



TOWN OF PUTNAM

TOWN HALL
200 SCHOOL STREET
PUTNAM, CONNECTICUT 06260

Inland Wetland Commission Meeting
Hybrid Meeting August 10, 2022 7:00 P.M.
Municipal Complex Room 201 Second Floor

Join Zoom Meeting

<https://us06web.zoom.us/j/82351299288?pwd=RzcraUNoV2NjSEVReTJsU2pVcEtVUT09>

Meeting ID: 823 5129 9288

Computer Passcode: zdvDP2

Dial by your location

+1 301 715 8592 US (Washington DC)

Meeting ID: 823 5129 9288

Phone Passcode: 973711

Find your local number: <https://us06web.zoom.us/j/82351299288?pwd=RzcraUNoV2NjSEVReTJsU2pVcEtVUT09>

Roll Call:

Agenda:

Review minutes of the July 13, 2022 meeting. VOTE REQUIRED

Correspondence:

Public Participation:

New Business: POSSIBLE VOTE REQUIRED

Application # 2022-06 123 Park Road LLC – 123 Park Road LLC – Construction of 2 additional storage buildings

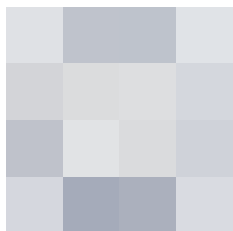
Other Business: POSSIBLE VOTE REQUIRED

Accepting of New Applications if applicable for the September 14, 2022 meeting.

122 David Circle – Andrew Reynolds – Proposed Selective clearing, Filling in rear of property

Agent Report:

Adjournment.



TOWN OF PUTNAM

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200 SCHOOL STREET
PUTNAM, CONNECTICUT 06260

Inland Wetland Commission Meeting Minutes
July 13, 2022 7:00 P.M.
Municipal Complex Room 201 Second Floor

Present: Theodore Altmeier-Acting Chairman, Walter Irwin, Adam Paquin
Alternates: Shannon O'Shea Christine Main

Motion by Walter Irwin to seat alternates Shannon O'Shea and Christine Main as voting members, second by Theodore Altmeier. ALL WERE IN FAVORS

Agenda:

Review minutes of the June 8, 2022 meeting.

Motion by Shannon O'Shea to accept the minutes, second by Christine Main. ALL WERE IN FAVOR

Correspondence: None

Public Participation: None

Agent Report:

Christine Main moved to place the agent report to the end of the meeting, second by Walter Irwin. ALL WERE IN FAVOR.

New Business:

Application # 2022-03 Michael Hyatt – 532 Liberty Highway - Filling, excavation and pond construction- create flat areas for more recreational area. Wetland Creation/ restoration. Agricultural area for livestock.

Daniel Blanchette of J & D Civil Engineers reviewed the plans with the Commission members, 4.6 acres are mostly wetland and flood plain. Soil Scientist delineated the wetlands. It will be completed in phases. Half would be completed this summer with the remaining work ending the summer of 2023. A 50 – 100' 8-foot-deep pond is being proposed. Discussion was held on the type of fill that would be used for the area to left and left rear of the property.

Christine Main moved to approve with the condition that specs are supplied for the type of fill that will be used, second by Shannon O'Shea. ALL WERE IN FAVOR

Application # 2022-04 Valta Energy – 4 Kennedy Drive – Installation of photovoltaic cell array.

Colleen Valendito reviewed the plans with the Commission members. Discussion took place regarding the maintenance, mowing and the recycling of the used panels.

Motion by Theodore Altmeier to approve, second by Adam Paquin. ALL WERE IN FAVOR

Application # 2022-05 Valta Energy – 83 Park Road - Installation of photovoltaic cell array.

Colleen Valendito reviewed the plans with the Commission members. Christine Main moved to approve, second by Adam Paquin. ALL WERE IN FAVOR

Election of Officers:

Theodore Altmeier nominated Adam Paquin as Chairman, second by Walter Irwin. ALL WERE IN FAVOR

Christine Main nominated Walter Irwin as Vice-Chairman, second by Theodore Altmeier. ALL WERE IN FAVOR

Other Business:

Accepting of New Applications if applicable for the August 10, 2022 meeting.

123 Park Road – 123 Park Road LLC – 2 Additional Self Storage Buildings

Christine Main moved to accept the application for the August 10, 2022 meeting, second by Walter Irwin. ALL WERE IN FAVOR.

Bruce Fitzback reviewed an application he had received from Provost & Rovero one day prior to the meeting stating that it was incomplete.

Christine Main moved to amend her motion not to accept the application for the August 10, 2022 meeting, second by Walter Irwin. ALL WERE IN FAVOR

Agent Report

Saveway Petroleum - 10 Marycrest Drive - Wetlands have been cleaned up and there are plans of constructing a new facility.

Dunkin Donuts – 21 Providence Pike - Has been put on hold agent will contact for update.

Burger King – 51 Providence Pike - Waiting for the surveyor to determine the ownership of the trees removed.

481 River Road – Jeeps- no application has been received to date.

122 David Circle – Fill being placed in rear yard application is forthcoming.

Christine Main moved to adjourn at 8:15 P.M. second by Shannon O'Shea. ALL WERE IN FAVOR

Respectfully submitted by Brenda Roy.

Please note these minutes have not been accepted by the Commission and will be placed on their next meeting agenda.



INLAND WETLAND COMMISSION

APPENDIX A

APPLICATION FOR PERMIT

This application is for the use of inland wetlands and water courses.

The meetings are held on the second Wednesday of every month at 7:00pm in the Town Hall. If an on-site inspection is canceled due to inclement weather, the applicant is asked to call the office at 963-6803 30 minutes before the scheduled inspection to see if or when the inspection will be held.

Name of Applicant 123 Park Road, LLC

Applicant's Address 123 Park Road, Putnam

Phone # 860-334-4207

Owner of Land 123 Park Road, LLC

Owner's Address 123 Park Road, Putnam

Location and description of proposed activity: Proposed storage buildings to existing facility. See attached plans.

Activity & Purpose Code

Please **CHECK** one in each column that best describes the activity proposed.

<u>Code</u>	<u>Activity Type</u>	<u>Code</u>	<u>Activity Purpose</u>
☒ 1	Filling	☐ A	Residential Improvement by homeowner
☒ 2	Excavation	☐ B	New residential development - single family
☐ 3	Land Clearing	☐ C	New residential development - multi- family/condo
☐ 4	Stream Channel	☒ D	Commercial/Industrial Uses
☐ 5	Stream Stabilization	☐ E	Municipal Improvements
☐ 6	Stream Clearance	☐ F	Utility Company Improvements
☐ 7	Culverting	☐ G	Agriculture, Forestry or Conservation
☐ 8	Und. Grd. Util.	☐ H	Wetland Creation/Restoration
☐ 9	Roadway Construction	☐ I	Storm Water/Flood Control
☐ 10	Drainage Improvements	☐ J	Erosion/Sediment Control
☐ 11	Pond Dredge/Dam Construction	☐ K	Recreation/Boating/Navigation
☐ 12	Activity Buffer/Set Back Area	☐ L	Routine Maintenance
☐ 13	Other: Please describe: _____		

INLAND WETLAND COMMISSION
APPENDIX A *Continued*

Project Name (if applicable) Storage Facility Addition

Estimate of Linear Footage affecting Wetlands 0

Affected number of acres in which Wetlands are part of
the impacted area for Multi-Family, Condos and
Commercial Development NA

TO BE COMPLETED BY THE COMMISSION

Application Number 2022-06 Date of Receipt 7-5-2022 ck #1625
h

Application Approved (date) _____

Conditions of approval if applicable _____

Application Denied (date) _____

Reason(s) for Denial _____

Signature of Chairman or Secretary of Commission _____
Date

INLAND WETLAND COMMISSION

APPENDIX A *Continued*

Application Procedure

1. Applicant will have a map showing the property boundaries, any wetlands on the property, proposed buildings, septic area, drainage if applicable and the dimension between these areas in scale 1" - 200' or less
2. Applicant must provide an approximate estimate of the linear footage of the wetlands that are affected by said proposal. This is for multi-family, condominiums or commercial development. Contact with the Zoning Official may clarify the nature of your project
3. Applicant must provide an approximate estimate of the number of acres that are affected by said proposal dealing with multi-family, condominiums and commercial development in which wetlands are part of that impacted area within the watershed.
4. Applicant will supply a copy of the soil scientist report with the application to the Wetlands Commission to be reviewed at the meeting by the Commission.
5. Applicant will have the soil scientist number the wetland flags and record the numbers of the flags on the site plan according to their location in the field. The location on the site map must match the field location.
6. If the applicant's estimates are not accurate, payment of the correct amount must be made before the Wetlands final approval of the application.
7. And any other information deemed necessary by the Commission.

Fee Schedule

1.	Permitted and non-regulated	\$40.00
2.	One lot regulated	\$40.00
3.	Regulated Area	
	Two (2) - Ten (10) lots	\$100.00
	Ten (10) - Twenty (20) lots	\$200.00
	Over Twenty (20+) lots	\$300.00
4.	Multi-Family/Condominium Regulated area	
	Zero (0) to Five (5) Acres	\$50.00
	Per linear foot of wetlands additional	\$0.35
	Over Five (5) acres	\$100.00
	Per linear foot of wetlands additional	\$0.35
5.	Commercial	
	Zero (0) to Five (5) Acres	\$100.00
	Per linear foot of wetlands additional	\$0.50
	Over Five (5) acres	\$300.00
	Per linear foot of wetlands additional	\$0.50

All applications must be submitted one week prior to the regularly scheduled monthly meeting.

123 PARK ROAD LLC
123 Park Road
Putnam, CT 06260

Rollstone Bank & Trust
Fitchburg, MA
53-7073/2113
46

1625

PAY TO THE
ORDER OF

TOWN OF PUTNAM

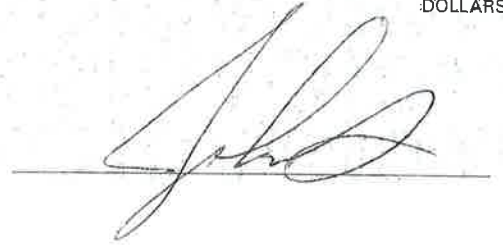
\$ 160.00

One Hundred Sixty — 00

DOLLARS

MEMO

WETLAND FEE





EROSION & SEDIMENTATION CONTROL NARRATIVE

1. THE EROSION & SEDIMENTATION CONTROL PLAN AND DETAILS HAVE BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEP.
2. THE PROPOSED LOCATIONS OF SILTATION AND EROSION CONTROL MEASURES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL PROVIDED SILT FENCE, STONE CHECK DAMS AND/OR OTHER EROSION CONTROL MEASURES AS NEEDED OR DIRECTED BY THE ENGINEER OR TOWN STAFF TO ADEQUATELY PREVENT SEDIMENT TRANSPORT.
3. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO SITE DISTURBANCE.
4. THE CONTRACTOR SHALL INSPECT, REPAIR AND/OR REPLACE EROSION CONTROL MEASURES EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT. SEDIMENT DEPOSITS MUST BE REMOVED WHEN WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED.
5. IF DEWATERING IS NECESSARY DURING ANY TIME OF CONSTRUCTION A CLEAR WATER DISCHARGE SHALL BE PROVIDED AS SHOWN IN THE HAY-BALE BARRIER DEWATERING DETAIL OR ALTERNATE METHOD PROPOSED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
6. ALL DISTURBED AREAS SHALL BE RESTORED PER THE SLOPE STABILIZATION AND PERMANENT VEGETATION DETAILS. ALL DISTURBED AREAS THAT ARE SLOPED LESS THAN THREE HORIZONTAL TO ONE VERTICAL (3:1) SLOPE SHALL BE LOAMED, SEED, FERTILIZED AND MULCHED PER THE PERMANENT VEGETATIVE COVER SPECIFICATIONS. EROSION CONTROL MATTING SHALL BE PROVIDED ON ALL DISTURBED AREAS THAT ARE SLOPED MORE THAN THREE HORIZONTAL TO ONE VERTICAL (3:1). IF FINAL SEEDING OF DISTURBED AREAS IS NOT TO BE COMPLETED BEFORE OCTOBER 15, THE CONTRACTOR SHALL PROVIDE TEMPORARY MULCHING (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY PERMANENT SEEDING.
8. WHEN FEASIBLE, TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINISHED GRADED SHALL BE COMPLETED PRIOR TO OCTOBER 15.
9. ANY EROSION WHICH OCCURS WITHIN THE DISTURBED AREAS SHALL BE IMMEDIATELY REPAIRED AND STABILIZED. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT SHALL BE RETURNED TO THE SITE. POST SEEDING, INTERCEPTED SEDIMENT, IF ANY, SHALL BE DISPOSED OF IN A MANNER APPROVED BY THE TOWN AND ENGINEER.
10. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL VEGETATION IS RE-ESTABLISHED OR SLOPES ARE STABILIZED AND REMOVAL IS APPROVED BY THE TOWN.
11. UNFORESEEN PROBLEMS WHICH ARE ENCOUNTERED IN THE FIELD SHALL BE SOLVED ACCORDING TO THE "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEP.
12. THE CONTRACTOR SHALL PROVIDE THE NAME AND EMERGENCY CONTACT INFORMATION FOR THE PROJECT PERSONNEL RESPONSIBLE FOR EROSION AND SEDIMENTATION CONTROLS.

GENERAL NOTES

1. TOPOGRAPHY ESTABLISHED BY CLA ENGINEERS, INC.
2. CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT 1-800-922-4455 PRIOR TO THE START OF CONSTRUCTION.
3. INFORMATION SHOWN ON THE DRAWINGS RELATING TO MATERIALS, CONDITIONS, AND/OR LOCATIONS OF EXISTING STRUCTURES AND UTILITIES HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING FIELD SURVEY, UTILITY COMPANY AND TOWN RECORD MAPS AND DRAWINGS, AND IS NOT GUARANTEED ACCURATE OR COMPLETE.
4. THE CONTRACTOR SHALL EXCAVATE TEST PITS AS NEEDED OR AS DIRECTED BY THE OWNER TO VERIFY UTILITY INFORMATION.
5. PASSAGE OF TRAFFIC ON ROADWAYS: A MINIMUM OF ONE LANE FOR TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL PERFORM HIS OPERATIONS TO MINIMIZE DISRUPTIONS TO TRAFFIC WITHIN THE PROJECT SITE. A SINGLE LANE OF TRAFFIC MUST BE MAINTAINED AT ALL TIMES FOR RESIDENTS, BUSINESSES AND EMERGENCY VEHICLES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF TRAFFIC AND TRAFFIC CONTROL.
7. THE CONTRACTOR SHALL CONFINE HIS OPERATIONS AND ACTIVITIES FOR CONSTRUCTION PURPOSES WITHIN THE STREET LINES, EASEMENTS AND PROPERTY AS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING PAVEMENT, ROADWAY, SIDEWALKS, ETC., OUTSIDE OF THE WORK AREA AND SHALL REPAIR SUCH DAMAGE AT NO ADDITIONAL COST TO THE OWNER.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TEMPORARY AND PERMANENT SUPPORT OF ALL EXISTING UTILITY POLES IN AN ADJACENT TO THE CONSTRUCTION AREA AND SHALL COMPLY WITH ALL THE REQUIREMENTS AND SPECIAL DETAILS FOR THE SUPPORT OF UTILITIES REQUIRED BY UTILITY AGENCIES. ALL COSTS FOR TEMPORARILY SUPPORTING UTILITY POLES DURING CONSTRUCTION SHALL BE INCLUDED IN OTHER ITEMS.
9. MATERIAL STOCKPILE AND STAGING AREAS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING STOCKPILE, MATERIAL STORAGE AND EQUIPMENT STORAGE AREAS. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL IDENTIFY THESE AREAS AND PROVIDE EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED.
10. IF BLASTING IS PERFORMED A PRE-BLAST SURVEY WILL BE REQUIRED. ANY AND ALL BLASTING SHALL CONFORM TO THE REGULATIONS SET FORTH BY THE TOWN AND SHALL BE APPROVED BY THE APPROPRIATE TOWN AGENCIES AND ADJACENT UTILITY OWNERS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION SURVEY AND STAKEOUT AS THEY NEED.
12. PROPOSED SITE LIGHTING SHALL BE WALL MOUNTED ON BUILDINGS DIRECTED DOWNWARD.

UTILITY NOTES

1. ALL UTILITY AND SERVICE INSTALLATIONS SHALL CONFORM TO THE TOWN OF PUTNAM REQUIREMENTS.
2. ANY UTILITY INSTALLATIONS TO BE TURNED OVER TO THE TOWN SHALL BE COORDINATED AND INSPECTED BY THE TOWN OF PUTNAM.

