Preliminary Stormwater Report for Catalyst High School Expansion at Map Tax Lot R3217 02500 1421 DEBORAH RD Newberg, Oregon

Emerio Project Number:	0921-001
City of Newberg Application No.:	TBD
Date:	10/15/2021

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Project Overview and Description:

The scope of the project includes a much-needed approximately 18,900 square foot building addition to the Catalyst campus, along with updated parking lot / bus drop off, covered entrance and plaza, and safety / security upgrades. The new addition will allow for Newberg Public Schools to provide additional program opportunities for students, staff and community members alike. The project is located in the SE Corner of the property which also includes Newberg High School, Mountain View Middle School, and Mabel Rush Elementary School at 1421 Deborah Rd (See Vicinity Map in Appendix A)

Soil Classification:

The NRCS soil survey of Yamhill County, Oregon classifies the onsite soils as Aloha silt loam, 0 to 3 percent slopes. The associated hydrologic soil groups of these soils are C/D. Hydraulic soil group (HSG) C was used to design the onsite proposed storm facilities. Curve numbers of 74 and 86 were used for pre and post-developed pervious surfaces. A curve number of 98 was set for impervious surfaces, reference appendices B(1) and B(2).

Basin Delineation:

The newly developed area being treated includes the building expansion, fire lane extension on the south side of the property, sidewalks on the north side of Catalyst High School, and a portion of the parking lot.

Due to grading constraints, proxy treatment is proposed to meet stormwater requirements for a portion of the newly developed area. Approximately 3,608 SF of existing impervious surface from the parking lot will be proxy treated, and 1,929 SF of parking area will be converted into landscape planters. The proposed development will not be treating 1,428 SF of new impervious area, resulting in an excess of 4,109 SF of existing impervious surfacing being treated and detained.

See Appendix C(1) for a tabulated basin areas and Appendix D for all basin maps.

Treatment Facility determination:

Due to spacial limitations, safety concerns, lack of fall to connect to the existing stormwater main, and costs, LIDA Planters were not used to treat stormwater runoff for the new addition to Catalyst High School.

The new development would include approximately 40,000 square feet of new impervious area. Sizing planters at 6% of new impervious surfacing, this would require 2,400 Square feet of stormwater planter. The only area available to provide this much planter area would be in the island at the bus turnaround in the parking lot, which is 2-feet above the Finish Floor elevation of the high school expansion. In order to pipe water from the SW Corner of the expansion into a flow through planter, the invert of the pipe outfall into the planter would be set at elevation 226.5, thus creating a greater than 6-foot hole from the parking lot to the top of planter soil.

If the top of soil is 226.5, using the minimum growing medium of 18-inches, and 12-inches of drainrock, the outfall pipe invert would be set at 224.0, which when piped to the storm main in Deborah road, would require a slope of under 1.0%.

Along with the 7-foot hole in the ground safety issue, and lack of fall, the costs to build this planter with concrete retaining walls makes this option undesirable.

Therefore, water treatment was determined to be performed using mechanical means

Water Quality:

Nine Low Drop StormFilter cartridges will provide water quality treatment for the new and proxy treated impervious areas. This was determined by calculating the relevant onsite water quality flows and comparing the flows to the design cartridge flow rates per Contech standard details. These calculations are shown in Appendix C(2). Contech Stormwater Management Stormfilter 8'x11' Peak Diversion Stormfilter (detail no. SFMH48) will be used to house these filters. Impervious areas were modeled in HydroCAD to produce the water quality flow. See Appendix C

Quantity Control/Detention:

Detention will be provided for the half of the 2, 2, 10, and 25-year 24-hour design storms. Flows are detained via Stormtech Detention facilities (3-Rows X 14-Chambers) located in the redeveloped parking lot to the north of the Catalyst HS Expansion.

All developed flows and upstream flows routed to the detention facility are considered in detention calculations. As some developed flows will go undetained, onsite and upstream areas that route to the pond will be overdetained to match pre-developed and post-developed peak flows for the whole development. Flow is controlled for the half of the 2, 2, 10, and 25-year flows via two orifices with information shown below:

Orifice #1: 2.0" diameter, elevation 221.85'
Orifice #2: 2.4" diameter, elevation 226.25'

Both orifices are set in an outflow control structure per City of Newberg standard drawings 416A and 418.

Storm Event	Pre-Developed and Detained Post-Developed Flows	
	Pre-Dev.	Post-Dev. w/ Detention
1/2 of 2 Year	0.07	0.07
2-Year	0.14	0.14
10-Year	0.31	0.25
25-Year	0.41	0.33

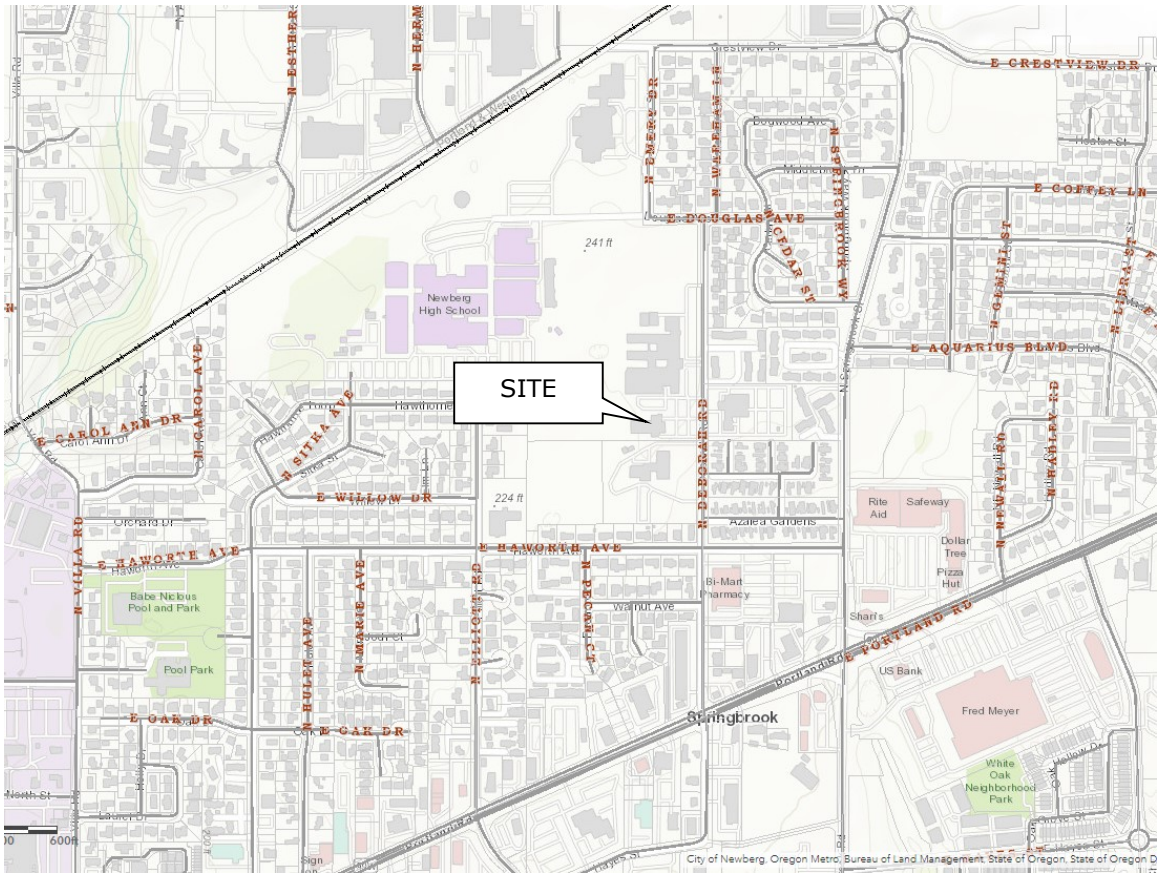
As shown in the tables above, the detention requirement is met by limiting the peak discharge of each of the return periods from the pre to post-developed conditions. With the 25-year design water elevation at 227.06' and the upper drainrock section, at 227.35, the peak 25-year water surface elevation remains below the top of the detention facilities. See Appendix C(2) for pre and post-developed HydroCAD detention plots.

Conclusion:

The design of the proposed site satisfies the water quality and water quantity standards set by the 2015 Newberg Public Works Design and Construction Standards.

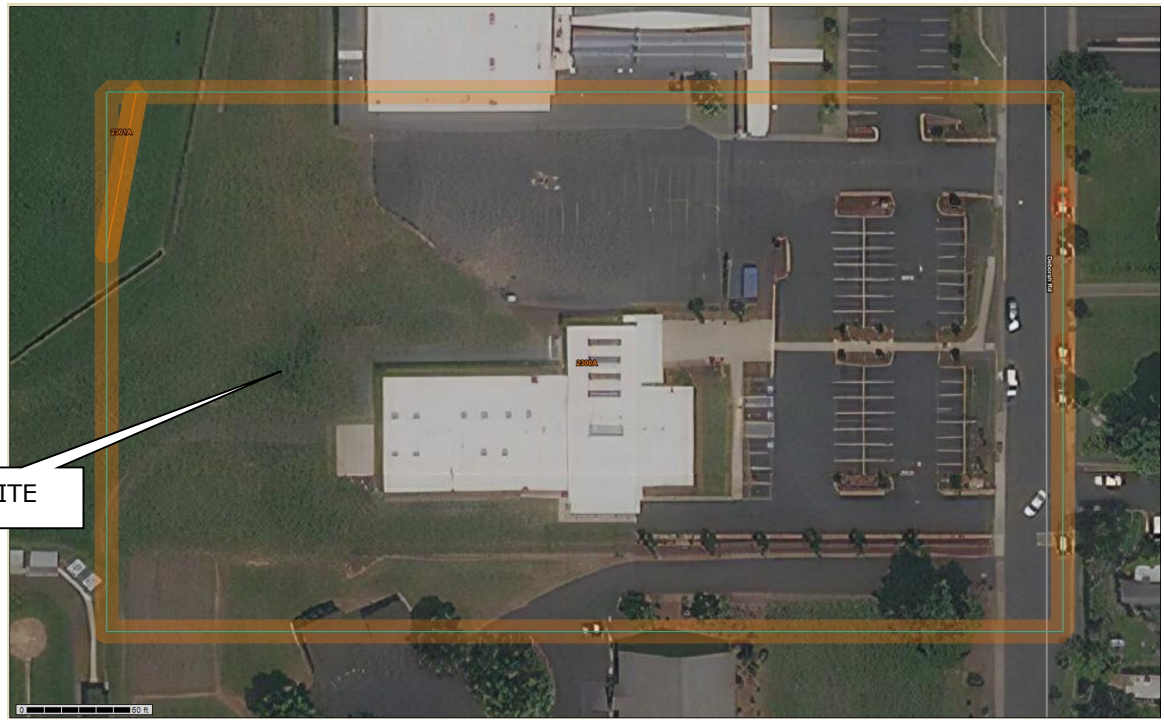
Appendix A:

Appendix A(1)
Vicinity Map



Appendix B:

Appendix B(1)
Soil Classification Map



Tables — Hydrologic Soil Group — Summary By Map Unit

Summary by Map Unit — Yamhill County, Oregon (OR071)

Summary by Map Unit — Yamhill County, Oregon (OR071)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
2300A	Aloha silt loam, 0 to 3 percent slopes	C/D	4.0	99.5%
2301A	Amity silt loam, 0 to 3 percent slopes	C/D	0.0	0.5%
Totals for Area of Interest			**4.0**	**100.0%**

RUNOFF CURVE NUMBERS (TR55)

Table 2-2a: Runoff curve numbers for urban areas [1]

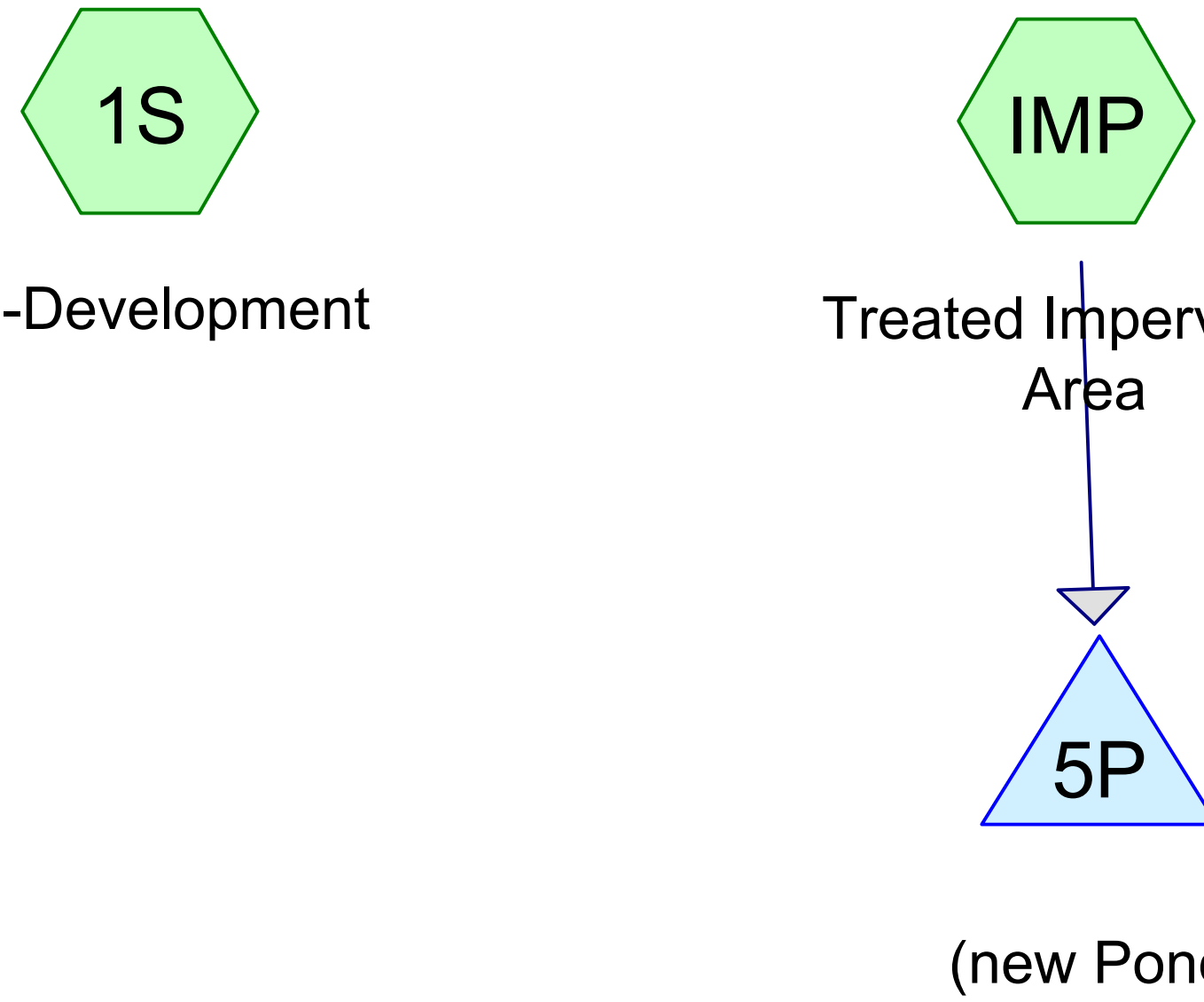
Cover description		CN for hydrologic soil group			
Cover type and hydrologic condition	Average percent impervious area[2]	A	B	C	D
Fully developed urban areas (vegetation established)					
Open space (lawns, parks, golf courses, cemeteries, etc.) [3]:					
Poor condition (grass cover <50%)				86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover >75%)				74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)				98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) [4]		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82

Use CN = 86 for Post-Developed Pervious Areas

Use CN = 74 for Onsite Pre-Developed Pervious Areas

Use CN = 98 for Impervious Areas

Appendix C:



Subcat Reach Pond Link

Routing Diagram for 0921-001 HydroCAD

Prepared by {enter your company name here}, Printed 10/14/2021

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.962	98	Impervious (1S, IMP)
0.925	74	Pervious (1S)
0.167	86	pervious (IMP)
2.054	**86**	**TOTAL AREA**

Summary for Subcatchment 1S: Pre-Development

Runoff = 0.14 cfs @ 8.05 hrs, Volume= 0.066 af, Depth= 0.77"

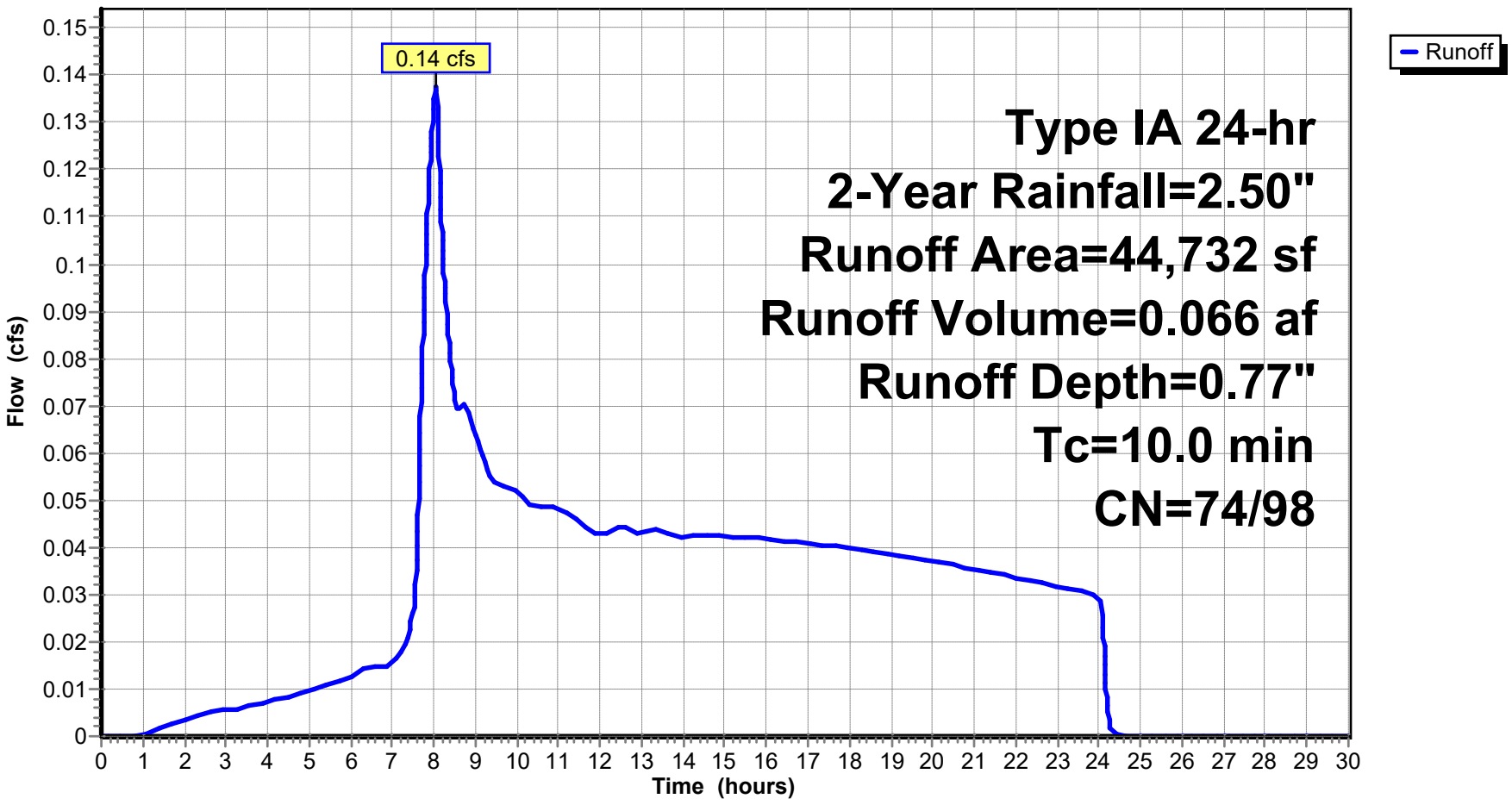
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2-Year Rainfall=2.50"

	Area (sf)	CN	Description
*	40,283	74	Pervious
*	4,449	98	Impervious
	44,732	76	Weighted Average
	40,283	74	90.05% Pervious Area
	4,449	98	9.95% Impervious Area

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

Subcatchment 1S: Pre-Development

Hydrograph



Summary for Subcatchment IMP: Treated Impervious Area

Runoff = 0.55 cfs @ 7.87 hrs, Volume= 0.180 af, Depth= 2.10"

