

Preliminary Critical Storm Calculations

Project:

Pride One – Jacoby Road

Copley Township
Summit County, Ohio

Prepared By:

Davey Resource Group
1310 Sharon Copley Road
Sharon Center, Ohio 44274

Christopher M. Schmidt, PE

July 28, 2022

Table of Contents

Project Description.....3

Critical Storm Design Methodology.....3

Hydrologic Soil Group3

Critical Storm Calculation.....3

Appendices4

Figures4

Project Description

Pride One – Jacoby Road is a commercial apartment project containing 132 single story units that includes paved streets, water mains, storm and sanitary sewers, and water quality/quantity control basins.

Critical Storm Design Methodology

- Summit County regulations were used to evaluate the present and developed storm water run-off using the Ohio Critical Storm Method.
- The data was collected via site visits, aerial photos, field surveys, and UDSA soils maps.
- The data was processed and analyzed using Hydraflow Hydrographs 2020 computer software. The TR-55 method was used to develop the hydrographs.

Hydrologic Soil Group

The site contains the following soil type & hydrologic group classification:

CdB	Canfield silt loam, 2 to 6 percent slopes
CdC	Canfield silt loam, 6 to 12 percent slopes
Uf	Udorthents, sanitary landfill
FcA	Fitchville silt loam, 0 to 2 percent slopes
Ly	Luray silt loam, 0 to 2 percent slopes

Critical Storm Calculation

The critical storm for the watershed is as follows:

AREA	PRE	POST	% CHANGE	CALCULA TED CRITICAL STORM
Pre 1	9,965	19,043	91%	10
Pre 2	11,776	22,729	93%	10
Pre 3	10,612	20,395	92%	10
Pre 4	14,598	27,930	91%	10

The one-year storm was used for this calculation.

Appendices

Appendix A – Hydrographs Model, Return Period Recap and Summary Report
Appendix B – CN calculations, TC calculations, and Hydrographs (pre and post)

Figures

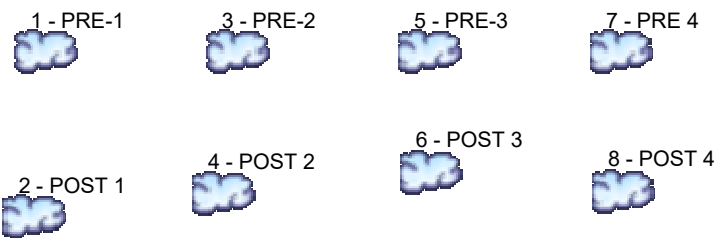
Hydrology: Pre-Development
Hydrology: Post-Development

1/2
2/2

Appendix A - Hydrographs Model, Return Period Recap, and Summary Report

Watershed Model Schematic

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020.4



Legend

<u>Hyd.</u>	<u>Origin</u>	<u>Description</u>
1	SCS Runoff	PRE-1
2	SCS Runoff	POST 1
3	SCS Runoff	PRE-2
4	SCS Runoff	POST 2
5	SCS Runoff	PRE-3
6	SCS Runoff	POST 3
7	SCS Runoff	PRE 4
8	SCS Runoff	POST 4

Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020.4

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SCS Runoff	-----	1.956	2.991	-----	4.630	6.082	8.312	10.27	12.43	PRE-1
2	SCS Runoff	-----	7.079	9.285	-----	12.51	15.20	19.16	22.51	26.11	POST 1
3	SCS Runoff	-----	1.906	2.921	-----	4.534	5.965	8.166	10.09	12.22	PRE-2
4	SCS Runoff	-----	8.449	11.08	-----	14.93	18.15	22.87	26.86	31.16	POST 2
5	SCS Runoff	-----	2.162	3.305	-----	5.112	6.712	9.172	11.33	13.71	PRE-3
6	SCS Runoff	-----	7.582	9.944	-----	13.40	16.28	20.52	24.10	27.96	POST 3
7	SCS Runoff	-----	2.407	3.689	-----	5.724	7.531	10.31	12.74	15.42	PRE 4
8	SCS Runoff	-----	10.38	13.62	-----	18.35	22.30	28.10	33.01	38.30	POST 4
Proj. file: 2387 SWM.gpw										Thursday, 07 / 28 / 2022	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020.4

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	1.956	1	737	9,965	-----	-----	-----	PRE-1
2	SCS Runoff	7.079	1	722	19,043	-----	-----	-----	POST 1
3	SCS Runoff	1.906	1	744	11,776	-----	-----	-----	PRE-2
4	SCS Runoff	8.449	1	722	22,729	-----	-----	-----	POST 2
5	SCS Runoff	2.162	1	736	10,612	-----	-----	-----	PRE-3
6	SCS Runoff	7.582	1	722	20,395	-----	-----	-----	POST 3
7	SCS Runoff	2.407	1	743	14,598	-----	-----	-----	PRE 4
8	SCS Runoff	10.38	1	722	27,930	-----	-----	-----	POST 4
2387 SWM.gpw					Return Period: 1 Year			Thursday, 07 / 28 / 2022	

Appendix B – CN calculations, TC calculations, and Hydrographs (pre and post)

TR55 Tc Worksheet

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020.4

Hyd. No. 1

PRE-1

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>			
Sheet Flow							
Manning's n-value	= 0.600	0.011	0.011				
Flow length (ft)	= 150.0	0.0	0.0				
Two-year 24-hr precip. (in)	= 2.45	0.00	0.00				
Land slope (%)	= 4.75	0.00	0.00				
Travel Time (min)	= 33.22	+	0.00	+	0.00	=	33.22
Shallow Concentrated Flow							
Flow length (ft)	= 787.00	0.00	0.00				
Watercourse slope (%)	= 5.00	0.00	0.00				
Surface description	= Unpaved	Paved	Paved				
Average velocity (ft/s)	=3.61	0.00	0.00				
Travel Time (min)	= 3.64	+	0.00	+	0.00	=	3.64
Channel Flow							
X sectional flow area (sqft)	= 0.00	0.00	0.00				
Wetted perimeter (ft)	= 0.00	0.00	0.00				
Channel slope (%)	= 0.00	0.00	0.00				
Manning's n-value	= 0.015	0.015	0.015				
Velocity (ft/s)	=0.00	0.00	0.00				
Flow length (ft)	((0})0.0	0.0	0.0				
Travel Time (min)	= 0.00	+	0.00	+	0.00	=	0.00
Total Travel Time, Tc				36.90 min			

Worksheet 2: Runoff curve number and runoff

Project: JACOBY ROAD		By: MJK		7/28/2022		PRE 1	
Location: COPLEY TOWNSHIP, SUMMIT COUNTY, OHIO		Checked:					
Check one: ☒ Present ☐ Developed							
1. Runoff curve number							
Soil name and hydrologic group (appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN ^{1/}			Area ☒ Acres ☐ mi ² ☐ %	Product of CN x area	
		Table 2-2	Figure 2-3	Figure 2-4			
D D D	IMPERVIOUS	98			0.00	0.00	
	WOODS	80			4.65	372.00	
	OPEN SPACE	80			0.00	0.00	
					0.00	0.00	
					0.00	0.00	
					0.00	0.00	
					0.00	0.00	
					0.00	0.00	
					0.00	0.00	
					0.00	0.00	
^{1/} Use only one CN source per line					Totals	4.65	372.00

CN (weighted)=

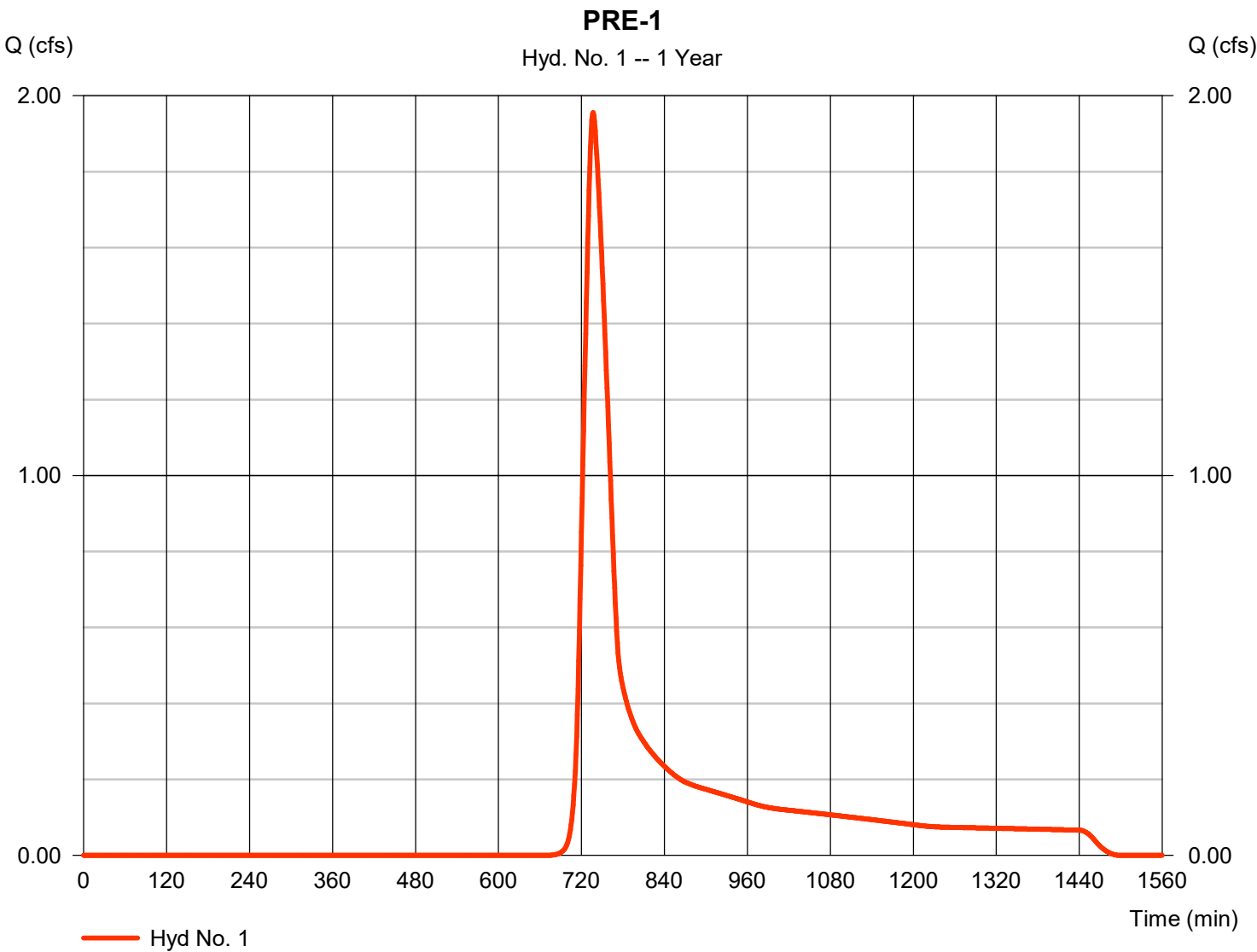
$$\frac{\text{Total Product}}{\text{Total Area}} = \frac{372.00}{4.65} = \boxed{80} \quad \leftarrow \quad \text{Use CN}$$

