COMMERCE POINT

Commercial Development

Franklin, Indiana

NORTHPOINTE ENGINEERING & SURVEYING, Inc.

WBE/DBE Certified

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Commerce Point

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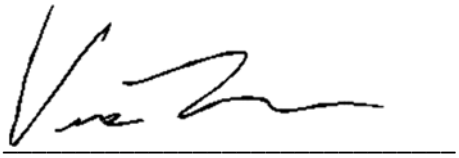
Professional Certification

Commerce Point

The following report and accompanying computations have been developed by me or under my direct supervision.



Venus Thorne
Professional Engineer
Registration Number: 11200278

NORTHPOINTE ENGINEERING & SURVEYING, Inc.
WBE/DBE Certified

Drainage Summary

Commerce Point

Project Overview
The proposed project is a 6.4-acre commercial development located on Commerce Drive in Franklin, Johnson County.

Analytical Methodology:
The Huff rainfall distribution hydrographs were used to calculate the runoff rates with the analysis of all storm durations (1, 2, 3, 6, 12 and 24 hours). The input parameters needed for the calculation include the Curve Number (CN) and Time of Concentration (ToC). The CN was determined by the surface description and soil type for the watershed. The ToC was calculated using TR-55 methodology, considering the surface conditions and slope.

Existing Site Conditions / Site History
The parcel currently consists of buildings, with paved parking area and grass. The majority of the site contains B group soils with some C present as well. A soils map and existing site conditions map are enclosed for the site. For analysis and runoff calculation purposes, the existing site is being treated as a pasture in good condition.

The site is zoned commercial. There are no zoning commitments that affect the drainage for the site.

The site is currently split into two watersheds. The west portion of the site drains in a southwesterly direction to an existing drainage ditch and outlets to the west. The east portion of the site drains in a southeasterly direction and outlets into the existing storm system along US 31.

Allowable Release Rates
Per the City of Franklin Subdivision Ordinance, the the storm water detention designs shall outlet storm water at a 2-year pre-development rainfall event rate for a 10-year post-development storm, and shall outlet at a 10-year pre-development rainfall event rate for a 100-year post-development storm.

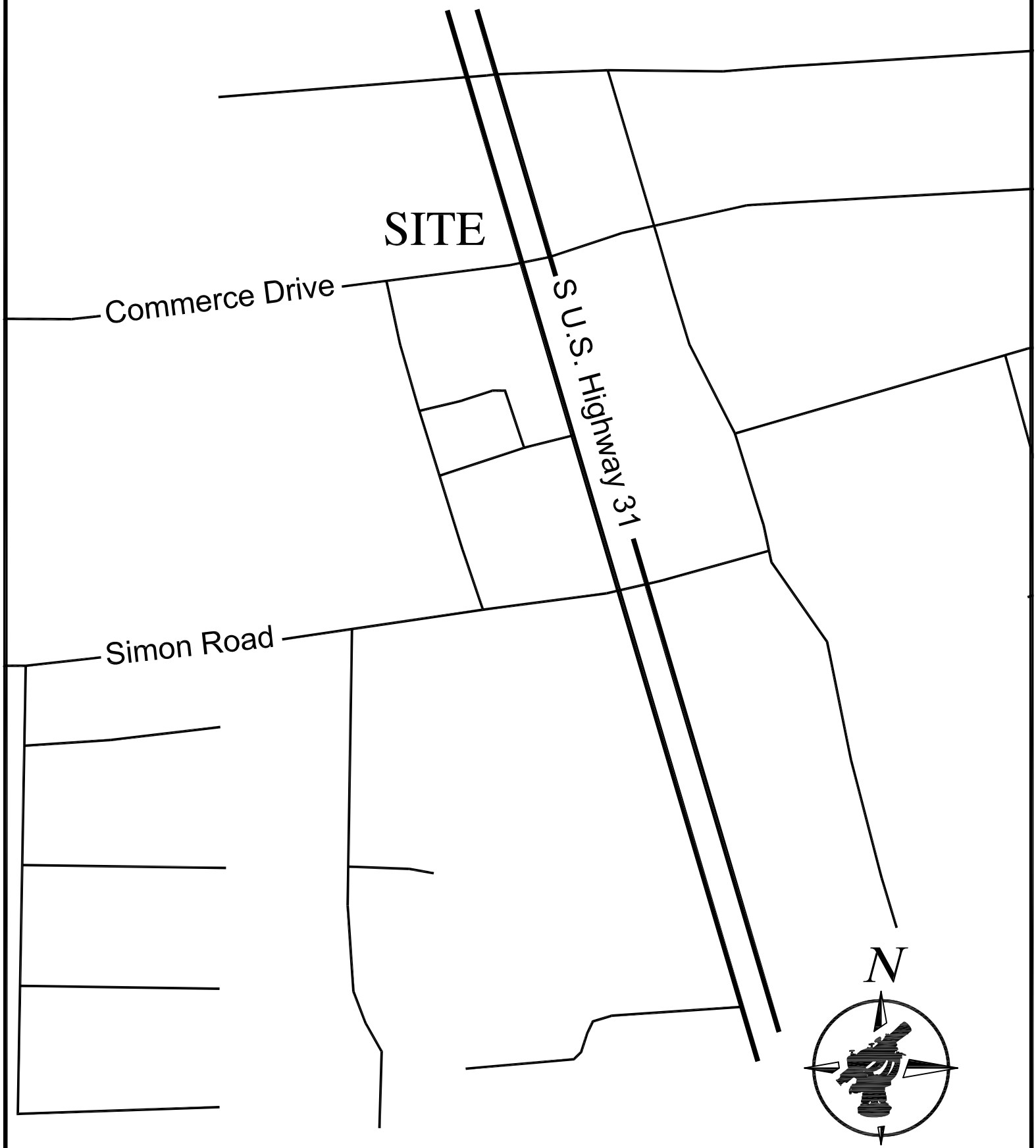
Proposed Site
The proposed site will drain through a proposed storm system and outlet into an underground detention system designed for the 6.4-acre development. The detention will outlet into the existing storm system located along US 31. Since the site is split into two watersheds under existing conditions, only the east watershed is being used to establish the allowable release rates for the site. The east existing watershed contains 4.59 acres. The allowable and proposed release rates for the development are as follows:

Storm	Allowable (cfs)	Proposed (cfs)
10-year	0.26	0.25
100-year	0.82	0.75

The underground detention has been designed to detain the runoff and meet the allowable release rates.

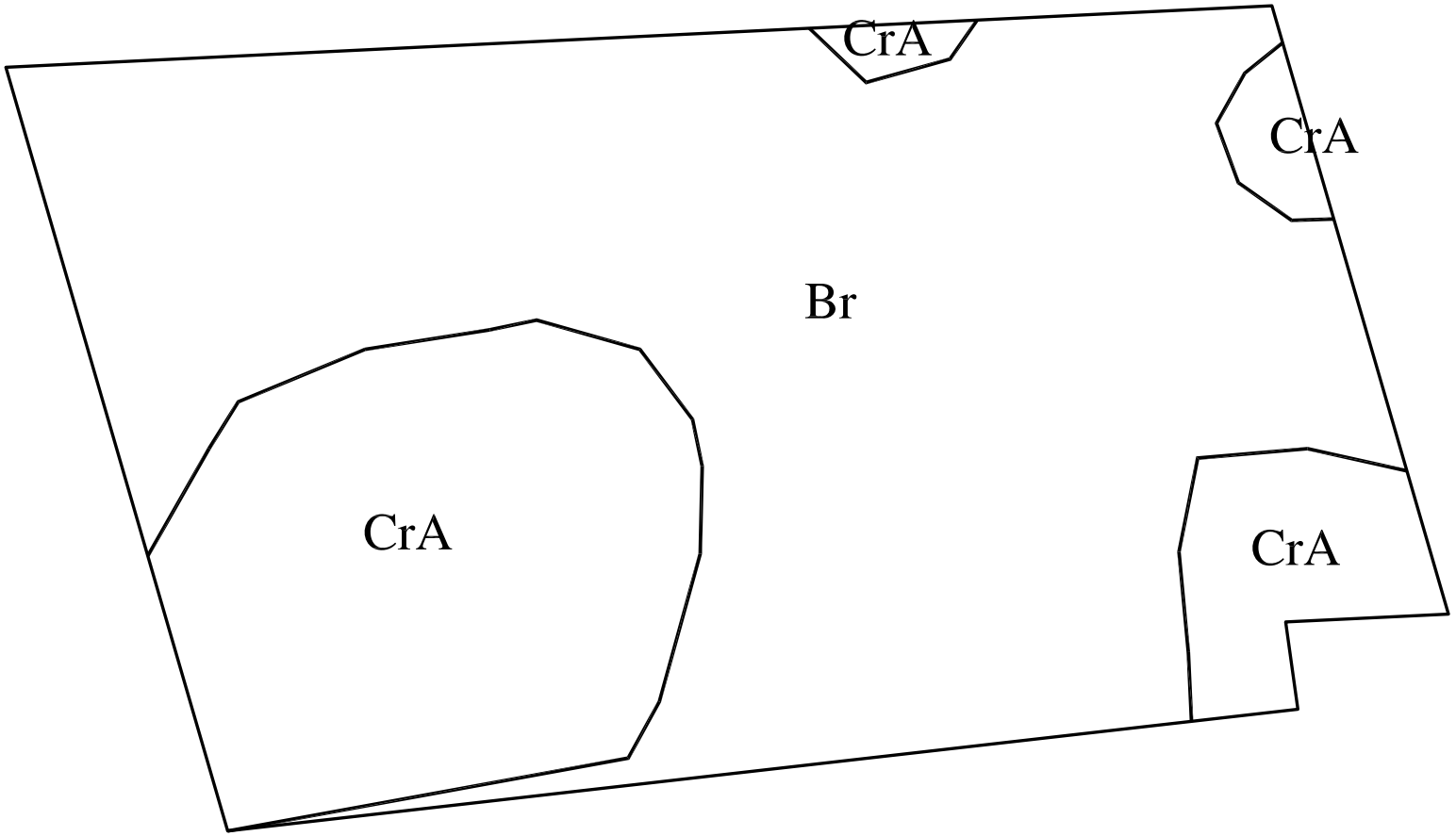
Water Quality
Water quality structures are proposed prior to the storm outletting into the detention area. Calculations for the water quality structures will be performed and structures provided during the design of the construction plans.