PERMANENT VEGETATIVE COVER

TOPSOIL WILL BE REPLACED ONCE THE EXCAVATIONS HAVE BEEN COMPLETED AND THE SLOPES ARE GRADED AS SHOWN ON THE PLANS. PROVIDE SLOPE PROTECTION AS CALLED FOR ON THE PLANS AND DETAILS. TOPSOIL SHALL BE SPREAD AT A MINIMUM COMPACTED DEPTH OF 4 INCHES. ONCE THE TOPSOIL HAS BEEN SPREAD, ALL STONES TWO INCHES OR LARGER IN ANY DIMENSION WILL BE REMOVED AS WELL AS DEBRID. APPLY AGRICULTURAL GROUND LESTONE AT THE RATE OF TWO TONS PER ACRE OR 100 LBS. PER 1000 S.F. APPLY 10-10-10 FERTILIZER OR EQUIVALENT AT A RATE OF 300 LBS. PER ACRE OR 7.5 LBS. PER S.F.. WORK LESTONE INTO THE SOIL TO A DEPTH OF 4 INCHES. INSPECT SEEDBED BEFORE SEEDING. IF TRAFFIC HAS COMPACTED THE SOIL, RETILL COMPACTED AREAS. APPLY THE FOLLOWING GRASS SEED MIX:

SEED MIXTURE

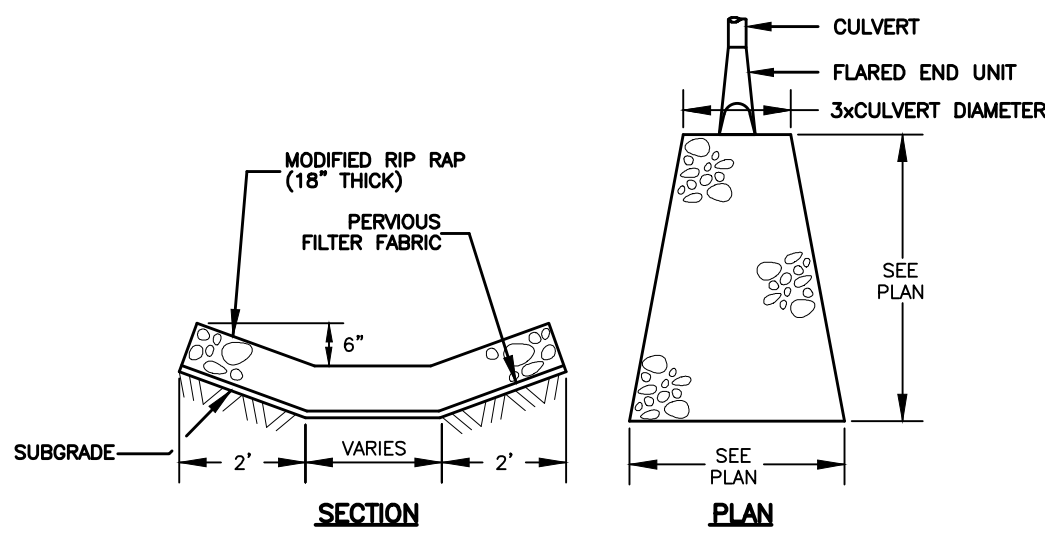
RETENTION BASIN & RAIN GARDENS

SEE BELOW

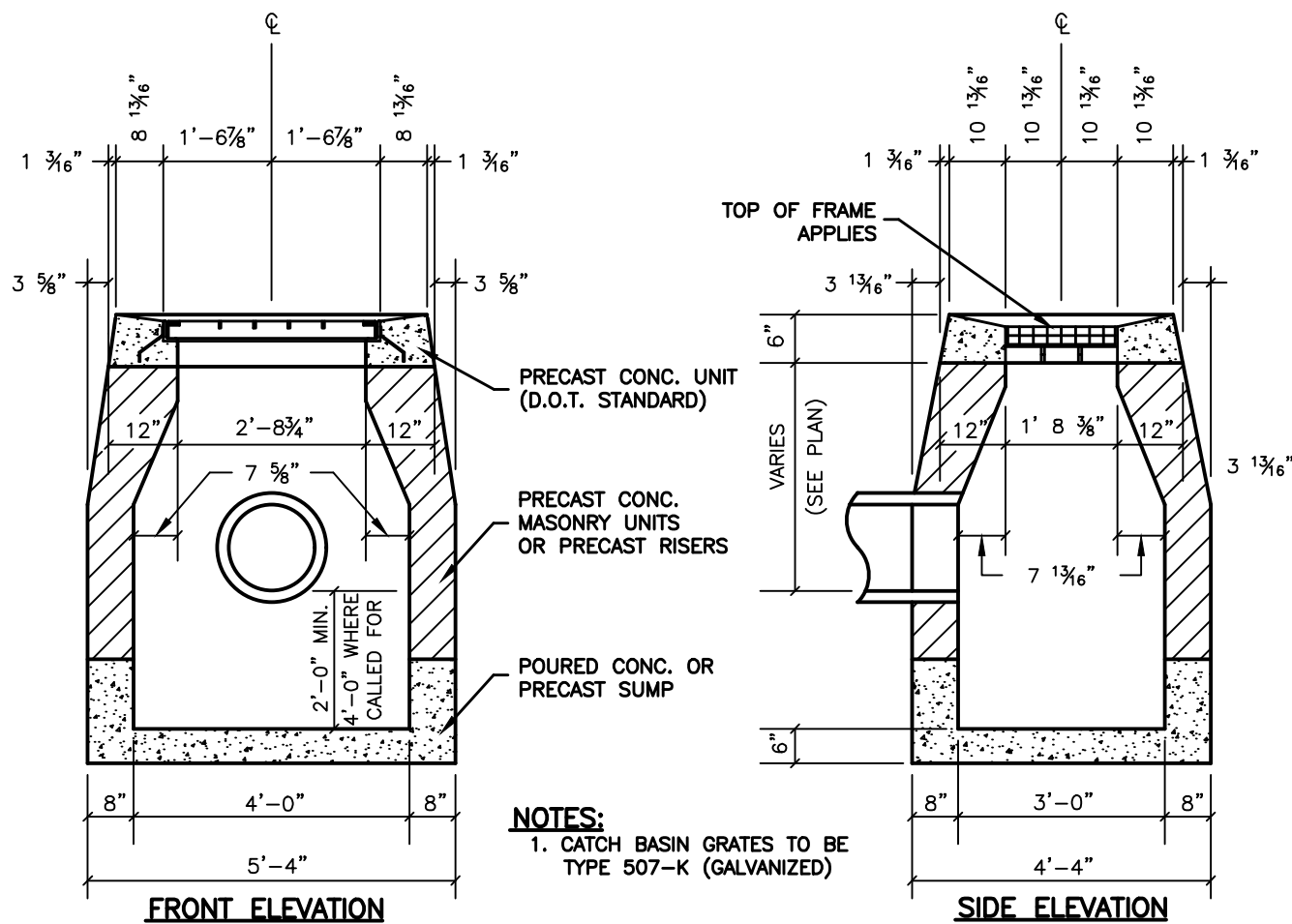
REMAINDER OF DISTURBED AREAS	LBS./ACRE	LBS./1000 S.F.
KENTUCKY BLUEGRASS	20	0.45
CREeping RED FESCUE	20	0.45
PERENNIAL RYEGRASS	5	0.10
	45	1.00

THE RECOMMENDED SEEDING DATES ARE:
APRIL 1 - JUNE 15 AND AUGUST 15 - OCTOBER 15

IMMEDIATELY FOLLOWING SEEDING, FIRM SEED BED WITH A ROLLER AND MULCH WITH WEED FREE STRAW. IF PERMANENT VEGETATIVE COVER IS HAS NOT BEEN ESTABLISHED BY SEPTEMBER 30, APPLY A TEMPORARY VEGETATIVE COVER ON THE TOPSOIL.



RIP RAP SPLASH PAD DETAIL
NOT TO SCALE



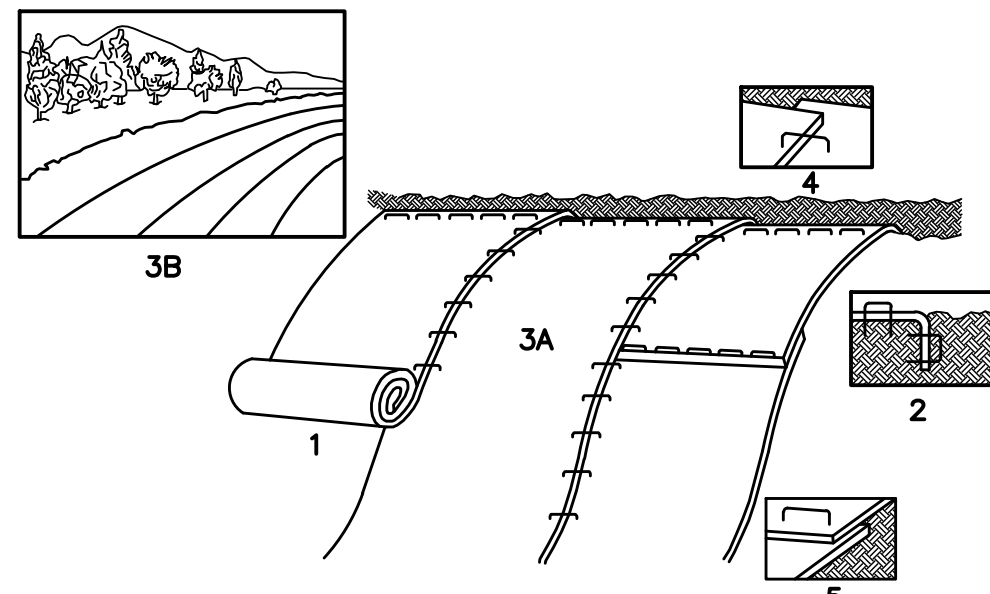
TYPE "C-L" CATCH BASIN DETAIL
NOT TO SCALE

CONSTRUCTION SEQUENCE

IT IS ANTICIPATED THAT THE CONSTRUCTION ACTIVITIES WILL BEGIN DURING THE FALL OF 2022 AND WILL BE COMPLETED IN APPROXIMATELY 1 YEAR.

CONSTRUCTION SEQUENCE:

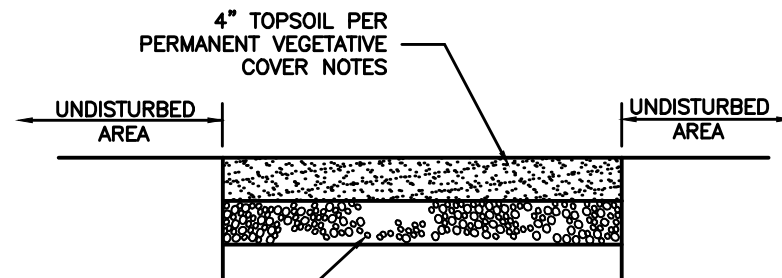
1. PRIOR TO ANY SITE DISTURBANCE CONTACT "CALL BEFORE YOU DIG" AT 1-800-922-4455 TO MARK EXISTING UTILITY LOCATIONS.
2. INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES PER THE EROSION AND SEDIMENTATION CONTROL PLAN & NARRATIVE.
3. CLEAR AND GRUB THE PROPOSED WORK AREA.
4. CUT & FILL THE SITE TO ESTABLISH THE SITE SUBGRADE.
5. INSTALL PROPOSED UNDERGROUND UTILITIES AND INSTALL PROPOSED DRAINAGE SYSTEM.
6. FINISH GRADE THE SITE AND INSTALL NEW SIDEWALKS, ISLANDS AND PAVEMENT.
7. INSTALL ALL LANDSCAPING. LOAM, SEED, FERTILIZE AND MULCH ALL DISTURBED AREAS BETWEEN PHASE 1 & 2 AND AFTER FINAL COMPLETION.
8. AFTER ALL DISTURBED AREAS ARE STABILIZED AND WITH PRIOR APPROVAL FROM TOWN STAFF, REMOVE EROSION AND SEDIMENTATION CONTROL MEASURES.



1. PROVIDE 4" THICKNESS OF TOPSOIL OVER CLEAN FILL. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED MIX PER PERMANENT VEGETATIVE COVER NOTES. (SHALL BE PAID FOR AT THE UNIT PRICE FOR LOAM, SEED, FERTILIZE & MULCH)
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN 6" DEEP x 6" WIDE TRENCH, BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL THE BLANKET (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 4" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.

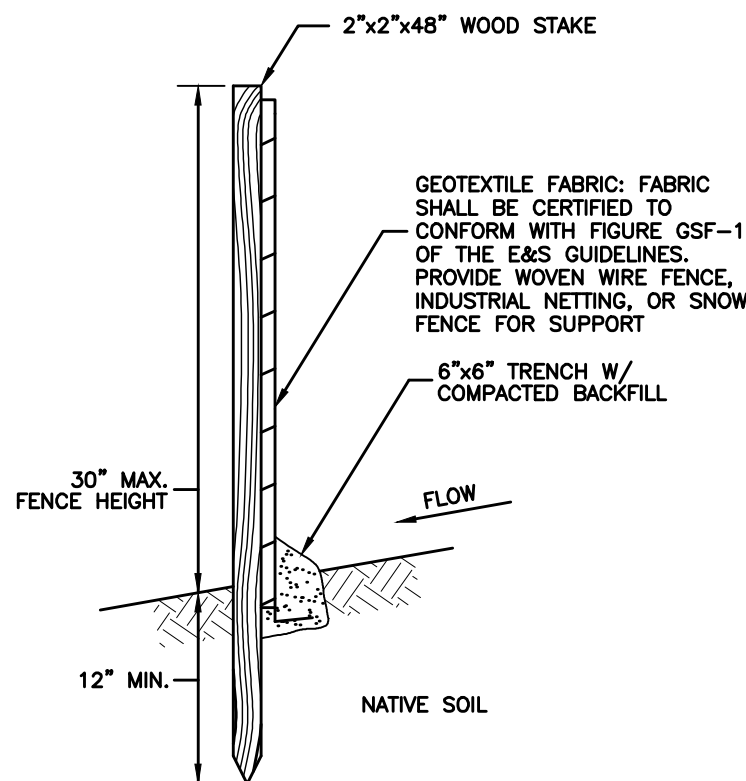
NOTE: ALL PERMANENT EROSION CONTROL BLANKETS ARE TO BE NORTH AMERICAN GREEN BIONET C125BN OR APPROVED EQUAL.

EROSION CONTROL MATTING DETAIL
(FOR SLOPES GREATER THAN 3:1)

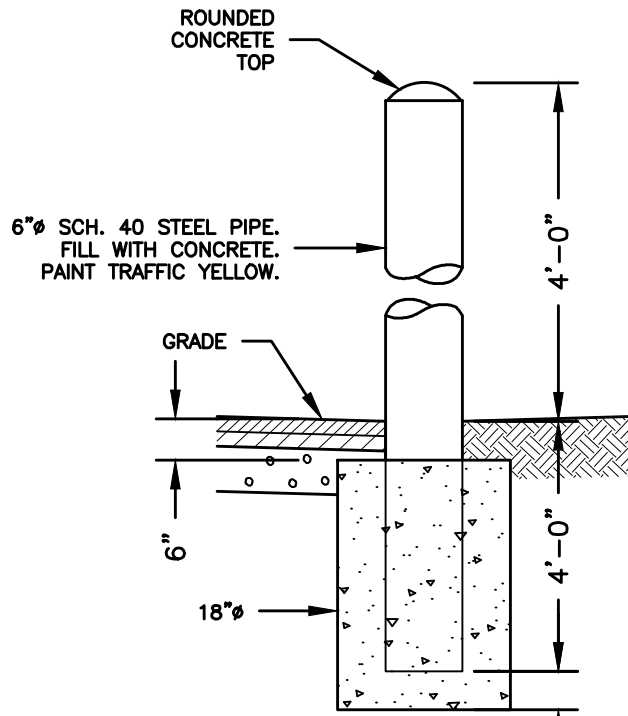


TYPICAL LOAM & SEED SECTION DETAIL
(FOR ALL DISTURBED AREAS)