Hydrograph Report

Hyd. No. 1

PRE-1

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.956 cfs
Storm frequency	=	1 yrs	Time to peak	=	737 min
Time interval	=	1 min	Hyd. volume	=	9,965 cuft
Drainage area	=	4.650 ac	Curve number	=	80
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	36.90 min
Total precip.	=	2.04 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



Worksheet 2: Runoff curve number and runoff

Project:	JACOBY ROAD	By:	MJK	7/28/2022	POST 1	
Location:	COPLEY TOWNSHIP, SUMMIT COUNTY, OHIO	Checked:				
Check one: ☐ Present ☒ Developed						
1. Runoff curve number						
Soil name and hydrologic group (appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN ^{1/}			Area ☒ Acres ☐ mi ² ☐ %	Product of CN x area
		Table 2-2	Figure 2-3	Figure 2-4		
D	IMPERVIOUS WOODS	98			2.30	225.40
		79			2.35	185.65
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
^{1/} Use only one CN source per line Totals					4.65	411.05

CN (weighted)=

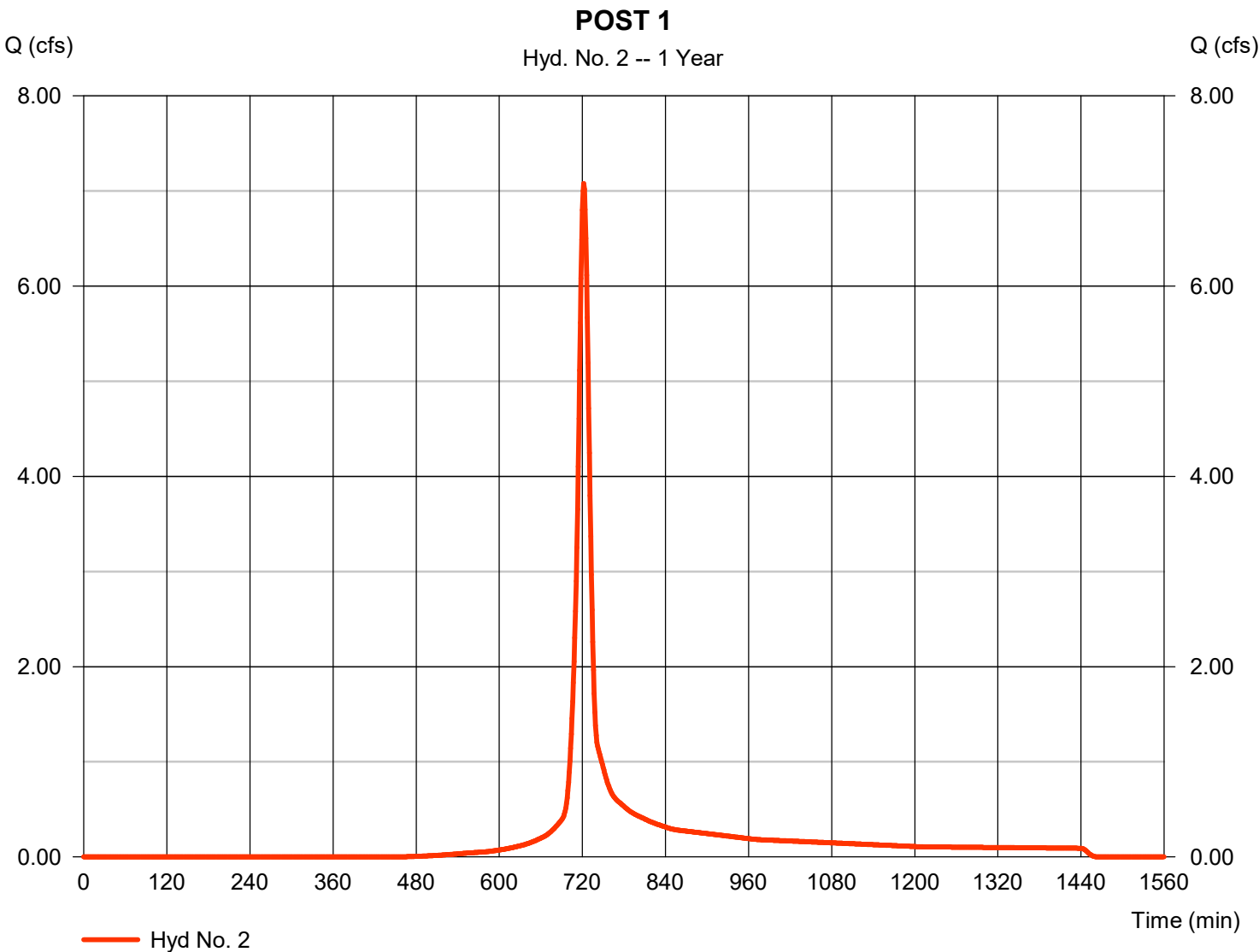
$$\frac{\text{Total Product}}{\text{Total Area}} = \frac{411.05}{4.65} = \boxed{90} \quad \leftarrow \quad \text{Use CN}$$

Hydrograph Report

Hyd. No. 2

POST 1

Hydrograph type	= SCS Runoff	Peak discharge	= 7.079 cfs
Storm frequency	= 1 yrs	Time to peak	= 722 min
Time interval	= 1 min	Hyd. volume	= 19,043 cuft
Drainage area	= 4.650 ac	Curve number	= 90
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 2.04 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



TR55 Tc Worksheet

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020.4

Hyd. No. 3

PRE-2

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>			
Sheet Flow							
Manning's n-value	= 0.600	0.011	0.011				
Flow length (ft)	= 150.0	0.0	0.0				
Two-year 24-hr precip. (in)	= 2.45	0.00	0.00				
Land slope (%)	= 2.50	0.00	0.00				
Travel Time (min)	= 42.94	+	0.00	+	0.00	=	42.94
Shallow Concentrated Flow							
Flow length (ft)	= 876.00	0.00	0.00				
Watercourse slope (%)	= 2.55	0.00	0.00				
Surface description	= Unpaved	Paved	Paved				
Average velocity (ft/s)	=2.58	0.00	0.00				
Travel Time (min)	= 5.67	+	0.00	+	0.00	=	5.67
Channel Flow							
X sectional flow area (sqft)	= 0.00	0.00	0.00				
Wetted perimeter (ft)	= 0.00	0.00	0.00				
Channel slope (%)	= 0.00	0.00	0.00				
Manning's n-value	= 0.015	0.015	0.015				
Velocity (ft/s)	=0.00	0.00	0.00				
Flow length (ft)	((0})0.0	0.0	0.0				
Travel Time (min)	= 0.00	+	0.00	+	0.00	=	0.00
Total Travel Time, Tc				48.60 min			

Worksheet 2: Runoff curve number and runoff

Project:	JACOBY ROAD	By:	MJK	7/28/2022	PRE 2	
Location:	COPLEY TOWNSHIP, SUMMIT COUNTY, OHIO	Checked:				
Check one: ☒ Present ☐ Developed						
1. Runoff curve number						
Soil name and hydrologic group (appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN ^{1/}			Area	Product of CN x area
		Table 2-2	Figure 2-3	Figure 2-4	☒ Acres ☐ mi ² ☐ %	
D D D	IMPERVIOUS	98			0.00	0.00
	WOODS	80			5.55	444.00
	OPEN SPACE	80			0.00	0.00
					0.00	0.00
					0.00	0.00
					0.00	0.00
					0.00	0.00
					0.00	0.00
					0.00	0.00
					0.00	0.00
					0.00	0.00
^{1/} Use only one CN source per line Totals					5.55	444.00