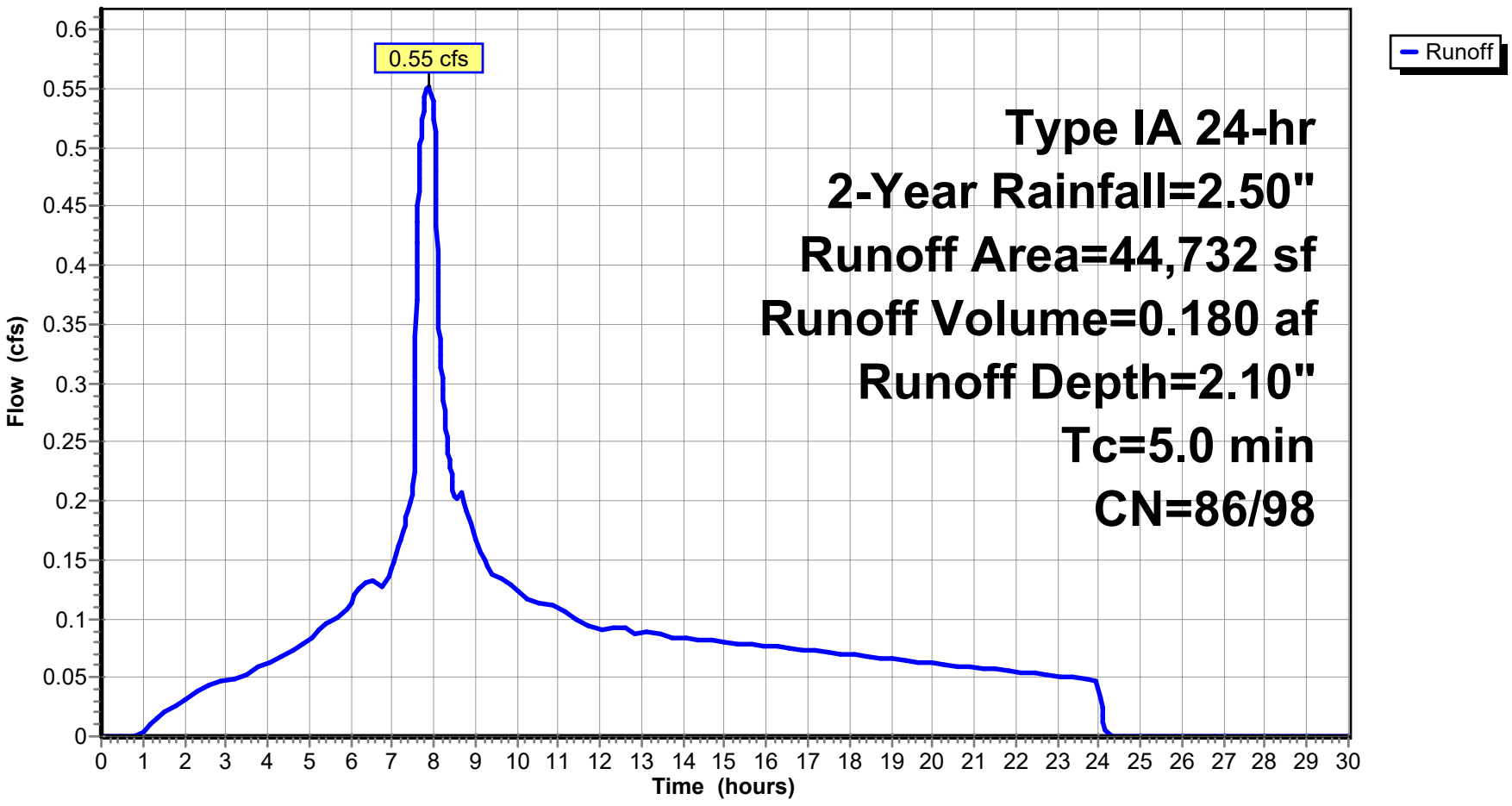
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2-Year Rainfall=2.50"

	Area (sf)	CN	Description
*	37,439	98	Impervious
*	7,293	86	pervious
	44,732	96	Weighted Average
	7,293	86	16.30% Pervious Area
	37,439	98	83.70% Impervious Area

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

Subcatchment IMP: Treated Impervious Area

Hydrograph



Summary for Pond 5P: (new Pond)

Inflow Area = 1.027 ac, 83.70% Impervious, Inflow Depth = 2.10" for 2-Year event
Inflow = 0.55 cfs @ 7.87 hrs, Volume= 0.180 af
Outflow = 0.14 cfs @ 9.36 hrs, Volume= 0.180 af, Atten= 75%, Lag= 89.4 min
Primary = 0.14 cfs @ 9.36 hrs, Volume= 0.180 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 225.51' @ 9.36 hrs Surf.Area= 0.037 ac Storage= 0.039 af

Plug-Flow detention time= 130.5 min calculated for 0.180 af (100% of inflow)
Center-of-Mass det. time= 130.4 min (814.7 - 684.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	223.85'	0.029 af	**15.75'W x 103.30'L x 3.50'H Field A** 0.131 af Overall - 0.044 af Embedded = 0.086 af x 33.0% Voids
#2A	224.35'	0.044 af	**ADS_StormTech SC-740 +Cap** x 42 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 42 Chambers in 3 Rows
		0.073 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	223.85'	**6.0" Round Culvert** L= 10.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 223.85' / 223.35' S= 0.0500 '/' Cc= 0.900 n= 0.013, Flow Area= 0.20 sf
#2	Device 1	221.85'	**2.0" Vert. Orifice/Grate** C= 0.620
#3	Device 1	226.25'	**2.4" Horiz. Orifice/Grate** C= 0.620 Limited to weir flow at low heads

Primary OutFlow Max=0.14 cfs @ 9.36 hrs HW=225.51' (Free Discharge)
└**1=Culvert** (Passes 0.14 cfs of 0.89 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.14 cfs @ 6.42 fps)
  └**3=Orifice/Grate** (Controls 0.00 cfs)

Pond 5P: (new Pond) - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

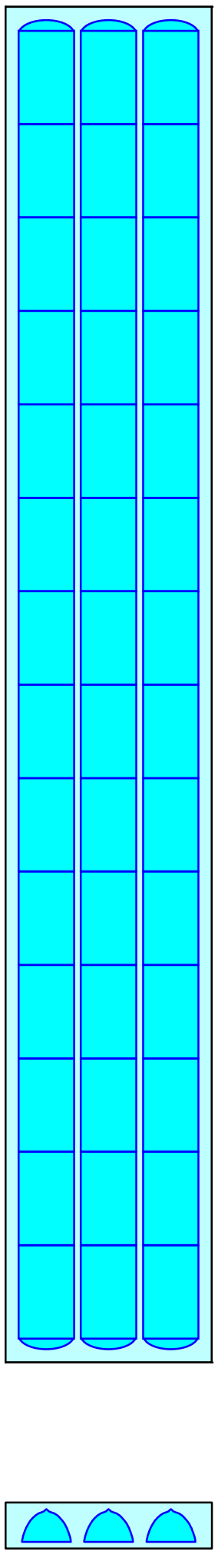
14 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 101.30' Row Length +12.0" End Stone x 2 = 103.30' Base Length
3 Rows x 51.0" Wide + 6.0" Spacing x 2 + 12.0" Side Stone x 2 = 15.75' Base Width
6.0" Base + 30.0" Chamber Height + 6.0" Cover = 3.50' Field Height

42 Chambers x 45.9 cf = 1,929.5 cf Chamber Storage

5,694.2 cf Field - 1,929.5 cf Chambers = 3,764.7 cf Stone x 33.0% Voids = 1,242.4 cf Stone Storage

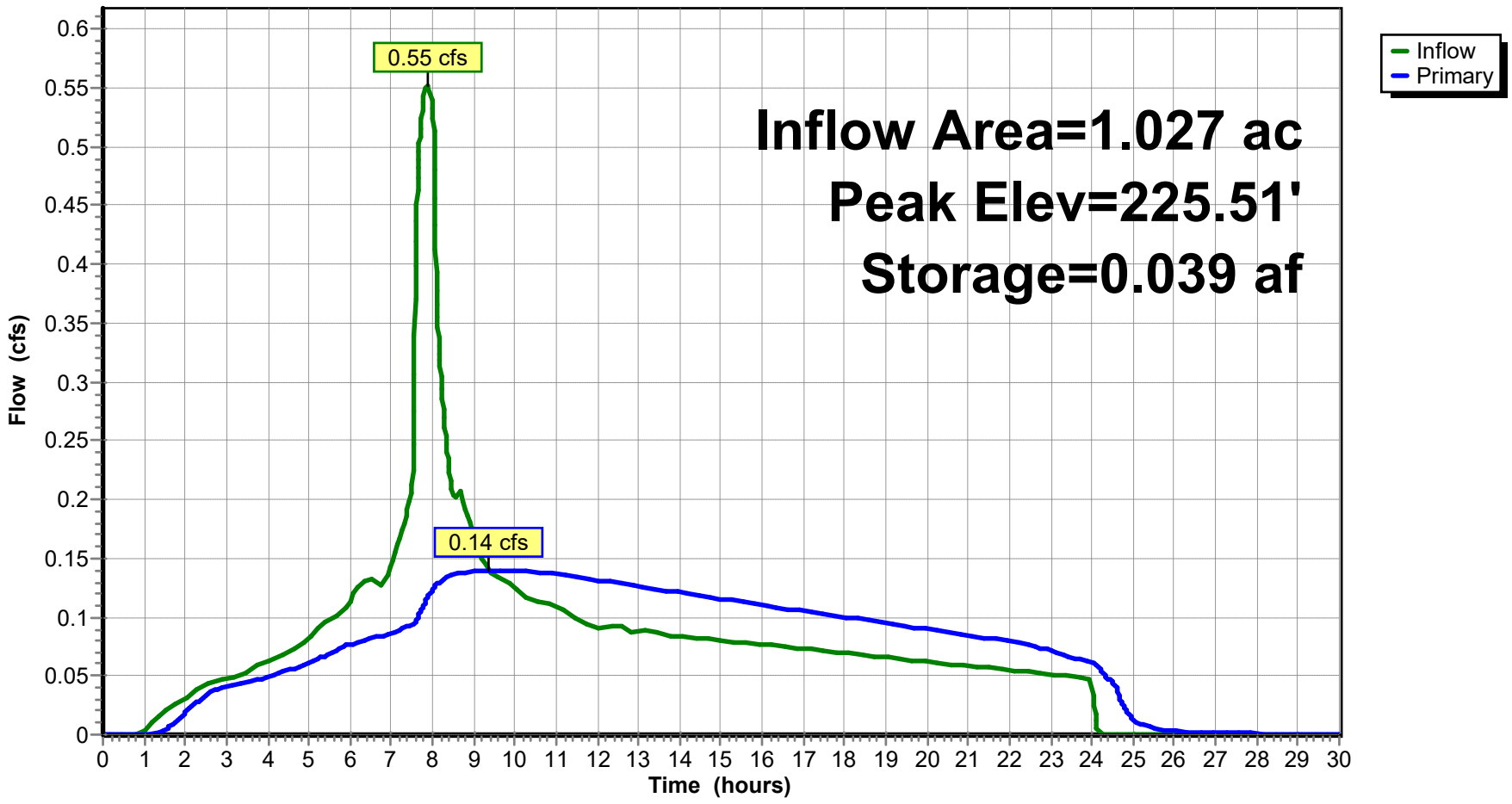
Chamber Storage + Stone Storage = 3,171.8 cf = 0.073 af
Overall Storage Efficiency = 55.7%
Overall System Size = 103.30' x 15.75' x 3.50'