Area Map



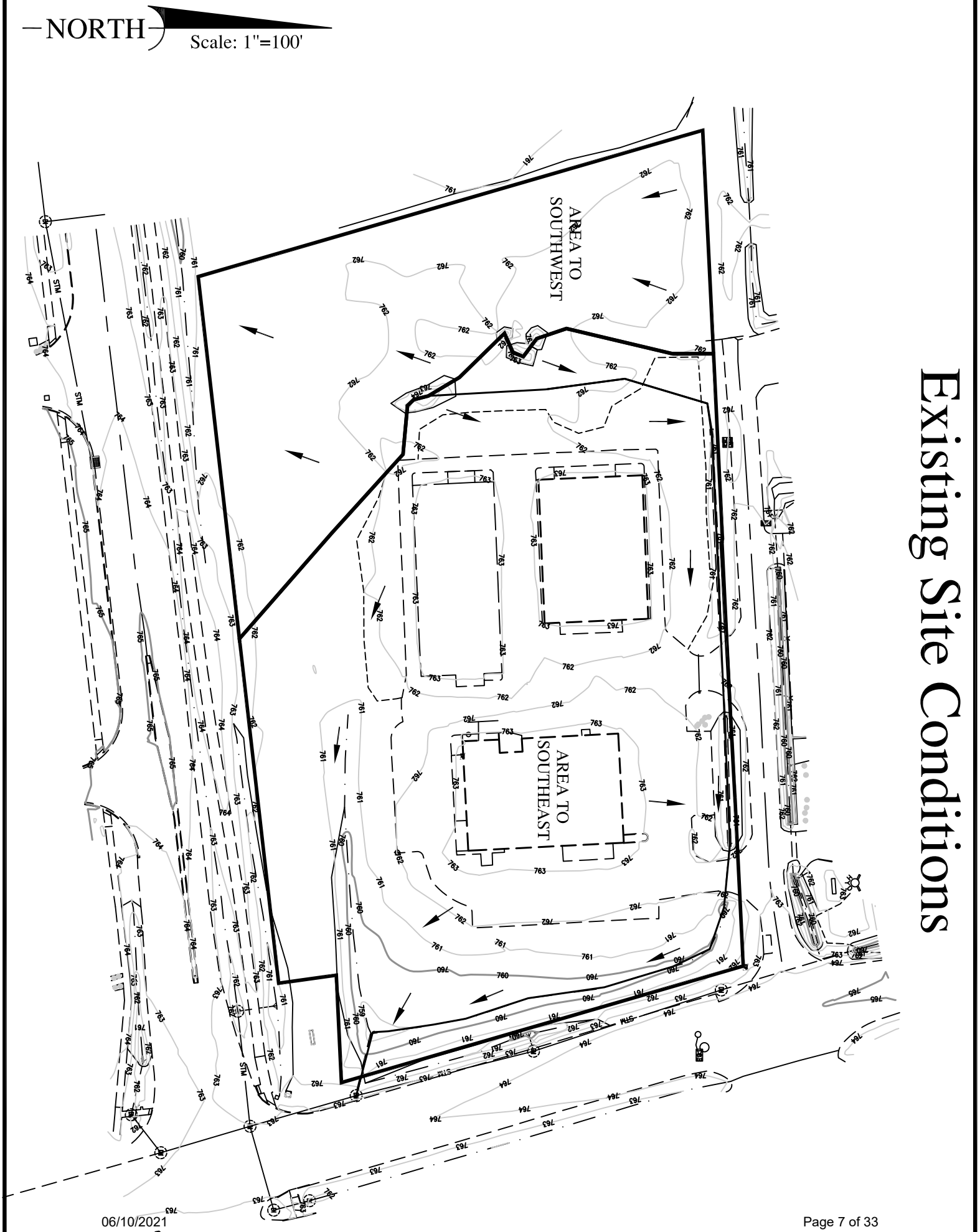
Scale: NTS

Soils Map



NORTH

Scale: 1"=100'



Existing Site Conditions

Runoff Coeffient

Project	Commerce Drive	By	VT	Date	6/9/2021
Location	Fanklin Johnson County	Checked	DJS	Date	6/9/2021

X	Present		Developed

	Cover Description	CN	Area (ac)	Product
Br - B	Pasture Good Condition	61	3.61	220.21
CrA - C	Pasture Good Condition	74	0.98	72.52
		Totals =	4.59	292.73

CN = 63.8

TR55 Tc Worksheet

Hyd. No. 1

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.150		0.011		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 2.64		0.00		0.00		
Land slope (%)	= 2.00		0.00		0.00		
Travel Time (min)	**= 10.79**	**+**	**0.00**	**+**	**0.00**	**=**	**10.79**
Shallow Concentrated Flow							
Flow length (ft)	= 376.00		0.00		0.00		
Watercourse slope (%)	= 0.40		0.00		0.00		
Surface description	= Unpaved		Paved		Paved		
Average velocity (ft/s)	=1.02		0.00		0.00		
Travel Time (min)	**= 6.14**	**+**	**0.00**	**+**	**0.00**	**=**	**6.14**
Channel Flow							
X sectional flow area (sqft)	= 8.50		0.00		0.00		
Wetted perimeter (ft)	= 11.00		0.00		0.00		
Channel slope (%)	= 0.60		0.00		0.00		
Manning's n-value	= 0.030		0.015		0.015		
Velocity (ft/s)	=3.24						
			0.00				
					0.00		
Flow length (ft)	({0})574.0		0.0		0.0		
Travel Time (min)	**= 2.96**	**+**	**0.00**	**+**	**0.00**	**=**	**2.96**

