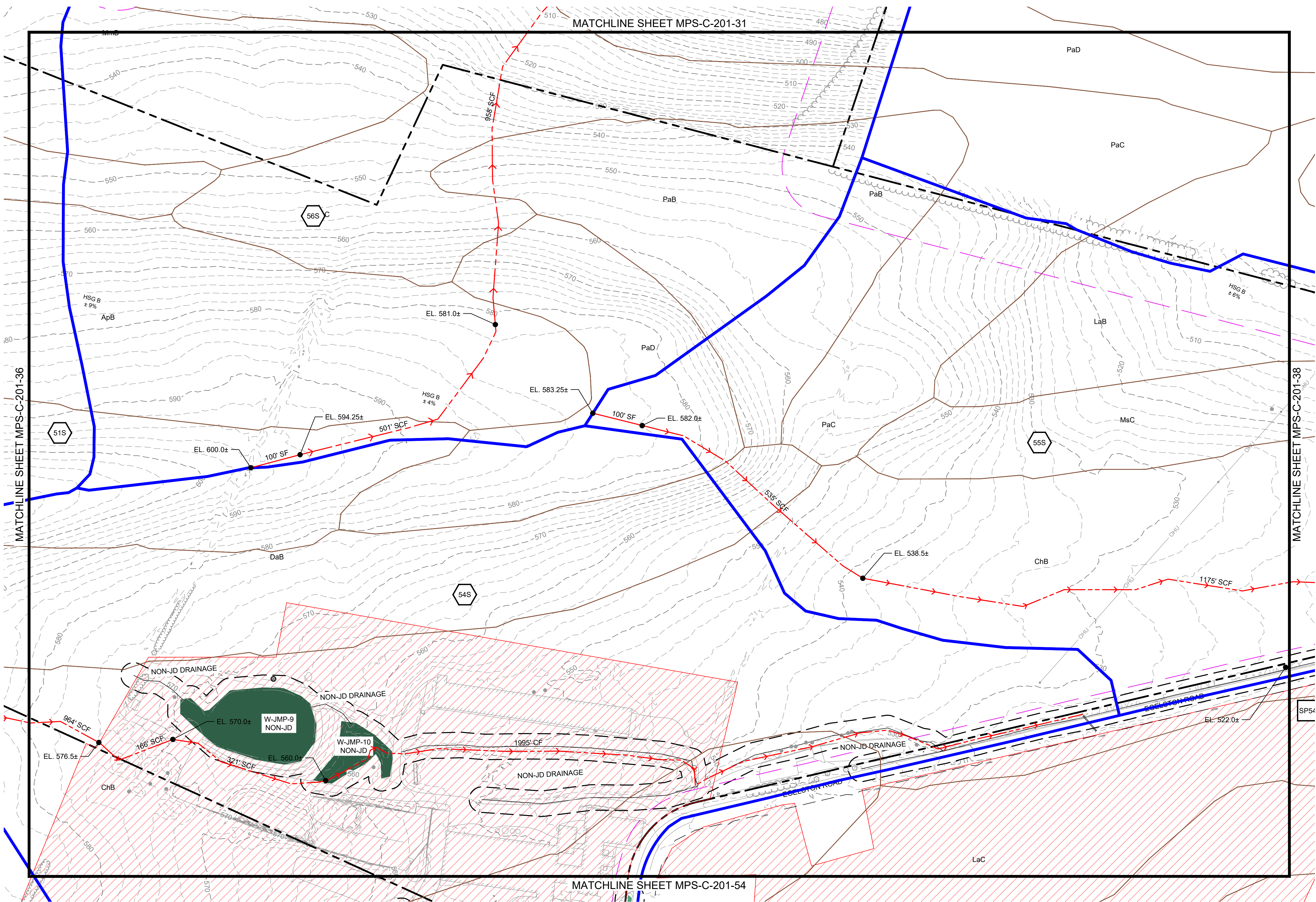
REVIEW 1  
REVIEW 2

03/01/2023  
DATE



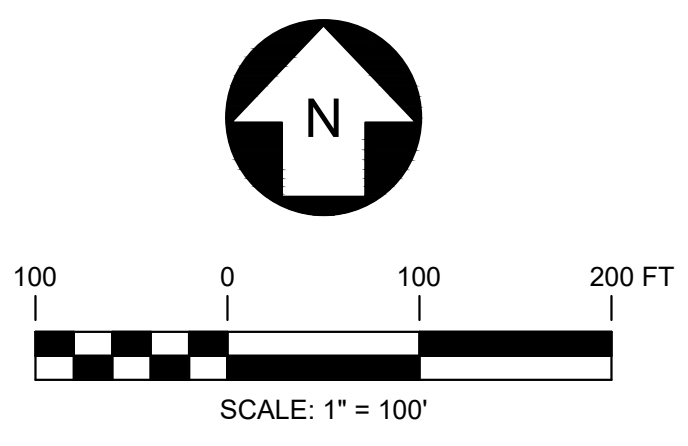
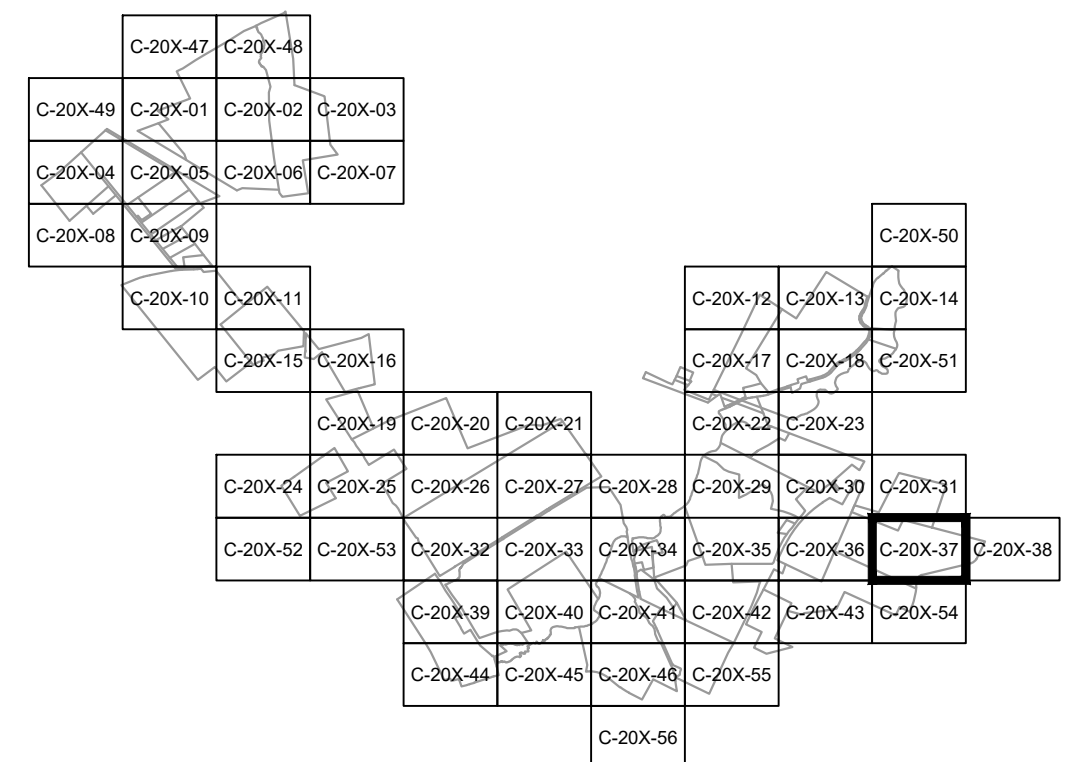
MPS-C-201-36

REV.  
C



**LEGEND**

- SUBCATCHMENT BOUNDARY: Solid blue line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrow
- REACH: Pink dashed line with circle
- SHEET FLOW: 100' SF (Solid blue line)
- SHALLOW CONCENTRATED FLOW: 100' SCF (Dashed red line)
- CHANNEL FLOW: 100' CF (Dashed black line)
- SPOT ELEVATION: Black dot with label (e.g., EL. 520.0±)
- REACH ID: Box with '1R'
- SUBCATCHMENT ID: Hexagon with '1S'
- POND ID: Triangle with '1P'
- STUDY POINT ID: Box with 'SP1'
- SOILS BOUNDARY: Brown dashed line



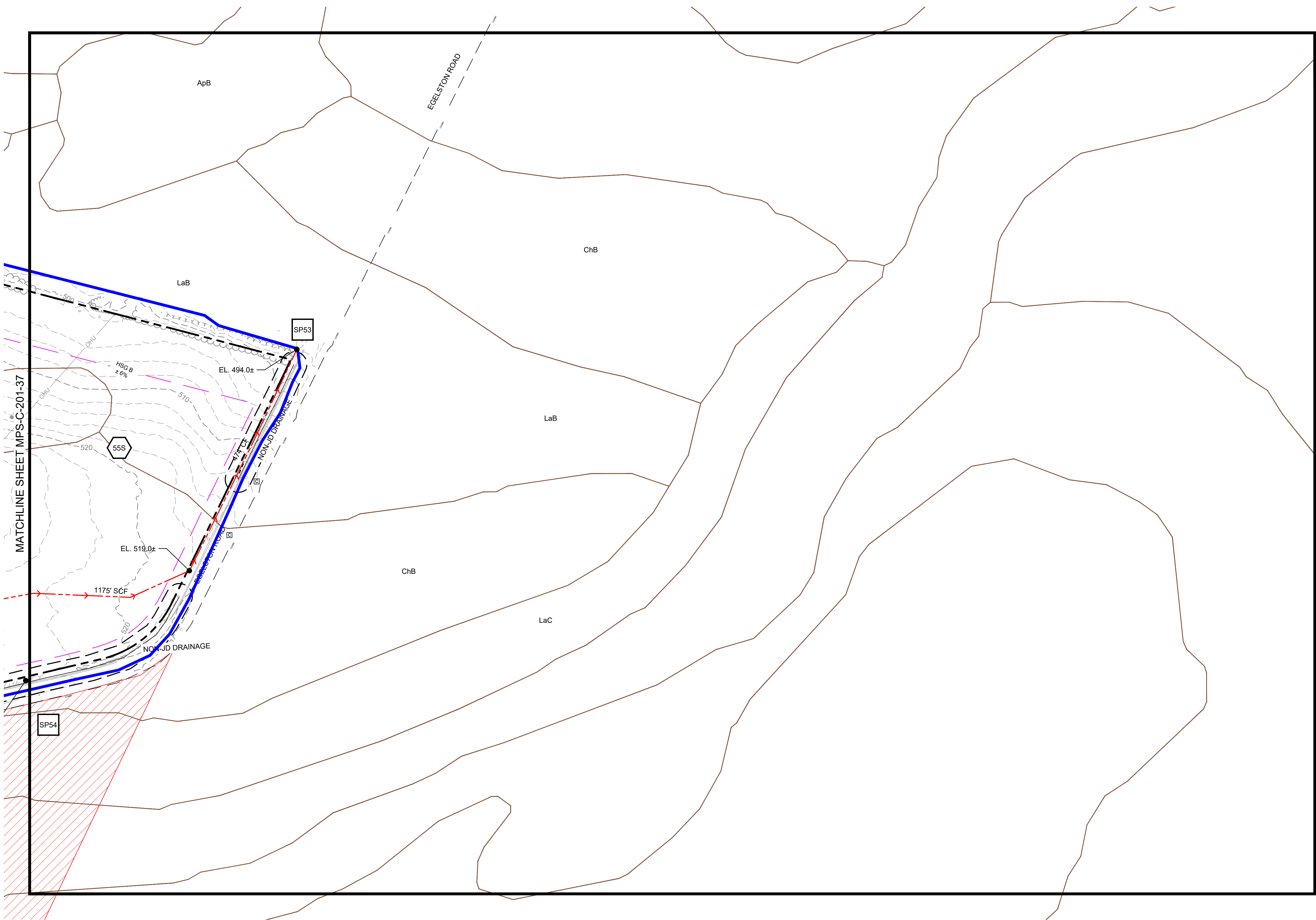
**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269			
REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM DESIGNED PMM DRAWN PMM CHECKED APPROVED	MILL POINT SOLAR PROJECT CONNECTGEN, LLC PRE-DEVELOPMENT STORMWATER PLAN		GLEN	NEW YORK
REVIEW 1 REVIEW 2	03/01/2023 DATE 1" = 100' SCALE		MPS-C-201-37	REV. C

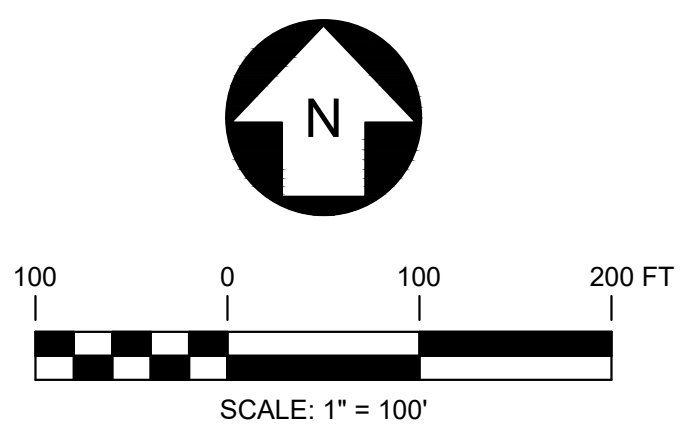
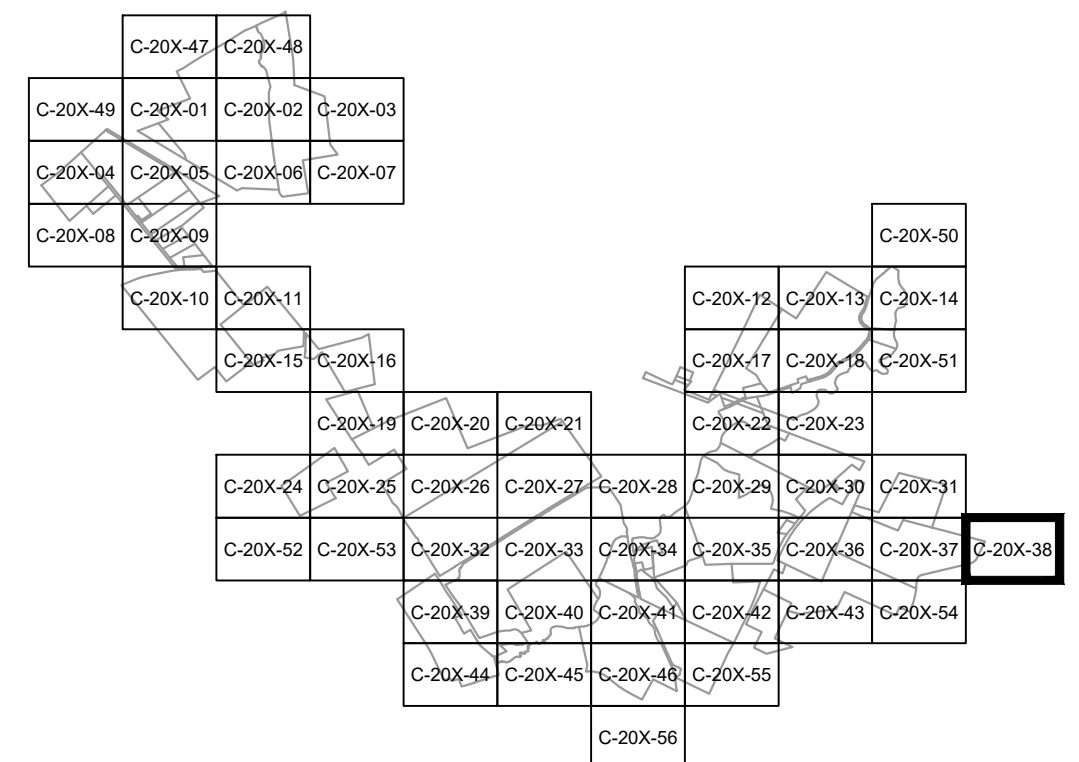
REFERENCE ITEMS



**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —

MATCHLINE SHEET MPS-C-201-37

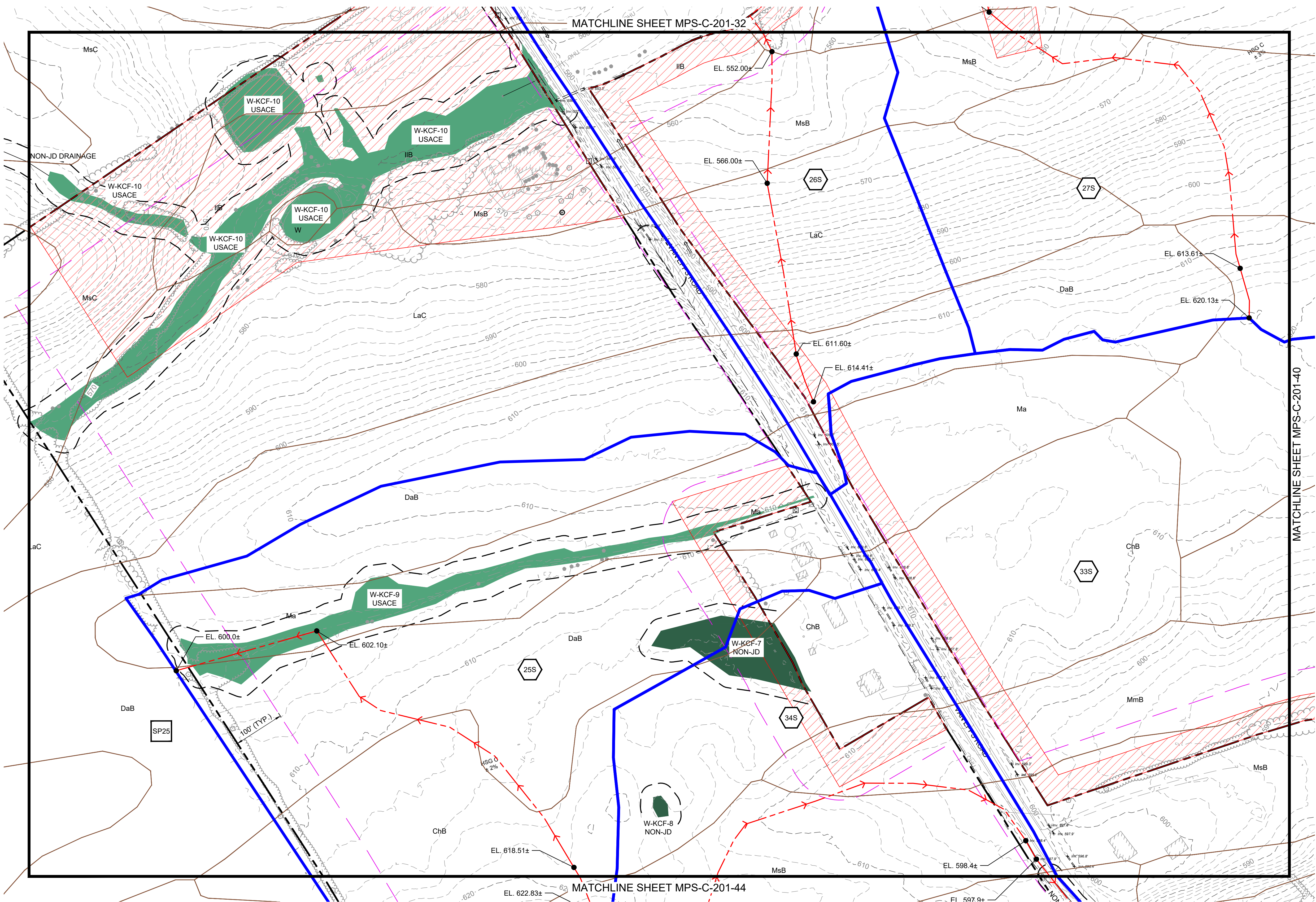


**PRELIMINARY**  
NOT FOR CONSTRUCTION



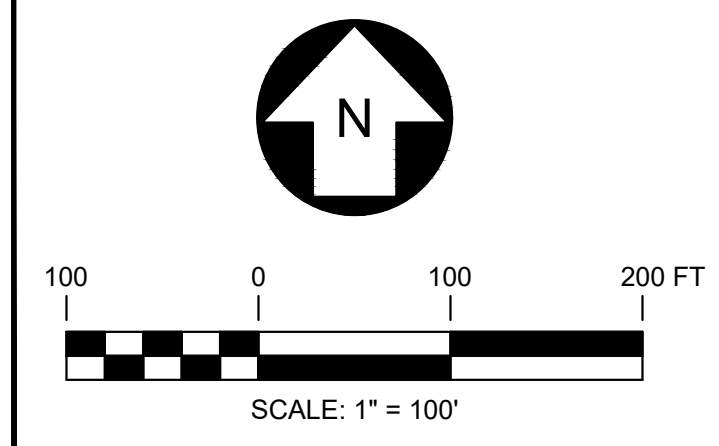
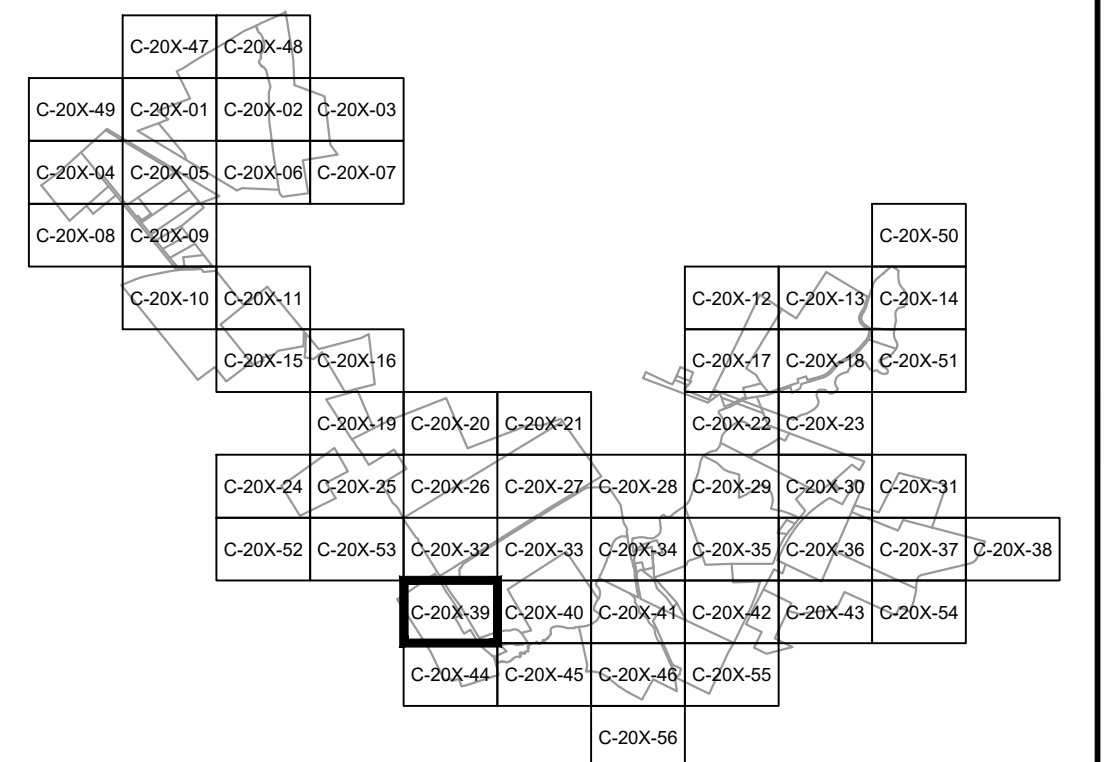
<b>TRC</b>		249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269		
REV	DESCRIPTION	DATE	DES	CHK	APP	
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM	
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM	
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM	
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM	

PMM DESIGNED	MILL POINT SOLAR PROJECT		
PMM DRAWN	CONNECTGEN, LLC		
PMM CHECKED	PRE-DEVELOPMENT STORMWATER PLAN		
APPROVED	GLEN	NEW YORK	
REVIEW 1	03/01/2023 DATE	<b>TRC</b>	MPS-C-201-38
REVIEW 2	1" = 100' SCALE		REV. C



**LEGEND**

- SUBCATCHMENT BOUNDARY:
- TIME OF CONCENTRATION FLOW LINE:
- REACH:
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 1S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY:



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN

NEW YORK

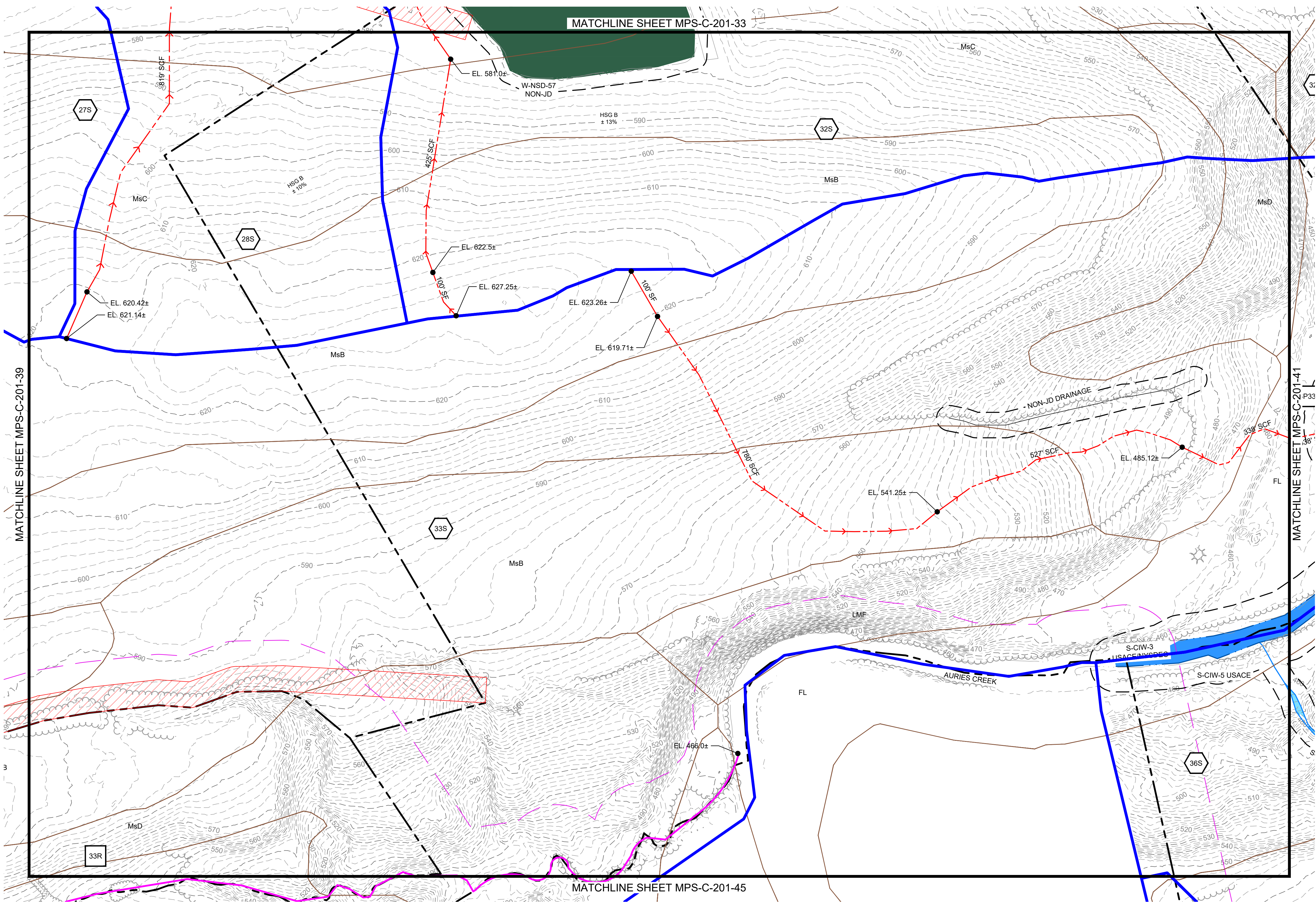
03/01/2023  
DATE

1" = 100'  
SCALE



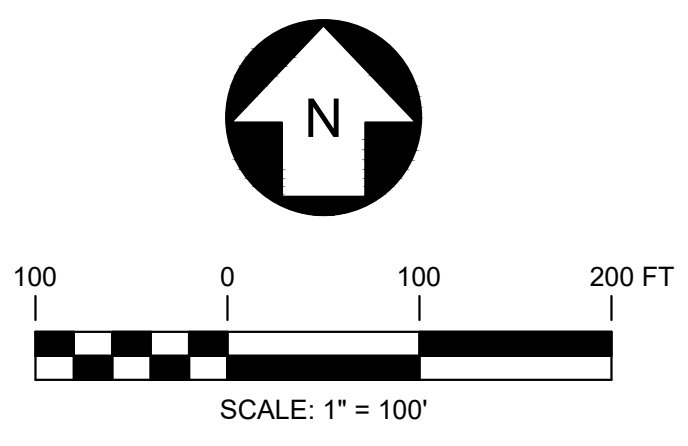
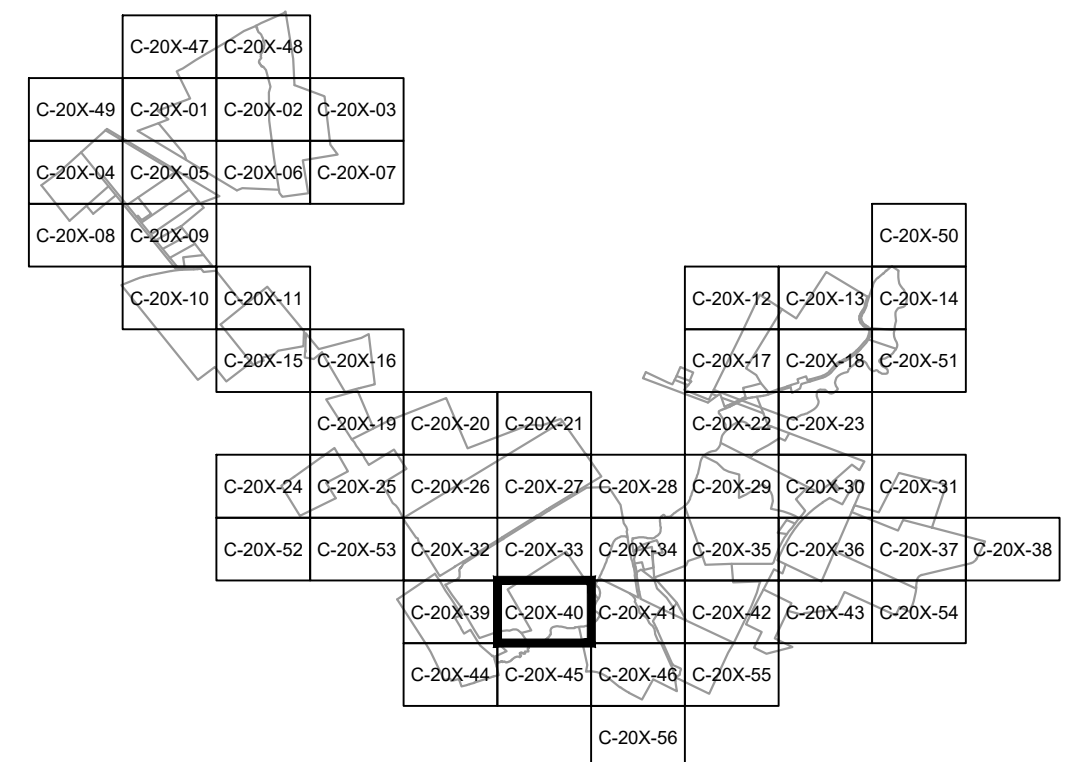
MPS-C-201-39

REV.  
C



**LEGEND**

- SUBCATCHMENT BOUNDARY:
- TIME OF CONCENTRATION FLOW LINE:
- REACH:
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 1S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY:



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM DESIGNED  
PMM DRAWN  
PMM CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

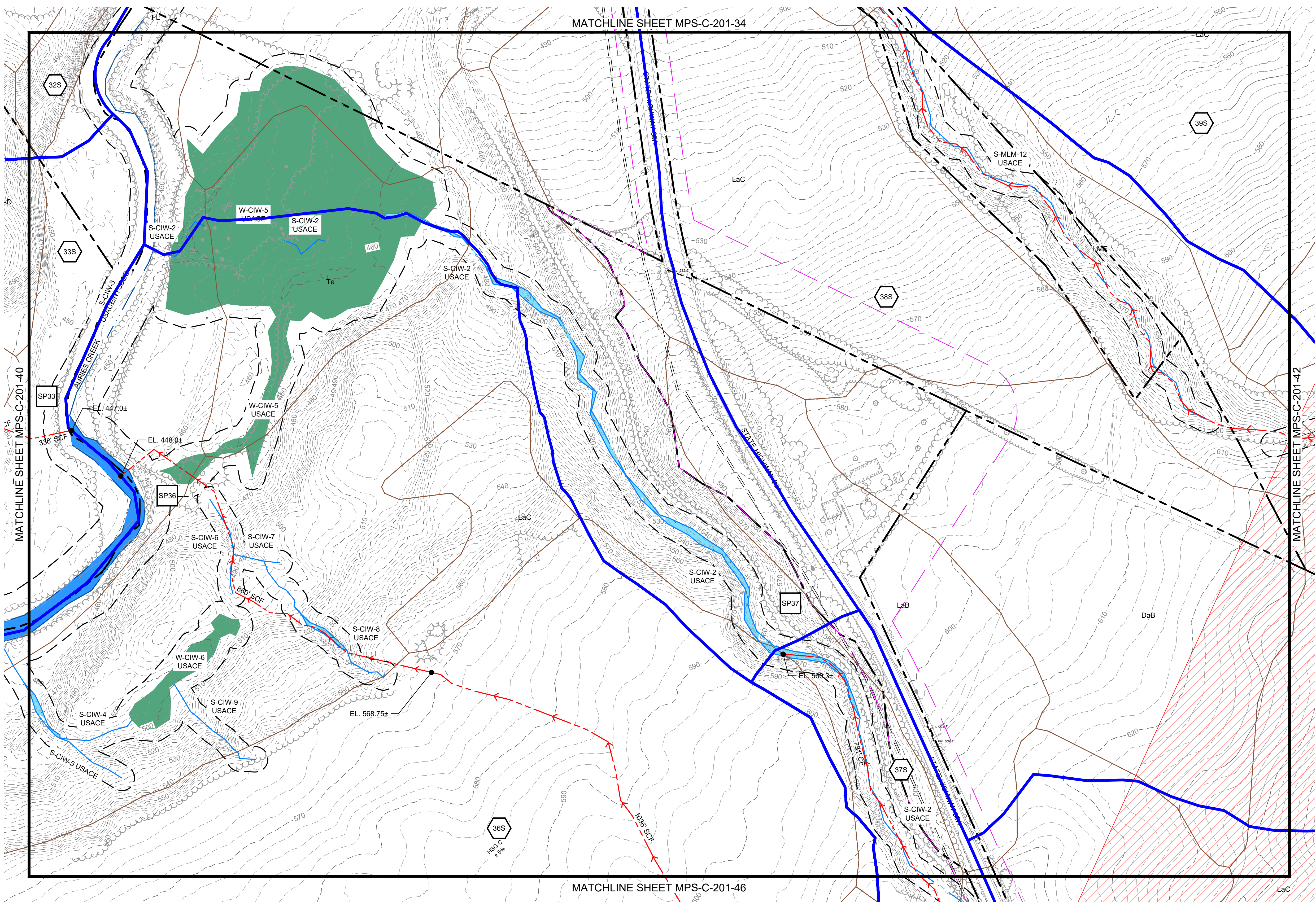
GLEN NEW YORK

03/01/2023  
DATE  
1" = 100'  
SCALE

MPS-C-201-40

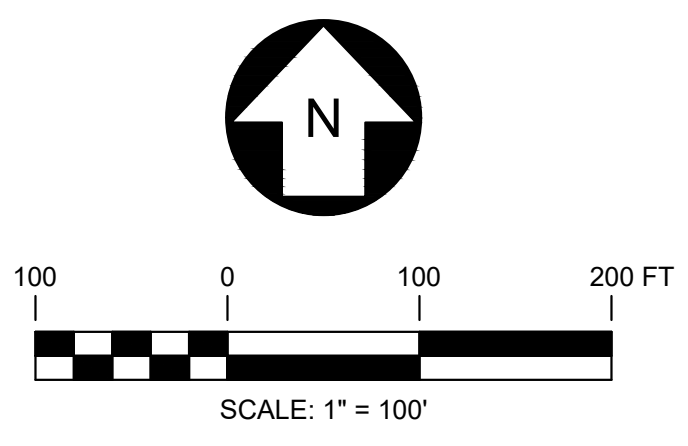
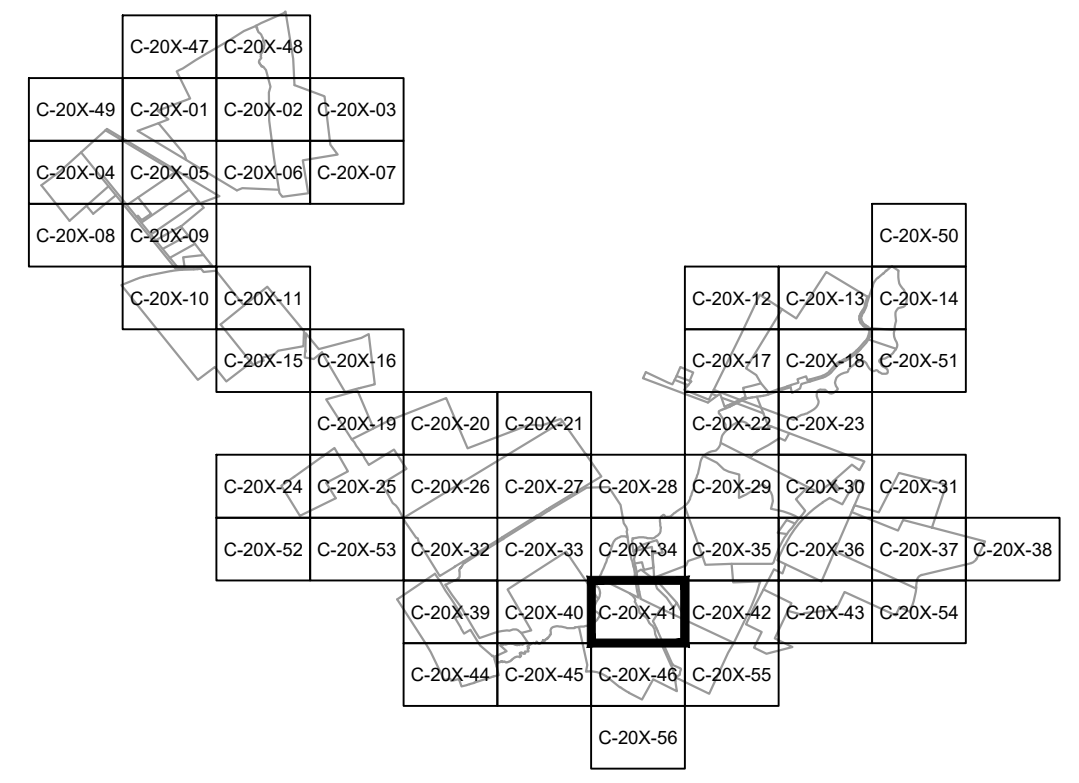
REV. C





**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue dashed line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrows
- REACH: Pink dashed line with circles
- SHEET FLOW: 100' SF (Blue solid line)
- SHALLOW CONCENTRATED FLOW: 100' SCF (Red solid line)
- CHANNEL FLOW: 100' CF (Blue solid line)
- SPOT ELEVATION: Black dot with label (e.g., EL. 520.0±)
- REACH ID: Square symbol with '1R'
- SUBCATCHMENT ID: Hexagon symbol with '1S'
- POND ID: Triangle symbol with '1P'
- STUDY POINT ID: Square symbol with 'SP1'
- SOILS BOUNDARY: Brown dashed line



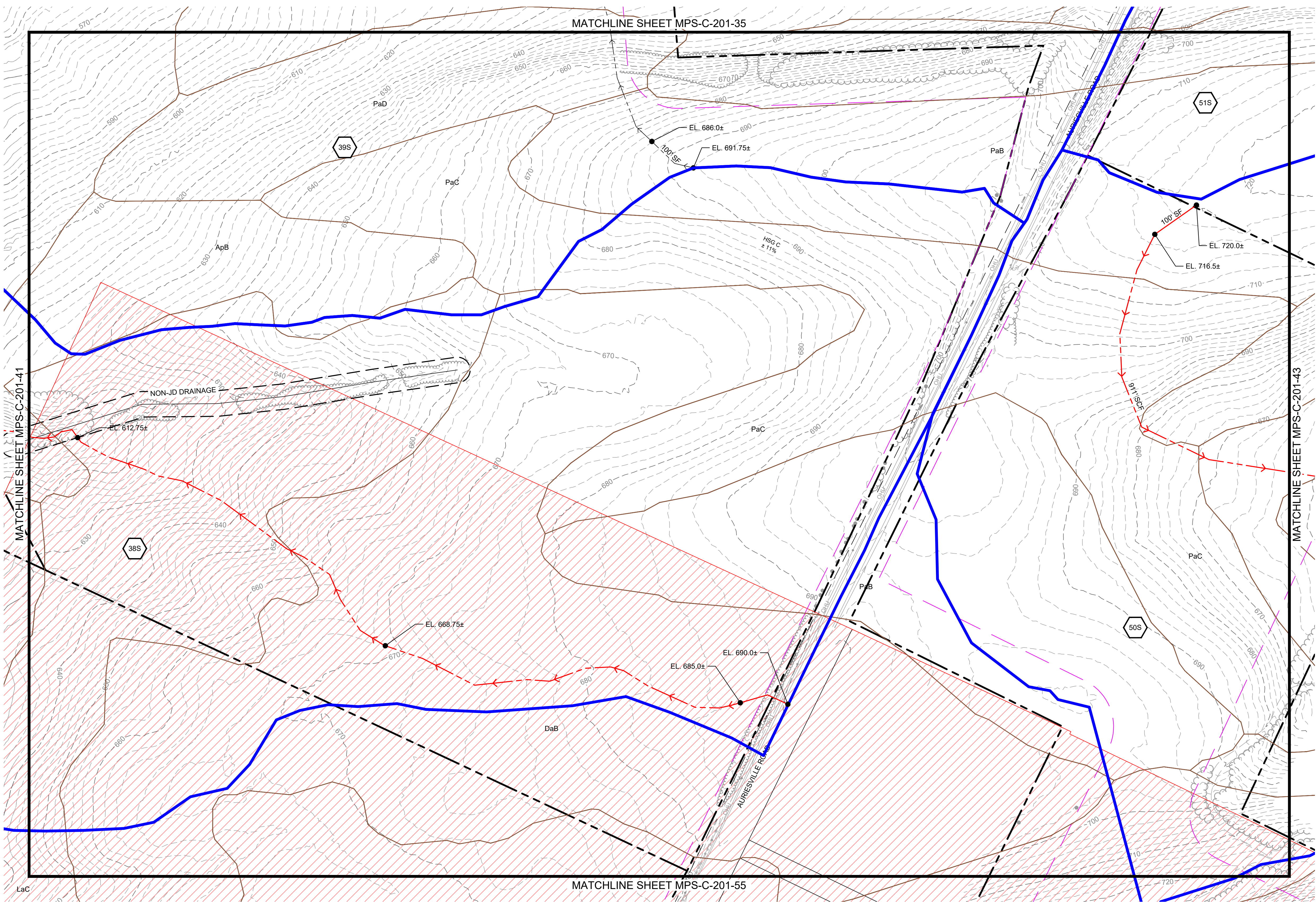
**PRELIMINARY**  
NOT FOR CONSTRUCTION



		249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269		
REV	DESCRIPTION	DATE	DES	CHK	APP	
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM	
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM	
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM	
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM	

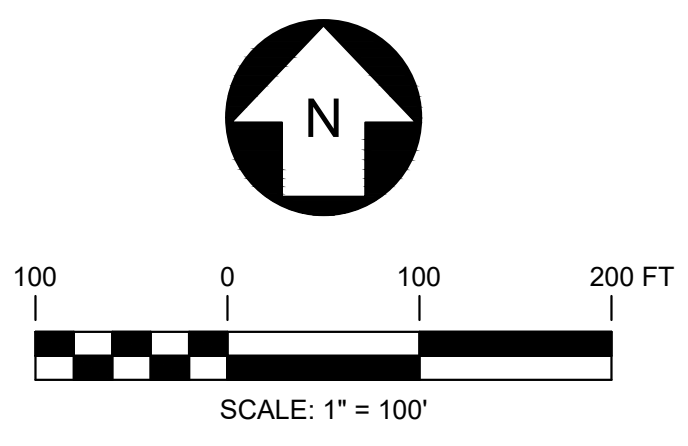
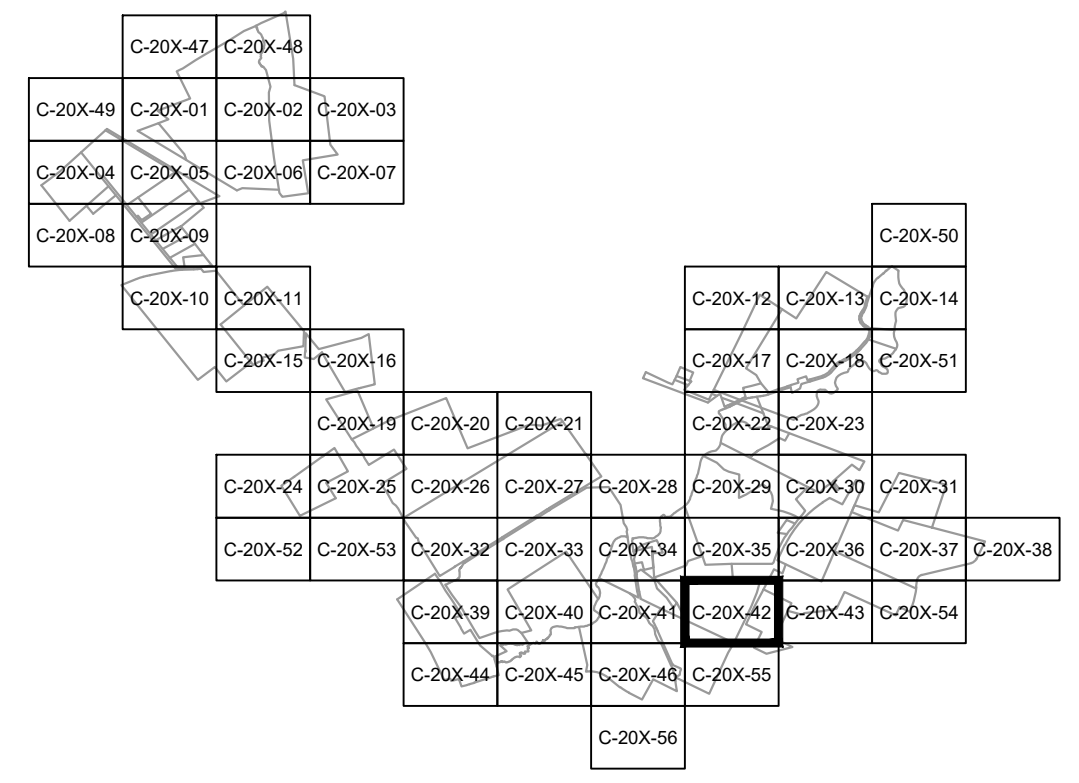
PMM DESIGNED PMM DRAWN PMM CHECKED APPROVED	MILL POINT SOLAR PROJECT CONNECTGEN, LLC PRE-DEVELOPMENT STORMWATER PLAN		GLEN	NEW YORK
REVIEW 1 REVIEW 2	03/01/2023 DATE 1" = 100' SCALE		MPS-C-201-41	REV. C

REFERENCE ITEMS



**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue solid line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrows
- REACH: Pink dashed line with circles
- SHEET FLOW: 100' SF (represented by a blue line)
- SHALLOW CONCENTRATED FLOW: 100' SCF (represented by a red dashed line)
- CHANNEL FLOW: 100' CF (represented by a black dashed line)
- SPOT ELEVATION: Black dot with 'EL. 520.0±'
- REACH ID: Square with '1R'
- SUBCATCHMENT ID: Hexagon with '1S'
- POND ID: Triangle with '1P'
- STUDY POINT ID: Square with 'SP1'
- SOILS BOUNDARY: Brown dashed line

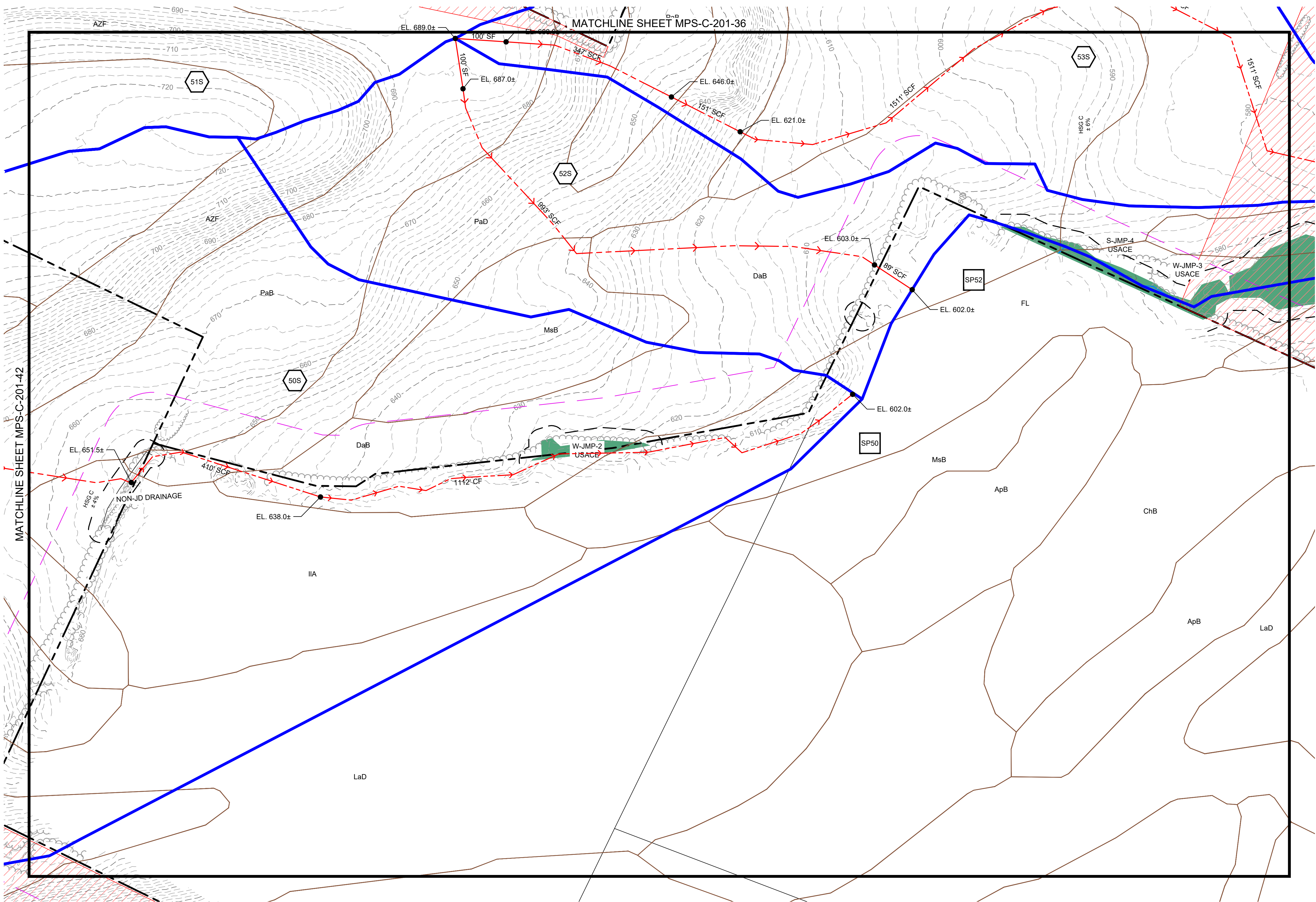


**PRELIMINARY**  
NOT FOR CONSTRUCTION



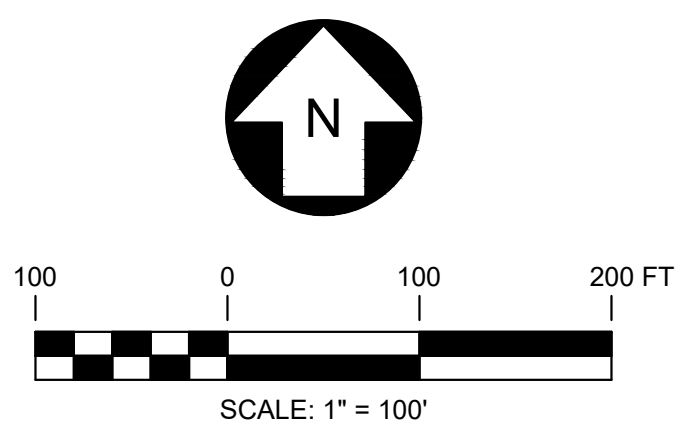
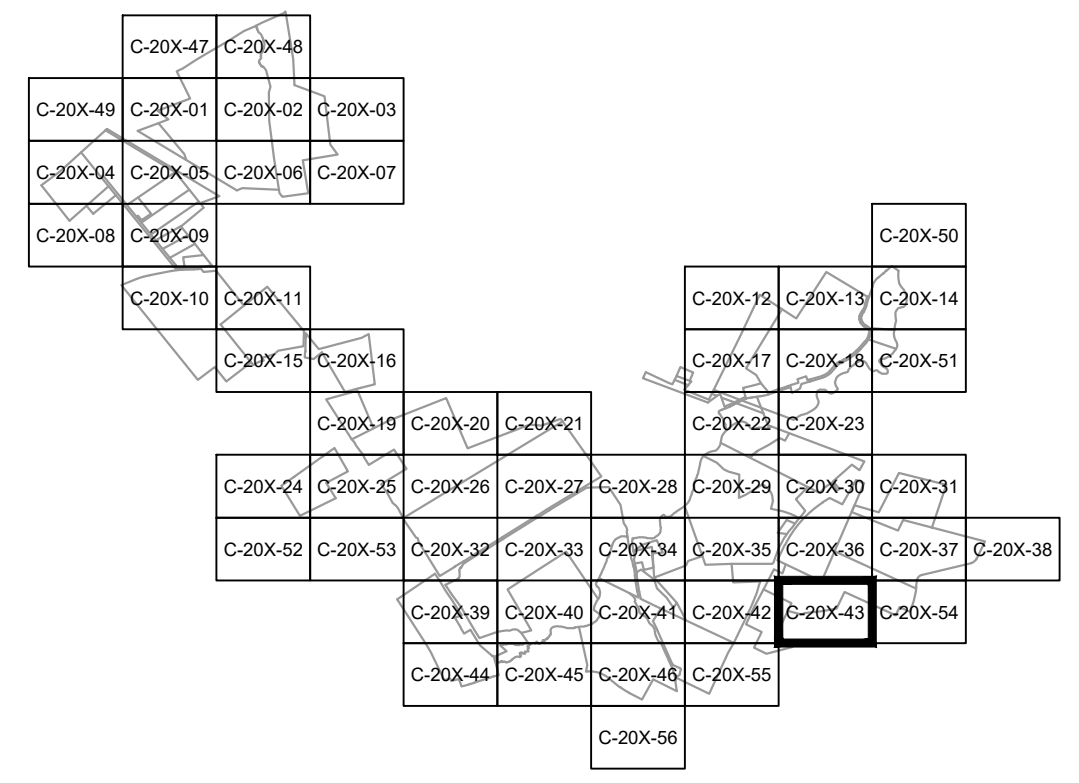
		249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269		
REV	DESCRIPTION	DATE	DES	CHK	APP	
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM	
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM	
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM	
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM	

PMM DESIGNED PMM DRAWN PMM CHECKED APPROVED	<b>MILL POINT SOLAR PROJECT</b> <b>CONNECTGEN, LLC</b> <b>PRE-DEVELOPMENT STORMWATER PLAN</b>		GLEN	NEW YORK
REVIEW 1 REVIEW 2	03/01/2023 DATE 1" = 100' SCALE		MPS-C-201-42	REV. C



**LEGEND**

SUBCATCHMENT BOUNDARY	
TIME OF CONCENTRATION FLOW LINE	
REACH	
SHEET FLOW	100' SF
SHALLOW CONCENTRATED FLOW	100' SCF
CHANNEL FLOW	100' CF
SPOT ELEVATION	EL. 520.0±
REACH ID	1R
SUBCATCHMENT ID	1S
POND ID	1P
STUDY POINT ID	SP1
SOILS BOUNDARY	



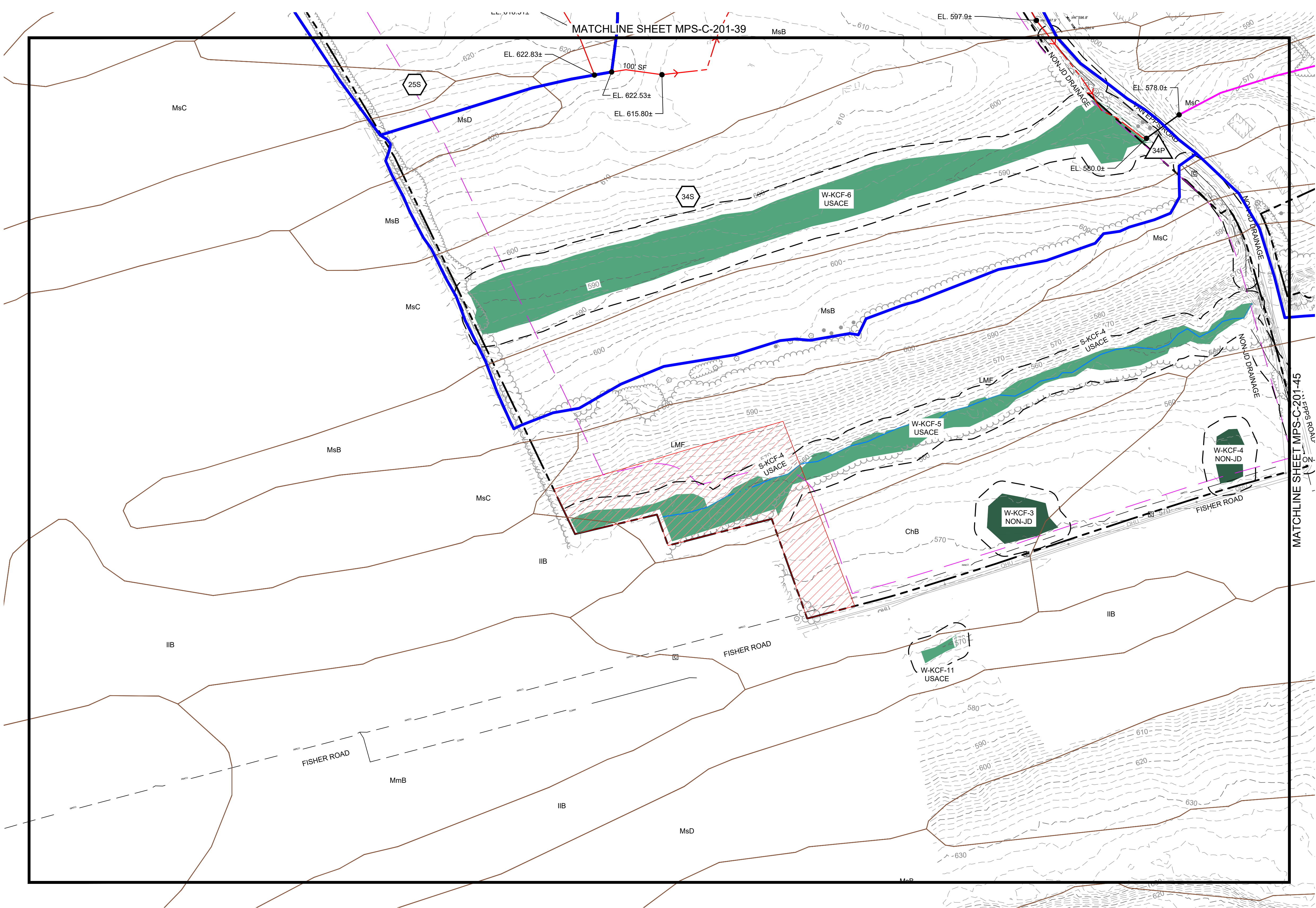
**PRELIMINARY**  
NOT FOR CONSTRUCTION



		249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269		
REV	DESCRIPTION	DATE	DES	CHK	APP	
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM	
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM	
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM	
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM	

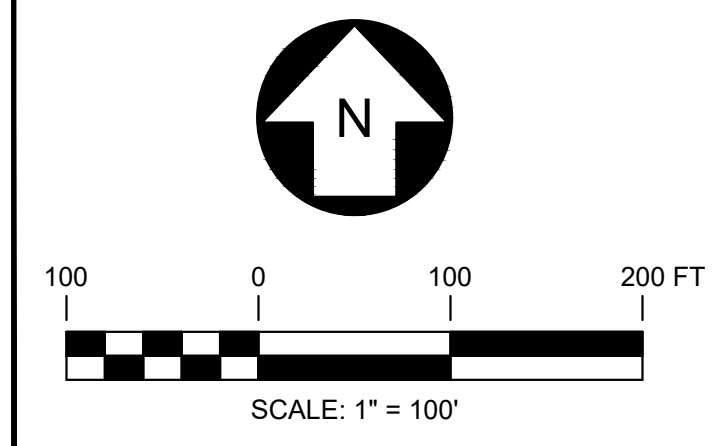
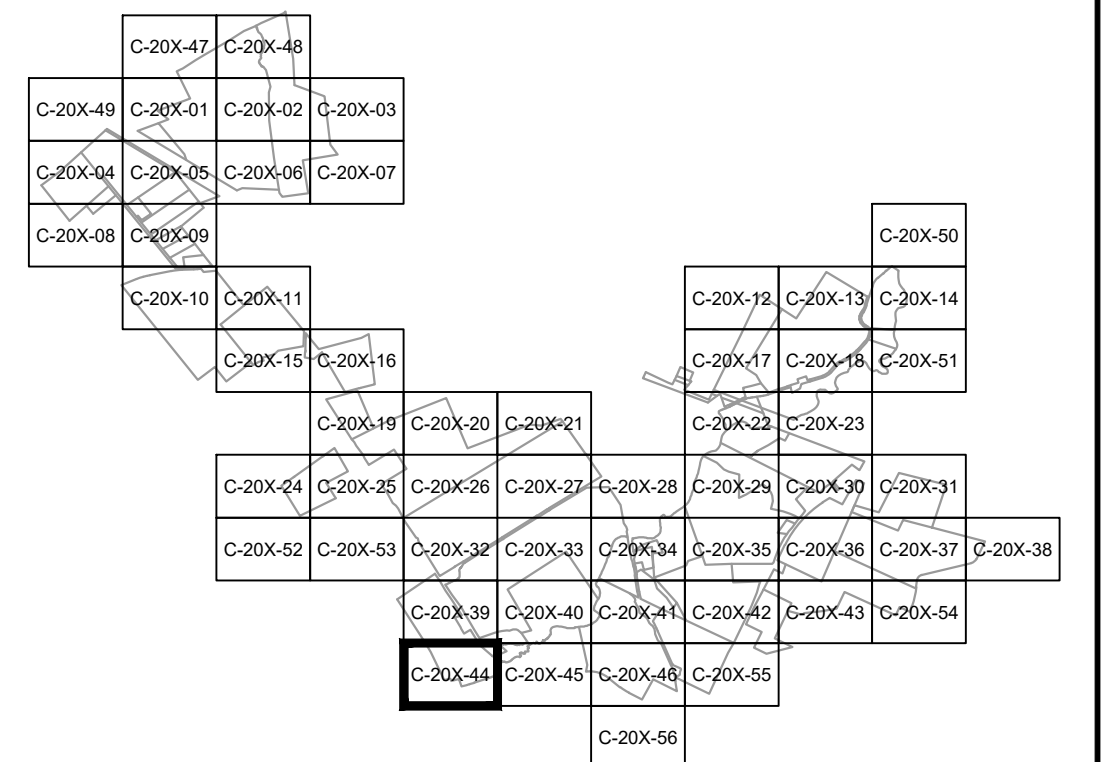
PMM DESIGNED	MILL POINT SOLAR PROJECT CONNECTGEN, LLC PRE-DEVELOPMENT STORMWATER PLAN	GLEN	NEW YORK
PMM DRAWN			
PMM CHECKED			
PMM APPROVED			
REVIEW 1	03/01/2023		MPS-C-201-43
REVIEW 2	DATE		
SCALE	1" = 100'		

REV. C



**LEGEND**

SUBCATCHMENT BOUNDARY	
TIME OF CONCENTRATION FLOW LINE	
REACH	
SHEET FLOW	100' SF
SHALLOW CONCENTRATED FLOW	100' SCF
CHANNEL FLOW	100' CF
SPOT ELEVATION	EL. 520.0±
REACH ID	1R
SUBCATCHMENT ID	1S
POND ID	1P
STUDY POINT ID	SP1
SOILS BOUNDARY	

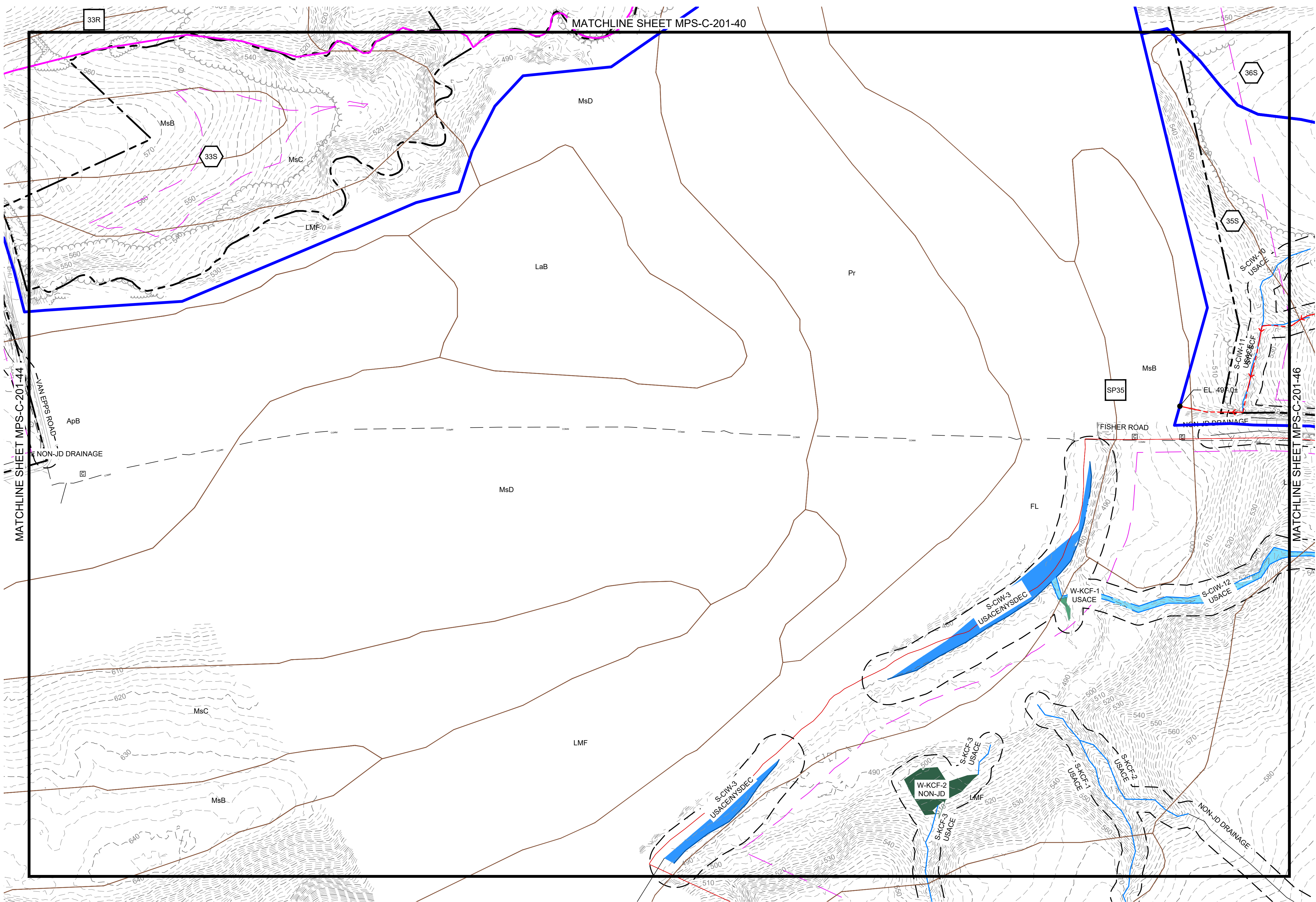


**PRELIMINARY**  
NOT FOR CONSTRUCTION



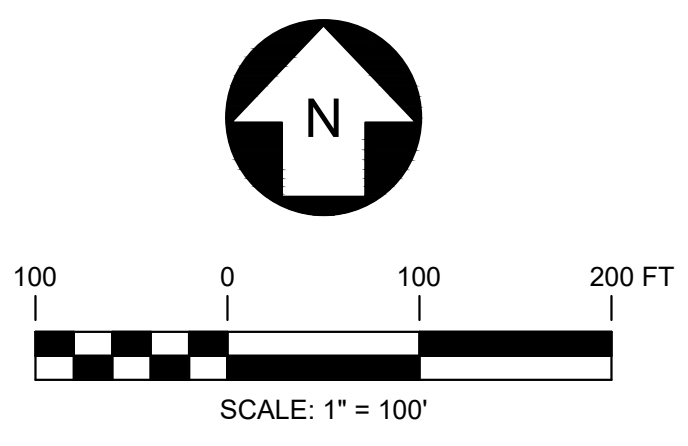
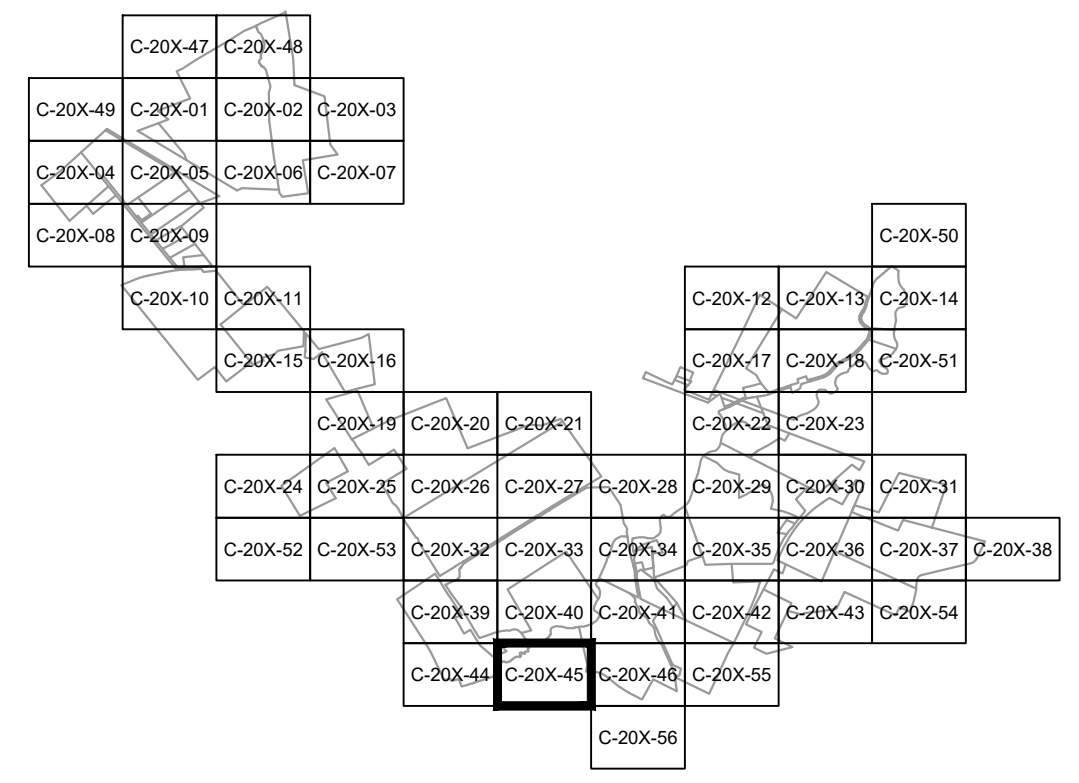
		249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269		
REV	DESCRIPTION	DATE	DES	CHK	APP	
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM	
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM	
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM	
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM	

PMM DESIGNED	MILL POINT SOLAR PROJECT CONNECTGEN, LLC PRE-DEVELOPMENT STORMWATER PLAN	GLEN	NEW YORK	
PMM DRAWN				
PMM CHECKED				
PMM APPROVED				
REVIEW 1	03/01/2023		MPS-C-201-44	REV.
REVIEW 2	DATE			C



**LEGEND**

SUBCATCHMENT BOUNDARY	
TIME OF CONCENTRATION FLOW LINE	
REACH	
SHEET FLOW	100' SF
SHALLOW CONCENTRATED FLOW	100' SCF
CHANNEL FLOW	100' CF
SPOT ELEVATION	EL. 520.0±
REACH ID	
SUBCATCHMENT ID	
POND ID	
STUDY POINT ID	
SOILS BOUNDARY	



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

REFERENCE ITEMS	REV	DESCRIPTION	DATE	DES	CHK	APP
	D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
	C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
	B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
	A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN

NEW YORK

03/01/2023  
DATE



MPS-C-201-45

REV.  
C

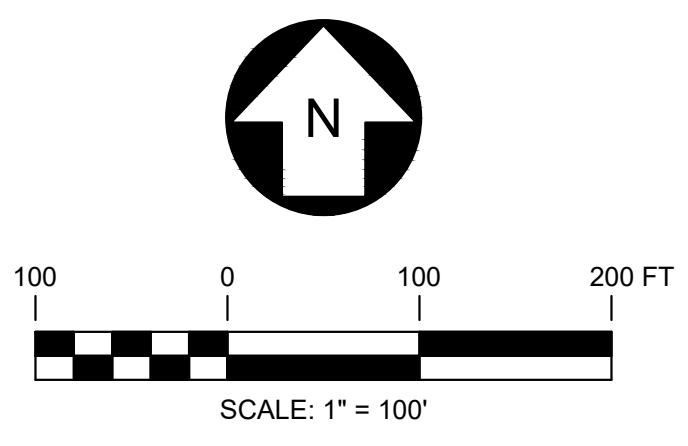
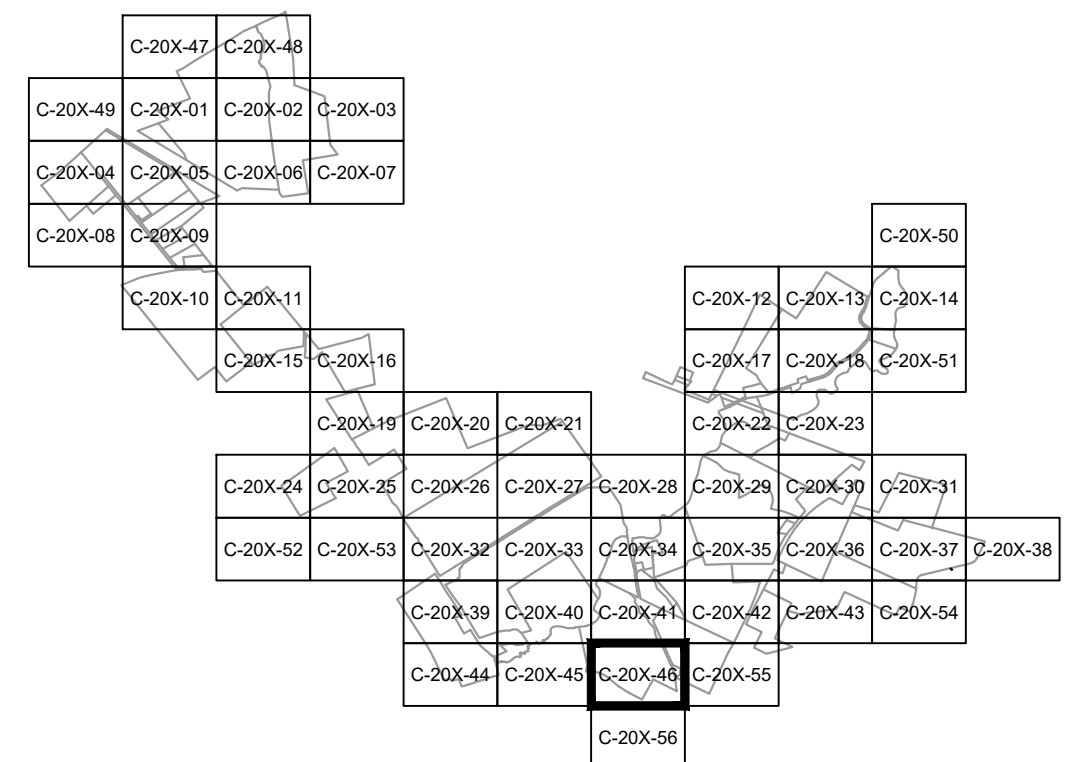
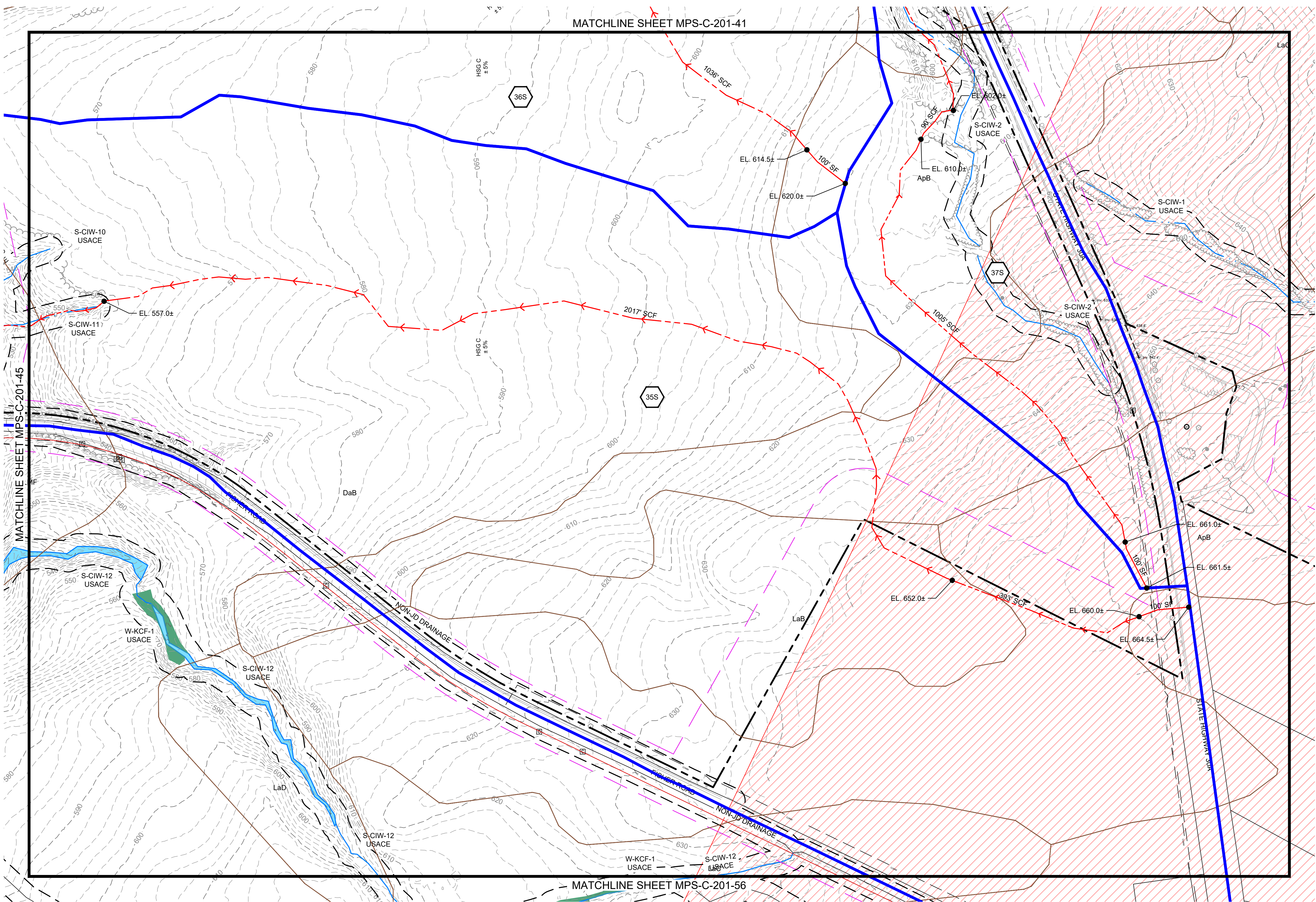
1" = 100'  
SCALE

MATCHLINE SHEET MPS-C-201-41

MATCHLINE SHEET MPS-C-201-56

LEGEND

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY - - -



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

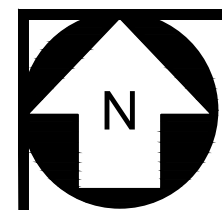
GLEN NEW YORK

03/01/2023  
DATE



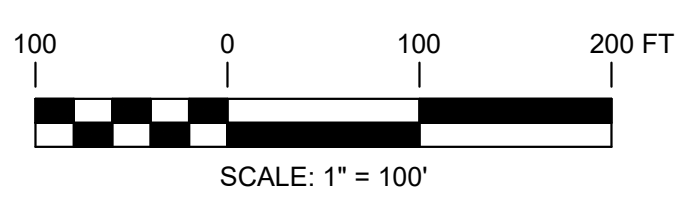
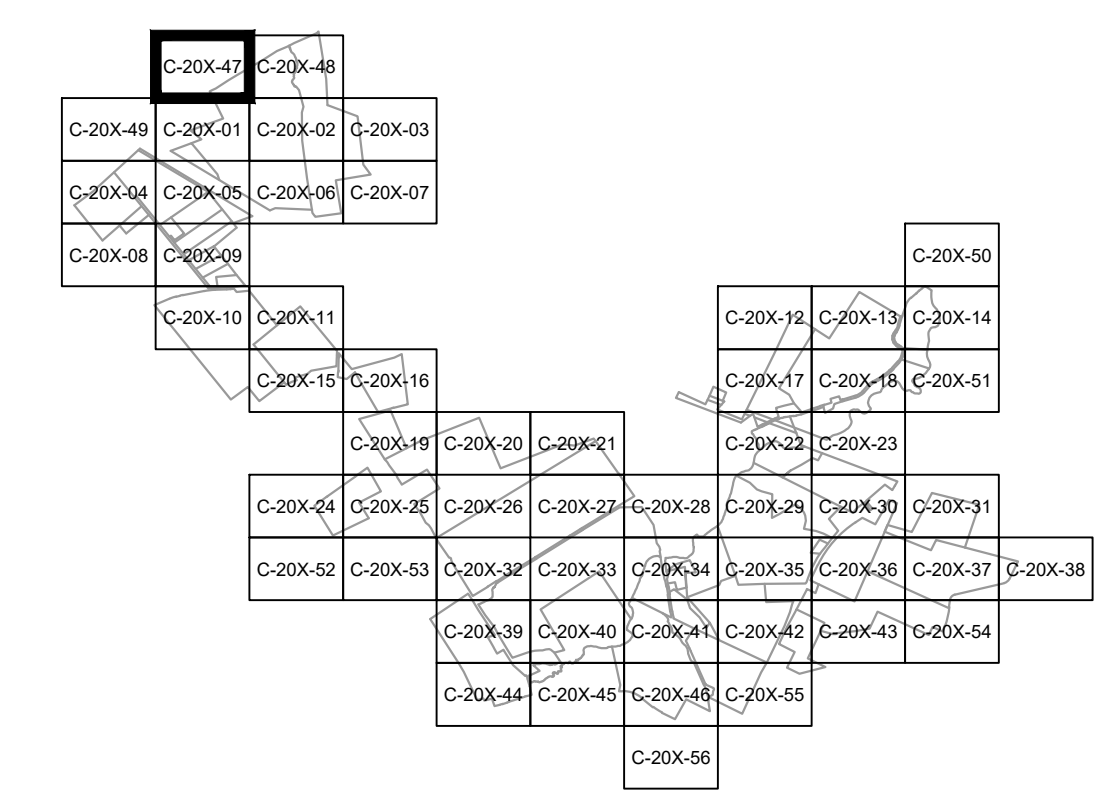
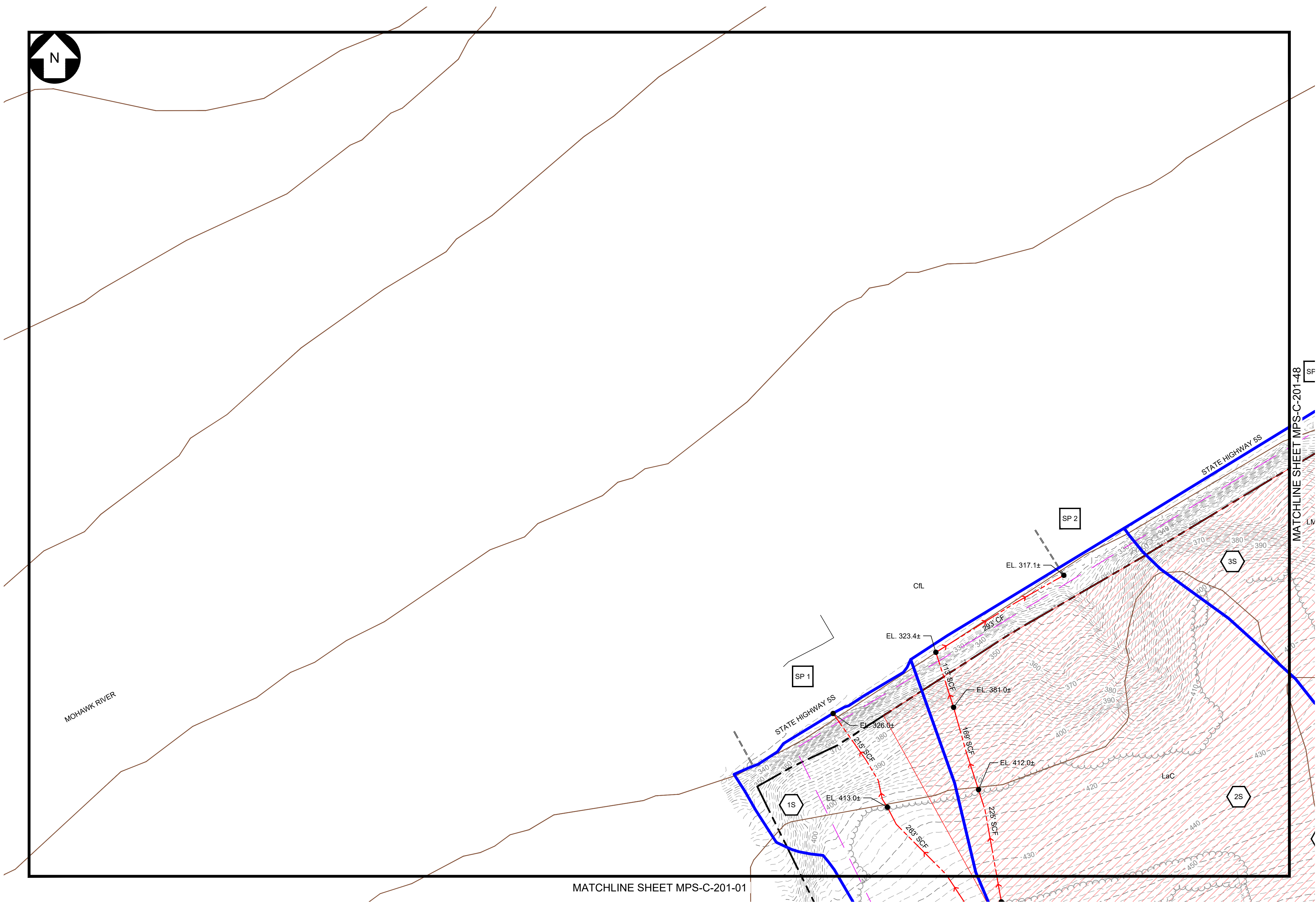
MPS-C-201-46

REV.  
C



**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



**PRELIMINARY**  
NOT FOR CONSTRUCTION



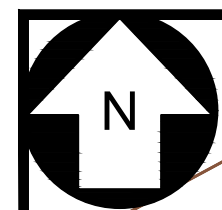
REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

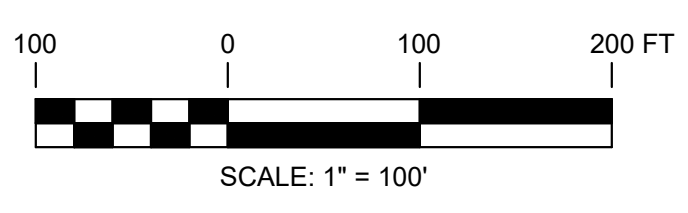
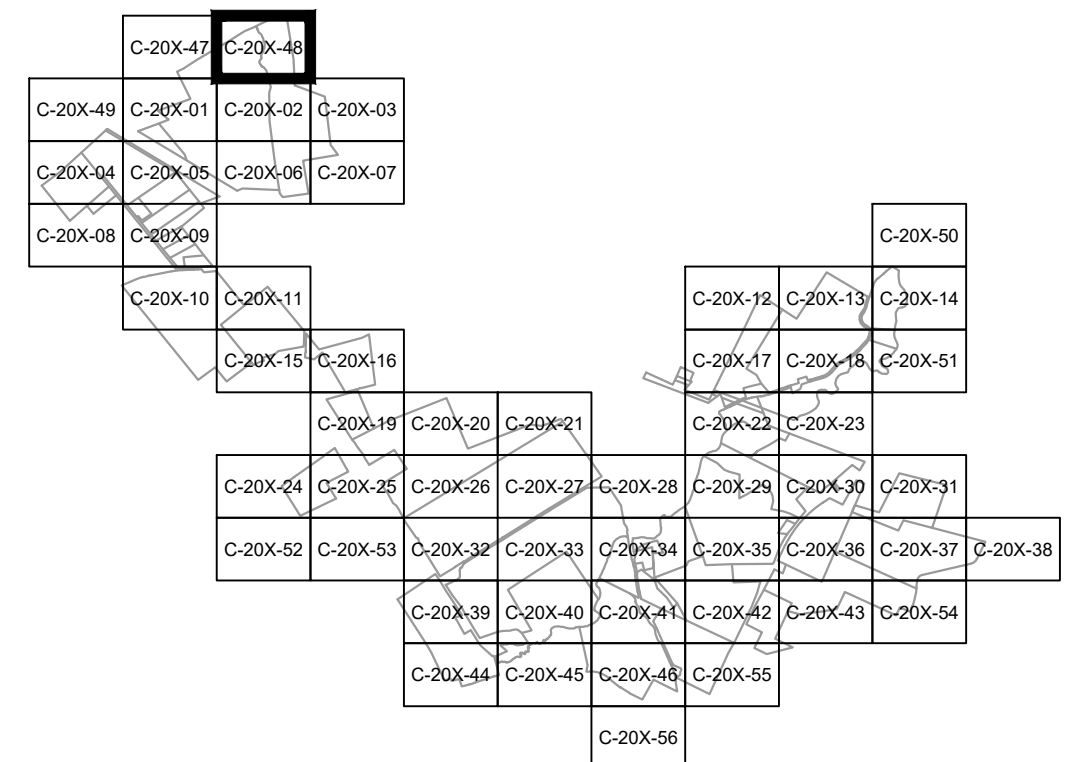
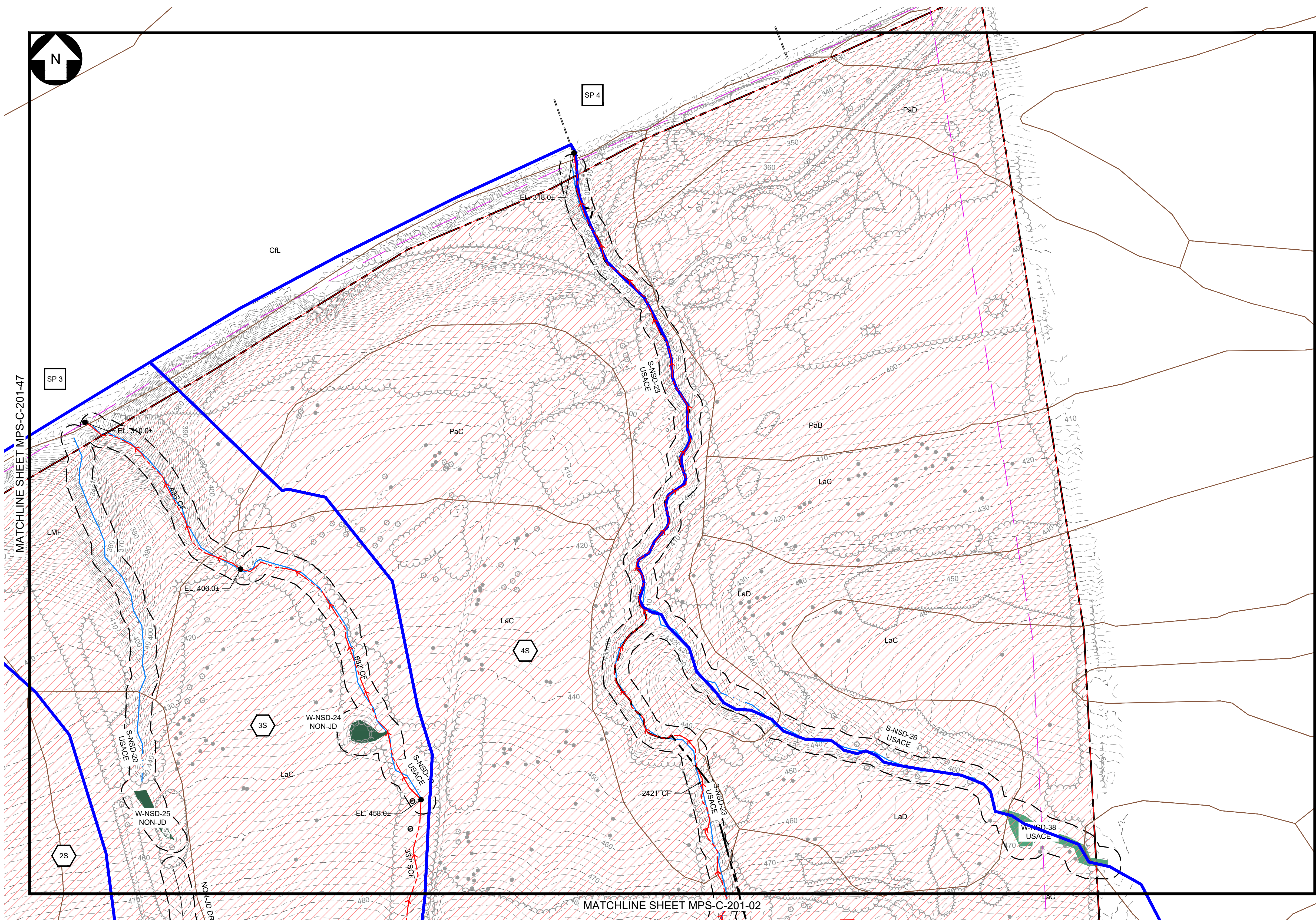
REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM DESIGNED PMM DRAWN PMM CHECKED APPROVED	<b>MILL POINT SOLAR PROJECT</b> <b>CONNECTGEN, LLC</b> <b>PRE-DEVELOPMENT STORMWATER PLAN</b>	NEW YORK
GLEN	03/01/2023 DATE 1" = 100' SCALE	
REVIEW 1 REVIEW 2	MPS-C-201-47	REV. C



**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH LINE —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

REVIEW 1  
REVIEW 2

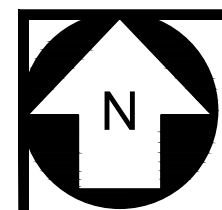
03/01/2023  
DATE



MPS-C-201-48

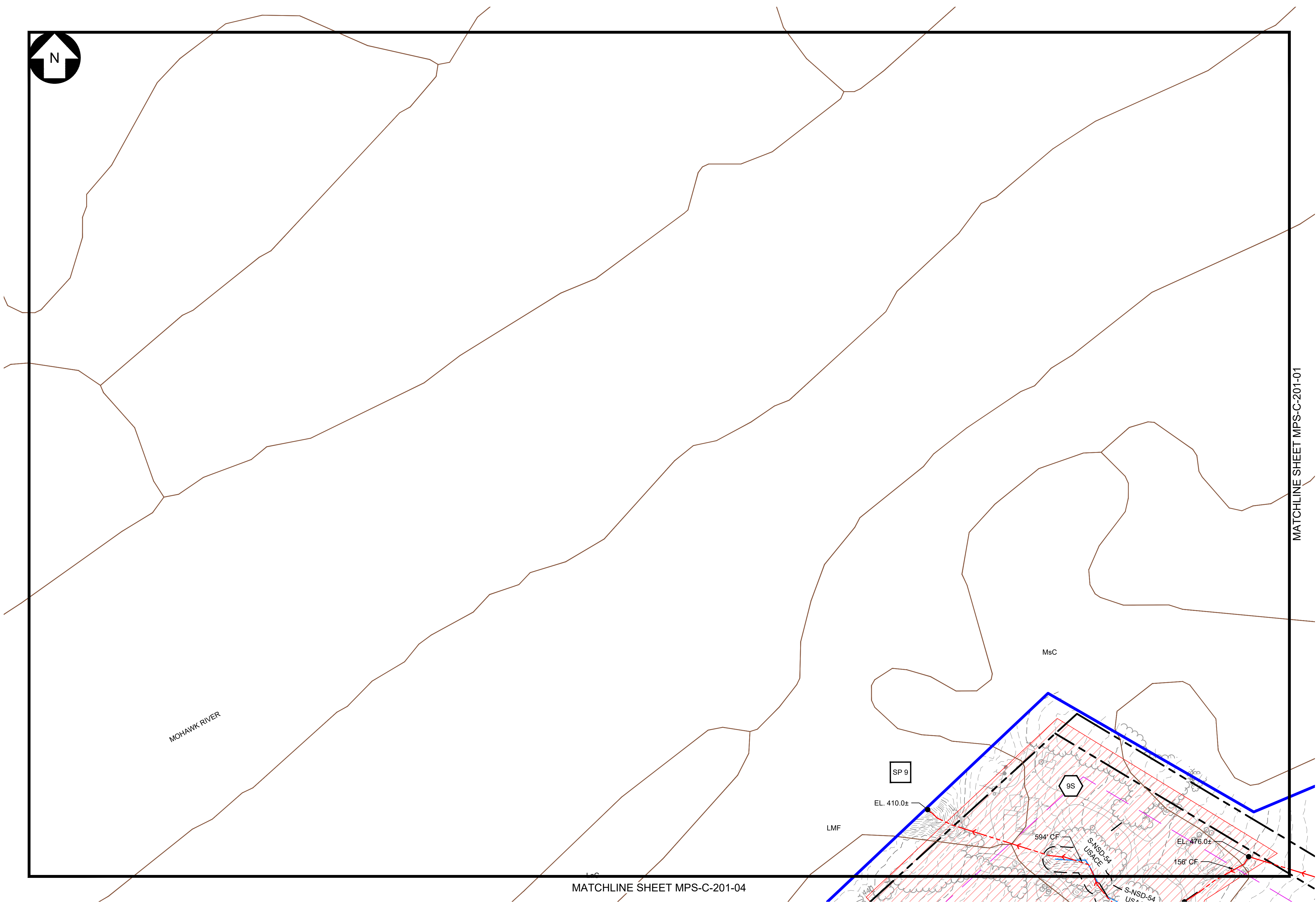
REV.  
C





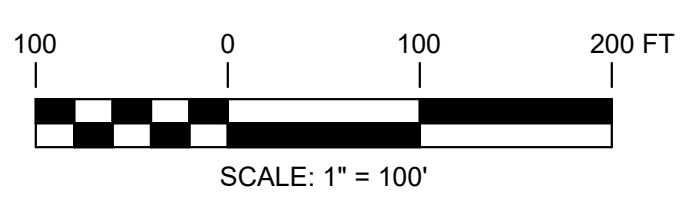
**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



MATCHLINE SHEET MPS-C-201-01

MATCHLINE SHEET MPS-C-201-04



**PRELIMINARY**  
NOT FOR CONSTRUCTION

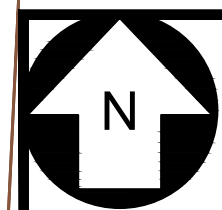


REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

249 Western Avenue  
Augusta, ME 04330

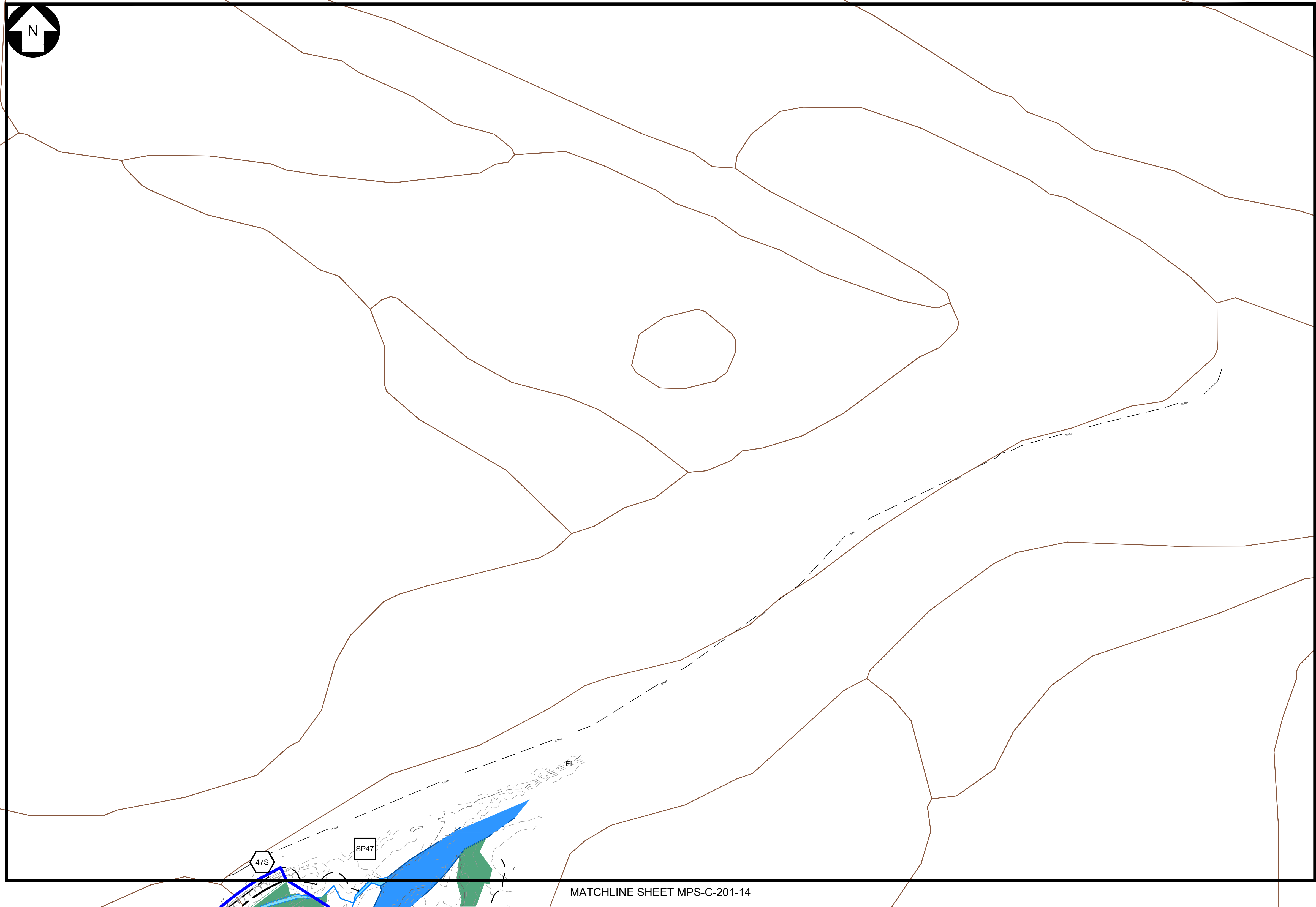
PROJECT NO: 443269

PMM DESIGNED PMM DRAWN PMM CHECKED - APPROVED	<b>MILL POINT SOLAR PROJECT</b> <b>CONNECTGEN, LLC</b> <b>PRE-DEVELOPMENT STORMWATER PLAN</b>	GLEN NEW YORK
REVIEW 1 - REVIEW 2	03/01/2023 DATE 1" = 100' SCALE	
	MPS-C-201-49	REV. C

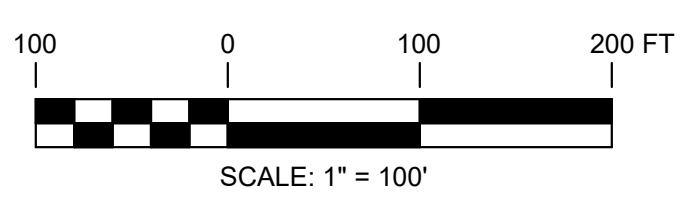
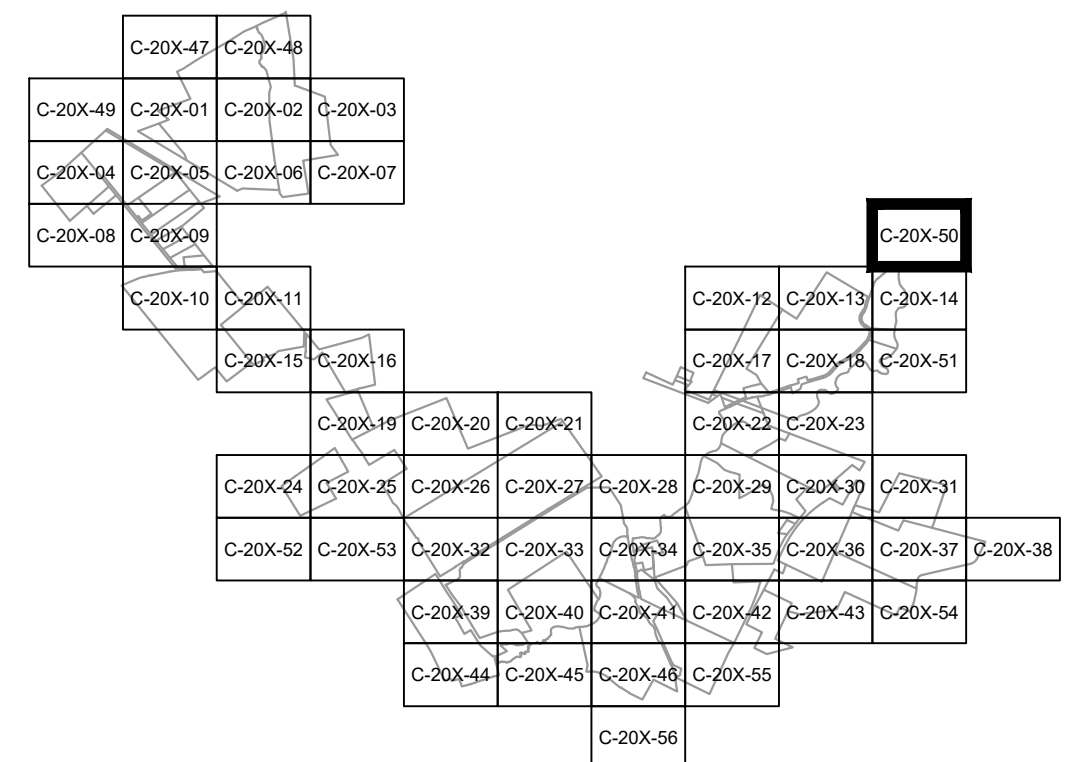


**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



MATCHLINE SHEET MPS-C-201-14



**PRELIMINARY**  
NOT FOR CONSTRUCTION



REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM





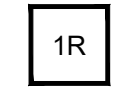
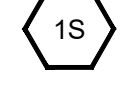



249 Western Avenue  
Augusta, ME 04330

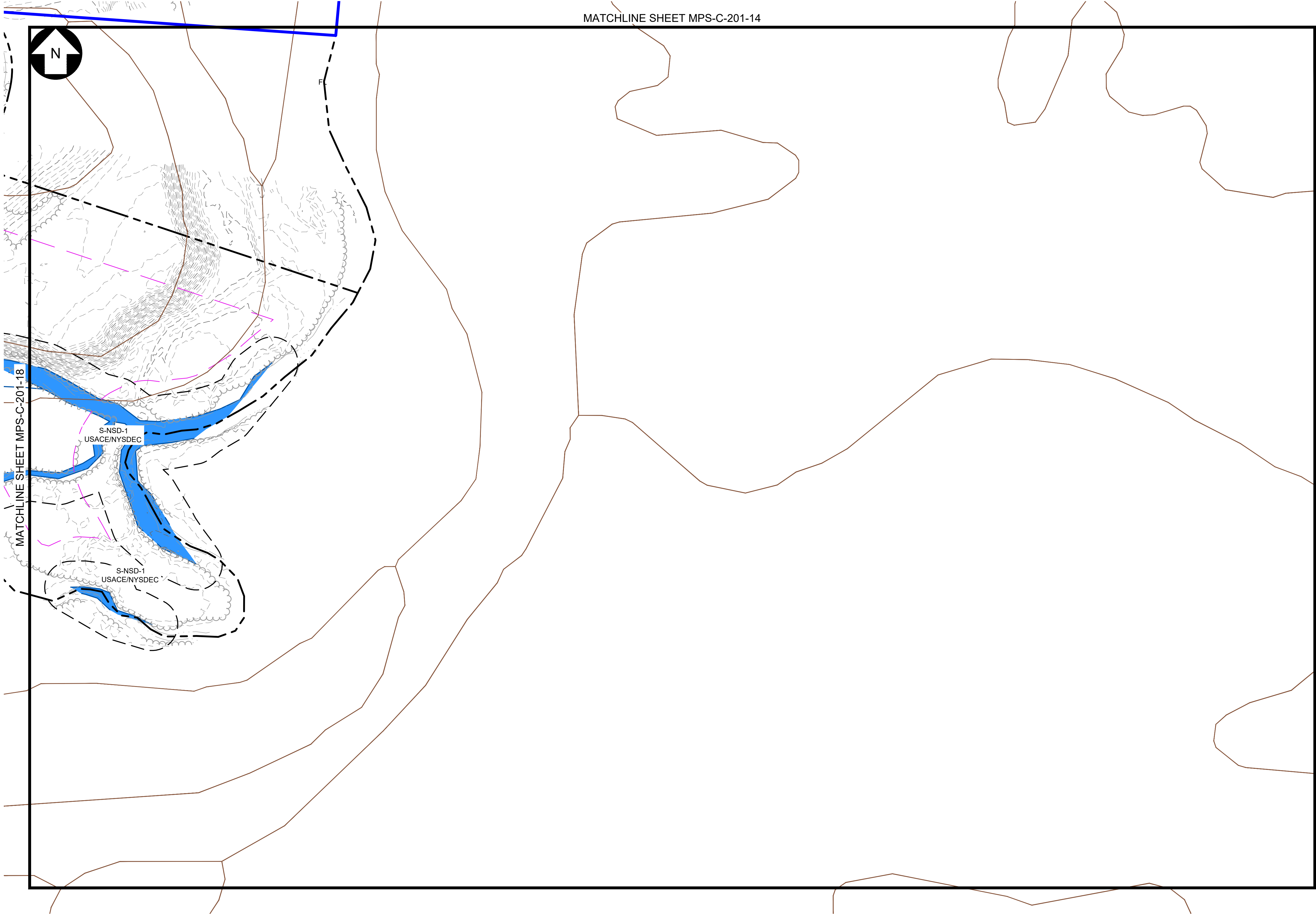
PROJECT NO: 443269

REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

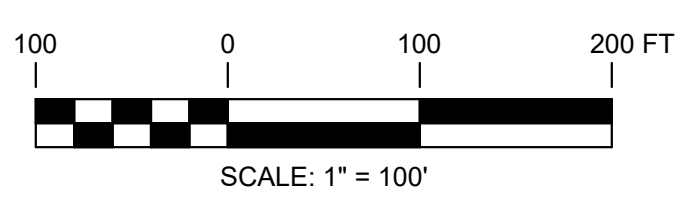
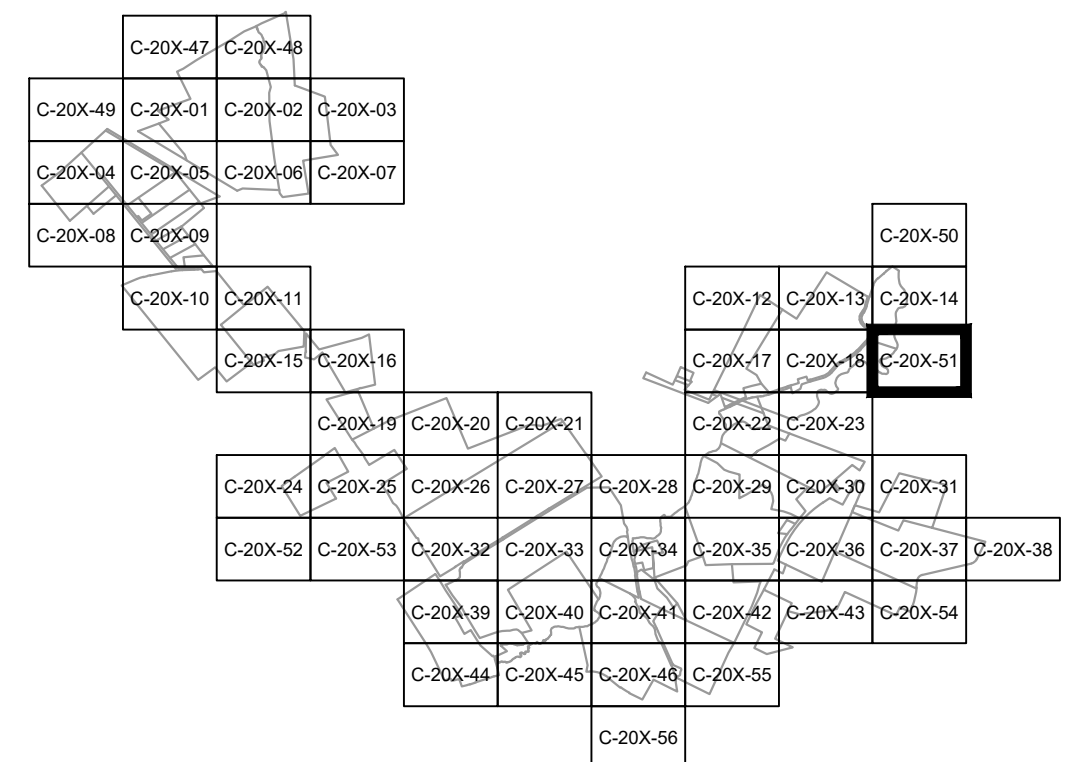
PMM DESIGNED PMM DRAWN PMM CHECKED APPROVED	<b>MILL POINT SOLAR PROJECT</b> <b>CONNECTGEN, LLC</b> <b>PRE-DEVELOPMENT STORMWATER PLAN</b>	NEW YORK
GLEN		MPS-C-201-50
REVIEW 1 REVIEW 2	03/01/2023 DATE 1" = 100' SCALE	REV. C

LEGEND

- SUBCATCHMENT BOUNDARY 
- TIME OF CONCENTRATION FLOW LINE 
- REACH 
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION  EL. 520.0±
- REACH ID 
- SUBCATCHMENT ID 
- POND ID 
- STUDY POINT ID 
- SOILS BOUNDARY 





MATCHLINE SHEET MPS-C-201-18

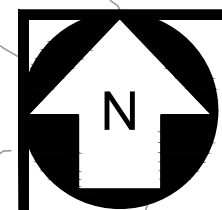


**PRELIMINARY**  
NOT FOR CONSTRUCTION



 249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269				
		REV	DESCRIPTION	DATE	DES	CHK
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	C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
	B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
	A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

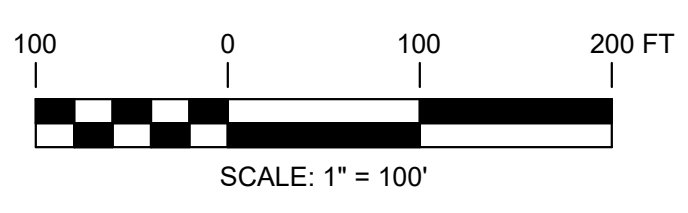
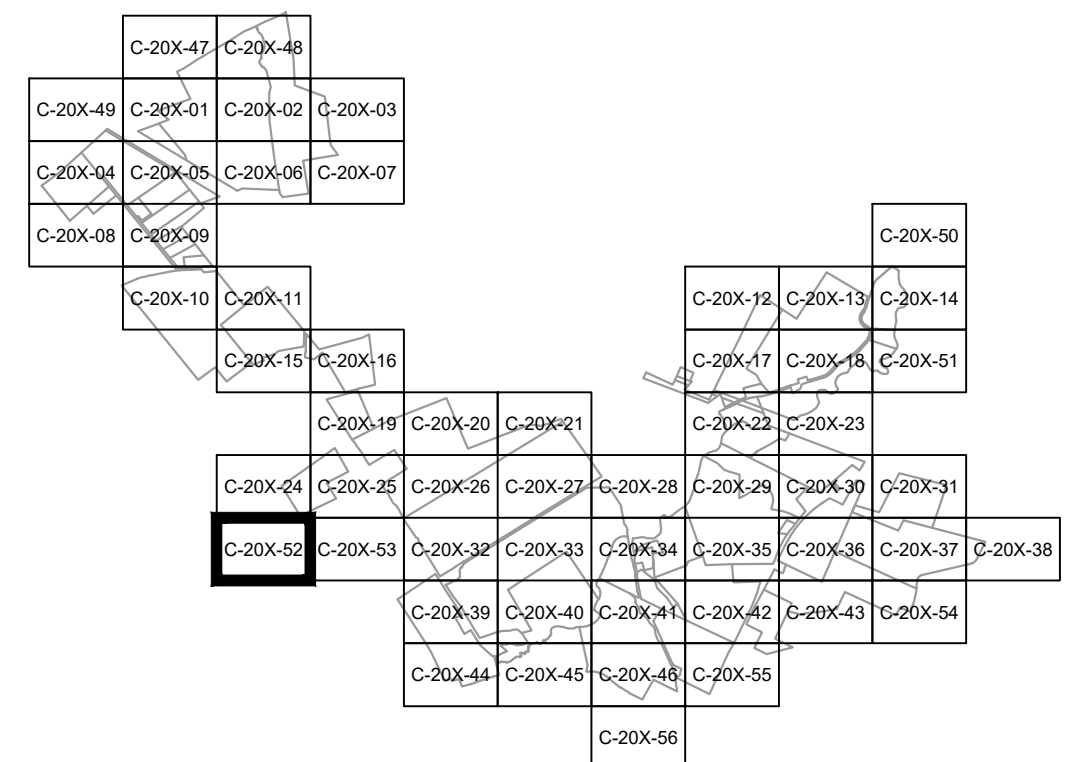
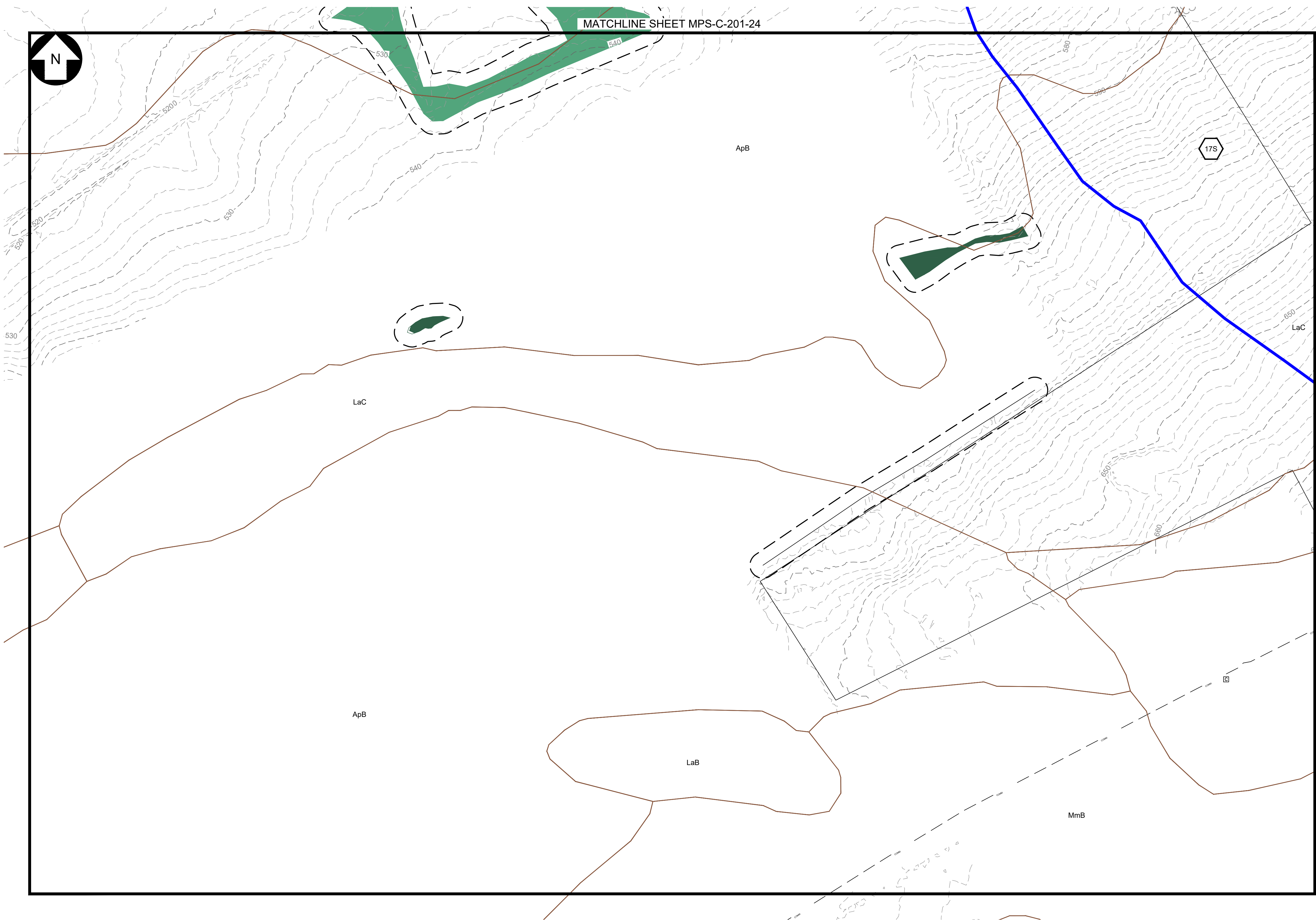
PMM DESIGNED PMM DRAWN PMM CHECKED - APPROVED	MILL POINT SOLAR PROJECT		GLEN NEW YORK
	CONNECTGEN, LLC		
PRE-DEVELOPMENT STORMWATER PLAN			
- REVIEW 1 - REVIEW 2	03/01/2023 DATE 1" = 100' SCALE	 MPS-C-201-51	REV. C



MATCHLINE SHEET MPS-C-201-24

LEGEND

- SUBCATCHMENT BOUNDARY
- TIME OF CONCENTRATION FLOW LINE
- REACH
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY



**PRELIMINARY**  
NOT FOR CONSTRUCTION





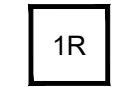
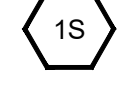
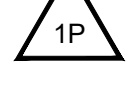




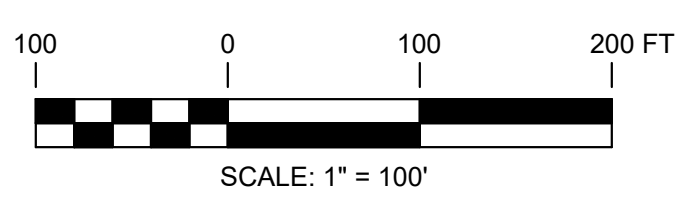
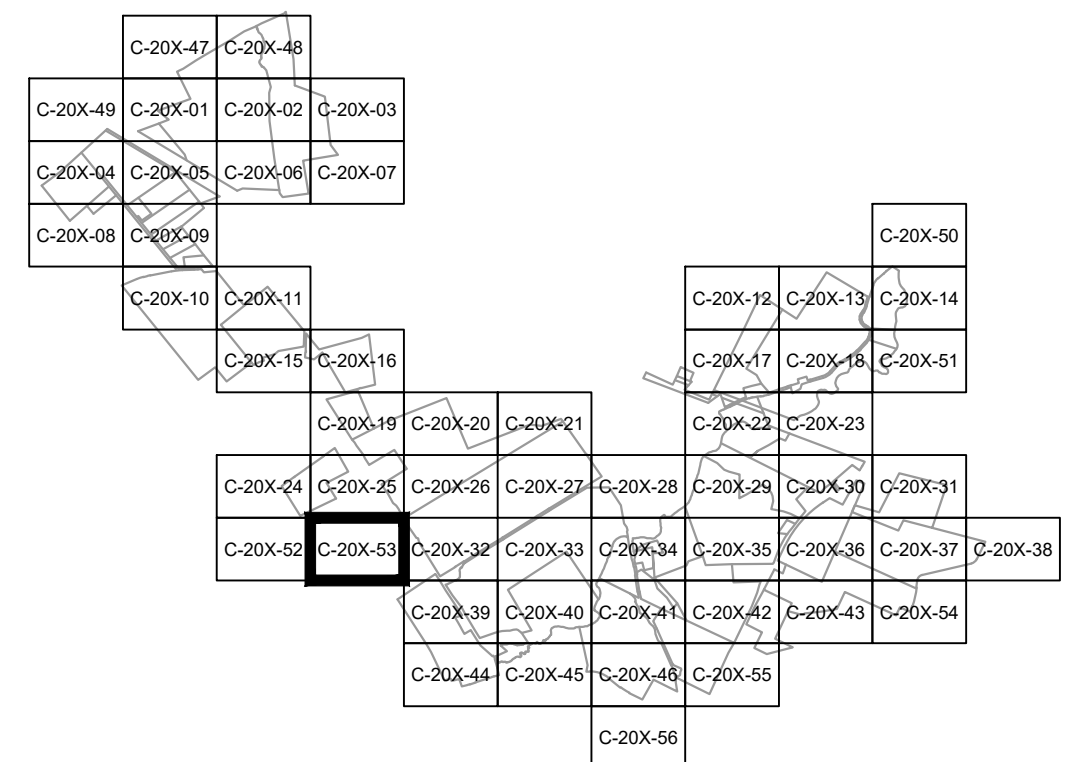
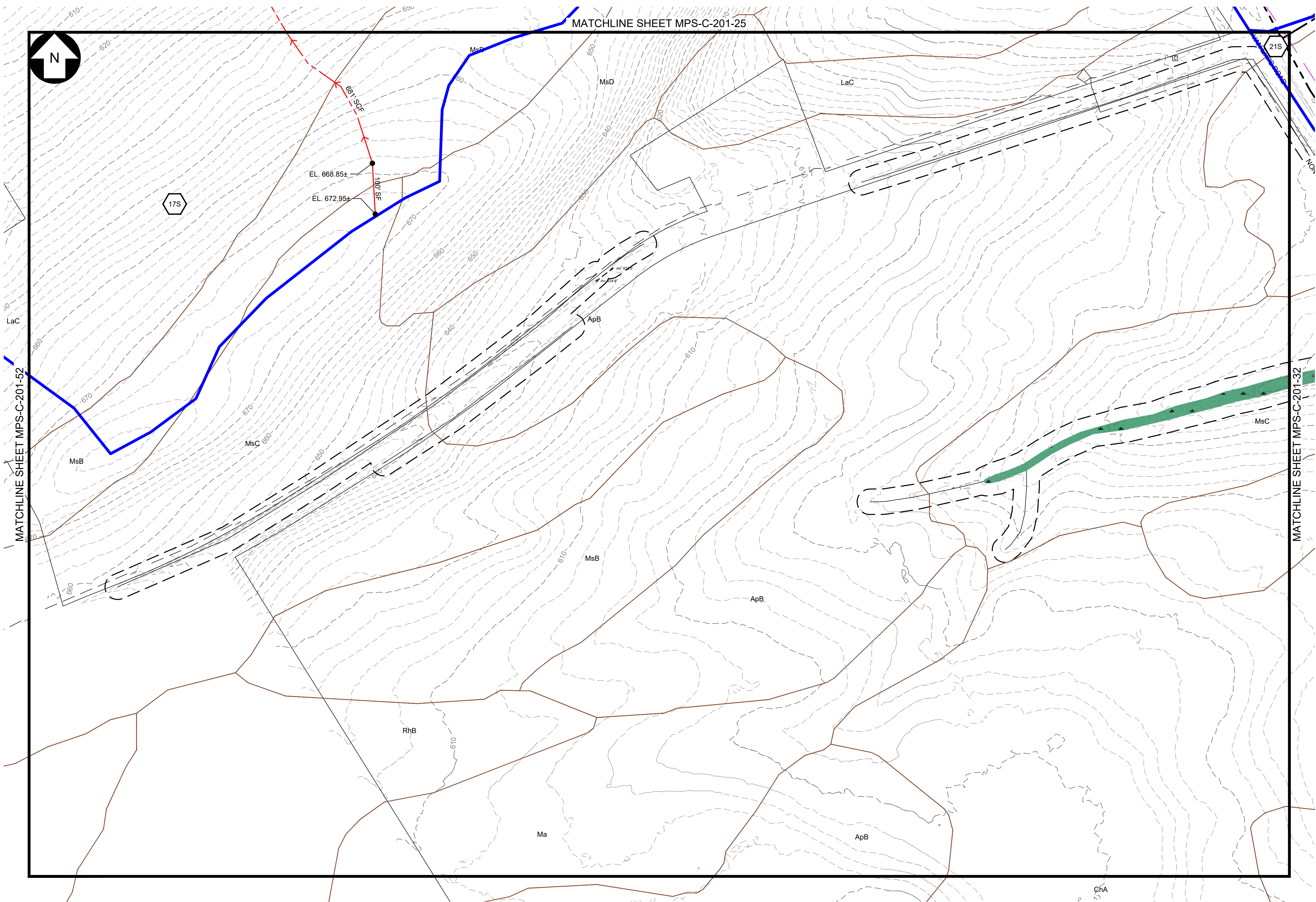
		249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269		
REV	DESCRIPTION	DATE	DES	CHK	APP	
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM	
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM	
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM	
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM	

PMM DESIGNED	MILL POINT SOLAR PROJECT CONNECTGEN, LLC PRE-DEVELOPMENT STORMWATER PLAN	GLEN	NEW YORK	
PMM DRAWN				
PMM CHECKED				
PMM APPROVED				
REVIEW 1	03/01/2023 DATE		MPS-C-201-52	REV.
REVIEW 2	1" = 100' SCALE			C

MATCHLINE SHEET MPS-C-201-25


LEGEND


- SUBCATCHMENT BOUNDARY 
- TIME OF CONCENTRATION FLOW LINE 
- REACH 
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION  EL. 520.0±
- REACH ID 
- SUBCATCHMENT ID 
- POND ID 
- STUDY POINT ID 
- SOILS BOUNDARY 



**PRELIMINARY**  
NOT FOR CONSTRUCTION







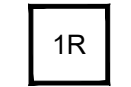
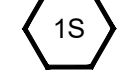
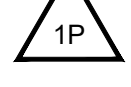


 249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269			
REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

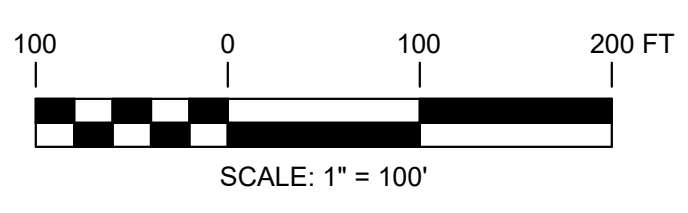
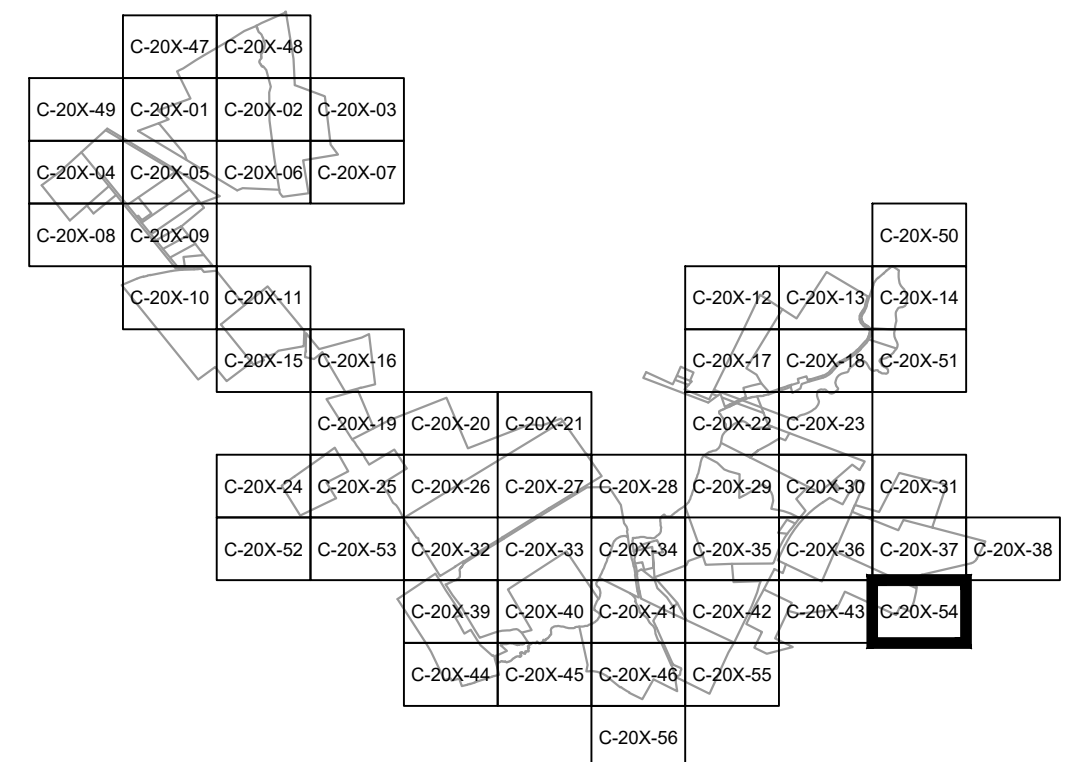
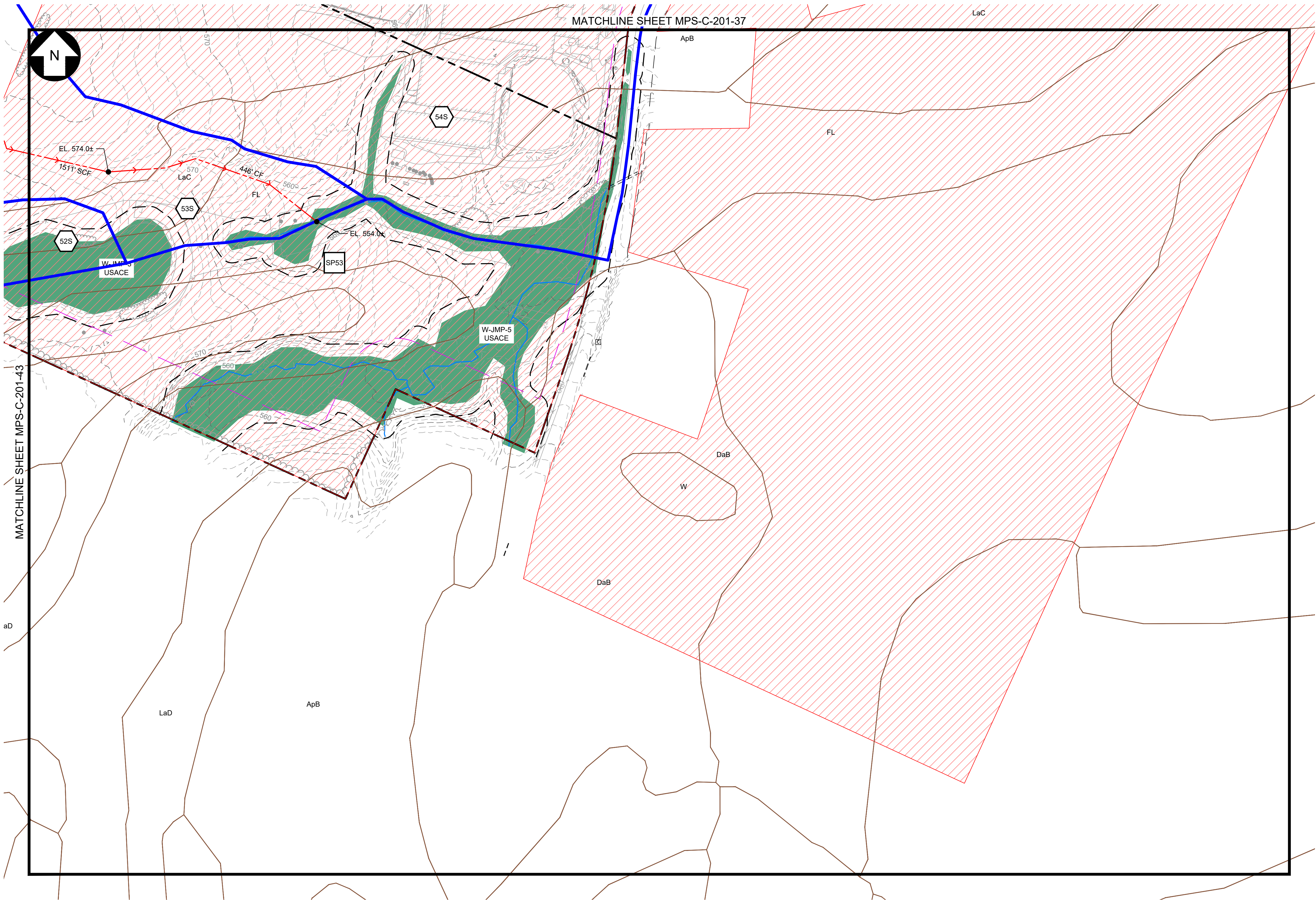
PMM DESIGNED	MILL POINT SOLAR PROJECT CONNECTGEN, LLC PRE-DEVELOPMENT STORMWATER PLAN	GLEN NEW YORK
PMM DRAWN		
PMM CHECKED		
PMM APPROVED		
REVIEW 1	03/01/2023	 MPS-C-201-53
REVIEW 2	DATE	

REV. C

MATCHLINE SHEET MPS-C-201-37


LEGEND


- SUBCATCHMENT BOUNDARY 
- TIME OF CONCENTRATION FLOW LINE 
- REACH 
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION  EL. 520.0±
- REACH ID 
- SUBCATCHMENT ID 
- POND ID 
- STUDY POINT ID 
- SOILS BOUNDARY 



**PRELIMINARY**  
NOT FOR CONSTRUCTION



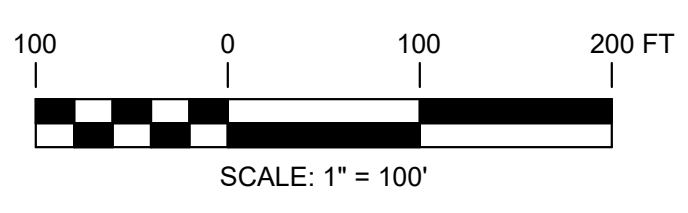
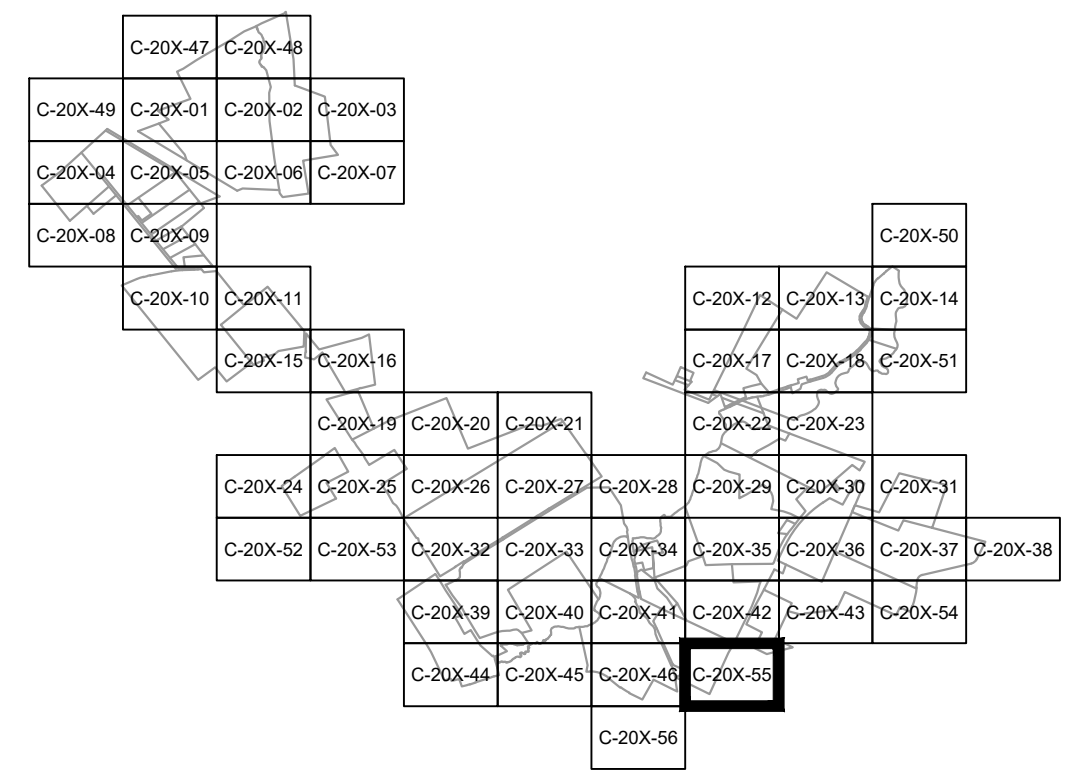
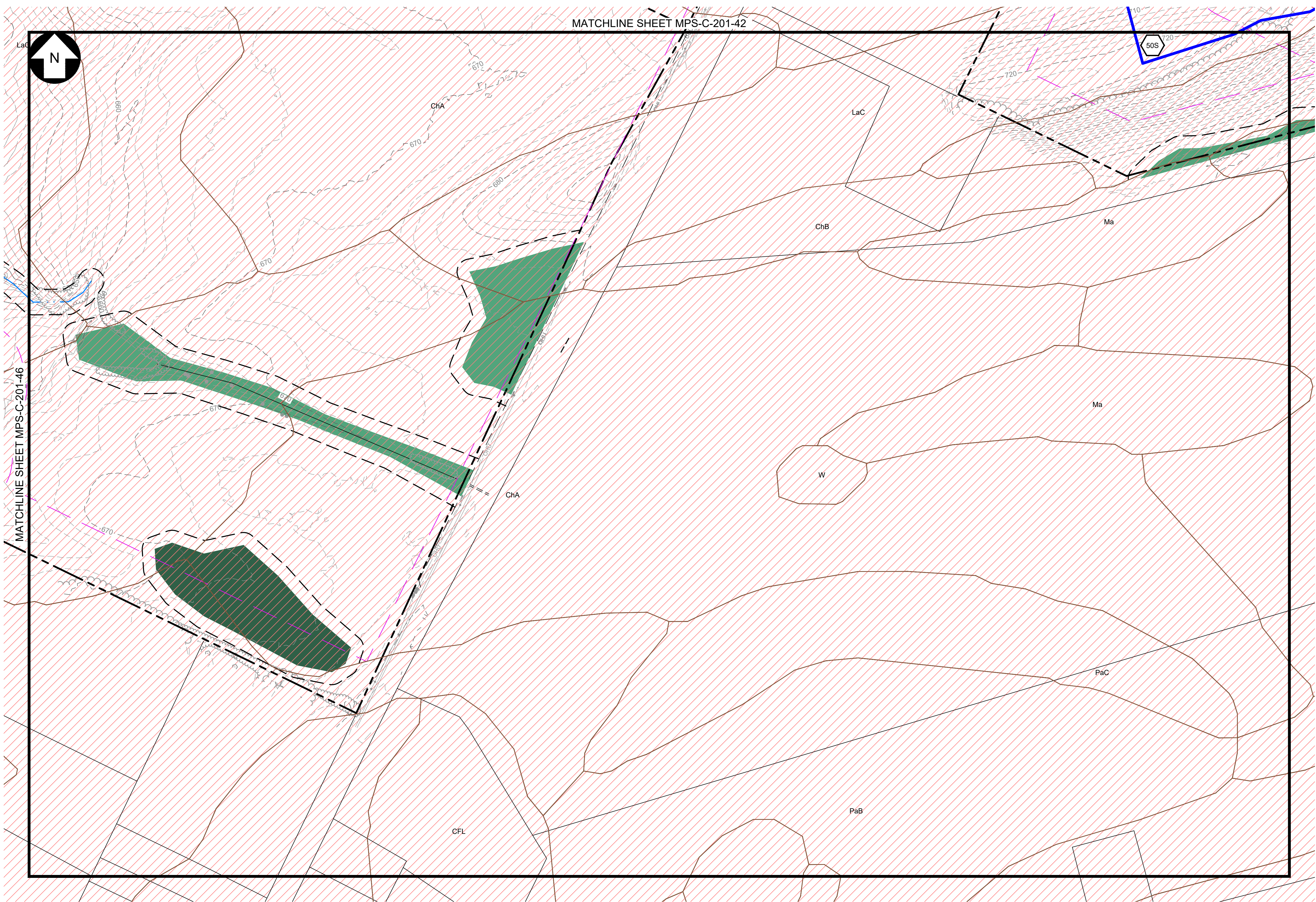
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C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM	
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM	
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM	

PMM DESIGNED	MILL POINT SOLAR PROJECT CONNECTGEN, LLC PRE-DEVELOPMENT STORMWATER PLAN	GLEN	NEW YORK
PMM DRAWN			
PMM CHECKED			
PMM APPROVED			
REVIEW 1	03/01/2023		MPS-C-201-54
REVIEW 2	DATE		
SCALE: 1" = 100'			REV. C

MATCHLINE SHEET MPS-C-201-42

**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330





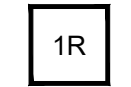
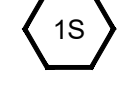
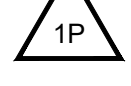


PROJECT NO: 443269

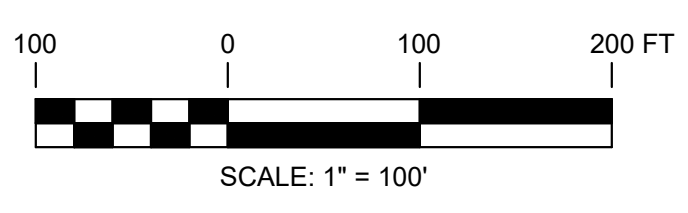
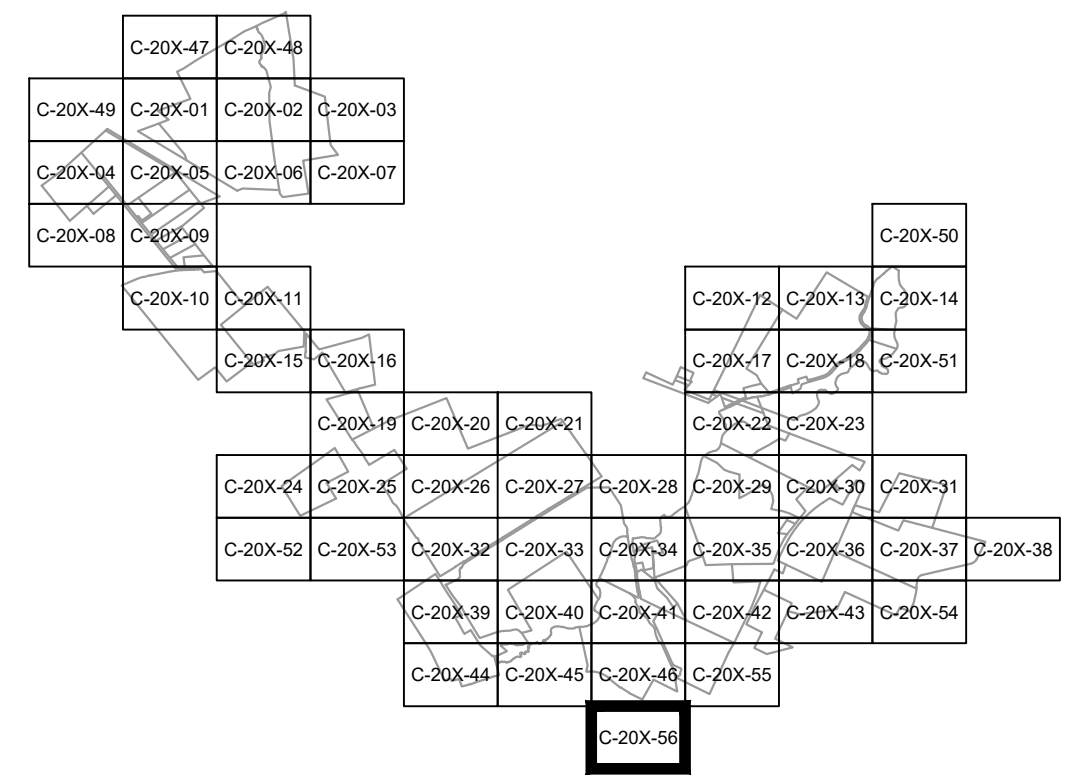
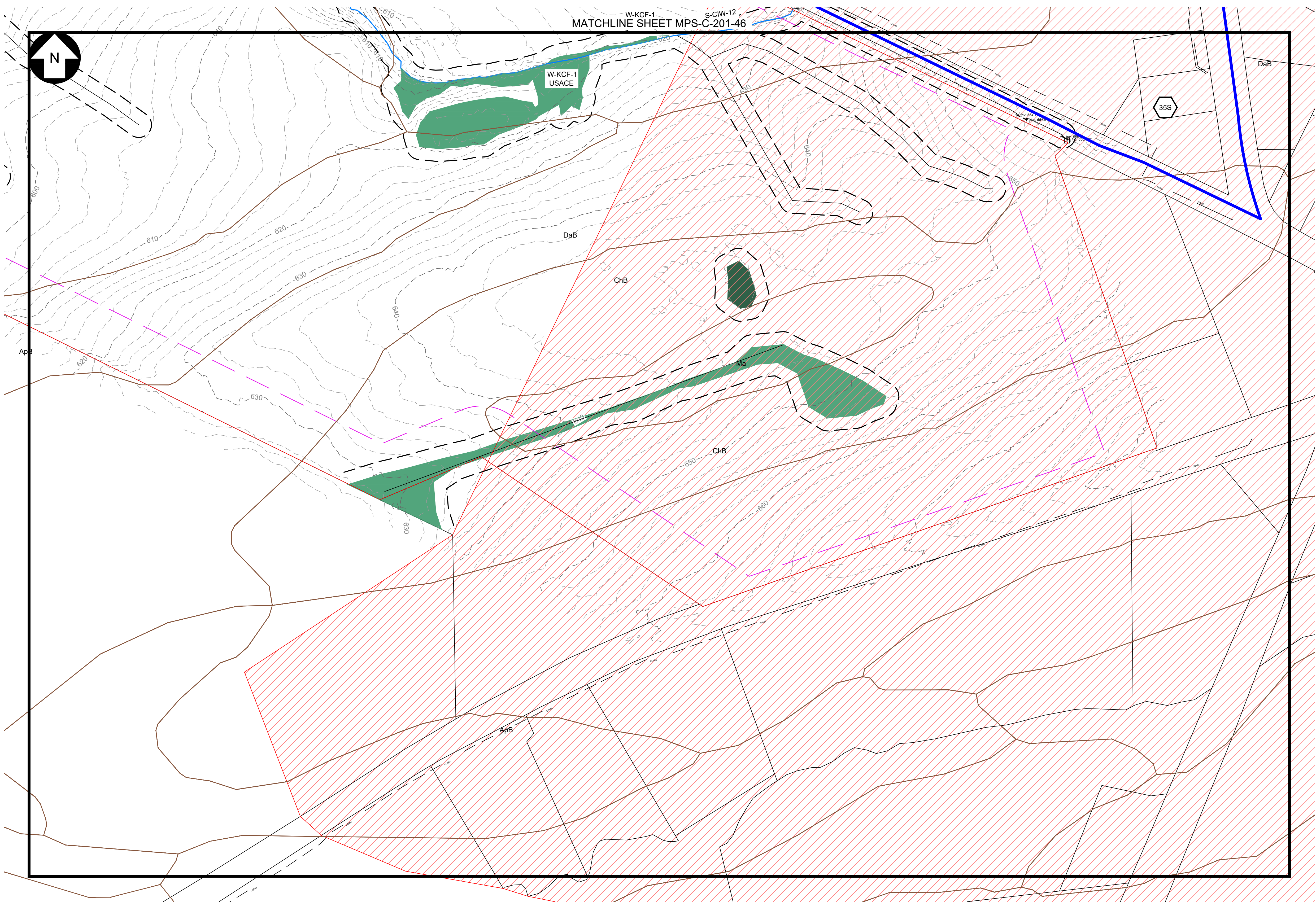
REV	DESCRIPTION	DATE	DES	CHK	APP
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C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM DESIGNED PMM DRAWN PMM CHECKED - APPROVED	<b>MILL POINT SOLAR PROJECT</b> CONNECTGEN, LLC PRE-DEVELOPMENT STORMWATER PLAN	GLEN NEW YORK	
REVIEW 1 - REVIEW 2	03/01/2023 DATE 1" = 100' SCALE		MPS-C-201-55 REV. C

MATCHLINE SHEET MPS-C-201-46


LEGEND


- SUBCATCHMENT BOUNDARY 
- TIME OF CONCENTRATION FLOW LINE 
- REACH 
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION  EL. 520.0±
- REACH ID 
- SUBCATCHMENT ID 
- POND ID 
- STUDY POINT ID 
- SOILS BOUNDARY 



**PRELIMINARY**  
NOT FOR CONSTRUCTION

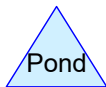
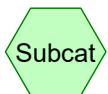
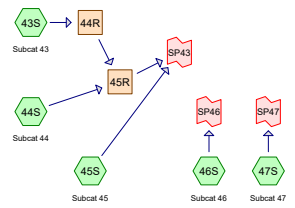
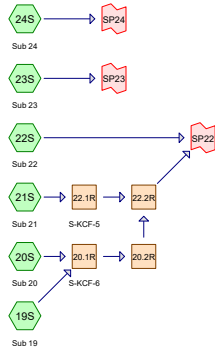
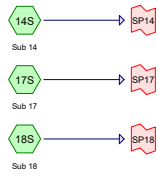
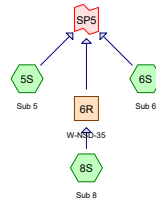
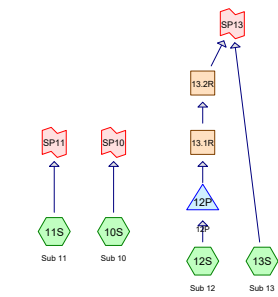


 249 Western Avenue Augusta, ME 04330		PROJECT NO: 443269			
REV	DESCRIPTION	DATE	DES	CHK	APP
D	REVISED PER TOWN REVIEW COMMENTS	07/19/2024	CMW	PMM	PMM
C	REVISED PER ORES REVIEW COMMENTS	06/28/2024	CMW	PMM	PMM
B	ISSUED FOR 94-C DEFICIENCY SUPPLEMENT	05/31/2024	CMW	PMM	PMM
A	ISSUED FOR 94-C	01/15/2024	CMW	PMM	PMM

PMM DESIGNED	MILL POINT SOLAR PROJECT CONNECTGEN, LLC PRE-DEVELOPMENT STORMWATER PLAN	GLEN NEW YORK
PMM DRAWN		
PMM CHECKED		
APPROVED		
REVIEW 1	03/01/2023	
REVIEW 2	DATE	
SCALE: 1" = 100'		MPS-C-201-56 REV. C



## **Appendix K – Pre-Development HydroCAD Model**



**Routing Diagram for Mill Pt Pre 1**  
 Prepared by TRC Companies, Printed 7/19/2024  
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**Mill Pt Pre 1**

Prepared by TRC Companies

Printed 7/19/2024

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**Area Listing (all nodes)**

Area (acres)	CN	Description (subcatchment-numbers)
0.502	39	>75% Grass cover, Good, HSG A (47S)
24.904	61	>75% Grass cover, Good, HSG B (9S, 10S, 11S, 17S, 20S, 21S, 23S, 24S, 45S, 47S)
20.145	74	>75% Grass cover, Good, HSG C (9S, 10S, 11S, 12S, 17S, 21S, 24S, 43S, 45S)
5.639	80	>75% Grass cover, Good, HSG D (10S, 14S, 17S)
0.940	30	Brush, Good, HSG A (45S, 46S, 47S)
14.146	48	Brush, Good, HSG B (4S, 9S, 10S, 11S, 13S, 14S, 18S, 20S, 21S, 22S, 23S, 45S, 46S, 47S)
6.222	65	Brush, Good, HSG C (4S, 9S, 10S, 11S, 13S, 14S, 19S, 20S, 21S, 22S, 23S, 45S)
9.473	73	Brush, Good, HSG D (9S, 10S, 14S, 18S, 19S, 20S, 45S, 46S)
12.888	96	Gravel surface (4S, 9S, 10S, 11S, 12S, 13S, 17S, 21S, 22S, 23S, 24S, 45S)
6.504	98	Impervious surface (4S, 9S, 10S, 11S, 13S, 14S, 17S, 18S, 20S, 21S, 22S, 23S, 24S, 43S, 45S, 46S, 47S)
21.008	30	Meadow, non-grazed, HSG A (43S, 44S, 45S, 46S, 47S)
384.066	58	Meadow, non-grazed, HSG B (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 13S, 14S, 17S, 18S, 19S, 20S, 21S, 22S, 23S, 24S, 43S, 44S, 45S, 46S, 47S)
334.025	71	Meadow, non-grazed, HSG C (3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 13S, 14S, 17S, 18S, 19S, 20S, 21S, 22S, 23S, 24S, 43S, 44S, 45S)
70.074	78	Meadow, non-grazed, HSG D (7S, 8S, 9S, 14S, 17S, 18S, 19S, 20S, 21S, 22S, 23S, 43S, 44S, 45S)
6.190	98	Surface water (9S, 10S, 11S, 19S, 20S, 21S, 45S, 46S)
21.522	30	Woods, Good, HSG A (43S, 44S, 45S, 46S, 47S)
115.702	55	Woods, Good, HSG B (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 13S, 14S, 17S, 20S, 21S, 22S, 23S, 43S, 44S, 45S, 46S, 47S)
47.386	70	Woods, Good, HSG C (3S, 4S, 5S, 6S, 8S, 9S, 10S, 11S, 13S, 14S, 17S, 20S, 21S, 22S, 24S, 43S, 44S, 45S)
28.126	77	Woods, Good, HSG D (7S, 8S, 10S, 14S, 17S, 18S, 19S, 20S, 22S, 43S, 44S, 45S, 46S)
<b>1,129.462</b>	<b>64</b>	<b>TOTAL AREA</b>

**Mill Pt Pre 1**

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**Soil Listing (all nodes)**

Area (acres)	Soil Group	Subcatchment Numbers
43.972	HSG A	43S, 44S, 45S, 46S, 47S
538.818	HSG B	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 13S, 14S, 17S, 18S, 19S, 20S, 21S, 22S, 23S, 24S, 43S, 44S, 45S, 46S, 47S
407.778	HSG C	3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 12S, 13S, 14S, 17S, 18S, 19S, 20S, 21S, 22S, 23S, 24S, 43S, 44S, 45S
113.312	HSG D	7S, 8S, 9S, 10S, 14S, 17S, 18S, 19S, 20S, 21S, 22S, 23S, 43S, 44S, 45S, 46S
25.582	Other	4S, 9S, 10S, 11S, 12S, 13S, 14S, 17S, 18S, 19S, 20S, 21S, 22S, 23S, 24S, 43S, 45S, 46S, 47S
<b>1,129.462</b>		<b>TOTAL AREA</b>

**Mill Pt Pre 1**

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**Ground Covers (all nodes)**

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.502	24.904	20.145	5.639	0.000	51.190	>75% Grass cover, Good	9S, 10S, 11S, 12S, 14S, 17S, 20S, 21S, 23S, 24S, 43S, 45S, 47S
0.940	14.146	6.222	9.473	0.000	30.781	Brush, Good	4S, 9S, 10S, 11S, 13S, 14S, 18S, 19S, 20S, 21S, 22S, 23S, 45S, 46S, 47S
0.000	0.000	0.000	0.000	12.888	12.888	Gravel surface	4S, 9S, 10S, 11S, 12S, 13S, 17S, 21S, 22S, 23S, 24S, 45S
0.000	0.000	0.000	0.000	6.504	6.504	Impervious surface	4S, 9S, 10S, 11S, 13S, 14S, 17S, 18S, 20S, 21S, 22S, 23S, 24S,

**Mill Pt Pre 1**

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**Ground Covers (all nodes) (continued)**

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
21.008	384.066	334.025	70.074	0.000	809.173	Meadow, non-grazed	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 13S, 14S, 17S, 18S, 19S, 20S, 21S, 22S, 23S, 24S, 43S, 44S, 45S, 46S, 47S
0.000	0.000	0.000	0.000	6.190	6.190	Surface water	9S, 10S, 11S, 19S, 20S, 21S, 45S, 46S
21.522	115.702	47.386	28.126	0.000	212.736	Woods, Good	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 13S, 14S, 17S, 18S, 19S, 20S, 21S, 22S, 23S, 24S, 43S, 44S, 45S, 46S, 47S

**Mill Pt Pre 1**

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**Ground Covers (all nodes) (continued)**

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
<b>43.972</b>	<b>538.818</b>	<b>407.778</b>	<b>113.312</b>	<b>25.582</b>	<b>1,129.462</b>	<b>TOTAL AREA</b>	

**Mill Pt Pre 1**

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*Type II 24-hr 1-year Rainfall=2.17"*

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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

<b>Subcatchment 1S: Sub 1</b>	Runoff Area=5.786 ac 0.00% Impervious Runoff Depth=0.04" Flow Length=1,005' Tc=13.1 min CN=56 Runoff=0.03 cfs 0.020 af
<b>Subcatchment 2S: Sub 2</b>	Runoff Area=16.498 ac 0.00% Impervious Runoff Depth=0.05" Flow Length=1,307' Tc=14.1 min CN=57 Runoff=0.10 cfs 0.073 af
<b>Subcatchment 3S: Sub 3</b>	Runoff Area=33.979 ac 0.00% Impervious Runoff Depth=0.09" Flow Length=2,507' Tc=25.3 min CN=60 Runoff=0.54 cfs 0.264 af
<b>Subcatchment 4S: Sub 4</b>	Runoff Area=92.318 ac 0.28% Impervious Runoff Depth=0.14" Flow Length=4,160' Tc=35.5 min CN=63 Runoff=3.41 cfs 1.110 af
<b>Subcatchment 5S: Sub 5</b>	Runoff Area=17.299 ac 0.00% Impervious Runoff Depth=0.18" Flow Length=1,946' Tc=24.6 min CN=65 Runoff=1.30 cfs 0.266 af
<b>Subcatchment 6S: Sub 6</b>	Runoff Area=16.301 ac 0.00% Impervious Runoff Depth=0.21" Flow Length=1,894' Tc=48.6 min CN=66 Runoff=1.03 cfs 0.280 af
<b>Subcatchment 7S: Sub 7</b>	Runoff Area=66.892 ac 0.00% Impervious Runoff Depth=0.07" Flow Length=2,117' Tc=40.9 min CN=58 Runoff=0.53 cfs 0.365 af
<b>Subcatchment 8S: Sub 8</b>	Runoff Area=58.963 ac 0.00% Impervious Runoff Depth=0.28" Flow Length=2,902' Tc=63.3 min CN=69 Runoff=5.24 cfs 1.378 af
<b>Subcatchment 9S: Sub 9</b>	Runoff Area=68.565 ac 1.11% Impervious Runoff Depth=0.16" Flow Length=2,945' Tc=45.6 min CN=64 Runoff=2.90 cfs 0.935 af
<b>Subcatchment 10S: Sub 10</b>	Runoff Area=22.236 ac 4.90% Impervious Runoff Depth=0.34" Flow Length=2,047' Tc=36.1 min CN=71 Runoff=3.89 cfs 0.624 af
<b>Subcatchment 11S: Sub 11</b>	Runoff Area=17.596 ac 2.21% Impervious Runoff Depth=0.21" Flow Length=1,622' Tc=18.4 min CN=66 Runoff=2.01 cfs 0.303 af
<b>Subcatchment 12S: Sub 12</b>	Runoff Area=4.859 ac 0.00% Impervious Runoff Depth=1.65" Tc=6.0 min CN=95 Runoff=13.00 cfs 0.666 af
<b>Subcatchment 13S: Sub 13</b>	Runoff Area=10.383 ac 0.20% Impervious Runoff Depth=0.16" Flow Length=848' Tc=17.7 min CN=64 Runoff=0.73 cfs 0.142 af
<b>Subcatchment 14S: Sub 14</b>	Runoff Area=72.733 ac 0.42% Impervious Runoff Depth=0.23" Flow Length=4,131' Tc=49.6 min CN=67 Runoff=5.46 cfs 1.393 af
<b>Subcatchment 17S: Sub 17</b>	Runoff Area=97.892 ac 1.18% Impervious Runoff Depth=0.09" Flow Length=3,526' Tc=35.1 min CN=60 Runoff=1.46 cfs 0.761 af
<b>Subcatchment 18S: Sub 18</b>	Runoff Area=45.577 ac 0.74% Impervious Runoff Depth=0.28" Flow Length=2,382' Tc=42.2 min CN=69 Runoff=5.31 cfs 1.065 af



**Mill Pt Pre 1**

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*Type II 24-hr 1-year Rainfall=2.17"*

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<b>Subcatchment 19S: Sub 19</b>	Runoff Area=28.407 ac 0.54% Impervious Runoff Depth=0.37" Flow Length=1,760' Tc=30.4 min CN=72 Runoff=6.43 cfs 0.869 af
<b>Subcatchment 20S: Sub 20</b>	Runoff Area=70.525 ac 0.78% Impervious Runoff Depth=0.21" Flow Length=1,829' Tc=20.0 min CN=66 Runoff=7.65 cfs 1.213 af
<b>Subcatchment 21S: Sub 21</b>	Runoff Area=123.017 ac 3.33% Impervious Runoff Depth=0.21" Flow Length=4,201' Tc=42.5 min CN=66 Runoff=8.36 cfs 2.117 af
<b>Subcatchment 22S: Sub 22</b>	Runoff Area=62.297 ac 0.60% Impervious Runoff Depth=0.34" Flow Length=1,834' Tc=47.0 min CN=71 Runoff=9.05 cfs 1.748 af
<b>Subcatchment 23S: Sub 23</b>	Runoff Area=16.752 ac 2.31% Impervious Runoff Depth=0.28" Flow Length=1,297' Tc=33.0 min CN=69 Runoff=2.30 cfs 0.392 af
<b>Subcatchment 24S: Sub 24</b>	Runoff Area=5.466 ac 7.70% Impervious Runoff Depth=0.43" Flow Length=1,025' Tc=23.1 min CN=74 Runoff=1.93 cfs 0.197 af
<b>Subcatchment 43S: Subcat 43</b>	Runoff Area=34.064 ac 0.46% Impervious Runoff Depth=0.31" Flow Length=2,795' Tc=40.7 min CN=70 Runoff=4.73 cfs 0.874 af
<b>Subcatchment 44S: Subcat 44</b>	Runoff Area=46.290 ac 0.00% Impervious Runoff Depth=0.31" Flow Length=2,470' Tc=41.7 min CN=70 Runoff=6.33 cfs 1.188 af
<b>Subcatchment 45S: Subcat 45</b>	Runoff Area=33.932 ac 1.93% Impervious Runoff Depth=0.08" Flow Length=2,198' Tc=29.8 min CN=59 Runoff=0.37 cfs 0.223 af
<b>Subcatchment 46S: Subcat 46</b>	Runoff Area=30.776 ac 3.93% Impervious Runoff Depth=0.00" Flow Length=1,524' Tc=54.0 min CN=42 Runoff=0.00 cfs 0.000 af
<b>Subcatchment 47S: Subcat 47</b>	Runoff Area=30.059 ac 1.26% Impervious Runoff Depth=0.00" Flow Length=1,854' Tc=31.7 min CN=41 Runoff=0.00 cfs 0.000 af
<b>Reach 6R: W-NSD-35</b>	Avg. Flow Depth=0.20' Max Vel=2.23 fps Inflow=5.24 cfs 1.378 af n=0.035 L=1,882.0' S=0.0276 '/ Capacity=90.86 cfs Outflow=4.92 cfs 1.378 af
<b>Reach 13.1R:</b>	Avg. Flow Depth=0.08' Max Vel=2.21 fps Inflow=1.38 cfs 0.666 af n=0.030 L=165.0' S=0.0727 '/ Capacity=48.67 cfs Outflow=1.38 cfs 0.666 af
<b>Reach 13.2R:</b>	Avg. Flow Depth=0.13' Max Vel=4.62 fps Inflow=1.38 cfs 0.666 af n=0.035 L=232.0' S=0.2069 '/ Capacity=1,230.81 cfs Outflow=1.38 cfs 0.666 af
<b>Reach 20.1R: S-KCF-6</b>	Avg. Flow Depth=0.62' Max Vel=1.69 fps Inflow=13.49 cfs 2.082 af n=0.030 L=1,405.0' S=0.0028 '/ Capacity=141.69 cfs Outflow=10.22 cfs 2.082 af
<b>Reach 20.2R:</b>	Avg. Flow Depth=0.42' Max Vel=2.39 fps Inflow=10.22 cfs 2.082 af n=0.035 L=1,322.0' S=0.0121 '/ Capacity=250.41 cfs Outflow=9.37 cfs 2.082 af
<b>Reach 22.1R: S-KCF-5</b>	Avg. Flow Depth=0.39' Max Vel=1.90 fps Inflow=8.36 cfs 2.117 af n=0.030 L=665.0' S=0.0060 '/ Capacity=89.91 cfs Outflow=8.20 cfs 2.117 af
<b>Reach 22.2R:</b>	Avg. Flow Depth=0.59' Max Vel=2.35 fps Inflow=16.63 cfs 4.199 af n=0.035 L=707.0' S=0.0075 '/ Capacity=86.27 cfs Outflow=16.35 cfs 4.199 af

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*Type II 24-hr 1-year Rainfall=2.17"*

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<b>Reach 44R:</b>	Avg. Flow Depth=0.37' Max Vel=2.96 fps Inflow=4.73 cfs 0.874 af n=0.035 L=498.0' S=0.0321 '/' Capacity=8.70 cfs Outflow=4.70 cfs 0.874 af
<b>Reach 45R:</b>	Avg. Flow Depth=0.40' Max Vel=4.05 fps Inflow=10.97 cfs 2.062 af n=0.035 L=537.0' S=0.0372 '/' Capacity=16.21 cfs Outflow=10.91 cfs 2.062 af
<b>Pond 12P: 12P</b>	Peak Elev=507.40' Storage=10,579 cf Inflow=13.00 cfs 0.666 af 8.0" Round Culvert n=0.013 L=172.7' S=0.0058 '/' Outflow=1.38 cfs 0.666 af
<b>Link SP1:</b>	Inflow=0.03 cfs 0.020 af Primary=0.03 cfs 0.020 af
<b>Link SP10:</b>	Inflow=3.89 cfs 0.624 af Primary=3.89 cfs 0.624 af
<b>Link SP11:</b>	Inflow=2.01 cfs 0.303 af Primary=2.01 cfs 0.303 af
<b>Link SP13:</b>	Inflow=2.11 cfs 0.808 af Primary=2.11 cfs 0.808 af
<b>Link SP14:</b>	Inflow=5.46 cfs 1.393 af Primary=5.46 cfs 1.393 af
<b>Link SP17:</b>	Inflow=1.46 cfs 0.761 af Primary=1.46 cfs 0.761 af
<b>Link SP18:</b>	Inflow=5.31 cfs 1.065 af Primary=5.31 cfs 1.065 af
<b>Link SP2:</b>	Inflow=0.10 cfs 0.073 af Primary=0.10 cfs 0.073 af
<b>Link SP22:</b>	Inflow=21.82 cfs 5.947 af Primary=21.82 cfs 5.947 af
<b>Link SP23:</b>	Inflow=2.30 cfs 0.392 af Primary=2.30 cfs 0.392 af
<b>Link SP24:</b>	Inflow=1.93 cfs 0.197 af Primary=1.93 cfs 0.197 af
<b>Link SP3:</b>	Inflow=0.54 cfs 0.264 af Primary=0.54 cfs 0.264 af
<b>Link SP4:</b>	Inflow=3.41 cfs 1.110 af Primary=3.41 cfs 1.110 af
<b>Link SP43:</b>	Inflow=11.22 cfs 2.284 af Primary=11.22 cfs 2.284 af

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**Link SP46:**

Inflow=0.00 cfs 0.000 af  
Primary=0.00 cfs 0.000 af

**Link SP47:**

Inflow=0.00 cfs 0.000 af  
Primary=0.00 cfs 0.000 af

**Link SP5:**

Inflow=6.08 cfs 1.924 af  
Primary=6.08 cfs 1.924 af

**Link SP7:**

Inflow=0.53 cfs 0.365 af  
Primary=0.53 cfs 0.365 af

**Link SP9:**

Inflow=2.90 cfs 0.935 af  
Primary=2.90 cfs 0.935 af

**Total Runoff Area = 1,129.462 ac   Runoff Volume = 18.465 af   Average Runoff Depth = 0.20"**  
**98.88% Pervious = 1,116.768 ac   1.12% Impervious = 12.694 ac**

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**Summary for Subcatchment 1S: Sub 1**

Runoff = 0.03 cfs @ 15.11 hrs, Volume= 0.020 af, Depth= 0.04"  
 Routed to Link SP1 :

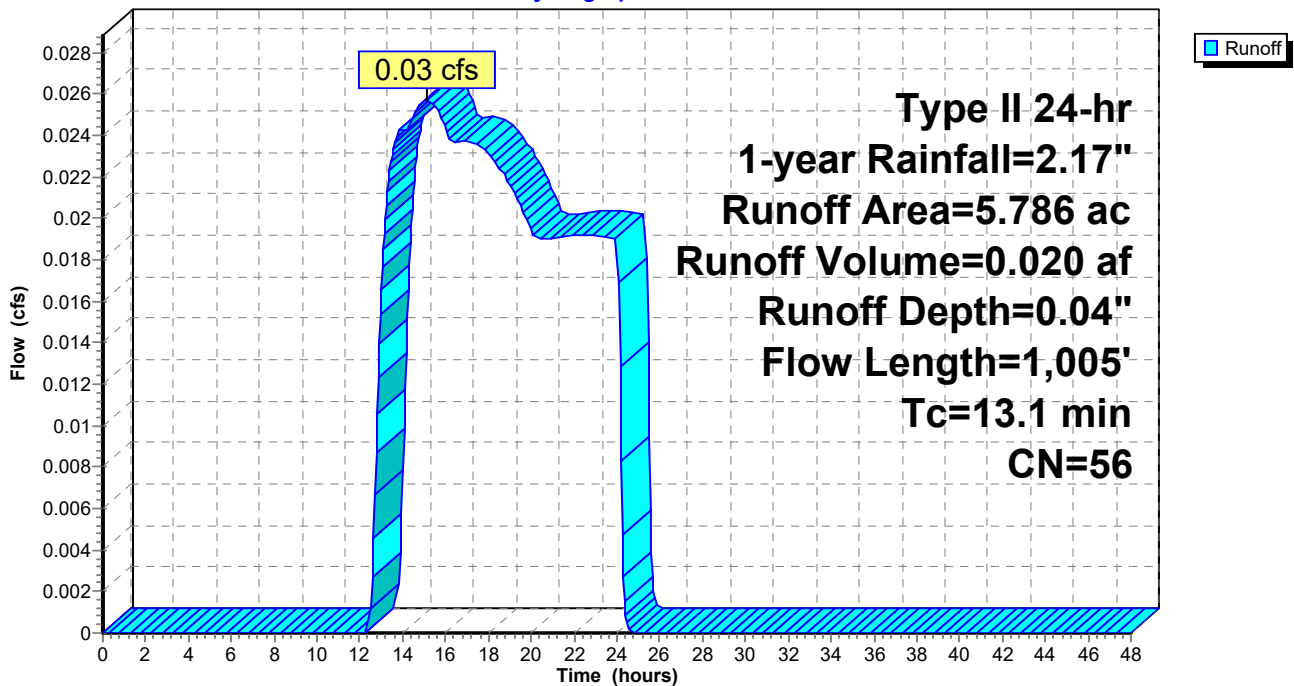
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
1.500	58	Meadow, non-grazed, HSG B
4.286	55	Woods, Good, HSG B
5.786	56	Weighted Average
5.786		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	100	0.0620	0.24		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
2.9	427	0.2390	2.44		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
2.0	263	0.0980	2.19		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.1	215	0.4050	3.18		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
13.1	1,005	Total			

**Subcatchment 1S: Sub 1**

Hydrograph



**Mill Pt Pre 1**

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**Summary for Subcatchment 2S: Sub 2**

Runoff = 0.10 cfs @ 13.52 hrs, Volume= 0.073 af, Depth= 0.05"

Routed to Link SP2 :

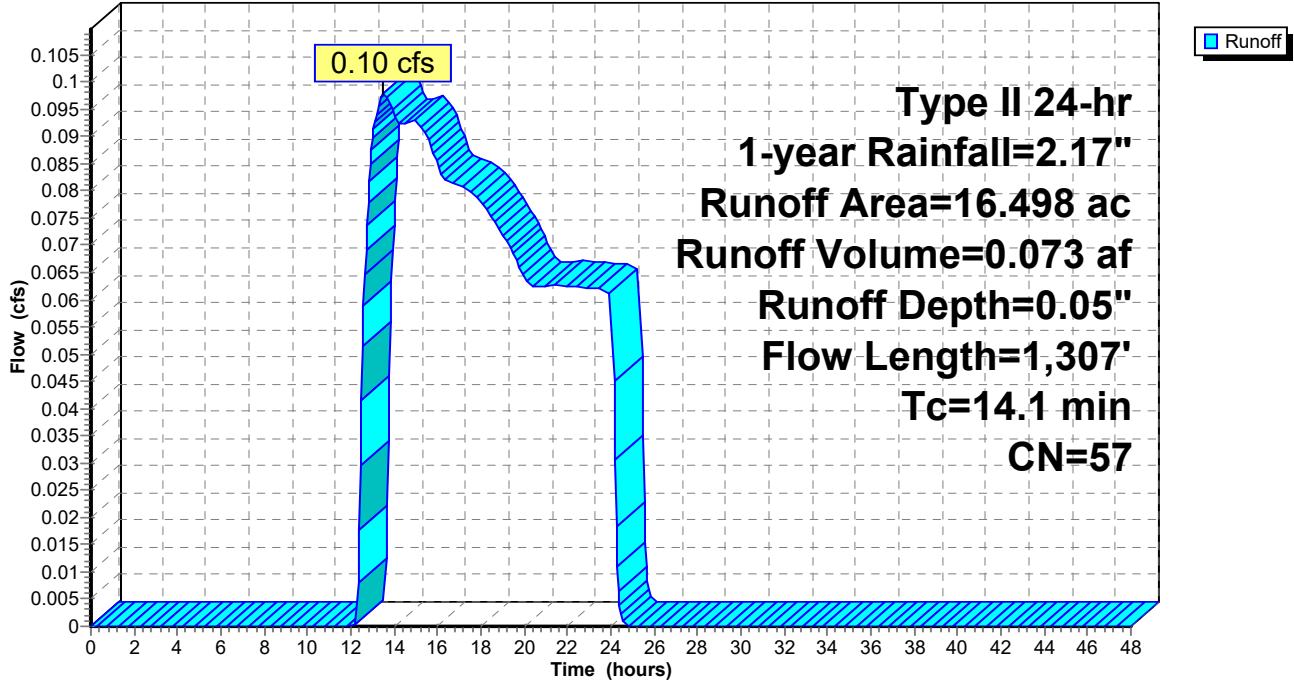
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
8.619	58	Meadow, non-grazed, HSG B
7.879	55	Woods, Good, HSG B
16.498	57	Weighted Average
16.498		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.8	100	0.1010	0.29		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
2.8	407	0.2420	2.46		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
1.5	225	0.1200	2.42		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.3	169	0.1830	2.14		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
0.5	113	0.5100	3.57		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
2.2	293	0.0220	2.22		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
14.1	1,307	Total			