CN (weighted)=

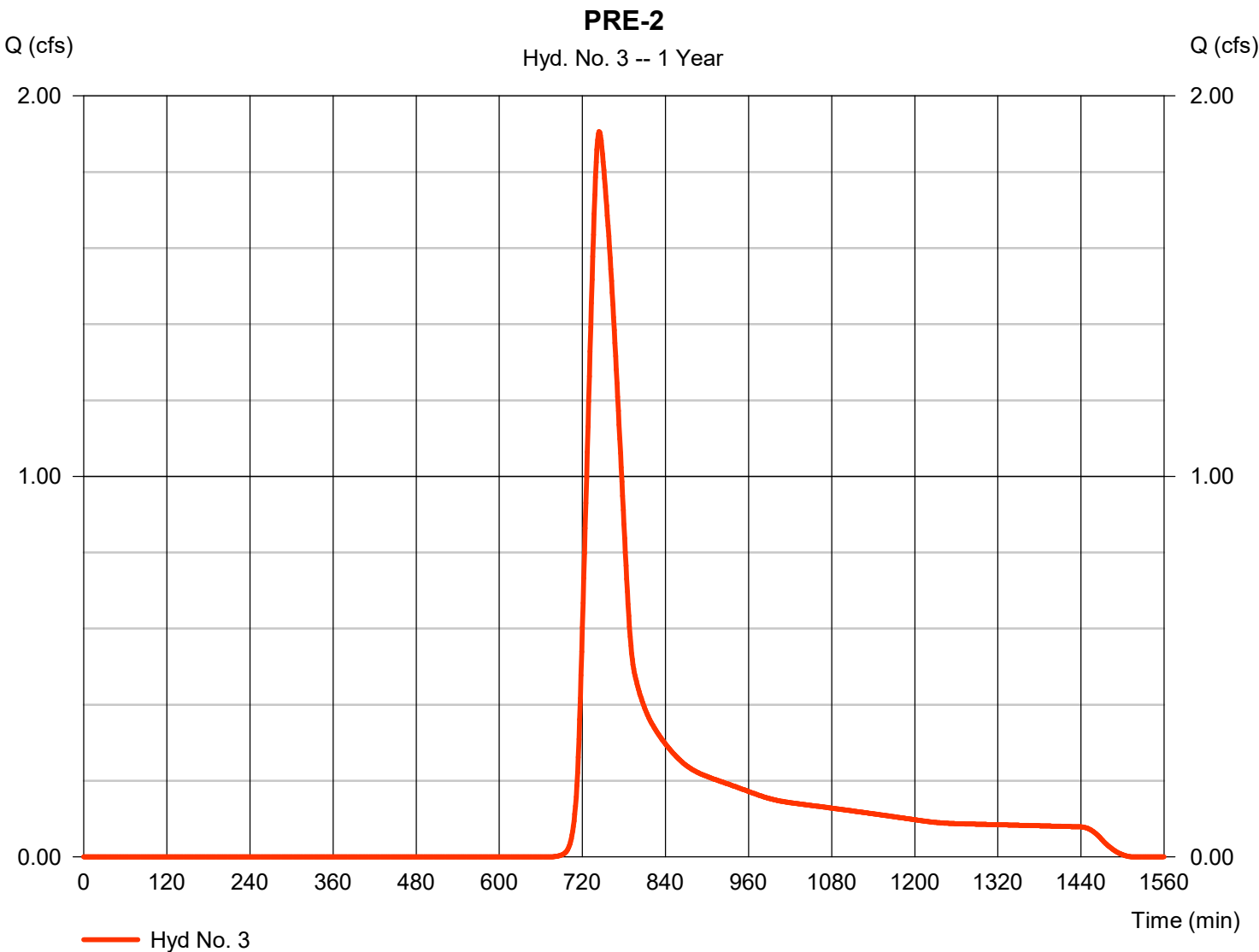
$$\frac{\text{Total Product}}{\text{Total Area}} = \frac{444.00}{5.55} = \boxed{80} \quad \leftarrow \quad \text{Use CN}$$

Hydrograph Report

Hyd. No. 3

PRE-2

Hydrograph type	= SCS Runoff	Peak discharge	= 1.906 cfs
Storm frequency	= 1 yrs	Time to peak	= 744 min
Time interval	= 1 min	Hyd. volume	= 11,776 cuft
Drainage area	= 5.550 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 48.60 min
Total precip.	= 2.04 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Worksheet 2: Runoff curve number and runoff

Project:	JACOBY ROAD	By:	MJK	7/28/2022	POST 2	
Location:	COPLEY TOWNSHIP, SUMMIT COUNTY, OHIO	Checked:				
Check one: ☐ Present ☒ Developed						
1. Runoff curve number						
Soil name and hydrologic group (appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN ^{1/}			Area ☒ Acres ☐ mi ² ☐ %	Product of CN x area
		Table 2-2	Figure 2-3	Figure 2-4		
D D D	IMPERVIOUS	98			2.50	245.00
	WOODS	79			3.05	240.95
	OPEN SPACE	80				0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
^{1/} Use only one CN source per line Totals					5.55	485.95

CN (weighted)=

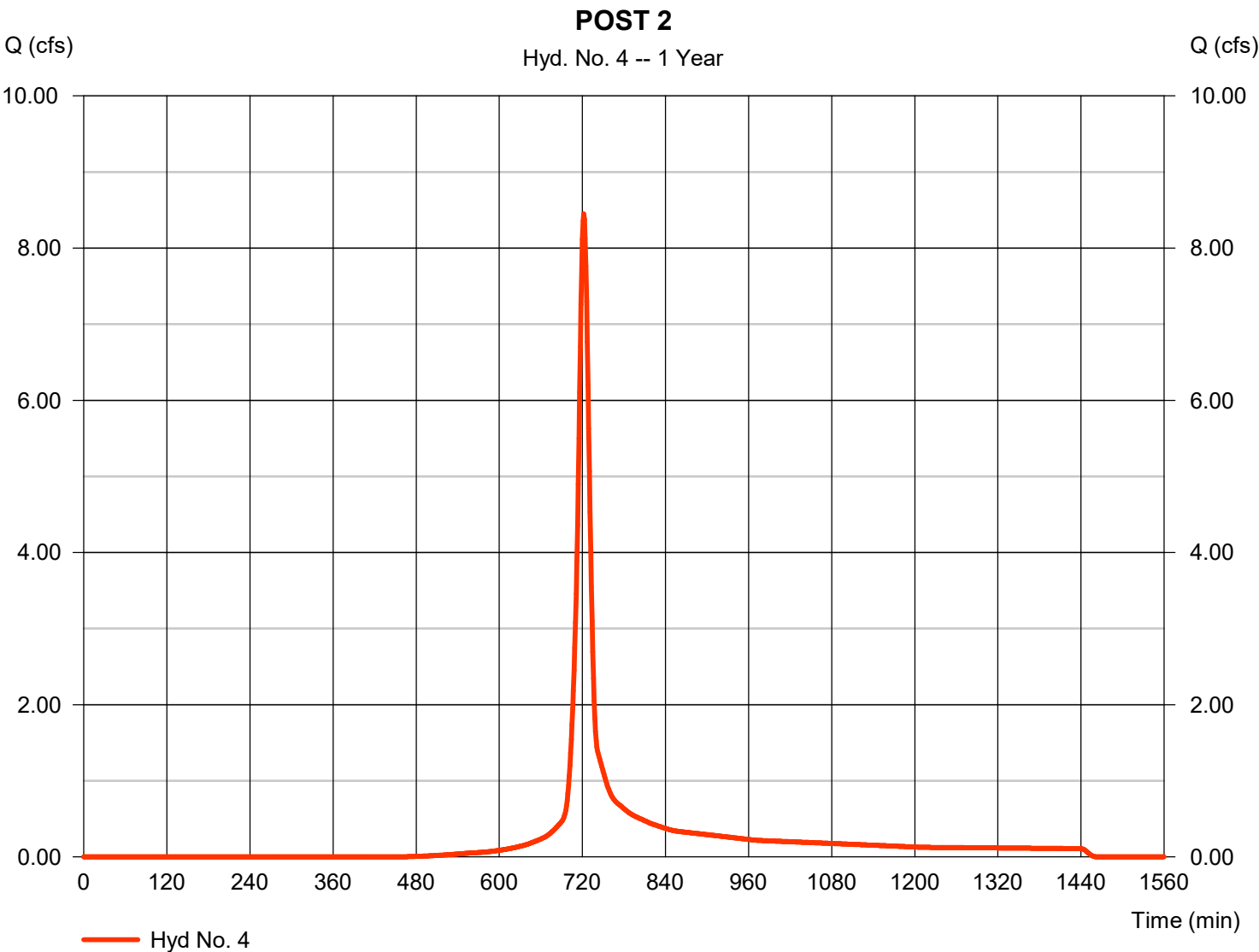
$$\frac{\text{Total Product}}{\text{Total Area}} = \frac{485.95}{5.55} = \boxed{90} \quad \leftarrow \quad \text{Use CN}$$

Hydrograph Report

Hyd. No. 4

POST 2

Hydrograph type	= SCS Runoff	Peak discharge	= 8.449 cfs
Storm frequency	= 1 yrs	Time to peak	= 722 min
Time interval	= 1 min	Hyd. volume	= 22,729 cuft
Drainage area	= 5.550 ac	Curve number	= 90
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 2.04 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



TR55 Tc Worksheet

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020.4

Hyd. No. 5

PRE-3

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
Sheet Flow				
Manning's n-value	= 0.600	0.011	0.011	
Flow length (ft)	= 150.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 2.45	0.00	0.00	
Land slope (%)	= 6.20	0.00	0.00	
Travel Time (min)	= 29.86	+	0.00	+
			0.00	= 29.86
Shallow Concentrated Flow				
Flow length (ft)	= 930.00	0.00	0.00	
Watercourse slope (%)	= 4.10	0.00	0.00	
Surface description	= Unpaved	Paved	Paved	
Average velocity (ft/s)	=3.27	0.00	0.00	
Travel Time (min)	= 4.74	+	0.00	+
			0.00	= 4.74
Channel Flow				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	=0.00	0.00	0.00	
Flow length (ft)	(0)0.0	0.0	0.0	
Travel Time (min)	= 0.00	+	0.00	+
			0.00	= 0.00
Total Travel Time, Tc				34.60 min