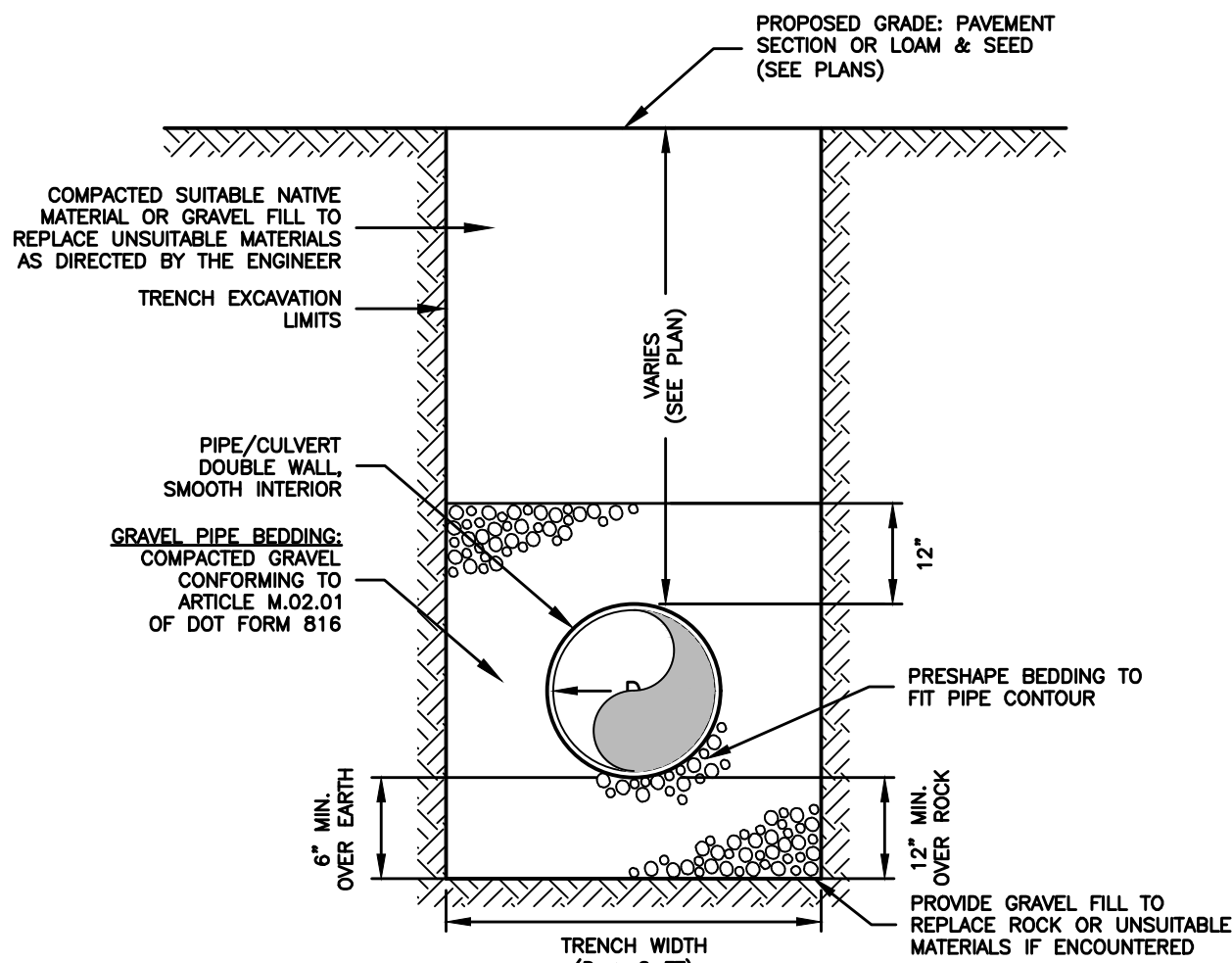
SLOPE STABILIZATION DETAILS
NOT TO SCALE



SILT FENCE SECTION
NOT TO SCALE

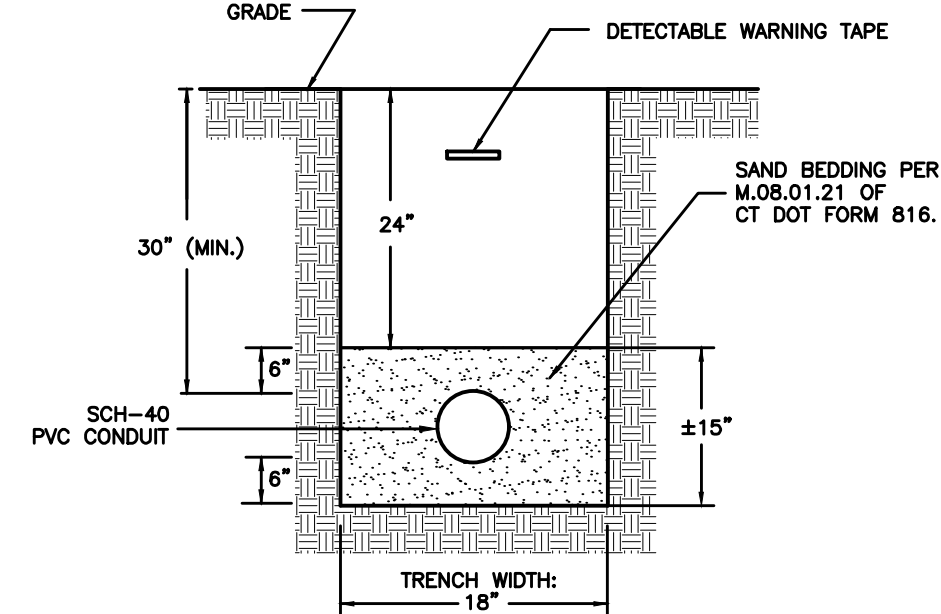


BOLLARD DETAIL
NOT TO SCALE



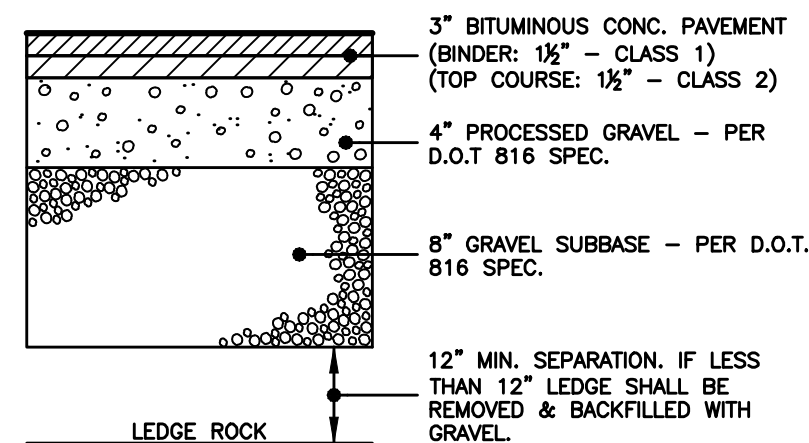
- NOTES:
1. D=INSIDE DIAMETER OF PIPE/CULVERT.
 2. TRENCH WIDTHS NOTED ARE SET TO ESTABLISH PAY LIMITS ONLY.
 3. ALL EXCAVATIONS MUST MEET OSHA STANDARDS.
 4. CONTRACTOR TO PROVIDE COMPACTION ON ALL TRENCH BACKFILLS, EXCAVATIONS AND PAVEMENT BASES TO NOT LESS THAN 95% OF THE DRY DENSITY FOR THAT MATERIAL.

TRENCH DETAIL: DRAINAGE CULVERT
NOT TO SCALE



- NOTES:
1. TRENCH WIDTHS NOTED ARE SET TO ESTABLISH PAY LIMITS ONLY.
 2. ALL EXCAVATIONS MUST MEET OSHA STANDARDS.
 3. CONTRACTOR TO PROVIDE COMPACTION ON ALL TRENCH BACKFILLS, EXCAVATIONS AND PAVEMENT BASES TO NOT LESS THAN 95% OF THE DRY DENSITY FOR THAT MATERIAL.
 4. CONTRACTOR TO PROVIDE COMPACTION ON ALL TRENCH BACKFILLS, EXCAVATIONS AND PAVEMENT BASES TO NOT LESS THAN 95% OF THE DRY DENSITY FOR THAT MATERIAL.
 5. MAINTAIN 2" SEPARATION BETWEEN MULTIPLE CONDUIT TRENCHES

CONDUIT TRENCH DETAIL
NOT TO SCALE



- NOTES:
1. PROVIDE CONTINUOUS TACK COAT ALONG EDGE WHEN MATCHING EXISTING PAVEMENT
 2. CONTRACTOR TO PROVIDE COMPACTION ON ALL TRENCH BACKFILLS, EXCAVATIONS AND PAVEMENT BASES TO NOT LESS THAN 95% OF THE DRY DENSITY FOR THAT MATERIAL WHEN TESTED IN ACCORDANCE WITH AASHTO T180, METHOD D

TYPICAL PAVEMENT SECTION DETAIL
NOT TO SCALE

			CLA Engineers, Inc. CIVIL • STRUCTURAL • SURVEYING	
			317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165	
No.	DATE	REVISION	123 Park Road, LLC, 123 Park Road Putnam, Connecticut	
			Proposed Storage Facility Addition	
			Grading & Drainage Plan	
			Project No. CLA-7049	Proj. Engineer R.A.D.
			Date: 6/1/2022	Sheet No. 2

DRAINAGE REPORT

Proposed Addition to Storage Facility 123 Park Road

Prepared for:

**123 Park Road, LLC
123 Park Road
Putnam, CT 06260**

June 2022

Prepared By:

CLA Engineers, Inc.

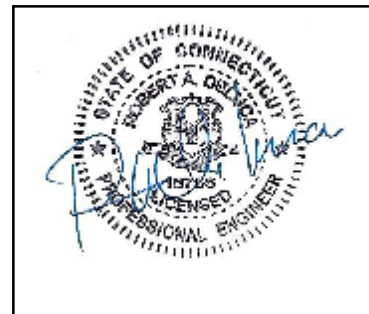
Consulting Engineers

317 Main Street

Norwich, CT 06360

Ph: 860-886-1966 F: 860-886-9165

www.claengineers.com



Robert DeLuca, P.E.

The proposed site is located at 123 Park Road and abuts I-395 on the east, town owned land on the north and an industrial facility on the south. The existing site is roughly 10 acres of partially developed land that is currently occupied by 8 separate self-storage buildings and 2 partially constructed buildings. The 10 buildings were part of a phased development. The buildings occupy approximately 5.5 acres of the 10-acre parcel.

The remaining undeveloped 4.5+/- acres of land consists of soils mapped by the NRCS listed as Hinckley gravelly sandy loam and Rippowam fine sandy loam. Approximately 1.5 acres in the northwest corner includes a channelized wetland that runs generally south to north. Existing drainage patterns in this area flow in two directions. An existing conditions watershed map and stormwater flow path is included as Figure 1. The majority flows to the channelized wetland in the northwest corner of the site. The remainder flows northeasterly off site. We note that there is a Town culvert that collects water from the east side of Park Road and deposits it in the northeasterly drainage area.

The proposed development will include 2 new buildings, paving and landscaping that will affect 3 of the 4.5 acres. The remaining 1.5 acres in the northwest corner of the site will remain unchanged. The proposed site layout and grading proposes that the majority stormwater runoff from the proposed pavement and roofs flow through catch basin and culvert systems to the proposed detention basin in the northwest corner of the site. The increased stormwater due to development will be attenuated with the detention basin in order to maintain existing peak flows in the northwest area. The basin will also provide water quality. Proposed peak stormwater flows to the northeasterly area will also be designed not to exceed existing flows to this area. Flow from the existing Town culvert will remain unchanged and has not been factored into the drainage calculations. A post development watershed map with stormwater flow paths is included as Figure 2.

Stormwater drainage calculations have been performed to determine the peak stormwater runoff rates from the site to the northwest and northeast area of the site for the existing and the post development site conditions for the 2, 10, 25, 50, and 100-year storms. Post development flows to the detention basin during the 2-year storm will be retained and eventually infiltrate. The 10 through 100- year storm will have an outfall less than existing conditions. The calculations also show a net reduction in the peak runoff rates for the post development site for the 2-year through 100-year storm for flows to the northeasterly area.

Table 1 – Peak Flow Summary:

Stormwater Flow to the Northwestly Detention Basin – outlet elevation = 221.0

	Peak Flow (cfs) / Basin Elevation for post development					
	2-Yr	5-Yr	10-Yr	25-Yr	50-Yr	100-Yr
Existing Conditions :	0.1	Not run	0.34	0.87	1.47	2.46
Post Development :	0	Not run	0.21	0.53	1.06	2.44
Basin Elevation :	220.34	Not run	221.02	221.05	221.24	225.0

Stormwater Flow to the Northeasterly Area

	Peak Flow (cfs)					
	2-Yr	5-Yr	10-Yr	25-Yr	50-Yr	100-Yr
Existing Conditions :	1.29	Not run	1.84	2.14	2.37	2.58
Post Development :	1.25	Not run	1.77	2.06	2.27	2.48

Water Quality Volume Calculation:

The required water quality volume will be provided within the retention basin as follows:

Per DEP 2004 Storm Water Quality Manual:

Required Water Quality Volume (WQV) = (1")(R)(A) / 12

R = 0.05 + 0.009(I)

I = percent of impervious cover

A = site area

A (total): 3.0 ac.

A (impervious): 1.83 ac.

I = 1.83 ac. / 3.00 ac. = 61%

R = 0.05 + 0.009(61%) = 0.60

WQV = (1")(0.60)(3.00 ac.) / 12 = 0.15 ac.-ft = 6,534 cf (required)

Provided: 16,000+/- cf within the retention basin below the high level overflow

Method:

The site hydraulic analysis was performed using the SCS TR-55 method and Rational Method utilizing the Hydraflow Hydrographs Extension for AutoCAD. Water quality volume and groundwater recharge volume calculations were performed as outlined in the 2004 Connecticut Stormwater Quality Manual (Section 7.4.1 and Section 7.5.1 respectively).

Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066



Legend

<u>Hyd.</u>	<u>Origin</u>	<u>Description</u>
1	Rational	Existing to NE
2	Rational	Proposed to NE
3	SCS Runoff	Existing to NW
4	SCS Runoff	Proposed to NW
5	Reservoir	NW to Pond

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

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	Rational	1.296	1	15	4,082	-----	-----	-----	Existing to NE
2	Rational	1.245	1	15	3,921	-----	-----	-----	Proposed to NE
3	SCS Runoff	0.010	2	1070	332	-----	-----	-----	Existing to NW
4	SCS Runoff	5.158	2	718	10,340	-----	-----	-----	Proposed to NW
5	Reservoir	0.000	2	n/a	0	4	220.34	10,340	NW to Pond
7049 - Drainage Calcs TR55 6-7-22.gpw					Return Period: 2 Year			Tuesday, Jun 7, 2022	

Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

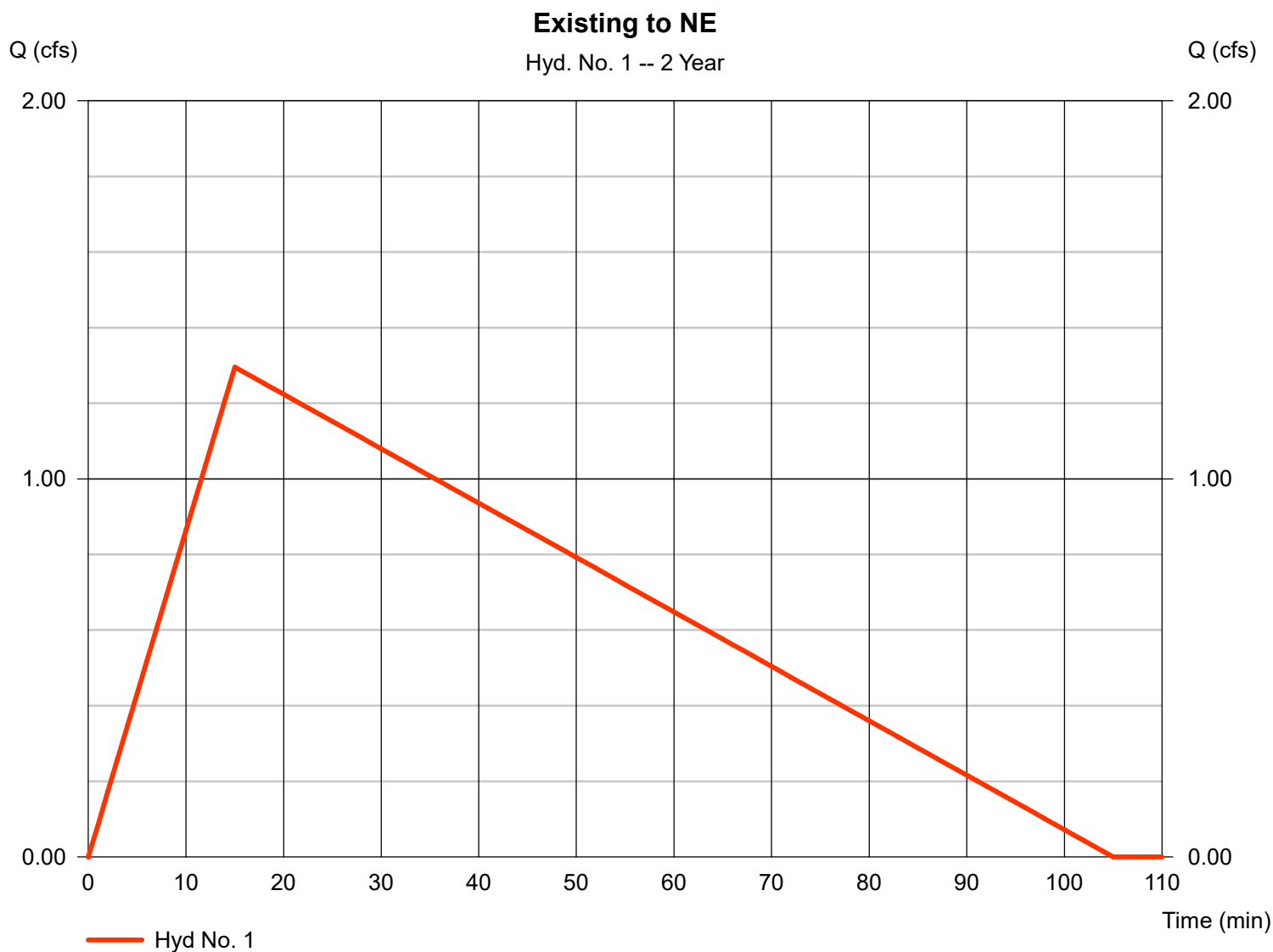
Hyd. No. 1

Existing to NE

Hydrograph type = Rational
 Storm frequency = 2 yrs
 Time interval = 1 min
 Drainage area = 1.300 ac
 Intensity = 2.848 in/hr
 IDF Curve = CTDOT2000.IDF