Subcatchment 2S: Sub 2

Hydrograph



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**Summary for Subcatchment 3S: Sub 3**

Runoff = 0.54 cfs @ 12.64 hrs, Volume= 0.264 af, Depth= 0.09"  
 Routed to Link SP3 :

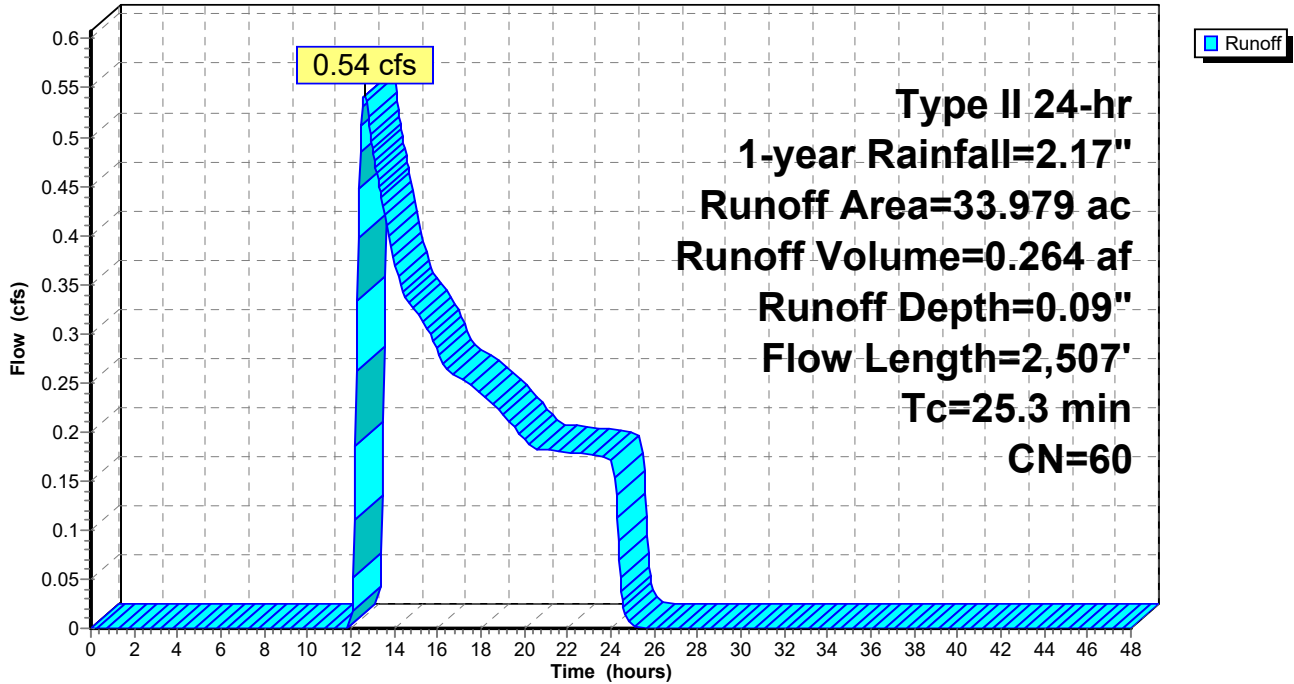
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
17.630	58	Meadow, non-grazed, HSG B
7.609	71	Meadow, non-grazed, HSG C
8.319	55	Woods, Good, HSG B
0.421	70	Woods, Good, HSG C
33.979	60	Weighted Average
33.979		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	100	0.0400	0.20		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
1.1	147	0.0990	2.20		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
5.5	480	0.0430	1.45		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.2	375	0.0770	1.94		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.6	337	0.0950	1.54		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
2.5	632		4.29		<b>Direct Entry, CF</b>
1.0	436		7.04		<b>Direct Entry, CF</b>
25.3	2,507	Total			

Subcatchment 3S: Sub 3

Hydrograph





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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 4S: Sub 4**

Runoff = 3.41 cfs @ 12.55 hrs, Volume= 1.110 af, Depth= 0.14"  
 Routed to Link SP4 :

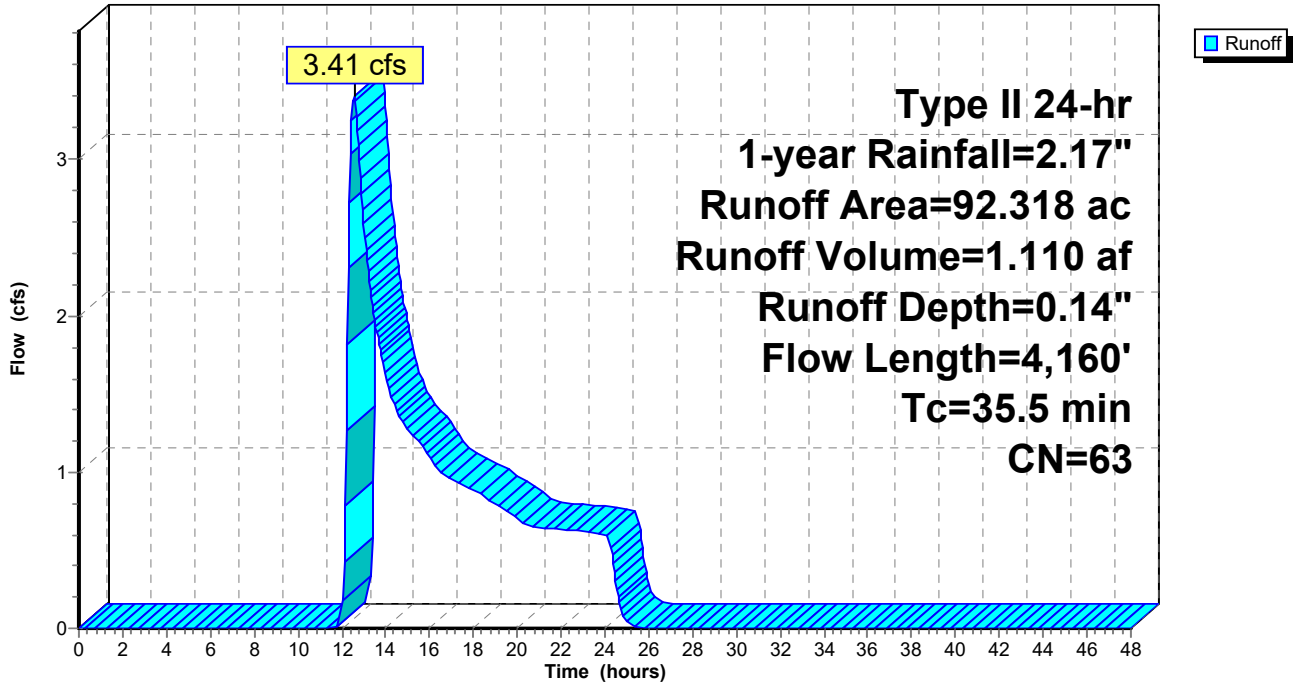
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.259	98	Impervious surface
* 0.324	96	Gravel surface
42.704	58	Meadow, non-grazed, HSG B
33.177	71	Meadow, non-grazed, HSG C
1.021	48	Brush, Good, HSG B
1.934	65	Brush, Good, HSG C
9.736	55	Woods, Good, HSG B
3.163	70	Woods, Good, HSG C
92.318	63	Weighted Average
92.059		99.72% Pervious Area
0.259		0.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	100	0.1900	0.17		<b>Sheet Flow,</b> Woods: Light underbrush n= 0.400 P2= 2.50"
1.8	295	0.1550	2.76		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
17.1	1,344	0.0350	1.31		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
6.7	2,421		6.01		<b>Direct Entry, CF</b>
35.5	4,160	Total			

Subcatchment 4S: Sub 4

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 5S: Sub 5**

Runoff = 1.30 cfs @ 12.30 hrs, Volume= 0.266 af, Depth= 0.18"  
 Routed to Link SP5 :

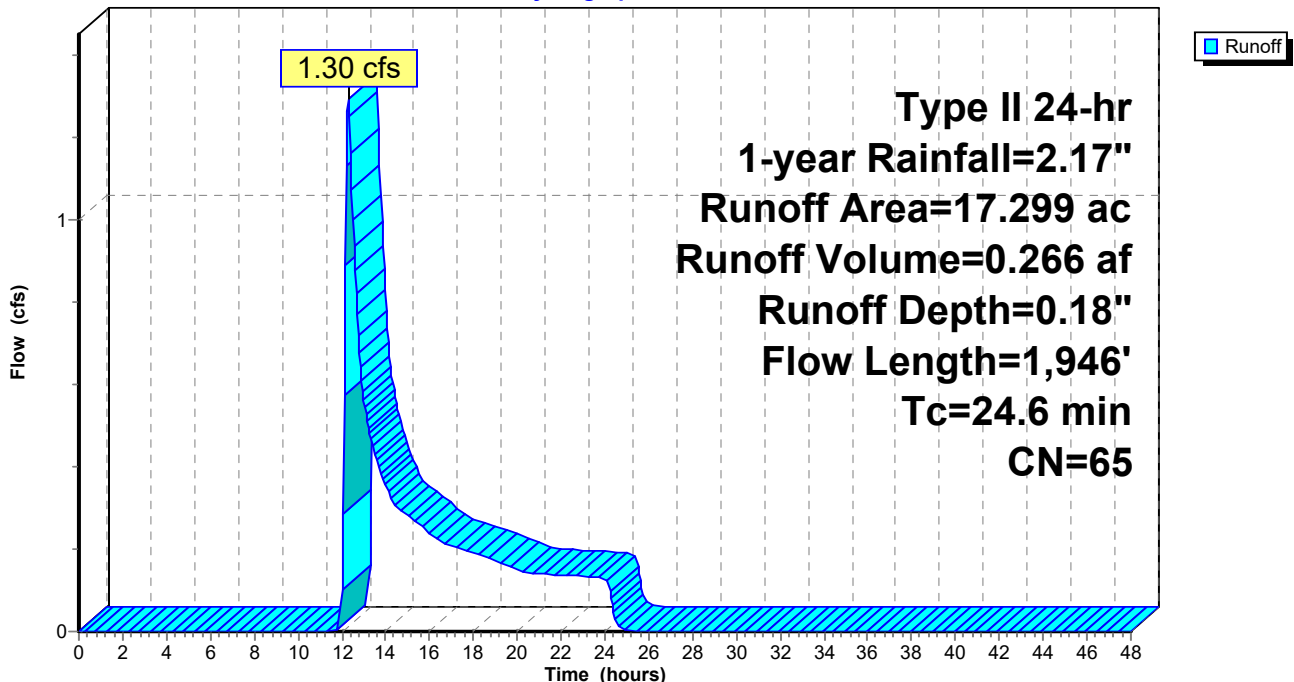
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
4.709	58	Meadow, non-grazed, HSG B
8.414	71	Meadow, non-grazed, HSG C
2.614	55	Woods, Good, HSG B
1.562	70	Woods, Good, HSG C
17.299	65	Weighted Average
17.299		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.0220	0.16		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
6.9	607	0.0440	1.47		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.3	195	0.0780	1.40		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
4.7	1,044		3.70		<b>Direct Entry, CF</b>
24.6	1,946	Total			

**Subcatchment 5S: Sub 5**

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 6S: Sub 6**

Runoff = 1.03 cfs @ 12.69 hrs, Volume= 0.280 af, Depth= 0.21"  
 Routed to Link SP5 :

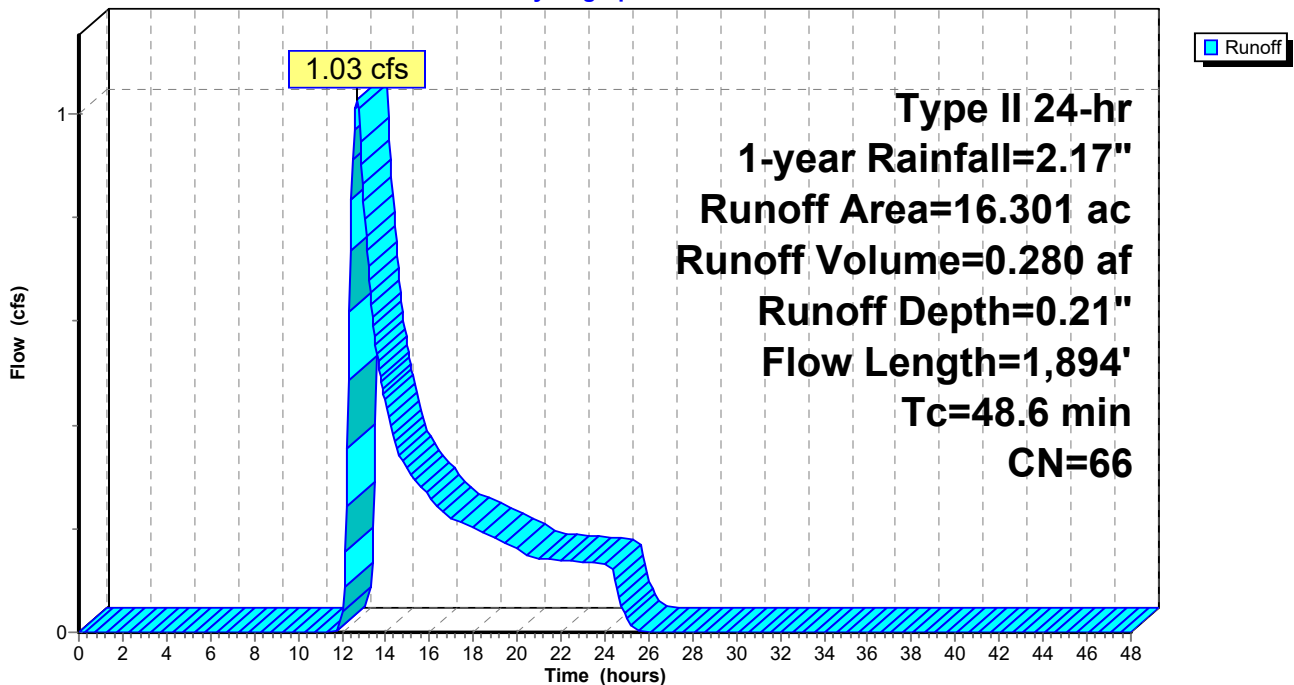
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
4.743	58	Meadow, non-grazed, HSG B
9.449	71	Meadow, non-grazed, HSG C
1.459	55	Woods, Good, HSG B
0.650	70	Woods, Good, HSG C
16.301	66	Weighted Average
16.301		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.8	100	0.0020	0.06		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
19.8	1,554	0.0350	1.31		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.0	240		3.81		<b>Direct Entry, CF</b>
48.6	1,894	Total			

**Subcatchment 6S: Sub 6**

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 7S: Sub 7**

Runoff = 0.53 cfs @ 13.70 hrs, Volume= 0.365 af, Depth= 0.07"  
 Routed to Link SP7 :

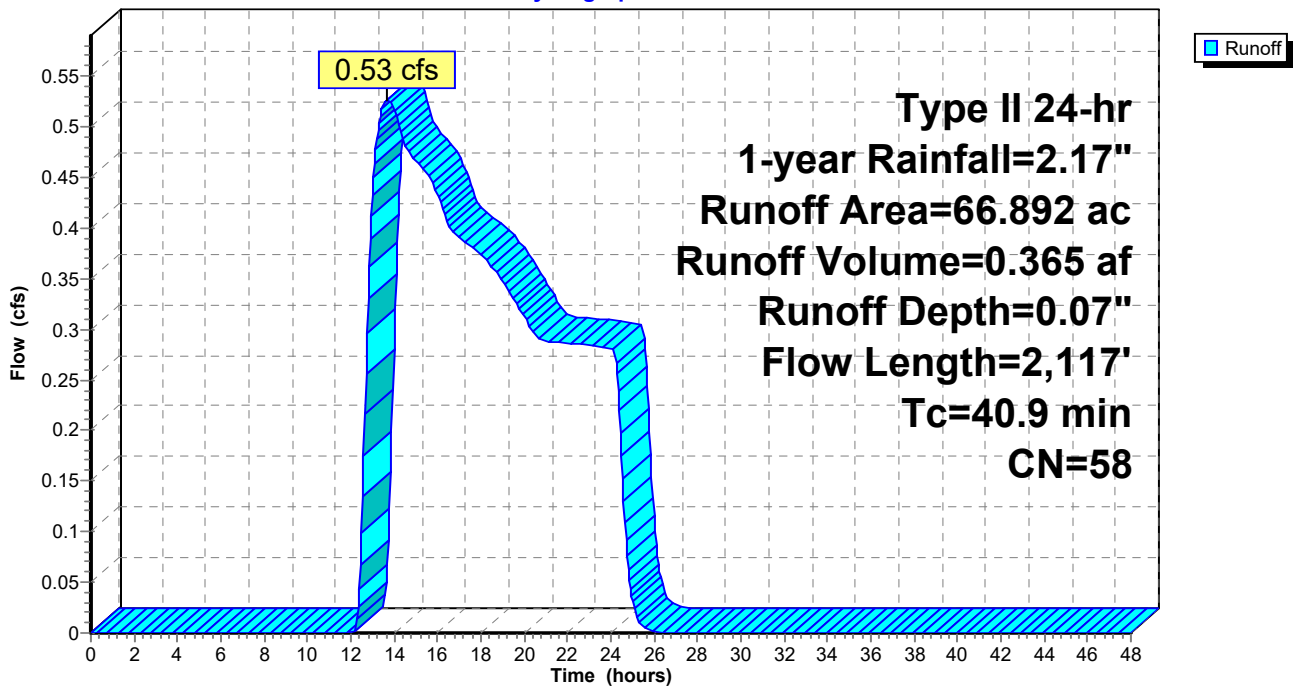
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
50.262	58	Meadow, non-grazed, HSG B
0.107	71	Meadow, non-grazed, HSG C
1.124	78	Meadow, non-grazed, HSG D
15.225	55	Woods, Good, HSG B
0.174	77	Woods, Good, HSG D
66.892	58	Weighted Average
66.892		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.8	100	0.0020	0.06		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
9.7	786	0.0370	1.35		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.4	1,231		6.01		<b>Direct Entry,</b>
40.9	2,117	Total			

**Subcatchment 7S: Sub 7**

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 8S: Sub 8**

Runoff = 5.24 cfs @ 12.85 hrs, Volume= 1.378 af, Depth= 0.28"  
 Routed to Reach 6R : W-NSD-35

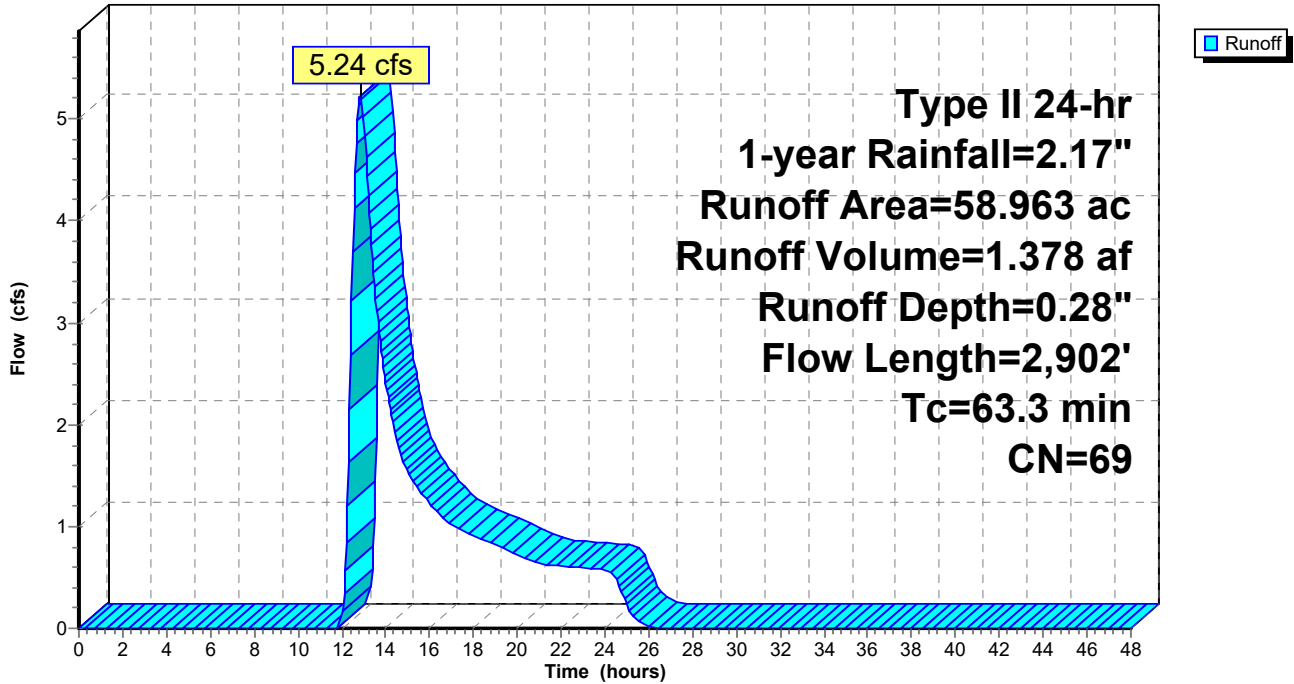
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
6.143	58	Meadow, non-grazed, HSG B
28.450	71	Meadow, non-grazed, HSG C
8.117	78	Meadow, non-grazed, HSG D
5.746	55	Woods, Good, HSG B
8.581	70	Woods, Good, HSG C
1.926	77	Woods, Good, HSG D
58.963	69	Weighted Average
58.963		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.7	100	0.0030	0.07		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
6.6	315	0.0130	0.80		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
23.1	727	0.0110	0.52		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
9.9	1,760		2.97		<b>Direct Entry, CF</b>
63.3	2,902	Total			

Subcatchment 8S: Sub 8

Hydrograph



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**Summary for Subcatchment 9S: Sub 9**

Runoff = 2.90 cfs @ 12.69 hrs, Volume= 0.935 af, Depth= 0.16"

Routed to Link SP9 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

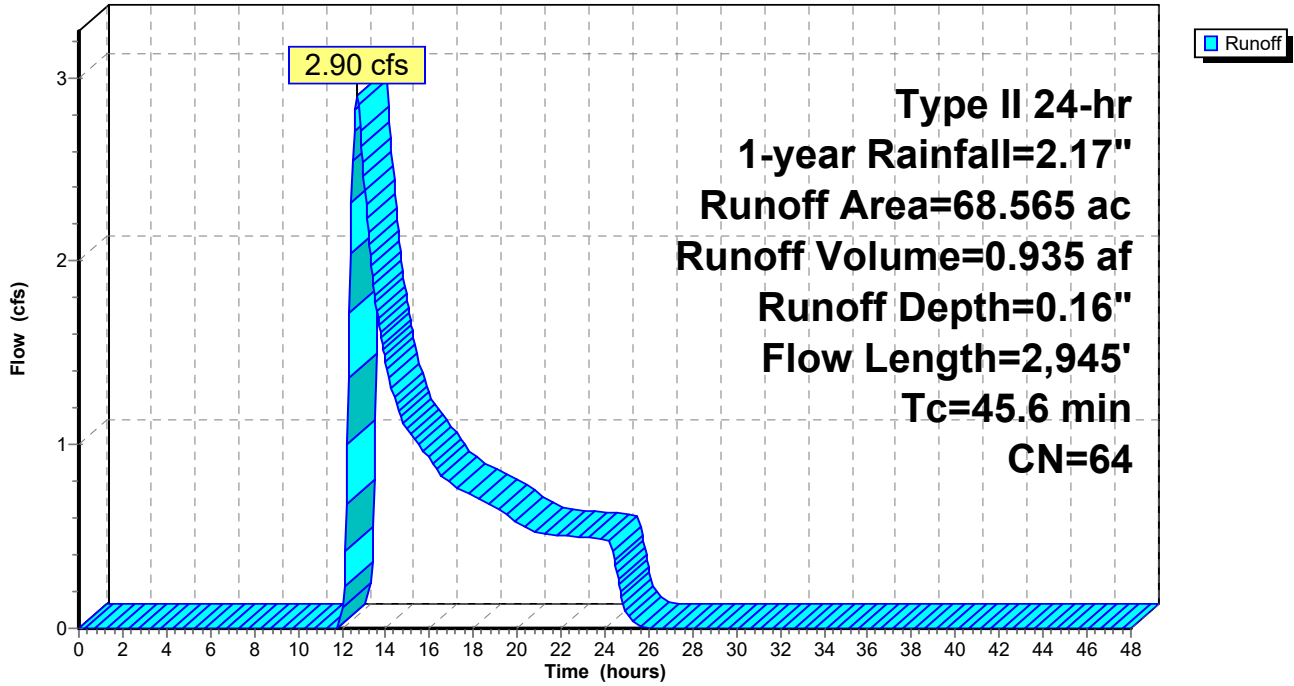
Area (ac)	CN	Description
* 0.430	98	Surface water
* 0.332	98	Impervious surface
* 2.628	96	Gravel surface
6.553	61	>75% Grass cover, Good, HSG B
8.430	74	>75% Grass cover, Good, HSG C
23.963	58	Meadow, non-grazed, HSG B
7.746	71	Meadow, non-grazed, HSG C
2.113	78	Meadow, non-grazed, HSG D
2.871	48	Brush, Good, HSG B
0.820	65	Brush, Good, HSG C
0.014	73	Brush, Good, HSG D
11.085	55	Woods, Good, HSG B
1.580	70	Woods, Good, HSG C
68.565	64	Weighted Average
67.803		98.89% Pervious Area
0.762		1.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	100	0.0060	0.09		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
13.8	841	0.0210	1.01		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
10.9	1,254	0.0750	1.92		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.6	156		1.63		<b>Direct Entry,</b>
1.4	594		7.07		<b>Direct Entry,</b>
45.6	2,945	Total			



Subcatchment 9S: Sub 9

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 10S: Sub 10**

Runoff = 3.89 cfs @ 12.41 hrs, Volume= 0.624 af, Depth= 0.34"  
 Routed to Link SP10 :

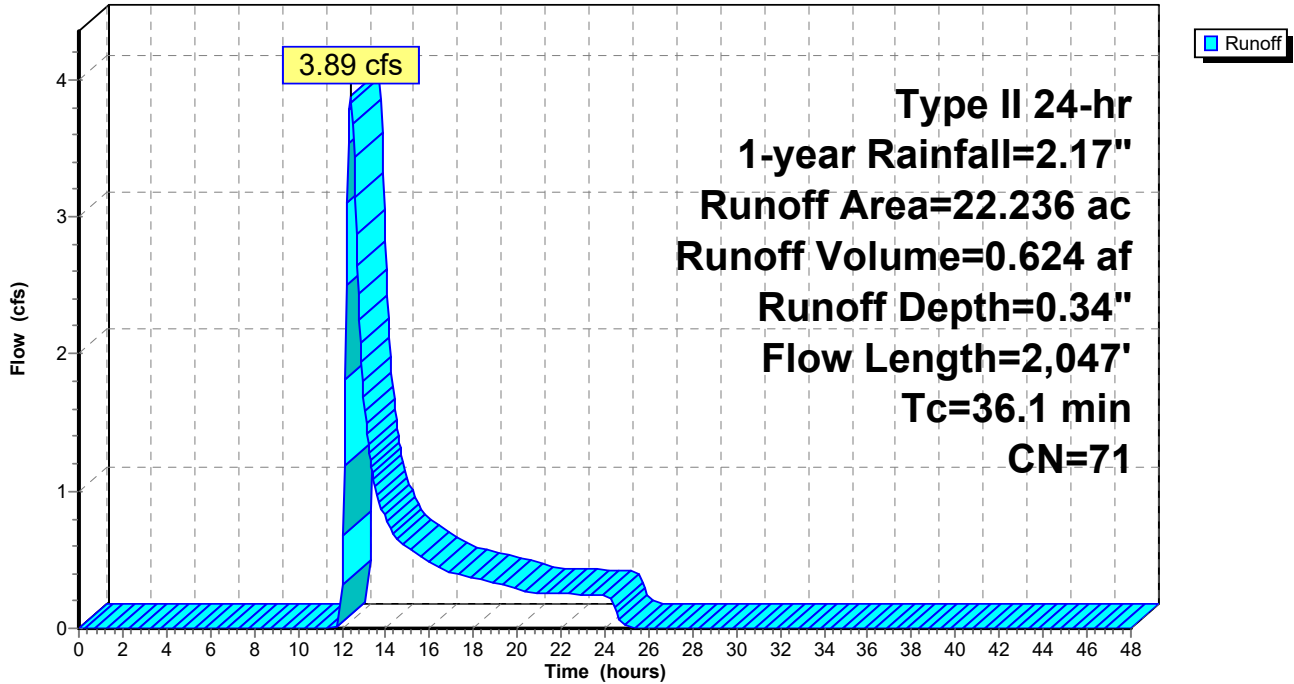
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 1.008	98	Surface water
* 0.081	98	Impervious surface
* 0.828	96	Gravel surface
5.353	61	>75% Grass cover, Good, HSG B
3.453	74	>75% Grass cover, Good, HSG C
3.647	80	>75% Grass cover, Good, HSG D
0.693	58	Meadow, non-grazed, HSG B
0.956	71	Meadow, non-grazed, HSG C
0.200	48	Brush, Good, HSG B
1.811	65	Brush, Good, HSG C
3.089	73	Brush, Good, HSG D
0.917	55	Woods, Good, HSG B
0.043	70	Woods, Good, HSG C
0.157	77	Woods, Good, HSG D
22.236	71	Weighted Average
21.147		95.10% Pervious Area
1.089		4.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	100	0.0210	0.15		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
22.7	1,347	0.0200	0.99		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.5	600	0.0225	3.97	19.83	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=2.00' D=1.00' Z= 3.0 '/' Top.W=8.00' n= 0.040 Winding stream, pools & shoals
36.1	2,047	Total			

Subcatchment 10S: Sub 10

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 11S: Sub 11**

Runoff = 2.01 cfs @ 12.18 hrs, Volume= 0.303 af, Depth= 0.21"  
 Routed to Link SP11 :

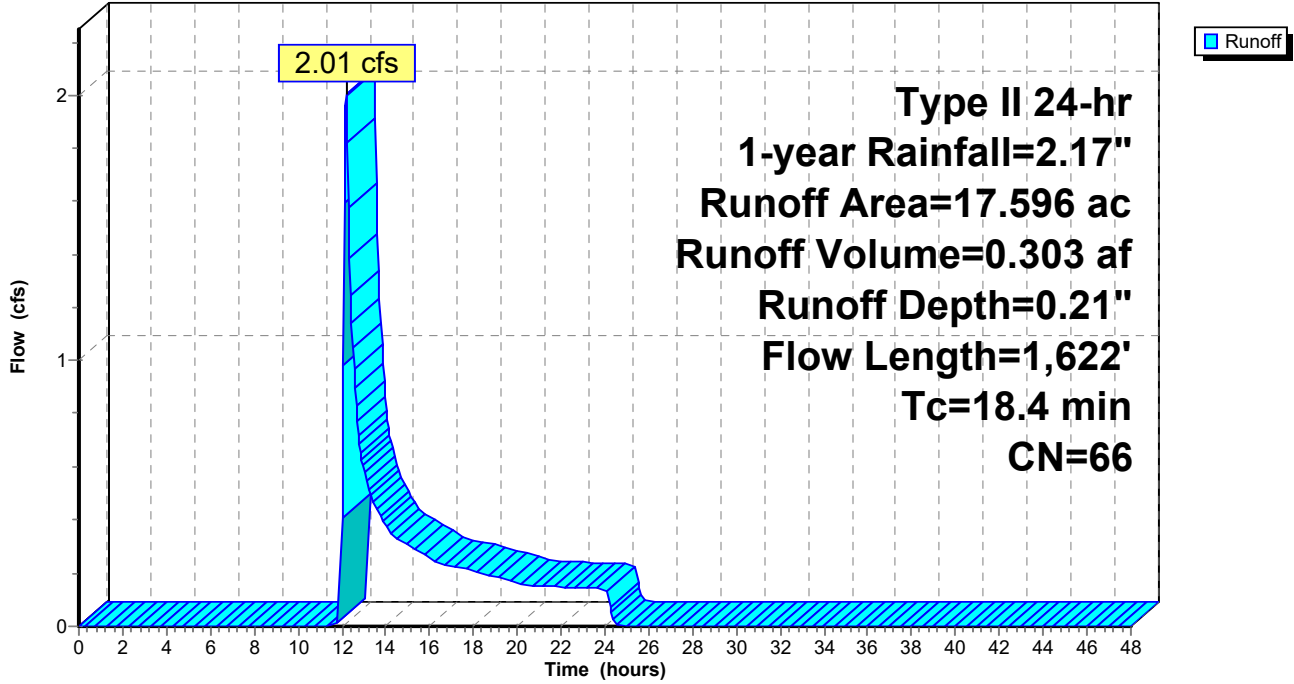
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.372	98	Surface water
* 0.016	98	Impervious surface
* 2.385	96	Gravel surface
2.824	61	>75% Grass cover, Good, HSG B
1.292	74	>75% Grass cover, Good, HSG C
1.394	58	Meadow, non-grazed, HSG B
1.371	71	Meadow, non-grazed, HSG C
0.199	48	Brush, Good, HSG B
0.163	65	Brush, Good, HSG C
7.256	55	Woods, Good, HSG B
0.324	70	Woods, Good, HSG C
17.596	66	Weighted Average
17.208		97.79% Pervious Area
0.388		2.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	100	0.0320	0.18		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
3.9	579	0.0240	2.49		<b>Shallow Concentrated Flow,</b> Unpaved Kv= 16.1 fps
2.6	277	0.0650	1.78		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.7	102	0.2650	2.57		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
2.0	564	0.0300	4.80	28.78	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=3.00' D=1.00' Z= 3.0 '/' Top.W=9.00' n= 0.040 Winding stream, pools & shoals
18.4	1,622	Total			

Subcatchment 11S: Sub 11

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 12S: Sub 12**

Runoff = 13.00 cfs @ 11.96 hrs, Volume= 0.666 af, Depth= 1.65"  
 Routed to Pond 12P : 12P

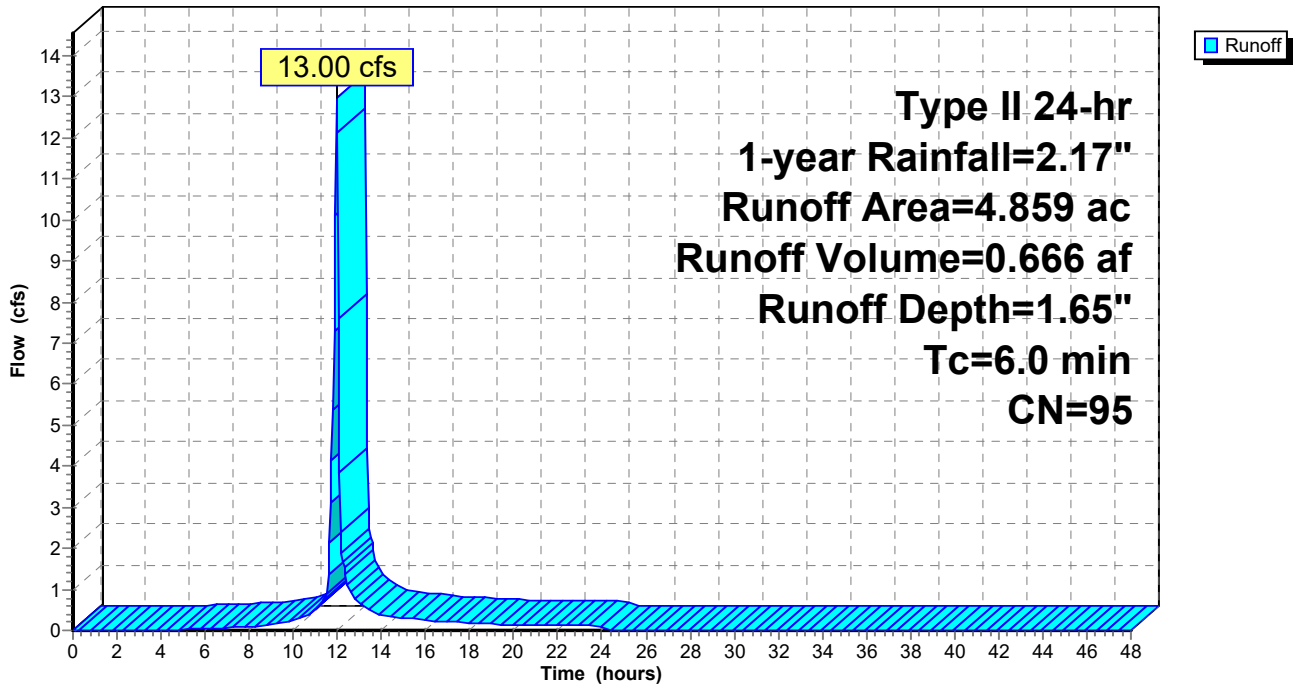
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 4.639	96	Gravel surface
0.220	74	>75% Grass cover, Good, HSG C
4.859	95	Weighted Average
4.859		100.00% Pervious Area

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

**Subcatchment 12S: Sub 12**

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 13S: Sub 13**

Runoff = 0.73 cfs @ 12.20 hrs, Volume= 0.142 af, Depth= 0.16"  
 Routed to Link SP13 :

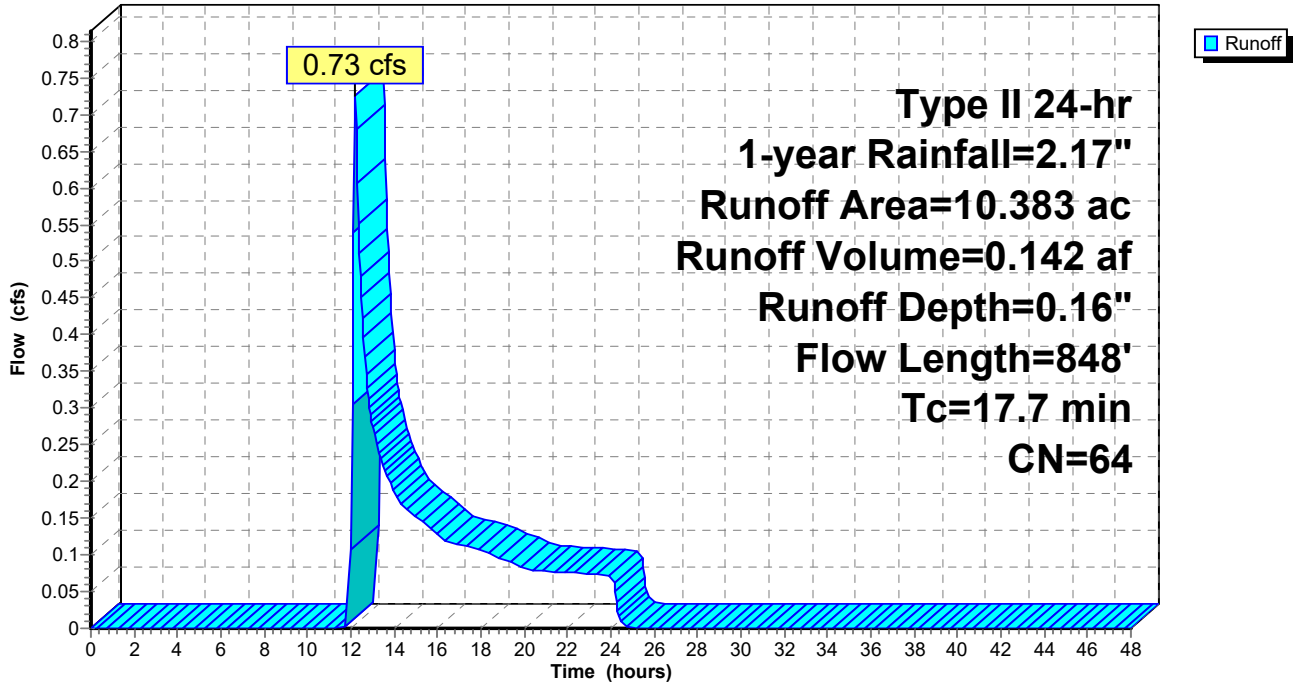
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.021	98	Impervious surface
* 0.324	96	Gravel surface
1.560	58	Meadow, non-grazed, HSG B
4.128	71	Meadow, non-grazed, HSG C
0.084	48	Brush, Good, HSG B
0.134	65	Brush, Good, HSG C
3.807	55	Woods, Good, HSG B
0.325	70	Woods, Good, HSG C
10.383	64	Weighted Average
10.362		99.80% Pervious Area
0.021		0.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.1	100	0.0250	0.16		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
5.4	525	0.0540	1.63		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.7	62	0.0970	1.56		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
1.5	161	0.1330	1.82		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
17.7	848	Total			

Subcatchment 13S: Sub 13

Hydrograph





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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 14S: Sub 14**

Runoff = 5.46 cfs @ 12.67 hrs, Volume= 1.393 af, Depth= 0.23"  
 Routed to Link SP14 :

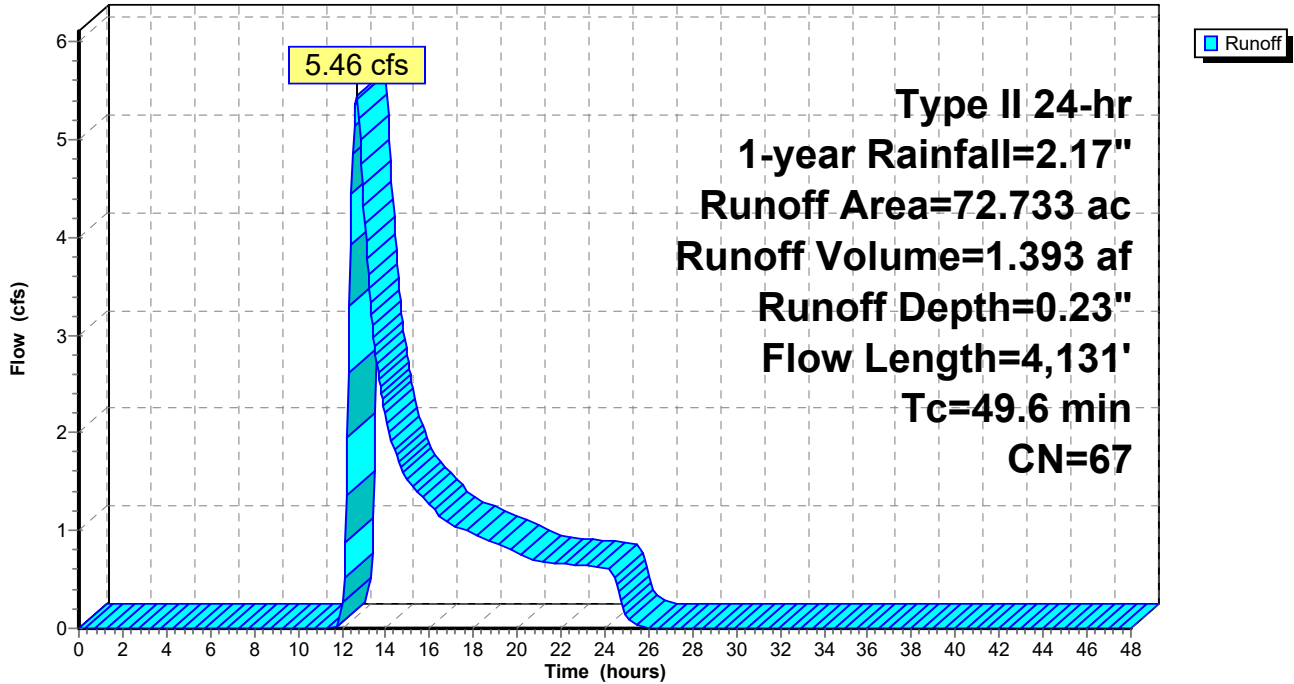
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.307	98	Impervious surface
0.760	80	>75% Grass cover, Good, HSG D
19.939	58	Meadow, non-grazed, HSG B
36.007	71	Meadow, non-grazed, HSG C
0.100	78	Meadow, non-grazed, HSG D
0.667	48	Brush, Good, HSG B
0.121	65	Brush, Good, HSG C
1.517	73	Brush, Good, HSG D
3.147	55	Woods, Good, HSG B
9.611	70	Woods, Good, HSG C
0.557	77	Woods, Good, HSG D
72.733	67	Weighted Average
72.426		99.58% Pervious Area
0.307		0.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	50	0.0600	0.09		<b>Sheet Flow,</b> Woods: Light underbrush n= 0.400 P2= 2.50"
5.6	50	0.0280	0.15		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
6.7	465	0.0270	1.15		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
9.8	1,433	0.0120	2.43	18.23	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=5.00' D=0.50' Z= 20.0 '/' Top.W=25.00' n= 0.030 Earth, grassed & winding
18.5	2,133	0.0080	1.93	7.70	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=5.00' D=0.50' Z= 6.0 '/' Top.W=11.00' n= 0.035 Earth, dense weeds
49.6	4,131	Total			

Subcatchment 14S: Sub 14

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 17S: Sub 17**

Runoff = 1.46 cfs @ 12.84 hrs, Volume= 0.761 af, Depth= 0.09"  
 Routed to Link SP17 :

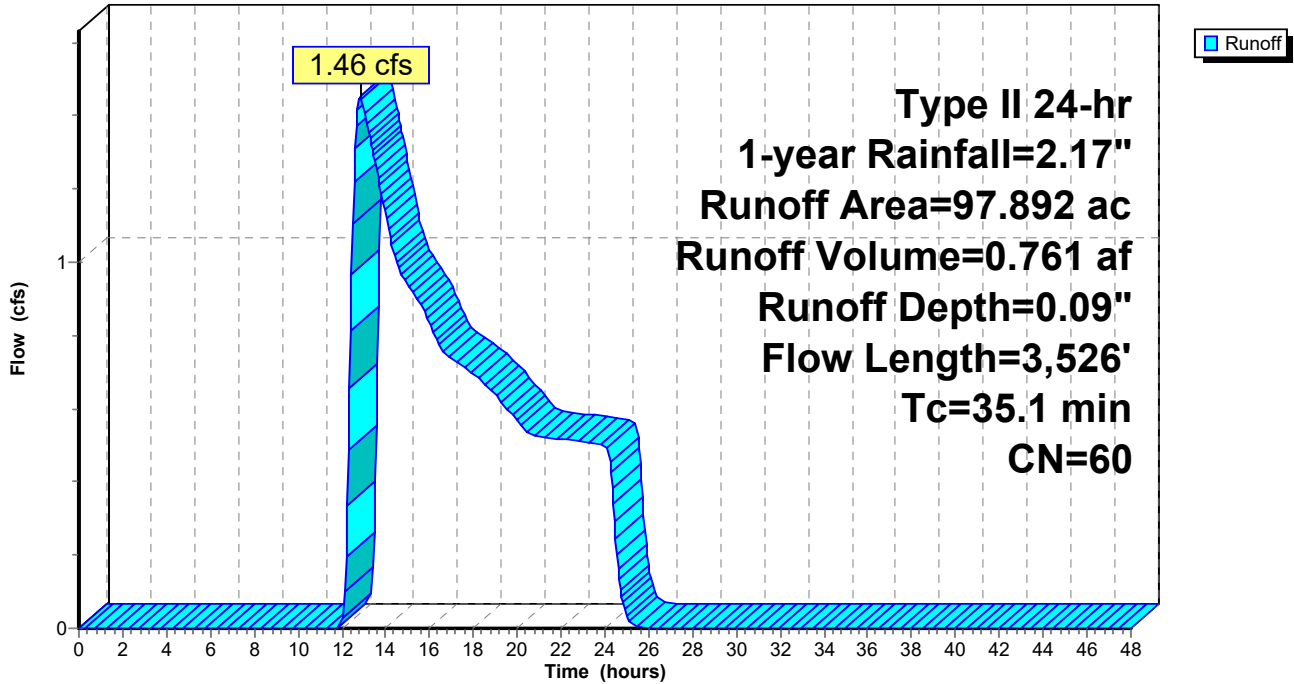
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 1.153	98	Impervious surface
* 0.105	96	Gravel surface
3.000	61	>75% Grass cover, Good, HSG B
0.324	74	>75% Grass cover, Good, HSG C
1.232	80	>75% Grass cover, Good, HSG D
78.791	58	Meadow, non-grazed, HSG B
0.375	71	Meadow, non-grazed, HSG C
4.855	78	Meadow, non-grazed, HSG D
7.632	55	Woods, Good, HSG B
0.085	70	Woods, Good, HSG C
0.340	77	Woods, Good, HSG D
97.892	60	Weighted Average
96.739		98.82% Pervious Area
1.153		1.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0300	0.18		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
5.2	681	0.0990	2.20		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
10.3	1,098	0.0650	1.78		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
10.2	1,647	0.0140	2.68	6.70	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=2.00' D=0.50' Z= 6.0 '/' Top.W=8.00' n= 0.030 Earth, grassed & winding
35.1	3,526	Total			

Subcatchment 17S: Sub 17

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 18S: Sub 18**

Runoff = 5.31 cfs @ 12.52 hrs, Volume= 1.065 af, Depth= 0.28"  
 Routed to Link SP18 :

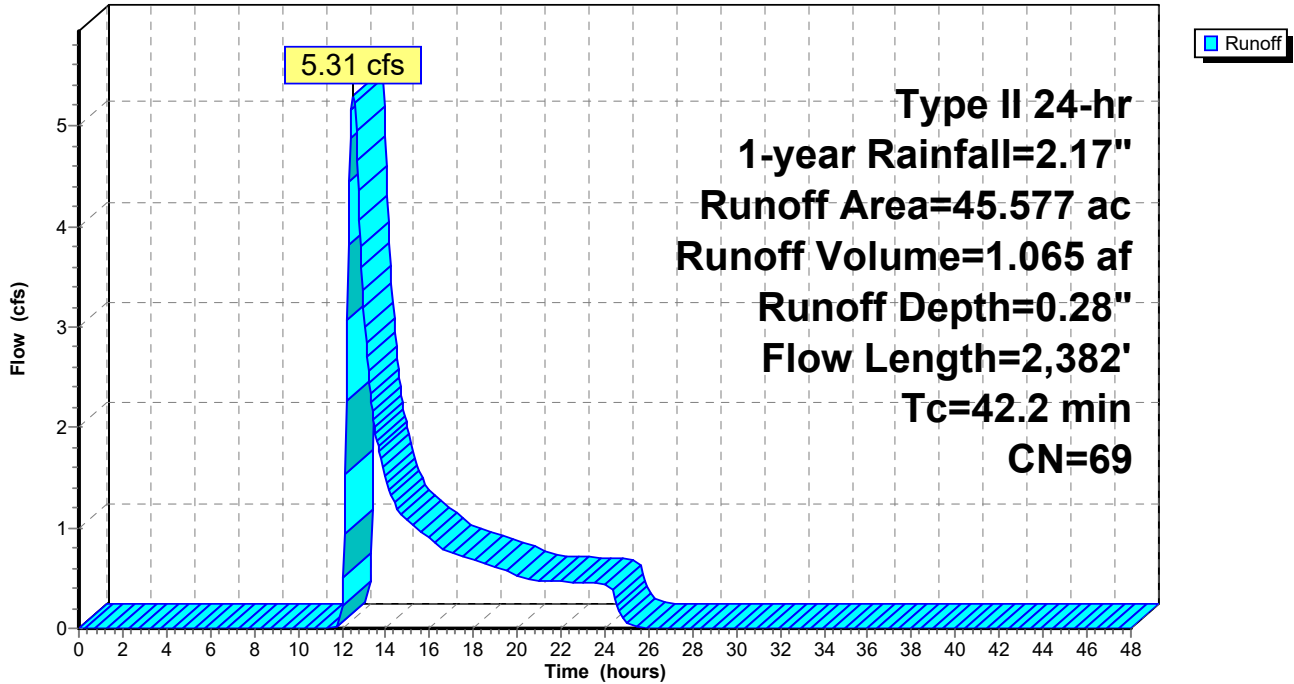
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.335	98	Impervious surface
9.521	58	Meadow, non-grazed, HSG B
19.657	71	Meadow, non-grazed, HSG C
8.775	78	Meadow, non-grazed, HSG D
2.586	48	Brush, Good, HSG B
4.116	73	Brush, Good, HSG D
0.587	77	Woods, Good, HSG D
45.577	69	Weighted Average
45.242		99.26% Pervious Area
0.335		0.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.6	100	0.0180	0.14		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
10.5	668	0.0230	1.06		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
4.5	459	0.0590	1.70		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.7	128	0.0130	0.80		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
12.9	1,027		1.33		<b>Direct Entry, CF</b>
42.2	2,382	Total			

Subcatchment 18S: Sub 18

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 19S: Sub 19**

Runoff = 6.43 cfs @ 12.32 hrs, Volume= 0.869 af, Depth= 0.37"  
 Routed to Reach 20.1R : S-KCF-6

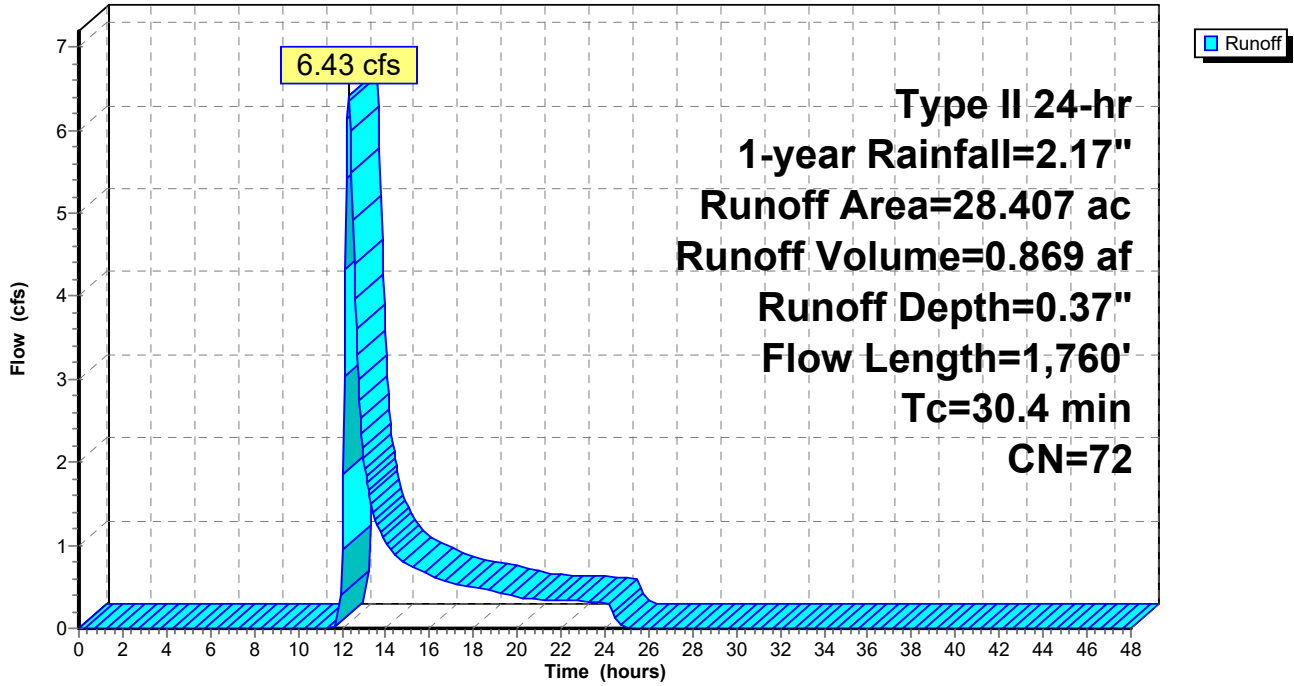
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.153	98	Surface water
2.120	58	Meadow, non-grazed, HSG B
18.359	71	Meadow, non-grazed, HSG C
7.318	78	Meadow, non-grazed, HSG D
0.227	65	Brush, Good, HSG C
0.105	73	Brush, Good, HSG D
0.125	77	Woods, Good, HSG D
28.407	72	Weighted Average
28.254		99.46% Pervious Area
0.153		0.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0430	0.20		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
1.5	212	0.1120	2.34		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
10.0	635	0.0230	1.06		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
10.7	813	0.0330	1.27		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
30.4	1,760	Total			

Subcatchment 19S: Sub 19

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 20S: Sub 20**

Runoff = 7.65 cfs @ 12.21 hrs, Volume= 1.213 af, Depth= 0.21"  
 Routed to Reach 20.1R : S-KCF-6

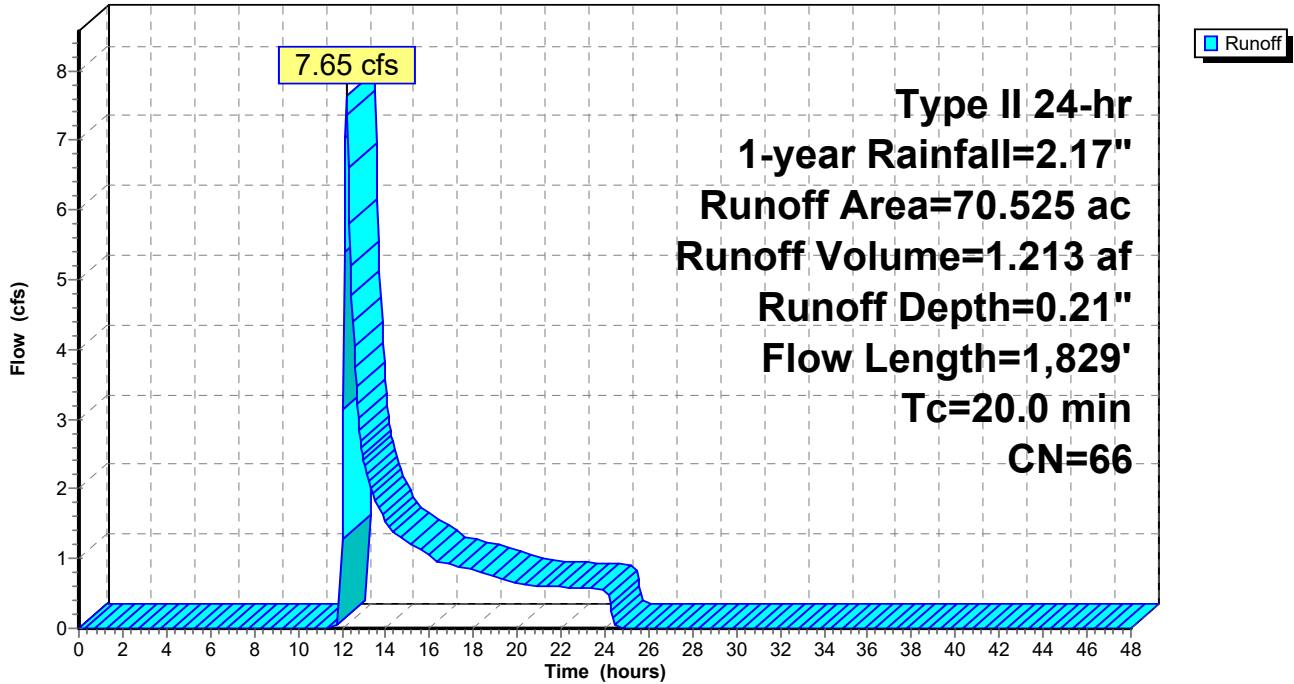
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.044	98	Surface water
* 0.508	98	Impervious surface
3.657	61	>75% Grass cover, Good, HSG B
29.608	58	Meadow, non-grazed, HSG B
22.967	71	Meadow, non-grazed, HSG C
12.748	78	Meadow, non-grazed, HSG D
0.147	48	Brush, Good, HSG B
0.032	65	Brush, Good, HSG C
0.133	73	Brush, Good, HSG D
0.124	55	Woods, Good, HSG B
0.523	70	Woods, Good, HSG C
0.034	77	Woods, Good, HSG D
70.525	66	Weighted Average
69.973		99.22% Pervious Area
0.552		0.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.7	100	0.0700	0.25		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
2.6	259	0.0580	1.69		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
8.8	703	0.0360	1.33		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.9	767	0.0300	6.81	54.44	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=5.00' D=1.00' Z= 3.0 '/' Top.W=11.00' n= 0.030 Earth, grassed & winding
20.0	1,829	Total			

Subcatchment 20S: Sub 20

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 21S: Sub 21**

Runoff = 8.36 cfs @ 12.58 hrs, Volume= 2.117 af, Depth= 0.21"  
 Routed to Reach 22.1R : S-KCF-5

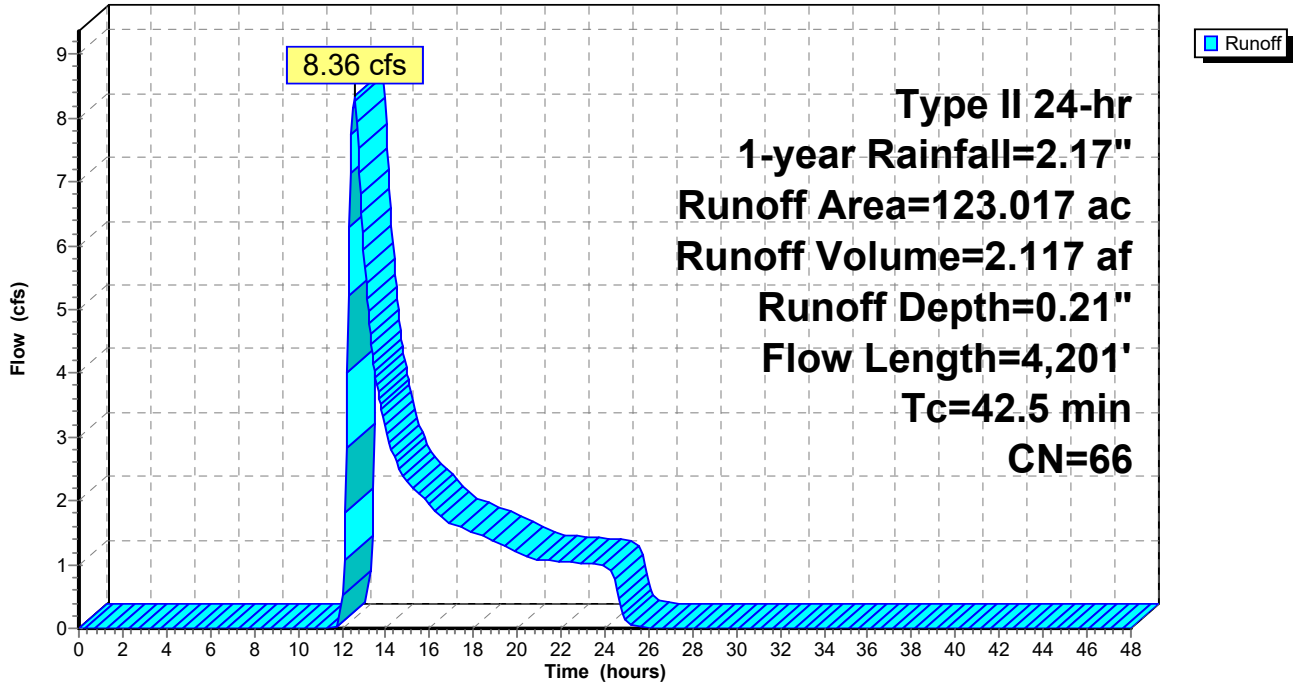
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 3.145	98	Surface water
* 0.950	98	Impervious surface
* 0.528	96	Gravel surface
0.616	61	>75% Grass cover, Good, HSG B
1.689	74	>75% Grass cover, Good, HSG C
54.805	58	Meadow, non-grazed, HSG B
54.707	71	Meadow, non-grazed, HSG C
2.342	78	Meadow, non-grazed, HSG D
0.747	48	Brush, Good, HSG B
0.437	65	Brush, Good, HSG C
0.758	55	Woods, Good, HSG B
2.293	70	Woods, Good, HSG C
123.017	66	Weighted Average
118.922		96.67% Pervious Area
4.095		3.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	100	0.0160	0.14		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
12.6	1,112	0.0440	1.47		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.2	346	0.0150	2.58	13.52	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=6.00' D=0.50' Z= 9.0 ' Top.W=15.00' n= 0.035 Earth, dense weeds
8.3	1,504	0.0150	3.03	15.15	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=9.00' D=0.50' Z= 2.0 ' Top.W=11.00' n= 0.035 Earth, dense weeds
7.3	1,139	0.0110	2.60	12.98	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=9.00' D=0.50' Z= 2.0 ' Top.W=11.00' n= 0.035 Earth, dense weeds
42.5	4,201	Total			

Subcatchment 21S: Sub 21

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 22S: Sub 22**

Runoff = 9.05 cfs @ 12.58 hrs, Volume= 1.748 af, Depth= 0.34"  
 Routed to Link SP22 :

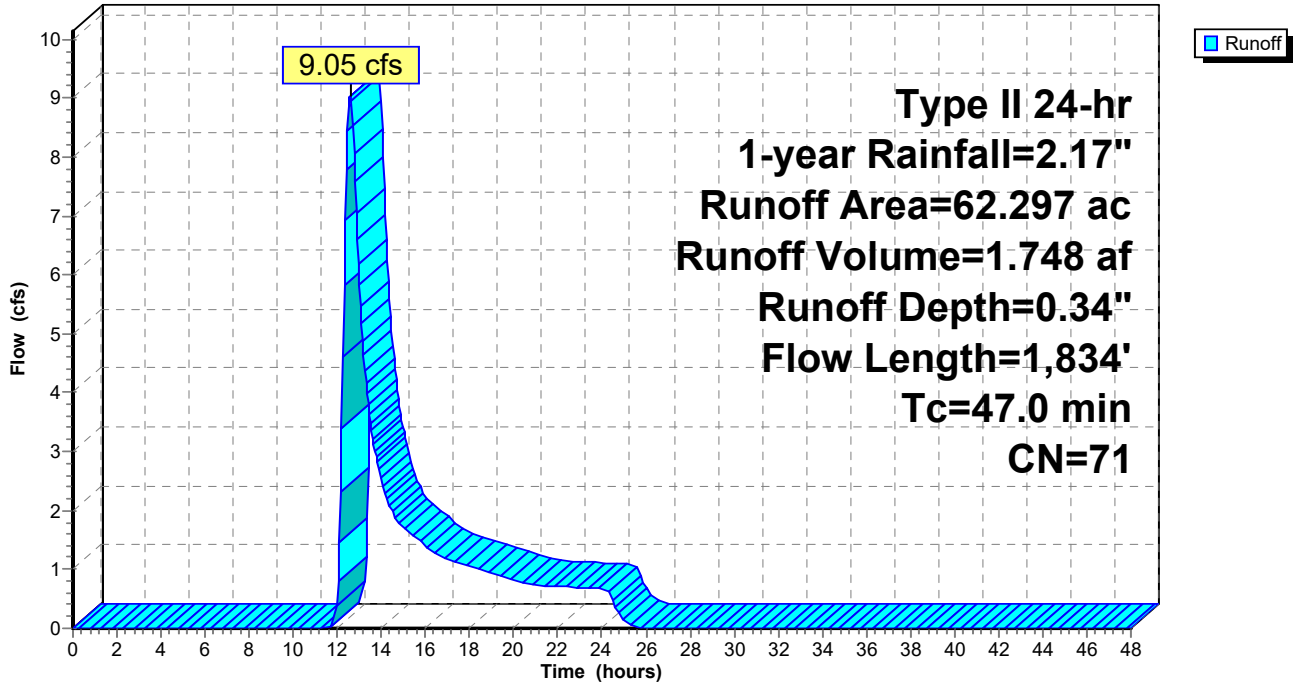
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.373	98	Impervious surface
* 0.117	96	Gravel surface
2.935	58	Meadow, non-grazed, HSG B
38.064	71	Meadow, non-grazed, HSG C
5.928	78	Meadow, non-grazed, HSG D
0.322	48	Brush, Good, HSG B
0.178	65	Brush, Good, HSG C
1.858	55	Woods, Good, HSG B
7.519	70	Woods, Good, HSG C
5.003	77	Woods, Good, HSG D
62.297	71	Weighted Average
61.924		99.40% Pervious Area
0.373		0.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.0220	0.16		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
5.0	316	0.0230	1.06		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
9.2	442	0.0130	0.80		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
9.3	305	0.0120	0.55		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
11.3	515	0.0230	0.76		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
1.5	156		1.73		<b>Direct Entry, CF</b>
47.0	1,834	Total			

Subcatchment 22S: Sub 22

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 23S: Sub 23**

Runoff = 2.30 cfs @ 12.38 hrs, Volume= 0.392 af, Depth= 0.28"

Routed to Link SP23 :

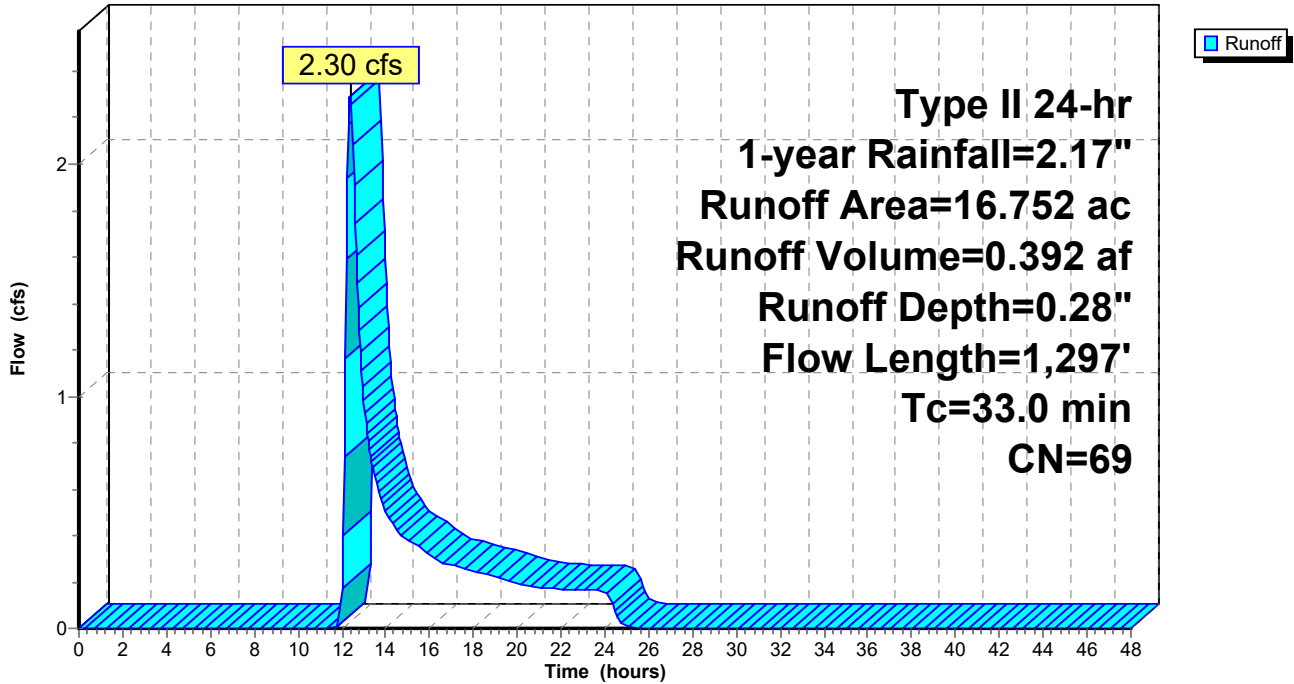
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.387	98	Impervious surface
* 0.929	96	Gravel surface
0.421	61	>75% Grass cover, Good, HSG B
4.958	58	Meadow, non-grazed, HSG B
9.559	71	Meadow, non-grazed, HSG C
0.403	78	Meadow, non-grazed, HSG D
0.012	48	Brush, Good, HSG B
0.052	65	Brush, Good, HSG C
0.031	55	Woods, Good, HSG B
16.752	69	Weighted Average
16.365		97.69% Pervious Area
0.387		2.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	100	0.0760	0.12		<b>Sheet Flow,</b> Woods: Light underbrush n= 0.400 P2= 2.50"
15.8	892	0.0180	0.94		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.8	262	0.0490	1.55		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.2	43	0.0160	4.00	24.02	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=3.00' D=1.00' Z= 3.0 '/' Top.W=9.00' n= 0.035 Earth, dense weeds
33.0	1,297	Total			

Subcatchment 23S: Sub 23

Hydrograph





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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 24S: Sub 24**

Runoff = 1.93 cfs @ 12.20 hrs, Volume= 0.197 af, Depth= 0.43"  
 Routed to Link SP24 :

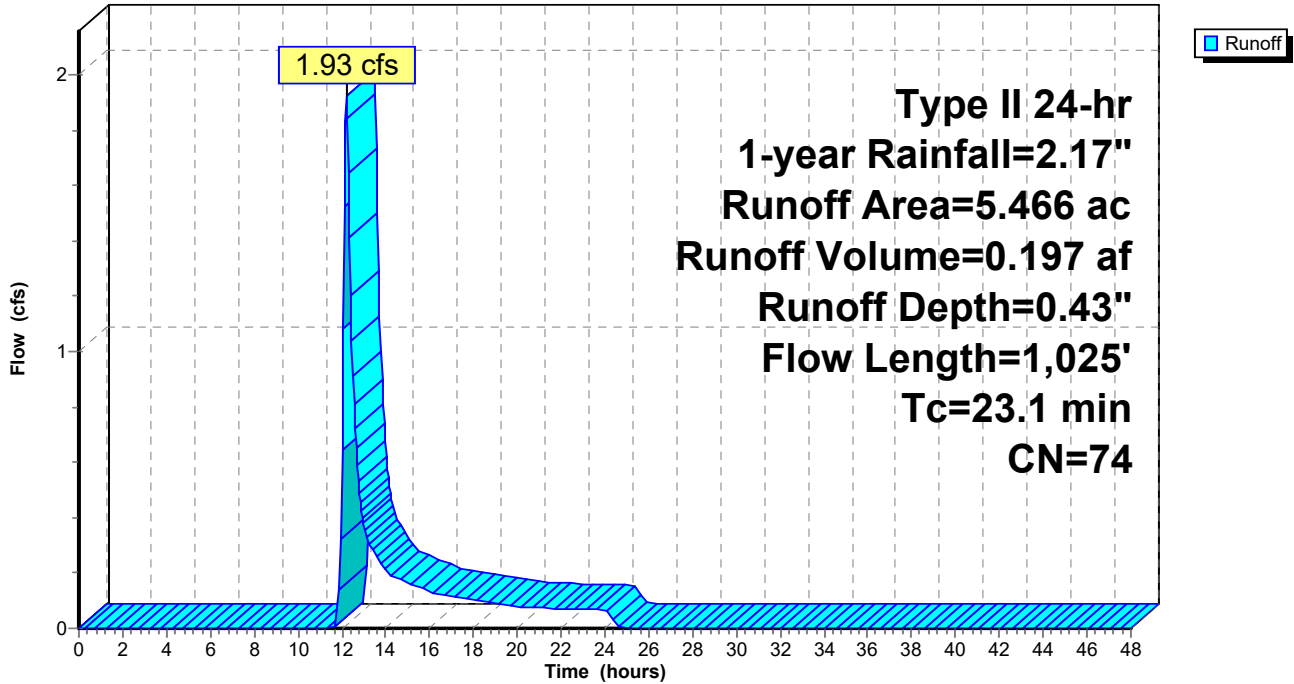
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.421	98	Impervious surface
* 0.036	96	Gravel surface
0.093	61	>75% Grass cover, Good, HSG B
1.916	74	>75% Grass cover, Good, HSG C
0.252	58	Meadow, non-grazed, HSG B
2.730	71	Meadow, non-grazed, HSG C
0.018	70	Woods, Good, HSG C
5.466	74	Weighted Average
5.045		92.30% Pervious Area
0.421		7.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	100	0.0060	0.09		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
1.7	169	0.0550	1.64		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.1	247	0.0230	3.64	12.74	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=6.00' D=0.50' Z= 2.0 '/' Top.W=8.00' n= 0.035 Earth, dense weeds
2.4	509	0.0220	3.47	13.02	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=6.00' D=0.50' Z= 3.0 '/' Top.W=9.00' n= 0.035 Earth, dense weeds
23.1	1,025	Total			

Subcatchment 24S: Sub 24

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 43S: Subcat 43**

Runoff = 4.73 cfs @ 12.49 hrs, Volume= 0.874 af, Depth= 0.31"  
 Routed to Reach 44R :

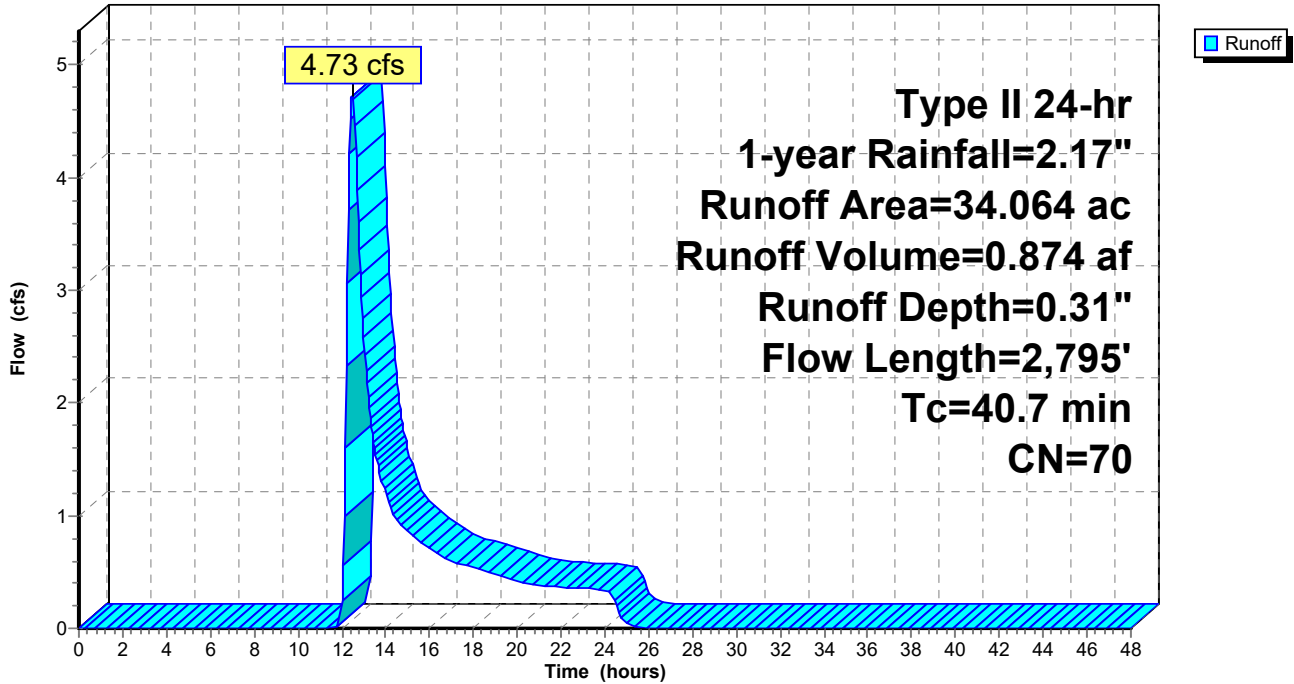
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.157	98	Impervious surface
2.153	74	>75% Grass cover, Good, HSG C
0.186	30	Meadow, non-grazed, HSG A
1.331	58	Meadow, non-grazed, HSG B
15.965	71	Meadow, non-grazed, HSG C
6.575	78	Meadow, non-grazed, HSG D
1.643	30	Woods, Good, HSG A
0.352	55	Woods, Good, HSG B
2.445	70	Woods, Good, HSG C
3.257	77	Woods, Good, HSG D
34.064	70	Weighted Average
33.907		99.54% Pervious Area
0.157		0.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0300	0.18		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
26.2	1,556	0.0200	0.99		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
5.1	1,139	0.0320	3.76	13.15	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=6.00' D=0.50' Z= 2.0 '/' Top.W=8.00' n= 0.040 Winding stream, pools & shoals
40.7	2,795	Total			

Subcatchment 43S: Subcat 43

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 44S: Subcat 44**

[47] Hint: Peak is 114% of capacity of segment #3

Runoff = 6.33 cfs @ 12.50 hrs, Volume= 1.188 af, Depth= 0.31"  
 Routed to Reach 45R :

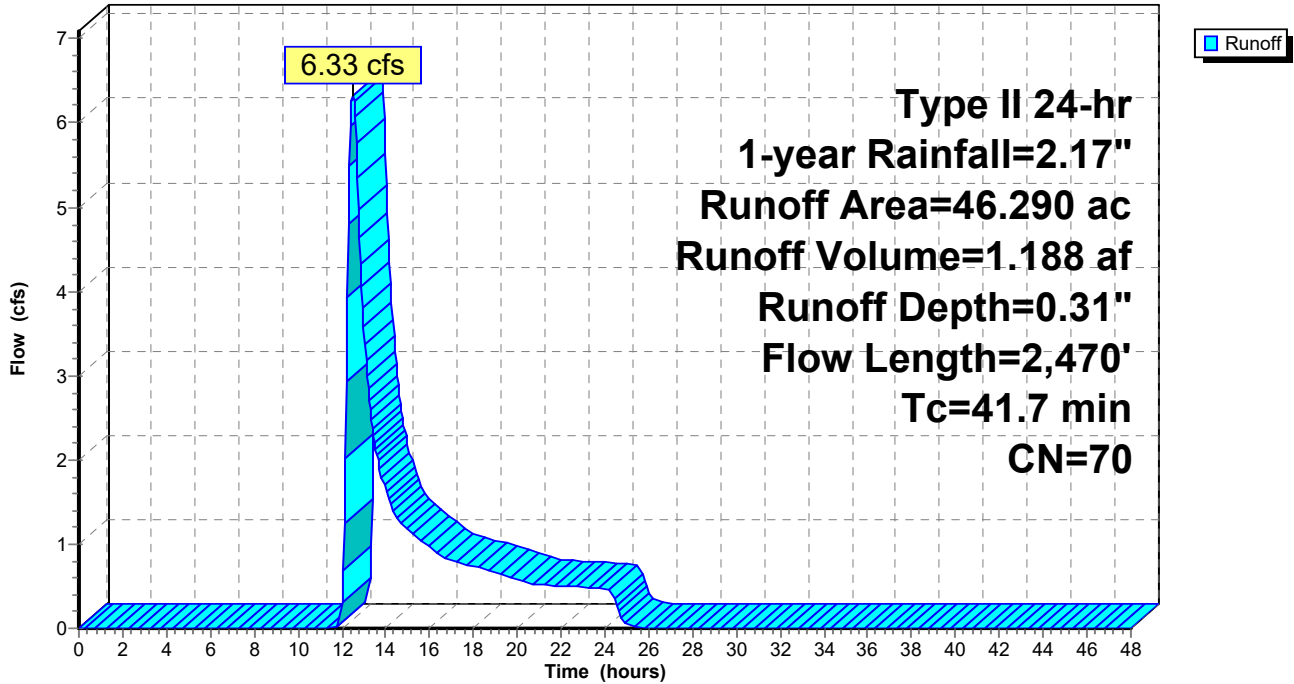
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
0.094	30	Meadow, non-grazed, HSG A
0.097	58	Meadow, non-grazed, HSG B
7.842	71	Meadow, non-grazed, HSG C
6.921	78	Meadow, non-grazed, HSG D
1.607	30	Woods, Good, HSG A
6.395	55	Woods, Good, HSG B
8.029	70	Woods, Good, HSG C
15.305	77	Woods, Good, HSG D
46.290	70	Weighted Average
46.290		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.9	100	0.0260	0.08		<b>Sheet Flow,</b> Woods: Light underbrush n= 0.400 P2= 2.50"
9.2	409	0.0220	0.74		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
5.2	715	0.0320	2.31	5.55	<b>Parabolic Channel,</b> W=18.00' D=0.20' Area=2.4 sf Perim=18.0' n= 0.030 Earth, grassed & winding
5.4	1,246	0.0350	3.83	14.37	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=6.00' D=0.50' Z= 3.0 '/' Top.W=9.00' n= 0.040 Winding stream, pools & shoals
41.7	2,470	Total			

Subcatchment 44S: Subcat 44

Hydrograph



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**Summary for Subcatchment 45S: Subcat 45**

Runoff = 0.37 cfs @ 13.00 hrs, Volume= 0.223 af, Depth= 0.08"  
 Routed to Link SP43 :

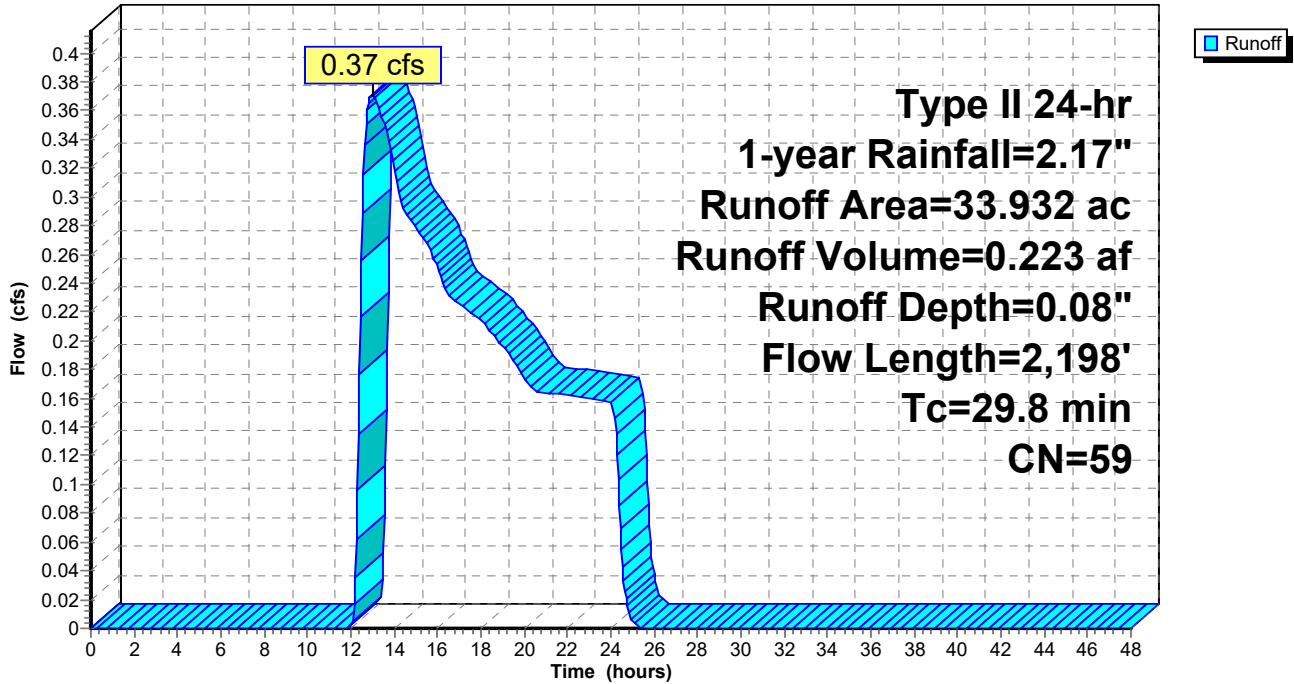
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.056	98	Surface water
* 0.600	98	Impervious surface
* 0.045	96	Gravel surface
0.358	61	>75% Grass cover, Good, HSG B
0.668	74	>75% Grass cover, Good, HSG C
0.893	30	Meadow, non-grazed, HSG A
10.865	58	Meadow, non-grazed, HSG B
6.386	71	Meadow, non-grazed, HSG C
2.755	78	Meadow, non-grazed, HSG D
0.369	30	Brush, Good, HSG A
4.141	48	Brush, Good, HSG B
0.313	65	Brush, Good, HSG C
0.221	73	Brush, Good, HSG D
2.407	30	Woods, Good, HSG A
3.328	55	Woods, Good, HSG B
0.214	70	Woods, Good, HSG C
0.313	77	Woods, Good, HSG D
33.932	59	Weighted Average
33.276		98.07% Pervious Area
0.656		1.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0150	0.13		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
6.5	396	0.0210	1.01		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.8	223	0.0900	2.10		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.4	196	0.0360	0.95		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
5.7	1,283	0.0370	3.77	10.38	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=4.00' D=0.50' Z= 3.0 ' /' Top.W=7.00' n= 0.040 Winding stream, pools & shoals
29.8	2,198	Total			

Subcatchment 45S: Subcat 45

Hydrograph





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**Summary for Subcatchment 46S: Subcat 46**

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"  
 Routed to Link SP46 :

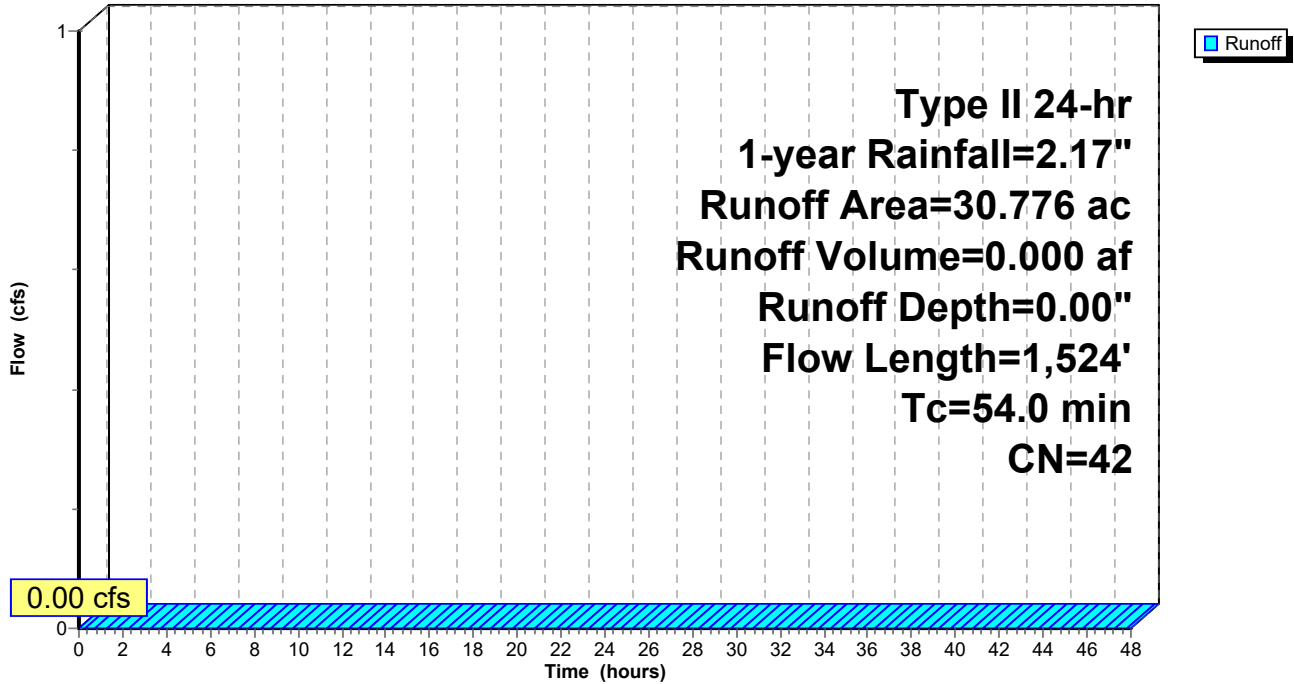
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.982	98	Surface water
* 0.226	98	Impervious surface
2.832	30	Meadow, non-grazed, HSG A
1.255	58	Meadow, non-grazed, HSG B
0.520	30	Brush, Good, HSG A
0.462	48	Brush, Good, HSG B
0.278	73	Brush, Good, HSG D
14.773	30	Woods, Good, HSG A
9.100	55	Woods, Good, HSG B
0.348	77	Woods, Good, HSG D
30.776	42	Weighted Average
29.568		96.07% Pervious Area
1.208		3.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0300	0.18		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
36.5	774	0.0050	0.35		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
5.2	153	0.0050	0.49		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.3	245	0.4120	3.21		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
1.2	79	0.0510	1.13		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
0.4	173		6.95		<b>Lake or Reservoir,</b> Mean Depth= 1.50'
54.0	1,524	Total			

Subcatchment 46S: Subcat 46

Hydrograph



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**Summary for Subcatchment 47S: Subcat 47**

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"  
 Routed to Link SP47 :

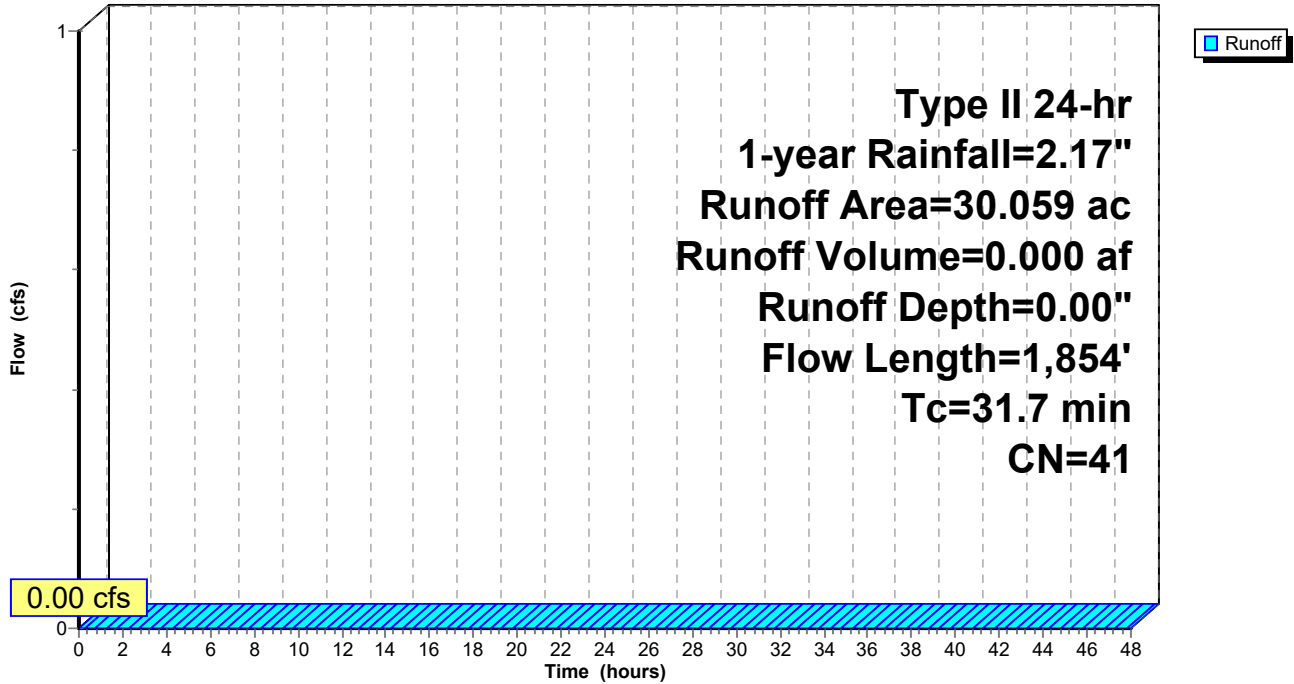
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.378	98	Impervious surface
0.502	39	>75% Grass cover, Good, HSG A
2.029	61	>75% Grass cover, Good, HSG B
17.003	30	Meadow, non-grazed, HSG A
3.669	58	Meadow, non-grazed, HSG B
0.051	30	Brush, Good, HSG A
0.687	48	Brush, Good, HSG B
1.092	30	Woods, Good, HSG A
4.648	55	Woods, Good, HSG B
30.059	41	Weighted Average
29.681		98.74% Pervious Area
0.378		1.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	100	0.0400	0.20		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
18.7	992	0.0160	0.89		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.1	88	0.0680	1.30		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
3.5	674	0.0180	3.19	13.54	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=7.00' D=0.50' Z= 3.0 '/' Top.W=10.00' n= 0.035 Earth, dense weeds
31.7	1,854	Total			

Subcatchment 47S: Subcat 47

Hydrograph



**Mill Pt Pre 1**

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**Summary for Reach 6R: W-NSD-35**

Inflow Area = 58.963 ac, 0.00% Impervious, Inflow Depth = 0.28" for 1-year event  
Inflow = 5.24 cfs @ 12.85 hrs, Volume= 1.378 af  
Outflow = 4.92 cfs @ 13.26 hrs, Volume= 1.378 af, Atten= 6%, Lag= 24.6 min  
Routed to Link SP5 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 2.23 fps, Min. Travel Time= 14.1 min  
Avg. Velocity = 0.81 fps, Avg. Travel Time= 38.7 min

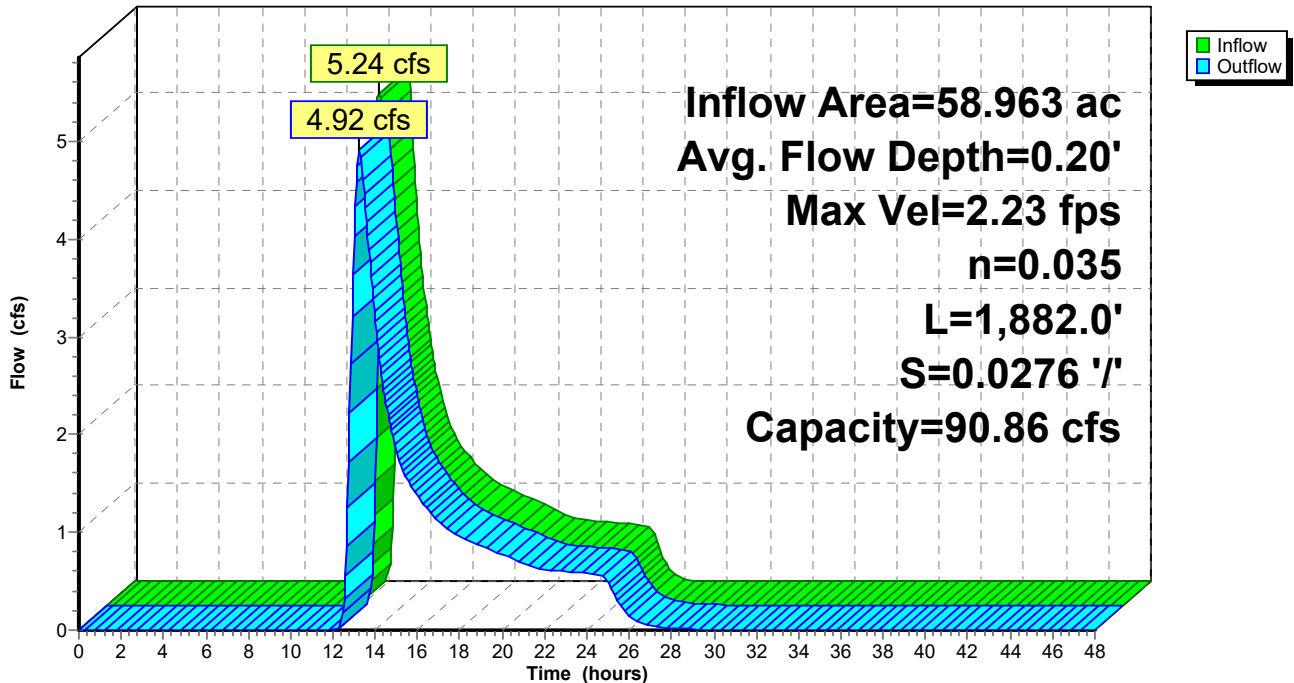
Peak Storage= 4,151 cf @ 13.03 hrs  
Average Depth at Peak Storage= 0.20' , Surface Width= 12.37'  
Bank-Full Depth= 1.00' Flow Area= 16.0 sf, Capacity= 90.86 cfs

10.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 6.0 '/' Top Width= 22.00'  
Length= 1,882.0' Slope= 0.0276 '/'  
Inlet Invert= 542.00', Outlet Invert= 490.00'



**Reach 6R: W-NSD-35**

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Reach 13.1R:**

Inflow Area = 4.859 ac, 0.00% Impervious, Inflow Depth = 1.64" for 1-year event  
Inflow = 1.38 cfs @ 12.36 hrs, Volume= 0.666 af  
Outflow = 1.38 cfs @ 12.39 hrs, Volume= 0.666 af, Atten= 0%, Lag= 2.1 min  
Routed to Reach 13.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 2.21 fps, Min. Travel Time= 1.2 min  
Avg. Velocity = 1.20 fps, Avg. Travel Time= 2.3 min

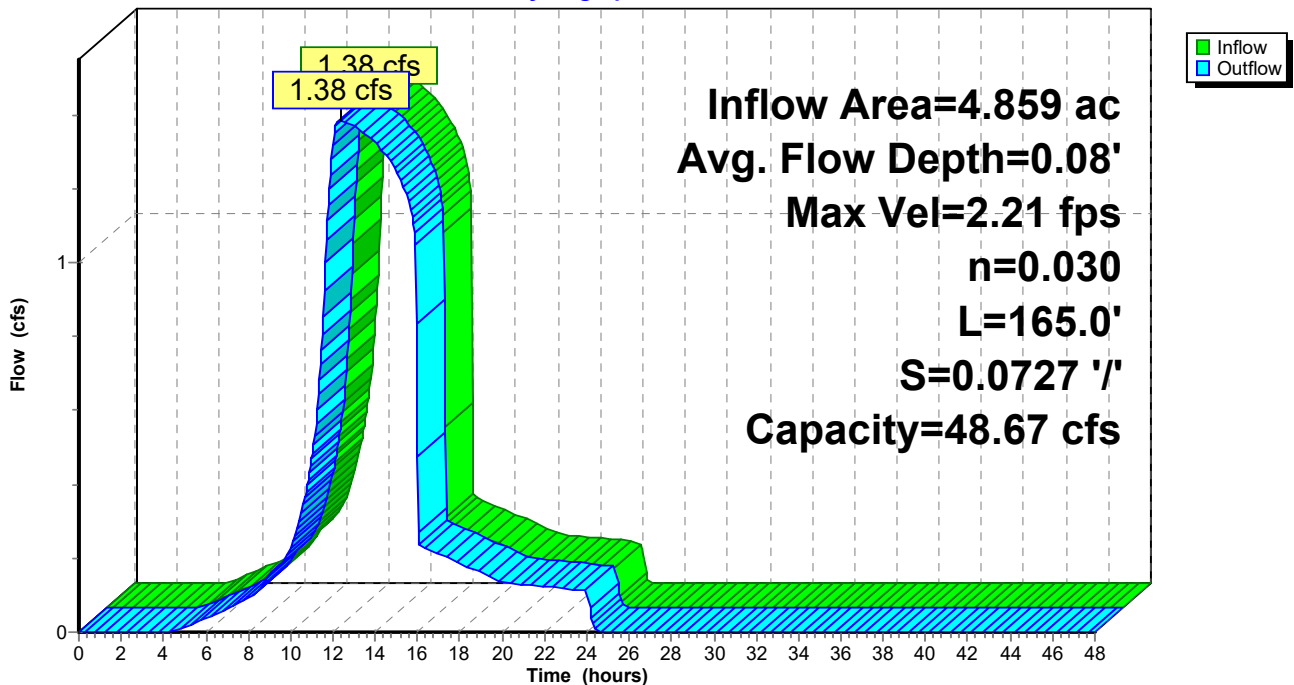
Peak Storage= 103 cf @ 12.37 hrs  
Average Depth at Peak Storage= 0.08' , Surface Width= 9.28'  
Bank-Full Depth= 0.50' Flow Area= 8.0 sf, Capacity= 48.67 cfs

6.00' x 0.50' deep channel, n= 0.030 Earth, grassed & winding  
Side Slope Z-value= 20.0 ' / ' Top Width= 26.00'  
Length= 165.0' Slope= 0.0727 ' / '  
Inlet Invert= 503.90', Outlet Invert= 491.90'



**Reach 13.1R:**

Hydrograph



# Mill Pt Pre 1

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Type II 24-hr 1-year Rainfall=2.17"

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## Summary for Reach 13.2R:

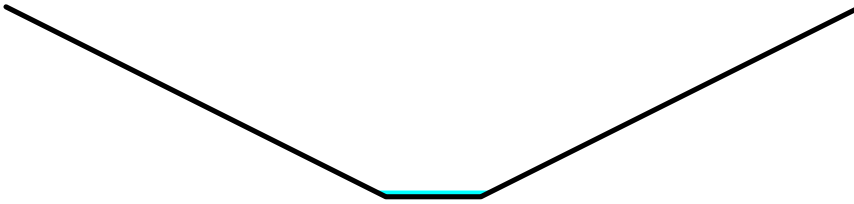
[61] Hint: Exceeded Reach 13.1R outlet invert by 0.03' @ 12.40 hrs

Inflow Area = 4.859 ac, 0.00% Impervious, Inflow Depth = 1.64" for 1-year event  
Inflow = 1.38 cfs @ 12.39 hrs, Volume= 0.666 af  
Outflow = 1.38 cfs @ 12.42 hrs, Volume= 0.666 af, Atten= 0%, Lag= 1.4 min  
Routed to Link SP13 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 4.62 fps, Min. Travel Time= 0.8 min  
Avg. Velocity = 2.77 fps, Avg. Travel Time= 1.4 min

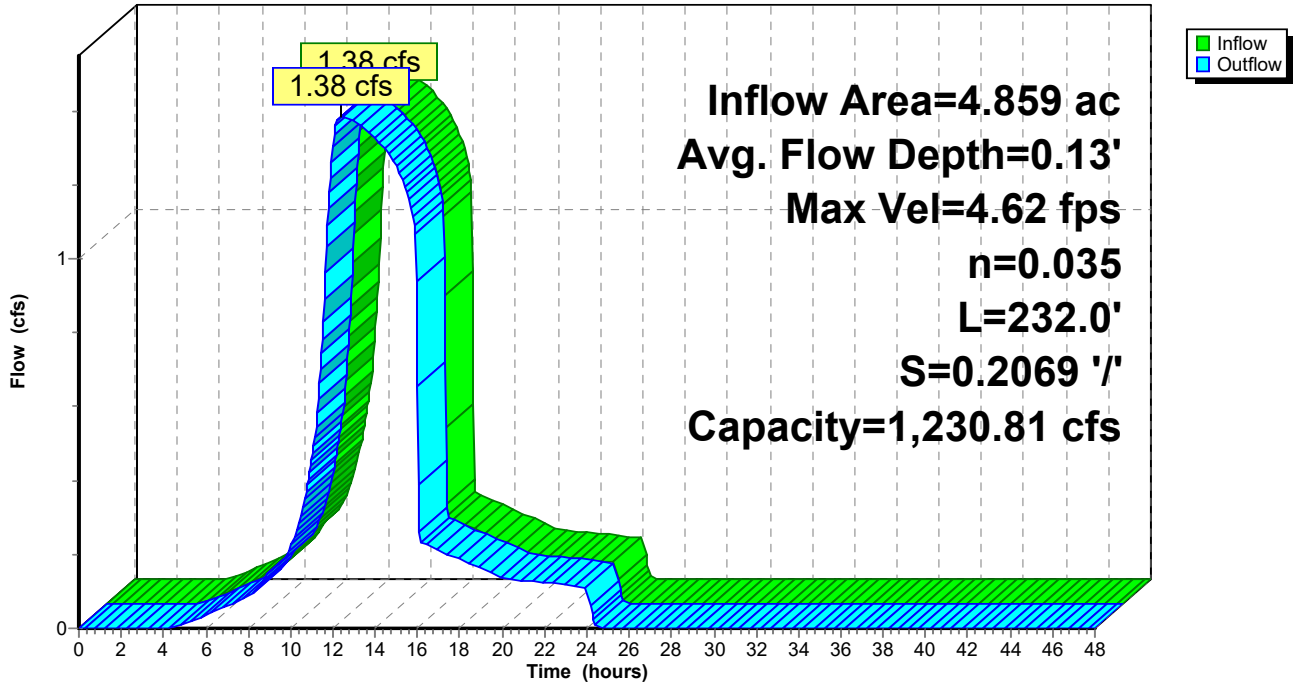
Peak Storage= 69 cf @ 12.40 hrs  
Average Depth at Peak Storage= 0.13' , Surface Width= 2.53'  
Bank-Full Depth= 4.00' Flow Area= 40.0 sf, Capacity= 1,230.81 cfs

2.00' x 4.00' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 2.0 '/' Top Width= 18.00'  
Length= 232.0' Slope= 0.2069 '/'  
Inlet Invert= 491.80', Outlet Invert= 443.80'



Reach 13.2R:

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Reach 20.1R: S-KCF-6**

Inflow Area = 98.932 ac, 0.71% Impervious, Inflow Depth = 0.25" for 1-year event  
Inflow = 13.49 cfs @ 12.25 hrs, Volume= 2.082 af  
Outflow = 10.22 cfs @ 12.69 hrs, Volume= 2.082 af, Atten= 24%, Lag= 26.3 min  
Routed to Reach 20.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 1.69 fps, Min. Travel Time= 13.9 min  
Avg. Velocity= 0.54 fps, Avg. Travel Time= 43.6 min

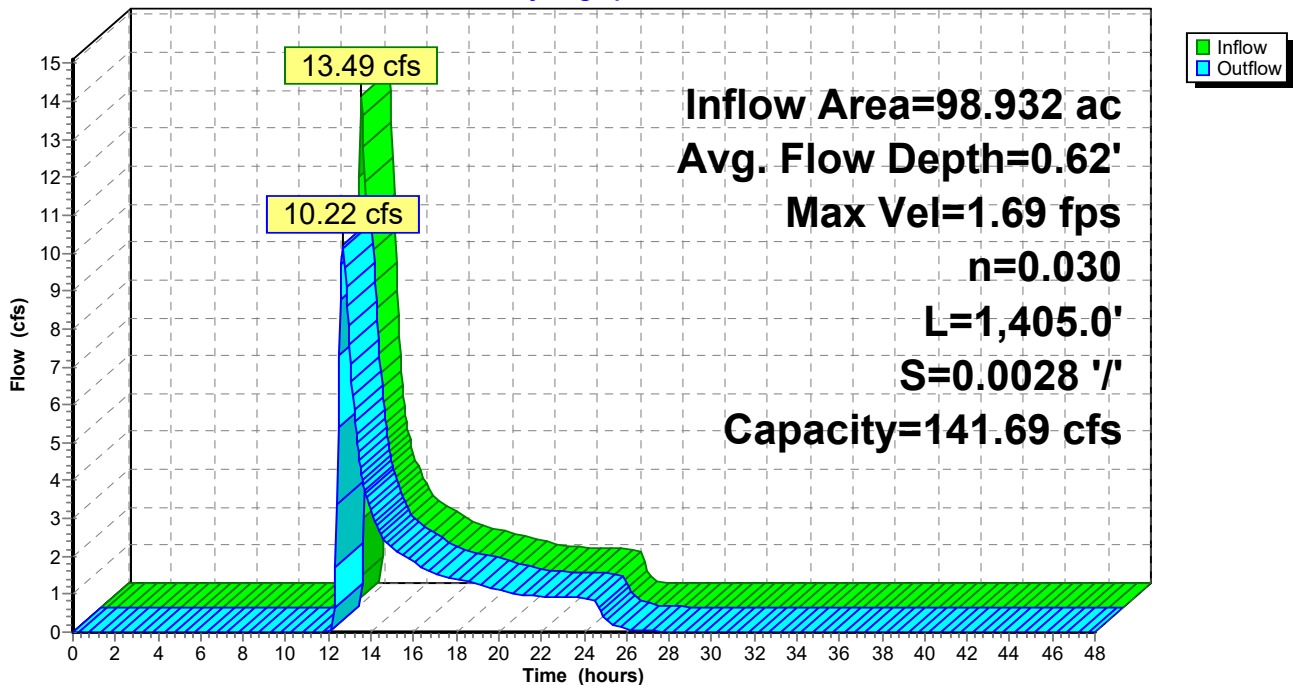
Peak Storage= 8,537 cf @ 12.45 hrs  
Average Depth at Peak Storage= 0.62' , Surface Width= 11.70'  
Bank-Full Depth= 2.50' Flow Area= 38.8 sf, Capacity= 141.69 cfs

8.00' x 2.50' deep channel, n= 0.030 Earth, grassed & winding  
Side Slope Z-value= 3.0 '/ Top Width= 23.00'  
Length= 1,405.0' Slope= 0.0028 '/  
Inlet Invert= 494.00', Outlet Invert= 490.00'



**Reach 20.1R: S-KCF-6**

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Reach 20.2R:**

[62] Hint: Exceeded Reach 20.1R OUTLET depth by 0.01' @ 25.10 hrs

Inflow Area = 98.932 ac, 0.71% Impervious, Inflow Depth = 0.25" for 1-year event  
Inflow = 10.22 cfs @ 12.69 hrs, Volume= 2.082 af  
Outflow = 9.37 cfs @ 12.98 hrs, Volume= 2.082 af, Atten= 8%, Lag= 17.7 min  
Routed to Reach 22.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 2.39 fps, Min. Travel Time= 9.2 min  
Avg. Velocity = 0.81 fps, Avg. Travel Time= 27.2 min

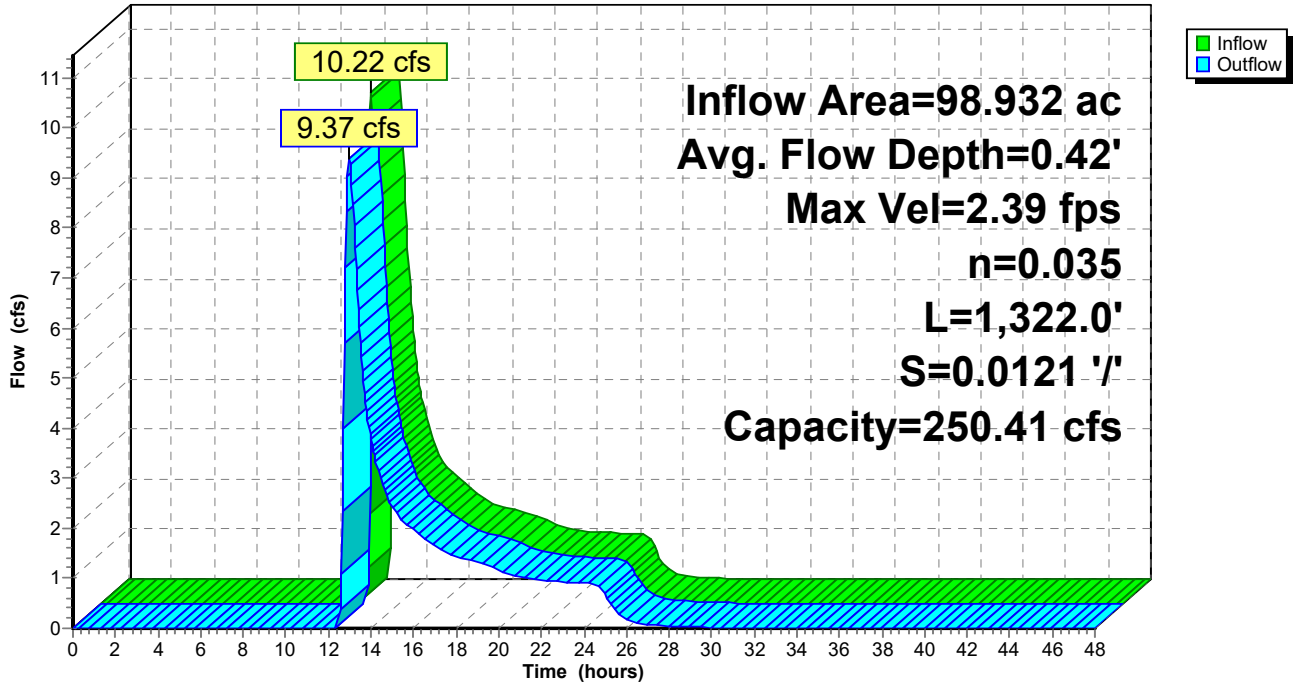
Peak Storage= 5,179 cf @ 12.83 hrs  
Average Depth at Peak Storage= 0.42' , Surface Width= 10.54'  
Bank-Full Depth= 2.50' Flow Area= 38.8 sf, Capacity= 250.41 cfs

8.00' x 2.50' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 3.0 '/' Top Width= 23.00'  
Length= 1,322.0' Slope= 0.0121 '/'  
Inlet Invert= 490.00', Outlet Invert= 474.00'



Reach 20.2R:

Hydrograph



# Mill Pt Pre 1

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## Summary for Reach 22.1R: S-KCF-5

Inflow Area = 123.017 ac, 3.33% Impervious, Inflow Depth = 0.21" for 1-year event  
Inflow = 8.36 cfs @ 12.58 hrs, Volume= 2.117 af  
Outflow = 8.20 cfs @ 12.75 hrs, Volume= 2.117 af, Atten= 2%, Lag= 10.2 min  
Routed to Reach 22.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 1.90 fps, Min. Travel Time= 5.8 min  
Avg. Velocity = 0.78 fps, Avg. Travel Time= 14.2 min

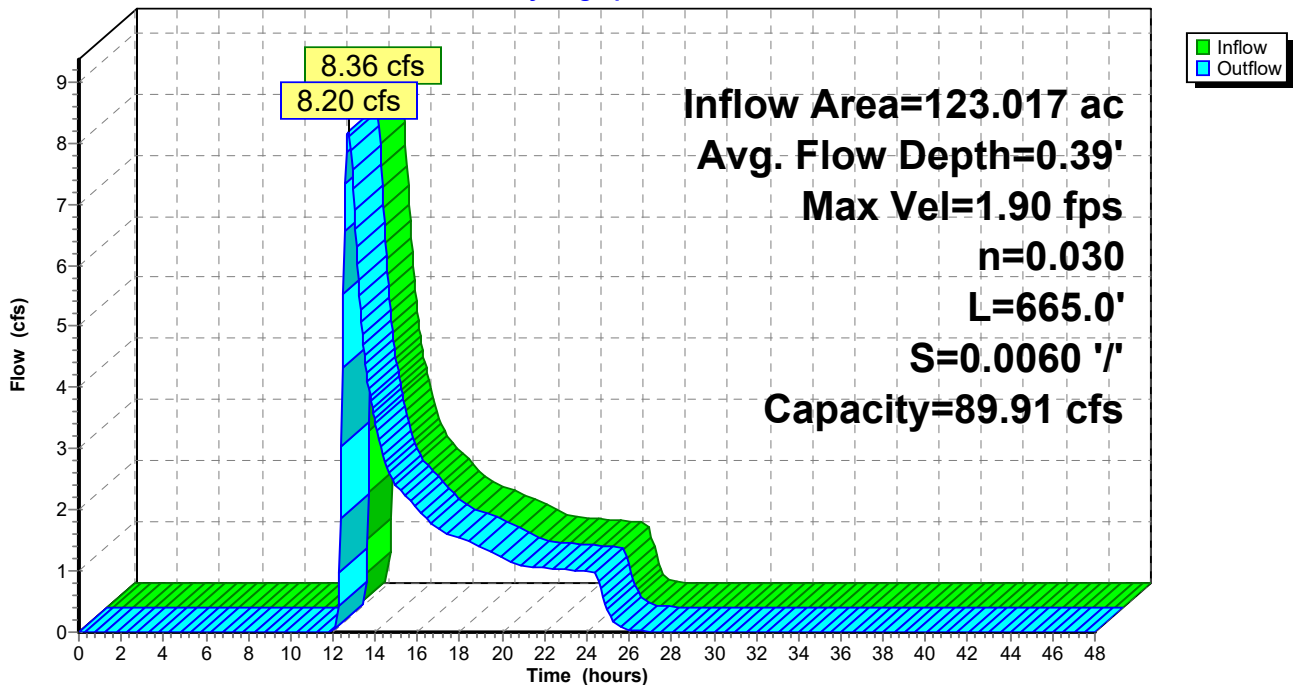
Peak Storage= 2,876 cf @ 12.65 hrs  
Average Depth at Peak Storage= 0.39' , Surface Width= 12.32'  
Bank-Full Depth= 1.50' Flow Area= 21.8 sf, Capacity= 89.91 cfs

10.00' x 1.50' deep channel, n= 0.030 Earth, grassed & winding  
Side Slope Z-value= 3.0 '/' Top Width= 19.00'  
Length= 665.0' Slope= 0.0060 '/'  
Inlet Invert= 478.00', Outlet Invert= 474.00'



### Reach 22.1R: S-KCF-5

Hydrograph



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**Summary for Reach 22.2R:**

[62] Hint: Exceeded Reach 20.2R OUTLET depth by 0.21' @ 13.15 hrs

[62] Hint: Exceeded Reach 22.1R OUTLET depth by 0.26' @ 13.05 hrs

Inflow Area = 221.949 ac, 2.16% Impervious, Inflow Depth = 0.23" for 1-year event

Inflow = 16.63 cfs @ 12.92 hrs, Volume= 4.199 af

Outflow = 16.35 cfs @ 13.07 hrs, Volume= 4.199 af, Atten= 2%, Lag= 9.1 min

Routed to Link SP22 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Max. Velocity= 2.35 fps, Min. Travel Time= 5.0 min

Avg. Velocity= 0.72 fps, Avg. Travel Time= 16.4 min

Peak Storage= 4,934 cf @ 12.99 hrs

Average Depth at Peak Storage= 0.59' , Surface Width= 13.56'

Bank-Full Depth= 1.50' Flow Area= 21.8 sf, Capacity= 86.27 cfs

10.00' x 1.50' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 3.0 '/' Top Width= 19.00'

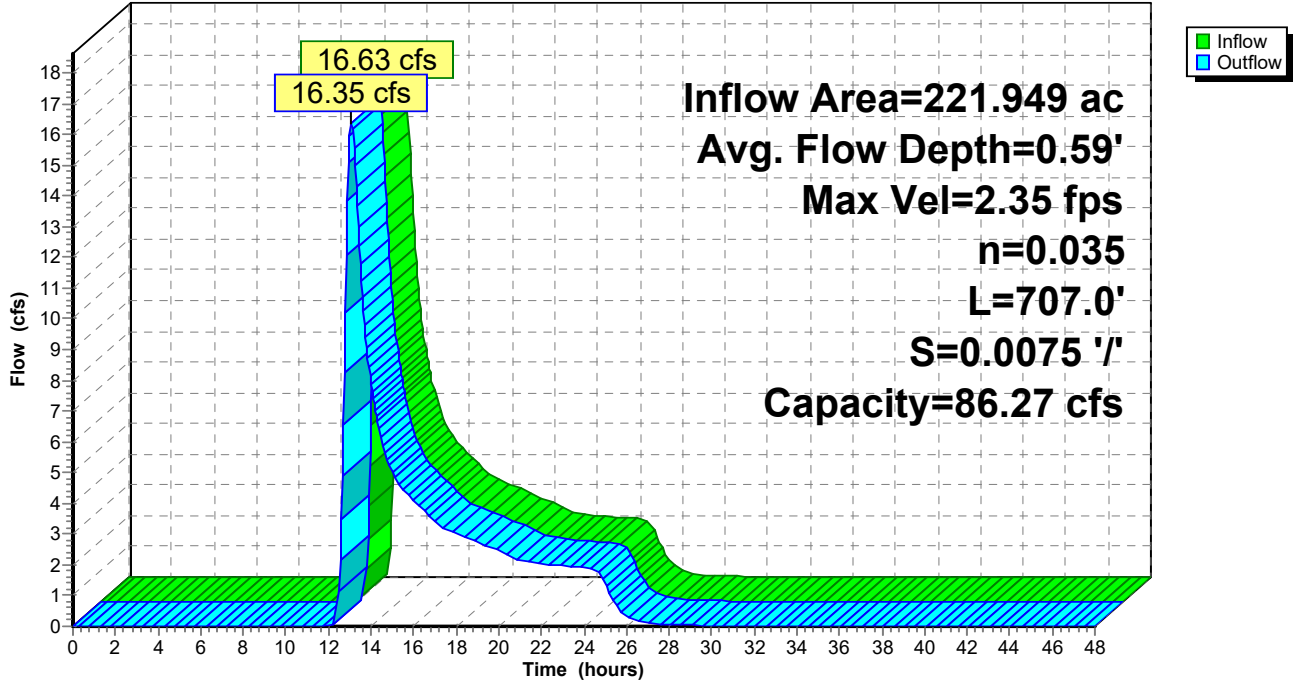
Length= 707.0' Slope= 0.0075 '/'

Inlet Invert= 474.00', Outlet Invert= 468.67'



Reach 22.2R:

Hydrograph



# Mill Pt Pre 1

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Type II 24-hr 1-year Rainfall=2.17"

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## Summary for Reach 44R:

Inflow Area = 34.064 ac, 0.46% Impervious, Inflow Depth = 0.31" for 1-year event  
Inflow = 4.73 cfs @ 12.49 hrs, Volume= 0.874 af  
Outflow = 4.70 cfs @ 12.57 hrs, Volume= 0.874 af, Atten= 1%, Lag= 5.1 min  
Routed to Reach 45R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 2.96 fps, Min. Travel Time= 2.8 min  
Avg. Velocity= 1.33 fps, Avg. Travel Time= 6.2 min

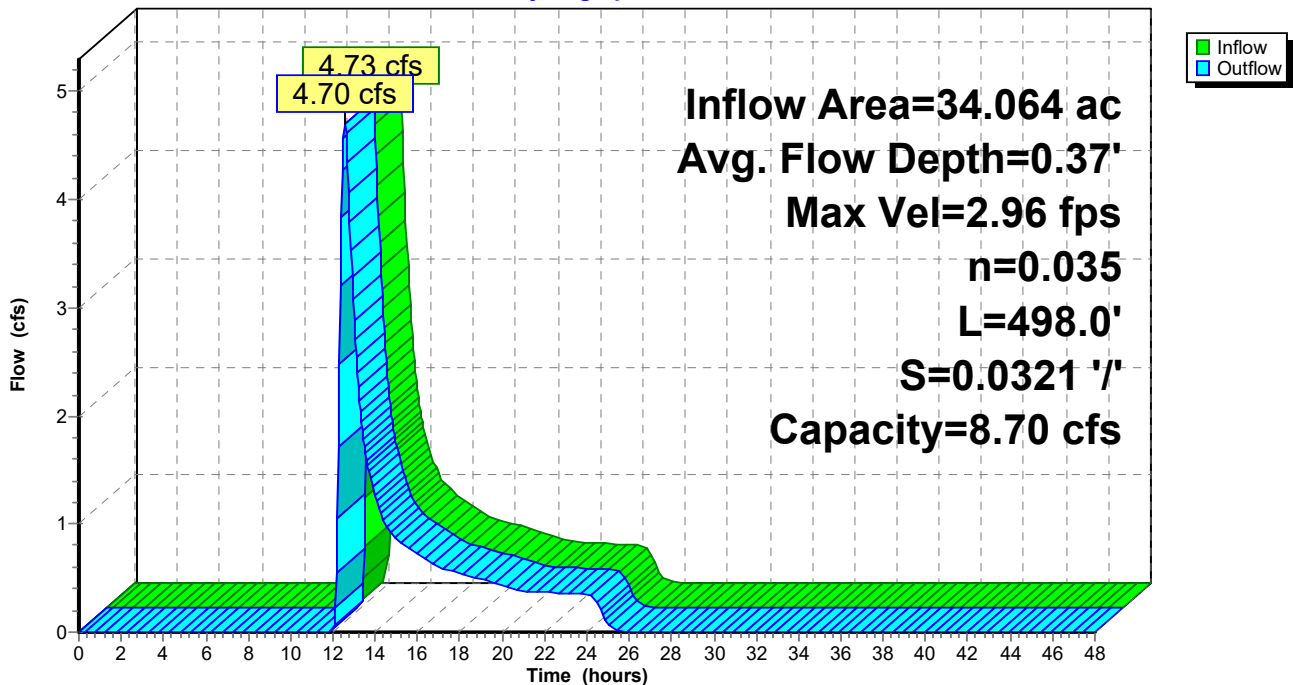
Peak Storage= 792 cf @ 12.52 hrs  
Average Depth at Peak Storage= 0.37' , Surface Width= 6.49'  
Bank-Full Depth= 0.50' Flow Area= 2.5 sf, Capacity= 8.70 cfs

2.00' x 0.50' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 6.0 '/' Top Width= 8.00'  
Length= 498.0' Slope= 0.0321 '/'  
Inlet Invert= 404.00', Outlet Invert= 388.00'



## Reach 44R:

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Reach 45R:**

[62] Hint: Exceeded Reach 44R OUTLET depth by 0.03' @ 12.65 hrs

Inflow Area = 80.354 ac, 0.20% Impervious, Inflow Depth = 0.31" for 1-year event  
Inflow = 10.97 cfs @ 12.54 hrs, Volume= 2.062 af  
Outflow = 10.91 cfs @ 12.60 hrs, Volume= 2.062 af, Atten= 1%, Lag= 3.8 min  
Routed to Link SP43 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 4.05 fps, Min. Travel Time= 2.2 min  
Avg. Velocity = 1.47 fps, Avg. Travel Time= 6.1 min

Peak Storage= 1,451 cf @ 12.56 hrs  
Average Depth at Peak Storage= 0.40' , Surface Width= 7.59'  
Bank-Full Depth= 0.50' Flow Area= 3.5 sf, Capacity= 16.21 cfs

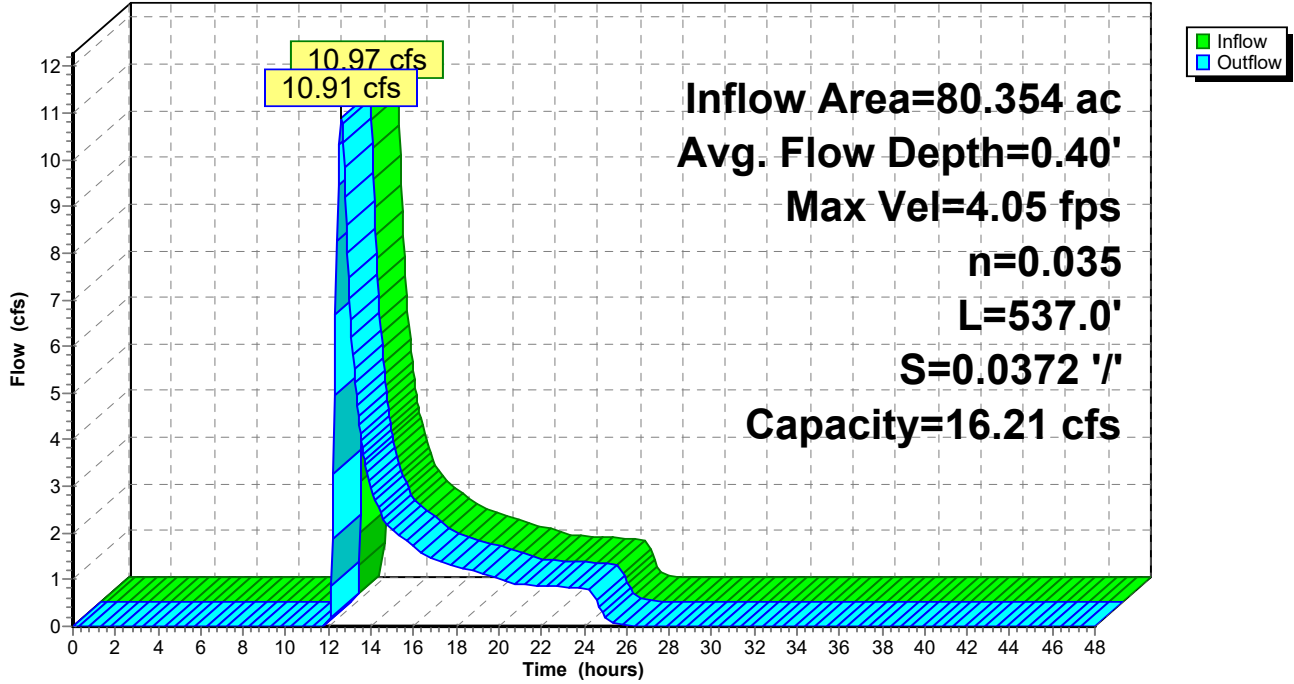
6.00' x 0.50' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 2.0 '/' Top Width= 8.00'  
Length= 537.0' Slope= 0.0372 '/'  
Inlet Invert= 388.00', Outlet Invert= 368.00'





Reach 45R:

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Pond 12P: 12P**

Inflow Area = 4.859 ac, 0.00% Impervious, Inflow Depth = 1.65" for 1-year event  
 Inflow = 13.00 cfs @ 11.96 hrs, Volume= 0.666 af  
 Outflow = 1.38 cfs @ 12.36 hrs, Volume= 0.666 af, Atten= 89%, Lag= 23.6 min  
 Primary = 1.38 cfs @ 12.36 hrs, Volume= 0.666 af  
 Routed to Reach 13.1R :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 3  
 Peak Elev= 507.40' @ 12.36 hrs Surf.Area= 20,577 sf Storage= 10,579 cf

Plug-Flow detention time= 52.9 min calculated for 0.666 af (100% of inflow)  
 Center-of-Mass det. time= 52.6 min ( 843.2 - 790.5 )

Volume	Invert	Avail.Storage	Storage Description		
#1	505.00'	349,932 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
505.00	50	25.0	0	0	50
506.00	138	45.5	90	90	170
508.00	39,705	811.5	28,123	28,213	52,417
510.00	80,589	1,415.9	117,907	146,120	159,570
512.00	124,830	2,053.3	203,812	349,932	335,572

Device	Routing	Invert	Outlet Devices
#1	Primary	505.00'	<b>8.0" Round Culvert</b> L= 172.7' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 505.00' / 504.00' S= 0.0058 ' / S= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

**Primary OutFlow** Max=1.38 cfs @ 12.36 hrs HW=507.40' (Free Discharge)  
 ↑1=Culvert (Barrel Controls 1.38 cfs @ 3.97 fps)

**Mill Pt Pre 1**

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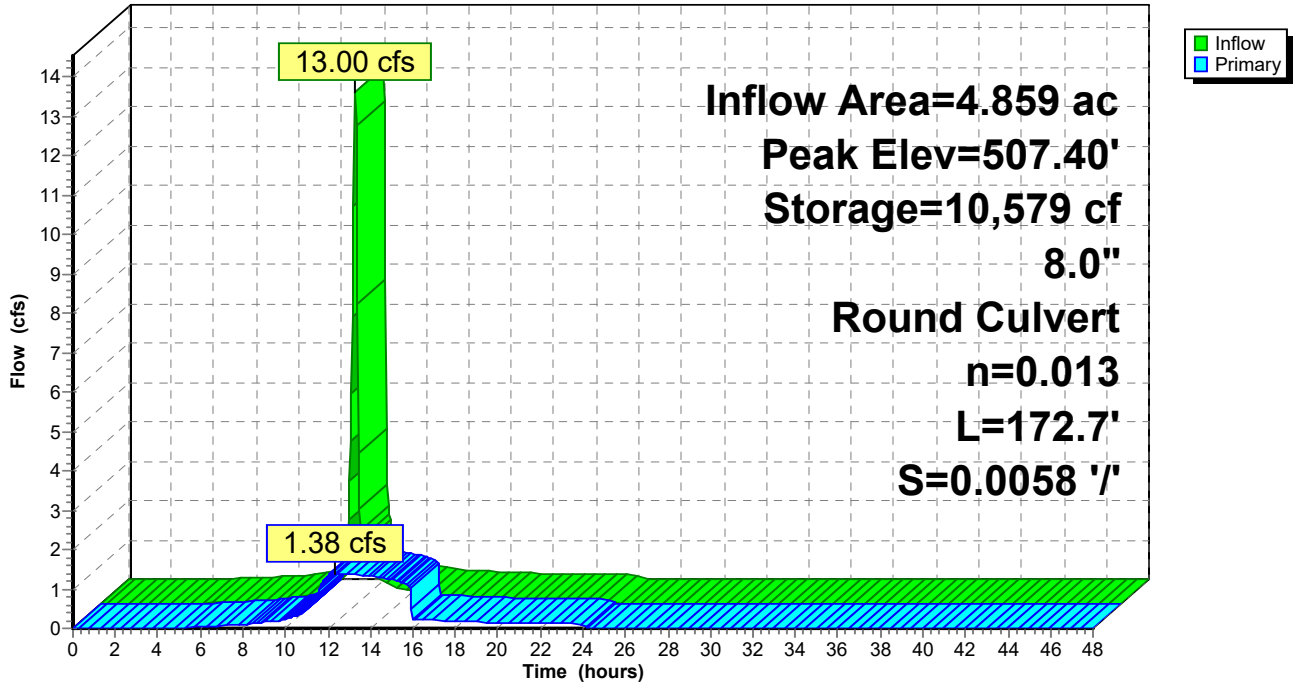
Type II 24-hr 1-year Rainfall=2.17"

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**Pond 12P: 12P**

Hydrograph

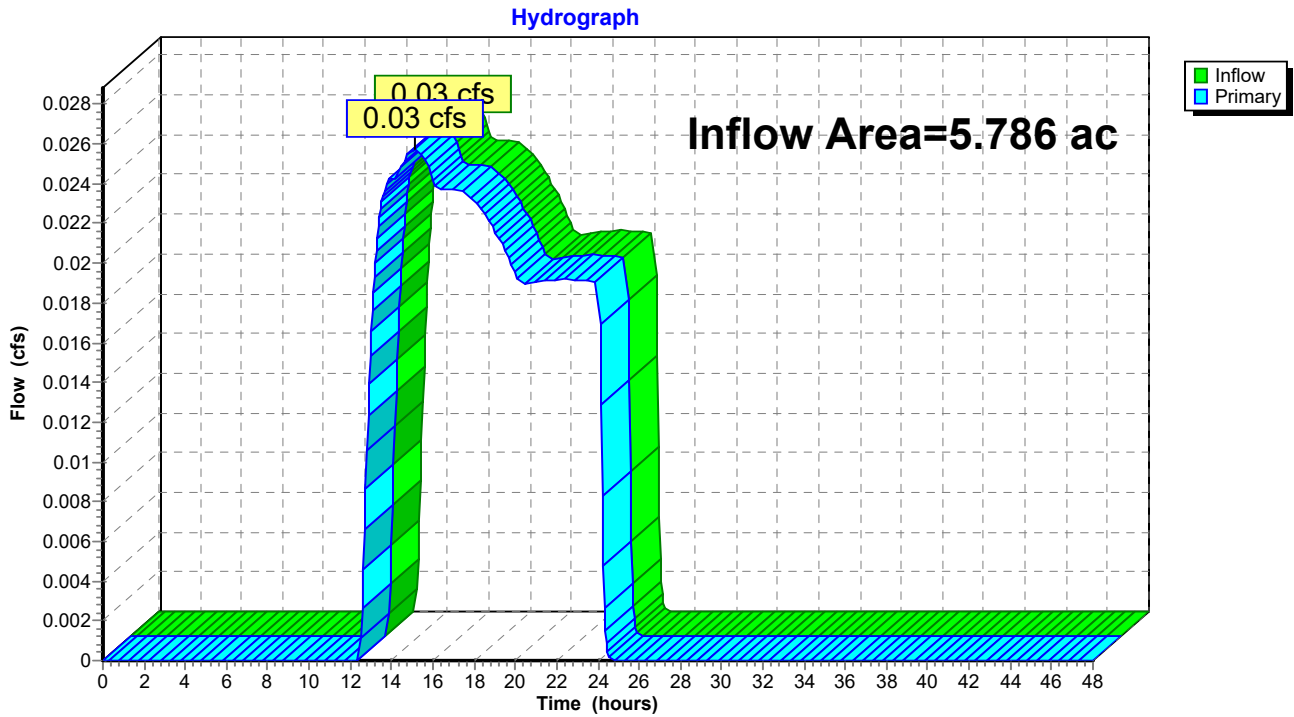


### Summary for Link SP1:

Inflow Area = 5.786 ac, 0.00% Impervious, Inflow Depth = 0.04" for 1-year event  
Inflow = 0.03 cfs @ 15.11 hrs, Volume= 0.020 af  
Primary = 0.03 cfs @ 15.11 hrs, Volume= 0.020 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP1:



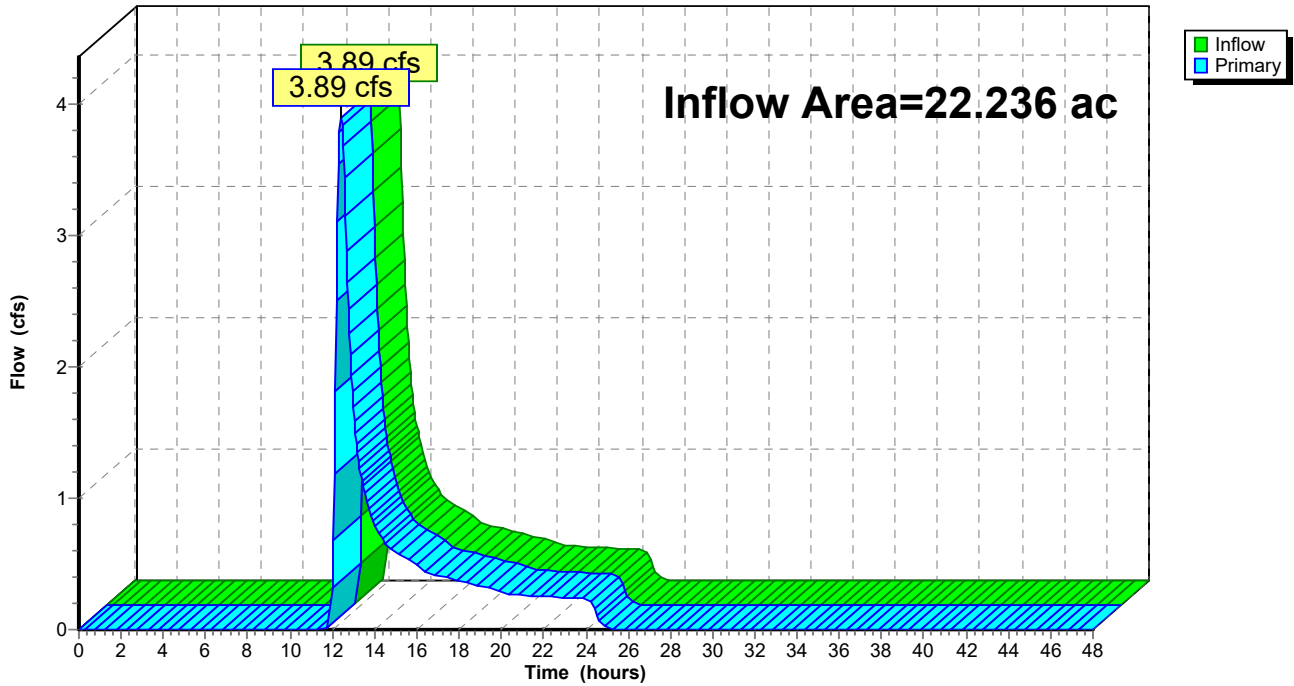
### Summary for Link SP10:

Inflow Area = 22.236 ac, 4.90% Impervious, Inflow Depth = 0.34" for 1-year event  
Inflow = 3.89 cfs @ 12.41 hrs, Volume= 0.624 af  
Primary = 3.89 cfs @ 12.41 hrs, Volume= 0.624 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP10:

Hydrograph



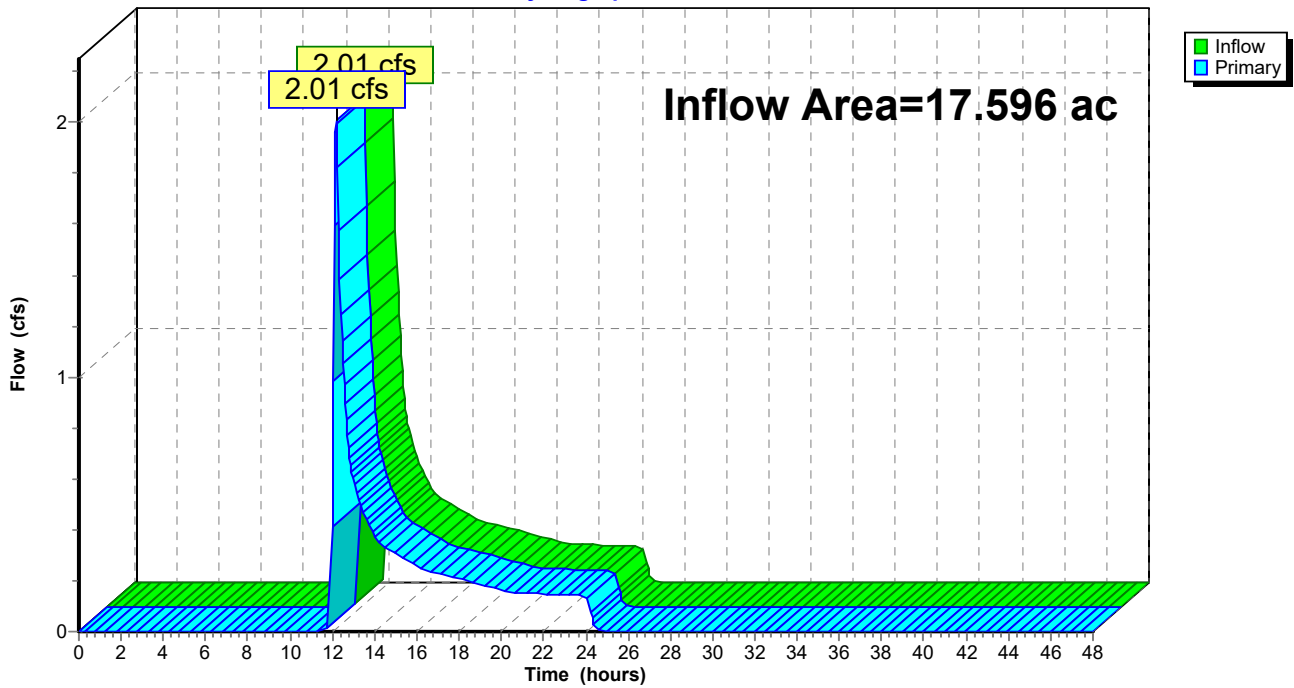
### Summary for Link SP11:

Inflow Area = 17.596 ac, 2.21% Impervious, Inflow Depth = 0.21" for 1-year event  
Inflow = 2.01 cfs @ 12.18 hrs, Volume= 0.303 af  
Primary = 2.01 cfs @ 12.18 hrs, Volume= 0.303 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP11:

Hydrograph



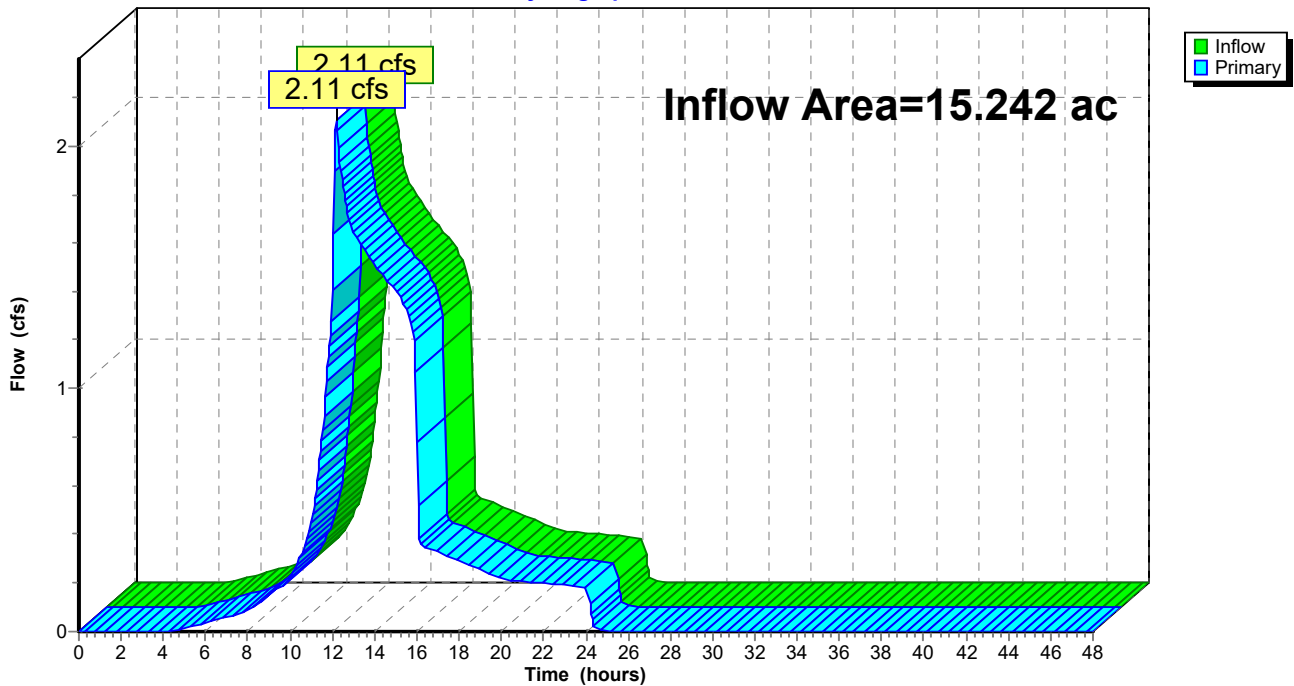
### Summary for Link SP13:

Inflow Area = 15.242 ac, 0.14% Impervious, Inflow Depth = 0.64" for 1-year event  
Inflow = 2.11 cfs @ 12.20 hrs, Volume= 0.808 af  
Primary = 2.11 cfs @ 12.20 hrs, Volume= 0.808 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP13:

Hydrograph



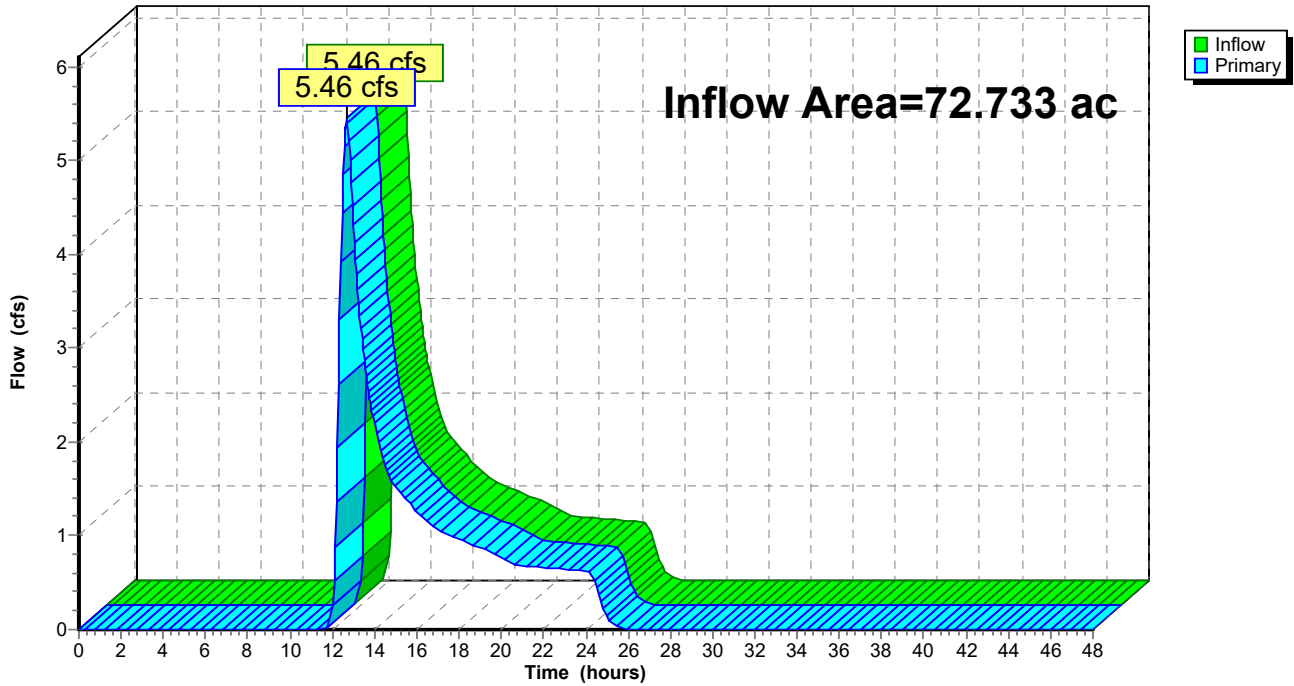
### Summary for Link SP14:

Inflow Area = 72.733 ac, 0.42% Impervious, Inflow Depth = 0.23" for 1-year event  
Inflow = 5.46 cfs @ 12.67 hrs, Volume= 1.393 af  
Primary = 5.46 cfs @ 12.67 hrs, Volume= 1.393 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP14:

Hydrograph





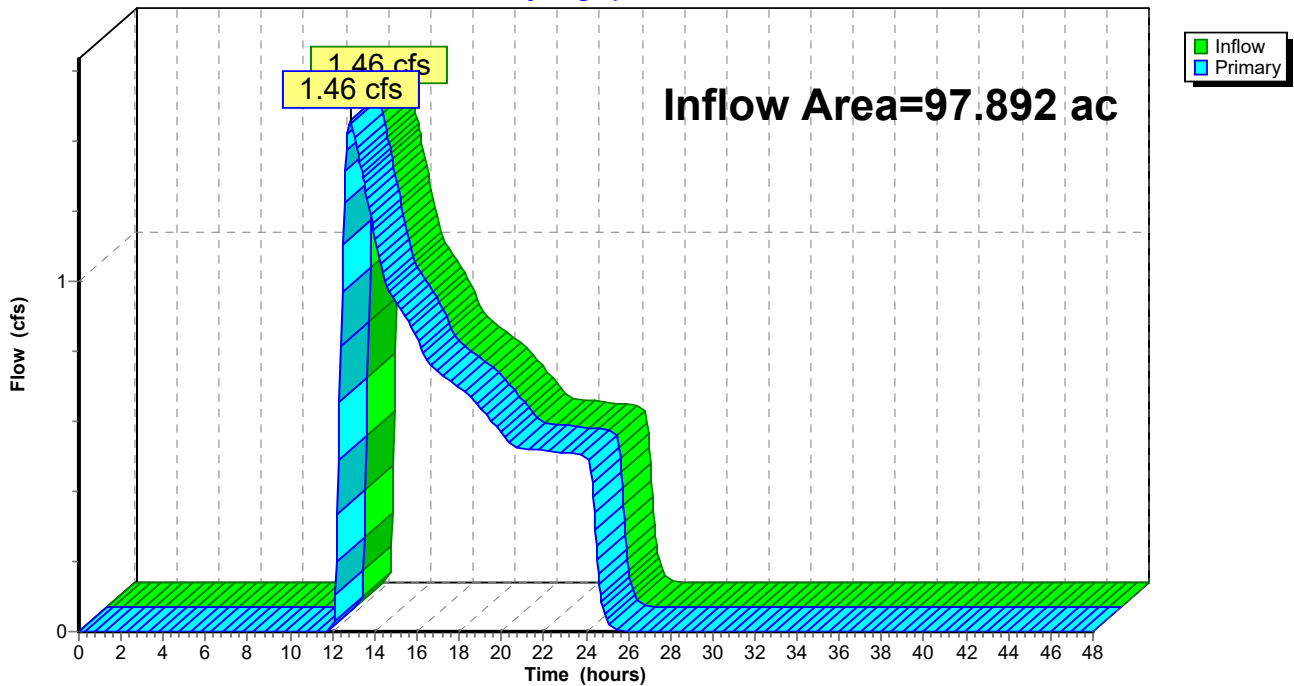
### Summary for Link SP17:

Inflow Area = 97.892 ac, 1.18% Impervious, Inflow Depth = 0.09" for 1-year event  
Inflow = 1.46 cfs @ 12.84 hrs, Volume= 0.761 af  
Primary = 1.46 cfs @ 12.84 hrs, Volume= 0.761 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP17:

Hydrograph



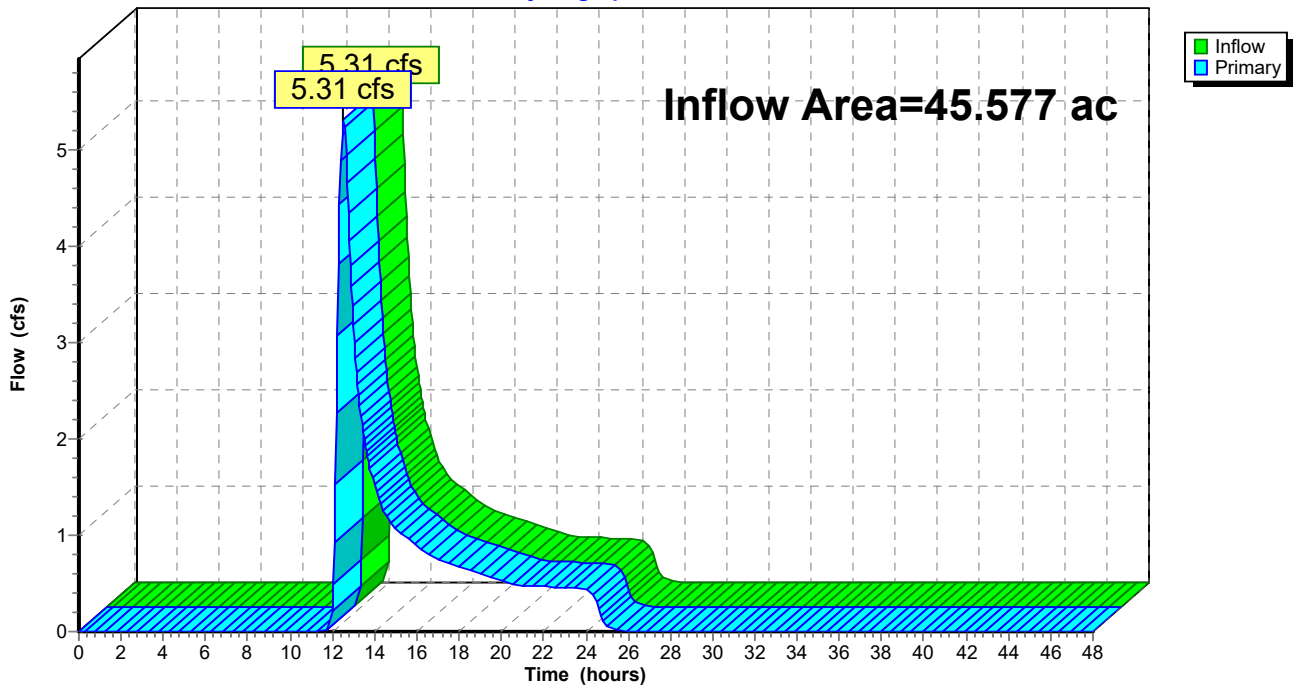
### Summary for Link SP18:

Inflow Area = 45.577 ac, 0.74% Impervious, Inflow Depth = 0.28" for 1-year event  
Inflow = 5.31 cfs @ 12.52 hrs, Volume= 1.065 af  
Primary = 5.31 cfs @ 12.52 hrs, Volume= 1.065 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP18:

Hydrograph



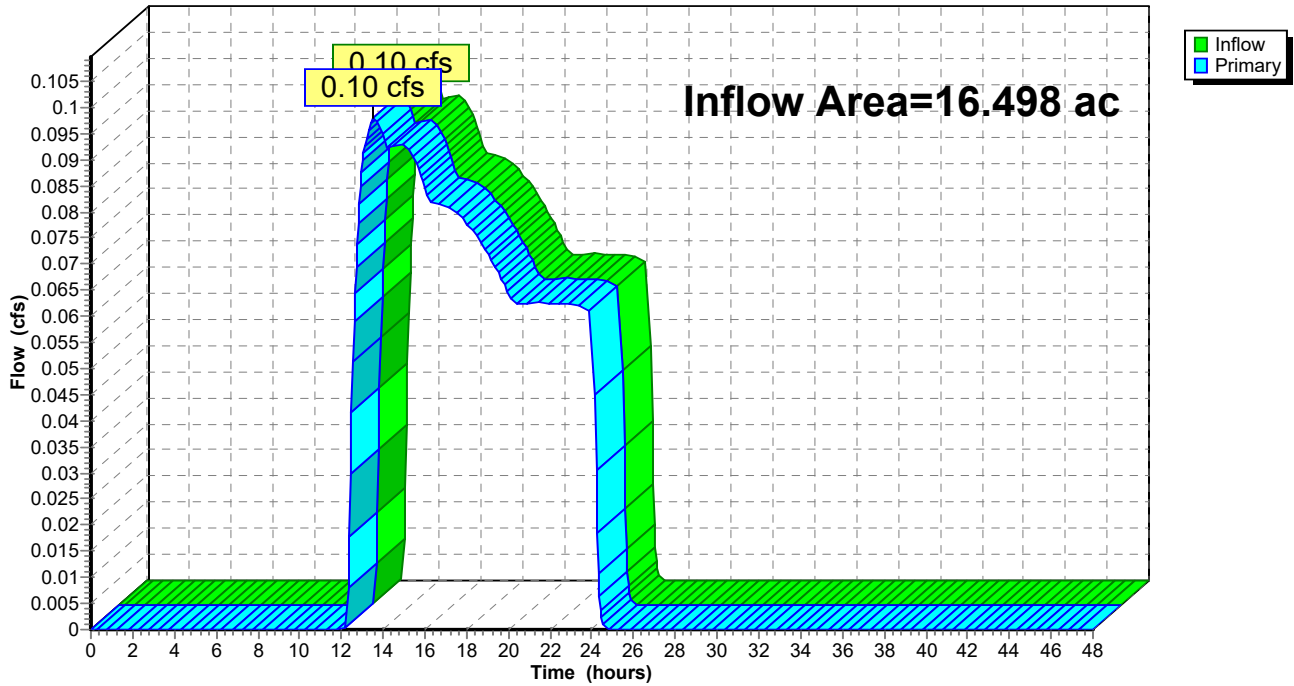
### Summary for Link SP2:

Inflow Area = 16.498 ac, 0.00% Impervious, Inflow Depth = 0.05" for 1-year event  
Inflow = 0.10 cfs @ 13.52 hrs, Volume= 0.073 af  
Primary = 0.10 cfs @ 13.52 hrs, Volume= 0.073 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP2:

Hydrograph



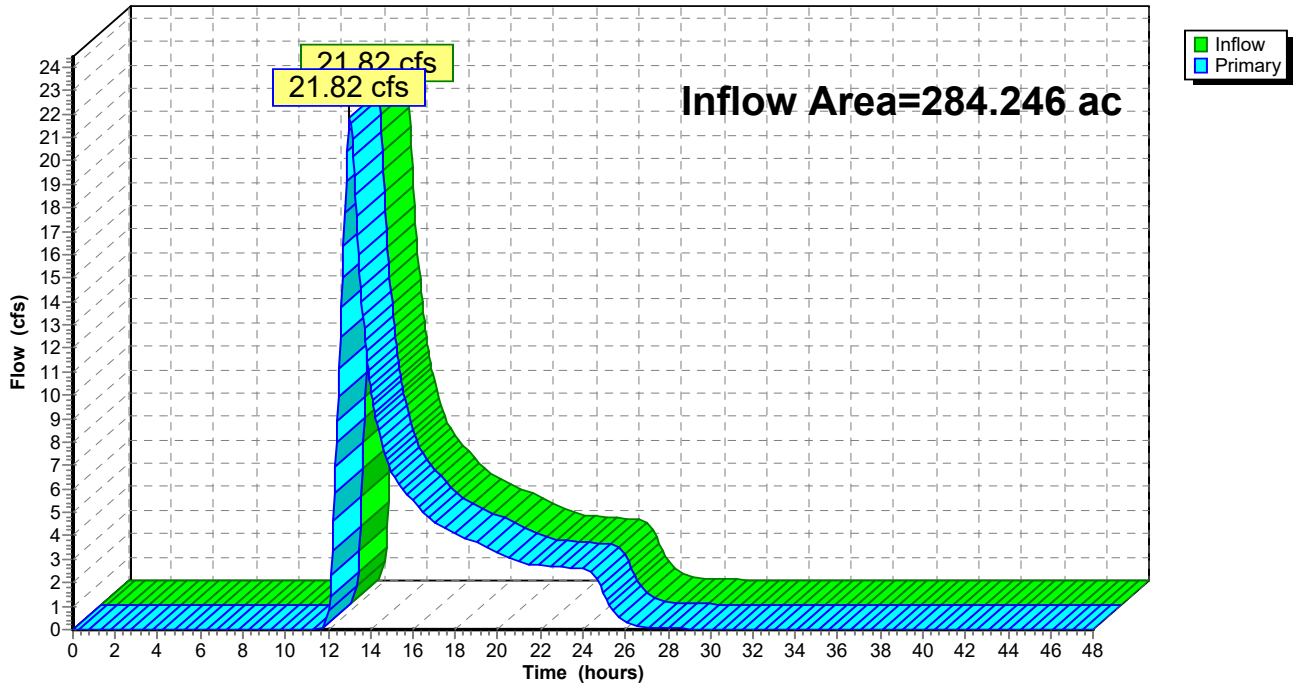
### Summary for Link SP22:

Inflow Area = 284.246 ac, 1.82% Impervious, Inflow Depth = 0.25" for 1-year event  
Inflow = 21.82 cfs @ 13.03 hrs, Volume= 5.947 af  
Primary = 21.82 cfs @ 13.03 hrs, Volume= 5.947 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP22:

Hydrograph



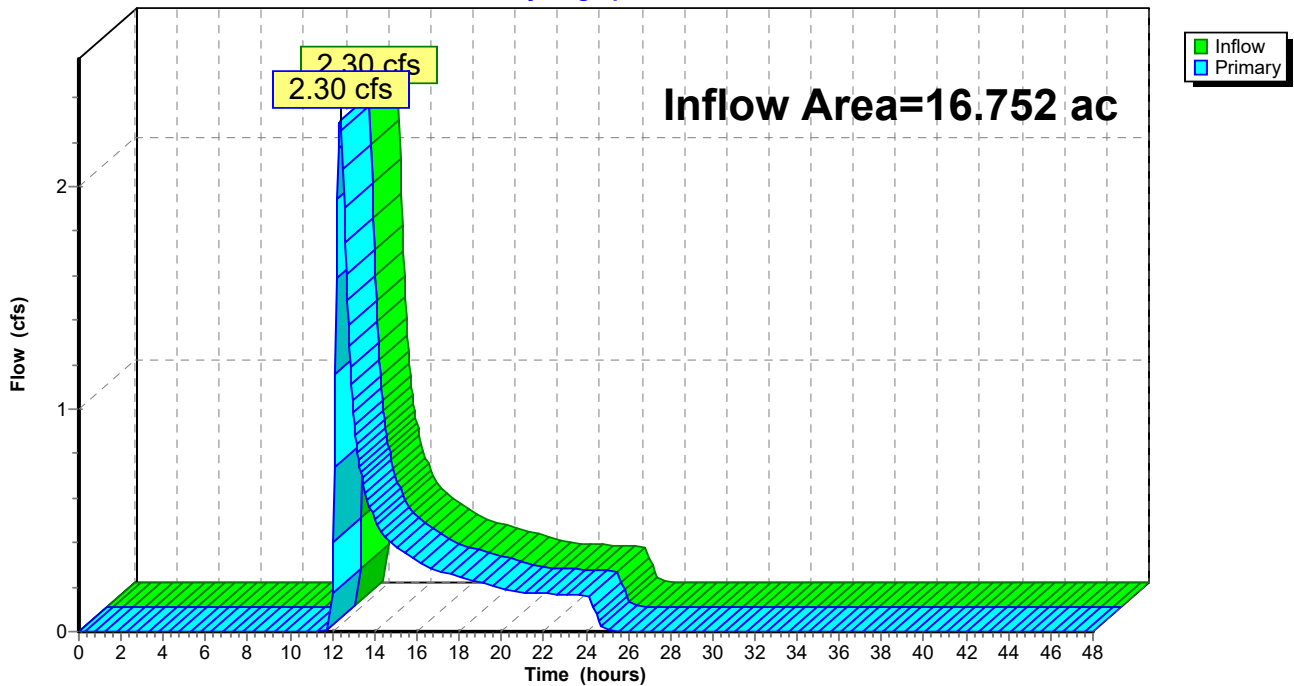
### Summary for Link SP23:

Inflow Area = 16.752 ac, 2.31% Impervious, Inflow Depth = 0.28" for 1-year event  
Inflow = 2.30 cfs @ 12.38 hrs, Volume= 0.392 af  
Primary = 2.30 cfs @ 12.38 hrs, Volume= 0.392 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP23:

Hydrograph



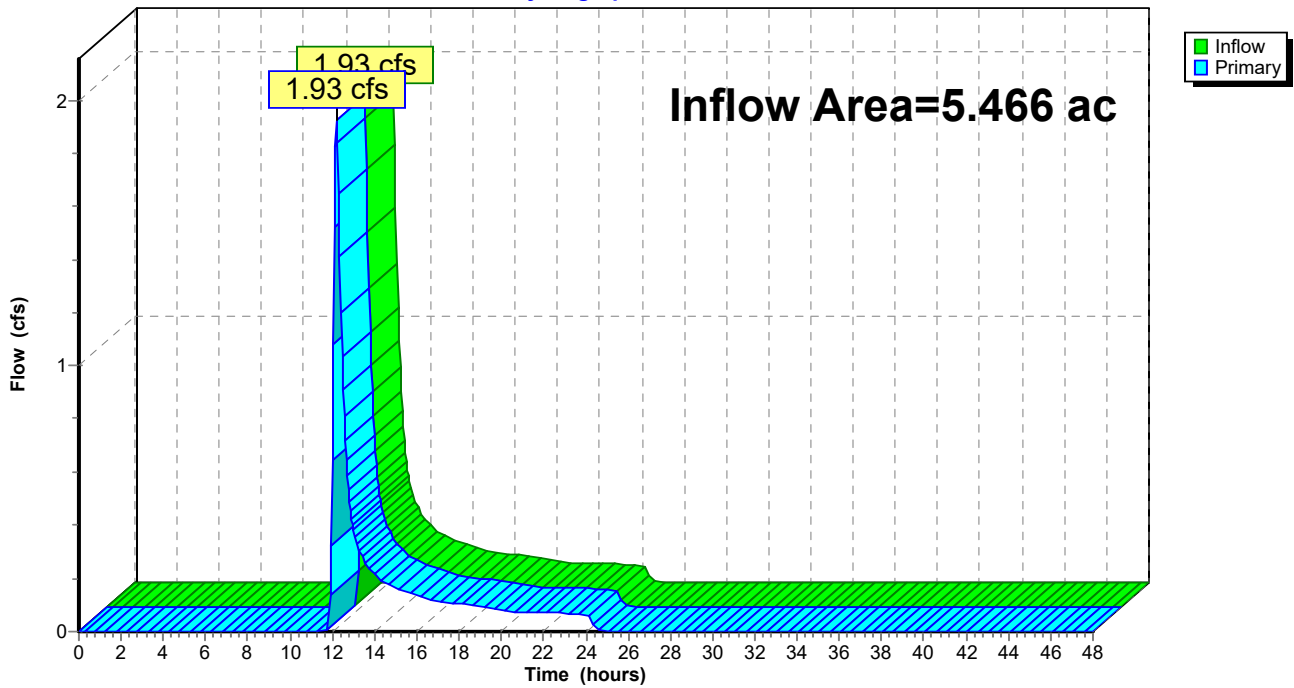
### Summary for Link SP24:

Inflow Area = 5.466 ac, 7.70% Impervious, Inflow Depth = 0.43" for 1-year event  
Inflow = 1.93 cfs @ 12.20 hrs, Volume= 0.197 af  
Primary = 1.93 cfs @ 12.20 hrs, Volume= 0.197 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP24:

Hydrograph



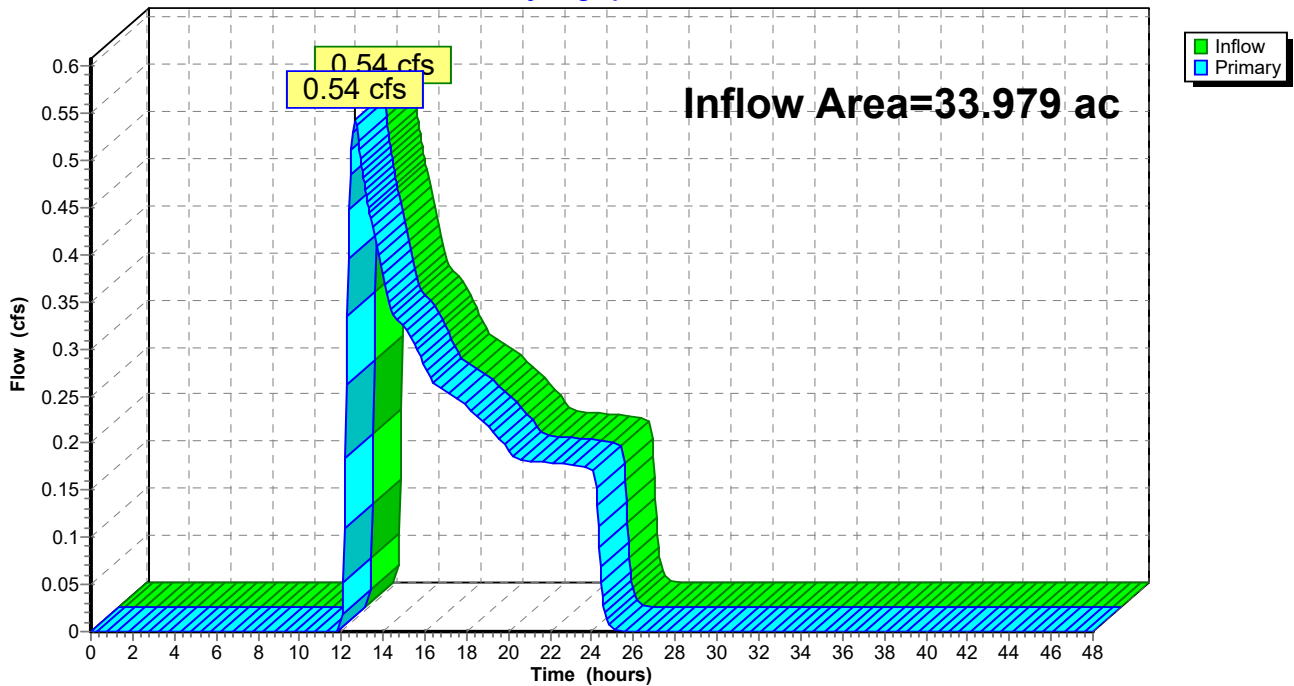
### Summary for Link SP3:

Inflow Area = 33.979 ac, 0.00% Impervious, Inflow Depth = 0.09" for 1-year event  
Inflow = 0.54 cfs @ 12.64 hrs, Volume= 0.264 af  
Primary = 0.54 cfs @ 12.64 hrs, Volume= 0.264 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP3:

Hydrograph



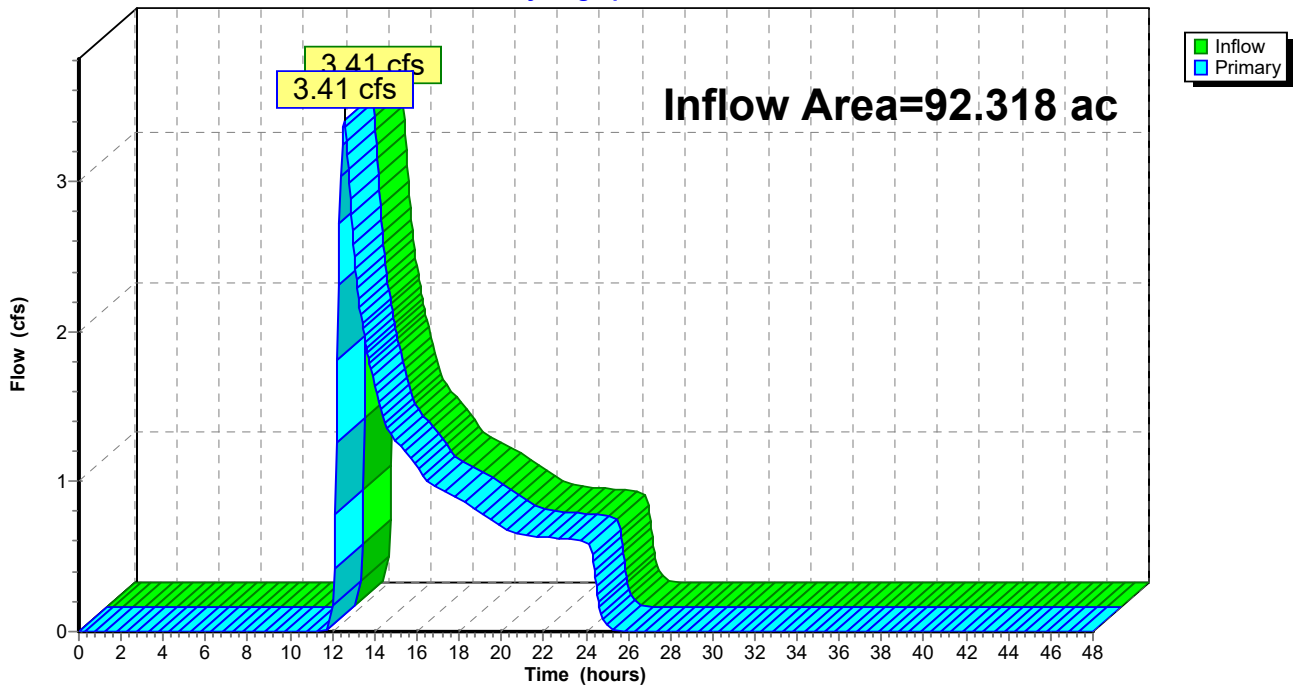
Summary for Link SP4:

Inflow Area = 92.318 ac, 0.28% Impervious, Inflow Depth = 0.14" for 1-year event  
Inflow = 3.41 cfs @ 12.55 hrs, Volume= 1.110 af  
Primary = 3.41 cfs @ 12.55 hrs, Volume= 1.110 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP4:

Hydrograph





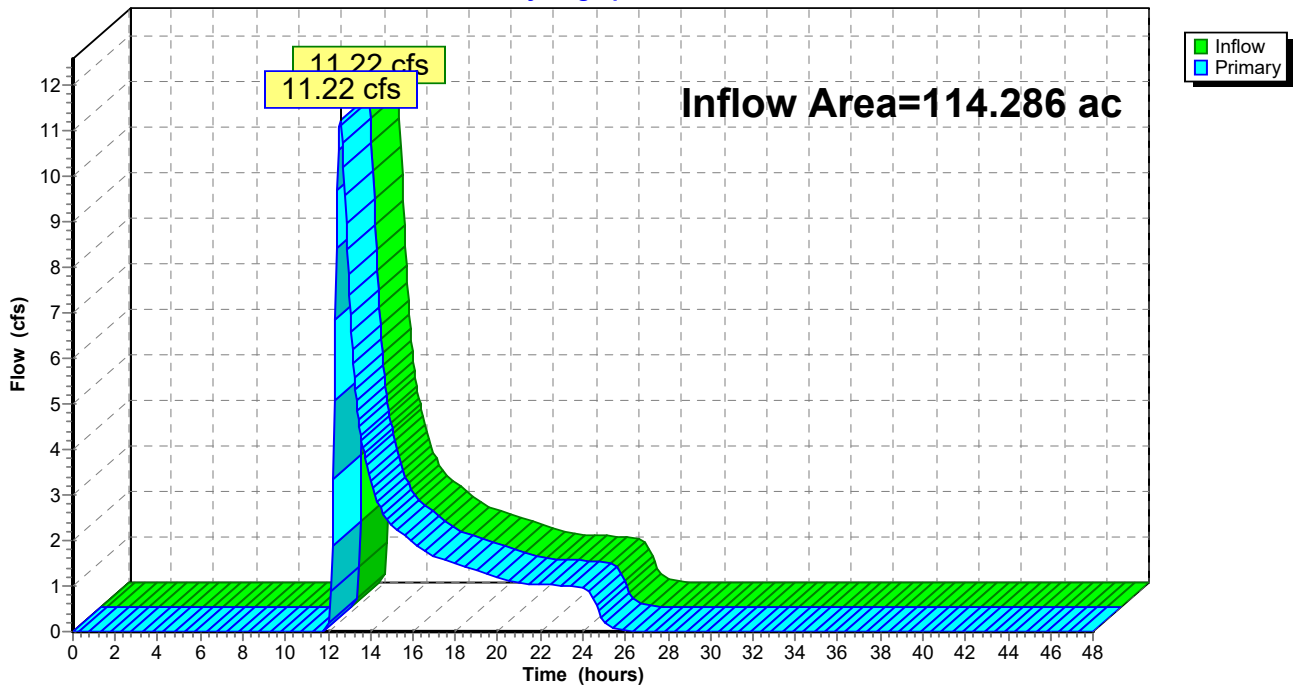
### Summary for Link SP43:

Inflow Area = 114.286 ac, 0.71% Impervious, Inflow Depth = 0.24" for 1-year event  
Inflow = 11.22 cfs @ 12.60 hrs, Volume= 2.284 af  
Primary = 11.22 cfs @ 12.60 hrs, Volume= 2.284 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP43:

Hydrograph

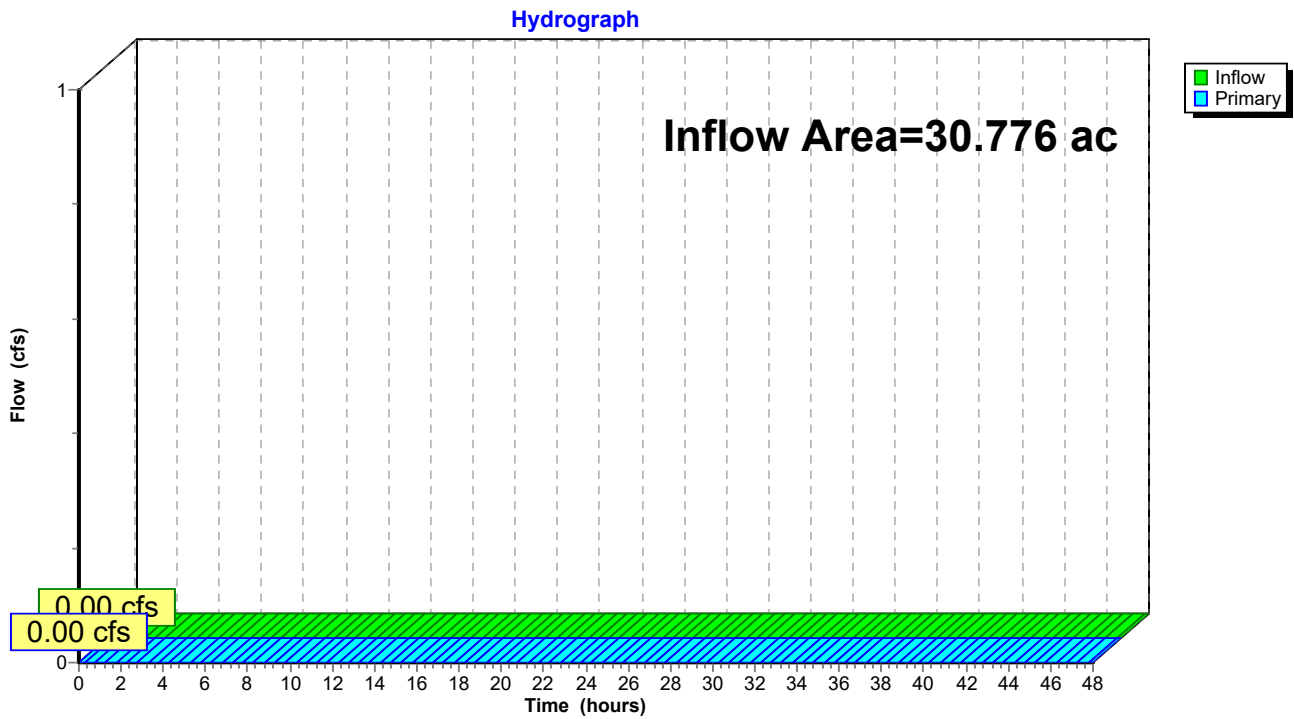


Summary for Link SP46:

Inflow Area = 30.776 ac, 3.93% Impervious, Inflow Depth = 0.00" for 1-year event  
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af  
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP46:

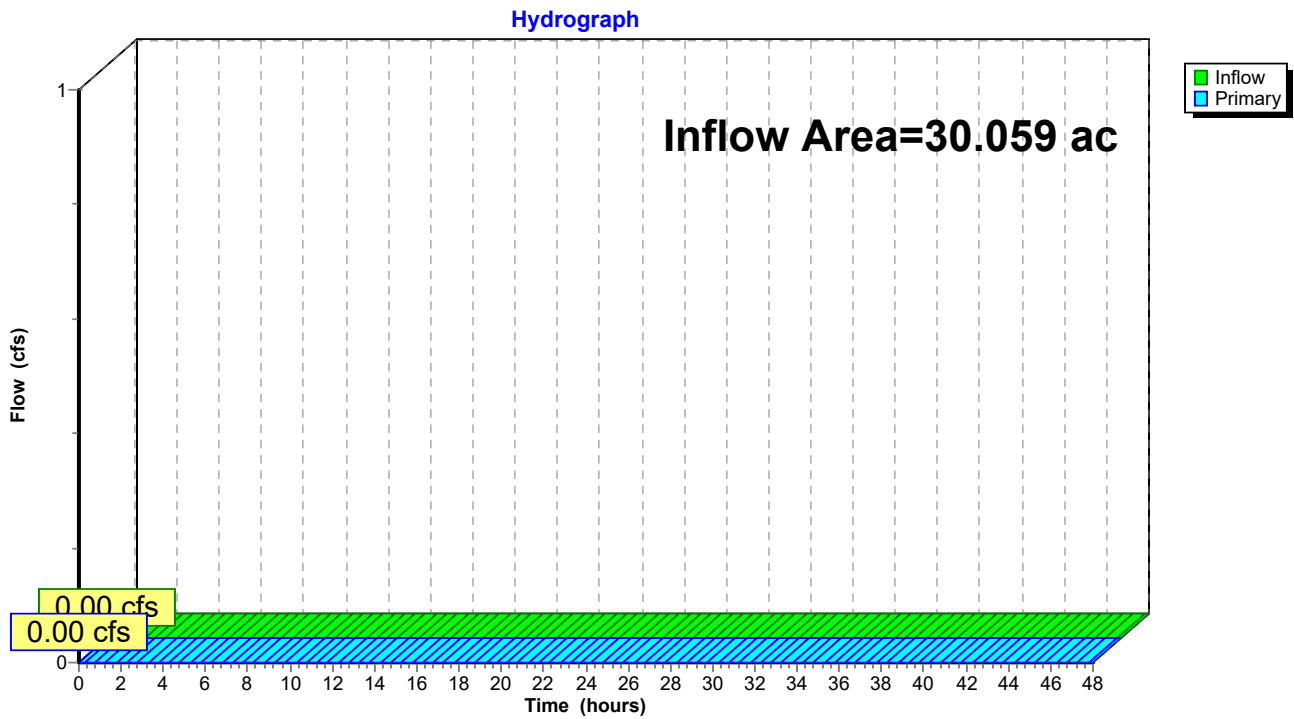


### Summary for Link SP47:

Inflow Area = 30.059 ac, 1.26% Impervious, Inflow Depth = 0.00" for 1-year event  
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af  
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP47:



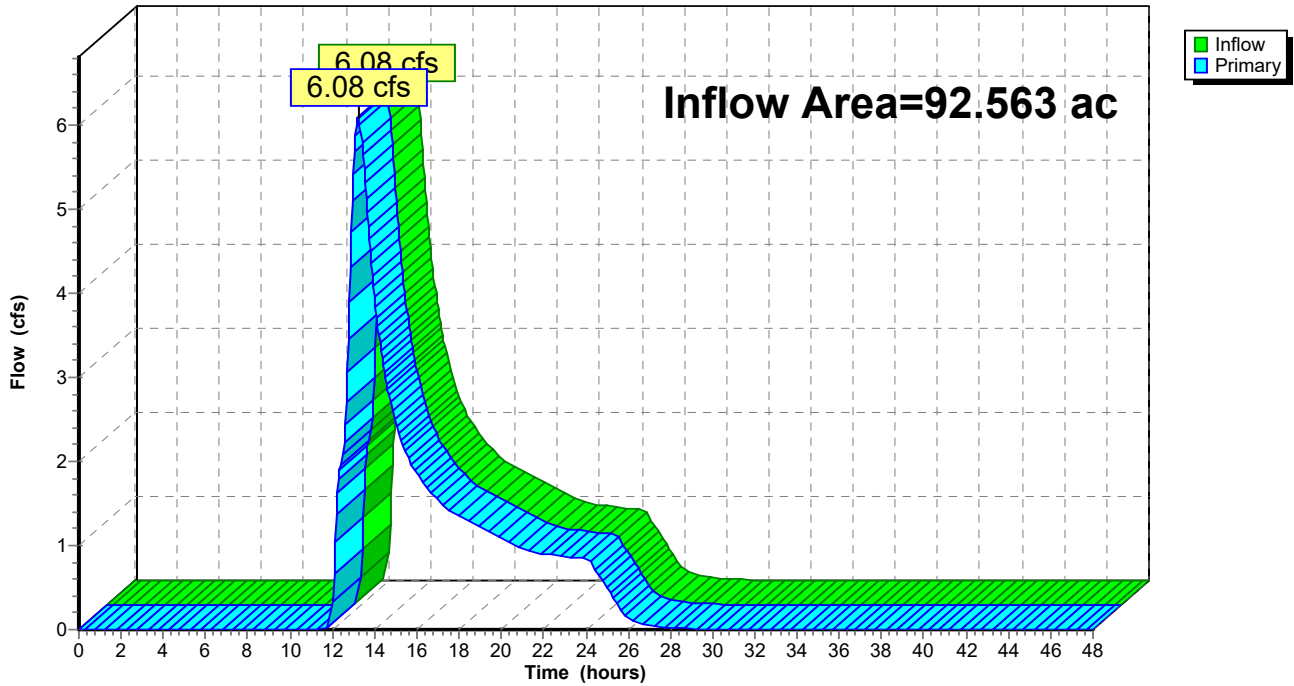
Summary for Link SP5:

Inflow Area = 92.563 ac, 0.00% Impervious, Inflow Depth = 0.25" for 1-year event  
Inflow = 6.08 cfs @ 13.23 hrs, Volume= 1.924 af  
Primary = 6.08 cfs @ 13.23 hrs, Volume= 1.924 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP5:

Hydrograph



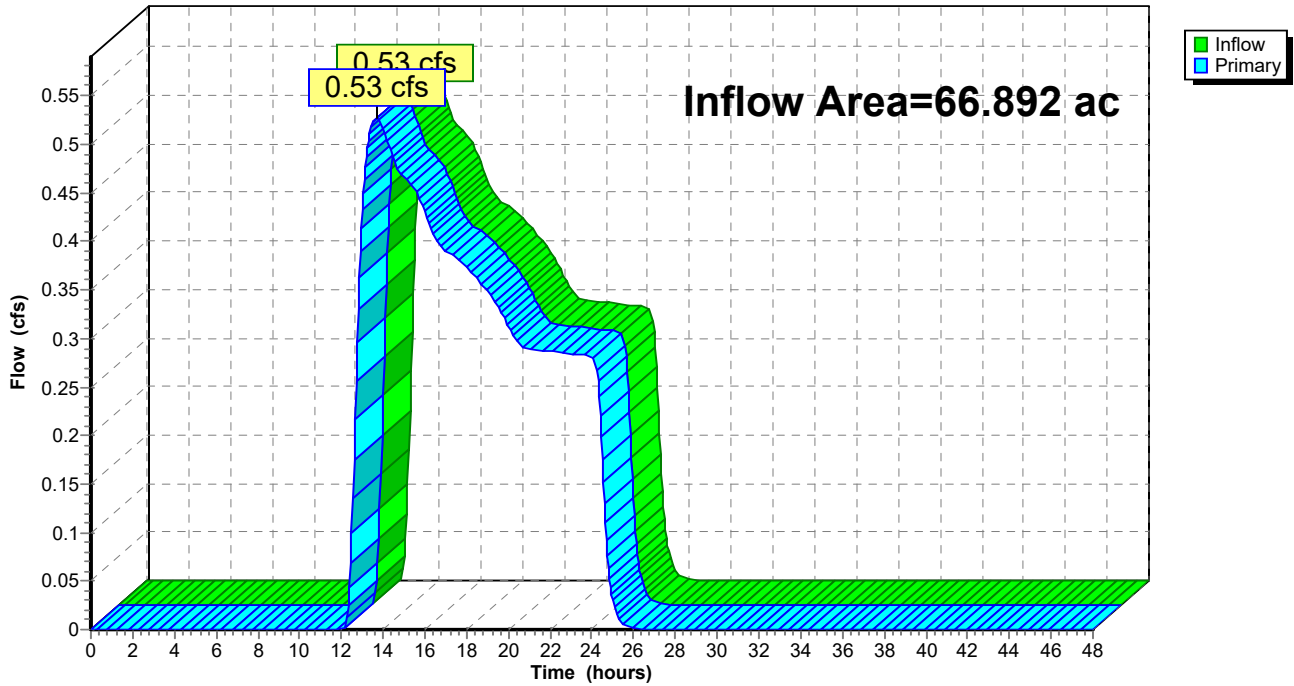
### Summary for Link SP7:

Inflow Area = 66.892 ac, 0.00% Impervious, Inflow Depth = 0.07" for 1-year event  
Inflow = 0.53 cfs @ 13.70 hrs, Volume= 0.365 af  
Primary = 0.53 cfs @ 13.70 hrs, Volume= 0.365 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP7:

Hydrograph



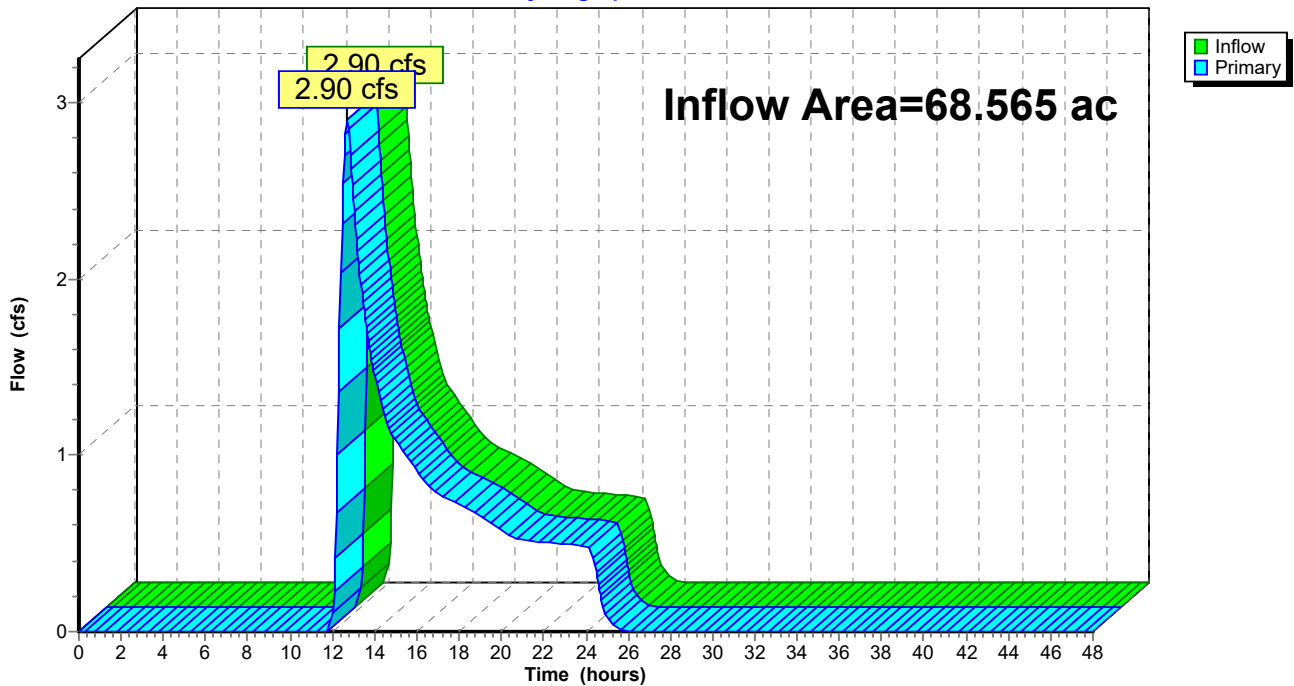
### Summary for Link SP9:

Inflow Area = 68.565 ac, 1.11% Impervious, Inflow Depth = 0.16" for 1-year event  
Inflow = 2.90 cfs @ 12.69 hrs, Volume= 0.935 af  
Primary = 2.90 cfs @ 12.69 hrs, Volume= 0.935 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP9:

Hydrograph



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*Type II 24-hr 10-year Rainfall=3.50"*

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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

<b>Subcatchment 1S: Sub 1</b>	Runoff Area=5.786 ac 0.00% Impervious Runoff Depth=0.38" Flow Length=1,005' Tc=13.1 min CN=56 Runoff=1.74 cfs 0.183 af
<b>Subcatchment 2S: Sub 2</b>	Runoff Area=16.498 ac 0.00% Impervious Runoff Depth=0.42" Flow Length=1,307' Tc=14.1 min CN=57 Runoff=5.64 cfs 0.572 af
<b>Subcatchment 3S: Sub 3</b>	Runoff Area=33.979 ac 0.00% Impervious Runoff Depth=0.53" Flow Length=2,507' Tc=25.3 min CN=60 Runoff=11.88 cfs 1.505 af
<b>Subcatchment 4S: Sub 4</b>	Runoff Area=92.318 ac 0.28% Impervious Runoff Depth=0.66" Flow Length=4,160' Tc=35.5 min CN=63 Runoff=35.64 cfs 5.074 af
<b>Subcatchment 5S: Sub 5</b>	Runoff Area=17.299 ac 0.00% Impervious Runoff Depth=0.75" Flow Length=1,946' Tc=24.6 min CN=65 Runoff=10.52 cfs 1.084 af
<b>Subcatchment 6S: Sub 6</b>	Runoff Area=16.301 ac 0.00% Impervious Runoff Depth=0.80" Flow Length=1,894' Tc=48.6 min CN=66 Runoff=6.63 cfs 1.087 af
<b>Subcatchment 7S: Sub 7</b>	Runoff Area=66.892 ac 0.00% Impervious Runoff Depth=0.45" Flow Length=2,117' Tc=40.9 min CN=58 Runoff=12.87 cfs 2.525 af
<b>Subcatchment 8S: Sub 8</b>	Runoff Area=58.963 ac 0.00% Impervious Runoff Depth=0.95" Flow Length=2,902' Tc=63.3 min CN=69 Runoff=25.13 cfs 4.687 af
<b>Subcatchment 9S: Sub 9</b>	Runoff Area=68.565 ac 1.11% Impervious Runoff Depth=0.71" Flow Length=2,945' Tc=45.6 min CN=64 Runoff=24.39 cfs 4.029 af
<b>Subcatchment 10S: Sub 10</b>	Runoff Area=22.236 ac 4.90% Impervious Runoff Depth=1.06" Flow Length=2,047' Tc=36.1 min CN=71 Runoff=16.44 cfs 1.971 af
<b>Subcatchment 11S: Sub 11</b>	Runoff Area=17.596 ac 2.21% Impervious Runoff Depth=0.80" Flow Length=1,622' Tc=18.4 min CN=66 Runoff=14.10 cfs 1.174 af
<b>Subcatchment 12S: Sub 12</b>	Runoff Area=4.859 ac 0.00% Impervious Runoff Depth=2.94" Tc=6.0 min CN=95 Runoff=22.37 cfs 1.190 af
<b>Subcatchment 13S: Sub 13</b>	Runoff Area=10.383 ac 0.20% Impervious Runoff Depth=0.71" Flow Length=848' Tc=17.7 min CN=64 Runoff=7.14 cfs 0.610 af
<b>Subcatchment 14S: Sub 14</b>	Runoff Area=72.733 ac 0.42% Impervious Runoff Depth=0.85" Flow Length=4,131' Tc=49.6 min CN=67 Runoff=31.66 cfs 5.152 af
<b>Subcatchment 17S: Sub 17</b>	Runoff Area=97.892 ac 1.18% Impervious Runoff Depth=0.53" Flow Length=3,526' Tc=35.1 min CN=60 Runoff=27.14 cfs 4.335 af
<b>Subcatchment 18S: Sub 18</b>	Runoff Area=45.577 ac 0.74% Impervious Runoff Depth=0.95" Flow Length=2,382' Tc=42.2 min CN=69 Runoff=26.15 cfs 3.623 af

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<b>Subcatchment 19S: Sub 19</b>	Runoff Area=28.407 ac 0.54% Impervious Runoff Depth=1.12" Flow Length=1,760' Tc=30.4 min CN=72 Runoff=25.36 cfs 2.653 af
<b>Subcatchment 20S: Sub 20</b>	Runoff Area=70.525 ac 0.78% Impervious Runoff Depth=0.80" Flow Length=1,829' Tc=20.0 min CN=66 Runoff=53.77 cfs 4.704 af
<b>Subcatchment 21S: Sub 21</b>	Runoff Area=123.017 ac 3.33% Impervious Runoff Depth=0.80" Flow Length=4,201' Tc=42.5 min CN=66 Runoff=55.18 cfs 8.204 af
<b>Subcatchment 22S: Sub 22</b>	Runoff Area=62.297 ac 0.60% Impervious Runoff Depth=1.06" Flow Length=1,834' Tc=47.0 min CN=71 Runoff=38.12 cfs 5.522 af
<b>Subcatchment 23S: Sub 23</b>	Runoff Area=16.752 ac 2.31% Impervious Runoff Depth=0.95" Flow Length=1,297' Tc=33.0 min CN=69 Runoff=11.48 cfs 1.332 af
<b>Subcatchment 24S: Sub 24</b>	Runoff Area=5.466 ac 7.70% Impervious Runoff Depth=1.24" Flow Length=1,025' Tc=23.1 min CN=74 Runoff=6.60 cfs 0.565 af
<b>Subcatchment 43S: Subcat 43</b>	Runoff Area=34.064 ac 0.46% Impervious Runoff Depth=1.01" Flow Length=2,795' Tc=40.7 min CN=70 Runoff=21.57 cfs 2.862 af
<b>Subcatchment 44S: Subcat 44</b>	Runoff Area=46.290 ac 0.00% Impervious Runoff Depth=1.01" Flow Length=2,470' Tc=41.7 min CN=70 Runoff=28.83 cfs 3.889 af
<b>Subcatchment 45S: Subcat 45</b>	Runoff Area=33.932 ac 1.93% Impervious Runoff Depth=0.49" Flow Length=2,198' Tc=29.8 min CN=59 Runoff=9.30 cfs 1.390 af
<b>Subcatchment 46S: Subcat 46</b>	Runoff Area=30.776 ac 3.93% Impervious Runoff Depth=0.04" Flow Length=1,524' Tc=54.0 min CN=42 Runoff=0.12 cfs 0.096 af
<b>Subcatchment 47S: Subcat 47</b>	Runoff Area=30.059 ac 1.26% Impervious Runoff Depth=0.03" Flow Length=1,854' Tc=31.7 min CN=41 Runoff=0.09 cfs 0.065 af
<b>Reach 6R: W-NSD-35</b>	Avg. Flow Depth=0.49' Max Vel=3.83 fps Inflow=25.13 cfs 4.687 af n=0.035 L=1,882.0' S=0.0276 '/' Capacity=90.86 cfs Outflow=24.41 cfs 4.687 af
<b>Reach 13.1R:</b>	Avg. Flow Depth=0.09' Max Vel=2.26 fps Inflow=1.49 cfs 1.190 af n=0.030 L=165.0' S=0.0727 '/' Capacity=48.67 cfs Outflow=1.49 cfs 1.190 af
<b>Reach 13.2R:</b>	Avg. Flow Depth=0.14' Max Vel=4.74 fps Inflow=1.49 cfs 1.190 af n=0.035 L=232.0' S=0.2069 '/' Capacity=1,230.81 cfs Outflow=1.49 cfs 1.190 af
<b>Reach 20.1R: S-KCF-6</b>	Avg. Flow Depth=1.68' Max Vel=2.95 fps Inflow=75.36 cfs 7.357 af n=0.030 L=1,405.0' S=0.0028 '/' Capacity=141.69 cfs Outflow=64.59 cfs 7.357 af
<b>Reach 20.2R:</b>	Avg. Flow Depth=1.21' Max Vel=4.35 fps Inflow=64.59 cfs 7.357 af n=0.035 L=1,322.0' S=0.0121 '/' Capacity=250.41 cfs Outflow=60.88 cfs 7.357 af
<b>Reach 22.1R: S-KCF-5</b>	Avg. Flow Depth=1.15' Max Vel=3.56 fps Inflow=55.18 cfs 8.204 af n=0.030 L=665.0' S=0.0060 '/' Capacity=89.91 cfs Outflow=54.76 cfs 8.204 af
<b>Reach 22.2R:</b>	Avg. Flow Depth=1.76' Max Vel=4.27 fps Inflow=115.67 cfs 15.561 af n=0.035 L=707.0' S=0.0075 '/' Capacity=86.27 cfs Outflow=114.21 cfs 15.561 af



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<b>Reach 44R:</b>	Avg. Flow Depth=0.84' Max Vel=4.11 fps Inflow=21.57 cfs 2.862 af n=0.035 L=498.0' S=0.0321 '/' Capacity=8.70 cfs Outflow=21.39 cfs 2.862 af
<b>Reach 45R:</b>	Avg. Flow Depth=1.11' Max Vel=5.98 fps Inflow=50.04 cfs 6.750 af n=0.035 L=537.0' S=0.0372 '/' Capacity=16.21 cfs Outflow=49.71 cfs 6.750 af
<b>Pond 12P: 12P</b>	Peak Elev=507.82' Storage=21,706 cf Inflow=22.37 cfs 1.190 af 8.0" Round Culvert n=0.013 L=172.7' S=0.0058 '/' Outflow=1.49 cfs 1.190 af
<b>Link SP1:</b>	Inflow=1.74 cfs 0.183 af Primary=1.74 cfs 0.183 af
<b>Link SP10:</b>	Inflow=16.44 cfs 1.971 af Primary=16.44 cfs 1.971 af
<b>Link SP11:</b>	Inflow=14.10 cfs 1.174 af Primary=14.10 cfs 1.174 af
<b>Link SP13:</b>	Inflow=8.61 cfs 1.800 af Primary=8.61 cfs 1.800 af
<b>Link SP14:</b>	Inflow=31.66 cfs 5.152 af Primary=31.66 cfs 5.152 af
<b>Link SP17:</b>	Inflow=27.14 cfs 4.335 af Primary=27.14 cfs 4.335 af
<b>Link SP18:</b>	Inflow=26.15 cfs 3.623 af Primary=26.15 cfs 3.623 af
<b>Link SP2:</b>	Inflow=5.64 cfs 0.572 af Primary=5.64 cfs 0.572 af
<b>Link SP22:</b>	Inflow=149.08 cfs 21.084 af Primary=149.08 cfs 21.084 af
<b>Link SP23:</b>	Inflow=11.48 cfs 1.332 af Primary=11.48 cfs 1.332 af
<b>Link SP24:</b>	Inflow=6.60 cfs 0.565 af Primary=6.60 cfs 0.565 af
<b>Link SP3:</b>	Inflow=11.88 cfs 1.505 af Primary=11.88 cfs 1.505 af
<b>Link SP4:</b>	Inflow=35.64 cfs 5.074 af Primary=35.64 cfs 5.074 af
<b>Link SP43:</b>	Inflow=57.18 cfs 8.140 af Primary=57.18 cfs 8.140 af

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**Link SP46:**

Inflow=0.12 cfs 0.096 af  
Primary=0.12 cfs 0.096 af

**Link SP47:**

Inflow=0.09 cfs 0.065 af  
Primary=0.09 cfs 0.065 af

**Link SP5:**

Inflow=31.00 cfs 6.859 af  
Primary=31.00 cfs 6.859 af

**Link SP7:**

Inflow=12.87 cfs 2.525 af  
Primary=12.87 cfs 2.525 af

**Link SP9:**

Inflow=24.39 cfs 4.029 af  
Primary=24.39 cfs 4.029 af

**Total Runoff Area = 1,129.462 ac   Runoff Volume = 70.083 af   Average Runoff Depth = 0.74"**  
**98.88% Pervious = 1,116.768 ac   1.12% Impervious = 12.694 ac**

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**Summary for Subcatchment 1S: Sub 1**

Runoff = 1.74 cfs @ 12.10 hrs, Volume= 0.183 af, Depth= 0.38"  
 Routed to Link SP1 :

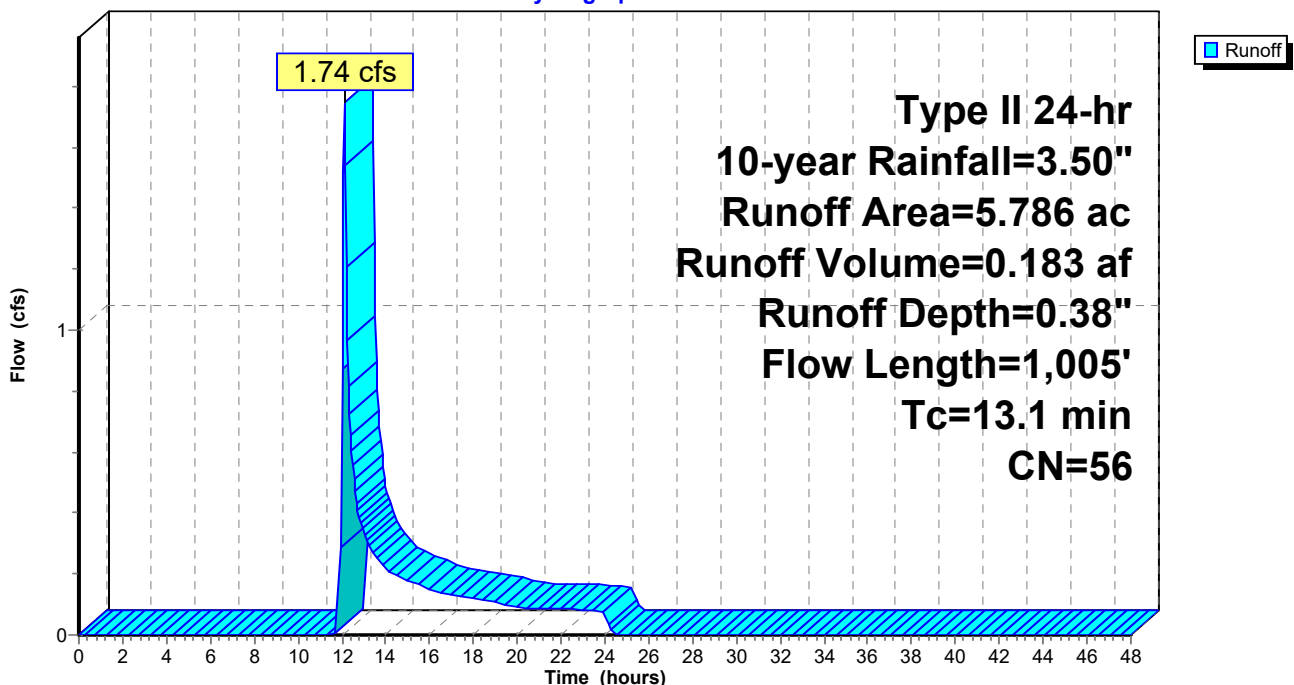
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
1.500	58	Meadow, non-grazed, HSG B
4.286	55	Woods, Good, HSG B
5.786	56	Weighted Average
5.786		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	100	0.0620	0.24		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
2.9	427	0.2390	2.44		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
2.0	263	0.0980	2.19		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.1	215	0.4050	3.18		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
13.1	1,005	Total			

**Subcatchment 1S: Sub 1**

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 2S: Sub 2**

Runoff = 5.64 cfs @ 12.11 hrs, Volume= 0.572 af, Depth= 0.42"

Routed to Link SP2 :

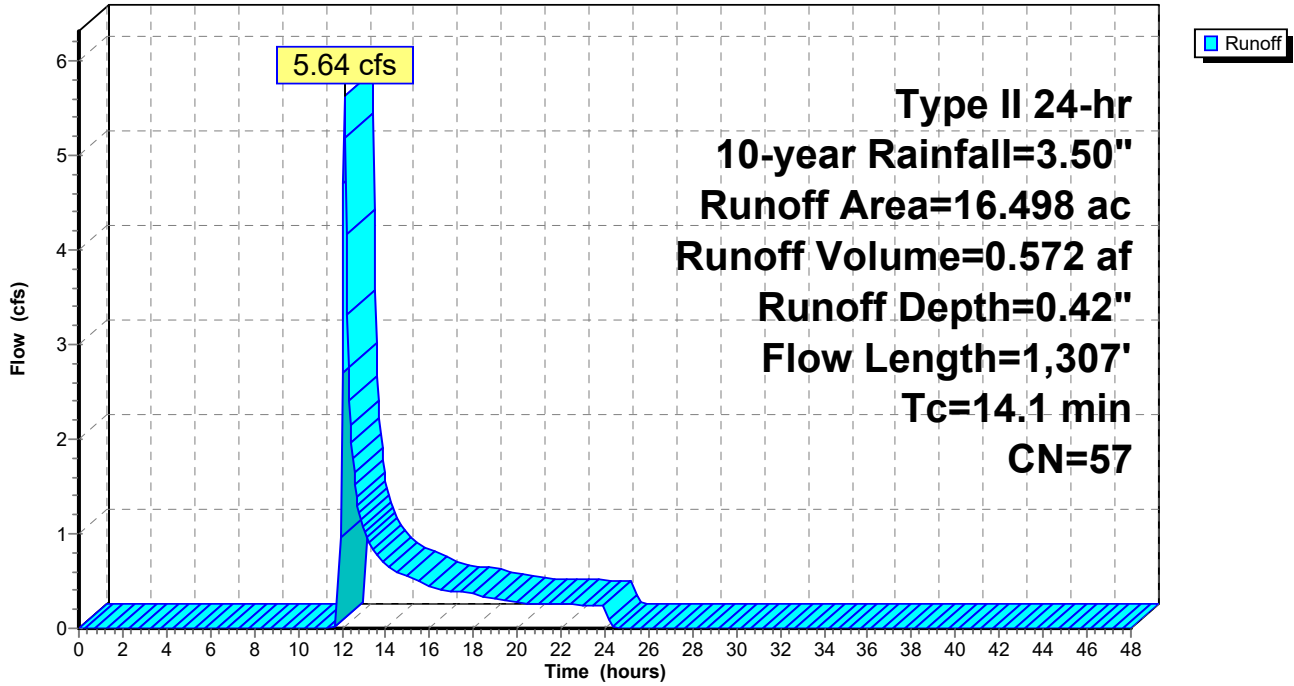
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
8.619	58	Meadow, non-grazed, HSG B
7.879	55	Woods, Good, HSG B
16.498	57	Weighted Average
16.498		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.8	100	0.1010	0.29		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
2.8	407	0.2420	2.46		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
1.5	225	0.1200	2.42		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.3	169	0.1830	2.14		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
0.5	113	0.5100	3.57		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
2.2	293	0.0220	2.22		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
14.1	1,307	Total			

Subcatchment 2S: Sub 2

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 3S: Sub 3**

Runoff = 11.88 cfs @ 12.25 hrs, Volume= 1.505 af, Depth= 0.53"  
 Routed to Link SP3 :

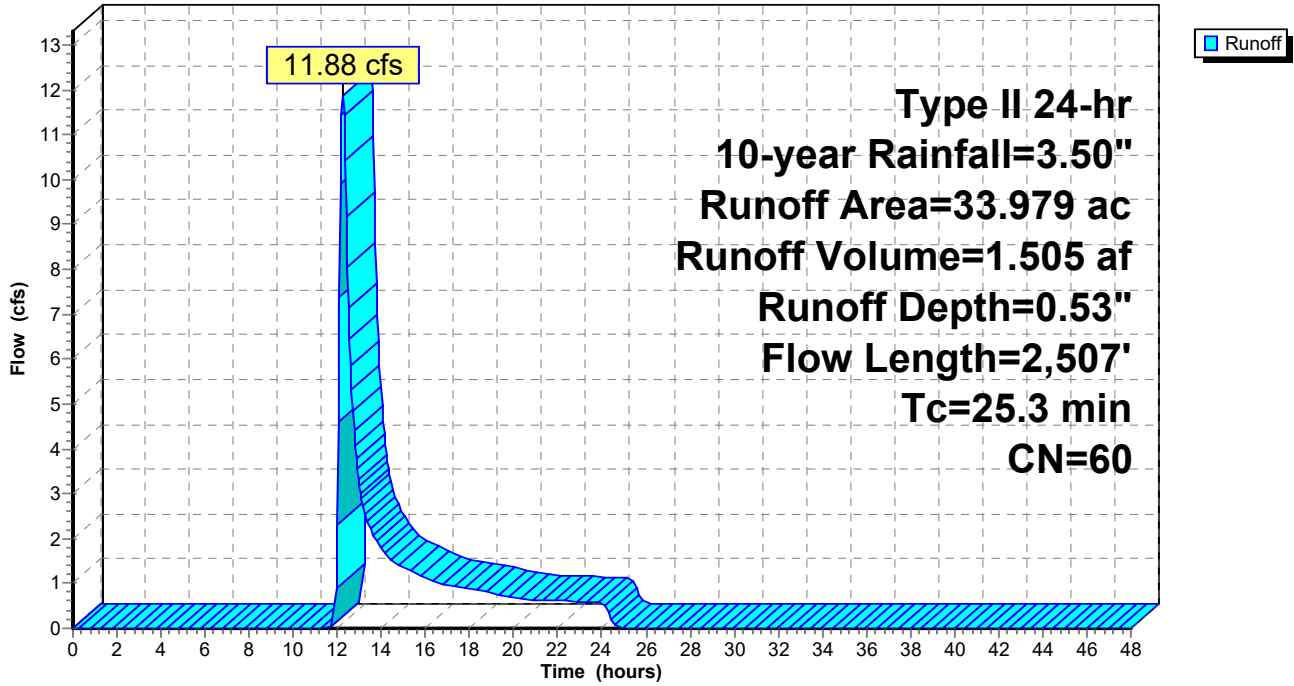
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
17.630	58	Meadow, non-grazed, HSG B
7.609	71	Meadow, non-grazed, HSG C
8.319	55	Woods, Good, HSG B
0.421	70	Woods, Good, HSG C
33.979	60	Weighted Average
33.979		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	100	0.0400	0.20		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
1.1	147	0.0990	2.20		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
5.5	480	0.0430	1.45		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.2	375	0.0770	1.94		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.6	337	0.0950	1.54		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
2.5	632		4.29		<b>Direct Entry, CF</b>
1.0	436		7.04		<b>Direct Entry, CF</b>
25.3	2,507	Total			

Subcatchment 3S: Sub 3

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 4S: Sub 4**

Runoff = 35.64 cfs @ 12.37 hrs, Volume= 5.074 af, Depth= 0.66"  
 Routed to Link SP4 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

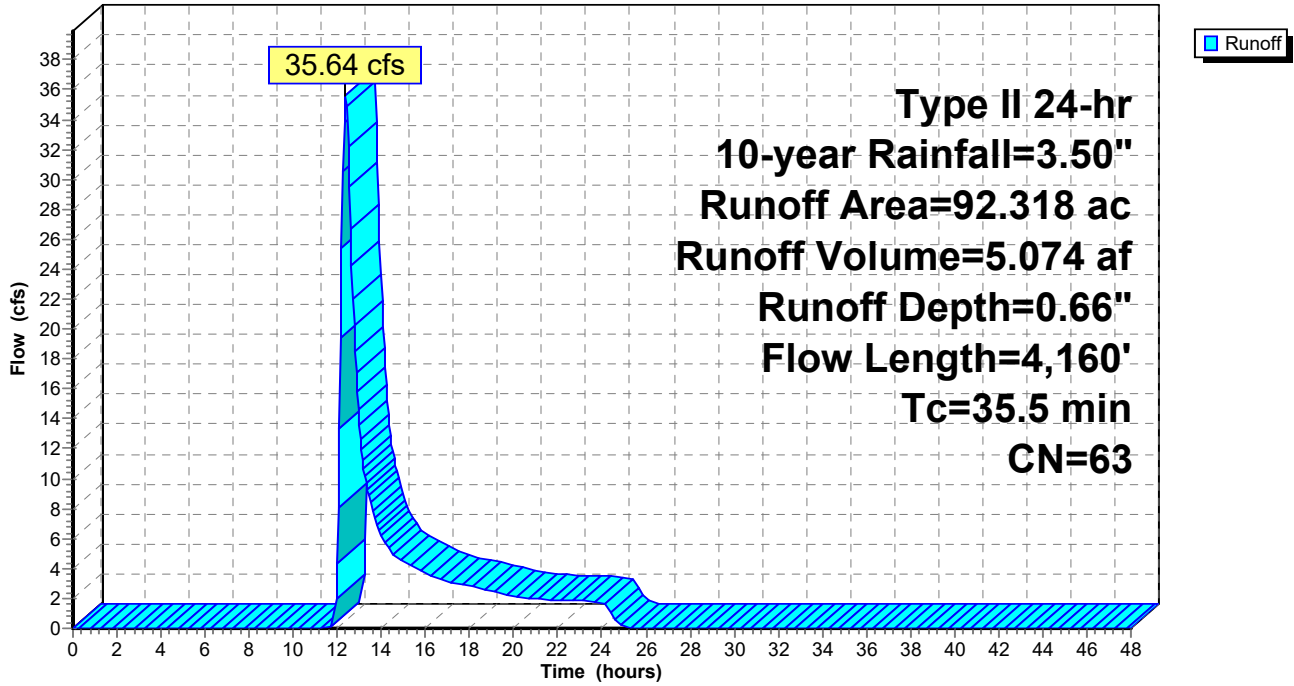
Area (ac)	CN	Description
* 0.259	98	Impervious surface
* 0.324	96	Gravel surface
42.704	58	Meadow, non-grazed, HSG B
33.177	71	Meadow, non-grazed, HSG C
1.021	48	Brush, Good, HSG B
1.934	65	Brush, Good, HSG C
9.736	55	Woods, Good, HSG B
3.163	70	Woods, Good, HSG C
92.318	63	Weighted Average
92.059		99.72% Pervious Area
0.259		0.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	100	0.1900	0.17		<b>Sheet Flow,</b> Woods: Light underbrush n= 0.400 P2= 2.50"
1.8	295	0.1550	2.76		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
17.1	1,344	0.0350	1.31		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
6.7	2,421		6.01		<b>Direct Entry, CF</b>
35.5	4,160	Total			



Subcatchment 4S: Sub 4

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 5S: Sub 5**

Runoff = 10.52 cfs @ 12.22 hrs, Volume= 1.084 af, Depth= 0.75"  
 Routed to Link SP5 :

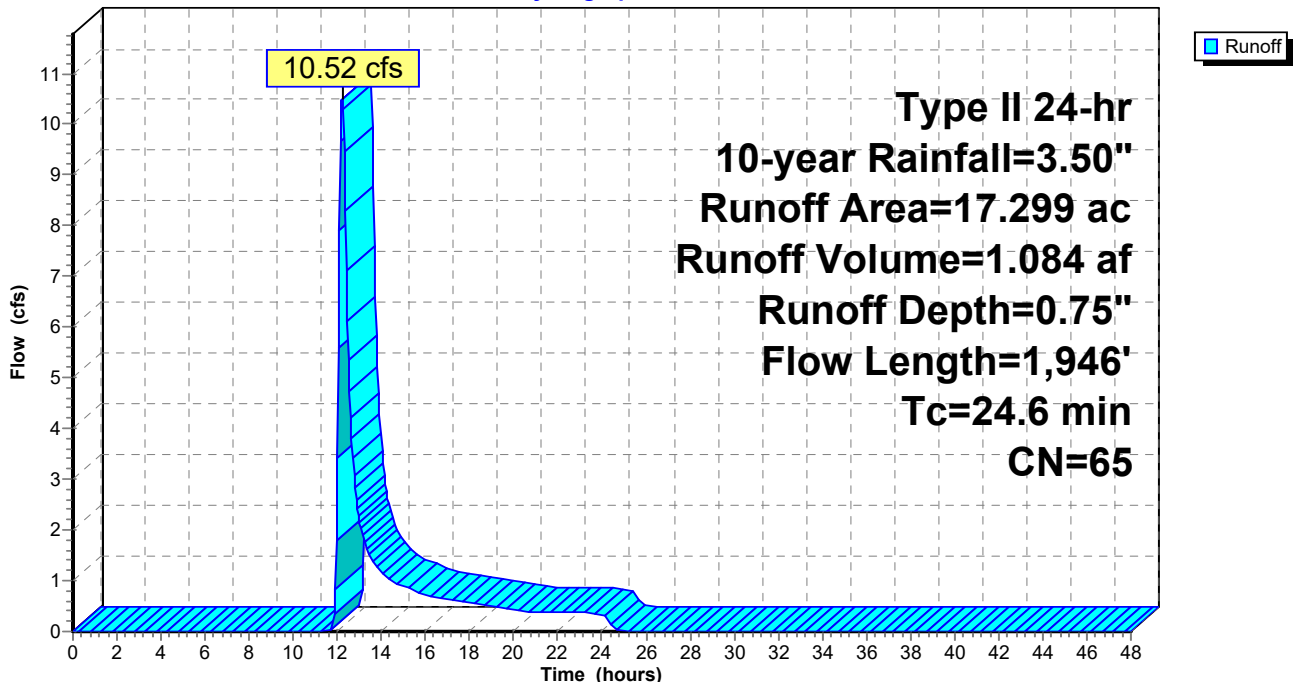
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
4.709	58	Meadow, non-grazed, HSG B
8.414	71	Meadow, non-grazed, HSG C
2.614	55	Woods, Good, HSG B
1.562	70	Woods, Good, HSG C
17.299	65	Weighted Average
17.299		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.0220	0.16		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
6.9	607	0.0440	1.47		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.3	195	0.0780	1.40		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
4.7	1,044		3.70		<b>Direct Entry, CF</b>
24.6	1,946	Total			

**Subcatchment 5S: Sub 5**

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 6S: Sub 6**

Runoff = 6.63 cfs @ 12.55 hrs, Volume= 1.087 af, Depth= 0.80"  
 Routed to Link SP5 :

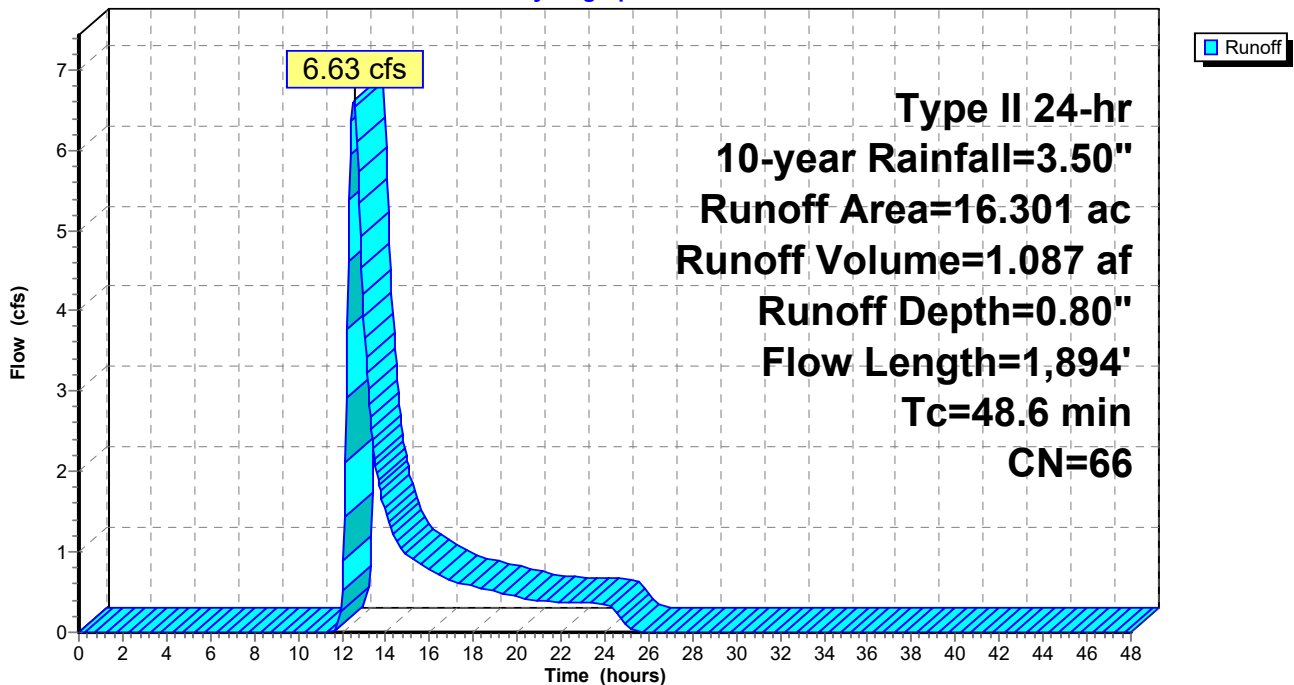
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
4.743	58	Meadow, non-grazed, HSG B
9.449	71	Meadow, non-grazed, HSG C
1.459	55	Woods, Good, HSG B
0.650	70	Woods, Good, HSG C
16.301	66	Weighted Average
16.301		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.8	100	0.0020	0.06		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
19.8	1,554	0.0350	1.31		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.0	240		3.81		<b>Direct Entry, CF</b>
48.6	1,894	Total			

**Subcatchment 6S: Sub 6**

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 7S: Sub 7**

Runoff = 12.87 cfs @ 12.50 hrs, Volume= 2.525 af, Depth= 0.45"  
 Routed to Link SP7 :

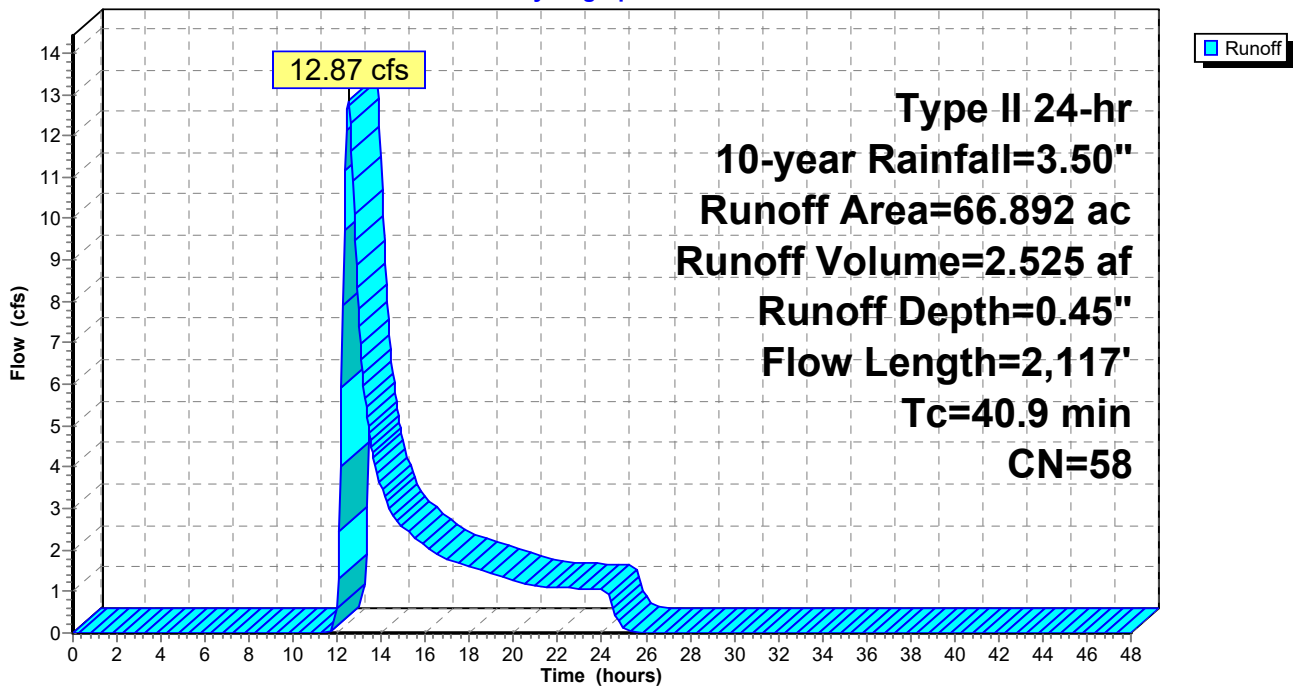
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
50.262	58	Meadow, non-grazed, HSG B
0.107	71	Meadow, non-grazed, HSG C
1.124	78	Meadow, non-grazed, HSG D
15.225	55	Woods, Good, HSG B
0.174	77	Woods, Good, HSG D
66.892	58	Weighted Average
66.892		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.8	100	0.0020	0.06		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
9.7	786	0.0370	1.35		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.4	1,231		6.01		<b>Direct Entry,</b>
40.9	2,117	Total			

**Subcatchment 7S: Sub 7**

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 8S: Sub 8**

Runoff = 25.13 cfs @ 12.74 hrs, Volume= 4.687 af, Depth= 0.95"  
 Routed to Reach 6R : W-NSD-35

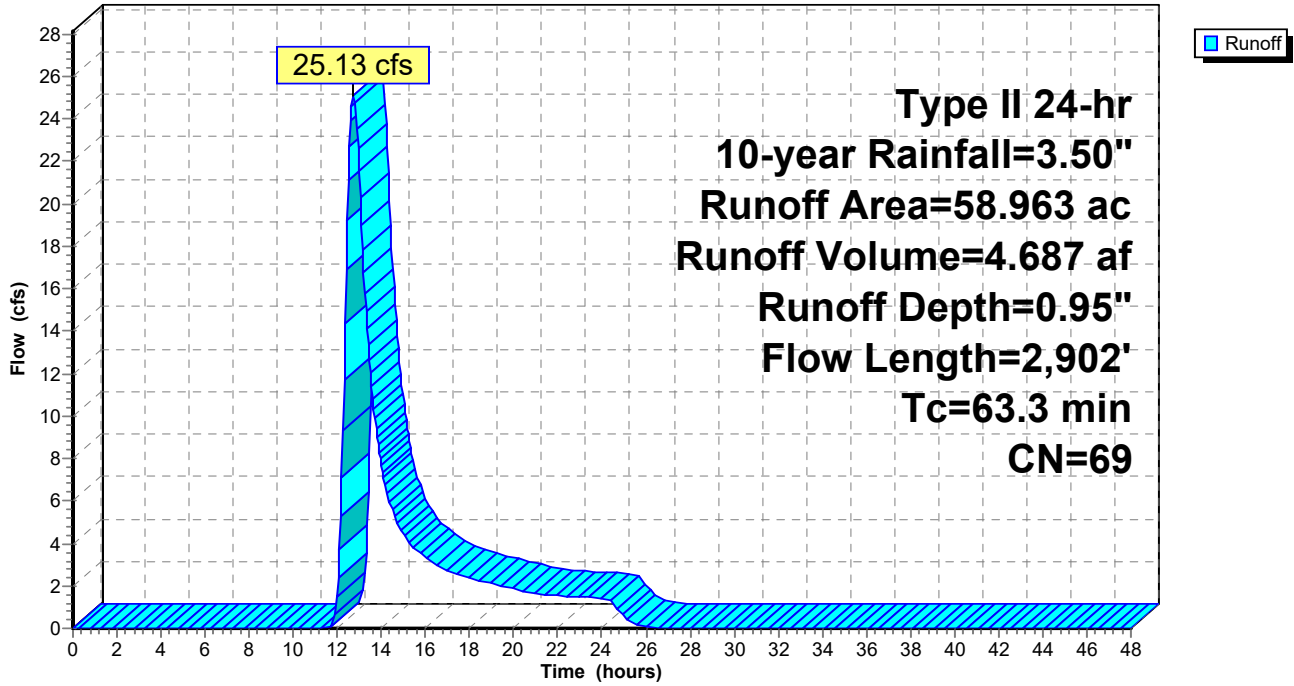
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
6.143	58	Meadow, non-grazed, HSG B
28.450	71	Meadow, non-grazed, HSG C
8.117	78	Meadow, non-grazed, HSG D
5.746	55	Woods, Good, HSG B
8.581	70	Woods, Good, HSG C
1.926	77	Woods, Good, HSG D
58.963	69	Weighted Average
58.963		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.7	100	0.0030	0.07		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
6.6	315	0.0130	0.80		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
23.1	727	0.0110	0.52		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
9.9	1,760		2.97		<b>Direct Entry, CF</b>
63.3	2,902	Total			

Subcatchment 8S: Sub 8

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 9S: Sub 9**

Runoff = 24.39 cfs @ 12.52 hrs, Volume= 4.029 af, Depth= 0.71"

Routed to Link SP9 :

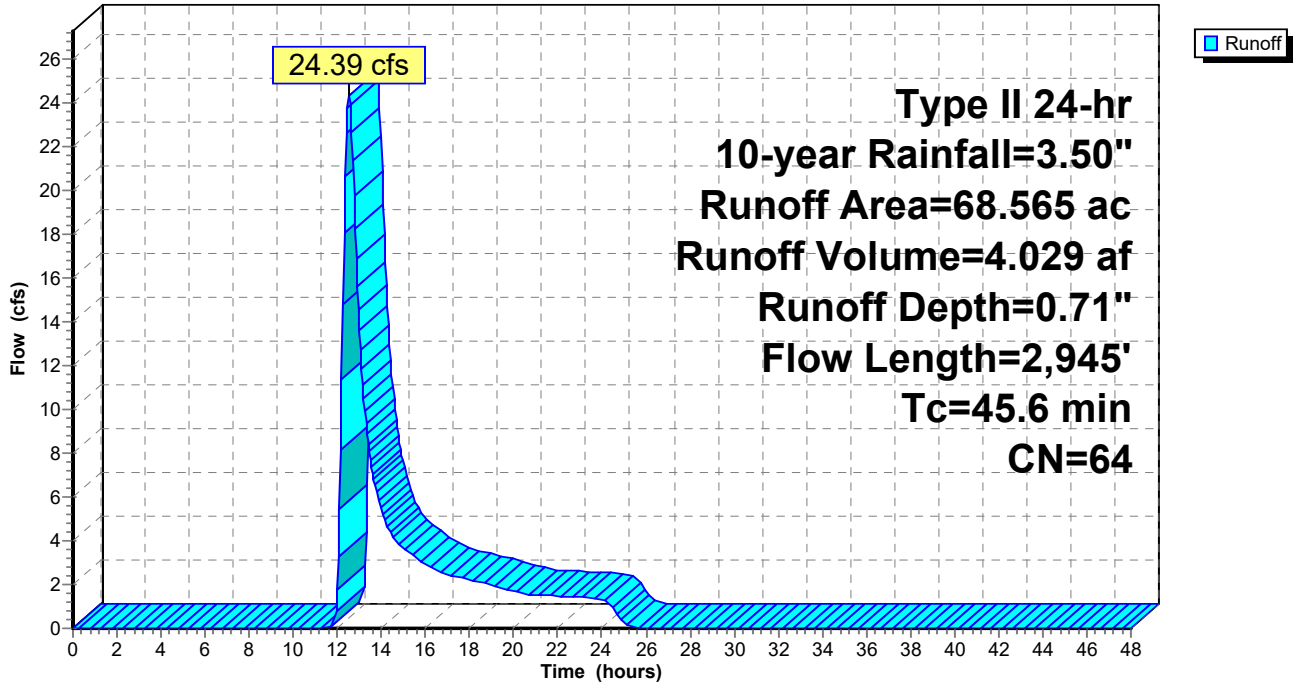
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 0.430	98	Surface water
* 0.332	98	Impervious surface
* 2.628	96	Gravel surface
6.553	61	>75% Grass cover, Good, HSG B
8.430	74	>75% Grass cover, Good, HSG C
23.963	58	Meadow, non-grazed, HSG B
7.746	71	Meadow, non-grazed, HSG C
2.113	78	Meadow, non-grazed, HSG D
2.871	48	Brush, Good, HSG B
0.820	65	Brush, Good, HSG C
0.014	73	Brush, Good, HSG D
11.085	55	Woods, Good, HSG B
1.580	70	Woods, Good, HSG C
68.565	64	Weighted Average
67.803		98.89% Pervious Area
0.762		1.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	100	0.0060	0.09		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
13.8	841	0.0210	1.01		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
10.9	1,254	0.0750	1.92		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.6	156		1.63		<b>Direct Entry,</b>
1.4	594		7.07		<b>Direct Entry,</b>
45.6	2,945	Total			

Subcatchment 9S: Sub 9

Hydrograph





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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 10S: Sub 10**

Runoff = 16.44 cfs @ 12.35 hrs, Volume= 1.971 af, Depth= 1.06"

Routed to Link SP10 :

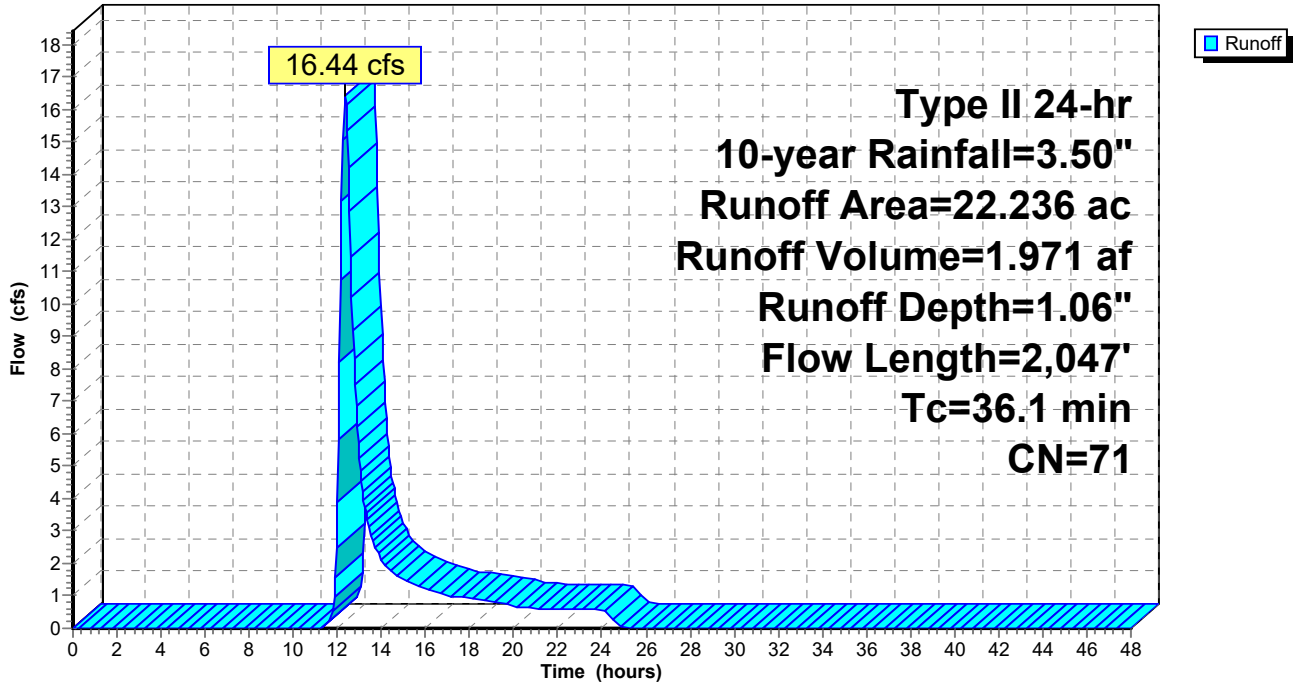
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 1.008	98	Surface water
* 0.081	98	Impervious surface
* 0.828	96	Gravel surface
5.353	61	>75% Grass cover, Good, HSG B
3.453	74	>75% Grass cover, Good, HSG C
3.647	80	>75% Grass cover, Good, HSG D
0.693	58	Meadow, non-grazed, HSG B
0.956	71	Meadow, non-grazed, HSG C
0.200	48	Brush, Good, HSG B
1.811	65	Brush, Good, HSG C
3.089	73	Brush, Good, HSG D
0.917	55	Woods, Good, HSG B
0.043	70	Woods, Good, HSG C
0.157	77	Woods, Good, HSG D
22.236	71	Weighted Average
21.147		95.10% Pervious Area
1.089		4.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	100	0.0210	0.15		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
22.7	1,347	0.0200	0.99		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.5	600	0.0225	3.97	19.83	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=2.00' D=1.00' Z= 3.0 ' /' Top.W=8.00' n= 0.040 Winding stream, pools & shoals
36.1	2,047	Total			

Subcatchment 10S: Sub 10

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 11S: Sub 11**

Runoff = 14.10 cfs @ 12.13 hrs, Volume= 1.174 af, Depth= 0.80"

Routed to Link SP11 :

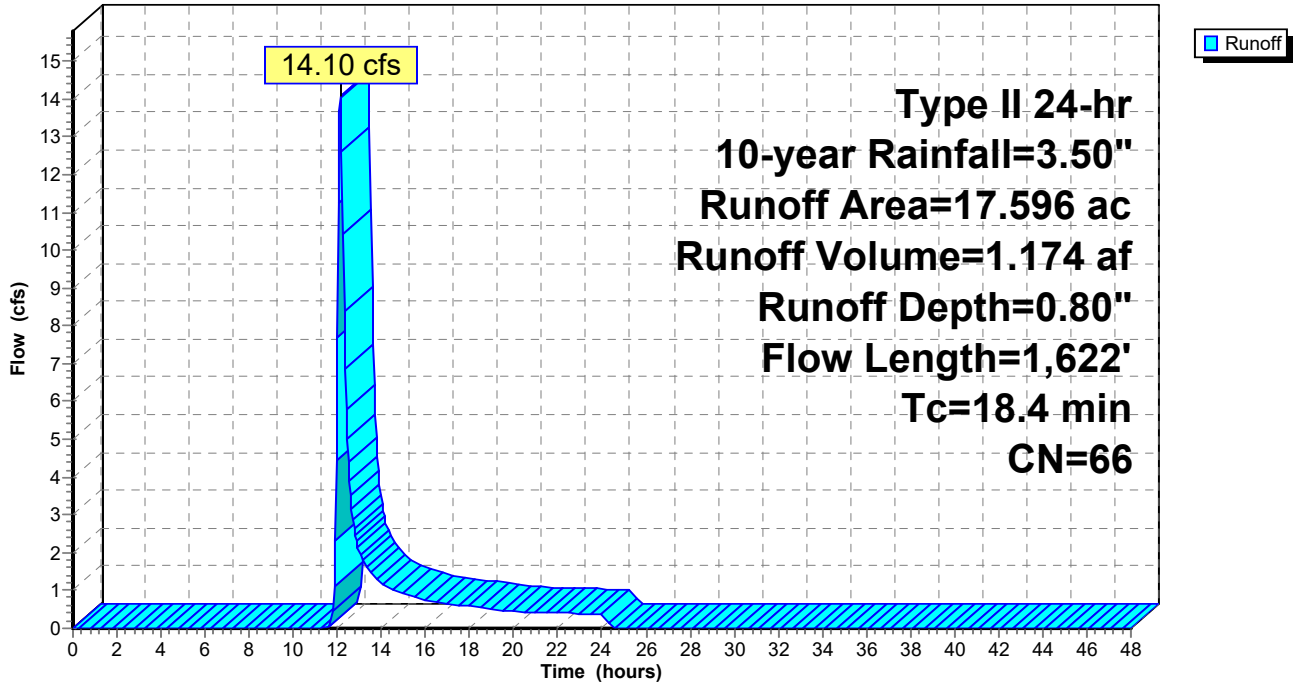
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 0.372	98	Surface water
* 0.016	98	Impervious surface
* 2.385	96	Gravel surface
2.824	61	>75% Grass cover, Good, HSG B
1.292	74	>75% Grass cover, Good, HSG C
1.394	58	Meadow, non-grazed, HSG B
1.371	71	Meadow, non-grazed, HSG C
0.199	48	Brush, Good, HSG B
0.163	65	Brush, Good, HSG C
7.256	55	Woods, Good, HSG B
0.324	70	Woods, Good, HSG C
17.596	66	Weighted Average
17.208		97.79% Pervious Area
0.388		2.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	100	0.0320	0.18		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
3.9	579	0.0240	2.49		<b>Shallow Concentrated Flow,</b> Unpaved Kv= 16.1 fps
2.6	277	0.0650	1.78		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.7	102	0.2650	2.57		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
2.0	564	0.0300	4.80	28.78	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=3.00' D=1.00' Z= 3.0 '/' Top.W=9.00' n= 0.040 Winding stream, pools & shoals
18.4	1,622	Total			

Subcatchment 11S: Sub 11

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 12S: Sub 12**

Runoff = 22.37 cfs @ 11.96 hrs, Volume= 1.190 af, Depth= 2.94"  
Routed to Pond 12P : 12P

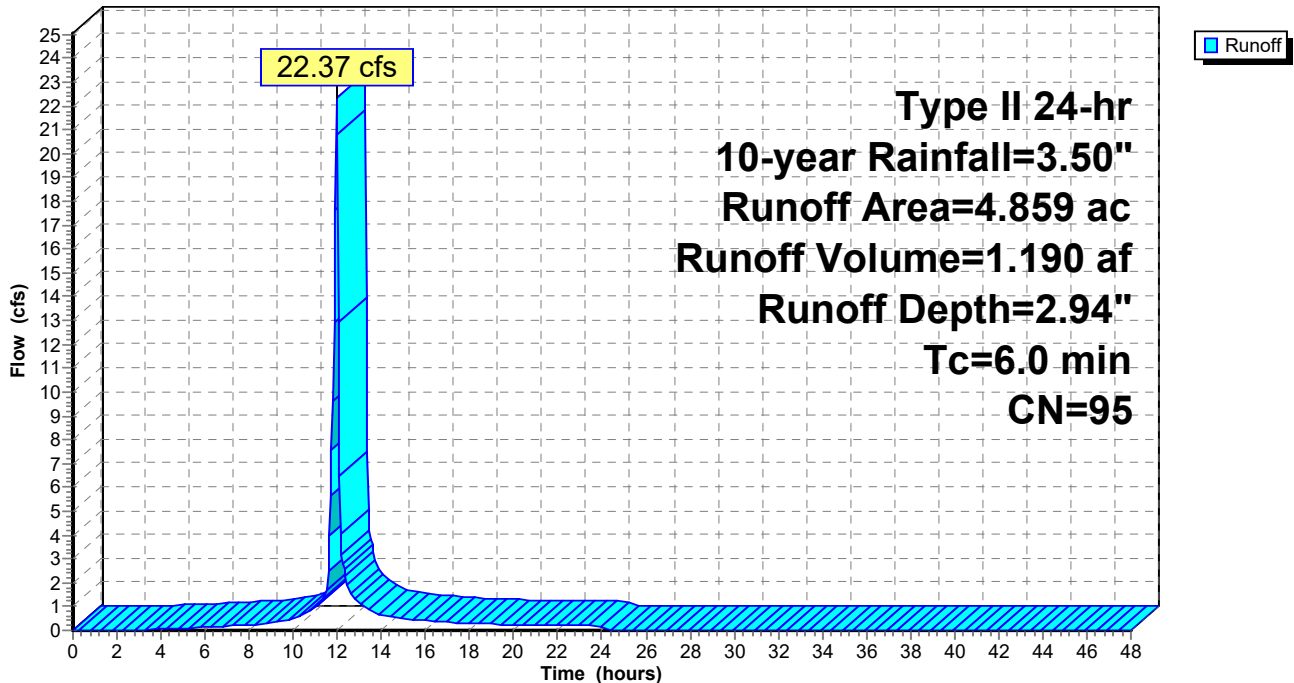
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 4.639	96	Gravel surface
0.220	74	>75% Grass cover, Good, HSG C
4.859	95	Weighted Average
4.859		100.00% Pervious Area

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

**Subcatchment 12S: Sub 12**

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 13S: Sub 13**

Runoff = 7.14 cfs @ 12.13 hrs, Volume= 0.610 af, Depth= 0.71"

Routed to Link SP13 :

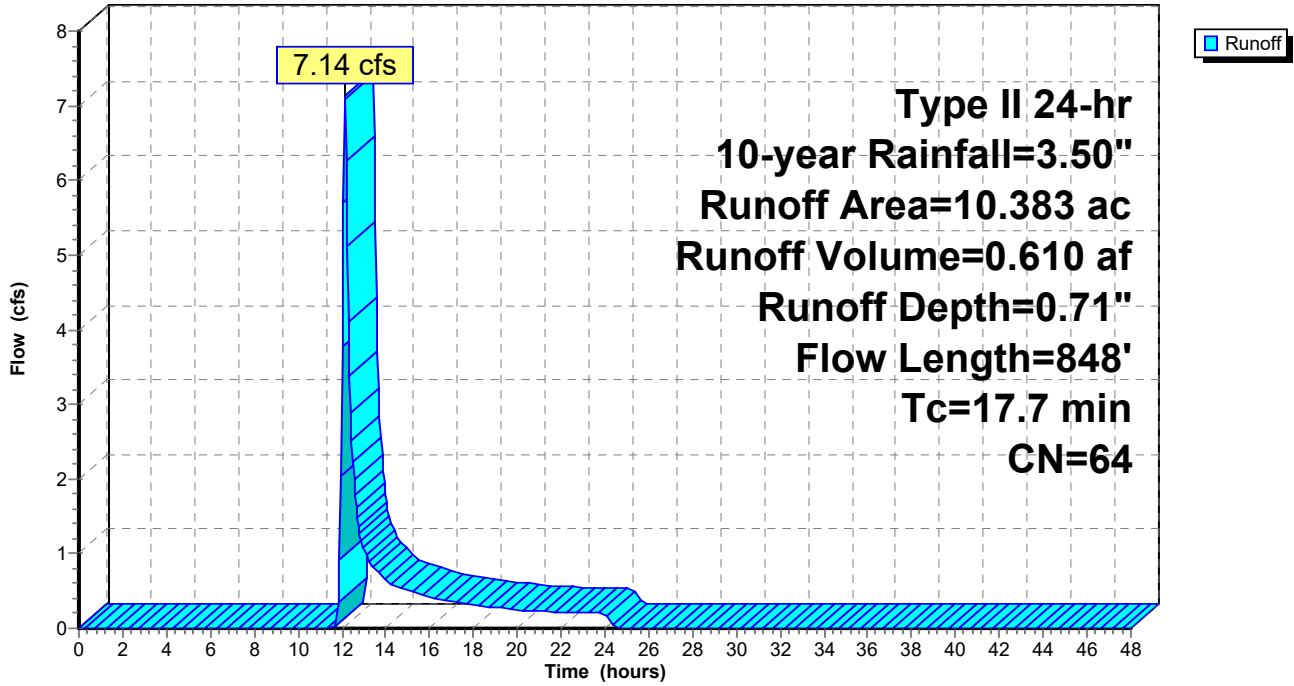
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 0.021	98	Impervious surface
* 0.324	96	Gravel surface
1.560	58	Meadow, non-grazed, HSG B
4.128	71	Meadow, non-grazed, HSG C
0.084	48	Brush, Good, HSG B
0.134	65	Brush, Good, HSG C
3.807	55	Woods, Good, HSG B
0.325	70	Woods, Good, HSG C
10.383	64	Weighted Average
10.362		99.80% Pervious Area
0.021		0.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.1	100	0.0250	0.16		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
5.4	525	0.0540	1.63		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.7	62	0.0970	1.56		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
1.5	161	0.1330	1.82		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
17.7	848	Total			

Subcatchment 13S: Sub 13

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 14S: Sub 14**

[47] Hint: Peak is 174% of capacity of segment #4

[47] Hint: Peak is 411% of capacity of segment #5

Runoff = 31.66 cfs @ 12.56 hrs, Volume= 5.152 af, Depth= 0.85"  
 Routed to Link SP14 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

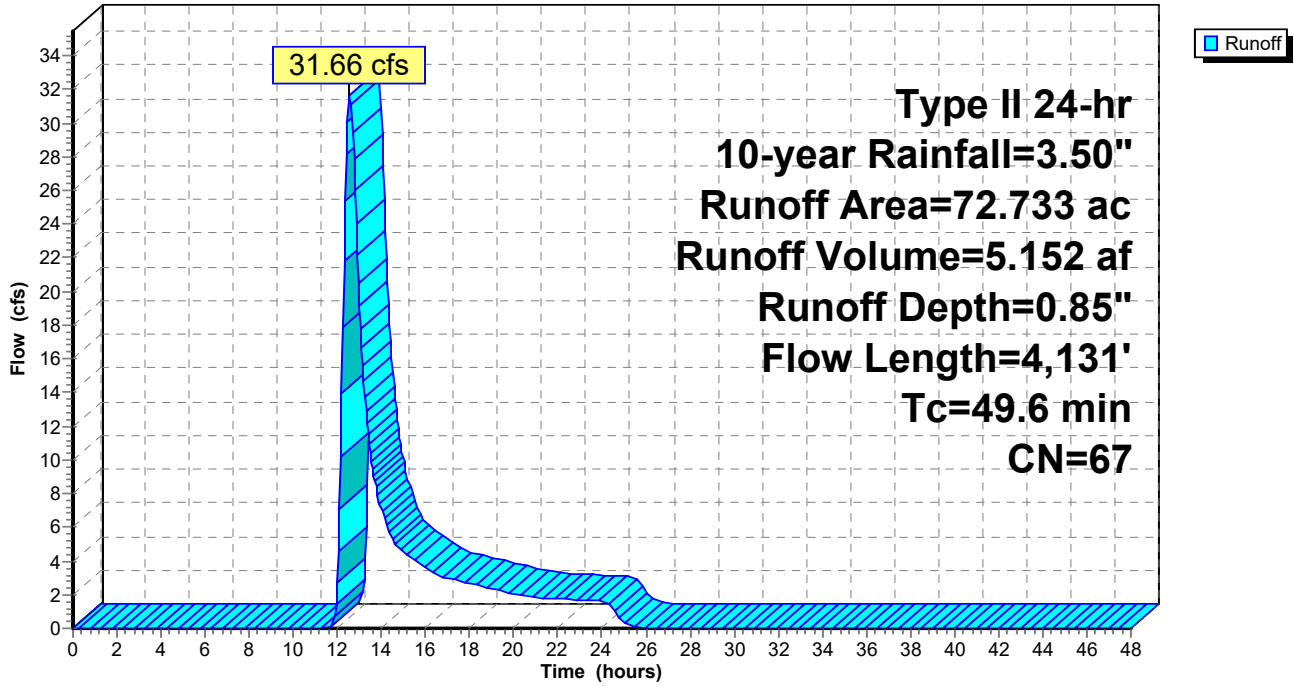
Area (ac)	CN	Description
* 0.307	98	Impervious surface
0.760	80	>75% Grass cover, Good, HSG D
19.939	58	Meadow, non-grazed, HSG B
36.007	71	Meadow, non-grazed, HSG C
0.100	78	Meadow, non-grazed, HSG D
0.667	48	Brush, Good, HSG B
0.121	65	Brush, Good, HSG C
1.517	73	Brush, Good, HSG D
3.147	55	Woods, Good, HSG B
9.611	70	Woods, Good, HSG C
0.557	77	Woods, Good, HSG D
72.733	67	Weighted Average
72.426		99.58% Pervious Area
0.307		0.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	50	0.0600	0.09		<b>Sheet Flow,</b> Woods: Light underbrush n= 0.400 P2= 2.50"
5.6	50	0.0280	0.15		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
6.7	465	0.0270	1.15		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
9.8	1,433	0.0120	2.43	18.23	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=5.00' D=0.50' Z= 20.0 ' /' Top.W=25.00' n= 0.030 Earth, grassed & winding
18.5	2,133	0.0080	1.93	7.70	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=5.00' D=0.50' Z= 6.0 ' /' Top.W=11.00' n= 0.035 Earth, dense weeds
49.6	4,131	Total			



Subcatchment 14S: Sub 14

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 17S: Sub 17**

[47] Hint: Peak is 405% of capacity of segment #4

Runoff = 27.14 cfs @ 12.39 hrs, Volume= 4.335 af, Depth= 0.53"  
 Routed to Link SP17 :

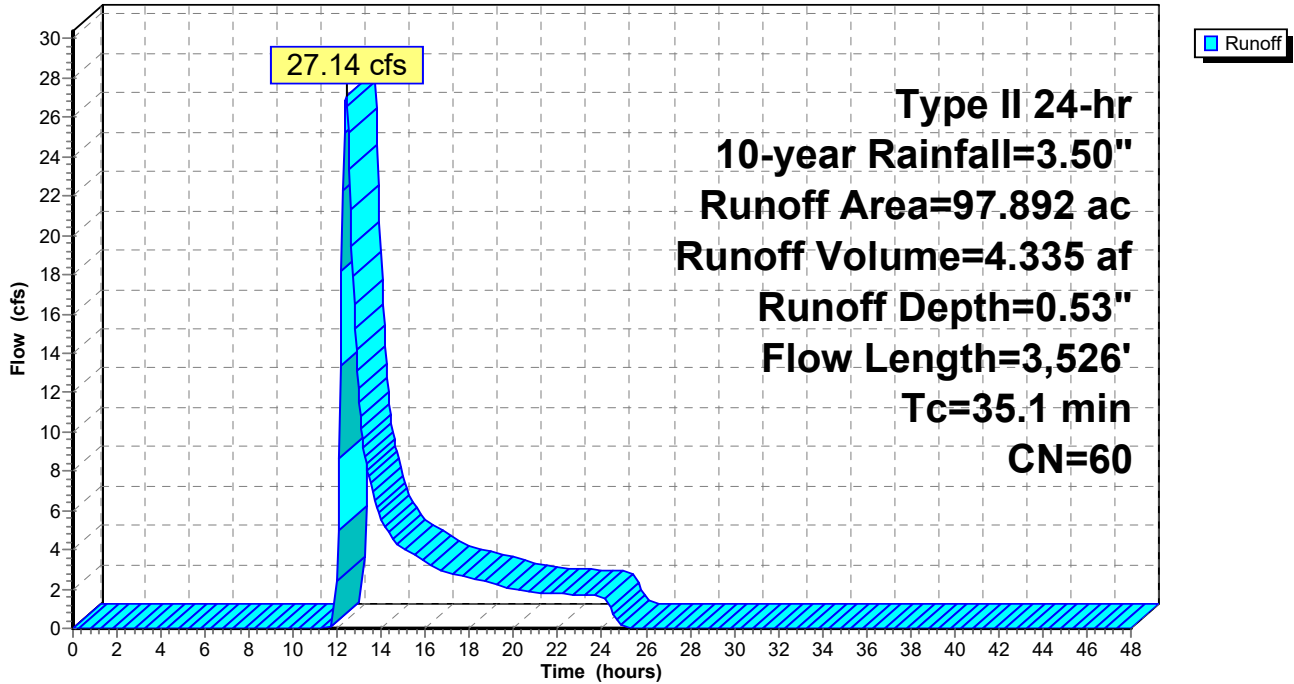
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 1.153	98	Impervious surface
* 0.105	96	Gravel surface
3.000	61	>75% Grass cover, Good, HSG B
0.324	74	>75% Grass cover, Good, HSG C
1.232	80	>75% Grass cover, Good, HSG D
78.791	58	Meadow, non-grazed, HSG B
0.375	71	Meadow, non-grazed, HSG C
4.855	78	Meadow, non-grazed, HSG D
7.632	55	Woods, Good, HSG B
0.085	70	Woods, Good, HSG C
0.340	77	Woods, Good, HSG D
97.892	60	Weighted Average
96.739		98.82% Pervious Area
1.153		1.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0300	0.18		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
5.2	681	0.0990	2.20		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
10.3	1,098	0.0650	1.78		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
10.2	1,647	0.0140	2.68	6.70	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=2.00' D=0.50' Z= 6.0 '/' Top.W=8.00' n= 0.030 Earth, grassed & winding
35.1	3,526	Total			

Subcatchment 17S: Sub 17

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 18S: Sub 18**

Runoff = 26.15 cfs @ 12.44 hrs, Volume= 3.623 af, Depth= 0.95"  
 Routed to Link SP18 :

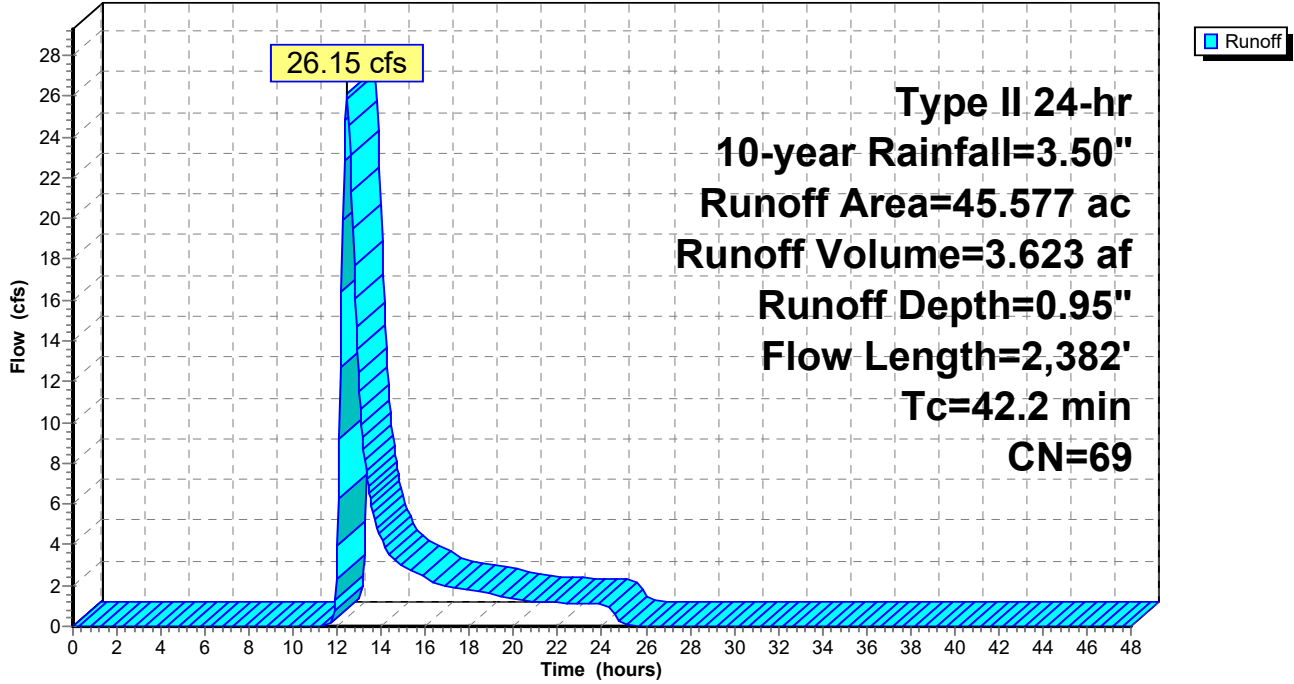
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 0.335	98	Impervious surface
9.521	58	Meadow, non-grazed, HSG B
19.657	71	Meadow, non-grazed, HSG C
8.775	78	Meadow, non-grazed, HSG D
2.586	48	Brush, Good, HSG B
4.116	73	Brush, Good, HSG D
0.587	77	Woods, Good, HSG D
45.577	69	Weighted Average
45.242		99.26% Pervious Area
0.335		0.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.6	100	0.0180	0.14		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
10.5	668	0.0230	1.06		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
4.5	459	0.0590	1.70		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.7	128	0.0130	0.80		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
12.9	1,027		1.33		<b>Direct Entry, CF</b>
42.2	2,382	Total			

Subcatchment 18S: Sub 18

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 19S: Sub 19**

Runoff = 25.36 cfs @ 12.27 hrs, Volume= 2.653 af, Depth= 1.12"  
 Routed to Reach 20.1R : S-KCF-6

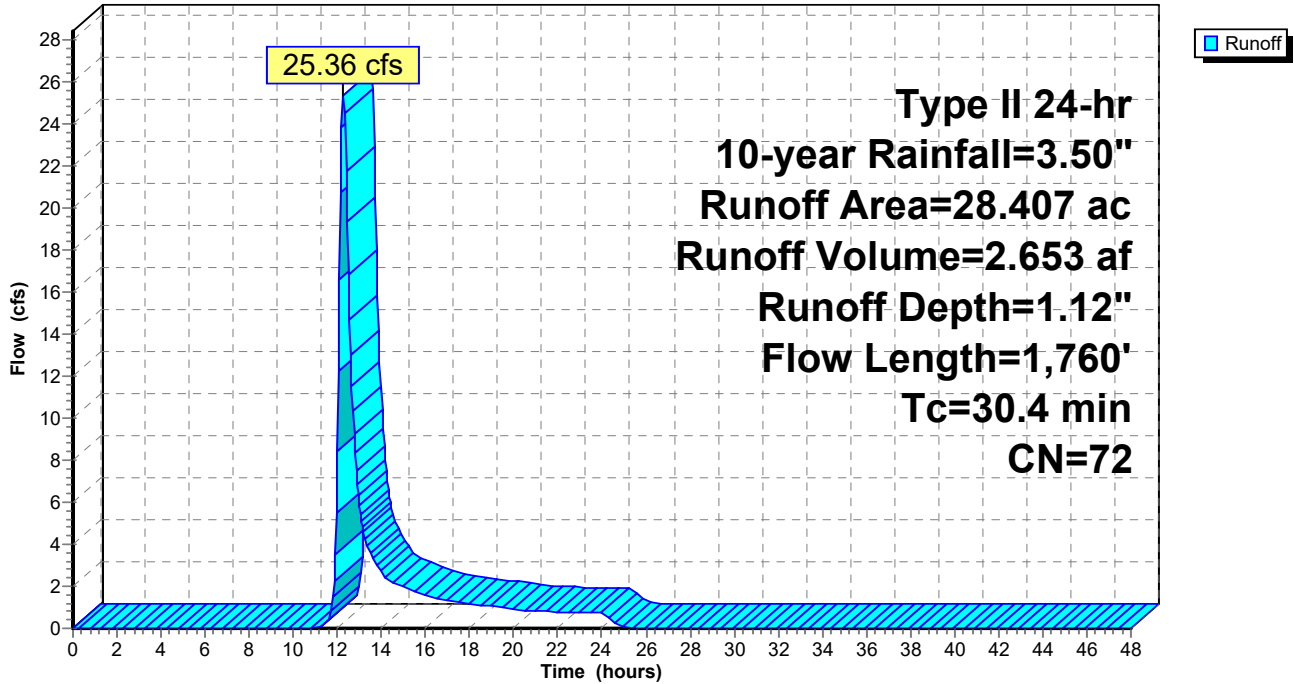
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 0.153	98	Surface water
2.120	58	Meadow, non-grazed, HSG B
18.359	71	Meadow, non-grazed, HSG C
7.318	78	Meadow, non-grazed, HSG D
0.227	65	Brush, Good, HSG C
0.105	73	Brush, Good, HSG D
0.125	77	Woods, Good, HSG D
28.407	72	Weighted Average
28.254		99.46% Pervious Area
0.153		0.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0430	0.20		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
1.5	212	0.1120	2.34		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
10.0	635	0.0230	1.06		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
10.7	813	0.0330	1.27		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
30.4	1,760	Total			

Subcatchment 19S: Sub 19

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 20S: Sub 20**

Runoff = 53.77 cfs @ 12.15 hrs, Volume= 4.704 af, Depth= 0.80"  
 Routed to Reach 20.1R : S-KCF-6

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

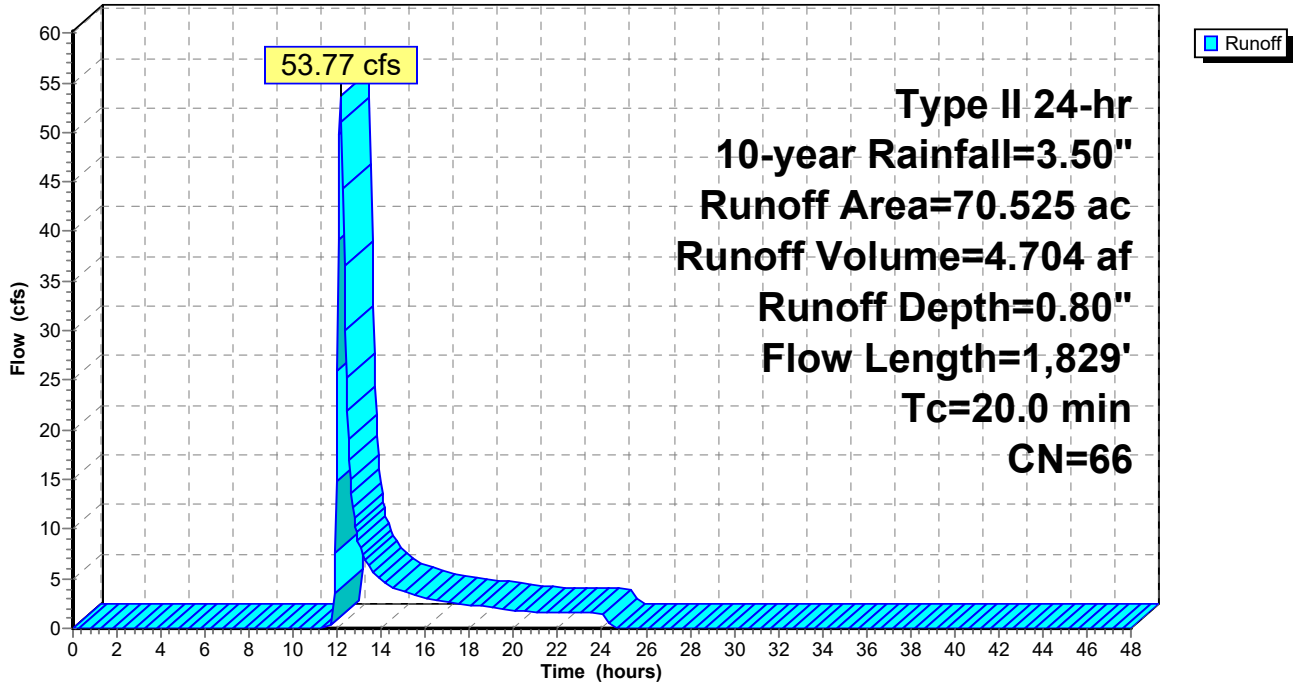
Area (ac)	CN	Description
* 0.044	98	Surface water
* 0.508	98	Impervious surface
3.657	61	>75% Grass cover, Good, HSG B
29.608	58	Meadow, non-grazed, HSG B
22.967	71	Meadow, non-grazed, HSG C
12.748	78	Meadow, non-grazed, HSG D
0.147	48	Brush, Good, HSG B
0.032	65	Brush, Good, HSG C
0.133	73	Brush, Good, HSG D
0.124	55	Woods, Good, HSG B
0.523	70	Woods, Good, HSG C
0.034	77	Woods, Good, HSG D
70.525	66	Weighted Average
69.973		99.22% Pervious Area
0.552		0.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.7	100	0.0700	0.25		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
2.6	259	0.0580	1.69		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
8.8	703	0.0360	1.33		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.9	767	0.0300	6.81	54.44	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=5.00' D=1.00' Z= 3.0 ' /' Top.W=11.00' n= 0.030 Earth, grassed & winding
20.0	1,829	Total			



Subcatchment 20S: Sub 20

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 21S: Sub 21**

[47] Hint: Peak is 408% of capacity of segment #3

[47] Hint: Peak is 364% of capacity of segment #4

[47] Hint: Peak is 425% of capacity of segment #5

Runoff = 55.18 cfs @ 12.46 hrs, Volume= 8.204 af, Depth= 0.80"  
 Routed to Reach 22.1R : S-KCF-5

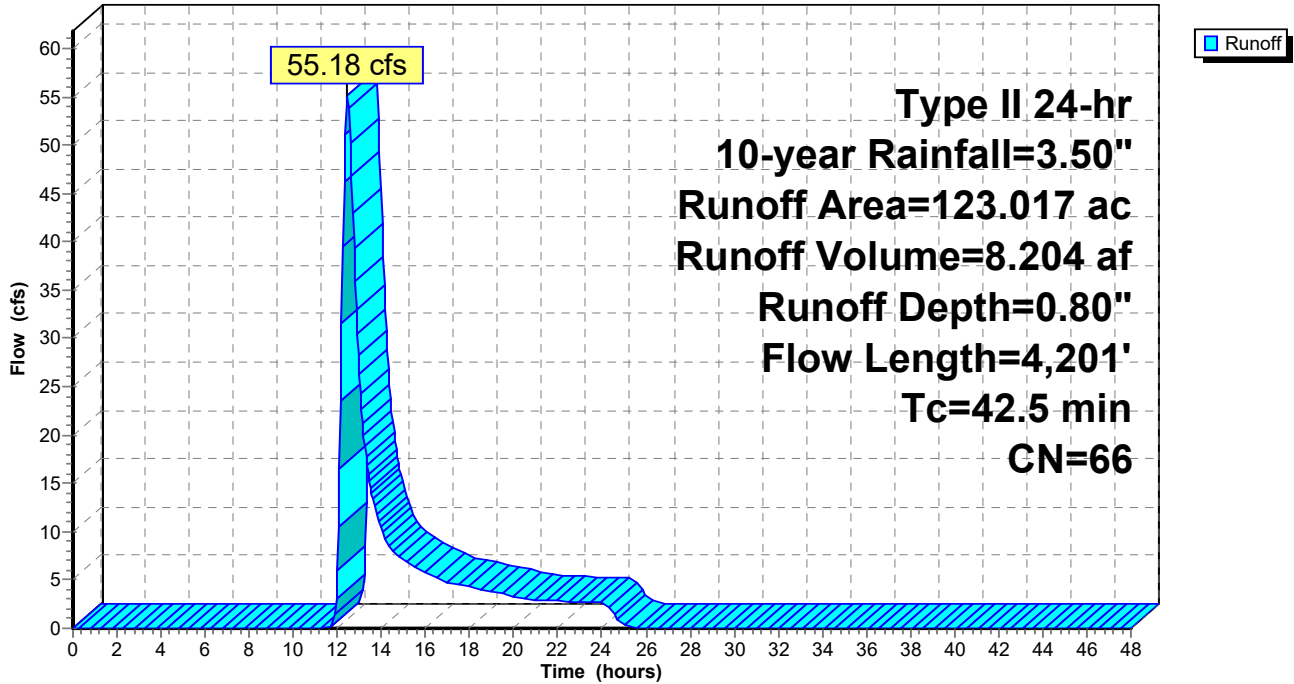
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 3.145	98	Surface water
* 0.950	98	Impervious surface
* 0.528	96	Gravel surface
0.616	61	>75% Grass cover, Good, HSG B
1.689	74	>75% Grass cover, Good, HSG C
54.805	58	Meadow, non-grazed, HSG B
54.707	71	Meadow, non-grazed, HSG C
2.342	78	Meadow, non-grazed, HSG D
0.747	48	Brush, Good, HSG B
0.437	65	Brush, Good, HSG C
0.758	55	Woods, Good, HSG B
2.293	70	Woods, Good, HSG C
123.017	66	Weighted Average
118.922		96.67% Pervious Area
4.095		3.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	100	0.0160	0.14		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
12.6	1,112	0.0440	1.47		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.2	346	0.0150	2.58	13.52	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=6.00' D=0.50' Z= 9.0 ' /' Top.W=15.00' n= 0.035 Earth, dense weeds
8.3	1,504	0.0150	3.03	15.15	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=9.00' D=0.50' Z= 2.0 ' /' Top.W=11.00' n= 0.035 Earth, dense weeds
7.3	1,139	0.0110	2.60	12.98	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=9.00' D=0.50' Z= 2.0 ' /' Top.W=11.00' n= 0.035 Earth, dense weeds
42.5	4,201	Total			

Subcatchment 21S: Sub 21

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 22S: Sub 22**

Runoff = 38.12 cfs @ 12.50 hrs, Volume= 5.522 af, Depth= 1.06"  
 Routed to Link SP22 :

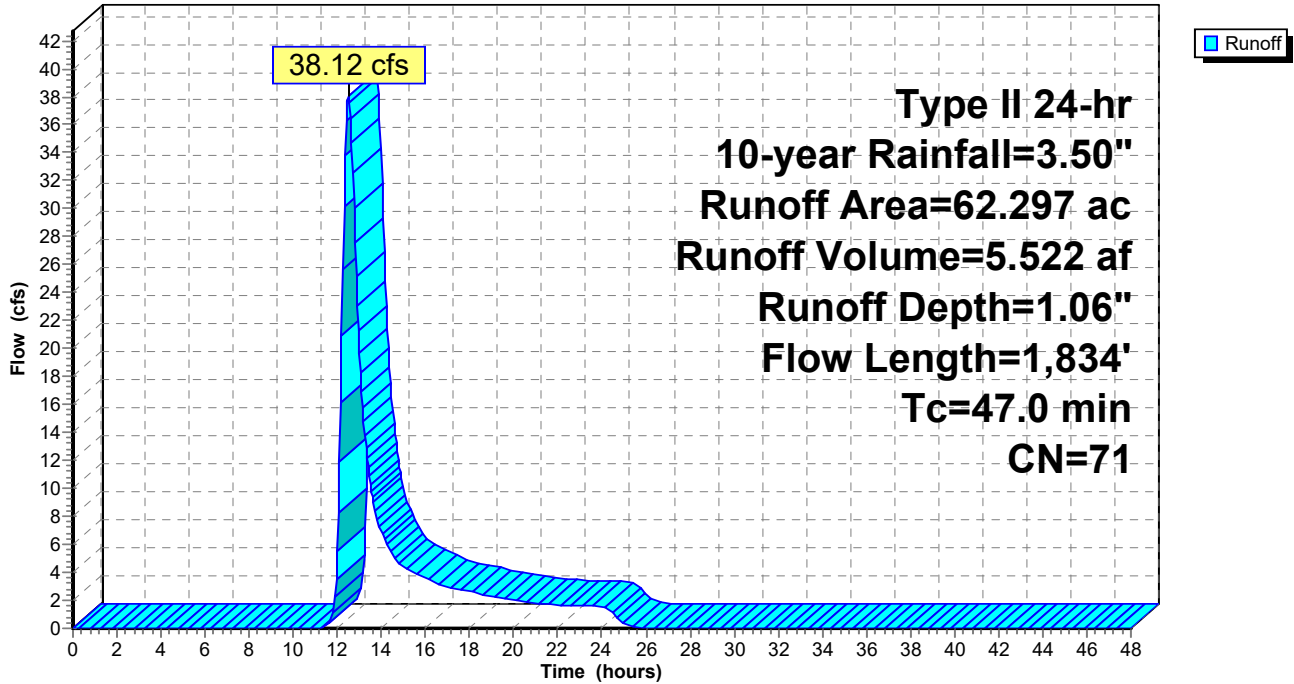
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 0.373	98	Impervious surface
* 0.117	96	Gravel surface
2.935	58	Meadow, non-grazed, HSG B
38.064	71	Meadow, non-grazed, HSG C
5.928	78	Meadow, non-grazed, HSG D
0.322	48	Brush, Good, HSG B
0.178	65	Brush, Good, HSG C
1.858	55	Woods, Good, HSG B
7.519	70	Woods, Good, HSG C
5.003	77	Woods, Good, HSG D
62.297	71	Weighted Average
61.924		99.40% Pervious Area
0.373		0.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.0220	0.16		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
5.0	316	0.0230	1.06		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
9.2	442	0.0130	0.80		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
9.3	305	0.0120	0.55		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
11.3	515	0.0230	0.76		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
1.5	156		1.73		<b>Direct Entry, CF</b>
47.0	1,834	Total			

Subcatchment 22S: Sub 22

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 23S: Sub 23**

Runoff = 11.48 cfs @ 12.32 hrs, Volume= 1.332 af, Depth= 0.95"  
 Routed to Link SP23 :

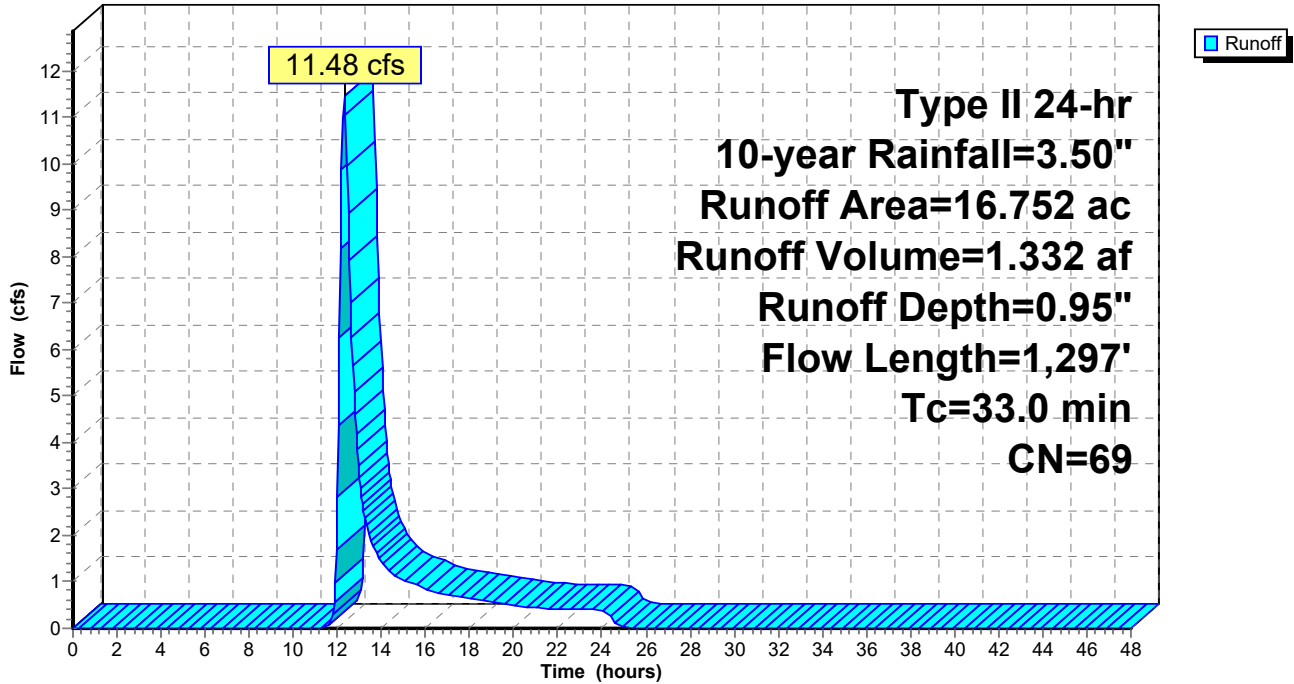
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 0.387	98	Impervious surface
* 0.929	96	Gravel surface
0.421	61	>75% Grass cover, Good, HSG B
4.958	58	Meadow, non-grazed, HSG B
9.559	71	Meadow, non-grazed, HSG C
0.403	78	Meadow, non-grazed, HSG D
0.012	48	Brush, Good, HSG B
0.052	65	Brush, Good, HSG C
0.031	55	Woods, Good, HSG B
16.752	69	Weighted Average
16.365		97.69% Pervious Area
0.387		2.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	100	0.0760	0.12		<b>Sheet Flow,</b> Woods: Light underbrush n= 0.400 P2= 2.50"
15.8	892	0.0180	0.94		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.8	262	0.0490	1.55		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.2	43	0.0160	4.00	24.02	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=3.00' D=1.00' Z= 3.0 '/' Top.W=9.00' n= 0.035 Earth, dense weeds
33.0	1,297	Total			

Subcatchment 23S: Sub 23

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 24S: Sub 24**

Runoff = 6.60 cfs @ 12.18 hrs, Volume= 0.565 af, Depth= 1.24"  
 Routed to Link SP24 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

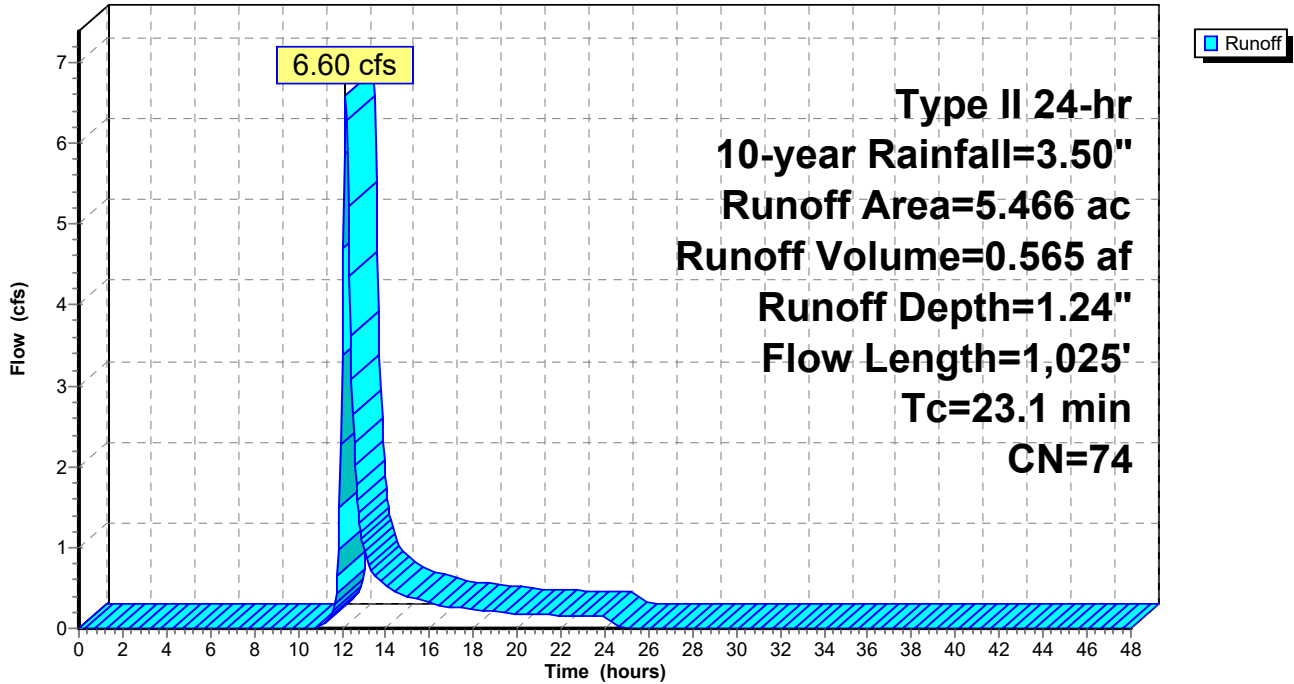
Area (ac)	CN	Description
* 0.421	98	Impervious surface
* 0.036	96	Gravel surface
0.093	61	>75% Grass cover, Good, HSG B
1.916	74	>75% Grass cover, Good, HSG C
0.252	58	Meadow, non-grazed, HSG B
2.730	71	Meadow, non-grazed, HSG C
0.018	70	Woods, Good, HSG C
5.466	74	Weighted Average
5.045		92.30% Pervious Area
0.421		7.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	100	0.0060	0.09		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
1.7	169	0.0550	1.64		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.1	247	0.0230	3.64	12.74	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=6.00' D=0.50' Z= 2.0 '/' Top.W=8.00' n= 0.035 Earth, dense weeds
2.4	509	0.0220	3.47	13.02	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=6.00' D=0.50' Z= 3.0 '/' Top.W=9.00' n= 0.035 Earth, dense weeds
23.1	1,025	Total			



Subcatchment 24S: Sub 24

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 43S: Subcat 43**

[47] Hint: Peak is 164% of capacity of segment #3

Runoff = 21.57 cfs @ 12.42 hrs, Volume= 2.862 af, Depth= 1.01"  
 Routed to Reach 44R :

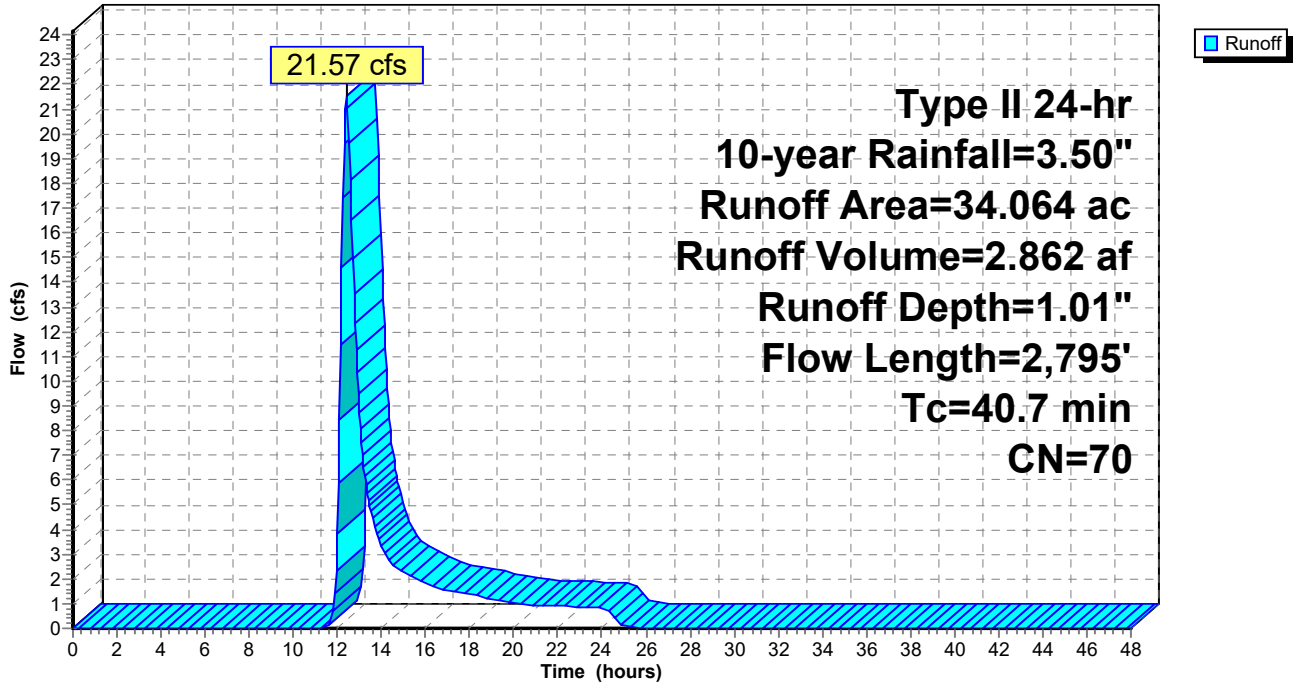
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 0.157	98	Impervious surface
2.153	74	>75% Grass cover, Good, HSG C
0.186	30	Meadow, non-grazed, HSG A
1.331	58	Meadow, non-grazed, HSG B
15.965	71	Meadow, non-grazed, HSG C
6.575	78	Meadow, non-grazed, HSG D
1.643	30	Woods, Good, HSG A
0.352	55	Woods, Good, HSG B
2.445	70	Woods, Good, HSG C
3.257	77	Woods, Good, HSG D
34.064	70	Weighted Average
33.907		99.54% Pervious Area
0.157		0.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0300	0.18		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
26.2	1,556	0.0200	0.99		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
5.1	1,139	0.0320	3.76	13.15	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=6.00' D=0.50' Z= 2.0 '/' Top.W=8.00' n= 0.040 Winding stream, pools & shoals
40.7	2,795	Total			

Subcatchment 43S: Subcat 43

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 44S: Subcat 44**

[47] Hint: Peak is 520% of capacity of segment #3

[47] Hint: Peak is 201% of capacity of segment #4

Runoff = 28.83 cfs @ 12.43 hrs, Volume= 3.889 af, Depth= 1.01"  
 Routed to Reach 45R :

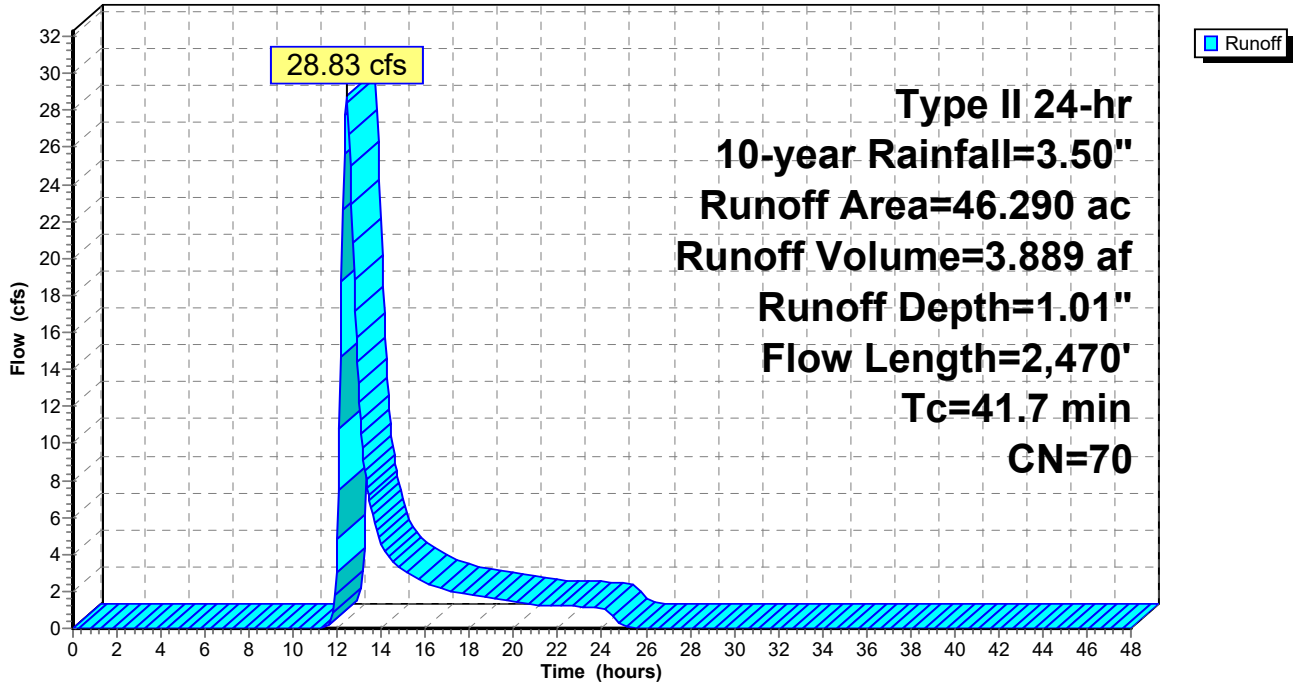
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
0.094	30	Meadow, non-grazed, HSG A
0.097	58	Meadow, non-grazed, HSG B
7.842	71	Meadow, non-grazed, HSG C
6.921	78	Meadow, non-grazed, HSG D
1.607	30	Woods, Good, HSG A
6.395	55	Woods, Good, HSG B
8.029	70	Woods, Good, HSG C
15.305	77	Woods, Good, HSG D
46.290	70	Weighted Average
46.290		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.9	100	0.0260	0.08		<b>Sheet Flow,</b> Woods: Light underbrush n= 0.400 P2= 2.50"
9.2	409	0.0220	0.74		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
5.2	715	0.0320	2.31	5.55	<b>Parabolic Channel,</b> W=18.00' D=0.20' Area=2.4 sf Perim=18.0' n= 0.030 Earth, grassed & winding
5.4	1,246	0.0350	3.83	14.37	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=6.00' D=0.50' Z= 3.0 '/' Top.W=9.00' n= 0.040 Winding stream, pools & shoals
41.7	2,470	Total			

Subcatchment 44S: Subcat 44

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 45S: Subcat 45**

Runoff = 9.30 cfs @ 12.32 hrs, Volume= 1.390 af, Depth= 0.49"  
 Routed to Link SP43 :

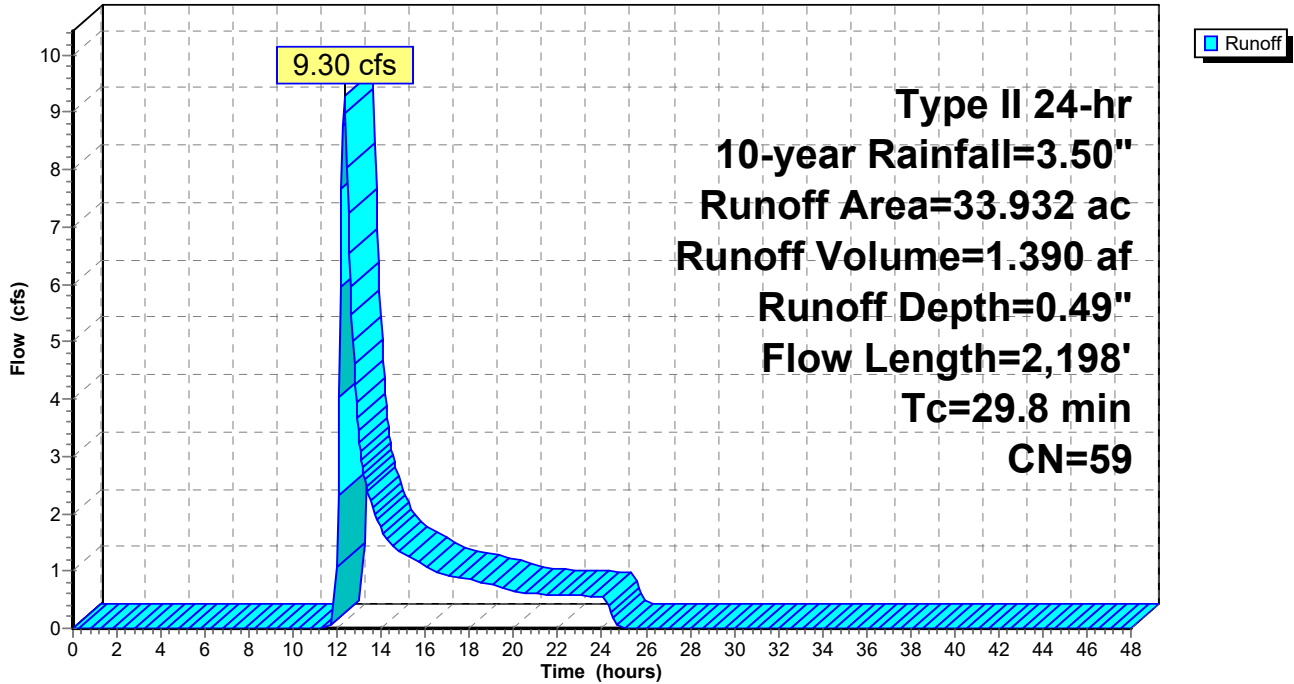
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 0.056	98	Surface water
* 0.600	98	Impervious surface
* 0.045	96	Gravel surface
0.358	61	>75% Grass cover, Good, HSG B
0.668	74	>75% Grass cover, Good, HSG C
0.893	30	Meadow, non-grazed, HSG A
10.865	58	Meadow, non-grazed, HSG B
6.386	71	Meadow, non-grazed, HSG C
2.755	78	Meadow, non-grazed, HSG D
0.369	30	Brush, Good, HSG A
4.141	48	Brush, Good, HSG B
0.313	65	Brush, Good, HSG C
0.221	73	Brush, Good, HSG D
2.407	30	Woods, Good, HSG A
3.328	55	Woods, Good, HSG B
0.214	70	Woods, Good, HSG C
0.313	77	Woods, Good, HSG D
33.932	59	Weighted Average
33.276		98.07% Pervious Area
0.656		1.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0150	0.13		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
6.5	396	0.0210	1.01		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.8	223	0.0900	2.10		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.4	196	0.0360	0.95		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
5.7	1,283	0.0370	3.77	10.38	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=4.00' D=0.50' Z= 3.0 ' /' Top.W=7.00' n= 0.040 Winding stream, pools & shoals
29.8	2,198	Total			

Subcatchment 45S: Subcat 45

Hydrograph



**Mill Pt Pre 1**

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**Summary for Subcatchment 46S: Subcat 46**

Runoff = 0.12 cfs @ 18.66 hrs, Volume= 0.096 af, Depth= 0.04"  
 Routed to Link SP46 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

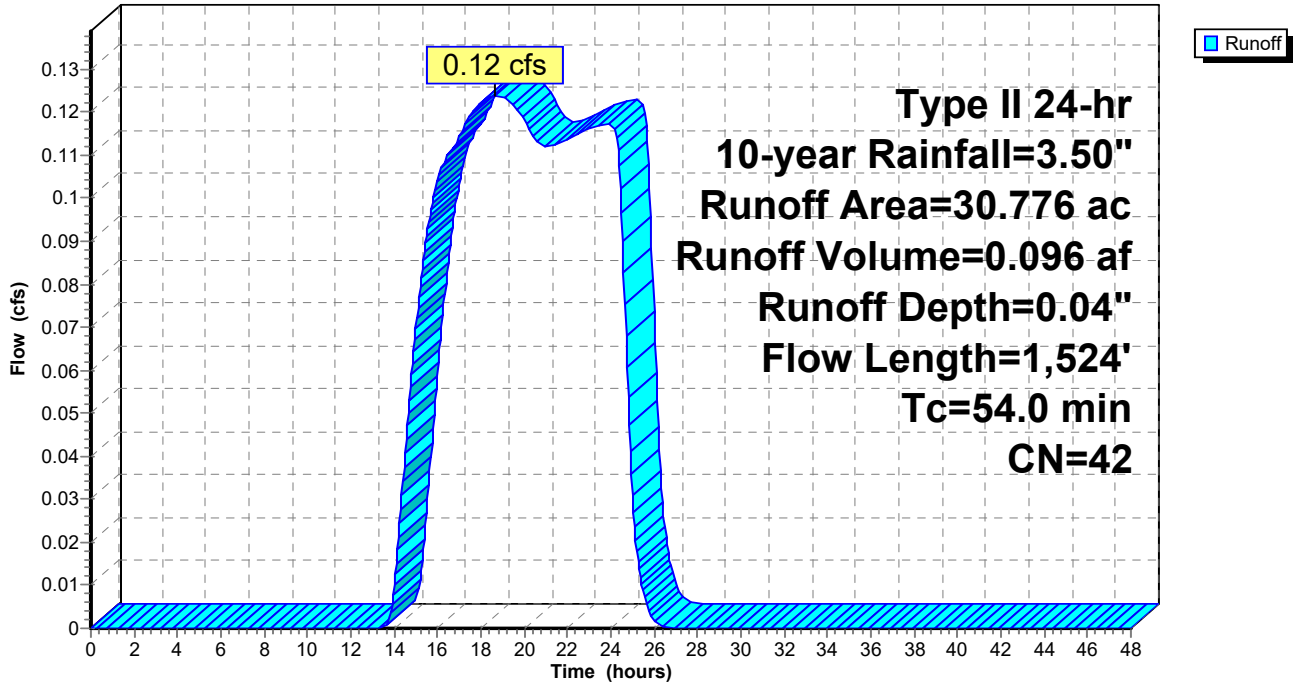
Area (ac)	CN	Description
* 0.982	98	Surface water
* 0.226	98	Impervious surface
2.832	30	Meadow, non-grazed, HSG A
1.255	58	Meadow, non-grazed, HSG B
0.520	30	Brush, Good, HSG A
0.462	48	Brush, Good, HSG B
0.278	73	Brush, Good, HSG D
14.773	30	Woods, Good, HSG A
9.100	55	Woods, Good, HSG B
0.348	77	Woods, Good, HSG D
30.776	42	Weighted Average
29.568		96.07% Pervious Area
1.208		3.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0300	0.18		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
36.5	774	0.0050	0.35		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
5.2	153	0.0050	0.49		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.3	245	0.4120	3.21		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
1.2	79	0.0510	1.13		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
0.4	173		6.95		<b>Lake or Reservoir,</b> Mean Depth= 1.50'
54.0	1,524	Total			



Subcatchment 46S: Subcat 46

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 47S: Subcat 47**

Runoff = 0.09 cfs @ 24.01 hrs, Volume= 0.065 af, Depth= 0.03"  
 Routed to Link SP47 :

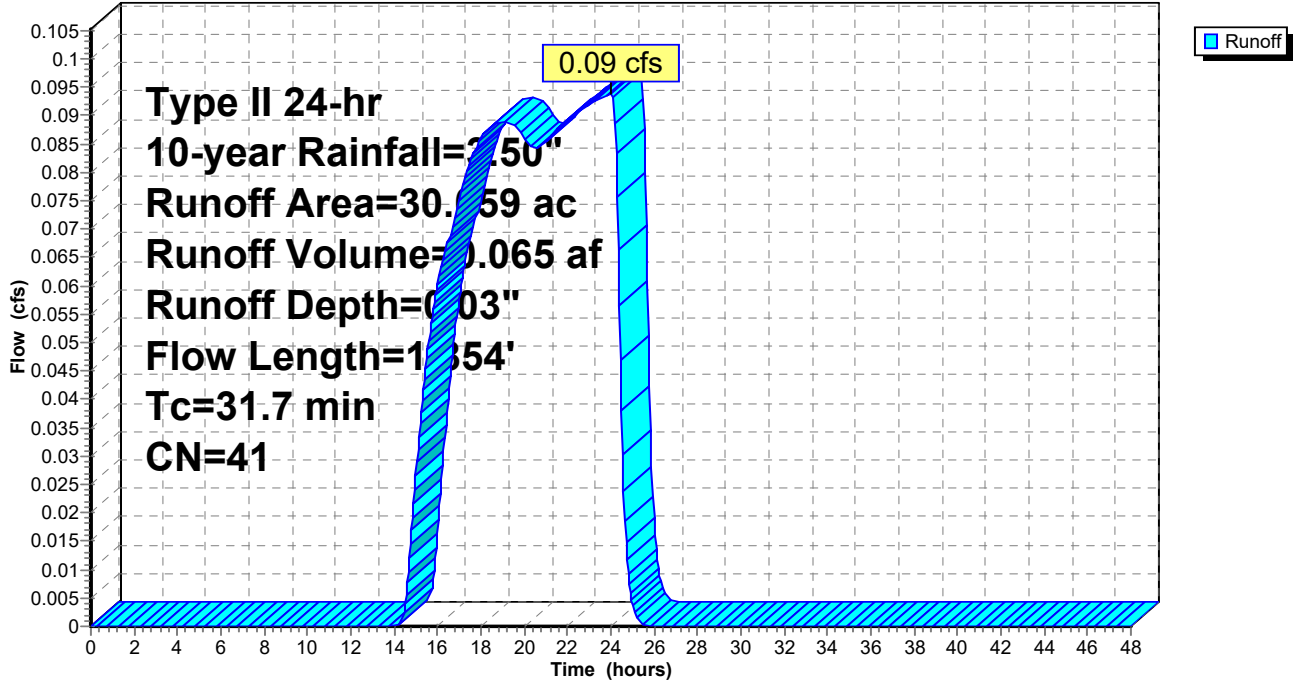
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 0.378	98	Impervious surface
0.502	39	>75% Grass cover, Good, HSG A
2.029	61	>75% Grass cover, Good, HSG B
17.003	30	Meadow, non-grazed, HSG A
3.669	58	Meadow, non-grazed, HSG B
0.051	30	Brush, Good, HSG A
0.687	48	Brush, Good, HSG B
1.092	30	Woods, Good, HSG A
4.648	55	Woods, Good, HSG B
30.059	41	Weighted Average
29.681		98.74% Pervious Area
0.378		1.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	100	0.0400	0.20		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
18.7	992	0.0160	0.89		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.1	88	0.0680	1.30		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
3.5	674	0.0180	3.19	13.54	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=7.00' D=0.50' Z= 3.0 '/' Top.W=10.00' n= 0.035 Earth, dense weeds
31.7	1,854	Total			

Subcatchment 47S: Subcat 47

Hydrograph



# Mill Pt Pre 1

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Type II 24-hr 10-year Rainfall=3.50"

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## Summary for Reach 6R: W-NSD-35

Inflow Area = 58.963 ac, 0.00% Impervious, Inflow Depth = 0.95" for 10-year event  
Inflow = 25.13 cfs @ 12.74 hrs, Volume= 4.687 af  
Outflow = 24.41 cfs @ 12.97 hrs, Volume= 4.687 af, Atten= 3%, Lag= 14.3 min  
Routed to Link SP5 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 3.83 fps, Min. Travel Time= 8.2 min  
Avg. Velocity= 1.12 fps, Avg. Travel Time= 28.1 min

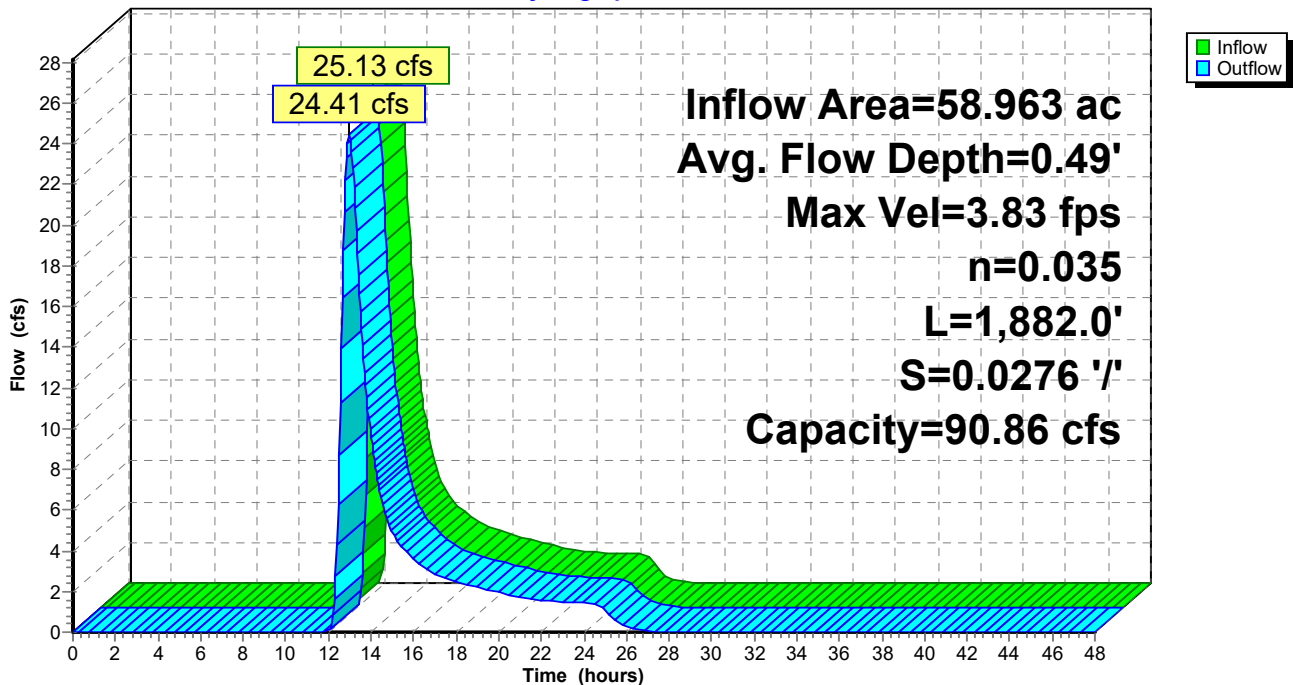
Peak Storage= 12,019 cf @ 12.84 hrs  
Average Depth at Peak Storage= 0.49' , Surface Width= 15.91'  
Bank-Full Depth= 1.00' Flow Area= 16.0 sf, Capacity= 90.86 cfs

10.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 6.0 ' / ' Top Width= 22.00'  
Length= 1,882.0' Slope= 0.0276 ' / '  
Inlet Invert= 542.00', Outlet Invert= 490.00'



## Reach 6R: W-NSD-35

### Hydrograph



# Mill Pt Pre 1

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Type II 24-hr 10-year Rainfall=3.50"

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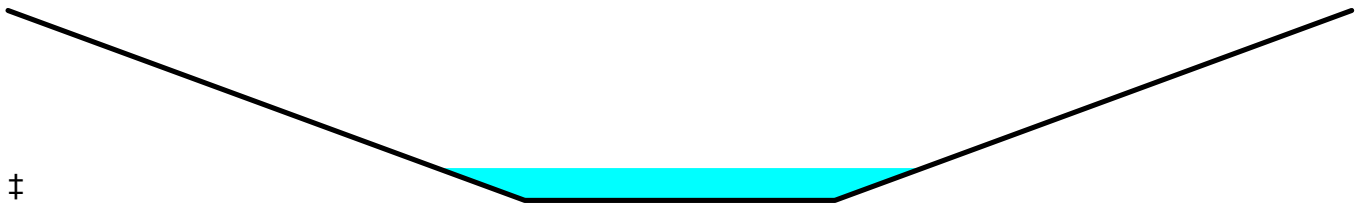
## Summary for Reach 13.1R:

Inflow Area = 4.859 ac, 0.00% Impervious, Inflow Depth = 2.94" for 10-year event  
Inflow = 1.49 cfs @ 12.61 hrs, Volume= 1.190 af  
Outflow = 1.49 cfs @ 12.64 hrs, Volume= 1.190 af, Atten= 0%, Lag= 2.2 min  
Routed to Reach 13.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 2.26 fps, Min. Travel Time= 1.2 min  
Avg. Velocity= 1.49 fps, Avg. Travel Time= 1.8 min

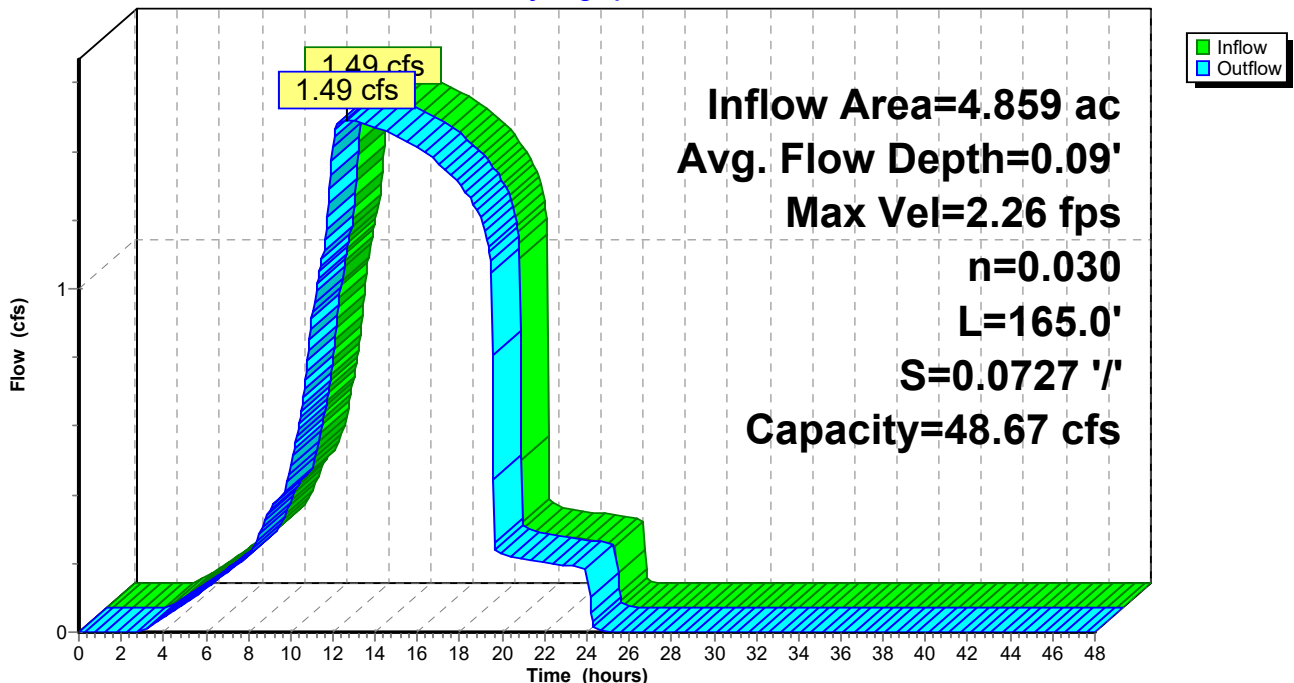
Peak Storage= 108 cf @ 12.62 hrs  
Average Depth at Peak Storage= 0.09' , Surface Width= 9.41'  
Bank-Full Depth= 0.50' Flow Area= 8.0 sf, Capacity= 48.67 cfs

6.00' x 0.50' deep channel, n= 0.030 Earth, grassed & winding  
Side Slope Z-value= 20.0 ' / ' Top Width= 26.00'  
Length= 165.0' Slope= 0.0727 ' / '  
Inlet Invert= 503.90', Outlet Invert= 491.90'



### Reach 13.1R:

Hydrograph



# Mill Pt Pre 1

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## Summary for Reach 13.2R:

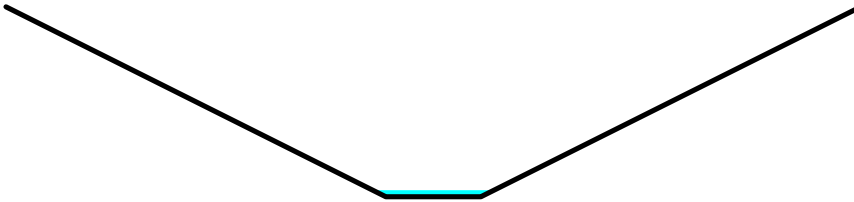
[61] Hint: Exceeded Reach 13.1R outlet invert by 0.04' @ 12.65 hrs

Inflow Area = 4.859 ac, 0.00% Impervious, Inflow Depth = 2.94" for 10-year event  
Inflow = 1.49 cfs @ 12.64 hrs, Volume= 1.190 af  
Outflow = 1.49 cfs @ 12.67 hrs, Volume= 1.190 af, Atten= 0%, Lag= 1.5 min  
Routed to Link SP13 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 4.74 fps, Min. Travel Time= 0.8 min  
Avg. Velocity = 3.27 fps, Avg. Travel Time= 1.2 min

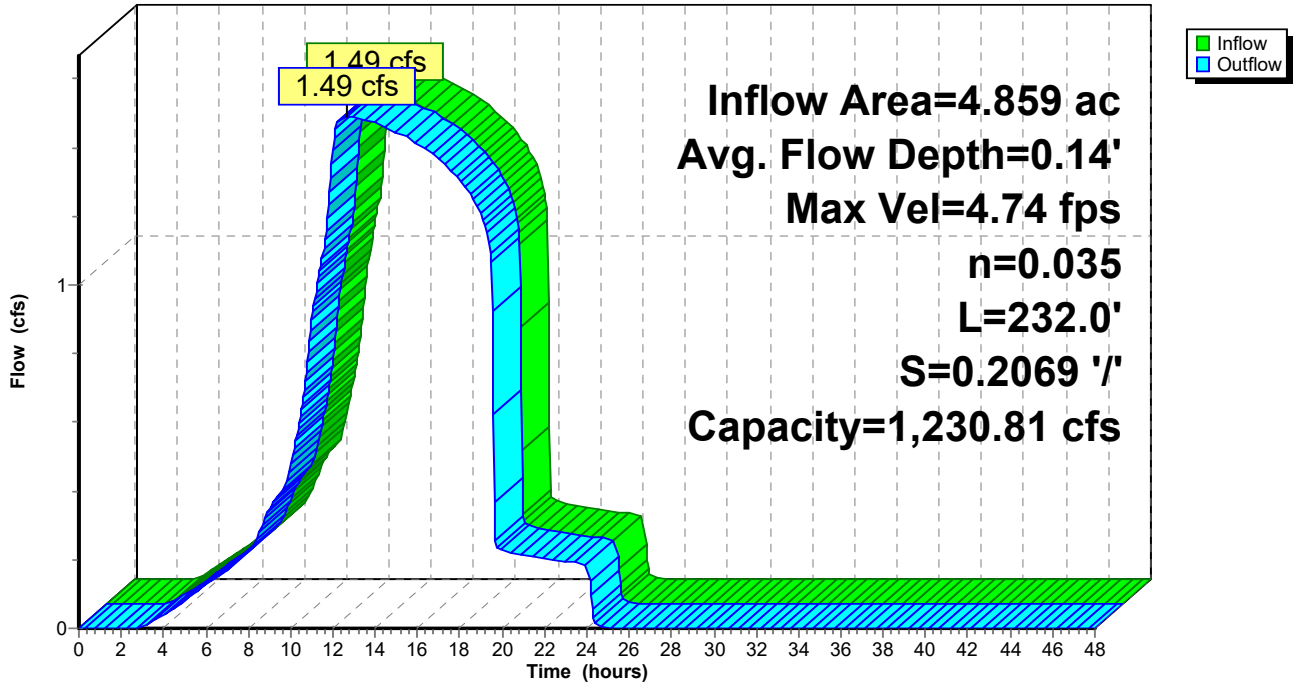
Peak Storage= 73 cf @ 12.65 hrs  
Average Depth at Peak Storage= 0.14' , Surface Width= 2.55'  
Bank-Full Depth= 4.00' Flow Area= 40.0 sf, Capacity= 1,230.81 cfs

2.00' x 4.00' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 2.0 '/' Top Width= 18.00'  
Length= 232.0' Slope= 0.2069 '/'  
Inlet Invert= 491.80', Outlet Invert= 443.80'



Reach 13.2R:

Hydrograph



**Summary for Reach 20.1R: S-KCF-6**

Inflow Area = 98.932 ac, 0.71% Impervious, Inflow Depth = 0.89" for 10-year event  
 Inflow = 75.36 cfs @ 12.18 hrs, Volume= 7.357 af  
 Outflow = 64.59 cfs @ 12.42 hrs, Volume= 7.357 af, Atten= 14%, Lag= 14.4 min  
 Routed to Reach 20.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Max. Velocity= 2.95 fps, Min. Travel Time= 7.9 min  
 Avg. Velocity = 0.72 fps, Avg. Travel Time= 32.6 min

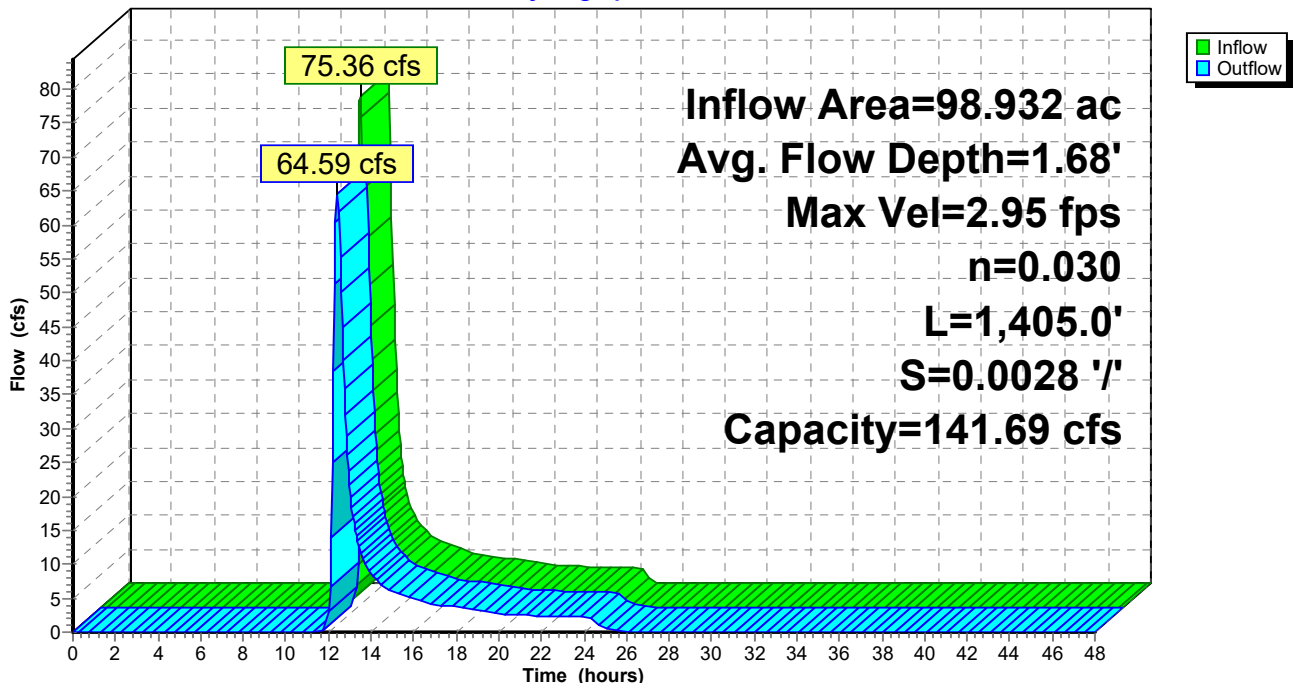
Peak Storage= 30,906 cf @ 12.28 hrs  
 Average Depth at Peak Storage= 1.68' , Surface Width= 18.11'  
 Bank-Full Depth= 2.50' Flow Area= 38.8 sf, Capacity= 141.69 cfs

8.00' x 2.50' deep channel, n= 0.030 Earth, grassed & winding  
 Side Slope Z-value= 3.0 '/' Top Width= 23.00'  
 Length= 1,405.0' Slope= 0.0028 '/'  
 Inlet Invert= 494.00', Outlet Invert= 490.00'



**Reach 20.1R: S-KCF-6**

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Reach 20.2R:**

[62] Hint: Exceeded Reach 20.1R OUTLET depth by 0.01' @ 25.00 hrs

Inflow Area = 98.932 ac, 0.71% Impervious, Inflow Depth = 0.89" for 10-year event  
Inflow = 64.59 cfs @ 12.42 hrs, Volume= 7.357 af  
Outflow = 60.88 cfs @ 12.58 hrs, Volume= 7.357 af, Atten= 6%, Lag= 9.5 min  
Routed to Reach 22.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 4.35 fps, Min. Travel Time= 5.1 min  
Avg. Velocity = 1.08 fps, Avg. Travel Time= 20.4 min

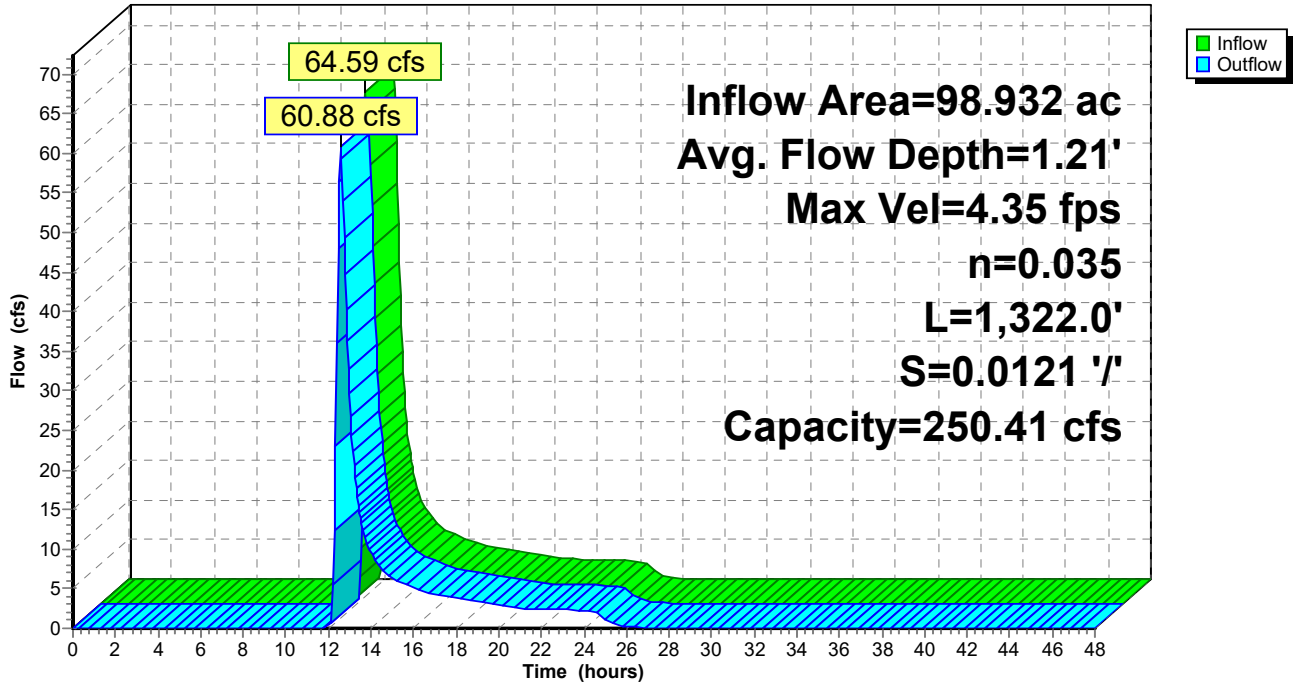
Peak Storage= 18,611 cf @ 12.49 hrs  
Average Depth at Peak Storage= 1.21' , Surface Width= 15.26'  
Bank-Full Depth= 2.50' Flow Area= 38.8 sf, Capacity= 250.41 cfs

8.00' x 2.50' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 3.0 '/' Top Width= 23.00'  
Length= 1,322.0' Slope= 0.0121 '/'  
Inlet Invert= 490.00', Outlet Invert= 474.00'



Reach 20.2R:

Hydrograph



# Mill Pt Pre 1

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## Summary for Reach 22.1R: S-KCF-5

Inflow Area = 123.017 ac, 3.33% Impervious, Inflow Depth = 0.80" for 10-year event  
Inflow = 55.18 cfs @ 12.46 hrs, Volume= 8.204 af  
Outflow = 54.76 cfs @ 12.55 hrs, Volume= 8.204 af, Atten= 1%, Lag= 5.4 min  
Routed to Reach 22.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 3.56 fps, Min. Travel Time= 3.1 min  
Avg. Velocity= 1.15 fps, Avg. Travel Time= 9.6 min

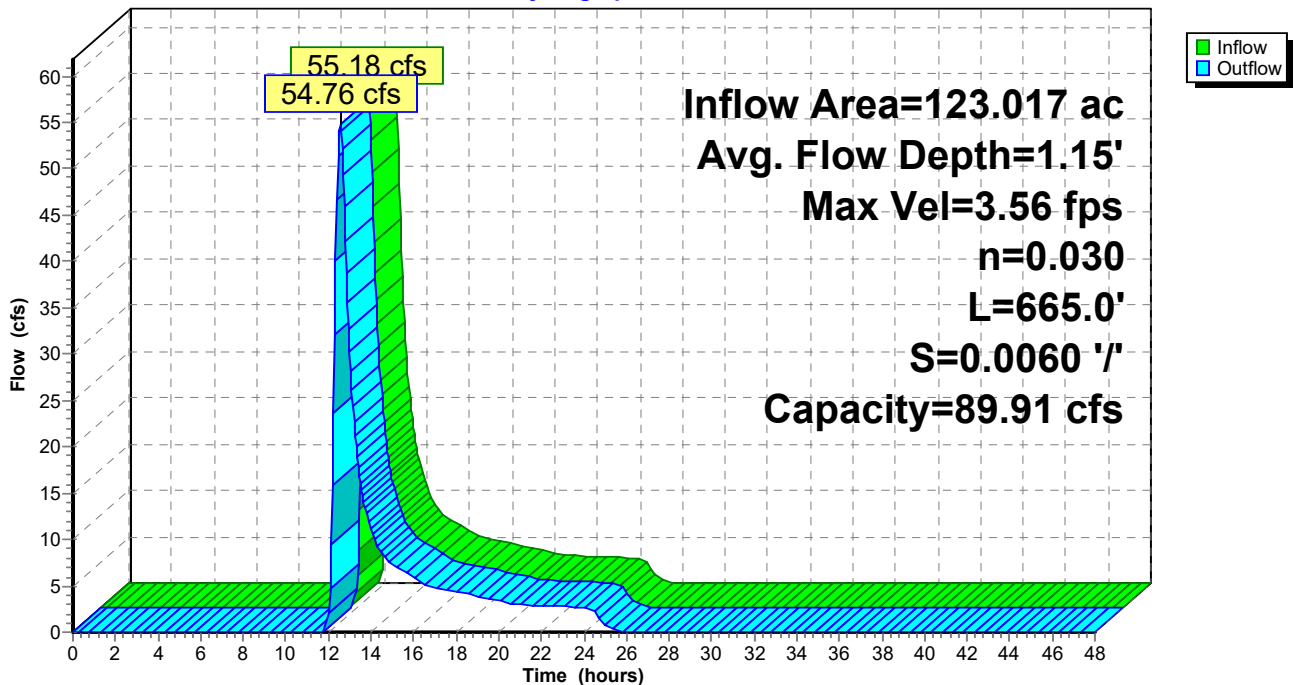
Peak Storage= 10,232 cf @ 12.50 hrs  
Average Depth at Peak Storage= 1.15' , Surface Width= 16.87'  
Bank-Full Depth= 1.50' Flow Area= 21.8 sf, Capacity= 89.91 cfs

10.00' x 1.50' deep channel, n= 0.030 Earth, grassed & winding  
Side Slope Z-value= 3.0 '/' Top Width= 19.00'  
Length= 665.0' Slope= 0.0060 '/'  
Inlet Invert= 478.00', Outlet Invert= 474.00'



## Reach 22.1R: S-KCF-5

Hydrograph



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**Summary for Reach 22.2R:**

[91] Warning: Storage range exceeded by 0.26'

[55] Hint: Peak inflow is 134% of Manning's capacity

[62] Hint: Exceeded Reach 20.2R OUTLET depth by 0.66' @ 12.70 hrs

[62] Hint: Exceeded Reach 22.1R OUTLET depth by 0.67' @ 12.65 hrs

[64] Warning: Exceeded Reach 22.1R outlet bank by 0.26' @ 12.61 hrs

Inflow Area = 221.949 ac, 2.16% Impervious, Inflow Depth = 0.84" for 10-year event

Inflow = 115.67 cfs @ 12.57 hrs, Volume= 15.561 af

Outflow = 114.21 cfs @ 12.66 hrs, Volume= 15.561 af, Atten= 1%, Lag= 5.2 min

Routed to Link SP22 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.27 fps, Min. Travel Time= 2.8 min

Avg. Velocity= 1.00 fps, Avg. Travel Time= 11.8 min

Peak Storage= 18,916 cf @ 12.61 hrs

Average Depth at Peak Storage= 1.76' , Surface Width= 20.58'

Bank-Full Depth= 1.50' Flow Area= 21.8 sf, Capacity= 86.27 cfs

10.00' x 1.50' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 3.0 '/' Top Width= 19.00'

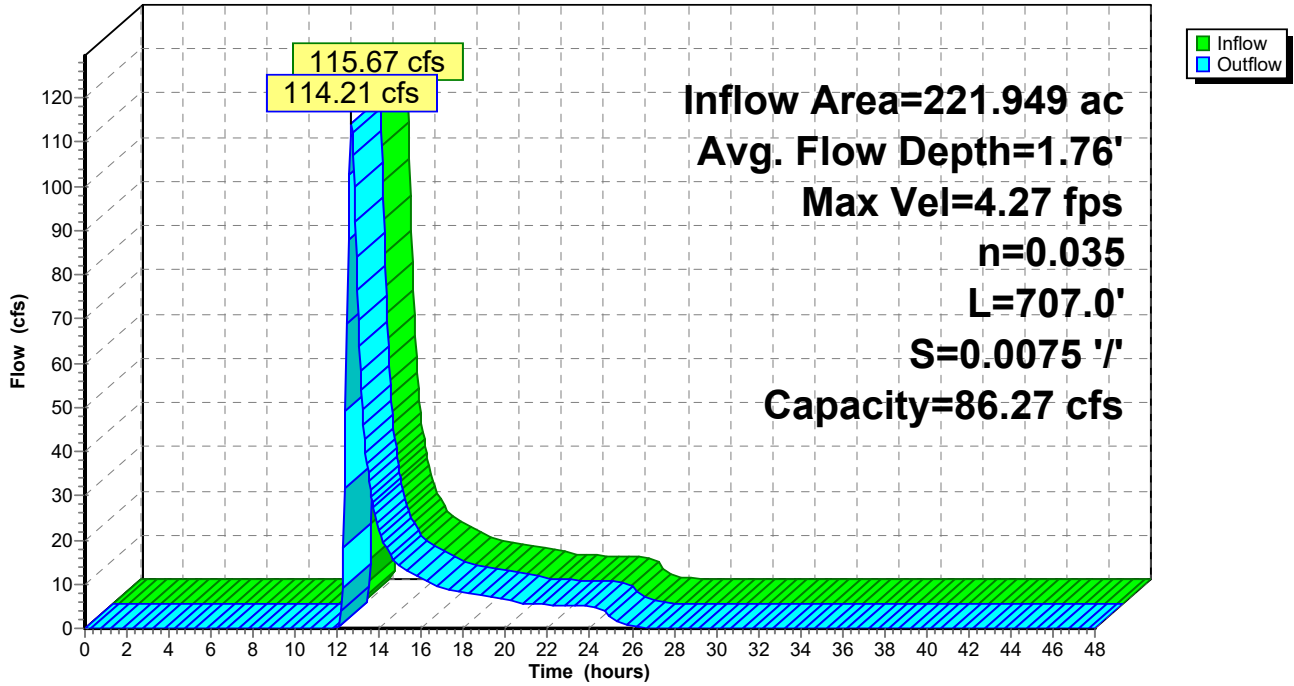
Length= 707.0' Slope= 0.0075 '/'

Inlet Invert= 474.00', Outlet Invert= 468.67'



Reach 22.2R:

Hydrograph



**Mill Pt Pre 1**

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**Summary for Reach 44R:**

[91] Warning: Storage range exceeded by 0.34'

[55] Hint: Peak inflow is 248% of Manning's capacity

Inflow Area = 34.064 ac, 0.46% Impervious, Inflow Depth = 1.01" for 10-year event  
Inflow = 21.57 cfs @ 12.42 hrs, Volume= 2.862 af  
Outflow = 21.39 cfs @ 12.48 hrs, Volume= 2.862 af, Atten= 1%, Lag= 3.8 min  
Routed to Reach 45R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 4.11 fps, Min. Travel Time= 2.0 min  
Avg. Velocity= 1.74 fps, Avg. Travel Time= 4.8 min

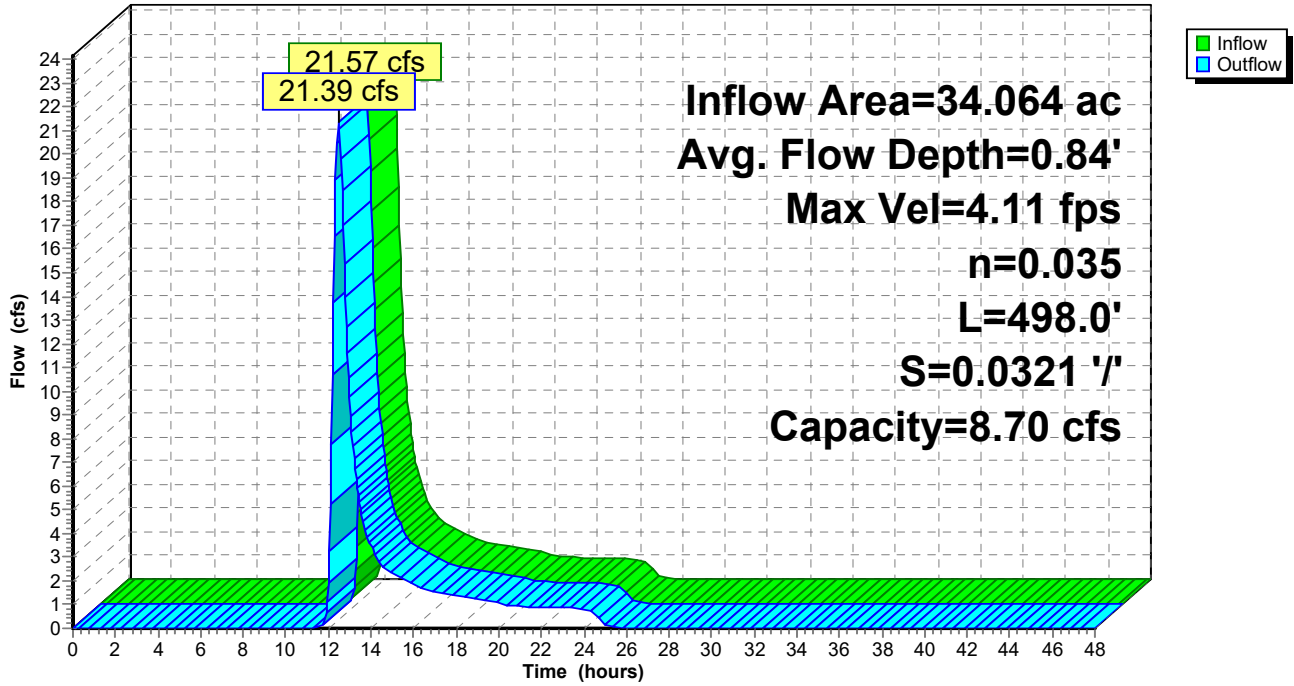
Peak Storage= 2,598 cf @ 12.45 hrs  
Average Depth at Peak Storage= 0.84' , Surface Width= 12.09'  
Bank-Full Depth= 0.50' Flow Area= 2.5 sf, Capacity= 8.70 cfs

2.00' x 0.50' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 6.0 '/' Top Width= 8.00'  
Length= 498.0' Slope= 0.0321 '/'  
Inlet Invert= 404.00', Outlet Invert= 388.00'



Reach 44R:

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Reach 45R:**

[91] Warning: Storage range exceeded by 0.61'

[55] Hint: Peak inflow is 309% of Manning's capacity

[62] Hint: Exceeded Reach 44R OUTLET depth by 0.27' @ 12.50 hrs

[64] Warning: Exceeded Reach 44R outlet bank by 0.61' @ 12.47 hrs

Inflow Area = 80.354 ac, 0.20% Impervious, Inflow Depth = 1.01" for 10-year event

Inflow = 50.04 cfs @ 12.45 hrs, Volume= 6.750 af

Outflow = 49.71 cfs @ 12.50 hrs, Volume= 6.750 af, Atten= 1%, Lag= 2.9 min

Routed to Link SP43 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.98 fps, Min. Travel Time= 1.5 min

Avg. Velocity= 2.05 fps, Avg. Travel Time= 4.4 min

Peak Storage= 4,477 cf @ 12.47 hrs

Average Depth at Peak Storage= 1.11' , Surface Width= 10.42'

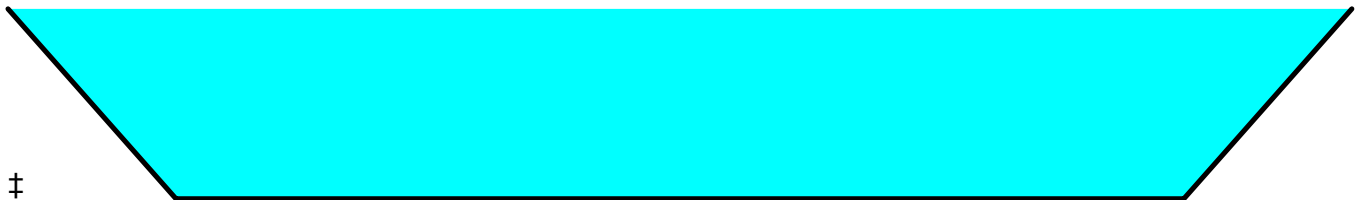
Bank-Full Depth= 0.50' Flow Area= 3.5 sf, Capacity= 16.21 cfs

6.00' x 0.50' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 2.0 '/' Top Width= 8.00'

Length= 537.0' Slope= 0.0372 '/'

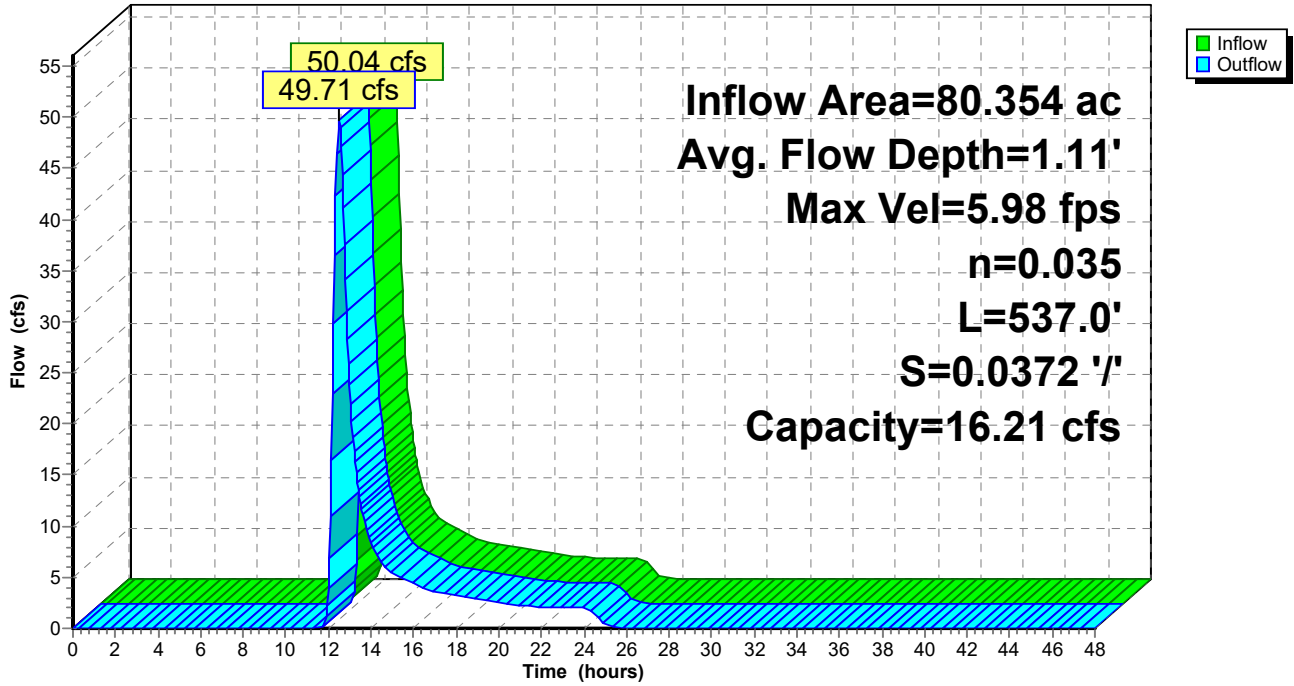
Inlet Invert= 388.00', Outlet Invert= 368.00'





Reach 45R:

Hydrograph



**Mill Pt Pre 1**

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**Summary for Pond 12P: 12P**

Inflow Area = 4.859 ac, 0.00% Impervious, Inflow Depth = 2.94" for 10-year event  
 Inflow = 22.37 cfs @ 11.96 hrs, Volume= 1.190 af  
 Outflow = 1.49 cfs @ 12.61 hrs, Volume= 1.190 af, Atten= 93%, Lag= 38.5 min  
 Primary = 1.49 cfs @ 12.61 hrs, Volume= 1.190 af  
 Routed to Reach 13.1R :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 3  
 Peak Elev= 507.82' @ 12.61 hrs Surf.Area= 33,317 sf Storage= 21,706 cf

Plug-Flow detention time= 112.8 min calculated for 1.189 af (100% of inflow)  
 Center-of-Mass det. time= 112.6 min ( 887.4 - 774.8 )

Volume	Invert	Avail.Storage	Storage Description		
#1	505.00'	349,932 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
505.00	50	25.0	0	0	50
506.00	138	45.5	90	90	170
508.00	39,705	811.5	28,123	28,213	52,417
510.00	80,589	1,415.9	117,907	146,120	159,570
512.00	124,830	2,053.3	203,812	349,932	335,572

Device	Routing	Invert	Outlet Devices
#1	Primary	505.00'	<b>8.0" Round Culvert</b> L= 172.7' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 505.00' / 504.00' S= 0.0058 ' / ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

**Primary OutFlow** Max=1.49 cfs @ 12.61 hrs HW=507.82' (Free Discharge)  
 ↑1=Culvert (Barrel Controls 1.49 cfs @ 4.26 fps)

**Mill Pt Pre 1**

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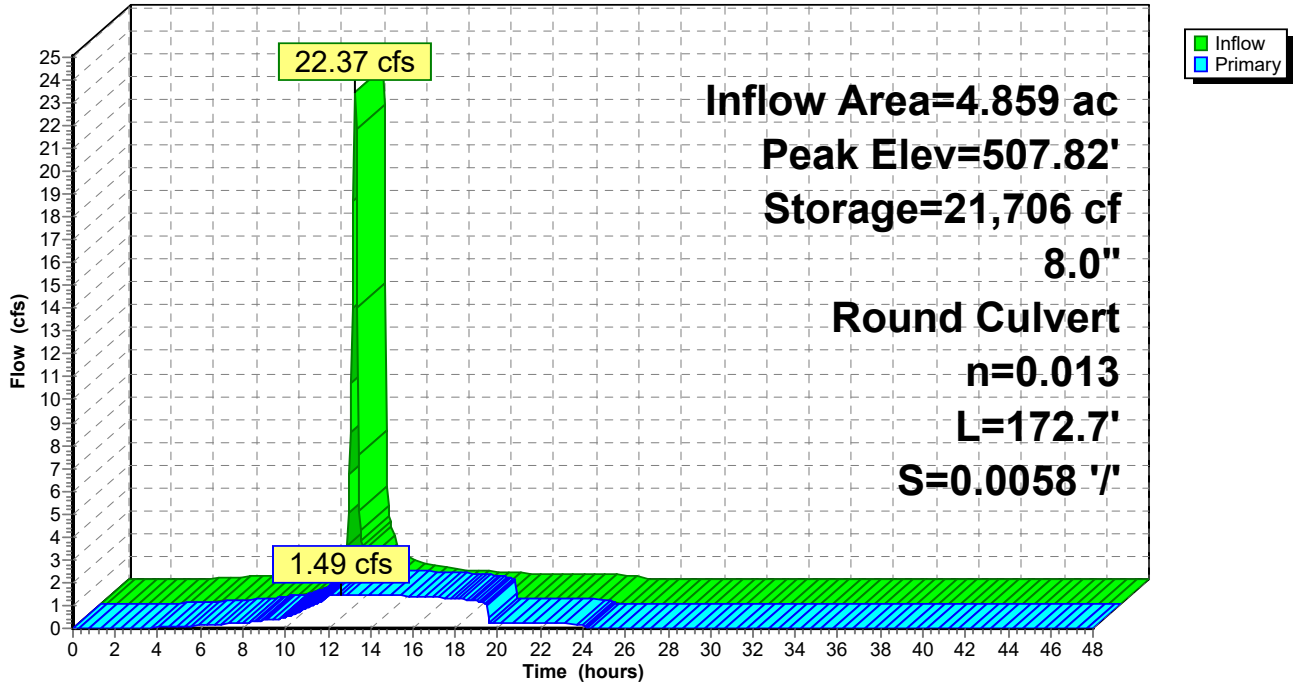
Type II 24-hr 10-year Rainfall=3.50"

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**Pond 12P: 12P**

Hydrograph



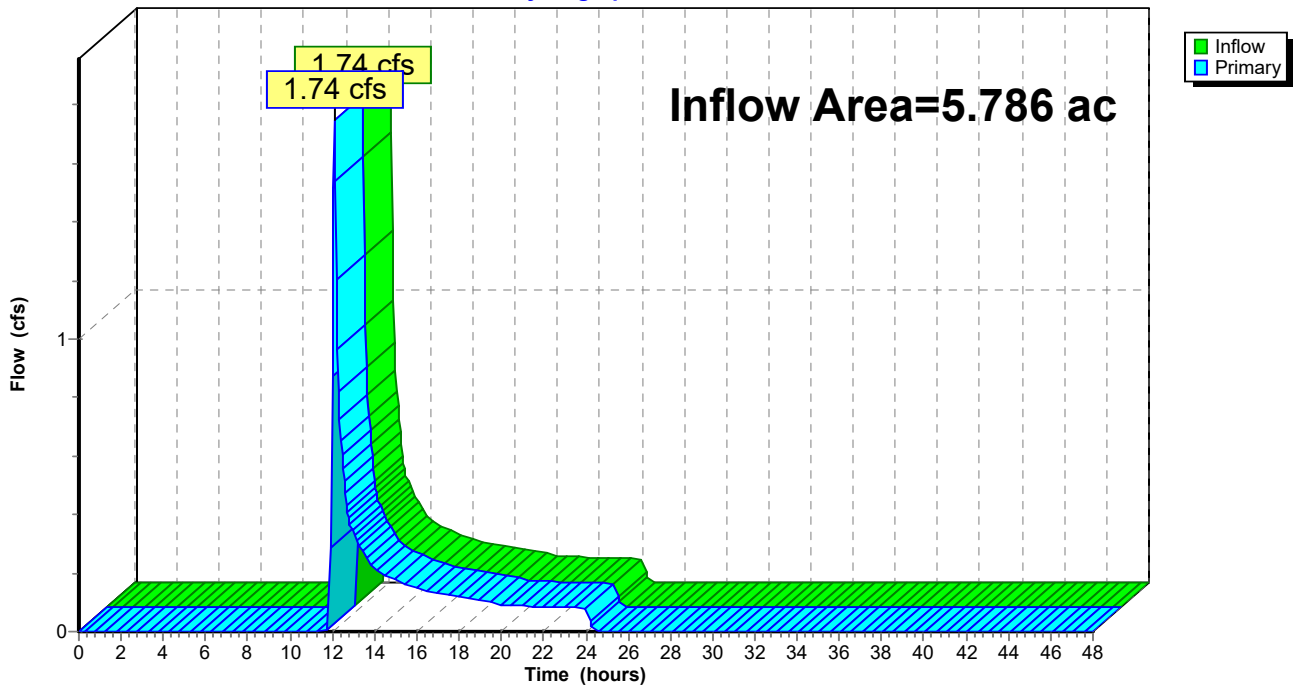
### Summary for Link SP1:

Inflow Area = 5.786 ac, 0.00% Impervious, Inflow Depth = 0.38" for 10-year event  
Inflow = 1.74 cfs @ 12.10 hrs, Volume= 0.183 af  
Primary = 1.74 cfs @ 12.10 hrs, Volume= 0.183 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP1:

Hydrograph



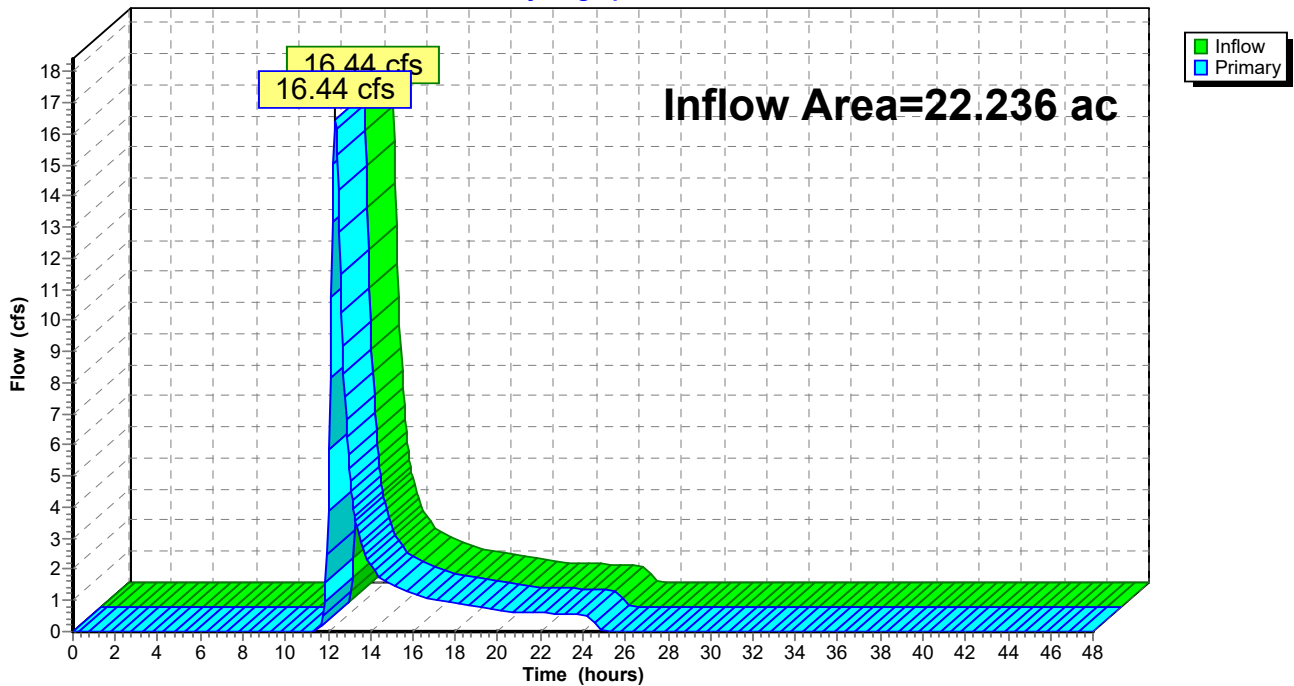
Summary for Link SP10:

Inflow Area = 22.236 ac, 4.90% Impervious, Inflow Depth = 1.06" for 10-year event  
Inflow = 16.44 cfs @ 12.35 hrs, Volume= 1.971 af  
Primary = 16.44 cfs @ 12.35 hrs, Volume= 1.971 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP10:

Hydrograph



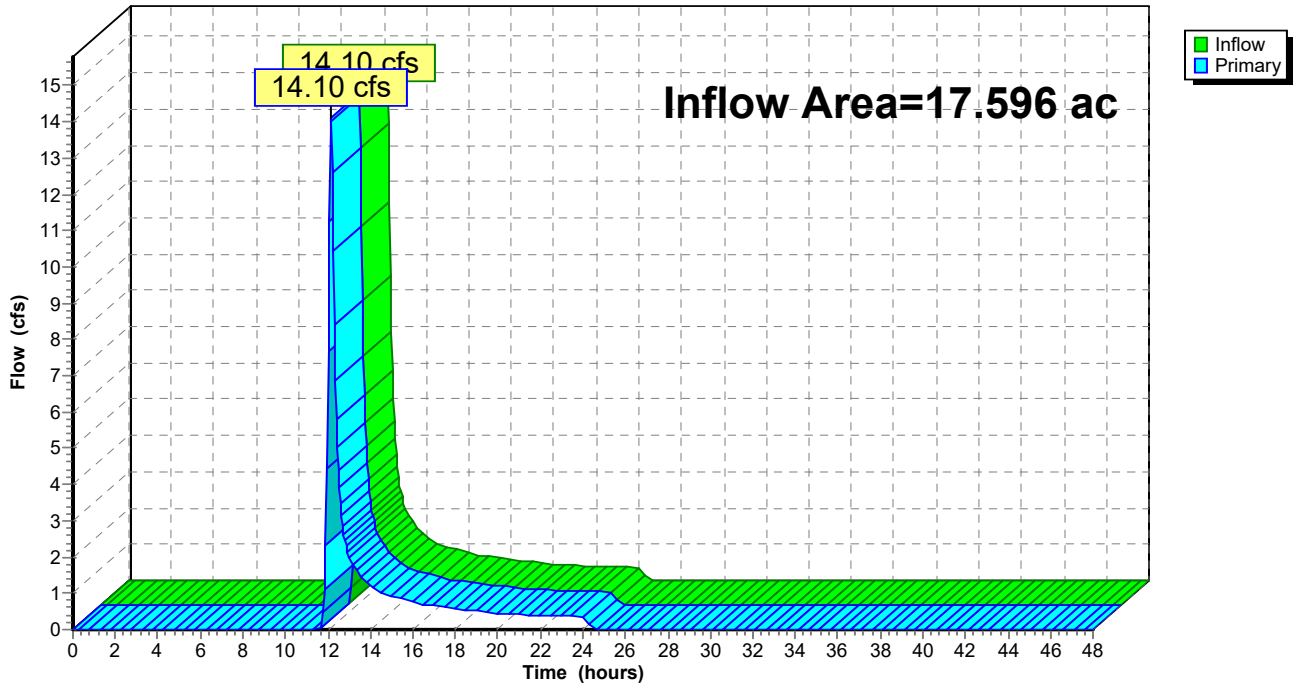
### Summary for Link SP11:

Inflow Area = 17.596 ac, 2.21% Impervious, Inflow Depth = 0.80" for 10-year event  
Inflow = 14.10 cfs @ 12.13 hrs, Volume= 1.174 af  
Primary = 14.10 cfs @ 12.13 hrs, Volume= 1.174 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP11:

Hydrograph



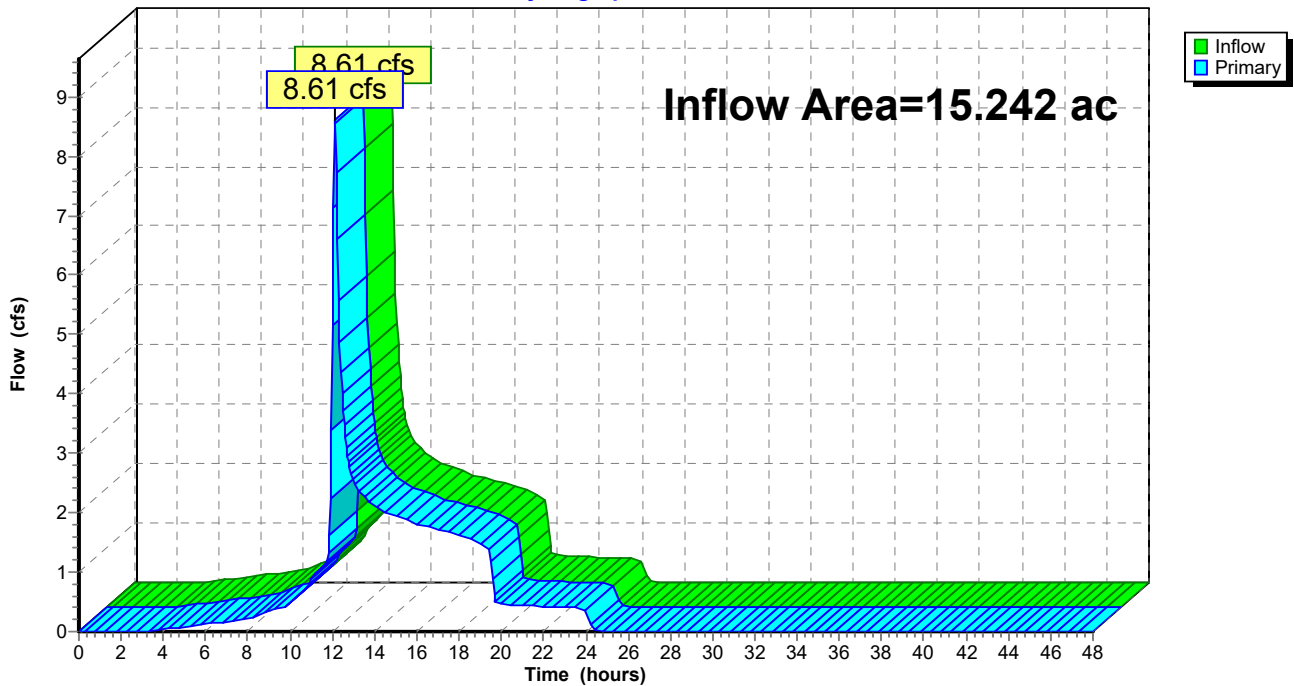
### Summary for Link SP13:

Inflow Area = 15.242 ac, 0.14% Impervious, Inflow Depth = 1.42" for 10-year event  
Inflow = 8.61 cfs @ 12.13 hrs, Volume= 1.800 af  
Primary = 8.61 cfs @ 12.13 hrs, Volume= 1.800 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP13:

Hydrograph



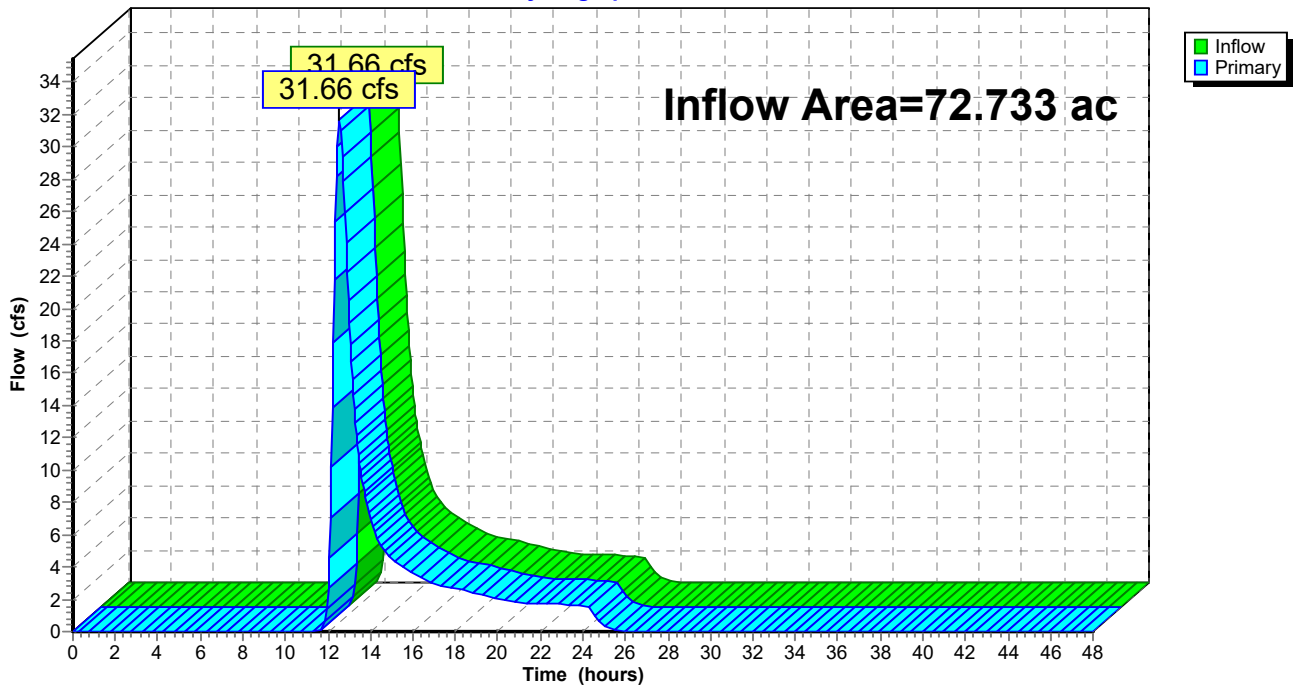
### Summary for Link SP14:

Inflow Area = 72.733 ac, 0.42% Impervious, Inflow Depth = 0.85" for 10-year event  
Inflow = 31.66 cfs @ 12.56 hrs, Volume= 5.152 af  
Primary = 31.66 cfs @ 12.56 hrs, Volume= 5.152 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP14:

Hydrograph





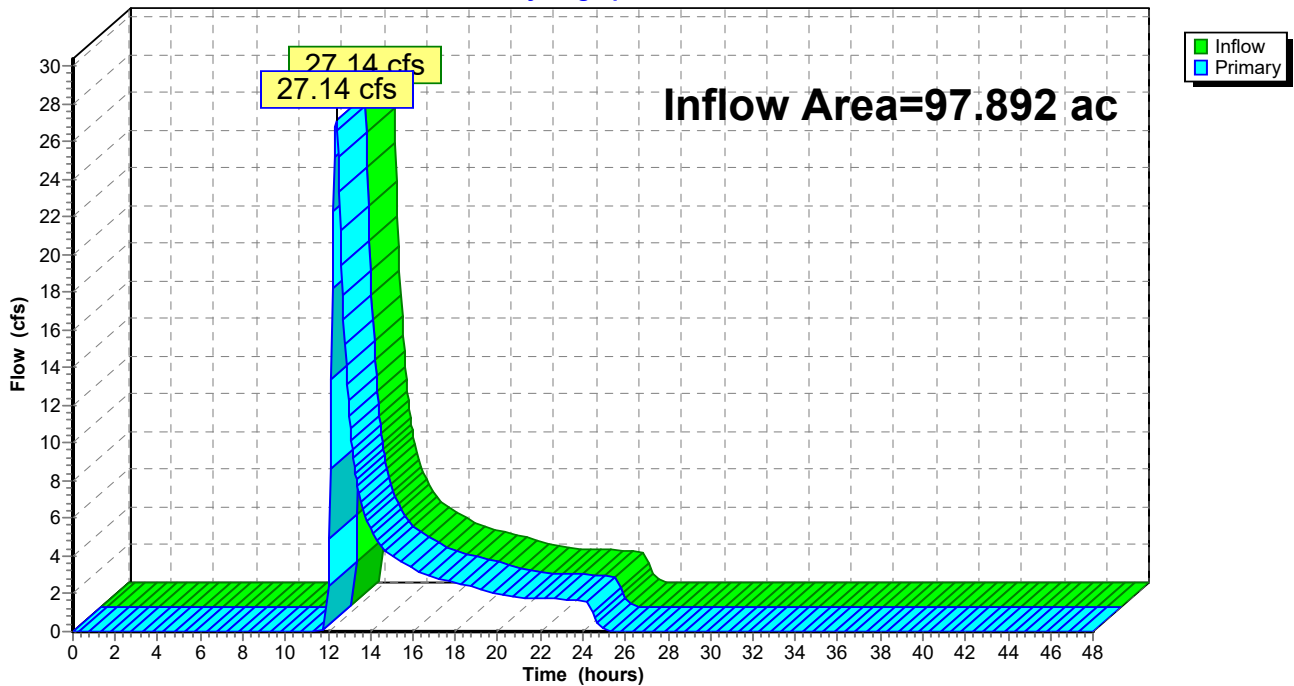
### Summary for Link SP17:

Inflow Area = 97.892 ac, 1.18% Impervious, Inflow Depth = 0.53" for 10-year event  
Inflow = 27.14 cfs @ 12.39 hrs, Volume= 4.335 af  
Primary = 27.14 cfs @ 12.39 hrs, Volume= 4.335 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP17:

Hydrograph



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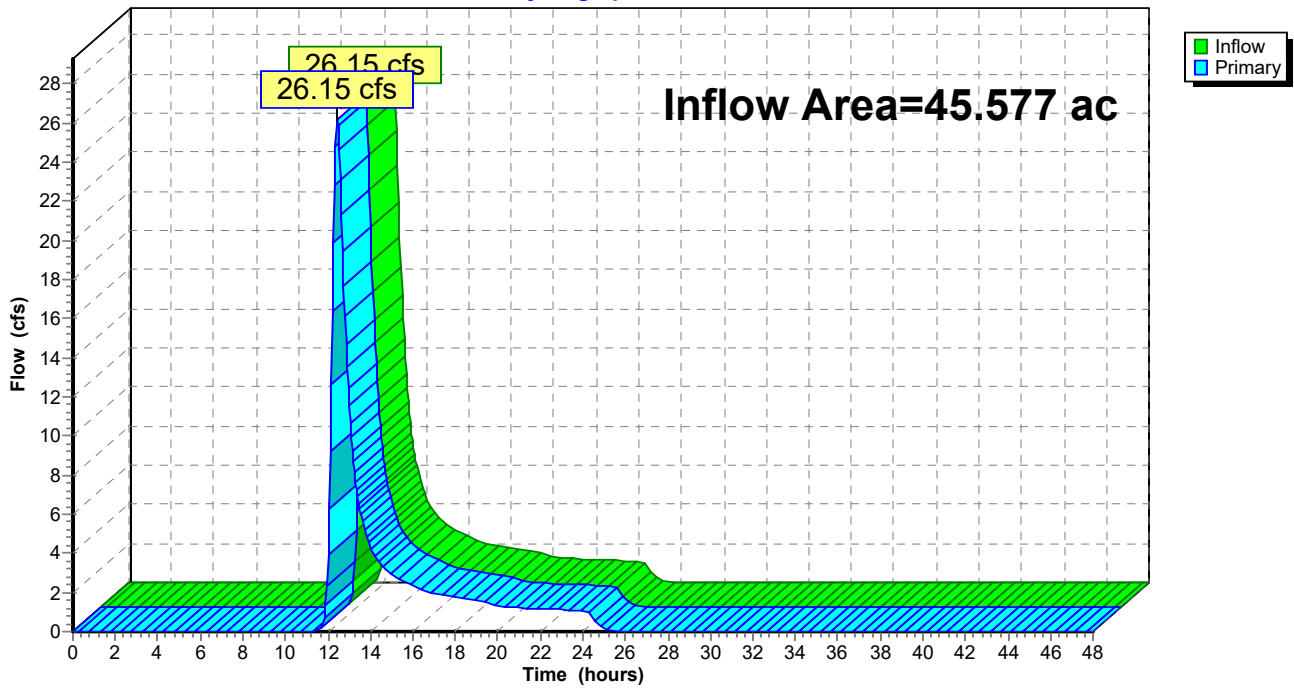
**Summary for Link SP18:**

Inflow Area = 45.577 ac, 0.74% Impervious, Inflow Depth = 0.95" for 10-year event  
Inflow = 26.15 cfs @ 12.44 hrs, Volume= 3.623 af  
Primary = 26.15 cfs @ 12.44 hrs, Volume= 3.623 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

**Link SP18:**

Hydrograph



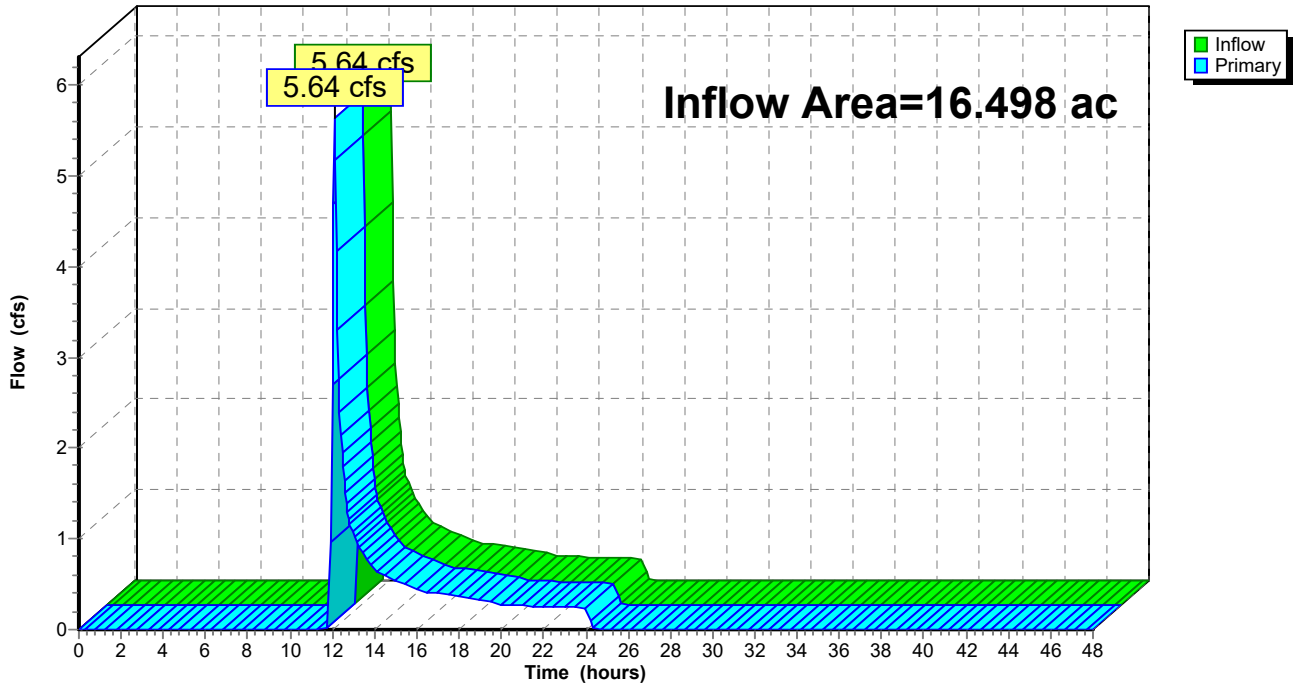
Summary for Link SP2:

Inflow Area = 16.498 ac, 0.00% Impervious, Inflow Depth = 0.42" for 10-year event  
Inflow = 5.64 cfs @ 12.11 hrs, Volume= 0.572 af  
Primary = 5.64 cfs @ 12.11 hrs, Volume= 0.572 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP2:

Hydrograph



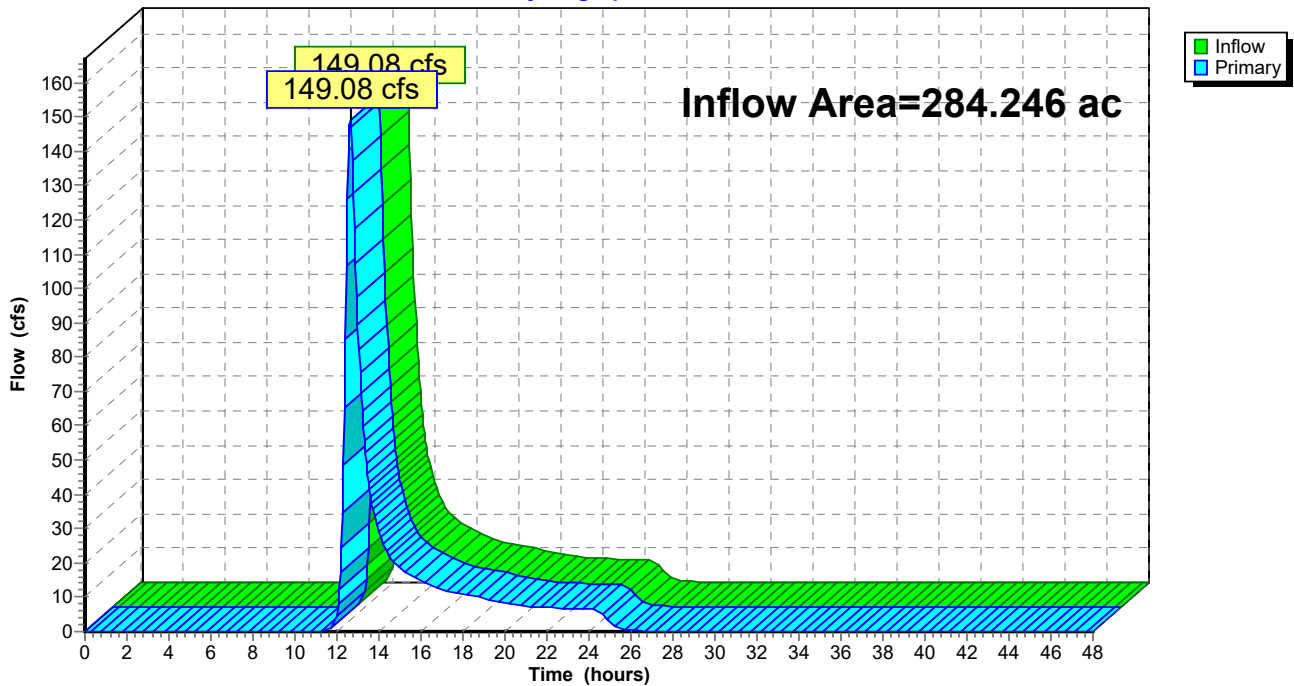
### Summary for Link SP22:

Inflow Area = 284.246 ac, 1.82% Impervious, Inflow Depth = 0.89" for 10-year event  
Inflow = 149.08 cfs @ 12.64 hrs, Volume= 21.084 af  
Primary = 149.08 cfs @ 12.64 hrs, Volume= 21.084 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP22:

Hydrograph



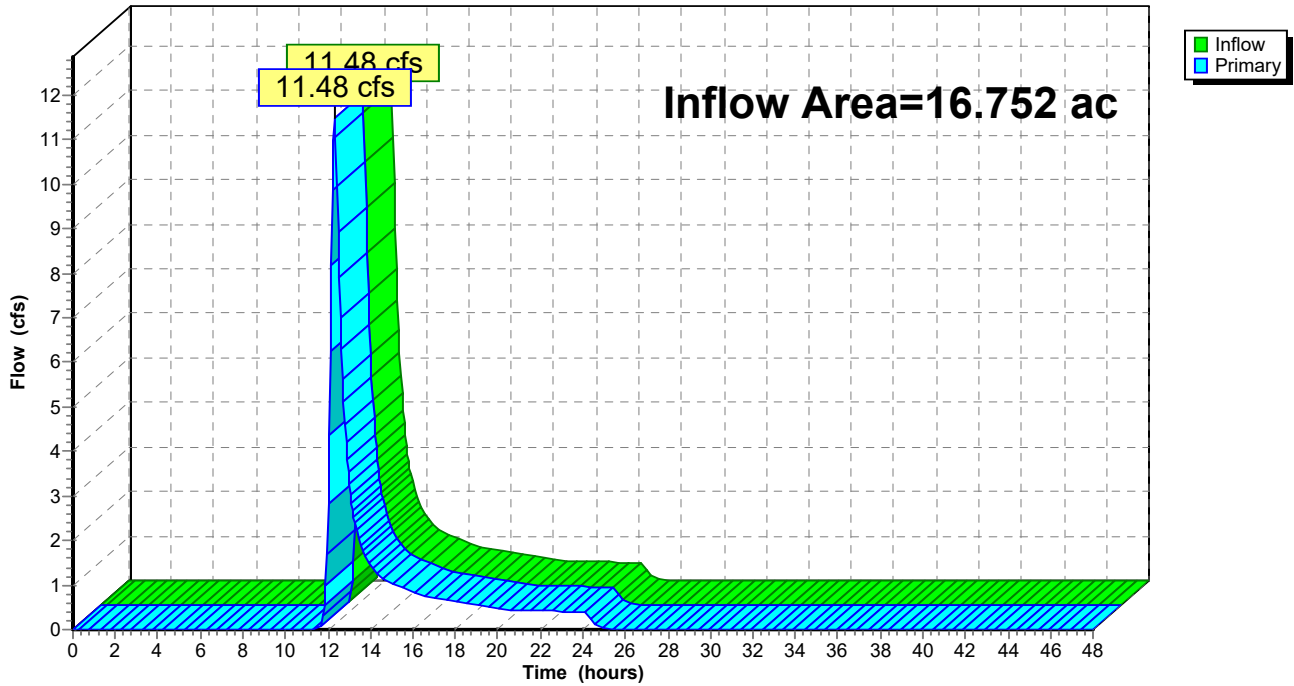
### Summary for Link SP23:

Inflow Area = 16.752 ac, 2.31% Impervious, Inflow Depth = 0.95" for 10-year event  
Inflow = 11.48 cfs @ 12.32 hrs, Volume= 1.332 af  
Primary = 11.48 cfs @ 12.32 hrs, Volume= 1.332 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP23:

Hydrograph



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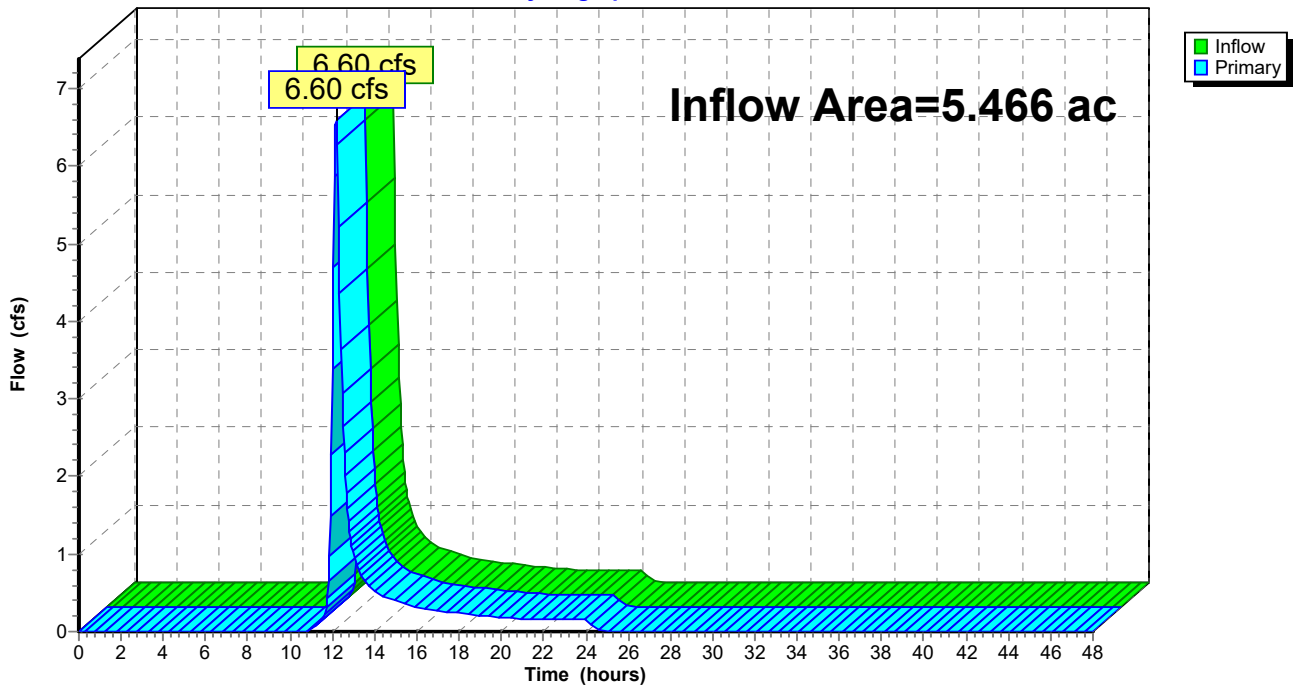
**Summary for Link SP24:**

Inflow Area = 5.466 ac, 7.70% Impervious, Inflow Depth = 1.24" for 10-year event  
Inflow = 6.60 cfs @ 12.18 hrs, Volume= 0.565 af  
Primary = 6.60 cfs @ 12.18 hrs, Volume= 0.565 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

**Link SP24:**

Hydrograph



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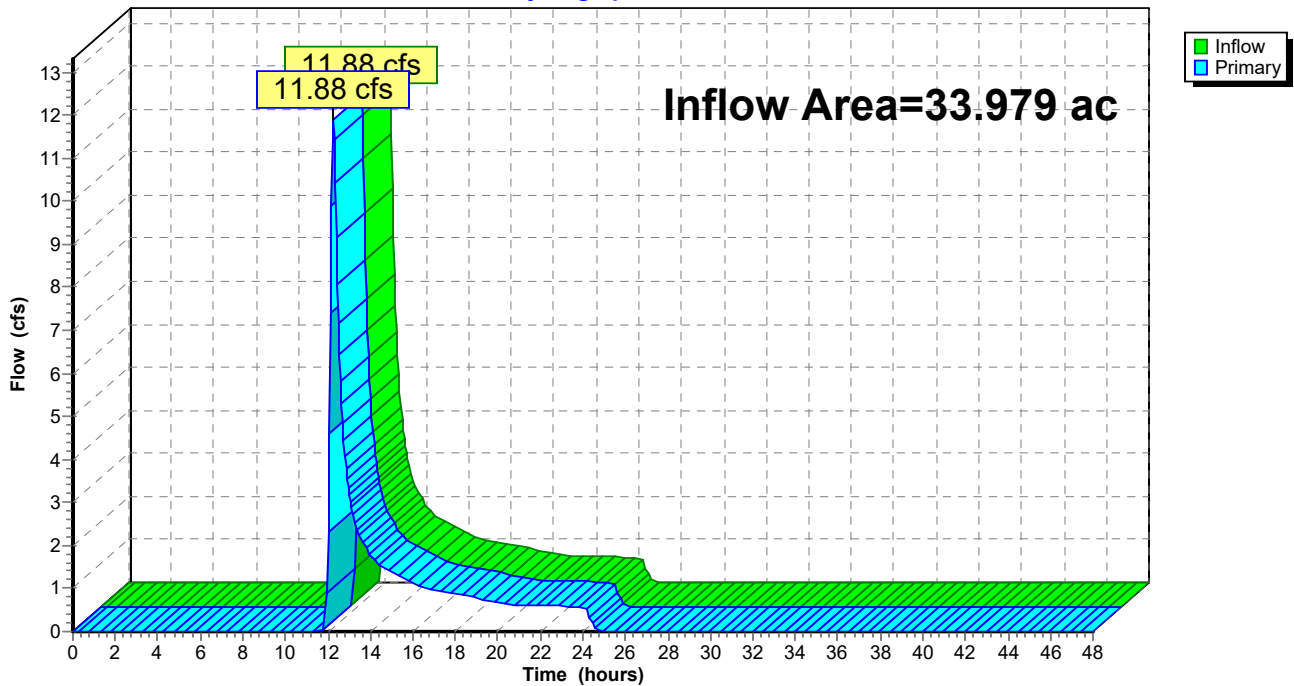
**Summary for Link SP3:**

Inflow Area = 33.979 ac, 0.00% Impervious, Inflow Depth = 0.53" for 10-year event  
Inflow = 11.88 cfs @ 12.25 hrs, Volume= 1.505 af  
Primary = 11.88 cfs @ 12.25 hrs, Volume= 1.505 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

**Link SP3:**

Hydrograph



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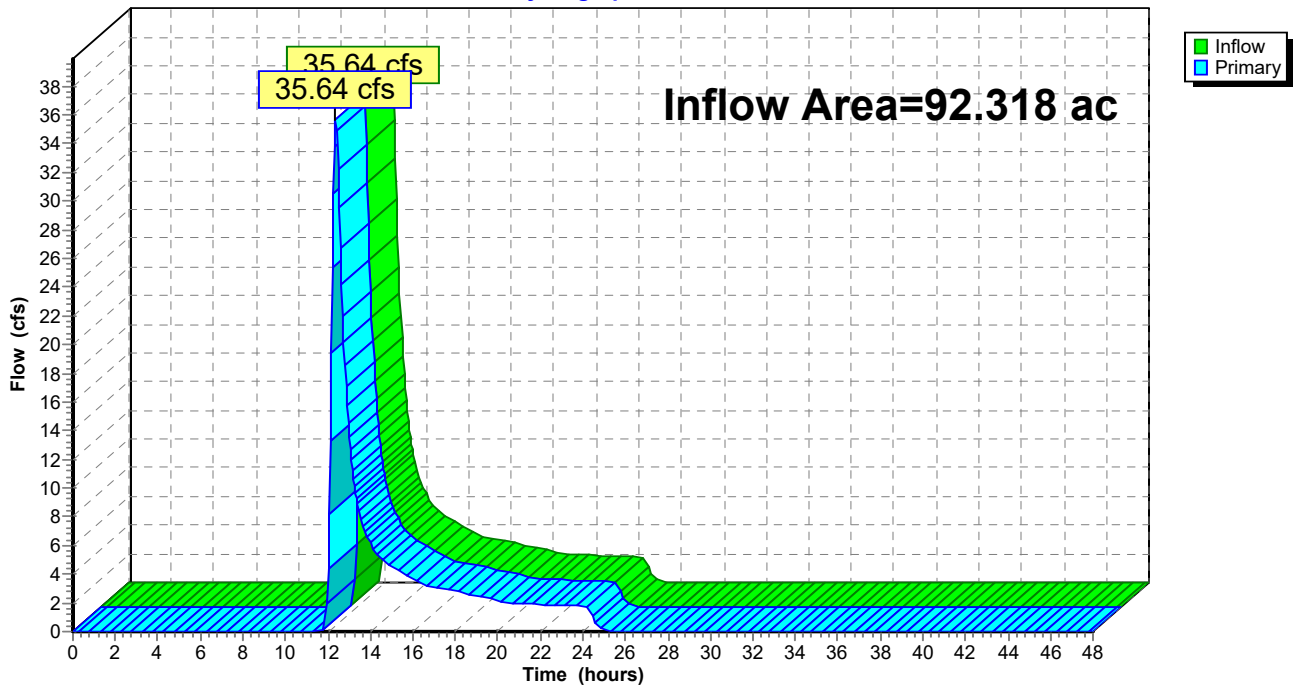
**Summary for Link SP4:**

Inflow Area = 92.318 ac, 0.28% Impervious, Inflow Depth = 0.66" for 10-year event  
Inflow = 35.64 cfs @ 12.37 hrs, Volume= 5.074 af  
Primary = 35.64 cfs @ 12.37 hrs, Volume= 5.074 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

**Link SP4:**

Hydrograph





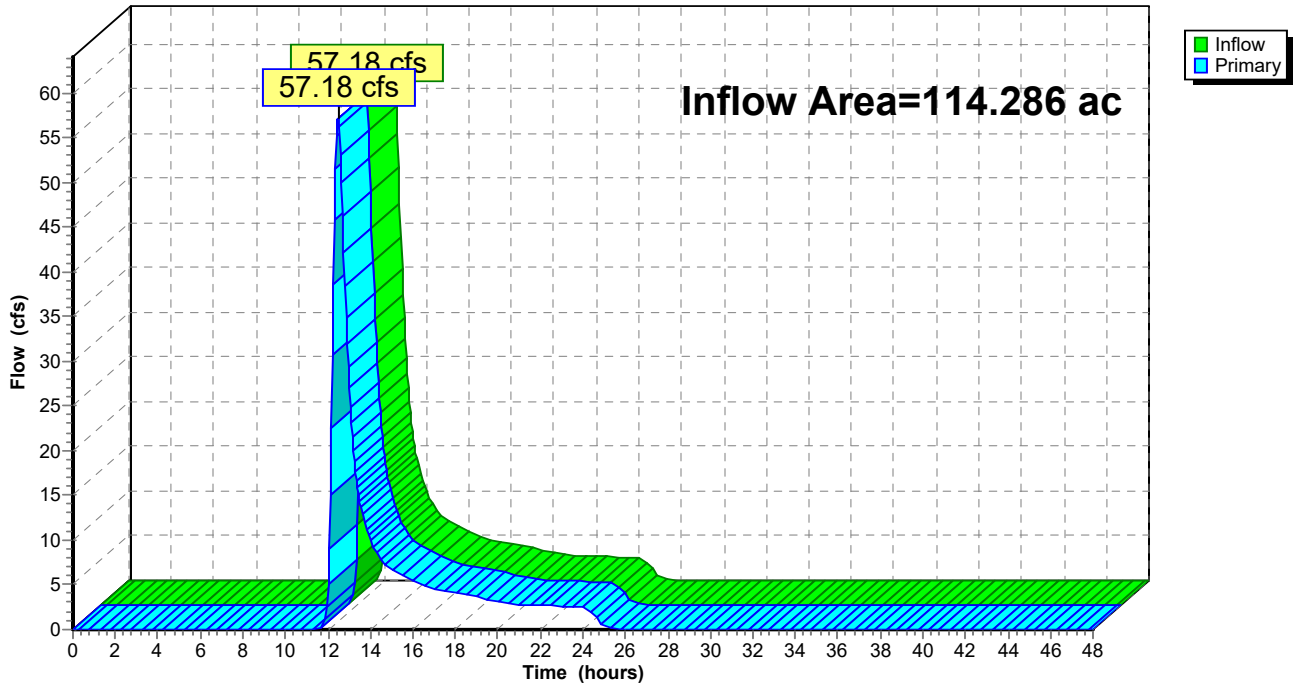
### Summary for Link SP43:

Inflow Area = 114.286 ac, 0.71% Impervious, Inflow Depth = 0.85" for 10-year event  
Inflow = 57.18 cfs @ 12.47 hrs, Volume= 8.140 af  
Primary = 57.18 cfs @ 12.47 hrs, Volume= 8.140 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP43:

Hydrograph



# Mill Pt Pre 1

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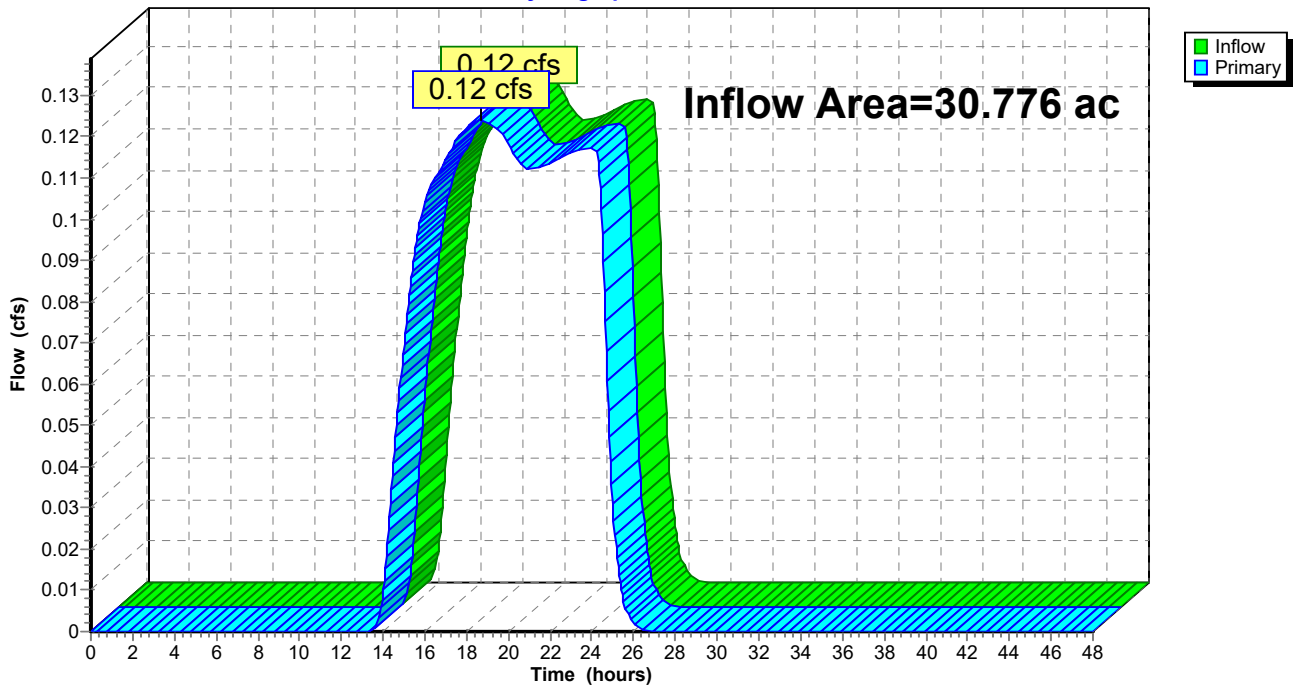
## Summary for Link SP46:

Inflow Area = 30.776 ac, 3.93% Impervious, Inflow Depth = 0.04" for 10-year event  
Inflow = 0.12 cfs @ 18.66 hrs, Volume= 0.096 af  
Primary = 0.12 cfs @ 18.66 hrs, Volume= 0.096 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP46:

Hydrograph



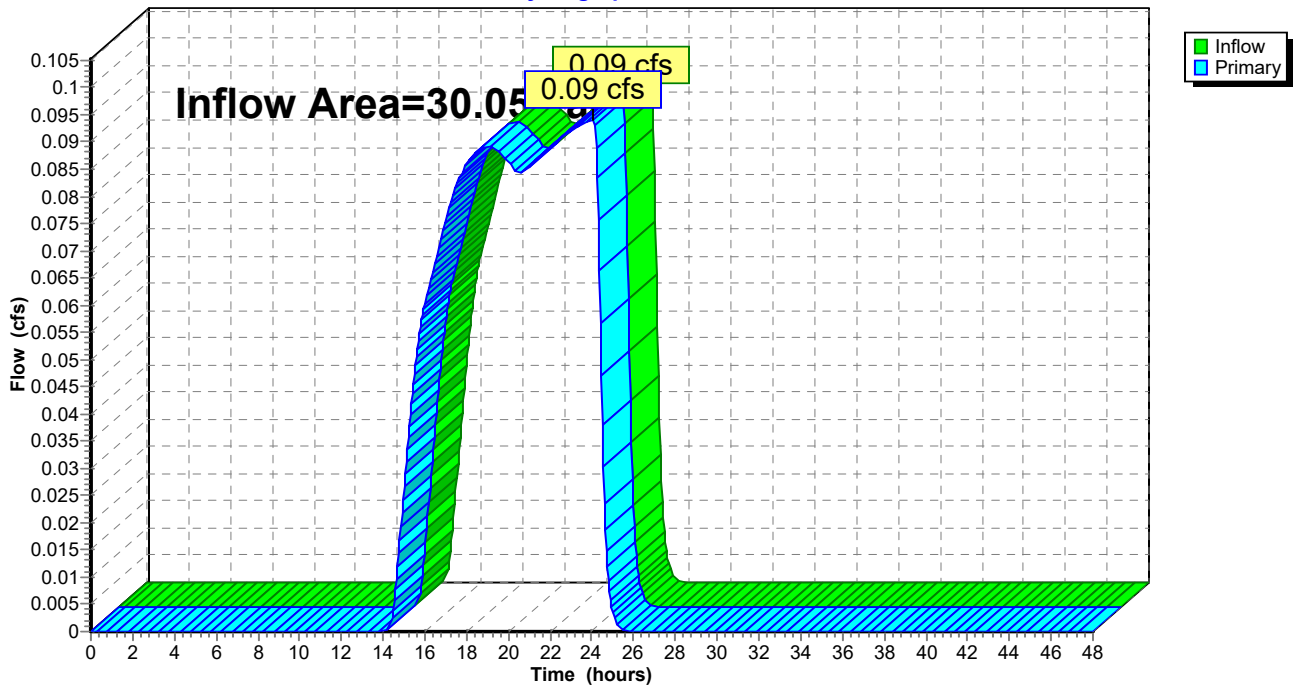
### Summary for Link SP47:

Inflow Area = 30.059 ac, 1.26% Impervious, Inflow Depth = 0.03" for 10-year event  
Inflow = 0.09 cfs @ 24.01 hrs, Volume= 0.065 af  
Primary = 0.09 cfs @ 24.01 hrs, Volume= 0.065 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP47:

Hydrograph



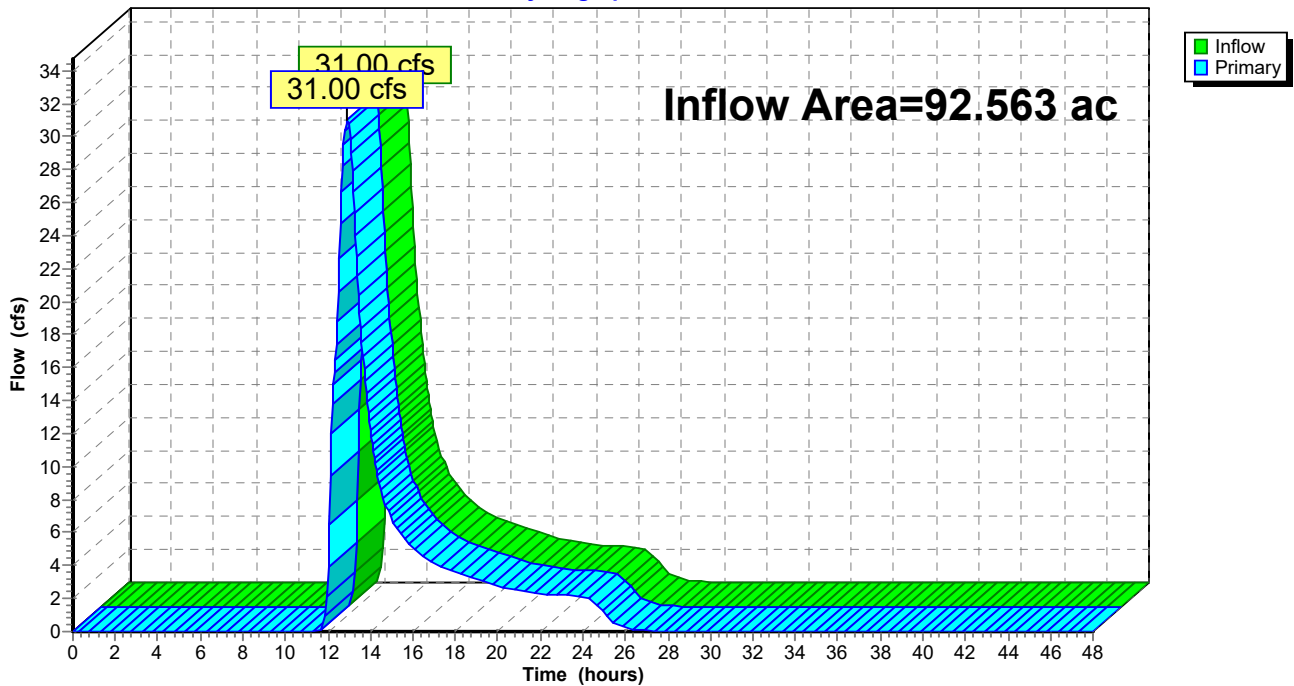
### Summary for Link SP5:

Inflow Area = 92.563 ac, 0.00% Impervious, Inflow Depth = 0.89" for 10-year event  
Inflow = 31.00 cfs @ 12.90 hrs, Volume= 6.859 af  
Primary = 31.00 cfs @ 12.90 hrs, Volume= 6.859 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP5:

Hydrograph



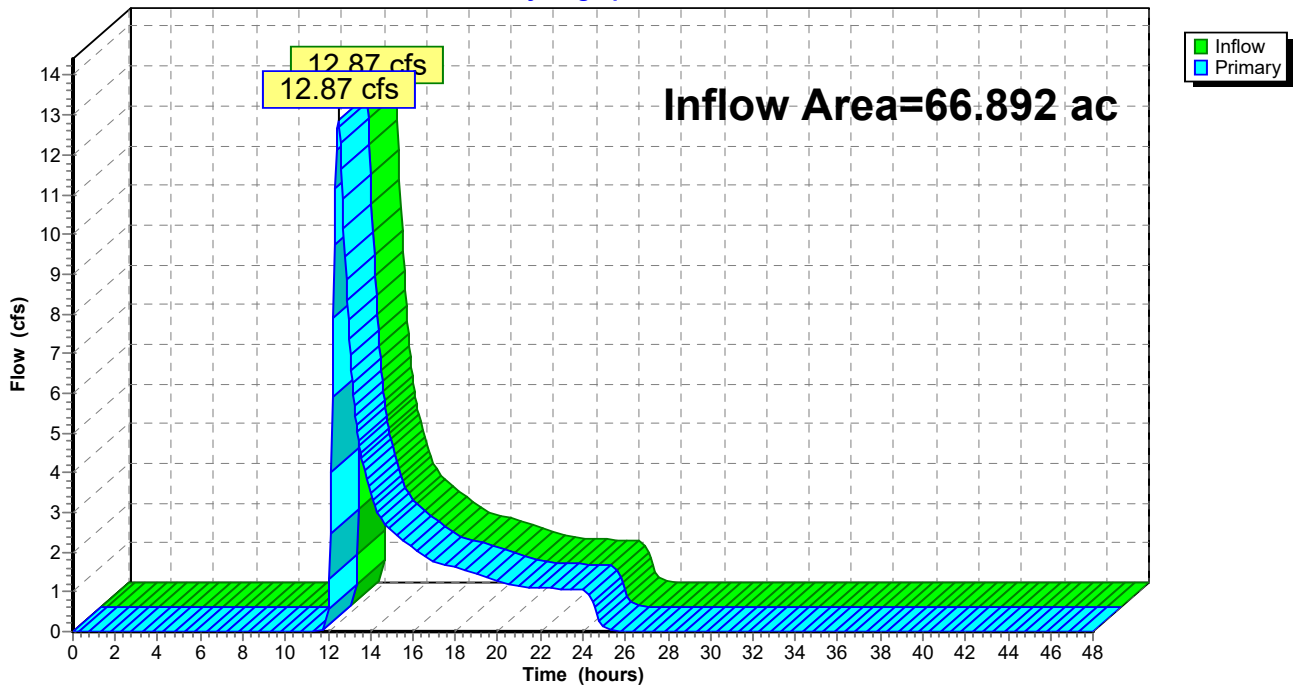
### Summary for Link SP7:

Inflow Area = 66.892 ac, 0.00% Impervious, Inflow Depth = 0.45" for 10-year event  
Inflow = 12.87 cfs @ 12.50 hrs, Volume= 2.525 af  
Primary = 12.87 cfs @ 12.50 hrs, Volume= 2.525 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP7:

Hydrograph



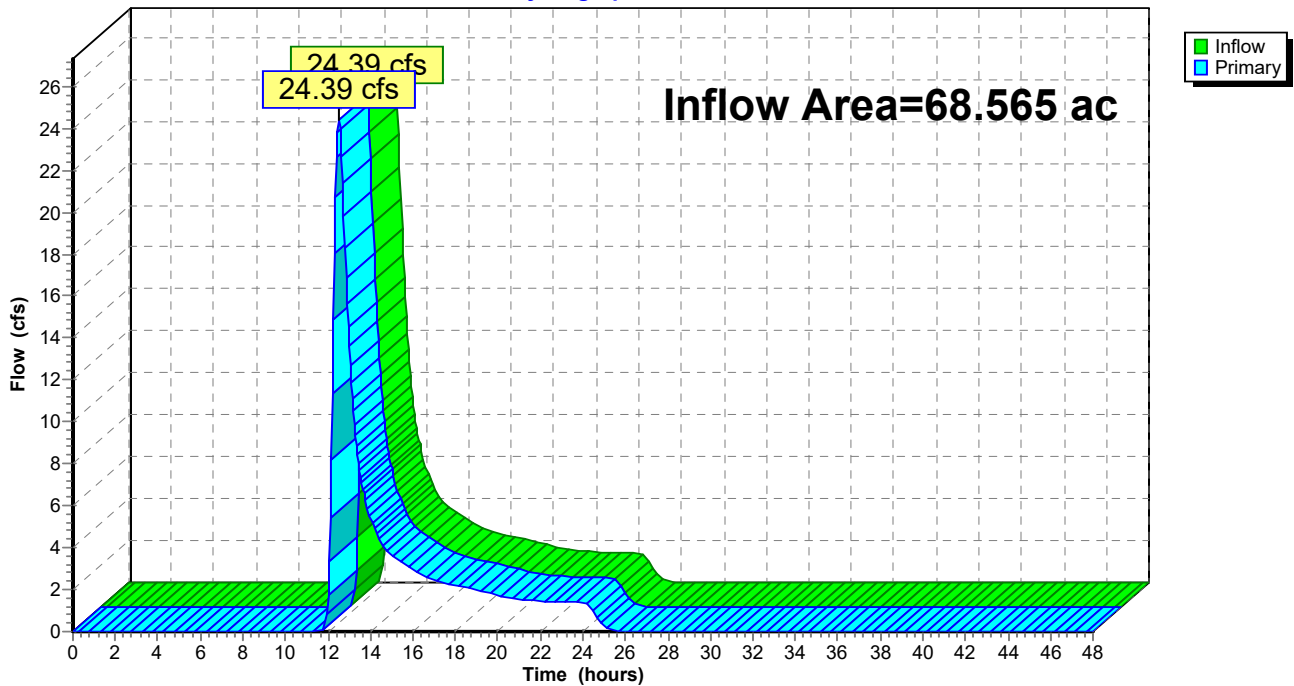
Summary for Link SP9:

Inflow Area = 68.565 ac, 1.11% Impervious, Inflow Depth = 0.71" for 10-year event  
Inflow = 24.39 cfs @ 12.52 hrs, Volume= 4.029 af  
Primary = 24.39 cfs @ 12.52 hrs, Volume= 4.029 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP9:

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points  
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

<b>Subcatchment 1S: Sub 1</b>	Runoff Area=5.786 ac 0.00% Impervious Runoff Depth=1.43" Flow Length=1,005' Tc=13.1 min CN=56 Runoff=10.41 cfs 0.691 af
<b>Subcatchment 2S: Sub 2</b>	Runoff Area=16.498 ac 0.00% Impervious Runoff Depth=1.51" Flow Length=1,307' Tc=14.1 min CN=57 Runoff=30.30 cfs 2.074 af
<b>Subcatchment 3S: Sub 3</b>	Runoff Area=33.979 ac 0.00% Impervious Runoff Depth=1.74" Flow Length=2,507' Tc=25.3 min CN=60 Runoff=52.70 cfs 4.930 af
<b>Subcatchment 4S: Sub 4</b>	Runoff Area=92.318 ac 0.28% Impervious Runoff Depth=1.98" Flow Length=4,160' Tc=35.5 min CN=63 Runoff=133.29 cfs 15.256 af
<b>Subcatchment 5S: Sub 5</b>	Runoff Area=17.299 ac 0.00% Impervious Runoff Depth=2.15" Flow Length=1,946' Tc=24.6 min CN=65 Runoff=35.19 cfs 3.099 af
<b>Subcatchment 6S: Sub 6</b>	Runoff Area=16.301 ac 0.00% Impervious Runoff Depth=2.23" Flow Length=1,894' Tc=48.6 min CN=66 Runoff=21.70 cfs 3.036 af
<b>Subcatchment 7S: Sub 7</b>	Runoff Area=66.892 ac 0.00% Impervious Runoff Depth=1.58" Flow Length=2,117' Tc=40.9 min CN=58 Runoff=65.69 cfs 8.835 af
<b>Subcatchment 8S: Sub 8</b>	Runoff Area=58.963 ac 0.00% Impervious Runoff Depth=2.50" Flow Length=2,902' Tc=63.3 min CN=69 Runoff=73.45 cfs 12.263 af
<b>Subcatchment 9S: Sub 9</b>	Runoff Area=68.565 ac 1.11% Impervious Runoff Depth=2.07" Flow Length=2,945' Tc=45.6 min CN=64 Runoff=86.90 cfs 11.804 af
<b>Subcatchment 10S: Sub 10</b>	Runoff Area=22.236 ac 4.90% Impervious Runoff Depth=2.67" Flow Length=2,047' Tc=36.1 min CN=71 Runoff=44.88 cfs 4.956 af
<b>Subcatchment 11S: Sub 11</b>	Runoff Area=17.596 ac 2.21% Impervious Runoff Depth=2.23" Flow Length=1,622' Tc=18.4 min CN=66 Runoff=44.67 cfs 3.277 af
<b>Subcatchment 12S: Sub 12</b>	Runoff Area=4.859 ac 0.00% Impervious Runoff Depth=5.13" Tc=6.0 min CN=95 Runoff=37.76 cfs 2.079 af
<b>Subcatchment 13S: Sub 13</b>	Runoff Area=10.383 ac 0.20% Impervious Runoff Depth=2.07" Flow Length=848' Tc=17.7 min CN=64 Runoff=24.66 cfs 1.788 af
<b>Subcatchment 14S: Sub 14</b>	Runoff Area=72.733 ac 0.42% Impervious Runoff Depth=2.32" Flow Length=4,131' Tc=49.6 min CN=67 Runoff=99.70 cfs 14.066 af
<b>Subcatchment 17S: Sub 17</b>	Runoff Area=97.892 ac 1.18% Impervious Runoff Depth=1.74" Flow Length=3,526' Tc=35.1 min CN=60 Runoff=121.08 cfs 14.202 af
<b>Subcatchment 18S: Sub 18</b>	Runoff Area=45.577 ac 0.74% Impervious Runoff Depth=2.50" Flow Length=2,382' Tc=42.2 min CN=69 Runoff=76.28 cfs 9.479 af

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<b>Subcatchment 19S: Sub 19</b>	Runoff Area=28.407 ac 0.54% Impervious Runoff Depth=2.77" Flow Length=1,760' Tc=30.4 min CN=72 Runoff=66.82 cfs 6.547 af
<b>Subcatchment 20S: Sub 20</b>	Runoff Area=70.525 ac 0.78% Impervious Runoff Depth=2.23" Flow Length=1,829' Tc=20.0 min CN=66 Runoff=170.25 cfs 13.134 af
<b>Subcatchment 21S: Sub 21</b>	Runoff Area=123.017 ac 3.33% Impervious Runoff Depth=2.23" Flow Length=4,201' Tc=42.5 min CN=66 Runoff=180.43 cfs 22.910 af
<b>Subcatchment 22S: Sub 22</b>	Runoff Area=62.297 ac 0.60% Impervious Runoff Depth=2.67" Flow Length=1,834' Tc=47.0 min CN=71 Runoff=104.33 cfs 13.886 af
<b>Subcatchment 23S: Sub 23</b>	Runoff Area=16.752 ac 2.31% Impervious Runoff Depth=2.50" Flow Length=1,297' Tc=33.0 min CN=69 Runoff=33.25 cfs 3.484 af
<b>Subcatchment 24S: Sub 24</b>	Runoff Area=5.466 ac 7.70% Impervious Runoff Depth=2.95" Flow Length=1,025' Tc=23.1 min CN=74 Runoff=16.40 cfs 1.344 af
<b>Subcatchment 43S: Subcat 43</b>	Runoff Area=34.064 ac 0.46% Impervious Runoff Depth=2.58" Flow Length=2,795' Tc=40.7 min CN=70 Runoff=60.76 cfs 7.337 af
<b>Subcatchment 44S: Subcat 44</b>	Runoff Area=46.290 ac 0.00% Impervious Runoff Depth=2.58" Flow Length=2,470' Tc=41.7 min CN=70 Runoff=81.24 cfs 9.971 af
<b>Subcatchment 45S: Subcat 45</b>	Runoff Area=33.932 ac 1.93% Impervious Runoff Depth=1.66" Flow Length=2,198' Tc=29.8 min CN=59 Runoff=44.42 cfs 4.701 af
<b>Subcatchment 46S: Subcat 46</b>	Runoff Area=30.776 ac 3.93% Impervious Runoff Depth=0.52" Flow Length=1,524' Tc=54.0 min CN=42 Runoff=4.48 cfs 1.338 af
<b>Subcatchment 47S: Subcat 47</b>	Runoff Area=30.059 ac 1.26% Impervious Runoff Depth=0.47" Flow Length=1,854' Tc=31.7 min CN=41 Runoff=4.75 cfs 1.174 af
<b>Reach 6R: W-NSD-35</b>	Avg. Flow Depth=0.89' Max Vel=5.32 fps Inflow=73.45 cfs 12.263 af n=0.035 L=1,882.0' S=0.0276 '/' Capacity=90.86 cfs Outflow=72.45 cfs 12.263 af
<b>Reach 13.1R:</b>	Avg. Flow Depth=0.09' Max Vel=2.32 fps Inflow=1.61 cfs 2.078 af n=0.030 L=165.0' S=0.0727 '/' Capacity=48.67 cfs Outflow=1.61 cfs 2.078 af
<b>Reach 13.2R:</b>	Avg. Flow Depth=0.14' Max Vel=4.86 fps Inflow=1.61 cfs 2.078 af n=0.035 L=232.0' S=0.2069 '/' Capacity=1,230.81 cfs Outflow=1.61 cfs 2.078 af
<b>Reach 20.1R: S-KCF-6</b>	Avg. Flow Depth=3.07' Max Vel=3.99 fps Inflow=227.84 cfs 19.682 af n=0.030 L=1,405.0' S=0.0028 '/' Capacity=141.69 cfs Outflow=206.83 cfs 19.682 af
<b>Reach 20.2R:</b>	Avg. Flow Depth=2.24' Max Vel=6.08 fps Inflow=206.83 cfs 19.682 af n=0.035 L=1,322.0' S=0.0121 '/' Capacity=250.41 cfs Outflow=199.93 cfs 19.682 af
<b>Reach 22.1R: S-KCF-5</b>	Avg. Flow Depth=2.31' Max Vel=4.84 fps Inflow=180.43 cfs 22.910 af n=0.030 L=665.0' S=0.0060 '/' Capacity=89.91 cfs Outflow=178.76 cfs 22.910 af
<b>Reach 22.2R:</b>	Avg. Flow Depth=4.19' Max Vel=5.12 fps Inflow=377.18 cfs 42.592 af n=0.035 L=707.0' S=0.0075 '/' Capacity=86.27 cfs Outflow=371.05 cfs 42.592 af



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<b>Reach 44R:</b>	Avg. Flow Depth=1.88' Max Vel=4.47 fps Inflow=60.76 cfs 7.337 af n=0.035 L=498.0' S=0.0321 '/' Capacity=8.70 cfs Outflow=60.27 cfs 7.337 af
<b>Reach 45R:</b>	Avg. Flow Depth=2.73' Max Vel=6.58 fps Inflow=141.03 cfs 17.308 af n=0.035 L=537.0' S=0.0372 '/' Capacity=16.21 cfs Outflow=140.13 cfs 17.308 af
<b>Pond 12P: 12P</b>	Peak Elev=508.35' Storage=43,067 cf Inflow=37.76 cfs 2.079 af 8.0" Round Culvert n=0.013 L=172.7' S=0.0058 '/' Outflow=1.61 cfs 2.078 af
<b>Link SP1:</b>	Inflow=10.41 cfs 0.691 af Primary=10.41 cfs 0.691 af
<b>Link SP10:</b>	Inflow=44.88 cfs 4.956 af Primary=44.88 cfs 4.956 af
<b>Link SP11:</b>	Inflow=44.67 cfs 3.277 af Primary=44.67 cfs 3.277 af
<b>Link SP13:</b>	Inflow=26.22 cfs 3.866 af Primary=26.22 cfs 3.866 af
<b>Link SP14:</b>	Inflow=99.70 cfs 14.066 af Primary=99.70 cfs 14.066 af
<b>Link SP17:</b>	Inflow=121.08 cfs 14.202 af Primary=121.08 cfs 14.202 af
<b>Link SP18:</b>	Inflow=76.28 cfs 9.479 af Primary=76.28 cfs 9.479 af
<b>Link SP2:</b>	Inflow=30.30 cfs 2.074 af Primary=30.30 cfs 2.074 af
<b>Link SP22:</b>	Inflow=473.35 cfs 56.478 af Primary=473.35 cfs 56.478 af
<b>Link SP23:</b>	Inflow=33.25 cfs 3.484 af Primary=33.25 cfs 3.484 af
<b>Link SP24:</b>	Inflow=16.40 cfs 1.344 af Primary=16.40 cfs 1.344 af
<b>Link SP3:</b>	Inflow=52.70 cfs 4.930 af Primary=52.70 cfs 4.930 af
<b>Link SP4:</b>	Inflow=133.29 cfs 15.256 af Primary=133.29 cfs 15.256 af
<b>Link SP43:</b>	Inflow=173.96 cfs 22.009 af Primary=173.96 cfs 22.009 af

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**Link SP46:**

Inflow=4.48 cfs 1.338 af  
Primary=4.48 cfs 1.338 af

**Link SP47:**

Inflow=4.75 cfs 1.174 af  
Primary=4.75 cfs 1.174 af

**Link SP5:**

Inflow=95.55 cfs 18.398 af  
Primary=95.55 cfs 18.398 af

**Link SP7:**

Inflow=65.69 cfs 8.835 af  
Primary=65.69 cfs 8.835 af

**Link SP9:**

Inflow=86.90 cfs 11.804 af  
Primary=86.90 cfs 11.804 af

**Total Runoff Area = 1,129.462 ac   Runoff Volume = 197.663 af   Average Runoff Depth = 2.10"**  
**98.88% Pervious = 1,116.768 ac   1.12% Impervious = 12.694 ac**

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**Summary for Subcatchment 1S: Sub 1**

Runoff = 10.41 cfs @ 12.07 hrs, Volume= 0.691 af, Depth= 1.43"  
 Routed to Link SP1 :

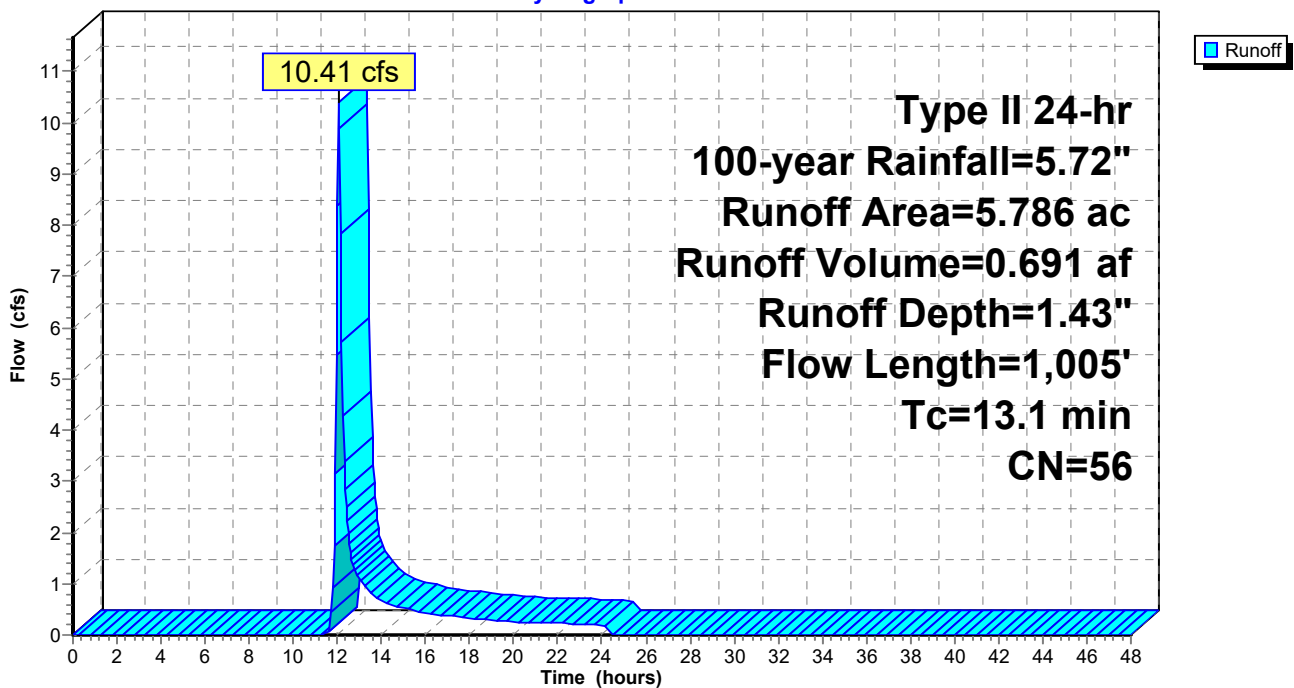
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
1.500	58	Meadow, non-grazed, HSG B
4.286	55	Woods, Good, HSG B
5.786	56	Weighted Average
5.786		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	100	0.0620	0.24		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
2.9	427	0.2390	2.44		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
2.0	263	0.0980	2.19		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.1	215	0.4050	3.18		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
13.1	1,005	Total			

**Subcatchment 1S: Sub 1**

Hydrograph



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**Summary for Subcatchment 2S: Sub 2**

Runoff = 30.30 cfs @ 12.08 hrs, Volume= 2.074 af, Depth= 1.51"

Routed to Link SP2 :

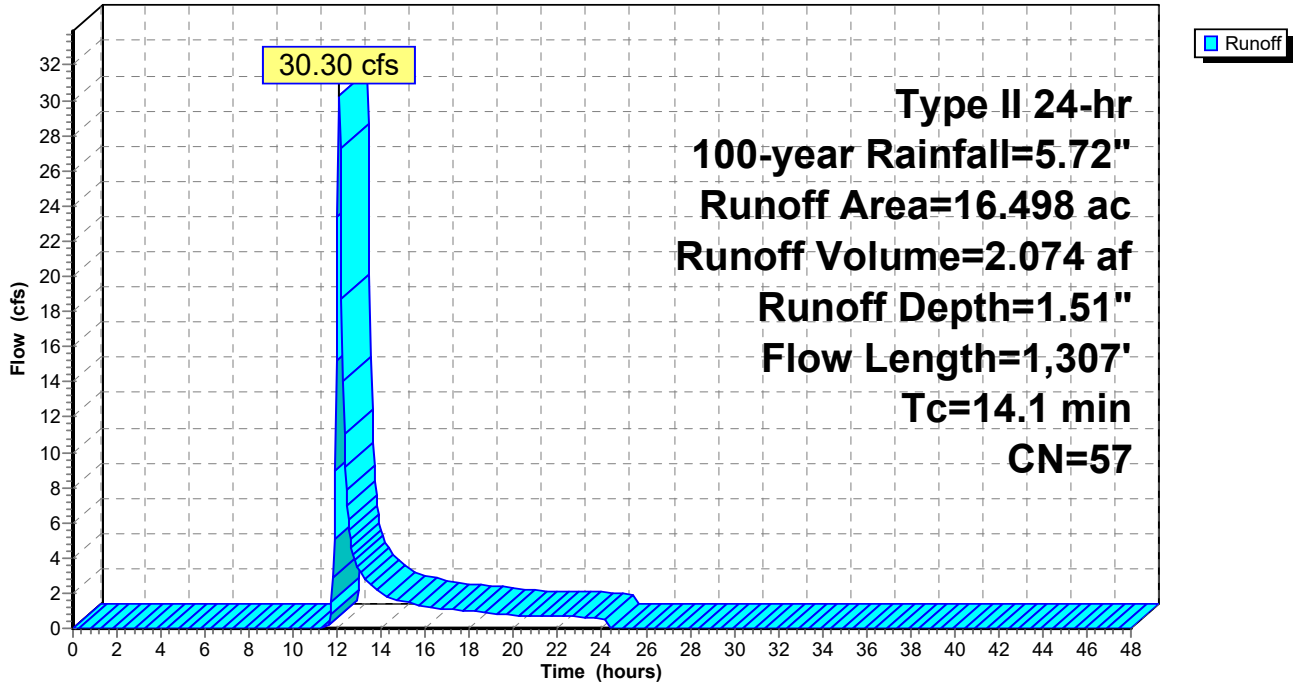
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
8.619	58	Meadow, non-grazed, HSG B
7.879	55	Woods, Good, HSG B
16.498	57	Weighted Average
16.498		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.8	100	0.1010	0.29		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
2.8	407	0.2420	2.46		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
1.5	225	0.1200	2.42		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.3	169	0.1830	2.14		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
0.5	113	0.5100	3.57		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
2.2	293	0.0220	2.22		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
14.1	1,307	Total			

Subcatchment 2S: Sub 2

Hydrograph



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**Summary for Subcatchment 3S: Sub 3**

Runoff = 52.70 cfs @ 12.21 hrs, Volume= 4.930 af, Depth= 1.74"  
 Routed to Link SP3 :

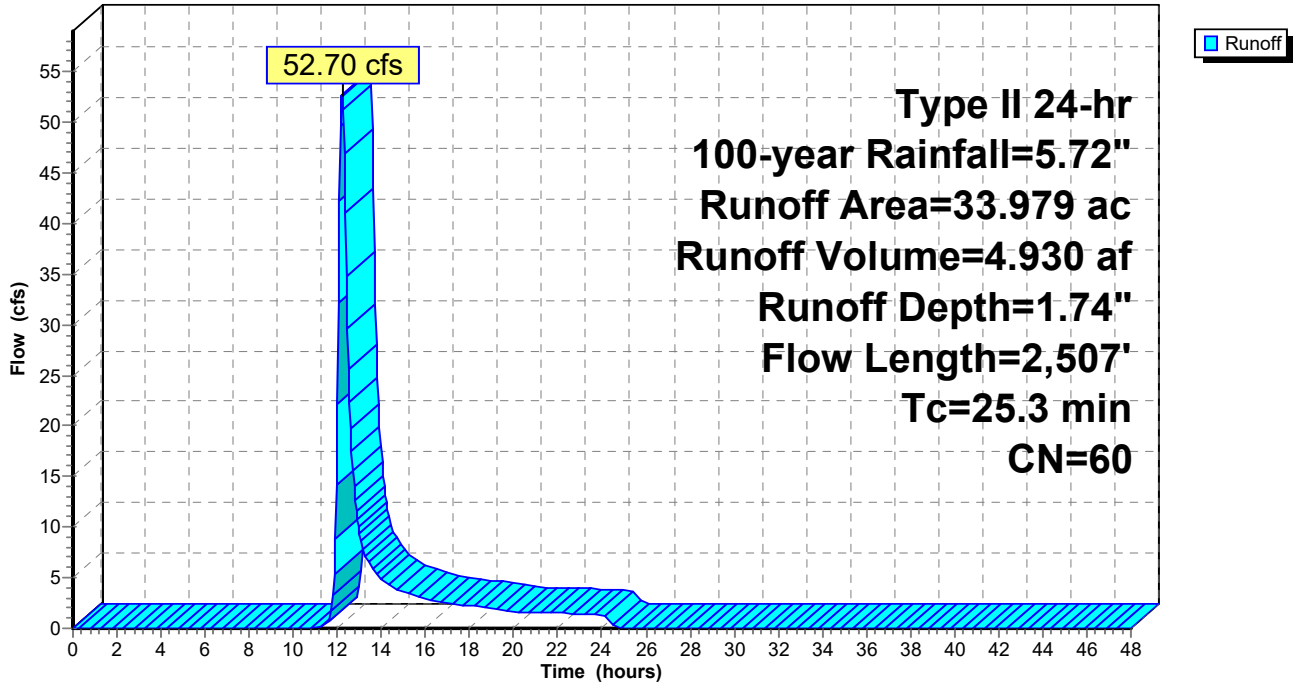
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
17.630	58	Meadow, non-grazed, HSG B
7.609	71	Meadow, non-grazed, HSG C
8.319	55	Woods, Good, HSG B
0.421	70	Woods, Good, HSG C
33.979	60	Weighted Average
33.979		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	100	0.0400	0.20		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
1.1	147	0.0990	2.20		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
5.5	480	0.0430	1.45		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.2	375	0.0770	1.94		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.6	337	0.0950	1.54		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
2.5	632		4.29		<b>Direct Entry, CF</b>
1.0	436		7.04		<b>Direct Entry, CF</b>
25.3	2,507	Total			

Subcatchment 3S: Sub 3

Hydrograph



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**Summary for Subcatchment 4S: Sub 4**

Runoff = 133.29 cfs @ 12.33 hrs, Volume= 15.256 af, Depth= 1.98"

Routed to Link SP4 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

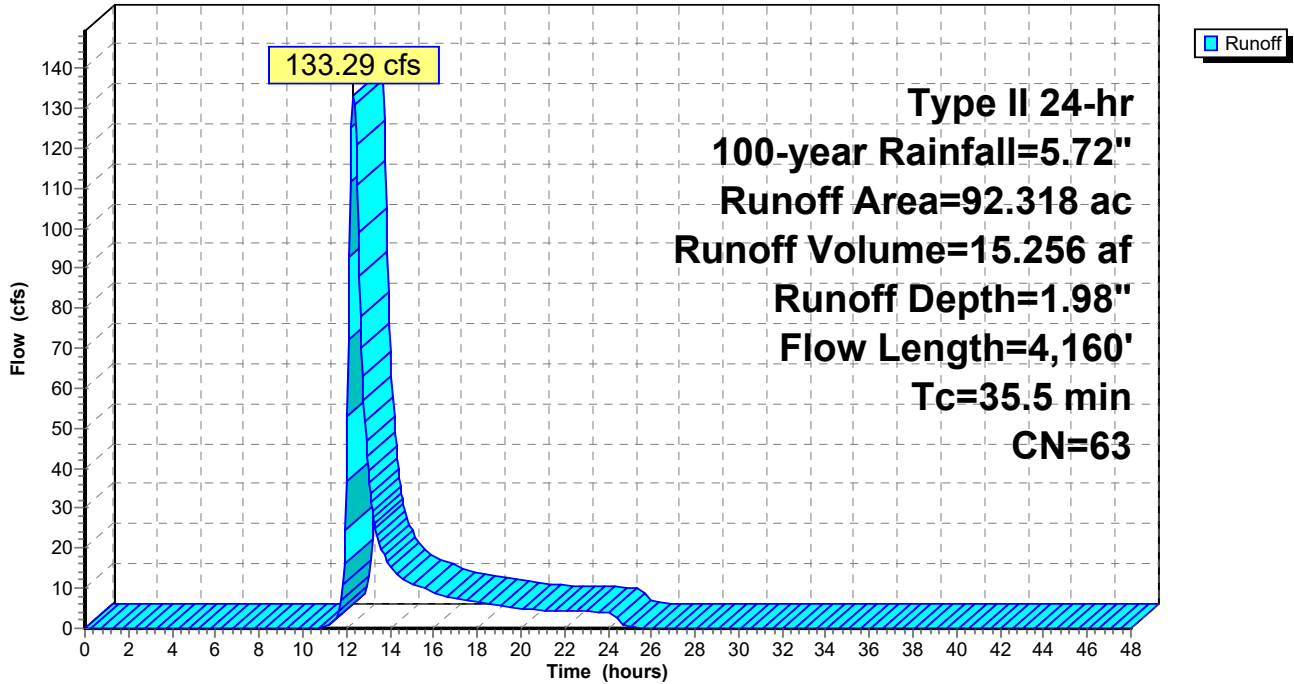
Area (ac)	CN	Description
* 0.259	98	Impervious surface
* 0.324	96	Gravel surface
42.704	58	Meadow, non-grazed, HSG B
33.177	71	Meadow, non-grazed, HSG C
1.021	48	Brush, Good, HSG B
1.934	65	Brush, Good, HSG C
9.736	55	Woods, Good, HSG B
3.163	70	Woods, Good, HSG C
92.318	63	Weighted Average
92.059		99.72% Pervious Area
0.259		0.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	100	0.1900	0.17		<b>Sheet Flow,</b> Woods: Light underbrush n= 0.400 P2= 2.50"
1.8	295	0.1550	2.76		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
17.1	1,344	0.0350	1.31		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
6.7	2,421		6.01		<b>Direct Entry, CF</b>
35.5	4,160	Total			



Subcatchment 4S: Sub 4

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**Summary for Subcatchment 5S: Sub 5**

Runoff = 35.19 cfs @ 12.19 hrs, Volume= 3.099 af, Depth= 2.15"  
 Routed to Link SP5 :

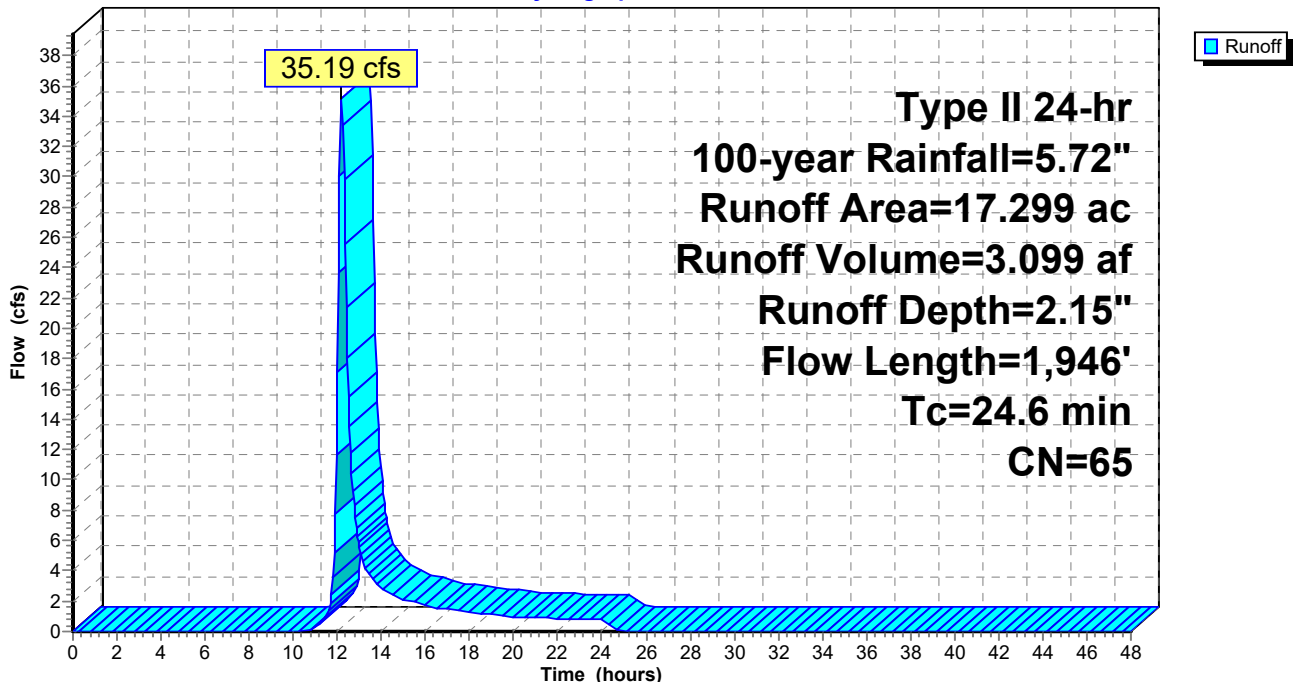
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
4.709	58	Meadow, non-grazed, HSG B
8.414	71	Meadow, non-grazed, HSG C
2.614	55	Woods, Good, HSG B
1.562	70	Woods, Good, HSG C
17.299	65	Weighted Average
17.299		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.0220	0.16		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
6.9	607	0.0440	1.47		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.3	195	0.0780	1.40		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
4.7	1,044		3.70		<b>Direct Entry, CF</b>
24.6	1,946	Total			

**Subcatchment 5S: Sub 5**

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**Summary for Subcatchment 6S: Sub 6**

Runoff = 21.70 cfs @ 12.50 hrs, Volume= 3.036 af, Depth= 2.23"  
 Routed to Link SP5 :

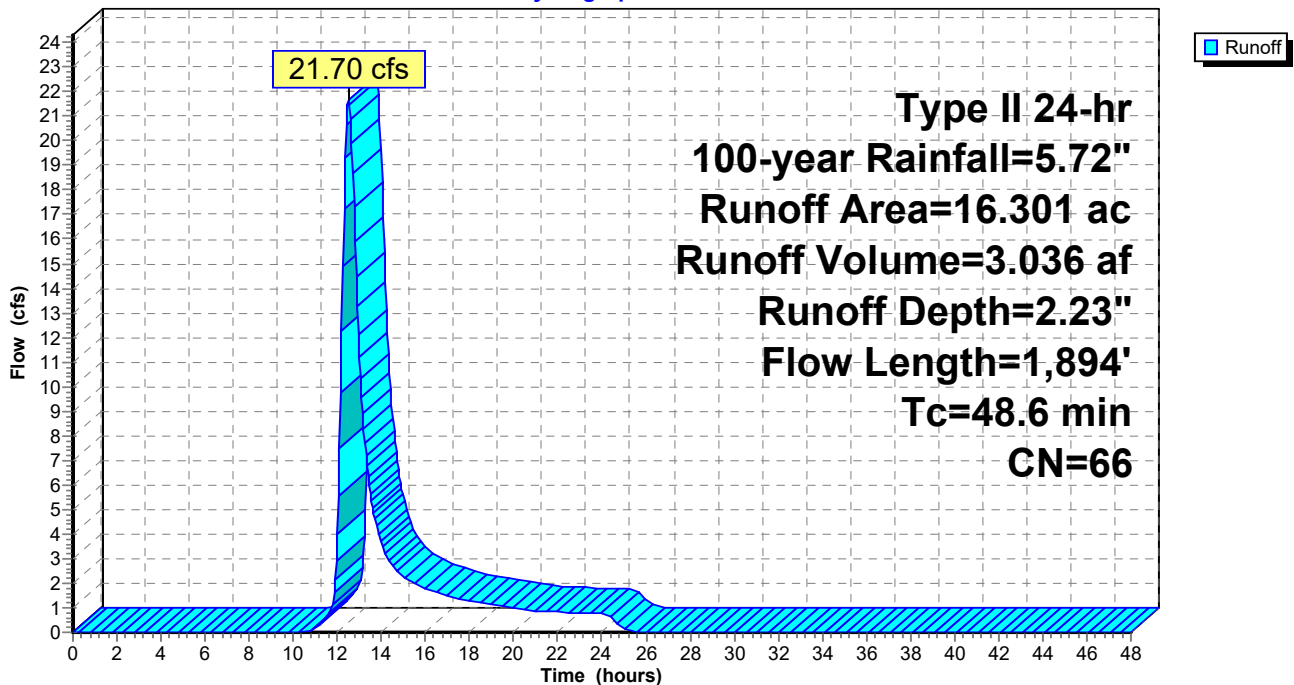
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
4.743	58	Meadow, non-grazed, HSG B
9.449	71	Meadow, non-grazed, HSG C
1.459	55	Woods, Good, HSG B
0.650	70	Woods, Good, HSG C
16.301	66	Weighted Average
16.301		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.8	100	0.0020	0.06		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
19.8	1,554	0.0350	1.31		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.0	240		3.81		<b>Direct Entry, CF</b>
48.6	1,894	Total			

**Subcatchment 6S: Sub 6**

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**Summary for Subcatchment 7S: Sub 7**

Runoff = 65.69 cfs @ 12.42 hrs, Volume= 8.835 af, Depth= 1.58"  
 Routed to Link SP7 :

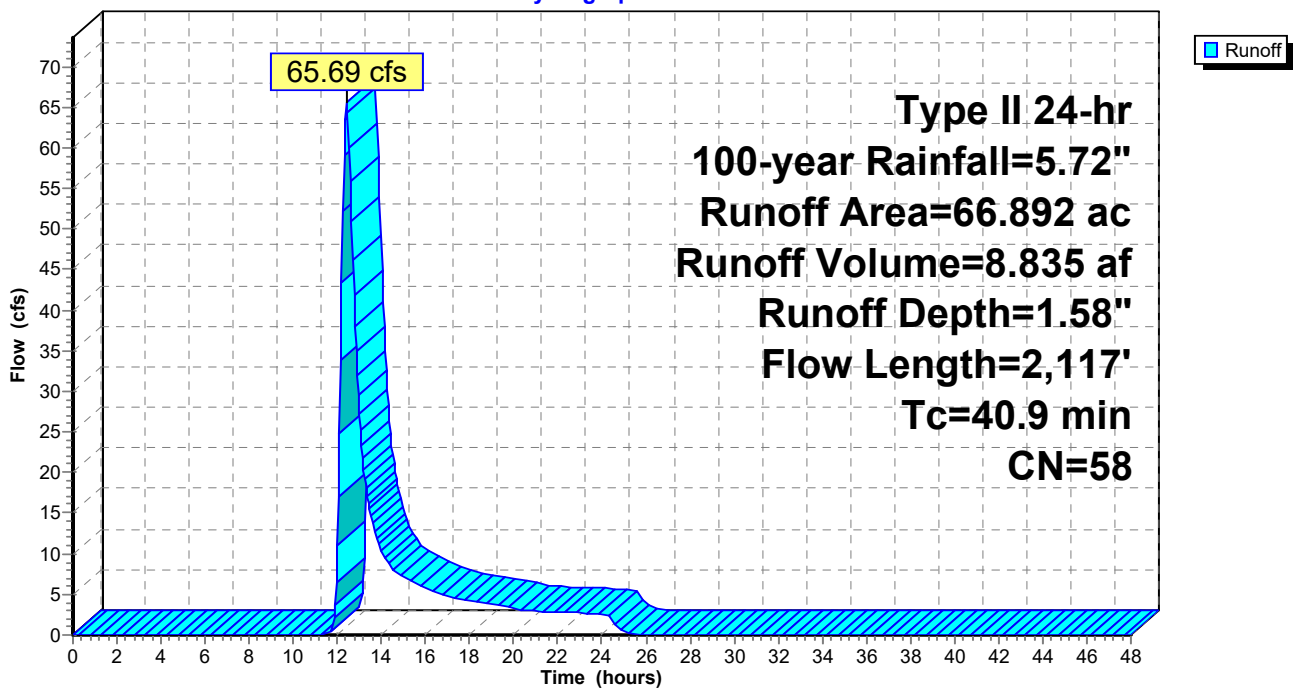
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
50.262	58	Meadow, non-grazed, HSG B
0.107	71	Meadow, non-grazed, HSG C
1.124	78	Meadow, non-grazed, HSG D
15.225	55	Woods, Good, HSG B
0.174	77	Woods, Good, HSG D
66.892	58	Weighted Average
66.892		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.8	100	0.0020	0.06		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
9.7	786	0.0370	1.35		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.4	1,231		6.01		<b>Direct Entry,</b>
40.9	2,117	Total			

**Subcatchment 7S: Sub 7**

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**Summary for Subcatchment 8S: Sub 8**

Runoff = 73.45 cfs @ 12.69 hrs, Volume= 12.263 af, Depth= 2.50"  
 Routed to Reach 6R : W-NSD-35

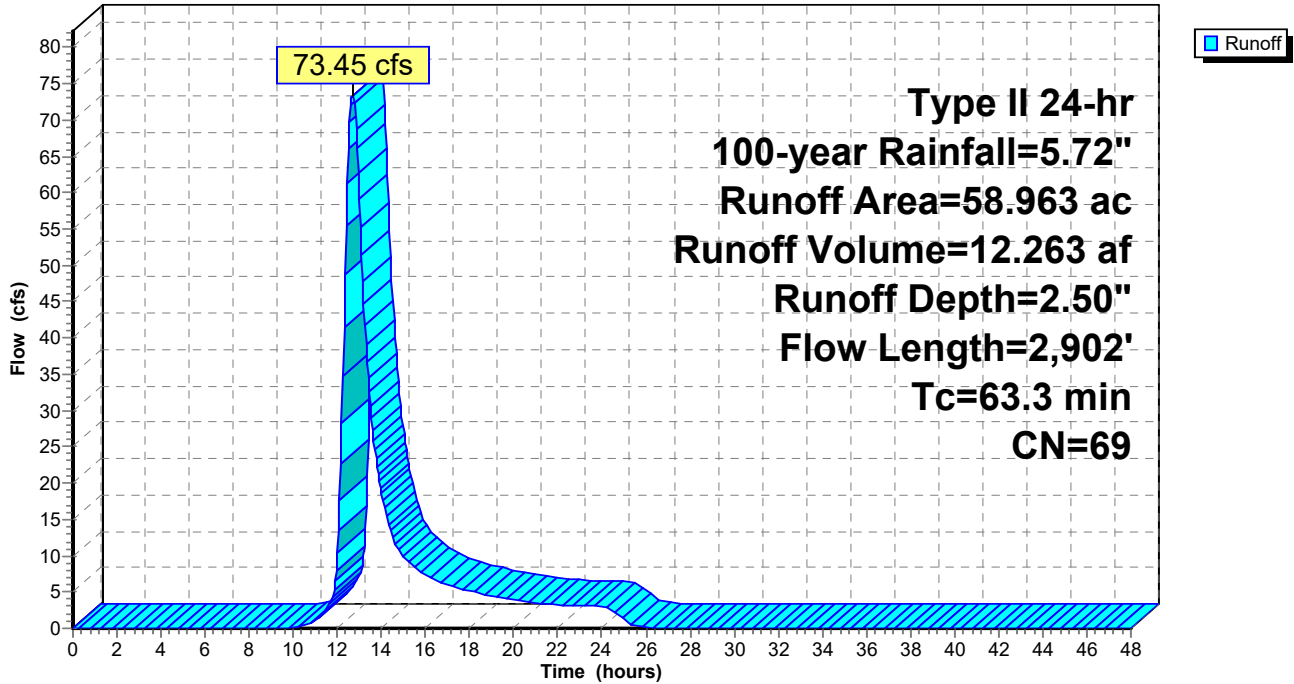
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
6.143	58	Meadow, non-grazed, HSG B
28.450	71	Meadow, non-grazed, HSG C
8.117	78	Meadow, non-grazed, HSG D
5.746	55	Woods, Good, HSG B
8.581	70	Woods, Good, HSG C
1.926	77	Woods, Good, HSG D
58.963	69	Weighted Average
58.963		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.7	100	0.0030	0.07		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
6.6	315	0.0130	0.80		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
23.1	727	0.0110	0.52		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
9.9	1,760		2.97		<b>Direct Entry, CF</b>
63.3	2,902	Total			

Subcatchment 8S: Sub 8

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 9S: Sub 9**

Runoff = 86.90 cfs @ 12.47 hrs, Volume= 11.804 af, Depth= 2.07"

Routed to Link SP9 :

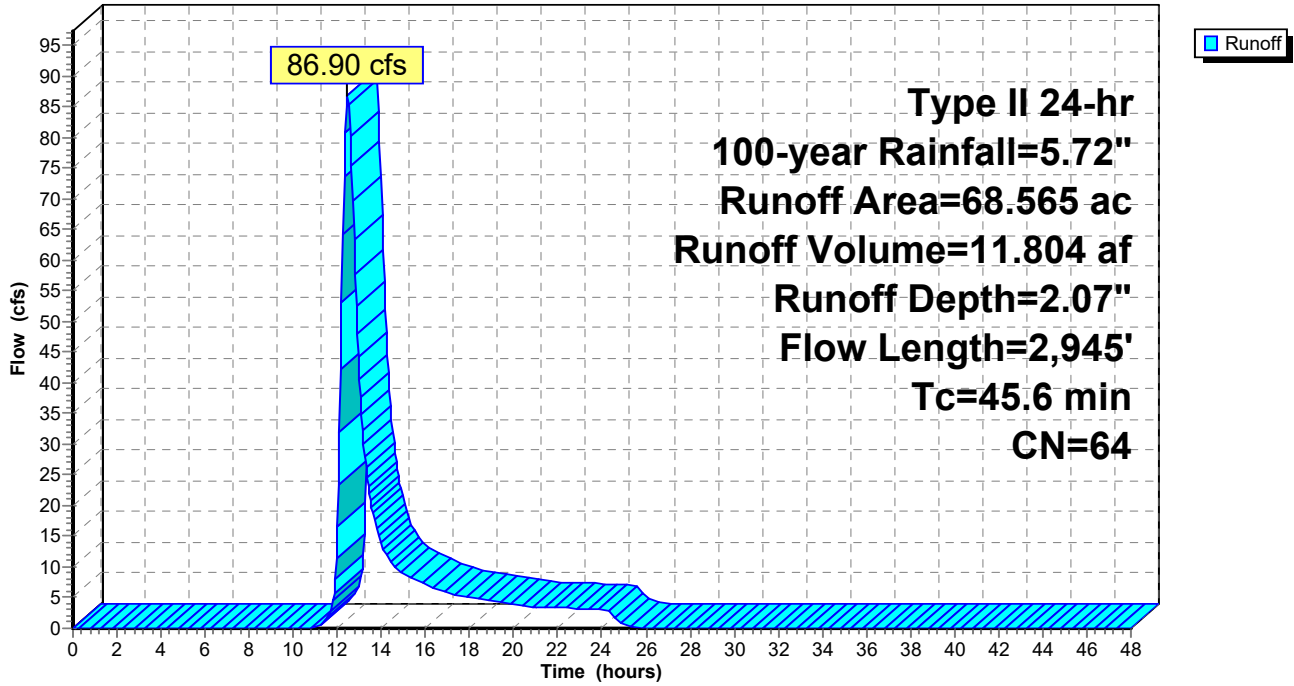
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 0.430	98	Surface water
* 0.332	98	Impervious surface
* 2.628	96	Gravel surface
6.553	61	>75% Grass cover, Good, HSG B
8.430	74	>75% Grass cover, Good, HSG C
23.963	58	Meadow, non-grazed, HSG B
7.746	71	Meadow, non-grazed, HSG C
2.113	78	Meadow, non-grazed, HSG D
2.871	48	Brush, Good, HSG B
0.820	65	Brush, Good, HSG C
0.014	73	Brush, Good, HSG D
11.085	55	Woods, Good, HSG B
1.580	70	Woods, Good, HSG C
68.565	64	Weighted Average
67.803		98.89% Pervious Area
0.762		1.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	100	0.0060	0.09		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
13.8	841	0.0210	1.01		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
10.9	1,254	0.0750	1.92		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.6	156		1.63		<b>Direct Entry,</b>
1.4	594		7.07		<b>Direct Entry,</b>
45.6	2,945	Total			

Subcatchment 9S: Sub 9

Hydrograph





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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 10S: Sub 10**

[47] Hint: Peak is 226% of capacity of segment #3

Runoff = 44.88 cfs @ 12.32 hrs, Volume= 4.956 af, Depth= 2.67"  
 Routed to Link SP10 :

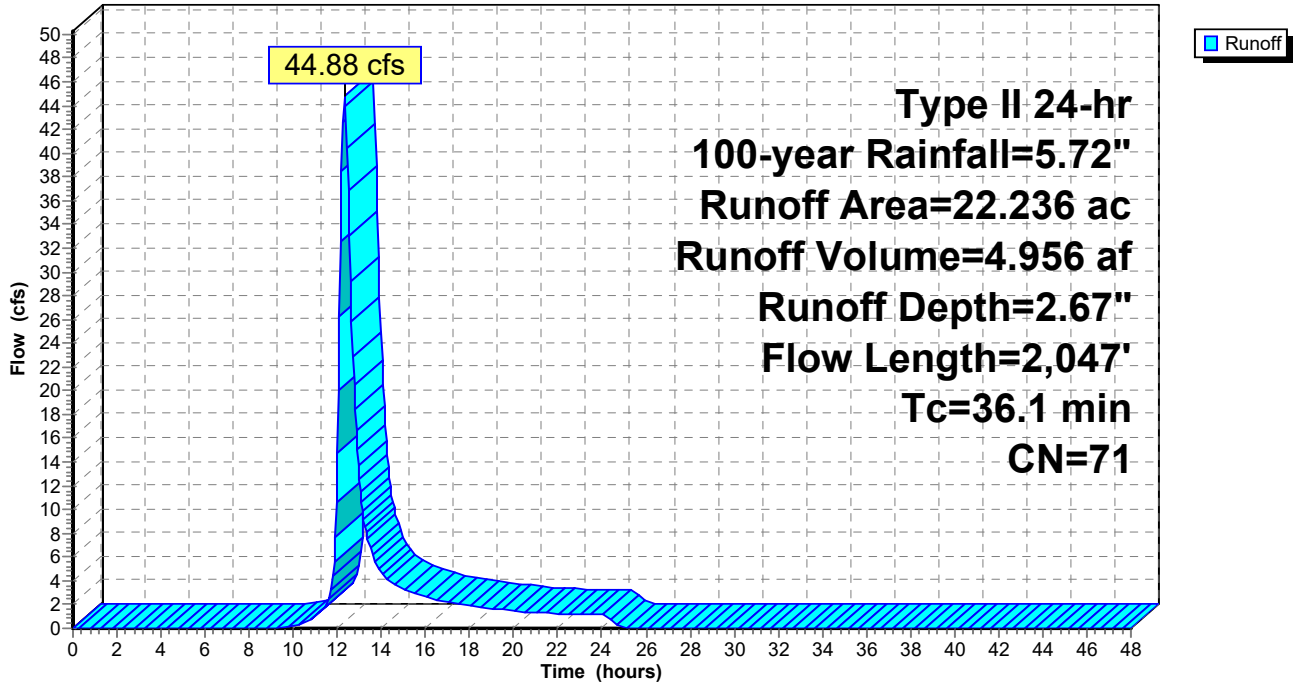
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 1.008	98	Surface water
* 0.081	98	Impervious surface
* 0.828	96	Gravel surface
5.353	61	>75% Grass cover, Good, HSG B
3.453	74	>75% Grass cover, Good, HSG C
3.647	80	>75% Grass cover, Good, HSG D
0.693	58	Meadow, non-grazed, HSG B
0.956	71	Meadow, non-grazed, HSG C
0.200	48	Brush, Good, HSG B
1.811	65	Brush, Good, HSG C
3.089	73	Brush, Good, HSG D
0.917	55	Woods, Good, HSG B
0.043	70	Woods, Good, HSG C
0.157	77	Woods, Good, HSG D
22.236	71	Weighted Average
21.147		95.10% Pervious Area
1.089		4.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	100	0.0210	0.15		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
22.7	1,347	0.0200	0.99		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.5	600	0.0225	3.97	19.83	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=2.00' D=1.00' Z= 3.0 '/' Top.W=8.00' n= 0.040 Winding stream, pools & shoals
36.1	2,047	Total			

Subcatchment 10S: Sub 10

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 11S: Sub 11**

[47] Hint: Peak is 155% of capacity of segment #5

Runoff = 44.67 cfs @ 12.12 hrs, Volume= 3.277 af, Depth= 2.23"  
 Routed to Link SP11 :

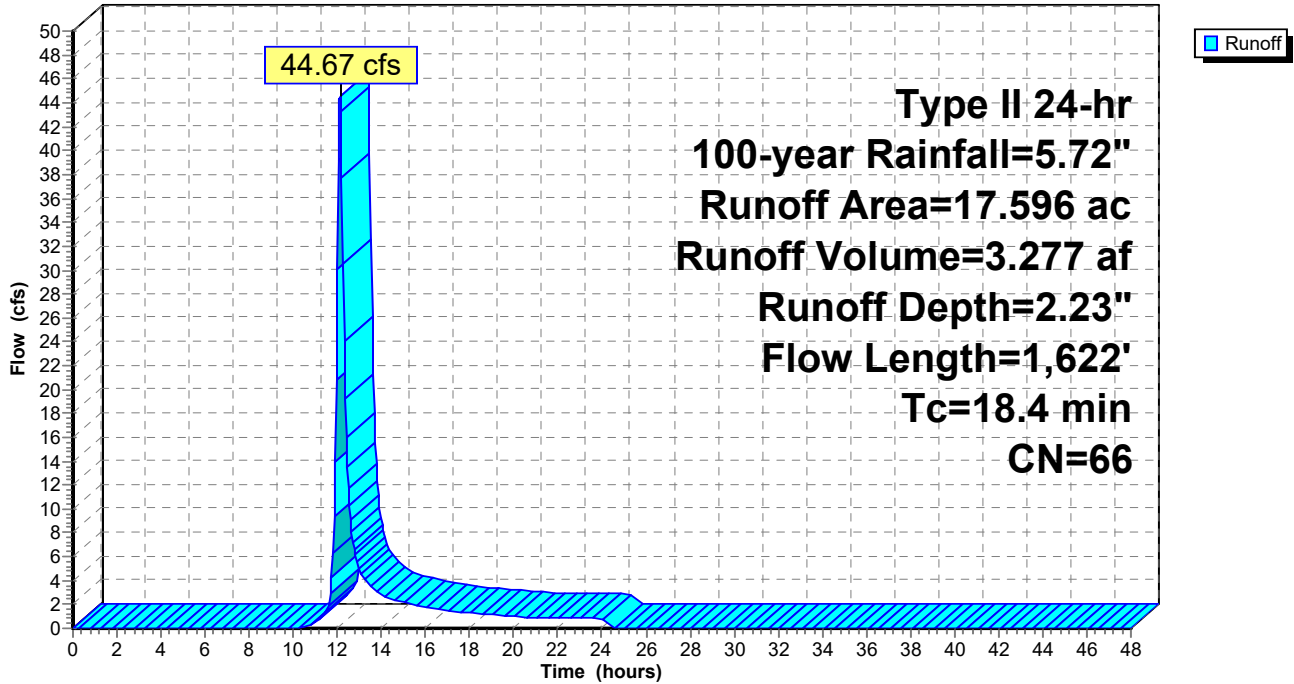
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 0.372	98	Surface water
* 0.016	98	Impervious surface
* 2.385	96	Gravel surface
2.824	61	>75% Grass cover, Good, HSG B
1.292	74	>75% Grass cover, Good, HSG C
1.394	58	Meadow, non-grazed, HSG B
1.371	71	Meadow, non-grazed, HSG C
0.199	48	Brush, Good, HSG B
0.163	65	Brush, Good, HSG C
7.256	55	Woods, Good, HSG B
0.324	70	Woods, Good, HSG C
17.596	66	Weighted Average
17.208		97.79% Pervious Area
0.388		2.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	100	0.0320	0.18		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
3.9	579	0.0240	2.49		<b>Shallow Concentrated Flow,</b> Unpaved Kv= 16.1 fps
2.6	277	0.0650	1.78		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.7	102	0.2650	2.57		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
2.0	564	0.0300	4.80	28.78	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=3.00' D=1.00' Z= 3.0 '/' Top.W=9.00' n= 0.040 Winding stream, pools & shoals
18.4	1,622	Total			

Subcatchment 11S: Sub 11

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 12S: Sub 12**

Runoff = 37.76 cfs @ 11.96 hrs, Volume= 2.079 af, Depth= 5.13"  
 Routed to Pond 12P : 12P

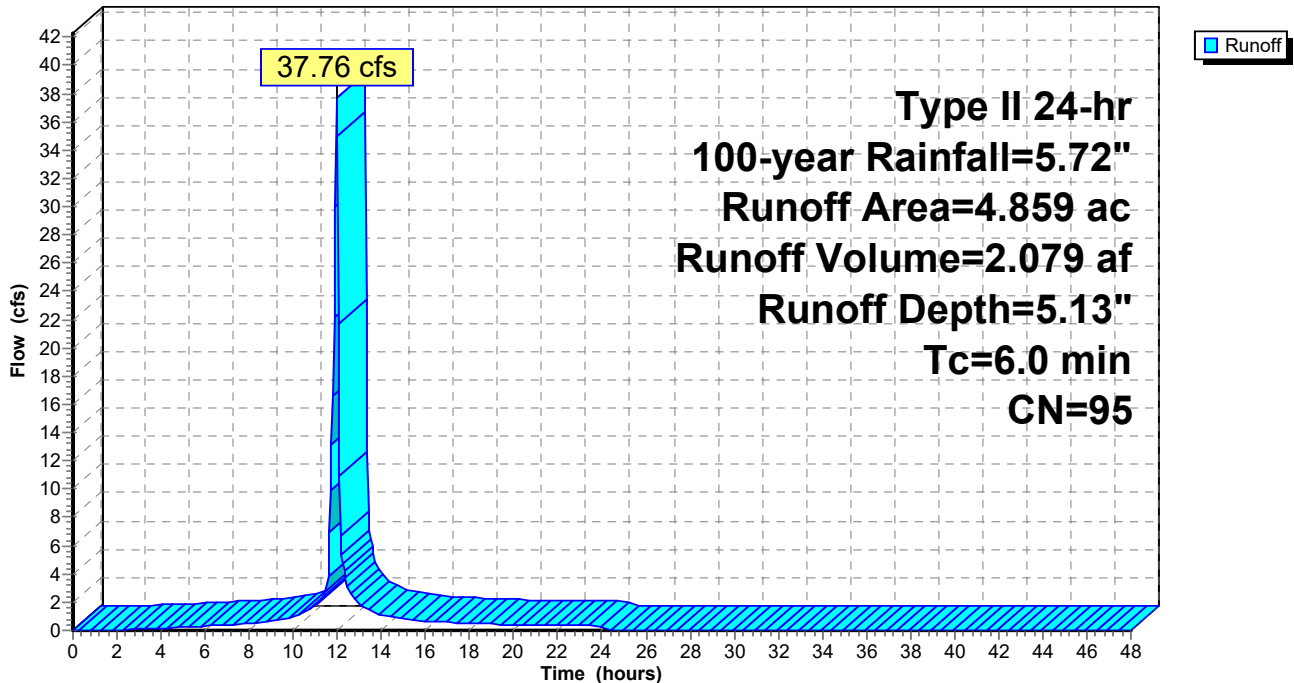
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 4.639	96	Gravel surface
0.220	74	>75% Grass cover, Good, HSG C
4.859	95	Weighted Average
4.859		100.00% Pervious Area

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

**Subcatchment 12S: Sub 12**

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 13S: Sub 13**

Runoff = 24.66 cfs @ 12.11 hrs, Volume= 1.788 af, Depth= 2.07"

Routed to Link SP13 :

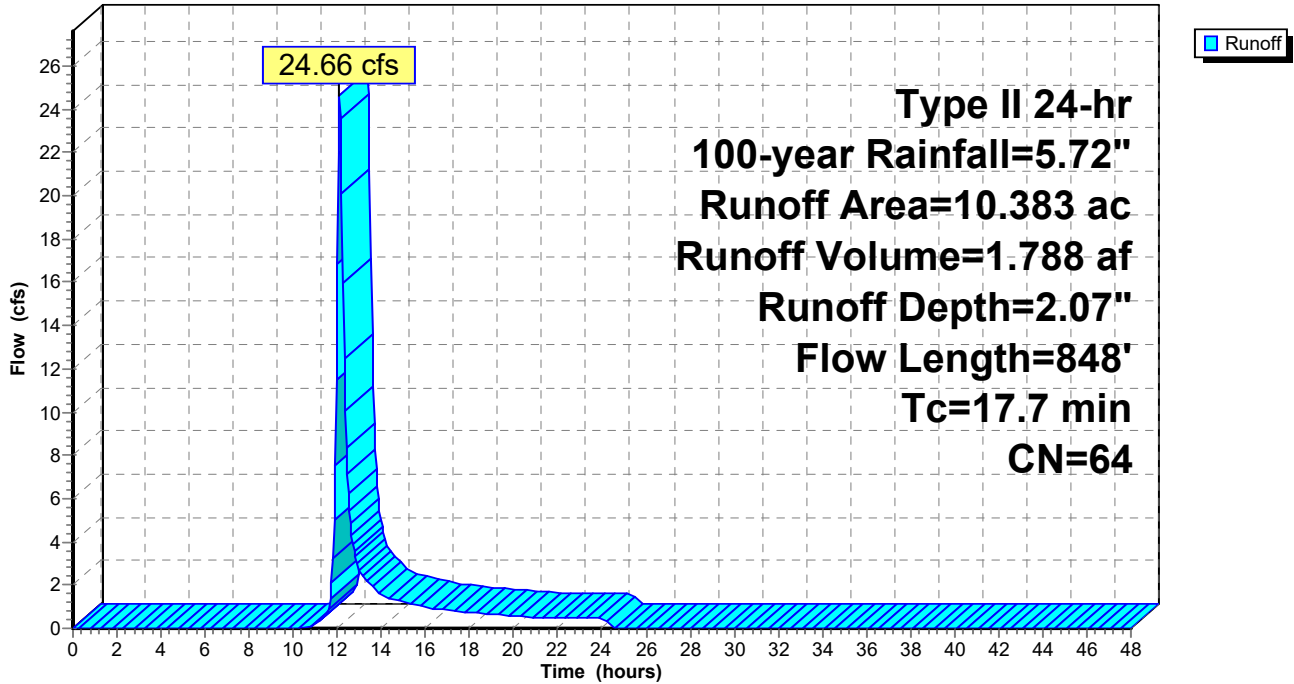
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 0.021	98	Impervious surface
* 0.324	96	Gravel surface
1.560	58	Meadow, non-grazed, HSG B
4.128	71	Meadow, non-grazed, HSG C
0.084	48	Brush, Good, HSG B
0.134	65	Brush, Good, HSG C
3.807	55	Woods, Good, HSG B
0.325	70	Woods, Good, HSG C
10.383	64	Weighted Average
10.362		99.80% Pervious Area
0.021		0.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.1	100	0.0250	0.16		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
5.4	525	0.0540	1.63		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.7	62	0.0970	1.56		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
1.5	161	0.1330	1.82		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
17.7	848	Total			

Subcatchment 13S: Sub 13

Hydrograph



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**Summary for Subcatchment 14S: Sub 14**

[47] Hint: Peak is 547% of capacity of segment #4

[47] Hint: Peak is 1295% of capacity of segment #5

Runoff = 99.70 cfs @ 12.51 hrs, Volume= 14.066 af, Depth= 2.32"  
 Routed to Link SP14 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

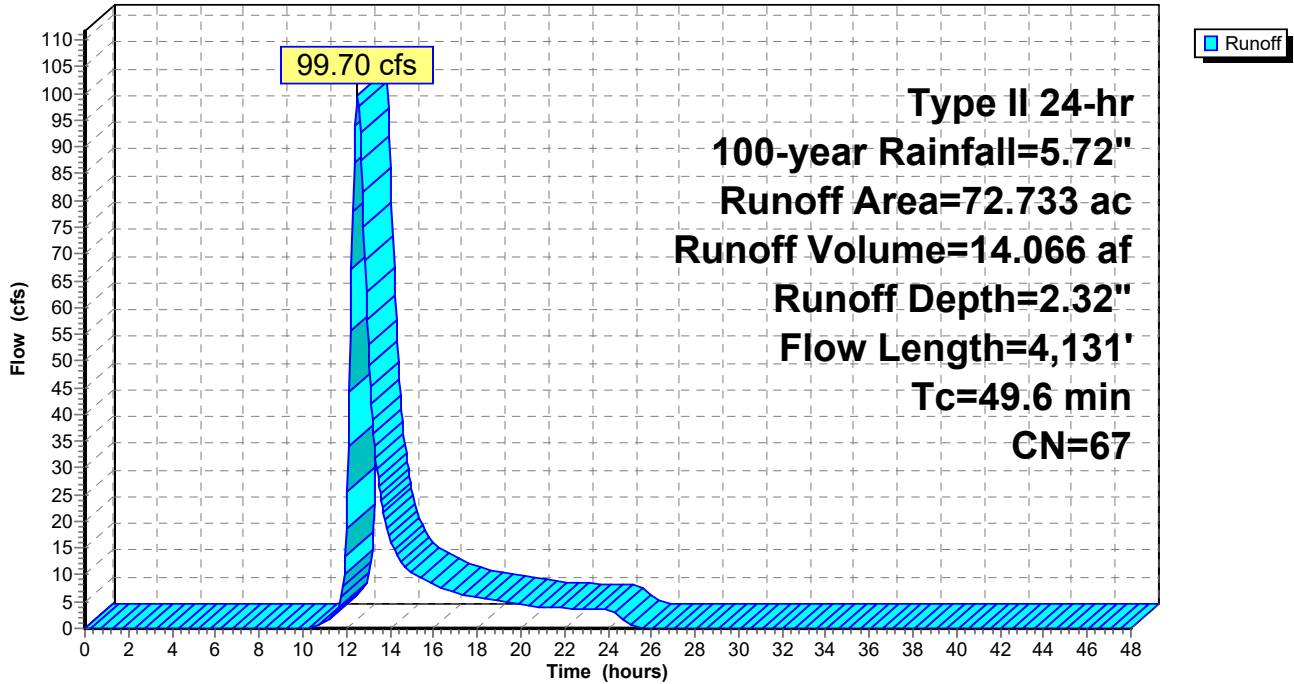
Area (ac)	CN	Description
* 0.307	98	Impervious surface
0.760	80	>75% Grass cover, Good, HSG D
19.939	58	Meadow, non-grazed, HSG B
36.007	71	Meadow, non-grazed, HSG C
0.100	78	Meadow, non-grazed, HSG D
0.667	48	Brush, Good, HSG B
0.121	65	Brush, Good, HSG C
1.517	73	Brush, Good, HSG D
3.147	55	Woods, Good, HSG B
9.611	70	Woods, Good, HSG C
0.557	77	Woods, Good, HSG D
72.733	67	Weighted Average
72.426		99.58% Pervious Area
0.307		0.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	50	0.0600	0.09		<b>Sheet Flow,</b> Woods: Light underbrush n= 0.400 P2= 2.50"
5.6	50	0.0280	0.15		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
6.7	465	0.0270	1.15		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
9.8	1,433	0.0120	2.43	18.23	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=5.00' D=0.50' Z= 20.0 '/' Top.W=25.00' n= 0.030 Earth, grassed & winding
18.5	2,133	0.0080	1.93	7.70	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=5.00' D=0.50' Z= 6.0 '/' Top.W=11.00' n= 0.035 Earth, dense weeds
49.6	4,131	Total			



Subcatchment 14S: Sub 14

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 17S: Sub 17**

[47] Hint: Peak is 1807% of capacity of segment #4

Runoff = 121.08 cfs @ 12.34 hrs, Volume= 14.202 af, Depth= 1.74"  
 Routed to Link SP17 :

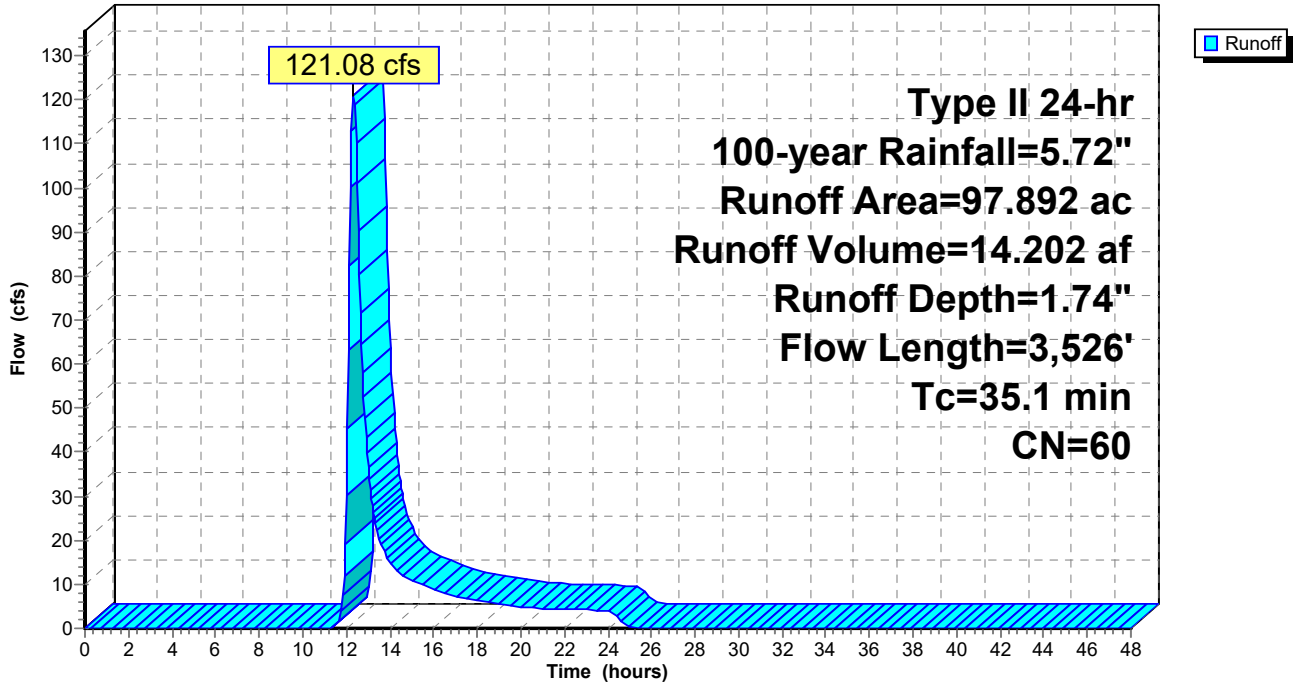
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 1.153	98	Impervious surface
* 0.105	96	Gravel surface
3.000	61	>75% Grass cover, Good, HSG B
0.324	74	>75% Grass cover, Good, HSG C
1.232	80	>75% Grass cover, Good, HSG D
78.791	58	Meadow, non-grazed, HSG B
0.375	71	Meadow, non-grazed, HSG C
4.855	78	Meadow, non-grazed, HSG D
7.632	55	Woods, Good, HSG B
0.085	70	Woods, Good, HSG C
0.340	77	Woods, Good, HSG D
97.892	60	Weighted Average
96.739		98.82% Pervious Area
1.153		1.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0300	0.18		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
5.2	681	0.0990	2.20		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
10.3	1,098	0.0650	1.78		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
10.2	1,647	0.0140	2.68	6.70	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=2.00' D=0.50' Z= 6.0 '/' Top.W=8.00' n= 0.030 Earth, grassed & winding
35.1	3,526	Total			

Subcatchment 17S: Sub 17

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 18S: Sub 18**

Runoff = 76.28 cfs @ 12.41 hrs, Volume= 9.479 af, Depth= 2.50"  
 Routed to Link SP18 :

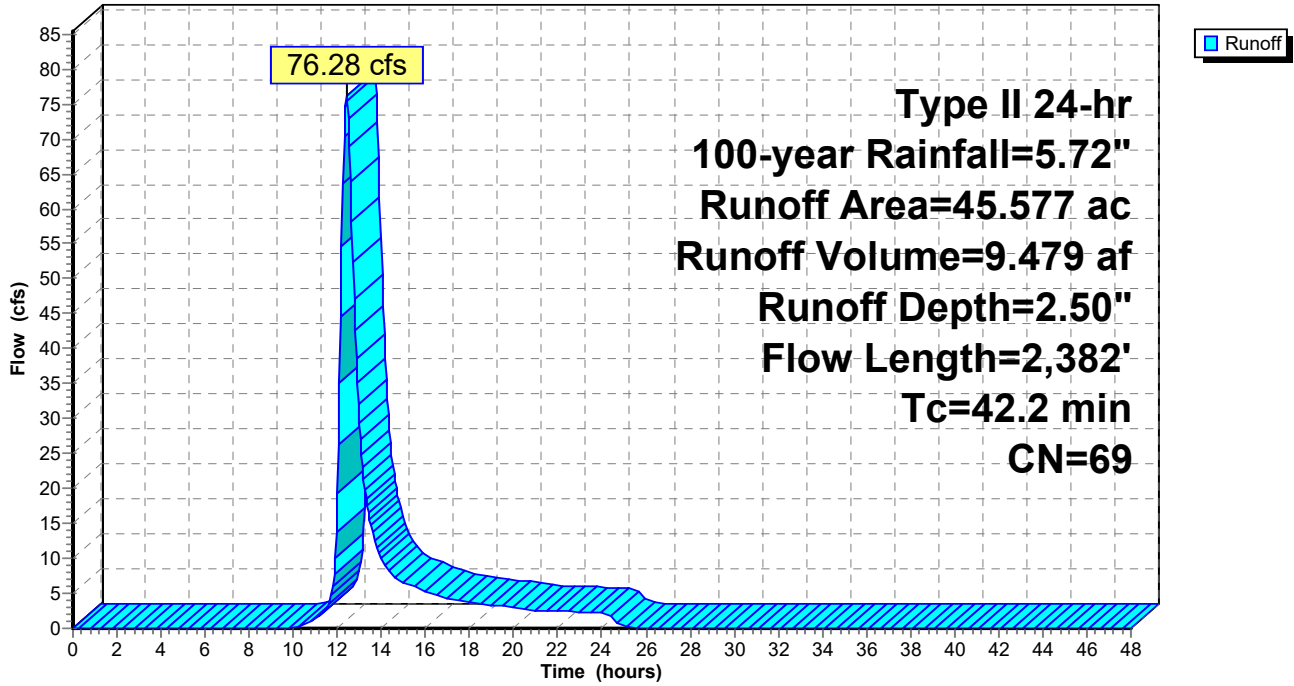
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 0.335	98	Impervious surface
9.521	58	Meadow, non-grazed, HSG B
19.657	71	Meadow, non-grazed, HSG C
8.775	78	Meadow, non-grazed, HSG D
2.586	48	Brush, Good, HSG B
4.116	73	Brush, Good, HSG D
0.587	77	Woods, Good, HSG D
45.577	69	Weighted Average
45.242		99.26% Pervious Area
0.335		0.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.6	100	0.0180	0.14		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
10.5	668	0.0230	1.06		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
4.5	459	0.0590	1.70		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.7	128	0.0130	0.80		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
12.9	1,027		1.33		<b>Direct Entry, CF</b>
42.2	2,382	Total			

Subcatchment 18S: Sub 18

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 19S: Sub 19**

Runoff = 66.82 cfs @ 12.25 hrs, Volume= 6.547 af, Depth= 2.77"  
 Routed to Reach 20.1R : S-KCF-6

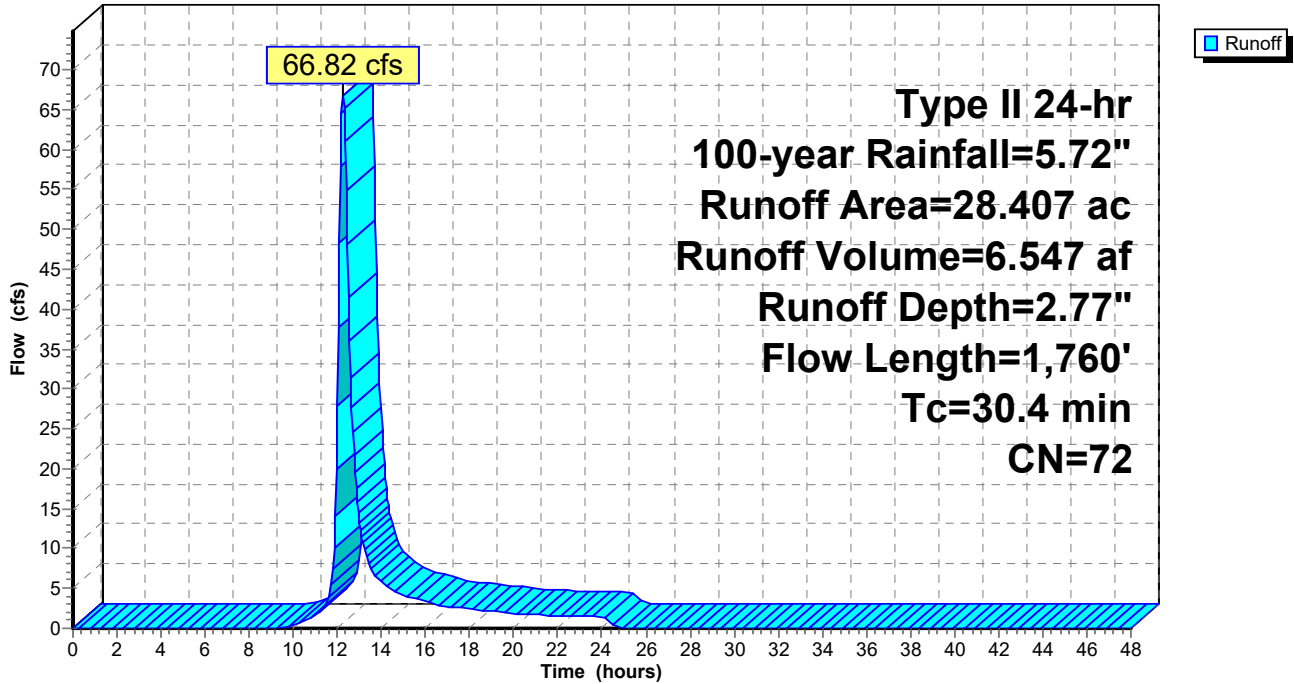
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 0.153	98	Surface water
2.120	58	Meadow, non-grazed, HSG B
18.359	71	Meadow, non-grazed, HSG C
7.318	78	Meadow, non-grazed, HSG D
0.227	65	Brush, Good, HSG C
0.105	73	Brush, Good, HSG D
0.125	77	Woods, Good, HSG D
28.407	72	Weighted Average
28.254		99.46% Pervious Area
0.153		0.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0430	0.20		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
1.5	212	0.1120	2.34		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
10.0	635	0.0230	1.06		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
10.7	813	0.0330	1.27		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
30.4	1,760	Total			

Subcatchment 19S: Sub 19

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 20S: Sub 20**

[47] Hint: Peak is 313% of capacity of segment #4

Runoff = 170.25 cfs @ 12.14 hrs, Volume= 13.134 af, Depth= 2.23"  
 Routed to Reach 20.1R : S-KCF-6

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

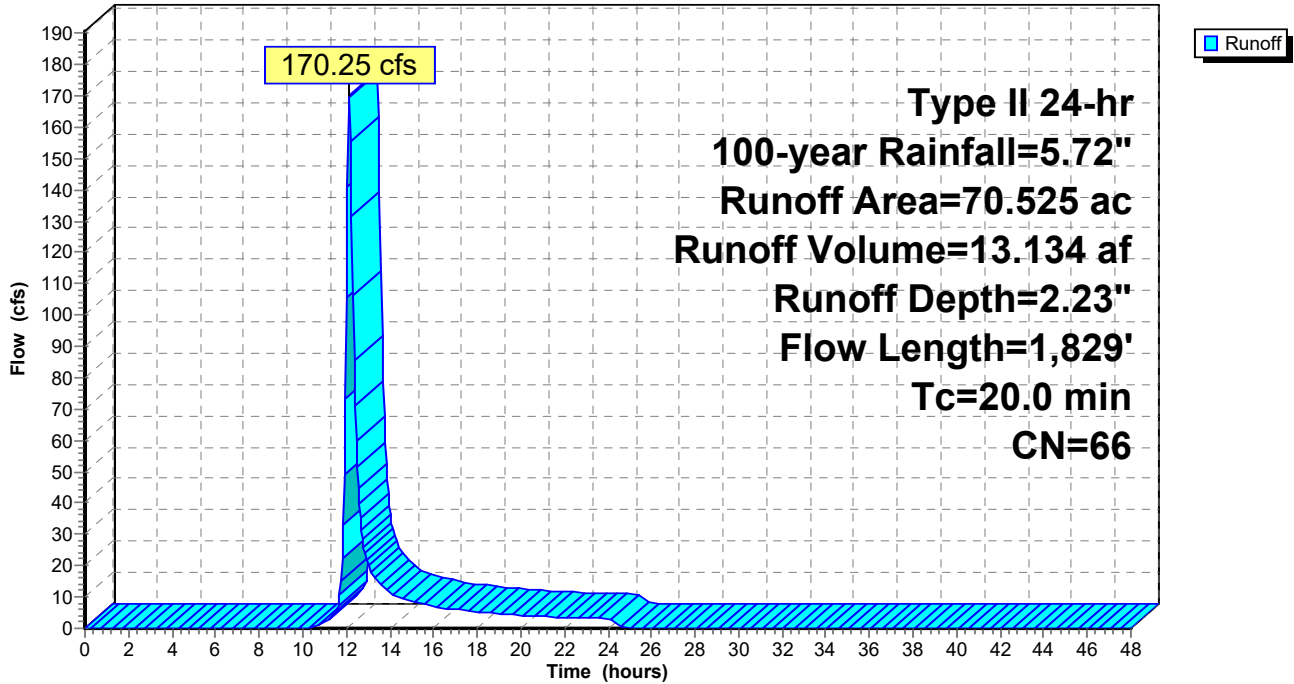
Area (ac)	CN	Description
* 0.044	98	Surface water
* 0.508	98	Impervious surface
3.657	61	>75% Grass cover, Good, HSG B
29.608	58	Meadow, non-grazed, HSG B
22.967	71	Meadow, non-grazed, HSG C
12.748	78	Meadow, non-grazed, HSG D
0.147	48	Brush, Good, HSG B
0.032	65	Brush, Good, HSG C
0.133	73	Brush, Good, HSG D
0.124	55	Woods, Good, HSG B
0.523	70	Woods, Good, HSG C
0.034	77	Woods, Good, HSG D
70.525	66	Weighted Average
69.973		99.22% Pervious Area
0.552		0.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.7	100	0.0700	0.25		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
2.6	259	0.0580	1.69		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
8.8	703	0.0360	1.33		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.9	767	0.0300	6.81	54.44	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=5.00' D=1.00' Z= 3.0 '/' Top.W=11.00' n= 0.030 Earth, grassed & winding
20.0	1,829	Total			



Subcatchment 20S: Sub 20

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 21S: Sub 21**

[47] Hint: Peak is 1334% of capacity of segment #3

[47] Hint: Peak is 1191% of capacity of segment #4

[47] Hint: Peak is 1390% of capacity of segment #5

Runoff = 180.43 cfs @ 12.42 hrs, Volume= 22.910 af, Depth= 2.23"  
 Routed to Reach 22.1R : S-KCF-5

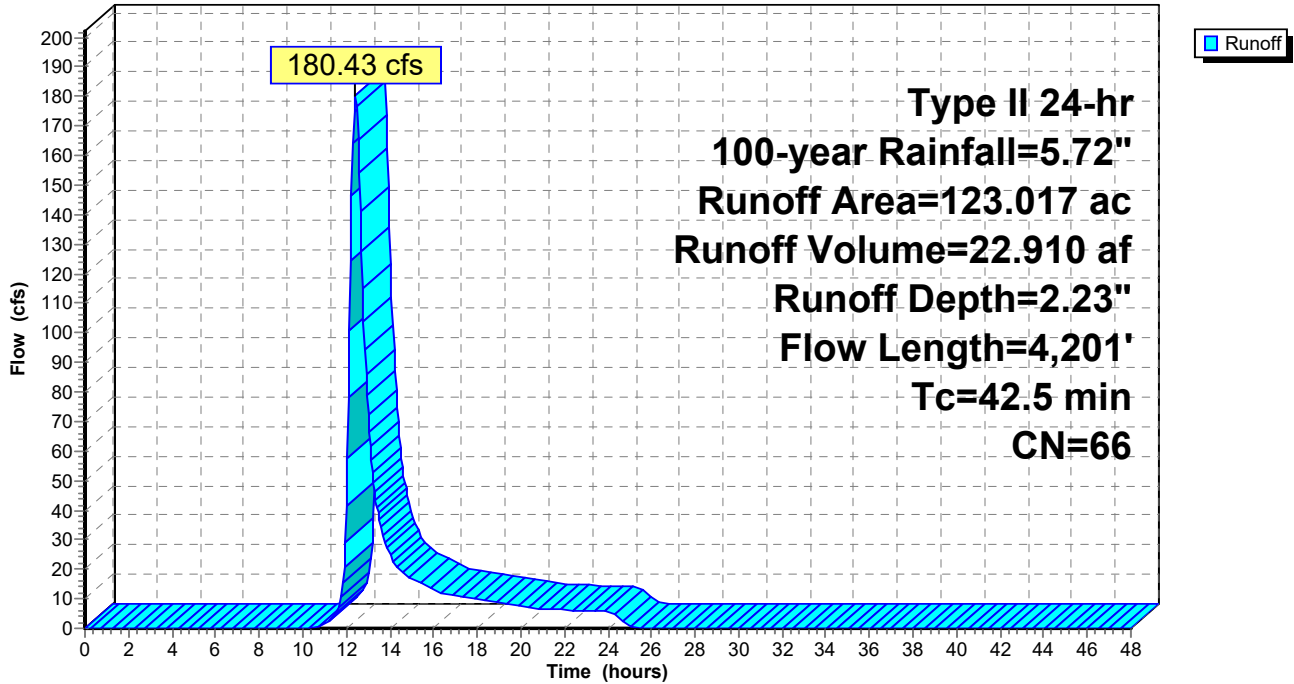
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 3.145	98	Surface water
* 0.950	98	Impervious surface
* 0.528	96	Gravel surface
0.616	61	>75% Grass cover, Good, HSG B
1.689	74	>75% Grass cover, Good, HSG C
54.805	58	Meadow, non-grazed, HSG B
54.707	71	Meadow, non-grazed, HSG C
2.342	78	Meadow, non-grazed, HSG D
0.747	48	Brush, Good, HSG B
0.437	65	Brush, Good, HSG C
0.758	55	Woods, Good, HSG B
2.293	70	Woods, Good, HSG C
123.017	66	Weighted Average
118.922		96.67% Pervious Area
4.095		3.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	100	0.0160	0.14		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
12.6	1,112	0.0440	1.47		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.2	346	0.0150	2.58	13.52	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=6.00' D=0.50' Z= 9.0 ' /' Top.W=15.00' n= 0.035 Earth, dense weeds
8.3	1,504	0.0150	3.03	15.15	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=9.00' D=0.50' Z= 2.0 ' /' Top.W=11.00' n= 0.035 Earth, dense weeds
7.3	1,139	0.0110	2.60	12.98	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=9.00' D=0.50' Z= 2.0 ' /' Top.W=11.00' n= 0.035 Earth, dense weeds
42.5	4,201	Total			

Subcatchment 21S: Sub 21

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 22S: Sub 22**

Runoff = 104.33 cfs @ 12.47 hrs, Volume= 13.886 af, Depth= 2.67"  
 Routed to Link SP22 :

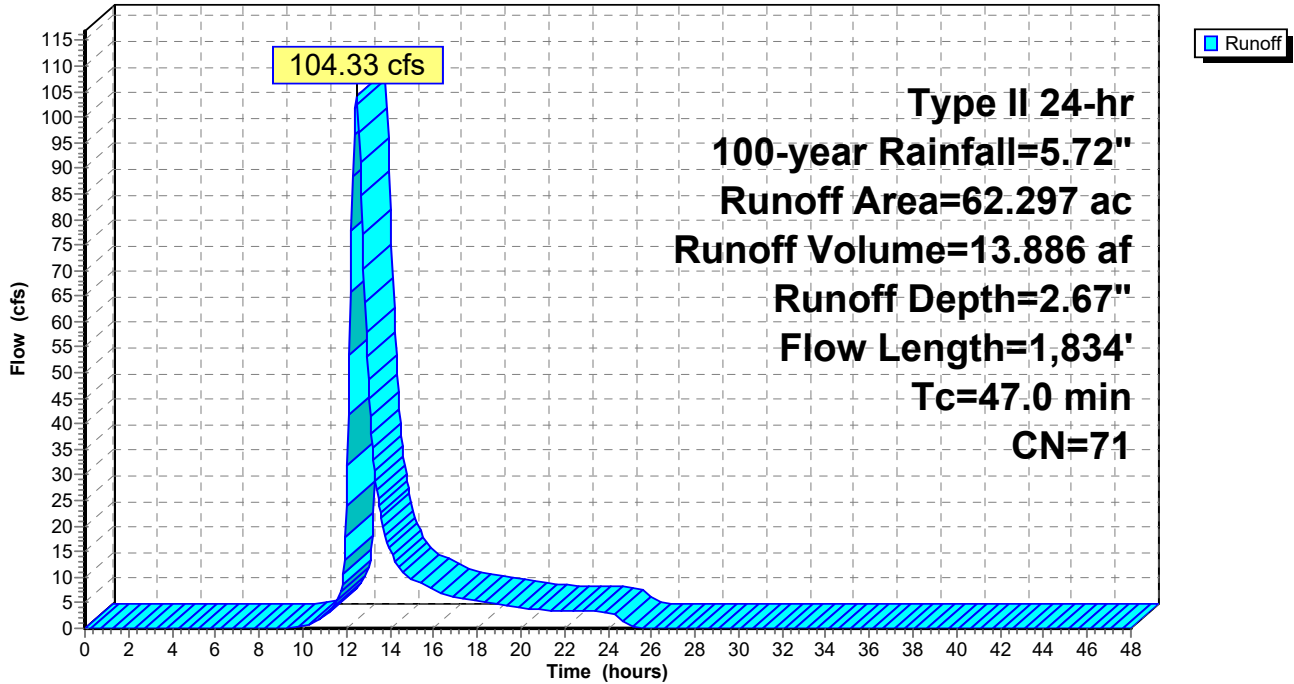
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 0.373	98	Impervious surface
* 0.117	96	Gravel surface
2.935	58	Meadow, non-grazed, HSG B
38.064	71	Meadow, non-grazed, HSG C
5.928	78	Meadow, non-grazed, HSG D
0.322	48	Brush, Good, HSG B
0.178	65	Brush, Good, HSG C
1.858	55	Woods, Good, HSG B
7.519	70	Woods, Good, HSG C
5.003	77	Woods, Good, HSG D
62.297	71	Weighted Average
61.924		99.40% Pervious Area
0.373		0.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.0220	0.16		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
5.0	316	0.0230	1.06		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
9.2	442	0.0130	0.80		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
9.3	305	0.0120	0.55		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
11.3	515	0.0230	0.76		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
1.5	156		1.73		<b>Direct Entry, CF</b>
47.0	1,834	Total			

Subcatchment 22S: Sub 22

Hydrograph



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**Summary for Subcatchment 23S: Sub 23**

[47] Hint: Peak is 138% of capacity of segment #4

Runoff = 33.25 cfs @ 12.29 hrs, Volume= 3.484 af, Depth= 2.50"  
 Routed to Link SP23 :

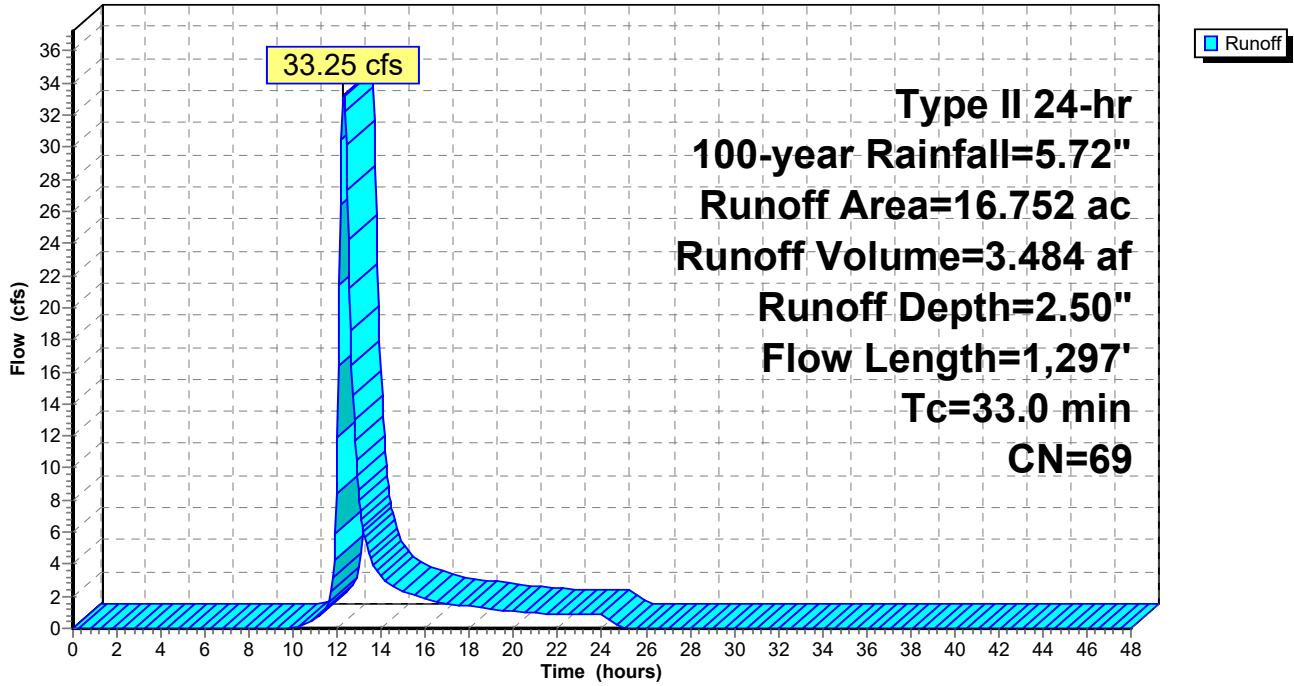
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 0.387	98	Impervious surface
* 0.929	96	Gravel surface
0.421	61	>75% Grass cover, Good, HSG B
4.958	58	Meadow, non-grazed, HSG B
9.559	71	Meadow, non-grazed, HSG C
0.403	78	Meadow, non-grazed, HSG D
0.012	48	Brush, Good, HSG B
0.052	65	Brush, Good, HSG C
0.031	55	Woods, Good, HSG B
16.752	69	Weighted Average
16.365		97.69% Pervious Area
0.387		2.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	100	0.0760	0.12		<b>Sheet Flow,</b> Woods: Light underbrush n= 0.400 P2= 2.50"
15.8	892	0.0180	0.94		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.8	262	0.0490	1.55		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.2	43	0.0160	4.00	24.02	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=3.00' D=1.00' Z= 3.0 '/' Top.W=9.00' n= 0.035 Earth, dense weeds
33.0	1,297	Total			

Subcatchment 23S: Sub 23

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 24S: Sub 24**

[47] Hint: Peak is 129% of capacity of segment #3

[47] Hint: Peak is 126% of capacity of segment #4

Runoff = 16.40 cfs @ 12.16 hrs, Volume= 1.344 af, Depth= 2.95"  
 Routed to Link SP24 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

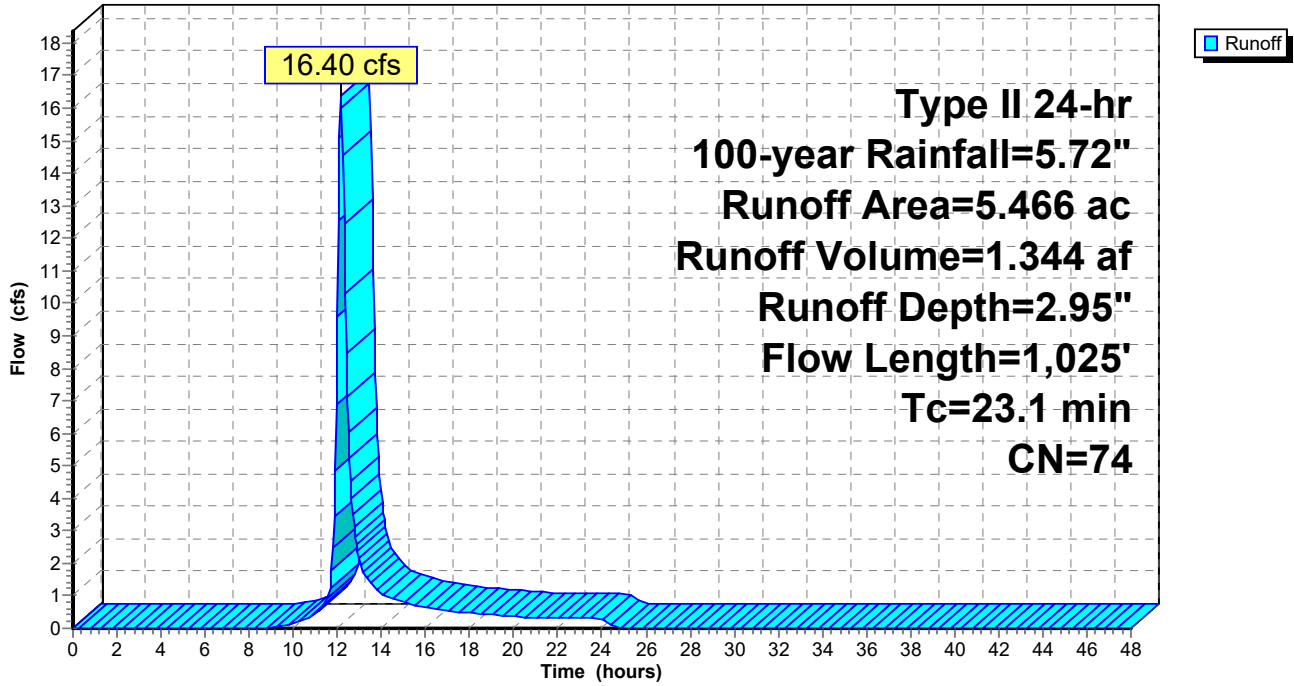
Area (ac)	CN	Description
* 0.421	98	Impervious surface
* 0.036	96	Gravel surface
0.093	61	>75% Grass cover, Good, HSG B
1.916	74	>75% Grass cover, Good, HSG C
0.252	58	Meadow, non-grazed, HSG B
2.730	71	Meadow, non-grazed, HSG C
0.018	70	Woods, Good, HSG C
5.466	74	Weighted Average
5.045		92.30% Pervious Area
0.421		7.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	100	0.0060	0.09		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
1.7	169	0.0550	1.64		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.1	247	0.0230	3.64	12.74	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=6.00' D=0.50' Z= 2.0 '/' Top.W=8.00' n= 0.035 Earth, dense weeds
2.4	509	0.0220	3.47	13.02	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=6.00' D=0.50' Z= 3.0 '/' Top.W=9.00' n= 0.035 Earth, dense weeds
23.1	1,025	Total			



Subcatchment 24S: Sub 24

Hydrograph



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**Summary for Subcatchment 43S: Subcat 43**

[47] Hint: Peak is 462% of capacity of segment #3

Runoff = 60.76 cfs @ 12.39 hrs, Volume= 7.337 af, Depth= 2.58"  
 Routed to Reach 44R :

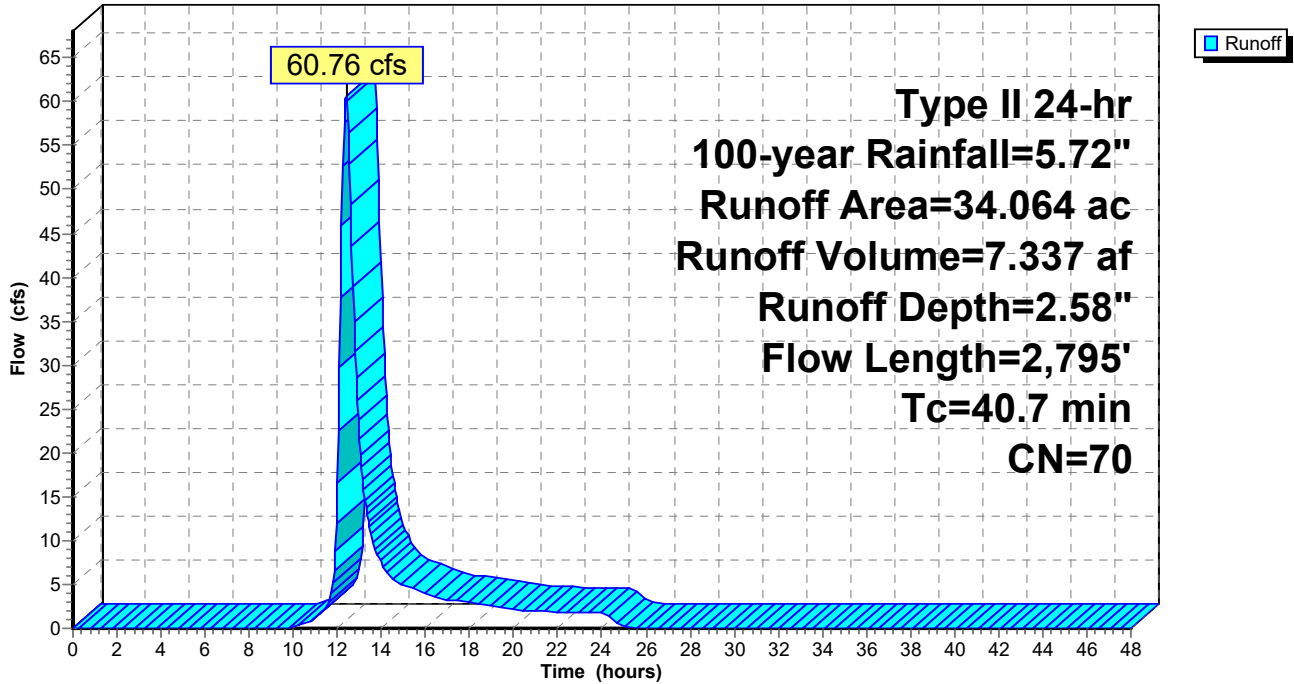
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 0.157	98	Impervious surface
2.153	74	>75% Grass cover, Good, HSG C
0.186	30	Meadow, non-grazed, HSG A
1.331	58	Meadow, non-grazed, HSG B
15.965	71	Meadow, non-grazed, HSG C
6.575	78	Meadow, non-grazed, HSG D
1.643	30	Woods, Good, HSG A
0.352	55	Woods, Good, HSG B
2.445	70	Woods, Good, HSG C
3.257	77	Woods, Good, HSG D
34.064	70	Weighted Average
33.907		99.54% Pervious Area
0.157		0.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0300	0.18		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
26.2	1,556	0.0200	0.99		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
5.1	1,139	0.0320	3.76	13.15	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=6.00' D=0.50' Z= 2.0 '/' Top.W=8.00' n= 0.040 Winding stream, pools & shoals
40.7	2,795	Total			

Subcatchment 43S: Subcat 43

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 44S: Subcat 44**

[47] Hint: Peak is 1464% of capacity of segment #3

[47] Hint: Peak is 565% of capacity of segment #4

Runoff = 81.24 cfs @ 12.40 hrs, Volume= 9.971 af, Depth= 2.58"  
 Routed to Reach 45R :

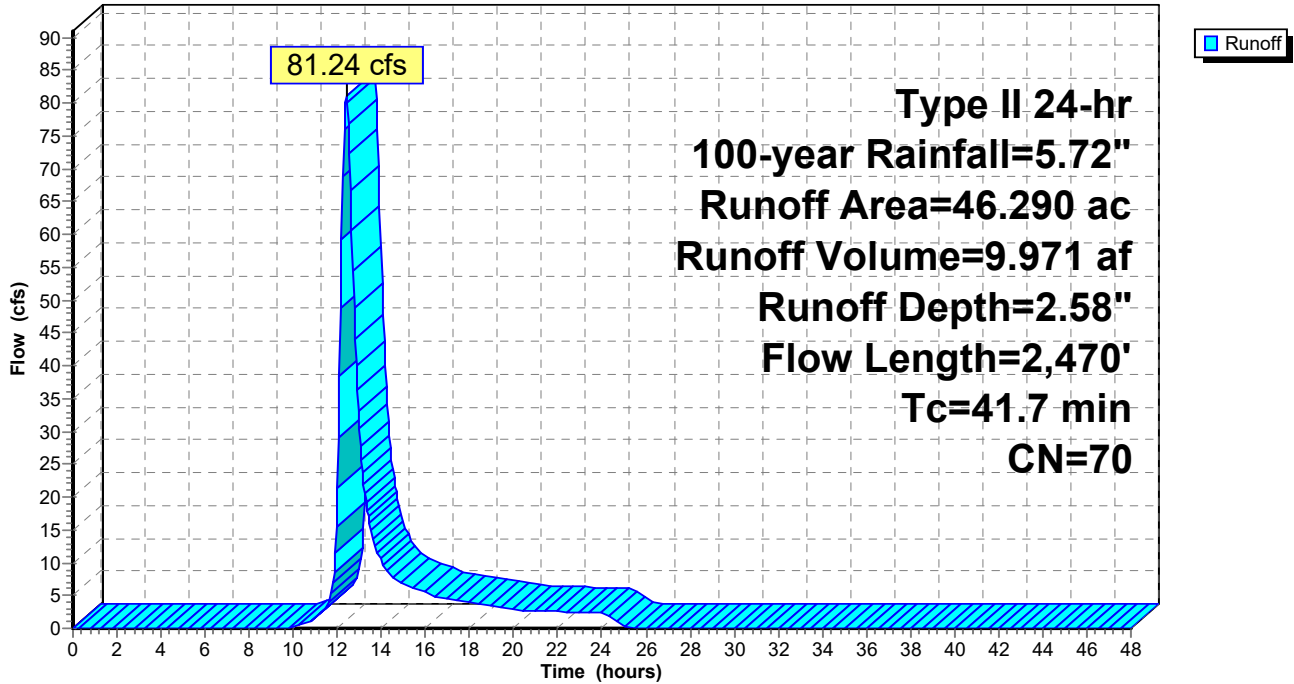
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
0.094	30	Meadow, non-grazed, HSG A
0.097	58	Meadow, non-grazed, HSG B
7.842	71	Meadow, non-grazed, HSG C
6.921	78	Meadow, non-grazed, HSG D
1.607	30	Woods, Good, HSG A
6.395	55	Woods, Good, HSG B
8.029	70	Woods, Good, HSG C
15.305	77	Woods, Good, HSG D
46.290	70	Weighted Average
46.290		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.9	100	0.0260	0.08		<b>Sheet Flow,</b> Woods: Light underbrush n= 0.400 P2= 2.50"
9.2	409	0.0220	0.74		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
5.2	715	0.0320	2.31	5.55	<b>Parabolic Channel,</b> W=18.00' D=0.20' Area=2.4 sf Perim=18.0' n= 0.030 Earth, grassed & winding
5.4	1,246	0.0350	3.83	14.37	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=6.00' D=0.50' Z= 3.0 '/' Top.W=9.00' n= 0.040 Winding stream, pools & shoals
41.7	2,470	Total			

Subcatchment 44S: Subcat 44

Hydrograph



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**Summary for Subcatchment 45S: Subcat 45**

[47] Hint: Peak is 428% of capacity of segment #5

Runoff = 44.42 cfs @ 12.27 hrs, Volume= 4.701 af, Depth= 1.66"  
 Routed to Link SP43 :

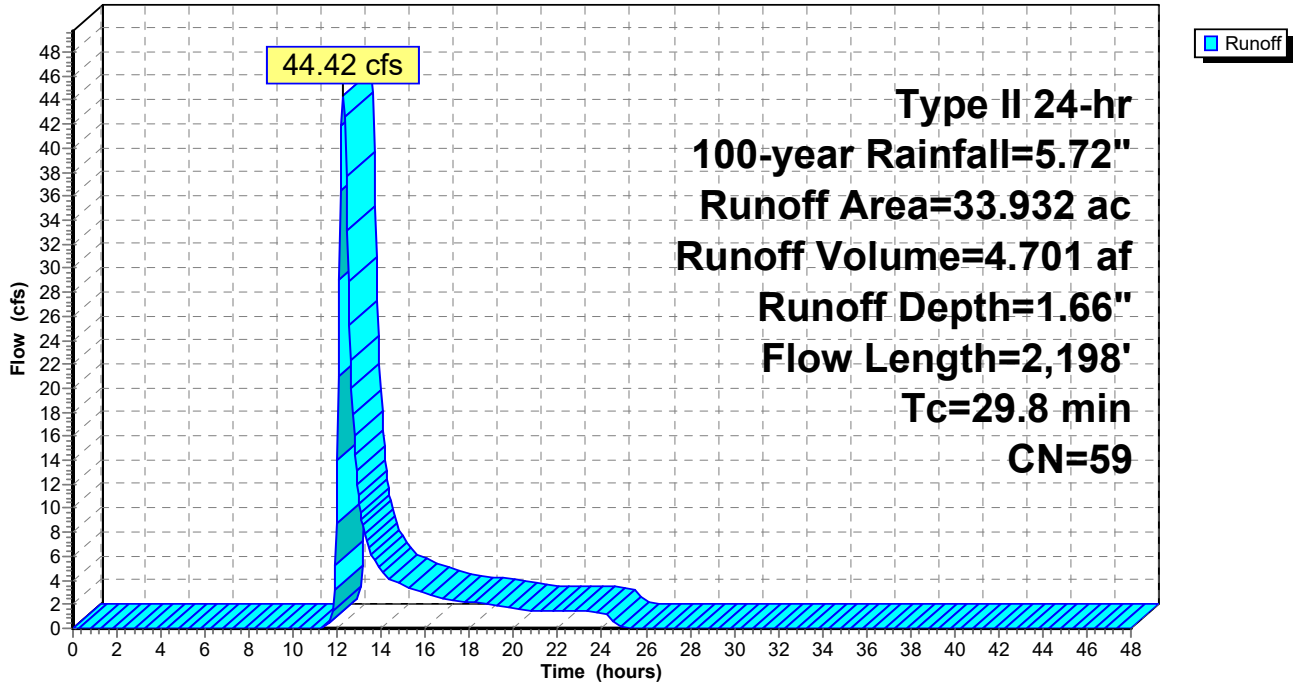
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 0.056	98	Surface water
* 0.600	98	Impervious surface
* 0.045	96	Gravel surface
0.358	61	>75% Grass cover, Good, HSG B
0.668	74	>75% Grass cover, Good, HSG C
0.893	30	Meadow, non-grazed, HSG A
10.865	58	Meadow, non-grazed, HSG B
6.386	71	Meadow, non-grazed, HSG C
2.755	78	Meadow, non-grazed, HSG D
0.369	30	Brush, Good, HSG A
4.141	48	Brush, Good, HSG B
0.313	65	Brush, Good, HSG C
0.221	73	Brush, Good, HSG D
2.407	30	Woods, Good, HSG A
3.328	55	Woods, Good, HSG B
0.214	70	Woods, Good, HSG C
0.313	77	Woods, Good, HSG D
33.932	59	Weighted Average
33.276		98.07% Pervious Area
0.656		1.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0150	0.13		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
6.5	396	0.0210	1.01		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.8	223	0.0900	2.10		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.4	196	0.0360	0.95		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
5.7	1,283	0.0370	3.77	10.38	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=4.00' D=0.50' Z= 3.0 ' Top.W=7.00' n= 0.040 Winding stream, pools & shoals
29.8	2,198	Total			

Subcatchment 45S: Subcat 45

Hydrograph



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**Summary for Subcatchment 46S: Subcat 46**

Runoff = 4.48 cfs @ 12.79 hrs, Volume= 1.338 af, Depth= 0.52"

Routed to Link SP46 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

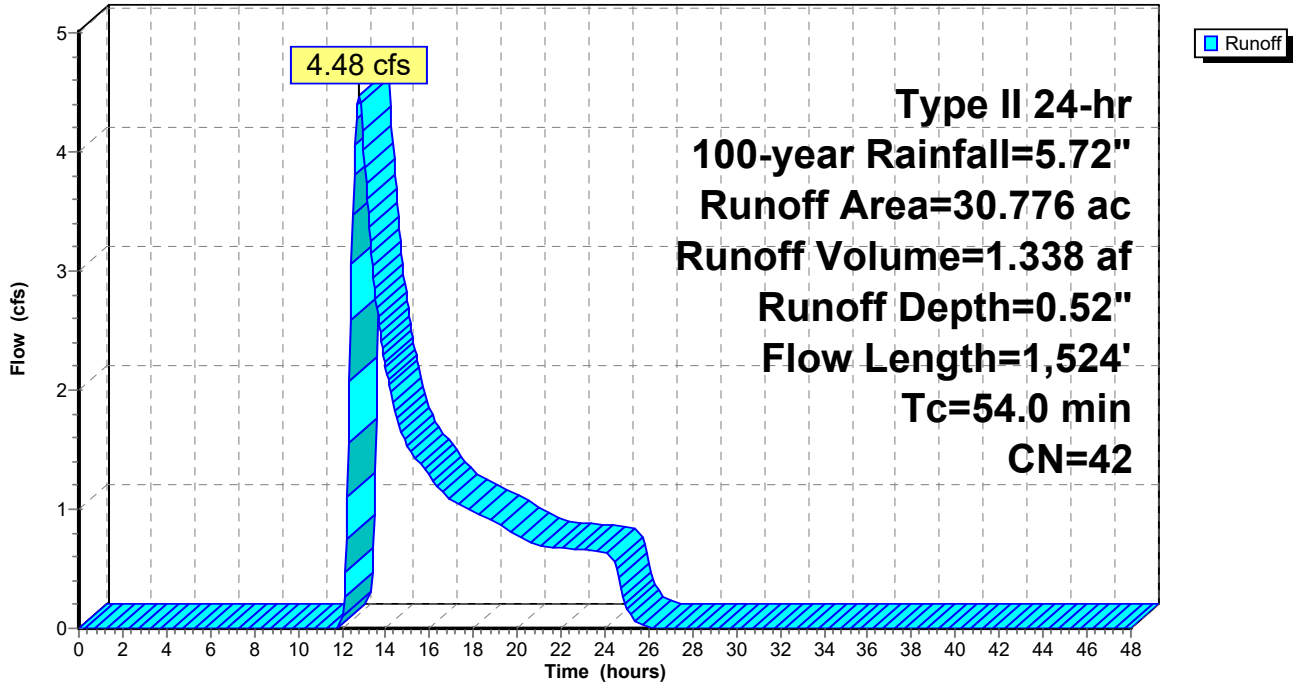
Area (ac)	CN	Description
* 0.982	98	Surface water
* 0.226	98	Impervious surface
2.832	30	Meadow, non-grazed, HSG A
1.255	58	Meadow, non-grazed, HSG B
0.520	30	Brush, Good, HSG A
0.462	48	Brush, Good, HSG B
0.278	73	Brush, Good, HSG D
14.773	30	Woods, Good, HSG A
9.100	55	Woods, Good, HSG B
0.348	77	Woods, Good, HSG D
30.776	42	Weighted Average
29.568		96.07% Pervious Area
1.208		3.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0300	0.18		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
36.5	774	0.0050	0.35		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
5.2	153	0.0050	0.49		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.3	245	0.4120	3.21		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
1.2	79	0.0510	1.13		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
0.4	173		6.95		<b>Lake or Reservoir,</b> Mean Depth= 1.50'
54.0	1,524	Total			



Subcatchment 46S: Subcat 46

Hydrograph



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**Summary for Subcatchment 47S: Subcat 47**

Runoff = 4.75 cfs @ 12.43 hrs, Volume= 1.174 af, Depth= 0.47"

Routed to Link SP47 :

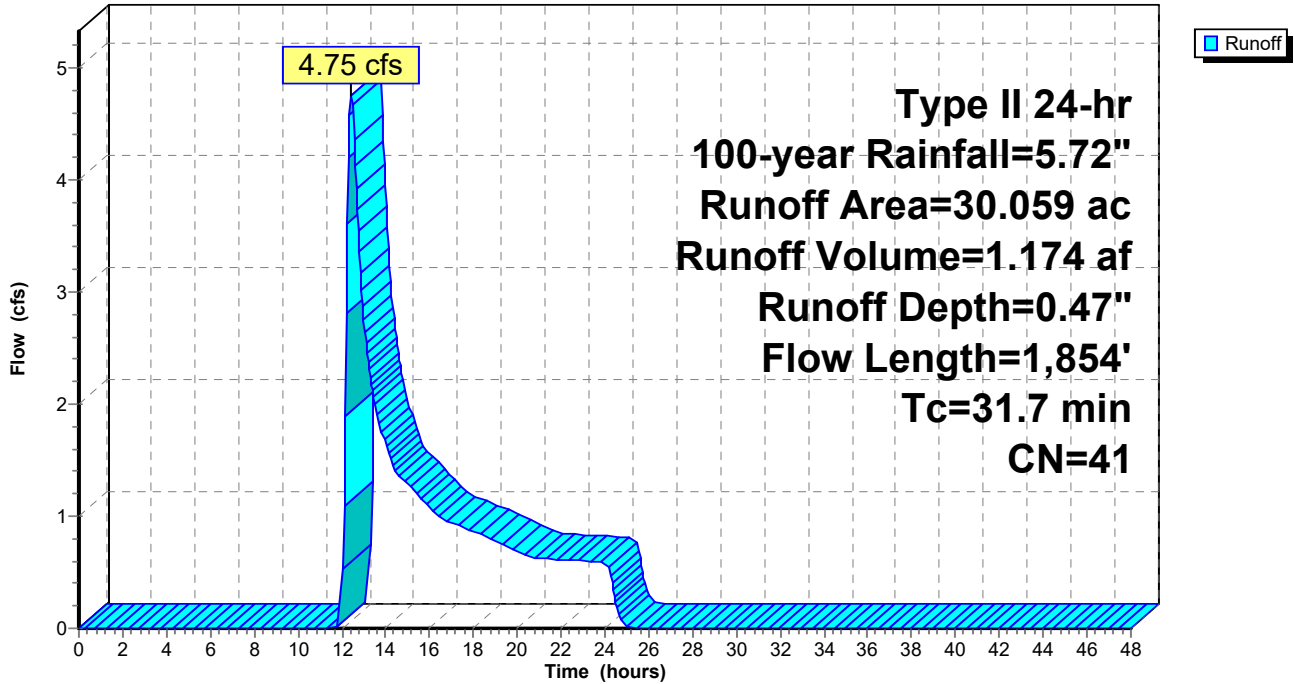
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 0.378	98	Impervious surface
0.502	39	>75% Grass cover, Good, HSG A
2.029	61	>75% Grass cover, Good, HSG B
17.003	30	Meadow, non-grazed, HSG A
3.669	58	Meadow, non-grazed, HSG B
0.051	30	Brush, Good, HSG A
0.687	48	Brush, Good, HSG B
1.092	30	Woods, Good, HSG A
4.648	55	Woods, Good, HSG B
30.059	41	Weighted Average
29.681		98.74% Pervious Area
0.378		1.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	100	0.0400	0.20		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
18.7	992	0.0160	0.89		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.1	88	0.0680	1.30		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
3.5	674	0.0180	3.19	13.54	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=7.00' D=0.50' Z= 3.0 '/' Top.W=10.00' n= 0.035 Earth, dense weeds
31.7	1,854	Total			

Subcatchment 47S: Subcat 47

Hydrograph



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**Summary for Reach 6R: W-NSD-35**

Inflow Area = 58.963 ac, 0.00% Impervious, Inflow Depth = 2.50" for 100-year event  
Inflow = 73.45 cfs @ 12.69 hrs, Volume= 12.263 af  
Outflow = 72.45 cfs @ 12.86 hrs, Volume= 12.263 af, Atten= 1%, Lag= 10.1 min  
Routed to Link SP5 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 5.32 fps, Min. Travel Time= 5.9 min  
Avg. Velocity= 1.42 fps, Avg. Travel Time= 22.2 min

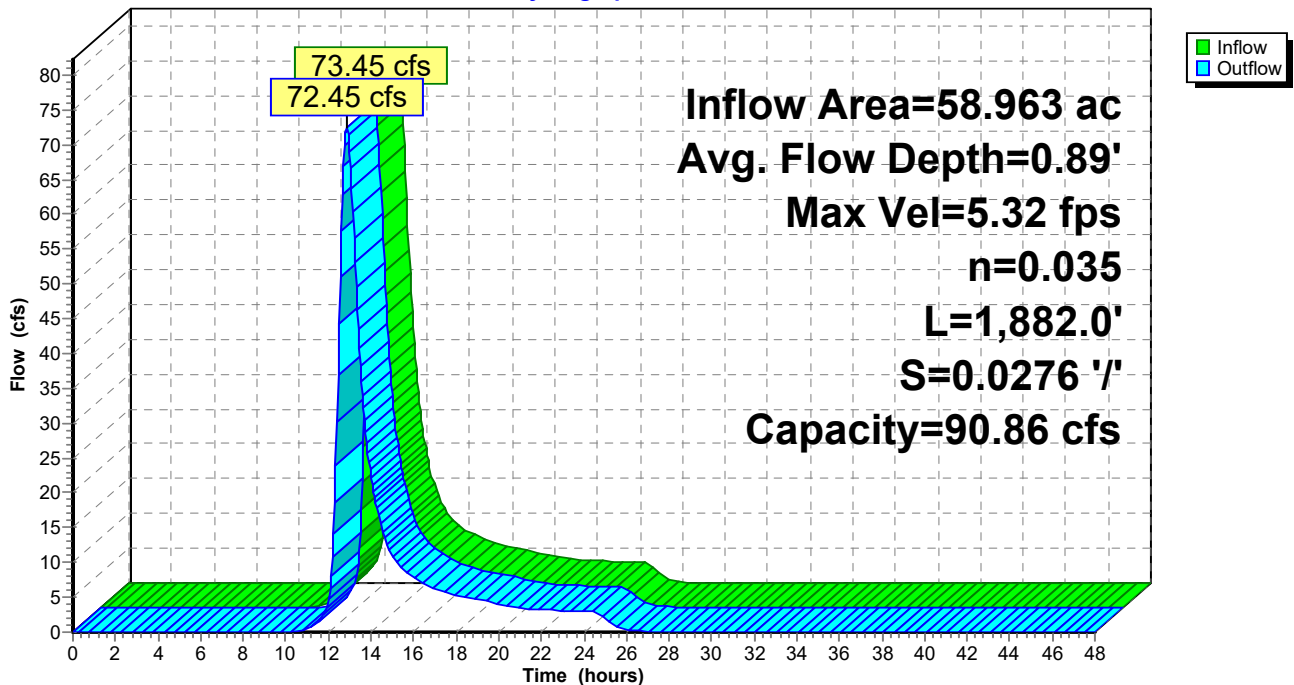
Peak Storage= 25,633 cf @ 12.76 hrs  
Average Depth at Peak Storage= 0.89' , Surface Width= 20.66'  
Bank-Full Depth= 1.00' Flow Area= 16.0 sf, Capacity= 90.86 cfs

10.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 6.0 ' / ' Top Width= 22.00'  
Length= 1,882.0' Slope= 0.0276 ' / '  
Inlet Invert= 542.00', Outlet Invert= 490.00'



**Reach 6R: W-NSD-35**

Hydrograph



**Mill Pt Pre 1**

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**Summary for Reach 13.1R:**

Inflow Area = 4.859 ac, 0.00% Impervious, Inflow Depth = 5.13" for 100-year event  
Inflow = 1.61 cfs @ 13.20 hrs, Volume= 2.078 af  
Outflow = 1.61 cfs @ 13.24 hrs, Volume= 2.078 af, Atten= 0%, Lag= 2.0 min  
Routed to Reach 13.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 2.32 fps, Min. Travel Time= 1.2 min  
Avg. Velocity = 1.85 fps, Avg. Travel Time= 1.5 min

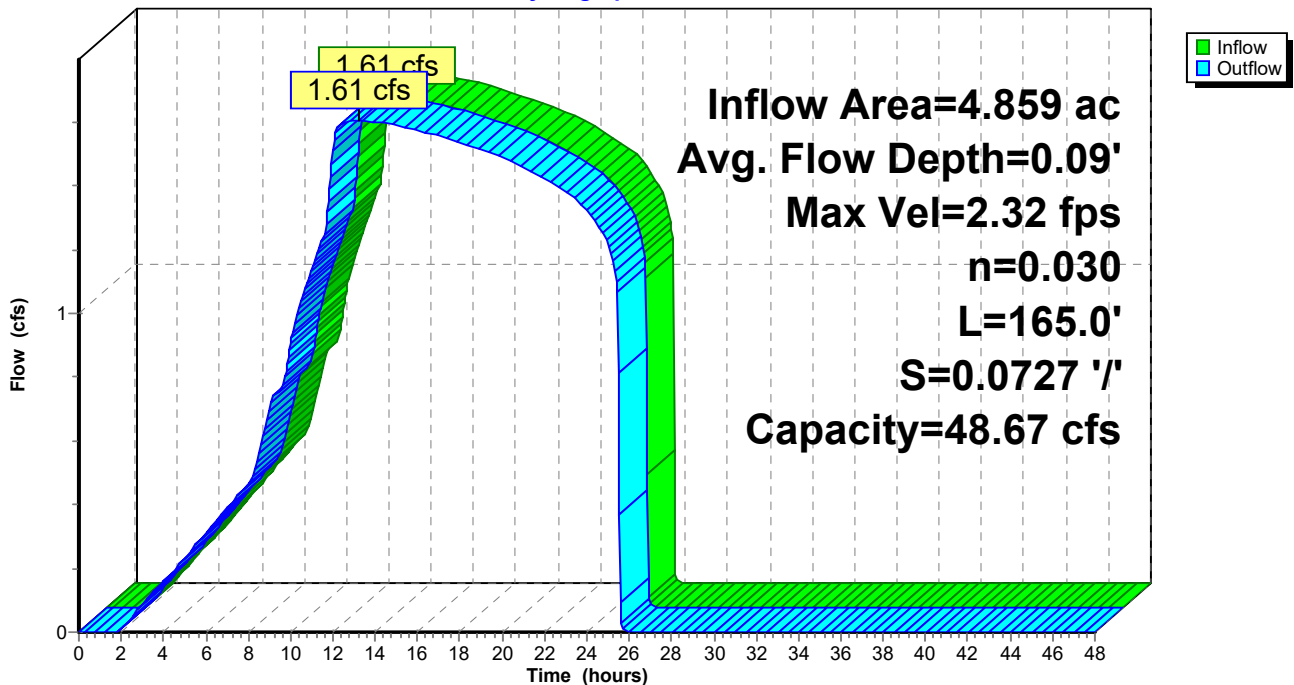
Peak Storage= 114 cf @ 13.22 hrs  
Average Depth at Peak Storage= 0.09' , Surface Width= 9.56'  
Bank-Full Depth= 0.50' Flow Area= 8.0 sf, Capacity= 48.67 cfs

6.00' x 0.50' deep channel, n= 0.030 Earth, grassed & winding  
Side Slope Z-value= 20.0 ' / ' Top Width= 26.00'  
Length= 165.0' Slope= 0.0727 ' / '  
Inlet Invert= 503.90', Outlet Invert= 491.90'



**Reach 13.1R:**

Hydrograph



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**Summary for Reach 13.2R:**

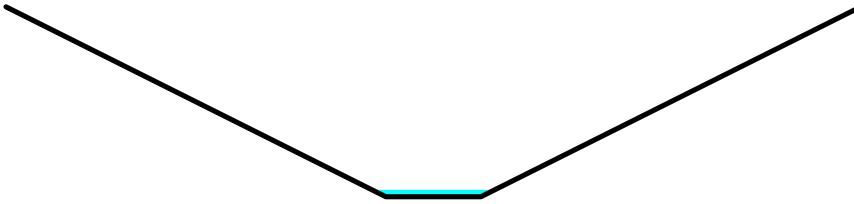
[61] Hint: Exceeded Reach 13.1R outlet invert by 0.04' @ 13.25 hrs

Inflow Area = 4.859 ac, 0.00% Impervious, Inflow Depth = 5.13" for 100-year event  
Inflow = 1.61 cfs @ 13.24 hrs, Volume= 2.078 af  
Outflow = 1.61 cfs @ 13.26 hrs, Volume= 2.078 af, Atten= 0%, Lag= 1.4 min  
Routed to Link SP13 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 4.86 fps, Min. Travel Time= 0.8 min  
Avg. Velocity = 3.98 fps, Avg. Travel Time= 1.0 min

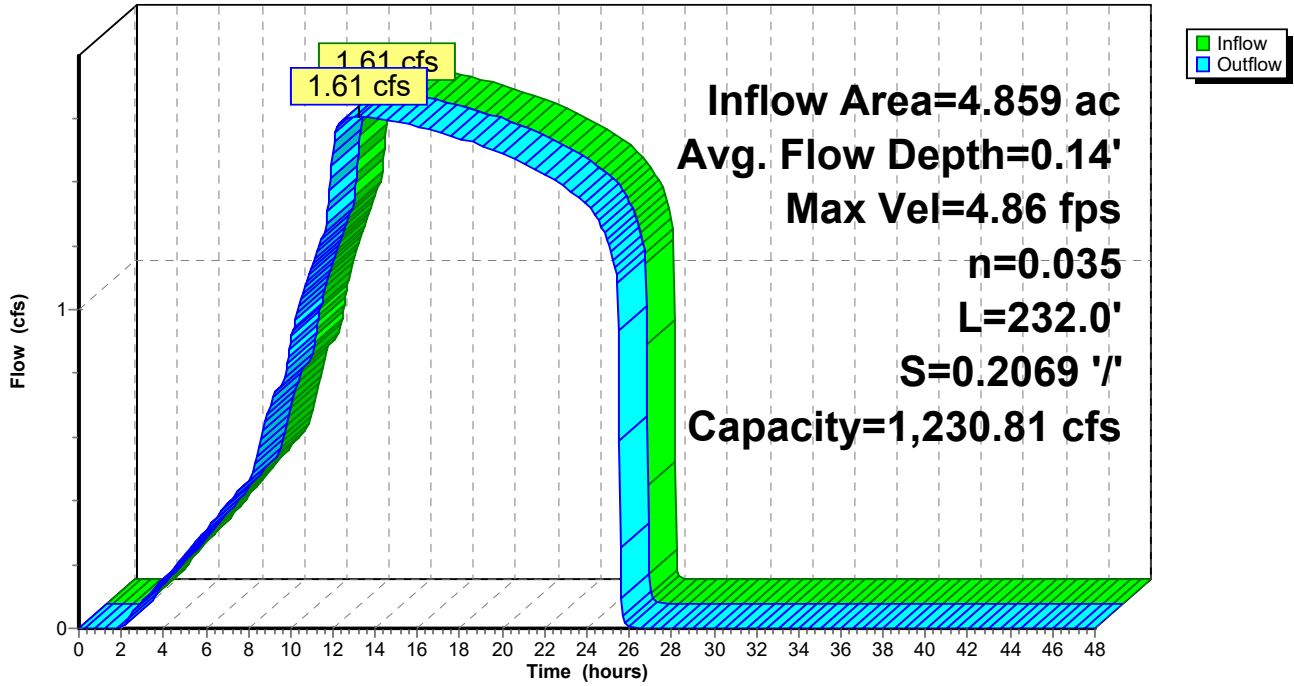
Peak Storage= 77 cf @ 13.25 hrs  
Average Depth at Peak Storage= 0.14' , Surface Width= 2.58'  
Bank-Full Depth= 4.00' Flow Area= 40.0 sf, Capacity= 1,230.81 cfs