Total Travel Time, Tc ..... 19.88 min

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

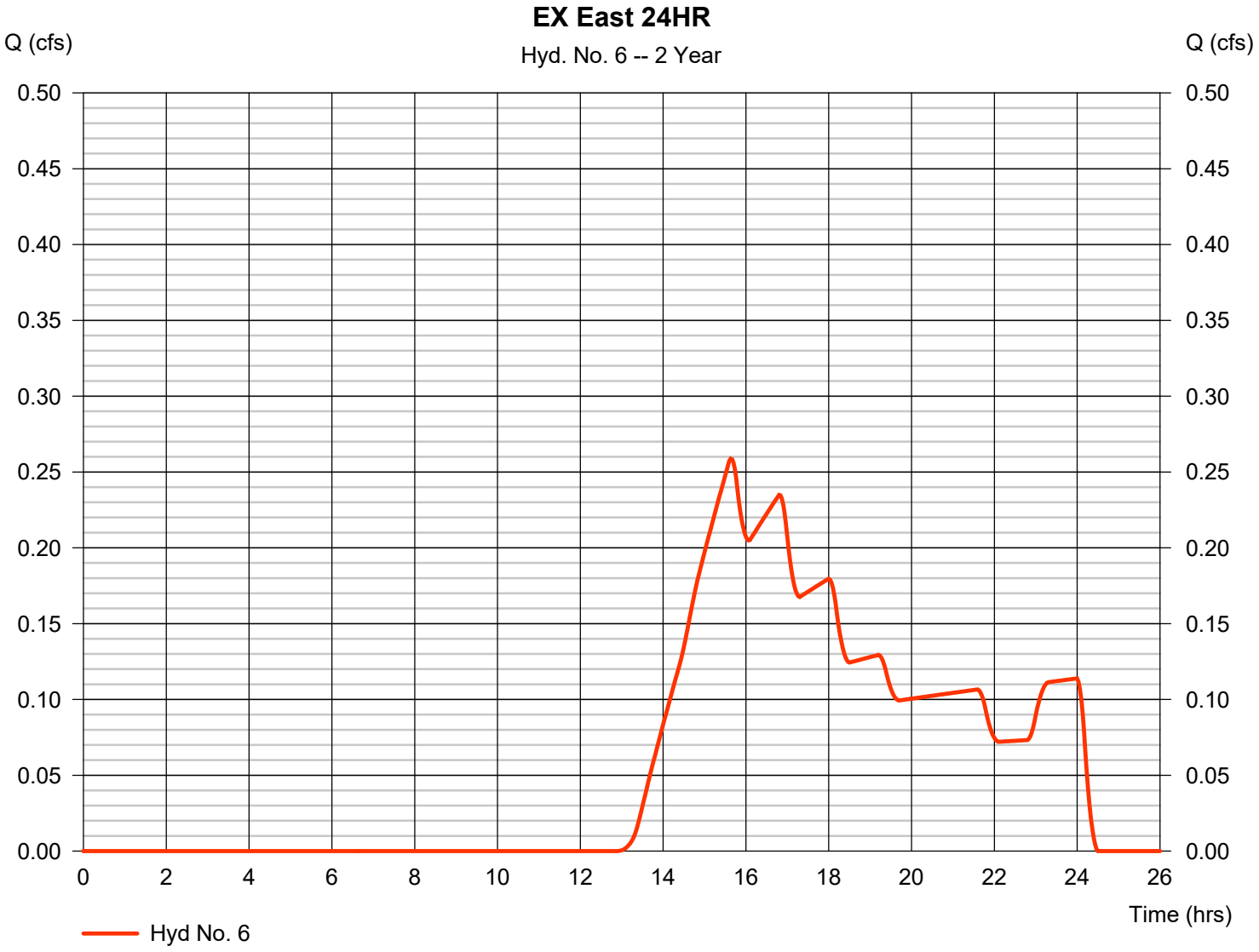
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	0.031	2	68	38	------	------	------	EX East 1HR
2	SCS Runoff	0.122	2	106	408	------	------	------	EX East 2HR
3	SCS Runoff	0.140	2	154	796	------	------	------	EX East 3HR
4	SCS Runoff	0.149	2	168	1,826	------	------	------	EX East 6HR
5	SCS Runoff	0.224	2	366	3,843	------	------	------	EX East 12HR
6	SCS Runoff	0.259	2	938	5,258	------	------	------	EX East 24HR

Hydrograph Report

Hyd. No. 6

EX East 24HR

Hydrograph type	= SCS Runoff	Peak discharge	= 0.259 cfs
Storm frequency	= 2 yrs	Time to peak	= 15.63 hrs
Time interval	= 2 min	Hyd. volume	= 5,258 cuft
Drainage area	= 4.590 ac	Curve number	= 63.8
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 19.90 min
Total precip.	= 2.64 in	Distribution	= Huff-3rd
Storm duration	= 24.00 hrs	Shape factor	= 484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

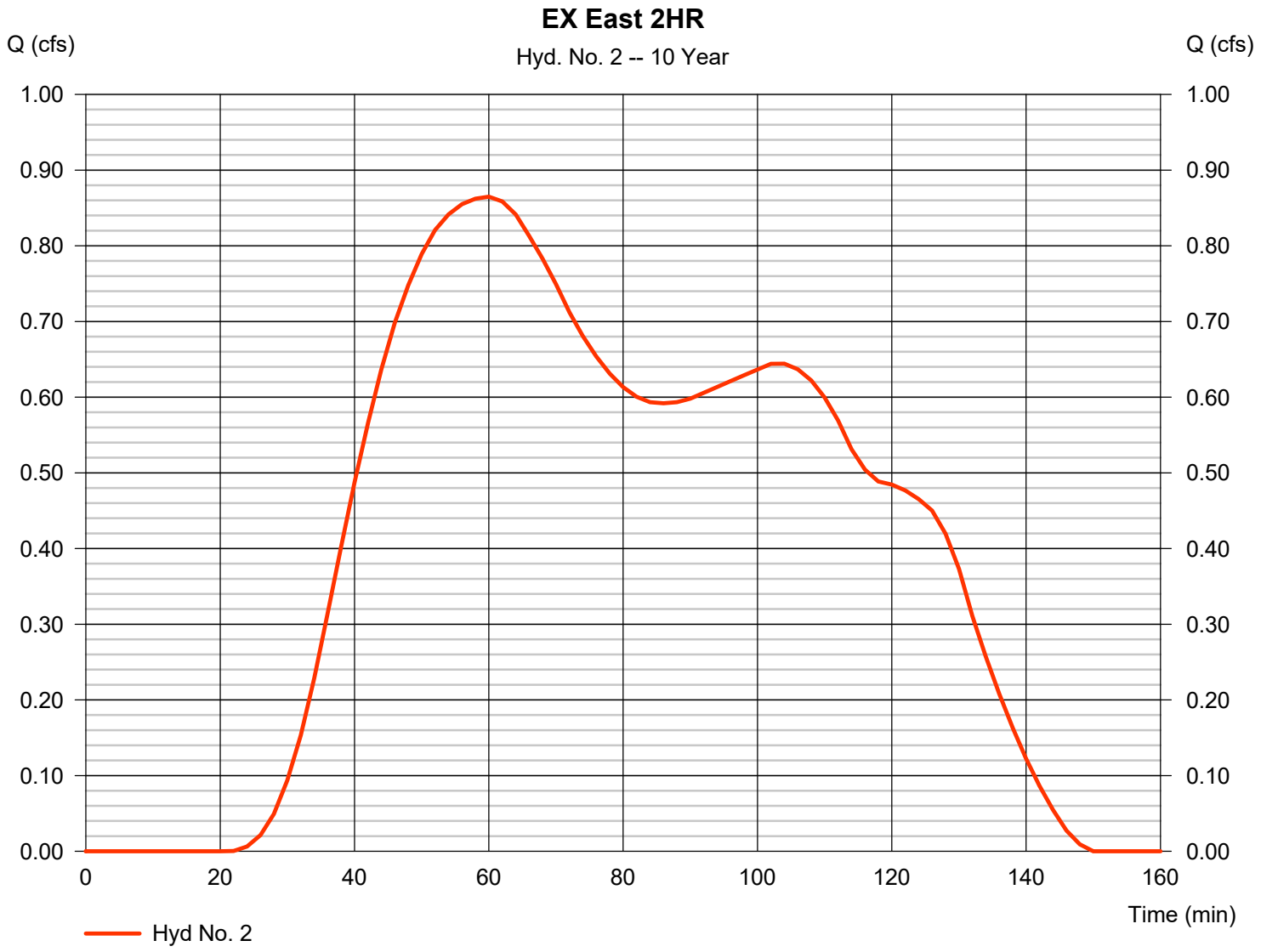
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	0.675	2	52	1,745	------	------	------	EX East 1HR
2	SCS Runoff	0.865	2	60	3,841	------	------	------	EX East 2HR
3	SCS Runoff	0.803	2	70	5,256	------	------	------	EX East 3HR
4	SCS Runoff	0.714	2	100	8,573	------	------	------	EX East 6HR
5	SCS Runoff	0.824	2	328	12,440	------	------	------	EX East 12HR
6	SCS Runoff	0.808	2	936	16,768	------	------	------	EX East 24HR

Hydrograph Report

Hyd. No. 2

EX East 2HR

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.865 cfs
Storm frequency	=	10 yrs	Time to peak	=	60 min
Time interval	=	2 min	Hyd. volume	=	3,841 cuft
Drainage area	=	4.590 ac	Curve number	=	63.8
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	19.90 min
Total precip.	=	2.40 in	Distribution	=	Huff-1st
Storm duration	=	2.00 hrs	Shape factor	=	484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