Peak discharge = 1.296 cfs
 Time to peak = 15 min
 Hyd. volume = 4,082 cuft
 Runoff coeff. = 0.35*
 Tc by User = 15.00 min
 Asc/Rec limb fact = 1/6

* Composite (Area/C) = $[(1.200 \times 0.30) + (0.100 \times 0.90)] / 1.300$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

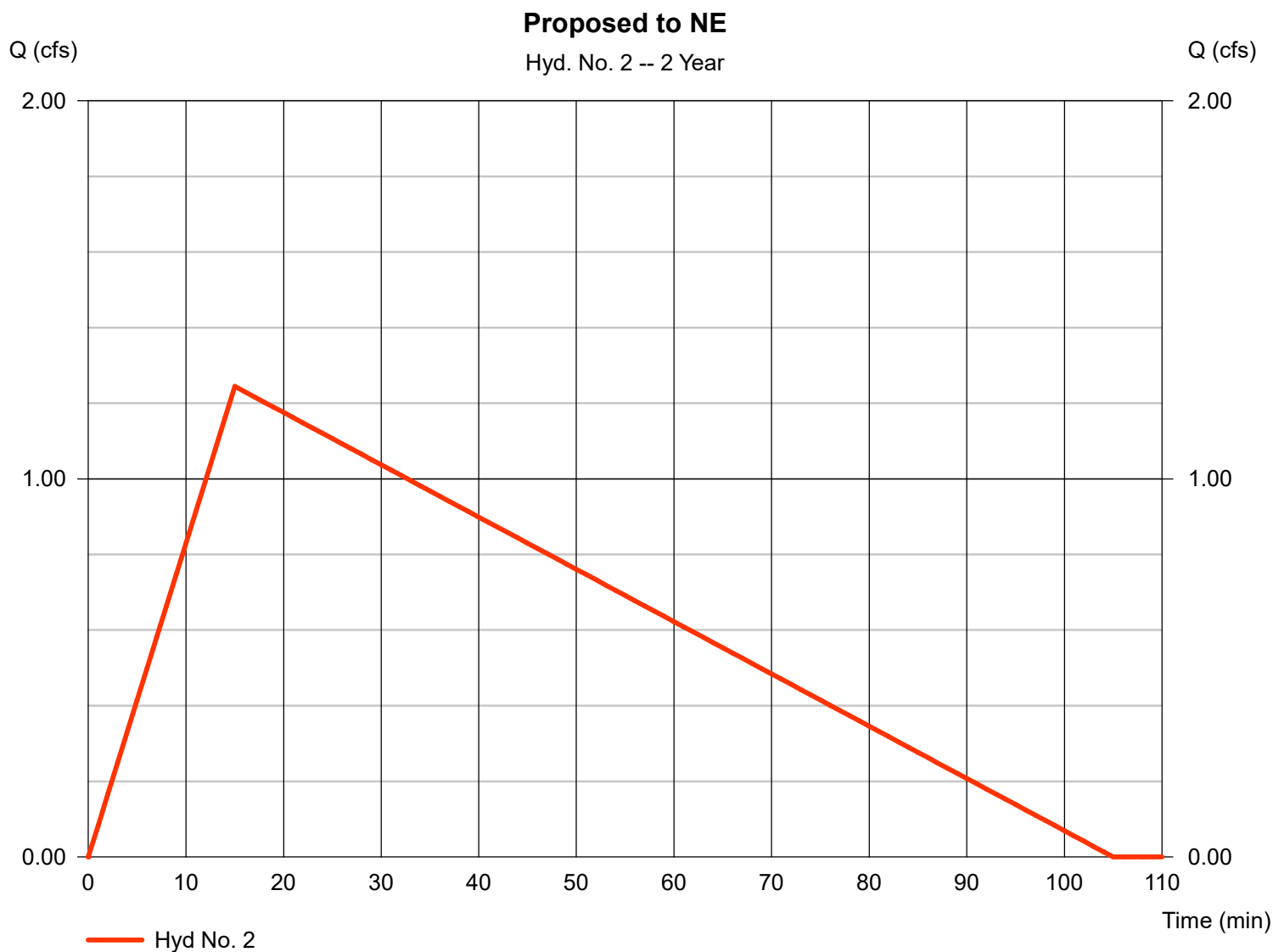
Hyd. No. 2

Proposed to NE

Hydrograph type = Rational
 Storm frequency = 2 yrs
 Time interval = 1 min
 Drainage area = 0.950 ac
 Intensity = 2.848 in/hr
 IDF Curve = CTDOT2000.IDF

Peak discharge = 1.245 cfs
 Time to peak = 15 min
 Hyd. volume = 3,921 cuft
 Runoff coeff. = 0.46*
 Tc by User = 15.00 min
 Asc/Rec limb fact = 1/6

* Composite (Area/C) = $[(0.690 \times 0.30) + (0.260 \times 0.90)] / 0.950$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

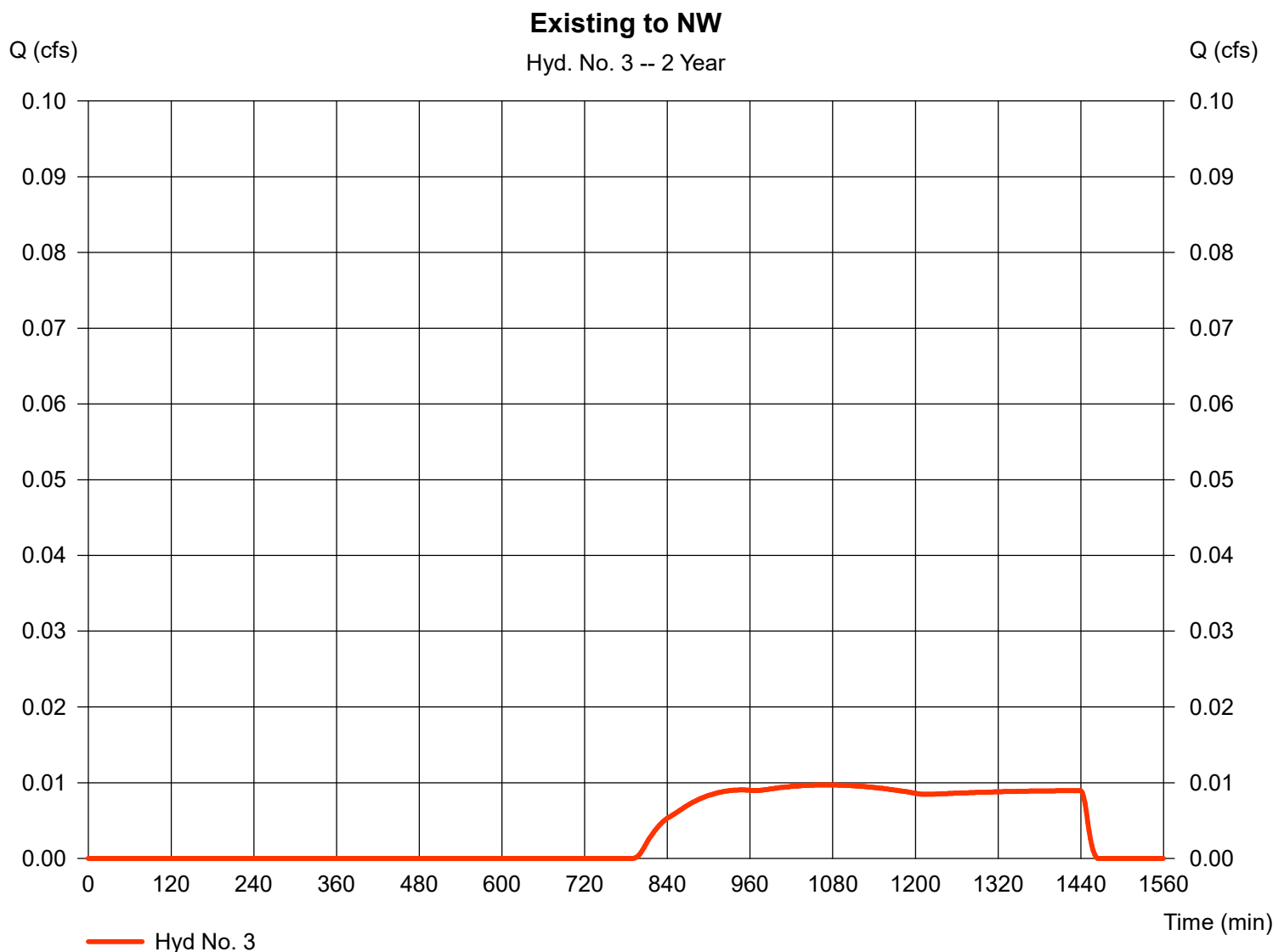
Hyd. No. 3

Existing to NW

Hydrograph type = SCS Runoff
 Storm frequency = 2 yrs
 Time interval = 2 min
 Drainage area = 2.340 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 3.40 in
 Storm duration = 24 hrs

Peak discharge = 0.010 cfs
 Time to peak = 1070 min
 Hyd. volume = 332 cuft
 Curve number = 43*
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 15.00 min
 Distribution = Type II
 Shape factor = 484

* Composite (Area/CN) = $[(2.200 \times 39) + (0.140 \times 98)] / 2.340$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

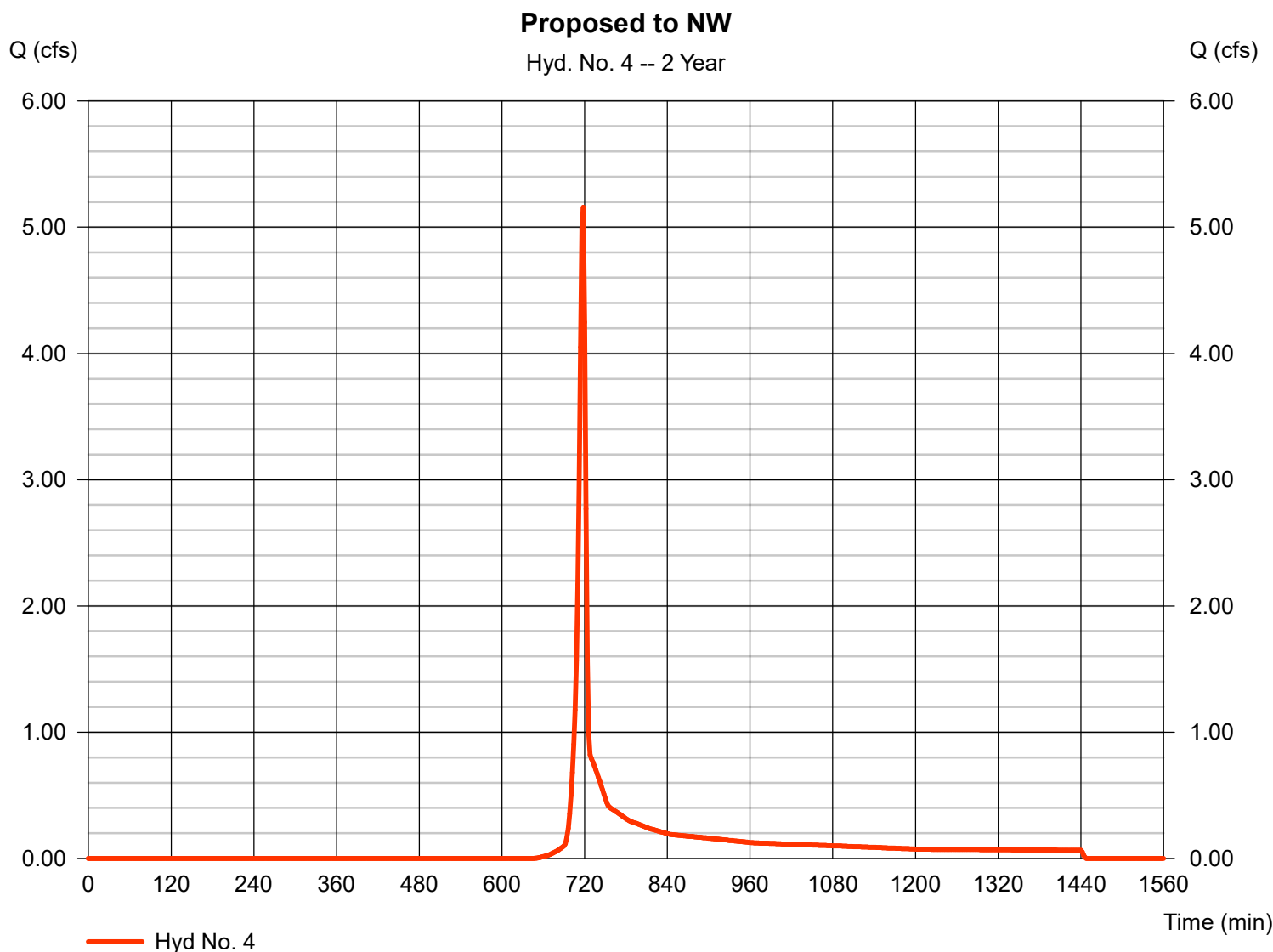
Hyd. No. 4

Proposed to NW

Hydrograph type = SCS Runoff
 Storm frequency = 2 yrs
 Time interval = 2 min
 Drainage area = 2.730 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 3.40 in
 Storm duration = 24 hrs

Peak discharge = 5.158 cfs
 Time to peak = 718 min
 Hyd. volume = 10,340 cuft
 Curve number = 73*
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 5.00 min
 Distribution = Type II
 Shape factor = 484

* Composite (Area/CN) = $[(1.160 \times 39) + (1.570 \times 98)] / 2.730$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

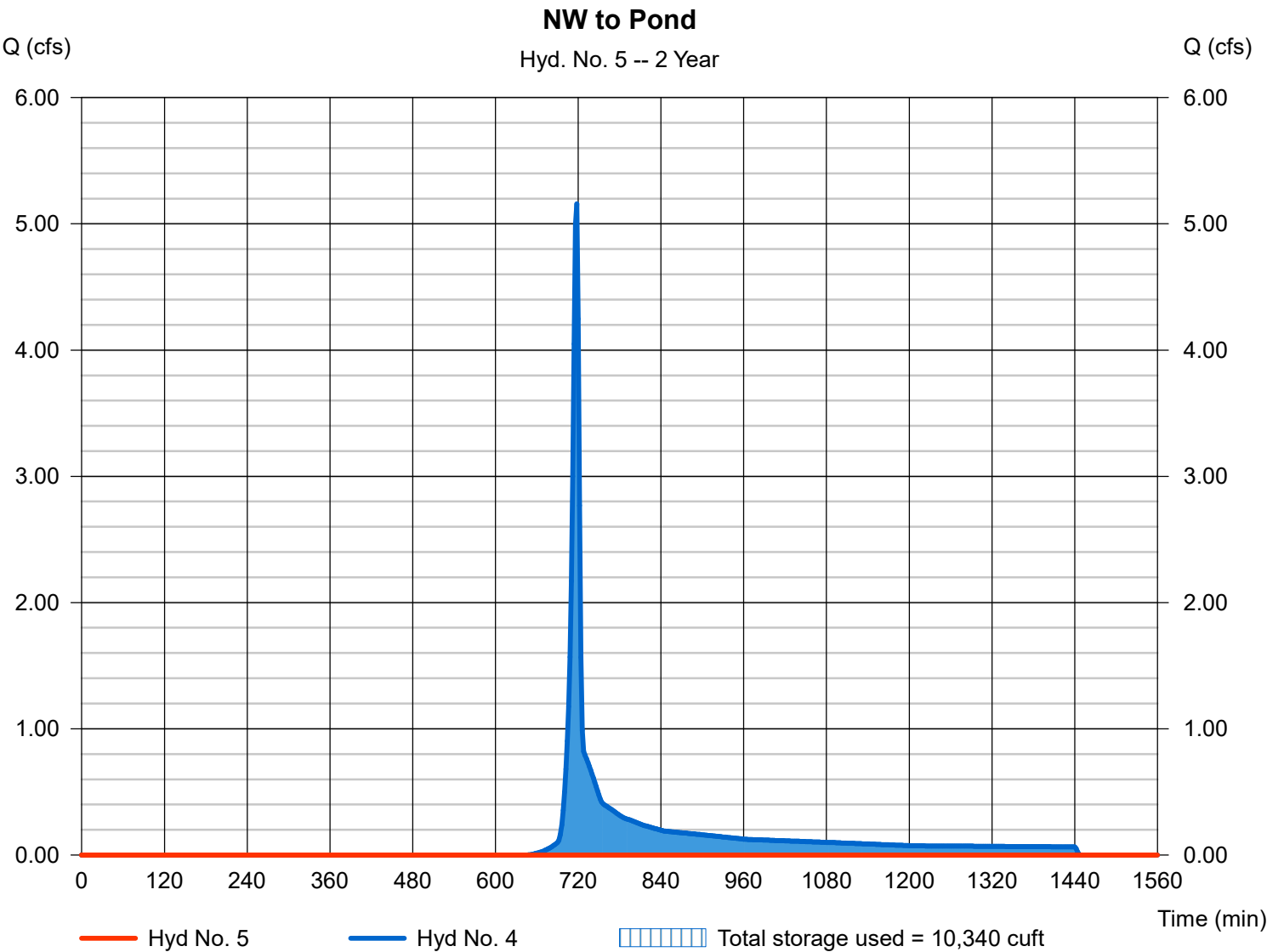
Tuesday, Jun 7, 2022

Hyd. No. 5

NW to Pond

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 4 - Proposed to NW	Max. Elevation	= 220.34 ft
Reservoir name	= Retention Basin	Max. Storage	= 10,340 cuft

Storage Indication method used.