2.00' x 4.00' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 2.0 '/' Top Width= 18.00'  
Length= 232.0' Slope= 0.2069 '/'  
Inlet Invert= 491.80', Outlet Invert= 443.80'



Reach 13.2R:

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Reach 20.1R: S-KCF-6**

[91] Warning: Storage range exceeded by 0.57'

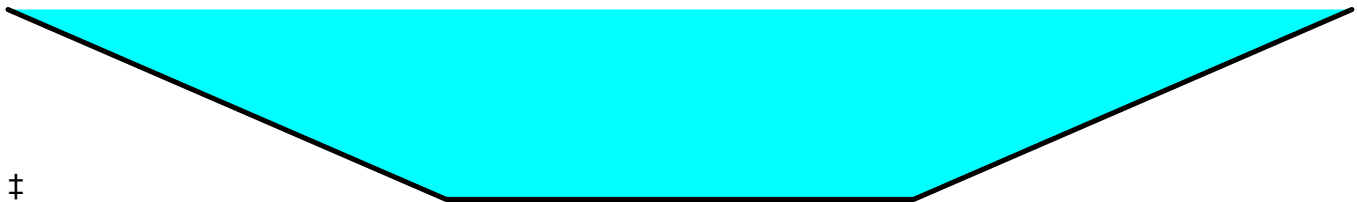
[55] Hint: Peak inflow is 161% of Manning's capacity

Inflow Area = 98.932 ac, 0.71% Impervious, Inflow Depth = 2.39" for 100-year event  
 Inflow = 227.84 cfs @ 12.16 hrs, Volume= 19.682 af  
 Outflow = 206.83 cfs @ 12.33 hrs, Volume= 19.682 af, Atten= 9%, Lag= 10.5 min  
 Routed to Reach 20.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Max. Velocity= 3.99 fps, Min. Travel Time= 5.9 min  
 Avg. Velocity= 0.90 fps, Avg. Travel Time= 26.0 min

Peak Storage= 72,865 cf @ 12.23 hrs  
 Average Depth at Peak Storage= 3.07' , Surface Width= 26.43'  
 Bank-Full Depth= 2.50' Flow Area= 38.8 sf, Capacity= 141.69 cfs

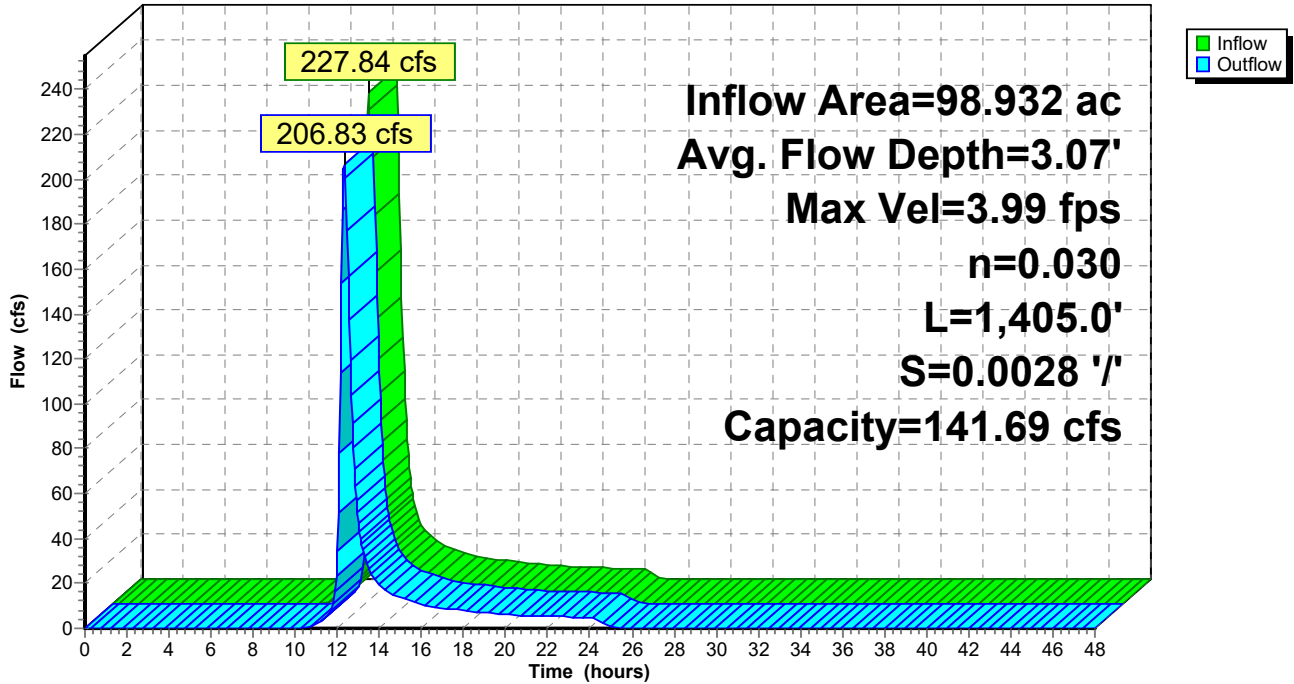
8.00' x 2.50' deep channel, n= 0.030 Earth, grassed & winding  
 Side Slope Z-value= 3.0 '/' Top Width= 23.00'  
 Length= 1,405.0' Slope= 0.0028 '/'  
 Inlet Invert= 494.00', Outlet Invert= 490.00'





Reach 20.1R: S-KCF-6

Hydrograph



**Mill Pt Pre 1**

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**Summary for Reach 20.2R:**

[62] Hint: Exceeded Reach 20.1R OUTLET depth by 0.02' @ 24.95 hrs

Inflow Area = 98.932 ac, 0.71% Impervious, Inflow Depth = 2.39" for 100-year event  
 Inflow = 206.83 cfs @ 12.33 hrs, Volume= 19.682 af  
 Outflow = 199.93 cfs @ 12.44 hrs, Volume= 19.682 af, Atten= 3%, Lag= 6.7 min  
 Routed to Reach 22.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Max. Velocity= 6.08 fps, Min. Travel Time= 3.6 min  
 Avg. Velocity= 1.35 fps, Avg. Travel Time= 16.3 min

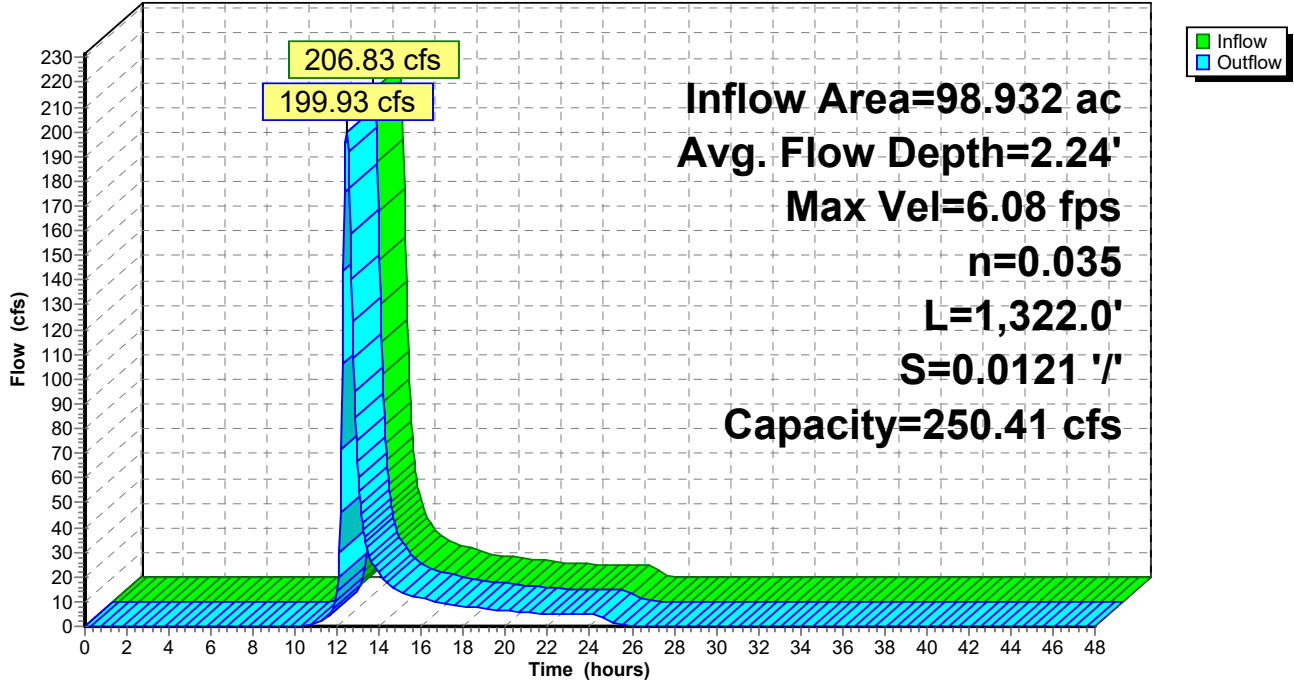
Peak Storage= 43,630 cf @ 12.38 hrs  
 Average Depth at Peak Storage= 2.24' , Surface Width= 21.45'  
 Bank-Full Depth= 2.50' Flow Area= 38.8 sf, Capacity= 250.41 cfs

8.00' x 2.50' deep channel, n= 0.035 Earth, dense weeds  
 Side Slope Z-value= 3.0 '/' Top Width= 23.00'  
 Length= 1,322.0' Slope= 0.0121 '/'  
 Inlet Invert= 490.00', Outlet Invert= 474.00'



Reach 20.2R:

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Reach 22.1R: S-KCF-5**

[91] Warning: Storage range exceeded by 0.81'

[55] Hint: Peak inflow is 201% of Manning's capacity

Inflow Area = 123.017 ac, 3.33% Impervious, Inflow Depth = 2.23" for 100-year event  
Inflow = 180.43 cfs @ 12.42 hrs, Volume= 22.910 af  
Outflow = 178.76 cfs @ 12.49 hrs, Volume= 22.910 af, Atten= 1%, Lag= 4.4 min  
Routed to Reach 22.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 4.84 fps, Min. Travel Time= 2.3 min  
Avg. Velocity= 1.49 fps, Avg. Travel Time= 7.4 min

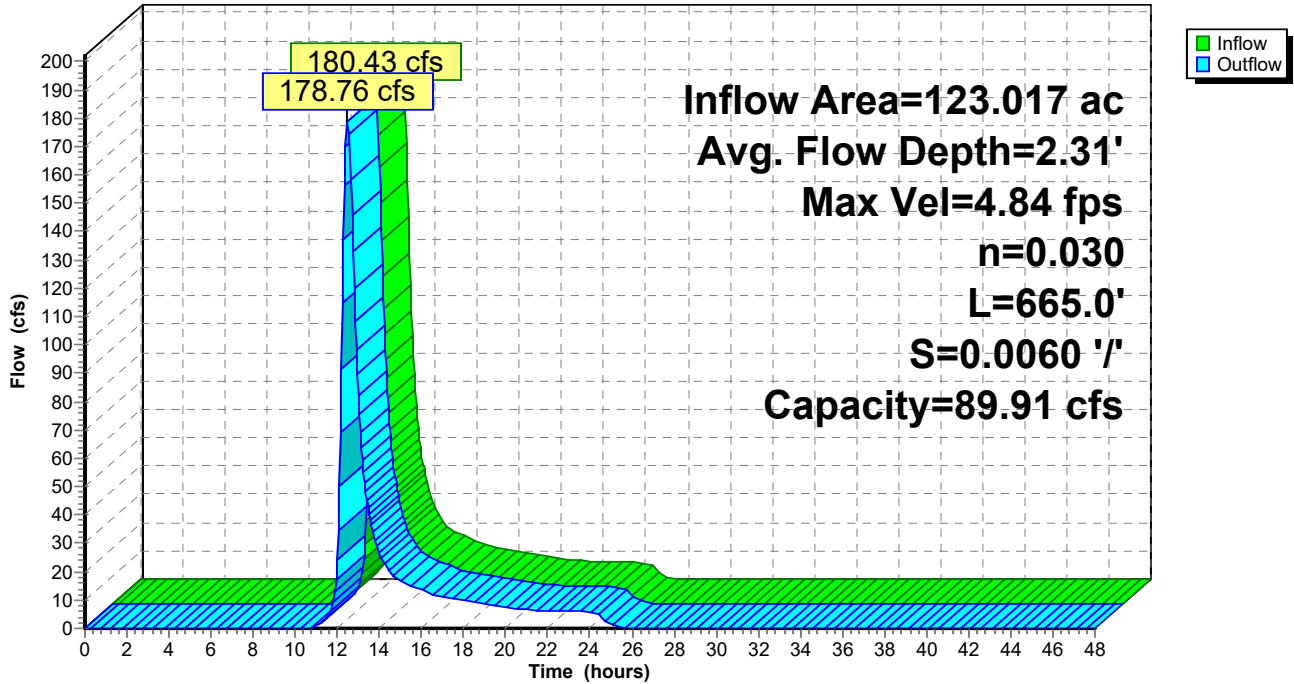
Peak Storage= 24,618 cf @ 12.45 hrs  
Average Depth at Peak Storage= 2.31' , Surface Width= 23.83'  
Bank-Full Depth= 1.50' Flow Area= 21.8 sf, Capacity= 89.91 cfs

10.00' x 1.50' deep channel, n= 0.030 Earth, grassed & winding  
Side Slope Z-value= 3.0 '/' Top Width= 19.00'  
Length= 665.0' Slope= 0.0060 '/'  
Inlet Invert= 478.00', Outlet Invert= 474.00'



Reach 22.1R: S-KCF-5

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Reach 22.2R:**

[91] Warning: Storage range exceeded by 2.69'

[55] Hint: Peak inflow is 437% of Manning's capacity

[62] Hint: Exceeded Reach 20.2R OUTLET depth by 2.14' @ 12.55 hrs

[64] Warning: Exceeded Reach 20.2R outlet bank by 1.69' @ 12.50 hrs

[62] Hint: Exceeded Reach 22.1R OUTLET depth by 1.91' @ 12.50 hrs

[64] Warning: Exceeded Reach 22.1R outlet bank by 2.69' @ 12.50 hrs

Inflow Area = 221.949 ac, 2.16% Impervious, Inflow Depth = 2.30" for 100-year event

Inflow = 377.18 cfs @ 12.46 hrs, Volume= 42.592 af

Outflow = 371.05 cfs @ 12.54 hrs, Volume= 42.592 af, Atten= 2%, Lag= 4.6 min

Routed to Link SP22 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.12 fps, Min. Travel Time= 2.3 min

Avg. Velocity= 1.25 fps, Avg. Travel Time= 9.4 min

Peak Storage= 51,431 cf @ 12.50 hrs

Average Depth at Peak Storage= 4.19' , Surface Width= 35.14'

Bank-Full Depth= 1.50' Flow Area= 21.8 sf, Capacity= 86.27 cfs

10.00' x 1.50' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 3.0 '/' Top Width= 19.00'

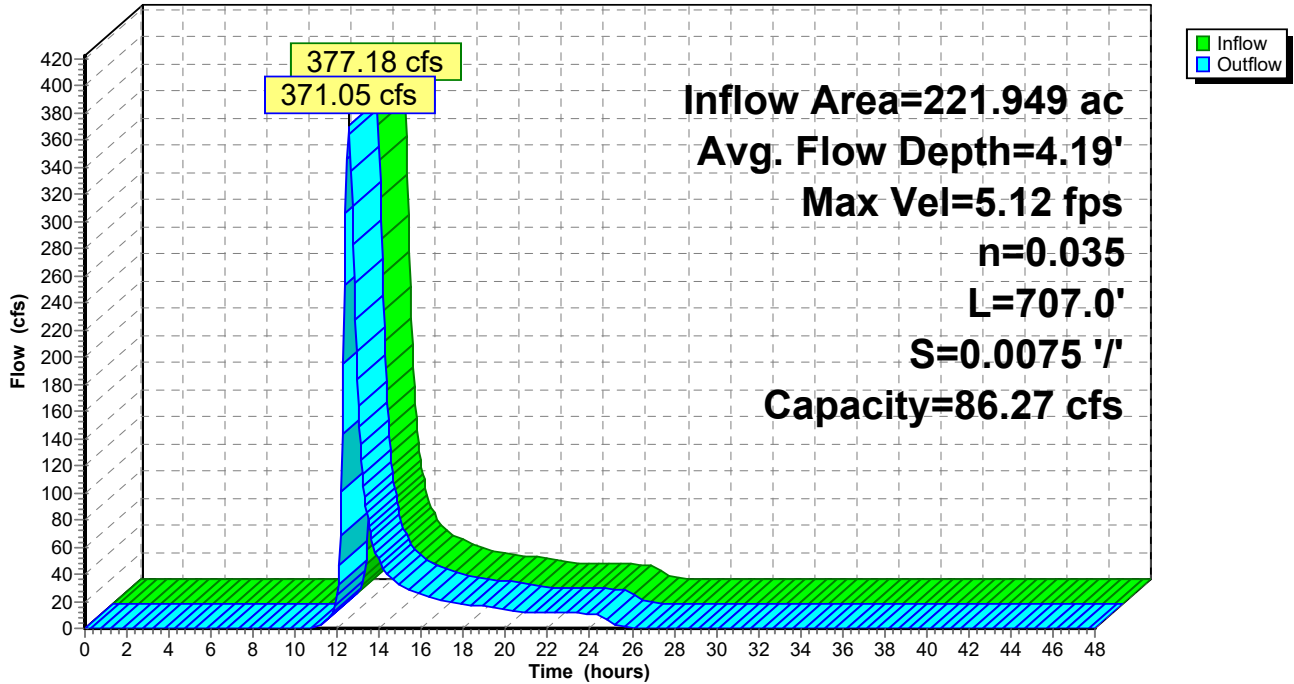
Length= 707.0' Slope= 0.0075 '/'

Inlet Invert= 474.00', Outlet Invert= 468.67'



Reach 22.2R:

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Reach 44R:**

[91] Warning: Storage range exceeded by 1.38'

[55] Hint: Peak inflow is 698% of Manning's capacity

Inflow Area = 34.064 ac, 0.46% Impervious, Inflow Depth = 2.58" for 100-year event  
Inflow = 60.76 cfs @ 12.39 hrs, Volume= 7.337 af  
Outflow = 60.27 cfs @ 12.45 hrs, Volume= 7.337 af, Atten= 1%, Lag= 3.9 min  
Routed to Reach 45R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 4.47 fps, Min. Travel Time= 1.9 min  
Avg. Velocity = 2.07 fps, Avg. Travel Time= 4.0 min

Peak Storage= 6,737 cf @ 12.42 hrs  
Average Depth at Peak Storage= 1.88' , Surface Width= 24.61'  
Bank-Full Depth= 0.50' Flow Area= 2.5 sf, Capacity= 8.70 cfs

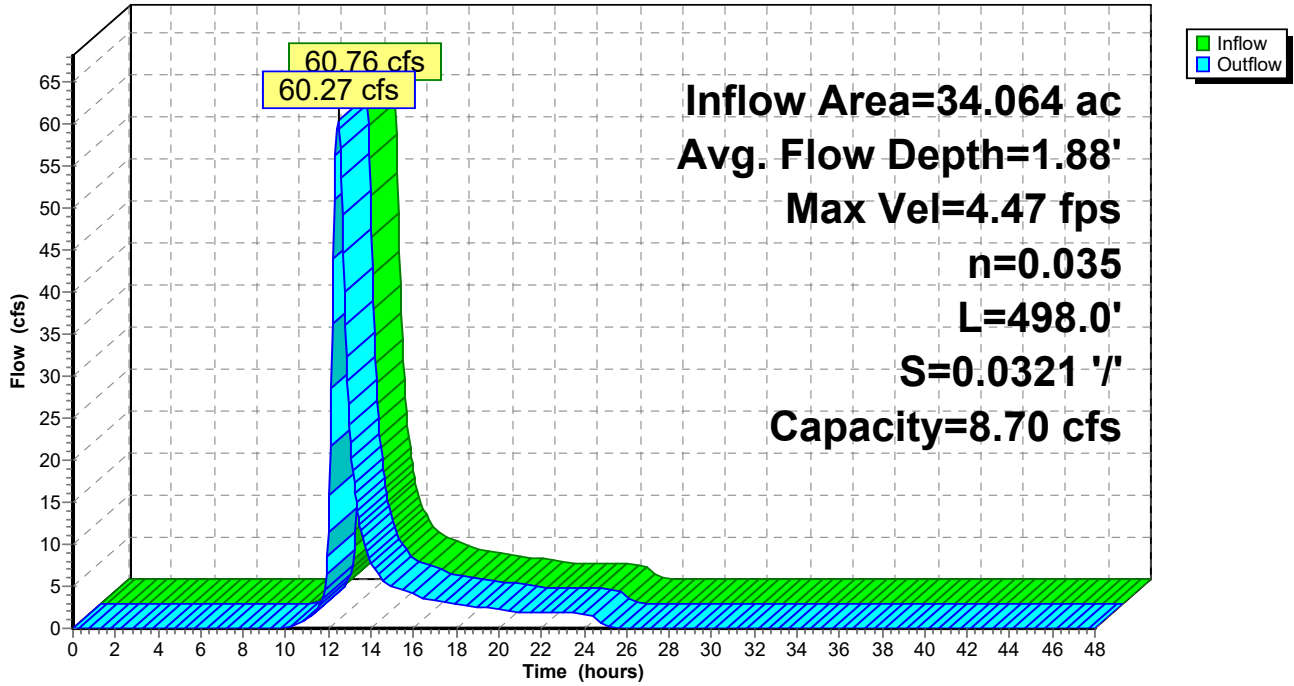
2.00' x 0.50' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 6.0 '/' Top Width= 8.00'  
Length= 498.0' Slope= 0.0321 '/'  
Inlet Invert= 404.00', Outlet Invert= 388.00'





Reach 44R:

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Reach 45R:**

[91] Warning: Storage range exceeded by 2.23'

[55] Hint: Peak inflow is 870% of Manning's capacity

[62] Hint: Exceeded Reach 44R OUTLET depth by 0.87' @ 12.50 hrs

[64] Warning: Exceeded Reach 44R outlet bank by 2.23' @ 12.45 hrs

Inflow Area = 80.354 ac, 0.20% Impervious, Inflow Depth = 2.58" for 100-year event

Inflow = 141.03 cfs @ 12.42 hrs, Volume= 17.308 af

Outflow = 140.13 cfs @ 12.47 hrs, Volume= 17.308 af, Atten= 1%, Lag= 2.7 min

Routed to Link SP43 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Max. Velocity= 6.58 fps, Min. Travel Time= 1.4 min

Avg. Velocity = 2.58 fps, Avg. Travel Time= 3.5 min

Peak Storage= 11,468 cf @ 12.45 hrs

Average Depth at Peak Storage= 2.73' , Surface Width= 16.94'

Bank-Full Depth= 0.50' Flow Area= 3.5 sf, Capacity= 16.21 cfs

6.00' x 0.50' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 2.0 '/' Top Width= 8.00'

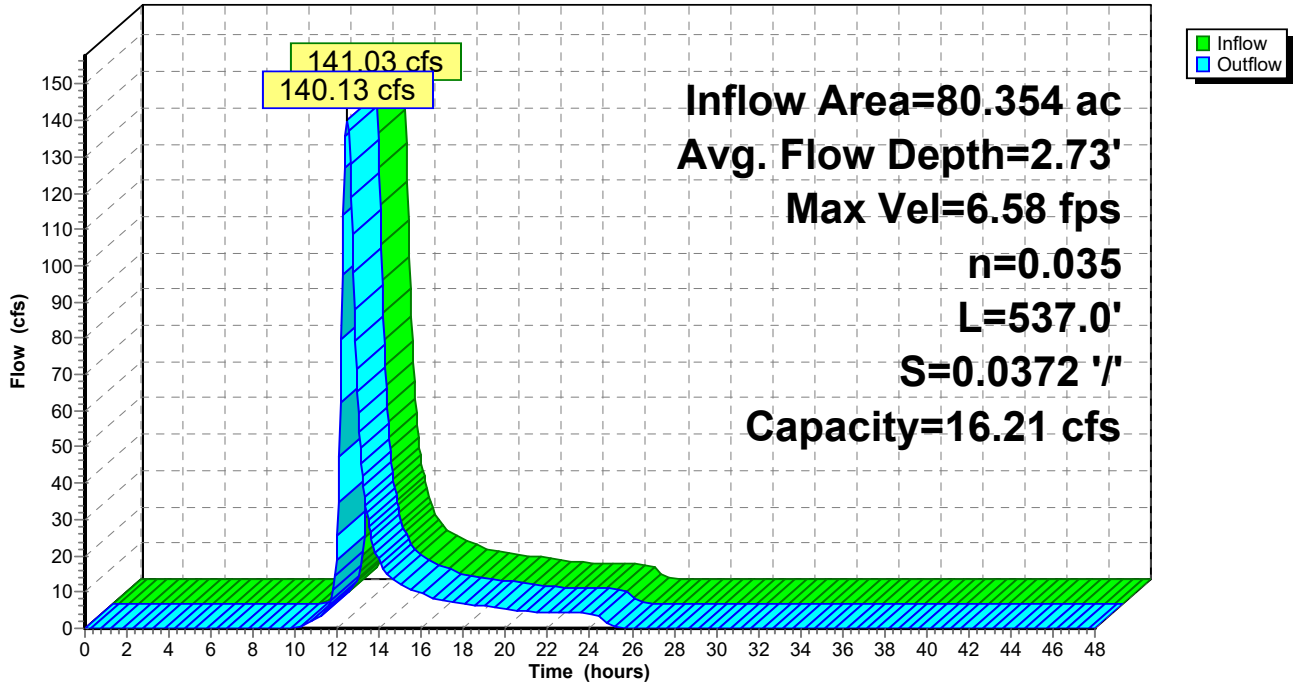
Length= 537.0' Slope= 0.0372 '/'

Inlet Invert= 388.00', Outlet Invert= 368.00'



Reach 45R:

Hydrograph



**Mill Pt Pre 1**

Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Pond 12P: 12P**

Inflow Area = 4.859 ac, 0.00% Impervious, Inflow Depth = 5.13" for 100-year event  
 Inflow = 37.76 cfs @ 11.96 hrs, Volume= 2.079 af  
 Outflow = 1.61 cfs @ 13.20 hrs, Volume= 2.078 af, Atten= 96%, Lag= 74.4 min  
 Primary = 1.61 cfs @ 13.20 hrs, Volume= 2.078 af  
 Routed to Reach 13.1R :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 3  
 Peak Elev= 508.35' @ 13.20 hrs Surf.Area= 45,786 sf Storage= 43,067 cf

Plug-Flow detention time= 232.4 min calculated for 2.078 af (100% of inflow)  
 Center-of-Mass det. time= 232.2 min ( 993.3 - 761.1 )

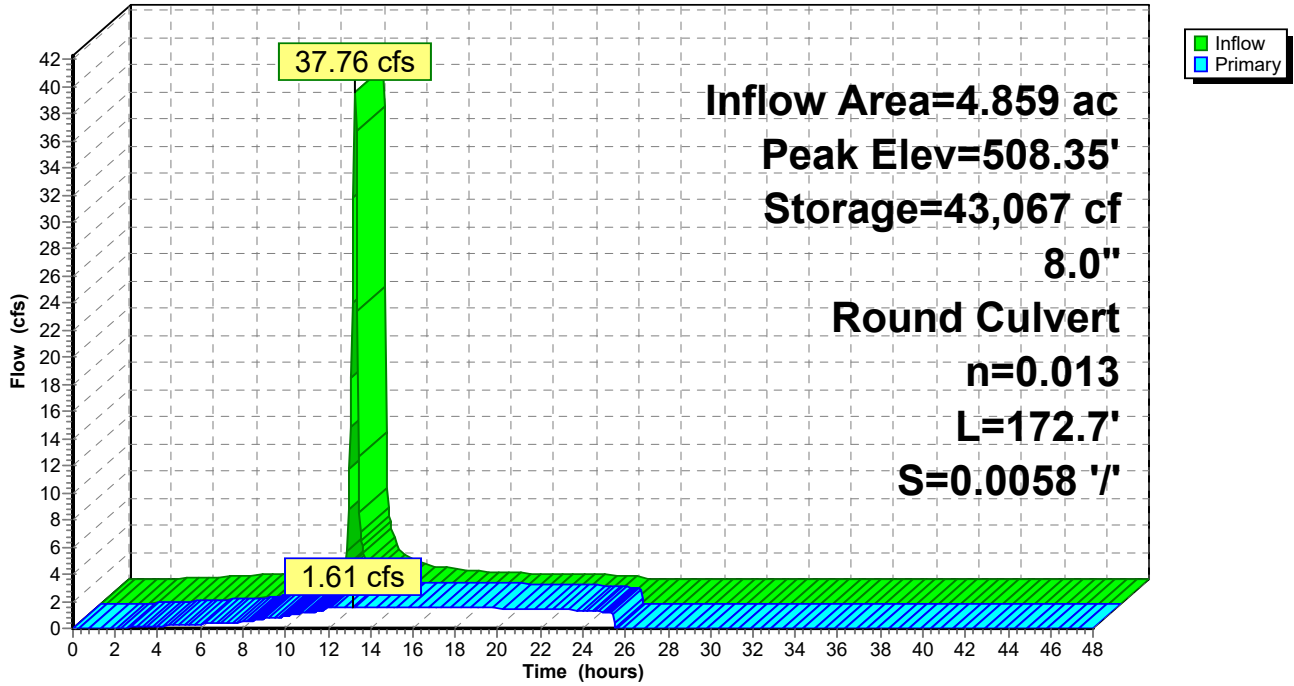
Volume	Invert	Avail.Storage	Storage Description		
#1	505.00'	349,932 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
505.00	50	25.0	0	0	50
506.00	138	45.5	90	90	170
508.00	39,705	811.5	28,123	28,213	52,417
510.00	80,589	1,415.9	117,907	146,120	159,570
512.00	124,830	2,053.3	203,812	349,932	335,572

Device	Routing	Invert	Outlet Devices
#1	Primary	505.00'	<b>8.0" Round Culvert</b> L= 172.7' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 505.00' / 504.00' S= 0.0058 ' /' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

**Primary OutFlow** Max=1.61 cfs @ 13.20 hrs HW=508.35' (Free Discharge)  
 ↑1=Culvert (Barrel Controls 1.61 cfs @ 4.60 fps)

Pond 12P: 12P

Hydrograph



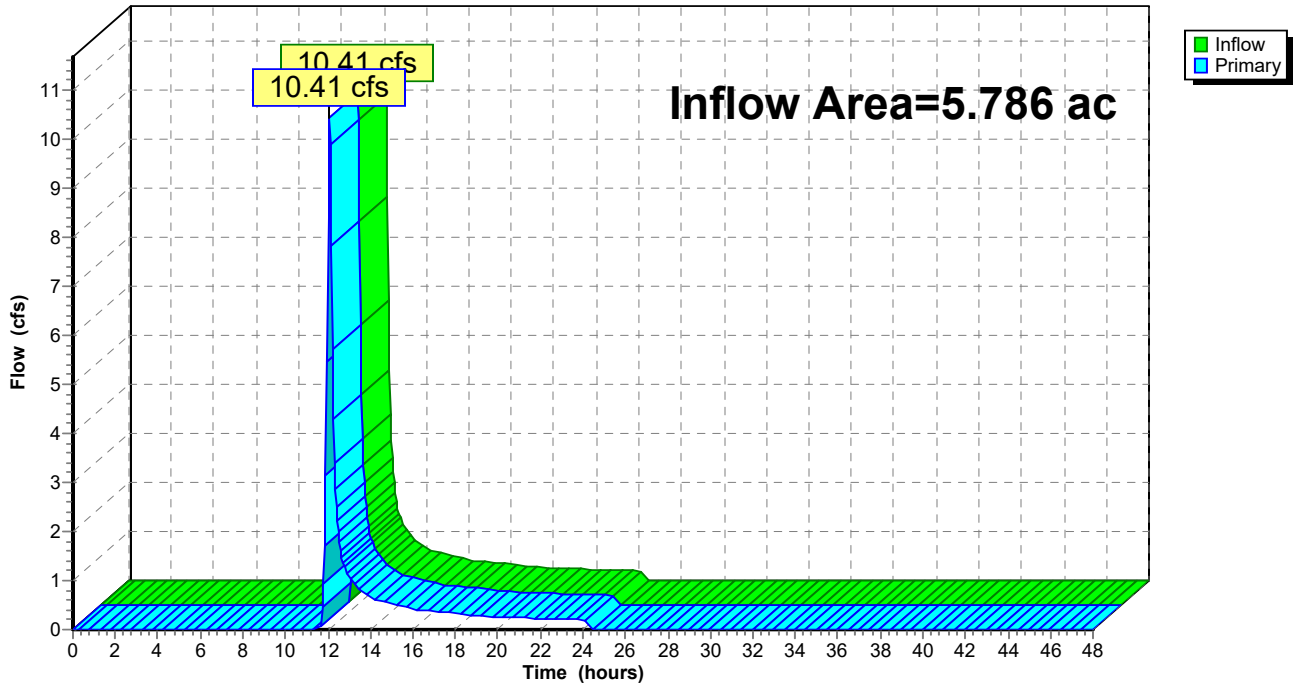
### Summary for Link SP1:

Inflow Area = 5.786 ac, 0.00% Impervious, Inflow Depth = 1.43" for 100-year event  
Inflow = 10.41 cfs @ 12.07 hrs, Volume= 0.691 af  
Primary = 10.41 cfs @ 12.07 hrs, Volume= 0.691 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP1:

Hydrograph



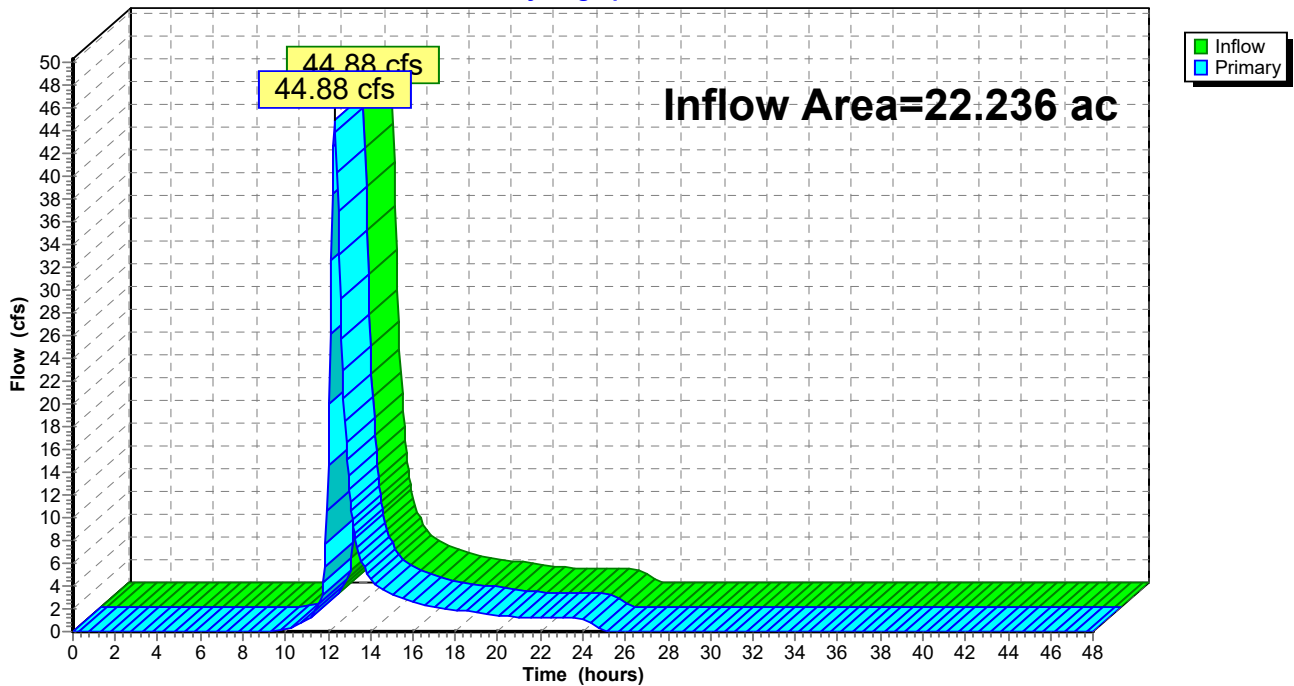
### Summary for Link SP10:

Inflow Area = 22.236 ac, 4.90% Impervious, Inflow Depth = 2.67" for 100-year event  
Inflow = 44.88 cfs @ 12.32 hrs, Volume= 4.956 af  
Primary = 44.88 cfs @ 12.32 hrs, Volume= 4.956 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP10:

Hydrograph



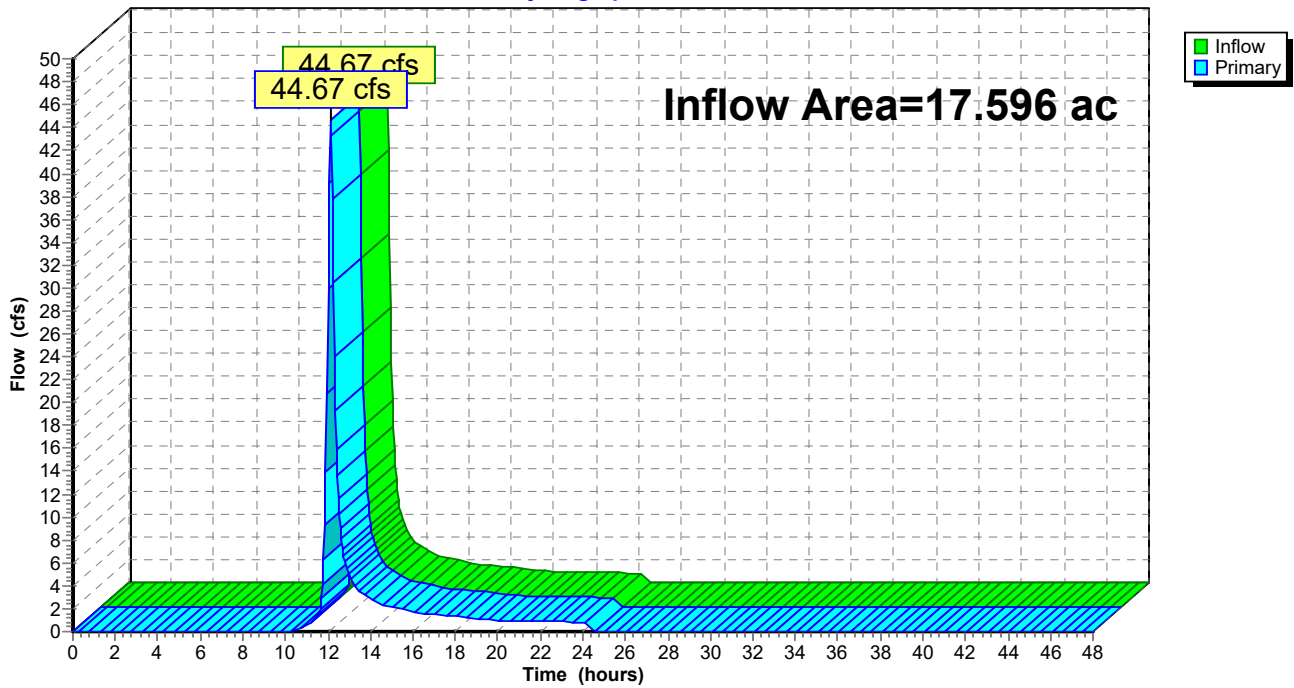
### Summary for Link SP11:

Inflow Area = 17.596 ac, 2.21% Impervious, Inflow Depth = 2.23" for 100-year event  
Inflow = 44.67 cfs @ 12.12 hrs, Volume= 3.277 af  
Primary = 44.67 cfs @ 12.12 hrs, Volume= 3.277 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP11:

Hydrograph





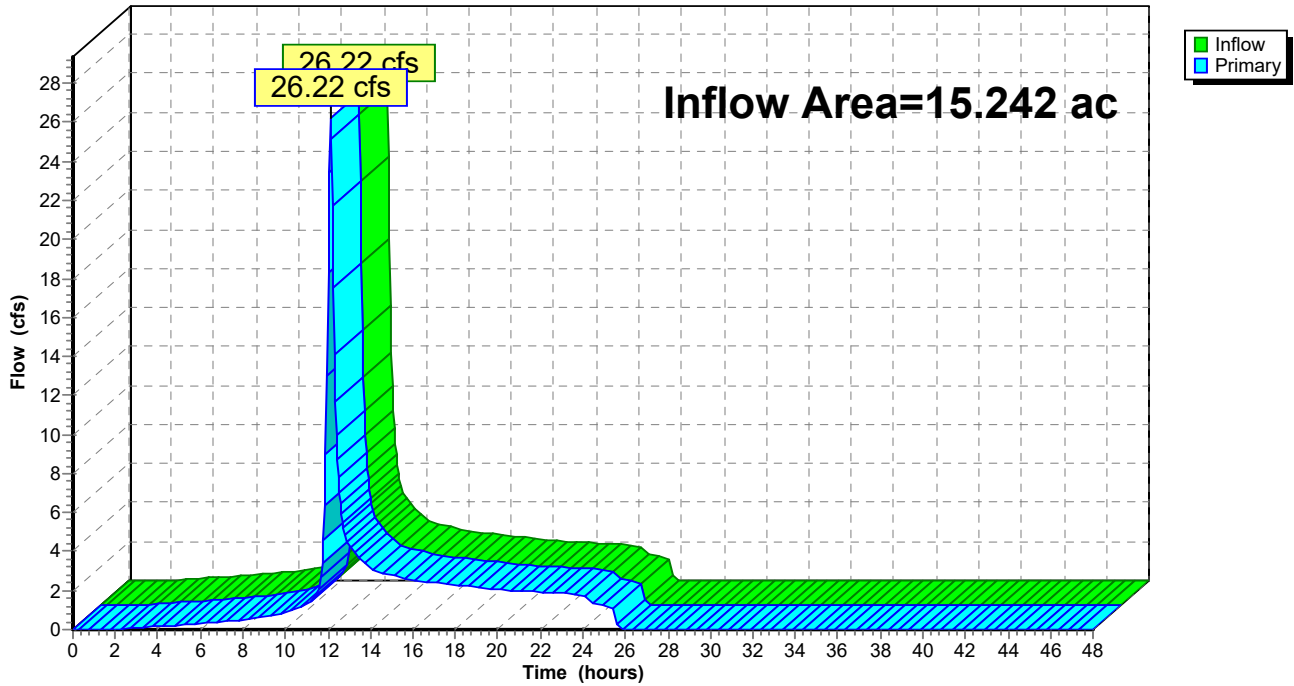
### Summary for Link SP13:

Inflow Area = 15.242 ac, 0.14% Impervious, Inflow Depth = 3.04" for 100-year event  
Inflow = 26.22 cfs @ 12.11 hrs, Volume= 3.866 af  
Primary = 26.22 cfs @ 12.11 hrs, Volume= 3.866 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP13:

Hydrograph



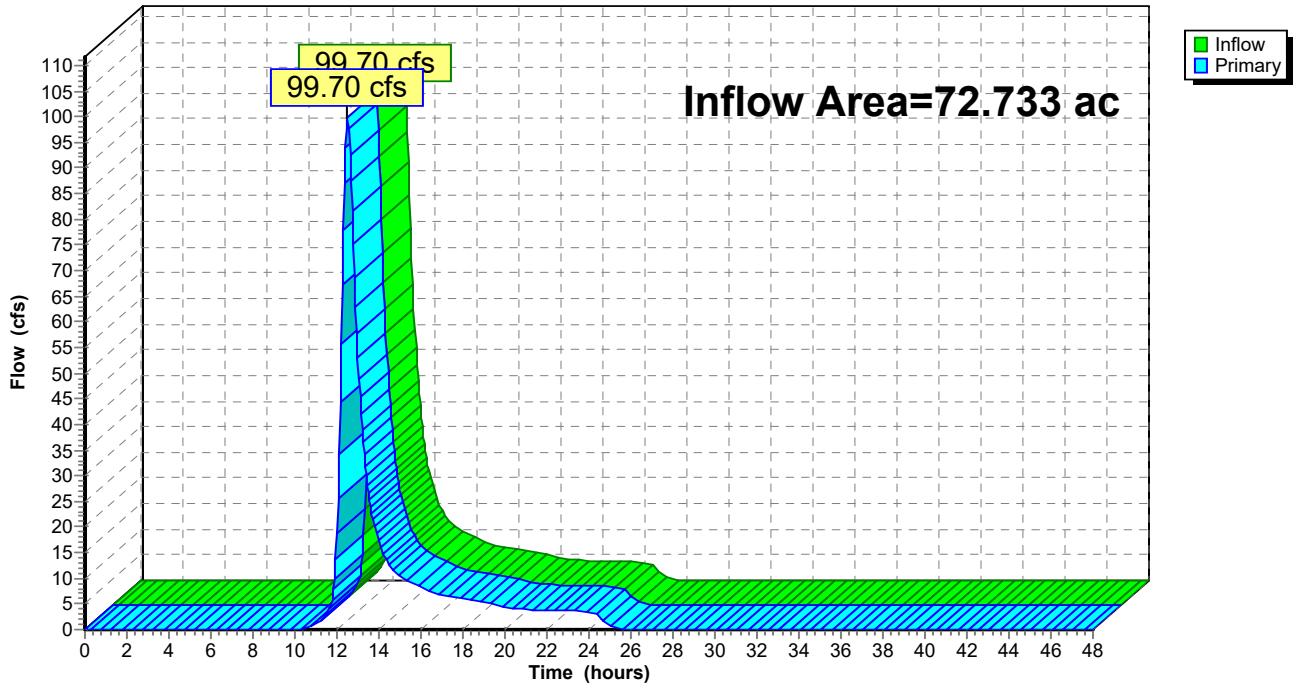
### Summary for Link SP14:

Inflow Area = 72.733 ac, 0.42% Impervious, Inflow Depth = 2.32" for 100-year event  
Inflow = 99.70 cfs @ 12.51 hrs, Volume= 14.066 af  
Primary = 99.70 cfs @ 12.51 hrs, Volume= 14.066 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP14:

Hydrograph



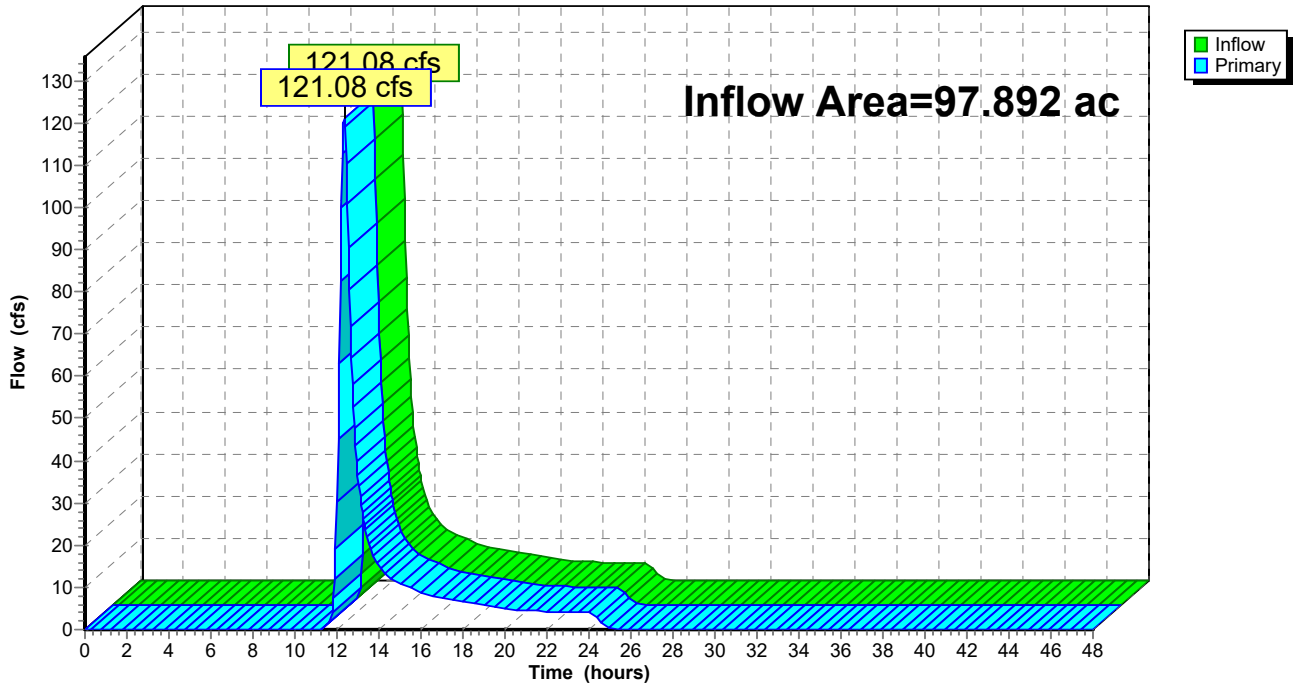
### Summary for Link SP17:

Inflow Area = 97.892 ac, 1.18% Impervious, Inflow Depth = 1.74" for 100-year event  
Inflow = 121.08 cfs @ 12.34 hrs, Volume= 14.202 af  
Primary = 121.08 cfs @ 12.34 hrs, Volume= 14.202 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP17:

Hydrograph



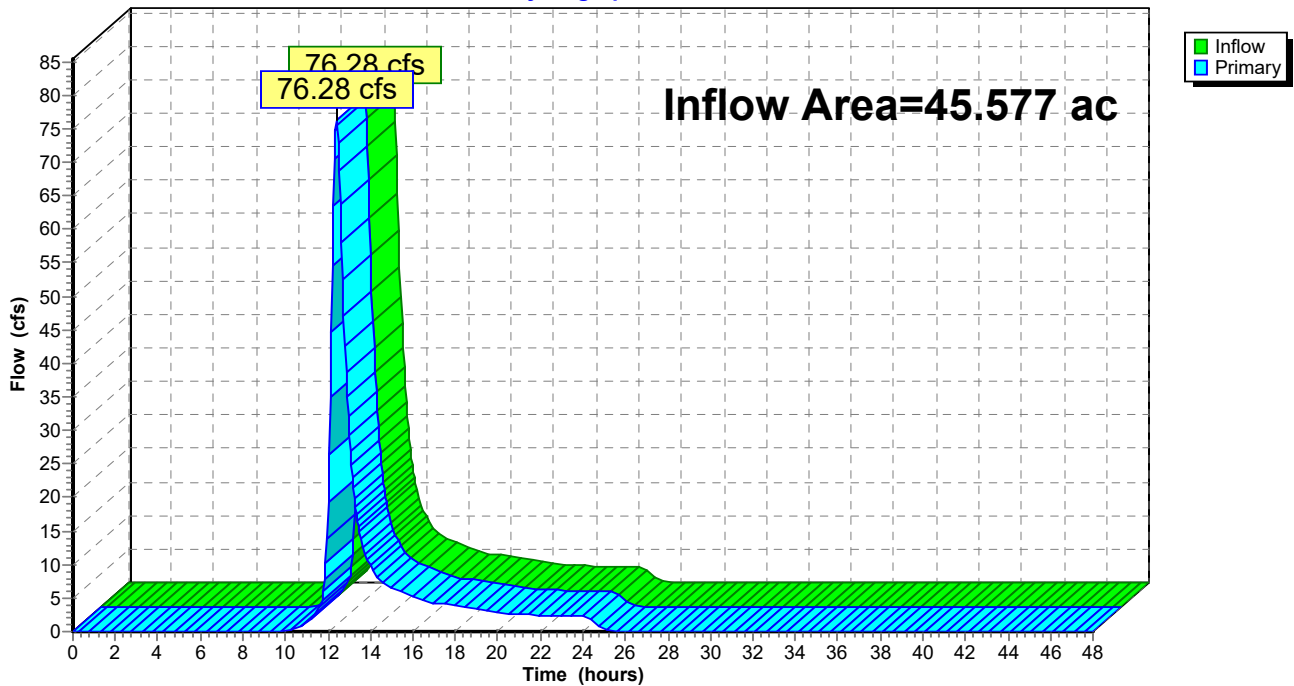
### Summary for Link SP18:

Inflow Area = 45.577 ac, 0.74% Impervious, Inflow Depth = 2.50" for 100-year event  
Inflow = 76.28 cfs @ 12.41 hrs, Volume= 9.479 af  
Primary = 76.28 cfs @ 12.41 hrs, Volume= 9.479 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP18:

Hydrograph



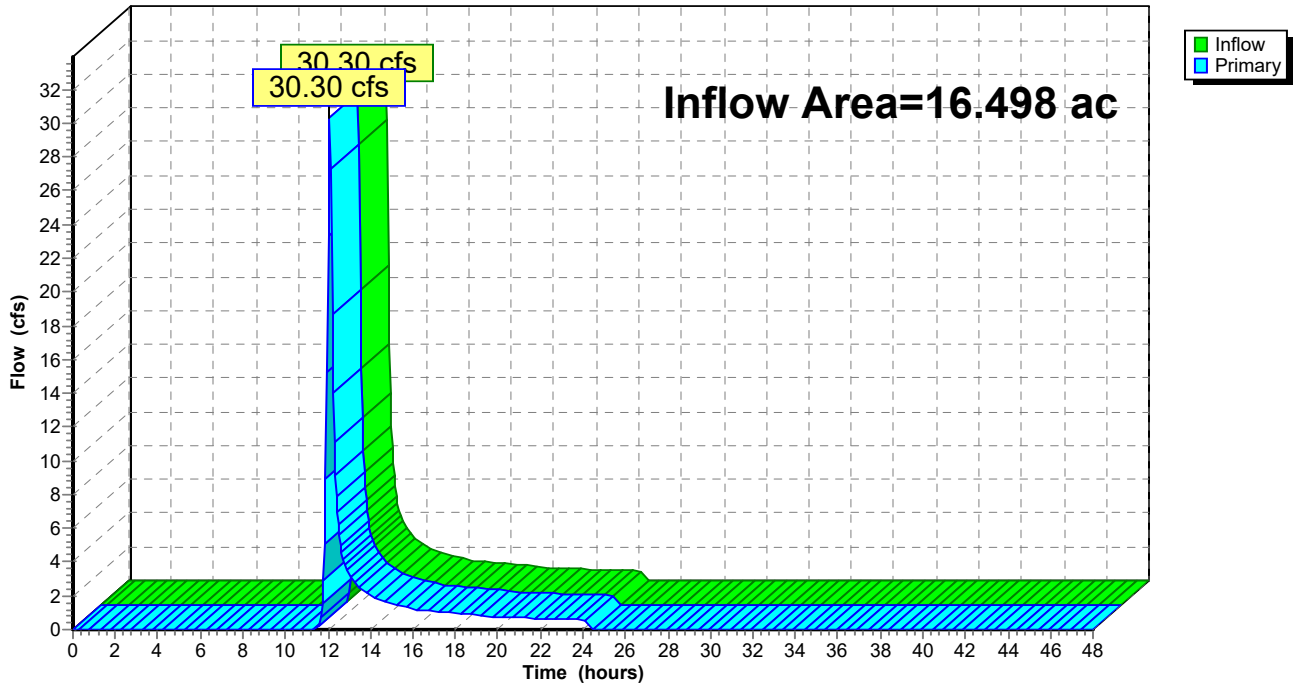
### Summary for Link SP2:

Inflow Area = 16.498 ac, 0.00% Impervious, Inflow Depth = 1.51" for 100-year event  
Inflow = 30.30 cfs @ 12.08 hrs, Volume= 2.074 af  
Primary = 30.30 cfs @ 12.08 hrs, Volume= 2.074 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP2:

Hydrograph



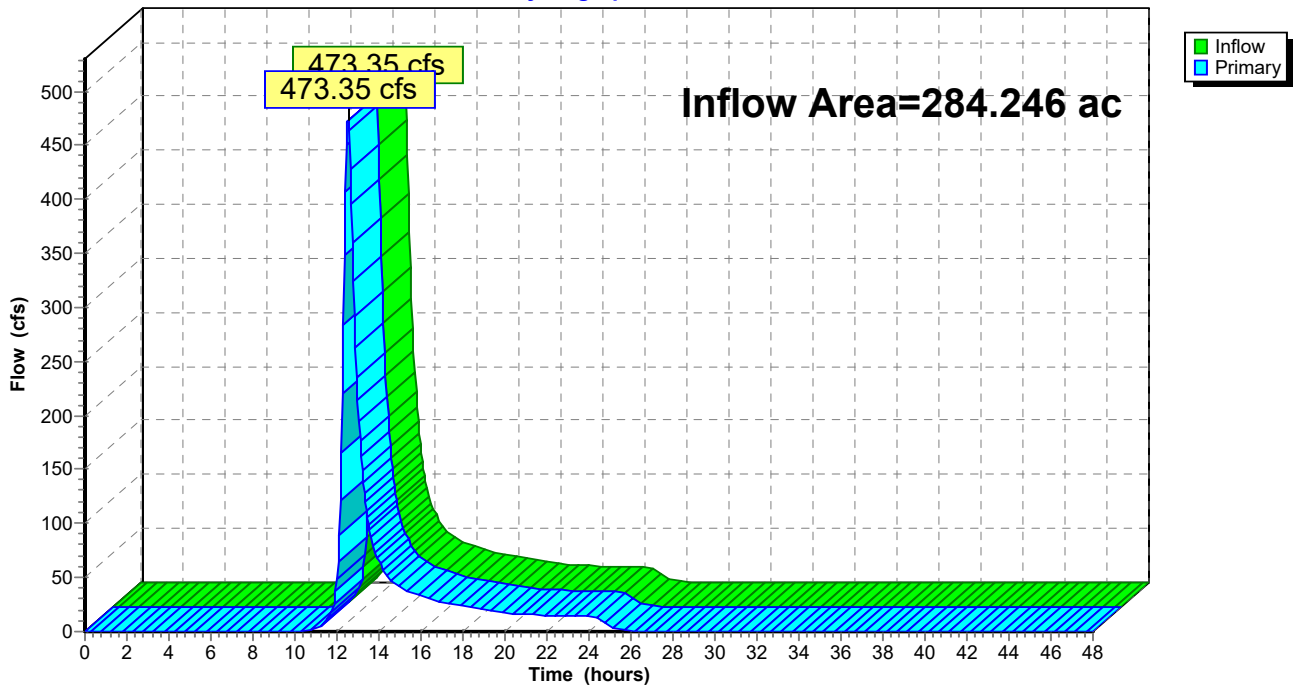
### Summary for Link SP22:

Inflow Area = 284.246 ac, 1.82% Impervious, Inflow Depth = 2.38" for 100-year event  
Inflow = 473.35 cfs @ 12.53 hrs, Volume= 56.478 af  
Primary = 473.35 cfs @ 12.53 hrs, Volume= 56.478 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP22:

Hydrograph



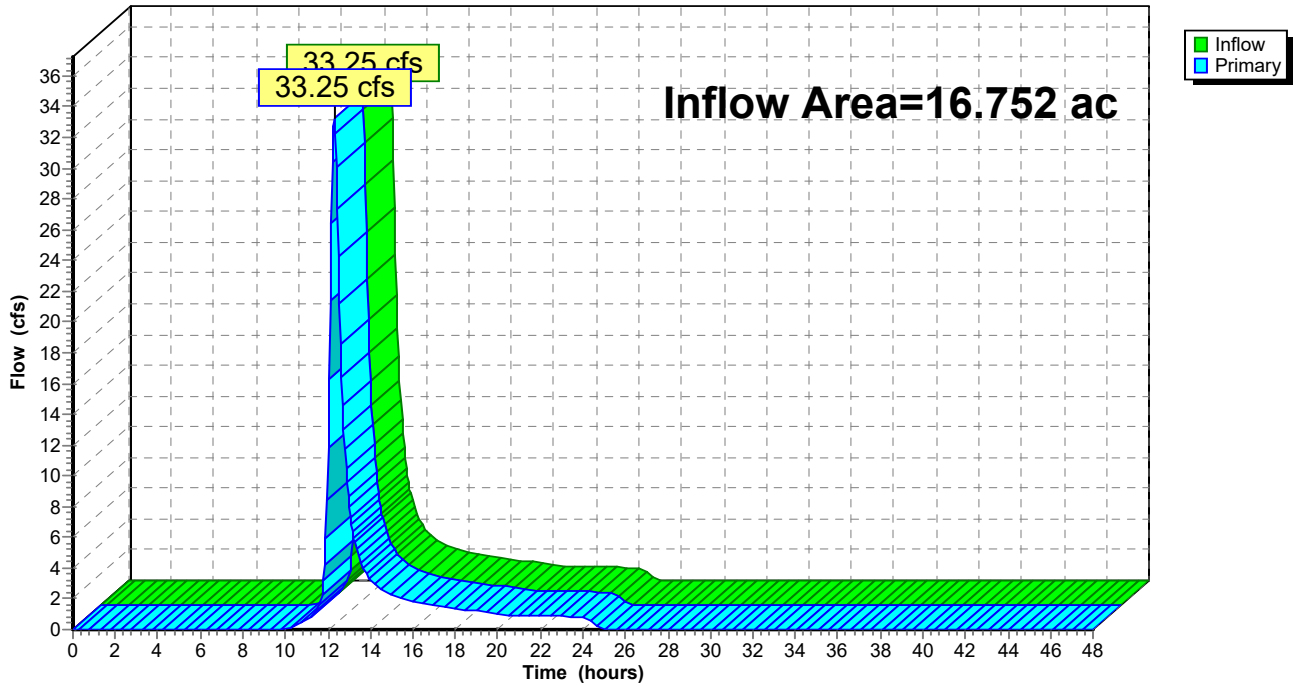
### Summary for Link SP23:

Inflow Area = 16.752 ac, 2.31% Impervious, Inflow Depth = 2.50" for 100-year event  
Inflow = 33.25 cfs @ 12.29 hrs, Volume= 3.484 af  
Primary = 33.25 cfs @ 12.29 hrs, Volume= 3.484 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP23:

Hydrograph



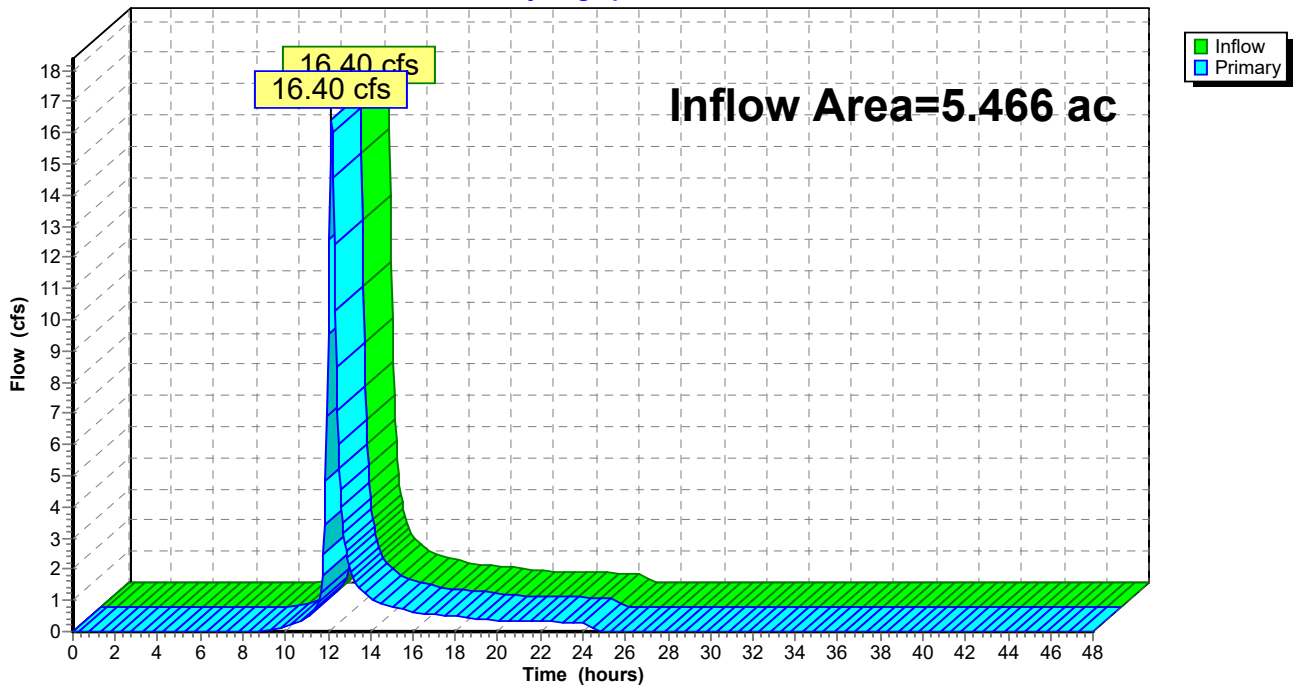
Summary for Link SP24:

Inflow Area = 5.466 ac, 7.70% Impervious, Inflow Depth = 2.95" for 100-year event  
Inflow = 16.40 cfs @ 12.16 hrs, Volume= 1.344 af  
Primary = 16.40 cfs @ 12.16 hrs, Volume= 1.344 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP24:

Hydrograph





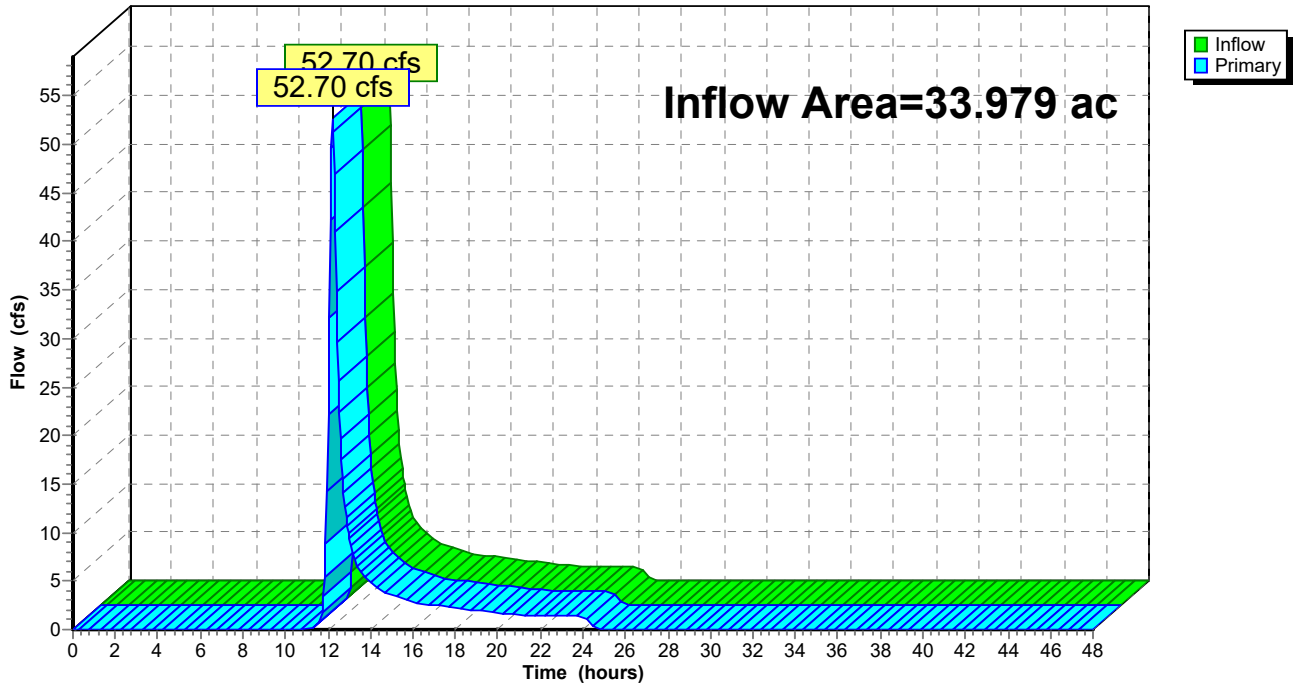
Summary for Link SP3:

Inflow Area = 33.979 ac, 0.00% Impervious, Inflow Depth = 1.74" for 100-year event  
Inflow = 52.70 cfs @ 12.21 hrs, Volume= 4.930 af  
Primary = 52.70 cfs @ 12.21 hrs, Volume= 4.930 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP3:

Hydrograph



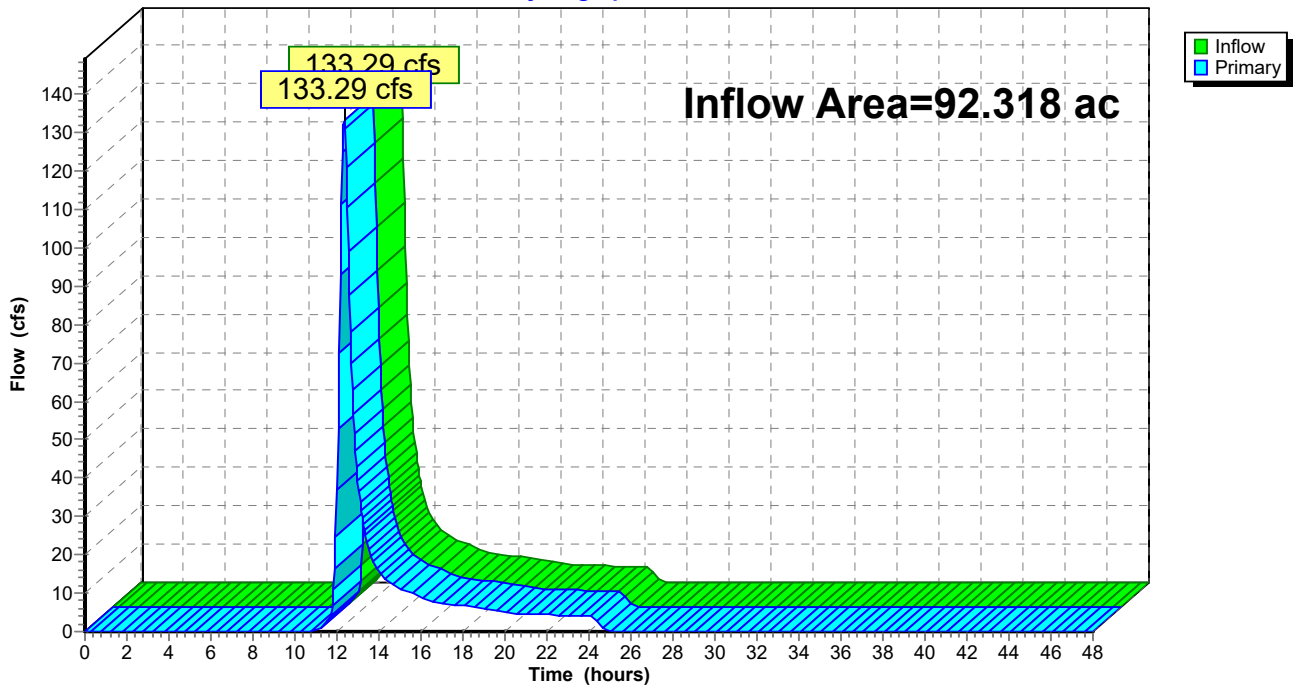
### Summary for Link SP4:

Inflow Area = 92.318 ac, 0.28% Impervious, Inflow Depth = 1.98" for 100-year event  
Inflow = 133.29 cfs @ 12.33 hrs, Volume= 15.256 af  
Primary = 133.29 cfs @ 12.33 hrs, Volume= 15.256 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP4:

Hydrograph



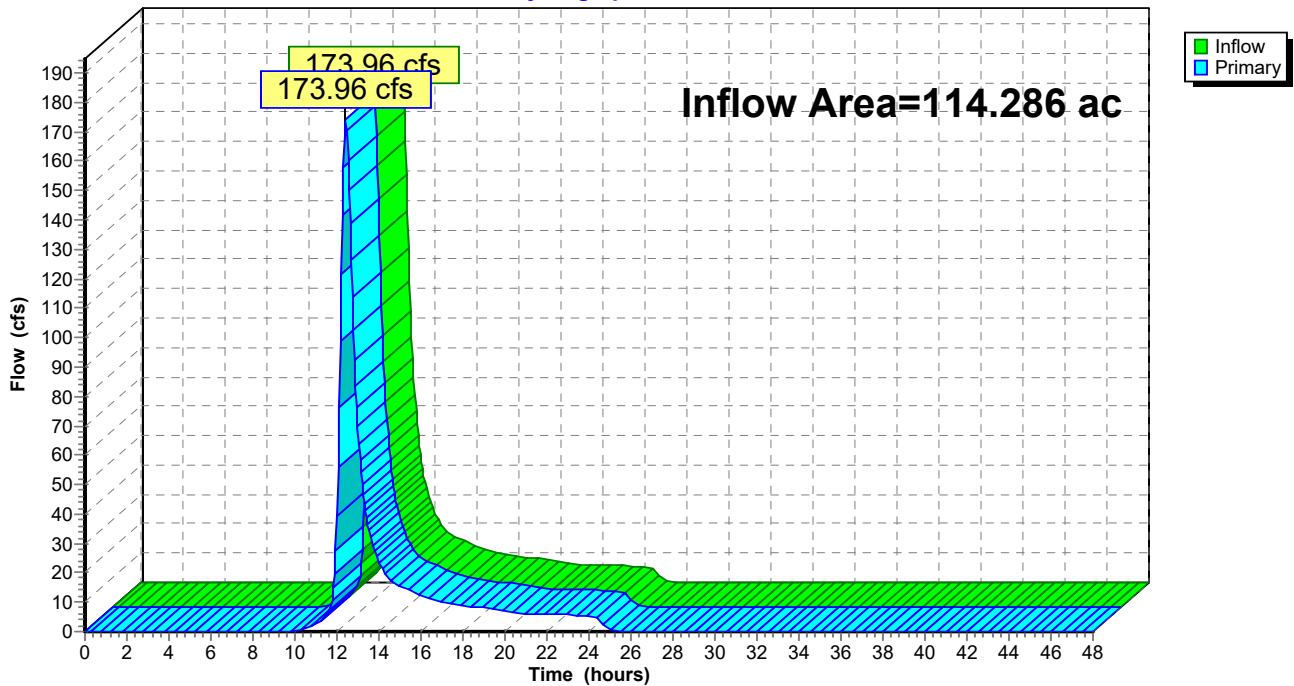
### Summary for Link SP43:

Inflow Area = 114.286 ac, 0.71% Impervious, Inflow Depth = 2.31" for 100-year event  
Inflow = 173.96 cfs @ 12.42 hrs, Volume= 22.009 af  
Primary = 173.96 cfs @ 12.42 hrs, Volume= 22.009 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP43:

Hydrograph



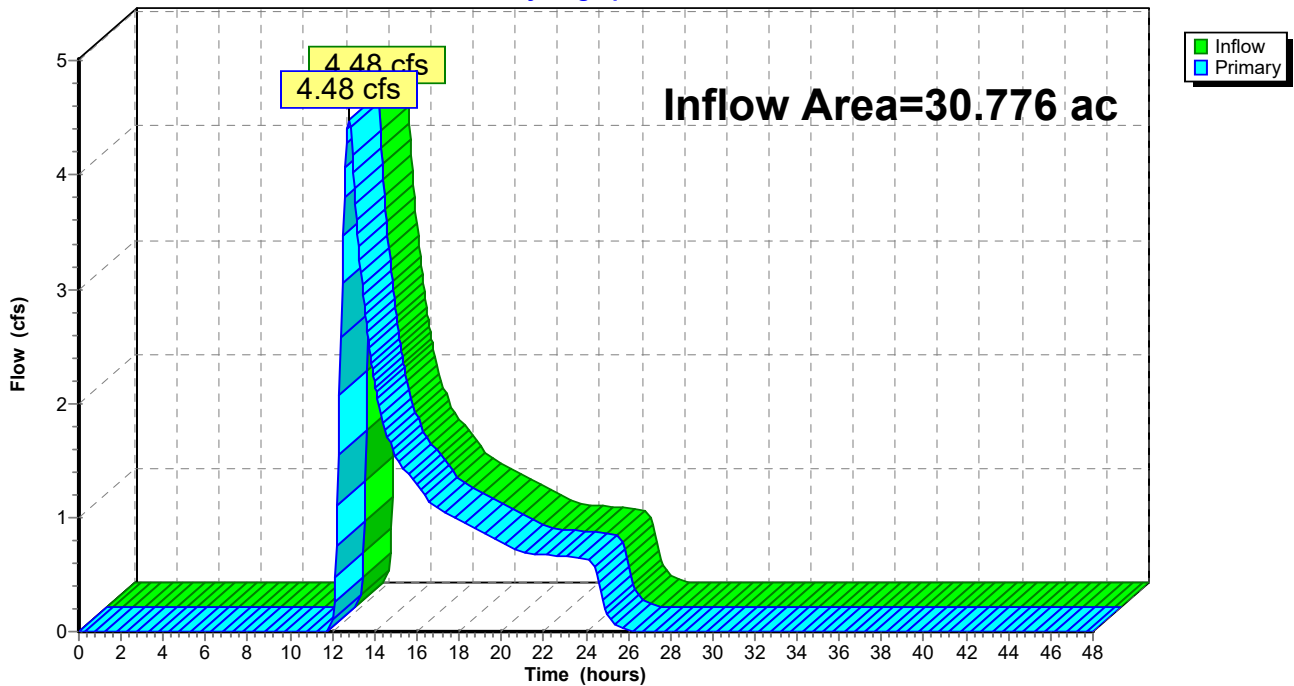
### Summary for Link SP46:

Inflow Area = 30.776 ac, 3.93% Impervious, Inflow Depth = 0.52" for 100-year event  
Inflow = 4.48 cfs @ 12.79 hrs, Volume= 1.338 af  
Primary = 4.48 cfs @ 12.79 hrs, Volume= 1.338 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP46:

Hydrograph



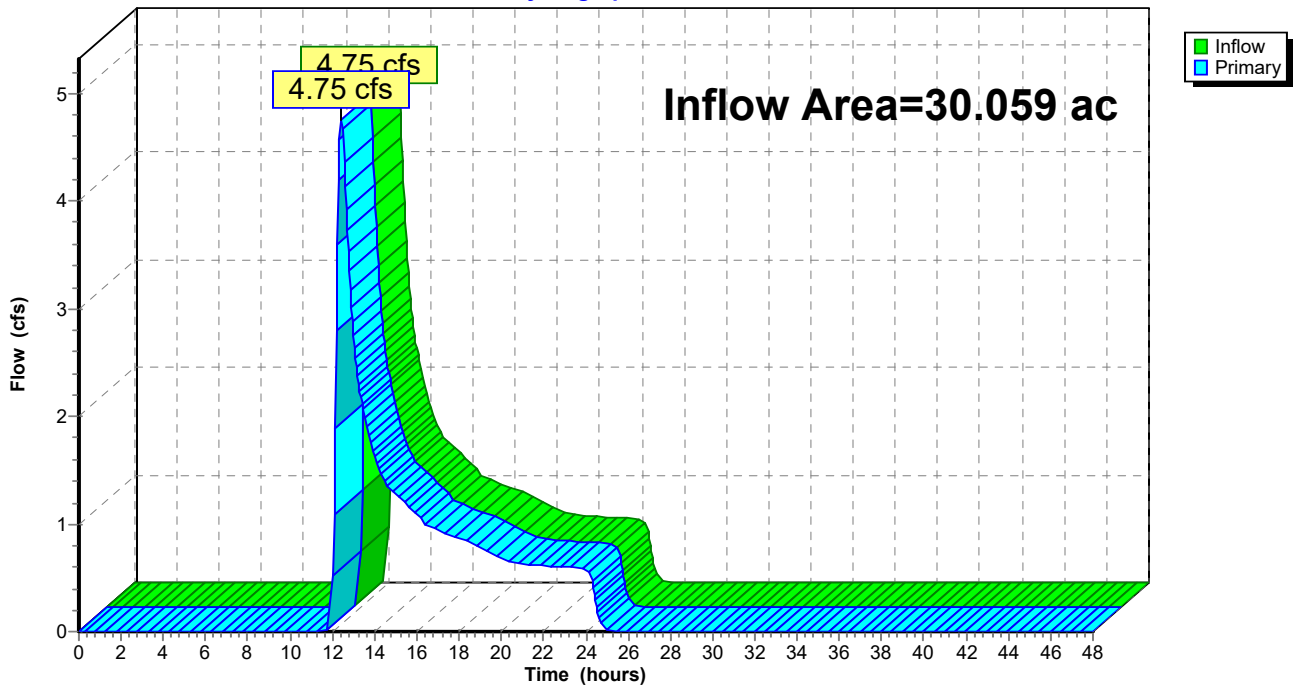
### Summary for Link SP47:

Inflow Area = 30.059 ac, 1.26% Impervious, Inflow Depth = 0.47" for 100-year event  
Inflow = 4.75 cfs @ 12.43 hrs, Volume= 1.174 af  
Primary = 4.75 cfs @ 12.43 hrs, Volume= 1.174 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP47:

Hydrograph



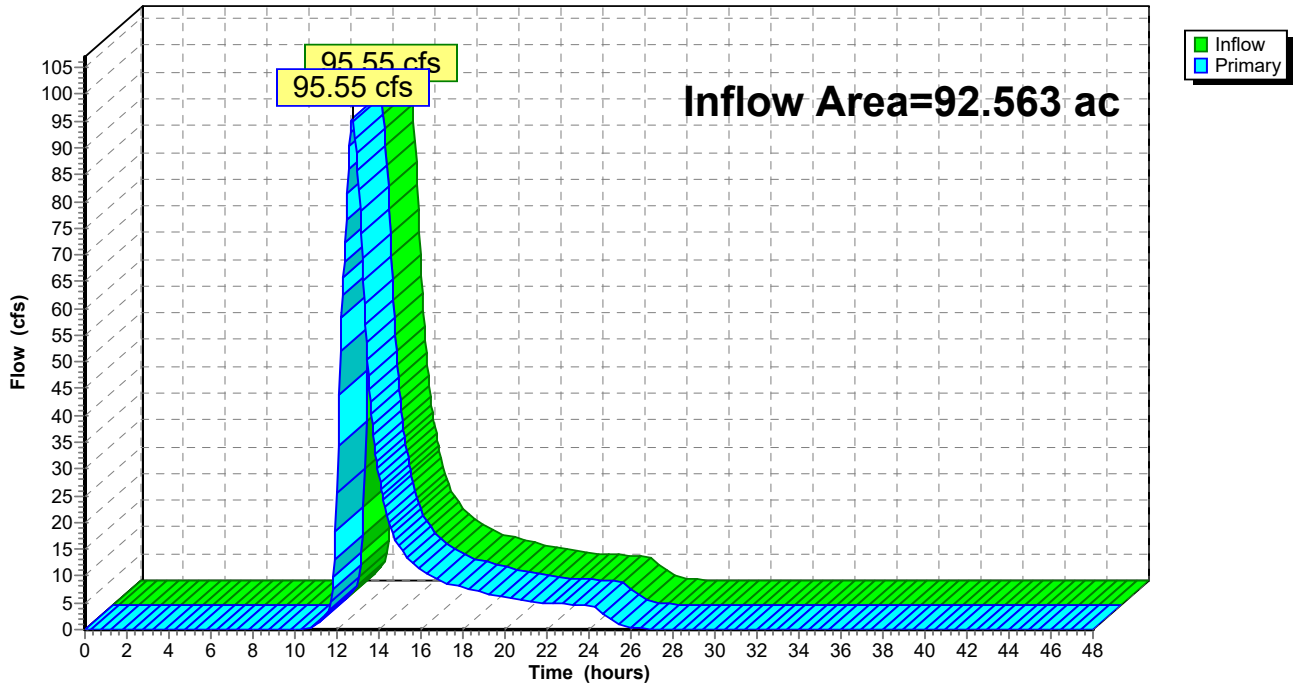
### Summary for Link SP5:

Inflow Area = 92.563 ac, 0.00% Impervious, Inflow Depth = 2.39" for 100-year event  
Inflow = 95.55 cfs @ 12.75 hrs, Volume= 18.398 af  
Primary = 95.55 cfs @ 12.75 hrs, Volume= 18.398 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP5:

Hydrograph



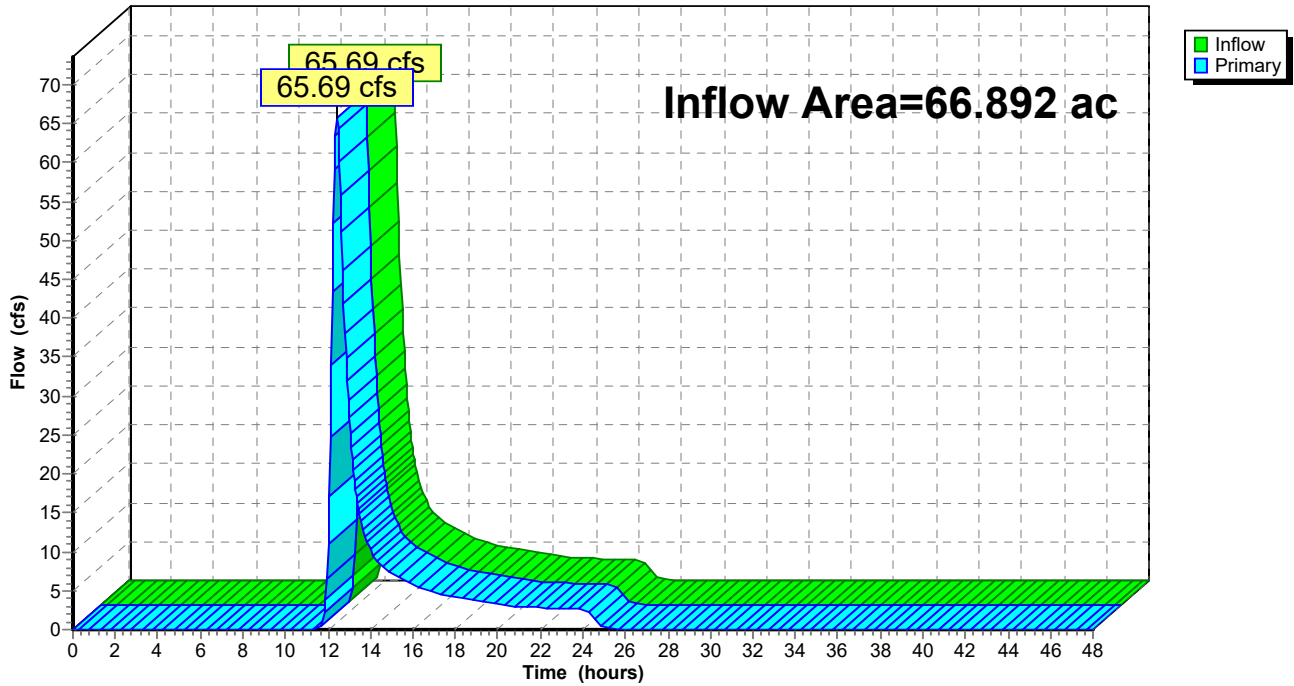
### Summary for Link SP7:

Inflow Area = 66.892 ac, 0.00% Impervious, Inflow Depth = 1.58" for 100-year event  
Inflow = 65.69 cfs @ 12.42 hrs, Volume= 8.835 af  
Primary = 65.69 cfs @ 12.42 hrs, Volume= 8.835 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP7:

Hydrograph



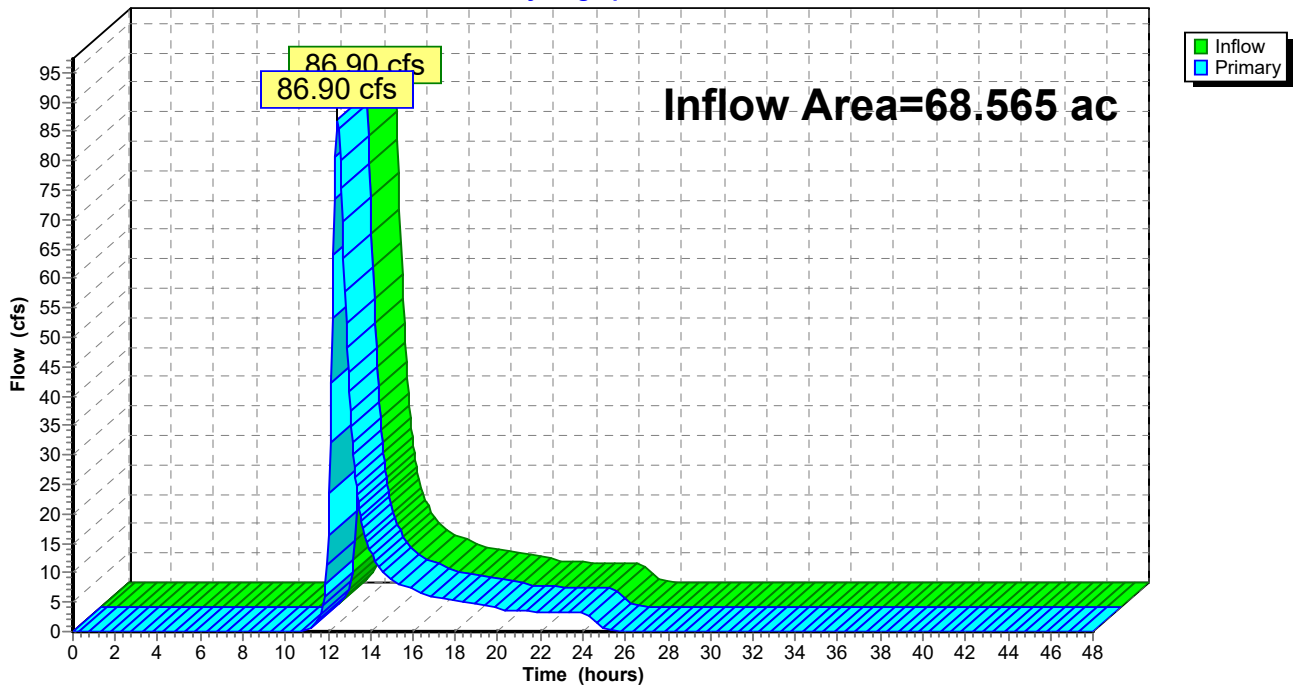
Summary for Link SP9:

Inflow Area = 68.565 ac, 1.11% Impervious, Inflow Depth = 2.07" for 100-year event  
Inflow = 86.90 cfs @ 12.47 hrs, Volume= 11.804 af  
Primary = 86.90 cfs @ 12.47 hrs, Volume= 11.804 af, Atten= 0%, Lag= 0.0 min

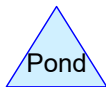
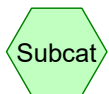
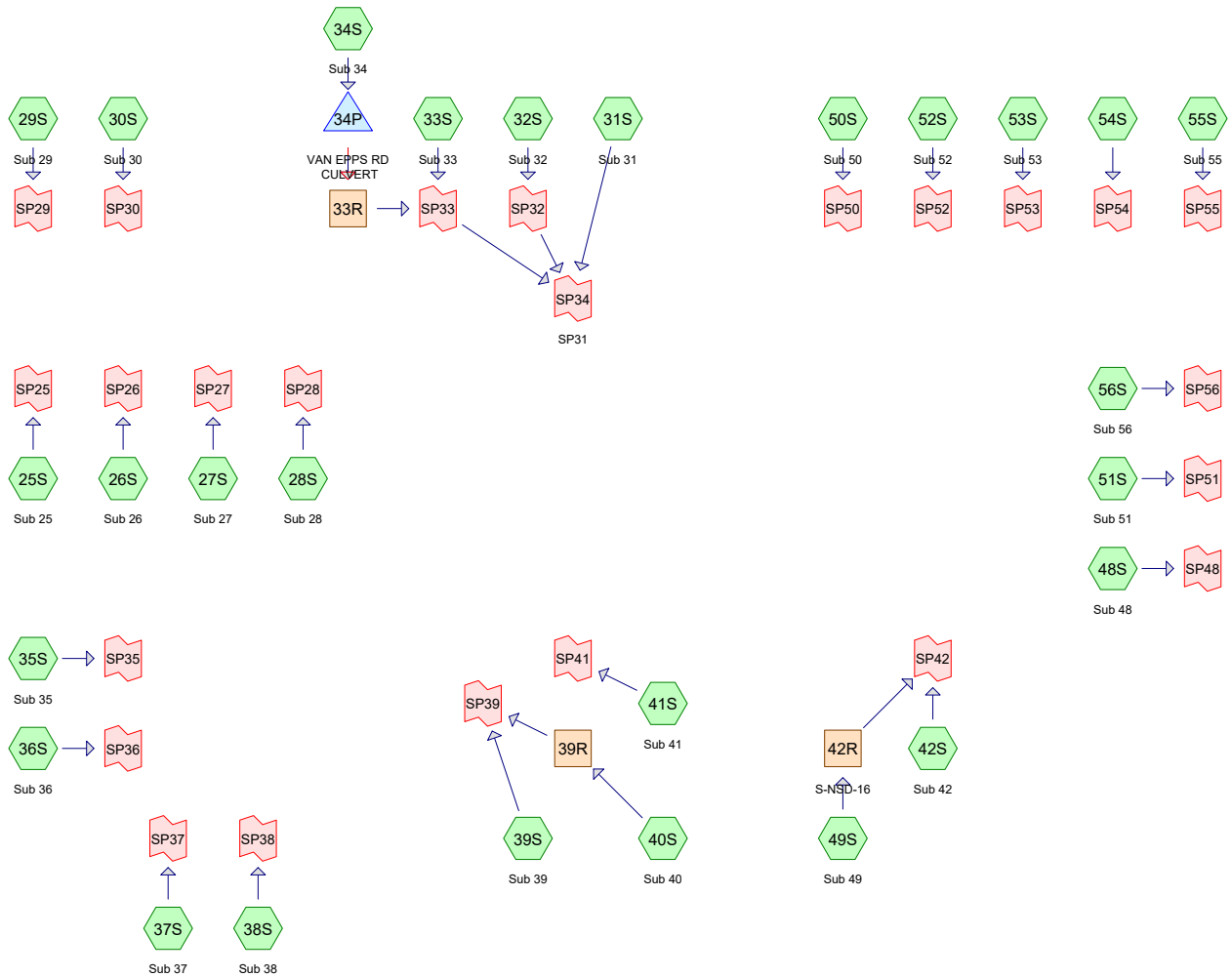
Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP9:

Hydrograph







**Routing Diagram for Mill Pt Pre 2**  
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## Mill Pt Pre 2

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### Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
26.002	61	>75% Grass cover, Good, HSG B (26S, 28S, 30S, 33S, 34S, 35S, 38S, 39S, 40S, 48S, 49S, 51S, 54S)
18.653	74	>75% Grass cover, Good, HSG C (25S, 26S, 28S, 30S, 34S, 35S, 39S, 48S, 49S, 51S, 54S)
2.068	80	>75% Grass cover, Good, HSG D (25S, 48S)
13.567	48	Brush, Good, HSG B (25S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 38S, 39S, 41S, 42S, 48S, 49S, 50S, 51S, 52S, 53S, 54S, 55S, 56S)
20.490	65	Brush, Good, HSG C (30S, 32S, 35S, 36S, 38S, 39S, 40S, 42S, 48S, 49S, 50S, 51S, 53S, 54S, 55S, 56S)
3.868	73	Brush, Good, HSG D (25S, 39S, 48S, 50S, 51S, 52S)
0.927	96	Gravel surface (26S, 27S, 28S, 29S, 30S, 33S, 48S)
2.487	96	Gravel surface, HSG D (34S, 36S, 38S, 39S, 40S, 49S)
1.693	98	Imperviopus surface (48S)
3.172	98	Impervious (37S, 54S)
3.473	98	Impervious surface (25S, 26S, 27S, 29S, 30S, 33S, 51S, 55S)
0.114	98	Impervoius surface (28S)
0.098	30	Meadow, non-grazed, HSG A (30S)
409.991	58	Meadow, non-grazed, HSG B (25S, 26S, 27S, 28S, 29S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 37S, 38S, 39S, 40S, 41S, 42S, 48S, 49S, 50S, 51S, 52S, 53S, 54S, 55S, 56S)
425.167	71	Meadow, non-grazed, HSG C (25S, 26S, 27S, 28S, 29S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 38S, 39S, 40S, 41S, 42S, 48S, 49S, 50S, 51S, 52S, 53S, 54S, 55S, 56S)
38.790	78	Meadow, non-grazed, HSG D (25S, 26S, 27S, 33S, 39S, 40S, 41S, 48S, 50S, 51S, 52S)
3.749	98	Surface water (27S, 32S, 48S)
4.420	98	Unconnected roofs, HSG D (34S, 35S, 36S, 38S, 39S, 40S, 41S, 49S, 50S)
9.776	98	Water Surface, HSG D (36S, 39S, 40S, 41S, 42S, 49S, 50S, 52S, 53S, 54S)
4.198	30	Woods, Good, HSG A (30S, 38S)
152.795	55	Woods, Good, HSG B (30S, 31S, 32S, 33S, 34S, 35S, 36S, 37S, 38S, 39S, 40S, 41S, 42S, 48S, 49S, 50S, 51S, 52S, 54S, 55S, 56S)
34.559	70	Woods, Good, HSG C (30S, 31S, 33S, 35S, 36S, 39S, 40S, 41S, 42S, 48S, 49S, 50S, 51S, 52S, 53S, 54S, 55S, 56S)
4.456	77	Woods, Good, HSG D (39S, 41S, 48S, 49S, 50S, 51S, 52S)
<b>1,184.513</b>	<b>65</b>	<b>TOTAL AREA</b>

## Mill Pt Pre 2

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### Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
4.296	HSG A	30S, 38S
602.355	HSG B	25S, 26S, 27S, 28S, 29S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 37S, 38S, 39S, 40S, 41S, 42S, 48S, 49S, 50S, 51S, 52S, 53S, 54S, 55S, 56S
498.869	HSG C	25S, 26S, 27S, 28S, 29S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 38S, 39S, 40S, 41S, 42S, 48S, 49S, 50S, 51S, 52S, 53S, 54S, 55S, 56S
65.865	HSG D	25S, 26S, 27S, 33S, 34S, 35S, 36S, 38S, 39S, 40S, 41S, 42S, 48S, 49S, 50S, 51S, 52S, 53S, 54S
13.128	Other	25S, 26S, 27S, 28S, 29S, 30S, 32S, 33S, 37S, 48S, 51S, 54S, 55S
<b>1,184.513</b>		<b>TOTAL AREA</b>

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**Ground Covers (all nodes)**

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	26.002	18.653	2.068	0.000	46.723	>75% Grass cover, Good	25S, 26S, 28S, 30S, 33S, 34S, 35S, 38S, 39S, 40S, 48S, 49S, 51S, 54S
0.000	13.567	20.490	3.868	0.000	37.925	Brush, Good	25S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 38S, 39S, 40S, 41S, 42S, 48S, 49S, 50S, 51S, 52S, 53S, 54S, 55S, 56S
0.000	0.000	0.000	2.487	0.927	3.414	Gravel surface	26S, 27S, 28S, 29S, 30S, 33S, 34S, 36S, 38S, 39S, 40S, 48S, 49S

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**Ground Covers (all nodes) (continued)**

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	1.693	1.693	Impervious surface	48S
0.000	0.000	0.000	0.000	3.172	3.172	Impervious	37S, 54S
0.000	0.000	0.000	0.000	3.473	3.473	Impervious surface	25S, 26S, 27S, 29S, 30S, 33S, 51S, 55S
0.000	0.000	0.000	0.000	0.114	0.114	Impervious surface	28S
0.098	409.991	425.167	38.790	0.000	874.046	Meadow, non-grazed	25S, 26S, 27S, 28S, 29S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 37S, 38S, 39S, 40S, 41S, 42S, 48S, 49S, 50S, 51S, 52S, 53S, 54S, 55S, 56S
0.000	0.000	0.000	0.000	3.749	3.749	Surface water	27S, 32S, 48S
0.000	0.000	0.000	4.420	0.000	4.420	Unconnected roofs	34S, 35S, 36S, 38S, 39S, 40S, 41S, 49S, 50S

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**Ground Covers (all nodes) (continued)**

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	9.776	0.000	9.776	Water Surface	36S, 39S, 40S, 41S, 42S, 49S, 50S, 52S, 53S, 54S
4.198	152.795	34.559	4.456	0.000	196.008	Woods, Good	30S, 31S, 32S, 33S, 34S, 35S, 36S, 37S, 38S, 39S, 40S, 41S, 42S, 48S, 49S, 50S, 51S, 52S, 53S, 54S, 55S, 56S
<b>4.296</b>	<b>602.355</b>	<b>498.869</b>	<b>65.865</b>	<b>13.128</b>	<b>1,184.513</b>	<b>TOTAL AREA</b>	

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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

<b>Subcatchment 25S: Sub 25</b>	Runoff Area=19.244 ac 0.52% Impervious Runoff Depth=0.37" Flow Length=1,103' Tc=22.2 min CN=72 Runoff=5.45 cfs 0.589 af
<b>Subcatchment 26S: Sub 26</b>	Runoff Area=14.925 ac 4.50% Impervious Runoff Depth=0.18" Flow Length=1,324' Tc=18.0 min CN=65 Runoff=1.36 cfs 0.229 af
<b>Subcatchment 27S: Sub 27</b>	Runoff Area=22.791 ac 1.95% Impervious Runoff Depth=0.21" Flow Length=1,602' Tc=17.8 min CN=66 Runoff=2.68 cfs 0.392 af
<b>Subcatchment 28S: Sub 28</b>	Runoff Area=21.372 ac 0.53% Impervious Runoff Depth=0.18" Flow Length=1,727' Tc=27.4 min CN=65 Runoff=1.51 cfs 0.329 af
<b>Subcatchment 29S: Sub 29</b>	Runoff Area=19.202 ac 1.21% Impervious Runoff Depth=0.13" Flow Length=1,648' Tc=26.3 min CN=62 Runoff=0.59 cfs 0.202 af
<b>Subcatchment 30S: Sub 30</b>	Runoff Area=36.199 ac 1.23% Impervious Runoff Depth=0.16" Flow Length=2,217' Tc=29.3 min CN=64 Runoff=1.90 cfs 0.494 af
<b>Subcatchment 31S: Sub 31</b>	Runoff Area=25.323 ac 0.00% Impervious Runoff Depth=0.11" Flow Length=2,409' Tc=31.8 min CN=61 Runoff=0.53 cfs 0.230 af
<b>Subcatchment 32S: Sub 32</b>	Runoff Area=44.904 ac 6.23% Impervious Runoff Depth=0.11" Flow Length=3,284' Tc=36.1 min CN=61 Runoff=0.91 cfs 0.408 af
<b>Subcatchment 33S: Sub 33</b>	Runoff Area=91.303 ac 0.68% Impervious Runoff Depth=0.08" Flow Length=1,749' Tc=22.2 min CN=59 Runoff=1.03 cfs 0.599 af
<b>Subcatchment 34S: Sub 34</b>	Runoff Area=25.797 ac 1.16% Impervious Runoff Depth=0.13" Flow Length=1,344' Tc=23.4 min CN=62 Runoff=0.82 cfs 0.271 af
<b>Subcatchment 35S: Sub 35</b>	Runoff Area=54.779 ac 2.01% Impervious Runoff Depth=0.18" Flow Length=3,022' Tc=38.7 min CN=65 Runoff=3.19 cfs 0.842 af
<b>Subcatchment 36S: Sub 36</b>	Runoff Area=46.619 ac 1.12% Impervious Runoff Depth=0.14" Flow Length=1,996' Tc=23.3 min CN=63 Runoff=2.07 cfs 0.560 af
<b>Subcatchment 37S: Sub 37</b>	Runoff Area=10.440 ac 5.80% Impervious Runoff Depth=0.09" Flow Length=1,926' Tc=33.1 min CN=60 Runoff=0.16 cfs 0.081 af
<b>Subcatchment 38S: Sub 38</b>	Runoff Area=71.315 ac 1.82% Impervious Runoff Depth=0.16" Flow Length=3,404' Tc=47.6 min CN=64 Runoff=2.95 cfs 0.973 af
<b>Subcatchment 39S: Sub 39</b>	Runoff Area=114.576 ac 2.51% Impervious Runoff Depth=0.13" Flow Length=2,852' Tc=30.0 min CN=62 Runoff=3.35 cfs 1.203 af
<b>Subcatchment 40S: Sub 40</b>	Runoff Area=20.880 ac 7.94% Impervious Runoff Depth=0.28" Flow Length=1,917' Tc=28.9 min CN=69 Runoff=3.15 cfs 0.488 af

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<b>Subcatchment41S: Sub 41</b>	Runoff Area=60.165 ac 2.55% Impervious Runoff Depth=0.14" Flow Length=2,626' Tc=33.1 min CN=63 Runoff=2.29 cfs 0.723 af
<b>Subcatchment42S: Sub 42</b>	Runoff Area=48.981 ac 3.85% Impervious Runoff Depth=0.13" Flow Length=890' Tc=21.1 min CN=62 Runoff=1.62 cfs 0.514 af
<b>Subcatchment48S: Sub 48</b>	Runoff Area=78.656 ac 2.88% Impervious Runoff Depth=0.37" Flow Length=4,007' Tc=38.1 min CN=72 Runoff=15.16 cfs 2.406 af
<b>Subcatchment49S: Sub 49</b>	Runoff Area=33.652 ac 1.78% Impervious Runoff Depth=0.16" Flow Length=2,999' Tc=38.0 min CN=64 Runoff=1.56 cfs 0.459 af
<b>Subcatchment50S: Sub 50</b>	Runoff Area=45.771 ac 1.25% Impervious Runoff Depth=0.25" Flow Length=2,533' Tc=29.4 min CN=68 Runoff=5.73 cfs 0.970 af
<b>Subcatchment51S: Sub 51</b>	Runoff Area=103.685 ac 1.03% Impervious Runoff Depth=0.16" Flow Length=2,611' Tc=36.7 min CN=64 Runoff=4.89 cfs 1.415 af
<b>Subcatchment52S: Sub 52</b>	Runoff Area=14.821 ac 2.79% Impervious Runoff Depth=0.28" Flow Length=1,182' Tc=22.0 min CN=69 Runoff=2.70 cfs 0.346 af
<b>Subcatchment53S: Sub 53</b>	Runoff Area=21.433 ac 1.80% Impervious Runoff Depth=0.23" Flow Length=2,555' Tc=37.9 min CN=67 Runoff=1.89 cfs 0.410 af
<b>Subcatchment54S:</b>	Runoff Area=47.100 ac 7.69% Impervious Runoff Depth=0.31" Flow Length=3,136' Tc=35.0 min CN=70 Runoff=7.27 cfs 1.208 af
<b>Subcatchment55S: Sub 55</b>	Runoff Area=27.826 ac 0.99% Impervious Runoff Depth=0.21" Flow Length=2,284' Tc=40.2 min CN=66 Runoff=1.96 cfs 0.479 af
<b>Subcatchment56S: Sub 56</b>	Runoff Area=62.754 ac 0.00% Impervious Runoff Depth=0.23" Flow Length=2,363' Tc=30.5 min CN=67 Runoff=6.36 cfs 1.202 af
<b>Reach 33R:</b>	Avg. Flow Depth=0.26' Max Vel=1.11 fps Inflow=0.82 cfs 0.271 af n=0.100 L=1,875.0' S=0.0597 '/' Capacity=10.60 cfs Outflow=0.58 cfs 0.271 af
<b>Reach 39R:</b>	Avg. Flow Depth=0.40' Max Vel=1.91 fps Inflow=3.15 cfs 0.488 af n=0.100 L=1,110.0' S=0.0991 '/' Capacity=86.68 cfs Outflow=2.69 cfs 0.488 af
<b>Reach 42R: S-NSD-16</b>	Avg. Flow Depth=0.34' Max Vel=1.27 fps Inflow=1.56 cfs 0.459 af n=0.100 L=1,790.0' S=0.0531 '/' Capacity=51.95 cfs Outflow=1.21 cfs 0.459 af
<b>Pond 34P: VAN EPPS RD CULVERT</b>	Peak Elev=580.48' Storage=12 cf Inflow=0.82 cfs 0.271 af Primary=0.82 cfs 0.271 af Secondary=0.00 cfs 0.000 af Outflow=0.82 cfs 0.271 af
<b>Link SP25:</b>	Inflow=5.45 cfs 0.589 af Primary=5.45 cfs 0.589 af
<b>Link SP26:</b>	Inflow=1.36 cfs 0.229 af Primary=1.36 cfs 0.229 af
<b>Link SP27:</b>	Inflow=2.68 cfs 0.392 af Primary=2.68 cfs 0.392 af



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<b>Link SP28:</b>	Inflow=1.51 cfs 0.329 af Primary=1.51 cfs 0.329 af
<b>Link SP29:</b>	Inflow=0.59 cfs 0.202 af Primary=0.59 cfs 0.202 af
<b>Link SP30:</b>	Inflow=1.90 cfs 0.494 af Primary=1.90 cfs 0.494 af
<b>Link SP32:</b>	Inflow=0.91 cfs 0.408 af Primary=0.91 cfs 0.408 af
<b>Link SP33:</b>	Inflow=1.54 cfs 0.870 af Primary=1.54 cfs 0.870 af
<b>Link SP34: SP31</b>	Inflow=2.78 cfs 1.508 af Primary=2.78 cfs 1.508 af
<b>Link SP35:</b>	Inflow=3.19 cfs 0.842 af Primary=3.19 cfs 0.842 af
<b>Link SP36:</b>	Inflow=2.07 cfs 0.560 af Primary=2.07 cfs 0.560 af
<b>Link SP37:</b>	Inflow=0.16 cfs 0.081 af Primary=0.16 cfs 0.081 af
<b>Link SP38:</b>	Inflow=2.95 cfs 0.973 af Primary=2.95 cfs 0.973 af
<b>Link SP39:</b>	Inflow=5.95 cfs 1.691 af Primary=5.95 cfs 1.691 af
<b>Link SP41:</b>	Inflow=2.29 cfs 0.723 af Primary=2.29 cfs 0.723 af
<b>Link SP42:</b>	Inflow=2.10 cfs 0.974 af Primary=2.10 cfs 0.974 af
<b>Link SP48:</b>	Inflow=15.16 cfs 2.406 af Primary=15.16 cfs 2.406 af
<b>Link SP50:</b>	Inflow=5.73 cfs 0.970 af Primary=5.73 cfs 0.970 af
<b>Link SP51:</b>	Inflow=4.89 cfs 1.415 af Primary=4.89 cfs 1.415 af
<b>Link SP52:</b>	Inflow=2.70 cfs 0.346 af Primary=2.70 cfs 0.346 af

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**Link SP53:**

Inflow=1.89 cfs 0.410 af  
Primary=1.89 cfs 0.410 af

**Link SP54:**

Inflow=7.27 cfs 1.208 af  
Primary=7.27 cfs 1.208 af

**Link SP55:**

Inflow=1.96 cfs 0.479 af  
Primary=1.96 cfs 0.479 af

**Link SP56:**

Inflow=6.36 cfs 1.202 af  
Primary=6.36 cfs 1.202 af

**Total Runoff Area = 1,184.513 ac   Runoff Volume = 18.024 af   Average Runoff Depth = 0.18"**  
**97.77% Pervious = 1,158.116 ac   2.23% Impervious = 26.397 ac**

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**Summary for Subcatchment 25S: Sub 25**

Runoff = 5.45 cfs @ 12.20 hrs, Volume= 0.589 af, Depth= 0.37"  
 Routed to Link SP25 :

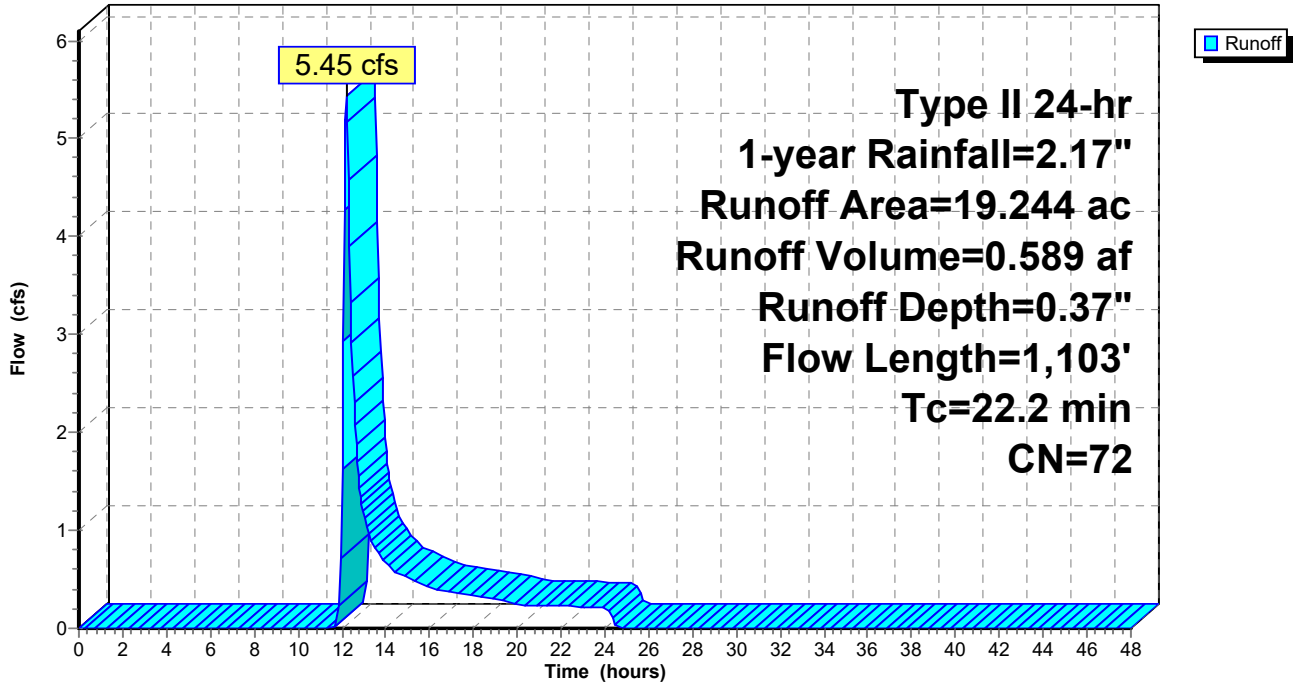
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.100	98	Impervious surface
0.475	74	>75% Grass cover, Good, HSG C
0.497	80	>75% Grass cover, Good, HSG D
0.785	58	Meadow, non-grazed, HSG B
13.183	71	Meadow, non-grazed, HSG C
3.694	78	Meadow, non-grazed, HSG D
0.050	48	Brush, Good, HSG B
0.274	71	Meadow, non-grazed, HSG C
0.186	73	Brush, Good, HSG D
19.244	72	Weighted Average
19.144		99.48% Pervious Area
0.100		0.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0430	0.20		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
11.3	717	0.0230	1.06		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.7	286		1.77		<b>Direct Entry, CF</b>
22.2	1,103	Total			

Subcatchment 25S: Sub 25

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 26S: Sub 26**

Runoff = 1.36 cfs @ 12.19 hrs, Volume= 0.229 af, Depth= 0.18"  
 Routed to Link SP26 :

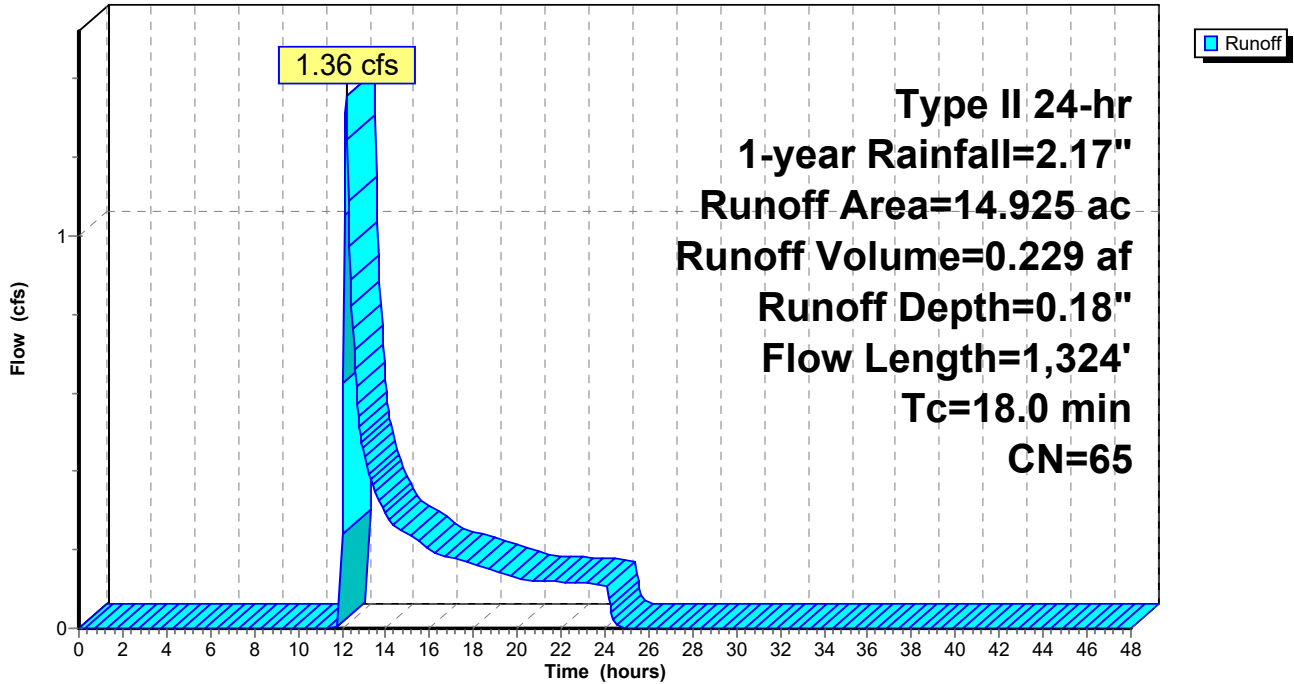
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.672	98	Impervious surface
* 0.189	96	Gravel surface
3.102	61	>75% Grass cover, Good, HSG B
0.965	74	>75% Grass cover, Good, HSG C
6.796	58	Meadow, non-grazed, HSG B
3.029	71	Meadow, non-grazed, HSG C
0.172	78	Meadow, non-grazed, HSG D
14.925	65	Weighted Average
14.253		95.50% Pervious Area
0.672		4.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.7	100	0.0280	0.17		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
2.2	340	0.1340	2.56		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.7	259	0.0540	1.63		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.4	625		3.06		<b>Direct Entry, CF</b>
18.0	1,324	Total			

Subcatchment 26S: Sub 26

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 27S: Sub 27**

Runoff = 2.68 cfs @ 12.17 hrs, Volume= 0.392 af, Depth= 0.21"  
 Routed to Link SP27 :

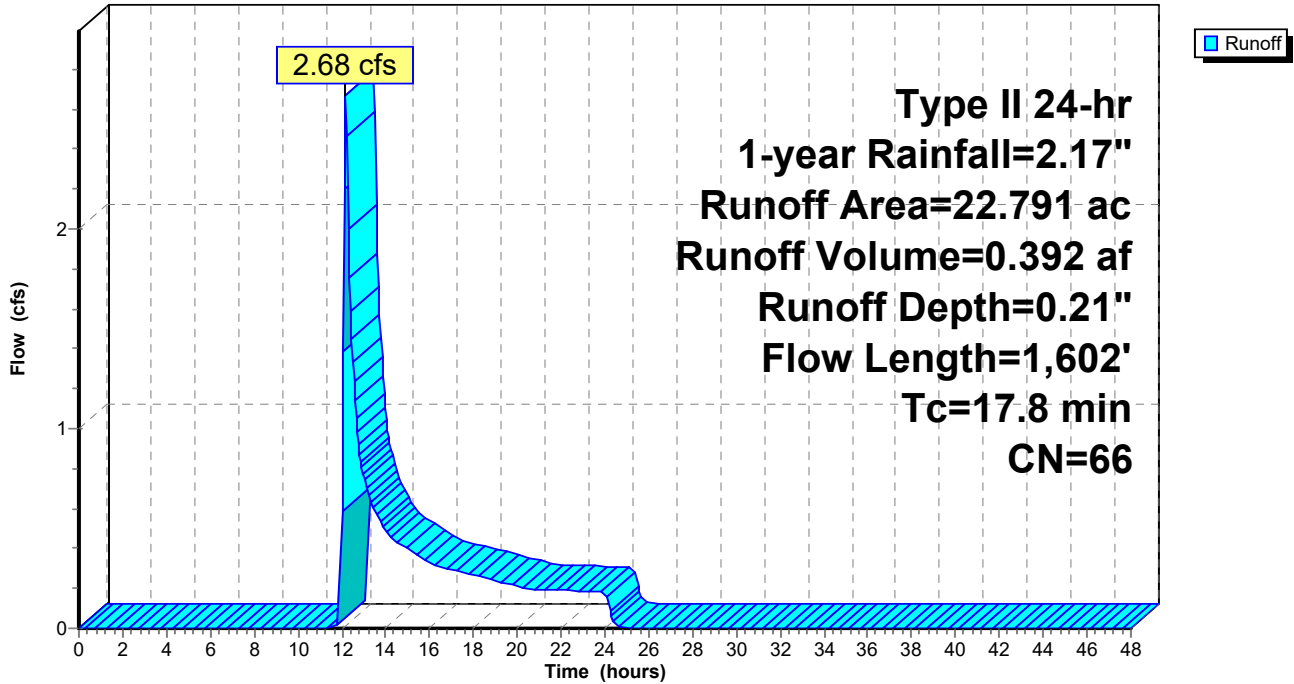
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.381	98	Surface water
* 0.064	98	Impervious surface
* 0.034	96	Gravel surface
9.647	58	Meadow, non-grazed, HSG B
12.525	71	Meadow, non-grazed, HSG C
0.140	78	Meadow, non-grazed, HSG D
22.791	66	Weighted Average
22.346		98.05% Pervious Area
0.445		1.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.0650	0.24		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
7.4	832	0.0720	1.88		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.5	670		3.19		<b>Direct Entry, CF</b>
17.8	1,602	Total			

Subcatchment 27S: Sub 27

Hydrograph





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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 28S: Sub 28**

Runoff = 1.51 cfs @ 12.34 hrs, Volume= 0.329 af, Depth= 0.18"  
 Routed to Link SP28 :

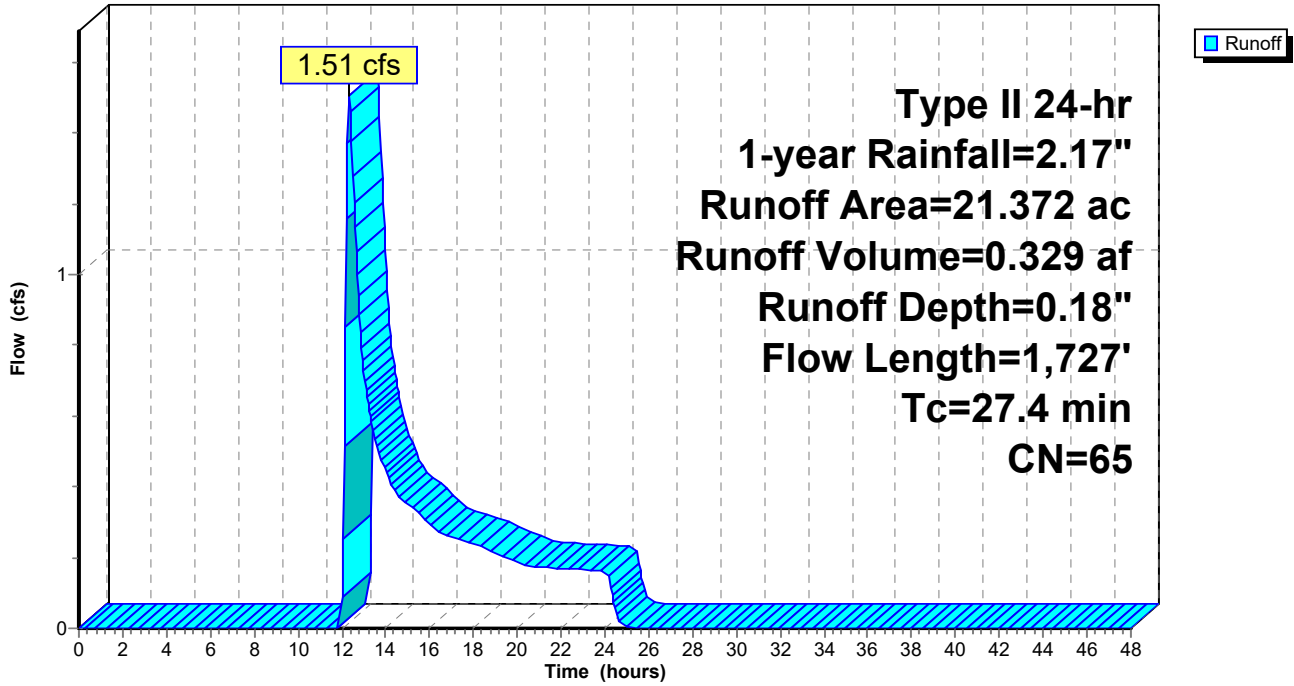
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.114	98	Impervious surface
* 0.018	96	Gravel surface
1.037	61	>75% Grass cover, Good, HSG B
0.949	74	>75% Grass cover, Good, HSG C
9.049	58	Meadow, non-grazed, HSG B
10.205	71	Meadow, non-grazed, HSG C
21.372	65	Weighted Average
21.258		99.47% Pervious Area
0.114		0.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.9	100	0.0070	0.10		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
7.4	819	0.0700	1.85		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.1	808	0.0420	4.36	6.53	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00' n= 0.035 Earth, dense weeds
27.4	1,727	Total			

Subcatchment 28S: Sub 28

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 29S: Sub 29**

Runoff = 0.59 cfs @ 12.42 hrs, Volume= 0.202 af, Depth= 0.13"  
 Routed to Link SP29 :

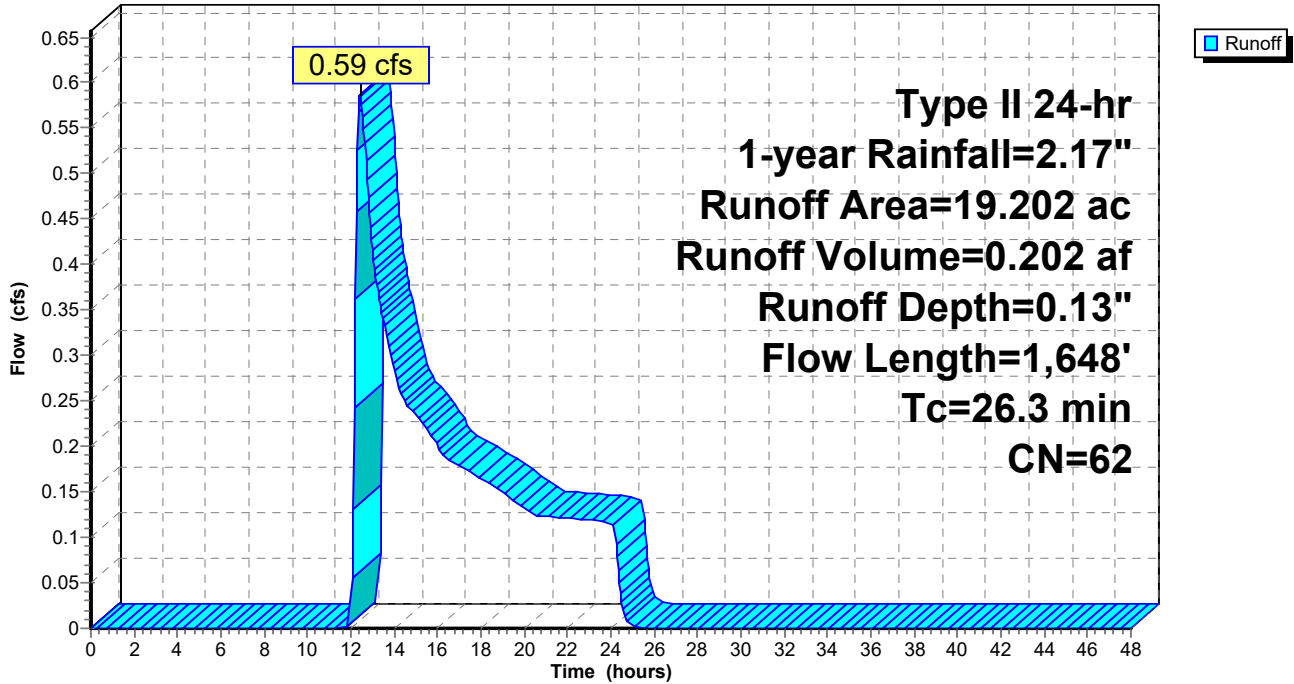
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.233	98	Impervious surface
* 0.063	96	Gravel surface
13.291	58	Meadow, non-grazed, HSG B
5.615	71	Meadow, non-grazed, HSG C
19.202	62	Weighted Average
18.969		98.79% Pervious Area
0.233		1.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	100	0.0370	0.19		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
8.9	661	0.0310	1.23		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
7.9	806	0.0590	1.70		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.8	81		1.69		<b>Direct Entry, CF</b>
26.3	1,648	Total			

Subcatchment 29S: Sub 29

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 30S: Sub 30**

Runoff = 1.90 cfs @ 12.40 hrs, Volume= 0.494 af, Depth= 0.16"  
 Routed to Link SP30 :

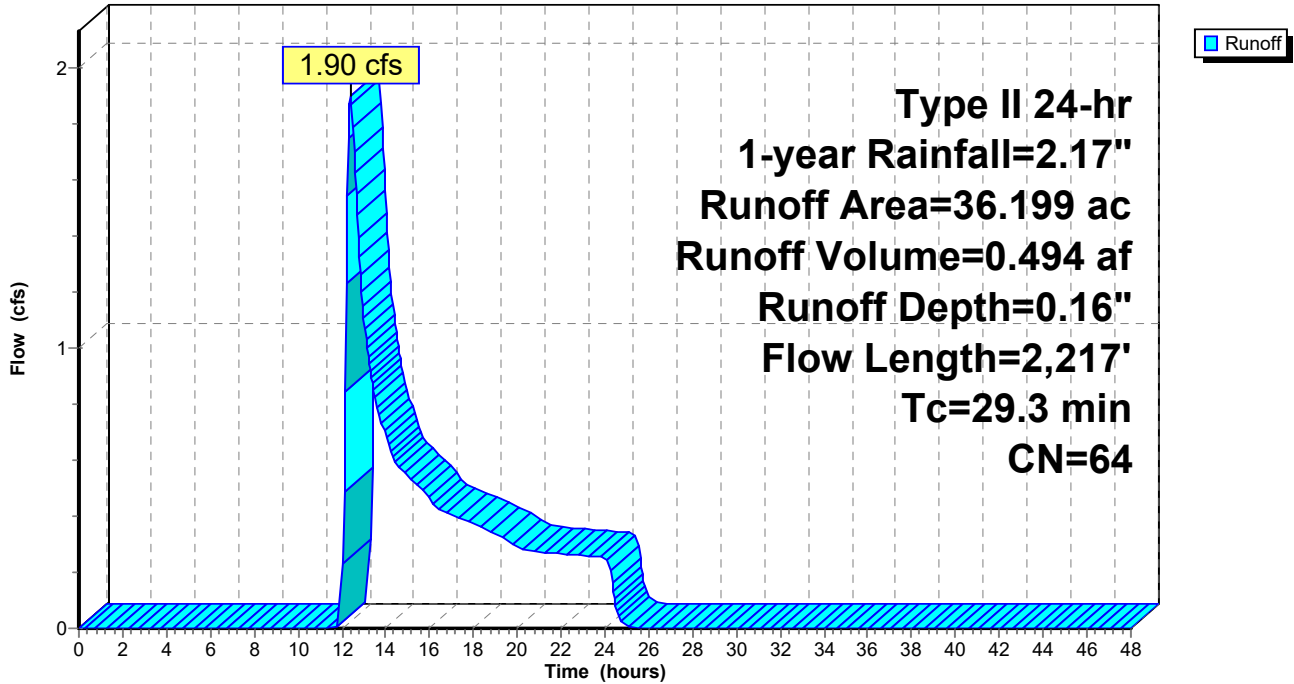
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.444	98	Impervious surface
* 0.471	96	Gravel surface
0.222	61	>75% Grass cover, Good, HSG B
0.026	74	>75% Grass cover, Good, HSG C
0.098	30	Meadow, non-grazed, HSG A
16.283	58	Meadow, non-grazed, HSG B
15.759	71	Meadow, non-grazed, HSG C
0.215	48	Brush, Good, HSG B
0.283	65	Brush, Good, HSG C
0.099	30	Woods, Good, HSG A
2.287	55	Woods, Good, HSG B
0.012	70	Woods, Good, HSG C
36.199	64	Weighted Average
35.755		98.77% Pervious Area
0.444		1.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.1	100	0.0250	0.16		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
15.4	1,100	0.0290	1.19		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.8	1,017	0.0290	4.46	12.25	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=4.00' D=0.50' Z= 3.0 ' /' Top.W=7.00' n= 0.030 Earth, grassed & winding
29.3	2,217	Total			

Subcatchment 30S: Sub 30

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 31S: Sub 31**

Runoff = 0.53 cfs @ 12.65 hrs, Volume= 0.230 af, Depth= 0.11"  
 Routed to Link SP34 : SP31

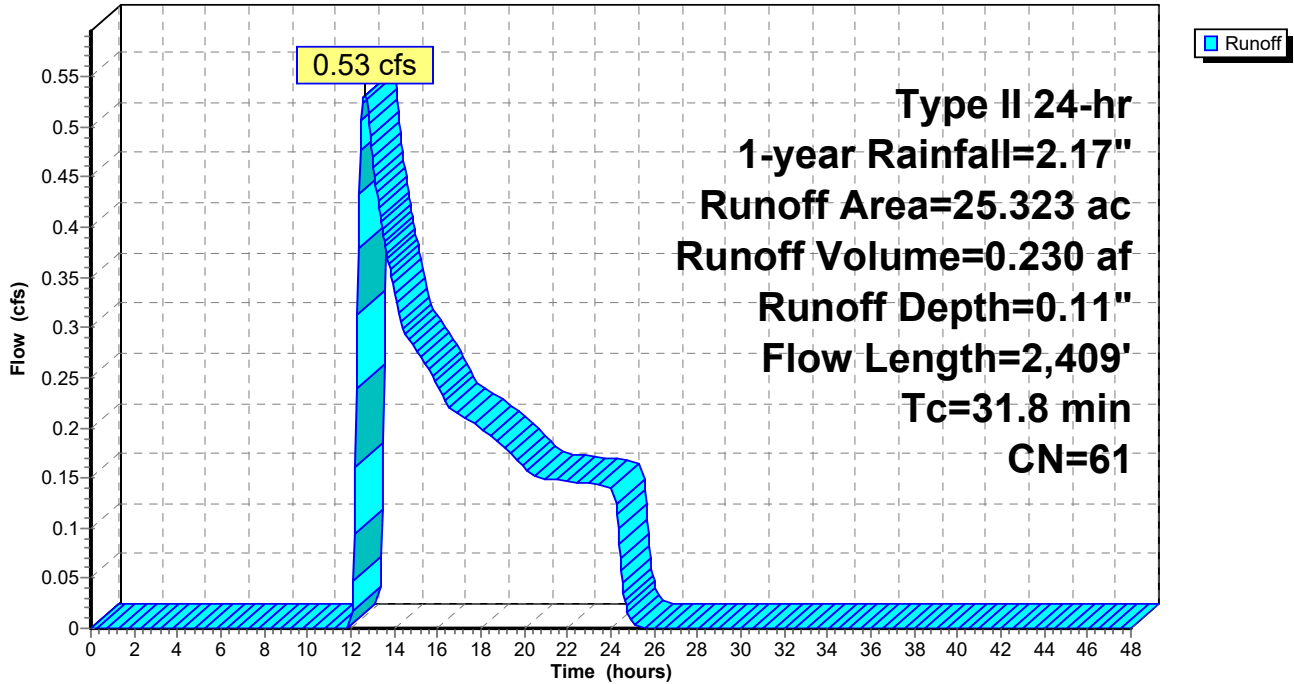
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
12.515	58	Meadow, non-grazed, HSG B
7.070	71	Meadow, non-grazed, HSG C
0.029	48	Brush, Good, HSG B
5.404	55	Woods, Good, HSG B
0.305	70	Woods, Good, HSG C
25.323	61	Weighted Average
25.323		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0450	0.21		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
20.4	1,456	0.0290	1.19		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.4	853	0.0938	4.18	4.18	<b>Parabolic Channel,</b> W=3.00' D=0.50' Area=1.0 sf Perim=3.2' n= 0.050 Mountain streams w/large boulders
31.8	2,409	Total			

Subcatchment 31S: Sub 31

Hydrograph





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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 32S: Sub 32**

Runoff = 0.91 cfs @ 12.72 hrs, Volume= 0.408 af, Depth= 0.11"  
 Routed to Link SP32 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 2.796	98	Surface water
20.102	58	Meadow, non-grazed, HSG B
5.829	71	Meadow, non-grazed, HSG C
0.127	48	Brush, Good, HSG B
0.286	65	Brush, Good, HSG C
15.764	55	Woods, Good, HSG B
44.904	61	Weighted Average
42.108		93.77% Pervious Area
2.796		6.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8	100	0.0475	0.21		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
3.2	425	0.0976	2.19		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
17.5	1,176	0.0257	1.12		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
7.6	1,583	0.0726	3.48	9.29	<b>Parabolic Channel,</b> W=4.00' D=1.00' Area=2.7 sf Perim=4.6' n= 0.080 Earth, long dense weeds
36.1	3,284	Total			

**Mill Pt Pre 2**

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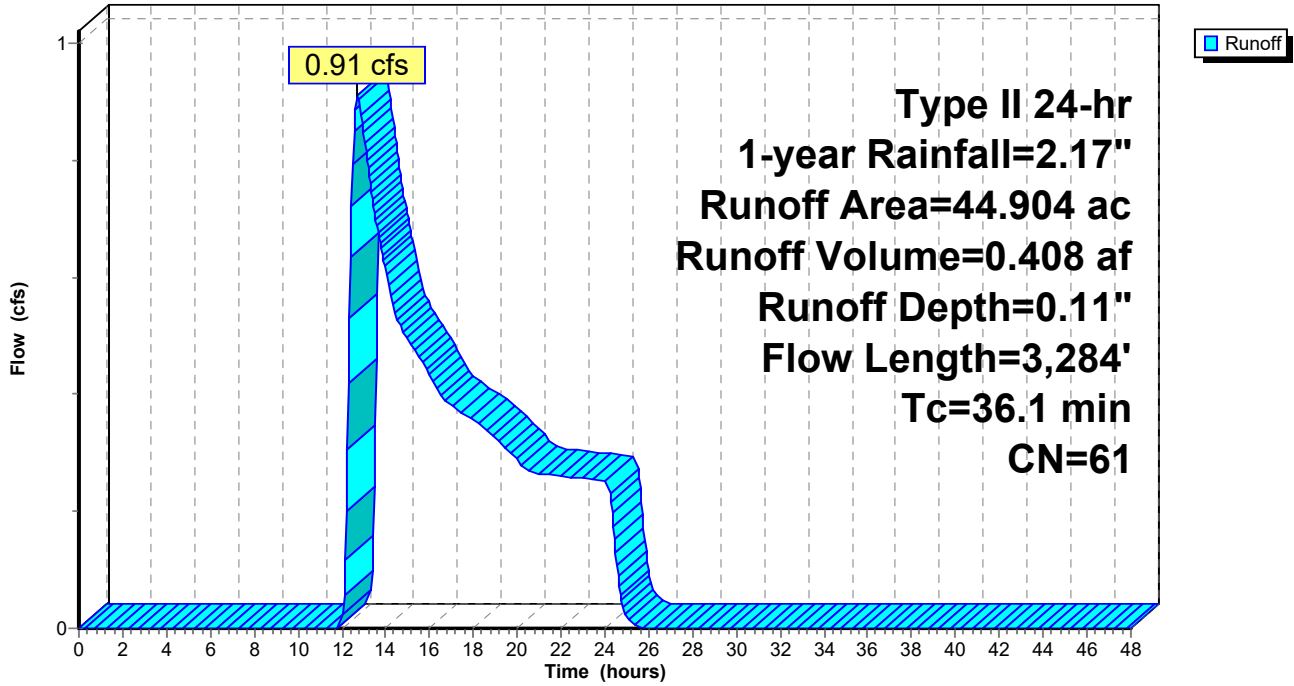
Type II 24-hr 1-year Rainfall=2.17"

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**Subcatchment 32S: Sub 32**

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 33S: Sub 33**

Runoff = 1.03 cfs @ 12.70 hrs, Volume= 0.599 af, Depth= 0.08"  
 Routed to Link SP33 :

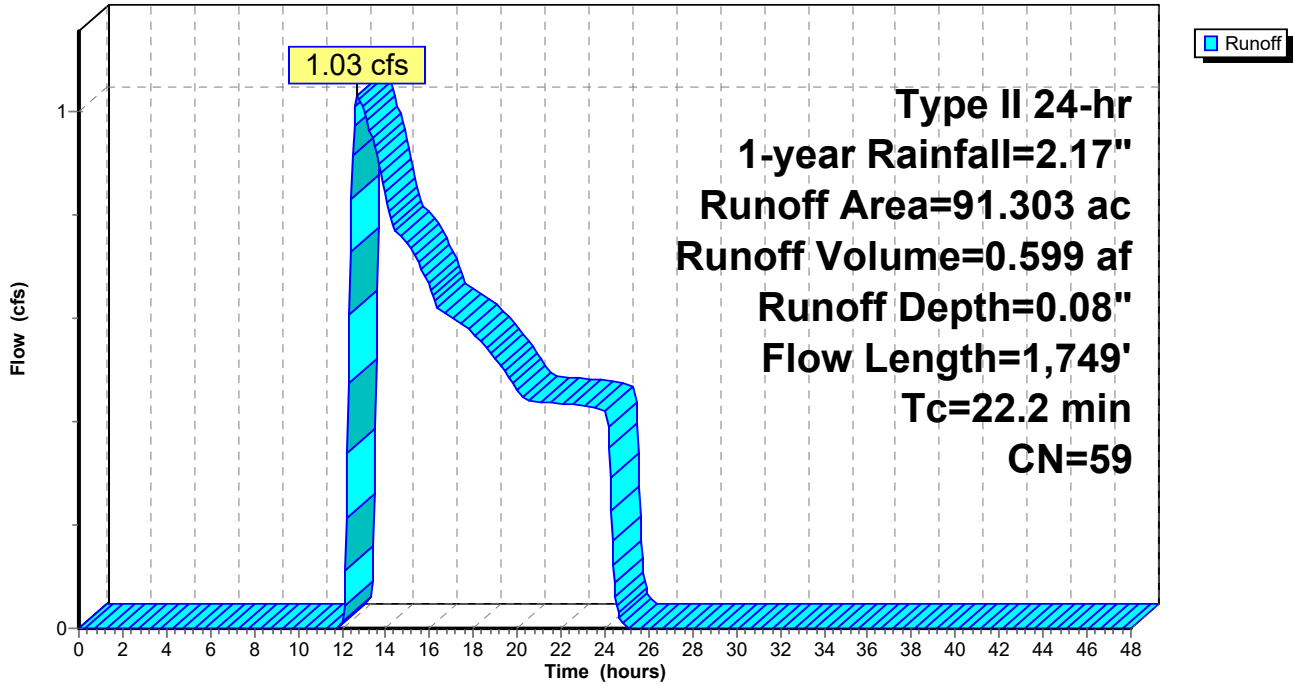
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.618	98	Impervious surface
* 0.042	96	Gravel surface
3.828	61	>75% Grass cover, Good, HSG B
45.219	58	Meadow, non-grazed, HSG B
9.199	71	Meadow, non-grazed, HSG C
3.134	78	Meadow, non-grazed, HSG D
0.415	48	Brush, Good, HSG B
28.566	55	Woods, Good, HSG B
0.282	70	Woods, Good, HSG C
91.303	59	Weighted Average
90.685		99.32% Pervious Area
0.618		0.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0350	0.19		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
5.8	780	0.1010	2.22		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.9	531	0.1059	2.28		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.6	338	0.1005	1.59		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
22.2	1,749	Total			

Subcatchment 33S: Sub 33

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 34S: Sub 34**

Runoff = 0.82 cfs @ 12.36 hrs, Volume= 0.271 af, Depth= 0.13"  
 Routed to Pond 34P : VAN EPPS RD CULVERT

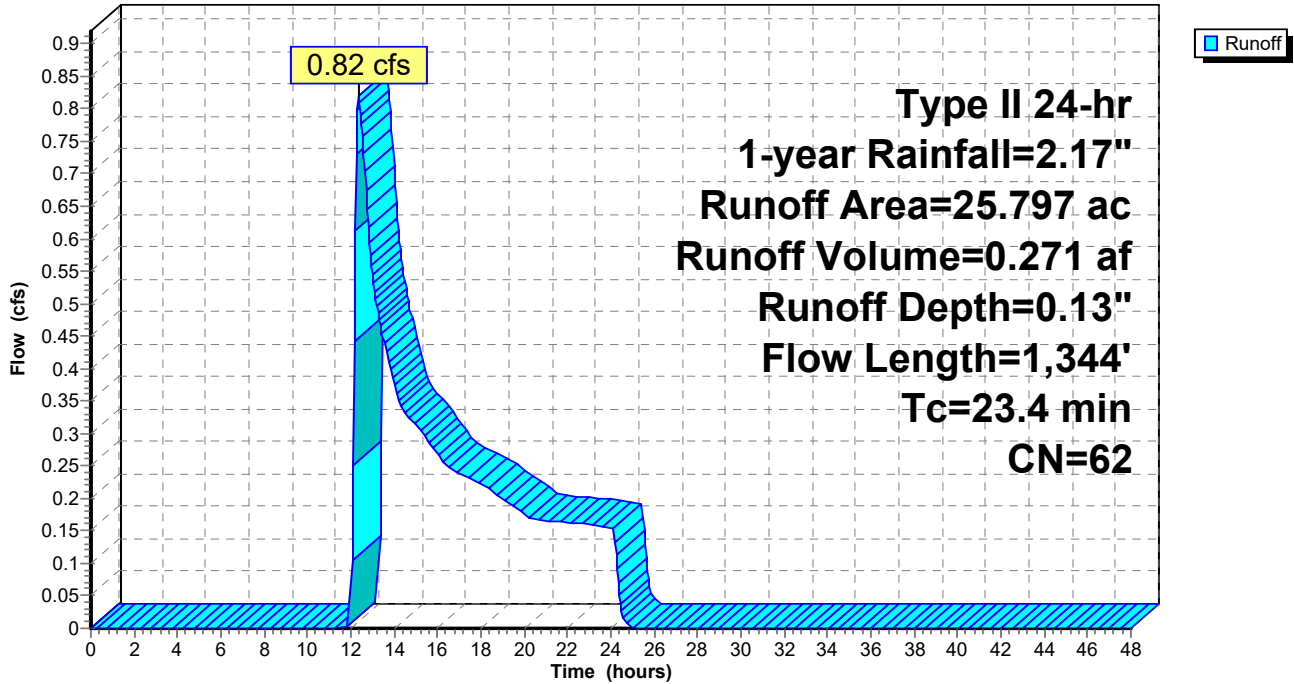
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
0.189	48	Brush, Good, HSG B
0.183	96	Gravel surface, HSG D
0.299	98	Unconnected roofs, HSG D
16.490	58	Meadow, non-grazed, HSG B
3.646	71	Meadow, non-grazed, HSG C
3.134	61	>75% Grass cover, Good, HSG B
1.498	74	>75% Grass cover, Good, HSG C
0.358	55	Woods, Good, HSG B
25.797	62	Weighted Average
25.498		98.84% Pervious Area
0.299		1.16% Impervious Area
0.299		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.8	100	0.0675	0.24		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
14.9	878	0.0198	0.98		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.2	42	0.0119	2.99	3.66	<b>Pipe Channel,</b> 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.025 Corrugated metal
1.5	324	0.0552	3.52		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
23.4	1,344	Total			

Subcatchment 34S: Sub 34

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 35S: Sub 35**

Runoff = 3.19 cfs @ 12.54 hrs, Volume= 0.842 af, Depth= 0.18"  
 Routed to Link SP35 :

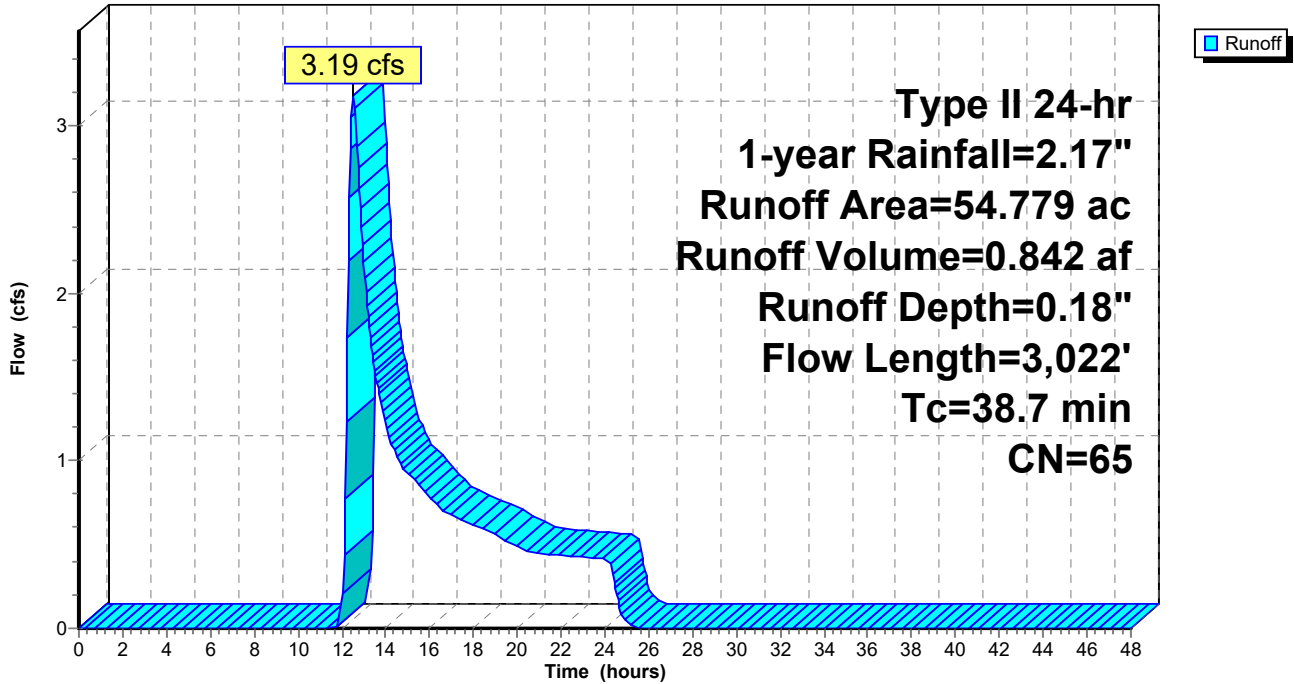
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
0.105	48	Brush, Good, HSG B
0.087	65	Brush, Good, HSG C
1.101	98	Unconnected roofs, HSG D
23.620	58	Meadow, non-grazed, HSG B
24.783	71	Meadow, non-grazed, HSG C
0.319	61	>75% Grass cover, Good, HSG B
1.326	74	>75% Grass cover, Good, HSG C
1.942	55	Woods, Good, HSG B
1.496	70	Woods, Good, HSG C
54.779	65	Weighted Average
53.678		97.99% Pervious Area
1.101		2.01% Impervious Area
1.101		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0450	0.21		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
6.6	393	0.0204	1.00		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
22.1	2,017	0.0471	1.52		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.0	512	0.1172	4.19	8.39	<b>Parabolic Channel,</b> W=3.00' D=1.00' Area=2.0 sf Perim=3.7' n= 0.080 Earth, long dense weeds
38.7	3,022	Total			

Subcatchment 35S: Sub 35

Hydrograph





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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 36S: Sub 36**

Runoff = 2.07 cfs @ 12.32 hrs, Volume= 0.560 af, Depth= 0.14"  
 Routed to Link SP36 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
0.405	48	Brush, Good, HSG B
0.013	65	Brush, Good, HSG C
0.081	96	Gravel surface, HSG D
0.007	98	Unconnected roofs, HSG D
2.271	58	Meadow, non-grazed, HSG B
21.338	71	Meadow, non-grazed, HSG C
0.513	98	Water Surface, HSG D
20.987	55	Woods, Good, HSG B
1.004	70	Woods, Good, HSG C
46.619	63	Weighted Average
46.099		98.88% Pervious Area
0.520		1.12% Impervious Area
0.007		1.35% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	100	0.0550	0.23		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
11.7	1,036	0.0442	1.47		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
4.2	860	0.1400	3.38	5.91	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=2.00' D=0.50' Z= 3.0 '/' Top.W=5.00' n= 0.080 Earth, long dense weeds
23.3	1,996	Total			

**Mill Pt Pre 2**

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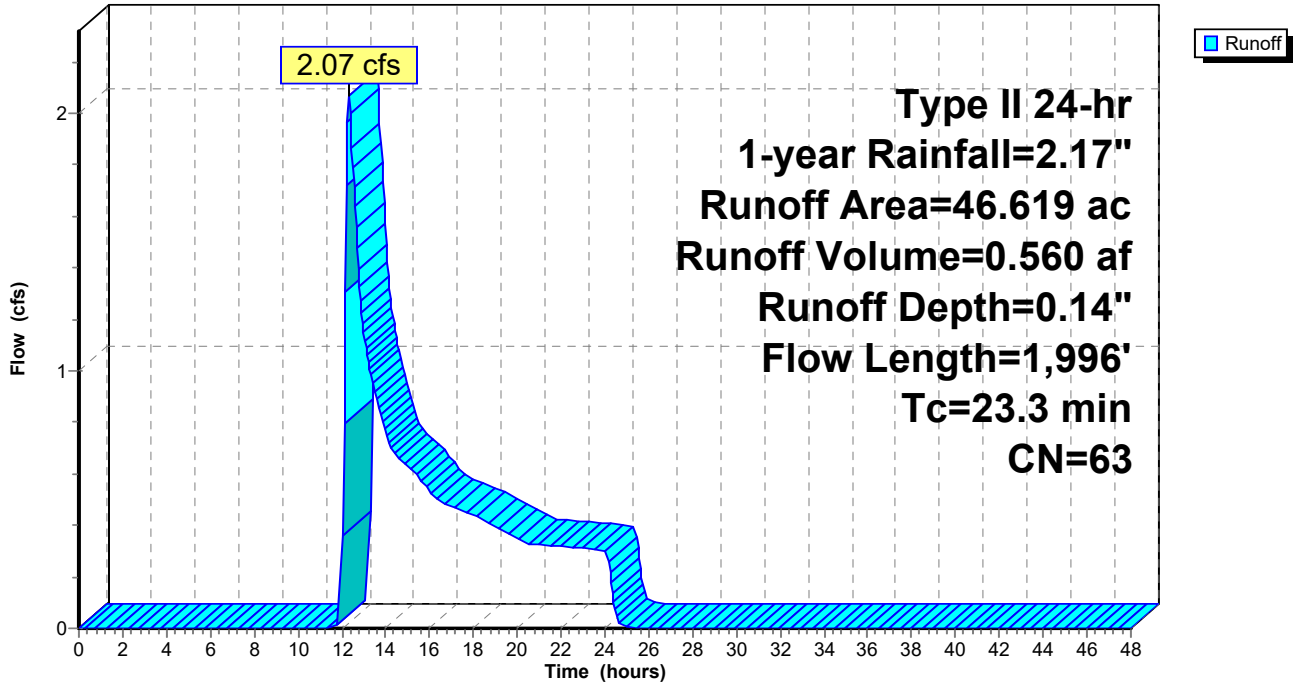
Type II 24-hr 1-year Rainfall=2.17"

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**Subcatchment 36S: Sub 36**

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 37S: Sub 37**

Runoff = 0.16 cfs @ 12.80 hrs, Volume= 0.081 af, Depth= 0.09"  
 Routed to Link SP37 :

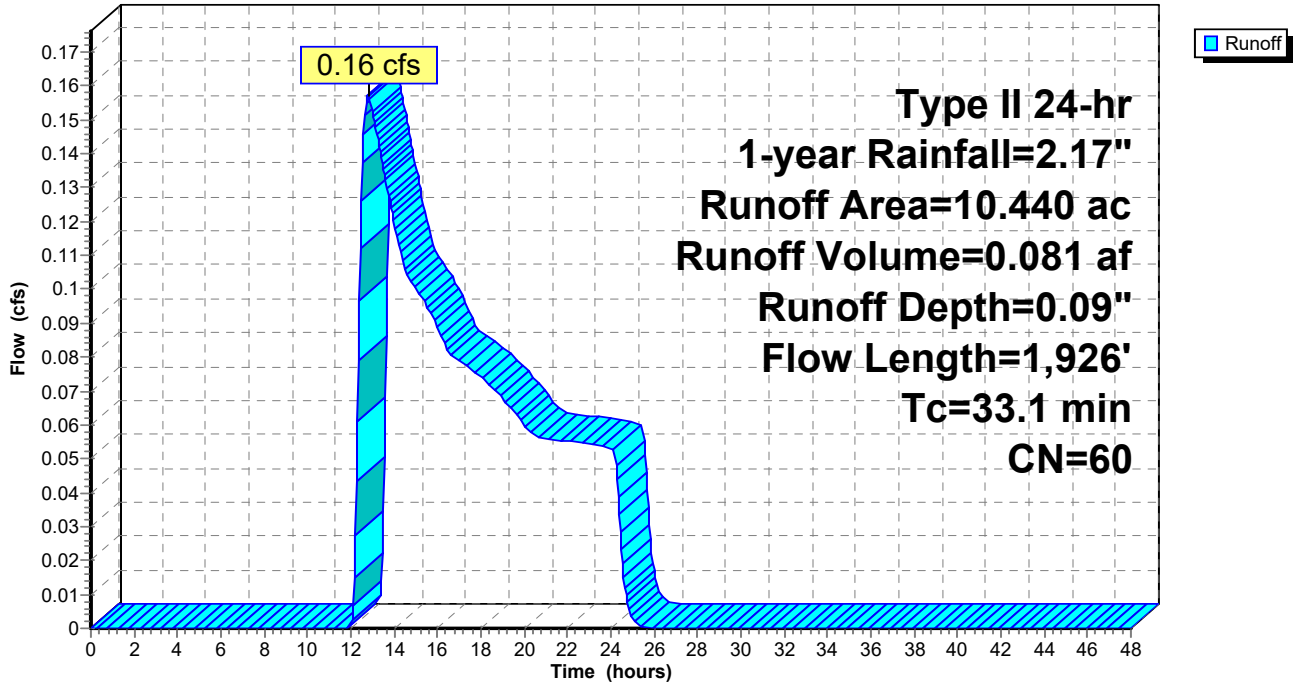
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
8.161	58	Meadow, non-grazed, HSG B
1.673	55	Woods, Good, HSG B
* 0.606	98	Impervious
10.440	60	Weighted Average
9.834		94.20% Pervious Area
0.606		5.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.3	100	0.0050	0.09		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
10.6	1,005	0.0507	1.58		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.0	90	0.0889	1.49		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
2.2	731	0.0570	5.59	20.95	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=6.00' D=0.50' Z= 3.0 '/' Top.W=9.00' n= 0.035 Earth, dense weeds
33.1	1,926	Total			

Subcatchment 37S: Sub 37

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 38S: Sub 38**

Runoff = 2.95 cfs @ 12.72 hrs, Volume= 0.973 af, Depth= 0.16"  
 Routed to Link SP38 :

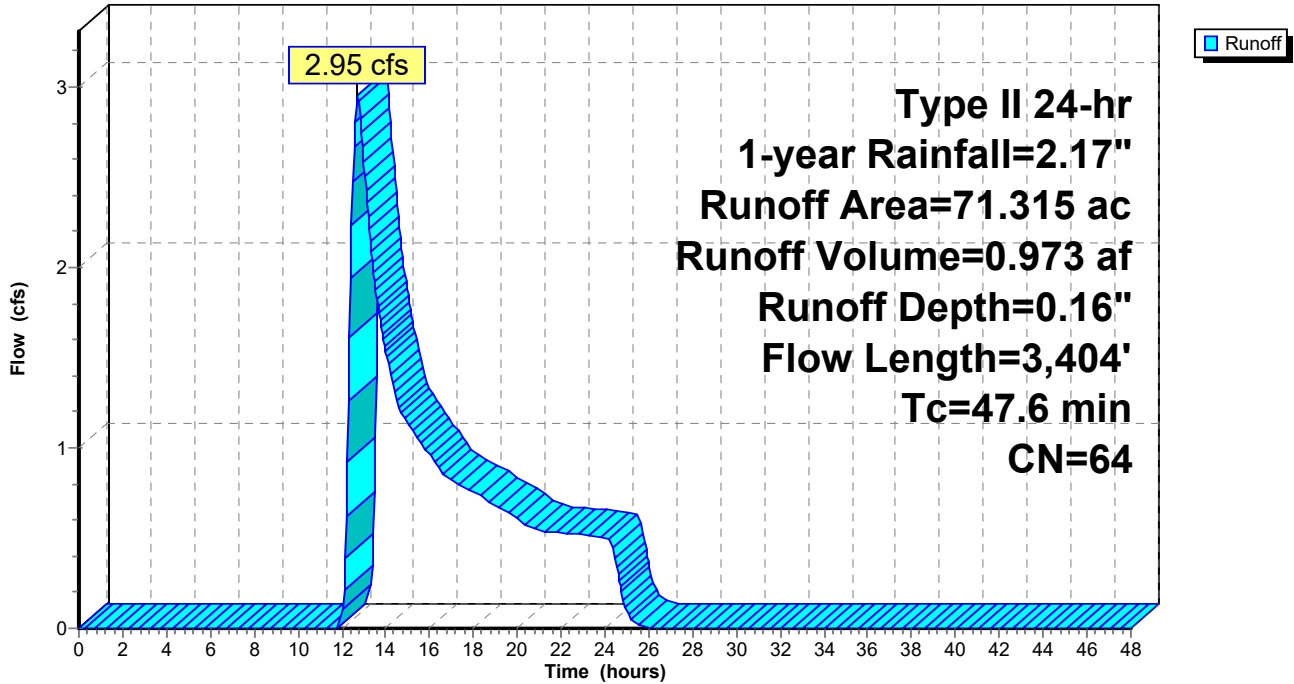
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
1.161	48	Brush, Good, HSG B
0.399	65	Brush, Good, HSG C
0.626	96	Gravel surface, HSG D
1.297	98	Unconnected roofs, HSG D
26.775	58	Meadow, non-grazed, HSG B
35.528	71	Meadow, non-grazed, HSG C
1.081	61	>75% Grass cover, Good, HSG B
4.099	30	Woods, Good, HSG A
0.349	55	Woods, Good, HSG B
71.315	64	Weighted Average
70.018		98.18% Pervious Area
1.297		1.82% Impervious Area
1.297		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	100	0.0500	0.22		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
11.9	739	0.0220	1.04		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
6.6	753	0.0744	1.91		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
21.4	1,812	0.0800	1.41		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
47.6	3,404	Total			

Subcatchment 38S: Sub 38

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 39S: Sub 39**

Runoff = 3.35 cfs @ 12.50 hrs, Volume= 1.203 af, Depth= 0.13"  
 Routed to Link SP39 :

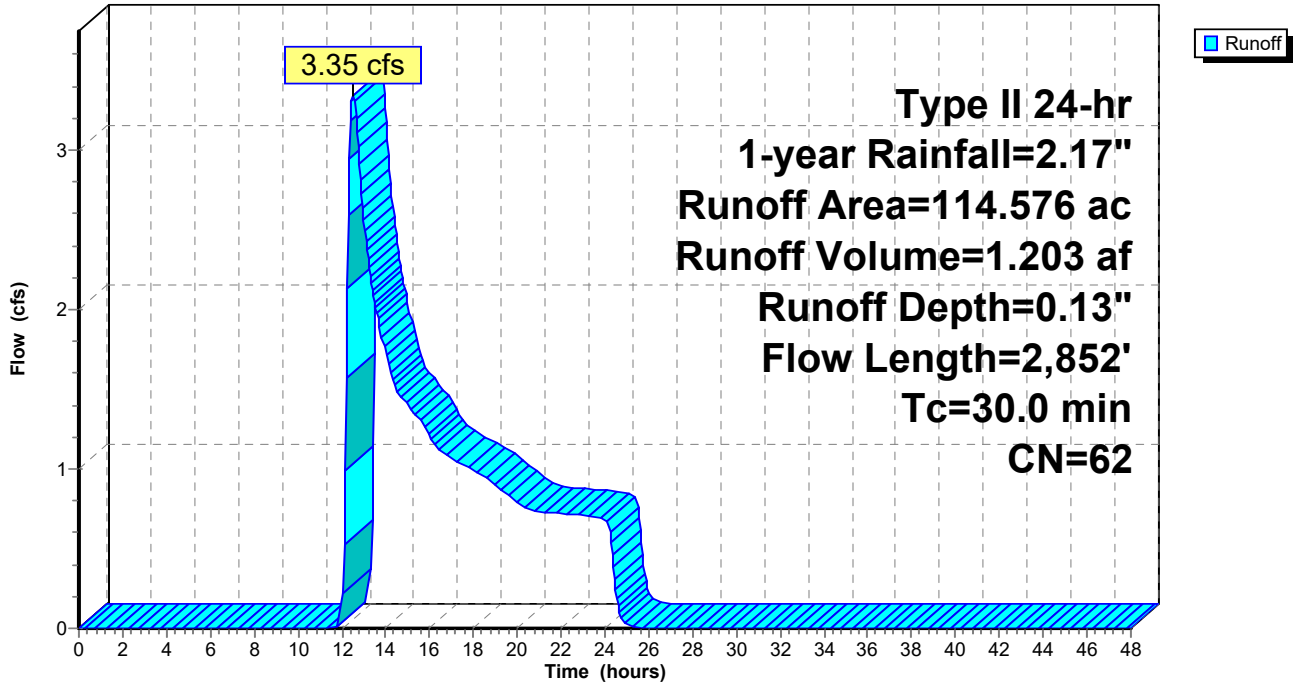
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
0.475	48	Brush, Good, HSG B
0.336	65	Brush, Good, HSG C
0.314	73	Brush, Good, HSG D
1.088	96	Gravel surface, HSG D
0.964	98	Unconnected roofs, HSG D
60.275	58	Meadow, non-grazed, HSG B
18.779	71	Meadow, non-grazed, HSG C
2.256	78	Meadow, non-grazed, HSG D
6.253	61	>75% Grass cover, Good, HSG B
3.233	74	>75% Grass cover, Good, HSG C
1.913	98	Water Surface, HSG D
17.544	55	Woods, Good, HSG B
0.343	70	Woods, Good, HSG C
0.803	77	Woods, Good, HSG D
114.576	62	Weighted Average
111.699		97.49% Pervious Area
2.877		2.51% Impervious Area
0.964		33.51% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	100	0.0600	0.23		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
17.7	2,151	0.0840	2.03		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
5.2	601	0.1490	1.93		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
30.0	2,852	Total			

Subcatchment 39S: Sub 39

Hydrograph





**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 40S: Sub 40**

Runoff = 3.15 cfs @ 12.32 hrs, Volume= 0.488 af, Depth= 0.28"  
 Routed to Reach 39R :

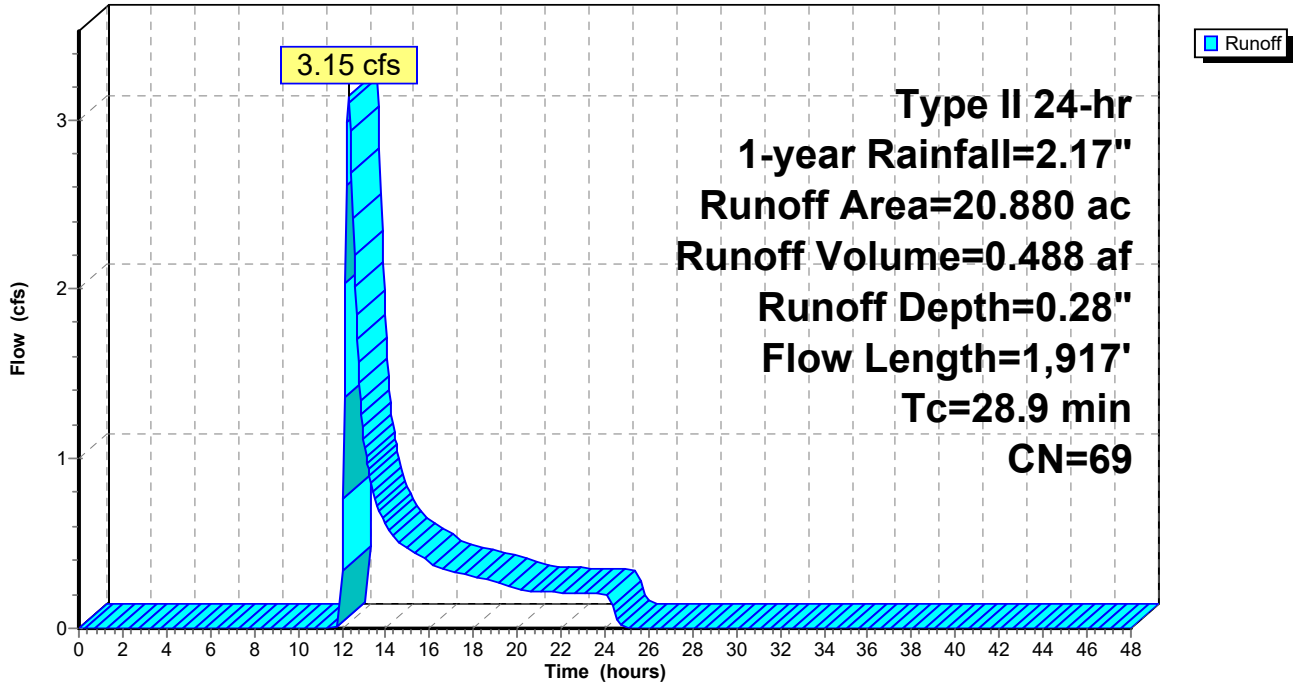
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
0.016	65	Brush, Good, HSG C
0.235	96	Gravel surface, HSG D
0.018	98	Unconnected roofs, HSG D
6.944	58	Meadow, non-grazed, HSG B
10.584	71	Meadow, non-grazed, HSG C
0.095	78	Meadow, non-grazed, HSG D
0.089	61	>75% Grass cover, Good, HSG B
1.640	98	Water Surface, HSG D
0.643	55	Woods, Good, HSG B
0.616	70	Woods, Good, HSG C
20.880	69	Weighted Average
19.222		92.06% Pervious Area
1.658		7.94% Impervious Area
0.018		1.09% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	100	0.0575	0.23		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
2.6	358	0.1089	2.31		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.4	38	0.1118	1.67		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
9.8	1,118	0.0733	1.90		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
8.8	303	0.0132	0.57		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
28.9	1,917	Total			

Subcatchment 40S: Sub 40

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 41S: Sub 41**

Runoff = 2.29 cfs @ 12.51 hrs, Volume= 0.723 af, Depth= 0.14"  
 Routed to Link SP41 :

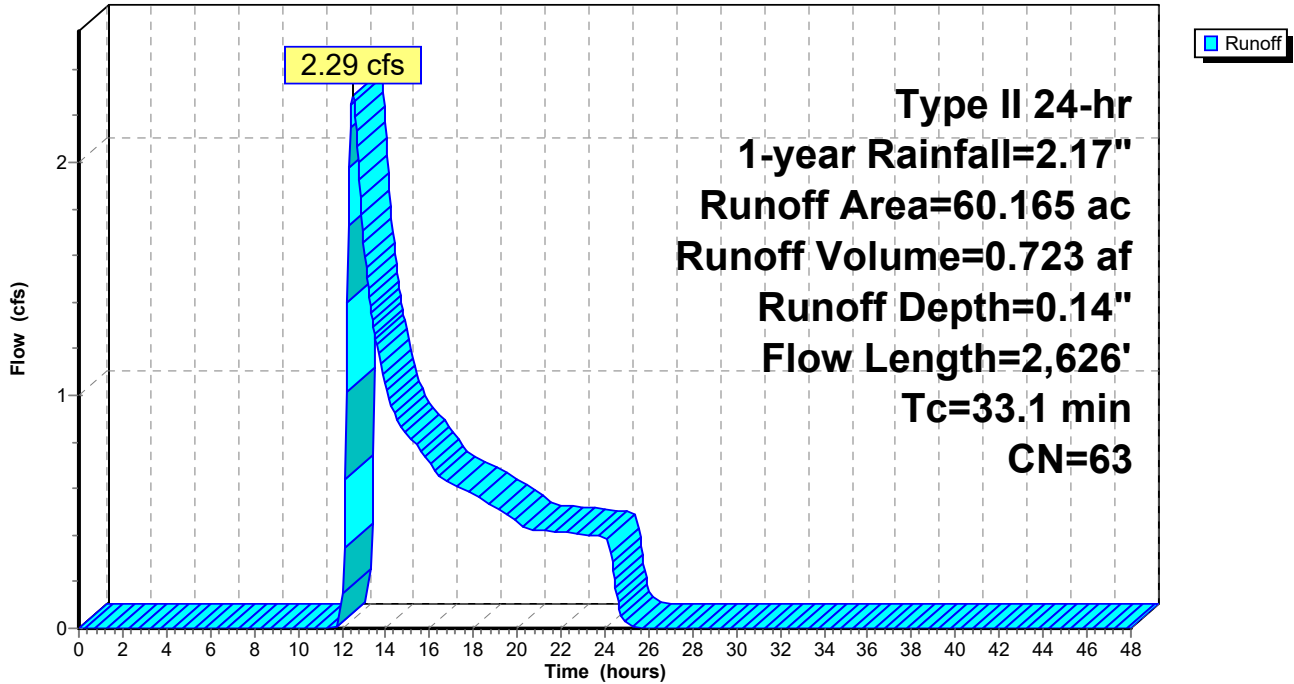
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
0.378	48	Brush, Good, HSG B
0.001	98	Unconnected roofs, HSG D
18.363	58	Meadow, non-grazed, HSG B
8.734	71	Meadow, non-grazed, HSG C
2.287	78	Meadow, non-grazed, HSG D
1.531	98	Water Surface, HSG D
19.479	55	Woods, Good, HSG B
9.335	70	Woods, Good, HSG C
0.057	77	Woods, Good, HSG D
60.165	63	Weighted Average
58.633		97.45% Pervious Area
1.532		2.55% Impervious Area
0.001		0.07% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0125	0.12		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
5.0	585	0.0765	1.94		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
7.8	652	0.0395	1.39		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
6.9	1,289	0.0436	3.13		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
33.1	2,626	Total			

Subcatchment 41S: Sub 41

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 42S: Sub 42**

Runoff = 1.62 cfs @ 12.31 hrs, Volume= 0.514 af, Depth= 0.13"  
 Routed to Link SP42 :

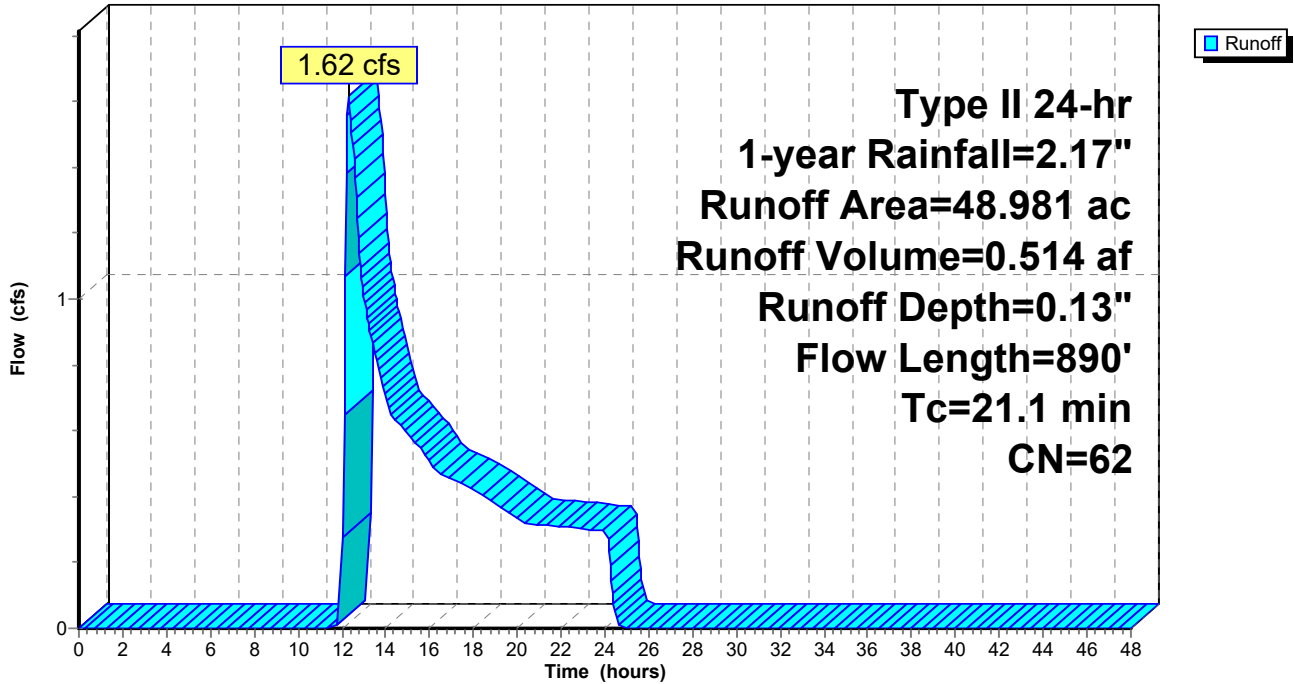
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
0.795	48	Brush, Good, HSG B
0.967	65	Brush, Good, HSG C
3.291	58	Meadow, non-grazed, HSG B
11.478	71	Meadow, non-grazed, HSG C
1.886	98	Water Surface, HSG D
27.090	55	Woods, Good, HSG B
3.474	70	Woods, Good, HSG C
48.981	62	Weighted Average
47.095		96.15% Pervious Area
1.886		3.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0125	0.12		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
3.2	234	0.0299	1.21		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
4.5	556	0.1704	2.06		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
21.1	890	Total			

Subcatchment 42S: Sub 42

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 48S: Sub 48**

Runoff = 15.16 cfs @ 12.42 hrs, Volume= 2.406 af, Depth= 0.37"

Routed to Link SP48 :