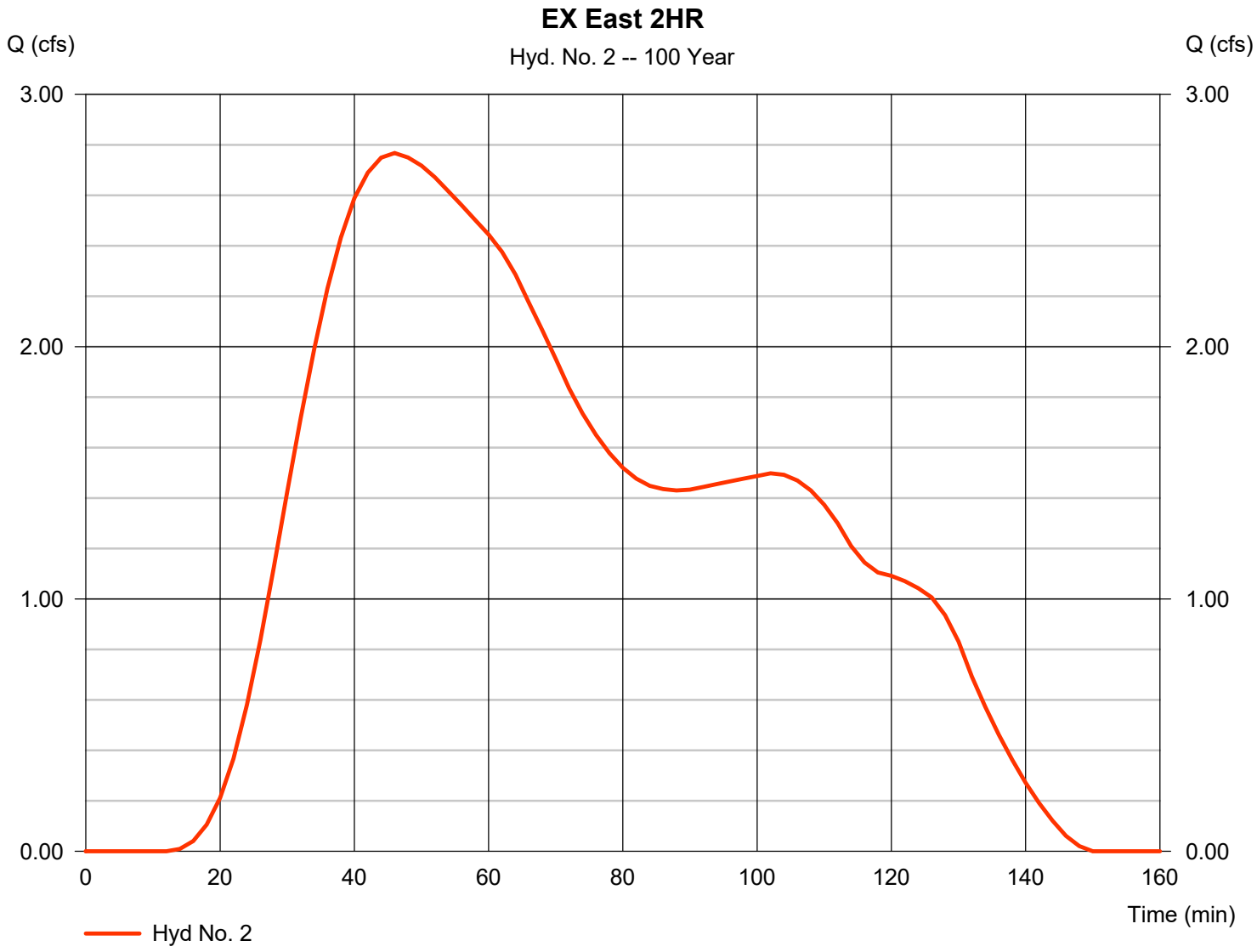
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	2.738	2	36	6,840	------	------	------	EX East 1HR
2	SCS Runoff	2.768	2	46	11,593	------	------	------	EX East 2HR
3	SCS Runoff	2.529	2	56	14,823	------	------	------	EX East 3HR
4	SCS Runoff	1.940	2	94	20,874	------	------	------	EX East 6HR
5	SCS Runoff	1.895	2	326	27,833	------	------	------	EX East 12HR
6	SCS Runoff	1.696	2	936	37,421	------	------	------	EX East 24HR

Hydrograph Report

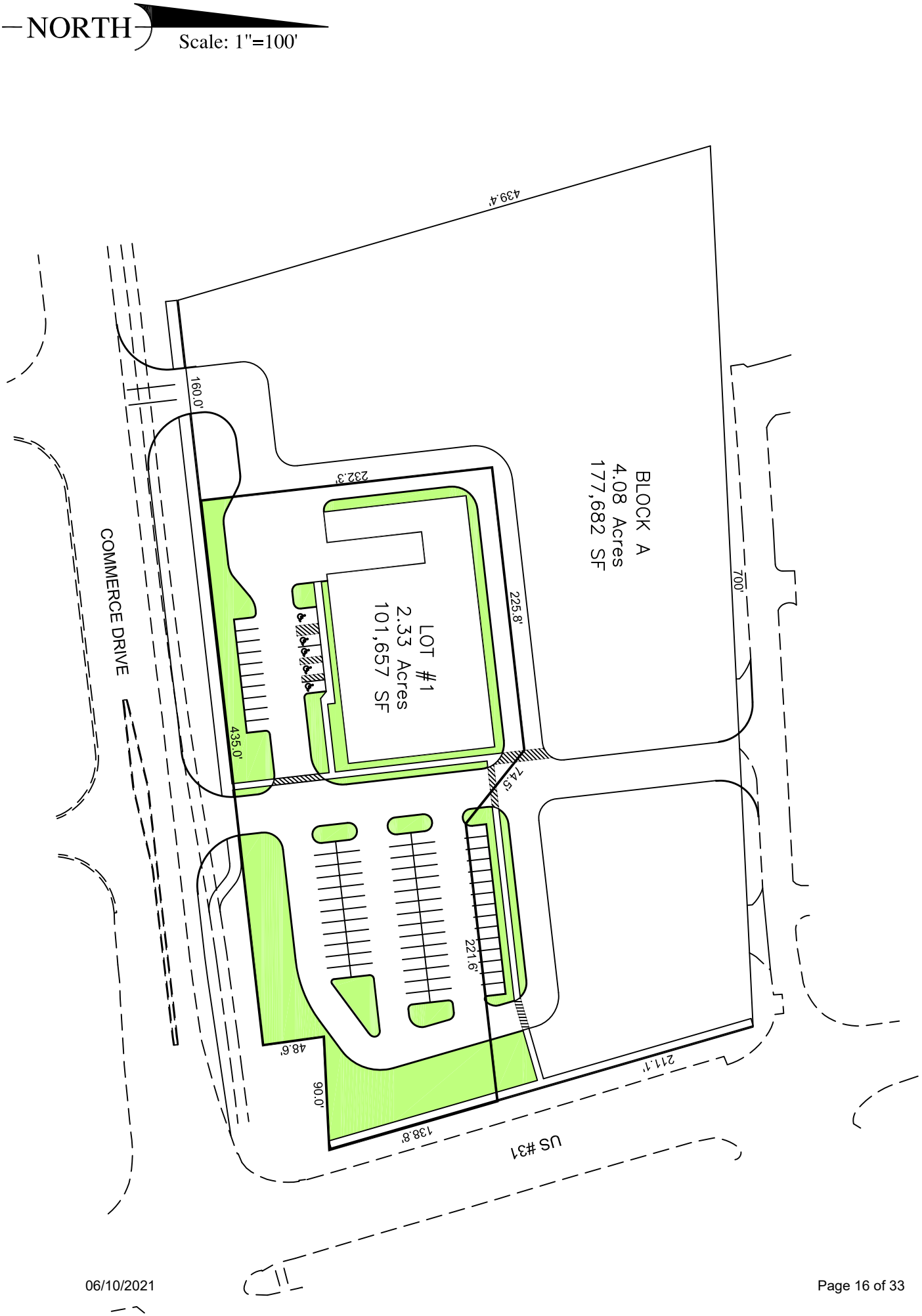
Hyd. No. 2

EX East 2HR

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.768 cfs
Storm frequency	=	100 yrs	Time to peak	=	46 min
Time interval	=	2 min	Hyd. volume	=	11,593 cuft
Drainage area	=	4.590 ac	Curve number	=	63.8
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	19.90 min
Total precip.	=	3.50 in	Distribution	=	Huff-1st
Storm duration	=	2.00 hrs	Shape factor	=	484



Proposed Site Map



Runoff Coeffient

Project	Commerce Point	By	VT	Date	4/9/2021
Location	Franklin Johnson County	Checked	DJS	Date	4/10/2021

	Present		Developed
		X	

	Cover Description	CN	Area (ac)	Product
Br - B	Commercial	92	3.20	294.4
CrA - C	Commercial	94	3.21	301.74
		Totals =	6.41	596.14

CN = 93

TR55 Tc Worksheet

Hyd. No. 1

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.150		0.011		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 2.64		0.00		0.00		
Land slope (%)	= 1.50		0.00		0.00		
Travel Time (min)	**= 12.10**	**+**	**0.00**	**+**	**0.00**	**=**	**12.10**
Shallow Concentrated Flow							
Flow length (ft)	= 183.00		0.00		0.00		
Watercourse slope (%)	= 1.00		0.00		0.00		
Surface description	= Paved		Paved		Paved		
Average velocity (ft/s)	=2.03		0.00		0.00		
Travel Time (min)	**= 1.50**	**+**	**0.00**	**+**	**0.00**	**=**	**1.50**
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 ..... 13.60 min