Pond Report

9

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

Pond No. 1 - Retention Basin

Pond Data

Contours - User-defined contour areas. Conic method used for volume calculation. Beginning Elevation = 218.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	218.00	5,952	0	0
1.00	220.00	8,448	7,163	7,163
3.50	221.50	10,520	23,660	30,823

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 6.00	0.00	0.00	0.00
Crest El. (ft)	= 221.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.000 (by Contour)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	218.00	---	---	---	---	0.00	---	---	---	---	---	0.000
0.10	716	218.10	---	---	---	---	0.00	---	---	---	---	---	0.000
0.20	1,433	218.20	---	---	---	---	0.00	---	---	---	---	---	0.000
0.30	2,149	218.30	---	---	---	---	0.00	---	---	---	---	---	0.000
0.40	2,865	218.40	---	---	---	---	0.00	---	---	---	---	---	0.000
0.50	3,581	218.50	---	---	---	---	0.00	---	---	---	---	---	0.000
0.60	4,298	218.60	---	---	---	---	0.00	---	---	---	---	---	0.000
0.70	5,014	218.70	---	---	---	---	0.00	---	---	---	---	---	0.000
0.80	5,730	218.80	---	---	---	---	0.00	---	---	---	---	---	0.000
0.90	6,447	218.90	---	---	---	---	0.00	---	---	---	---	---	0.000
1.00	7,163	220.00	---	---	---	---	0.00	---	---	---	---	---	0.000
1.25	9,529	220.25	---	---	---	---	0.00	---	---	---	---	---	0.000
1.50	11,895	220.50	---	---	---	---	0.00	---	---	---	---	---	0.000
1.75	14,261	220.75	---	---	---	---	0.00	---	---	---	---	---	0.000
2.00	16,627	221.00	---	---	---	---	0.00	---	---	---	---	---	0.000
2.25	18,993	221.25	---	---	---	---	2.50	---	---	---	---	---	2.498
2.50	21,359	221.50	---	---	---	---	7.06	---	---	---	---	---	7.064
2.75	23,725	221.75	---	---	---	---	12.98	---	---	---	---	---	12.98
3.00	26,091	222.00	---	---	---	---	19.98	---	---	---	---	---	19.98
3.25	28,457	222.25	---	---	---	---	27.92	---	---	---	---	---	27.92
3.50	30,823	221.50	---	---	---	---	7.06	---	---	---	---	---	7.064

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

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	Rational	1.840	1	15	5,795	-----	-----	-----	Existing to NE
2	Rational	1.767	1	15	5,566	-----	-----	-----	Proposed to NE
3	SCS Runoff	0.345	2	728	2,924	-----	-----	-----	Existing to NW
4	SCS Runoff	10.52	2	718	21,187	-----	-----	-----	Proposed to NW
5	Reservoir	0.208	2	1000	4,559	4	221.02	16,824	NW to Pond
7049 - Drainage Calcs TR55 6-7-22.gpw					Return Period: 10 Year			Tuesday, Jun 7, 2022	

Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

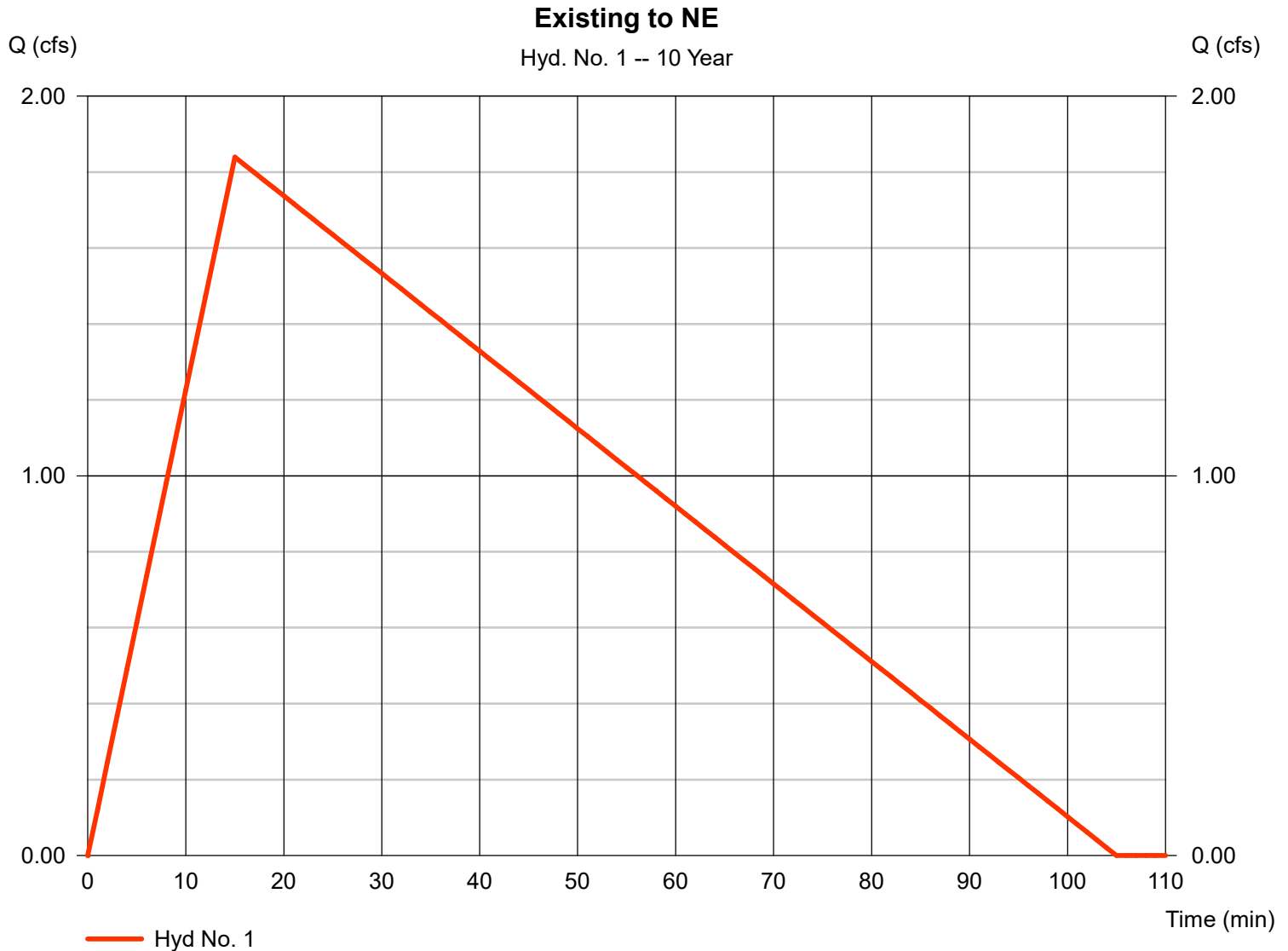
Hyd. No. 1

Existing to NE

Hydrograph type = Rational
 Storm frequency = 10 yrs
 Time interval = 1 min
 Drainage area = 1.300 ac
 Intensity = 4.043 in/hr
 IDF Curve = CTDOT2000.IDF

Peak discharge = 1.840 cfs
 Time to peak = 15 min
 Hyd. volume = 5,795 cuft
 Runoff coeff. = 0.35*
 Tc by User = 15.00 min
 Asc/Rec limb fact = 1/6

* Composite (Area/C) = $[(1.200 \times 0.30) + (0.100 \times 0.90)] / 1.300$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

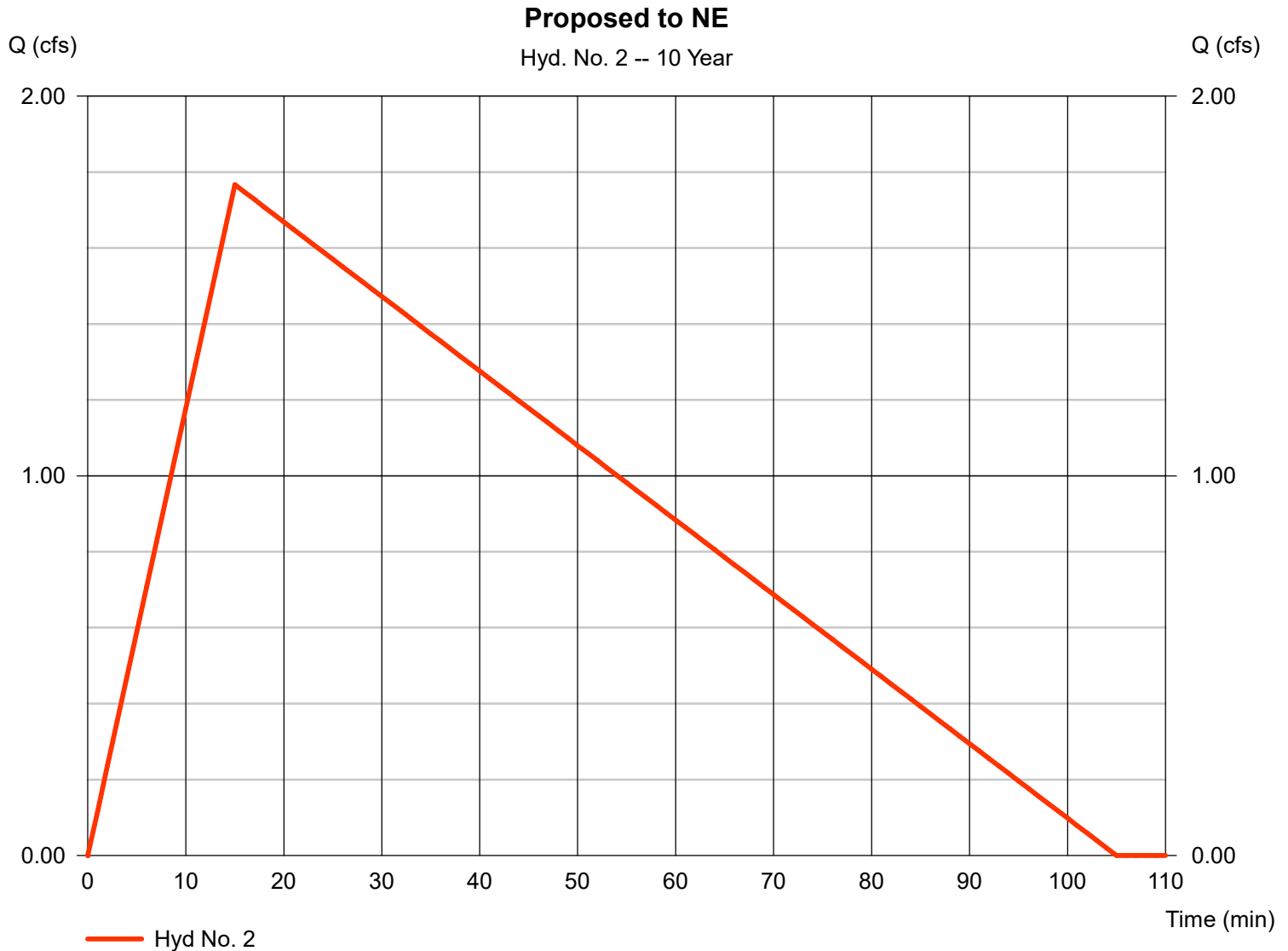
Hyd. No. 2

Proposed to NE

Hydrograph type = Rational
 Storm frequency = 10 yrs
 Time interval = 1 min
 Drainage area = 0.950 ac
 Intensity = 4.043 in/hr
 IDF Curve = CTDOT2000.IDF

Peak discharge = 1.767 cfs
 Time to peak = 15 min
 Hyd. volume = 5,566 cuft
 Runoff coeff. = 0.46*
 Tc by User = 15.00 min
 Asc/Rec limb fact = 1/6

* Composite (Area/C) = $[(0.690 \times 0.30) + (0.260 \times 0.90)] / 0.950$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

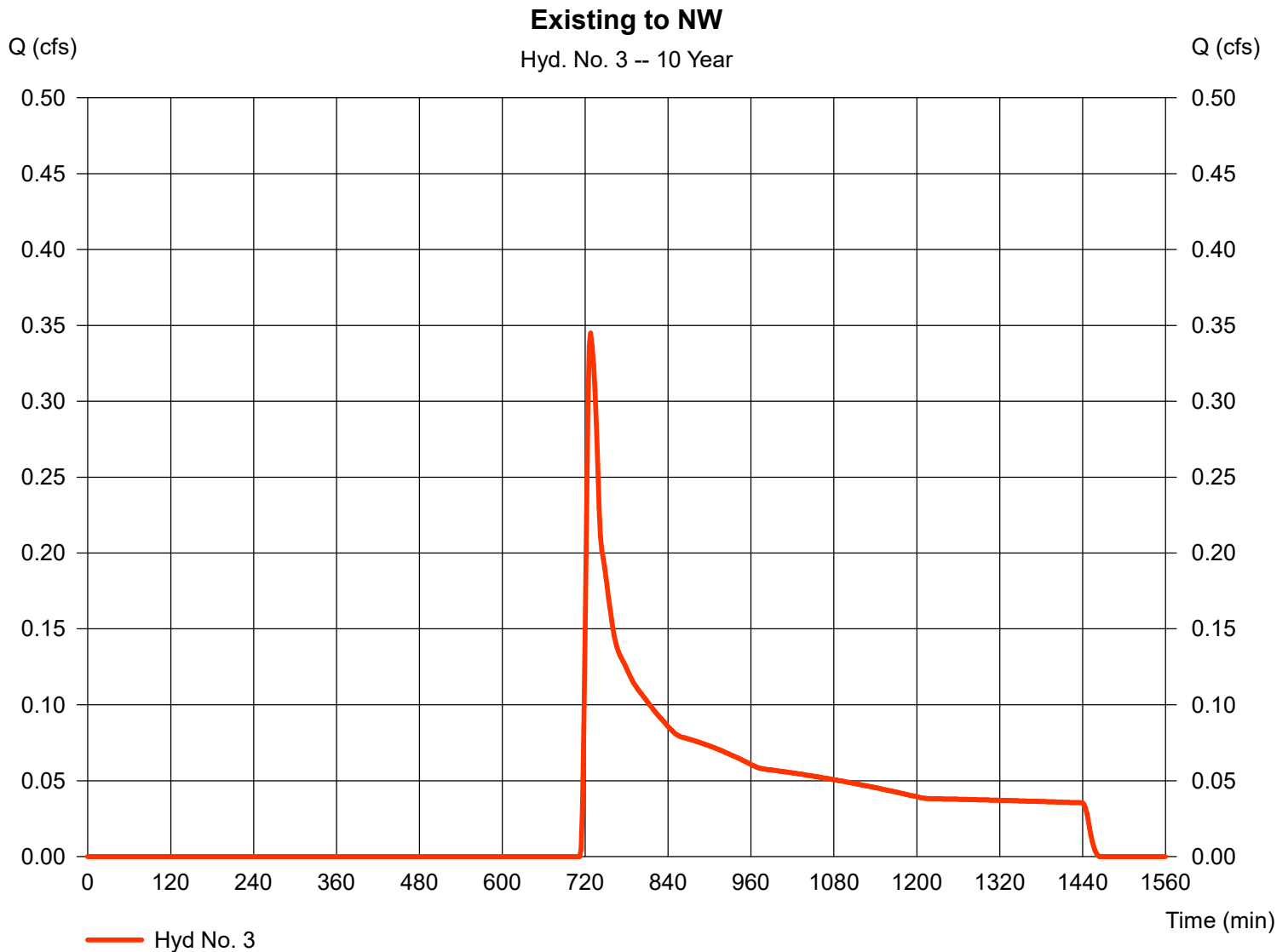
Hyd. No. 3

Existing to NW

Hydrograph type = SCS Runoff
 Storm frequency = 10 yrs
 Time interval = 2 min
 Drainage area = 2.340 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 5.00 in
 Storm duration = 24 hrs