42 Chambers
210.9 cy Field
139.4 cy Stone



Pond 5P: (new Pond)

Hydrograph



Summary for Subcatchment 1S: Pre-Development

Runoff = 0.31 cfs @ 8.03 hrs, Volume= 0.123 af, Depth= 1.44"

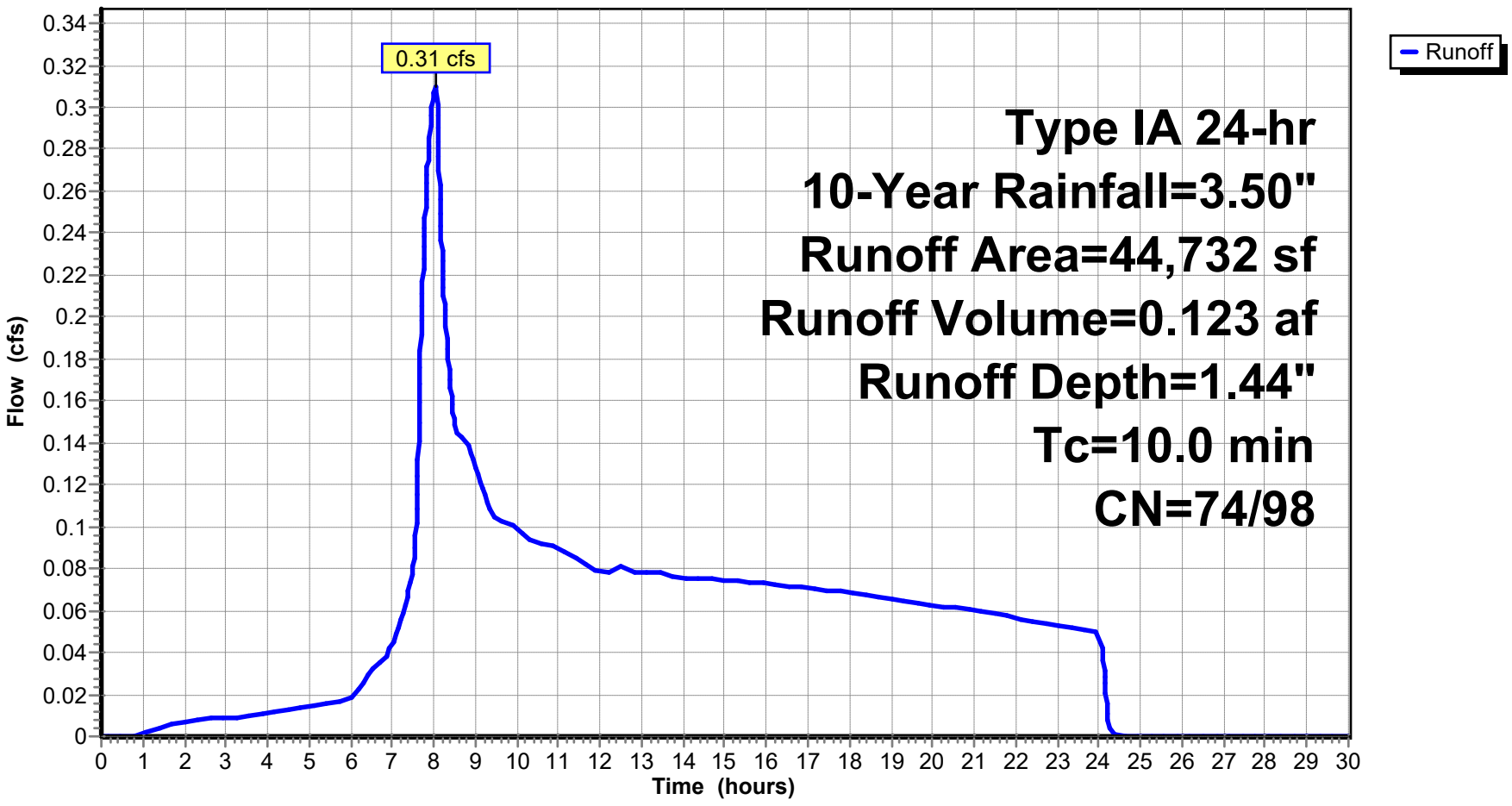
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10-Year Rainfall=3.50"

	Area (sf)	CN	Description
*	40,283	74	Pervious
*	4,449	98	Impervious
	44,732	76	Weighted Average
	40,283	74	90.05% Pervious Area
	4,449	98	9.95% Impervious Area

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

Subcatchment 1S: Pre-Development

Hydrograph



Summary for Subcatchment IMP: Treated Impervious Area

Runoff = 0.80 cfs @ 7.87 hrs, Volume= 0.263 af, Depth= 3.08"

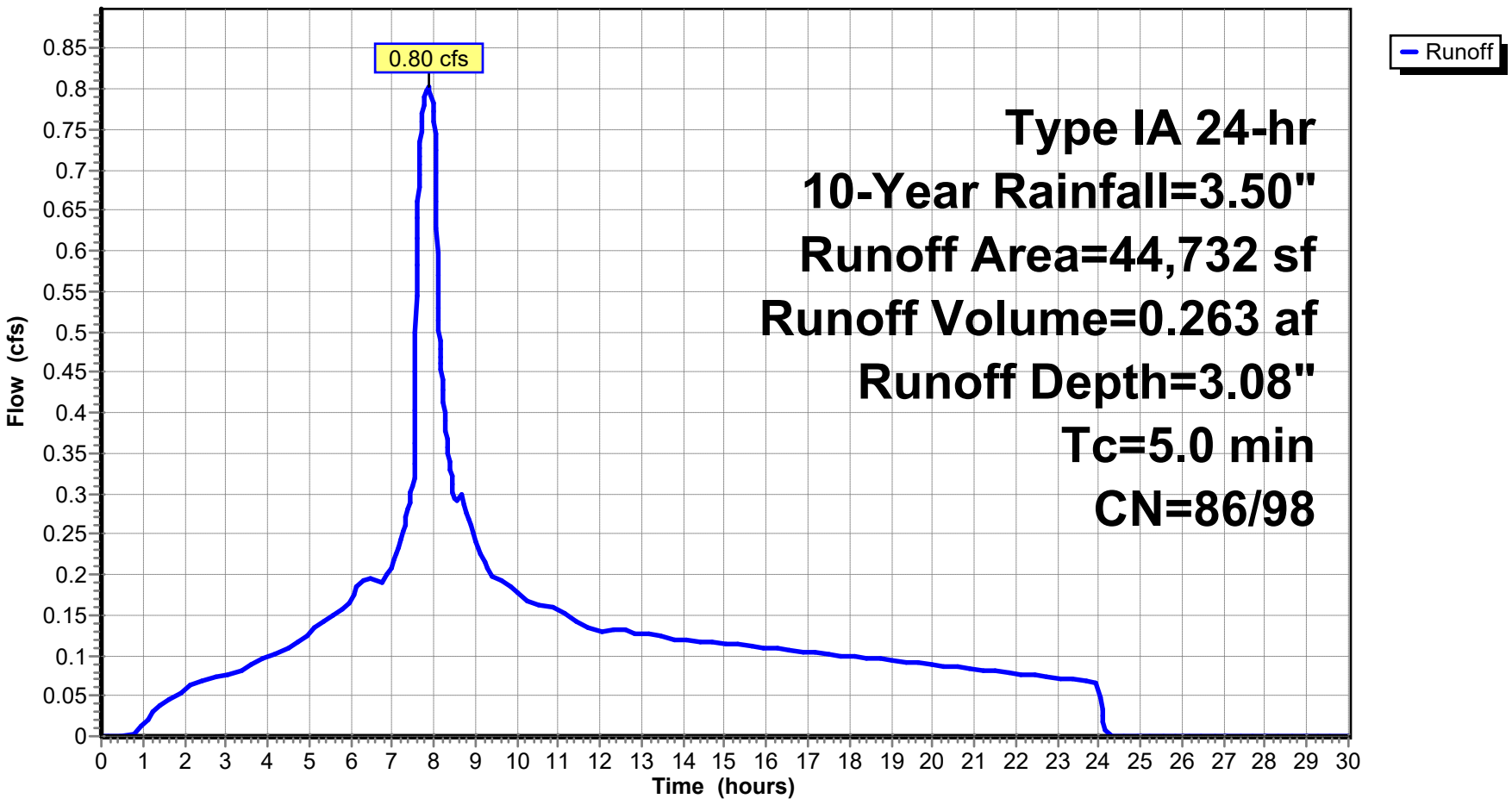
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10-Year Rainfall=3.50"

	Area (sf)	CN	Description
*	37,439	98	Impervious
*	7,293	86	pervious
	44,732	96	Weighted Average
	7,293	86	16.30% Pervious Area
	37,439	98	83.70% Impervious Area

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

Subcatchment IMP: Treated Impervious Area

Hydrograph



Summary for Pond 5P: (new Pond)

Inflow Area = 1.027 ac, 83.70% Impervious, Inflow Depth = 3.08" for 10-Year event
Inflow = 0.80 cfs @ 7.87 hrs, Volume= 0.263 af
Outflow = 0.25 cfs @ 8.95 hrs, Volume= 0.263 af, Atten= 69%, Lag= 65.1 min
Primary = 0.25 cfs @ 8.95 hrs, Volume= 0.263 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 226.49' @ 8.95 hrs Surf.Area= 0.037 ac Storage= 0.061 af

Plug-Flow detention time= 174.6 min calculated for 0.263 af (100% of inflow)
Center-of-Mass det. time= 174.3 min (848.4 - 674.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	223.85'	0.029 af	**15.75'W x 103.30'L x 3.50'H Field A** 0.131 af Overall - 0.044 af Embedded = 0.086 af x 33.0% Voids
#2A	224.35'	0.044 af	**ADS_StormTech SC-740 +Cap** x 42 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 42 Chambers in 3 Rows
		0.073 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	223.85'	**6.0" Round Culvert** L= 10.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 223.85' / 223.35' S= 0.0500 '/' Cc= 0.900 n= 0.013, Flow Area= 0.20 sf
#2	Device 1	221.85'	**2.0" Vert. Orifice/Grate** C= 0.620
#3	Device 1	226.25'	**2.4" Horiz. Orifice/Grate** C= 0.620 Limited to weir flow at low heads

Primary OutFlow Max=0.25 cfs @ 8.95 hrs HW=226.49' (Free Discharge)
└**1=Culvert** (Passes 0.25 cfs of 1.15 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.18 cfs @ 8.08 fps)
  └**3=Orifice/Grate** (Orifice Controls 0.08 cfs @ 2.44 fps)