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

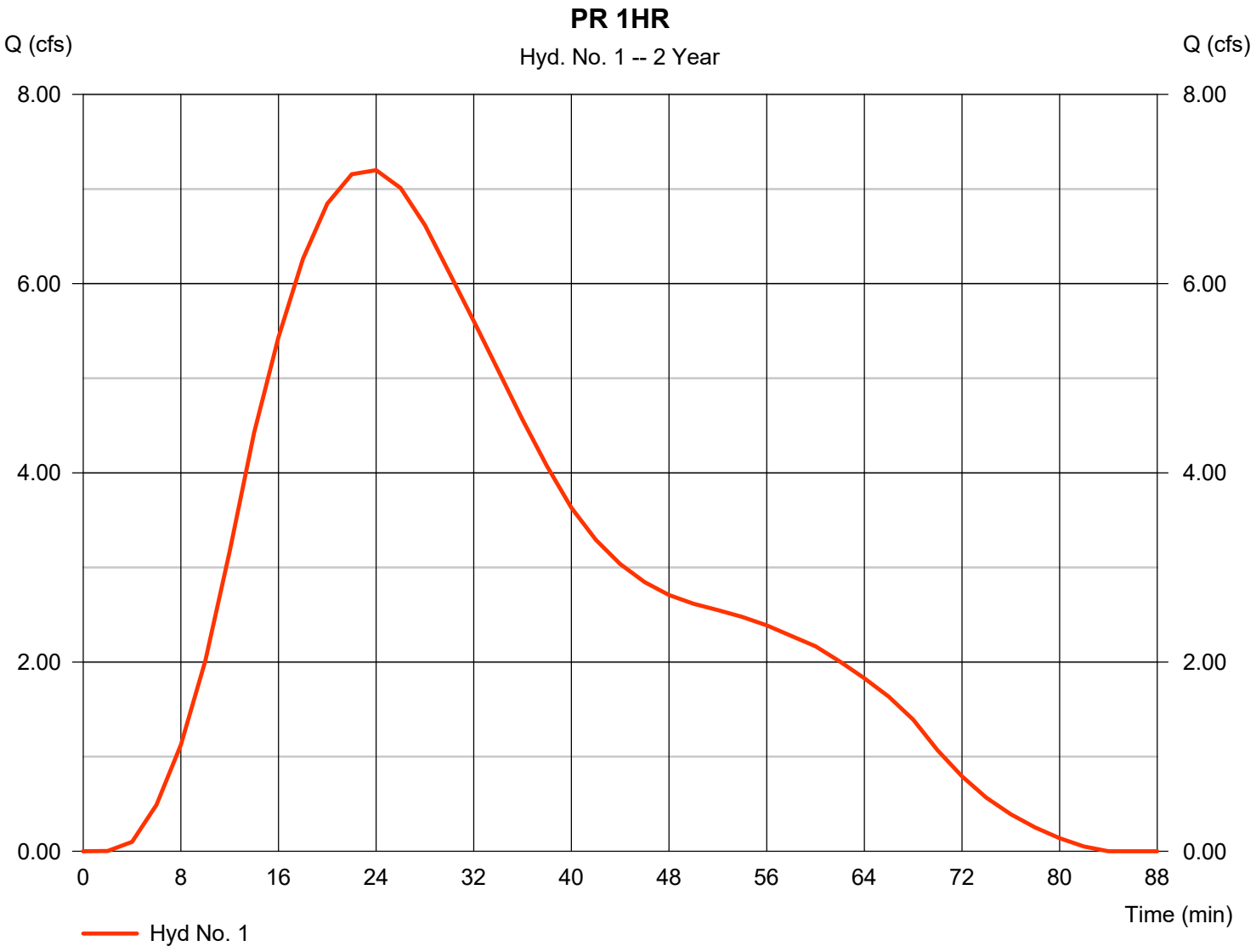
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	7.199	2	24	14,807	------	------	------	PR 1HR
2	SCS Runoff	5.876	2	30	20,045	------	------	------	PR 2HR
3	SCS Runoff	4.767	2	32	23,230	------	------	------	PR 3HR
4	SCS Runoff	3.671	2	42	29,403	------	------	------	PR 6HR
5	SCS Runoff	2.460	2	290	38,238	------	------	------	PR 12HR
6	SCS Runoff	1.625	2	936	43,366	------	------	------	PR 24HR
7	Reservoir	0.013	2	84	3,609	1	759.08	14,773	Detention 1HR
8	Reservoir	0.026	2	142	6,072	2	759.11	19,935	Detention 2HR
9	Reservoir	0.034	2	202	7,854	3	759.12	23,020	Detention 3HR
10	Reservoir	0.053	2	380	11,476	4	759.15	28,770	Detention 6HR
11	Reservoir	0.085	2	736	16,829	5	759.20	36,638	Detention 12HR
12	Reservoir	0.104	2	1454	19,112	6	759.22	40,534	Detention 24HR

Hydrograph Report

Hyd. No. 1

PR 1HR

Hydrograph type	= SCS Runoff	Peak discharge	= 7.199 cfs
Storm frequency	= 2 yrs	Time to peak	= 24 min
Time interval	= 2 min	Hyd. volume	= 14,807 cuft
Drainage area	= 6.410 ac	Curve number	= 93
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 13.60 min
Total precip.	= 1.25 in	Distribution	= Huff-1st
Storm duration	= 1.00 hrs	Shape factor	= 484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

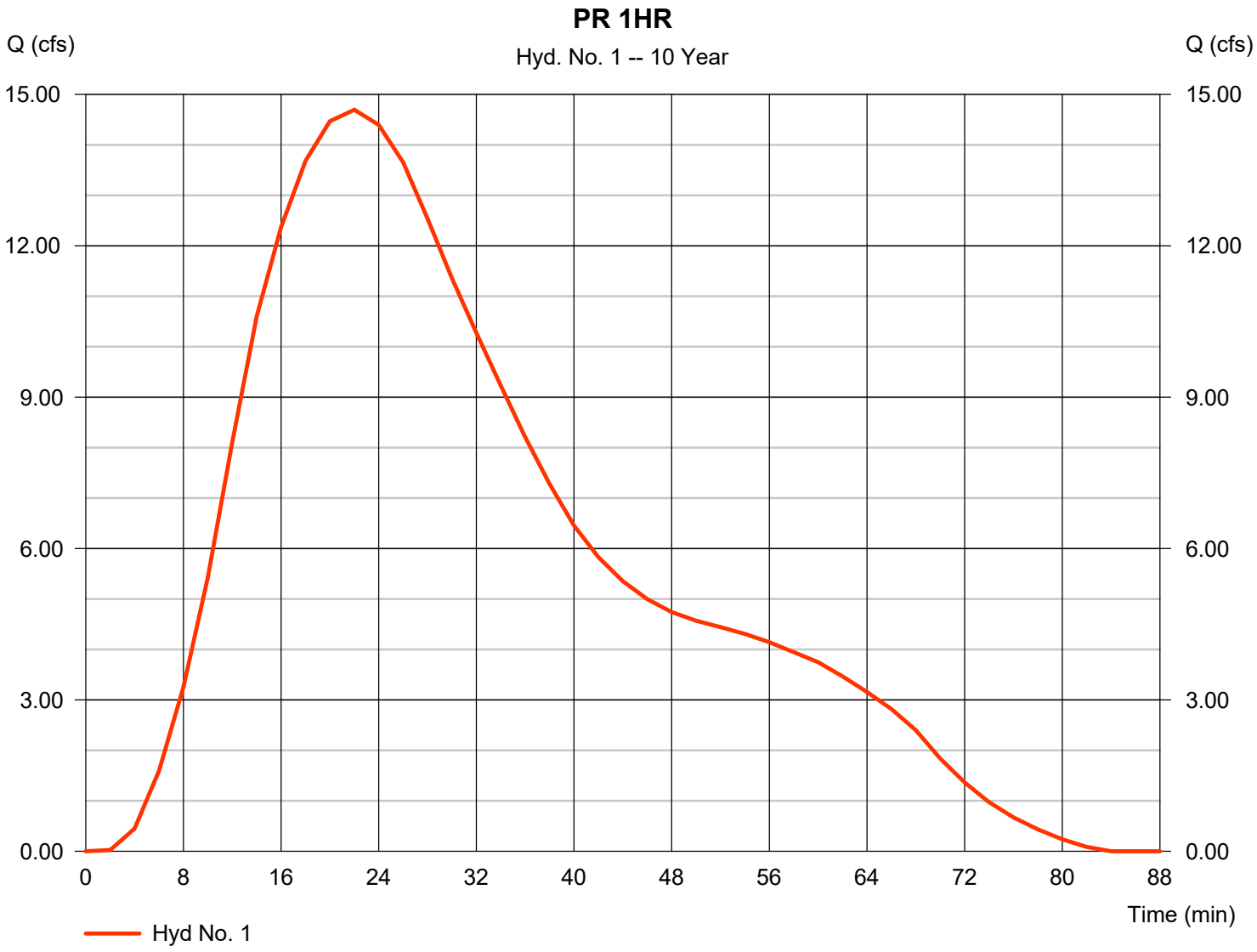
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	14.70	2	22	28,991	------	------	------	PR 1HR
2	SCS Runoff	11.90	2	26	38,238	------	------	------	PR 2HR
3	SCS Runoff	9.947	2	28	43,326	------	------	------	PR 3HR
4	SCS Runoff	7.565	2	40	53,737	------	------	------	PR 6HR
5	SCS Runoff	4.053	2	288	64,239	------	------	------	PR 12HR
6	SCS Runoff	2.647	2	936	74,815	------	------	------	PR 24HR
7	Reservoir	0.053	2	82	11,400	1	759.16	28,854	Detention 1HR
8	Reservoir	0.091	2	142	17,475	2	759.20	37,830	Detention 2HR
9	Reservoir	0.113	2	200	21,049	3	759.23	42,590	Detention 3HR
10	Reservoir	0.162	2	378	28,636	4	759.28	51,672	Detention 6HR
11	Reservoir	0.214	2	734	36,131	5	759.32	59,958	Detention 12HR
12	Reservoir	0.256	2	1452	42,447	6	759.36	67,057	Detention 24HR