Peak discharge = 0.345 cfs
 Time to peak = 728 min
 Hyd. volume = 2,924 cuft
 Curve number = 43*
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 15.00 min
 Distribution = Type II
 Shape factor = 484

* Composite (Area/CN) = $[(2.200 \times 39) + (0.140 \times 98)] / 2.340$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

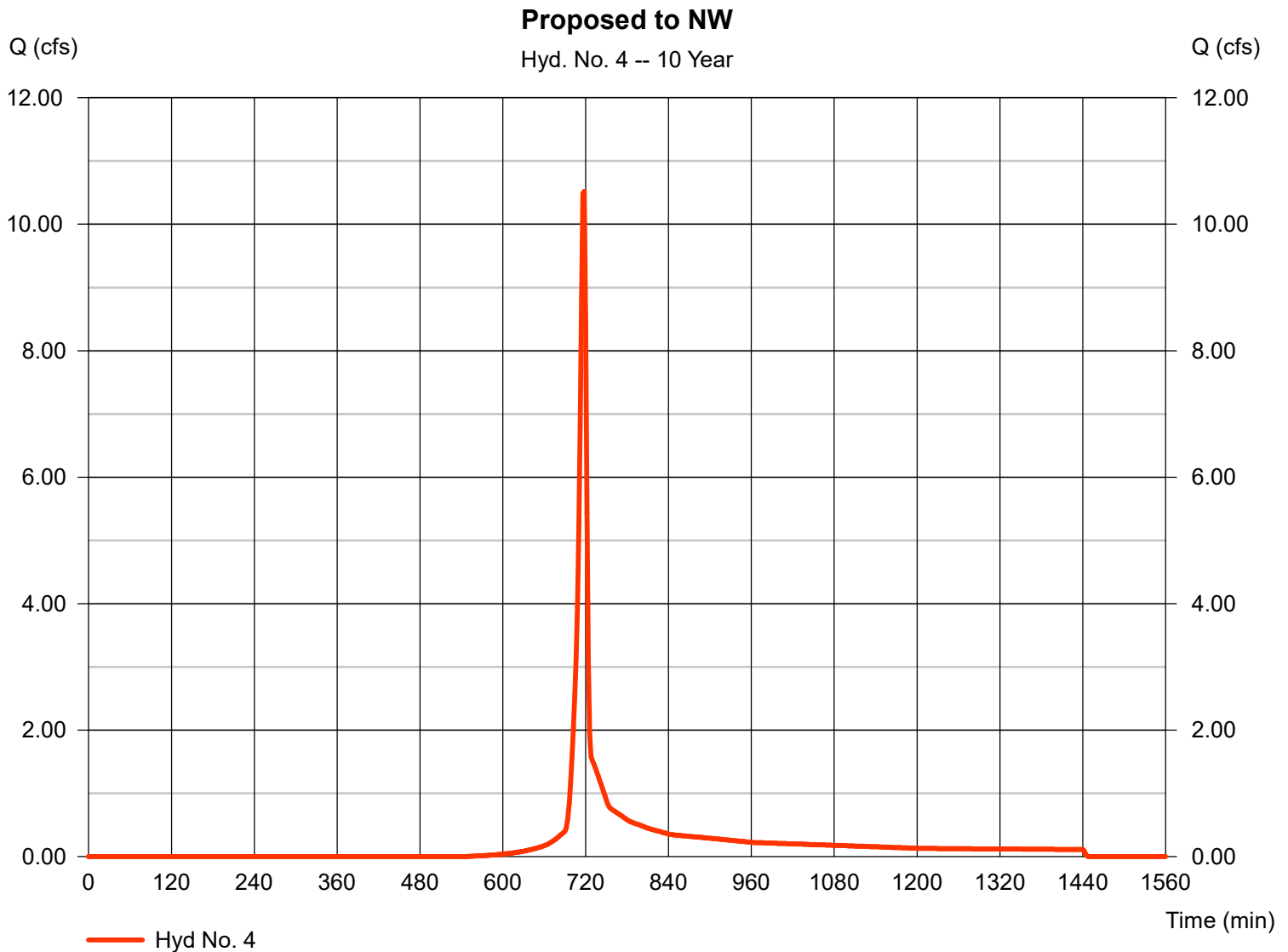
Hyd. No. 4

Proposed to NW

Hydrograph type = SCS Runoff
 Storm frequency = 10 yrs
 Time interval = 2 min
 Drainage area = 2.730 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 5.00 in
 Storm duration = 24 hrs

Peak discharge = 10.52 cfs
 Time to peak = 718 min
 Hyd. volume = 21,187 cuft
 Curve number = 73*
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 5.00 min
 Distribution = Type II
 Shape factor = 484

* Composite (Area/CN) = $[(1.160 \times 39) + (1.570 \times 98)] / 2.730$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

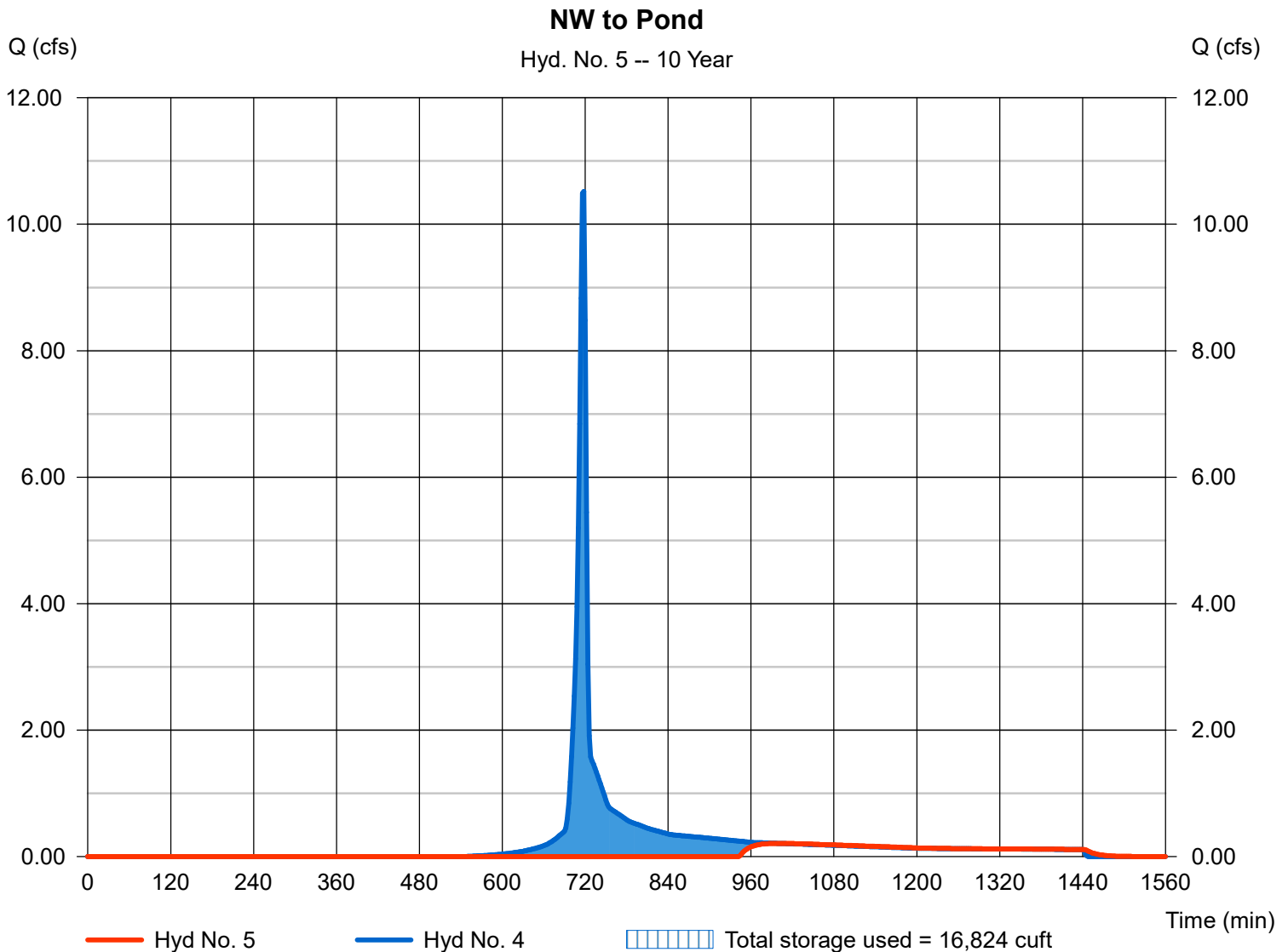
Hyd. No. 5

NW to Pond

Hydrograph type = Reservoir
 Storm frequency = 10 yrs
 Time interval = 2 min
 Inflow hyd. No. = 4 - Proposed to NW
 Reservoir name = Retention Basin

Peak discharge = 0.208 cfs
 Time to peak = 1000 min
 Hyd. volume = 4,559 cuft
 Max. Elevation = 221.02 ft
 Max. Storage = 16,824 cuft

Storage Indication method used.



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

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	Rational	2.143	1	15	6,752	-----	-----	-----	Existing to NE
2	Rational	2.059	1	15	6,485	-----	-----	-----	Proposed to NE
3	SCS Runoff	0.874	2	726	4,721	-----	-----	-----	Existing to NW
4	SCS Runoff	13.07	2	716	26,399	-----	-----	-----	Proposed to NW
5	Reservoir	0.527	2	814	9,771	4	221.05	17,126	NW to Pond
7049 - Drainage Calcs TR55 6-7-22.gpw					Return Period: 25 Year			Tuesday, Jun 7, 2022	

Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

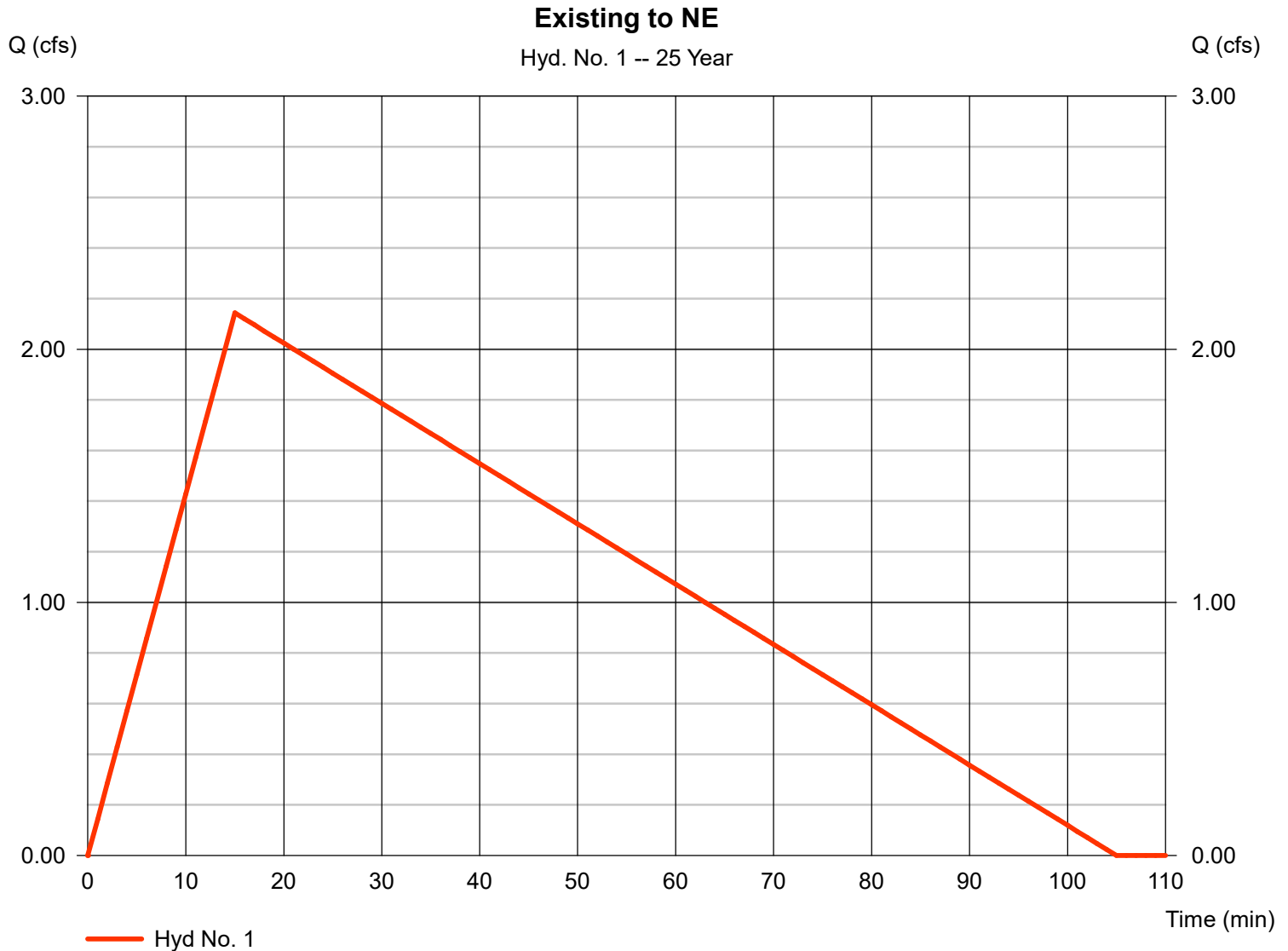
Hyd. No. 1

Existing to NE

Hydrograph type = Rational
 Storm frequency = 25 yrs
 Time interval = 1 min
 Drainage area = 1.300 ac
 Intensity = 4.711 in/hr
 IDF Curve = CTDOT2000.IDF

Peak discharge = 2.143 cfs
 Time to peak = 15 min
 Hyd. volume = 6,752 cuft
 Runoff coeff. = 0.35*
 Tc by User = 15.00 min
 Asc/Rec limb fact = 1/6

* Composite (Area/C) = $[(1.200 \times 0.30) + (0.100 \times 0.90)] / 1.300$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