Worksheet 2: Runoff curve number and runoff

Project:	JACOBY ROAD	By:	MJK	7/28/2022	PRE 3	
Location:	COPLEY TOWNSHIP, SUMMIT COUNTY, OHIO	Checked:				
Check one: ☒ Present ☐ Developed						
1. Runoff curve number						
Soil name and hydrologic group (appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN ^{1/}			Area ☒ Acres ☐ mi ² ☐ %	Product of CN x area
		Table 2-2	Figure 2-3	Figure 2-4		
D D D	IMPERVIOUS	98			0.00	0.00
	WOODS	80			4.98	398.40
	OPEN SPACE	80			0.00	0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
^{1/} Use only one CN source per line Totals					4.98	398.40

CN (weighted)=

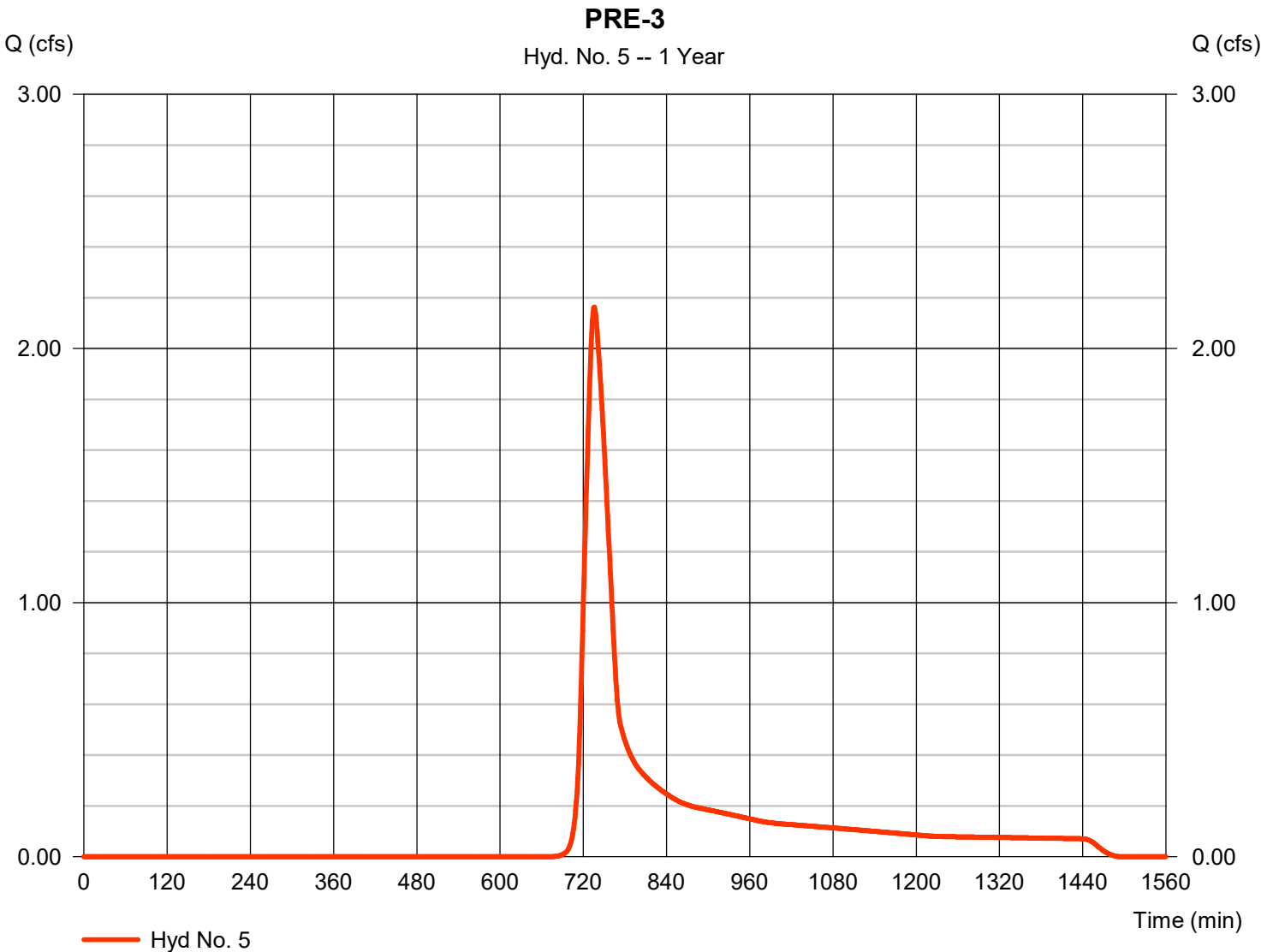
$$\frac{\text{Total Product}}{\text{Total Area}} = \frac{398.40}{4.98} = \boxed{80} \quad \leftarrow \quad \text{Use CN}$$

Hydrograph Report

Hyd. No. 5

PRE-3

Hydrograph type	= SCS Runoff	Peak discharge	= 2.162 cfs
Storm frequency	= 1 yrs	Time to peak	= 736 min
Time interval	= 1 min	Hyd. volume	= 10,612 cuft
Drainage area	= 4.980 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 34.60 min
Total precip.	= 2.04 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Worksheet 2: Runoff curve number and runoff

Project:	JACOBY ROAD	By:	MJK	7/28/2022	POST 3	
Location:	COPLEY TOWNSHIP, SUMMIT COUNTY, OHIO	Checked:				
Check one: ☐ Present ☒ Developed						
1. Runoff curve number						
Soil name and hydrologic group (appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN ^{1/}			Area ☒ Acres ☐ mi ² ☐ %	Product of CN x area
		Table 2-2	Figure 2-3	Figure 2-4		
D D D	IMPERVIOUS	98			2.15	210.70
	WOODS	79			2.83	223.57
	OPEN SPACE	80				0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
^{1/} Use only one CN source per line Totals					4.98	434.27

CN (weighted)=

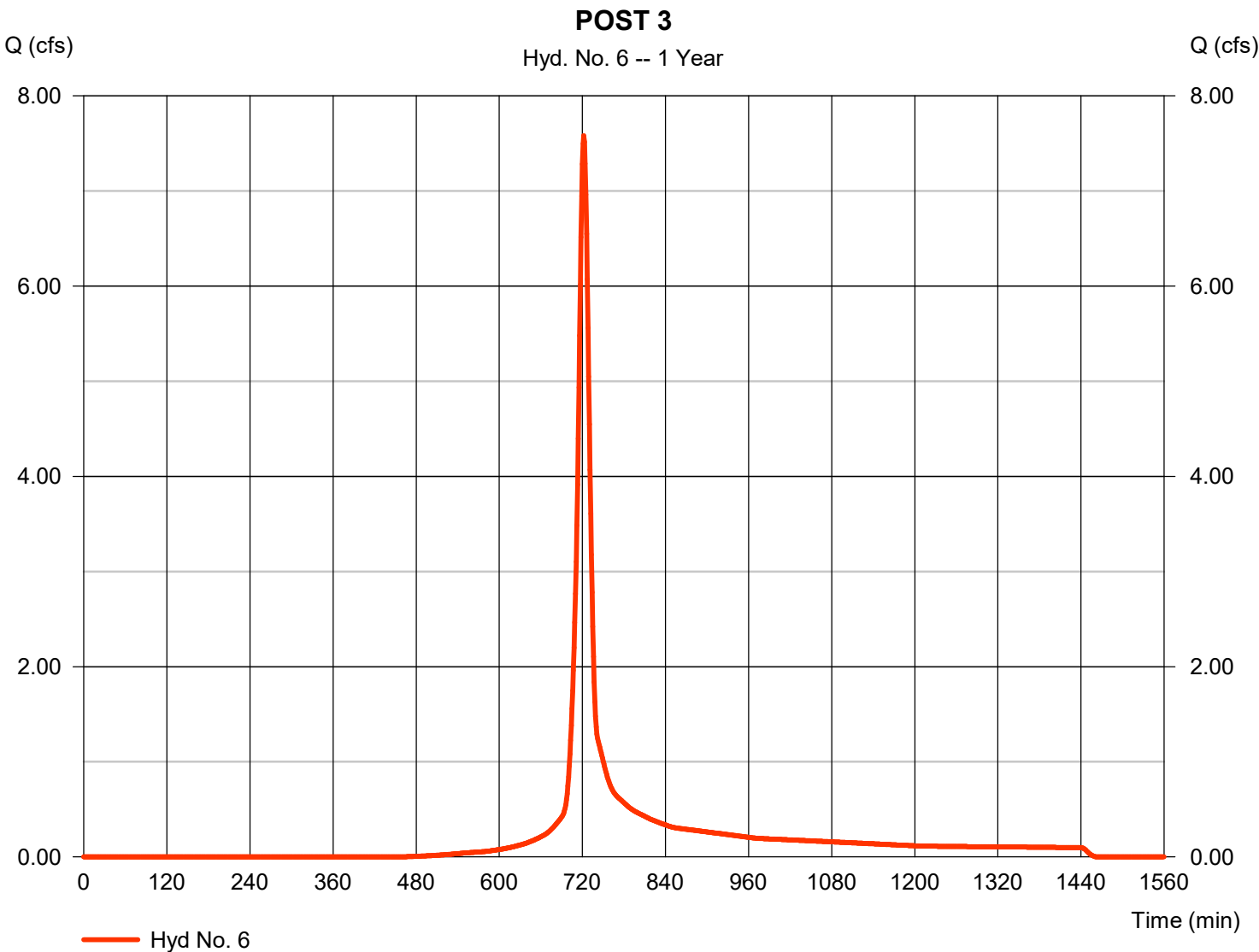
$$\frac{\text{Total Product}}{\text{Total Area}} = \frac{434.27}{4.98} = \boxed{90} \quad \leftarrow \quad \text{Use CN}$$