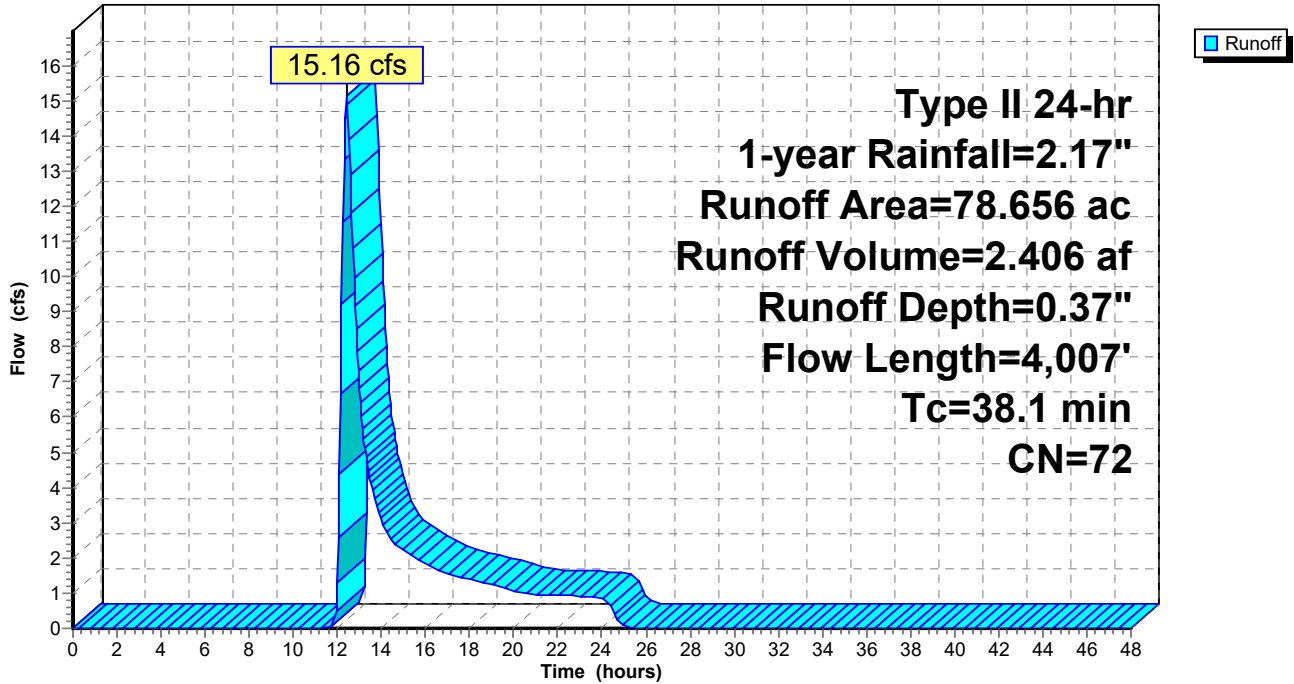
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 0.572	98	Surface water
* 1.693	98	Imperviopus surface
* 0.110	96	Gravel surface
0.416	61	>75% Grass cover, Good, HSG B
3.809	74	>75% Grass cover, Good, HSG C
1.571	80	>75% Grass cover, Good, HSG D
9.889	58	Meadow, non-grazed, HSG B
26.970	71	Meadow, non-grazed, HSG C
21.544	78	Meadow, non-grazed, HSG D
0.763	48	Brush, Good, HSG B
4.514	65	Brush, Good, HSG C
2.800	73	Brush, Good, HSG D
0.194	55	Woods, Good, HSG B
0.882	70	Woods, Good, HSG C
2.929	77	Woods, Good, HSG D
78.656	72	Weighted Average
76.391		97.12% Pervious Area
2.265		2.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	100	0.0625	0.24		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
22.2	1,935	0.0430	1.45		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
8.9	1,972	0.0230	3.68	19.31	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=9.00' D=0.50' Z= 3.0 '/' Top.W=12.00' n= 0.035 Earth, dense weeds
38.1	4,007	Total			

Subcatchment 48S: Sub 48

Hydrograph





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**Summary for Subcatchment 49S: Sub 49**

Runoff = 1.56 cfs @ 12.56 hrs, Volume= 0.459 af, Depth= 0.16"  
 Routed to Reach 42R : S-NSD-16

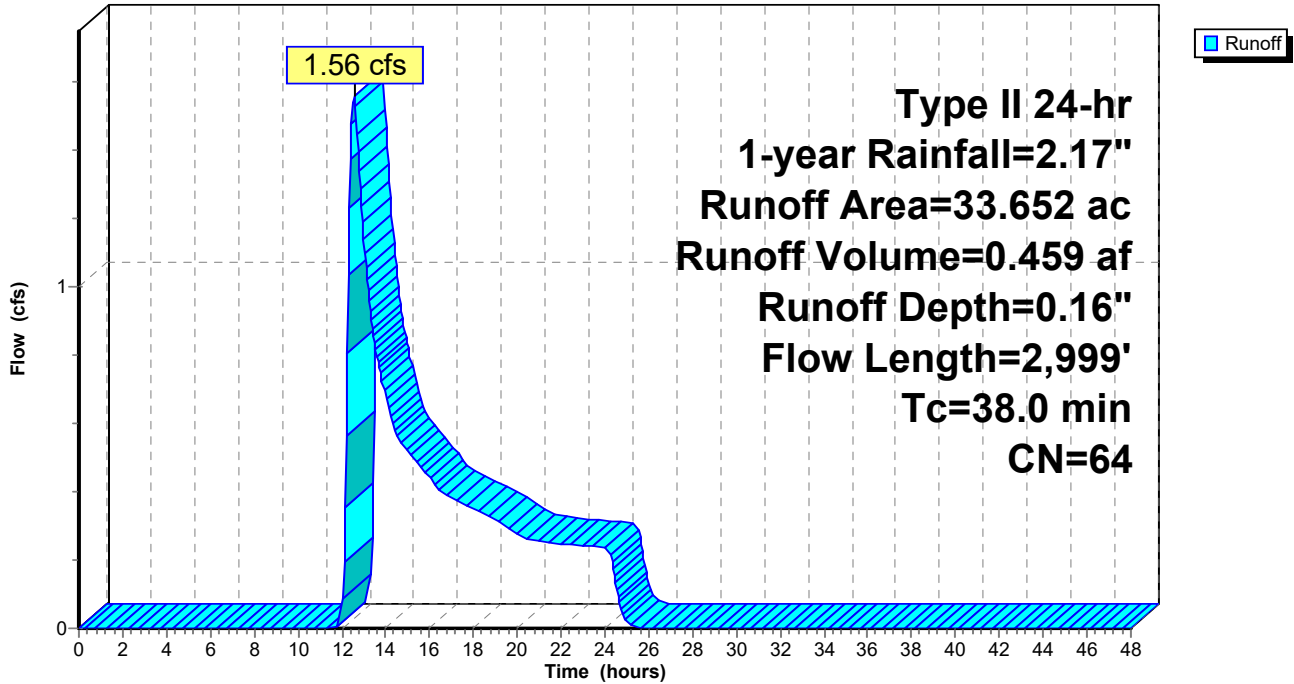
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
1.496	48	Brush, Good, HSG B
1.174	65	Brush, Good, HSG C
0.274	96	Gravel surface, HSG D
0.570	98	Unconnected roofs, HSG D
13.748	58	Meadow, non-grazed, HSG B
12.594	71	Meadow, non-grazed, HSG C
1.421	61	>75% Grass cover, Good, HSG B
0.238	74	>75% Grass cover, Good, HSG C
0.029	98	Water Surface, HSG D
1.071	55	Woods, Good, HSG B
0.984	70	Woods, Good, HSG C
0.053	77	Woods, Good, HSG D
33.652	64	Weighted Average
33.053		98.22% Pervious Area
0.599		1.78% Impervious Area
0.570		95.16% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	100	0.0600	0.23		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
1.5	240	0.1500	2.71		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.4	534	0.1367	2.59		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.8	168	0.0506	1.57		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
8.2	561	0.0267	1.14		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
16.0	1,396	0.0434	1.46		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
38.0	2,999	Total			

Subcatchment 49S: Sub 49

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 50S: Sub 50**

Runoff = 5.73 cfs @ 12.33 hrs, Volume= 0.970 af, Depth= 0.25"  
 Routed to Link SP50 :

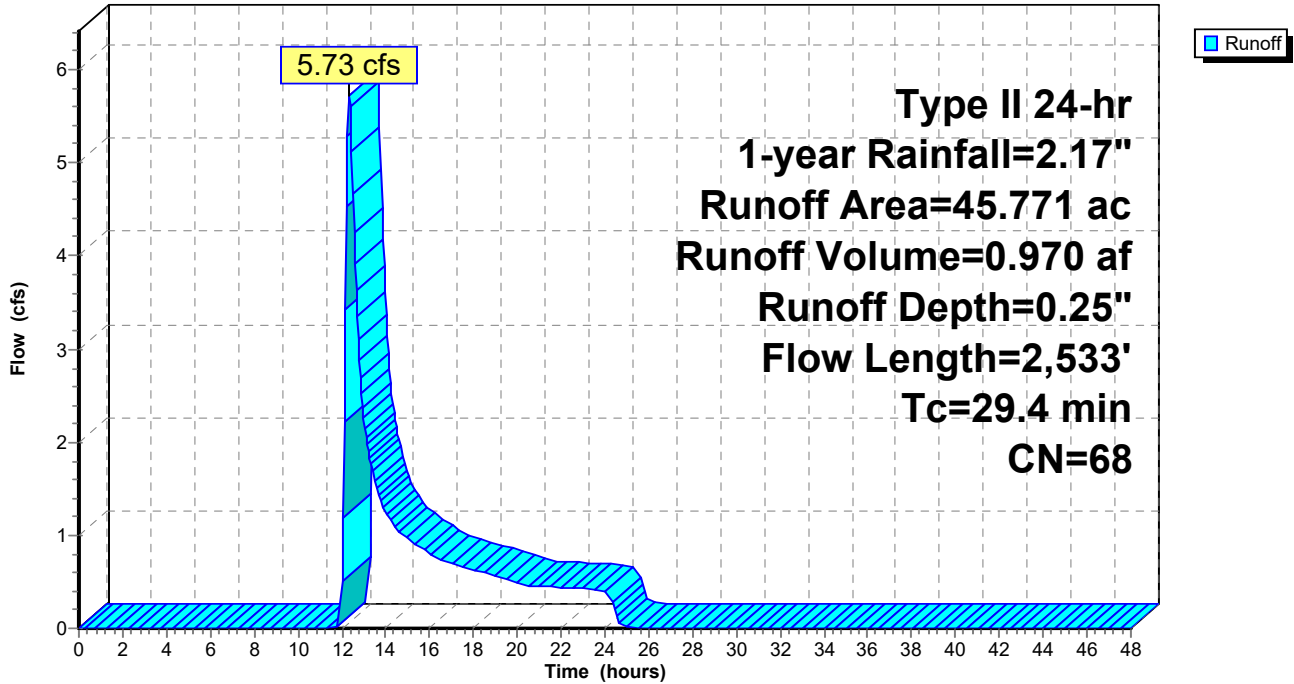
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
0.310	48	Brush, Good, HSG B
3.852	65	Brush, Good, HSG C
0.150	73	Brush, Good, HSG D
0.163	98	Unconnected roofs, HSG D
3.353	58	Meadow, non-grazed, HSG B
23.813	71	Meadow, non-grazed, HSG C
2.446	78	Meadow, non-grazed, HSG D
0.409	98	Water Surface, HSG D
5.669	55	Woods, Good, HSG B
5.353	70	Woods, Good, HSG C
0.253	77	Woods, Good, HSG D
45.771	68	Weighted Average
45.199		98.75% Pervious Area
0.572		1.25% Impervious Area
0.163		28.50% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0350	0.19		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
8.1	911	0.0710	1.87		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
7.5	410	0.0330	0.91		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
4.9	1,112	0.0320	3.80	5.70	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00' n= 0.035 Earth, dense weeds
29.4	2,533	Total			

Subcatchment 50S: Sub 50

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 51S: Sub 51**

Runoff = 4.89 cfs @ 12.54 hrs, Volume= 1.415 af, Depth= 0.16"  
 Routed to Link SP51 :

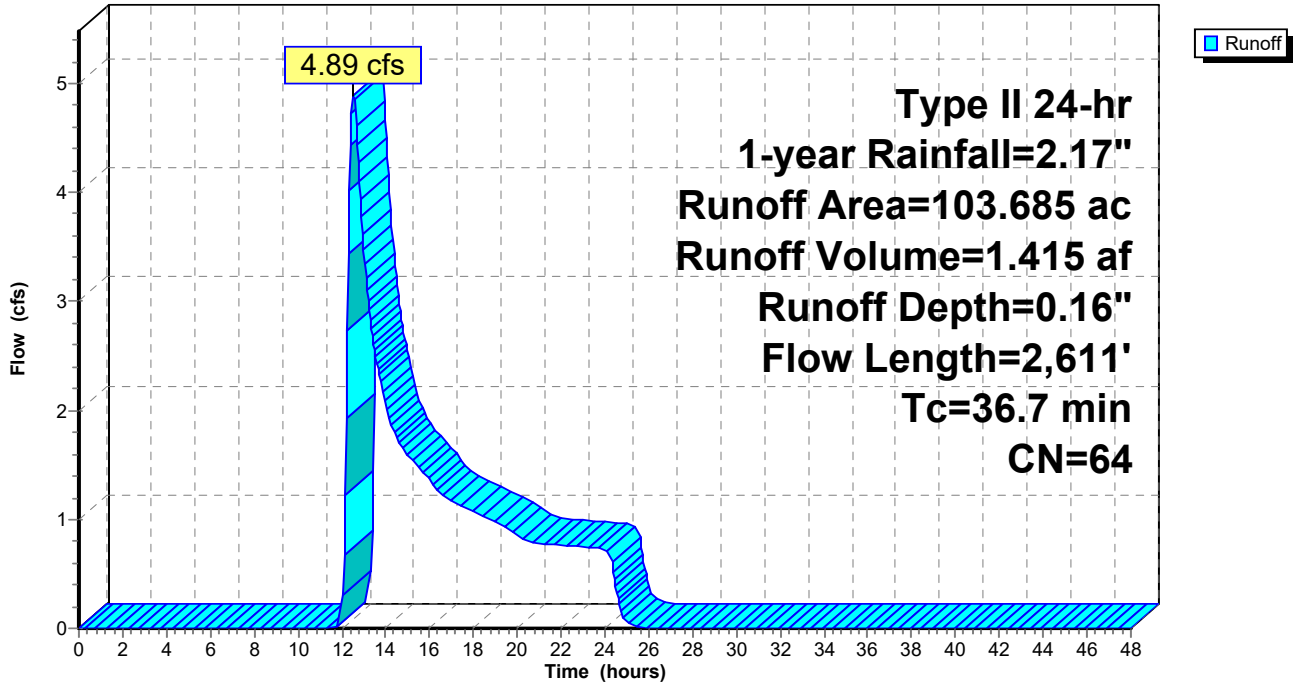
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
* 1.067	98	Impervious surface
2.753	61	>75% Grass cover, Good, HSG B
1.096	74	>75% Grass cover, Good, HSG C
49.195	58	Meadow, non-grazed, HSG B
39.362	71	Meadow, non-grazed, HSG C
2.576	78	Meadow, non-grazed, HSG D
0.936	48	Brush, Good, HSG B
0.917	65	Brush, Good, HSG C
0.252	73	Brush, Good, HSG D
1.975	55	Woods, Good, HSG B
3.395	70	Woods, Good, HSG C
0.161	77	Woods, Good, HSG D
103.685	64	Weighted Average
102.618		98.97% Pervious Area
1.067		1.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0150	0.13		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
12.6	1,592	0.0908	2.11		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
4.3	435	0.0586	1.69		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
4.4	336	0.0327	1.27		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.0	148	0.0270	0.82		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
36.7	2,611	Total			

Subcatchment 51S: Sub 51

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 52S: Sub 52**

Runoff = 2.70 cfs @ 12.21 hrs, Volume= 0.346 af, Depth= 0.28"  
 Routed to Link SP52 :

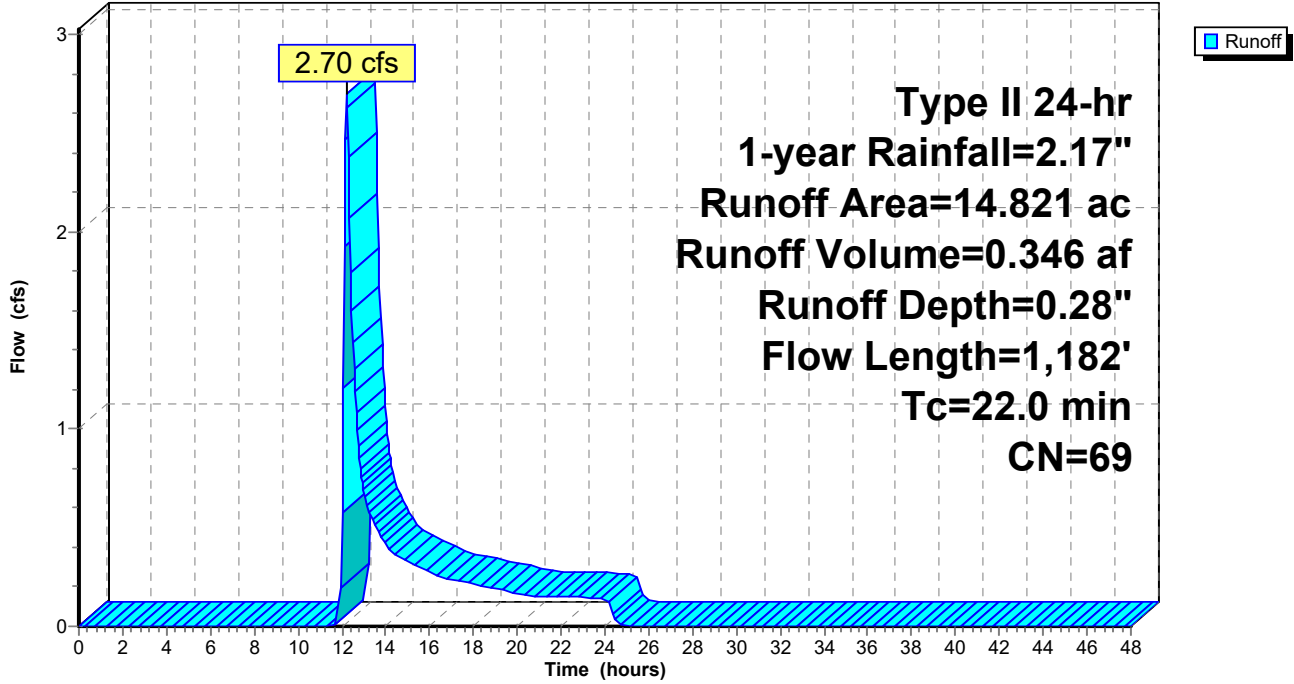
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
0.561	48	Brush, Good, HSG B
0.166	73	Brush, Good, HSG D
1.696	58	Meadow, non-grazed, HSG B
10.185	71	Meadow, non-grazed, HSG C
0.446	78	Meadow, non-grazed, HSG D
0.413	98	Water Surface, HSG D
0.321	55	Woods, Good, HSG B
0.833	70	Woods, Good, HSG C
0.200	77	Woods, Good, HSG D
14.821	69	Weighted Average
14.408		97.21% Pervious Area
0.413		2.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.1	100	0.0200	0.15		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
8.1	993	0.0850	2.04		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.8	89	0.0112	0.53		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
22.0	1,182	Total			

Subcatchment 52S: Sub 52

Hydrograph





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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 53S: Sub 53**

Runoff = 1.89 cfs @ 12.48 hrs, Volume= 0.410 af, Depth= 0.23"  
 Routed to Link SP53 :

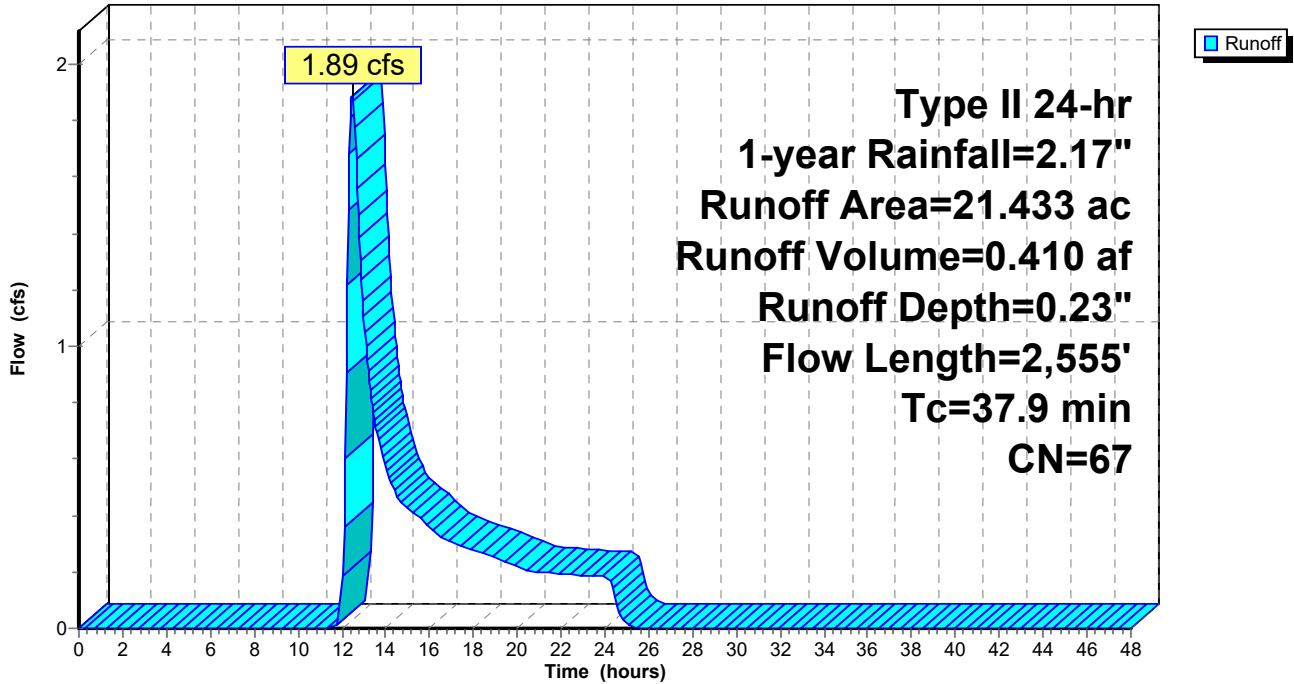
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
1.581	48	Brush, Good, HSG B
0.993	65	Brush, Good, HSG C
4.029	58	Meadow, non-grazed, HSG B
14.178	71	Meadow, non-grazed, HSG C
0.386	98	Water Surface, HSG D
0.266	70	Woods, Good, HSG C
21.433	67	Weighted Average
21.047		98.20% Pervious Area
0.386		1.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.6	100	0.0100	0.11		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
2.4	347	0.1210	2.43		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.9	151	0.1656	2.85		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
19.3	1,511	0.0347	1.30		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.7	446	0.2690	11.02	16.53	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00' n= 0.035 Earth, dense weeds
37.9	2,555	Total			

Subcatchment 53S: Sub 53

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 54S:**

Runoff = 7.27 cfs @ 12.40 hrs, Volume= 1.208 af, Depth= 0.31"  
 Routed to Link SP54 :

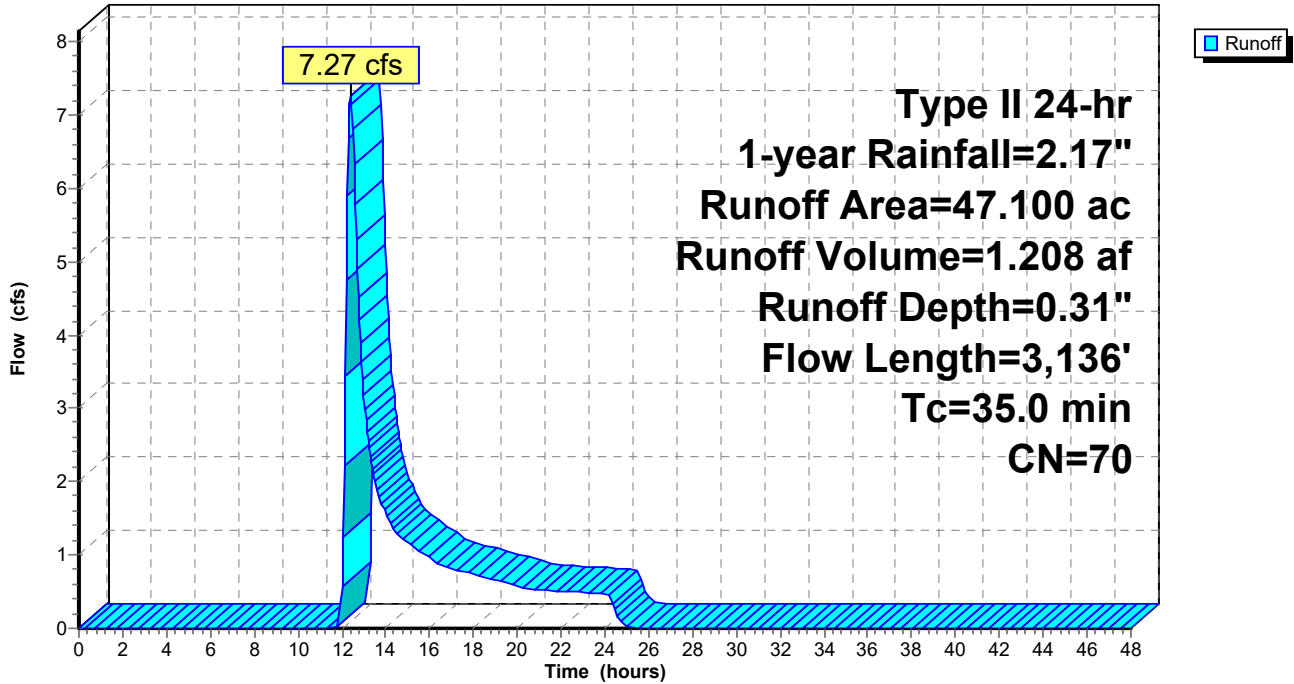
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
2.263	48	Brush, Good, HSG B
4.855	65	Brush, Good, HSG C
* 2.566	98	Impervious
5.659	58	Meadow, non-grazed, HSG B
23.239	71	Meadow, non-grazed, HSG C
2.347	61	>75% Grass cover, Good, HSG B
5.038	74	>75% Grass cover, Good, HSG C
1.056	98	Water Surface, HSG D
0.043	55	Woods, Good, HSG B
0.034	70	Woods, Good, HSG C
47.100	70	Weighted Average
43.478		92.31% Pervious Area
3.622		7.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	100	0.0500	0.22		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
11.2	964	0.0420	1.43		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.8	166	0.0392	0.99		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
1.9	321	0.0312	2.84		<b>Shallow Concentrated Flow,</b> Unpaved Kv= 16.1 fps
11.4	1,585	0.0230	2.31	7.69	<b>Parabolic Channel,</b> W=5.00' D=1.00' Area=3.3 sf Perim=5.5' n= 0.070 Sluggish weedy reaches w/pools
35.0	3,136	Total			

Subcatchment 54S:

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 55S: Sub 55**

Runoff = 1.96 cfs @ 12.54 hrs, Volume= 0.479 af, Depth= 0.21"

Routed to Link SP55 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
0.418	48	Brush, Good, HSG B
0.338	65	Brush, Good, HSG C
* 0.275	98	Impervious surface
9.179	58	Meadow, non-grazed, HSG B
17.187	71	Meadow, non-grazed, HSG C
0.192	55	Woods, Good, HSG B
0.237	70	Woods, Good, HSG C
27.826	66	Weighted Average
27.551		99.01% Pervious Area
0.275		0.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.2	100	0.0130	0.13		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
4.5	535	0.0810	1.99		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
21.5	1,175	0.0170	0.91		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.0	474	0.0530	7.94	21.17	<b>Parabolic Channel,</b> W=4.00' D=1.00' Area=2.7 sf Perim=4.6' n= 0.030 Earth, grassed & winding
40.2	2,284	Total			

**Mill Pt Pre 2**

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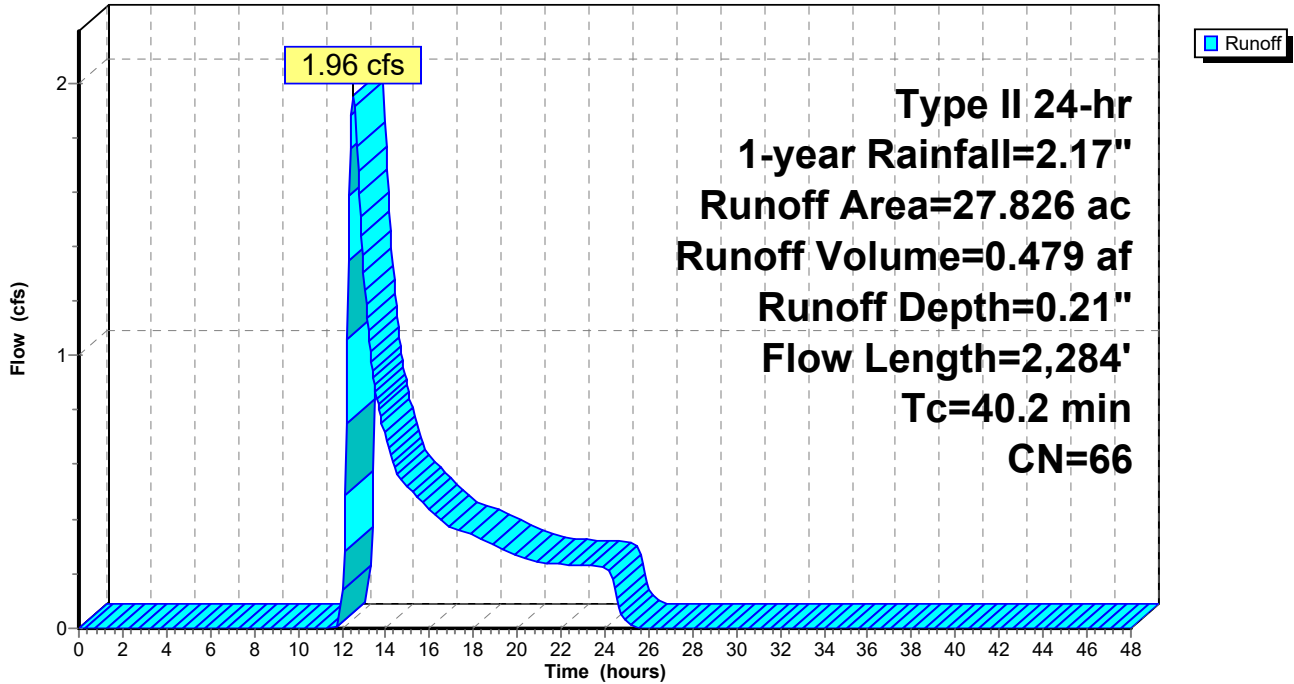
Type II 24-hr 1-year Rainfall=2.17"

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**Subcatchment 55S: Sub 55**

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 56S: Sub 56**

Runoff = 6.36 cfs @ 12.36 hrs, Volume= 1.202 af, Depth= 0.23"  
 Routed to Link SP56 :

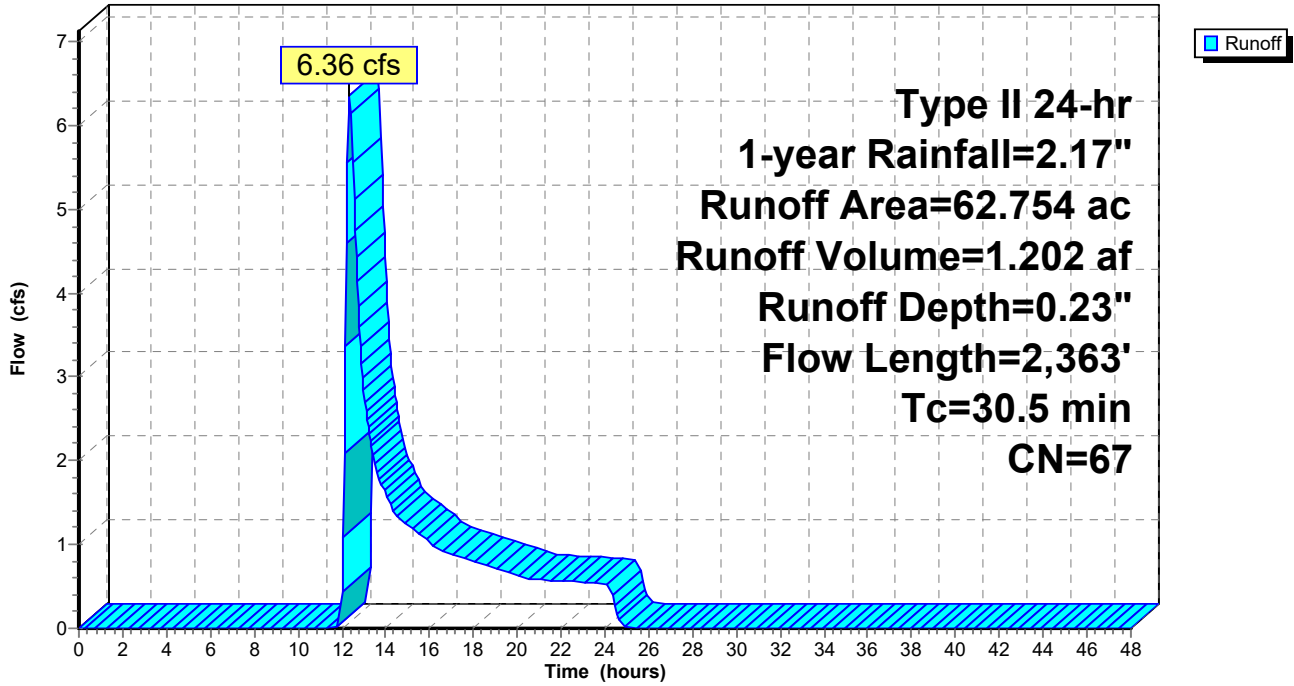
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

Area (ac)	CN	Description
0.895	48	Brush, Good, HSG B
1.460	65	Brush, Good, HSG C
13.366	58	Meadow, non-grazed, HSG B
40.081	71	Meadow, non-grazed, HSG C
1.244	55	Woods, Good, HSG B
5.708	70	Woods, Good, HSG C
62.754	67	Weighted Average
62.754		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	100	0.0575	0.23		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
7.3	501	0.0264	1.14		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
6.2	958	0.1336	2.56		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
6.8	644	0.0505	1.57		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.9	160	0.0344	0.93		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
30.5	2,363	Total			

Subcatchment 56S: Sub 56

Hydrograph





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Type II 24-hr 1-year Rainfall=2.17"

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## Summary for Reach 33R:

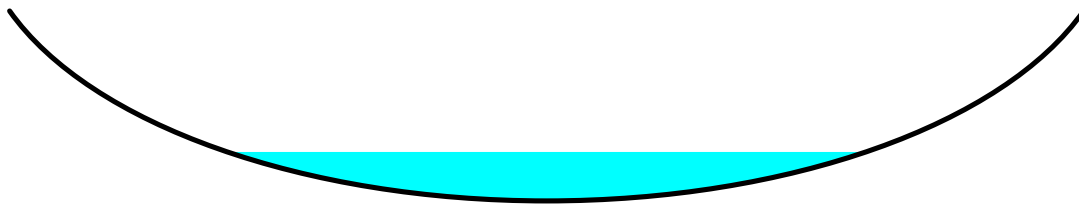
[79] Warning: Submerged Pond 34P Primary device # 1 OUTLET by 0.26'

Inflow Area = 25.797 ac, 1.16% Impervious, Inflow Depth = 0.13" for 1-year event  
Inflow = 0.82 cfs @ 12.36 hrs, Volume= 0.271 af  
Outflow = 0.58 cfs @ 13.36 hrs, Volume= 0.271 af, Atten= 29%, Lag= 59.9 min  
Routed to Link SP33 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 1.11 fps, Min. Travel Time= 28.2 min  
Avg. Velocity = 0.42 fps, Avg. Travel Time= 75.1 min

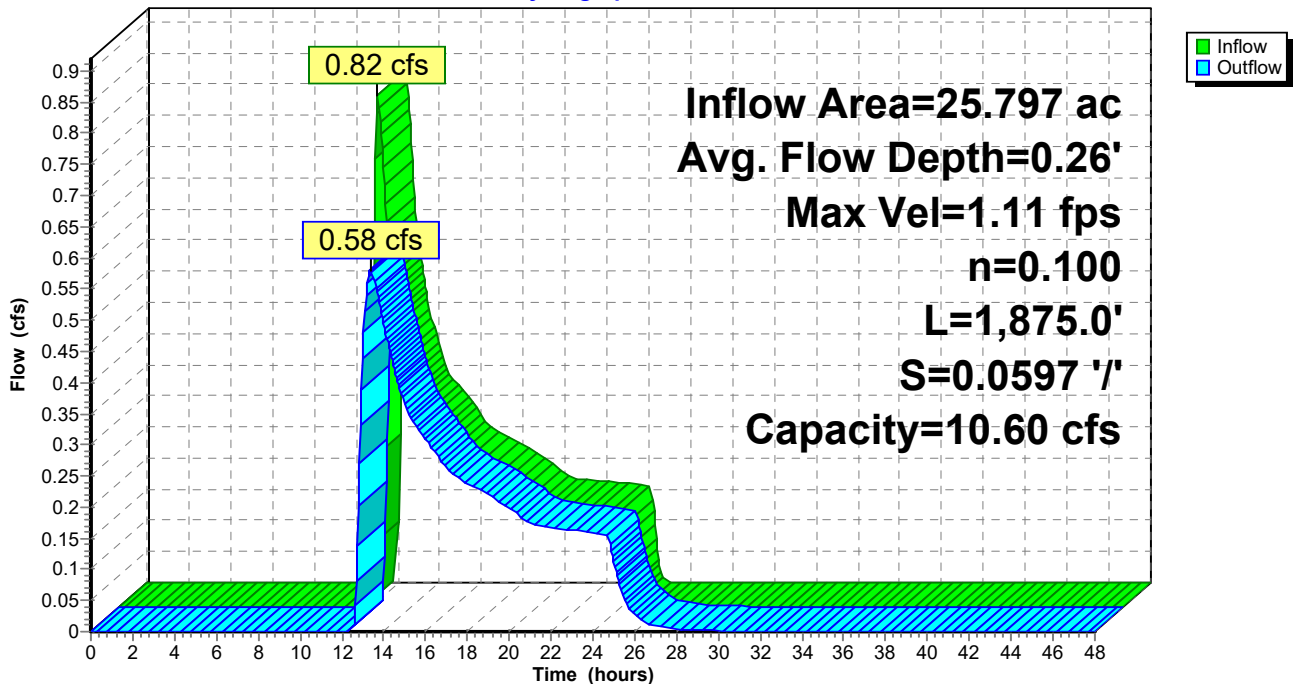
Peak Storage= 982 cf @ 12.89 hrs  
Average Depth at Peak Storage= 0.26' , Surface Width= 3.05'  
Bank-Full Depth= 1.00' Flow Area= 4.0 sf, Capacity= 10.60 cfs

6.00' x 1.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage  
Length= 1,875.0' Slope= 0.0597 '/'  
Inlet Invert= 578.00', Outlet Invert= 466.00'



## Reach 33R:

Hydrograph



# Mill Pt Pre 2

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Type II 24-hr 1-year Rainfall=2.17"

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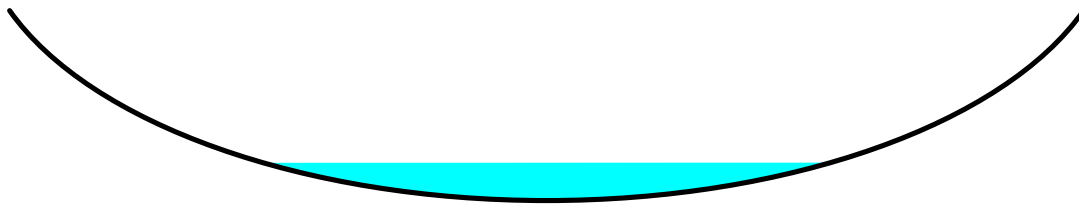
## Summary for Reach 39R:

Inflow Area = 20.880 ac, 7.94% Impervious, Inflow Depth = 0.28" for 1-year event  
Inflow = 3.15 cfs @ 12.32 hrs, Volume= 0.488 af  
Outflow = 2.69 cfs @ 12.61 hrs, Volume= 0.488 af, Atten= 14%, Lag= 17.8 min  
Routed to Link SP39 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 1.91 fps, Min. Travel Time= 9.7 min  
Avg. Velocity = 0.76 fps, Avg. Travel Time= 24.3 min

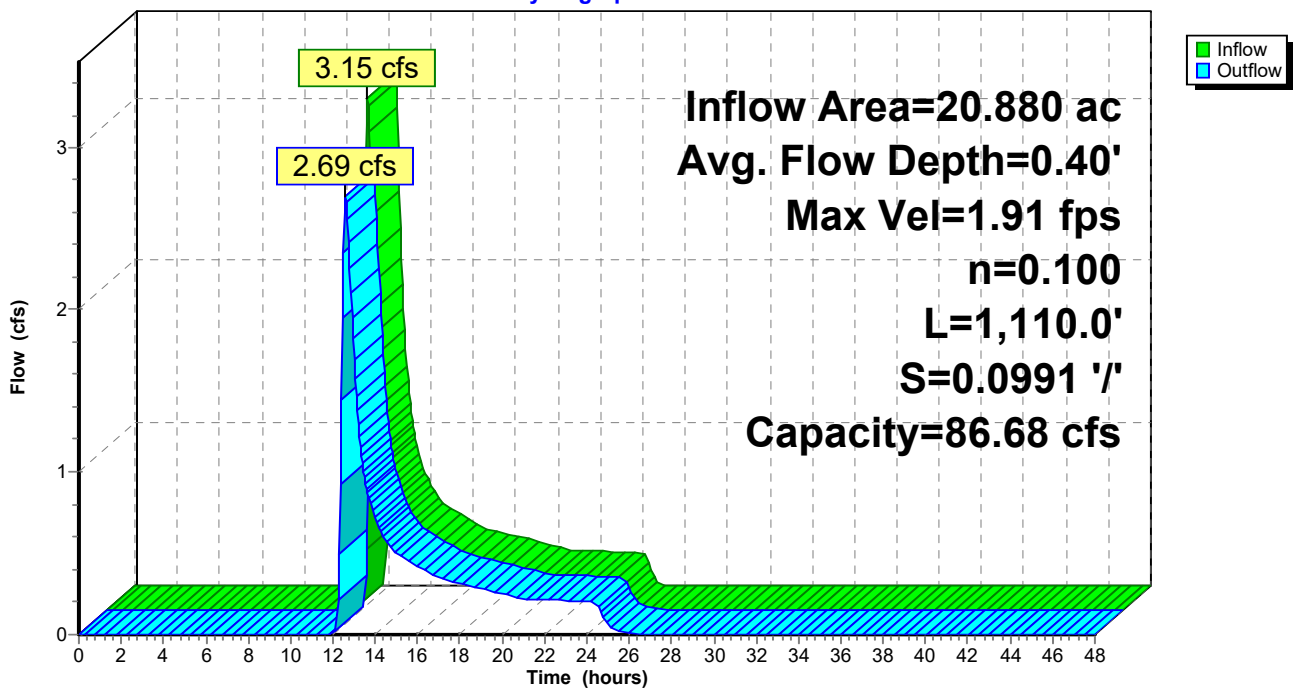
Peak Storage= 1,571 cf @ 12.45 hrs  
Average Depth at Peak Storage= 0.40' , Surface Width= 5.35'  
Bank-Full Depth= 2.00' Flow Area= 16.0 sf, Capacity= 86.68 cfs

12.00' x 2.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage  
Length= 1,110.0' Slope= 0.0991 '/'  
Inlet Invert= 526.00', Outlet Invert= 416.00'



## Reach 39R:

Hydrograph



# Mill Pt Pre 2

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Type II 24-hr 1-year Rainfall=2.17"

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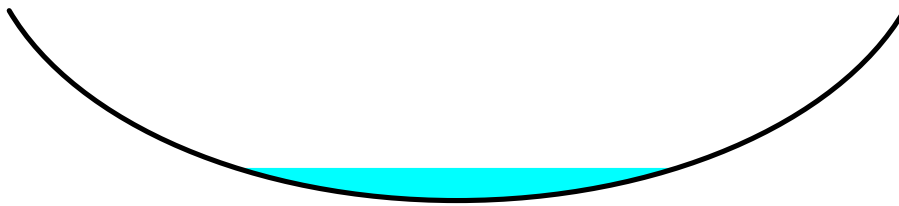
## Summary for Reach 42R: S-NSD-16

Inflow Area = 33.652 ac, 1.78% Impervious, Inflow Depth = 0.16" for 1-year event  
Inflow = 1.56 cfs @ 12.56 hrs, Volume= 0.459 af  
Outflow = 1.21 cfs @ 13.33 hrs, Volume= 0.459 af, Atten= 23%, Lag= 45.9 min  
Routed to Link SP42 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 1.27 fps, Min. Travel Time= 23.5 min  
Avg. Velocity = 0.52 fps, Avg. Travel Time= 57.7 min

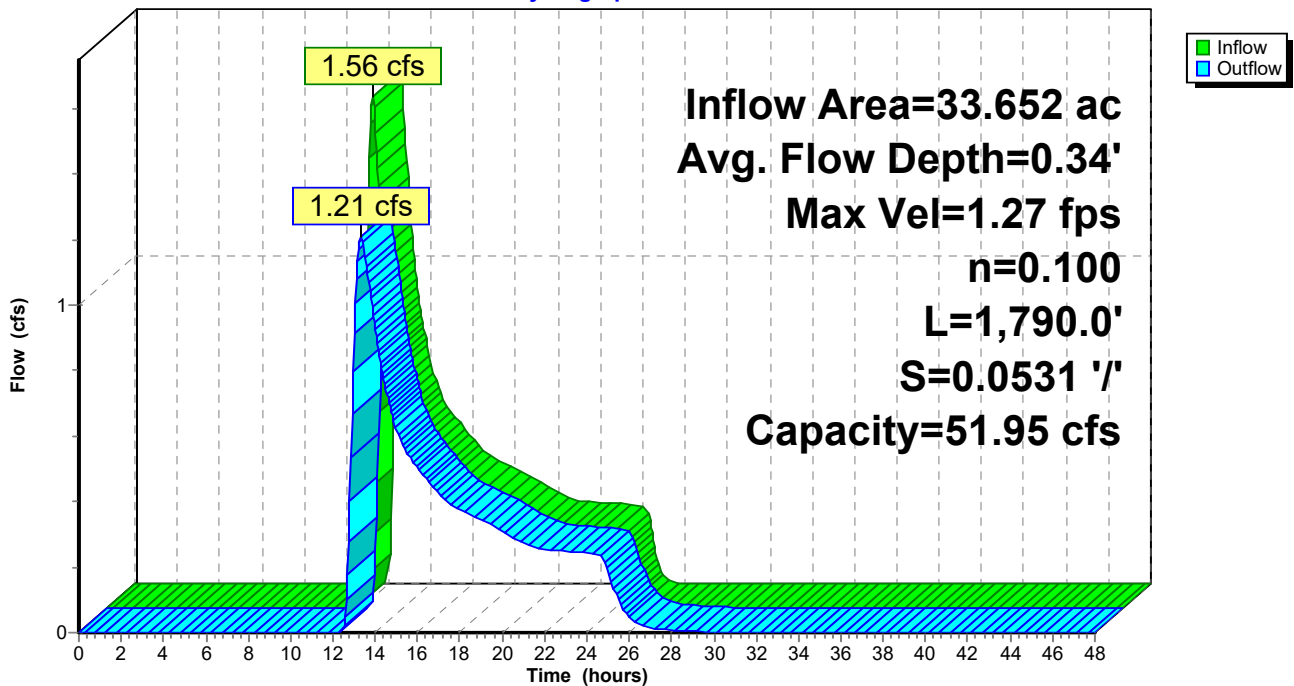
Peak Storage= 1,704 cf @ 12.93 hrs  
Average Depth at Peak Storage= 0.34' , Surface Width= 4.15'  
Bank-Full Depth= 2.00' Flow Area= 13.3 sf, Capacity= 51.95 cfs

10.00' x 2.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage  
Length= 1,790.0' Slope= 0.0531 '/'  
Inlet Invert= 470.00', Outlet Invert= 375.00'



## Reach 42R: S-NSD-16

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Pond 34P: VAN EPPS RD CULVERT**

Inflow Area = 25.797 ac, 1.16% Impervious, Inflow Depth = 0.13" for 1-year event  
 Inflow = 0.82 cfs @ 12.36 hrs, Volume= 0.271 af  
 Outflow = 0.82 cfs @ 12.36 hrs, Volume= 0.271 af, Atten= 0%, Lag= 0.4 min  
 Primary = 0.82 cfs @ 12.36 hrs, Volume= 0.271 af  
 Routed to Reach 33R :  
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af  
 Routed to Reach 33R :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 580.48' @ 12.36 hrs Surf.Area= 67 sf Storage= 12 cf

Plug-Flow detention time= 0.2 min calculated for 0.271 af (100% of inflow)  
 Center-of-Mass det. time= 0.2 min ( 998.2 - 998.1 )

Volume	Invert	Avail.Storage	Storage Description			
#1	580.00'	32,769 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
580.00	1	5.0	0	0	1	
582.00	935	220.0	644	644	3,857	
584.00	6,900	505.0	6,917	7,561	20,316	
585.00	12,860	515.0	9,727	17,288	21,274	
586.00	18,260	645.0	15,481	32,769	33,289	

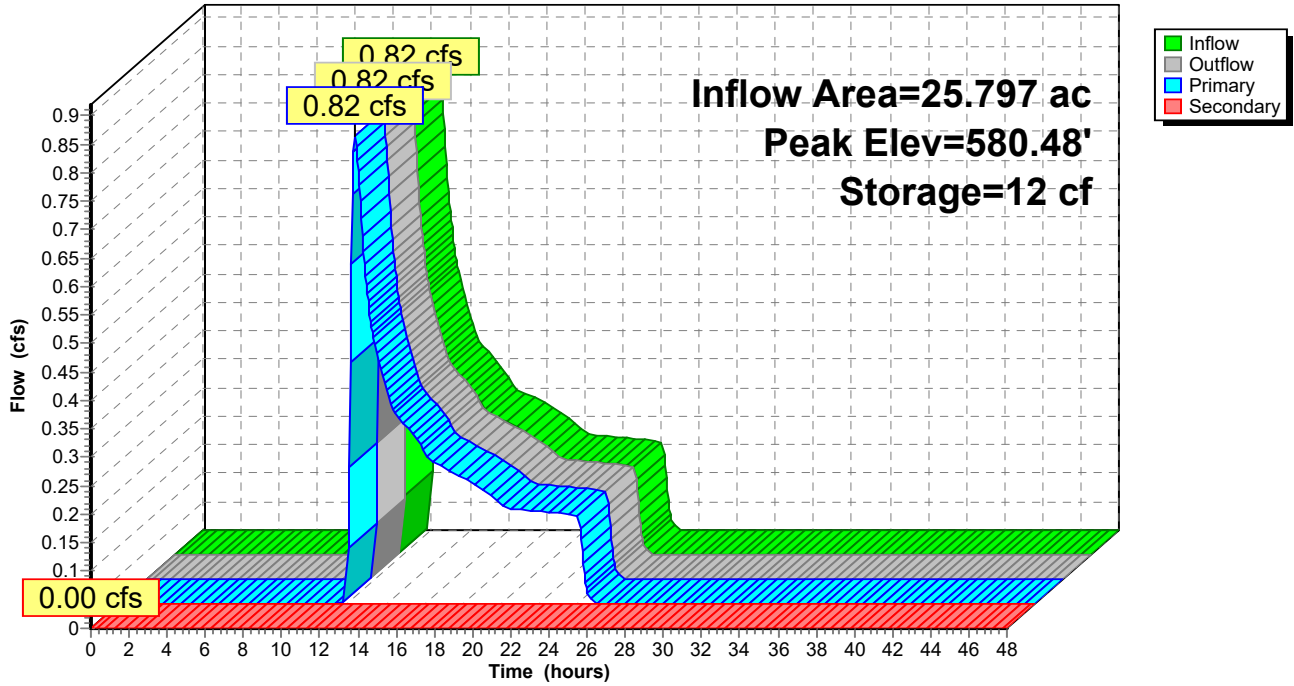
Device	Routing	Invert	Outlet Devices
#1	Primary	580.00'	<b>15.0" Round Culvert</b> L= 79.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 580.00' / 578.00' S= 0.0253 ' /' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Secondary	585.00'	<b>15.0' long + 3.0 ' /' SideZ x 25.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

**Primary OutFlow** Max=0.82 cfs @ 12.36 hrs HW=580.48' (Free Discharge)  
 ↑1=Culvert (Inlet Controls 0.82 cfs @ 1.87 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=580.00' (Free Discharge)  
 ↑2=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)

### Pond 34P: VAN EPPS RD CULVERT

Hydrograph



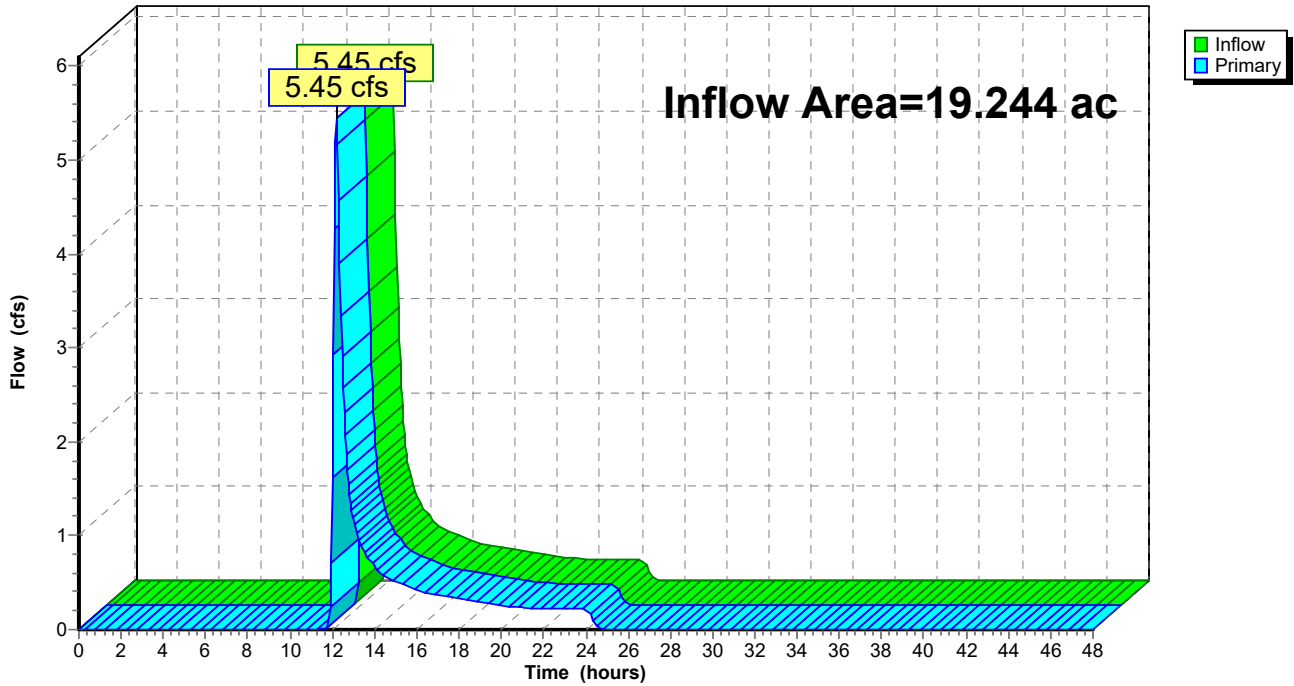
### Summary for Link SP25:

Inflow Area = 19.244 ac, 0.52% Impervious, Inflow Depth = 0.37" for 1-year event  
Inflow = 5.45 cfs @ 12.20 hrs, Volume= 0.589 af  
Primary = 5.45 cfs @ 12.20 hrs, Volume= 0.589 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP25:

Hydrograph



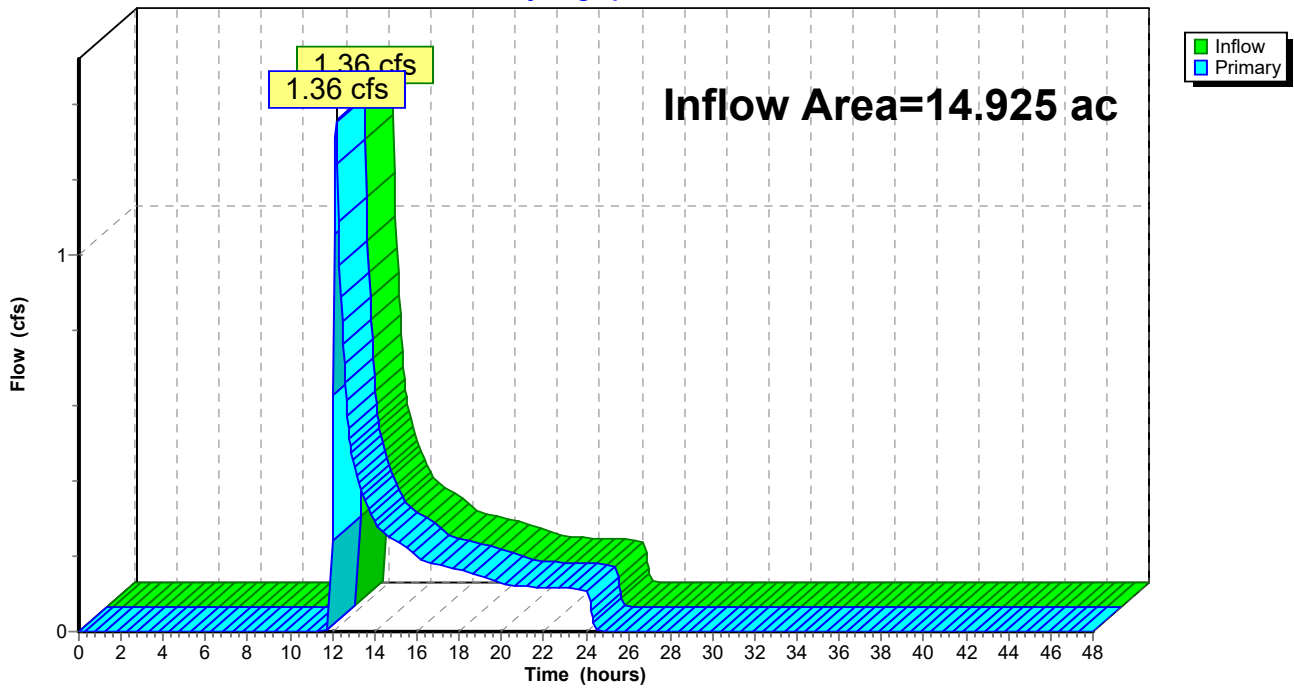
Summary for Link SP26:

Inflow Area = 14.925 ac, 4.50% Impervious, Inflow Depth = 0.18" for 1-year event  
Inflow = 1.36 cfs @ 12.19 hrs, Volume= 0.229 af  
Primary = 1.36 cfs @ 12.19 hrs, Volume= 0.229 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP26:

Hydrograph



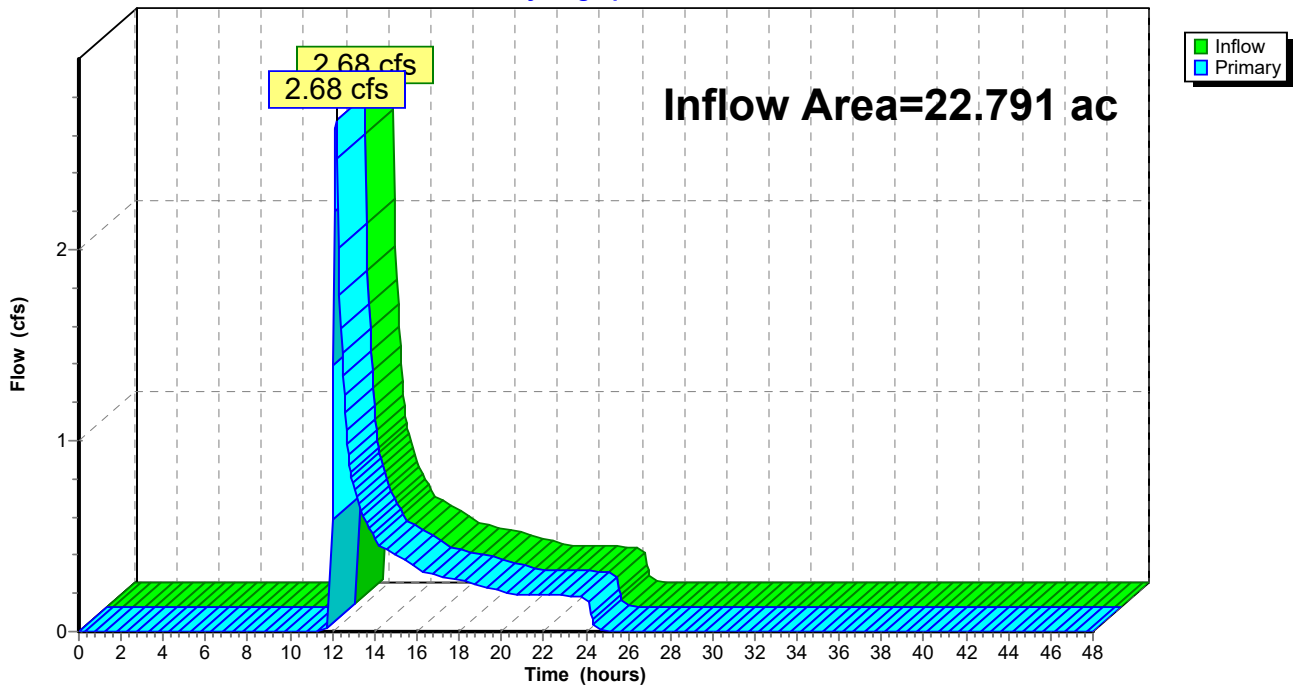
Summary for Link SP27:

Inflow Area = 22.791 ac, 1.95% Impervious, Inflow Depth = 0.21" for 1-year event  
Inflow = 2.68 cfs @ 12.17 hrs, Volume= 0.392 af  
Primary = 2.68 cfs @ 12.17 hrs, Volume= 0.392 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP27:

Hydrograph





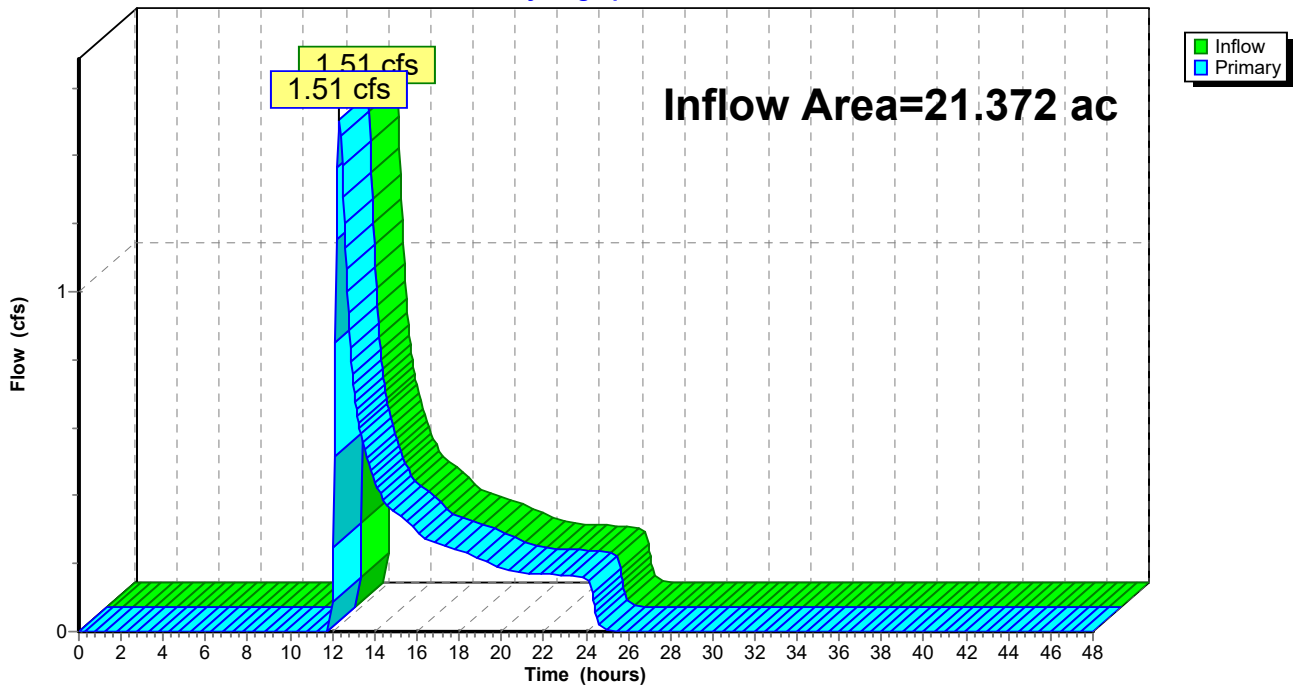
### Summary for Link SP28:

Inflow Area = 21.372 ac, 0.53% Impervious, Inflow Depth = 0.18" for 1-year event  
Inflow = 1.51 cfs @ 12.34 hrs, Volume= 0.329 af  
Primary = 1.51 cfs @ 12.34 hrs, Volume= 0.329 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP28:

Hydrograph



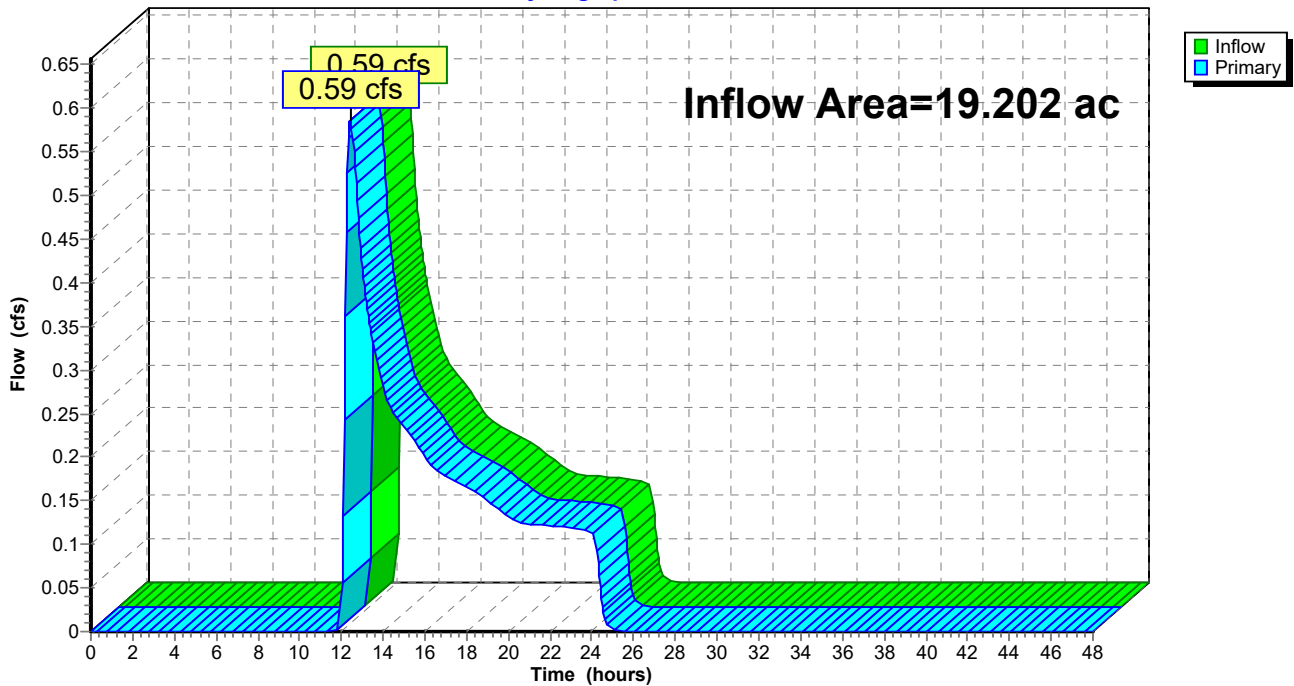
Summary for Link SP29:

Inflow Area = 19.202 ac, 1.21% Impervious, Inflow Depth = 0.13" for 1-year event  
Inflow = 0.59 cfs @ 12.42 hrs, Volume= 0.202 af  
Primary = 0.59 cfs @ 12.42 hrs, Volume= 0.202 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP29:

Hydrograph



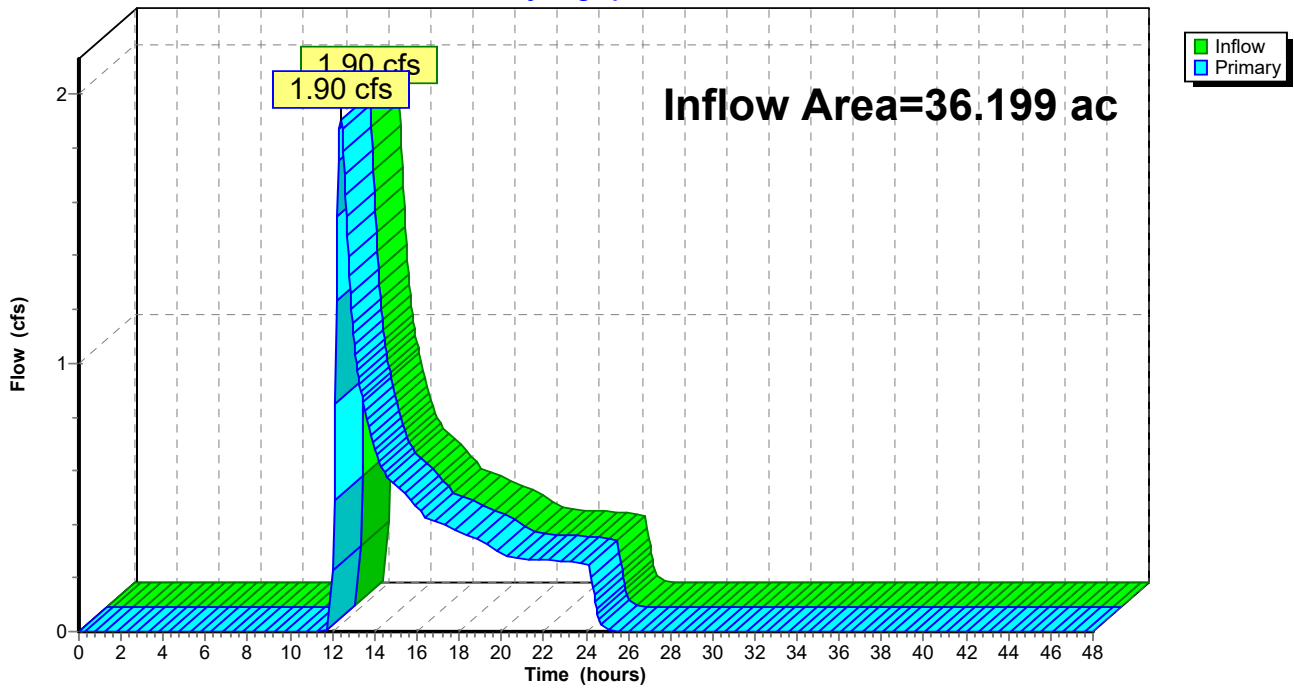
### Summary for Link SP30:

Inflow Area = 36.199 ac, 1.23% Impervious, Inflow Depth = 0.16" for 1-year event  
Inflow = 1.90 cfs @ 12.40 hrs, Volume= 0.494 af  
Primary = 1.90 cfs @ 12.40 hrs, Volume= 0.494 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP30:

Hydrograph



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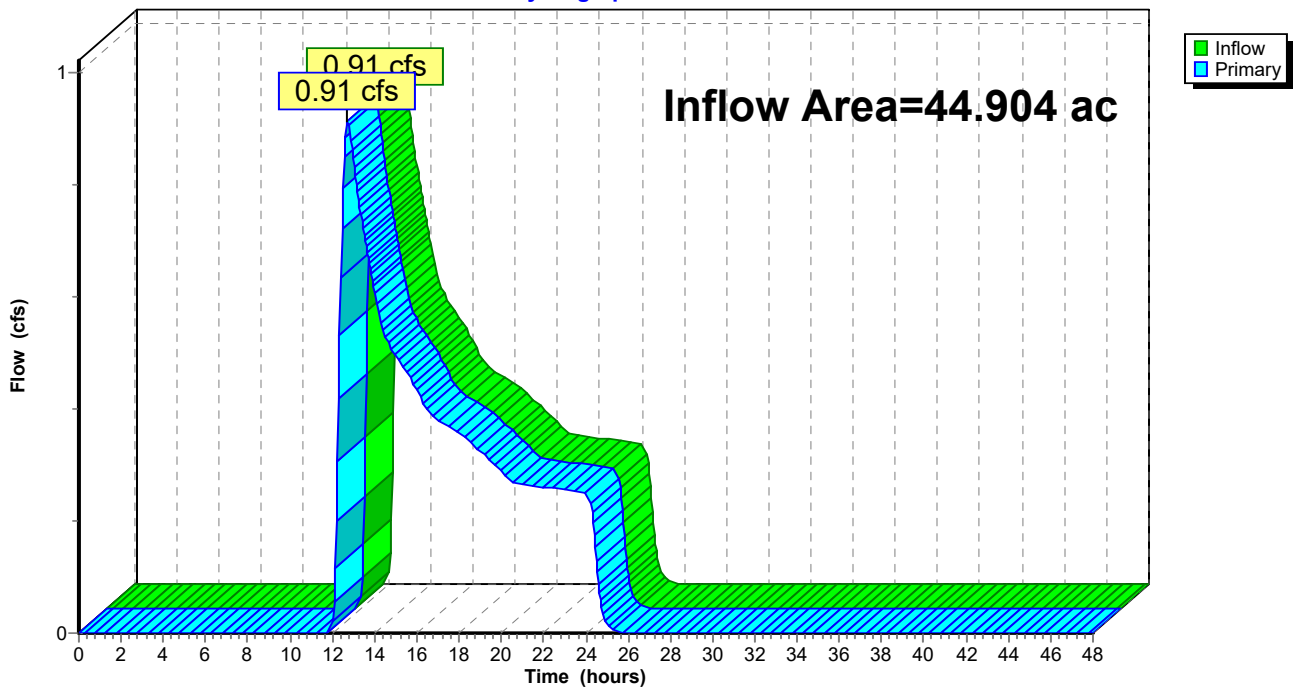
**Summary for Link SP32:**

Inflow Area = 44.904 ac, 6.23% Impervious, Inflow Depth = 0.11" for 1-year event  
Inflow = 0.91 cfs @ 12.72 hrs, Volume= 0.408 af  
Primary = 0.91 cfs @ 12.72 hrs, Volume= 0.408 af, Atten= 0%, Lag= 0.0 min  
Routed to Link SP34 : SP31

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

**Link SP32:**

Hydrograph



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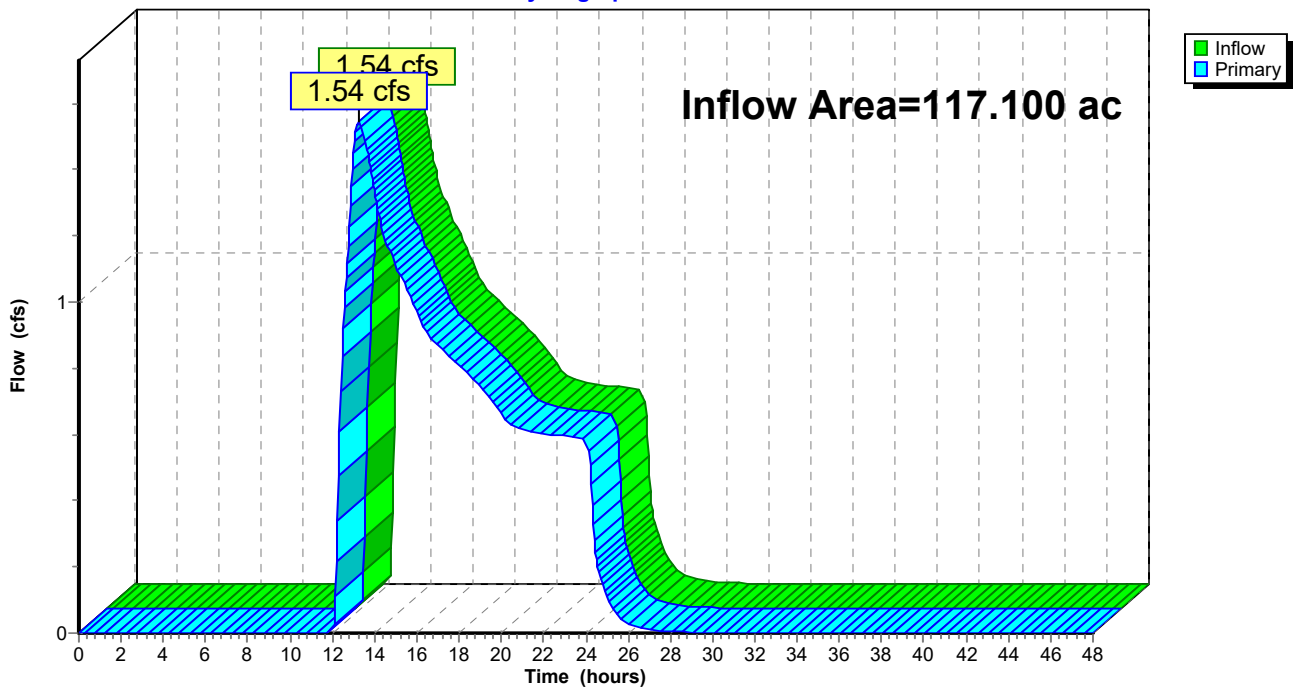
**Summary for Link SP33:**

Inflow Area = 117.100 ac, 0.78% Impervious, Inflow Depth = 0.09" for 1-year event  
Inflow = 1.54 cfs @ 13.25 hrs, Volume= 0.870 af  
Primary = 1.54 cfs @ 13.25 hrs, Volume= 0.870 af, Atten= 0%, Lag= 0.0 min  
Routed to Link SP34 : SP31

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

**Link SP33:**

Hydrograph



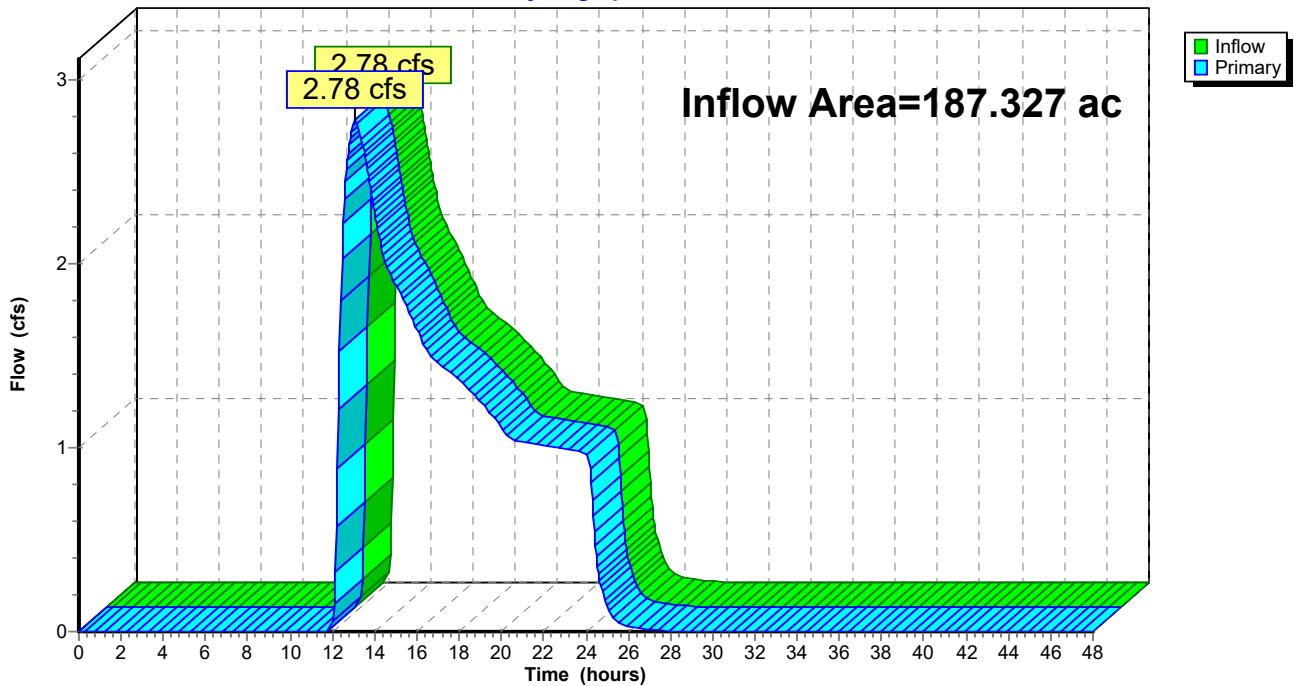
### Summary for Link SP34: SP31

Inflow Area = 187.327 ac, 1.98% Impervious, Inflow Depth = 0.10" for 1-year event  
Inflow = 2.78 cfs @ 13.09 hrs, Volume= 1.508 af  
Primary = 2.78 cfs @ 13.09 hrs, Volume= 1.508 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP34: SP31

Hydrograph



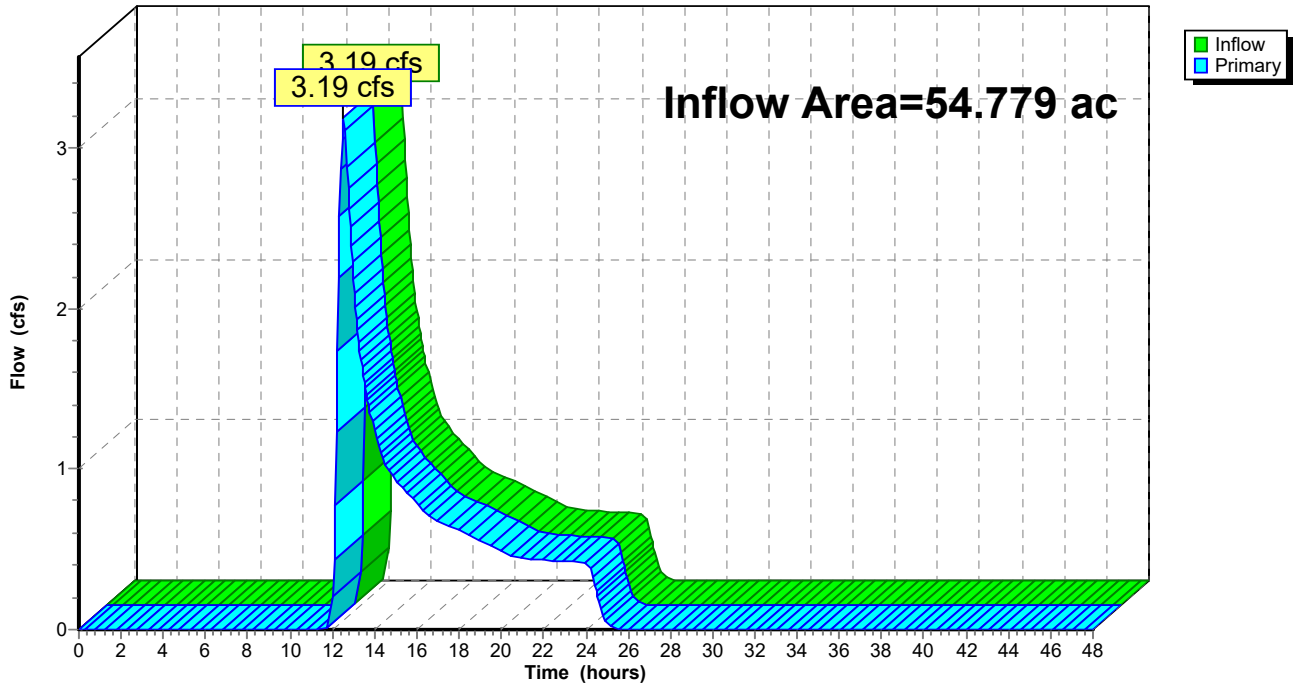
### Summary for Link SP35:

Inflow Area = 54.779 ac, 2.01% Impervious, Inflow Depth = 0.18" for 1-year event  
Inflow = 3.19 cfs @ 12.54 hrs, Volume= 0.842 af  
Primary = 3.19 cfs @ 12.54 hrs, Volume= 0.842 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP35:

Hydrograph



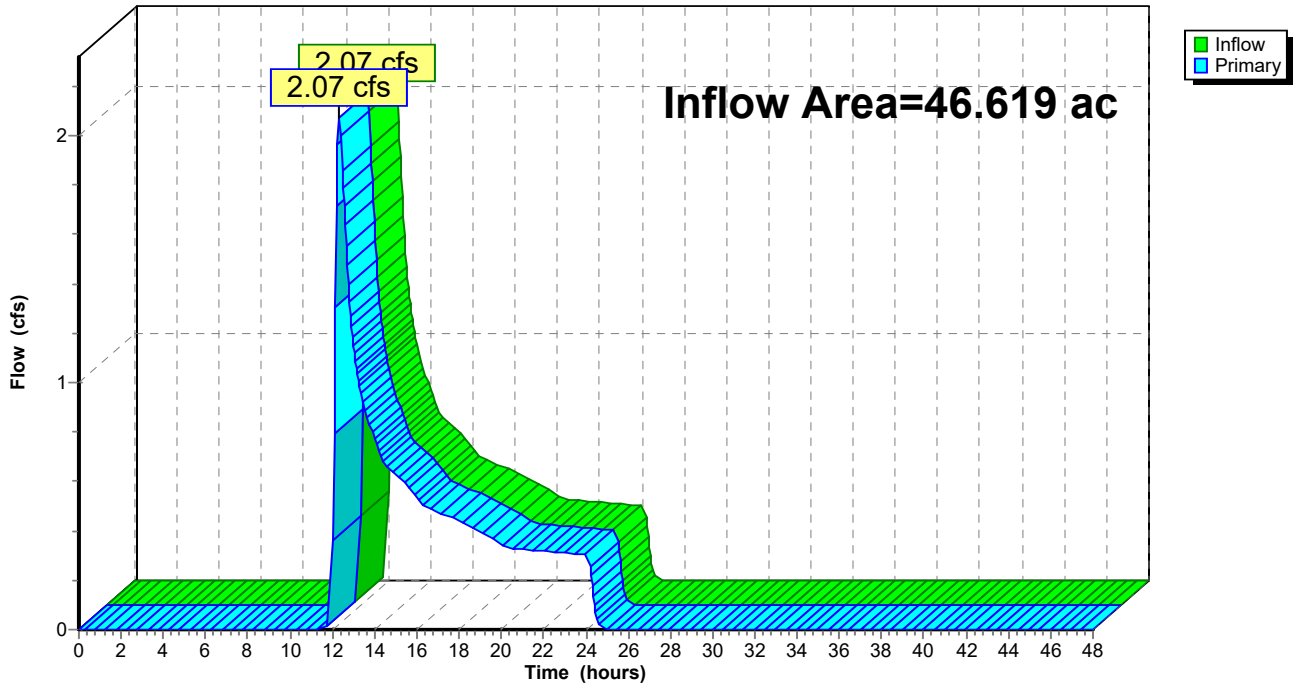
### Summary for Link SP36:

Inflow Area = 46.619 ac, 1.12% Impervious, Inflow Depth = 0.14" for 1-year event  
Inflow = 2.07 cfs @ 12.32 hrs, Volume= 0.560 af  
Primary = 2.07 cfs @ 12.32 hrs, Volume= 0.560 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP36:

Hydrograph





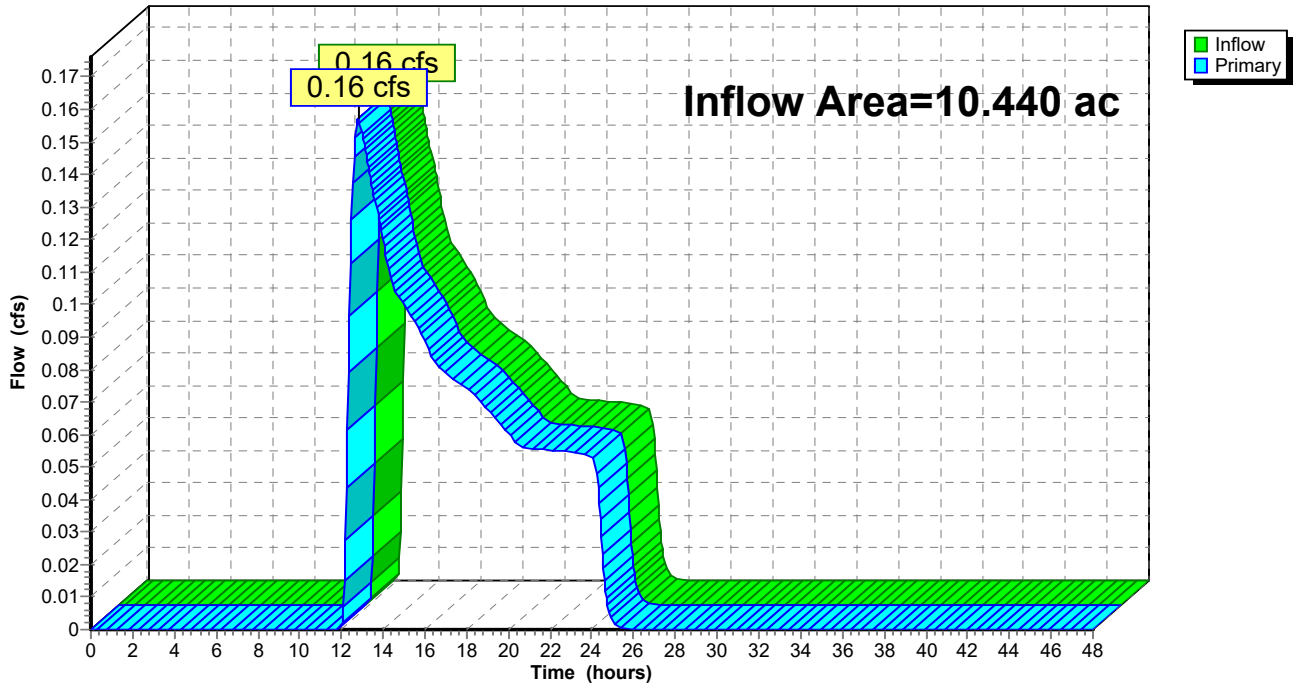
### Summary for Link SP37:

Inflow Area = 10.440 ac, 5.80% Impervious, Inflow Depth = 0.09" for 1-year event  
Inflow = 0.16 cfs @ 12.80 hrs, Volume= 0.081 af  
Primary = 0.16 cfs @ 12.80 hrs, Volume= 0.081 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP37:

Hydrograph



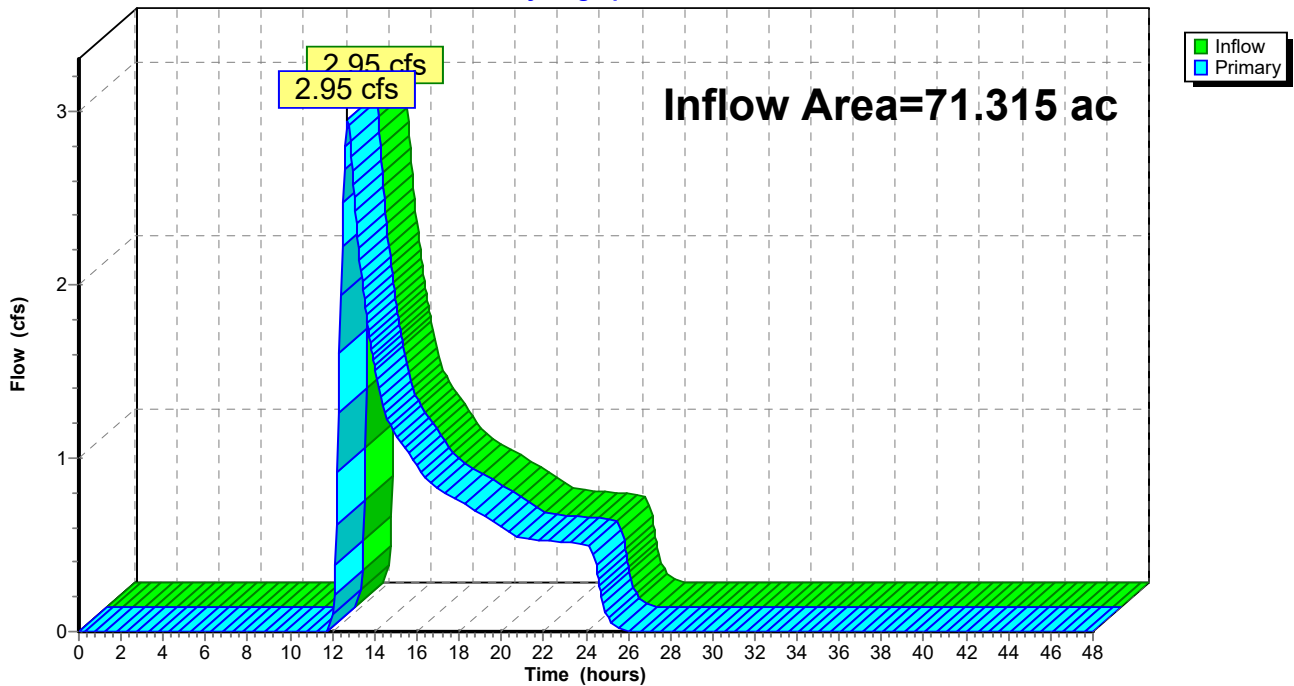
### Summary for Link SP38:

Inflow Area = 71.315 ac, 1.82% Impervious, Inflow Depth = 0.16" for 1-year event  
Inflow = 2.95 cfs @ 12.72 hrs, Volume= 0.973 af  
Primary = 2.95 cfs @ 12.72 hrs, Volume= 0.973 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP38:

Hydrograph



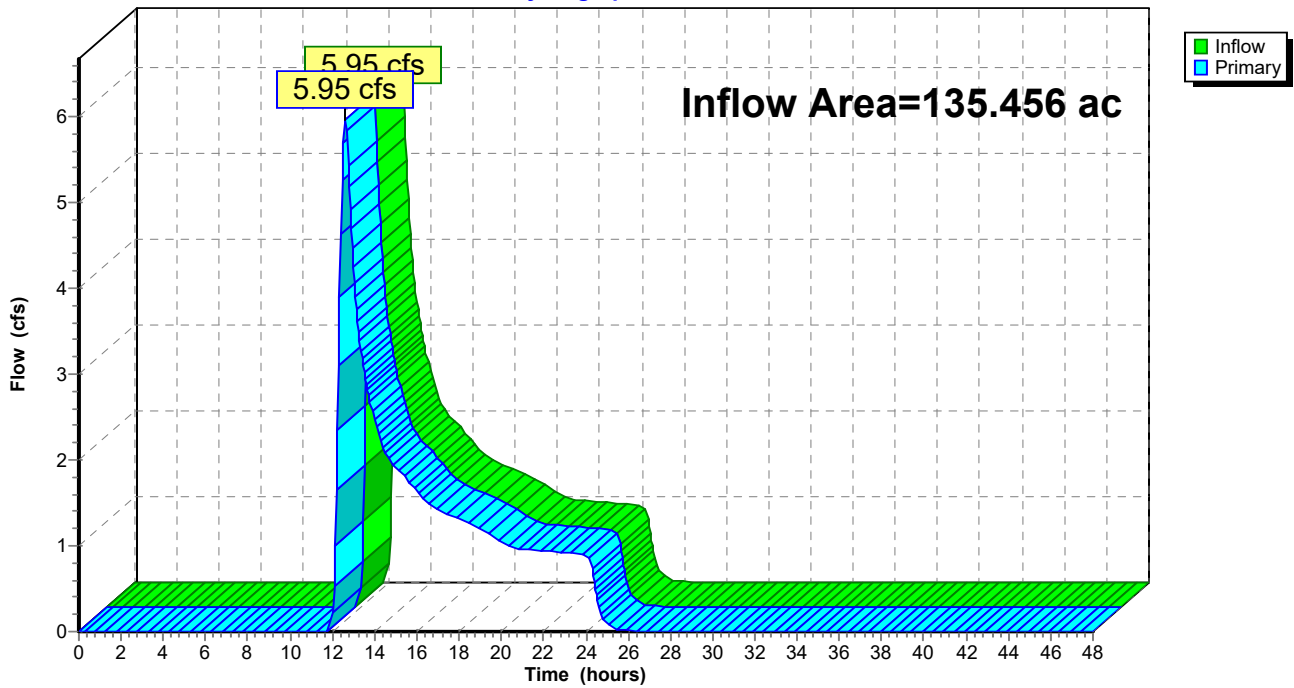
### Summary for Link SP39:

Inflow Area = 135.456 ac, 3.35% Impervious, Inflow Depth = 0.15" for 1-year event  
Inflow = 5.95 cfs @ 12.59 hrs, Volume= 1.691 af  
Primary = 5.95 cfs @ 12.59 hrs, Volume= 1.691 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP39:

Hydrograph



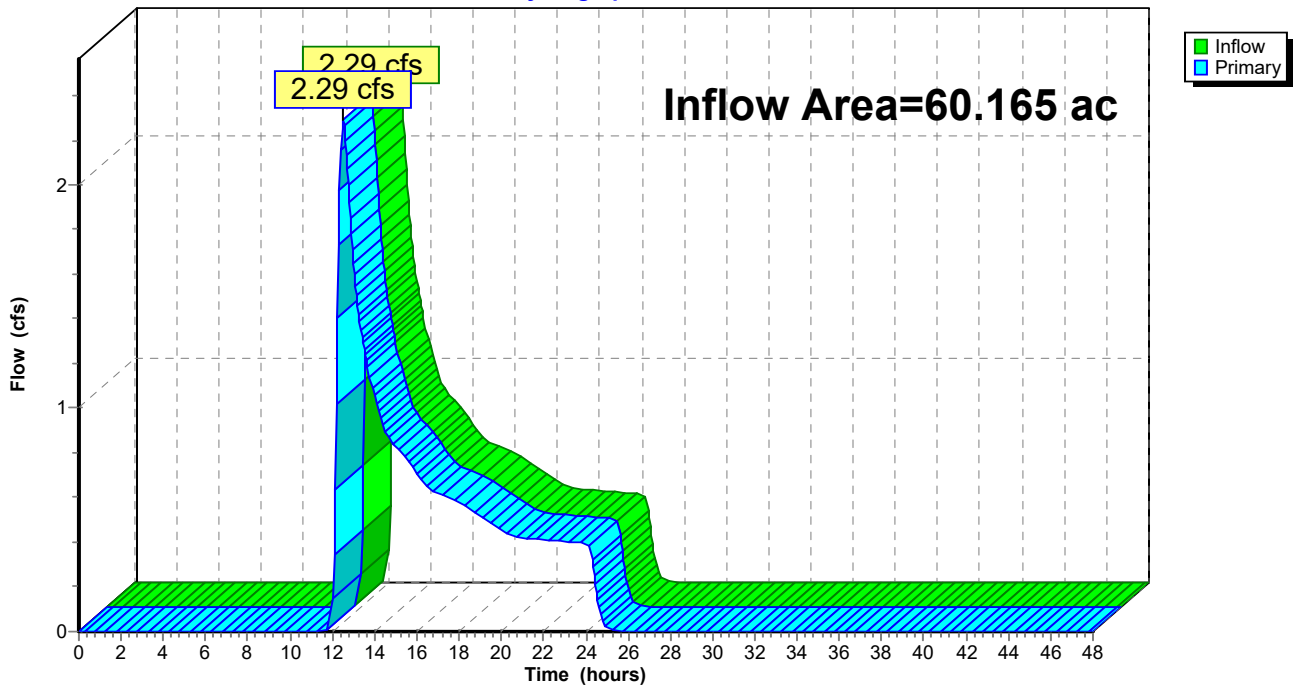
### Summary for Link SP41:

Inflow Area = 60.165 ac, 2.55% Impervious, Inflow Depth = 0.14" for 1-year event  
Inflow = 2.29 cfs @ 12.51 hrs, Volume= 0.723 af  
Primary = 2.29 cfs @ 12.51 hrs, Volume= 0.723 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP41:

Hydrograph



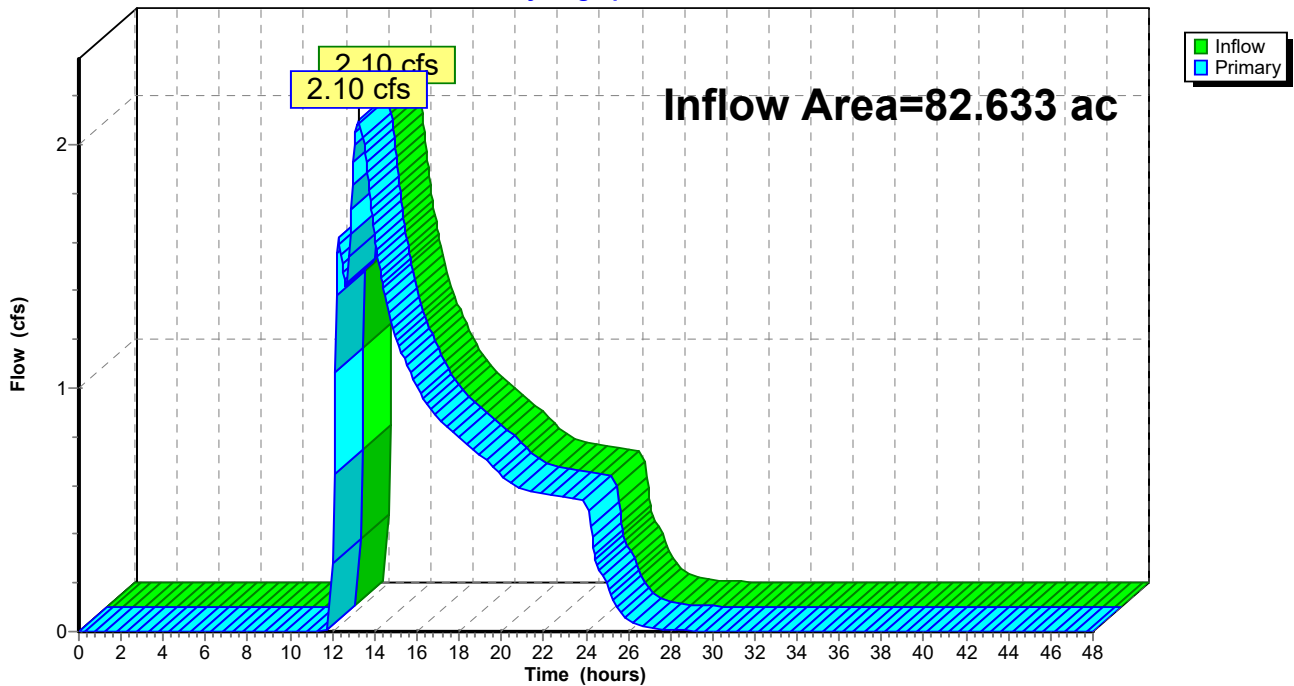
### Summary for Link SP42:

Inflow Area = 82.633 ac, 3.01% Impervious, Inflow Depth = 0.14" for 1-year event  
Inflow = 2.10 cfs @ 13.24 hrs, Volume= 0.974 af  
Primary = 2.10 cfs @ 13.24 hrs, Volume= 0.974 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP42:

Hydrograph



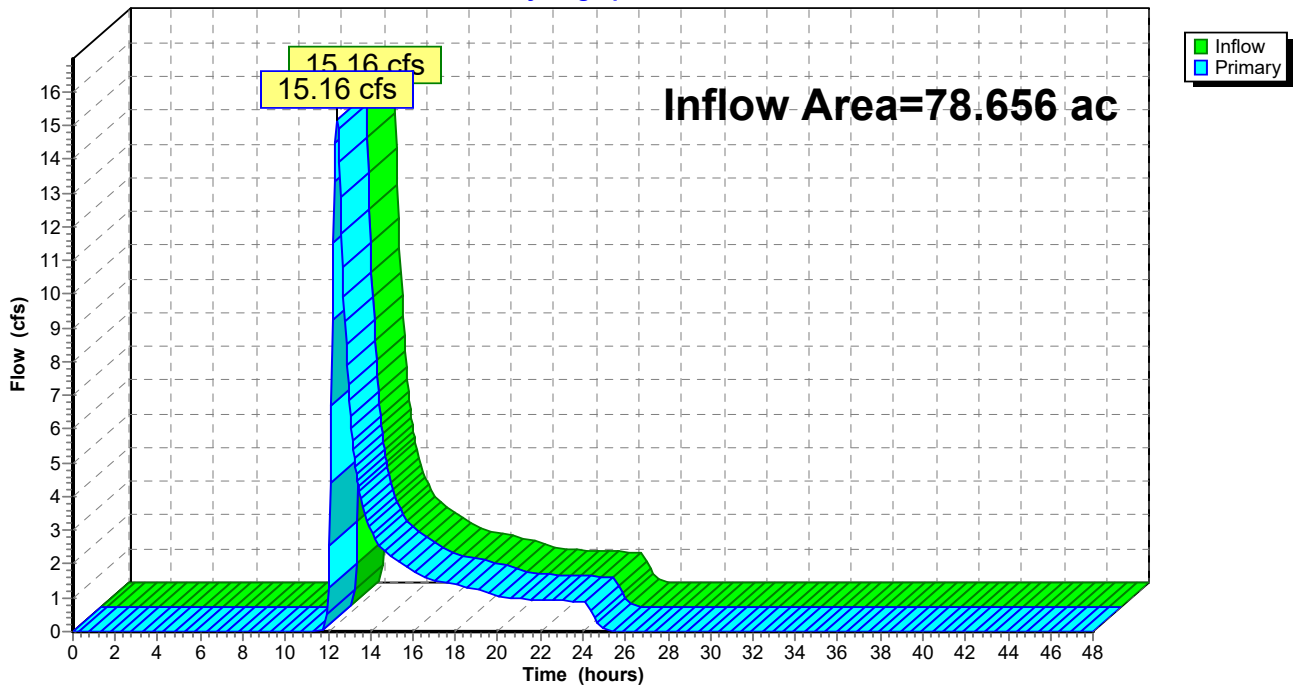
### Summary for Link SP48:

Inflow Area = 78.656 ac, 2.88% Impervious, Inflow Depth = 0.37" for 1-year event  
Inflow = 15.16 cfs @ 12.42 hrs, Volume= 2.406 af  
Primary = 15.16 cfs @ 12.42 hrs, Volume= 2.406 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP48:

Hydrograph



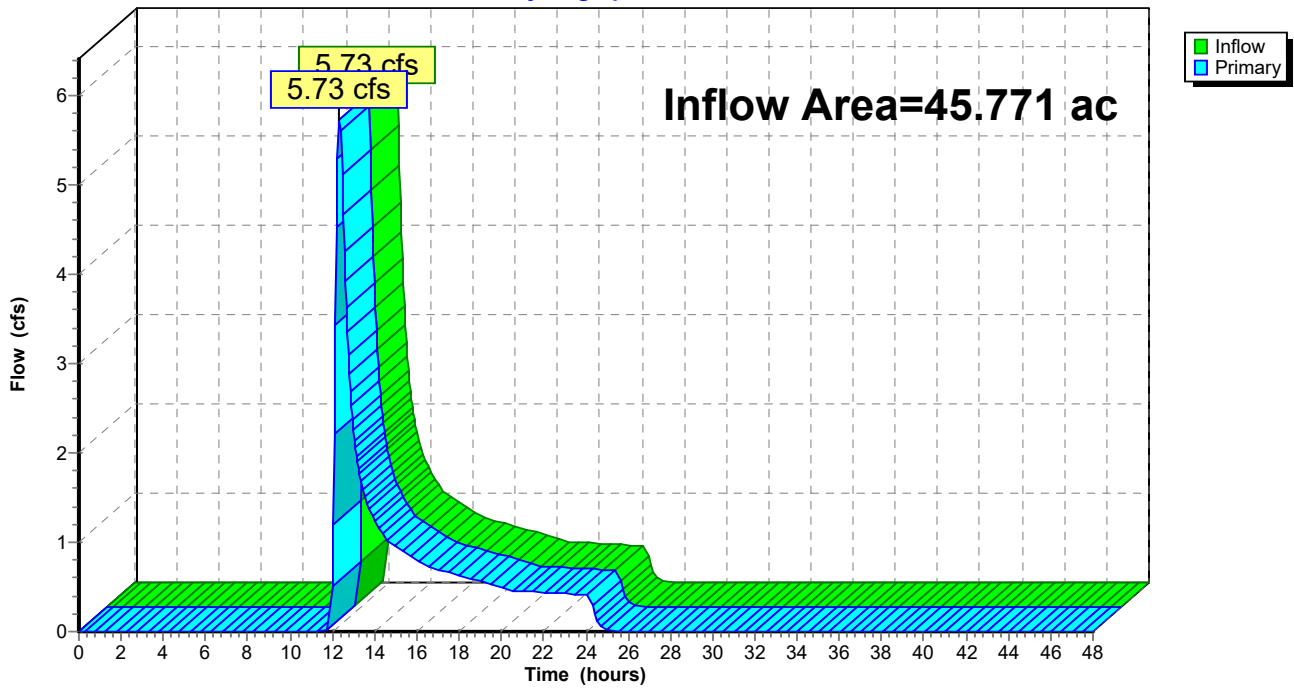
Summary for Link SP50:

Inflow Area = 45.771 ac, 1.25% Impervious, Inflow Depth = 0.25" for 1-year event  
Inflow = 5.73 cfs @ 12.33 hrs, Volume= 0.970 af  
Primary = 5.73 cfs @ 12.33 hrs, Volume= 0.970 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP50:

Hydrograph



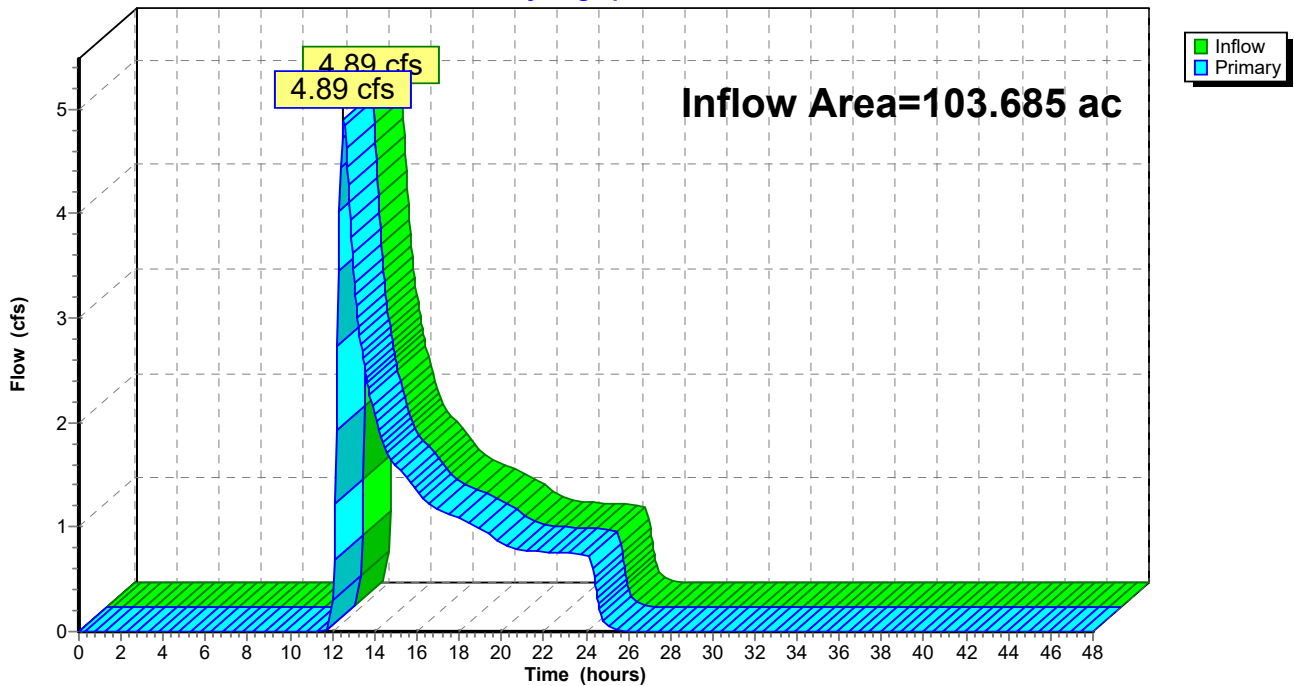
### Summary for Link SP51:

Inflow Area = 103.685 ac, 1.03% Impervious, Inflow Depth = 0.16" for 1-year event  
Inflow = 4.89 cfs @ 12.54 hrs, Volume= 1.415 af  
Primary = 4.89 cfs @ 12.54 hrs, Volume= 1.415 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP51:

Hydrograph





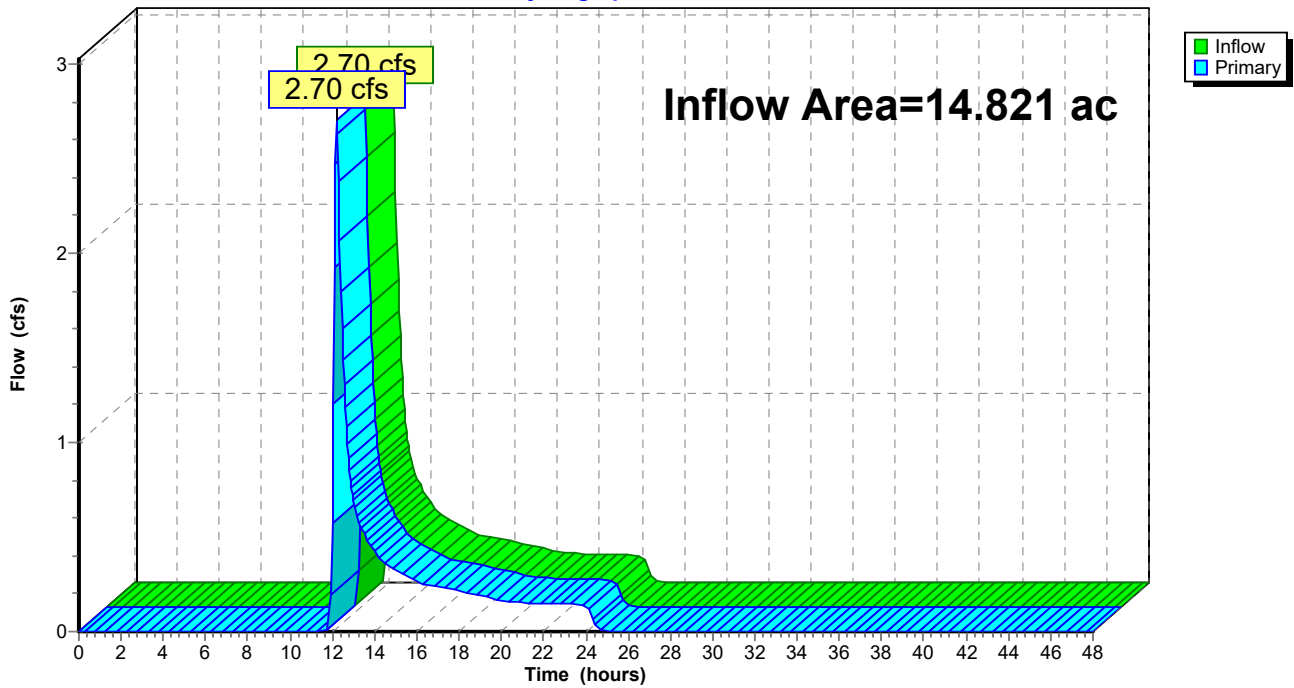
Summary for Link SP52:

Inflow Area = 14.821 ac, 2.79% Impervious, Inflow Depth = 0.28" for 1-year event  
Inflow = 2.70 cfs @ 12.21 hrs, Volume= 0.346 af  
Primary = 2.70 cfs @ 12.21 hrs, Volume= 0.346 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP52:

Hydrograph



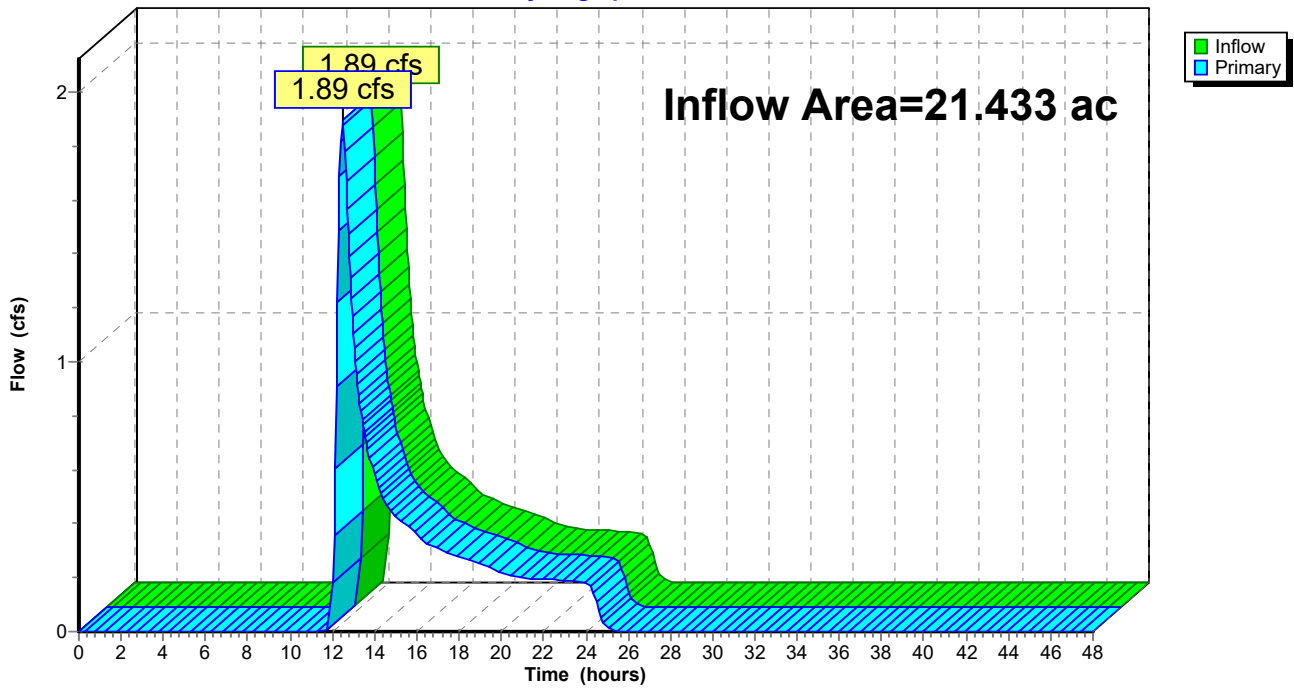
### Summary for Link SP53:

Inflow Area = 21.433 ac, 1.80% Impervious, Inflow Depth = 0.23" for 1-year event  
Inflow = 1.89 cfs @ 12.48 hrs, Volume= 0.410 af  
Primary = 1.89 cfs @ 12.48 hrs, Volume= 0.410 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP53:

Hydrograph



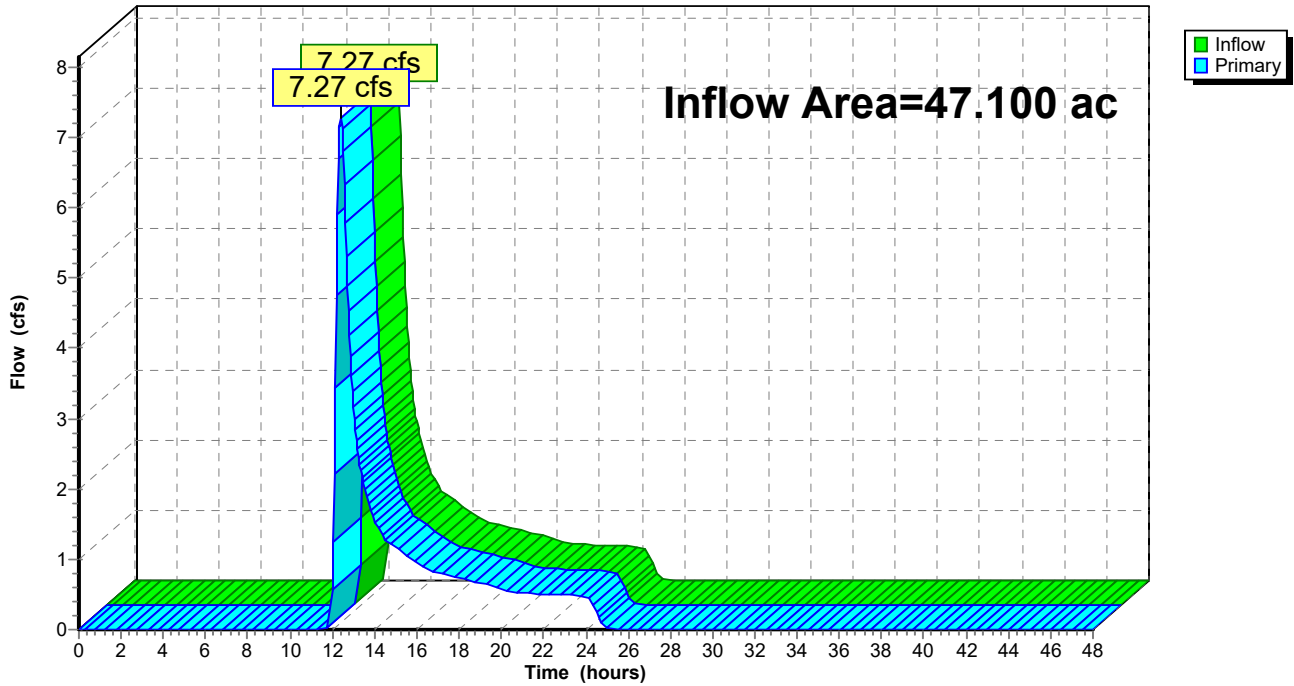
### Summary for Link SP54:

Inflow Area = 47.100 ac, 7.69% Impervious, Inflow Depth = 0.31" for 1-year event  
Inflow = 7.27 cfs @ 12.40 hrs, Volume= 1.208 af  
Primary = 7.27 cfs @ 12.40 hrs, Volume= 1.208 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP54:

Hydrograph



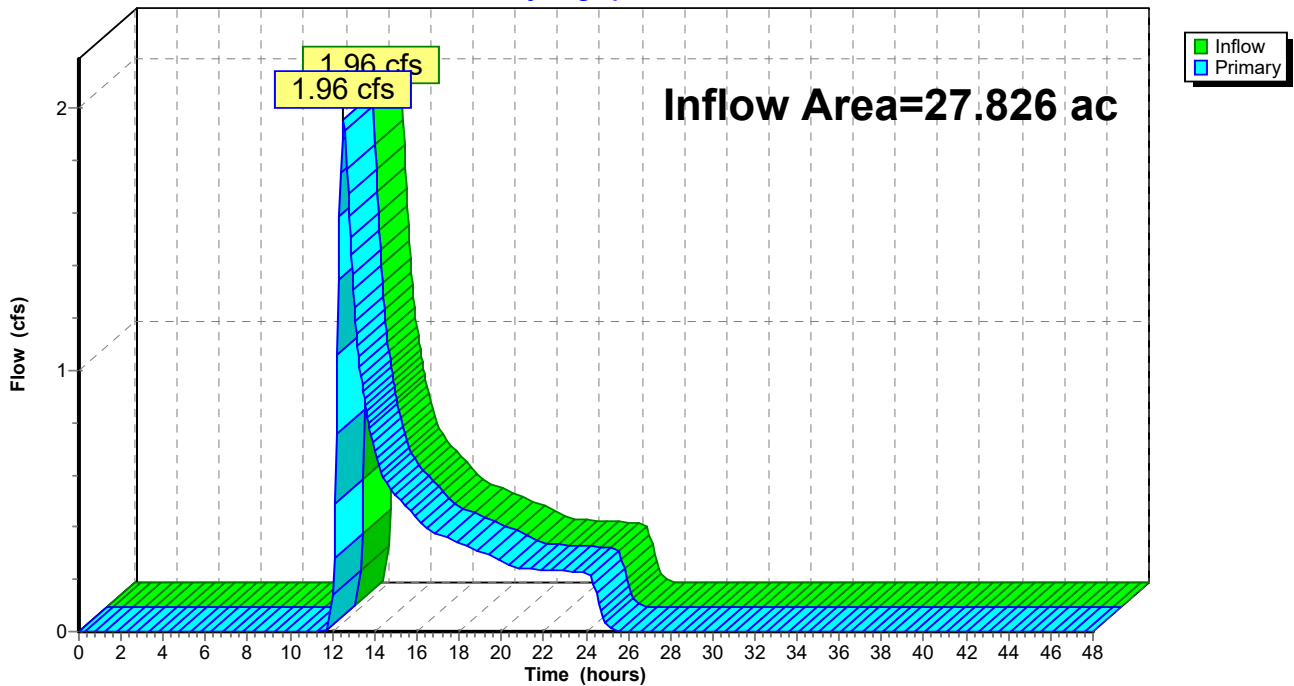
### Summary for Link SP55:

Inflow Area = 27.826 ac, 0.99% Impervious, Inflow Depth = 0.21" for 1-year event  
Inflow = 1.96 cfs @ 12.54 hrs, Volume= 0.479 af  
Primary = 1.96 cfs @ 12.54 hrs, Volume= 0.479 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP55:

Hydrograph



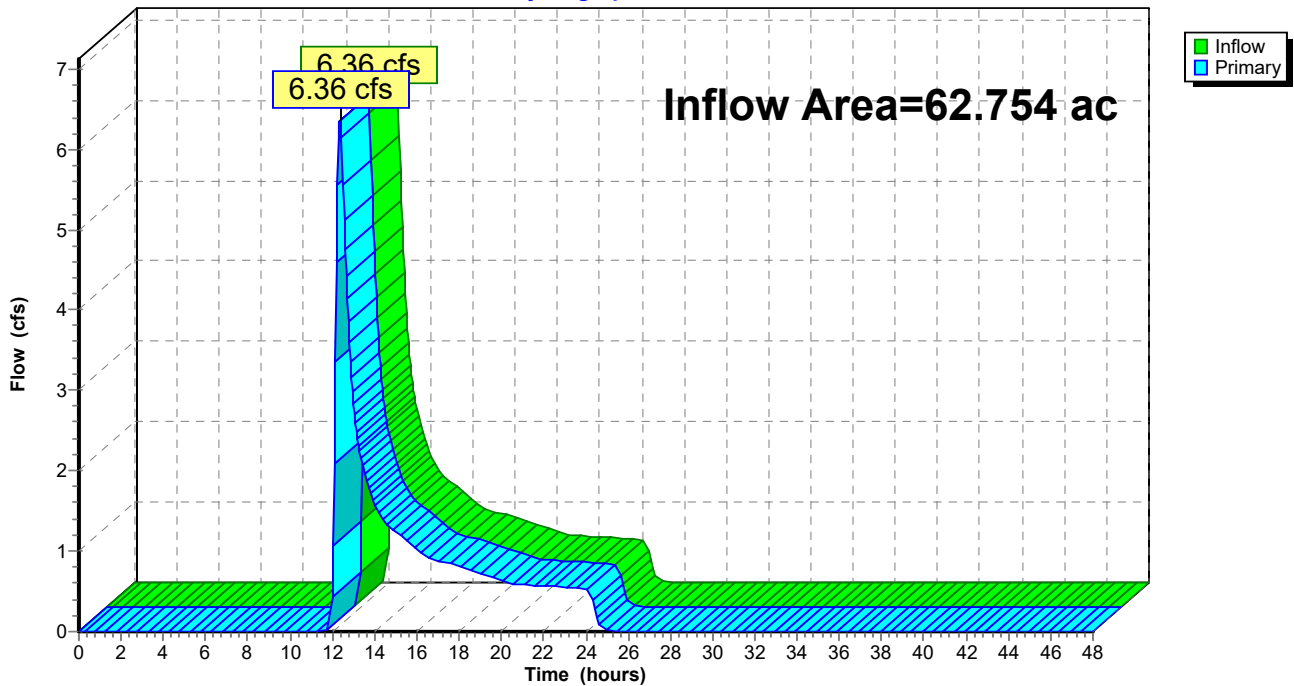
### Summary for Link SP56:

Inflow Area = 62.754 ac, 0.00% Impervious, Inflow Depth = 0.23" for 1-year event  
Inflow = 6.36 cfs @ 12.36 hrs, Volume= 1.202 af  
Primary = 6.36 cfs @ 12.36 hrs, Volume= 1.202 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP56:

Hydrograph



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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

<b>Subcatchment 25S: Sub 25</b>	Runoff Area=19.244 ac 0.52% Impervious Runoff Depth=1.12" Flow Length=1,103' Tc=22.2 min CN=72 Runoff=21.20 cfs 1.798 af
<b>Subcatchment 26S: Sub 26</b>	Runoff Area=14.925 ac 4.50% Impervious Runoff Depth=0.75" Flow Length=1,324' Tc=18.0 min CN=65 Runoff=11.13 cfs 0.935 af
<b>Subcatchment 27S: Sub 27</b>	Runoff Area=22.791 ac 1.95% Impervious Runoff Depth=0.80" Flow Length=1,602' Tc=17.8 min CN=66 Runoff=18.63 cfs 1.520 af
<b>Subcatchment 28S: Sub 28</b>	Runoff Area=21.372 ac 0.53% Impervious Runoff Depth=0.75" Flow Length=1,727' Tc=27.4 min CN=65 Runoff=12.05 cfs 1.339 af
<b>Subcatchment 29S: Sub 29</b>	Runoff Area=19.202 ac 1.21% Impervious Runoff Depth=0.62" Flow Length=1,648' Tc=26.3 min CN=62 Runoff=8.27 cfs 0.985 af
<b>Subcatchment 30S: Sub 30</b>	Runoff Area=36.199 ac 1.23% Impervious Runoff Depth=0.71" Flow Length=2,217' Tc=29.3 min CN=64 Runoff=17.68 cfs 2.127 af
<b>Subcatchment 31S: Sub 31</b>	Runoff Area=25.323 ac 0.00% Impervious Runoff Depth=0.57" Flow Length=2,409' Tc=31.8 min CN=61 Runoff=8.50 cfs 1.209 af
<b>Subcatchment 32S: Sub 32</b>	Runoff Area=44.904 ac 6.23% Impervious Runoff Depth=0.57" Flow Length=3,284' Tc=36.1 min CN=61 Runoff=13.78 cfs 2.143 af
<b>Subcatchment 33S: Sub 33</b>	Runoff Area=91.303 ac 0.68% Impervious Runoff Depth=0.49" Flow Length=1,749' Tc=22.2 min CN=59 Runoff=30.81 cfs 3.740 af
<b>Subcatchment 34S: Sub 34</b>	Runoff Area=25.797 ac 1.16% Impervious Runoff Depth=0.62" Flow Length=1,344' Tc=23.4 min CN=62 Runoff=12.06 cfs 1.323 af
<b>Subcatchment 35S: Sub 35</b>	Runoff Area=54.779 ac 2.01% Impervious Runoff Depth=0.75" Flow Length=3,022' Tc=38.7 min CN=65 Runoff=24.07 cfs 3.433 af
<b>Subcatchment 36S: Sub 36</b>	Runoff Area=46.619 ac 1.12% Impervious Runoff Depth=0.66" Flow Length=1,996' Tc=23.3 min CN=63 Runoff=24.27 cfs 2.562 af
<b>Subcatchment 37S: Sub 37</b>	Runoff Area=10.440 ac 5.80% Impervious Runoff Depth=0.53" Flow Length=1,926' Tc=33.1 min CN=60 Runoff=3.02 cfs 0.462 af
<b>Subcatchment 38S: Sub 38</b>	Runoff Area=71.315 ac 1.82% Impervious Runoff Depth=0.71" Flow Length=3,404' Tc=47.6 min CN=64 Runoff=24.59 cfs 4.190 af
<b>Subcatchment 39S: Sub 39</b>	Runoff Area=114.576 ac 2.51% Impervious Runoff Depth=0.62" Flow Length=2,852' Tc=30.0 min CN=62 Runoff=44.91 cfs 5.877 af
<b>Subcatchment 40S: Sub 40</b>	Runoff Area=20.880 ac 7.94% Impervious Runoff Depth=0.95" Flow Length=1,917' Tc=28.9 min CN=69 Runoff=15.72 cfs 1.660 af

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<b>Subcatchment41S: Sub 41</b>	Runoff Area=60.165 ac 2.55% Impervious Runoff Depth=0.66" Flow Length=2,626' Tc=33.1 min CN=63 Runoff=24.38 cfs 3.307 af
<b>Subcatchment42S: Sub 42</b>	Runoff Area=48.981 ac 3.85% Impervious Runoff Depth=0.62" Flow Length=890' Tc=21.1 min CN=62 Runoff=24.51 cfs 2.512 af
<b>Subcatchment48S: Sub 48</b>	Runoff Area=78.656 ac 2.88% Impervious Runoff Depth=1.12" Flow Length=4,007' Tc=38.1 min CN=72 Runoff=59.86 cfs 7.347 af
<b>Subcatchment49S: Sub 49</b>	Runoff Area=33.652 ac 1.78% Impervious Runoff Depth=0.71" Flow Length=2,999' Tc=38.0 min CN=64 Runoff=13.64 cfs 1.977 af
<b>Subcatchment50S: Sub 50</b>	Runoff Area=45.771 ac 1.25% Impervious Runoff Depth=0.90" Flow Length=2,533' Tc=29.4 min CN=68 Runoff=31.56 cfs 3.438 af
<b>Subcatchment51S: Sub 51</b>	Runoff Area=103.685 ac 1.03% Impervious Runoff Depth=0.71" Flow Length=2,611' Tc=36.7 min CN=64 Runoff=43.05 cfs 6.092 af
<b>Subcatchment52S: Sub 52</b>	Runoff Area=14.821 ac 2.79% Impervious Runoff Depth=0.95" Flow Length=1,182' Tc=22.0 min CN=69 Runoff=13.42 cfs 1.178 af
<b>Subcatchment53S: Sub 53</b>	Runoff Area=21.433 ac 1.80% Impervious Runoff Depth=0.85" Flow Length=2,555' Tc=37.9 min CN=67 Runoff=11.37 cfs 1.518 af
<b>Subcatchment54S:</b>	Runoff Area=47.100 ac 7.69% Impervious Runoff Depth=1.01" Flow Length=3,136' Tc=35.0 min CN=70 Runoff=33.26 cfs 3.957 af
<b>Subcatchment55S: Sub 55</b>	Runoff Area=27.826 ac 0.99% Impervious Runoff Depth=0.80" Flow Length=2,284' Tc=40.2 min CN=66 Runoff=13.01 cfs 1.856 af
<b>Subcatchment56S: Sub 56</b>	Runoff Area=62.754 ac 0.00% Impervious Runoff Depth=0.85" Flow Length=2,363' Tc=30.5 min CN=67 Runoff=38.94 cfs 4.445 af
<b>Reach 33R:</b>	Avg. Flow Depth=0.84' Max Vel=2.37 fps Inflow=7.83 cfs 1.323 af n=0.100 L=1,875.0' S=0.0597 '/' Capacity=10.60 cfs Outflow=7.31 cfs 1.323 af
<b>Reach 39R:</b>	Avg. Flow Depth=0.87' Max Vel=3.19 fps Inflow=15.72 cfs 1.660 af n=0.100 L=1,110.0' S=0.0991 '/' Capacity=86.68 cfs Outflow=14.73 cfs 1.660 af
<b>Reach 42R: S-NSD-16</b>	Avg. Flow Depth=1.00' Max Vel=2.52 fps Inflow=13.64 cfs 1.977 af n=0.100 L=1,790.0' S=0.0531 '/' Capacity=51.95 cfs Outflow=11.83 cfs 1.977 af
<b>Pond 34P: VAN EPPS RD CULVERT</b>	Peak Elev=583.44' Storage=4,362 cf Inflow=12.06 cfs 1.323 af Primary=7.83 cfs 1.323 af Secondary=0.00 cfs 0.000 af Outflow=7.83 cfs 1.323 af
<b>Link SP25:</b>	Inflow=21.20 cfs 1.798 af Primary=21.20 cfs 1.798 af
<b>Link SP26:</b>	Inflow=11.13 cfs 0.935 af Primary=11.13 cfs 0.935 af
<b>Link SP27:</b>	Inflow=18.63 cfs 1.520 af Primary=18.63 cfs 1.520 af

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<b>Link SP28:</b>	Inflow=12.05 cfs 1.339 af Primary=12.05 cfs 1.339 af
<b>Link SP29:</b>	Inflow=8.27 cfs 0.985 af Primary=8.27 cfs 0.985 af
<b>Link SP30:</b>	Inflow=17.68 cfs 2.127 af Primary=17.68 cfs 2.127 af
<b>Link SP32:</b>	Inflow=13.78 cfs 2.143 af Primary=13.78 cfs 2.143 af
<b>Link SP33:</b>	Inflow=31.07 cfs 5.063 af Primary=31.07 cfs 5.063 af
<b>Link SP34: SP31</b>	Inflow=49.57 cfs 8.415 af Primary=49.57 cfs 8.415 af
<b>Link SP35:</b>	Inflow=24.07 cfs 3.433 af Primary=24.07 cfs 3.433 af
<b>Link SP36:</b>	Inflow=24.27 cfs 2.562 af Primary=24.27 cfs 2.562 af
<b>Link SP37:</b>	Inflow=3.02 cfs 0.462 af Primary=3.02 cfs 0.462 af
<b>Link SP38:</b>	Inflow=24.59 cfs 4.190 af Primary=24.59 cfs 4.190 af
<b>Link SP39:</b>	Inflow=57.34 cfs 7.536 af Primary=57.34 cfs 7.536 af
<b>Link SP41:</b>	Inflow=24.38 cfs 3.307 af Primary=24.38 cfs 3.307 af
<b>Link SP42:</b>	Inflow=24.60 cfs 4.489 af Primary=24.60 cfs 4.489 af
<b>Link SP48:</b>	Inflow=59.86 cfs 7.347 af Primary=59.86 cfs 7.347 af
<b>Link SP50:</b>	Inflow=31.56 cfs 3.438 af Primary=31.56 cfs 3.438 af
<b>Link SP51:</b>	Inflow=43.05 cfs 6.092 af Primary=43.05 cfs 6.092 af
<b>Link SP52:</b>	Inflow=13.42 cfs 1.178 af Primary=13.42 cfs 1.178 af



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**Link SP53:**

Inflow=11.37 cfs 1.518 af  
Primary=11.37 cfs 1.518 af

**Link SP54:**

Inflow=33.26 cfs 3.957 af  
Primary=33.26 cfs 3.957 af

**Link SP55:**

Inflow=13.01 cfs 1.856 af  
Primary=13.01 cfs 1.856 af

**Link SP56:**

Inflow=38.94 cfs 4.445 af  
Primary=38.94 cfs 4.445 af

**Total Runoff Area = 1,184.513 ac   Runoff Volume = 72.931 af   Average Runoff Depth = 0.74"**  
**97.77% Pervious = 1,158.116 ac   2.23% Impervious = 26.397 ac**

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**Summary for Subcatchment 25S: Sub 25**

Runoff = 21.20 cfs @ 12.17 hrs, Volume= 1.798 af, Depth= 1.12"  
 Routed to Link SP25 :

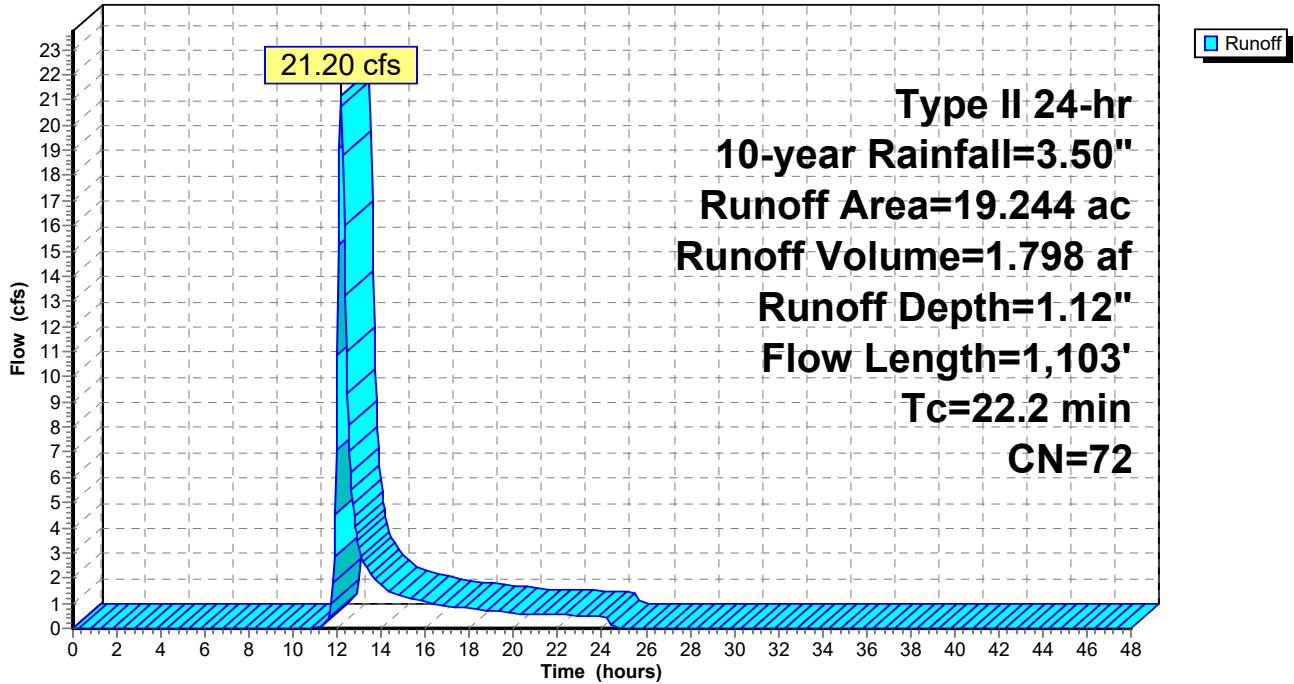
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 0.100	98	Impervious surface
0.475	74	>75% Grass cover, Good, HSG C
0.497	80	>75% Grass cover, Good, HSG D
0.785	58	Meadow, non-grazed, HSG B
13.183	71	Meadow, non-grazed, HSG C
3.694	78	Meadow, non-grazed, HSG D
0.050	48	Brush, Good, HSG B
0.274	71	Meadow, non-grazed, HSG C
0.186	73	Brush, Good, HSG D
19.244	72	Weighted Average
19.144		99.48% Pervious Area
0.100		0.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0430	0.20		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
11.3	717	0.0230	1.06		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.7	286		1.77		<b>Direct Entry, CF</b>
22.2	1,103	Total			

Subcatchment 25S: Sub 25

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 26S: Sub 26**

Runoff = 11.13 cfs @ 12.13 hrs, Volume= 0.935 af, Depth= 0.75"  
 Routed to Link SP26 :

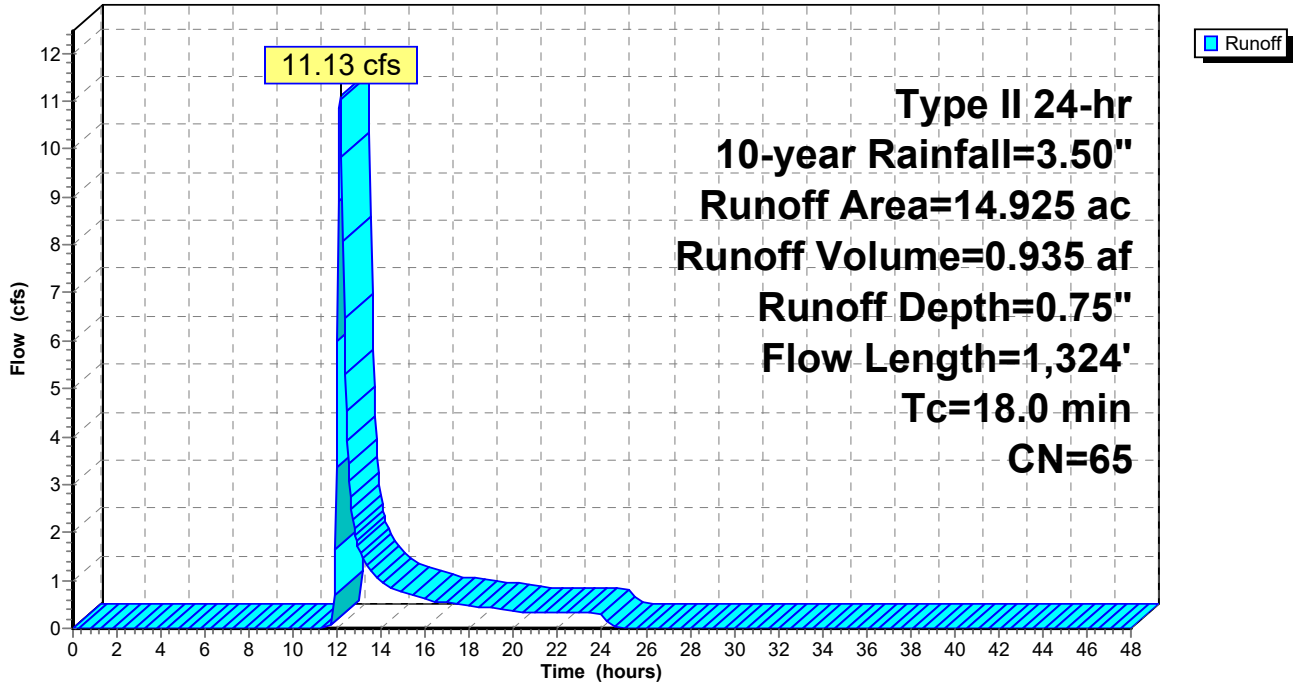
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 0.672	98	Impervious surface
* 0.189	96	Gravel surface
3.102	61	>75% Grass cover, Good, HSG B
0.965	74	>75% Grass cover, Good, HSG C
6.796	58	Meadow, non-grazed, HSG B
3.029	71	Meadow, non-grazed, HSG C
0.172	78	Meadow, non-grazed, HSG D
14.925	65	Weighted Average
14.253		95.50% Pervious Area
0.672		4.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.7	100	0.0280	0.17		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
2.2	340	0.1340	2.56		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.7	259	0.0540	1.63		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.4	625		3.06		<b>Direct Entry, CF</b>
18.0	1,324	Total			

Subcatchment 26S: Sub 26

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 27S: Sub 27**

Runoff = 18.63 cfs @ 12.13 hrs, Volume= 1.520 af, Depth= 0.80"  
 Routed to Link SP27 :

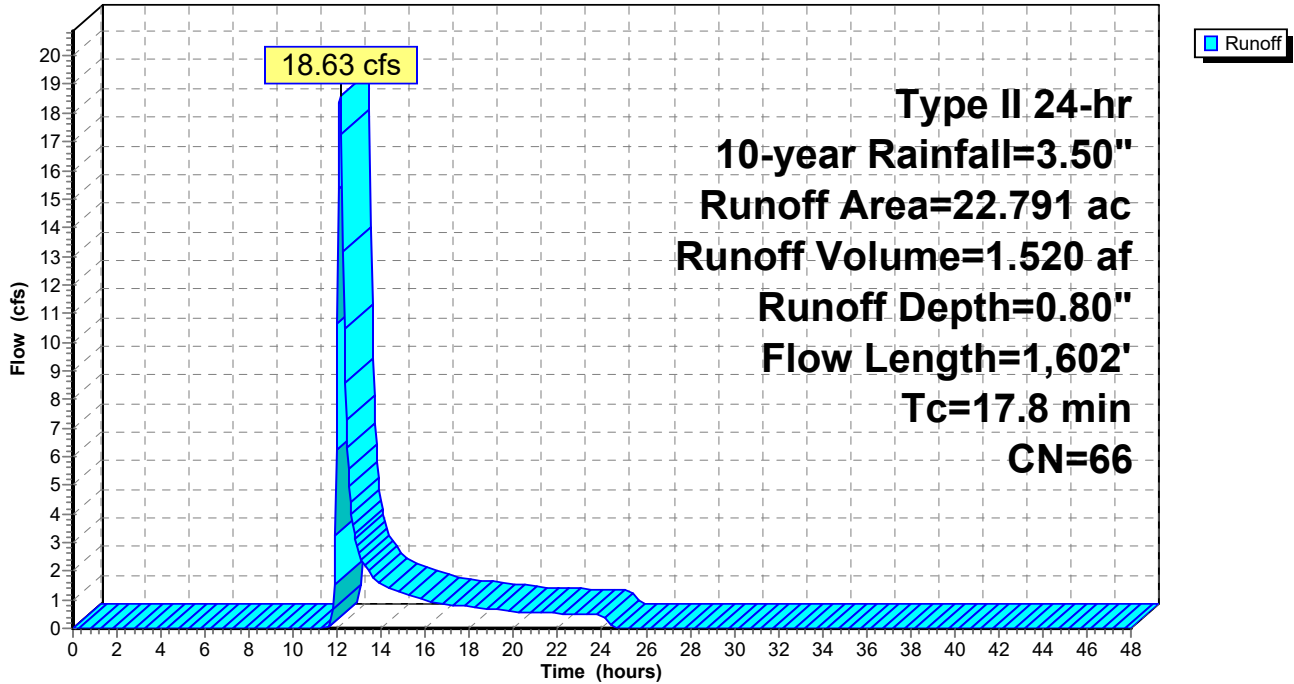
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 0.381	98	Surface water
* 0.064	98	Impervious surface
* 0.034	96	Gravel surface
9.647	58	Meadow, non-grazed, HSG B
12.525	71	Meadow, non-grazed, HSG C
0.140	78	Meadow, non-grazed, HSG D
22.791	66	Weighted Average
22.346		98.05% Pervious Area
0.445		1.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.0650	0.24		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
7.4	832	0.0720	1.88		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.5	670		3.19		<b>Direct Entry, CF</b>
17.8	1,602	Total			

Subcatchment 27S: Sub 27

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 28S: Sub 28**

[47] Hint: Peak is 184% of capacity of segment #3

Runoff = 12.05 cfs @ 12.25 hrs, Volume= 1.339 af, Depth= 0.75"  
 Routed to Link SP28 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

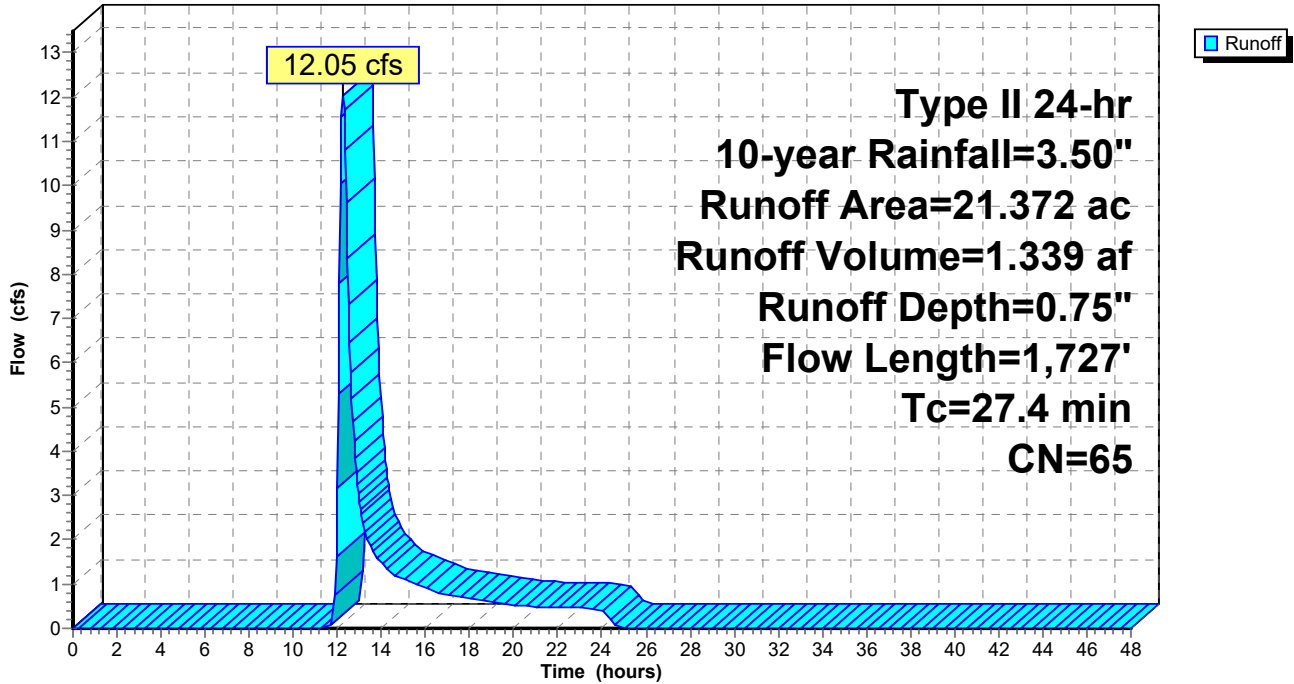
Area (ac)	CN	Description
* 0.114	98	Impervious surface
* 0.018	96	Gravel surface
1.037	61	>75% Grass cover, Good, HSG B
0.949	74	>75% Grass cover, Good, HSG C
9.049	58	Meadow, non-grazed, HSG B
10.205	71	Meadow, non-grazed, HSG C
21.372	65	Weighted Average
21.258		99.47% Pervious Area
0.114		0.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.9	100	0.0070	0.10		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
7.4	819	0.0700	1.85		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.1	808	0.0420	4.36	6.53	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00' n= 0.035 Earth, dense weeds
27.4	1,727	Total			



Subcatchment 28S: Sub 28

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 29S: Sub 29**

Runoff = 8.27 cfs @ 12.25 hrs, Volume= 0.985 af, Depth= 0.62"  
 Routed to Link SP29 :

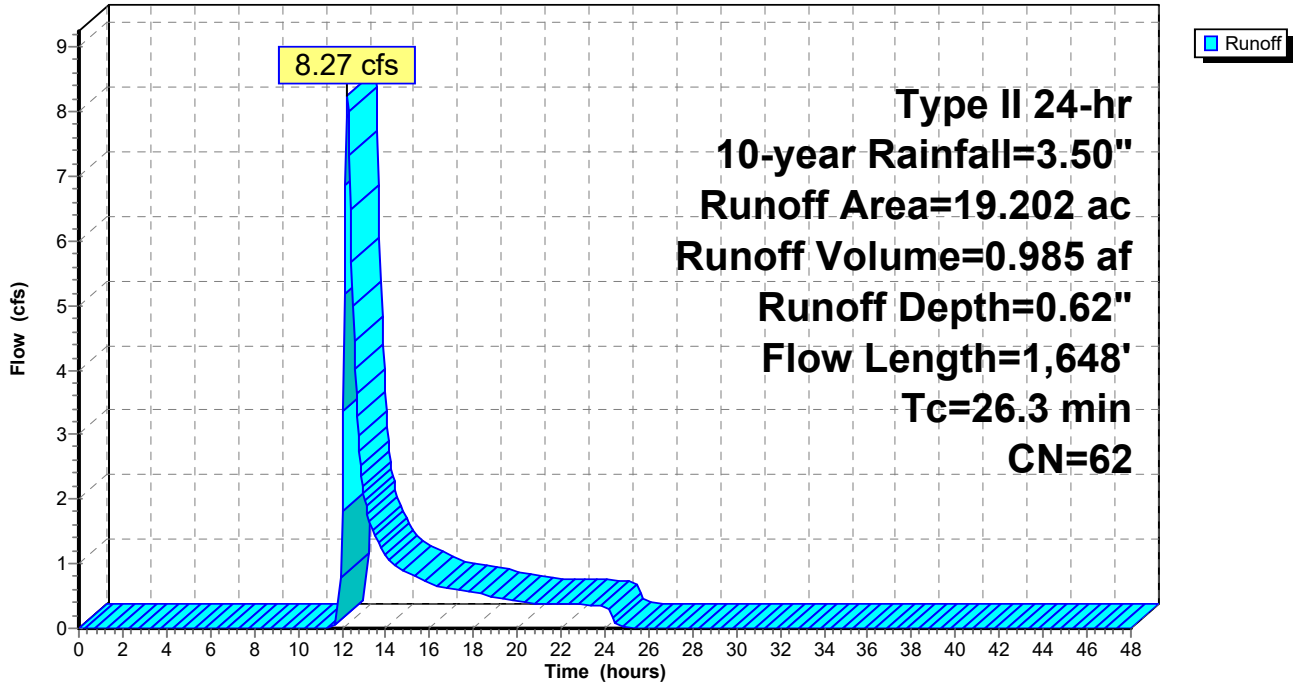
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 0.233	98	Impervious surface
* 0.063	96	Gravel surface
13.291	58	Meadow, non-grazed, HSG B
5.615	71	Meadow, non-grazed, HSG C
19.202	62	Weighted Average
18.969		98.79% Pervious Area
0.233		1.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	100	0.0370	0.19		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
8.9	661	0.0310	1.23		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
7.9	806	0.0590	1.70		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.8	81		1.69		<b>Direct Entry, CF</b>
26.3	1,648	Total			

Subcatchment 29S: Sub 29

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 30S: Sub 30**

[47] Hint: Peak is 144% of capacity of segment #3

Runoff = 17.68 cfs @ 12.28 hrs, Volume= 2.127 af, Depth= 0.71"  
 Routed to Link SP30 :

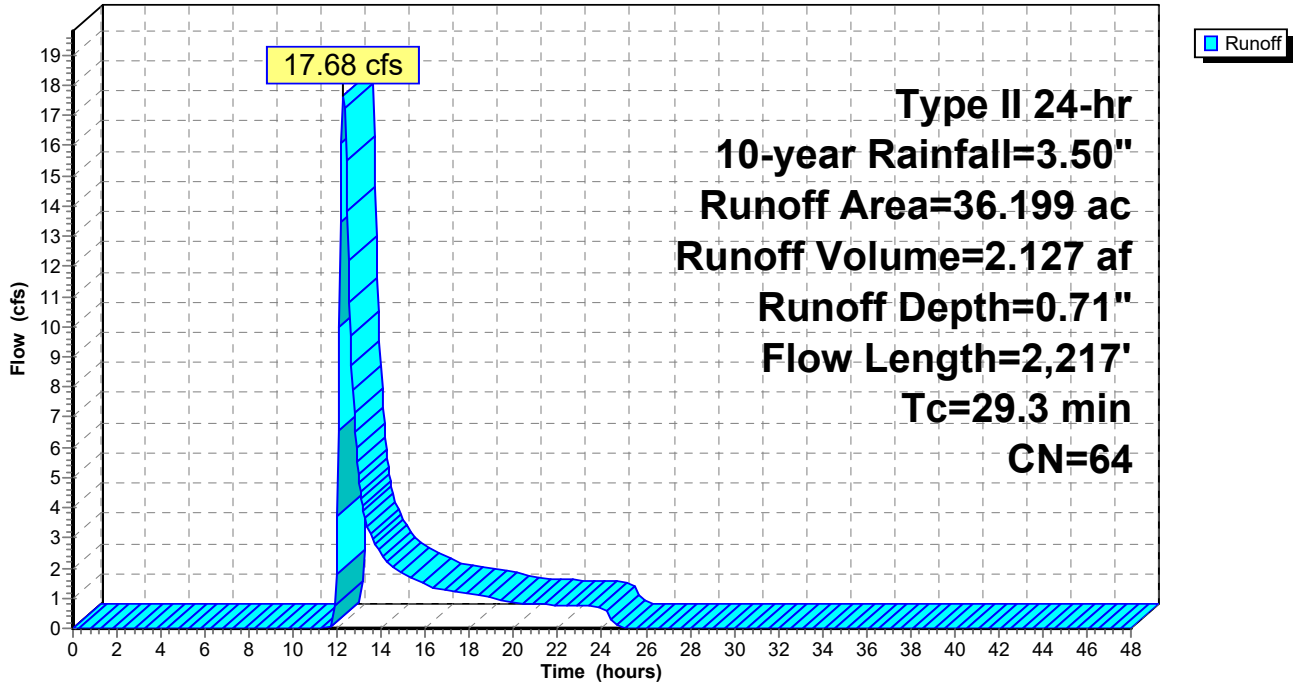
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 0.444	98	Impervious surface
* 0.471	96	Gravel surface
0.222	61	>75% Grass cover, Good, HSG B
0.026	74	>75% Grass cover, Good, HSG C
0.098	30	Meadow, non-grazed, HSG A
16.283	58	Meadow, non-grazed, HSG B
15.759	71	Meadow, non-grazed, HSG C
0.215	48	Brush, Good, HSG B
0.283	65	Brush, Good, HSG C
0.099	30	Woods, Good, HSG A
2.287	55	Woods, Good, HSG B
0.012	70	Woods, Good, HSG C
36.199	64	Weighted Average
35.755		98.77% Pervious Area
0.444		1.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.1	100	0.0250	0.16		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
15.4	1,100	0.0290	1.19		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.8	1,017	0.0290	4.46	12.25	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=4.00' D=0.50' Z= 3.0 '/' Top.W=7.00' n= 0.030 Earth, grassed & winding
29.3	2,217	Total			

Subcatchment 30S: Sub 30

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 31S: Sub 31**

[47] Hint: Peak is 203% of capacity of segment #3

Runoff = 8.50 cfs @ 12.34 hrs, Volume= 1.209 af, Depth= 0.57"  
 Routed to Link SP34 : SP31

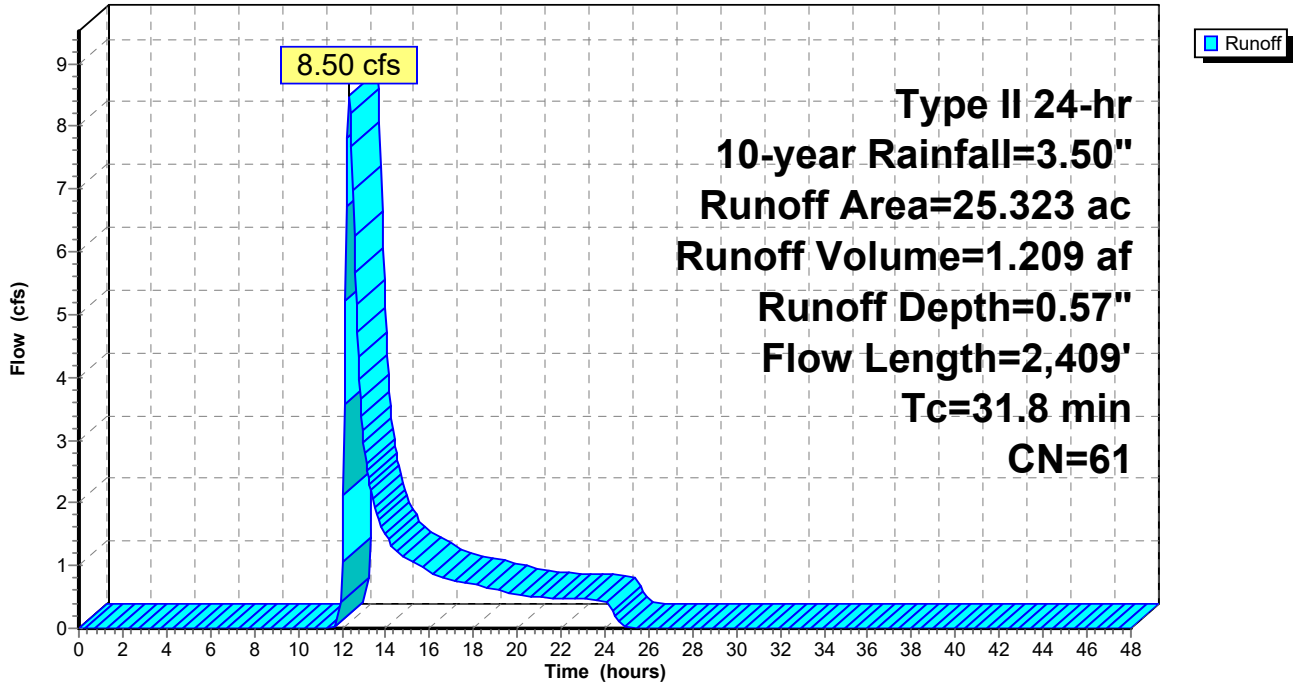
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
12.515	58	Meadow, non-grazed, HSG B
7.070	71	Meadow, non-grazed, HSG C
0.029	48	Brush, Good, HSG B
5.404	55	Woods, Good, HSG B
0.305	70	Woods, Good, HSG C
25.323	61	Weighted Average
25.323		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0450	0.21		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
20.4	1,456	0.0290	1.19		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.4	853	0.0938	4.18	4.18	<b>Parabolic Channel,</b> W=3.00' D=0.50' Area=1.0 sf Perim=3.2' n= 0.050 Mountain streams w/large boulders
31.8	2,409	Total			

Subcatchment 31S: Sub 31

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 32S: Sub 32**

[47] Hint: Peak is 148% of capacity of segment #4

Runoff = 13.78 cfs @ 12.40 hrs, Volume= 2.143 af, Depth= 0.57"  
 Routed to Link SP32 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

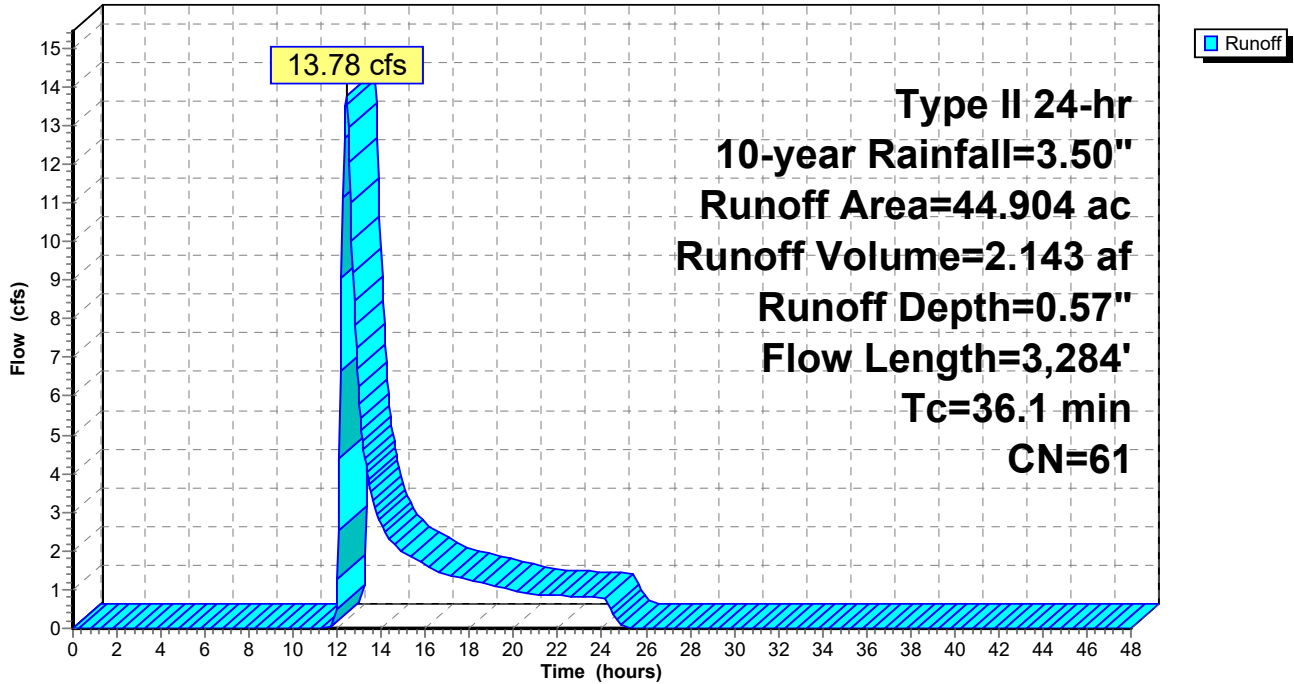
Area (ac)	CN	Description
* 2.796	98	Surface water
20.102	58	Meadow, non-grazed, HSG B
5.829	71	Meadow, non-grazed, HSG C
0.127	48	Brush, Good, HSG B
0.286	65	Brush, Good, HSG C
15.764	55	Woods, Good, HSG B
44.904	61	Weighted Average
42.108		93.77% Pervious Area
2.796		6.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8	100	0.0475	0.21		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
3.2	425	0.0976	2.19		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
17.5	1,176	0.0257	1.12		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
7.6	1,583	0.0726	3.48	9.29	<b>Parabolic Channel,</b> W=4.00' D=1.00' Area=2.7 sf Perim=4.6' n= 0.080 Earth, long dense weeds
36.1	3,284	Total			



Subcatchment 32S: Sub 32

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 33S: Sub 33**

Runoff = 30.81 cfs @ 12.21 hrs, Volume= 3.740 af, Depth= 0.49"  
 Routed to Link SP33 :

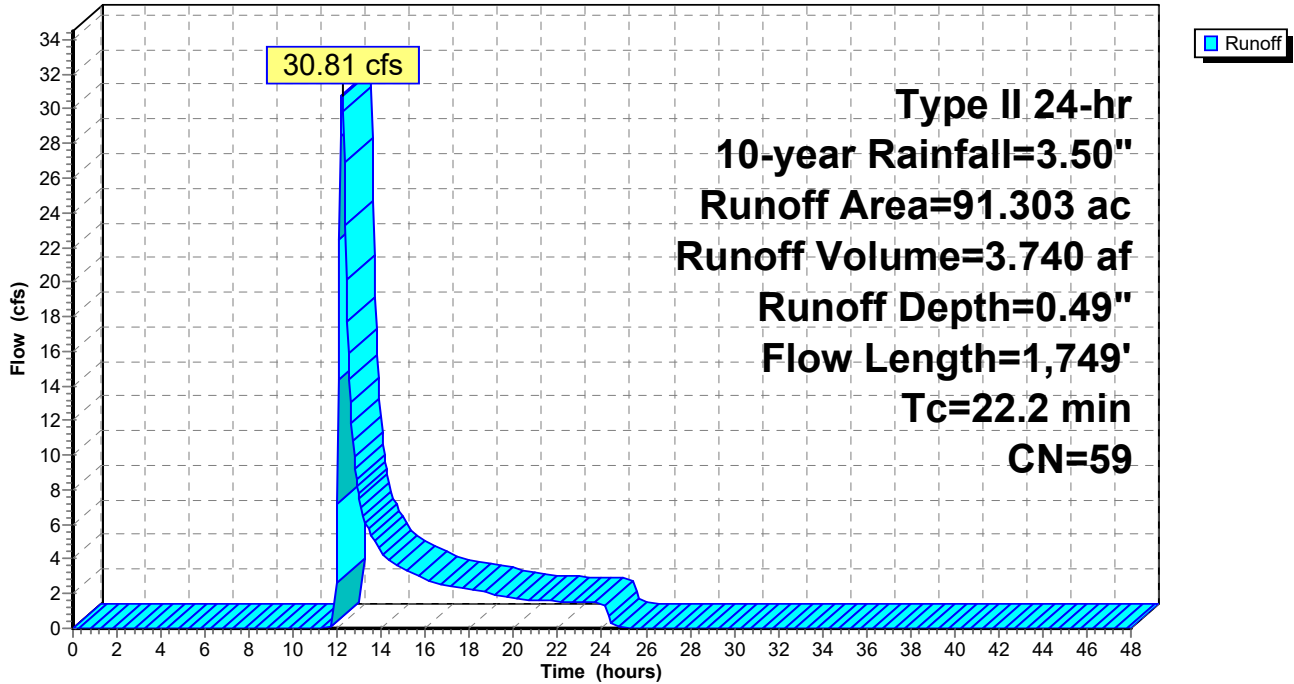
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 0.618	98	Impervious surface
* 0.042	96	Gravel surface
3.828	61	>75% Grass cover, Good, HSG B
45.219	58	Meadow, non-grazed, HSG B
9.199	71	Meadow, non-grazed, HSG C
3.134	78	Meadow, non-grazed, HSG D
0.415	48	Brush, Good, HSG B
28.566	55	Woods, Good, HSG B
0.282	70	Woods, Good, HSG C
91.303	59	Weighted Average
90.685		99.32% Pervious Area
0.618		0.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0350	0.19		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
5.8	780	0.1010	2.22		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.9	531	0.1059	2.28		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.6	338	0.1005	1.59		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
22.2	1,749	Total			

Subcatchment 33S: Sub 33

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 34S: Sub 34**

[47] Hint: Peak is 329% of capacity of segment #3

Runoff = 12.06 cfs @ 12.21 hrs, Volume= 1.323 af, Depth= 0.62"  
 Routed to Pond 34P : VAN EPPS RD CULVERT

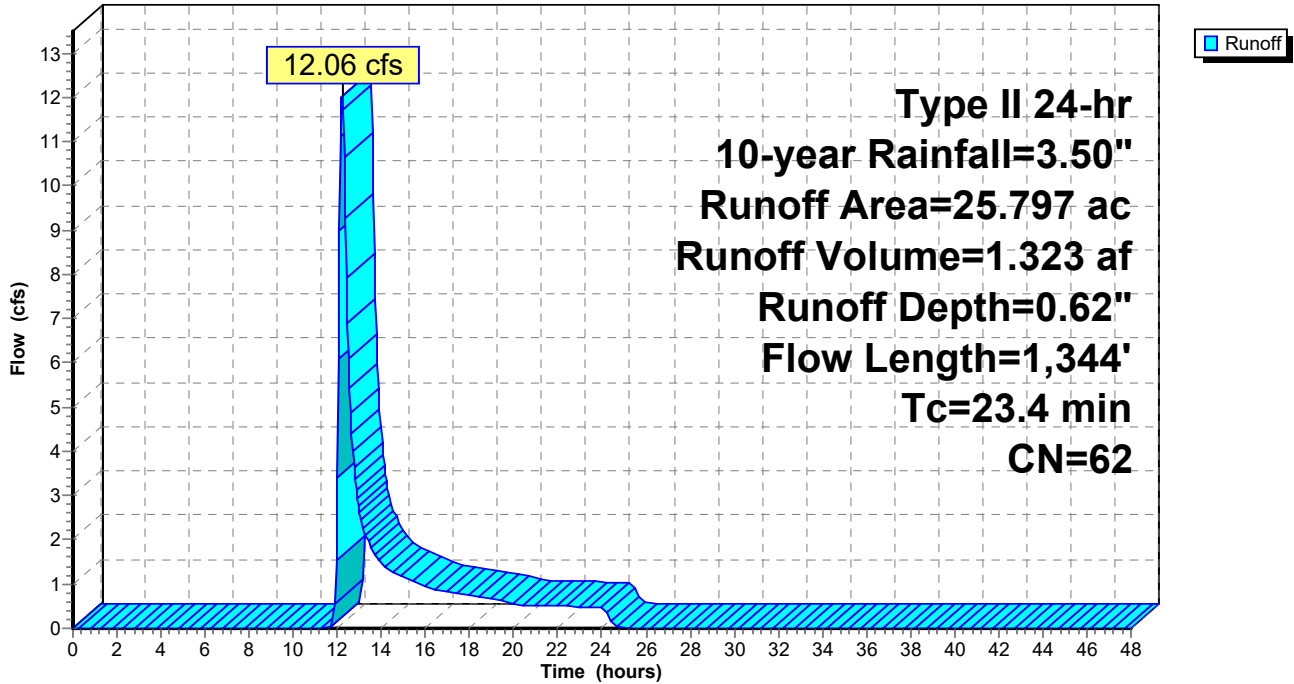
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
0.189	48	Brush, Good, HSG B
0.183	96	Gravel surface, HSG D
0.299	98	Unconnected roofs, HSG D
16.490	58	Meadow, non-grazed, HSG B
3.646	71	Meadow, non-grazed, HSG C
3.134	61	>75% Grass cover, Good, HSG B
1.498	74	>75% Grass cover, Good, HSG C
0.358	55	Woods, Good, HSG B
25.797	62	Weighted Average
25.498		98.84% Pervious Area
0.299		1.16% Impervious Area
0.299		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.8	100	0.0675	0.24		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
14.9	878	0.0198	0.98		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.2	42	0.0119	2.99	3.66	<b>Pipe Channel,</b> 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.025 Corrugated metal
1.5	324	0.0552	3.52		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
23.4	1,344	Total			

Subcatchment 34S: Sub 34

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 35S: Sub 35**

[47] Hint: Peak is 287% of capacity of segment #4

Runoff = 24.07 cfs @ 12.41 hrs, Volume= 3.433 af, Depth= 0.75"  
 Routed to Link SP35 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
0.105	48	Brush, Good, HSG B
0.087	65	Brush, Good, HSG C
1.101	98	Unconnected roofs, HSG D
23.620	58	Meadow, non-grazed, HSG B
24.783	71	Meadow, non-grazed, HSG C
0.319	61	>75% Grass cover, Good, HSG B
1.326	74	>75% Grass cover, Good, HSG C
1.942	55	Woods, Good, HSG B
1.496	70	Woods, Good, HSG C
54.779	65	Weighted Average
53.678		97.99% Pervious Area
1.101		2.01% Impervious Area
1.101		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0450	0.21		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
6.6	393	0.0204	1.00		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
22.1	2,017	0.0471	1.52		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.0	512	0.1172	4.19	8.39	<b>Parabolic Channel,</b> W=3.00' D=1.00' Area=2.0 sf Perim=3.7' n= 0.080 Earth, long dense weeds
38.7	3,022	Total			

**Mill Pt Pre 2**

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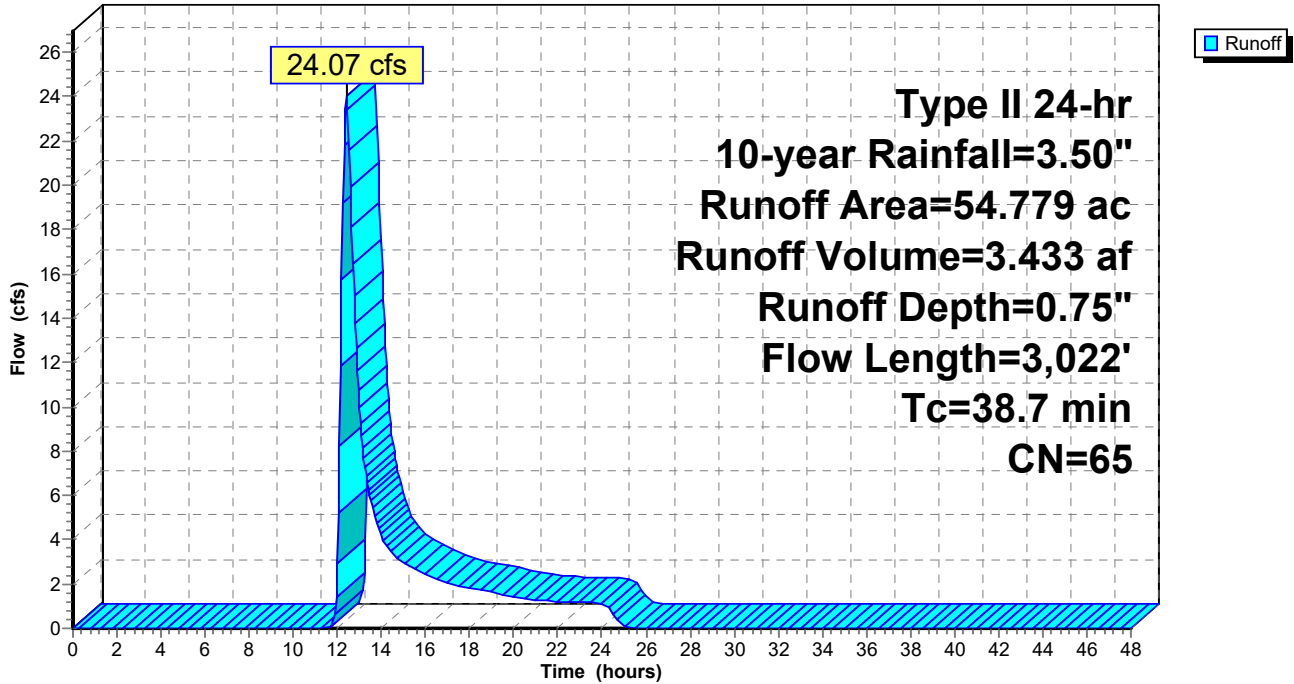
Type II 24-hr 10-year Rainfall=3.50"

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**Subcatchment 35S: Sub 35**

Hydrograph



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**Summary for Subcatchment 36S: Sub 36**

[47] Hint: Peak is 410% of capacity of segment #3

Runoff = 24.27 cfs @ 12.21 hrs, Volume= 2.562 af, Depth= 0.66"  
 Routed to Link SP36 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