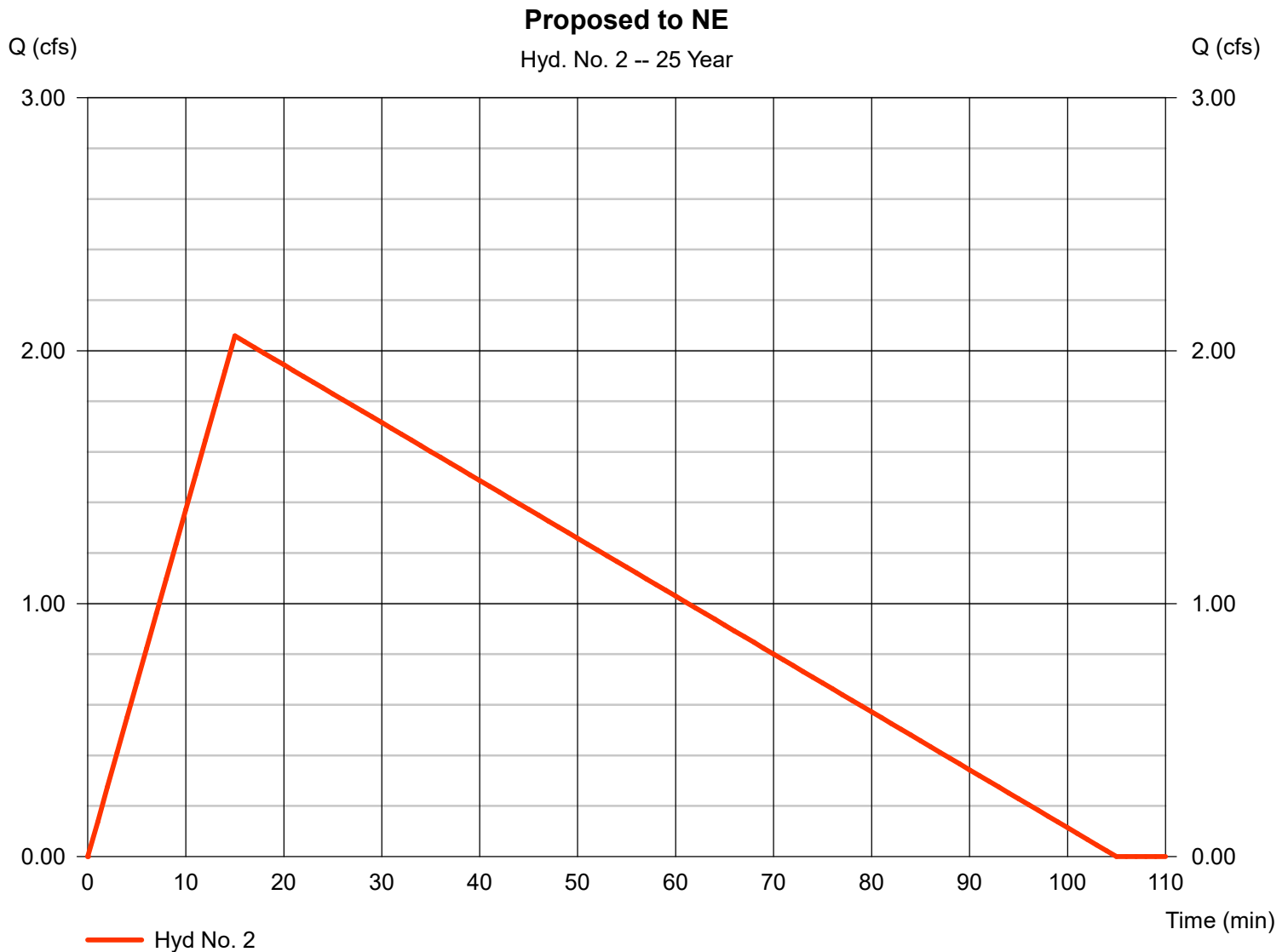
Hyd. No. 2

Proposed to NE

Hydrograph type = Rational
 Storm frequency = 25 yrs
 Time interval = 1 min
 Drainage area = 0.950 ac
 Intensity = 4.711 in/hr
 IDF Curve = CTDOT2000.IDF

Peak discharge = 2.059 cfs
 Time to peak = 15 min
 Hyd. volume = 6,485 cuft
 Runoff coeff. = 0.46*
 Tc by User = 15.00 min
 Asc/Rec limb fact = 1/6

* Composite (Area/C) = $[(0.690 \times 0.30) + (0.260 \times 0.90)] / 0.950$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

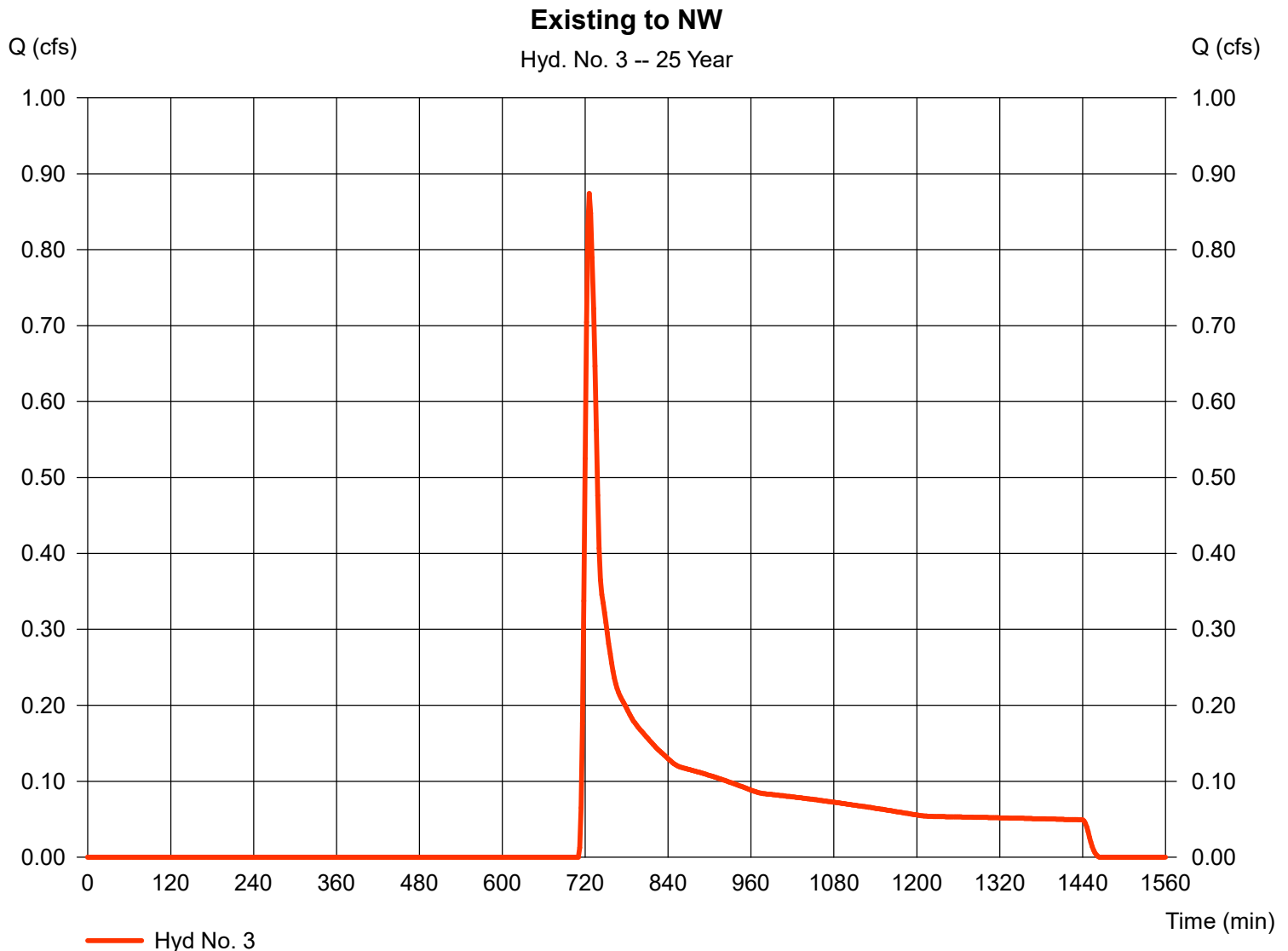
Hyd. No. 3

Existing to NW

Hydrograph type = SCS Runoff
 Storm frequency = 25 yrs
 Time interval = 2 min
 Drainage area = 2.340 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 5.70 in
 Storm duration = 24 hrs

Peak discharge = 0.874 cfs
 Time to peak = 726 min
 Hyd. volume = 4,721 cuft
 Curve number = 43*
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 15.00 min
 Distribution = Type II
 Shape factor = 484

* Composite (Area/CN) = $[(2.200 \times 39) + (0.140 \times 98)] / 2.340$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

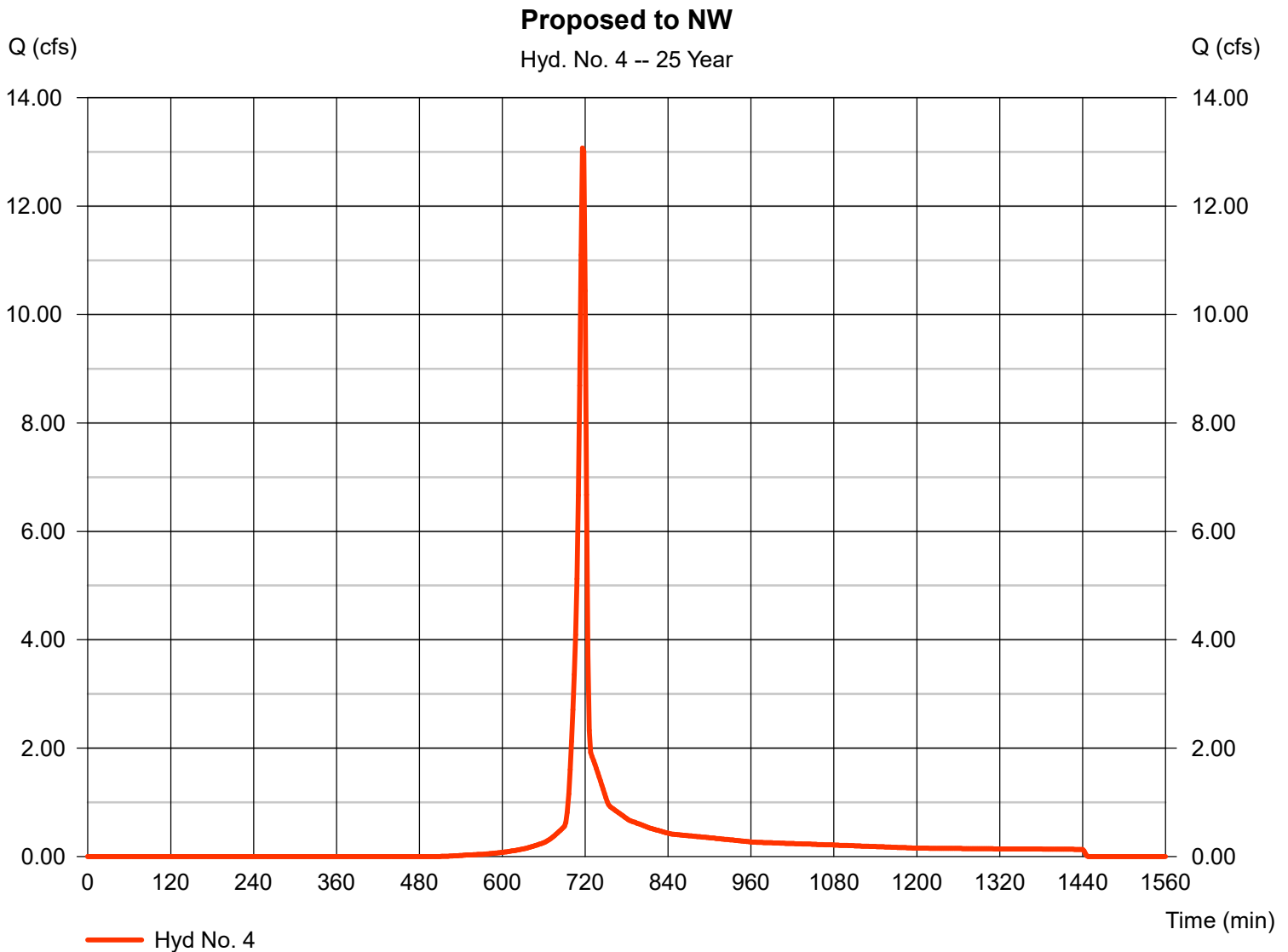
Hyd. No. 4

Proposed to NW

Hydrograph type = SCS Runoff
 Storm frequency = 25 yrs
 Time interval = 2 min
 Drainage area = 2.730 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 5.70 in
 Storm duration = 24 hrs

Peak discharge = 13.07 cfs
 Time to peak = 716 min
 Hyd. volume = 26,399 cuft
 Curve number = 73*
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 5.00 min
 Distribution = Type II
 Shape factor = 484

* Composite (Area/CN) = $[(1.160 \times 39) + (1.570 \times 98)] / 2.730$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

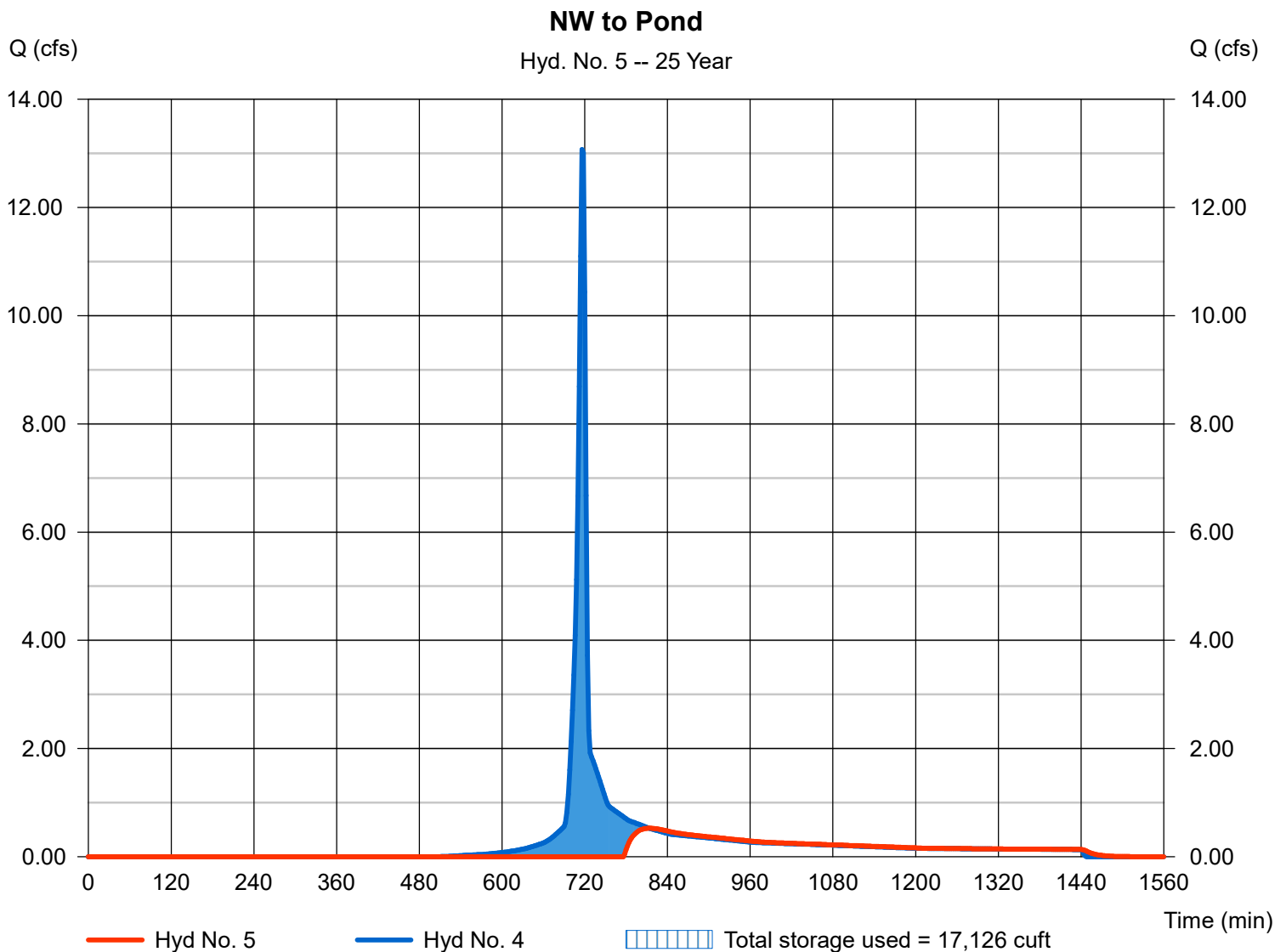
Hyd. No. 5

NW to Pond

Hydrograph type = Reservoir
 Storm frequency = 25 yrs
 Time interval = 2 min
 Inflow hyd. No. = 4 - Proposed to NW
 Reservoir name = Retention Basin

Peak discharge = 0.527 cfs
 Time to peak = 814 min
 Hyd. volume = 9,771 cuft
 Max. Elevation = 221.05 ft
 Max. Storage = 17,126 cuft

Storage Indication method used.