Hydrograph Report

Hyd. No. 1

PR 1HR

Hydrograph type	= SCS Runoff	Peak discharge	= 14.70 cfs
Storm frequency	= 10 yrs	Time to peak	= 22 min
Time interval	= 2 min	Hyd. volume	= 28,991 cuft
Drainage area	= 6.410 ac	Curve number	= 93
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 13.60 min
Total precip.	= 1.96 in	Distribution	= Huff-1st
Storm duration	= 1.00 hrs	Shape factor	= 484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

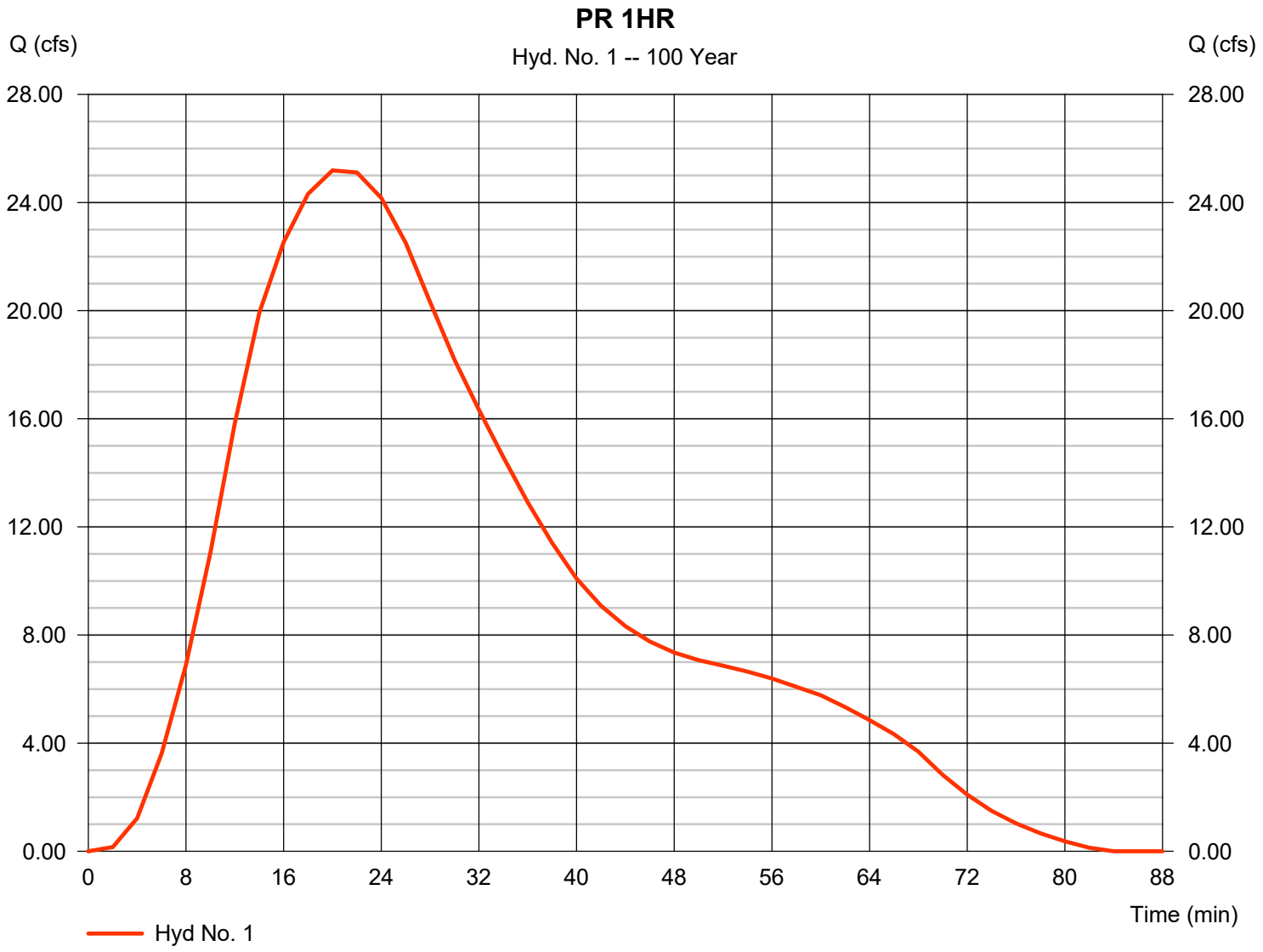
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	25.19	2	20	48,537	------	------	------	PR 1HR
2	SCS Runoff	20.24	2	24	62,045	------	------	------	PR 2HR
3	SCS Runoff	17.49	2	26	70,180	------	------	------	PR 3HR
4	SCS Runoff	12.54	2	38	84,115	------	------	------	PR 6HR
5	SCS Runoff	6.105	2	288	98,802	------	------	------	PR 12HR
6	SCS Runoff	3.990	2	936	117,575	------	------	------	PR 24HR
7	Reservoir	0.143	2	82	25,011	1	759.26	48,161	Detention 1HR
8	Reservoir	0.220	2	140	35,428	2	759.33	61,013	Detention 2HR
9	Reservoir	0.265	2	200	41,913	3	759.37	68,358	Detention 3HR
10	Reservoir	0.408	2	376	53,331	4	759.42	79,279	Detention 6HR
11	Reservoir	0.602	2	730	65,496	5	759.46	87,676	Detention 12HR
12	Reservoir	0.745	2	1446	80,019	6	759.49	94,539	Detention 24HR

Hydrograph Report

Hyd. No. 1

PR 1HR

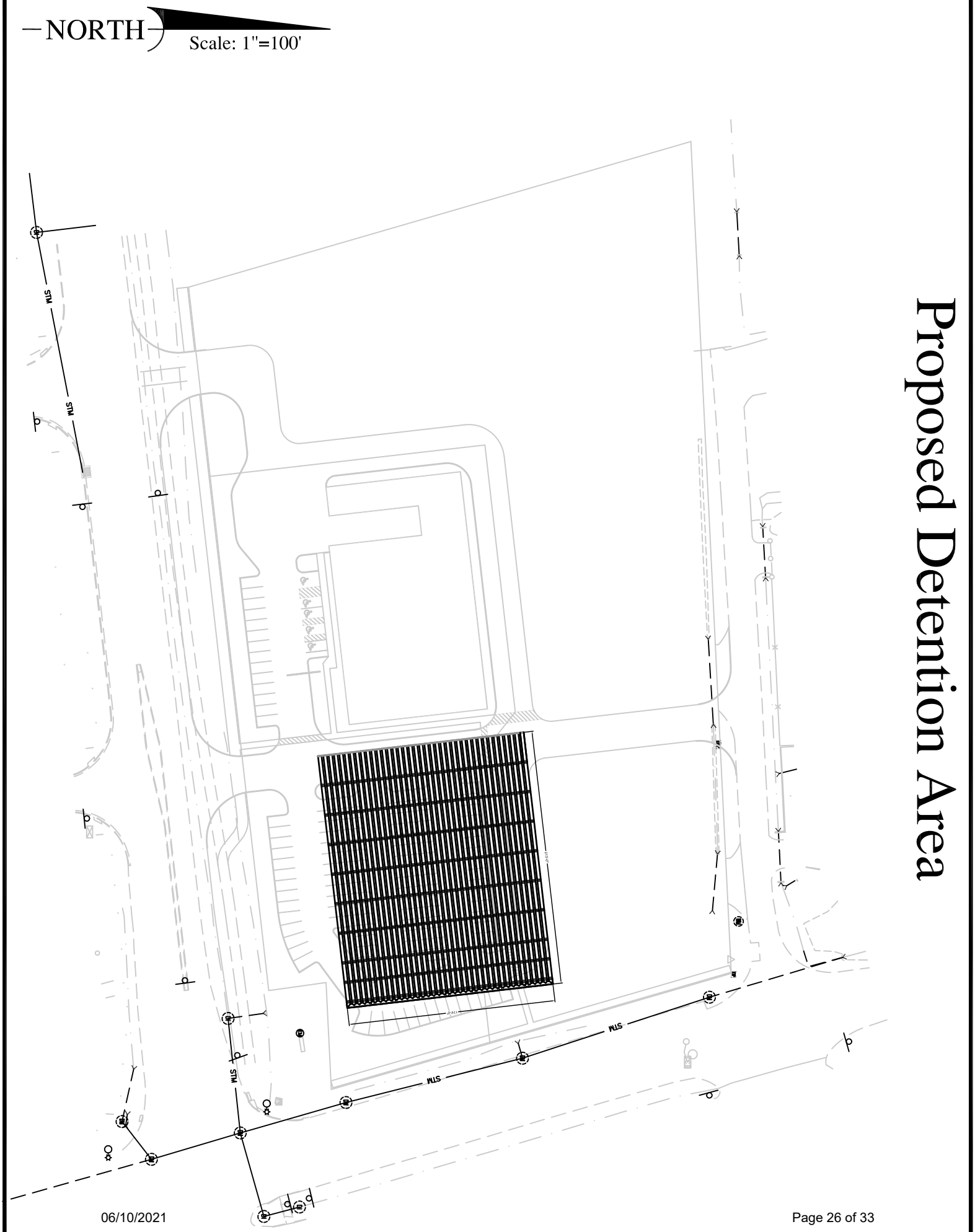
Hydrograph type	= SCS Runoff	Peak discharge	= 25.19 cfs
Storm frequency	= 100 yrs	Time to peak	= 20 min
Time interval	= 2 min	Hyd. volume	= 48,537 cuft
Drainage area	= 6.410 ac	Curve number	= 93
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 13.60 min
Total precip.	= 2.88 in	Distribution	= Huff-1st
Storm duration	= 1.00 hrs	Shape factor	= 484