Pond 5P: (new Pond) - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

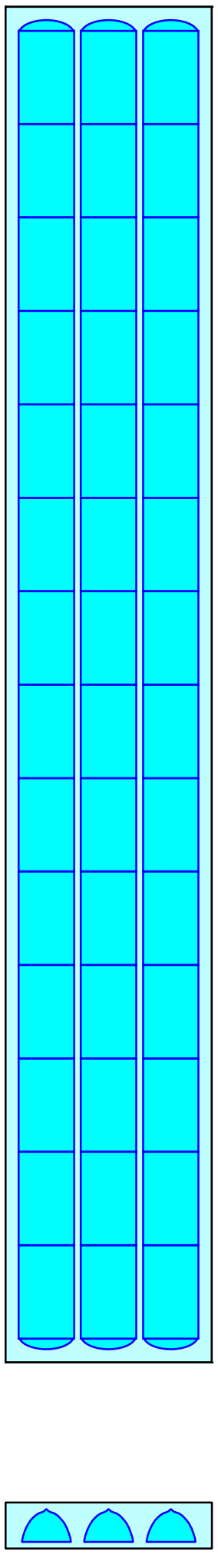
14 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 101.30' Row Length +12.0" End Stone x 2 = 103.30' Base Length
3 Rows x 51.0" Wide + 6.0" Spacing x 2 + 12.0" Side Stone x 2 = 15.75' Base Width
6.0" Base + 30.0" Chamber Height + 6.0" Cover = 3.50' Field Height

42 Chambers x 45.9 cf = 1,929.5 cf Chamber Storage

5,694.2 cf Field - 1,929.5 cf Chambers = 3,764.7 cf Stone x 33.0% Voids = 1,242.4 cf Stone Storage

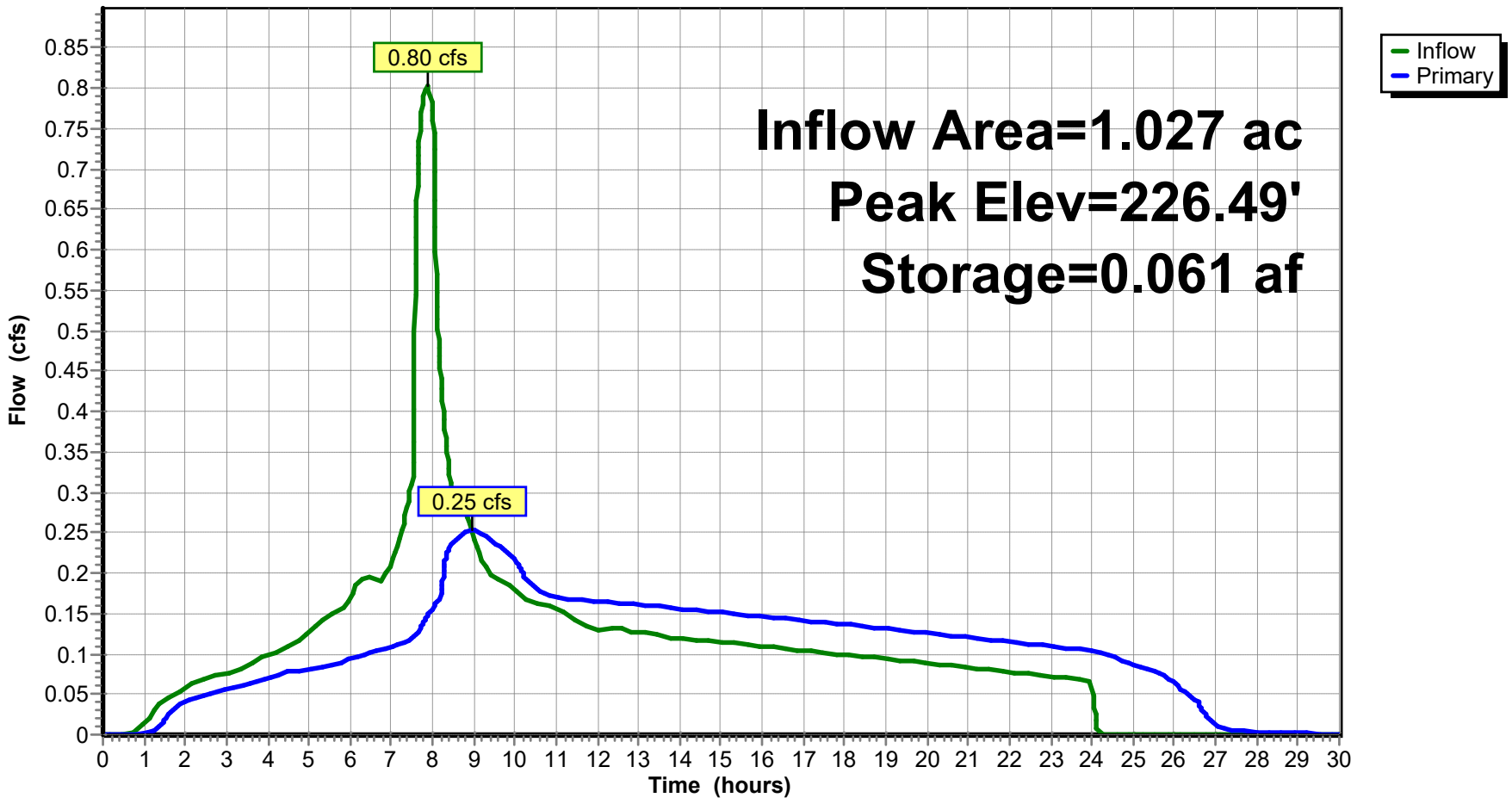
Chamber Storage + Stone Storage = 3,171.8 cf = 0.073 af
Overall Storage Efficiency = 55.7%
Overall System Size = 103.30' x 15.75' x 3.50'

42 Chambers
210.9 cy Field
139.4 cy Stone



Pond 5P: (new Pond)

Hydrograph



Summary for Subcatchment 1S: Pre-Development

Runoff = 0.41 cfs @ 8.03 hrs, Volume= 0.155 af, Depth= 1.81"

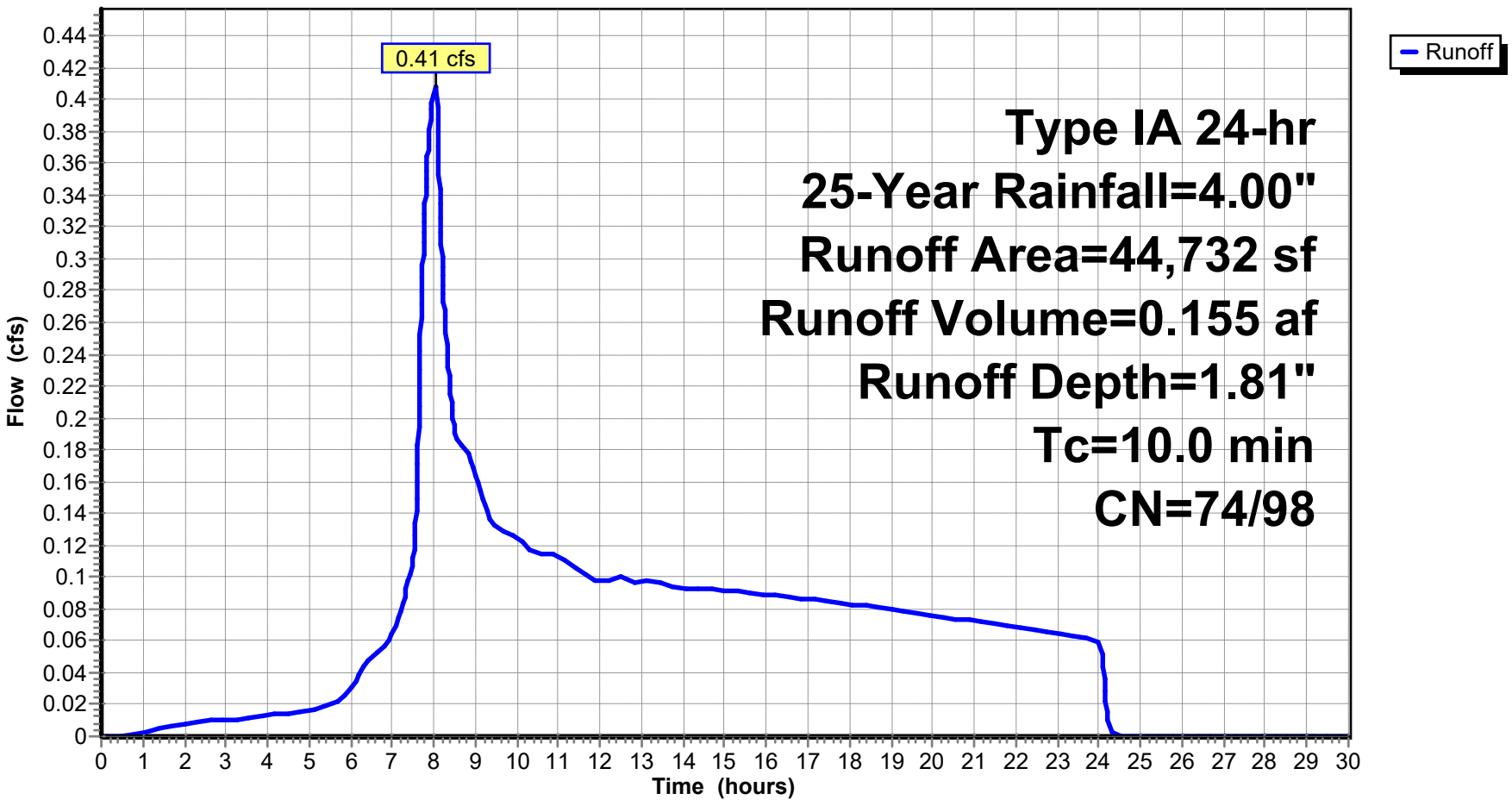
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type IA 24-hr 25-Year Rainfall=4.00"

	Area (sf)	CN	Description
*	40,283	74	Pervious
*	4,449	98	Impervious
	44,732	76	Weighted Average
	40,283	74	90.05% Pervious Area
	4,449	98	9.95% Impervious Area

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

Subcatchment 1S: Pre-Development

Hydrograph



Summary for Subcatchment IMP: Treated Impervious Area

Runoff = 0.93 cfs @ 7.86 hrs, Volume= 0.305 af, Depth= 3.57"