Hydrograph Report

Hyd. No. 6

POST 3

Hydrograph type	= SCS Runoff	Peak discharge	= 7.582 cfs
Storm frequency	= 1 yrs	Time to peak	= 722 min
Time interval	= 1 min	Hyd. volume	= 20,395 cuft
Drainage area	= 4.980 ac	Curve number	= 90
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 2.04 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



TR55 Tc Worksheet

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020.4

Hyd. No. 7

PRE 4

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>			
Sheet Flow							
Manning's n-value	= 0.600	0.011	0.011				
Flow length (ft)	= 150.0	0.0	0.0				
Two-year 24-hr precip. (in)	= 2.45	0.00	0.00				
Land slope (%)	= 2.88	0.00	0.00				
Travel Time (min)	= 40.58	+	0.00	+	0.00	=	40.58
Shallow Concentrated Flow							
Flow length (ft)	= 850.00	0.00	0.00				
Watercourse slope (%)	= 2.50	0.00	0.00				
Surface description	= Unpaved	Paved	Paved				
Average velocity (ft/s)	=2.55	0.00	0.00				
Travel Time (min)	= 5.55	+	0.00	+	0.00	=	5.55
Channel Flow							
X sectional flow area (sqft)	= 0.00	0.00	0.00				
Wetted perimeter (ft)	= 0.00	0.00	0.00				
Channel slope (%)	= 0.00	0.00	0.00				
Manning's n-value	= 0.015	0.015	0.015				
Velocity (ft/s)	=0.00	0.00	0.00				
Flow length (ft)	(0)0.0	0.0	0.0				
Travel Time (min)	= 0.00	+	0.00	+	0.00	=	0.00
Total Travel Time, Tc				46.10 min			

Worksheet 2: Runoff curve number and runoff

Project:	JACOBY ROAD	By:	MJK	7/28/2022	PRE 4		
Location:	COPLEY TOWNSHIP, SUMMIT COUNTY, OHIO	Checked:					
Check one: ☒ Present ☐ Developed							
1. Runoff curve number							
Soil name and hydrologic group (appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN ^{1/}			Area ☒ Acres ☐ mi ² ☐ %	Product of CN x area	
		Table 2-2	Figure 2-3	Figure 2-4			
D D D	IMPERVIOUS	98			0.00	0.00	
	WOODS	80			6.82	545.60	
	OPEN SPACE	80			0.00	0.00	
					0.00	0.00	
					0.00	0.00	
					0.00	0.00	
					0.00	0.00	
					0.00	0.00	
					0.00	0.00	
					0.00	0.00	
^{1/} Use only one CN source per line					Totals	6.82	545.60

CN (weighted)=

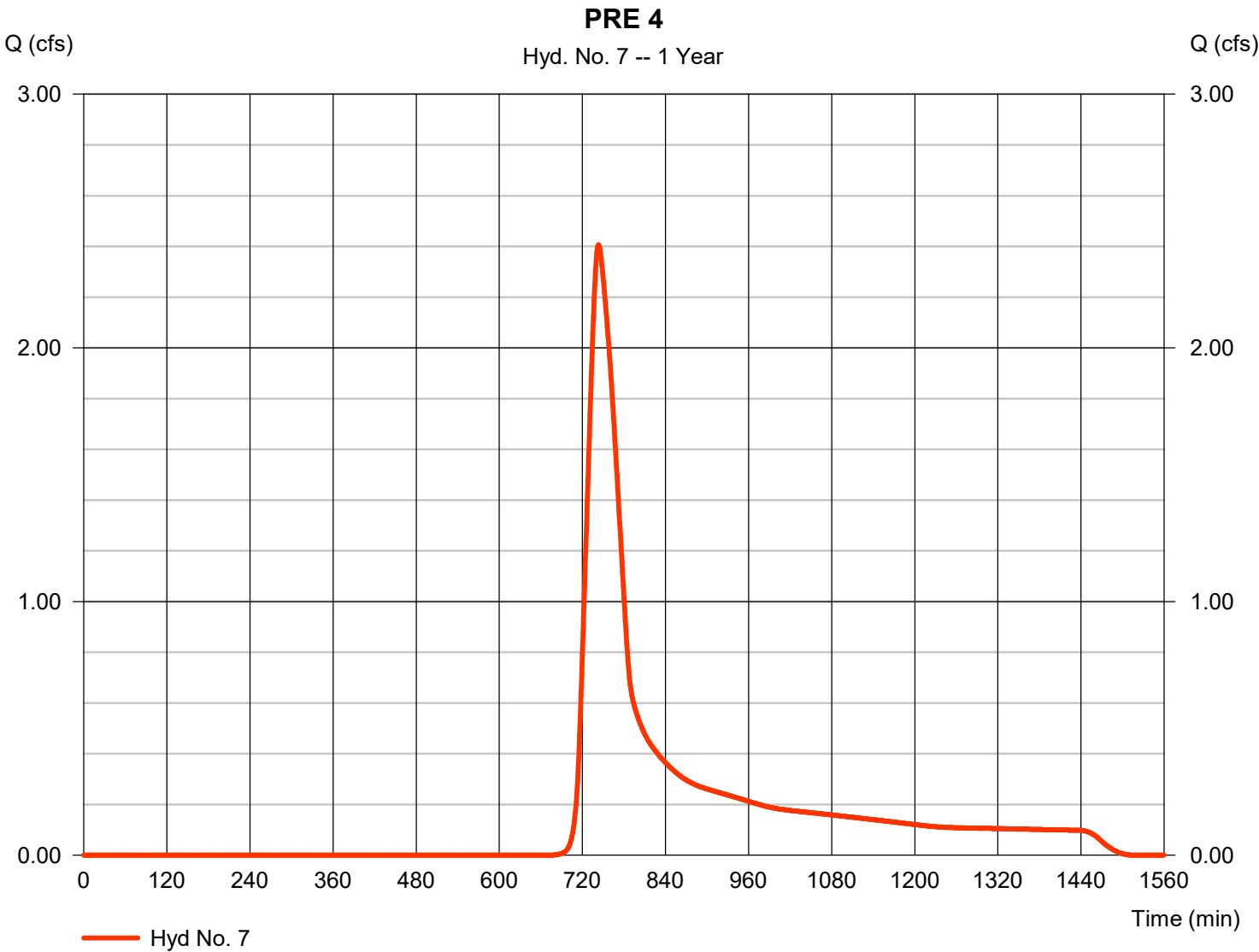
$$\frac{\text{Total Product}}{\text{Total Area}} = \frac{545.60}{6.82} = \boxed{80} \quad \leftarrow \quad \text{Use CN}$$

Hydrograph Report

Hyd. No. 7

PRE 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.407 cfs
Storm frequency	=	1 yrs	Time to peak	=	743 min
Time interval	=	1 min	Hyd. volume	=	14,598 cuft
Drainage area	=	6.820 ac	Curve number	=	80
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	46.10 min
Total precip.	=	2.04 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



Worksheet 2: Runoff curve number and runoff

Project:	JACOBY ROAD	By:	MJK	7/28/2022	POST4	
Location:	COPLEY TOWNSHIP, SUMMIT COUNTY, OHIO	Checked:				
Check one: ☐ Present ☒ Developed						
1. Runoff curve number						
Soil name and hydrologic group (appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN ^{1/}			Area ☒ Acres ☐ mi ² ☐ %	Product of CN x area
		Table 2-2	Figure 2-3	Figure 2-4		
D D D	IMPERVIOUS	98			2.15	210.70
	WOODS	79			4.67	368.93
	OPEN SPACE	80				0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
^{1/} Use only one CN source per line Totals					6.82	579.63

CN (weighted)=

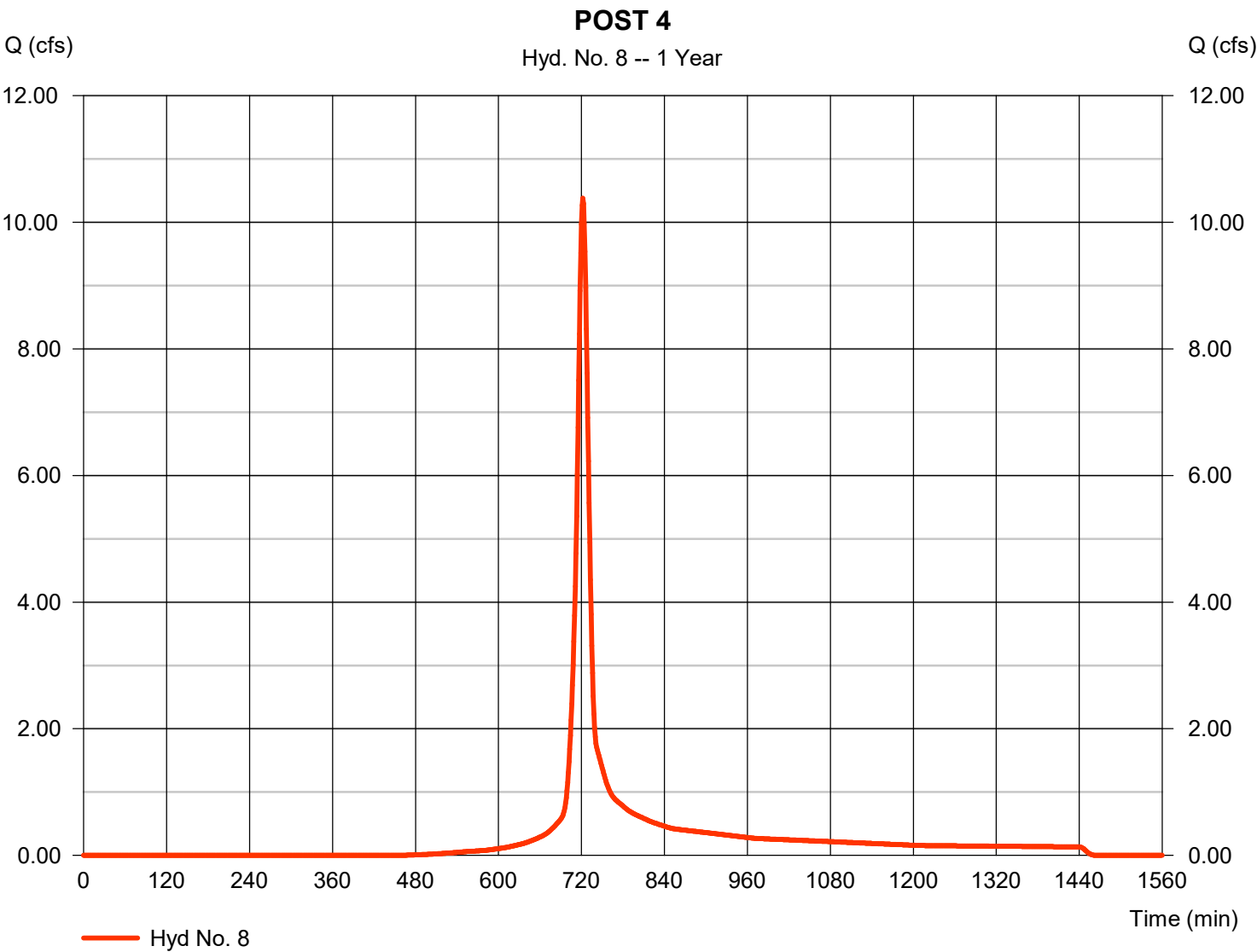
$$\frac{\text{Total Product}}{\text{Total Area}} = \frac{579.63}{6.82} = \boxed{90} \quad \leftarrow \quad \text{Use CN}$$