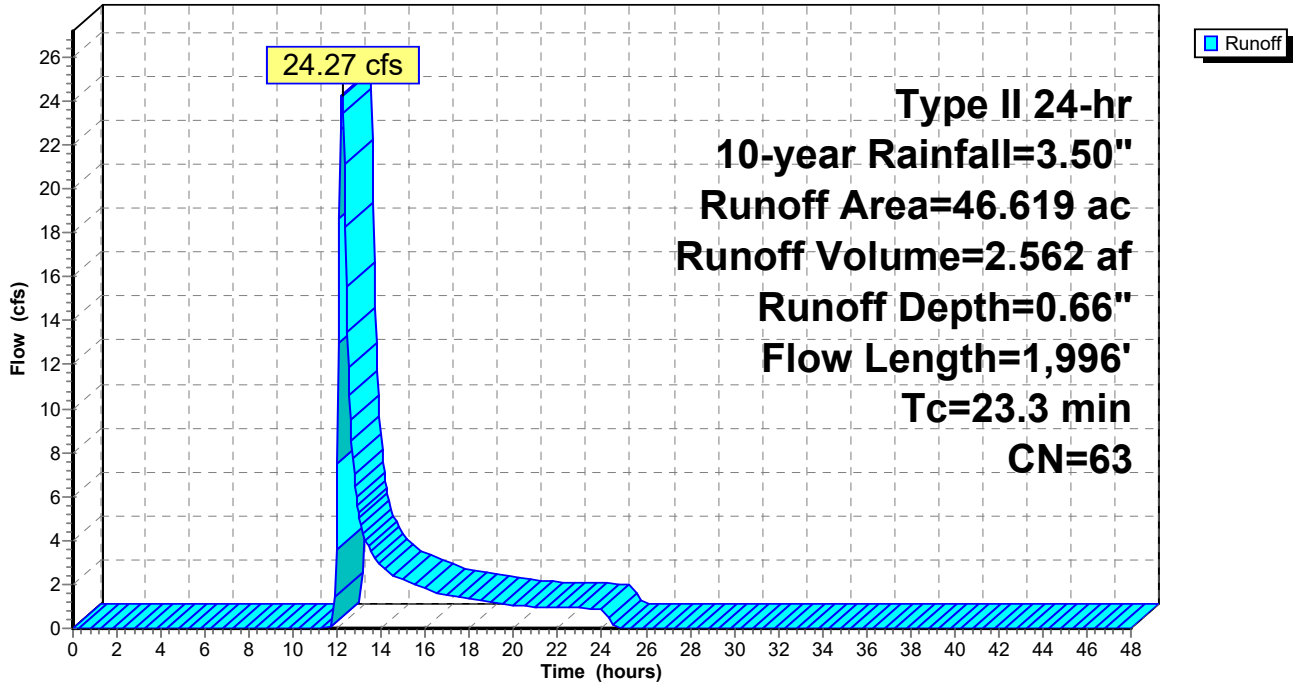
Area (ac)	CN	Description
0.405	48	Brush, Good, HSG B
0.013	65	Brush, Good, HSG C
0.081	96	Gravel surface, HSG D
0.007	98	Unconnected roofs, HSG D
2.271	58	Meadow, non-grazed, HSG B
21.338	71	Meadow, non-grazed, HSG C
0.513	98	Water Surface, HSG D
20.987	55	Woods, Good, HSG B
1.004	70	Woods, Good, HSG C
46.619	63	Weighted Average
46.099		98.88% Pervious Area
0.520		1.12% Impervious Area
0.007		1.35% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	100	0.0550	0.23		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
11.7	1,036	0.0442	1.47		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
4.2	860	0.1400	3.38	5.91	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=2.00' D=0.50' Z= 3.0 '/' Top.W=5.00' n= 0.080 Earth, long dense weeds
23.3	1,996	Total			



Subcatchment 36S: Sub 36

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 37S: Sub 37**

Runoff = 3.02 cfs @ 12.36 hrs, Volume= 0.462 af, Depth= 0.53"  
 Routed to Link SP37 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
8.161	58	Meadow, non-grazed, HSG B
1.673	55	Woods, Good, HSG B
* 0.606	98	Impervious
10.440	60	Weighted Average
9.834		94.20% Pervious Area
0.606		5.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.3	100	0.0050	0.09		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
10.6	1,005	0.0507	1.58		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.0	90	0.0889	1.49		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
2.2	731	0.0570	5.59	20.95	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=6.00' D=0.50' Z= 3.0 '/' Top.W=9.00' n= 0.035 Earth, dense weeds
33.1	1,926	Total			

**Mill Pt Pre 2**

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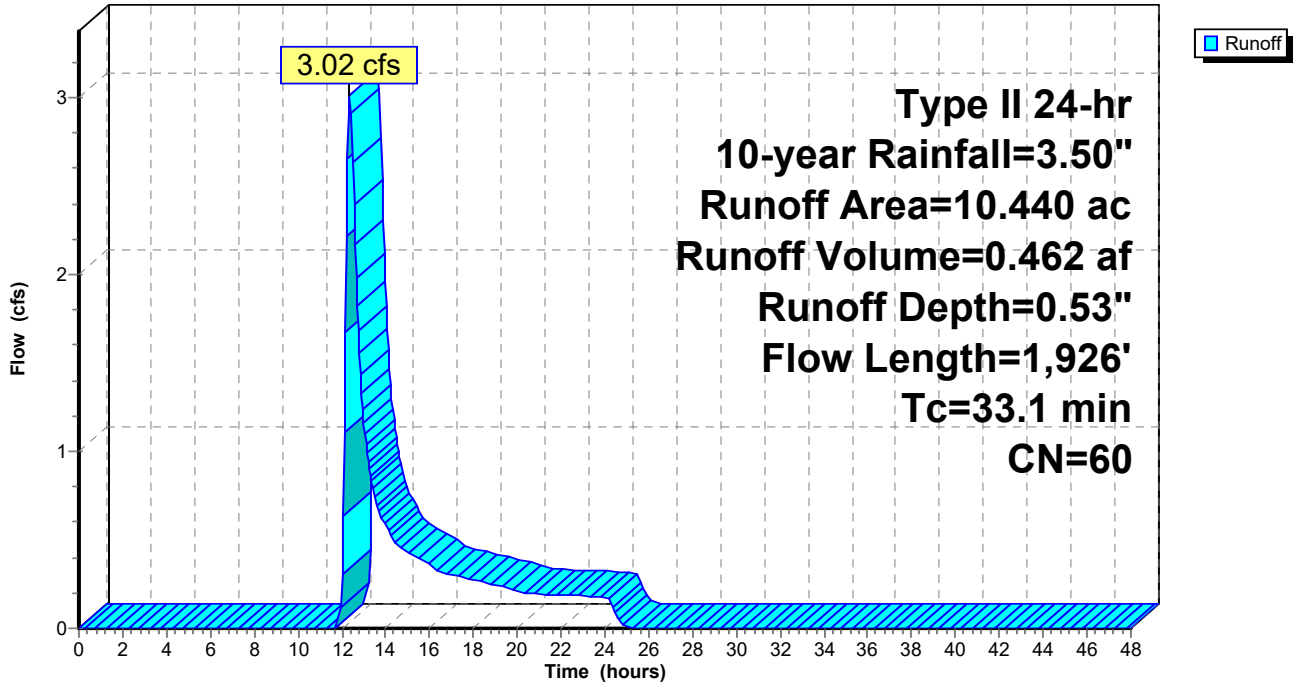
Type II 24-hr 10-year Rainfall=3.50"

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**Subcatchment 37S: Sub 37**

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 38S: Sub 38**

Runoff = 24.59 cfs @ 12.55 hrs, Volume= 4.190 af, Depth= 0.71"  
 Routed to Link SP38 :

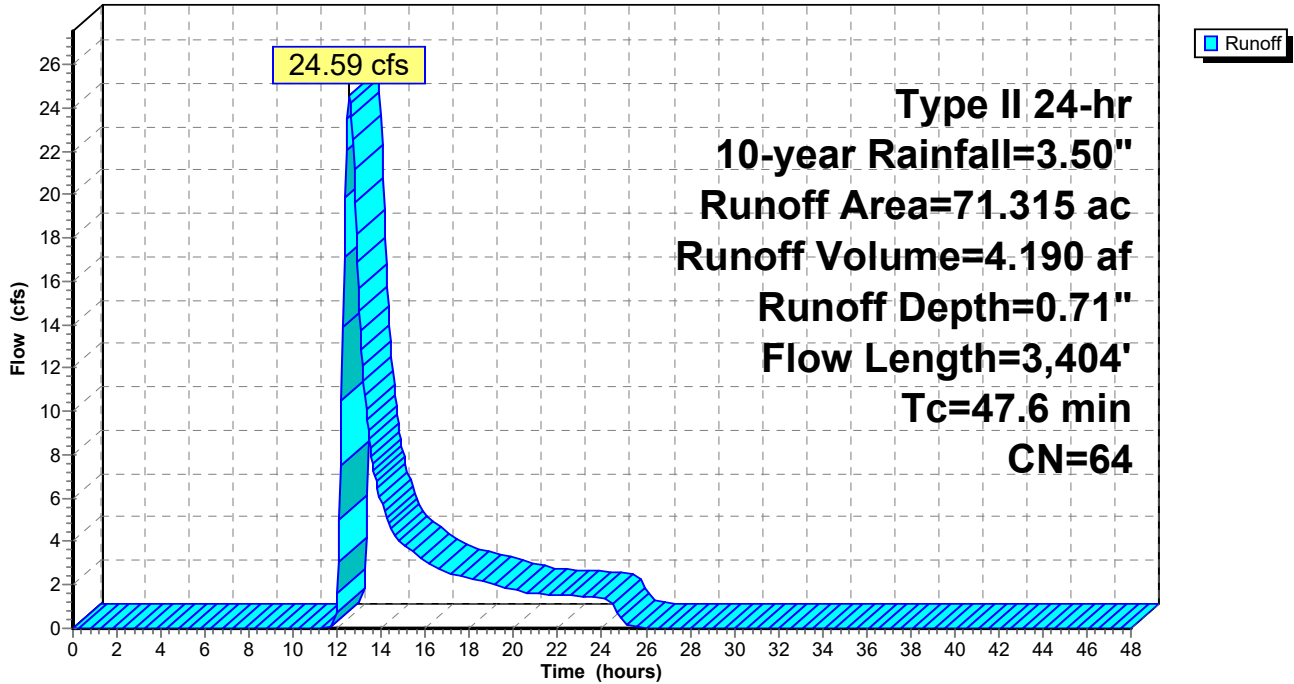
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
1.161	48	Brush, Good, HSG B
0.399	65	Brush, Good, HSG C
0.626	96	Gravel surface, HSG D
1.297	98	Unconnected roofs, HSG D
26.775	58	Meadow, non-grazed, HSG B
35.528	71	Meadow, non-grazed, HSG C
1.081	61	>75% Grass cover, Good, HSG B
4.099	30	Woods, Good, HSG A
0.349	55	Woods, Good, HSG B
71.315	64	Weighted Average
70.018		98.18% Pervious Area
1.297		1.82% Impervious Area
1.297		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	100	0.0500	0.22		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
11.9	739	0.0220	1.04		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
6.6	753	0.0744	1.91		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
21.4	1,812	0.0800	1.41		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
47.6	3,404	Total			

Subcatchment 38S: Sub 38

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 39S: Sub 39**

Runoff = 44.91 cfs @ 12.31 hrs, Volume= 5.877 af, Depth= 0.62"  
 Routed to Link SP39 :

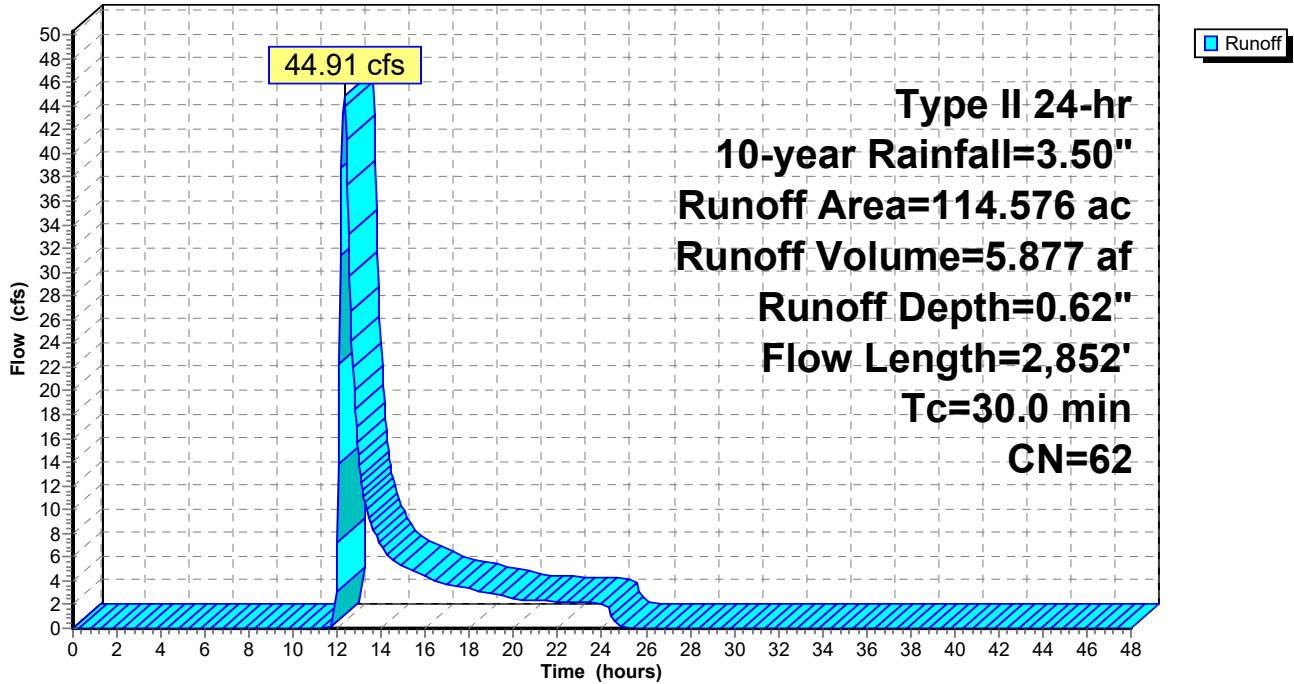
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
0.475	48	Brush, Good, HSG B
0.336	65	Brush, Good, HSG C
0.314	73	Brush, Good, HSG D
1.088	96	Gravel surface, HSG D
0.964	98	Unconnected roofs, HSG D
60.275	58	Meadow, non-grazed, HSG B
18.779	71	Meadow, non-grazed, HSG C
2.256	78	Meadow, non-grazed, HSG D
6.253	61	>75% Grass cover, Good, HSG B
3.233	74	>75% Grass cover, Good, HSG C
1.913	98	Water Surface, HSG D
17.544	55	Woods, Good, HSG B
0.343	70	Woods, Good, HSG C
0.803	77	Woods, Good, HSG D
114.576	62	Weighted Average
111.699		97.49% Pervious Area
2.877		2.51% Impervious Area
0.964		33.51% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	100	0.0600	0.23		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
17.7	2,151	0.0840	2.03		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
5.2	601	0.1490	1.93		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
30.0	2,852	Total			

Subcatchment 39S: Sub 39

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 40S: Sub 40**

Runoff = 15.72 cfs @ 12.26 hrs, Volume= 1.660 af, Depth= 0.95"

Routed to Reach 39R :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

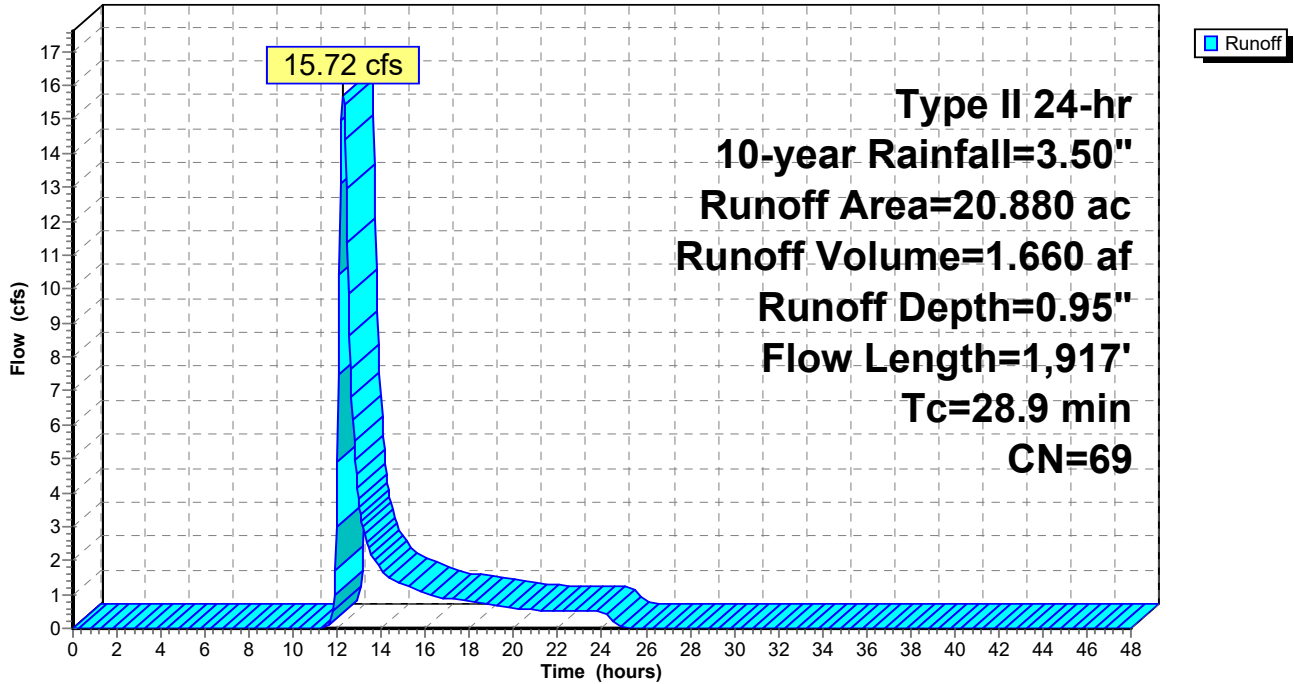
Area (ac)	CN	Description
0.016	65	Brush, Good, HSG C
0.235	96	Gravel surface, HSG D
0.018	98	Unconnected roofs, HSG D
6.944	58	Meadow, non-grazed, HSG B
10.584	71	Meadow, non-grazed, HSG C
0.095	78	Meadow, non-grazed, HSG D
0.089	61	>75% Grass cover, Good, HSG B
1.640	98	Water Surface, HSG D
0.643	55	Woods, Good, HSG B
0.616	70	Woods, Good, HSG C
20.880	69	Weighted Average
19.222		92.06% Pervious Area
1.658		7.94% Impervious Area
0.018		1.09% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	100	0.0575	0.23		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
2.6	358	0.1089	2.31		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.4	38	0.1118	1.67		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
9.8	1,118	0.0733	1.90		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
8.8	303	0.0132	0.57		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
28.9	1,917	Total			



Subcatchment 40S: Sub 40

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 41S: Sub 41**

Runoff = 24.38 cfs @ 12.34 hrs, Volume= 3.307 af, Depth= 0.66"  
 Routed to Link SP41 :

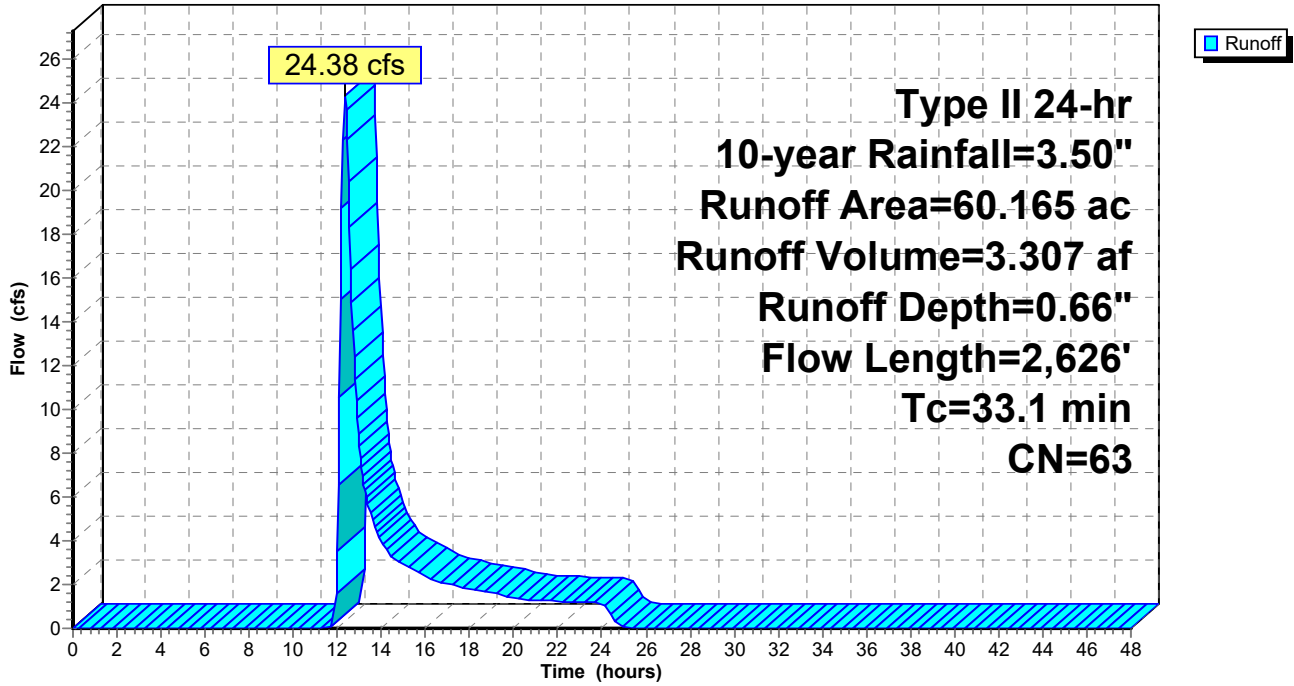
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
0.378	48	Brush, Good, HSG B
0.001	98	Unconnected roofs, HSG D
18.363	58	Meadow, non-grazed, HSG B
8.734	71	Meadow, non-grazed, HSG C
2.287	78	Meadow, non-grazed, HSG D
1.531	98	Water Surface, HSG D
19.479	55	Woods, Good, HSG B
9.335	70	Woods, Good, HSG C
0.057	77	Woods, Good, HSG D
60.165	63	Weighted Average
58.633		97.45% Pervious Area
1.532		2.55% Impervious Area
0.001		0.07% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0125	0.12		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
5.0	585	0.0765	1.94		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
7.8	652	0.0395	1.39		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
6.9	1,289	0.0436	3.13		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
33.1	2,626	Total			

Subcatchment 41S: Sub 41

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 42S: Sub 42**

Runoff = 24.51 cfs @ 12.18 hrs, Volume= 2.512 af, Depth= 0.62"

Routed to Link SP42 :

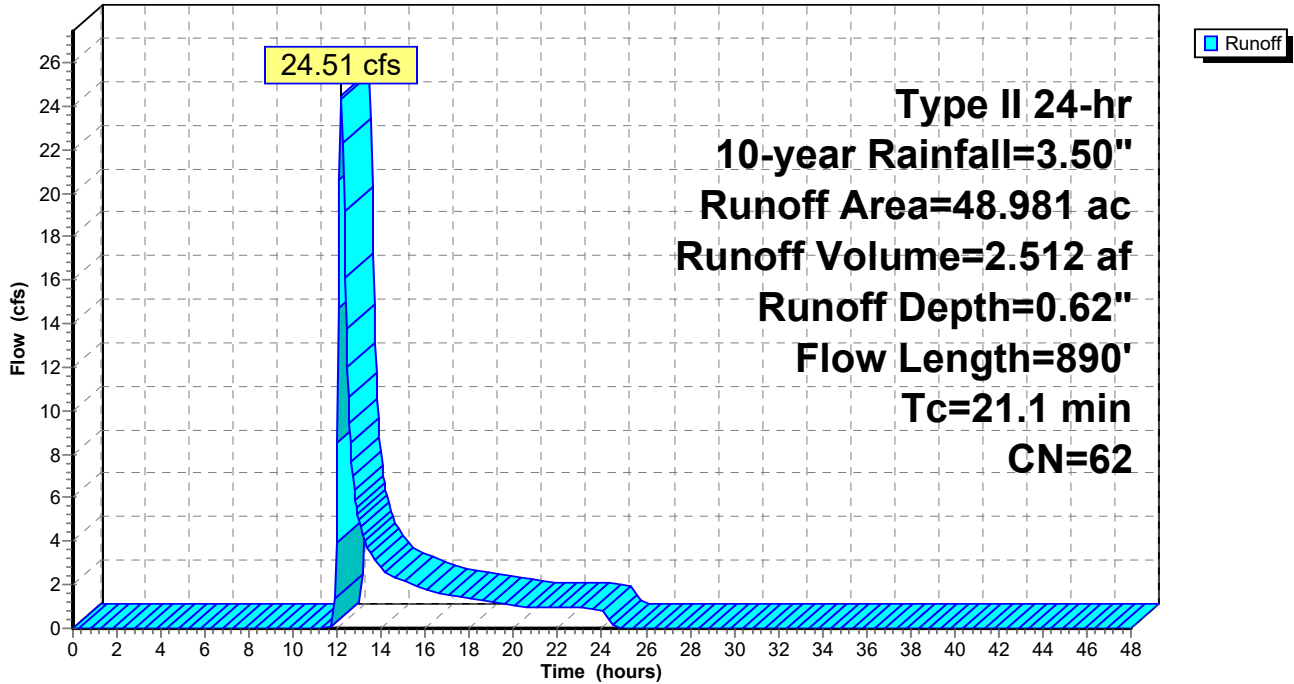
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
0.795	48	Brush, Good, HSG B
0.967	65	Brush, Good, HSG C
3.291	58	Meadow, non-grazed, HSG B
11.478	71	Meadow, non-grazed, HSG C
1.886	98	Water Surface, HSG D
27.090	55	Woods, Good, HSG B
3.474	70	Woods, Good, HSG C
48.981	62	Weighted Average
47.095		96.15% Pervious Area
1.886		3.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0125	0.12		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
3.2	234	0.0299	1.21		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
4.5	556	0.1704	2.06		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
21.1	890	Total			

Subcatchment 42S: Sub 42

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 48S: Sub 48**

[47] Hint: Peak is 310% of capacity of segment #3

Runoff = 59.86 cfs @ 12.37 hrs, Volume= 7.347 af, Depth= 1.12"  
 Routed to Link SP48 :

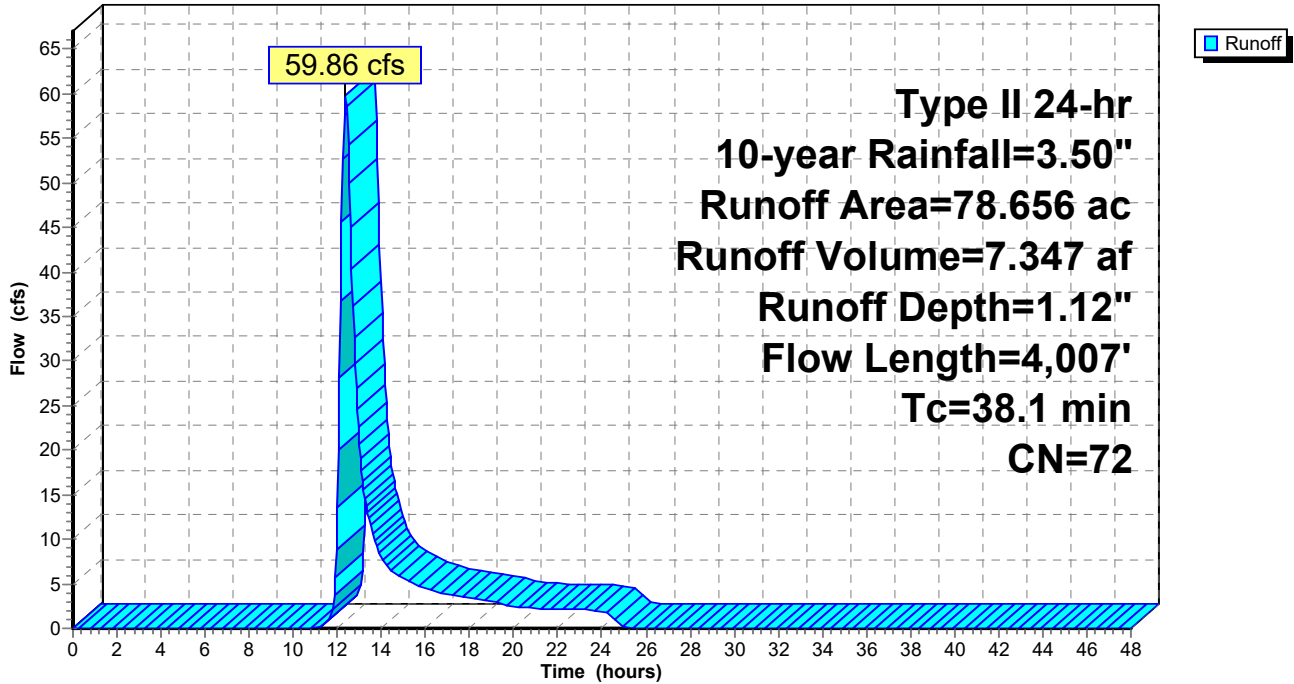
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 0.572	98	Surface water
* 1.693	98	Imperviopus surface
* 0.110	96	Gravel surface
0.416	61	>75% Grass cover, Good, HSG B
3.809	74	>75% Grass cover, Good, HSG C
1.571	80	>75% Grass cover, Good, HSG D
9.889	58	Meadow, non-grazed, HSG B
26.970	71	Meadow, non-grazed, HSG C
21.544	78	Meadow, non-grazed, HSG D
0.763	48	Brush, Good, HSG B
4.514	65	Brush, Good, HSG C
2.800	73	Brush, Good, HSG D
0.194	55	Woods, Good, HSG B
0.882	70	Woods, Good, HSG C
2.929	77	Woods, Good, HSG D
78.656	72	Weighted Average
76.391		97.12% Pervious Area
2.265		2.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	100	0.0625	0.24		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
22.2	1,935	0.0430	1.45		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
8.9	1,972	0.0230	3.68	19.31	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=9.00' D=0.50' Z= 3.0 '/' Top.W=12.00' n= 0.035 Earth, dense weeds
38.1	4,007	Total			

Subcatchment 48S: Sub 48

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 49S: Sub 49**

Runoff = 13.64 cfs @ 12.41 hrs, Volume= 1.977 af, Depth= 0.71"  
 Routed to Reach 42R : S-NSD-16

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
1.496	48	Brush, Good, HSG B
1.174	65	Brush, Good, HSG C
0.274	96	Gravel surface, HSG D
0.570	98	Unconnected roofs, HSG D
13.748	58	Meadow, non-grazed, HSG B
12.594	71	Meadow, non-grazed, HSG C
1.421	61	>75% Grass cover, Good, HSG B
0.238	74	>75% Grass cover, Good, HSG C
0.029	98	Water Surface, HSG D
1.071	55	Woods, Good, HSG B
0.984	70	Woods, Good, HSG C
0.053	77	Woods, Good, HSG D
33.652	64	Weighted Average
33.053		98.22% Pervious Area
0.599		1.78% Impervious Area
0.570		95.16% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	100	0.0600	0.23		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
1.5	240	0.1500	2.71		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.4	534	0.1367	2.59		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.8	168	0.0506	1.57		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
8.2	561	0.0267	1.14		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
16.0	1,396	0.0434	1.46		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
38.0	2,999	Total			



**Mill Pt Pre 2**

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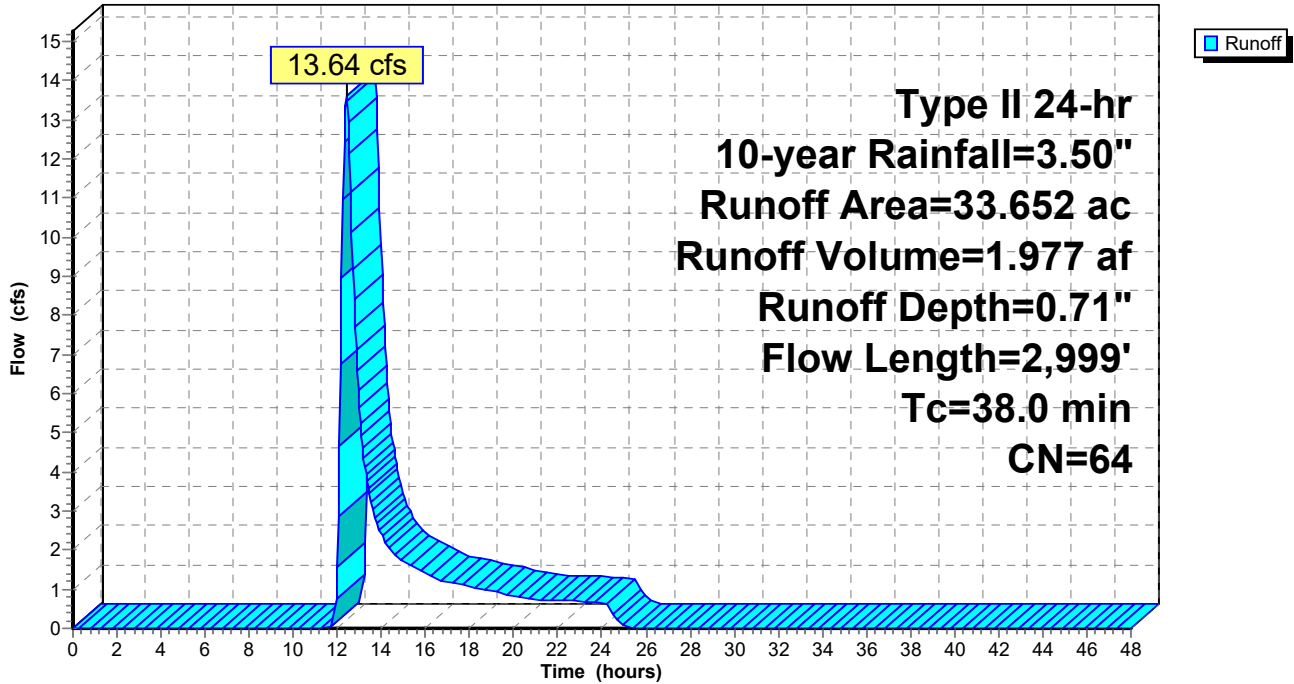
Type II 24-hr 10-year Rainfall=3.50"

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**Subcatchment 49S: Sub 49**

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 50S: Sub 50**

[47] Hint: Peak is 554% of capacity of segment #4

Runoff = 31.56 cfs @ 12.27 hrs, Volume= 3.438 af, Depth= 0.90"  
 Routed to Link SP50 :

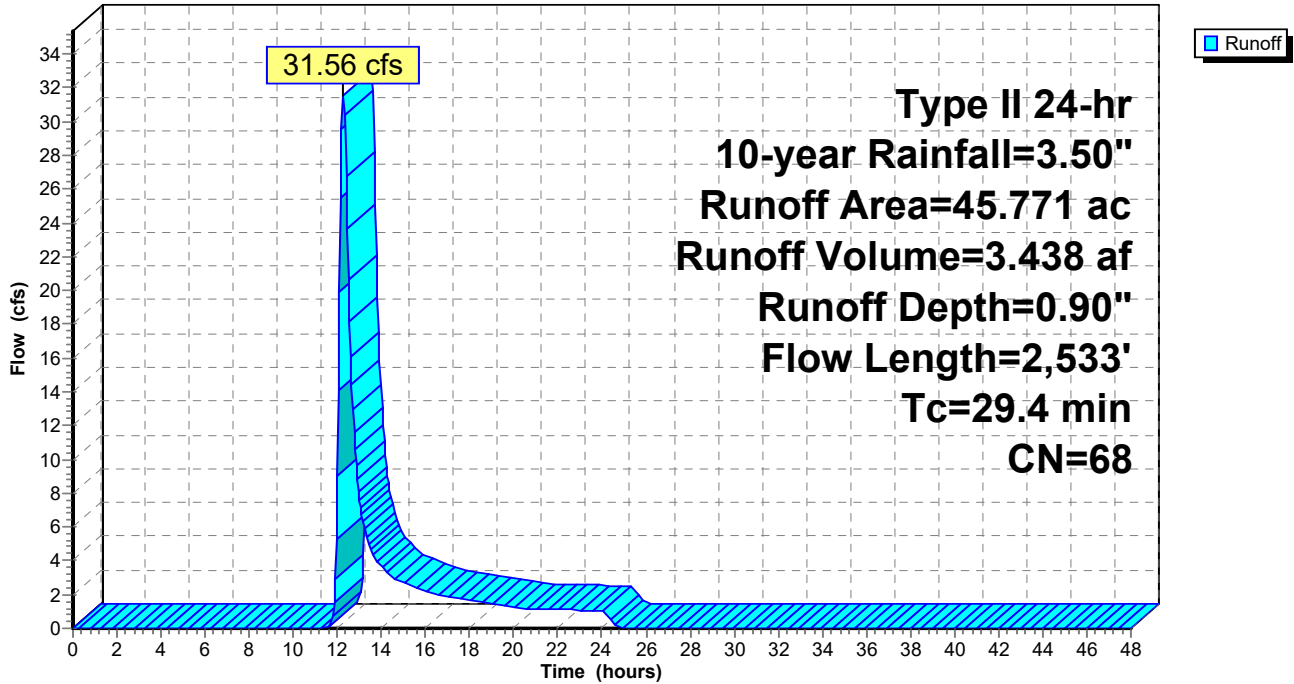
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
0.310	48	Brush, Good, HSG B
3.852	65	Brush, Good, HSG C
0.150	73	Brush, Good, HSG D
0.163	98	Unconnected roofs, HSG D
3.353	58	Meadow, non-grazed, HSG B
23.813	71	Meadow, non-grazed, HSG C
2.446	78	Meadow, non-grazed, HSG D
0.409	98	Water Surface, HSG D
5.669	55	Woods, Good, HSG B
5.353	70	Woods, Good, HSG C
0.253	77	Woods, Good, HSG D
45.771	68	Weighted Average
45.199		98.75% Pervious Area
0.572		1.25% Impervious Area
0.163		28.50% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0350	0.19		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
8.1	911	0.0710	1.87		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
7.5	410	0.0330	0.91		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
4.9	1,112	0.0320	3.80	5.70	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00' n= 0.035 Earth, dense weeds
29.4	2,533	Total			

Subcatchment 50S: Sub 50

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 51S: Sub 51**

Runoff = 43.05 cfs @ 12.39 hrs, Volume= 6.092 af, Depth= 0.71"  
 Routed to Link SP51 :

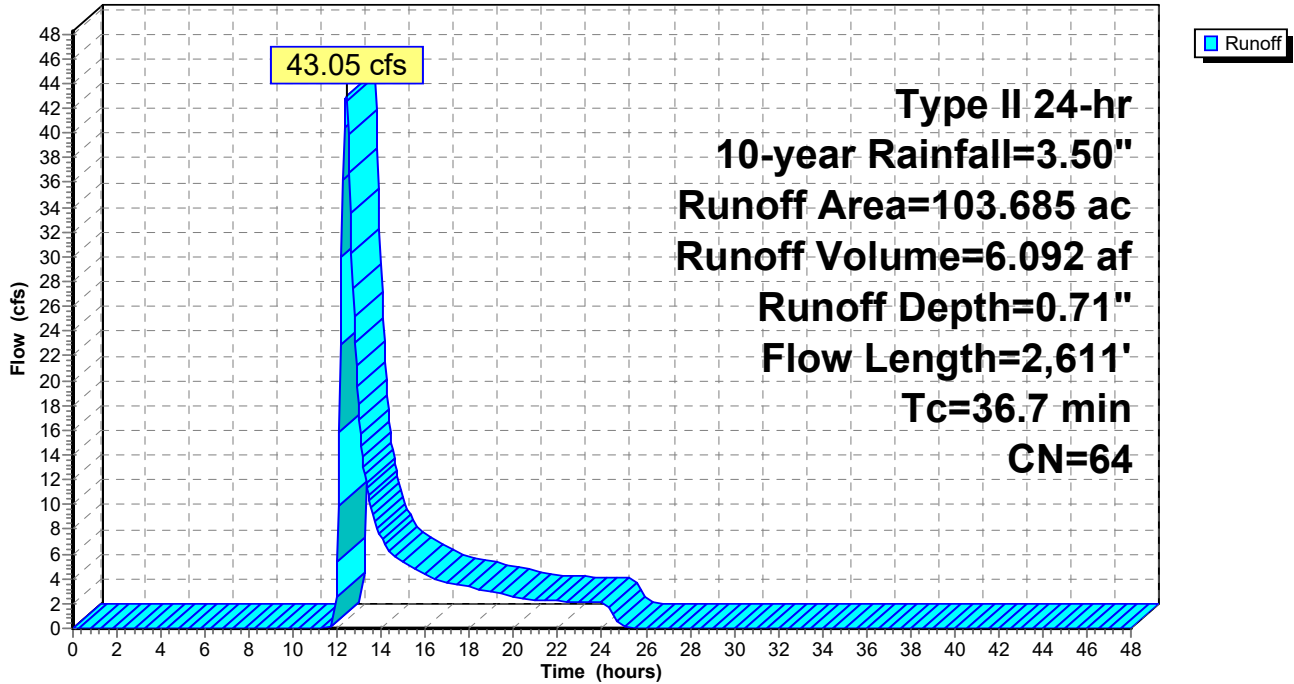
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
* 1.067	98	Impervious surface
2.753	61	>75% Grass cover, Good, HSG B
1.096	74	>75% Grass cover, Good, HSG C
49.195	58	Meadow, non-grazed, HSG B
39.362	71	Meadow, non-grazed, HSG C
2.576	78	Meadow, non-grazed, HSG D
0.936	48	Brush, Good, HSG B
0.917	65	Brush, Good, HSG C
0.252	73	Brush, Good, HSG D
1.975	55	Woods, Good, HSG B
3.395	70	Woods, Good, HSG C
0.161	77	Woods, Good, HSG D
103.685	64	Weighted Average
102.618		98.97% Pervious Area
1.067		1.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0150	0.13		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
12.6	1,592	0.0908	2.11		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
4.3	435	0.0586	1.69		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
4.4	336	0.0327	1.27		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.0	148	0.0270	0.82		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
36.7	2,611	Total			

Subcatchment 51S: Sub 51

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 52S: Sub 52**

Runoff = 13.42 cfs @ 12.17 hrs, Volume= 1.178 af, Depth= 0.95"  
 Routed to Link SP52 :

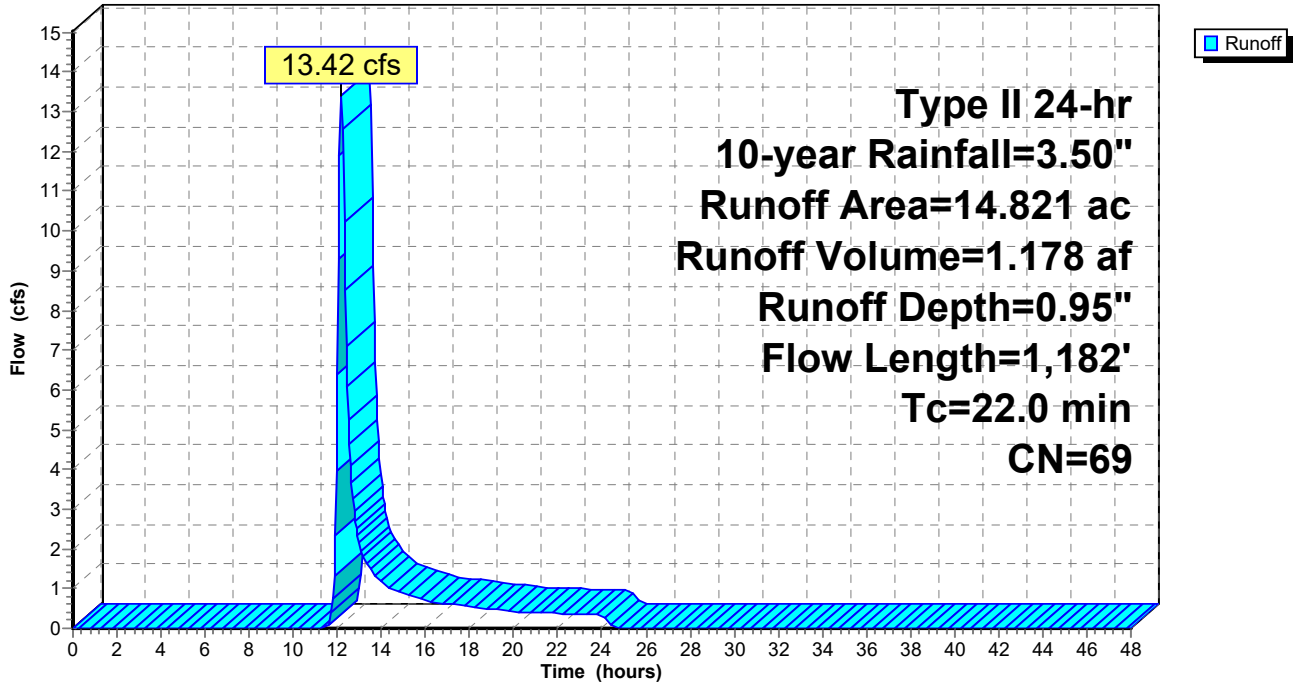
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
0.561	48	Brush, Good, HSG B
0.166	73	Brush, Good, HSG D
1.696	58	Meadow, non-grazed, HSG B
10.185	71	Meadow, non-grazed, HSG C
0.446	78	Meadow, non-grazed, HSG D
0.413	98	Water Surface, HSG D
0.321	55	Woods, Good, HSG B
0.833	70	Woods, Good, HSG C
0.200	77	Woods, Good, HSG D
14.821	69	Weighted Average
14.408		97.21% Pervious Area
0.413		2.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.1	100	0.0200	0.15		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
8.1	993	0.0850	2.04		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.8	89	0.0112	0.53		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
22.0	1,182	Total			

Subcatchment 52S: Sub 52

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 53S: Sub 53**

Runoff = 11.37 cfs @ 12.39 hrs, Volume= 1.518 af, Depth= 0.85"  
 Routed to Link SP53 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

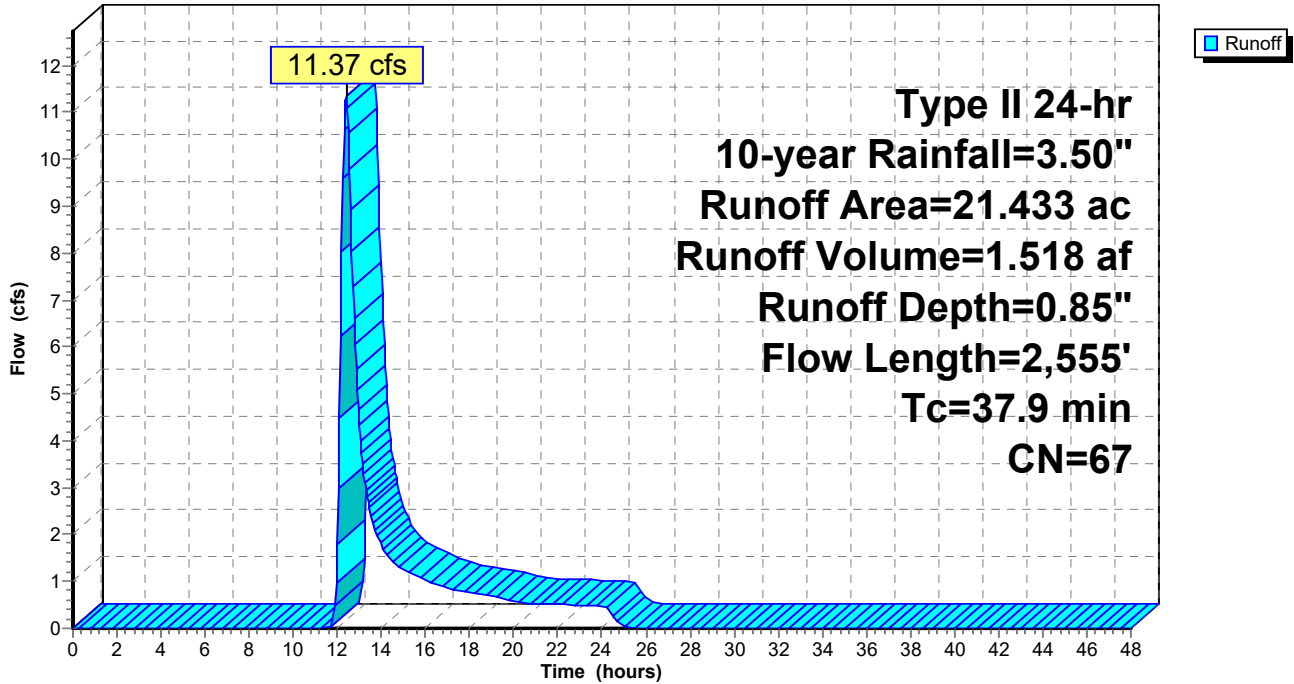
Area (ac)	CN	Description
1.581	48	Brush, Good, HSG B
0.993	65	Brush, Good, HSG C
4.029	58	Meadow, non-grazed, HSG B
14.178	71	Meadow, non-grazed, HSG C
0.386	98	Water Surface, HSG D
0.266	70	Woods, Good, HSG C
21.433	67	Weighted Average
21.047		98.20% Pervious Area
0.386		1.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.6	100	0.0100	0.11		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
2.4	347	0.1210	2.43		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.9	151	0.1656	2.85		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
19.3	1,511	0.0347	1.30		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.7	446	0.2690	11.02	16.53	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00' n= 0.035 Earth, dense weeds
37.9	2,555	Total			



Subcatchment 53S: Sub 53

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 54S:**

[47] Hint: Peak is 432% of capacity of segment #5

Runoff = 33.26 cfs @ 12.34 hrs, Volume= 3.957 af, Depth= 1.01"  
 Routed to Link SP54 :

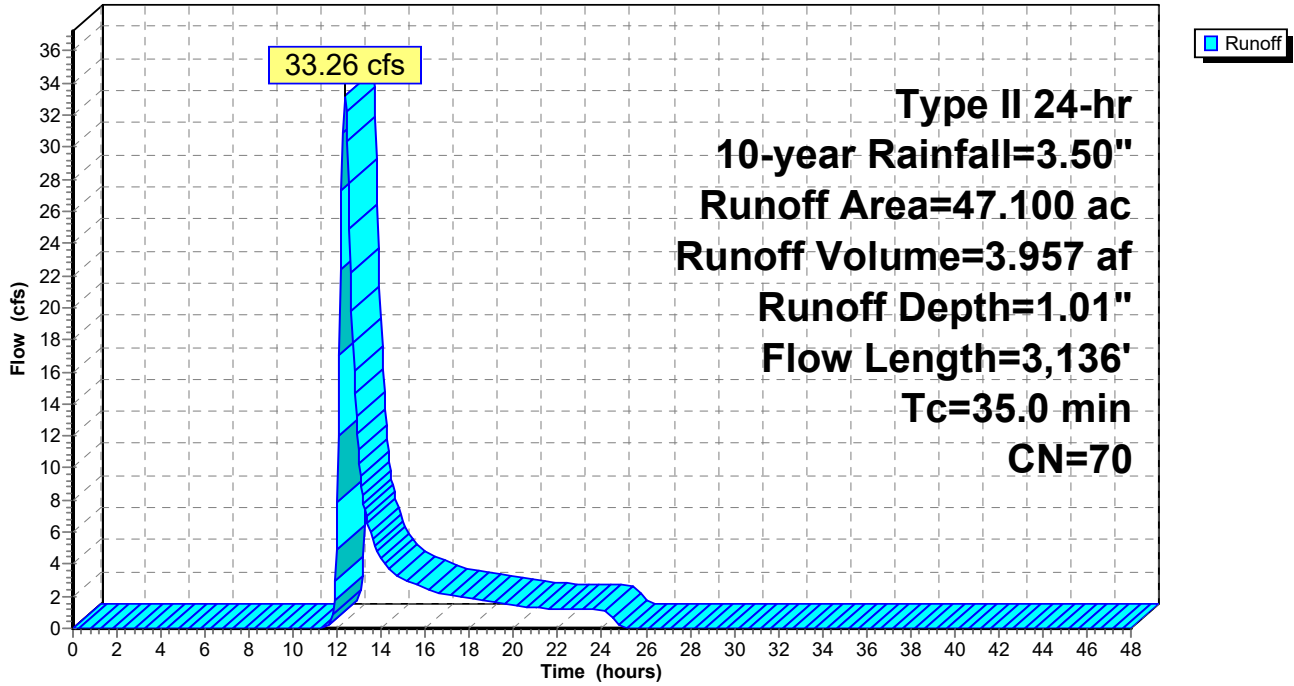
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
2.263	48	Brush, Good, HSG B
4.855	65	Brush, Good, HSG C
* 2.566	98	Impervious
5.659	58	Meadow, non-grazed, HSG B
23.239	71	Meadow, non-grazed, HSG C
2.347	61	>75% Grass cover, Good, HSG B
5.038	74	>75% Grass cover, Good, HSG C
1.056	98	Water Surface, HSG D
0.043	55	Woods, Good, HSG B
0.034	70	Woods, Good, HSG C
47.100	70	Weighted Average
43.478		92.31% Pervious Area
3.622		7.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	100	0.0500	0.22		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
11.2	964	0.0420	1.43		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.8	166	0.0392	0.99		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
1.9	321	0.0312	2.84		<b>Shallow Concentrated Flow,</b> Unpaved Kv= 16.1 fps
11.4	1,585	0.0230	2.31	7.69	<b>Parabolic Channel,</b> W=5.00' D=1.00' Area=3.3 sf Perim=5.5' n= 0.070 Sluggish weedy reaches w/pools
35.0	3,136	Total			

Subcatchment 54S:

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 55S: Sub 55**

Runoff = 13.01 cfs @ 12.43 hrs, Volume= 1.856 af, Depth= 0.80"

Routed to Link SP55 :

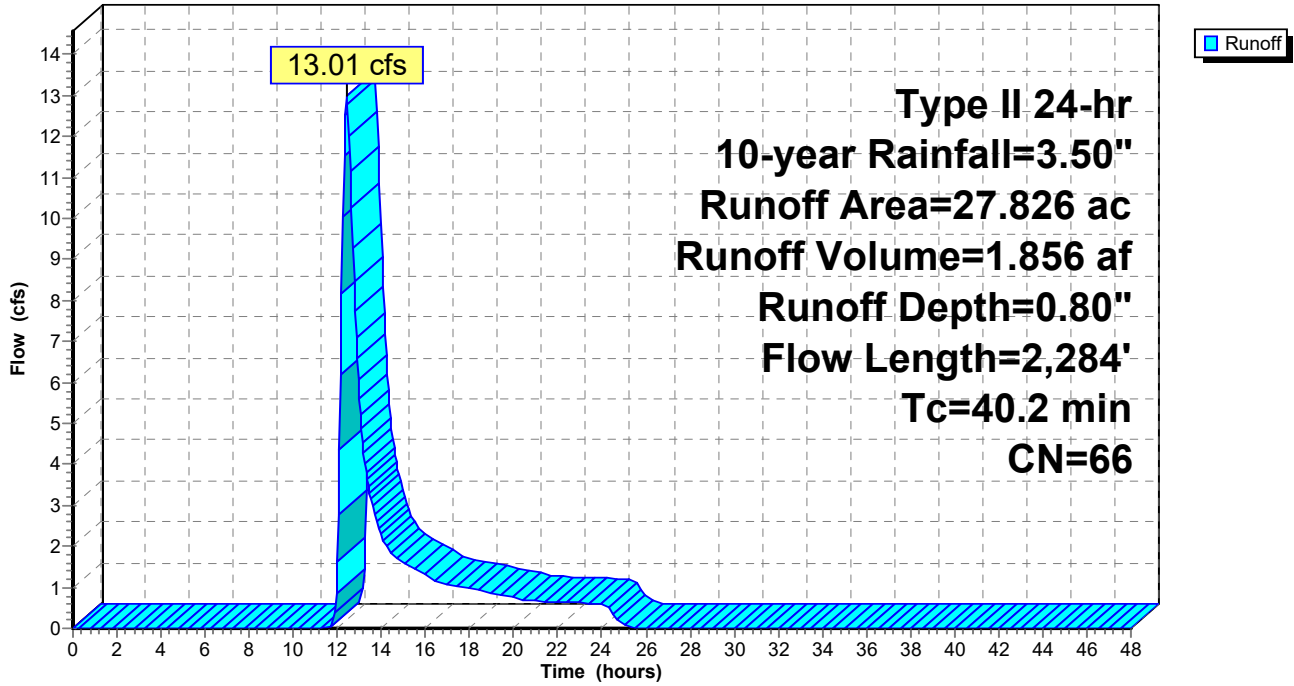
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
0.418	48	Brush, Good, HSG B
0.338	65	Brush, Good, HSG C
* 0.275	98	Impervious surface
9.179	58	Meadow, non-grazed, HSG B
17.187	71	Meadow, non-grazed, HSG C
0.192	55	Woods, Good, HSG B
0.237	70	Woods, Good, HSG C
27.826	66	Weighted Average
27.551		99.01% Pervious Area
0.275		0.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.2	100	0.0130	0.13		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
4.5	535	0.0810	1.99		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
21.5	1,175	0.0170	0.91		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.0	474	0.0530	7.94	21.17	<b>Parabolic Channel,</b> W=4.00' D=1.00' Area=2.7 sf Perim=4.6' n= 0.030 Earth, grassed & winding
40.2	2,284	Total			

Subcatchment 55S: Sub 55

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 56S: Sub 56**

Runoff = 38.94 cfs @ 12.29 hrs, Volume= 4.445 af, Depth= 0.85"  
 Routed to Link SP56 :

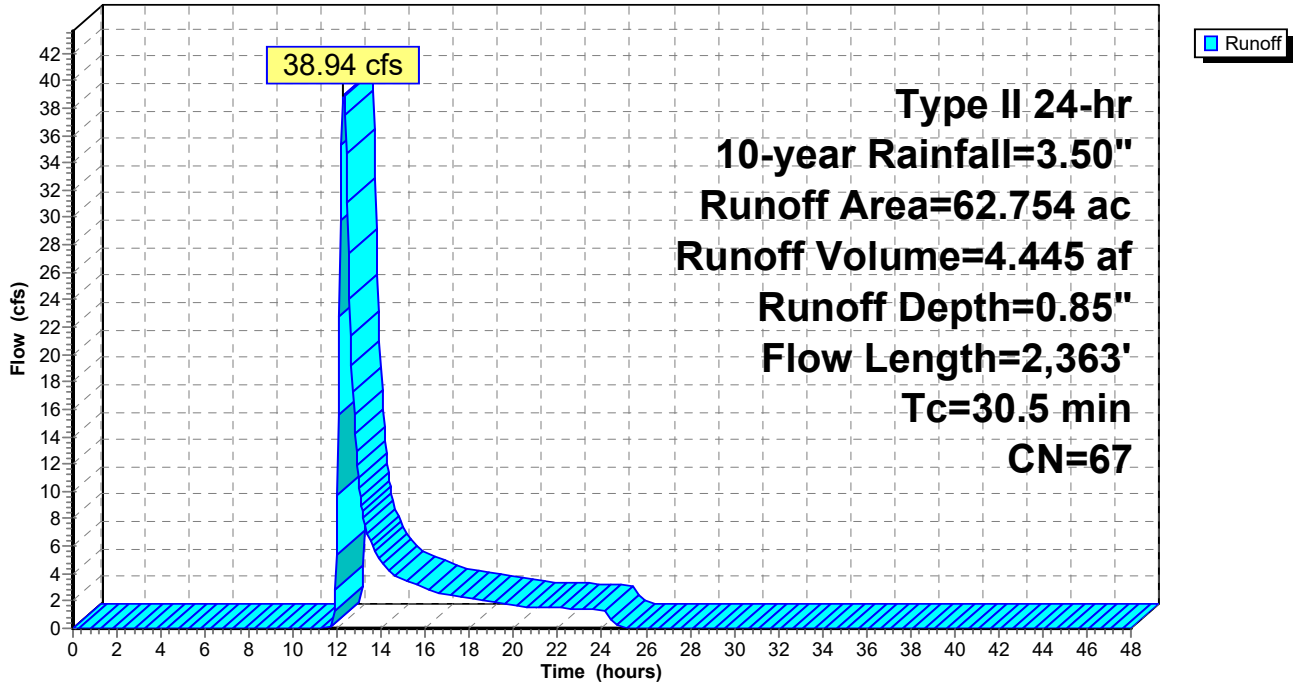
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

Area (ac)	CN	Description
0.895	48	Brush, Good, HSG B
1.460	65	Brush, Good, HSG C
13.366	58	Meadow, non-grazed, HSG B
40.081	71	Meadow, non-grazed, HSG C
1.244	55	Woods, Good, HSG B
5.708	70	Woods, Good, HSG C
62.754	67	Weighted Average
62.754		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	100	0.0575	0.23		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
7.3	501	0.0264	1.14		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
6.2	958	0.1336	2.56		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
6.8	644	0.0505	1.57		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.9	160	0.0344	0.93		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
30.5	2,363	Total			

Subcatchment 56S: Sub 56

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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## Summary for Reach 33R:

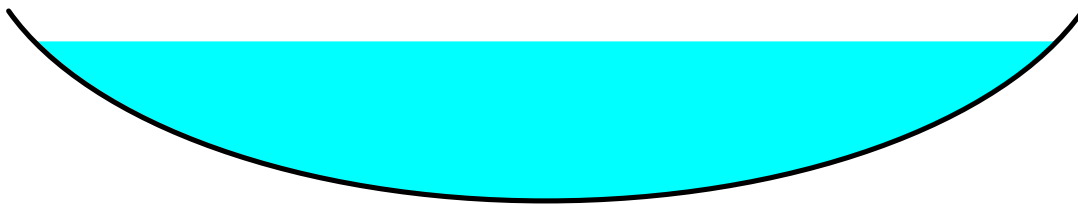
[79] Warning: Submerged Pond 34P Primary device # 1 OUTLET by 0.84'

Inflow Area = 25.797 ac, 1.16% Impervious, Inflow Depth = 0.62" for 10-year event  
Inflow = 7.83 cfs @ 12.41 hrs, Volume= 1.323 af  
Outflow = 7.31 cfs @ 12.86 hrs, Volume= 1.323 af, Atten= 7%, Lag= 27.2 min  
Routed to Link SP33 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 2.37 fps, Min. Travel Time= 13.2 min  
Avg. Velocity = 0.58 fps, Avg. Travel Time= 53.6 min

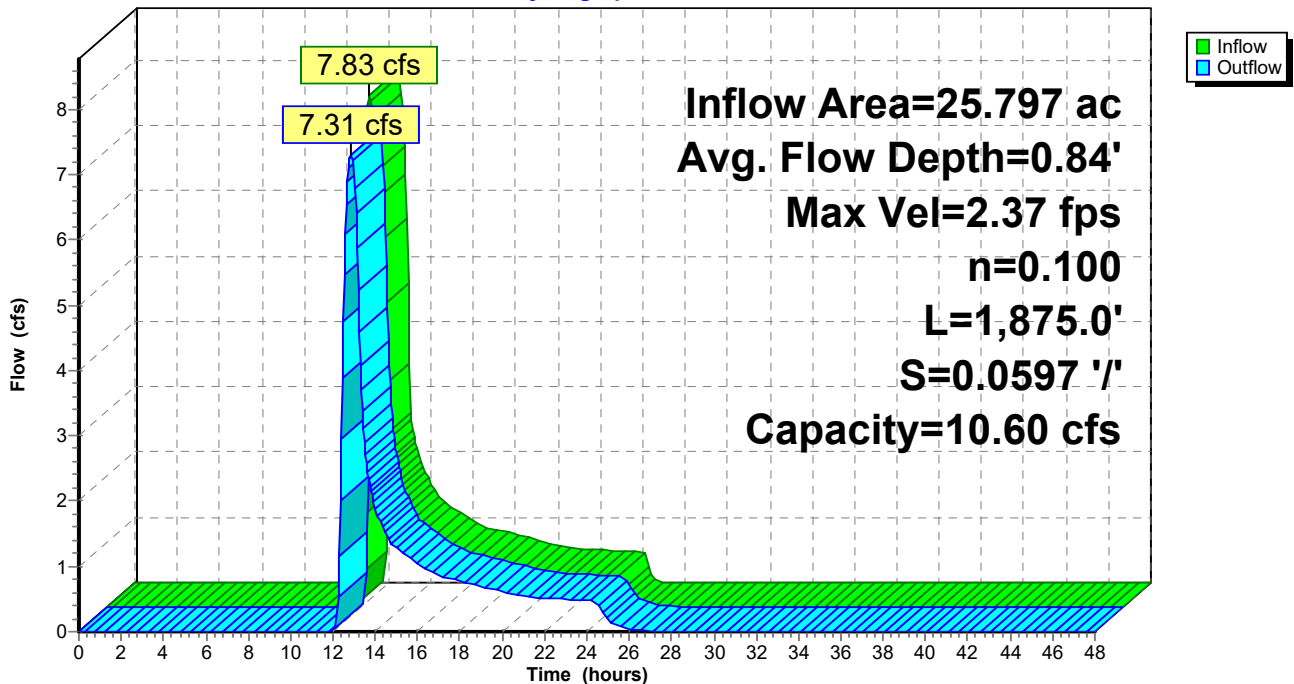
Peak Storage= 5,774 cf @ 12.64 hrs  
Average Depth at Peak Storage= 0.84' , Surface Width= 5.50'  
Bank-Full Depth= 1.00' Flow Area= 4.0 sf, Capacity= 10.60 cfs

6.00' x 1.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage  
Length= 1,875.0' Slope= 0.0597 '/'  
Inlet Invert= 578.00', Outlet Invert= 466.00'



## Reach 33R:

Hydrograph





# Mill Pt Pre 2

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Type II 24-hr 10-year Rainfall=3.50"

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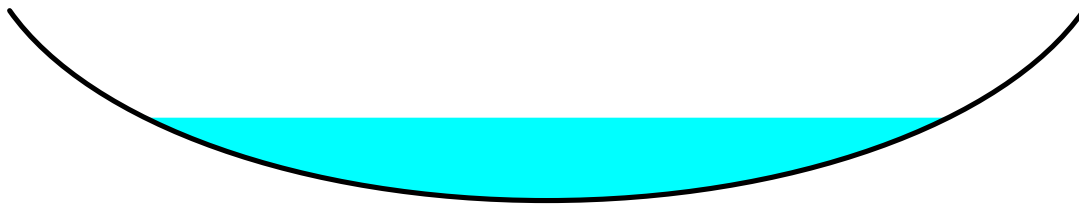
## Summary for Reach 39R:

Inflow Area = 20.880 ac, 7.94% Impervious, Inflow Depth = 0.95" for 10-year event  
Inflow = 15.72 cfs @ 12.26 hrs, Volume= 1.660 af  
Outflow = 14.73 cfs @ 12.43 hrs, Volume= 1.660 af, Atten= 6%, Lag= 10.4 min  
Routed to Link SP39 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 3.19 fps, Min. Travel Time= 5.8 min  
Avg. Velocity = 1.00 fps, Avg. Travel Time= 18.5 min

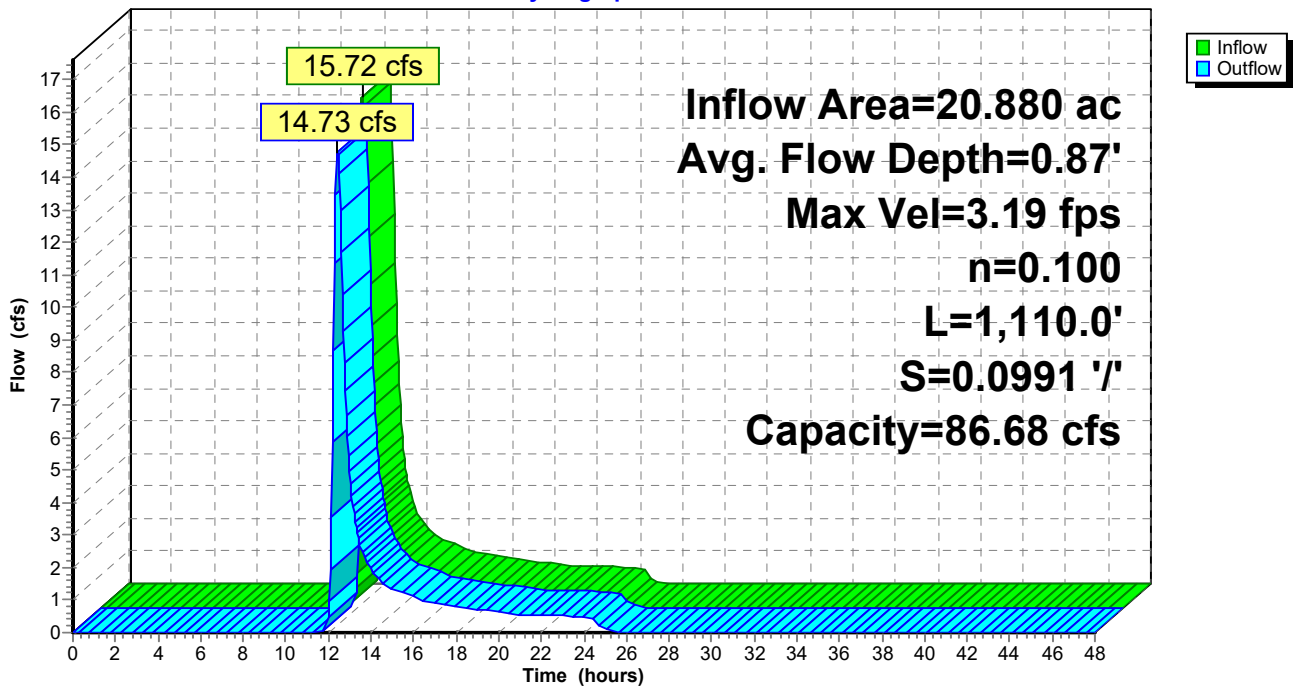
Peak Storage= 5,125 cf @ 12.34 hrs  
Average Depth at Peak Storage= 0.87' , Surface Width= 7.93'  
Bank-Full Depth= 2.00' Flow Area= 16.0 sf, Capacity= 86.68 cfs

12.00' x 2.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage  
Length= 1,110.0' Slope= 0.0991 '/'  
Inlet Invert= 526.00', Outlet Invert= 416.00'



## Reach 39R:

Hydrograph



# Mill Pt Pre 2

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Type II 24-hr 10-year Rainfall=3.50"

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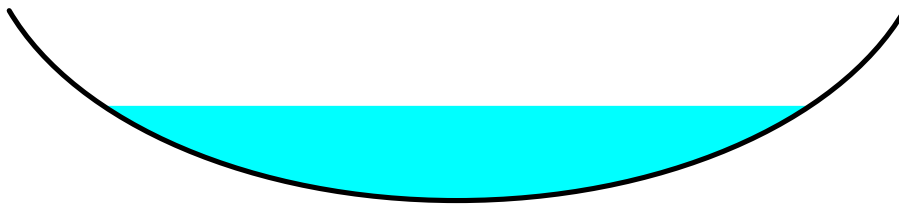
## Summary for Reach 42R: S-NSD-16

Inflow Area = 33.652 ac, 1.78% Impervious, Inflow Depth = 0.71" for 10-year event  
Inflow = 13.64 cfs @ 12.41 hrs, Volume= 1.977 af  
Outflow = 11.83 cfs @ 12.77 hrs, Volume= 1.977 af, Atten= 13%, Lag= 21.4 min  
Routed to Link SP42 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 2.52 fps, Min. Travel Time= 11.8 min  
Avg. Velocity = 0.70 fps, Avg. Travel Time= 42.4 min

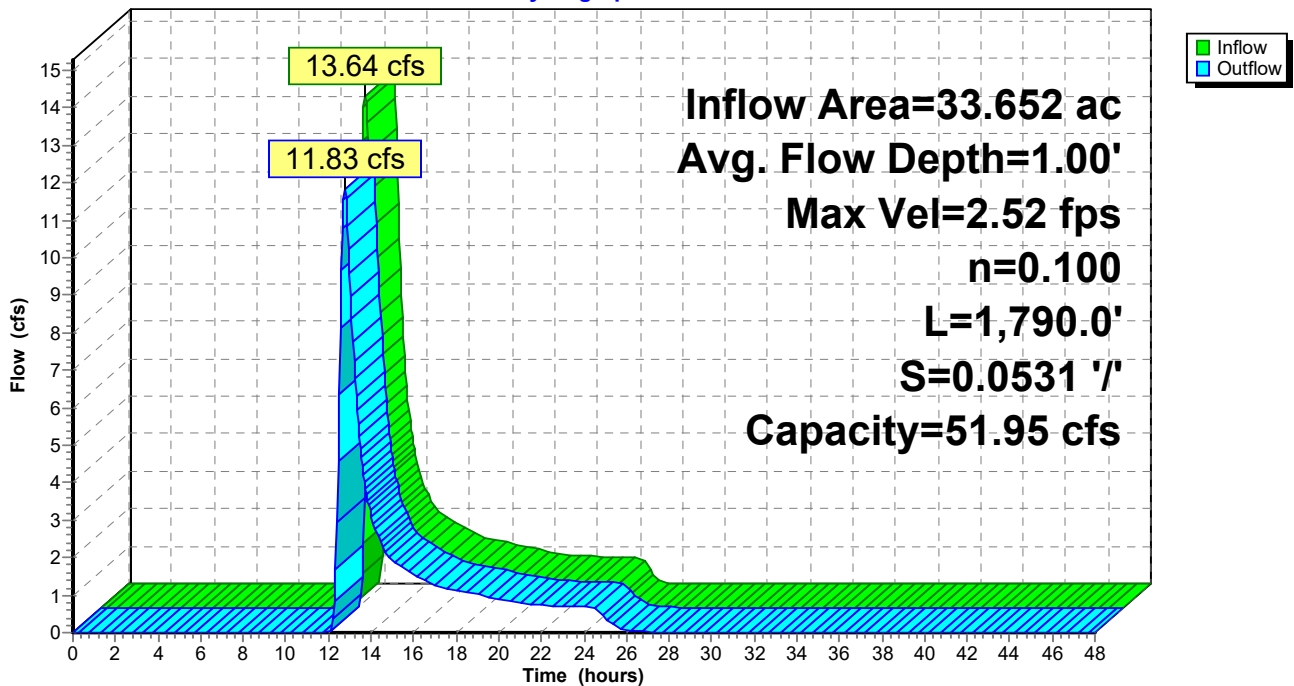
Peak Storage= 8,402 cf @ 12.57 hrs  
Average Depth at Peak Storage= 1.00' , Surface Width= 7.06'  
Bank-Full Depth= 2.00' Flow Area= 13.3 sf, Capacity= 51.95 cfs

10.00' x 2.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage  
Length= 1,790.0' Slope= 0.0531 '/'  
Inlet Invert= 470.00', Outlet Invert= 375.00'



## Reach 42R: S-NSD-16

Hydrograph



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**Summary for Pond 34P: VAN EPPS RD CULVERT**

Inflow Area = 25.797 ac, 1.16% Impervious, Inflow Depth = 0.62" for 10-year event  
 Inflow = 12.06 cfs @ 12.21 hrs, Volume= 1.323 af  
 Outflow = 7.83 cfs @ 12.41 hrs, Volume= 1.323 af, Atten= 35%, Lag= 11.7 min  
 Primary = 7.83 cfs @ 12.41 hrs, Volume= 1.323 af  
 Routed to Reach 33R :  
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af  
 Routed to Reach 33R :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 583.44' @ 12.41 hrs Surf.Area= 4,691 sf Storage= 4,362 cf

Plug-Flow detention time= 2.5 min calculated for 1.322 af (100% of inflow)  
 Center-of-Mass det. time= 2.5 min ( 915.9 - 913.3 )

Volume	Invert	Avail.Storage	Storage Description			
#1	580.00'	32,769 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
580.00	1	5.0	0	0	1	
582.00	935	220.0	644	644	3,857	
584.00	6,900	505.0	6,917	7,561	20,316	
585.00	12,860	515.0	9,727	17,288	21,274	
586.00	18,260	645.0	15,481	32,769	33,289	

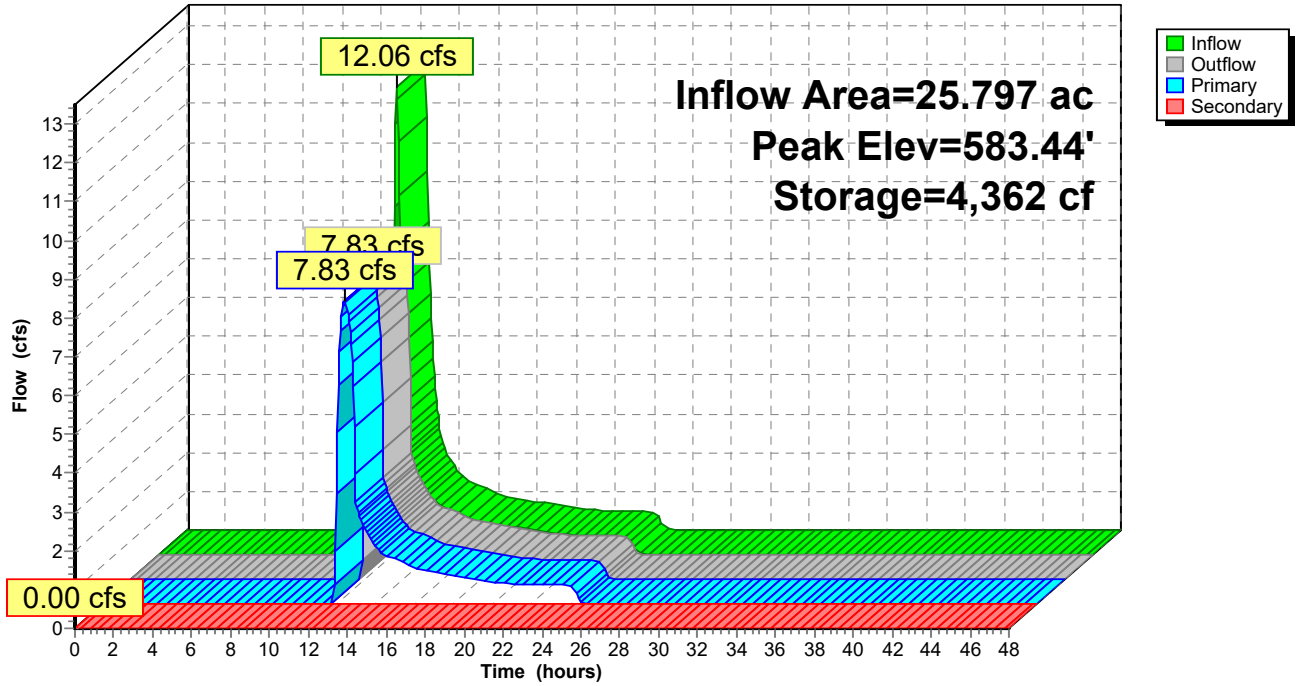
Device	Routing	Invert	Outlet Devices
#1	Primary	580.00'	<b>15.0" Round Culvert</b> L= 79.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 580.00' / 578.00' S= 0.0253 ' /' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Secondary	585.00'	<b>15.0' long + 3.0 ' /' SideZ x 25.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

**Primary OutFlow** Max=7.83 cfs @ 12.41 hrs HW=583.44' (Free Discharge)  
 ↑1=Culvert (Inlet Controls 7.83 cfs @ 6.38 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=580.00' (Free Discharge)  
 ↑2=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)

### Pond 34P: VAN EPPS RD CULVERT

Hydrograph



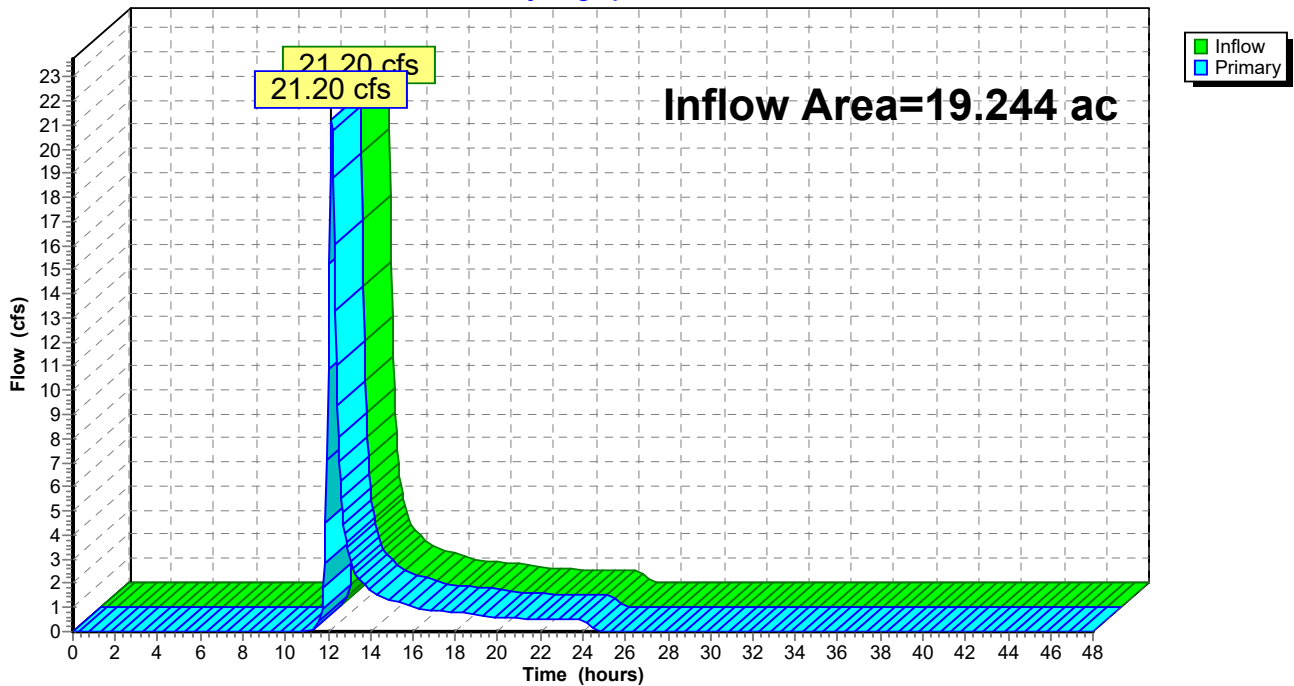
### Summary for Link SP25:

Inflow Area = 19.244 ac, 0.52% Impervious, Inflow Depth = 1.12" for 10-year event  
Inflow = 21.20 cfs @ 12.17 hrs, Volume= 1.798 af  
Primary = 21.20 cfs @ 12.17 hrs, Volume= 1.798 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP25:

Hydrograph



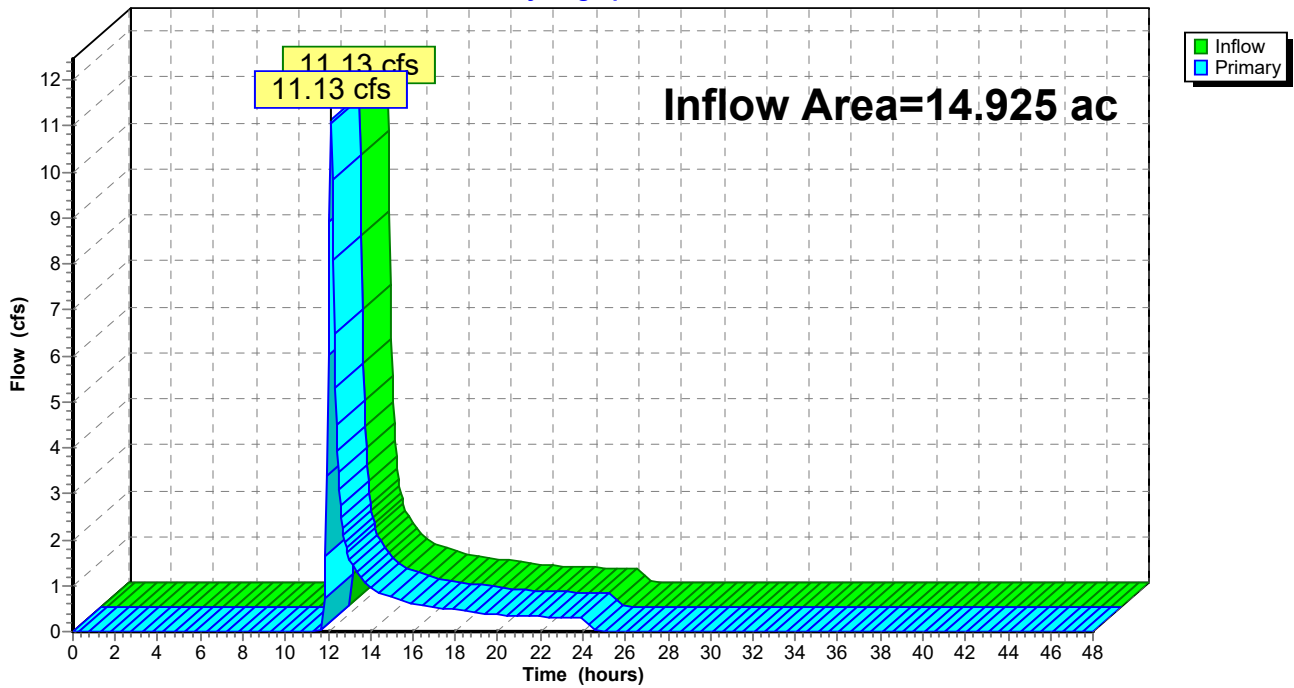
### Summary for Link SP26:

Inflow Area = 14.925 ac, 4.50% Impervious, Inflow Depth = 0.75" for 10-year event  
Inflow = 11.13 cfs @ 12.13 hrs, Volume= 0.935 af  
Primary = 11.13 cfs @ 12.13 hrs, Volume= 0.935 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP26:

Hydrograph



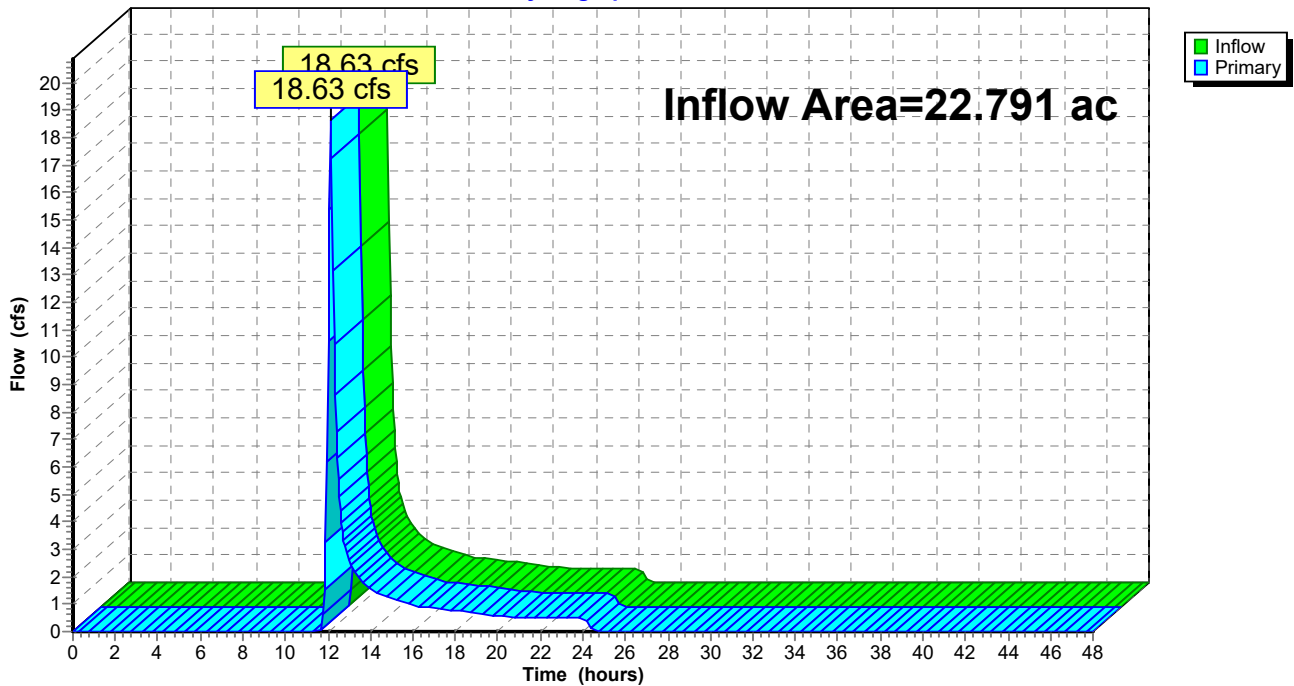
Summary for Link SP27:

Inflow Area = 22.791 ac, 1.95% Impervious, Inflow Depth = 0.80" for 10-year event  
Inflow = 18.63 cfs @ 12.13 hrs, Volume= 1.520 af  
Primary = 18.63 cfs @ 12.13 hrs, Volume= 1.520 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP27:

Hydrograph



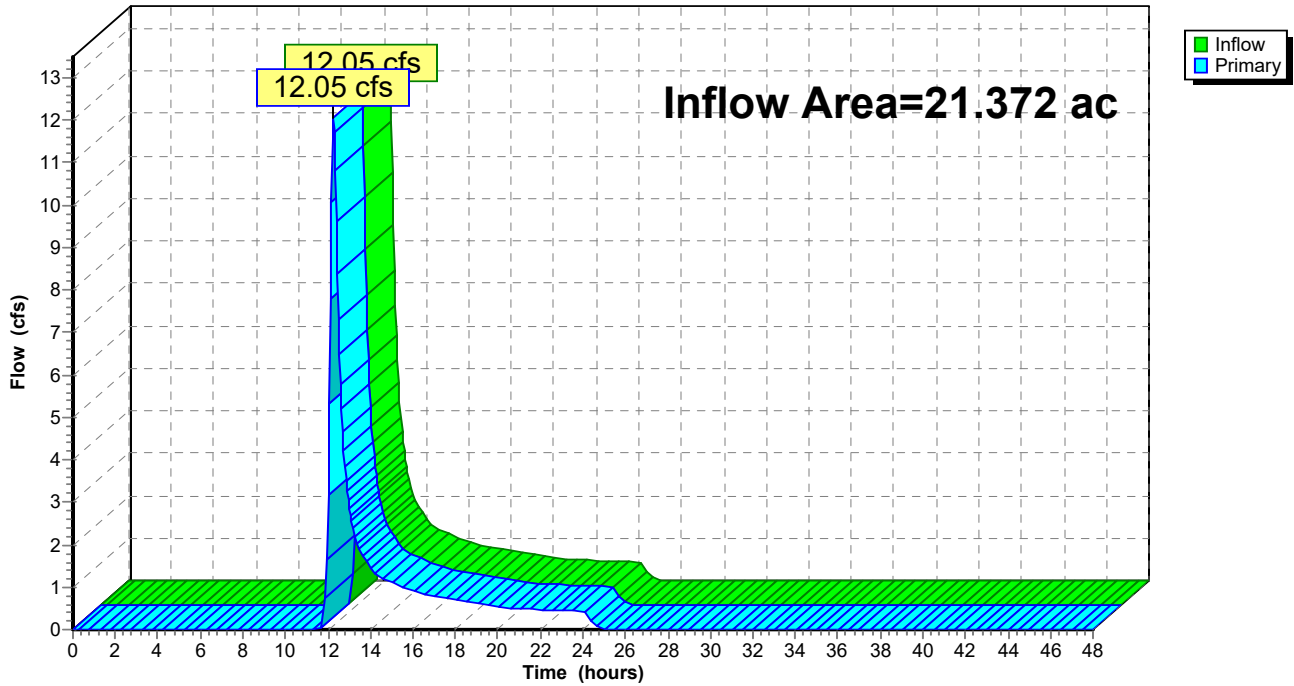
### Summary for Link SP28:

Inflow Area = 21.372 ac, 0.53% Impervious, Inflow Depth = 0.75" for 10-year event  
Inflow = 12.05 cfs @ 12.25 hrs, Volume= 1.339 af  
Primary = 12.05 cfs @ 12.25 hrs, Volume= 1.339 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP28:

Hydrograph





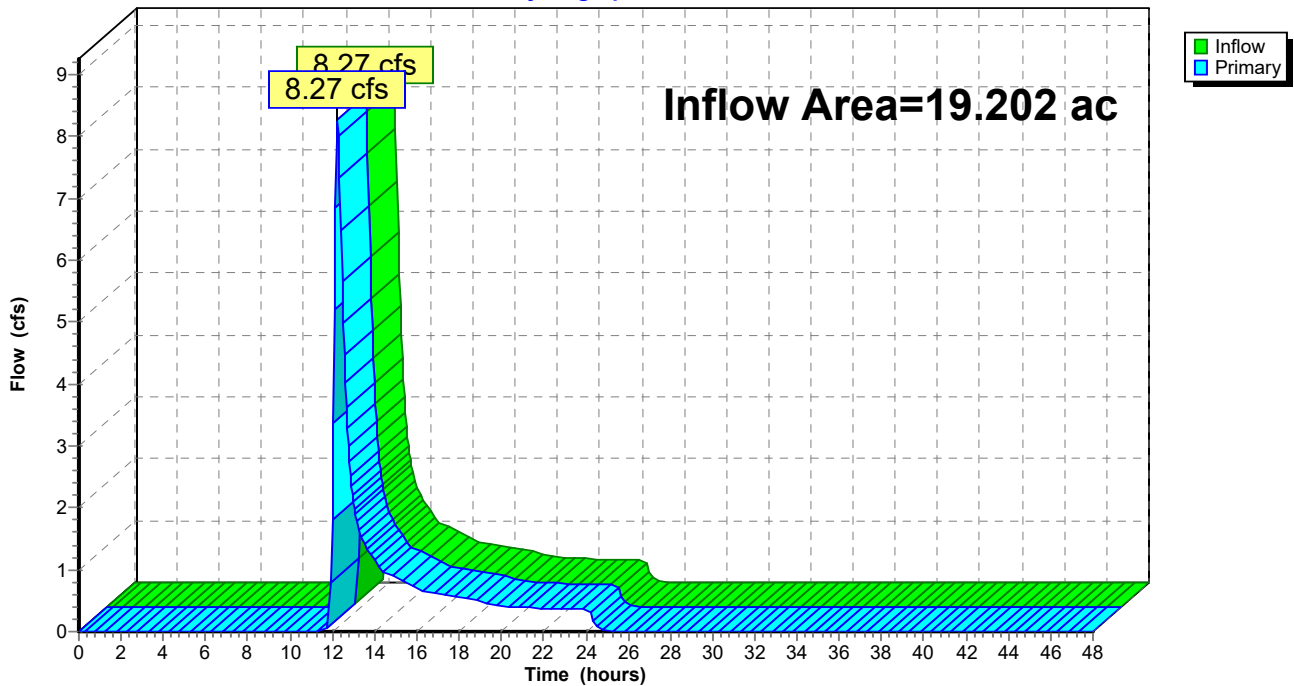
### Summary for Link SP29:

Inflow Area = 19.202 ac, 1.21% Impervious, Inflow Depth = 0.62" for 10-year event  
Inflow = 8.27 cfs @ 12.25 hrs, Volume= 0.985 af  
Primary = 8.27 cfs @ 12.25 hrs, Volume= 0.985 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP29:

Hydrograph



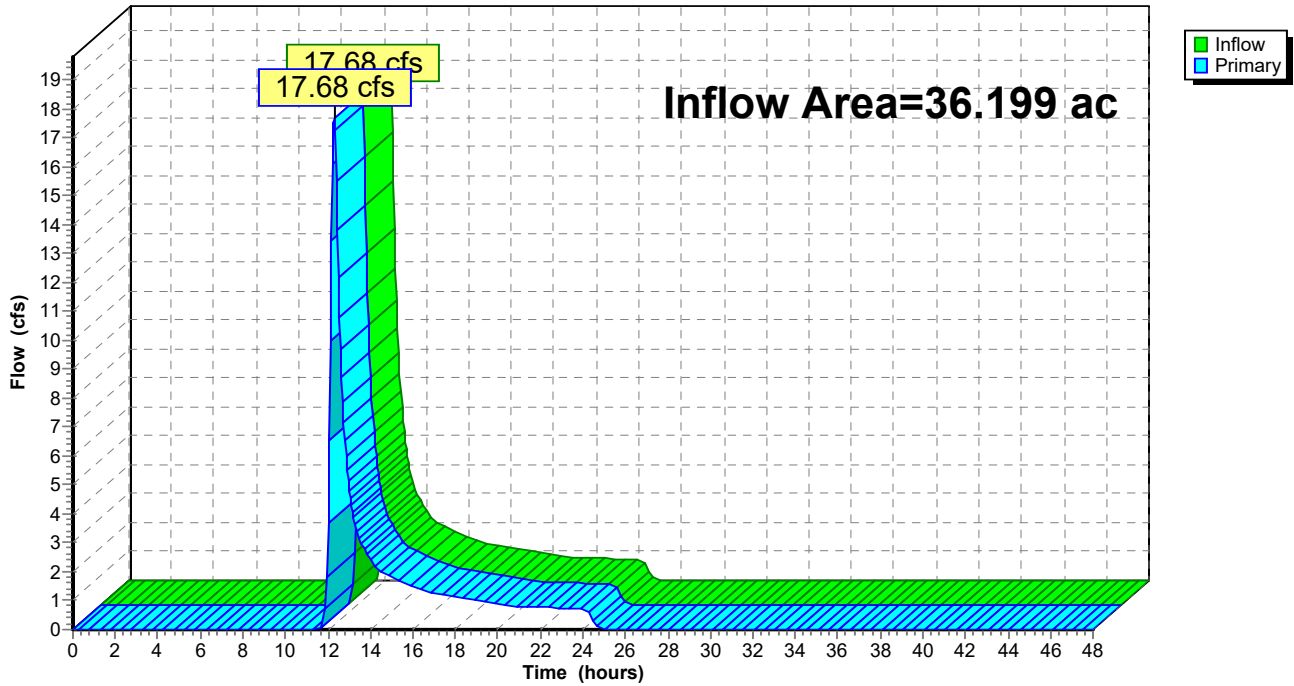
### Summary for Link SP30:

Inflow Area = 36.199 ac, 1.23% Impervious, Inflow Depth = 0.71" for 10-year event  
Inflow = 17.68 cfs @ 12.28 hrs, Volume= 2.127 af  
Primary = 17.68 cfs @ 12.28 hrs, Volume= 2.127 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP30:

Hydrograph



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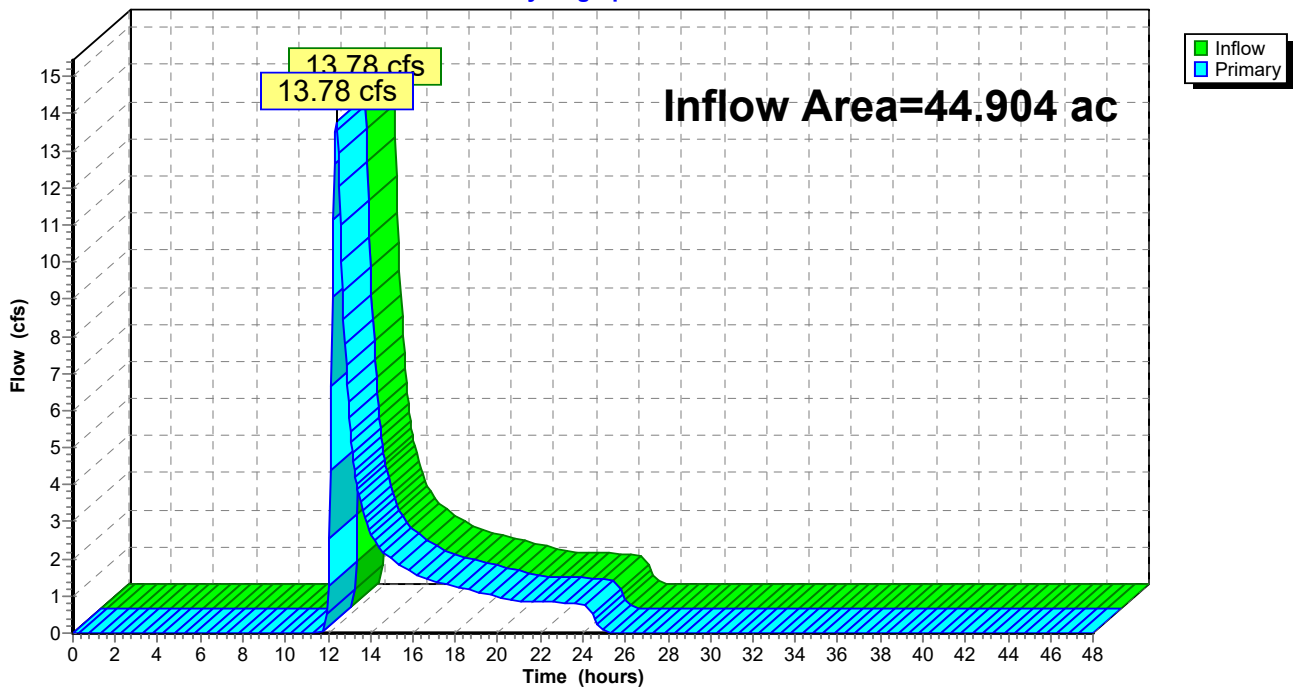
## Summary for Link SP32:

Inflow Area = 44.904 ac, 6.23% Impervious, Inflow Depth = 0.57" for 10-year event  
Inflow = 13.78 cfs @ 12.40 hrs, Volume= 2.143 af  
Primary = 13.78 cfs @ 12.40 hrs, Volume= 2.143 af, Atten= 0%, Lag= 0.0 min  
Routed to Link SP34 : SP31

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP32:

Hydrograph



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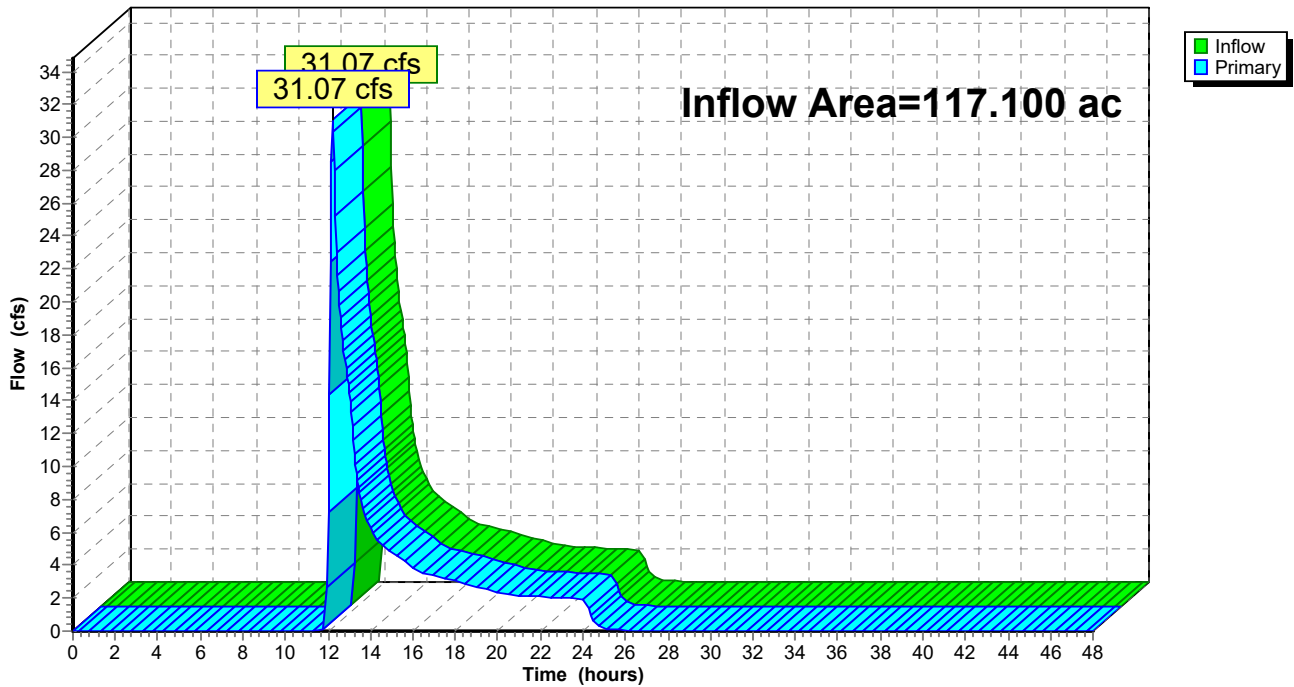
## Summary for Link SP33:

Inflow Area = 117.100 ac, 0.78% Impervious, Inflow Depth = 0.52" for 10-year event  
Inflow = 31.07 cfs @ 12.22 hrs, Volume= 5.063 af  
Primary = 31.07 cfs @ 12.22 hrs, Volume= 5.063 af, Atten= 0%, Lag= 0.0 min  
Routed to Link SP34 : SP31

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP33:

Hydrograph



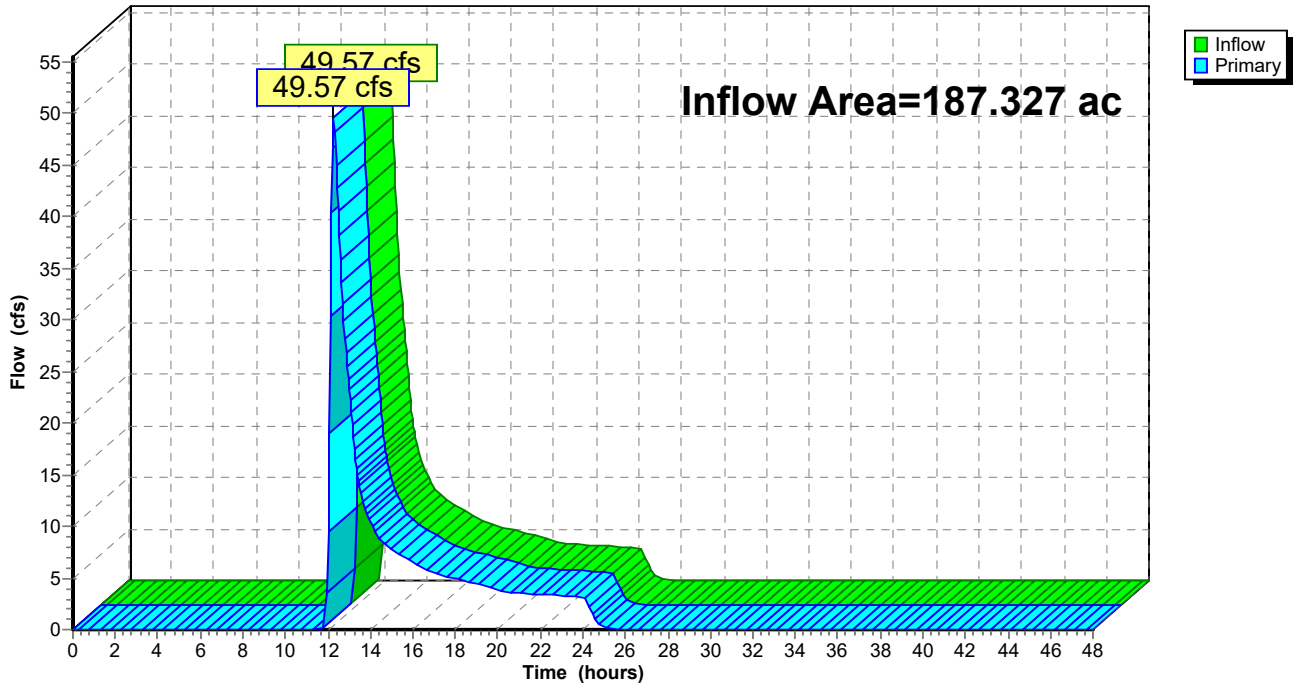
### Summary for Link SP34: SP31

Inflow Area = 187.327 ac, 1.98% Impervious, Inflow Depth = 0.54" for 10-year event  
Inflow = 49.57 cfs @ 12.27 hrs, Volume= 8.415 af  
Primary = 49.57 cfs @ 12.27 hrs, Volume= 8.415 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP34: SP31

Hydrograph



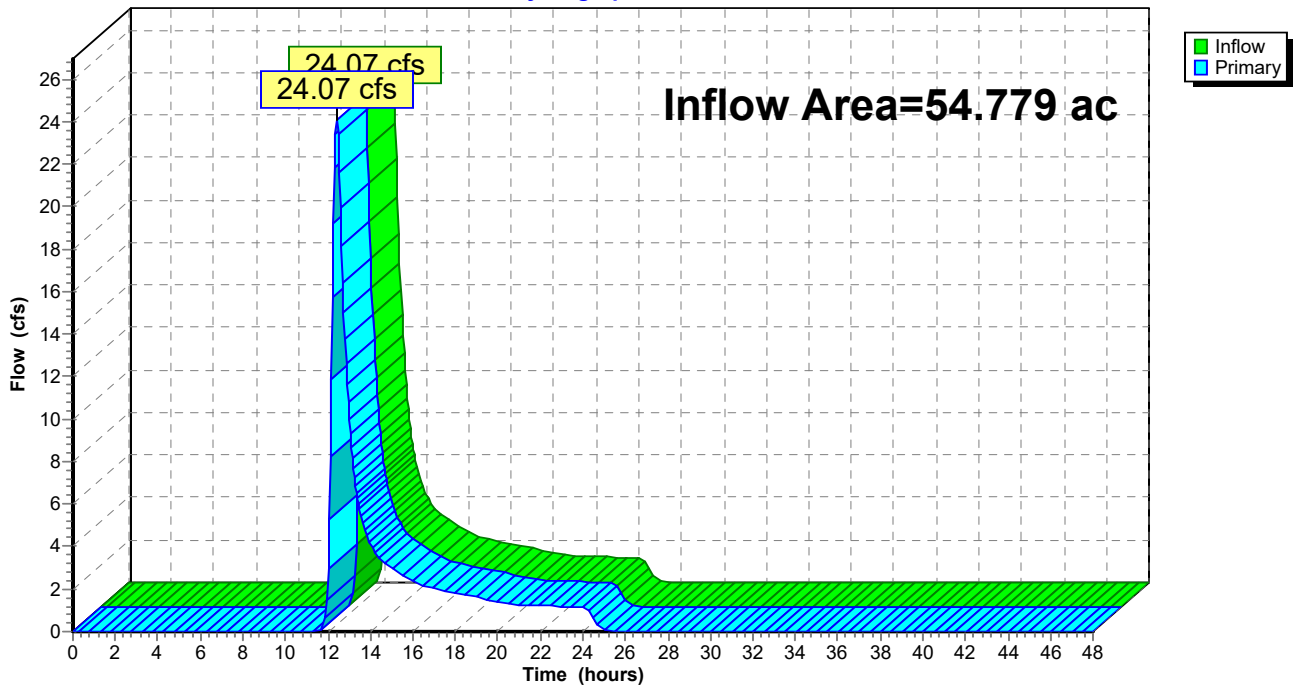
### Summary for Link SP35:

Inflow Area = 54.779 ac, 2.01% Impervious, Inflow Depth = 0.75" for 10-year event  
Inflow = 24.07 cfs @ 12.41 hrs, Volume= 3.433 af  
Primary = 24.07 cfs @ 12.41 hrs, Volume= 3.433 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP35:

Hydrograph



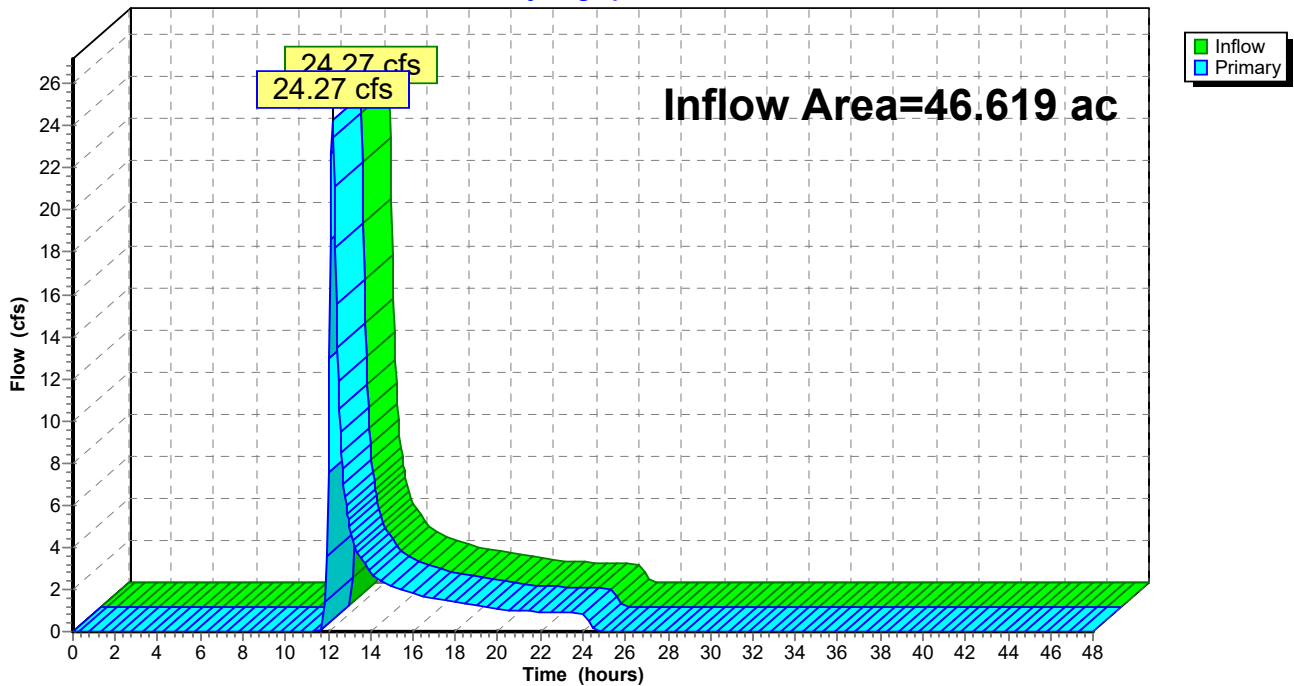
### Summary for Link SP36:

Inflow Area = 46.619 ac, 1.12% Impervious, Inflow Depth = 0.66" for 10-year event  
Inflow = 24.27 cfs @ 12.21 hrs, Volume= 2.562 af  
Primary = 24.27 cfs @ 12.21 hrs, Volume= 2.562 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP36:

Hydrograph



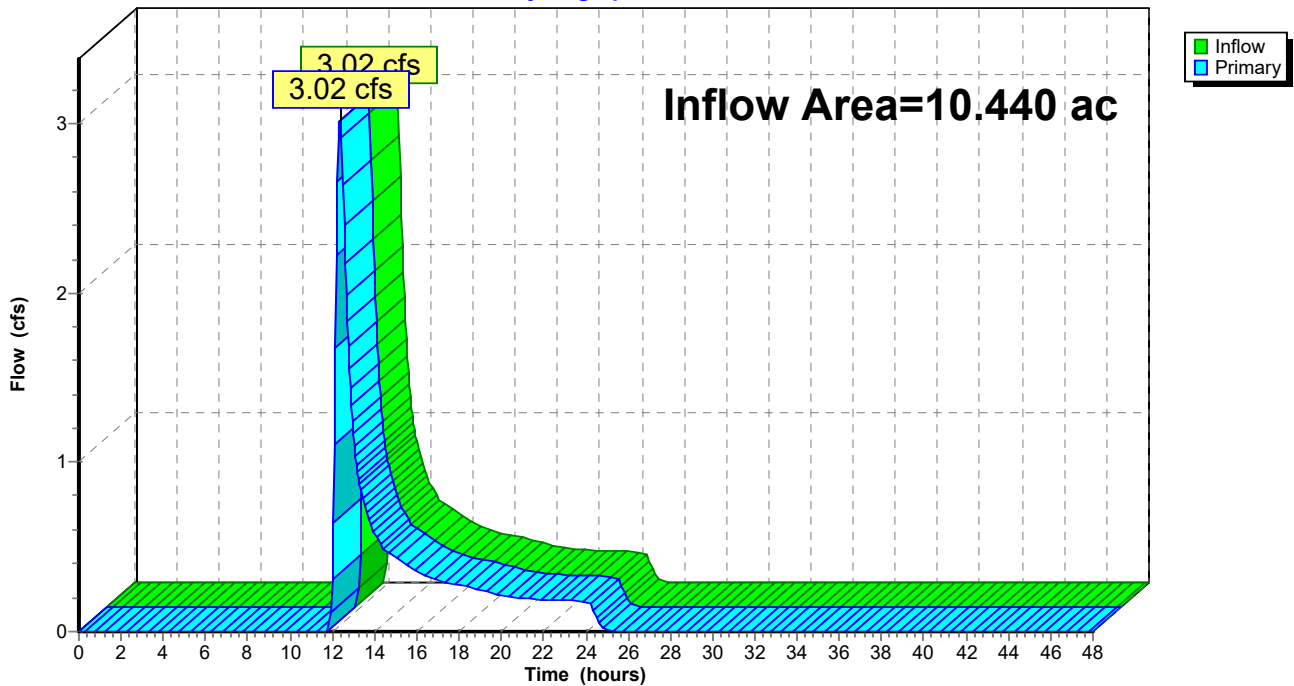
### Summary for Link SP37:

Inflow Area = 10.440 ac, 5.80% Impervious, Inflow Depth = 0.53" for 10-year event  
Inflow = 3.02 cfs @ 12.36 hrs, Volume= 0.462 af  
Primary = 3.02 cfs @ 12.36 hrs, Volume= 0.462 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP37:

Hydrograph





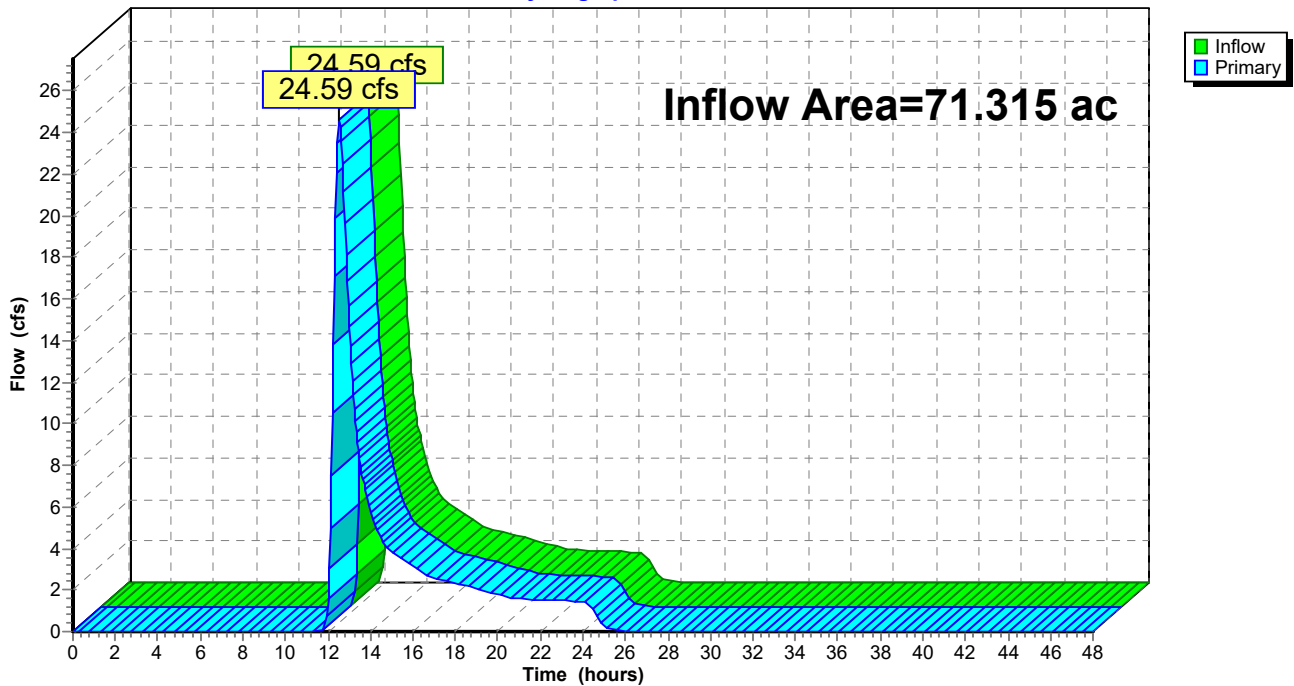
### Summary for Link SP38:

Inflow Area = 71.315 ac, 1.82% Impervious, Inflow Depth = 0.71" for 10-year event  
Inflow = 24.59 cfs @ 12.55 hrs, Volume= 4.190 af  
Primary = 24.59 cfs @ 12.55 hrs, Volume= 4.190 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP38:

Hydrograph



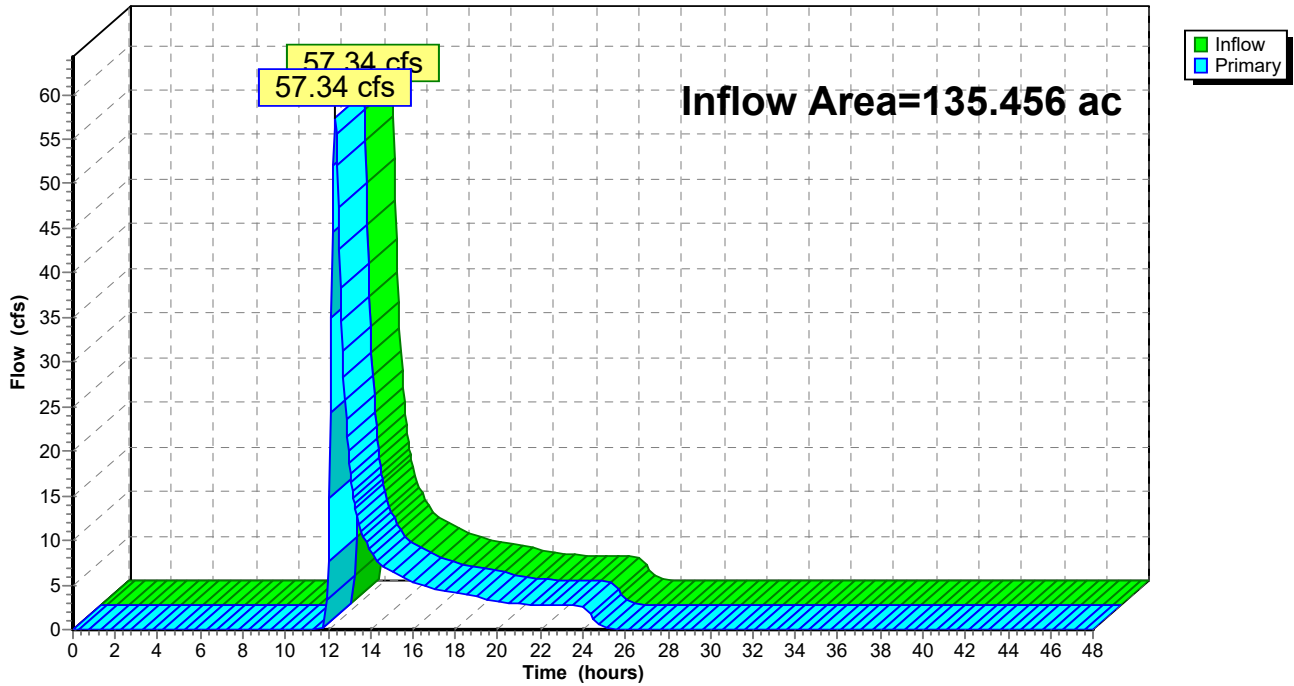
### Summary for Link SP39:

Inflow Area = 135.456 ac, 3.35% Impervious, Inflow Depth = 0.67" for 10-year event  
Inflow = 57.34 cfs @ 12.34 hrs, Volume= 7.536 af  
Primary = 57.34 cfs @ 12.34 hrs, Volume= 7.536 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP39:

Hydrograph



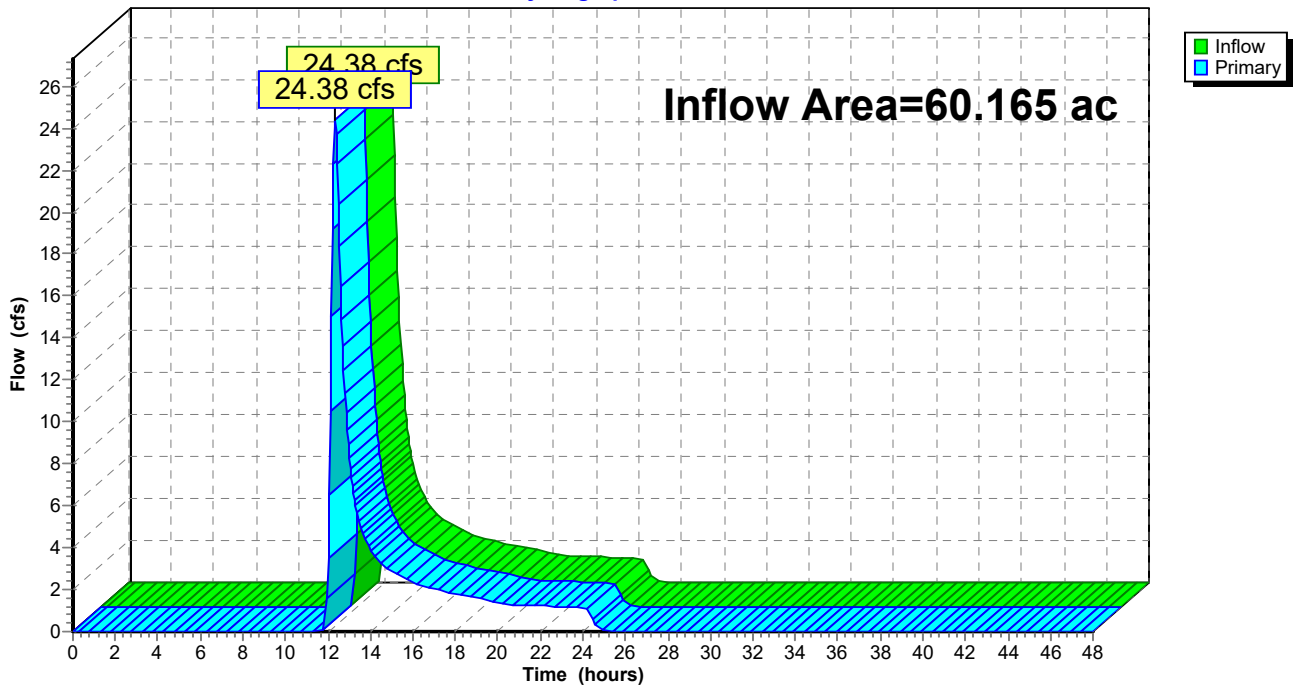
### Summary for Link SP41:

Inflow Area = 60.165 ac, 2.55% Impervious, Inflow Depth = 0.66" for 10-year event  
Inflow = 24.38 cfs @ 12.34 hrs, Volume= 3.307 af  
Primary = 24.38 cfs @ 12.34 hrs, Volume= 3.307 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP41:

Hydrograph



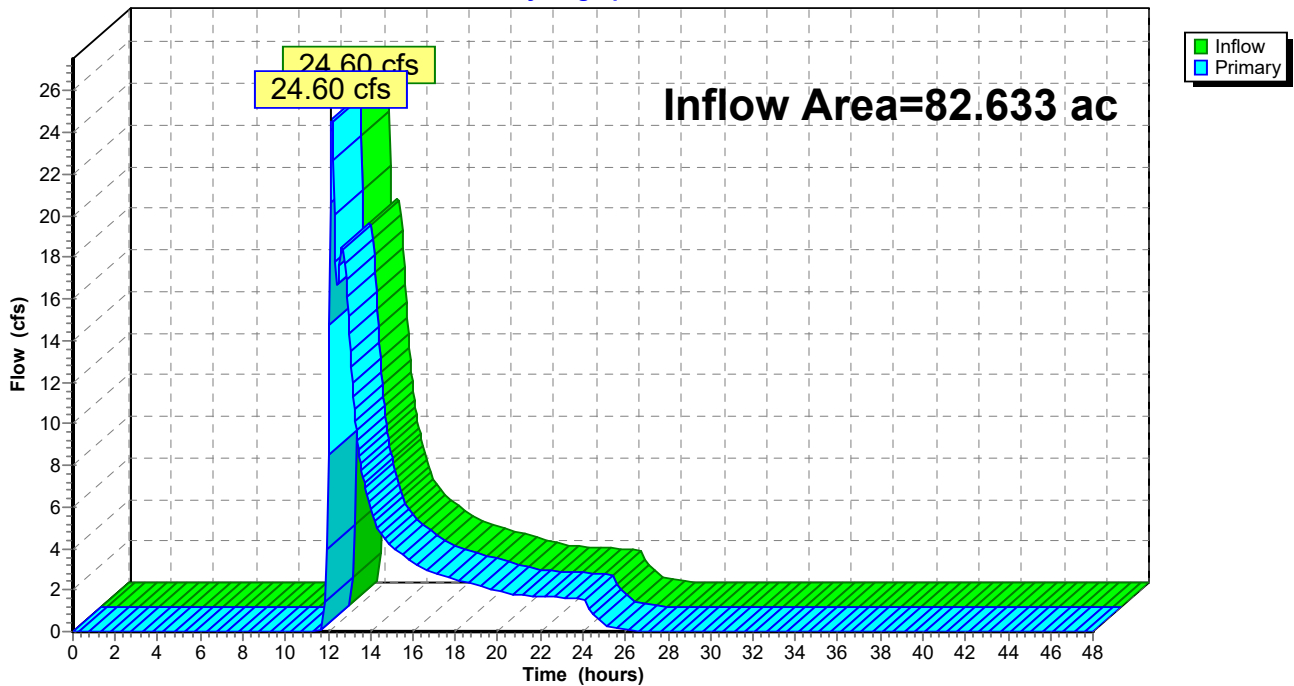
### Summary for Link SP42:

Inflow Area = 82.633 ac, 3.01% Impervious, Inflow Depth = 0.65" for 10-year event  
Inflow = 24.60 cfs @ 12.18 hrs, Volume= 4.489 af  
Primary = 24.60 cfs @ 12.18 hrs, Volume= 4.489 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP42:

Hydrograph



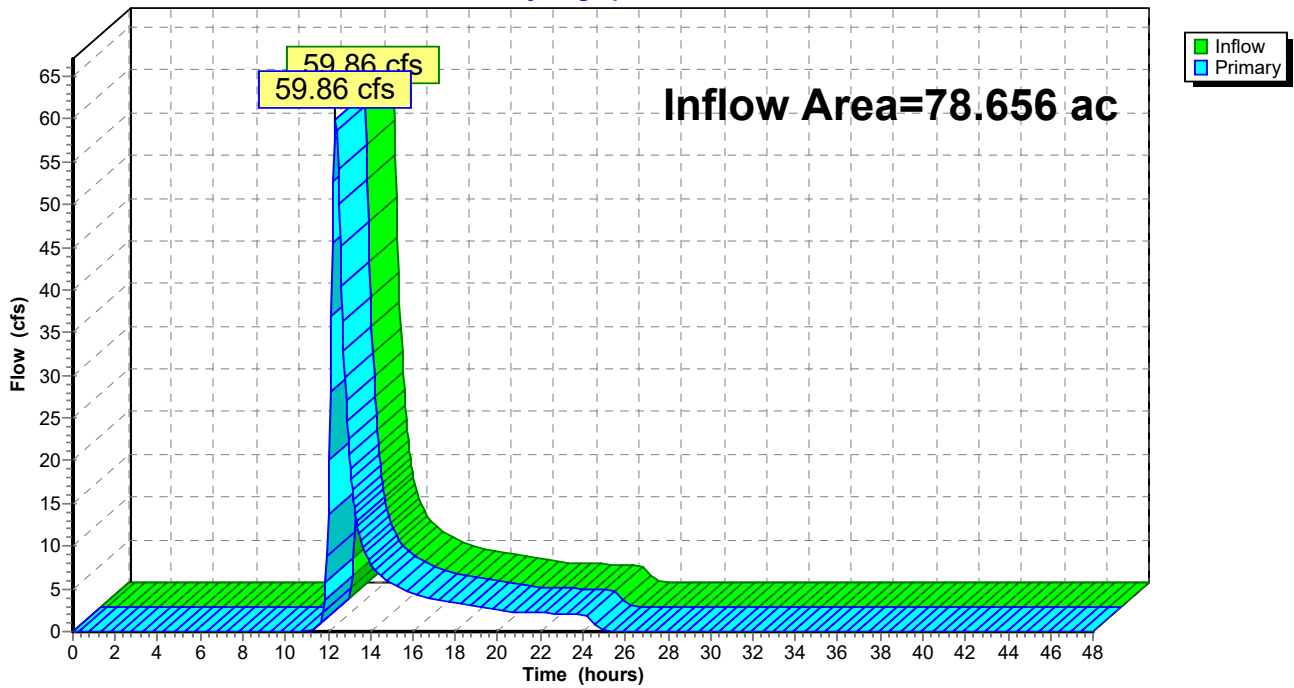
### Summary for Link SP48:

Inflow Area = 78.656 ac, 2.88% Impervious, Inflow Depth = 1.12" for 10-year event  
Inflow = 59.86 cfs @ 12.37 hrs, Volume= 7.347 af  
Primary = 59.86 cfs @ 12.37 hrs, Volume= 7.347 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP48:

Hydrograph



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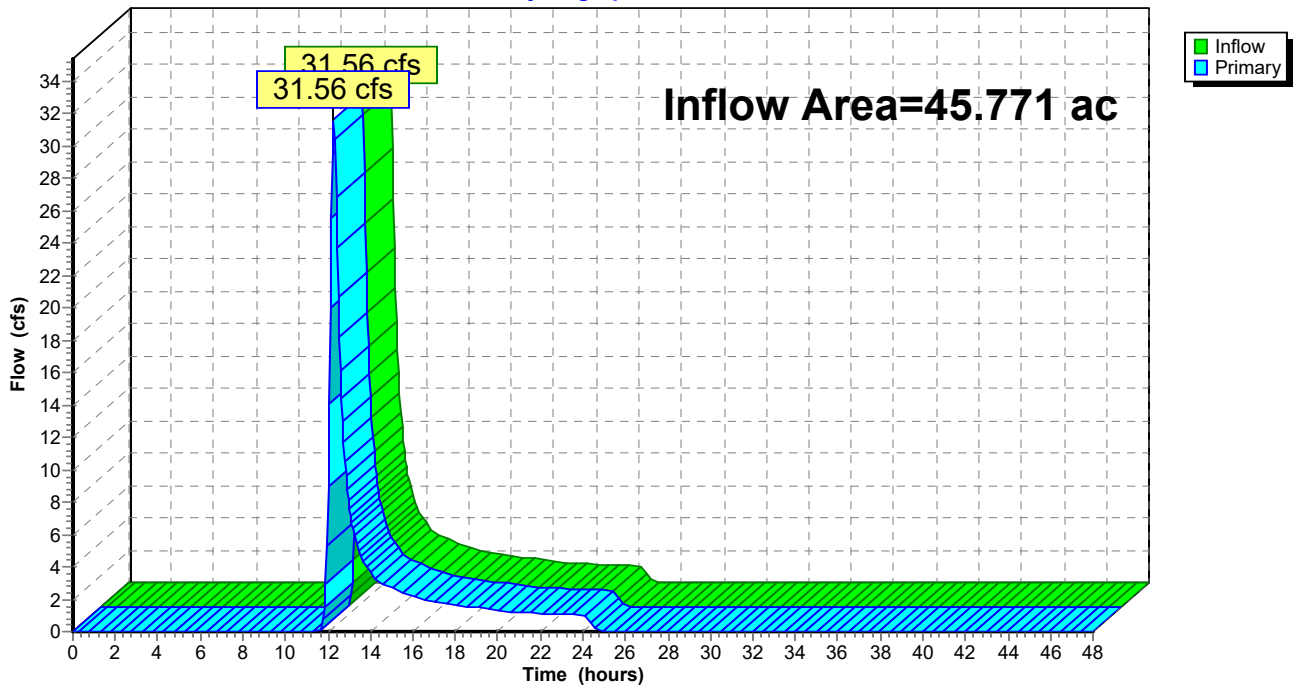
**Summary for Link SP50:**

Inflow Area = 45.771 ac, 1.25% Impervious, Inflow Depth = 0.90" for 10-year event  
Inflow = 31.56 cfs @ 12.27 hrs, Volume= 3.438 af  
Primary = 31.56 cfs @ 12.27 hrs, Volume= 3.438 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

**Link SP50:**

Hydrograph



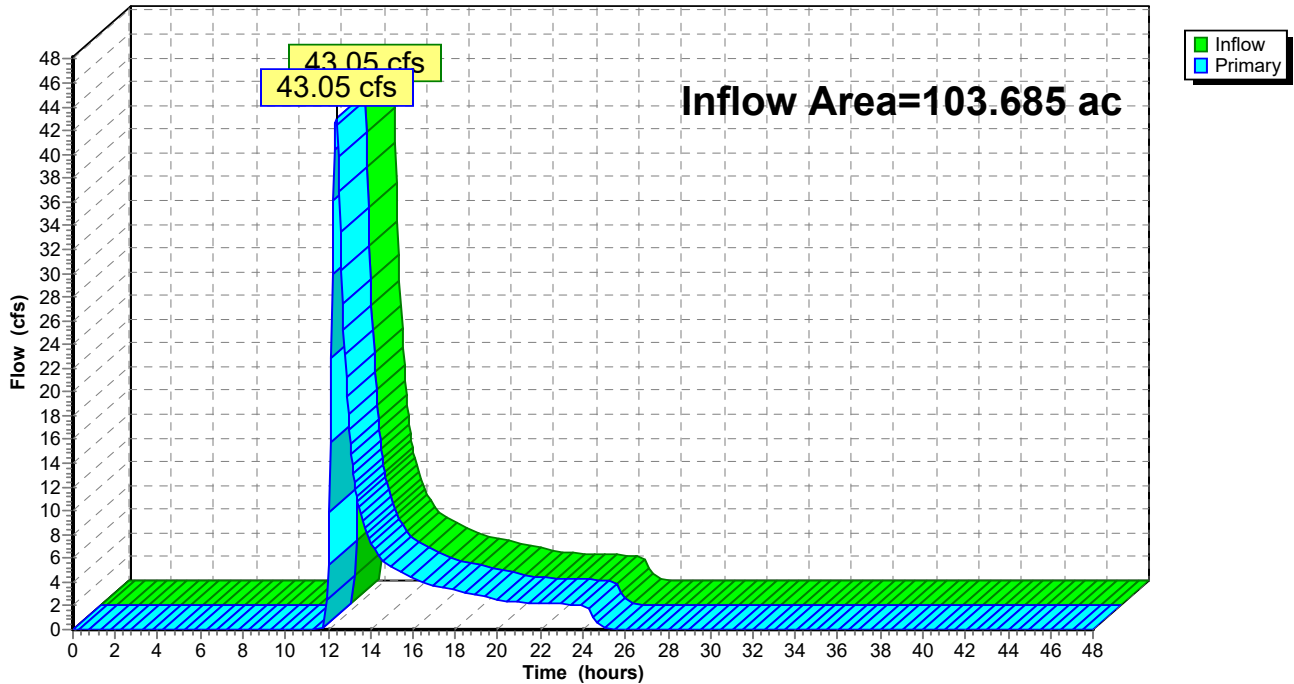
### Summary for Link SP51:

Inflow Area = 103.685 ac, 1.03% Impervious, Inflow Depth = 0.71" for 10-year event  
Inflow = 43.05 cfs @ 12.39 hrs, Volume= 6.092 af  
Primary = 43.05 cfs @ 12.39 hrs, Volume= 6.092 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP51:

Hydrograph



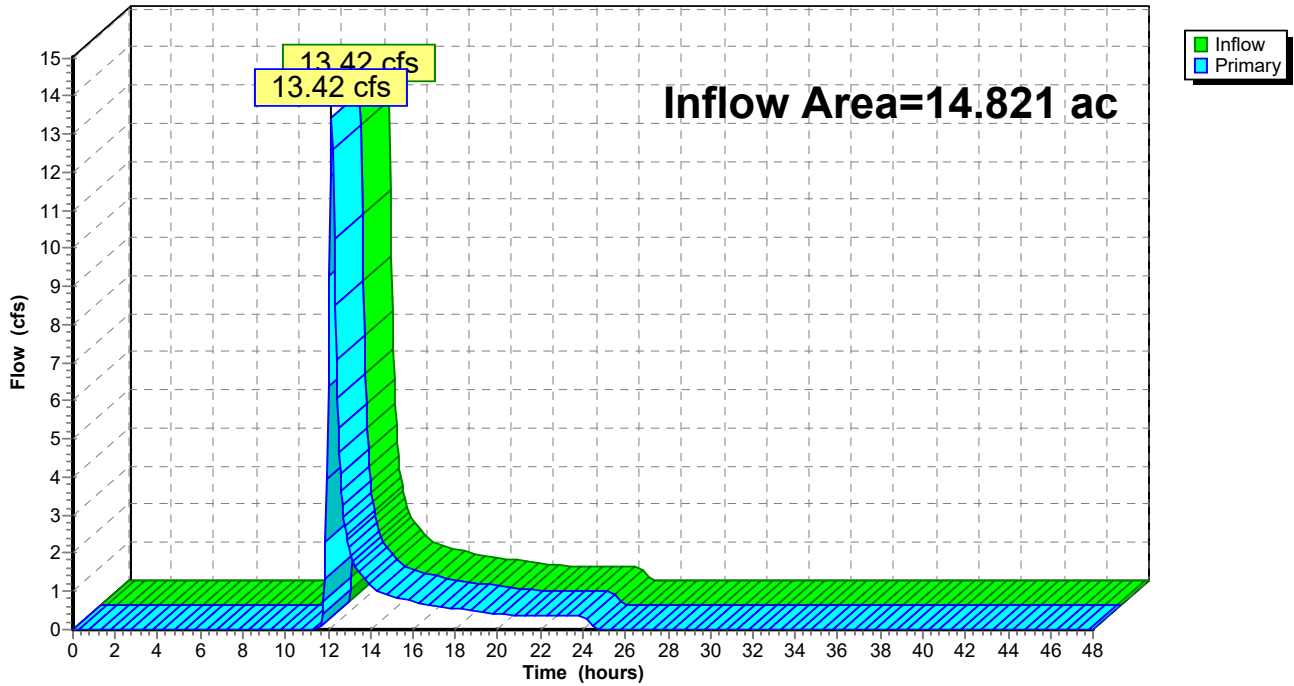
### Summary for Link SP52:

Inflow Area = 14.821 ac, 2.79% Impervious, Inflow Depth = 0.95" for 10-year event  
Inflow = 13.42 cfs @ 12.17 hrs, Volume= 1.178 af  
Primary = 13.42 cfs @ 12.17 hrs, Volume= 1.178 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP52:

Hydrograph





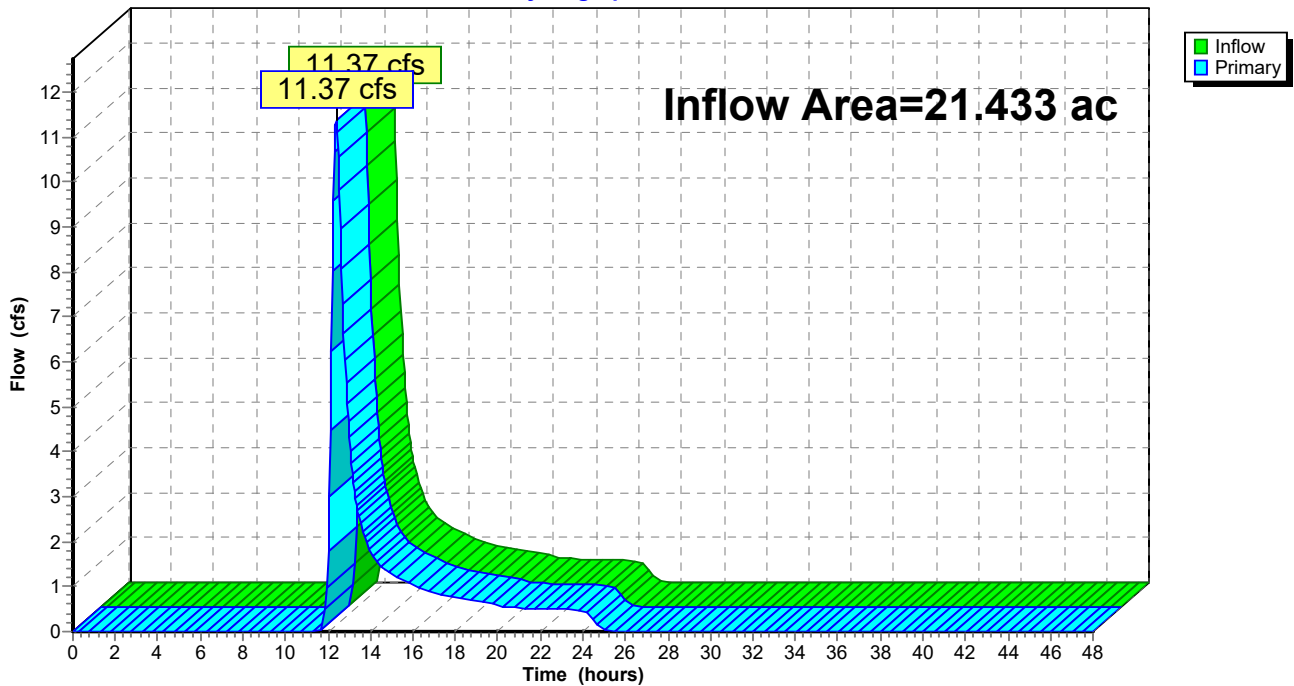
### Summary for Link SP53:

Inflow Area = 21.433 ac, 1.80% Impervious, Inflow Depth = 0.85" for 10-year event  
Inflow = 11.37 cfs @ 12.39 hrs, Volume= 1.518 af  
Primary = 11.37 cfs @ 12.39 hrs, Volume= 1.518 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP53:

Hydrograph



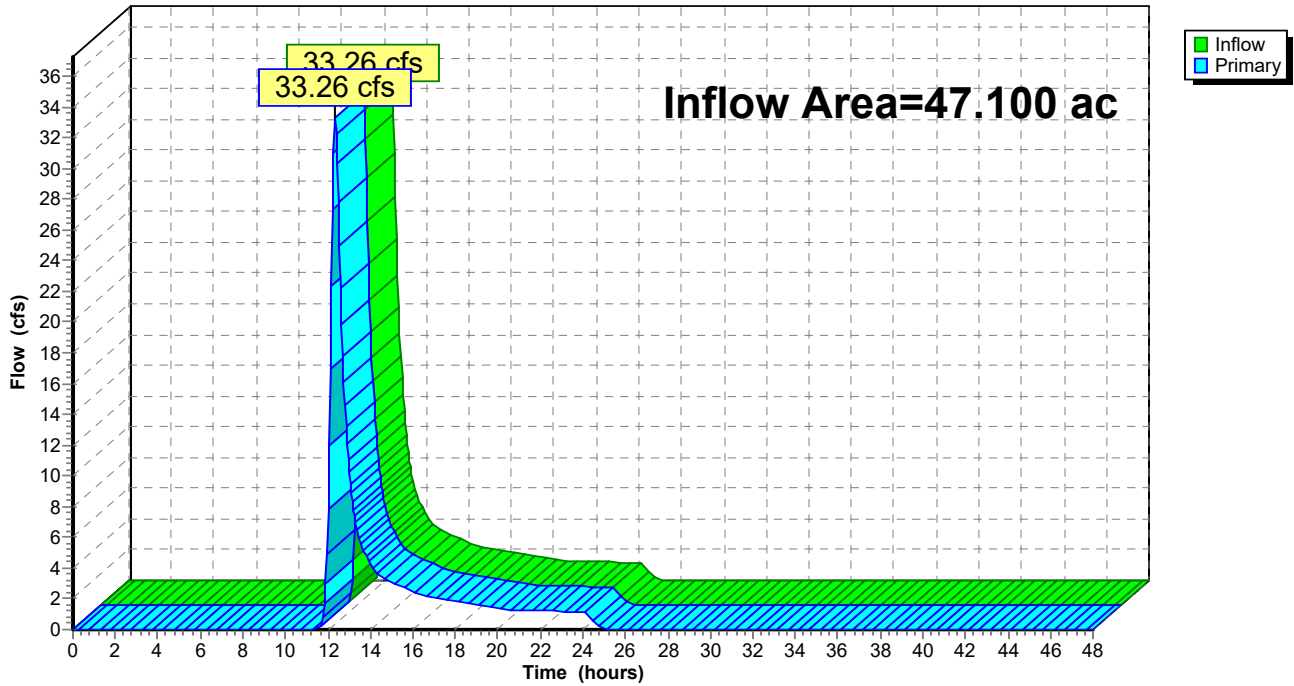
### Summary for Link SP54:

Inflow Area = 47.100 ac, 7.69% Impervious, Inflow Depth = 1.01" for 10-year event  
Inflow = 33.26 cfs @ 12.34 hrs, Volume= 3.957 af  
Primary = 33.26 cfs @ 12.34 hrs, Volume= 3.957 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP54:

Hydrograph



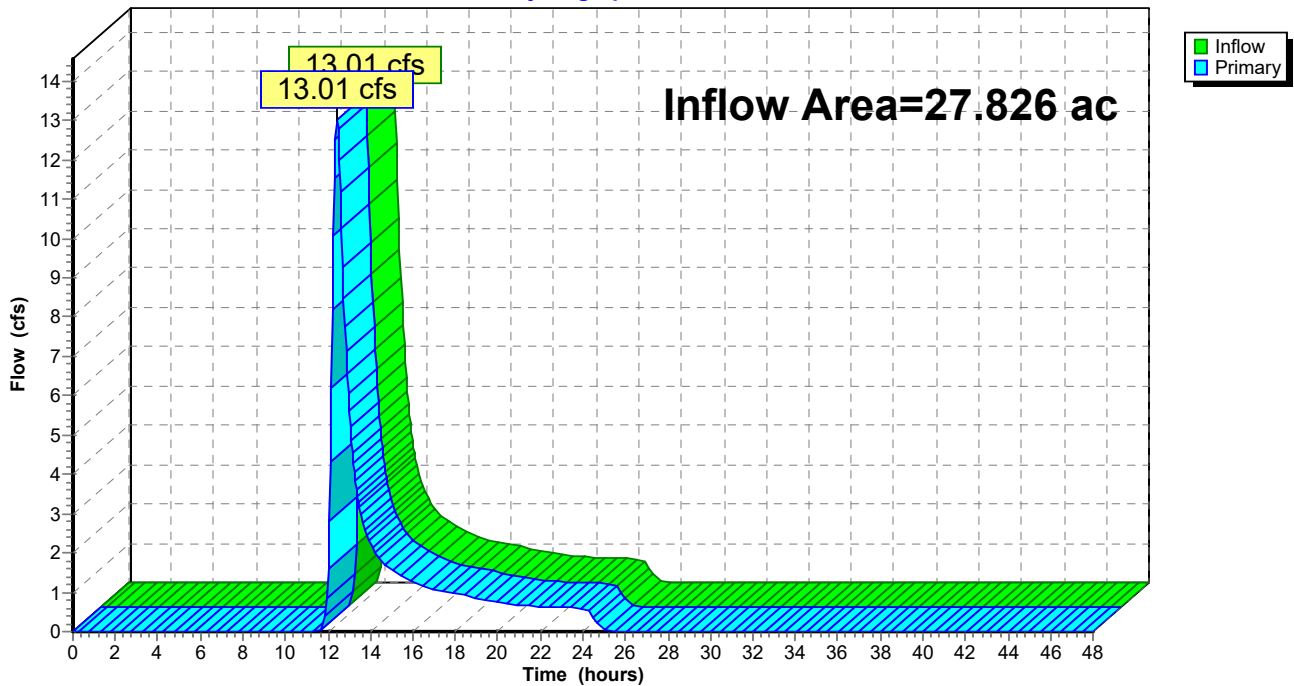
### Summary for Link SP55:

Inflow Area = 27.826 ac, 0.99% Impervious, Inflow Depth = 0.80" for 10-year event  
Inflow = 13.01 cfs @ 12.43 hrs, Volume= 1.856 af  
Primary = 13.01 cfs @ 12.43 hrs, Volume= 1.856 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP55:

Hydrograph



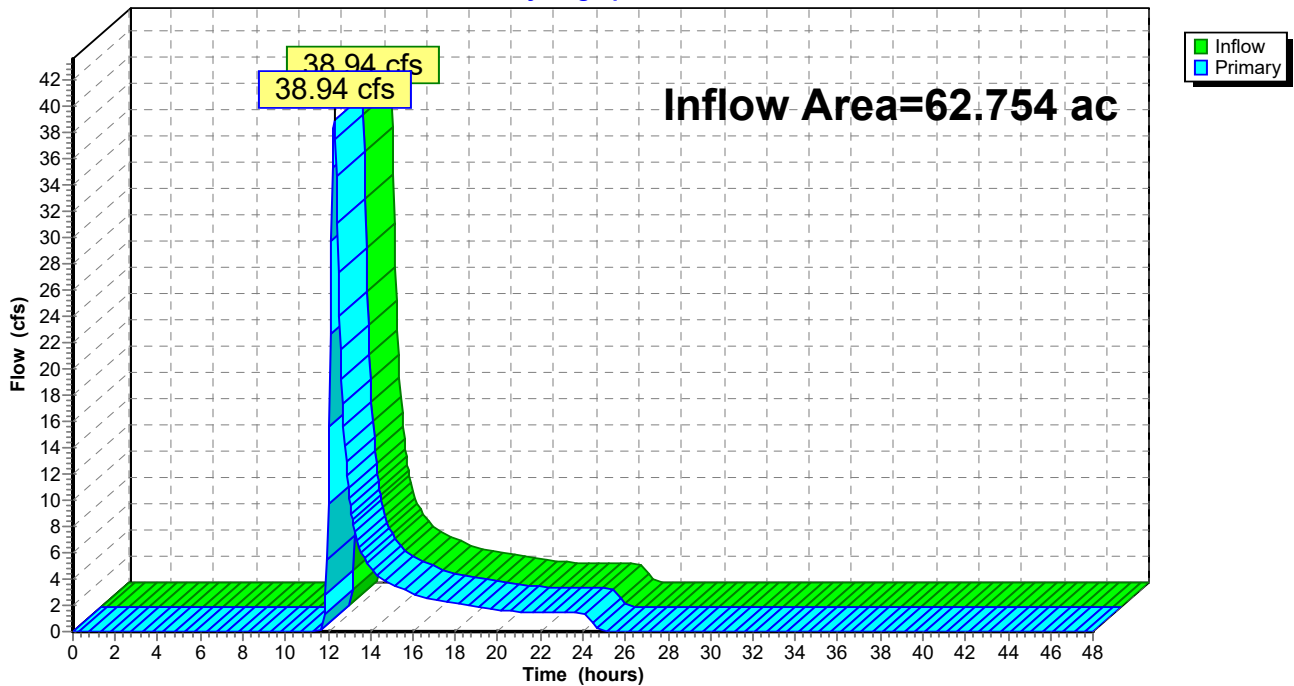
### Summary for Link SP56:

Inflow Area = 62.754 ac, 0.00% Impervious, Inflow Depth = 0.85" for 10-year event  
Inflow = 38.94 cfs @ 12.29 hrs, Volume= 4.445 af  
Primary = 38.94 cfs @ 12.29 hrs, Volume= 4.445 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP56:

Hydrograph



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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

<b>Subcatchment 25S: Sub 25</b>	Runoff Area=19.244 ac 0.52% Impervious Runoff Depth=2.77" Flow Length=1,103' Tc=22.2 min CN=72 Runoff=55.28 cfs 4.436 af
<b>Subcatchment 26S: Sub 26</b>	Runoff Area=14.925 ac 4.50% Impervious Runoff Depth=2.15" Flow Length=1,324' Tc=18.0 min CN=65 Runoff=36.72 cfs 2.674 af
<b>Subcatchment 27S: Sub 27</b>	Runoff Area=22.791 ac 1.95% Impervious Runoff Depth=2.23" Flow Length=1,602' Tc=17.8 min CN=66 Runoff=58.97 cfs 4.244 af
<b>Subcatchment 28S: Sub 28</b>	Runoff Area=21.372 ac 0.53% Impervious Runoff Depth=2.15" Flow Length=1,727' Tc=27.4 min CN=65 Runoff=40.53 cfs 3.829 af
<b>Subcatchment 29S: Sub 29</b>	Runoff Area=19.202 ac 1.21% Impervious Runoff Depth=1.90" Flow Length=1,648' Tc=26.3 min CN=62 Runoff=32.39 cfs 3.042 af
<b>Subcatchment 30S: Sub 30</b>	Runoff Area=36.199 ac 1.23% Impervious Runoff Depth=2.07" Flow Length=2,217' Tc=29.3 min CN=64 Runoff=62.67 cfs 6.232 af
<b>Subcatchment 31S: Sub 31</b>	Runoff Area=25.323 ac 0.00% Impervious Runoff Depth=1.82" Flow Length=2,409' Tc=31.8 min CN=61 Runoff=35.46 cfs 3.842 af
<b>Subcatchment 32S: Sub 32</b>	Runoff Area=44.904 ac 6.23% Impervious Runoff Depth=1.82" Flow Length=3,284' Tc=36.1 min CN=61 Runoff=57.52 cfs 6.813 af
<b>Subcatchment 33S: Sub 33</b>	Runoff Area=91.303 ac 0.68% Impervious Runoff Depth=1.66" Flow Length=1,749' Tc=22.2 min CN=59 Runoff=145.80 cfs 12.648 af
<b>Subcatchment 34S: Sub 34</b>	Runoff Area=25.797 ac 1.16% Impervious Runoff Depth=1.90" Flow Length=1,344' Tc=23.4 min CN=62 Runoff=46.80 cfs 4.087 af
<b>Subcatchment 35S: Sub 35</b>	Runoff Area=54.779 ac 2.01% Impervious Runoff Depth=2.15" Flow Length=3,022' Tc=38.7 min CN=65 Runoff=82.01 cfs 9.814 af
<b>Subcatchment 36S: Sub 36</b>	Runoff Area=46.619 ac 1.12% Impervious Runoff Depth=1.98" Flow Length=1,996' Tc=23.3 min CN=63 Runoff=89.17 cfs 7.704 af
<b>Subcatchment 37S: Sub 37</b>	Runoff Area=10.440 ac 5.80% Impervious Runoff Depth=1.74" Flow Length=1,926' Tc=33.1 min CN=60 Runoff=13.48 cfs 1.515 af
<b>Subcatchment 38S: Sub 38</b>	Runoff Area=71.315 ac 1.82% Impervious Runoff Depth=2.07" Flow Length=3,404' Tc=47.6 min CN=64 Runoff=87.58 cfs 12.278 af
<b>Subcatchment 39S: Sub 39</b>	Runoff Area=114.576 ac 2.51% Impervious Runoff Depth=1.90" Flow Length=2,852' Tc=30.0 min CN=62 Runoff=176.76 cfs 18.153 af
<b>Subcatchment 40S: Sub 40</b>	Runoff Area=20.880 ac 7.94% Impervious Runoff Depth=2.50" Flow Length=1,917' Tc=28.9 min CN=69 Runoff=45.31 cfs 4.343 af

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<b>Subcatchment41S: Sub 41</b>	Runoff Area=60.165 ac 2.55% Impervious Runoff Depth=1.98" Flow Length=2,626' Tc=33.1 min CN=63 Runoff=91.27 cfs 9.943 af
<b>Subcatchment42S: Sub 42</b>	Runoff Area=48.981 ac 3.85% Impervious Runoff Depth=1.90" Flow Length=890' Tc=21.1 min CN=62 Runoff=95.07 cfs 7.761 af
<b>Subcatchment48S: Sub 48</b>	Runoff Area=78.656 ac 2.88% Impervious Runoff Depth=2.77" Flow Length=4,007' Tc=38.1 min CN=72 Runoff=158.49 cfs 18.129 af
<b>Subcatchment49S: Sub 49</b>	Runoff Area=33.652 ac 1.78% Impervious Runoff Depth=2.07" Flow Length=2,999' Tc=38.0 min CN=64 Runoff=48.68 cfs 5.794 af
<b>Subcatchment50S: Sub 50</b>	Runoff Area=45.771 ac 1.25% Impervious Runoff Depth=2.41" Flow Length=2,533' Tc=29.4 min CN=68 Runoff=94.34 cfs 9.184 af
<b>Subcatchment51S: Sub 51</b>	Runoff Area=103.685 ac 1.03% Impervious Runoff Depth=2.07" Flow Length=2,611' Tc=36.7 min CN=64 Runoff=153.74 cfs 17.851 af
<b>Subcatchment52S: Sub 52</b>	Runoff Area=14.821 ac 2.79% Impervious Runoff Depth=2.50" Flow Length=1,182' Tc=22.0 min CN=69 Runoff=38.30 cfs 3.083 af
<b>Subcatchment53S: Sub 53</b>	Runoff Area=21.433 ac 1.80% Impervious Runoff Depth=2.32" Flow Length=2,555' Tc=37.9 min CN=67 Runoff=35.62 cfs 4.145 af
<b>Subcatchment54S:</b>	Runoff Area=47.100 ac 7.69% Impervious Runoff Depth=2.58" Flow Length=3,136' Tc=35.0 min CN=70 Runoff=93.52 cfs 10.145 af
<b>Subcatchment55S: Sub 55</b>	Runoff Area=27.826 ac 0.99% Impervious Runoff Depth=2.23" Flow Length=2,284' Tc=40.2 min CN=66 Runoff=42.41 cfs 5.182 af
<b>Subcatchment56S: Sub 56</b>	Runoff Area=62.754 ac 0.00% Impervious Runoff Depth=2.32" Flow Length=2,363' Tc=30.5 min CN=67 Runoff=121.25 cfs 12.137 af
<b>Reach 33R:</b>	Avg. Flow Depth=1.84' Max Vel=3.26 fps Inflow=37.08 cfs 4.087 af n=0.100 L=1,875.0' S=0.0597 '/ Capacity=10.60 cfs Outflow=29.27 cfs 4.087 af
<b>Reach 39R:</b>	Avg. Flow Depth=1.45' Max Vel=4.43 fps Inflow=45.31 cfs 4.343 af n=0.100 L=1,110.0' S=0.0991 '/ Capacity=86.68 cfs Outflow=43.63 cfs 4.343 af
<b>Reach 42R: S-NSD-16</b>	Avg. Flow Depth=1.88' Max Vel=3.74 fps Inflow=48.68 cfs 5.794 af n=0.100 L=1,790.0' S=0.0531 '/ Capacity=51.95 cfs Outflow=45.20 cfs 5.794 af
<b>Pond 34P: VAN EPPS RD CULVERT</b>	Peak Elev=585.71' Storage=27,689 cf Inflow=46.80 cfs 4.087 af Primary=10.52 cfs 3.300 af Secondary=26.56 cfs 0.788 af Outflow=37.08 cfs 4.087 af
<b>Link SP25:</b>	Inflow=55.28 cfs 4.436 af Primary=55.28 cfs 4.436 af
<b>Link SP26:</b>	Inflow=36.72 cfs 2.674 af Primary=36.72 cfs 2.674 af
<b>Link SP27:</b>	Inflow=58.97 cfs 4.244 af Primary=58.97 cfs 4.244 af

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<b>Link SP28:</b>	Inflow=40.53 cfs 3.829 af Primary=40.53 cfs 3.829 af
<b>Link SP29:</b>	Inflow=32.39 cfs 3.042 af Primary=32.39 cfs 3.042 af
<b>Link SP30:</b>	Inflow=62.67 cfs 6.232 af Primary=62.67 cfs 6.232 af
<b>Link SP32:</b>	Inflow=57.52 cfs 6.813 af Primary=57.52 cfs 6.813 af
<b>Link SP33:</b>	Inflow=150.28 cfs 16.736 af Primary=150.28 cfs 16.736 af
<b>Link SP34: SP31</b>	Inflow=227.89 cfs 27.390 af Primary=227.89 cfs 27.390 af
<b>Link SP35:</b>	Inflow=82.01 cfs 9.814 af Primary=82.01 cfs 9.814 af
<b>Link SP36:</b>	Inflow=89.17 cfs 7.704 af Primary=89.17 cfs 7.704 af
<b>Link SP37:</b>	Inflow=13.48 cfs 1.515 af Primary=13.48 cfs 1.515 af
<b>Link SP38:</b>	Inflow=87.58 cfs 12.278 af Primary=87.58 cfs 12.278 af
<b>Link SP39:</b>	Inflow=215.84 cfs 22.496 af Primary=215.84 cfs 22.496 af
<b>Link SP41:</b>	Inflow=91.27 cfs 9.943 af Primary=91.27 cfs 9.943 af
<b>Link SP42:</b>	Inflow=101.59 cfs 13.554 af Primary=101.59 cfs 13.554 af
<b>Link SP48:</b>	Inflow=158.49 cfs 18.129 af Primary=158.49 cfs 18.129 af
<b>Link SP50:</b>	Inflow=94.34 cfs 9.184 af Primary=94.34 cfs 9.184 af
<b>Link SP51:</b>	Inflow=153.74 cfs 17.851 af Primary=153.74 cfs 17.851 af
<b>Link SP52:</b>	Inflow=38.30 cfs 3.083 af Primary=38.30 cfs 3.083 af

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**Link SP53:**

Inflow=35.62 cfs 4.145 af  
Primary=35.62 cfs 4.145 af

**Link SP54:**

Inflow=93.52 cfs 10.145 af  
Primary=93.52 cfs 10.145 af

**Link SP55:**

Inflow=42.41 cfs 5.182 af  
Primary=42.41 cfs 5.182 af

**Link SP56:**

Inflow=121.25 cfs 12.137 af  
Primary=121.25 cfs 12.137 af

**Total Runoff Area = 1,184.513 ac   Runoff Volume = 209.006 af   Average Runoff Depth = 2.12"**  
**97.77% Pervious = 1,158.116 ac   2.23% Impervious = 26.397 ac**



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**Summary for Subcatchment 25S: Sub 25**

Runoff = 55.28 cfs @ 12.16 hrs, Volume= 4.436 af, Depth= 2.77"  
 Routed to Link SP25 :

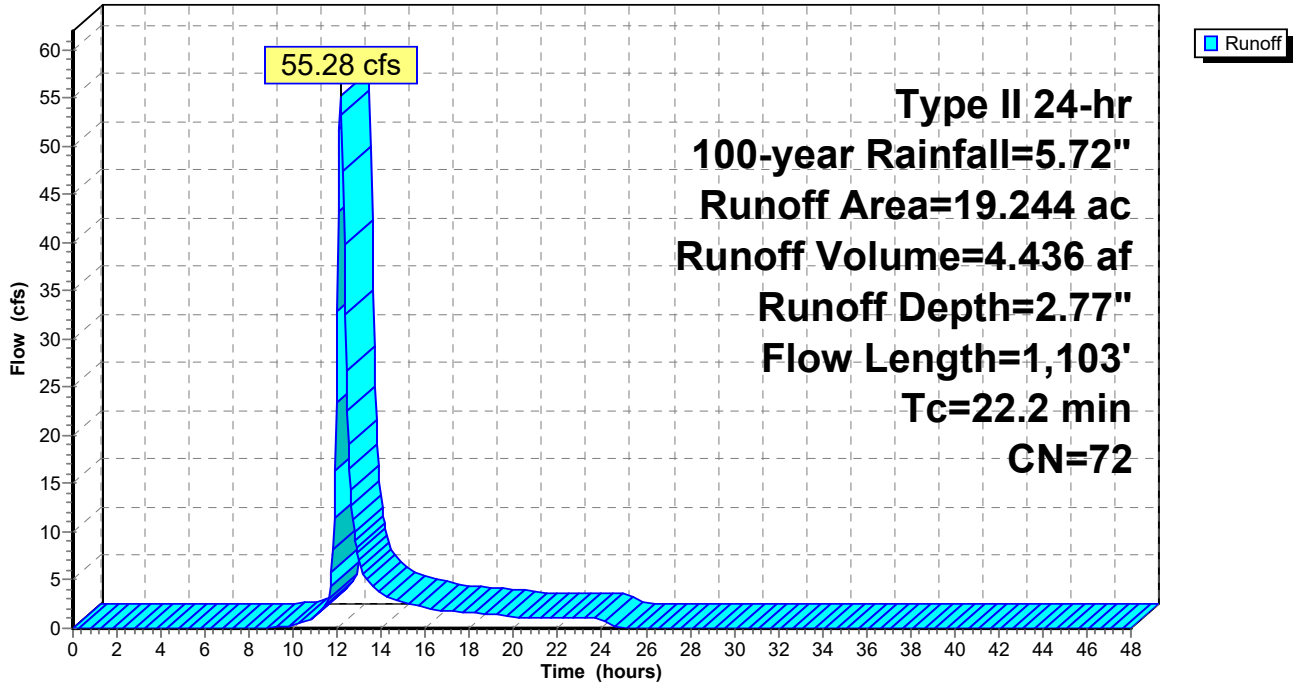
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 0.100	98	Impervious surface
0.475	74	>75% Grass cover, Good, HSG C
0.497	80	>75% Grass cover, Good, HSG D
0.785	58	Meadow, non-grazed, HSG B
13.183	71	Meadow, non-grazed, HSG C
3.694	78	Meadow, non-grazed, HSG D
0.050	48	Brush, Good, HSG B
0.274	71	Meadow, non-grazed, HSG C
0.186	73	Brush, Good, HSG D
19.244	72	Weighted Average
19.144		99.48% Pervious Area
0.100		0.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0430	0.20		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
11.3	717	0.0230	1.06		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.7	286		1.77		<b>Direct Entry, CF</b>
22.2	1,103	Total			

Subcatchment 25S: Sub 25

Hydrograph



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**Summary for Subcatchment 26S: Sub 26**

Runoff = 36.72 cfs @ 12.11 hrs, Volume= 2.674 af, Depth= 2.15"  
 Routed to Link SP26 :

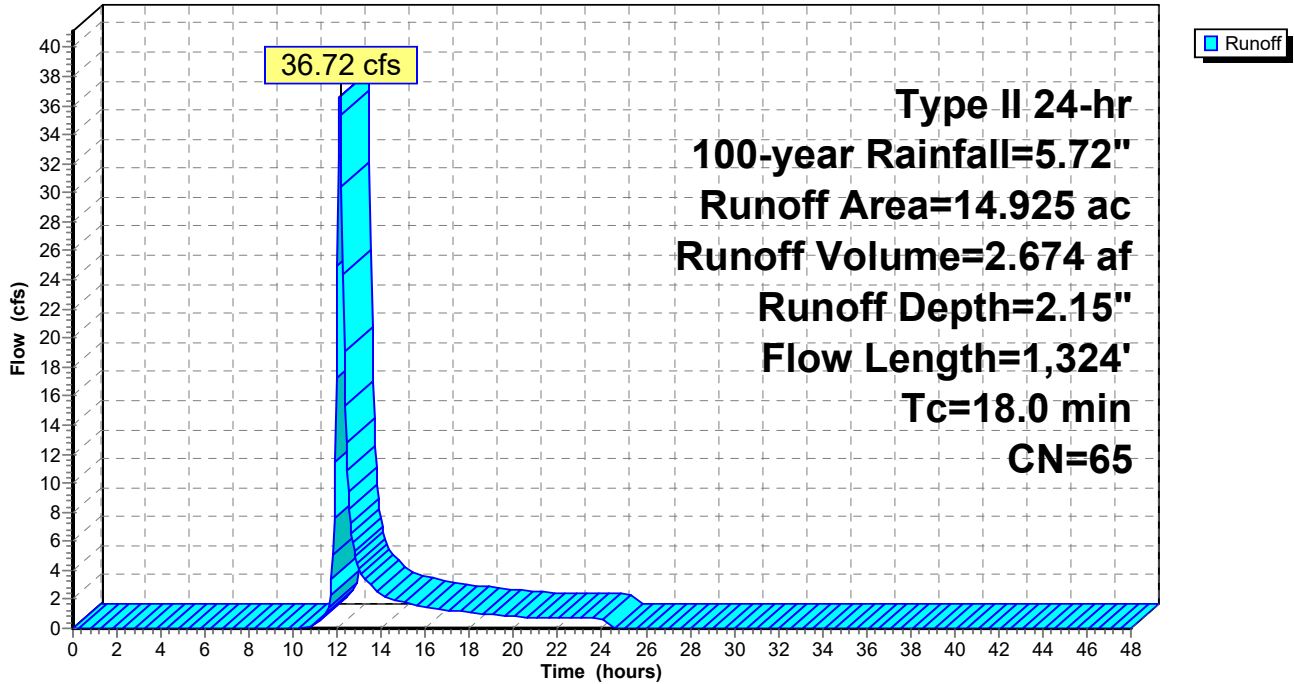
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 0.672	98	Impervious surface
* 0.189	96	Gravel surface
3.102	61	>75% Grass cover, Good, HSG B
0.965	74	>75% Grass cover, Good, HSG C
6.796	58	Meadow, non-grazed, HSG B
3.029	71	Meadow, non-grazed, HSG C
0.172	78	Meadow, non-grazed, HSG D
14.925	65	Weighted Average
14.253		95.50% Pervious Area
0.672		4.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.7	100	0.0280	0.17		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
2.2	340	0.1340	2.56		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.7	259	0.0540	1.63		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.4	625		3.06		<b>Direct Entry, CF</b>
18.0	1,324	Total			

Subcatchment 26S: Sub 26

Hydrograph



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**Summary for Subcatchment 27S: Sub 27**

Runoff = 58.97 cfs @ 12.11 hrs, Volume= 4.244 af, Depth= 2.23"  
 Routed to Link SP27 :

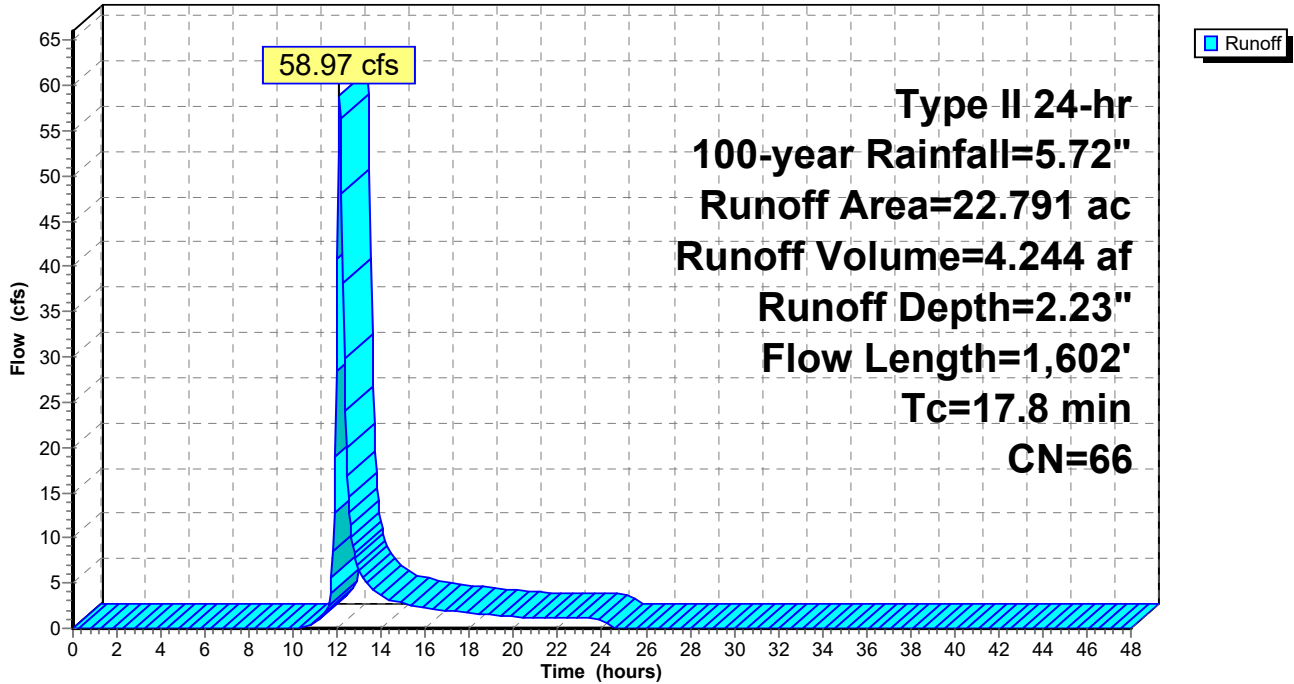
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 0.381	98	Surface water
* 0.064	98	Impervious surface
* 0.034	96	Gravel surface
9.647	58	Meadow, non-grazed, HSG B
12.525	71	Meadow, non-grazed, HSG C
0.140	78	Meadow, non-grazed, HSG D
22.791	66	Weighted Average
22.346		98.05% Pervious Area
0.445		1.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.0650	0.24		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
7.4	832	0.0720	1.88		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.5	670		3.19		<b>Direct Entry, CF</b>
17.8	1,602	Total			

Subcatchment 27S: Sub 27

Hydrograph



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**Summary for Subcatchment 28S: Sub 28**

[47] Hint: Peak is 620% of capacity of segment #3

Runoff = 40.53 cfs @ 12.23 hrs, Volume= 3.829 af, Depth= 2.15"  
 Routed to Link SP28 :

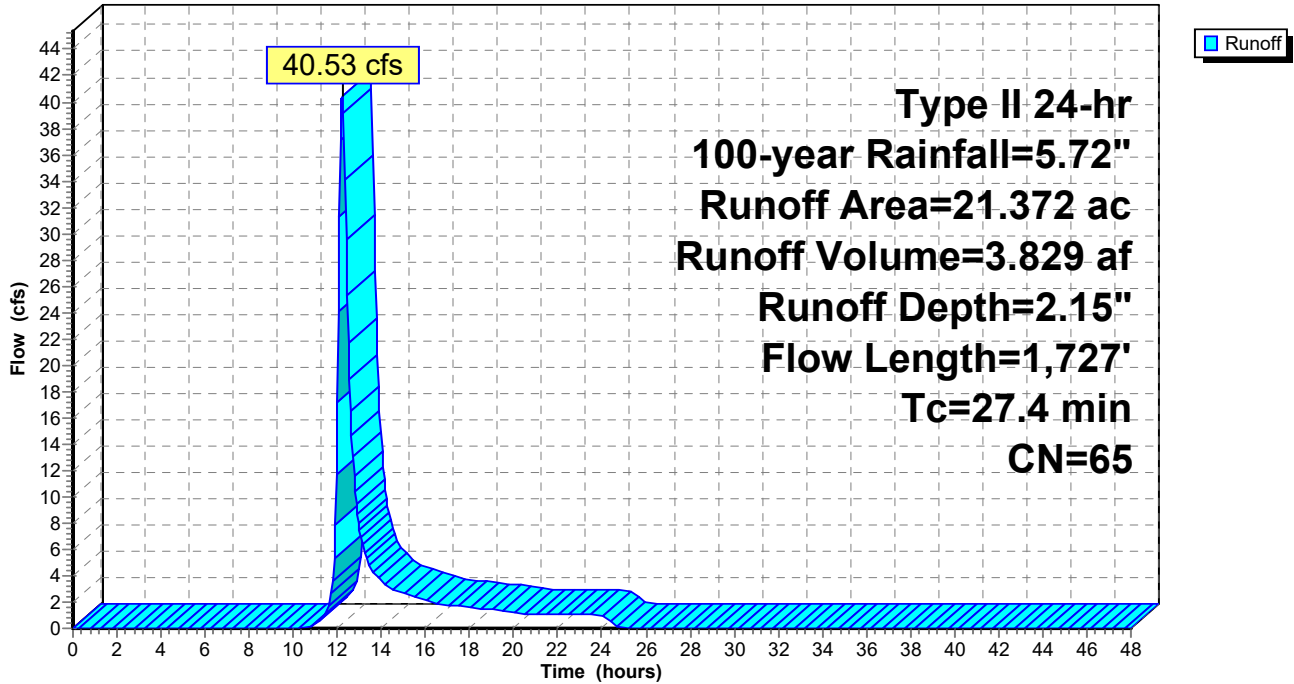
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 0.114	98	Impervious surface
* 0.018	96	Gravel surface
1.037	61	>75% Grass cover, Good, HSG B
0.949	74	>75% Grass cover, Good, HSG C
9.049	58	Meadow, non-grazed, HSG B
10.205	71	Meadow, non-grazed, HSG C
21.372	65	Weighted Average
21.258		99.47% Pervious Area
0.114		0.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.9	100	0.0070	0.10		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
7.4	819	0.0700	1.85		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.1	808	0.0420	4.36	6.53	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00' n= 0.035 Earth, dense weeds
27.4	1,727	Total			