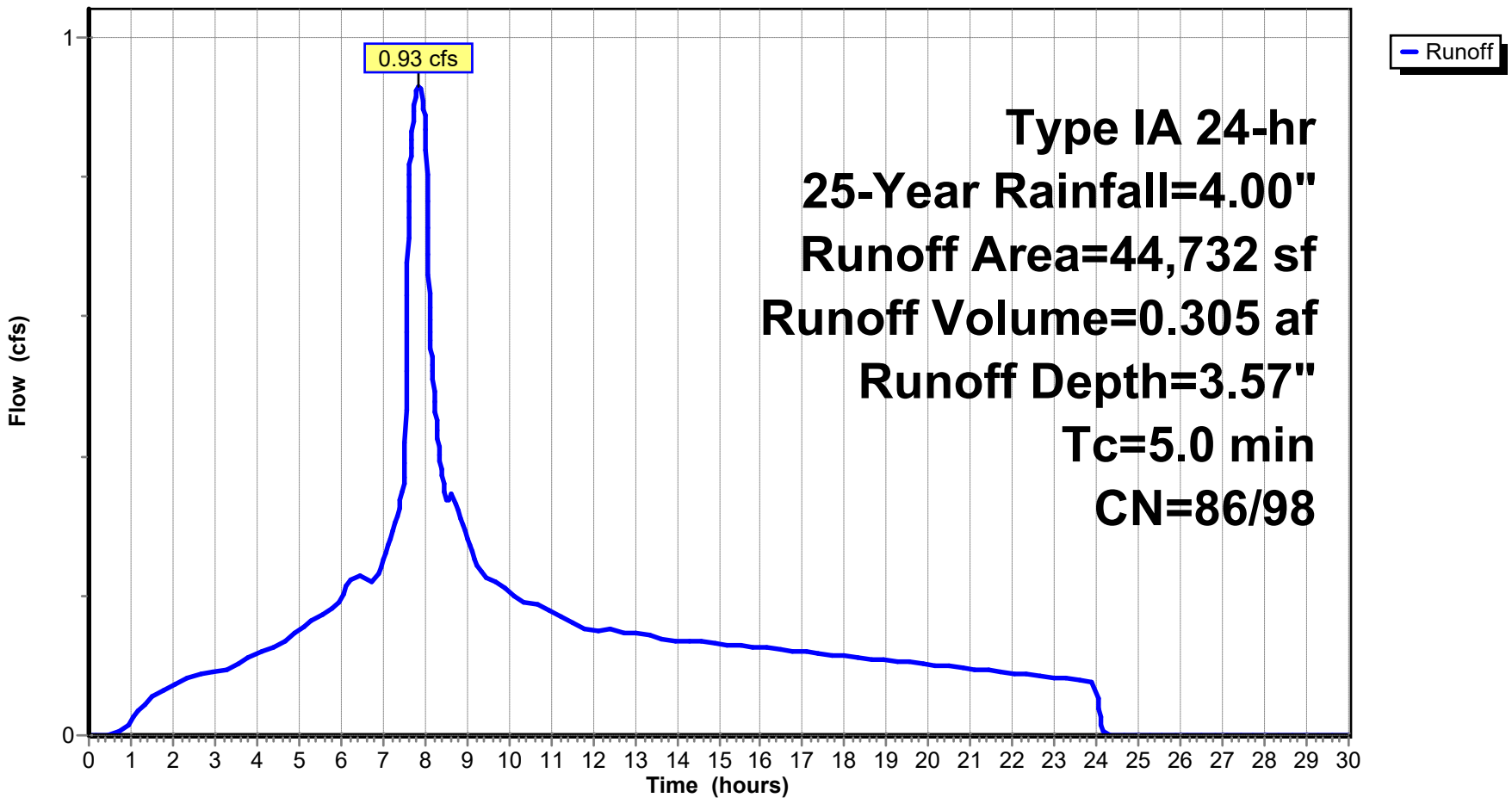
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type IA 24-hr 25-Year Rainfall=4.00"

	Area (sf)	CN	Description
*	37,439	98	Impervious
*	7,293	86	pervious
	44,732	96	Weighted Average
	7,293	86	16.30% Pervious Area
	37,439	98	83.70% Impervious Area

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

Subcatchment IMP: Treated Impervious Area

Hydrograph



Summary for Pond 5P: (new Pond)

Inflow Area = 1.027 ac, 83.70% Impervious, Inflow Depth = 3.57" for 25-Year event
Inflow = 0.93 cfs @ 7.86 hrs, Volume= 0.305 af
Outflow = 0.33 cfs @ 8.72 hrs, Volume= 0.305 af, Atten= 64%, Lag= 51.6 min
Primary = 0.33 cfs @ 8.72 hrs, Volume= 0.305 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 227.06' @ 8.72 hrs Surf.Area= 0.037 ac Storage= 0.069 af

Plug-Flow detention time= 175.9 min calculated for 0.305 af (100% of inflow)
Center-of-Mass det. time= 175.4 min (845.9 - 670.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	223.85'	0.029 af	**15.75'W x 103.30'L x 3.50'H Field A** 0.131 af Overall - 0.044 af Embedded = 0.086 af x 33.0% Voids
#2A	224.35'	0.044 af	**ADS_StormTech SC-740 +Cap** x 42 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 42 Chambers in 3 Rows
		0.073 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	223.85'	**6.0" Round Culvert** L= 10.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 223.85' / 223.35' S= 0.0500 '/' Cc= 0.900 n= 0.013, Flow Area= 0.20 sf
#2	Device 1	221.85'	**2.0" Vert. Orifice/Grate** C= 0.620
#3	Device 1	226.25'	**2.4" Horiz. Orifice/Grate** C= 0.620 Limited to weir flow at low heads

Primary OutFlow Max=0.33 cfs @ 8.72 hrs HW=227.06' (Free Discharge)
└**1=Culvert** (Passes 0.33 cfs of 1.28 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.19 cfs @ 8.91 fps)
  └**3=Orifice/Grate** (Orifice Controls 0.14 cfs @ 4.47 fps)

Pond 5P: (new Pond) - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

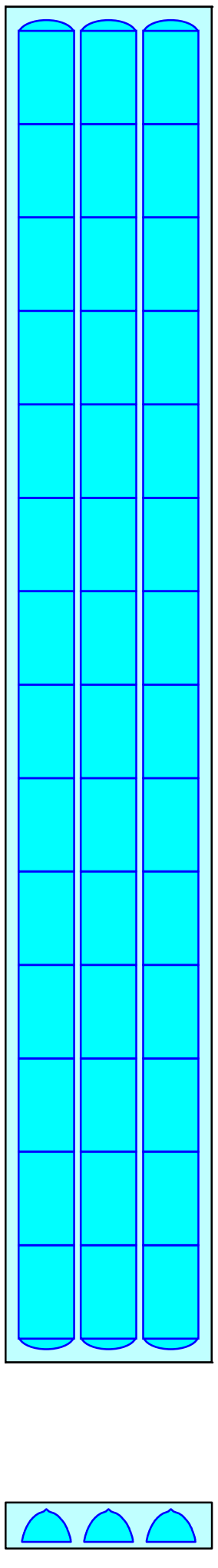
14 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 101.30' Row Length +12.0" End Stone x 2 = 103.30' Base Length
3 Rows x 51.0" Wide + 6.0" Spacing x 2 + 12.0" Side Stone x 2 = 15.75' Base Width
6.0" Base + 30.0" Chamber Height + 6.0" Cover = 3.50' Field Height

42 Chambers x 45.9 cf = 1,929.5 cf Chamber Storage

5,694.2 cf Field - 1,929.5 cf Chambers = 3,764.7 cf Stone x 33.0% Voids = 1,242.4 cf Stone Storage

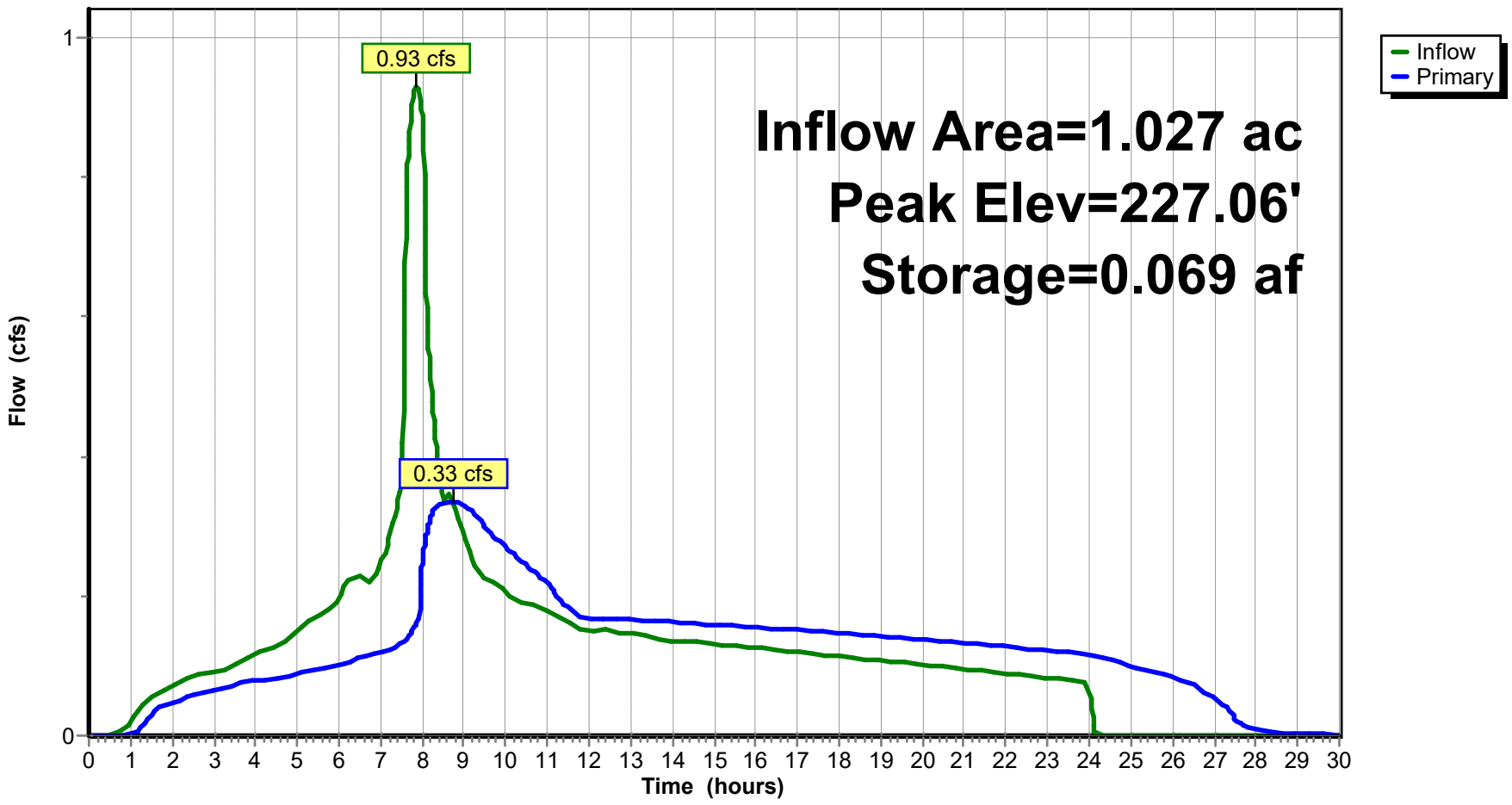
Chamber Storage + Stone Storage = 3,171.8 cf = 0.073 af
Overall Storage Efficiency = 55.7%
Overall System Size = 103.30' x 15.75' x 3.50'