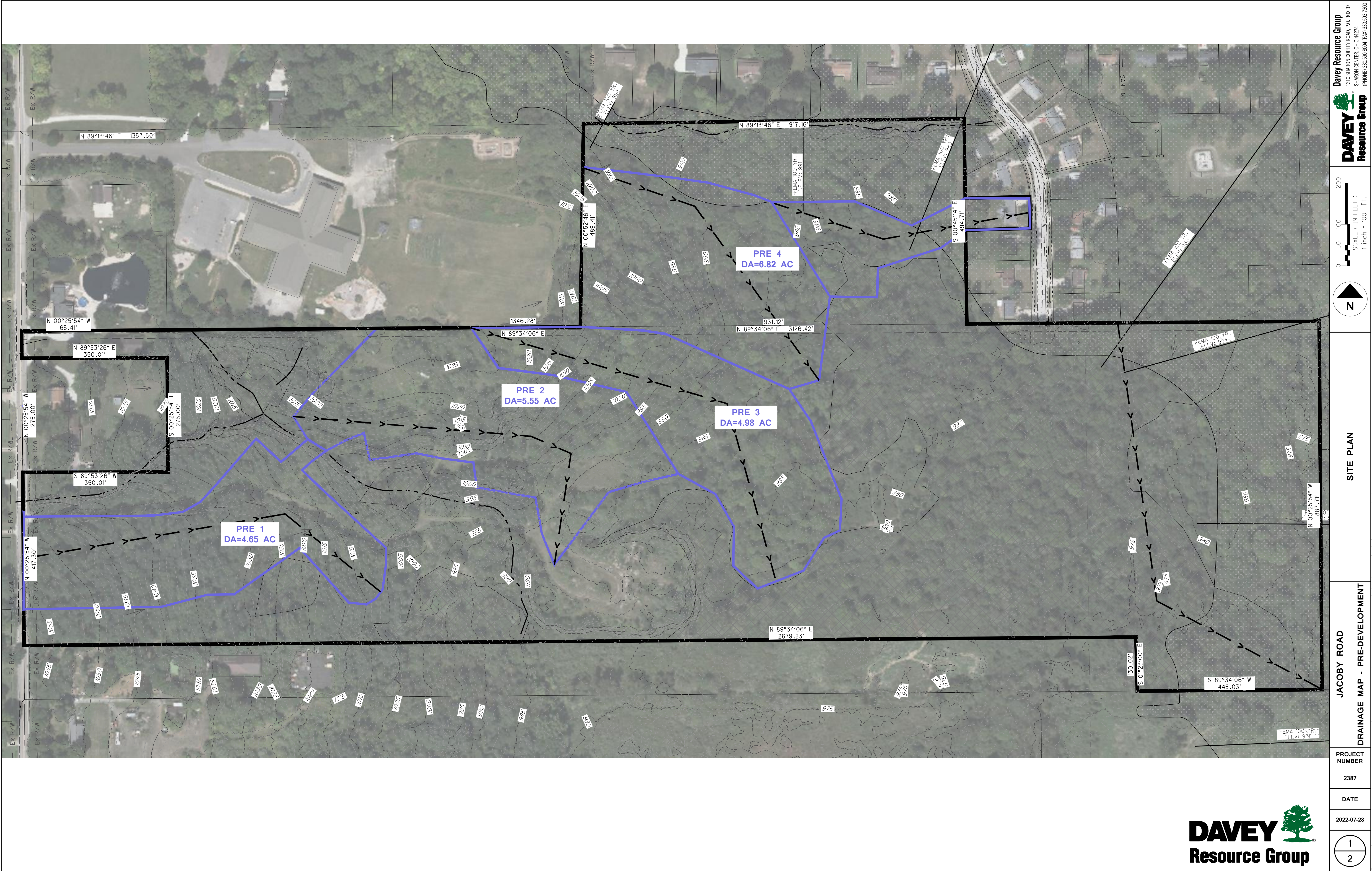
Hydrograph Report

Hyd. No. 8

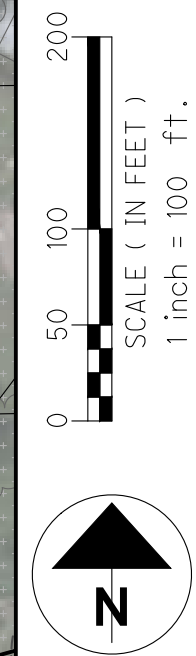
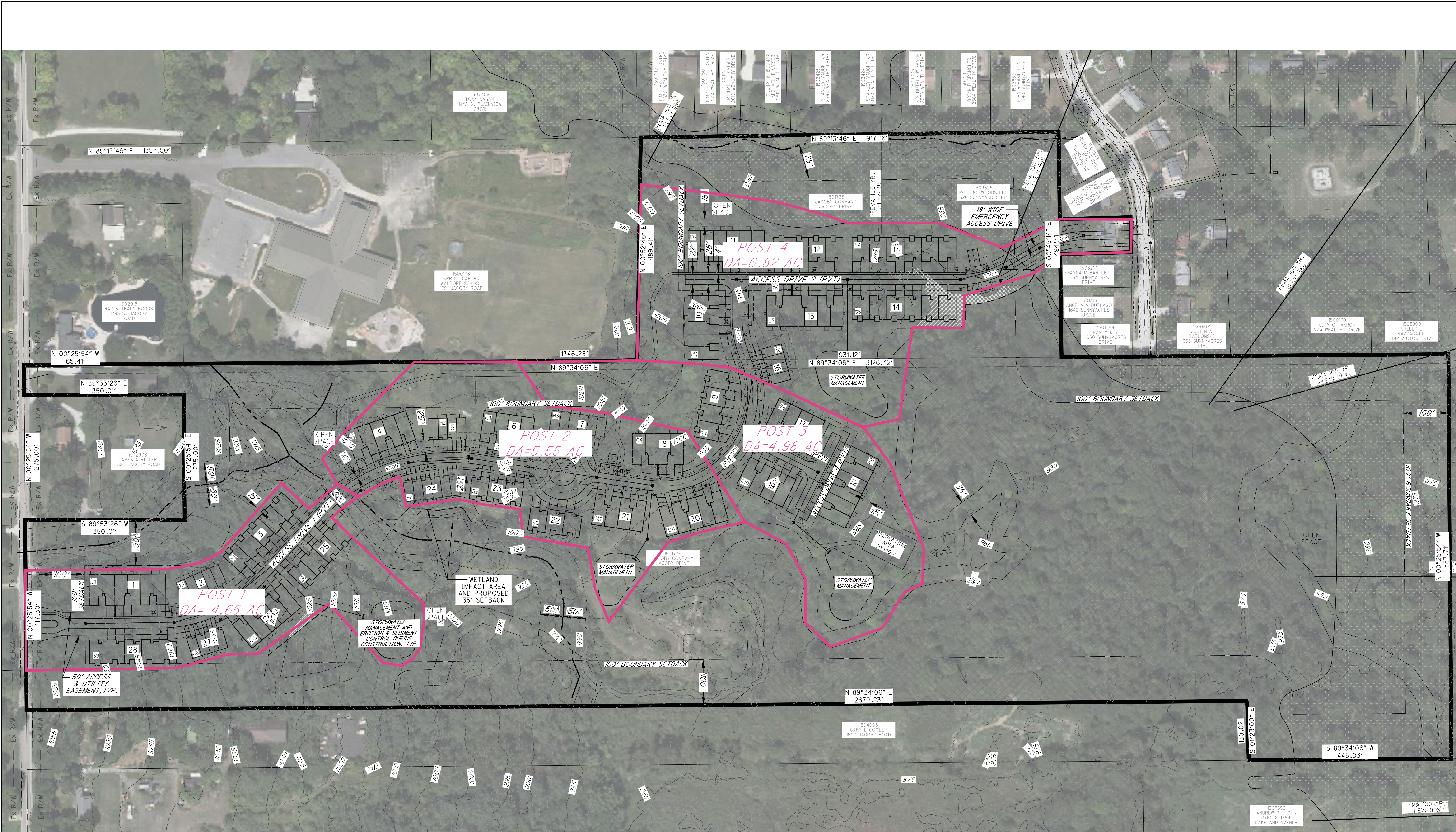
POST 4