Subcatchment 28S: Sub 28

Hydrograph





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**Summary for Subcatchment 29S: Sub 29**

Runoff = 32.39 cfs @ 12.22 hrs, Volume= 3.042 af, Depth= 1.90"  
 Routed to Link SP29 :

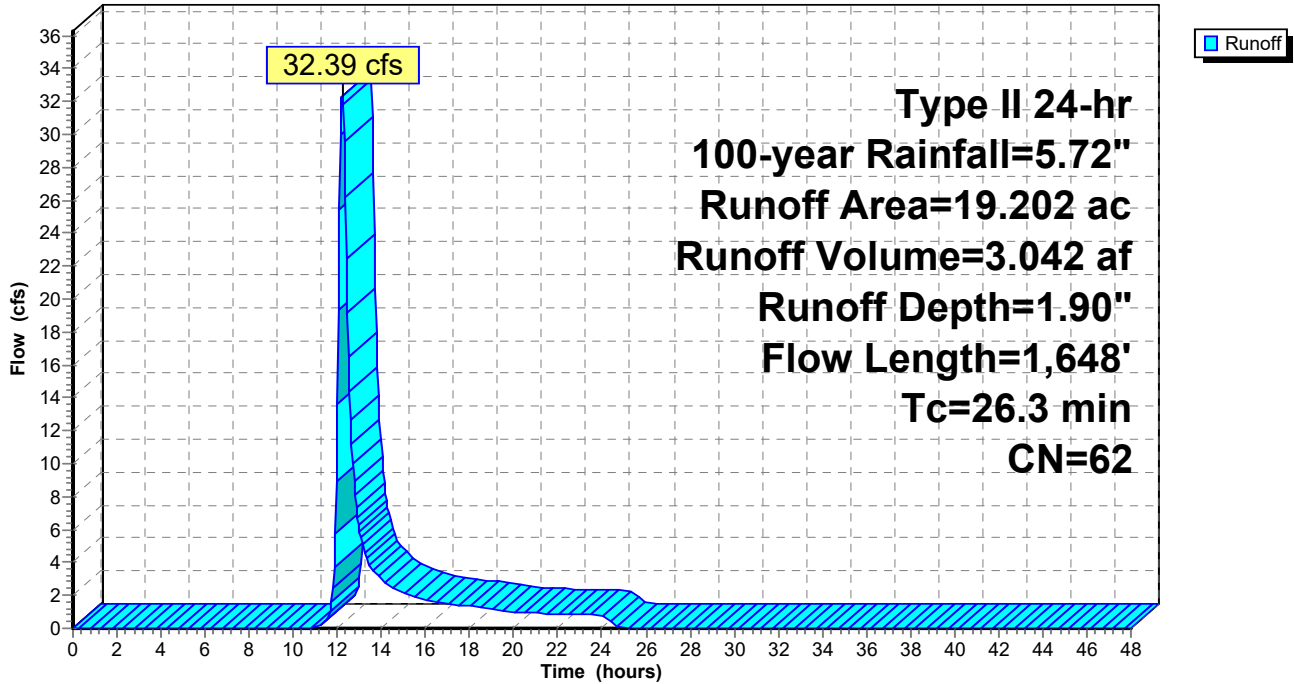
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 0.233	98	Impervious surface
* 0.063	96	Gravel surface
13.291	58	Meadow, non-grazed, HSG B
5.615	71	Meadow, non-grazed, HSG C
19.202	62	Weighted Average
18.969		98.79% Pervious Area
0.233		1.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	100	0.0370	0.19		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
8.9	661	0.0310	1.23		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
7.9	806	0.0590	1.70		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.8	81		1.69		<b>Direct Entry, CF</b>
26.3	1,648	Total			

Subcatchment 29S: Sub 29

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 30S: Sub 30**

[47] Hint: Peak is 511% of capacity of segment #3

Runoff = 62.67 cfs @ 12.25 hrs, Volume= 6.232 af, Depth= 2.07"  
 Routed to Link SP30 :

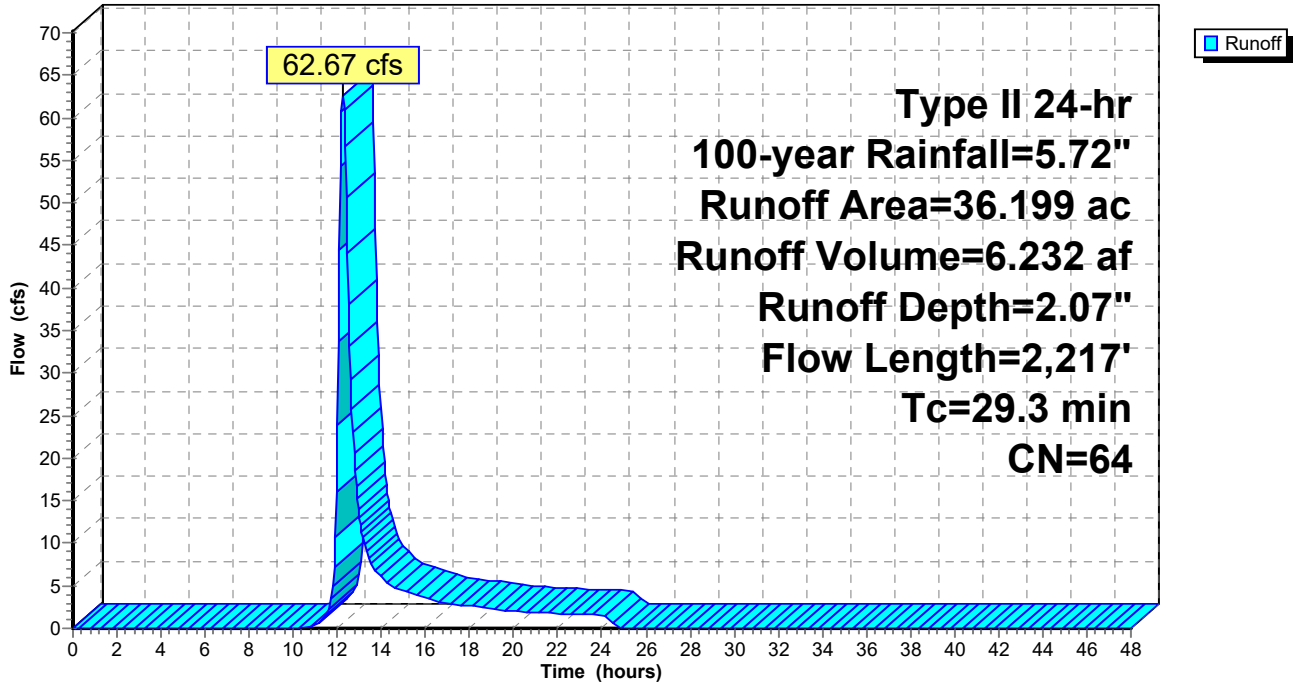
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 0.444	98	Impervious surface
* 0.471	96	Gravel surface
0.222	61	>75% Grass cover, Good, HSG B
0.026	74	>75% Grass cover, Good, HSG C
0.098	30	Meadow, non-grazed, HSG A
16.283	58	Meadow, non-grazed, HSG B
15.759	71	Meadow, non-grazed, HSG C
0.215	48	Brush, Good, HSG B
0.283	65	Brush, Good, HSG C
0.099	30	Woods, Good, HSG A
2.287	55	Woods, Good, HSG B
0.012	70	Woods, Good, HSG C
36.199	64	Weighted Average
35.755		98.77% Pervious Area
0.444		1.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.1	100	0.0250	0.16		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
15.4	1,100	0.0290	1.19		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.8	1,017	0.0290	4.46	12.25	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=4.00' D=0.50' Z= 3.0 ' /' Top.W=7.00' n= 0.030 Earth, grassed & winding
29.3	2,217	Total			

Subcatchment 30S: Sub 30

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 31S: Sub 31**

[47] Hint: Peak is 848% of capacity of segment #3

Runoff = 35.46 cfs @ 12.29 hrs, Volume= 3.842 af, Depth= 1.82"  
 Routed to Link SP34 : SP31

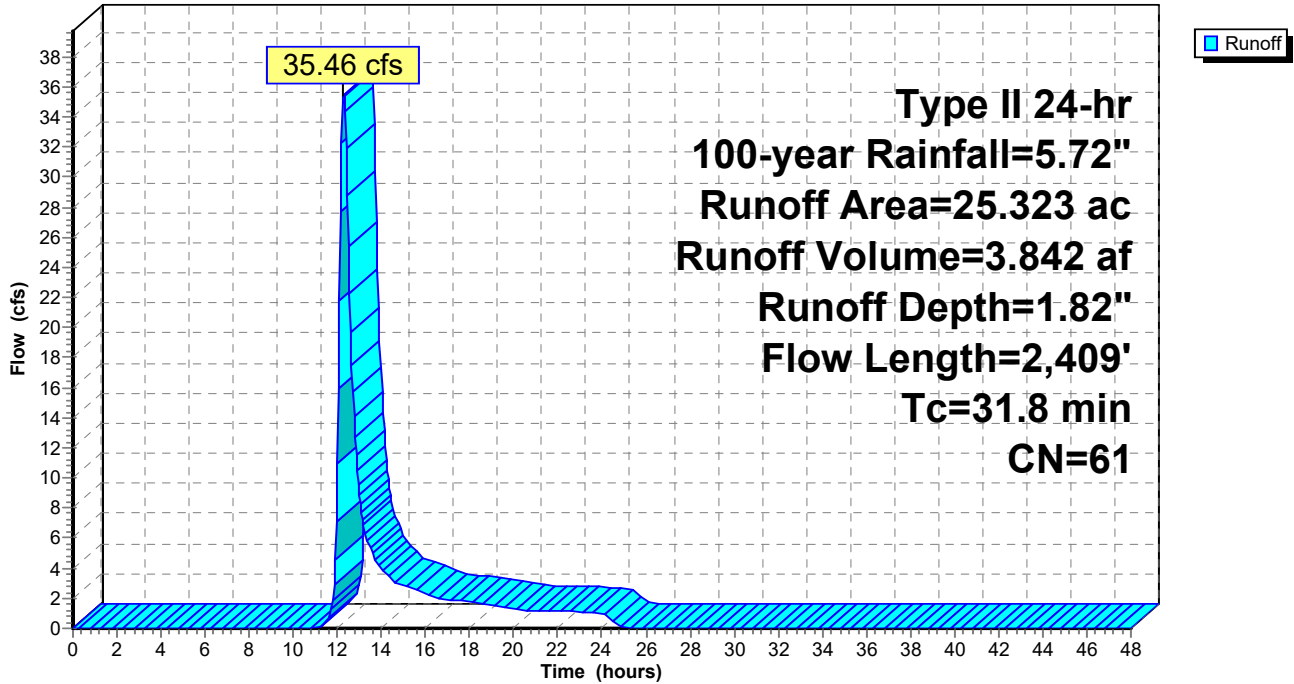
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
12.515	58	Meadow, non-grazed, HSG B
7.070	71	Meadow, non-grazed, HSG C
0.029	48	Brush, Good, HSG B
5.404	55	Woods, Good, HSG B
0.305	70	Woods, Good, HSG C
25.323	61	Weighted Average
25.323		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0450	0.21		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
20.4	1,456	0.0290	1.19		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.4	853	0.0938	4.18	4.18	<b>Parabolic Channel,</b> W=3.00' D=0.50' Area=1.0 sf Perim=3.2' n= 0.050 Mountain streams w/large boulders
31.8	2,409	Total			

Subcatchment 31S: Sub 31

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 32S: Sub 32**

[47] Hint: Peak is 619% of capacity of segment #4

Runoff = 57.52 cfs @ 12.35 hrs, Volume= 6.813 af, Depth= 1.82"  
 Routed to Link SP32 :

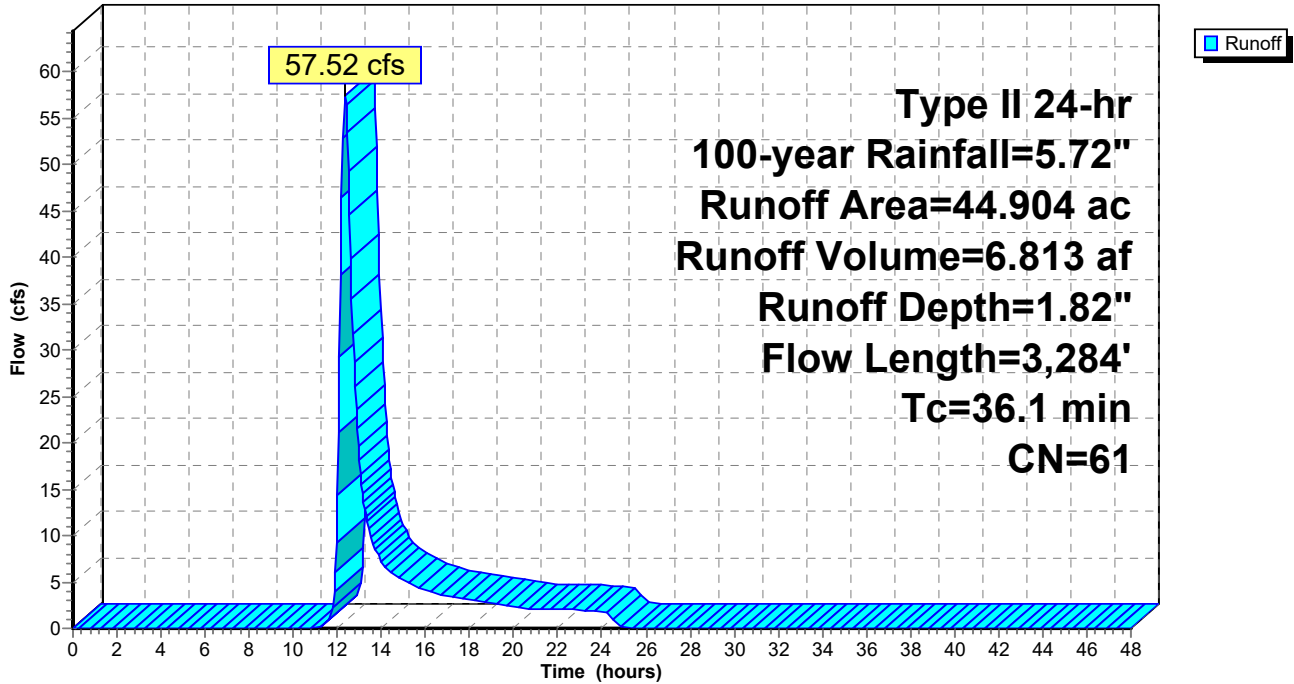
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 2.796	98	Surface water
20.102	58	Meadow, non-grazed, HSG B
5.829	71	Meadow, non-grazed, HSG C
0.127	48	Brush, Good, HSG B
0.286	65	Brush, Good, HSG C
15.764	55	Woods, Good, HSG B
44.904	61	Weighted Average
42.108		93.77% Pervious Area
2.796		6.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8	100	0.0475	0.21		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
3.2	425	0.0976	2.19		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
17.5	1,176	0.0257	1.12		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
7.6	1,583	0.0726	3.48	9.29	<b>Parabolic Channel,</b> W=4.00' D=1.00' Area=2.7 sf Perim=4.6' n= 0.080 Earth, long dense weeds
36.1	3,284	Total			

Subcatchment 32S: Sub 32

Hydrograph





**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 33S: Sub 33**

Runoff = 145.80 cfs @ 12.17 hrs, Volume= 12.648 af, Depth= 1.66"  
 Routed to Link SP33 :

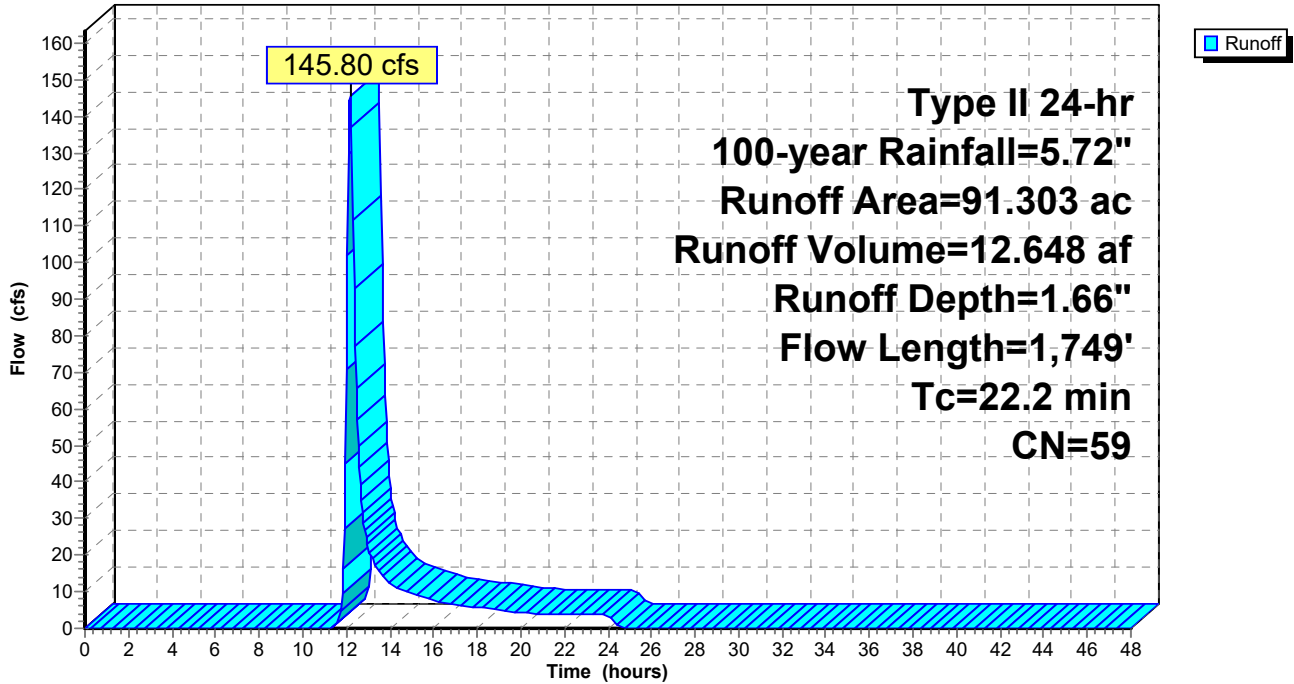
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 0.618	98	Impervious surface
* 0.042	96	Gravel surface
3.828	61	>75% Grass cover, Good, HSG B
45.219	58	Meadow, non-grazed, HSG B
9.199	71	Meadow, non-grazed, HSG C
3.134	78	Meadow, non-grazed, HSG D
0.415	48	Brush, Good, HSG B
28.566	55	Woods, Good, HSG B
0.282	70	Woods, Good, HSG C
91.303	59	Weighted Average
90.685		99.32% Pervious Area
0.618		0.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0350	0.19		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
5.8	780	0.1010	2.22		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.9	531	0.1059	2.28		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.6	338	0.1005	1.59		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
22.2	1,749	Total			

Subcatchment 33S: Sub 33

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 34S: Sub 34**

[47] Hint: Peak is 1277% of capacity of segment #3

Runoff = 46.80 cfs @ 12.18 hrs, Volume= 4.087 af, Depth= 1.90"  
 Routed to Pond 34P : VAN EPPS RD CULVERT

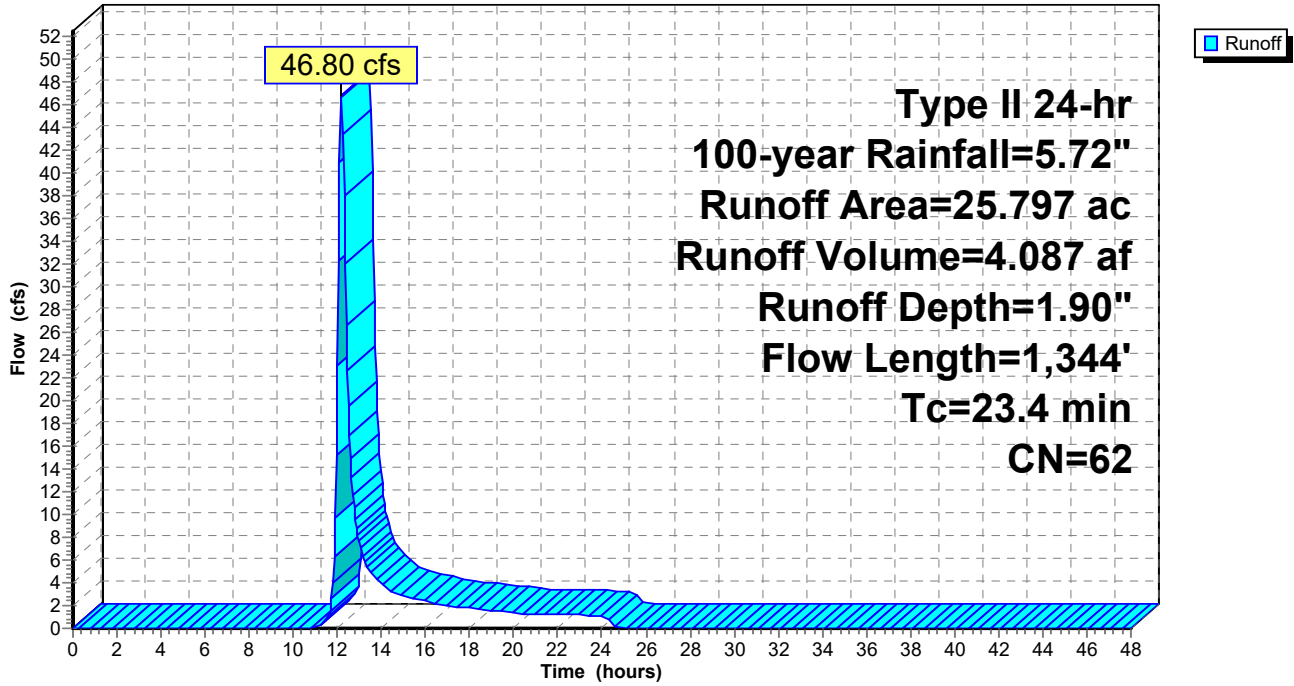
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
0.189	48	Brush, Good, HSG B
0.183	96	Gravel surface, HSG D
0.299	98	Unconnected roofs, HSG D
16.490	58	Meadow, non-grazed, HSG B
3.646	71	Meadow, non-grazed, HSG C
3.134	61	>75% Grass cover, Good, HSG B
1.498	74	>75% Grass cover, Good, HSG C
0.358	55	Woods, Good, HSG B
25.797	62	Weighted Average
25.498		98.84% Pervious Area
0.299		1.16% Impervious Area
0.299		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.8	100	0.0675	0.24		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
14.9	878	0.0198	0.98		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.2	42	0.0119	2.99	3.66	<b>Pipe Channel,</b> 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.025 Corrugated metal
1.5	324	0.0552	3.52		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
23.4	1,344	Total			

Subcatchment 34S: Sub 34

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 35S: Sub 35**

[47] Hint: Peak is 978% of capacity of segment #4

Runoff = 82.01 cfs @ 12.37 hrs, Volume= 9.814 af, Depth= 2.15"  
 Routed to Link SP35 :

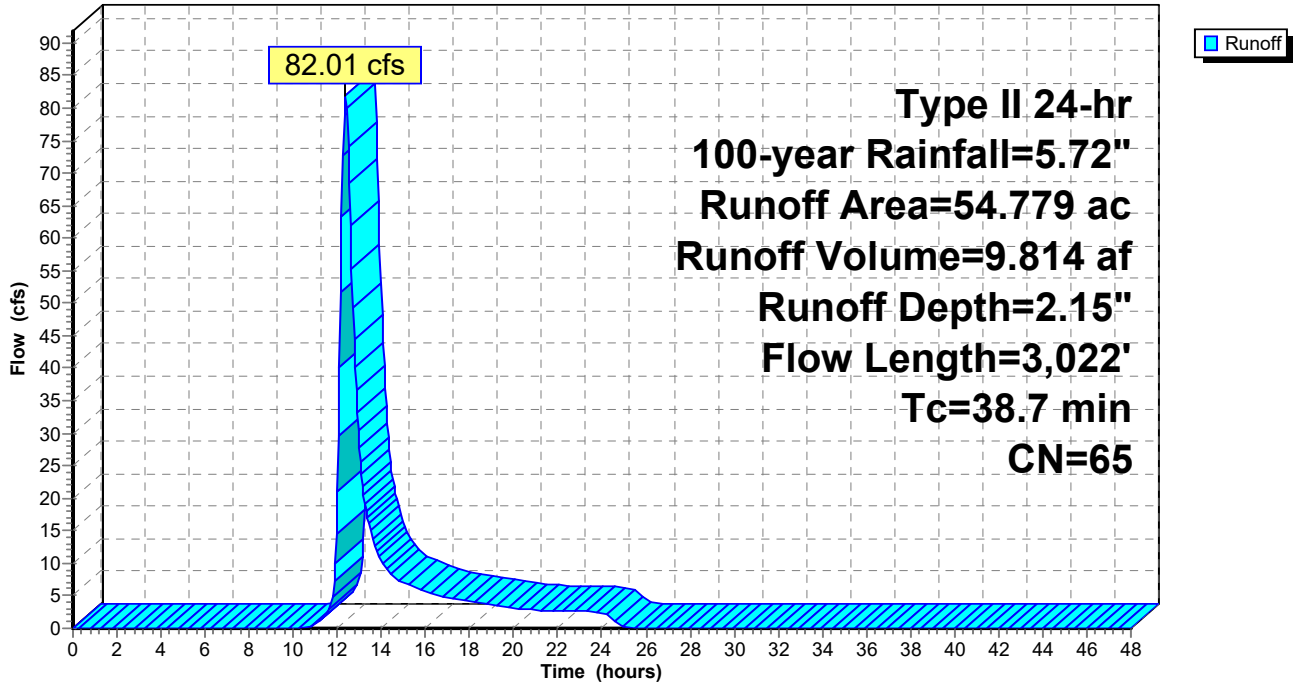
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
0.105	48	Brush, Good, HSG B
0.087	65	Brush, Good, HSG C
1.101	98	Unconnected roofs, HSG D
23.620	58	Meadow, non-grazed, HSG B
24.783	71	Meadow, non-grazed, HSG C
0.319	61	>75% Grass cover, Good, HSG B
1.326	74	>75% Grass cover, Good, HSG C
1.942	55	Woods, Good, HSG B
1.496	70	Woods, Good, HSG C
54.779	65	Weighted Average
53.678		97.99% Pervious Area
1.101		2.01% Impervious Area
1.101		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0450	0.21		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
6.6	393	0.0204	1.00		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
22.1	2,017	0.0471	1.52		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.0	512	0.1172	4.19	8.39	<b>Parabolic Channel,</b> W=3.00' D=1.00' Area=2.0 sf Perim=3.7' n= 0.080 Earth, long dense weeds
38.7	3,022	Total			

Subcatchment 35S: Sub 35

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 36S: Sub 36**

[47] Hint: Peak is 1508% of capacity of segment #3

Runoff = 89.17 cfs @ 12.18 hrs, Volume= 7.704 af, Depth= 1.98"  
 Routed to Link SP36 :

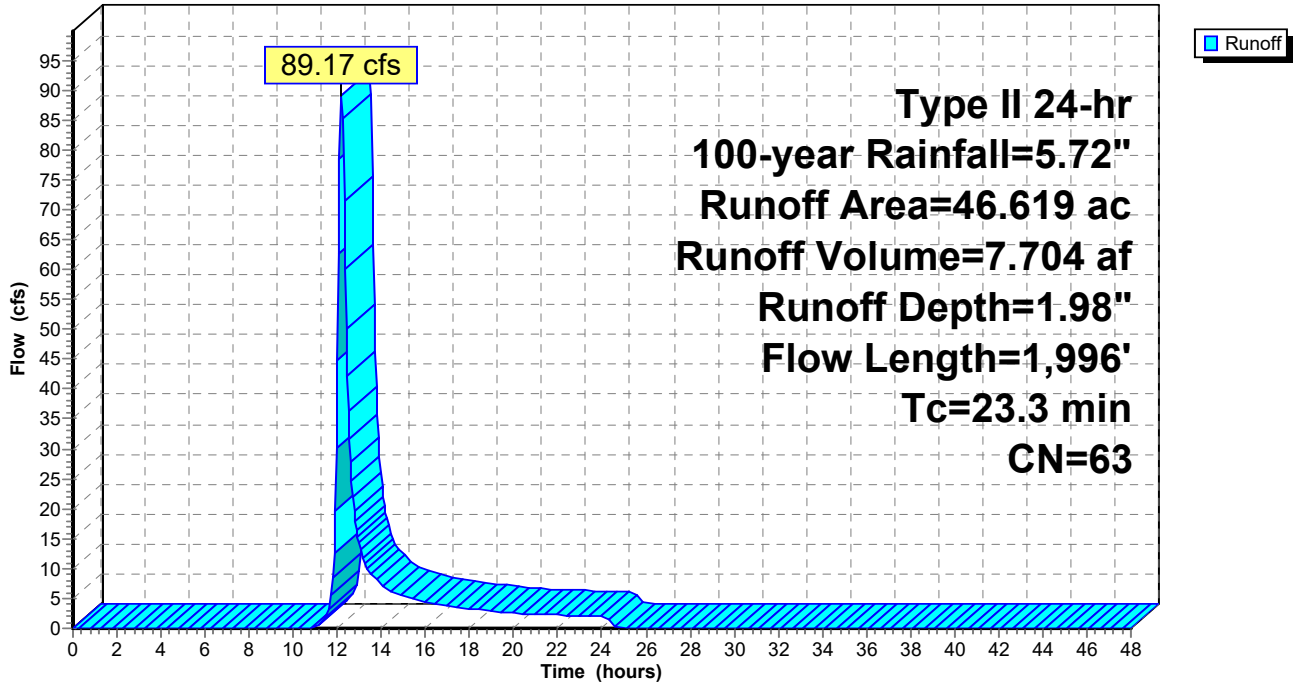
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
0.405	48	Brush, Good, HSG B
0.013	65	Brush, Good, HSG C
0.081	96	Gravel surface, HSG D
0.007	98	Unconnected roofs, HSG D
2.271	58	Meadow, non-grazed, HSG B
21.338	71	Meadow, non-grazed, HSG C
0.513	98	Water Surface, HSG D
20.987	55	Woods, Good, HSG B
1.004	70	Woods, Good, HSG C
46.619	63	Weighted Average
46.099		98.88% Pervious Area
0.520		1.12% Impervious Area
0.007		1.35% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	100	0.0550	0.23		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
11.7	1,036	0.0442	1.47		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
4.2	860	0.1400	3.38	5.91	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=2.00' D=0.50' Z= 3.0 ' Top.W=5.00' n= 0.080 Earth, long dense weeds
23.3	1,996	Total			

Subcatchment 36S: Sub 36

Hydrograph





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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 37S: Sub 37**

Runoff = 13.48 cfs @ 12.31 hrs, Volume= 1.515 af, Depth= 1.74"  
 Routed to Link SP37 :

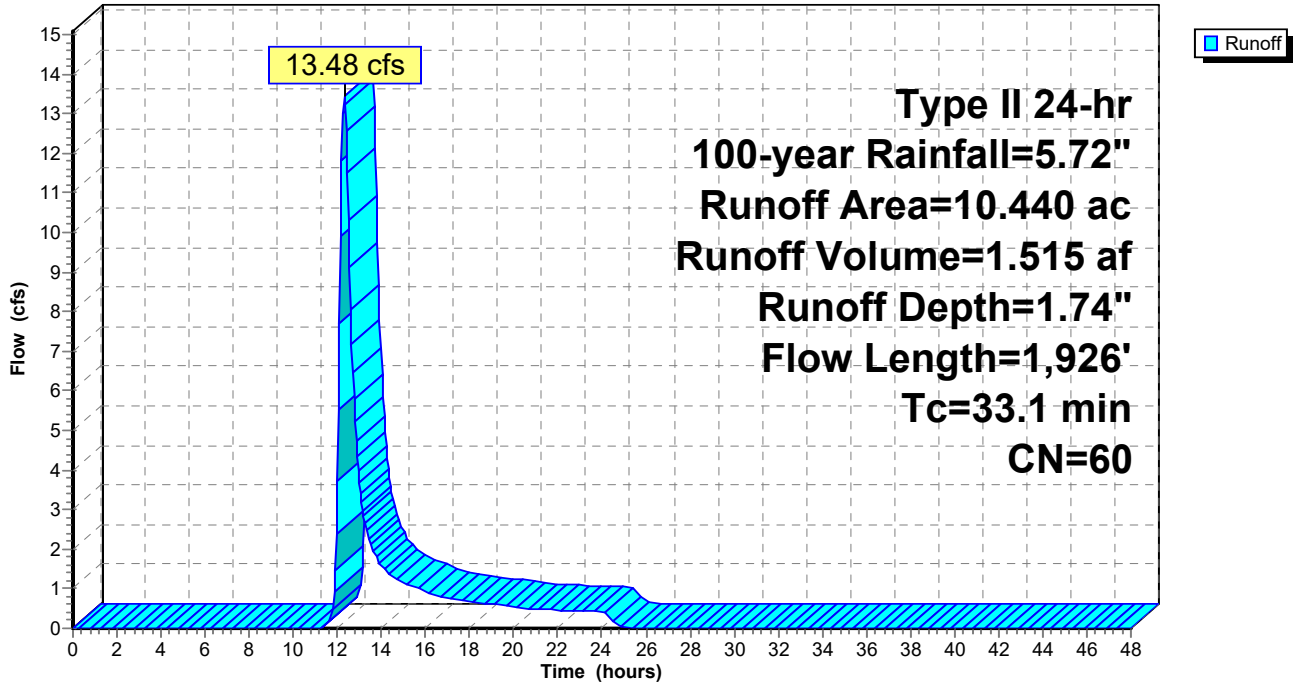
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
8.161	58	Meadow, non-grazed, HSG B
1.673	55	Woods, Good, HSG B
* 0.606	98	Impervious
10.440	60	Weighted Average
9.834		94.20% Pervious Area
0.606		5.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.3	100	0.0050	0.09		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
10.6	1,005	0.0507	1.58		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.0	90	0.0889	1.49		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
2.2	731	0.0570	5.59	20.95	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=6.00' D=0.50' Z= 3.0 '/' Top.W=9.00' n= 0.035 Earth, dense weeds
33.1	1,926	Total			

Subcatchment 37S: Sub 37

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 38S: Sub 38**

Runoff = 87.58 cfs @ 12.49 hrs, Volume= 12.278 af, Depth= 2.07"

Routed to Link SP38 :

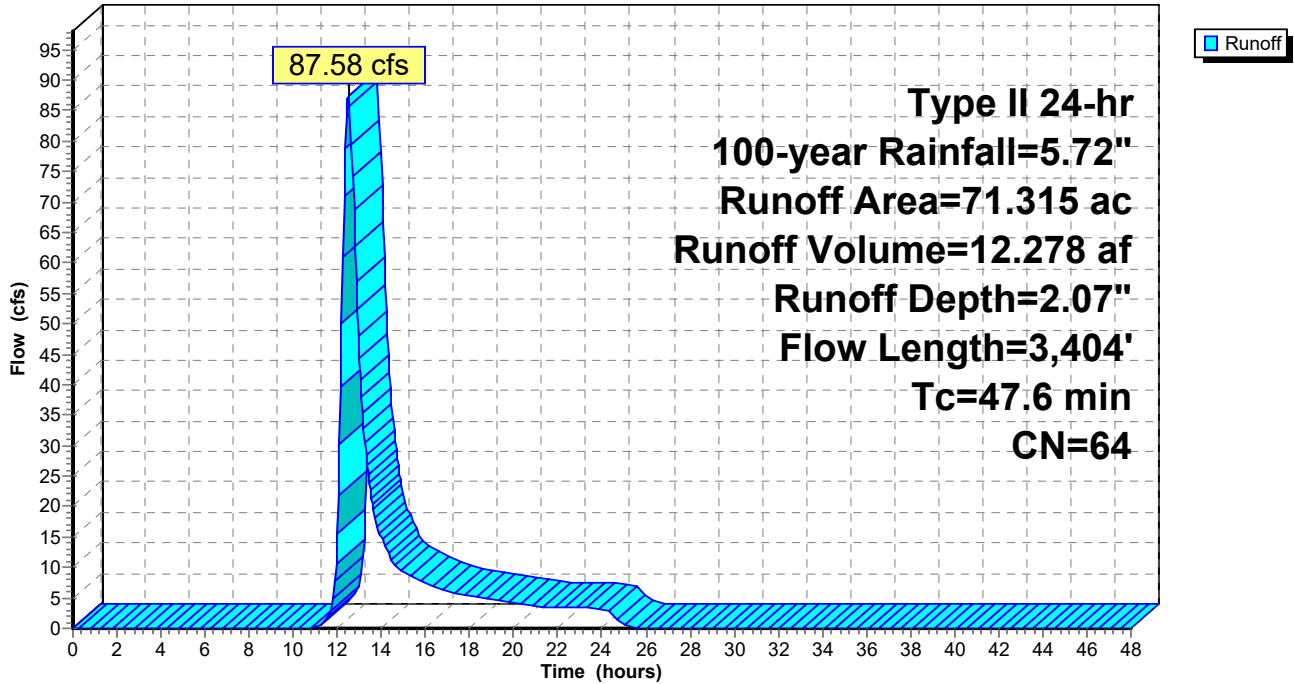
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
1.161	48	Brush, Good, HSG B
0.399	65	Brush, Good, HSG C
0.626	96	Gravel surface, HSG D
1.297	98	Unconnected roofs, HSG D
26.775	58	Meadow, non-grazed, HSG B
35.528	71	Meadow, non-grazed, HSG C
1.081	61	>75% Grass cover, Good, HSG B
4.099	30	Woods, Good, HSG A
0.349	55	Woods, Good, HSG B
71.315	64	Weighted Average
70.018		98.18% Pervious Area
1.297		1.82% Impervious Area
1.297		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	100	0.0500	0.22		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
11.9	739	0.0220	1.04		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
6.6	753	0.0744	1.91		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
21.4	1,812	0.0800	1.41		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
47.6	3,404	Total			

Subcatchment 38S: Sub 38

Hydrograph



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**Summary for Subcatchment 39S: Sub 39**

Runoff = 176.76 cfs @ 12.27 hrs, Volume= 18.153 af, Depth= 1.90"

Routed to Link SP39 :

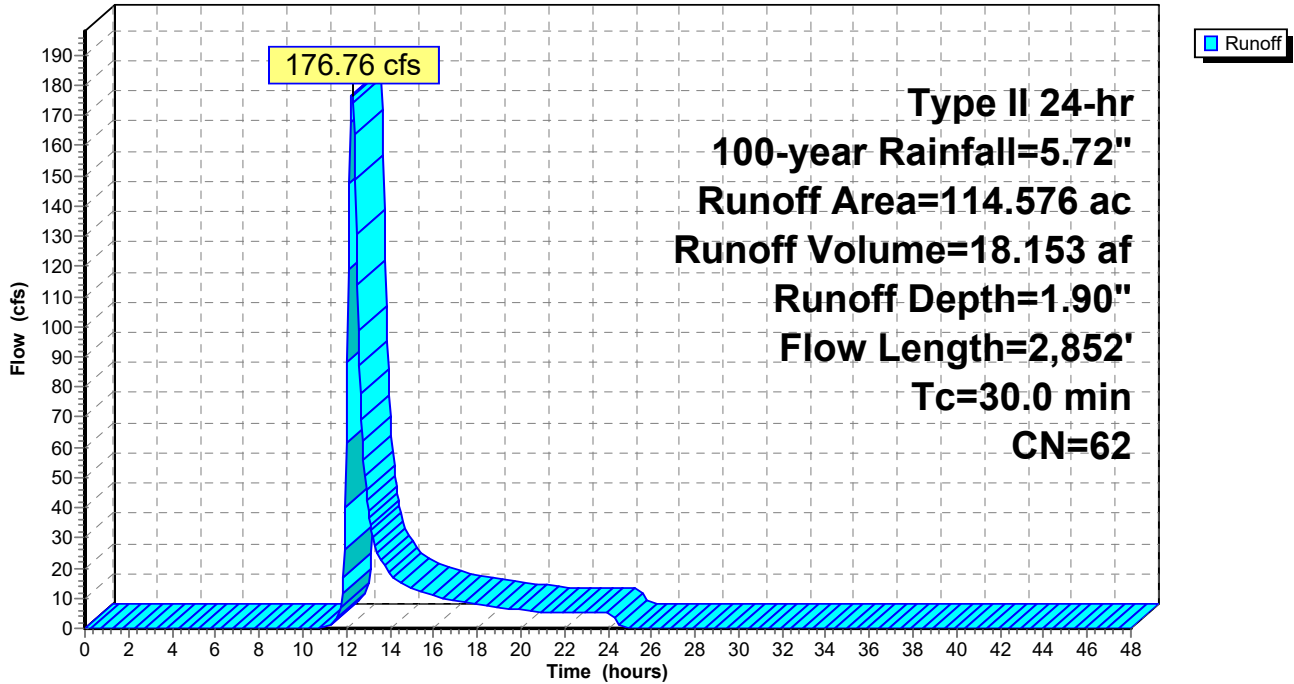
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
0.475	48	Brush, Good, HSG B
0.336	65	Brush, Good, HSG C
0.314	73	Brush, Good, HSG D
1.088	96	Gravel surface, HSG D
0.964	98	Unconnected roofs, HSG D
60.275	58	Meadow, non-grazed, HSG B
18.779	71	Meadow, non-grazed, HSG C
2.256	78	Meadow, non-grazed, HSG D
6.253	61	>75% Grass cover, Good, HSG B
3.233	74	>75% Grass cover, Good, HSG C
1.913	98	Water Surface, HSG D
17.544	55	Woods, Good, HSG B
0.343	70	Woods, Good, HSG C
0.803	77	Woods, Good, HSG D
114.576	62	Weighted Average
111.699		97.49% Pervious Area
2.877		2.51% Impervious Area
0.964		33.51% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	100	0.0600	0.23		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
17.7	2,151	0.0840	2.03		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
5.2	601	0.1490	1.93		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
30.0	2,852	Total			

Subcatchment 39S: Sub 39

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 40S: Sub 40**

Runoff = 45.31 cfs @ 12.24 hrs, Volume= 4.343 af, Depth= 2.50"  
 Routed to Reach 39R :

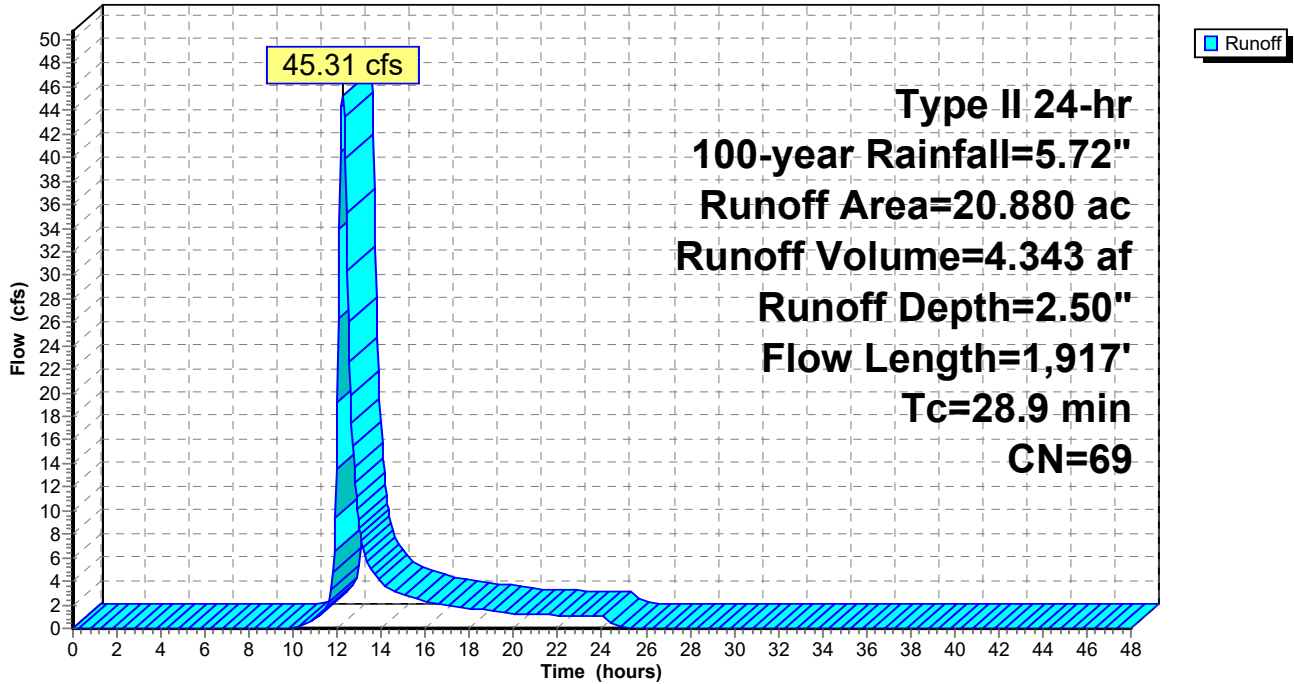
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
0.016	65	Brush, Good, HSG C
0.235	96	Gravel surface, HSG D
0.018	98	Unconnected roofs, HSG D
6.944	58	Meadow, non-grazed, HSG B
10.584	71	Meadow, non-grazed, HSG C
0.095	78	Meadow, non-grazed, HSG D
0.089	61	>75% Grass cover, Good, HSG B
1.640	98	Water Surface, HSG D
0.643	55	Woods, Good, HSG B
0.616	70	Woods, Good, HSG C
20.880	69	Weighted Average
19.222		92.06% Pervious Area
1.658		7.94% Impervious Area
0.018		1.09% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	100	0.0575	0.23		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
2.6	358	0.1089	2.31		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.4	38	0.1118	1.67		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
9.8	1,118	0.0733	1.90		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
8.8	303	0.0132	0.57		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
28.9	1,917	Total			

Subcatchment 40S: Sub 40

Hydrograph





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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 41S: Sub 41**

Runoff = 91.27 cfs @ 12.30 hrs, Volume= 9.943 af, Depth= 1.98"  
 Routed to Link SP41 :

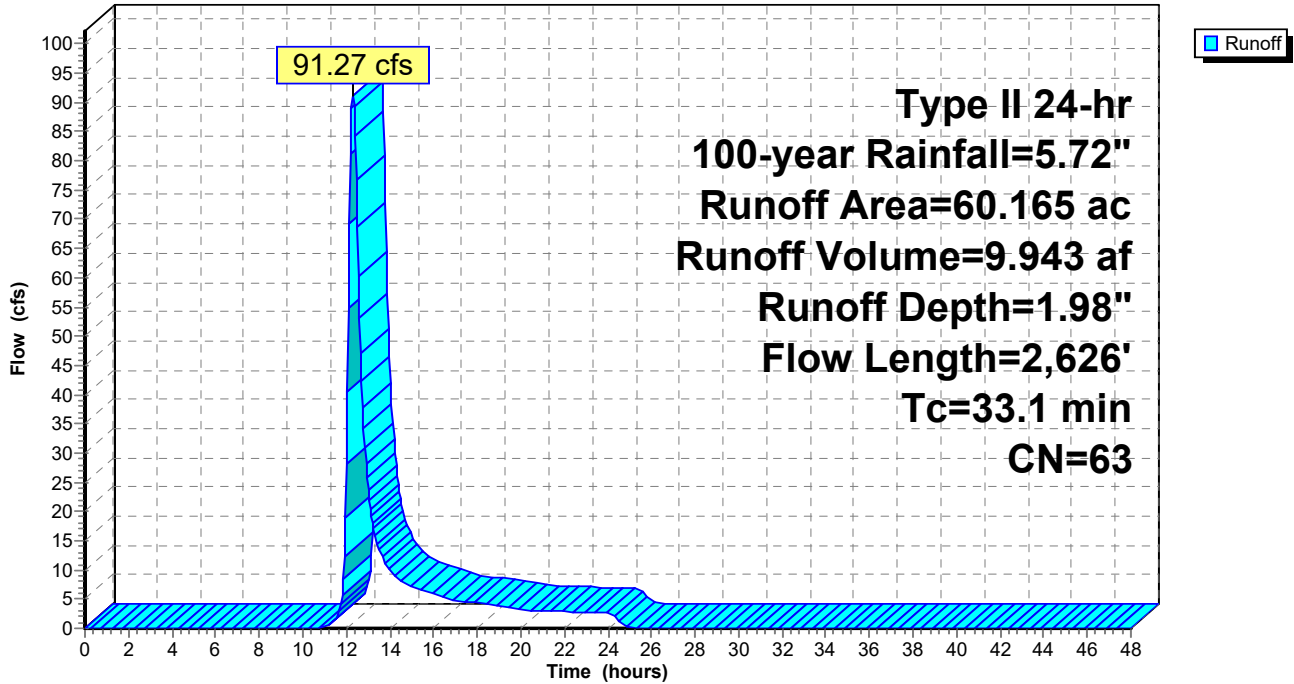
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
0.378	48	Brush, Good, HSG B
0.001	98	Unconnected roofs, HSG D
18.363	58	Meadow, non-grazed, HSG B
8.734	71	Meadow, non-grazed, HSG C
2.287	78	Meadow, non-grazed, HSG D
1.531	98	Water Surface, HSG D
19.479	55	Woods, Good, HSG B
9.335	70	Woods, Good, HSG C
0.057	77	Woods, Good, HSG D
60.165	63	Weighted Average
58.633		97.45% Pervious Area
1.532		2.55% Impervious Area
0.001		0.07% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0125	0.12		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
5.0	585	0.0765	1.94		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
7.8	652	0.0395	1.39		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
6.9	1,289	0.0436	3.13		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
33.1	2,626	Total			

Subcatchment 41S: Sub 41

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 42S: Sub 42**

Runoff = 95.07 cfs @ 12.15 hrs, Volume= 7.761 af, Depth= 1.90"

Routed to Link SP42 :

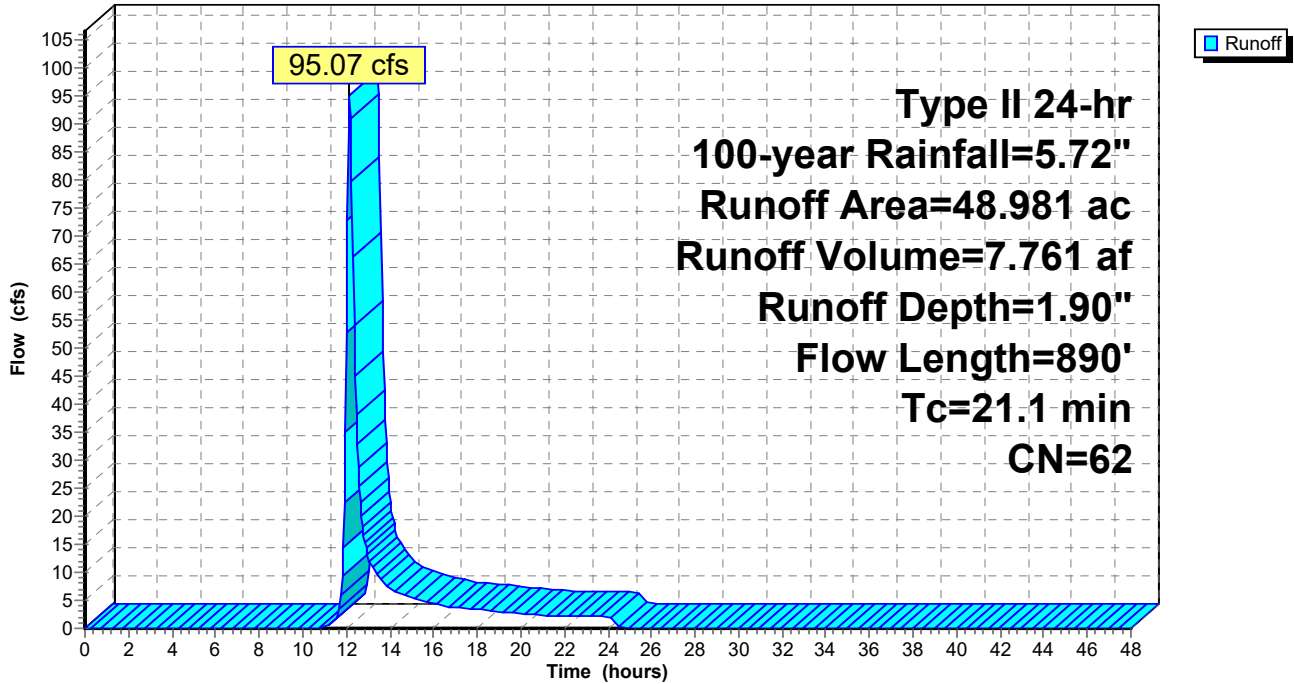
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
0.795	48	Brush, Good, HSG B
0.967	65	Brush, Good, HSG C
3.291	58	Meadow, non-grazed, HSG B
11.478	71	Meadow, non-grazed, HSG C
1.886	98	Water Surface, HSG D
27.090	55	Woods, Good, HSG B
3.474	70	Woods, Good, HSG C
48.981	62	Weighted Average
47.095		96.15% Pervious Area
1.886		3.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0125	0.12		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
3.2	234	0.0299	1.21		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
4.5	556	0.1704	2.06		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
21.1	890	Total			

Subcatchment 42S: Sub 42

Hydrograph



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**Summary for Subcatchment 48S: Sub 48**

[47] Hint: Peak is 821% of capacity of segment #3

Runoff = 158.49 cfs @ 12.35 hrs, Volume= 18.129 af, Depth= 2.77"  
 Routed to Link SP48 :

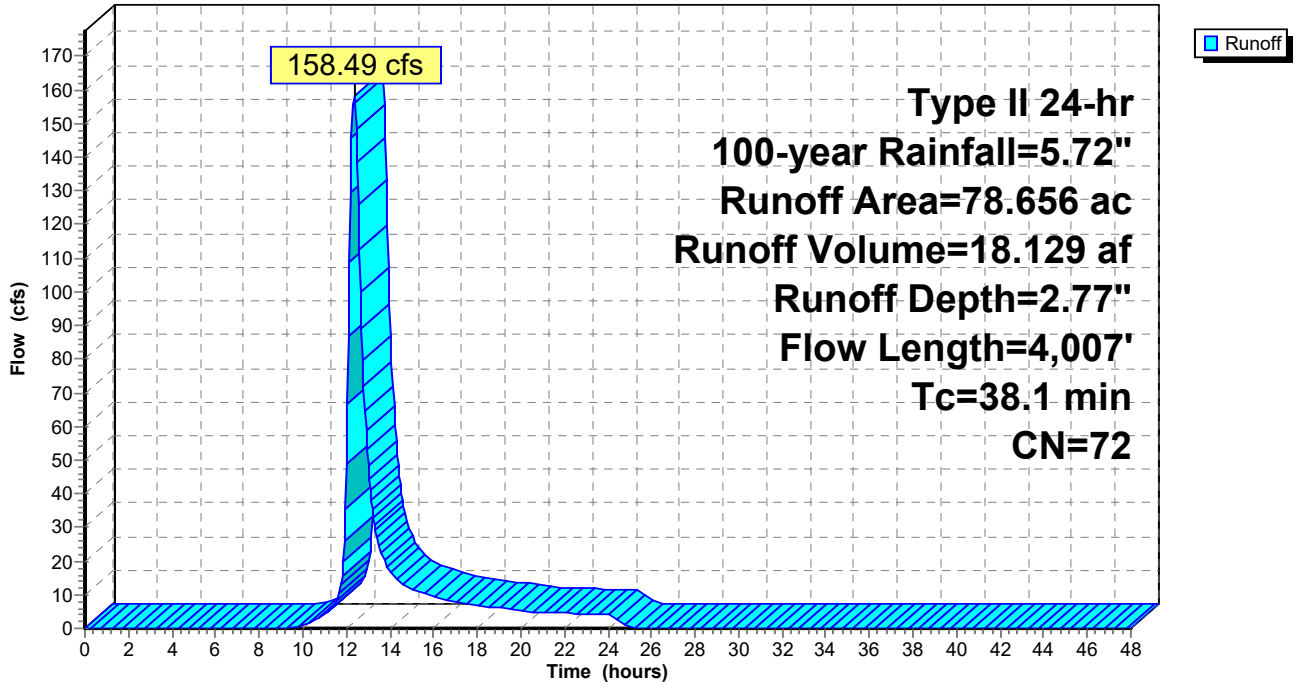
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 0.572	98	Surface water
* 1.693	98	Imperviopus surface
* 0.110	96	Gravel surface
0.416	61	>75% Grass cover, Good, HSG B
3.809	74	>75% Grass cover, Good, HSG C
1.571	80	>75% Grass cover, Good, HSG D
9.889	58	Meadow, non-grazed, HSG B
26.970	71	Meadow, non-grazed, HSG C
21.544	78	Meadow, non-grazed, HSG D
0.763	48	Brush, Good, HSG B
4.514	65	Brush, Good, HSG C
2.800	73	Brush, Good, HSG D
0.194	55	Woods, Good, HSG B
0.882	70	Woods, Good, HSG C
2.929	77	Woods, Good, HSG D
78.656	72	Weighted Average
76.391		97.12% Pervious Area
2.265		2.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	100	0.0625	0.24		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
22.2	1,935	0.0430	1.45		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
8.9	1,972	0.0230	3.68	19.31	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=9.00' D=0.50' Z= 3.0 '/' Top.W=12.00' n= 0.035 Earth, dense weeds
38.1	4,007	Total			

Subcatchment 48S: Sub 48

Hydrograph



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**Summary for Subcatchment 49S: Sub 49**

Runoff = 48.68 cfs @ 12.36 hrs, Volume= 5.794 af, Depth= 2.07"  
 Routed to Reach 42R : S-NSD-16

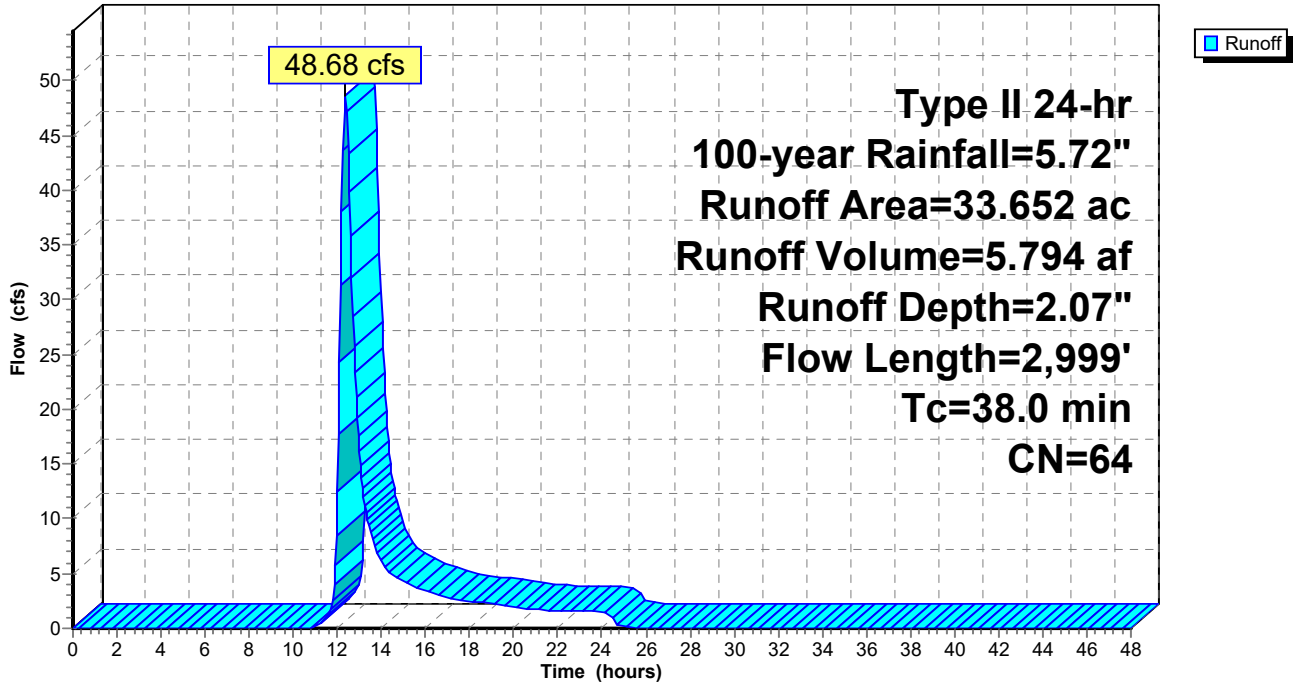
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
1.496	48	Brush, Good, HSG B
1.174	65	Brush, Good, HSG C
0.274	96	Gravel surface, HSG D
0.570	98	Unconnected roofs, HSG D
13.748	58	Meadow, non-grazed, HSG B
12.594	71	Meadow, non-grazed, HSG C
1.421	61	>75% Grass cover, Good, HSG B
0.238	74	>75% Grass cover, Good, HSG C
0.029	98	Water Surface, HSG D
1.071	55	Woods, Good, HSG B
0.984	70	Woods, Good, HSG C
0.053	77	Woods, Good, HSG D
33.652	64	Weighted Average
33.053		98.22% Pervious Area
0.599		1.78% Impervious Area
0.570		95.16% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	100	0.0600	0.23		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
1.5	240	0.1500	2.71		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.4	534	0.1367	2.59		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.8	168	0.0506	1.57		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
8.2	561	0.0267	1.14		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
16.0	1,396	0.0434	1.46		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
38.0	2,999	Total			

Subcatchment 49S: Sub 49

Hydrograph





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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 50S: Sub 50**

[47] Hint: Peak is 1655% of capacity of segment #4

Runoff = 94.34 cfs @ 12.25 hrs, Volume= 9.184 af, Depth= 2.41"  
 Routed to Link SP50 :

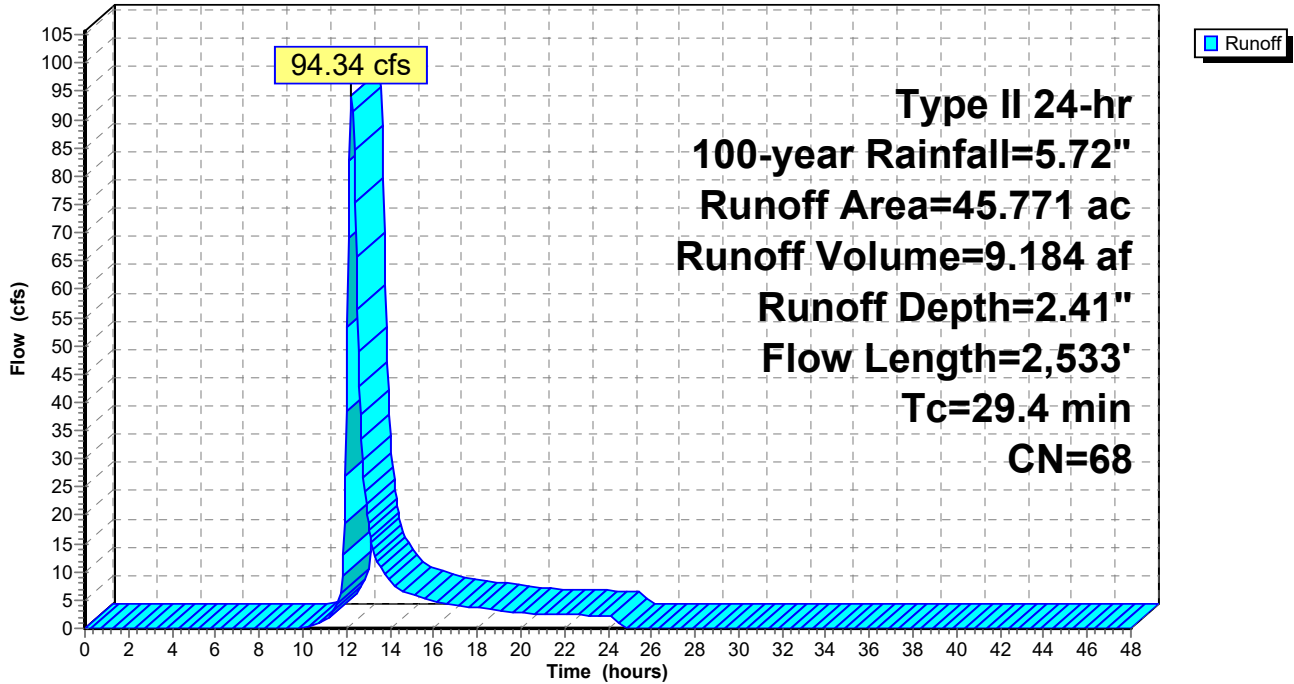
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
0.310	48	Brush, Good, HSG B
3.852	65	Brush, Good, HSG C
0.150	73	Brush, Good, HSG D
0.163	98	Unconnected roofs, HSG D
3.353	58	Meadow, non-grazed, HSG B
23.813	71	Meadow, non-grazed, HSG C
2.446	78	Meadow, non-grazed, HSG D
0.409	98	Water Surface, HSG D
5.669	55	Woods, Good, HSG B
5.353	70	Woods, Good, HSG C
0.253	77	Woods, Good, HSG D
45.771	68	Weighted Average
45.199		98.75% Pervious Area
0.572		1.25% Impervious Area
0.163		28.50% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0350	0.19		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
8.1	911	0.0710	1.87		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
7.5	410	0.0330	0.91		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
4.9	1,112	0.0320	3.80	5.70	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00' n= 0.035 Earth, dense weeds
29.4	2,533	Total			

Subcatchment 50S: Sub 50

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 51S: Sub 51**

Runoff = 153.74 cfs @ 12.35 hrs, Volume= 17.851 af, Depth= 2.07"

Routed to Link SP51 :

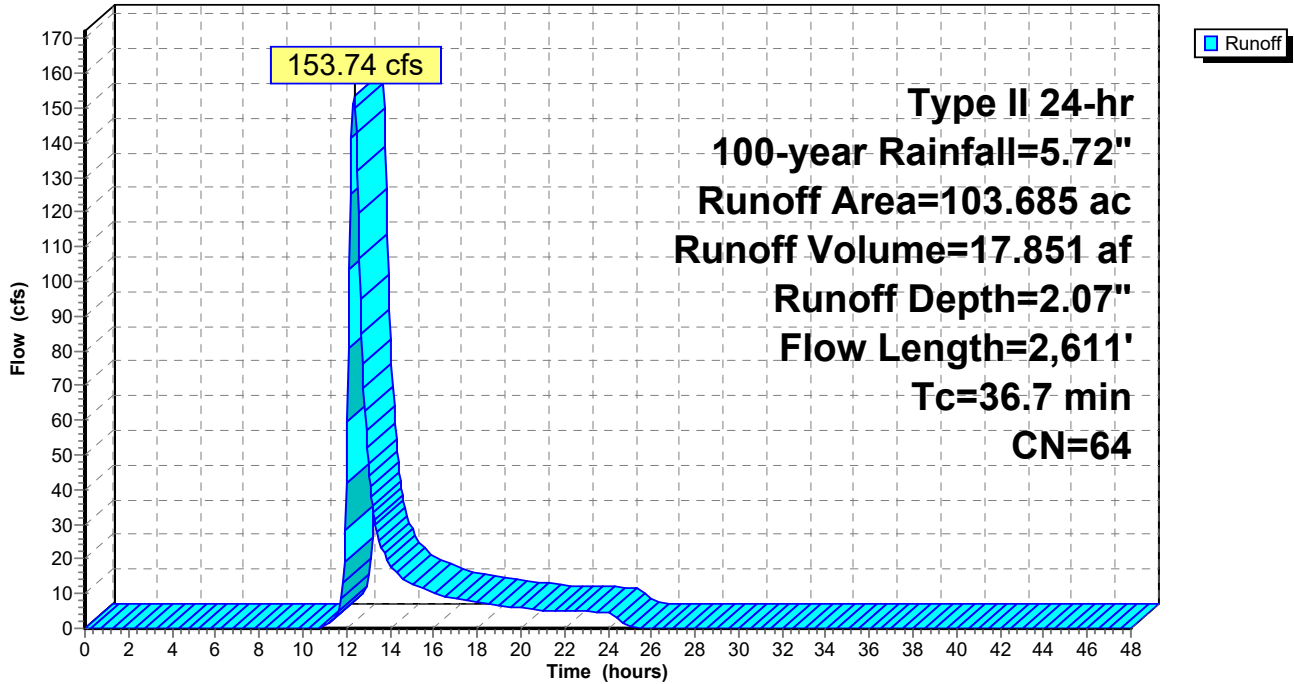
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
* 1.067	98	Impervious surface
2.753	61	>75% Grass cover, Good, HSG B
1.096	74	>75% Grass cover, Good, HSG C
49.195	58	Meadow, non-grazed, HSG B
39.362	71	Meadow, non-grazed, HSG C
2.576	78	Meadow, non-grazed, HSG D
0.936	48	Brush, Good, HSG B
0.917	65	Brush, Good, HSG C
0.252	73	Brush, Good, HSG D
1.975	55	Woods, Good, HSG B
3.395	70	Woods, Good, HSG C
0.161	77	Woods, Good, HSG D
103.685	64	Weighted Average
102.618		98.97% Pervious Area
1.067		1.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0150	0.13		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
12.6	1,592	0.0908	2.11		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
4.3	435	0.0586	1.69		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
4.4	336	0.0327	1.27		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
3.0	148	0.0270	0.82		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
36.7	2,611	Total			

Subcatchment 51S: Sub 51

Hydrograph



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**Summary for Subcatchment 52S: Sub 52**

Runoff = 38.30 cfs @ 12.16 hrs, Volume= 3.083 af, Depth= 2.50"  
 Routed to Link SP52 :

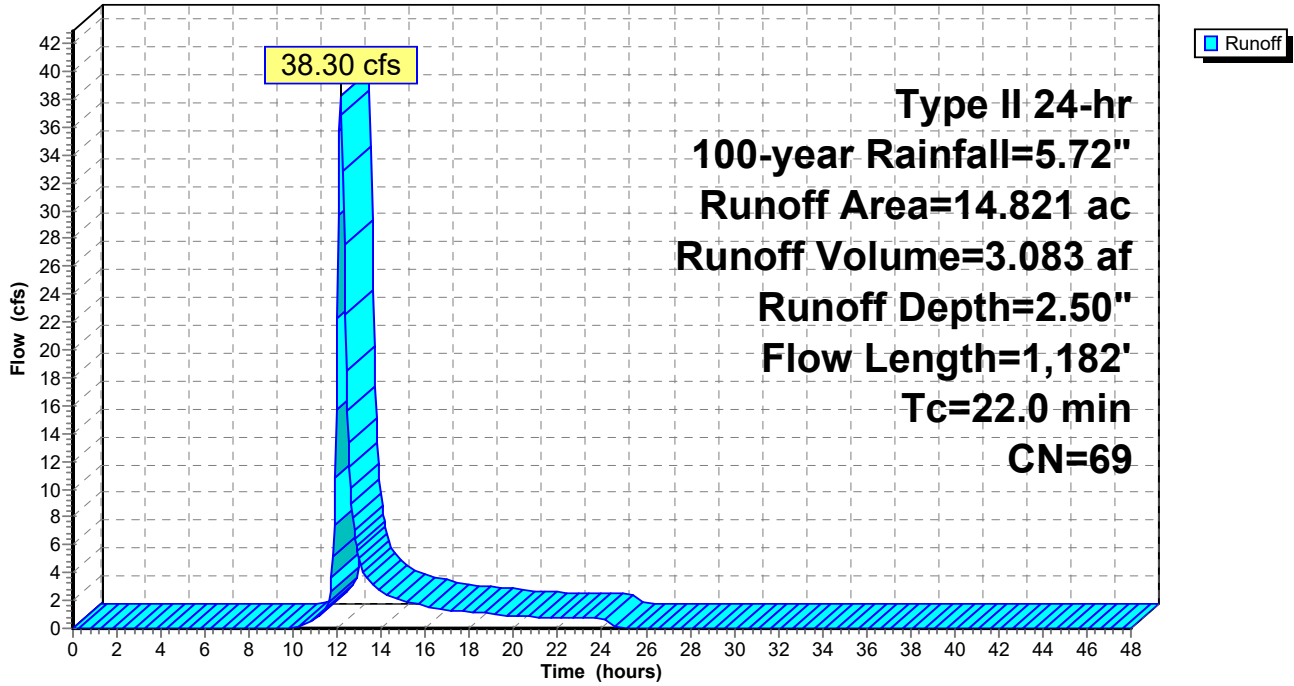
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
0.561	48	Brush, Good, HSG B
0.166	73	Brush, Good, HSG D
1.696	58	Meadow, non-grazed, HSG B
10.185	71	Meadow, non-grazed, HSG C
0.446	78	Meadow, non-grazed, HSG D
0.413	98	Water Surface, HSG D
0.321	55	Woods, Good, HSG B
0.833	70	Woods, Good, HSG C
0.200	77	Woods, Good, HSG D
14.821	69	Weighted Average
14.408		97.21% Pervious Area
0.413		2.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.1	100	0.0200	0.15		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
8.1	993	0.0850	2.04		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.8	89	0.0112	0.53		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
22.0	1,182	Total			

Subcatchment 52S: Sub 52

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 53S: Sub 53**

[47] Hint: Peak is 215% of capacity of segment #5

Runoff = 35.62 cfs @ 12.36 hrs, Volume= 4.145 af, Depth= 2.32"  
 Routed to Link SP53 :

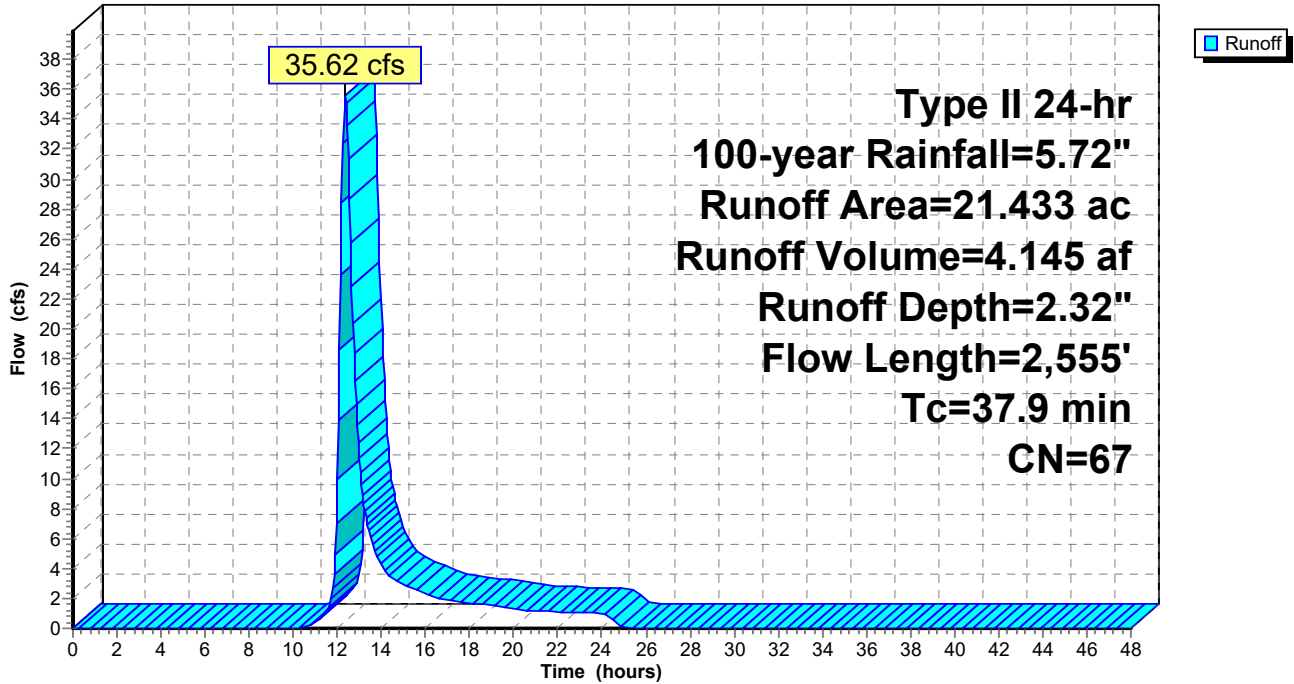
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
1.581	48	Brush, Good, HSG B
0.993	65	Brush, Good, HSG C
4.029	58	Meadow, non-grazed, HSG B
14.178	71	Meadow, non-grazed, HSG C
0.386	98	Water Surface, HSG D
0.266	70	Woods, Good, HSG C
21.433	67	Weighted Average
21.047		98.20% Pervious Area
0.386		1.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.6	100	0.0100	0.11		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
2.4	347	0.1210	2.43		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.9	151	0.1656	2.85		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
19.3	1,511	0.0347	1.30		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.7	446	0.2690	11.02	16.53	<b>Trap/Vee/Rect Channel Flow,</b> Bot.W=2.00' D=0.50' Z= 2.0 ' Top.W=4.00' n= 0.035 Earth, dense weeds
37.9	2,555	Total			

Subcatchment 53S: Sub 53

Hydrograph





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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 54S:**

[47] Hint: Peak is 1215% of capacity of segment #5

Runoff = 93.52 cfs @ 12.31 hrs, Volume= 10.145 af, Depth= 2.58"  
 Routed to Link SP54 :

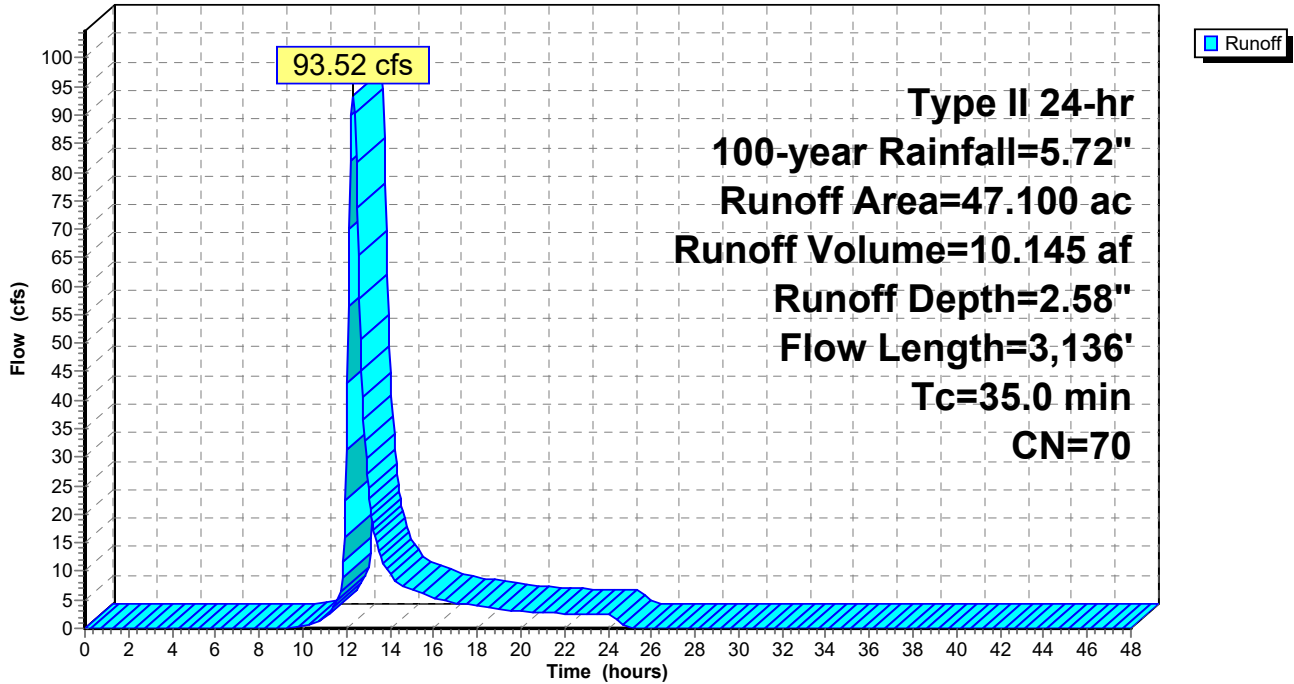
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
2.263	48	Brush, Good, HSG B
4.855	65	Brush, Good, HSG C
* 2.566	98	Impervious
5.659	58	Meadow, non-grazed, HSG B
23.239	71	Meadow, non-grazed, HSG C
2.347	61	>75% Grass cover, Good, HSG B
5.038	74	>75% Grass cover, Good, HSG C
1.056	98	Water Surface, HSG D
0.043	55	Woods, Good, HSG B
0.034	70	Woods, Good, HSG C
47.100	70	Weighted Average
43.478		92.31% Pervious Area
3.622		7.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	100	0.0500	0.22		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
11.2	964	0.0420	1.43		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.8	166	0.0392	0.99		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
1.9	321	0.0312	2.84		<b>Shallow Concentrated Flow,</b> Unpaved Kv= 16.1 fps
11.4	1,585	0.0230	2.31	7.69	<b>Parabolic Channel,</b> W=5.00' D=1.00' Area=3.3 sf Perim=5.5' n= 0.070 Sluggish weedy reaches w/pools
35.0	3,136	Total			

Subcatchment 54S:

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 55S: Sub 55**

[47] Hint: Peak is 200% of capacity of segment #4

Runoff = 42.41 cfs @ 12.39 hrs, Volume= 5.182 af, Depth= 2.23"  
 Routed to Link SP55 :

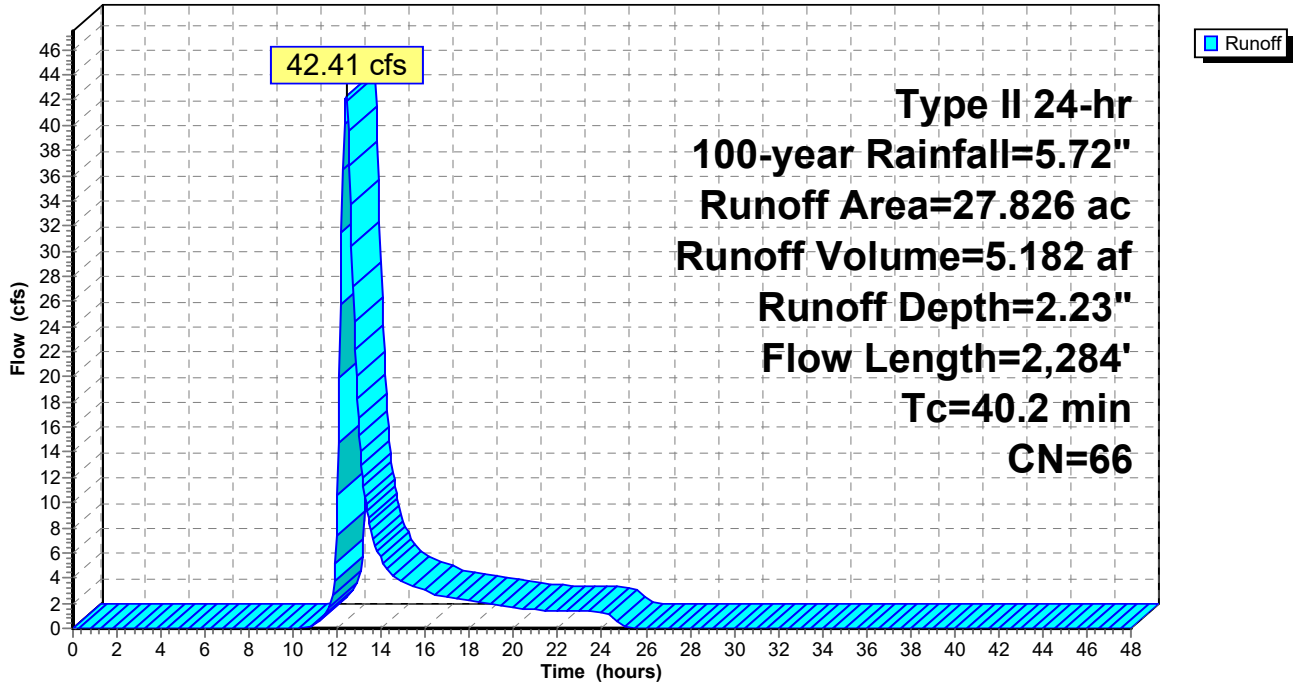
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
0.418	48	Brush, Good, HSG B
0.338	65	Brush, Good, HSG C
* 0.275	98	Impervious surface
9.179	58	Meadow, non-grazed, HSG B
17.187	71	Meadow, non-grazed, HSG C
0.192	55	Woods, Good, HSG B
0.237	70	Woods, Good, HSG C
27.826	66	Weighted Average
27.551		99.01% Pervious Area
0.275		0.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.2	100	0.0130	0.13		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
4.5	535	0.0810	1.99		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
21.5	1,175	0.0170	0.91		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.0	474	0.0530	7.94	21.17	<b>Parabolic Channel,</b> W=4.00' D=1.00' Area=2.7 sf Perim=4.6' n= 0.030 Earth, grassed & winding
40.2	2,284	Total			

Subcatchment 55S: Sub 55

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 56S: Sub 56**

Runoff = 121.25 cfs @ 12.26 hrs, Volume= 12.137 af, Depth= 2.32"  
 Routed to Link SP56 :

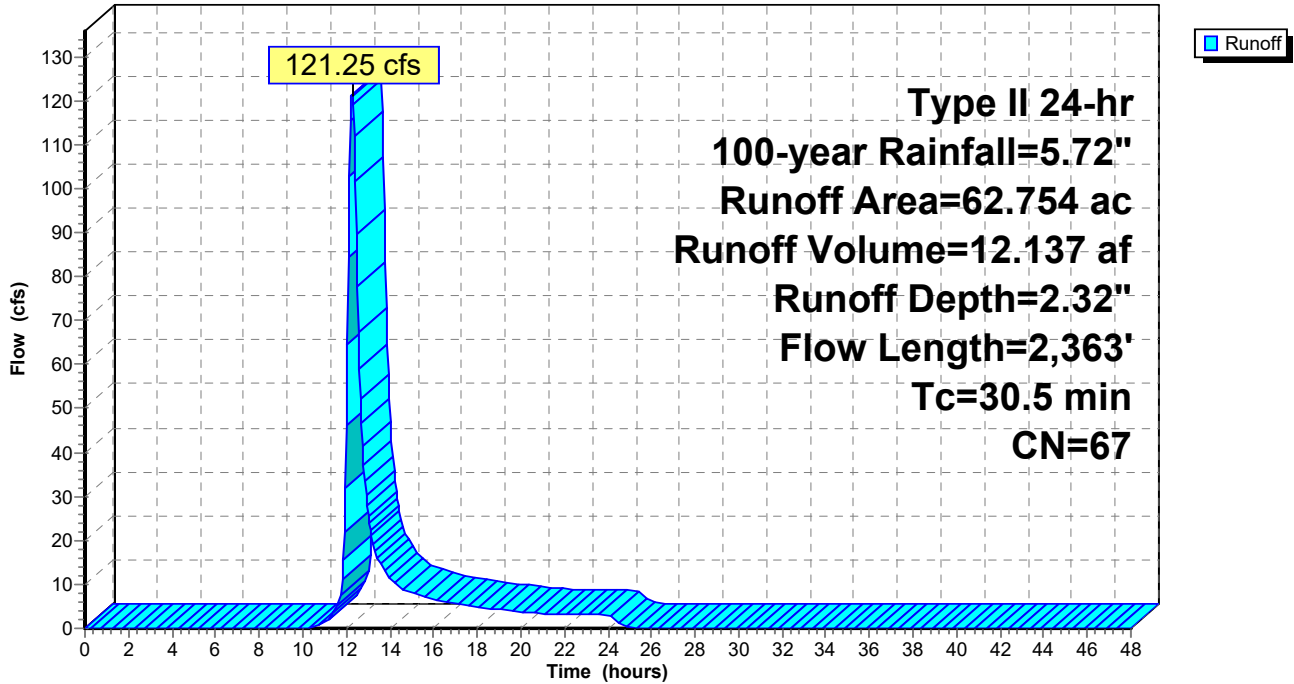
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

Area (ac)	CN	Description
0.895	48	Brush, Good, HSG B
1.460	65	Brush, Good, HSG C
13.366	58	Meadow, non-grazed, HSG B
40.081	71	Meadow, non-grazed, HSG C
1.244	55	Woods, Good, HSG B
5.708	70	Woods, Good, HSG C
62.754	67	Weighted Average
62.754		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	100	0.0575	0.23		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 2.50"
7.3	501	0.0264	1.14		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
6.2	958	0.1336	2.56		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
6.8	644	0.0505	1.57		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.9	160	0.0344	0.93		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
30.5	2,363	Total			

Subcatchment 56S: Sub 56

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Reach 33R:**

[91] Warning: Storage range exceeded by 0.84'

[55] Hint: Peak inflow is 350% of Manning's capacity

[79] Warning: Submerged Pond 34P Primary device # 1 OUTLET by 1.84'

Inflow Area = 25.797 ac, 1.16% Impervious, Inflow Depth = 1.90" for 100-year event

Inflow = 37.08 cfs @ 12.31 hrs, Volume= 4.087 af

Outflow = 29.27 cfs @ 12.61 hrs, Volume= 4.087 af, Atten= 21%, Lag= 17.8 min

Routed to Link SP33 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Max. Velocity= 3.26 fps, Min. Travel Time= 9.6 min

Avg. Velocity = 0.75 fps, Avg. Travel Time= 41.8 min

Peak Storage= 16,904 cf @ 12.45 hrs

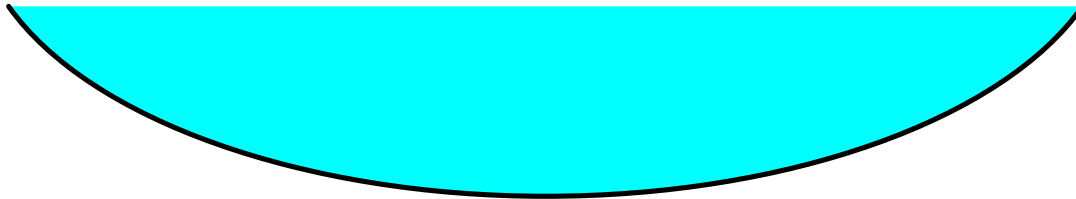
Average Depth at Peak Storage= 1.84' , Surface Width= 8.13'

Bank-Full Depth= 1.00' Flow Area= 4.0 sf, Capacity= 10.60 cfs

6.00' x 1.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage

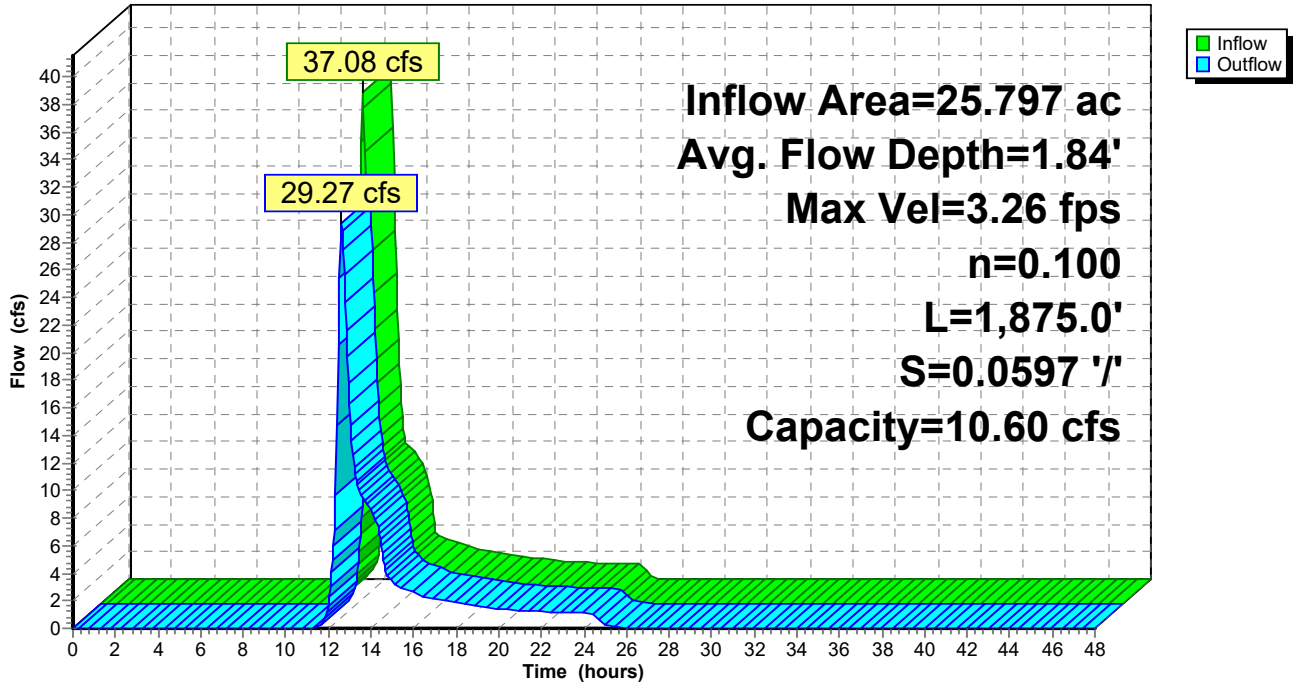
Length= 1,875.0' Slope= 0.0597 '/'

Inlet Invert= 578.00', Outlet Invert= 466.00'



Reach 33R:

Hydrograph





# Mill Pt Pre 2

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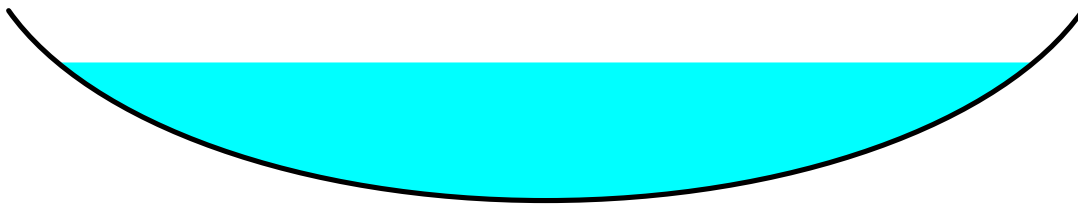
## Summary for Reach 39R:

Inflow Area = 20.880 ac, 7.94% Impervious, Inflow Depth = 2.50" for 100-year event  
Inflow = 45.31 cfs @ 12.24 hrs, Volume= 4.343 af  
Outflow = 43.63 cfs @ 12.37 hrs, Volume= 4.343 af, Atten= 4%, Lag= 7.4 min  
Routed to Link SP39 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 4.43 fps, Min. Travel Time= 4.2 min  
Avg. Velocity = 1.24 fps, Avg. Travel Time= 14.9 min

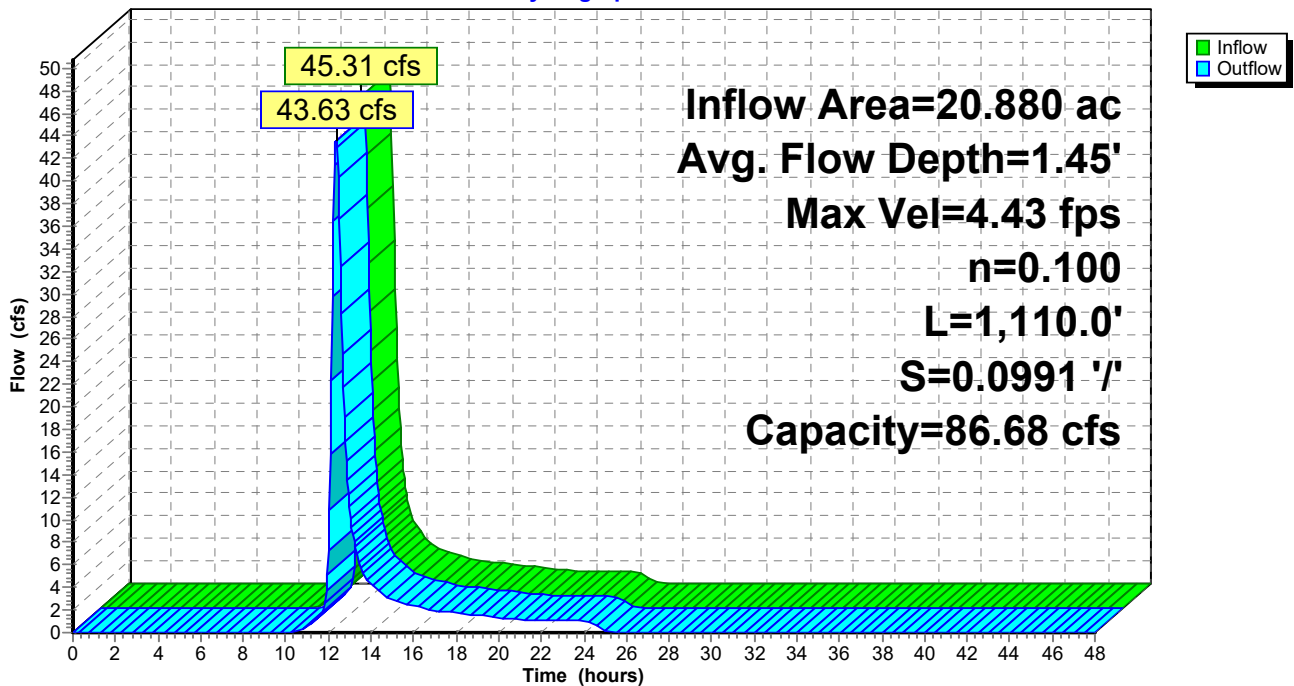
Peak Storage= 11,003 cf @ 12.29 hrs  
Average Depth at Peak Storage= 1.45' , Surface Width= 10.23'  
Bank-Full Depth= 2.00' Flow Area= 16.0 sf, Capacity= 86.68 cfs

12.00' x 2.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage  
Length= 1,110.0' Slope= 0.0991 '/'  
Inlet Invert= 526.00', Outlet Invert= 416.00'



## Reach 39R:

Hydrograph



# Mill Pt Pre 2

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Type II 24-hr 100-year Rainfall=5.72"

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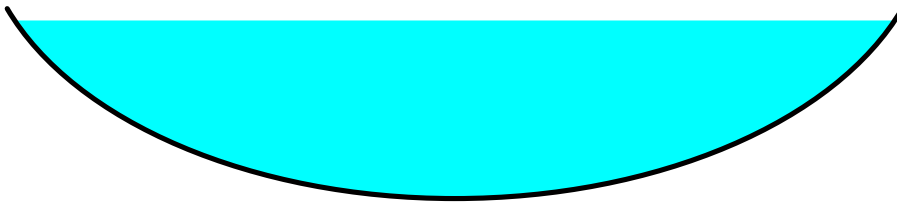
## Summary for Reach 42R: S-NSD-16

Inflow Area = 33.652 ac, 1.78% Impervious, Inflow Depth = 2.07" for 100-year event  
Inflow = 48.68 cfs @ 12.36 hrs, Volume= 5.794 af  
Outflow = 45.20 cfs @ 12.60 hrs, Volume= 5.794 af, Atten= 7%, Lag= 14.5 min  
Routed to Link SP42 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 3.74 fps, Min. Travel Time= 8.0 min  
Avg. Velocity = 0.89 fps, Avg. Travel Time= 33.7 min

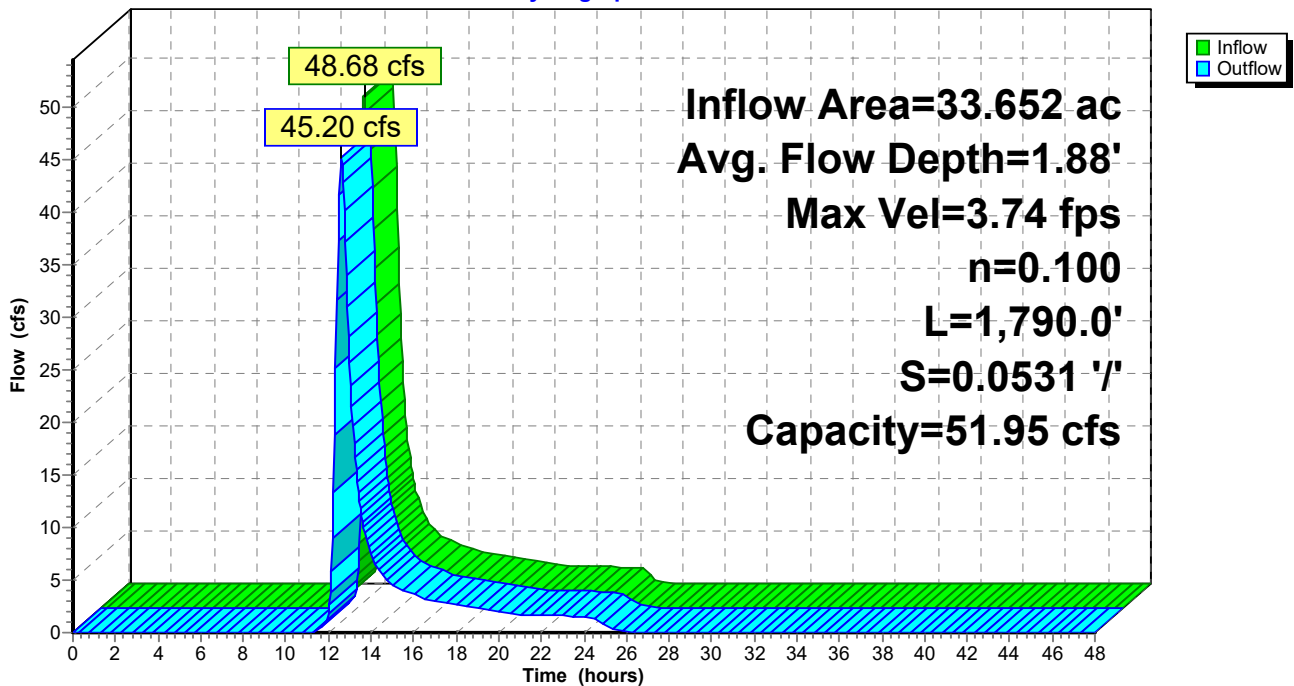
Peak Storage= 21,682 cf @ 12.47 hrs  
Average Depth at Peak Storage= 1.88' , Surface Width= 9.69'  
Bank-Full Depth= 2.00' Flow Area= 13.3 sf, Capacity= 51.95 cfs

10.00' x 2.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage  
Length= 1,790.0' Slope= 0.0531 '/'  
Inlet Invert= 470.00', Outlet Invert= 375.00'



## Reach 42R: S-NSD-16

Hydrograph



**Mill Pt Pre 2**

Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Pond 34P: VAN EPPS RD CULVERT**

Inflow Area = 25.797 ac, 1.16% Impervious, Inflow Depth = 1.90" for 100-year event  
 Inflow = 46.80 cfs @ 12.18 hrs, Volume= 4.087 af  
 Outflow = 37.08 cfs @ 12.31 hrs, Volume= 4.087 af, Atten= 21%, Lag= 7.9 min  
 Primary = 10.52 cfs @ 12.31 hrs, Volume= 3.300 af  
 Routed to Reach 33R :  
 Secondary = 26.56 cfs @ 12.31 hrs, Volume= 0.788 af  
 Routed to Reach 33R :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 585.71' @ 12.31 hrs Surf.Area= 16,588 sf Storage= 27,689 cf

Plug-Flow detention time= 11.0 min calculated for 4.083 af (100% of inflow)  
 Center-of-Mass det. time= 11.0 min ( 884.4 - 873.3 )

Volume	Invert	Avail.Storage	Storage Description			
#1	580.00'	32,769 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
580.00	1	5.0	0	0	1	
582.00	935	220.0	644	644	3,857	
584.00	6,900	505.0	6,917	7,561	20,316	
585.00	12,860	515.0	9,727	17,288	21,274	
586.00	18,260	645.0	15,481	32,769	33,289	

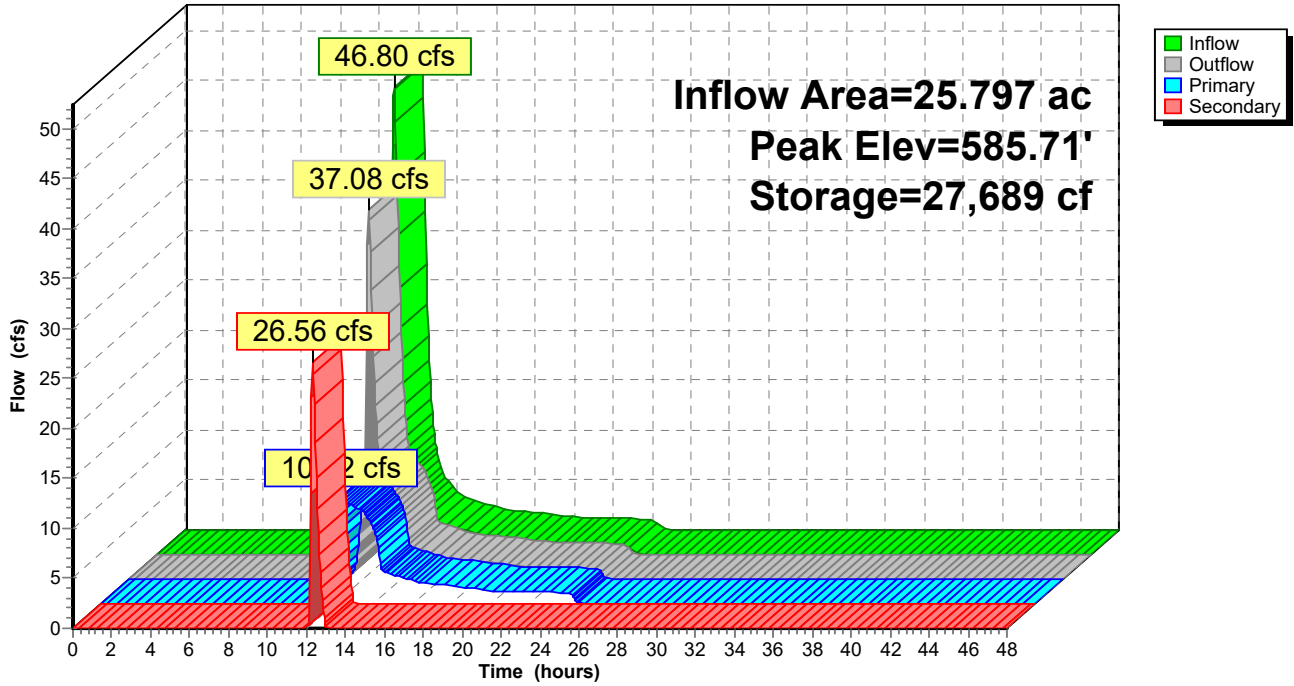
Device	Routing	Invert	Outlet Devices
#1	Primary	580.00'	<b>15.0" Round Culvert</b> L= 79.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 580.00' / 578.00' S= 0.0253 ' /' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Secondary	585.00'	<b>15.0' long + 3.0 ' /' SideZ x 25.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

**Primary OutFlow** Max=10.51 cfs @ 12.31 hrs HW=585.70' (Free Discharge)  
 ↑1=Culvert (Inlet Controls 10.51 cfs @ 8.56 fps)

**Secondary OutFlow** Max=26.12 cfs @ 12.31 hrs HW=585.70' (Free Discharge)  
 ↑2=Broad-Crested Rectangular Weir (Weir Controls 26.12 cfs @ 2.18 fps)

### Pond 34P: VAN EPPS RD CULVERT

Hydrograph



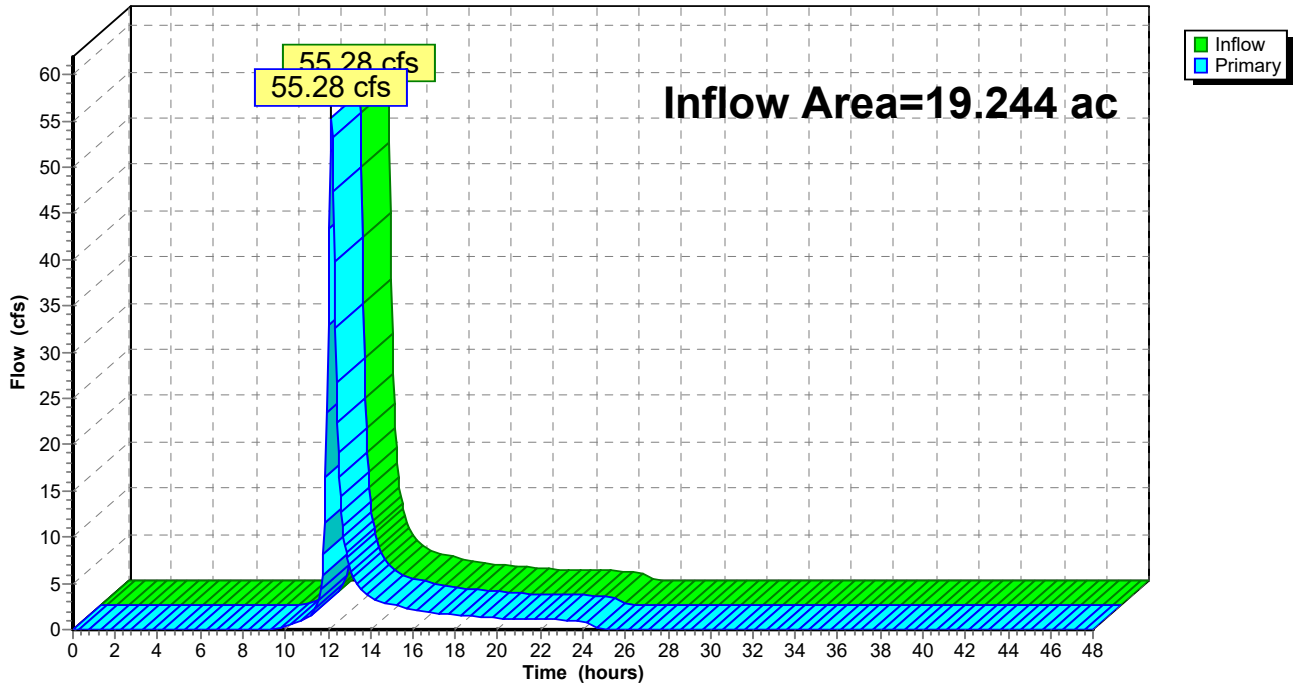
### Summary for Link SP25:

Inflow Area = 19.244 ac, 0.52% Impervious, Inflow Depth = 2.77" for 100-year event  
Inflow = 55.28 cfs @ 12.16 hrs, Volume= 4.436 af  
Primary = 55.28 cfs @ 12.16 hrs, Volume= 4.436 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP25:

Hydrograph



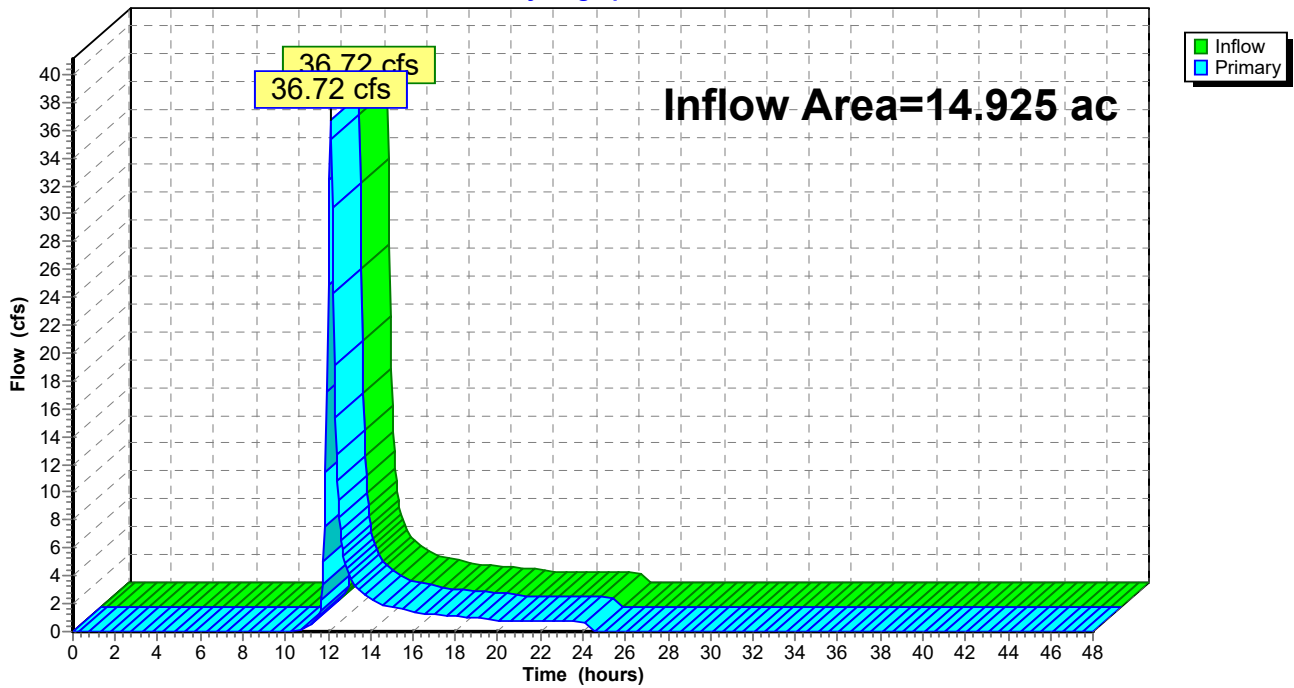
Summary for Link SP26:

Inflow Area = 14.925 ac, 4.50% Impervious, Inflow Depth = 2.15" for 100-year event  
Inflow = 36.72 cfs @ 12.11 hrs, Volume= 2.674 af  
Primary = 36.72 cfs @ 12.11 hrs, Volume= 2.674 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP26:

Hydrograph



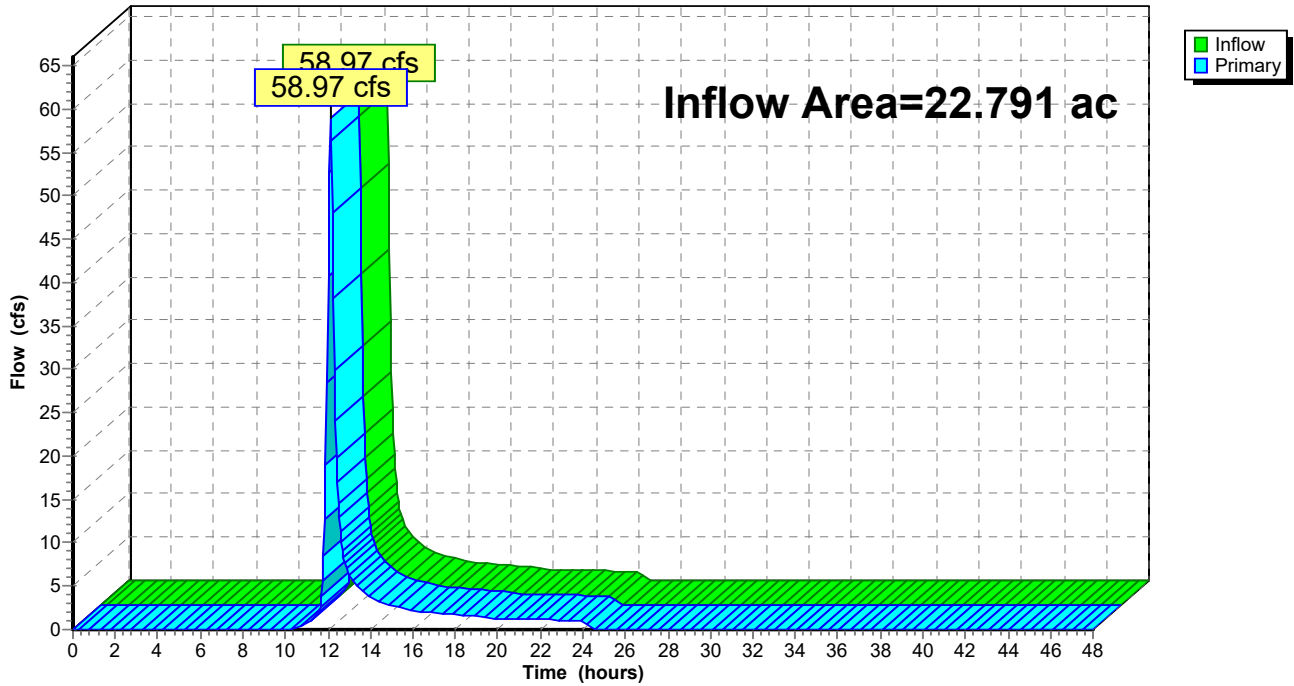
### Summary for Link SP27:

Inflow Area = 22.791 ac, 1.95% Impervious, Inflow Depth = 2.23" for 100-year event  
Inflow = 58.97 cfs @ 12.11 hrs, Volume= 4.244 af  
Primary = 58.97 cfs @ 12.11 hrs, Volume= 4.244 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP27:

Hydrograph



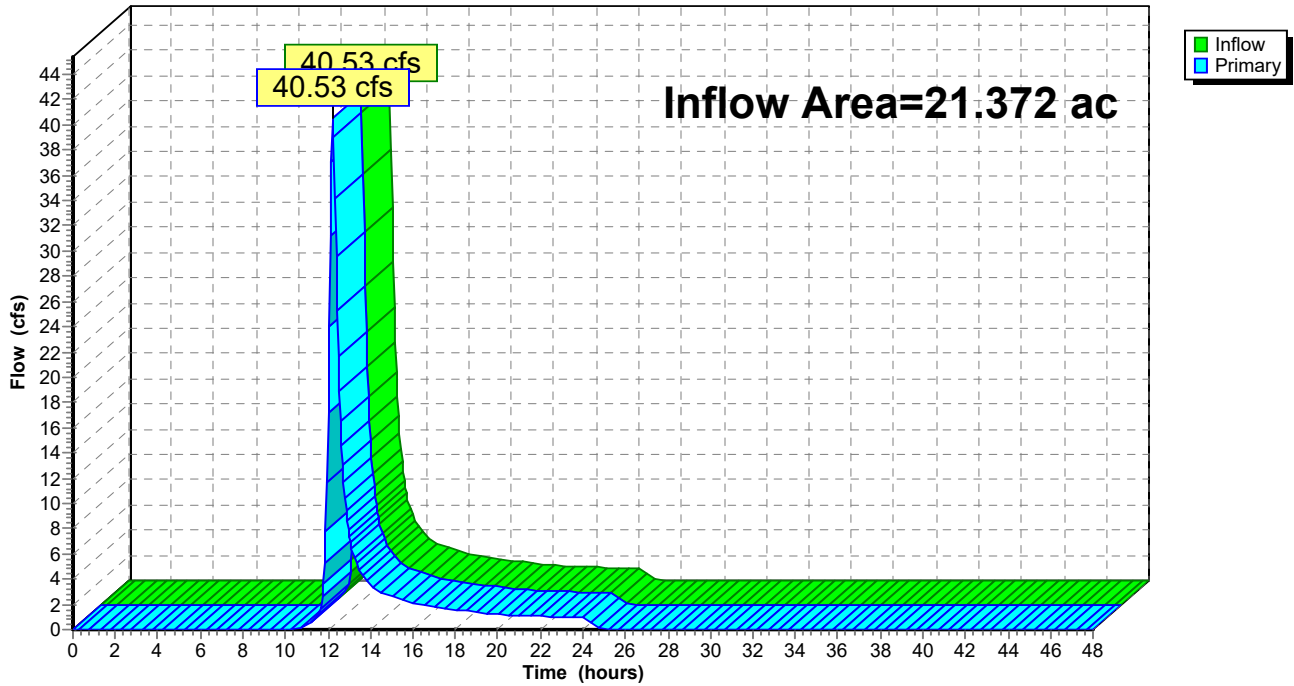
Summary for Link SP28:

Inflow Area = 21.372 ac, 0.53% Impervious, Inflow Depth = 2.15" for 100-year event  
Inflow = 40.53 cfs @ 12.23 hrs, Volume= 3.829 af  
Primary = 40.53 cfs @ 12.23 hrs, Volume= 3.829 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP28:

Hydrograph





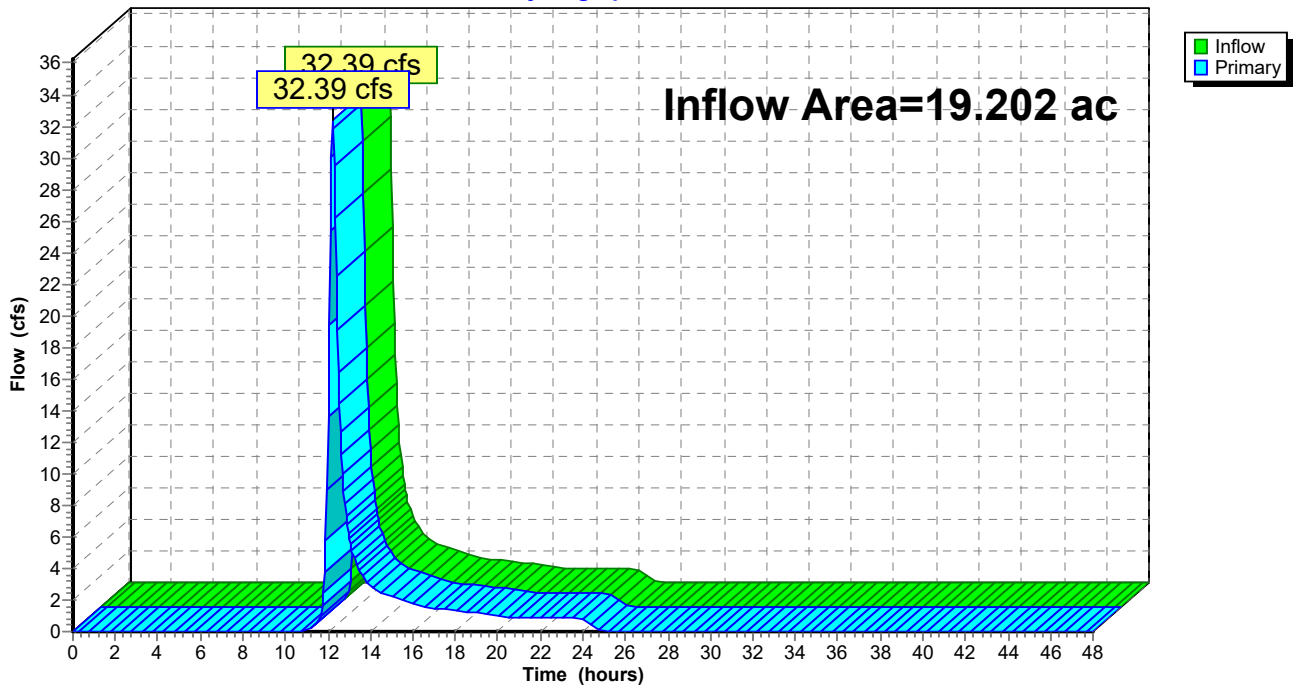
### Summary for Link SP29:

Inflow Area = 19.202 ac, 1.21% Impervious, Inflow Depth = 1.90" for 100-year event  
Inflow = 32.39 cfs @ 12.22 hrs, Volume= 3.042 af  
Primary = 32.39 cfs @ 12.22 hrs, Volume= 3.042 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP29:

Hydrograph



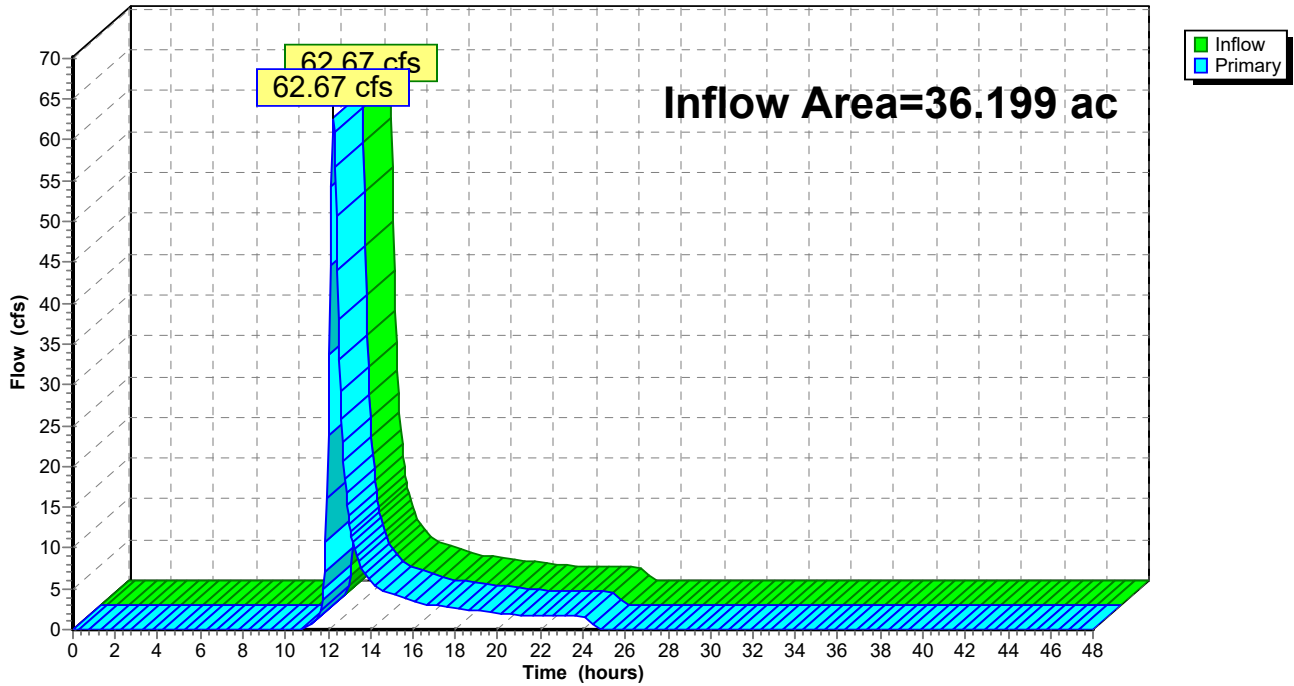
### Summary for Link SP30:

Inflow Area = 36.199 ac, 1.23% Impervious, Inflow Depth = 2.07" for 100-year event  
Inflow = 62.67 cfs @ 12.25 hrs, Volume= 6.232 af  
Primary = 62.67 cfs @ 12.25 hrs, Volume= 6.232 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP30:

Hydrograph



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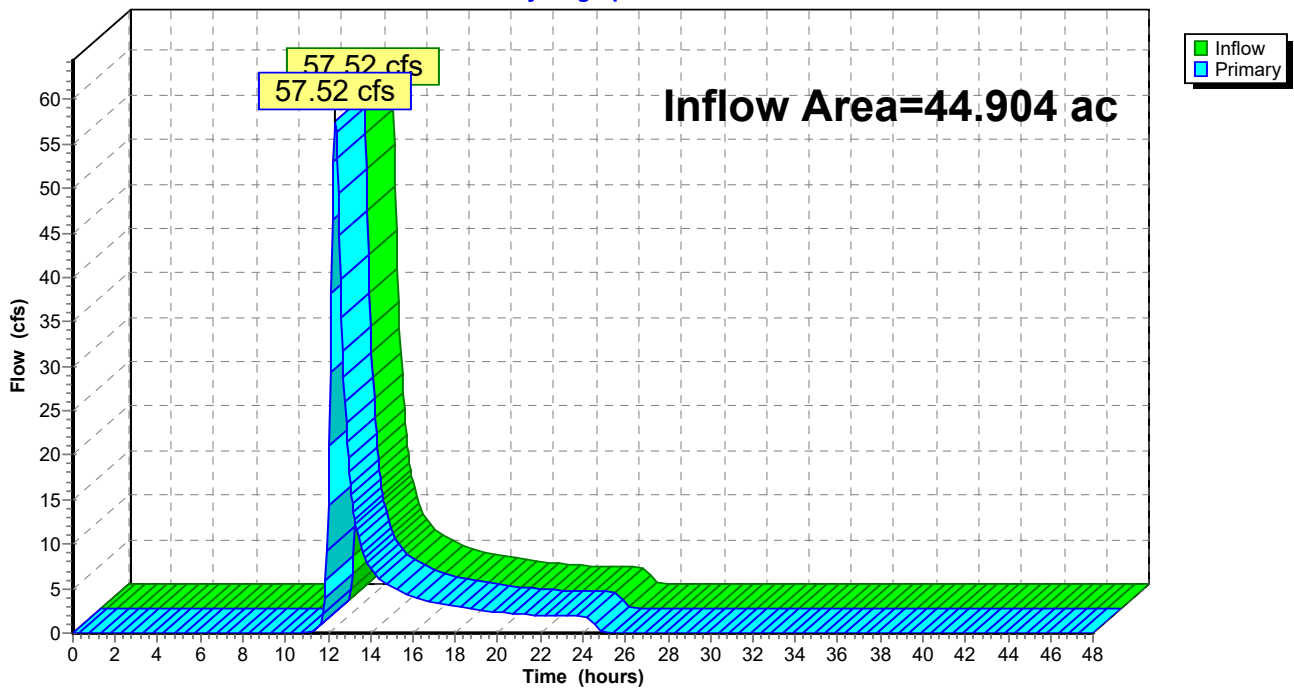
## Summary for Link SP32:

Inflow Area = 44.904 ac, 6.23% Impervious, Inflow Depth = 1.82" for 100-year event  
Inflow = 57.52 cfs @ 12.35 hrs, Volume= 6.813 af  
Primary = 57.52 cfs @ 12.35 hrs, Volume= 6.813 af, Atten= 0%, Lag= 0.0 min  
Routed to Link SP34 : SP31

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP32:

Hydrograph



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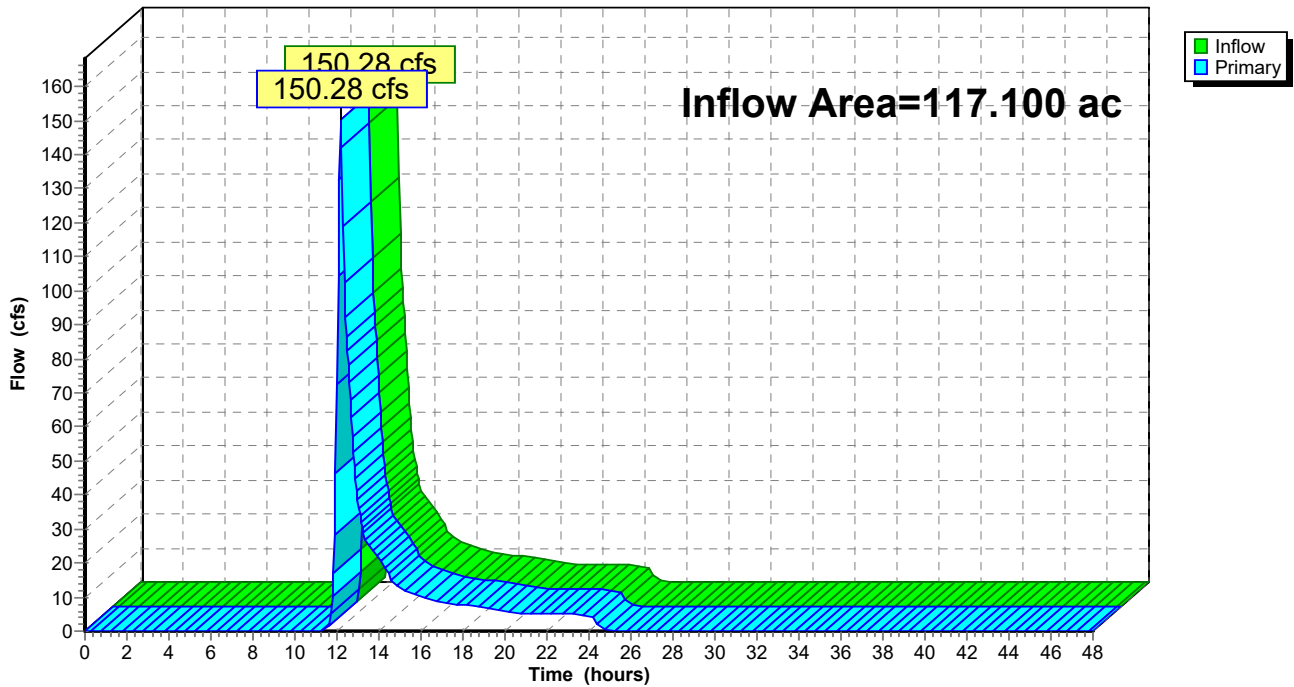
**Summary for Link SP33:**

Inflow Area = 117.100 ac, 0.78% Impervious, Inflow Depth = 1.71" for 100-year event  
Inflow = 150.28 cfs @ 12.17 hrs, Volume= 16.736 af  
Primary = 150.28 cfs @ 12.17 hrs, Volume= 16.736 af, Atten= 0%, Lag= 0.0 min  
Routed to Link SP34 : SP31

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

**Link SP33:**

Hydrograph



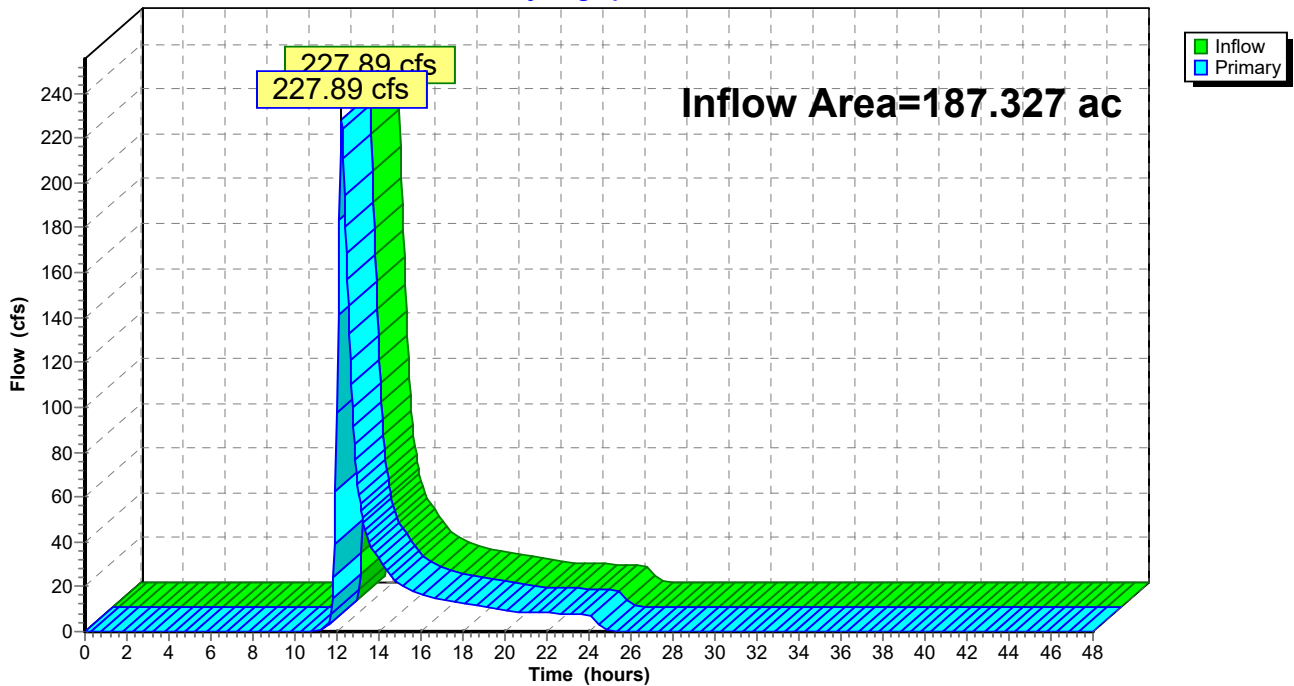
### Summary for Link SP34: SP31

Inflow Area = 187.327 ac, 1.98% Impervious, Inflow Depth = 1.75" for 100-year event  
Inflow = 227.89 cfs @ 12.22 hrs, Volume= 27.390 af  
Primary = 227.89 cfs @ 12.22 hrs, Volume= 27.390 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP34: SP31

Hydrograph



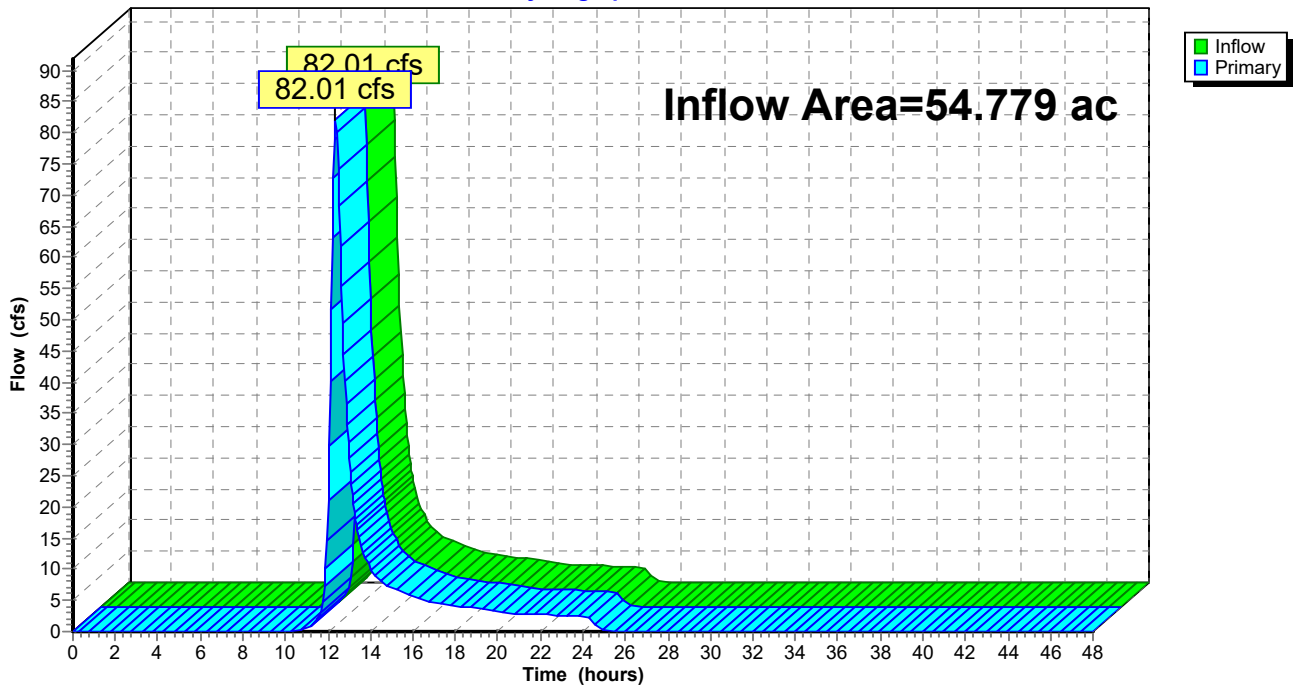
### Summary for Link SP35:

Inflow Area = 54.779 ac, 2.01% Impervious, Inflow Depth = 2.15" for 100-year event  
Inflow = 82.01 cfs @ 12.37 hrs, Volume= 9.814 af  
Primary = 82.01 cfs @ 12.37 hrs, Volume= 9.814 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP35:

Hydrograph



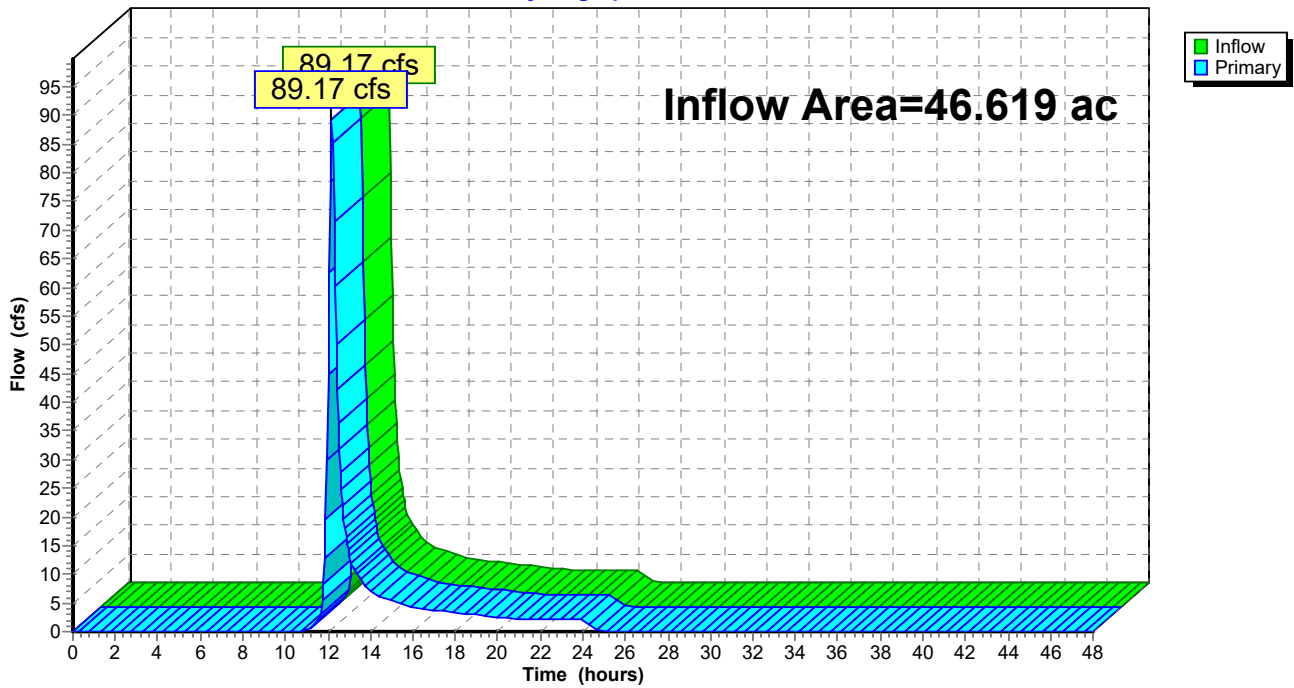
### Summary for Link SP36:

Inflow Area = 46.619 ac, 1.12% Impervious, Inflow Depth = 1.98" for 100-year event  
Inflow = 89.17 cfs @ 12.18 hrs, Volume= 7.704 af  
Primary = 89.17 cfs @ 12.18 hrs, Volume= 7.704 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP36:

Hydrograph



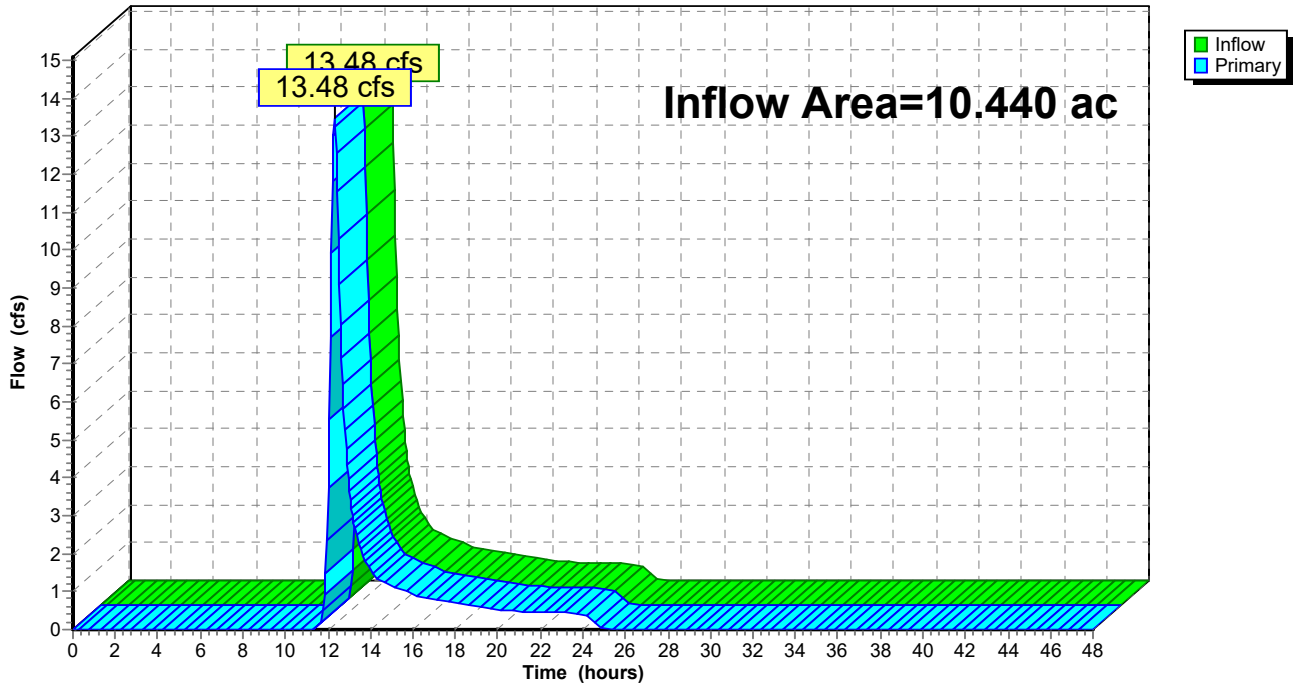
### Summary for Link SP37:

Inflow Area = 10.440 ac, 5.80% Impervious, Inflow Depth = 1.74" for 100-year event  
Inflow = 13.48 cfs @ 12.31 hrs, Volume= 1.515 af  
Primary = 13.48 cfs @ 12.31 hrs, Volume= 1.515 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP37:

Hydrograph





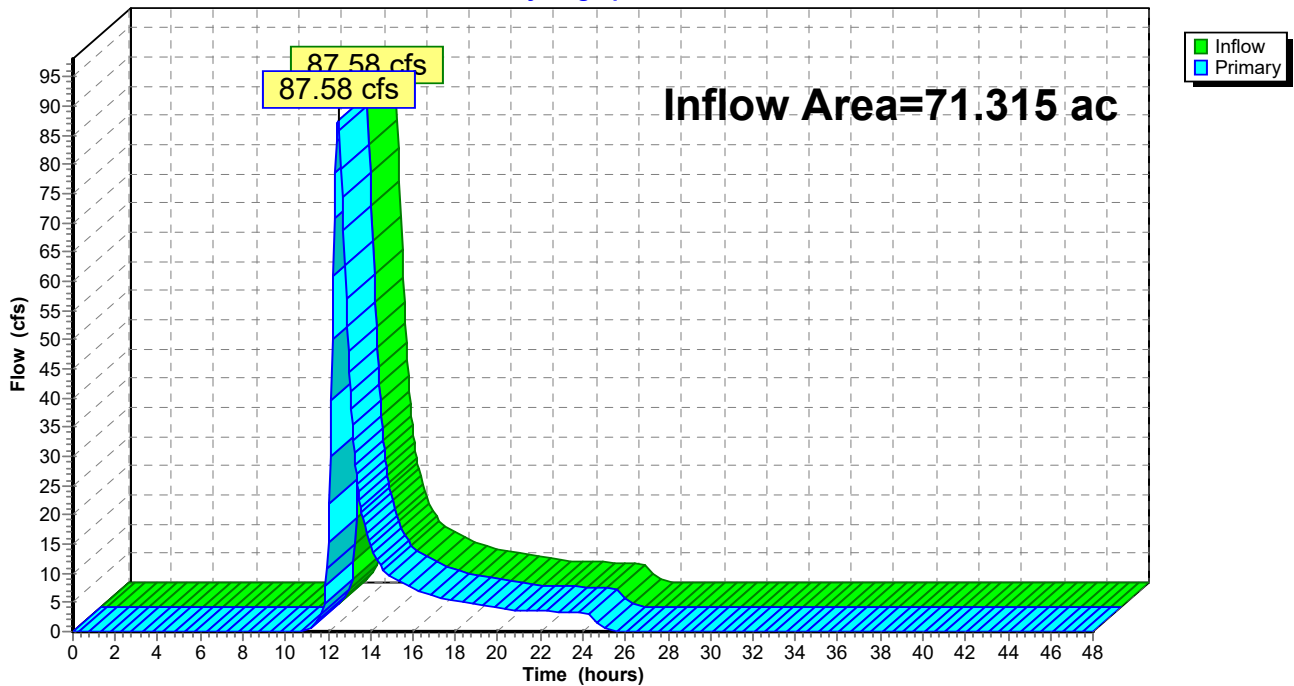
### Summary for Link SP38:

Inflow Area = 71.315 ac, 1.82% Impervious, Inflow Depth = 2.07" for 100-year event  
Inflow = 87.58 cfs @ 12.49 hrs, Volume= 12.278 af  
Primary = 87.58 cfs @ 12.49 hrs, Volume= 12.278 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP38:

Hydrograph



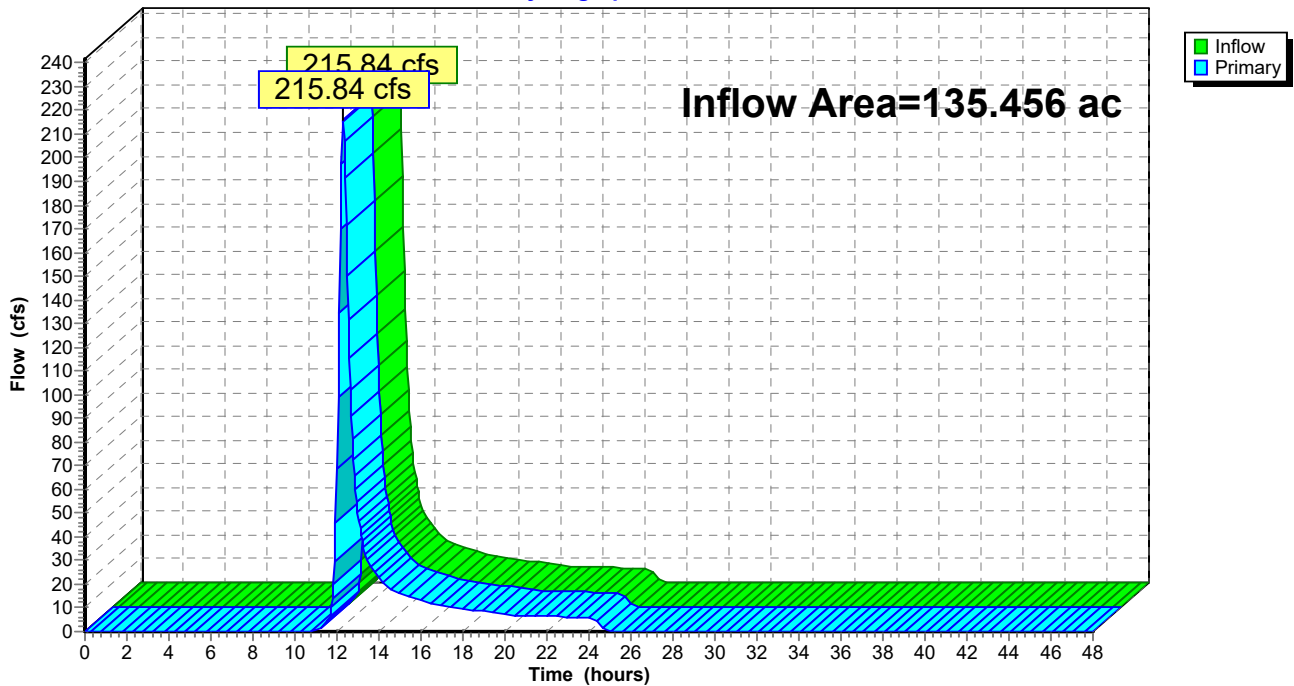
Summary for Link SP39:

Inflow Area = 135.456 ac, 3.35% Impervious, Inflow Depth = 1.99" for 100-year event  
Inflow = 215.84 cfs @ 12.29 hrs, Volume= 22.496 af  
Primary = 215.84 cfs @ 12.29 hrs, Volume= 22.496 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP39:

Hydrograph



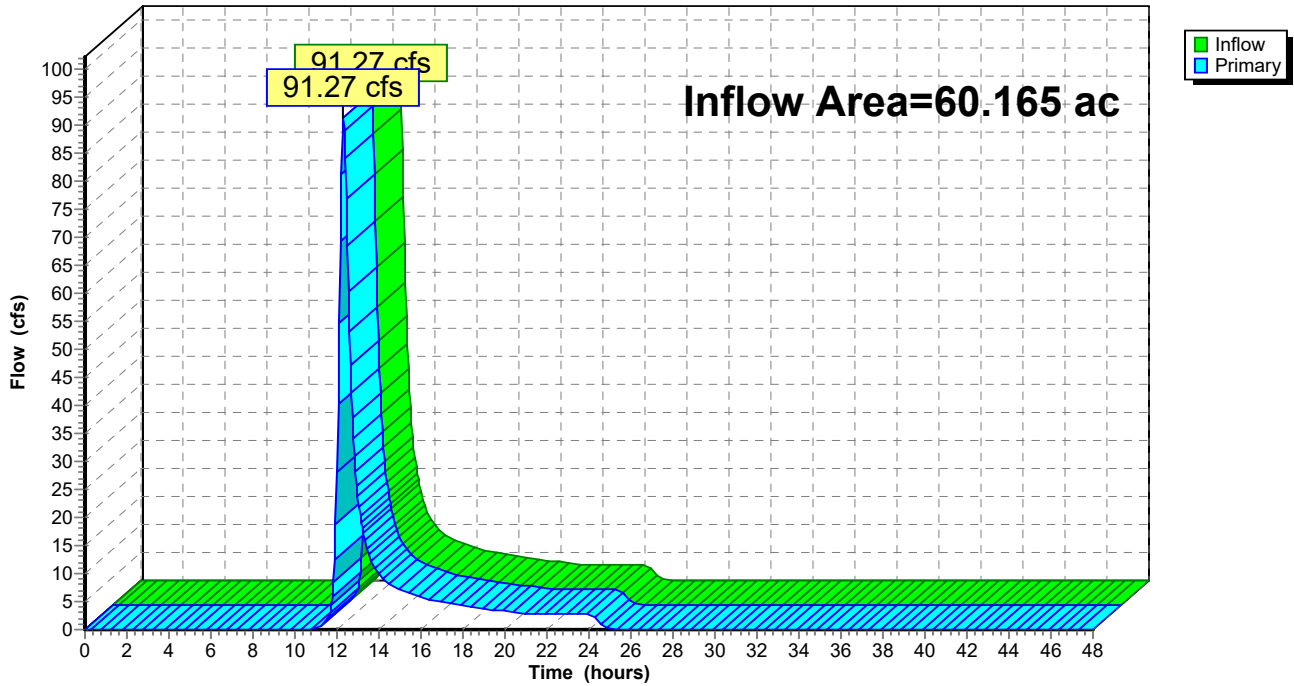
### Summary for Link SP41:

Inflow Area = 60.165 ac, 2.55% Impervious, Inflow Depth = 1.98" for 100-year event  
Inflow = 91.27 cfs @ 12.30 hrs, Volume= 9.943 af  
Primary = 91.27 cfs @ 12.30 hrs, Volume= 9.943 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP41:

Hydrograph



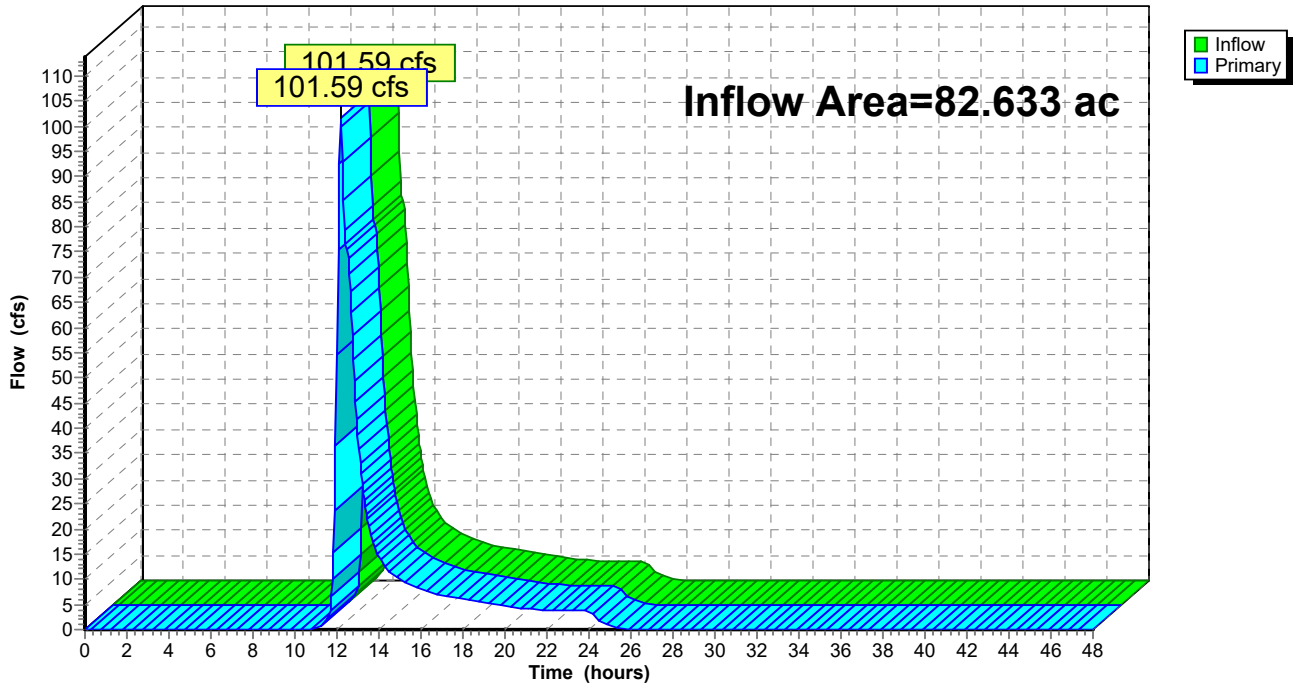
### Summary for Link SP42:

Inflow Area = 82.633 ac, 3.01% Impervious, Inflow Depth = 1.97" for 100-year event  
Inflow = 101.59 cfs @ 12.17 hrs, Volume= 13.554 af  
Primary = 101.59 cfs @ 12.17 hrs, Volume= 13.554 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP42:

Hydrograph



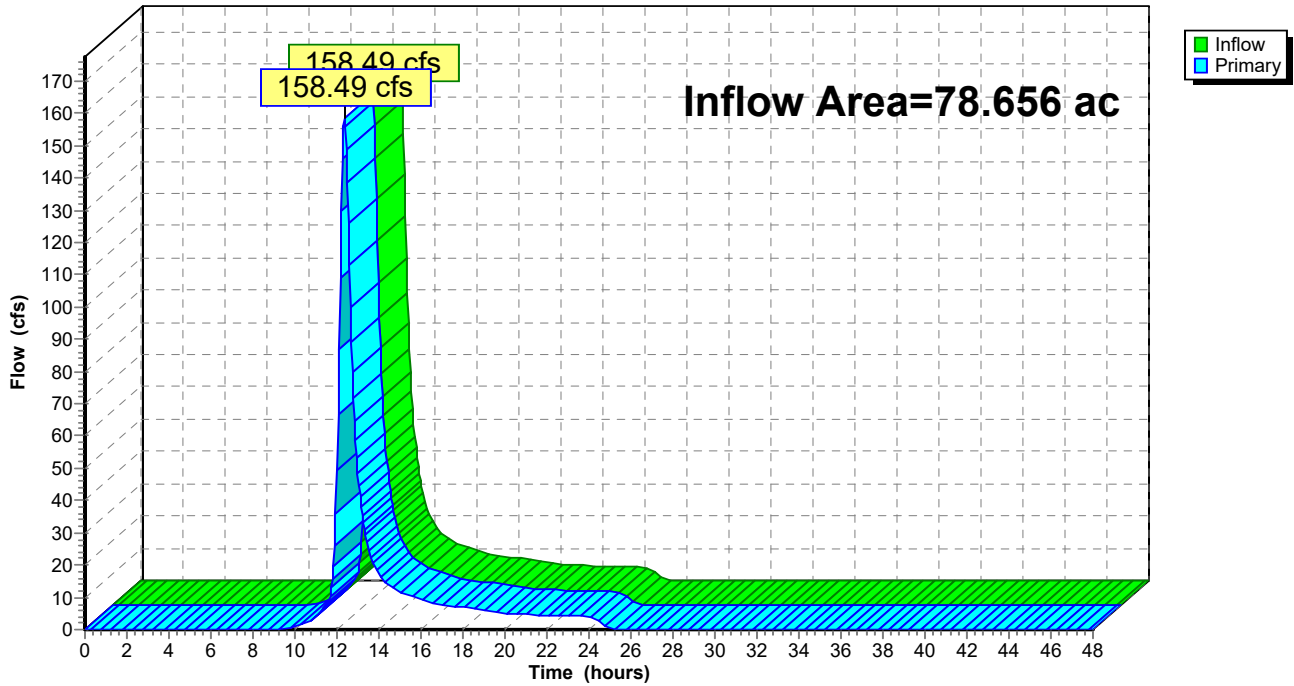
### Summary for Link SP48:

Inflow Area = 78.656 ac, 2.88% Impervious, Inflow Depth = 2.77" for 100-year event  
Inflow = 158.49 cfs @ 12.35 hrs, Volume= 18.129 af  
Primary = 158.49 cfs @ 12.35 hrs, Volume= 18.129 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP48:

Hydrograph



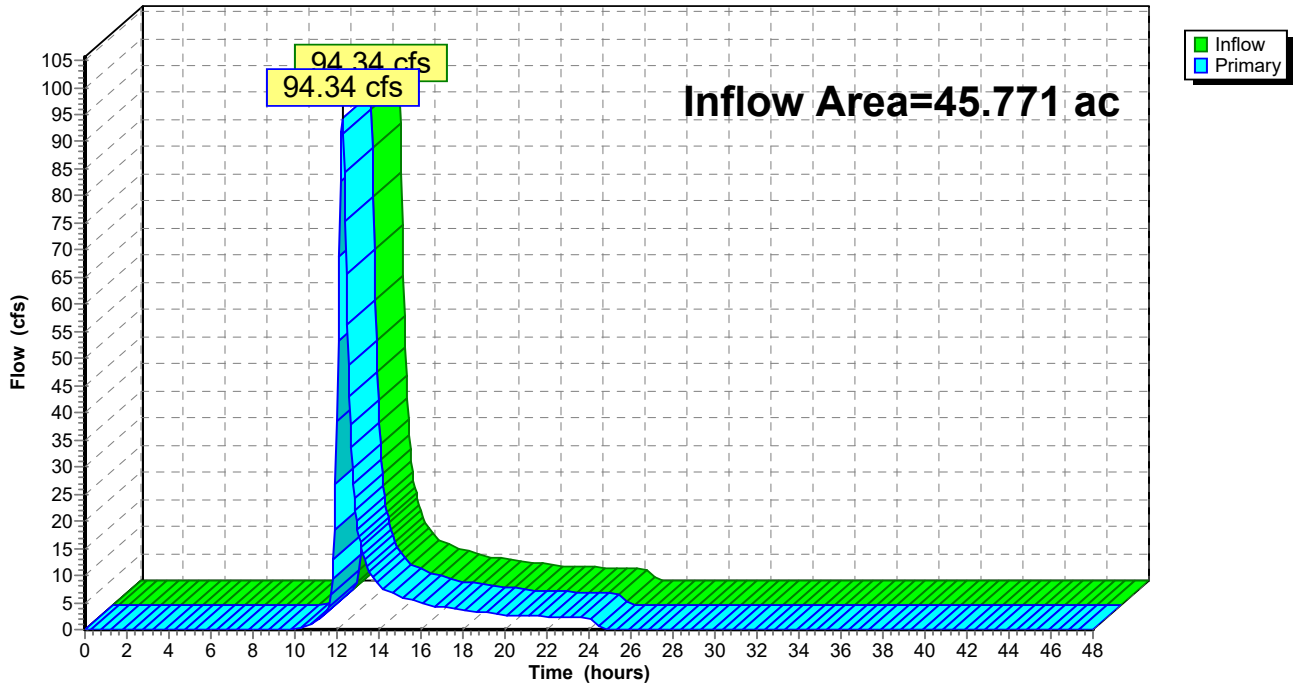
### Summary for Link SP50:

Inflow Area = 45.771 ac, 1.25% Impervious, Inflow Depth = 2.41" for 100-year event  
Inflow = 94.34 cfs @ 12.25 hrs, Volume= 9.184 af  
Primary = 94.34 cfs @ 12.25 hrs, Volume= 9.184 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP50:

Hydrograph



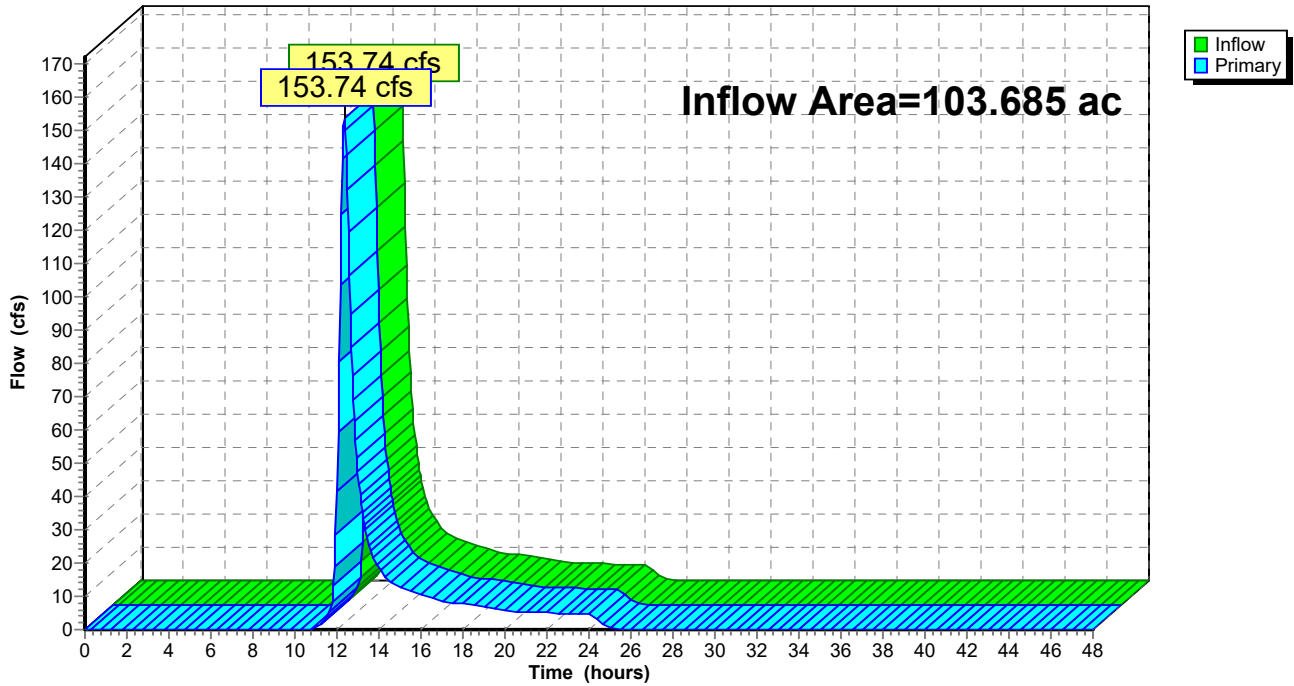
### Summary for Link SP51:

Inflow Area = 103.685 ac, 1.03% Impervious, Inflow Depth = 2.07" for 100-year event  
Inflow = 153.74 cfs @ 12.35 hrs, Volume= 17.851 af  
Primary = 153.74 cfs @ 12.35 hrs, Volume= 17.851 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP51:

Hydrograph



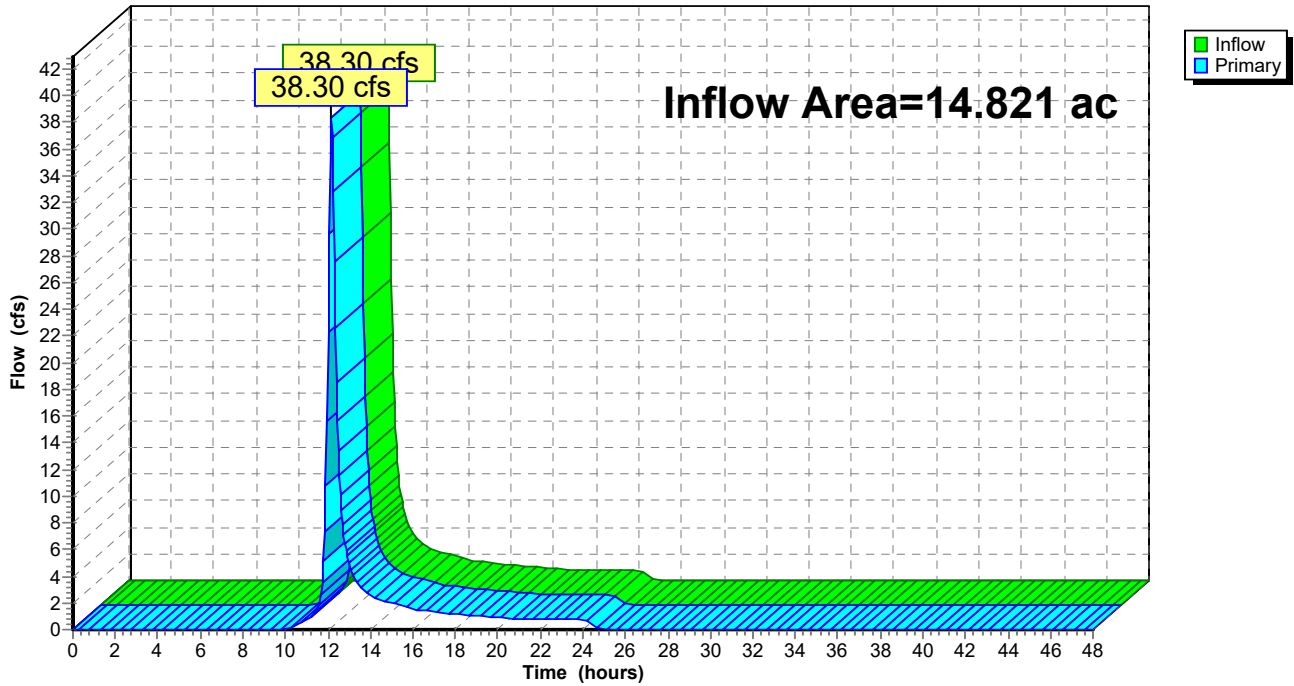
### Summary for Link SP52:

Inflow Area = 14.821 ac, 2.79% Impervious, Inflow Depth = 2.50" for 100-year event  
Inflow = 38.30 cfs @ 12.16 hrs, Volume= 3.083 af  
Primary = 38.30 cfs @ 12.16 hrs, Volume= 3.083 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP52:

Hydrograph





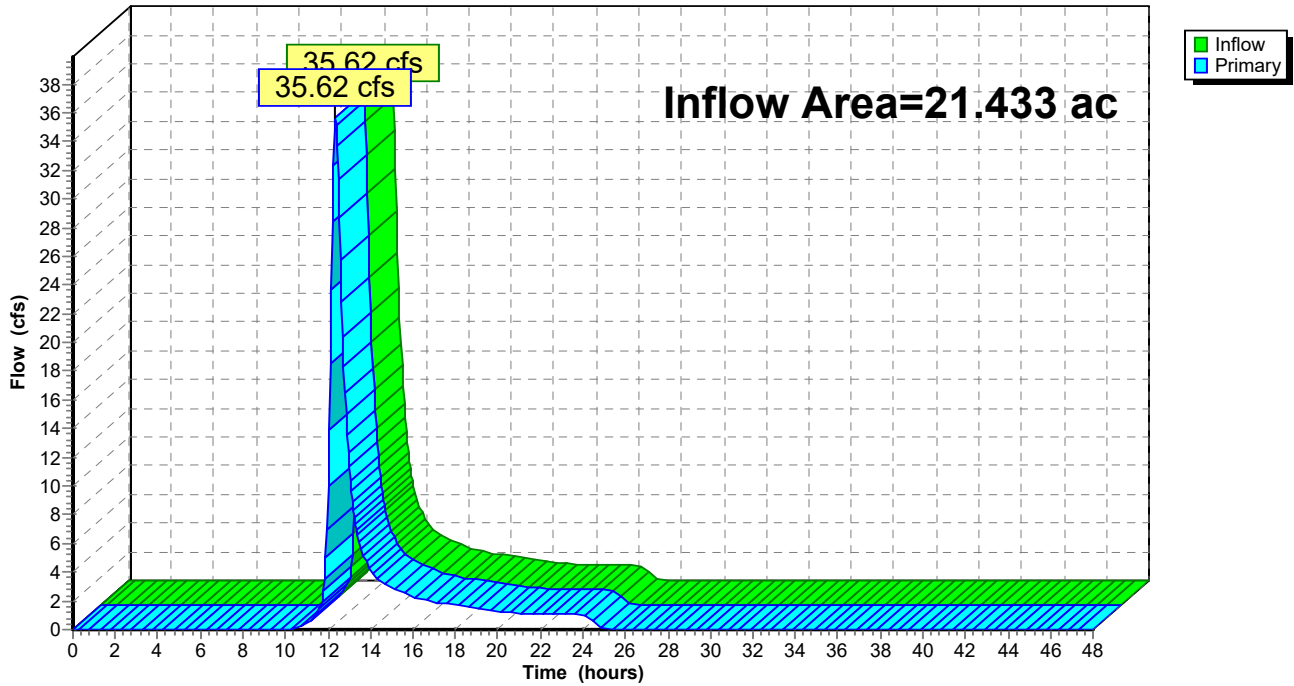
### Summary for Link SP53:

Inflow Area = 21.433 ac, 1.80% Impervious, Inflow Depth = 2.32" for 100-year event  
Inflow = 35.62 cfs @ 12.36 hrs, Volume= 4.145 af  
Primary = 35.62 cfs @ 12.36 hrs, Volume= 4.145 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP53:

Hydrograph



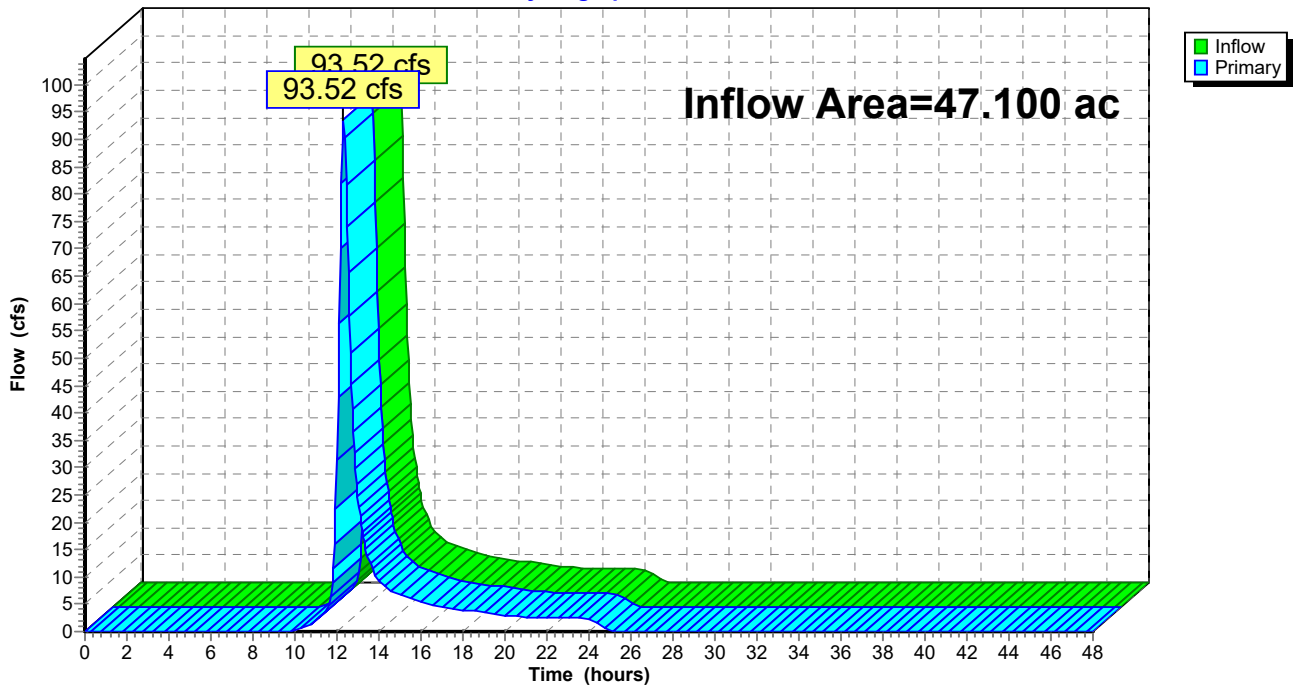
### Summary for Link SP54:

Inflow Area = 47.100 ac, 7.69% Impervious, Inflow Depth = 2.58" for 100-year event  
Inflow = 93.52 cfs @ 12.31 hrs, Volume= 10.145 af  
Primary = 93.52 cfs @ 12.31 hrs, Volume= 10.145 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP54:

Hydrograph



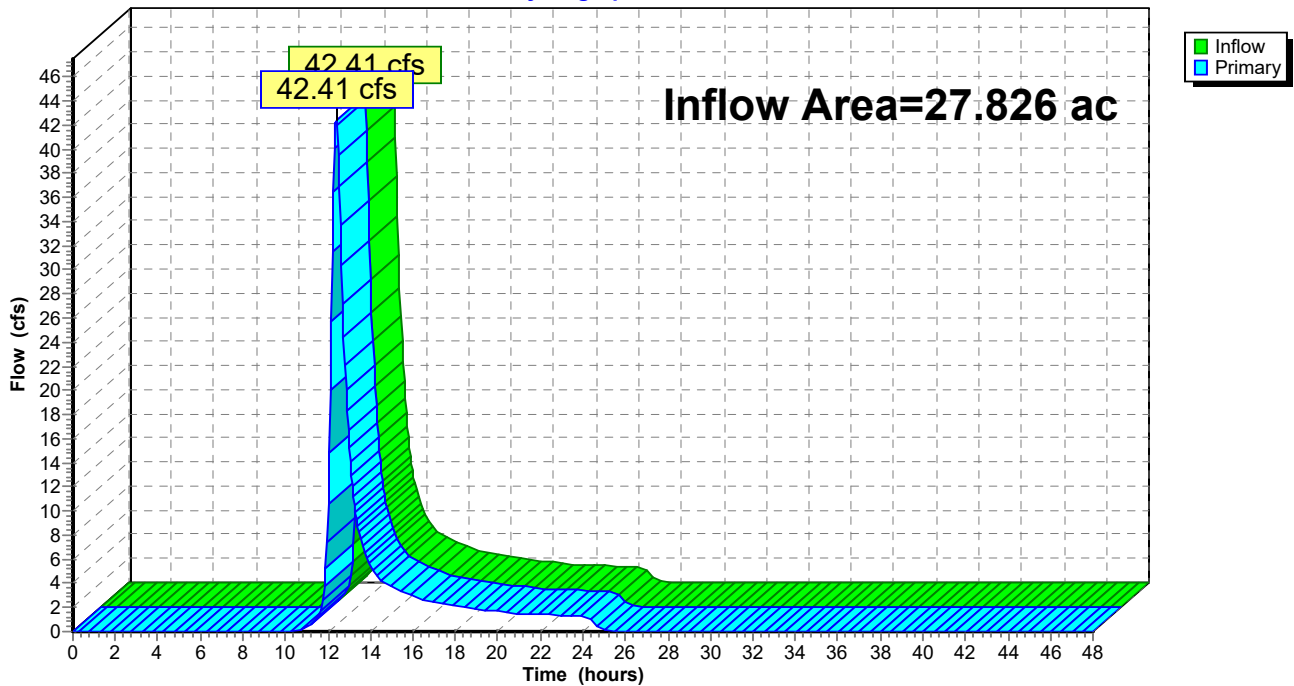
### Summary for Link SP55:

Inflow Area = 27.826 ac, 0.99% Impervious, Inflow Depth = 2.23" for 100-year event  
Inflow = 42.41 cfs @ 12.39 hrs, Volume= 5.182 af  
Primary = 42.41 cfs @ 12.39 hrs, Volume= 5.182 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP55:

Hydrograph



### Summary for Link SP56:

Inflow Area = 62.754 ac, 0.00% Impervious, Inflow Depth = 2.32" for 100-year event  
Inflow = 121.25 cfs @ 12.26 hrs, Volume= 12.137 af  
Primary = 121.25 cfs @ 12.26 hrs, Volume= 12.137 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP56:

Hydrograph