42 Chambers
210.9 cy Field
139.4 cy Stone



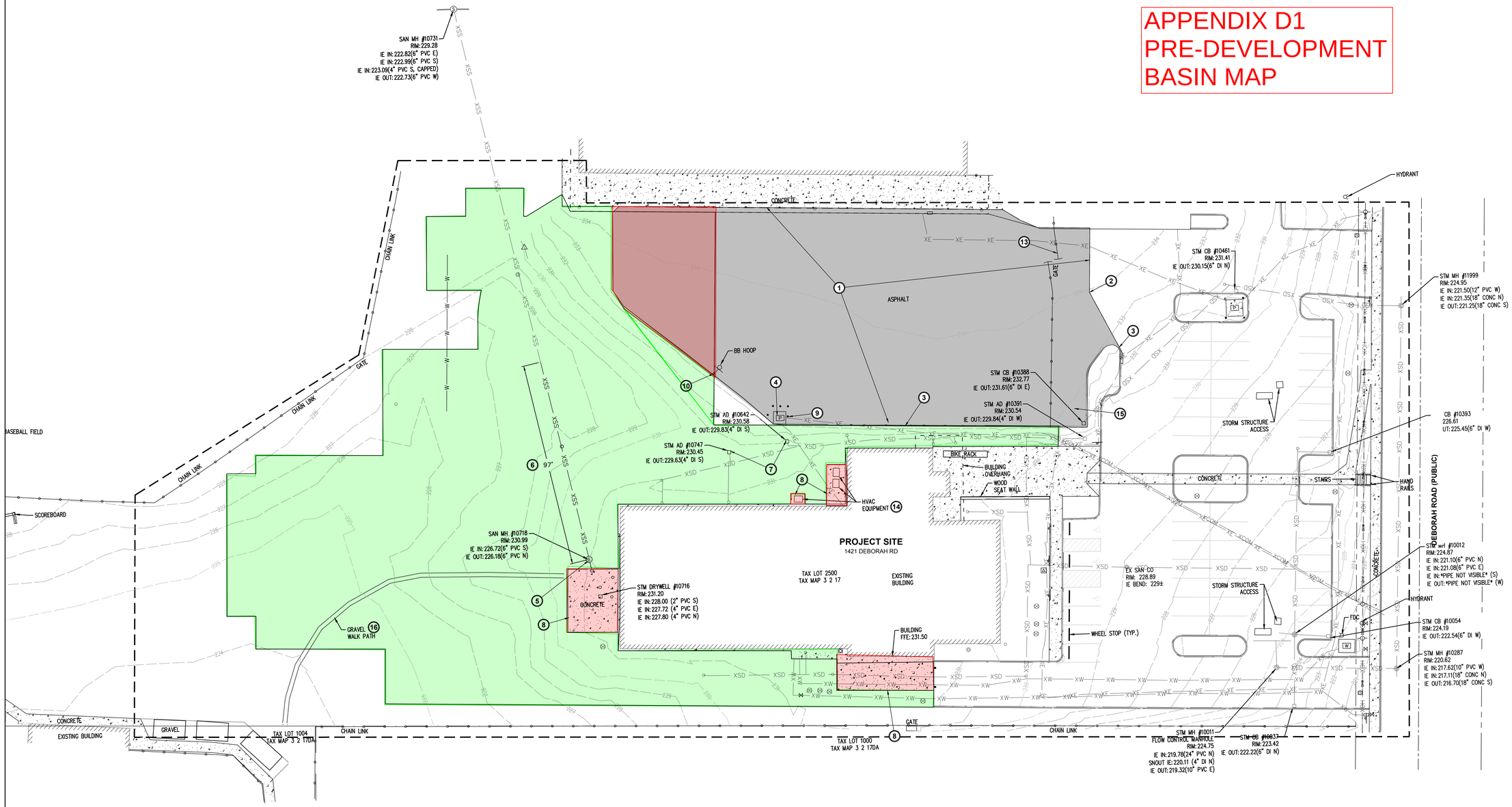
Pond 5P: (new Pond)

Hydrograph



Appendix D:

APPENDIX D1
PRE-DEVELOPMENT
BASIN MAP



PRE-DEVELOPED PERVIOUS AREA

PRE-DEVELOPED IMPERVIOUS AREA

CONSTRUCTION NOTES:

1. EXISTING ASPHALT PARKING LOT TO BE DEMOLISHED.
2. SAWCUT EXISTING ASPHALT
3. EXISTING CURB TO BE DEMOLISHED
4. EXISTING TRANSFORMER TO BE REMOVED AND REPLACED IN A NEW LOCATOIN
5. EXISTING SANITARY MH TO BE DEMOLISHED AND REMOVED
6. EXISTING SANITARY SEWER TO BE DEMOLISHED
7. EXISTING INLET TO BE DEMOLISHED AND REMOVED
8. EXISTING CONCRETE PAD TO BE DEMOLISHED AND REMOVED
9. EXISTING BOLLARDS TO BE REMOVED (TYP – 5)
10. EXISTING BASKETBALL HOOP TO BE REMOVED AND STORED FOR FUTURE USE.
11. SANITARY CONNECTION TO TRASH ENCLOSURE. COORDINATE WITH PLUMBING CONTRACTOR FOR VENTING.
12. INSTALL JR SMITH 2315 FLOOR DRAIN WITH TRAP W/ 2" VENT AND 1/2" TRAP PRIMER AND CONNECT TO SANITARY SEWER LINE. SEE PLUMING PLANS FOR CONTINUATION.
13. EXISTING CHAINLINK FENCE AND GATE TO BE DEMOLISHED
14. EXISTING HVAC EQUIPMENT TO BE REMOVED AND RELOCATED. SEE ARCHITECTURAL PLANS
15. EXISTING RECYCLING / GARBAGE BINS TO BE REMOVED AND SALVAGED
16. EXISTING GRAVEL WALKWAY TO BE DEMOLISHED

LEGEND

EXISTING

- RIGHT OF WAY (ROW) LINE
- CENTERLINE
- LOT LINE
- OVERHEAD LINE
- ELECTRICAL LINE
- GAS LINE
- SANITARY SEWER
- STORM LINE
- WATER LINE
- COMM LINE
- FENCE LINE
- CURB
- SIGN
- UTILITY/LIGHT POLE
- WATER METER
- FIRE HYDRANT
- SANITARY SEWER CLEANOUT
- SANITARY SEWER MANHOLE
- STORM INLET
- STORM SEWER MANHOLE
- WATER VALVE
- SIGN POST
- TRANSFORMER
- EX AC TO BE DEMOLISHED

N

20' 0 10' 20' 40'

SCALE: 1" = 20'

BRIC ARCHITECTURE, INC

NEWBERG PUBLIC SCHOOLS

CATALYST ADDITION
1421 Deborah Rd, Newberg, OR 97132
NEWBERG PUBLIC SCHOOLS
T (503) 554-5000

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAY 12, 2006
STEVEN WELLS HANSEN
EXPIRES: 6/30/2023
NOT FOR CONSTRUCTION

revisions	

phase	50% DD
date	09/30/2021
project	21006

EXISTING CONDITIONS AND DEMOLITION PLAN

C1.00

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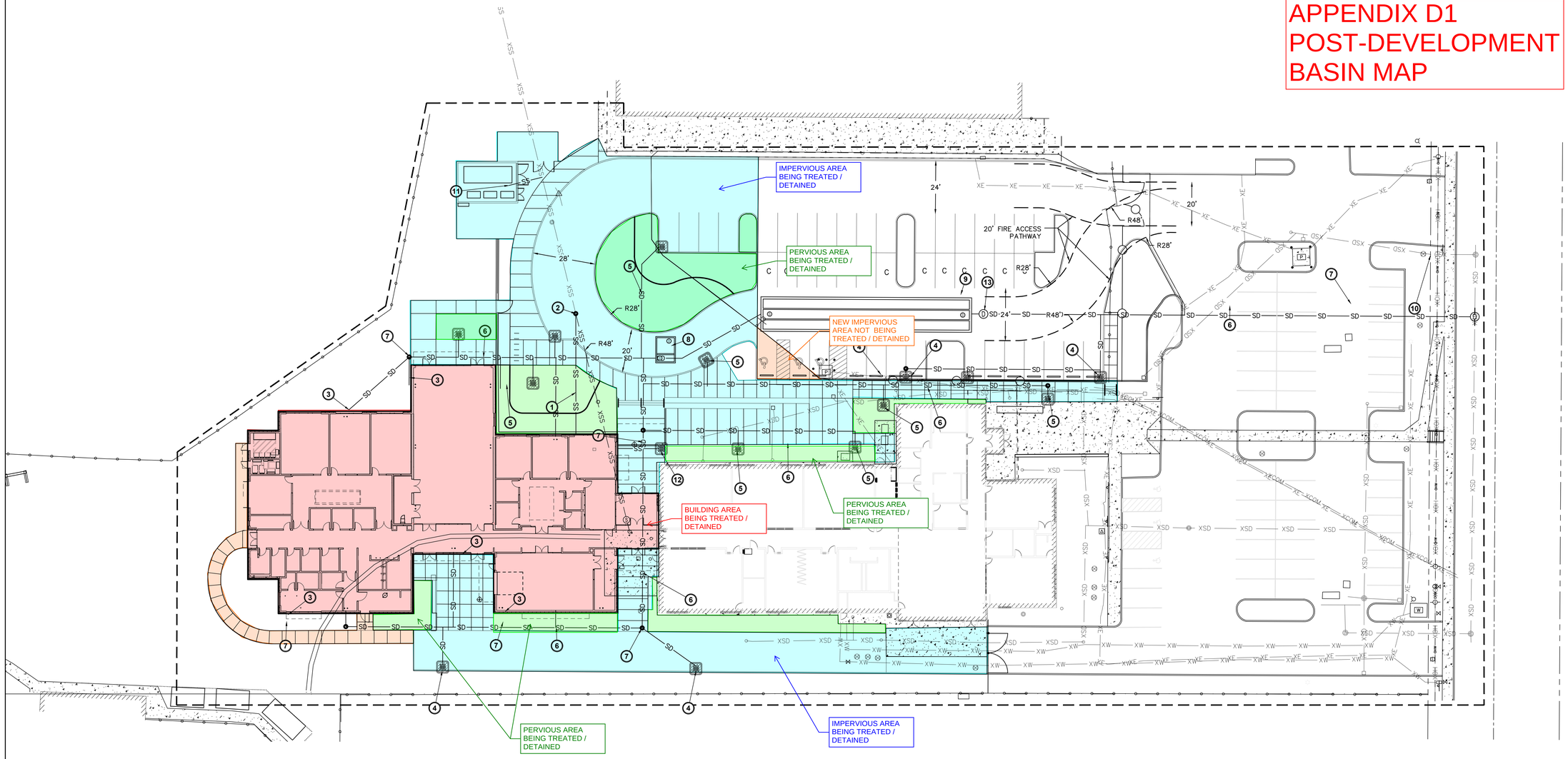
APPENDIX D1
POST-DEVELOPMENT BASIN MAP