Hydrograph type	= SCS Runoff	Peak discharge	= 10.38 cfs
Storm frequency	= 1 yrs	Time to peak	= 722 min
Time interval	= 1 min	Hyd. volume	= 27,930 cuft
Drainage area	= 6.820 ac	Curve number	= 90
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 2.04 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484





DAVEY Resource Group 1310 SHARON COPLEY ROAD, P.O. BOX 37 SHARON CENTER, OHIO 44274 (PHONE) 330.593.8004 (FAX) 330.593.7300	
N 0 50 100 200 SCALE (IN FEET) 1 inch = 100 ft.	
JACOBY ROAD DRAINAGE MAP - PRE-DEVELOPMENT SITE PLAN	
PROJECT NUMBER 2387	DATE 2022-07-28
1 2	



SITE PLAN

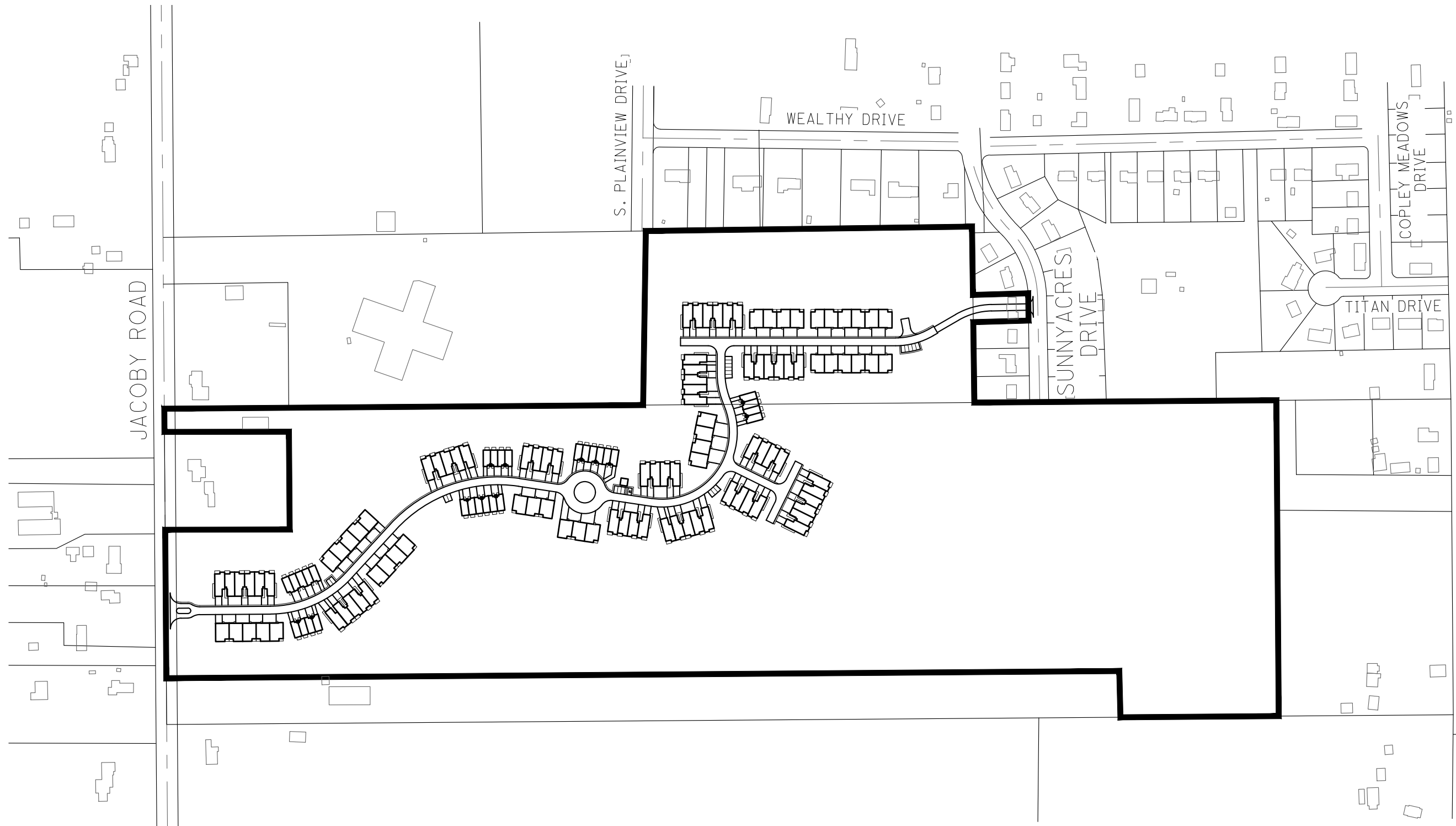
JACOBY ROAD

DRAINAGE MAP - POST DEVELOPMENT

PROJECT NUMBER
2387
DATE
2022-07-28
2
2



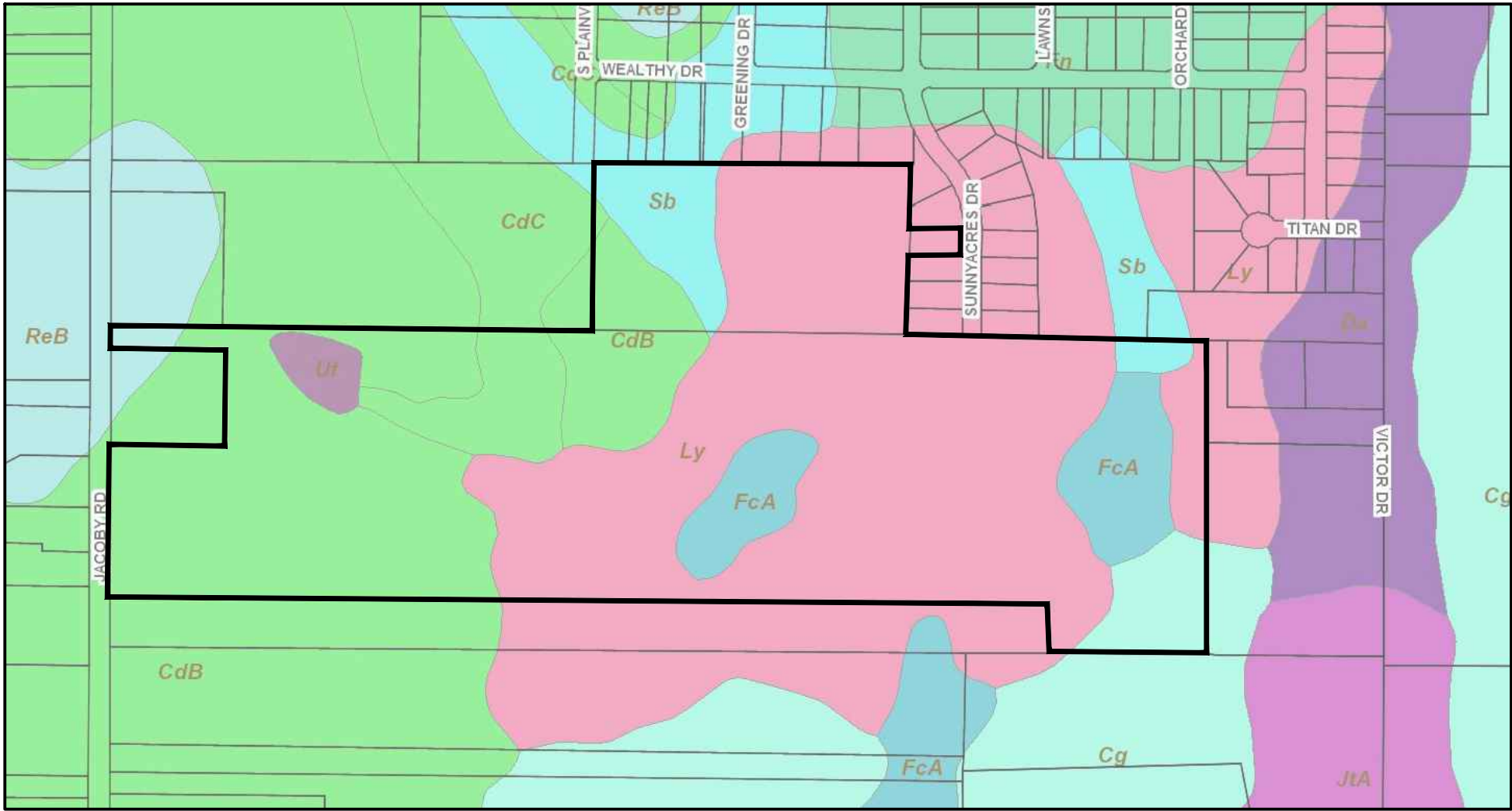
LOCATION MAP
NO SCALE



OVERALL SITE PLAN
SCALE: 1" = 300'