Detention Summary

Commerce Point

Analytical Methodology:
The proposed underground detention was sized using Hydraflow Hydrographs. Per the design calculations the site requires 94,539 cubic feet (cuft) of storage. A Contech underground detention system is proposed for the site. The system provides 95,000 cuft of storage.



Proposed Detention Area

DYODS™
Design Your Own Detention System

CONTECH CMP DETENTION SYSTEMS

CONTECH STORMWATER SOLUTIONS INC.

For design assistance, drawings, and pricing send completed worksheet to:
dyods@contech-cpi.com

Project Summary

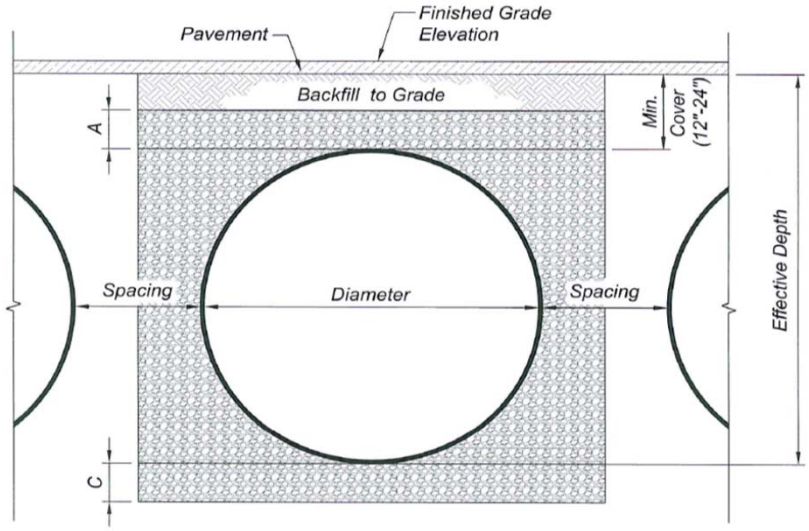
Date:	6/9/2021
Project Name:	Commerce Drive West
City / County:	Greenwood
State:	IN
Designed By:	Venus Thorne
Company:	Northpointe
Telephone:	317721-0032

Enter Information in Blue Cells

Corrugated Metal Pipe Calculator

Storage Volume Required (cf):	94,539
Limiting Width (ft):	230.00
Invert Depth Below Asphalt (ft):	4.00
Solid or Perforated Pipe:	Perforated
Shape Or Diameter (in):	36
Number Of Headers:	2
Spacing between Barrels (ft):	1.50
Stone Width Around Perimeter of System (ft):	1
Depth A: Porous Stone Above Pipe (in):	12
Depth C: Porous Stone Below Pipe (in):	0
Stone Porosity (0 to 40%):	40

7.07 ft^2 Pipe Area



System Sizing

Pipe Storage:	59,100	cf	
Porous Stone Storage:	36,344	cf	
Total Storage Provided:	95,444	cf	101.0% Of Required Storage
Number of Barrels:	51	barrels	
Length per Barrel:	155.0	ft	
Length Per Header:	228.0	ft	
Rectangular Footprint (W x L):	230. ft x 163. ft		

CONTECH Materials

Total CMP Footage:	8,361	ft
Approximate Total Pieces:	377	pcs
Approximate Coupling Bands:	426	bands
Approximate Truckloads:	38	trucks

Construction Quantities**

Total Excavation:	5555	cy
Porous Stone Backfill For Storage:	3365	cy stone
Backfill to Grade Excluding Stone:	1	cy fill

***Construction quantities are approximate and should be verified upon final design*

System Layout

Barrel 12
Barrel 11
Barrel 10
Barrel 9
Barrel 8
Barrel 7
Barrel 6
Barrel 5
Barrel 4
Barrel 3
Barrel 2
Barrel 1

Number Of Barrels Exceed Graph Limitations

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

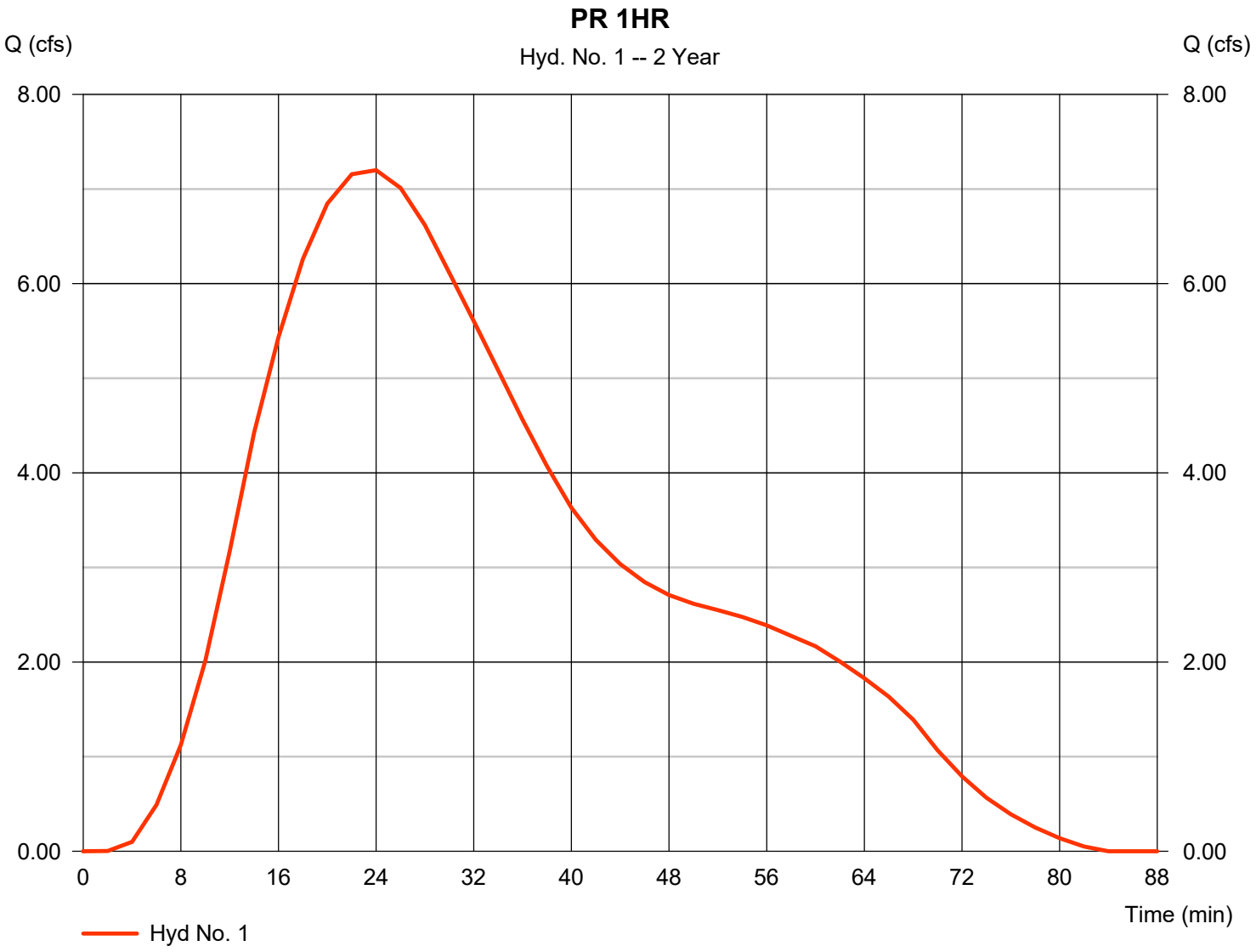
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	7.199	2	24	14,807	------	------	------	PR 1HR
2	SCS Runoff	5.876	2	30	20,045	------	------	------	PR 2HR
3	SCS Runoff	4.767	2	32	23,230	------	------	------	PR 3HR
4	SCS Runoff	3.671	2	42	29,403	------	------	------	PR 6HR
5	SCS Runoff	2.460	2	290	38,238	------	------	------	PR 12HR
6	SCS Runoff	1.625	2	936	43,366	------	------	------	PR 24HR
7	Reservoir	0.013	2	84	3,609	1	759.08	14,773	Detention 1HR
8	Reservoir	0.026	2	142	6,072	2	759.11	19,935	Detention 2HR
9	Reservoir	0.034	2	202	7,854	3	759.12	23,020	Detention 3HR
10	Reservoir	0.053	2	380	11,476	4	759.15	28,770	Detention 6HR
11	Reservoir	0.085	2	736	16,829	5	759.20	36,638	Detention 12HR
12	Reservoir	0.104	2	1454	19,112	6	759.22	40,534	Detention 24HR