PERVIOUS LANDSCAPE PLANTING BEING DETAINED

NEW IMPERVIOUS AREA NOT BEING TREATED OR DETAINED

IMPVERVIOUS BUILDING BEING TREATED & DETAINED

IMPERVIOUS PAVED SURFACING BEIGN TREATED & DETAINED

CONSTRUCTION NOTES:

1. 6" SANITARY SEWER LATERAL CONNECTION
2. CONNECT TO EXISTING 6" SANITARY SEWER LINE WITH NEW CLEANOUT. S=2.0% (PRIVATE) SEE DETAIL ON SHEET C5.00
3. 6" PVC ROOF DRAIN CONNECTION POINT.
4. INSTALL 24" LYNCH STYLE CATCH BASIN AND DISCHARGE TO STORM SEWER. SEE DETAIL ON SHEET C5.00
5. INSTALL 12" LYNCH STYLE CATCH BASIN AND DISCHARGE TO STORM SEWER. SEE DETAIL ON SHEET C5.00
6. 6" PVC STORM SEWER, MIN S=1.0%
7. INSTALL SD CLEANOUT. SEE DETAIL ON SHEET C5.00
8. INSTALL CONTECH 8'X11' PEAK DIVERSION STORMFILTER WITH 18 CARTRIDGES. SEE DETAIL ON SHEET C5.00
9. INSTALL ADS STORMTECH SC-740 DETENTION SYSTEM UNDER EXISTING PARKING LOT. DETENTION SYSTEM TO CONSIST OF 3-ROWS OF 13 CHAMBERS, AND STONE AT 96'Lx15.75'Wx3.5'D. SEE DETAIL ON SHEET C5.01
10. CONNECT TO EXISTING SD OUTFALL PIPE WITH NEW CLEANOUT
11. SANITARY CONNECTION TO TRASH ENCLOSURE. COORDINATE WITH PLUMBING CONTRACTOR FOR VENTING.
12. INSTALL JR SMITH 2315 FLOOR DRAIN WITH TRAP W/ 2" VENT AND 1/2" TRAP PRIMER AND CONNECT TO SANITARY SEWER LINE. SEE PLUMING PLANS FOR CONTINUATION. SEE DETAIL ON SHEET C5.00
13. INSTALL FLOW CONTROL MANHOLE WITH ORIFICE PLATE PER CITY OF NEWBERG DETAILS 416A & 418. SEE DETAIL ON SHEET C5.00

LEGEND

EXISTING

- RIGHT OF WAY (ROW) LINE
- CENTERLINE
- LOT LINE
- OVERHEAD LINE
- ELECTRICAL LINE
- GAS LINE
- SANITARY SEWER
- STORM LINE
- WATER LINE
- COMM LINE
- FENCE LINE
- CURB
- SIGN
- UTILITY/LIGHT POLE
- WATER METER
- FIRE HYDRANT
- SANITARY SEWER CLEANOUT
- SANITARY SEWER MANHOLE
- STORM INLET
- STORM SEWER MANHOLE

PROPOSED

- SANITARY SEWER LATERAL
- WATER LINE
- STORM LATERAL
- STANDARD CURB
- SIDEWALK
- SIGN
- STORM CLEANOUT
- STORM INLET
- SANITARY SEWER CLEANOUT

N

20' 0 10' 20' 40'

SCALE: 1" = 20'

BRIC ARCHITECTURE, INC

NEWBERG PUBLIC SCHOOLS

CATALYST ADDITION

1421 Deborah Rd, Newberg, OR 97132

NEWBERG PUBLIC SCHOOLS
T (503) 554-5000

REGISTERED PROFESSIONAL ENGINEER OREGON MAY 12, 2006 STEVEN WELLS HANSEN EXPIRES: 6/30/2022

NOT FOR CONSTRUCTION

revisions	

phase	50% DD
date	09/30/2021
project	21006

SITE UTILITY PLAN

C3.00

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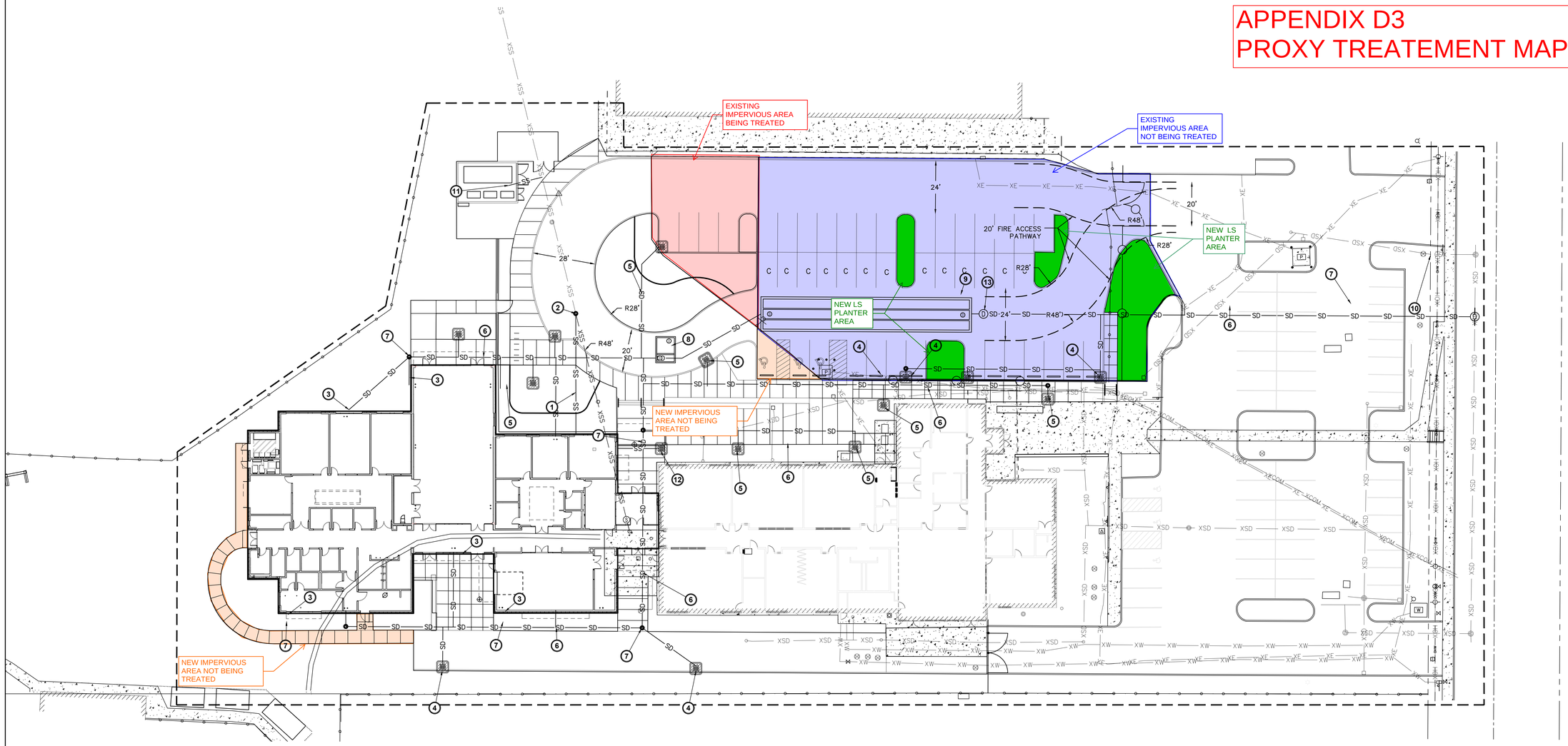
APPENDIX D3
PROXY TREATEMENT MAP



EXISTING IMPERVIOUS AREA BEING CONVERTED TO LANDSCAPE PLANTING = 1,929 SF

NEW IMPERVIOUS AREA NOT BEING TREATED = 1,428 SF

EXISTING IMPERVIOUS AREA BEING PROXY TREATED = 3,608 SF

EXISTING IMPERVIOUS AREA NOT BEING TREATED

CONSTRUCTION NOTES:

1. 6" SANITARY SEWER LATERAL CONNECTION
2. CONNECT TO EXISTING 6" SANITARY SEWER LINE WITH NEW CLEANOUT. S=2.0% (PRIVATE) SEE DETAIL ON SHEET C5.00
3. 6" PVC ROOF DRAIN CONNECTION POINT.
4. INSTALL 24" LYNCH STYLE CATCH BASIN AND DISCHARGE TO STORM SEWER. SEE DETAIL ON SHEET C5.00
5. INSTALL 12" LYNCH STYLE CATCH BASIN AND DISCHARGE TO STORM SEWER. SEE DETAIL ON SHEET C5.00
6. 6" PVC STORM SEWER, MIN S=1.0%
7. INSTALL SD CLEANOUT. SEE DETAIL ON SHEET C5.00
8. INSTALL CONTECH 8'X11' PEAK DIVERSION STORMFILTER WITH 18 CARTRIDGES. SEE DETAIL ON SHEET C5.00
9. INSTALL ADS STORMTECH SC-740 DETENTION SYSTEM UNDER EXISTING PARKING LOT. DETENTION SYSTEM TO CONSIST OF 3-ROWS OF 13 CHAMBERS, AND STONE AT 96'Lx15.75'Wx3.5'D. SEE DETAIL ON SHEET C5.01
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13. INSTALL FLOW CONTROL MANHOLE WITH ORIFICE PLATE PER CITY OF NEWBERG DETAILS 416A & 418. SEE DETAIL ON SHEET C5.00

LEGEND

EXISTING

- RIGHT OF WAY (ROW) LINE
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- LOT LINE
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- GAS LINE
- SANITARY SEWER
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- WATER METER
- FIRE HYDRANT
- SANITARY SEWER CLEANOUT
- SANITARY SEWER MANHOLE
- STORM INLET
- STORM SEWER MANHOLE

PROPOSED

- SANITARY SEWER LATERAL
- WATER LINE
- STORM LATERAL
- STANDARD CURB
- SIDEWALK
- SIGN
- STORM CLEANOUT
- STORM INLET
- SANITARY SEWER CLEANOUT

N

20' 0 10' 20' 40'

SCALE: 1" = 20'

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REGISTERED PROFESSIONAL ENGINEER OREGON MAY 12, 2006 STEVEN WELLS HANSEN EXPIRES: 6/30/2021

NOT FOR CONSTRUCTION

revisions	

phase	50% DD
date	09/30/2021
project	21006

SITE UTILITY PLAN

C3.00

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