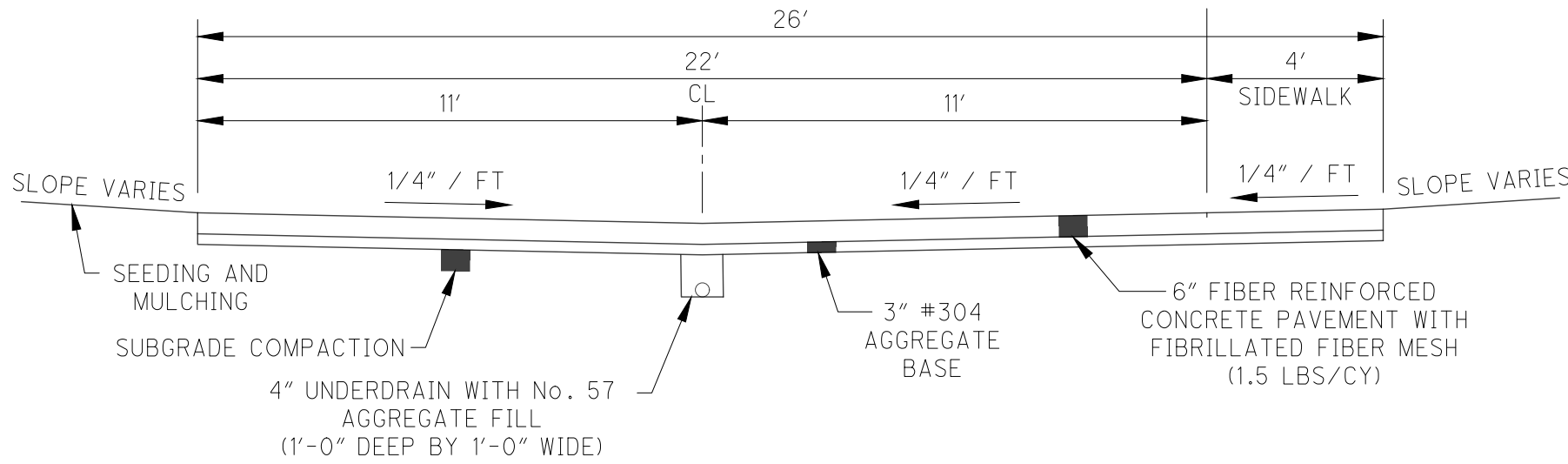
SHEET INDEX:
SHEET 1 TITLE SHEET
SHEET 2 SITE PLAN



SOILS TYPES: CdB, CdC, Cg, FcA, Ly, Sb, Uf

SOILS MAP
NO SCALE

SOIL
MAP



TYPICAL PAVEMENT SECTION
PRIVATE ACCESS DRIVE
NO SCALE

GENERAL DEVELOPMENT PLAN FOR JACOBY ROAD TOWNSHIP OF COPLEY, COUNTY OF SUMMIT, STATE OF OHIO

SITE INFORMATION:

PROJECT LOCATION: JACOBY ROAD, COPLEY, OHIO

PARCEL NUMBERS: 1501734 53.50 AC
1501735 10.44 AC
1503826 0.27 AC

TOTAL PROJECT AREA: 64.21 AC GROSS
- 0.33 AC EXISTING JACOBY ROAD ROW
63.88 AC NET

CURRENT ZONING: R-MD MEDIUM DENSITY RESIDENTIAL
PROPOSED ZONING: R-CD CONSERVATION DEVELOPMENT RESIDENTIAL

DESIGN INFORMATION-CONSERVATION DEVELOPMENT:

PROPOSED AREA: 63.88 AC

PROPOSED UNITS: 133 TOTAL
40 SANIBEL UNITS (52'dx38'w) (PLAN LABEL: S#)
64 CANTERBURY/WINDSOR UNITS (68'dx28'w) (PLAN LABEL: C#)
29 HAVANA UNITS (46.5'dx20'w) (PLAN LABEL: H#)

PROPOSED PRIVATE ACCESS DRIVES: 3,465 LF
PROPOSED EMERGENCY ACCESS DRIVE: 301 LF

ZONING: R-CD CONSERVATION DEVELOPMENT RESIDENTIAL DISTRICT:

	PER CODE	SHOWN
MIN. PROJECT AREA:	25 AC	63.88 AC
MAX. DENSITY:	153 UNITS	133 UNITS
MIN. RESTRICTED OPEN SPACE:	40% (25.6 AC)	45% (29.3 AC)
MIN. SETBACK FROM EX. ROW:	100'	100'
MIN. BOUNDARY SETBACK:	100'	100'
MIN. BUILDING SEPARATION:	15'	20'
MAX. BUILDING HEIGHT:	35'	35'
MIN. WETLAND SETBACK:	35'	35'
MIN. RIPARIAN SETBACK:	50', 75'	50', 75'
MIN. GARAGE FRONT TO EOP:	--	25'
PROPOSED GUEST PARKING:	--	22 SPACES

OWNER: 1501734 & 1501735
JACOBY COMPANY
REAL PROPERTY ADVENTURES
8202 DRYBANK DRIVE
HUNTINGTON BEACH, CA. 92646

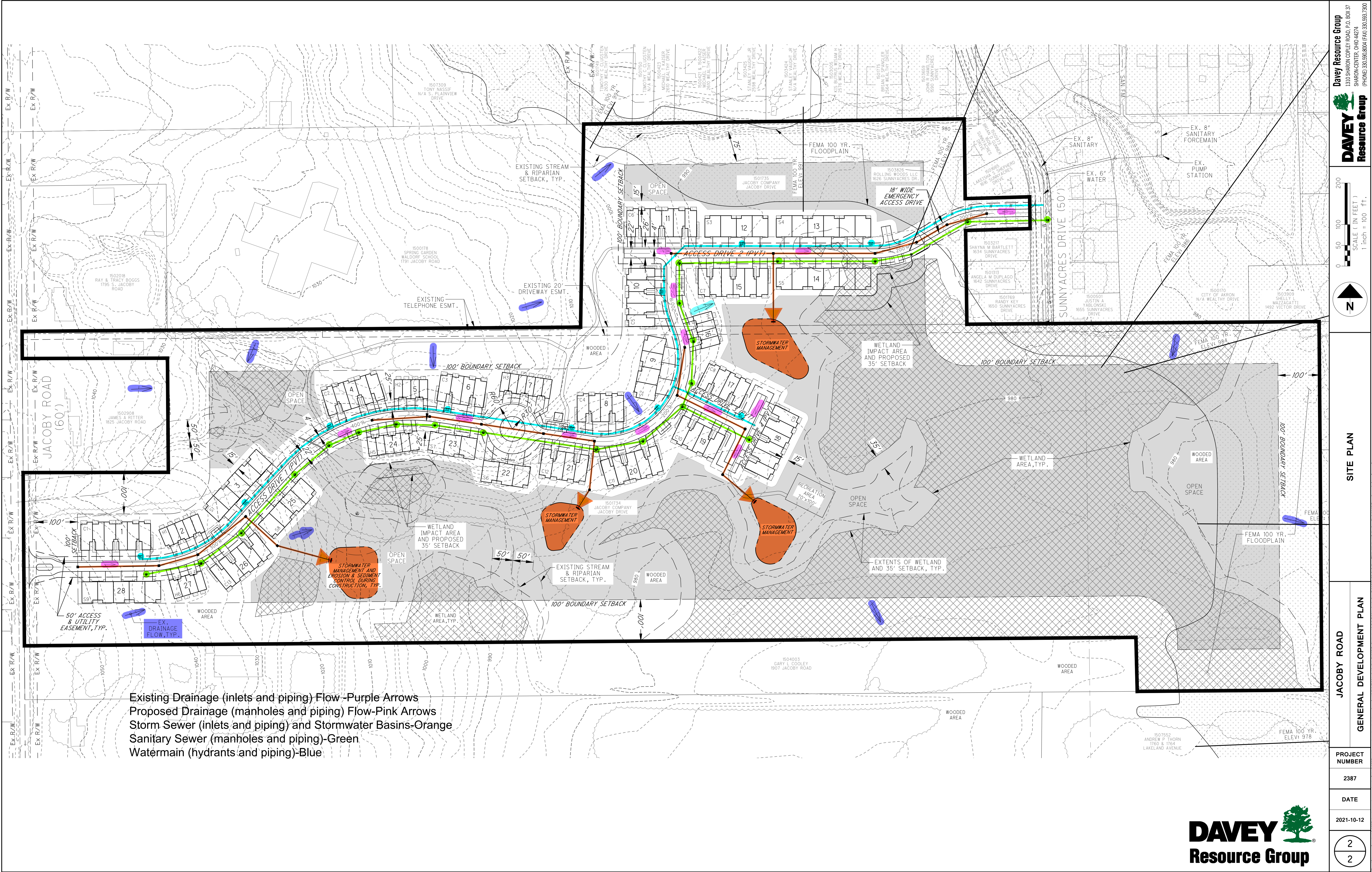
OWNER: 1503826
ROLLING WOOD LLC
2211 MEDINA ROAD
SUITE 100
MEDINA, OHIO 44256
BEN WEINERMAN
330-590-8017

DEVELOPER:
PRIDE ONE CONSTRUCTION
2211 MEDINA ROAD
SUITE 100
MEDINA, OHIO 44256
BEN WEINERMAN
330-590-8017

DESIGN ENGINEER:
DAVEY RESOURCE GROUP
1310 SHARON COPLEY ROAD
P.O. BOX 37
SHARON CENTER, OHIO 44274
TRAVIS G. CRANE, P.E.
330-590-8004

SUBMITTAL INDEX	
SUBMITTAL	DATE
1	10/12/2021





DAVEY
Resource Group

1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.593.0004 (FAX) 330.593.7300

0 50 100 200
SCALE (IN FEET)
1 inch = 100 ft.

N

JACOBY ROAD

GENERAL DEVELOPMENT PLAN

SITE PLAN

PROJECT NUMBER

2387

DATE

2021-10-12

2

2

File: T:\Sp: eng\projects\2387_jacoby_road - copy\dwg\plan\mxdg Scale: 10/12/2021 2:42 PM (10050) PlotStyle: (pc: 2018.ctb) Scale: (1:39922) Page 3 of 3