Hydrograph Report

Hyd. No. 1

PR 1HR

Hydrograph type	= SCS Runoff	Peak discharge	= 7.199 cfs
Storm frequency	= 2 yrs	Time to peak	= 24 min
Time interval	= 2 min	Hyd. volume	= 14,807 cuft
Drainage area	= 6.410 ac	Curve number	= 93
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 13.60 min
Total precip.	= 1.25 in	Distribution	= Huff-1st
Storm duration	= 1.00 hrs	Shape factor	= 484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

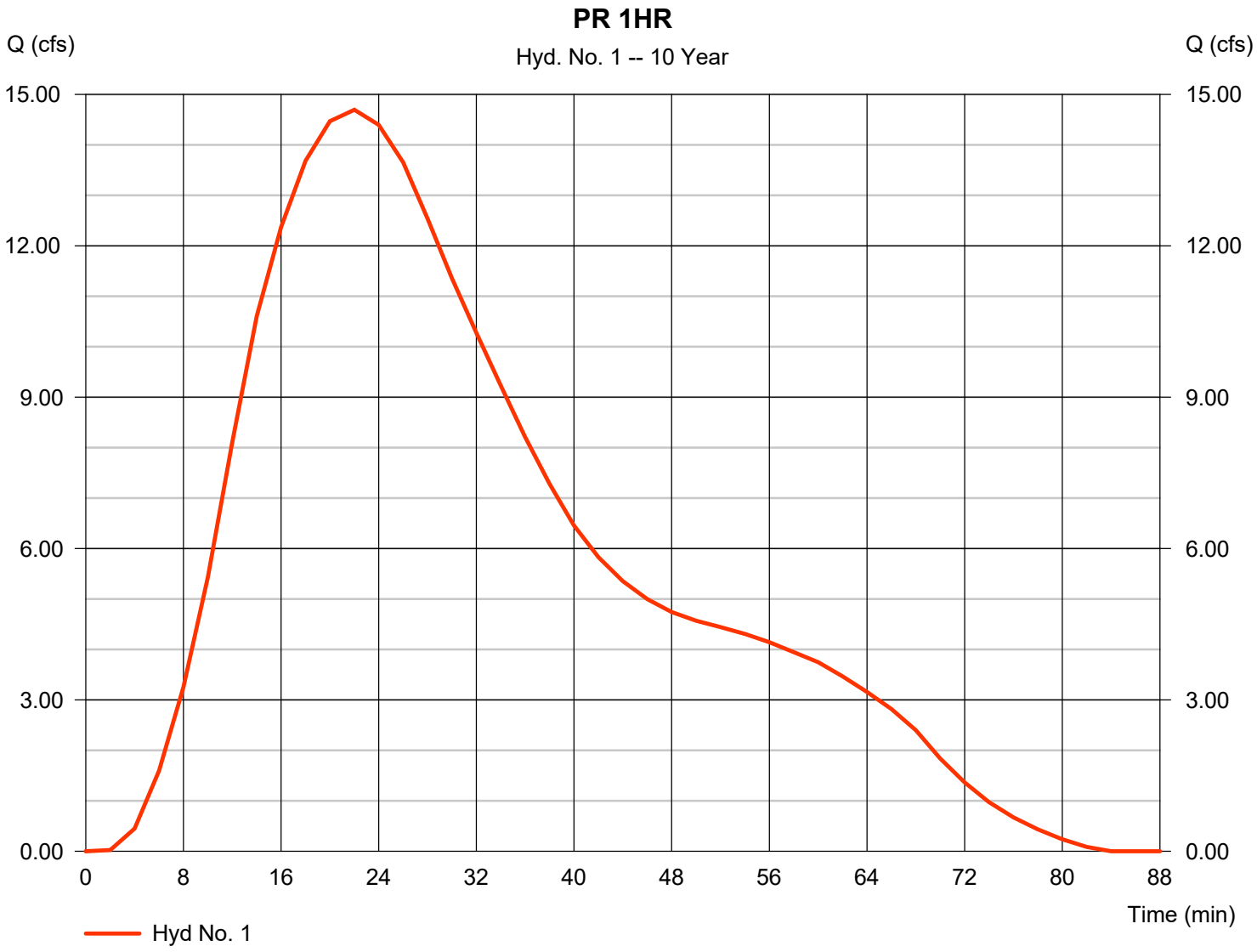
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	14.70	2	22	28,991	------	------	------	PR 1HR
2	SCS Runoff	11.90	2	26	38,238	------	------	------	PR 2HR
3	SCS Runoff	9.947	2	28	43,326	------	------	------	PR 3HR
4	SCS Runoff	7.565	2	40	53,737	------	------	------	PR 6HR
5	SCS Runoff	4.053	2	288	64,239	------	------	------	PR 12HR
6	SCS Runoff	2.647	2	936	74,815	------	------	------	PR 24HR
7	Reservoir	0.053	2	82	11,400	1	759.16	28,854	Detention 1HR
8	Reservoir	0.091	2	142	17,475	2	759.20	37,830	Detention 2HR
9	Reservoir	0.113	2	200	21,049	3	759.23	42,590	Detention 3HR
10	Reservoir	0.162	2	378	28,636	4	759.28	51,672	Detention 6HR
11	Reservoir	0.214	2	734	36,131	5	759.32	59,958	Detention 12HR
12	Reservoir	0.256	2	1452	42,447	6	759.36	67,057	Detention 24HR

Hydrograph Report

Hyd. No. 1

PR 1HR

Hydrograph type	= SCS Runoff	Peak discharge	= 14.70 cfs
Storm frequency	= 10 yrs	Time to peak	= 22 min
Time interval	= 2 min	Hyd. volume	= 28,991 cuft
Drainage area	= 6.410 ac	Curve number	= 93
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 13.60 min
Total precip.	= 1.96 in	Distribution	= Huff-1st
Storm duration	= 1.00 hrs	Shape factor	= 484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

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	25.19	2	20	48,537	------	------	------	PR 1HR
2	SCS Runoff	20.24	2	24	62,045	------	------	------	PR 2HR
3	SCS Runoff	17.49	2	26	70,180	------	------	------	PR 3HR
4	SCS Runoff	12.54	2	38	84,115	------	------	------	PR 6HR
5	SCS Runoff	6.105	2	288	98,802	------	------	------	PR 12HR
6	SCS Runoff	3.990	2	936	117,575	------	------	------	PR 24HR
7	Reservoir	0.143	2	82	25,011	1	759.26	48,161	Detention 1HR
8	Reservoir	0.220	2	140	35,428	2	759.33	61,013	Detention 2HR
9	Reservoir	0.265	2	200	41,913	3	759.37	68,358	Detention 3HR
10	Reservoir	0.408	2	376	53,331	4	759.42	79,279	Detention 6HR
11	Reservoir	0.602	2	730	65,496	5	759.46	87,676	Detention 12HR
12	Reservoir	0.745	2	1446	80,019	6	759.49	94,539	Detention 24HR

Hydrograph Report

Hyd. No. 1

PR 1HR

Hydrograph type	= SCS Runoff	Peak discharge	= 25.19 cfs
Storm frequency	= 100 yrs	Time to peak	= 20 min
Time interval	= 2 min	Hyd. volume	= 48,537 cuft
Drainage area	= 6.410 ac	Curve number	= 93
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 13.60 min
Total precip.	= 2.88 in	Distribution	= Huff-1st
Storm duration	= 1.00 hrs	Shape factor	= 484