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

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	Rational	2.368	1	15	7,460	-----	-----	-----	Existing to NE
2	Rational	2.274	1	15	7,164	-----	-----	-----	Proposed to NE
3	SCS Runoff	1.473	2	726	6,520	-----	-----	-----	Existing to NW
4	SCS Runoff	15.33	2	716	31,022	-----	-----	-----	Proposed to NW
5	Reservoir	1.058	2	756	14,394	4	221.11	17,629	NW to Pond
7049 - Drainage Calcs TR55 6-7-22.gpw					Return Period: 50 Year			Tuesday, Jun 7, 2022	

Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

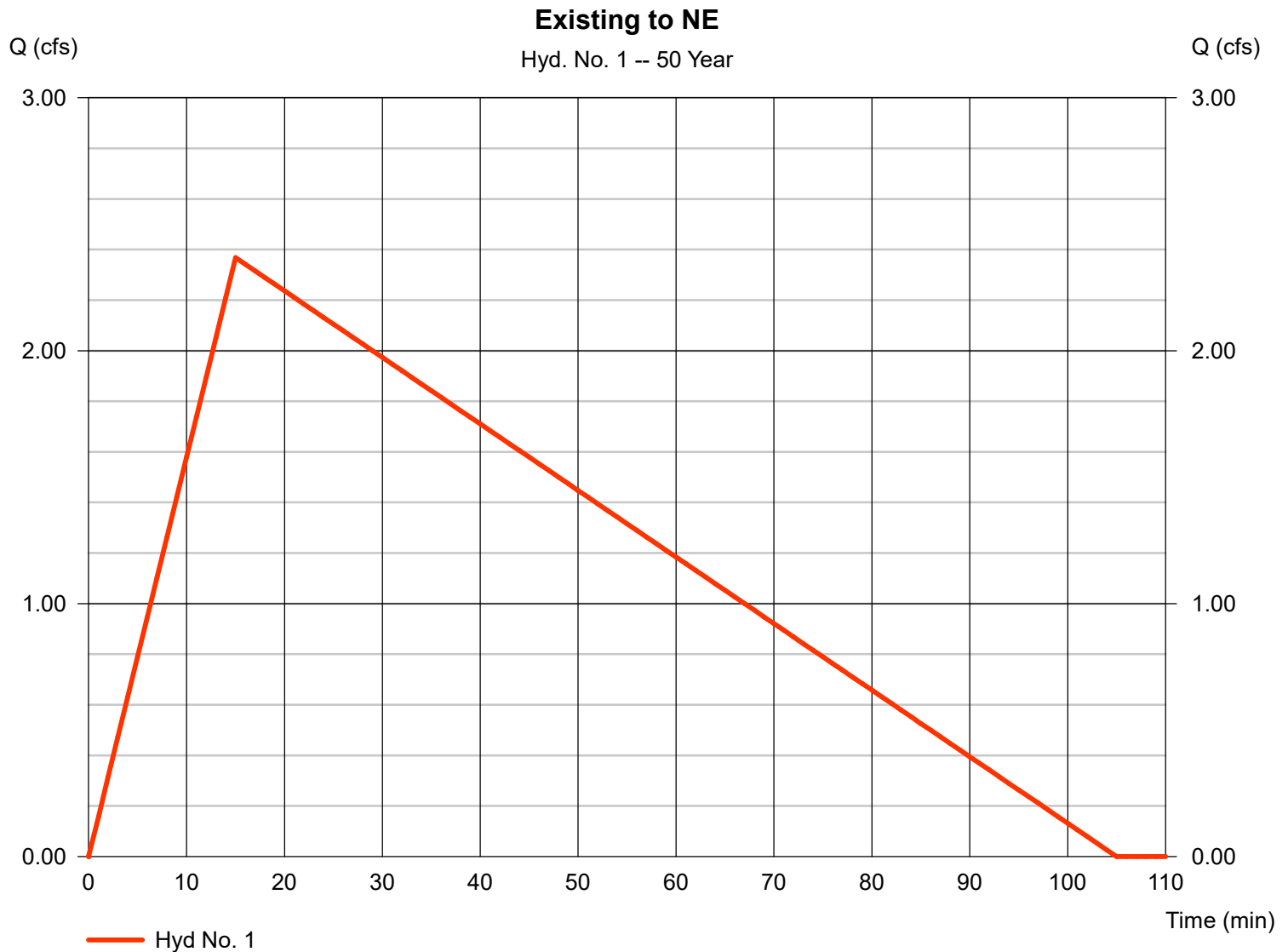
Hyd. No. 1

Existing to NE

Hydrograph type = Rational
 Storm frequency = 50 yrs
 Time interval = 1 min
 Drainage area = 1.300 ac
 Intensity = 5.205 in/hr
 IDF Curve = CTDOT2000.IDF

Peak discharge = 2.368 cfs
 Time to peak = 15 min
 Hyd. volume = 7,460 cuft
 Runoff coeff. = 0.35*
 Tc by User = 15.00 min
 Asc/Rec limb fact = 1/6

* Composite (Area/C) = $[(1.200 \times 0.30) + (0.100 \times 0.90)] / 1.300$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

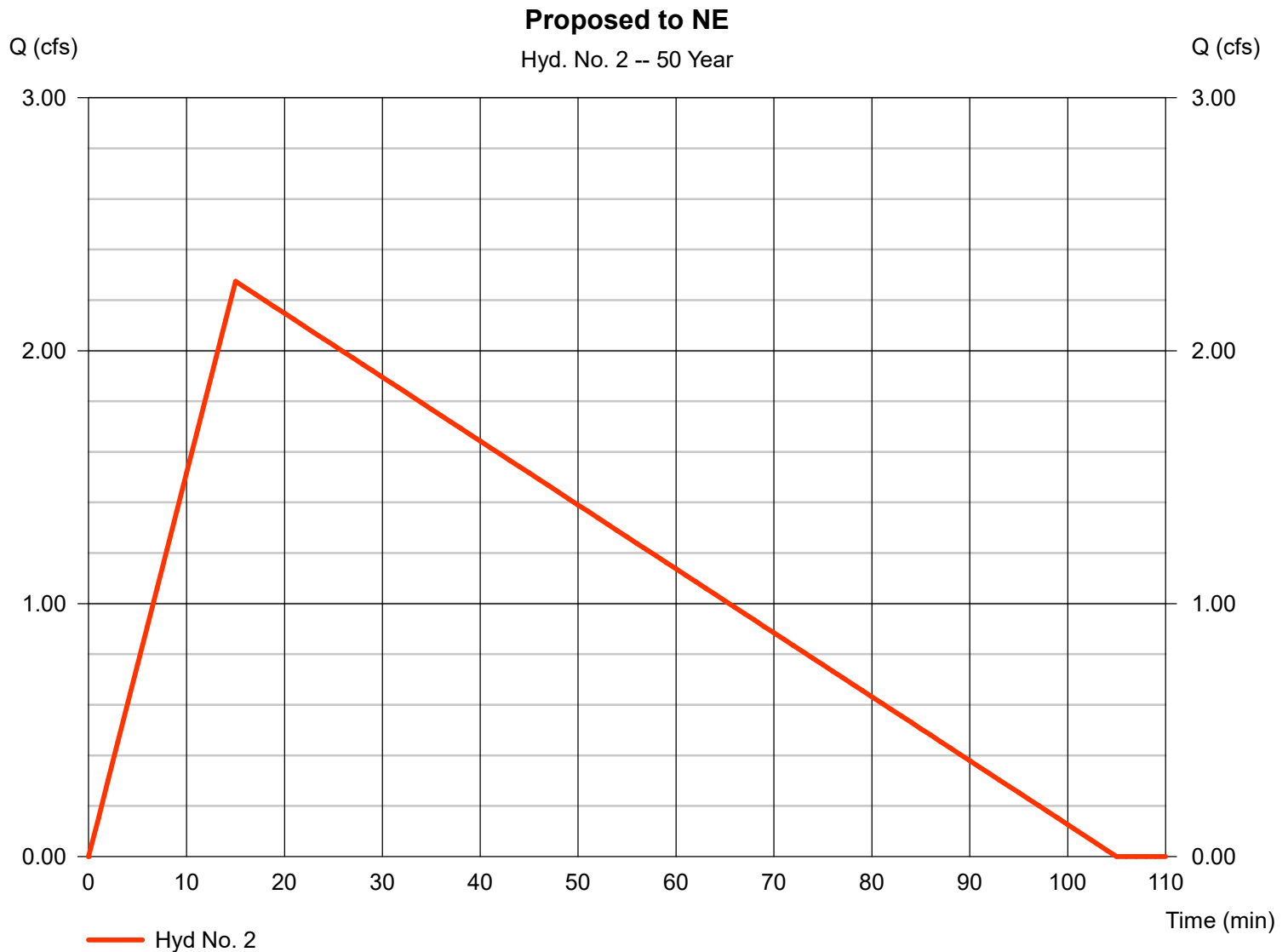
Hyd. No. 2

Proposed to NE

Hydrograph type = Rational
 Storm frequency = 50 yrs
 Time interval = 1 min
 Drainage area = 0.950 ac
 Intensity = 5.205 in/hr
 IDF Curve = CTDOT2000.IDF

Peak discharge = 2.274 cfs
 Time to peak = 15 min
 Hyd. volume = 7,164 cuft
 Runoff coeff. = 0.46*
 Tc by User = 15.00 min
 Asc/Rec limb fact = 1/6

* Composite (Area/C) = $[(0.690 \times 0.30) + (0.260 \times 0.90)] / 0.950$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

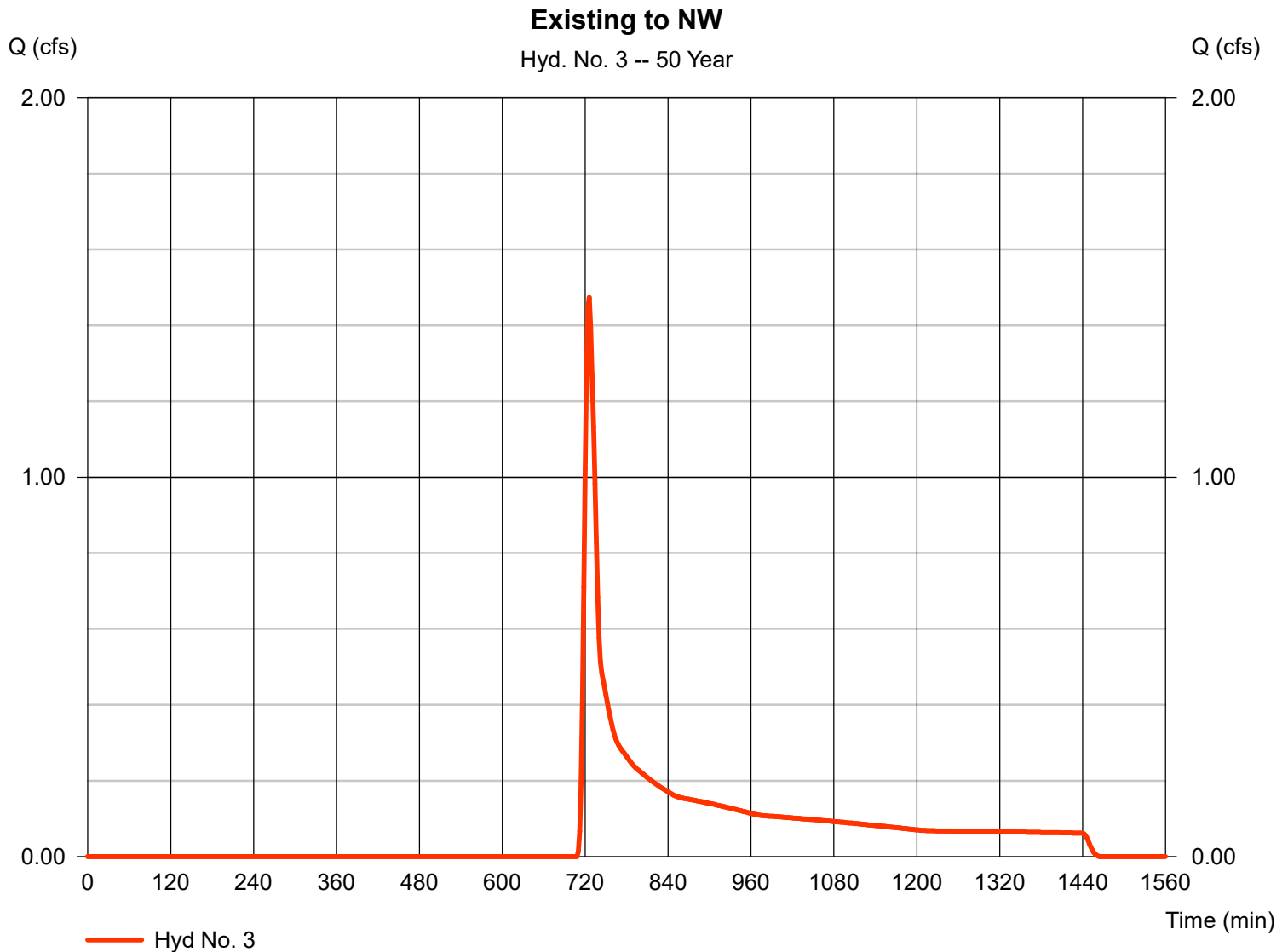
Hyd. No. 3

Existing to NW

Hydrograph type = SCS Runoff
 Storm frequency = 50 yrs
 Time interval = 2 min
 Drainage area = 2.340 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 6.30 in
 Storm duration = 24 hrs

Peak discharge = 1.473 cfs
 Time to peak = 726 min
 Hyd. volume = 6,520 cuft
 Curve number = 43*
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 15.00 min
 Distribution = Type II
 Shape factor = 484

* Composite (Area/CN) = $[(2.200 \times 39) + (0.140 \times 98)] / 2.340$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

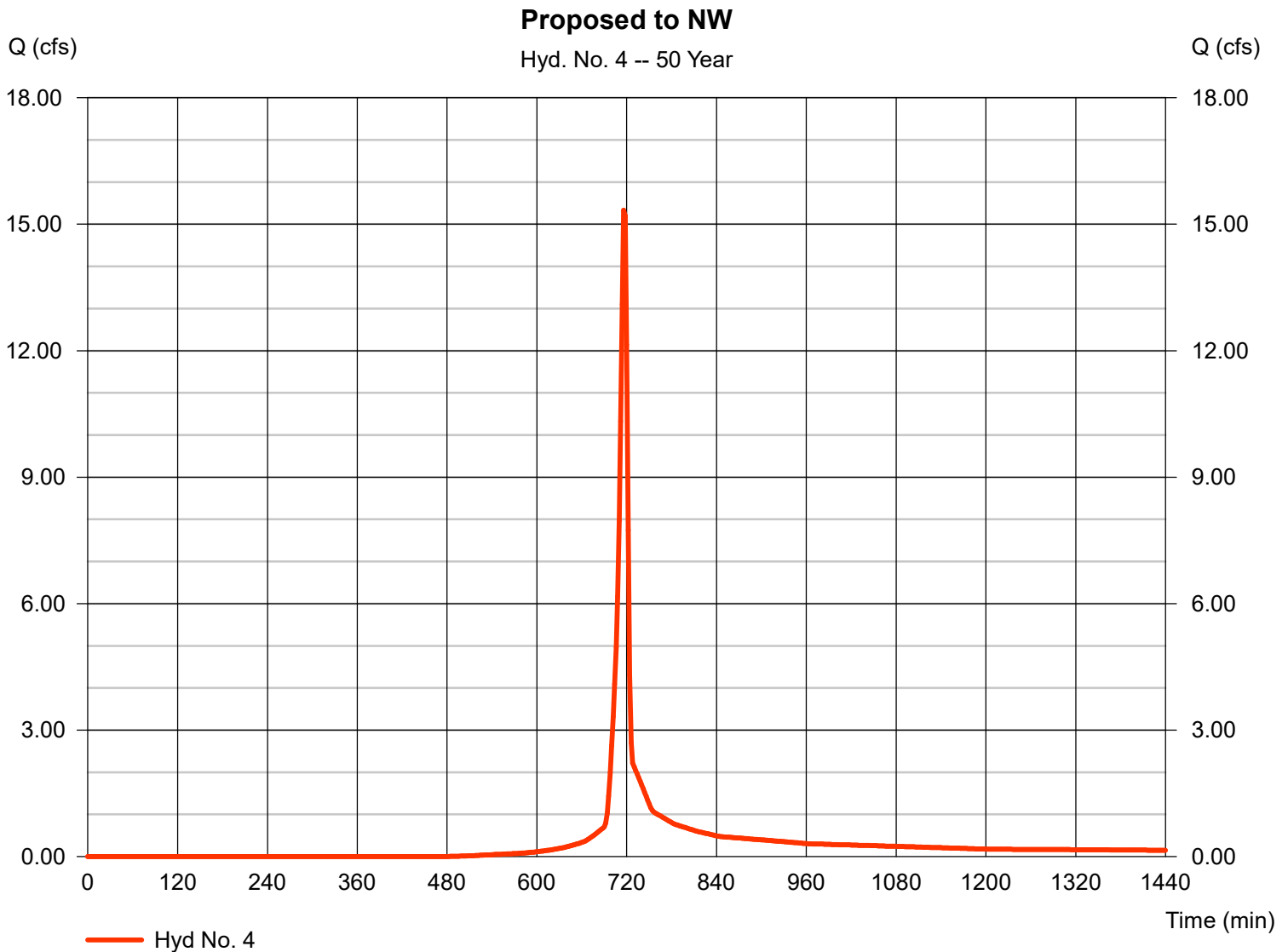
Hyd. No. 4

Proposed to NW

Hydrograph type = SCS Runoff
 Storm frequency = 50 yrs
 Time interval = 2 min
 Drainage area = 2.730 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 6.30 in
 Storm duration = 24 hrs

Peak discharge = 15.33 cfs
 Time to peak = 716 min
 Hyd. volume = 31,022 cuft
 Curve number = 73*
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 5.00 min
 Distribution = Type II
 Shape factor = 484

* Composite (Area/CN) = $[(1.160 \times 39) + (1.570 \times 98)] / 2.730$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

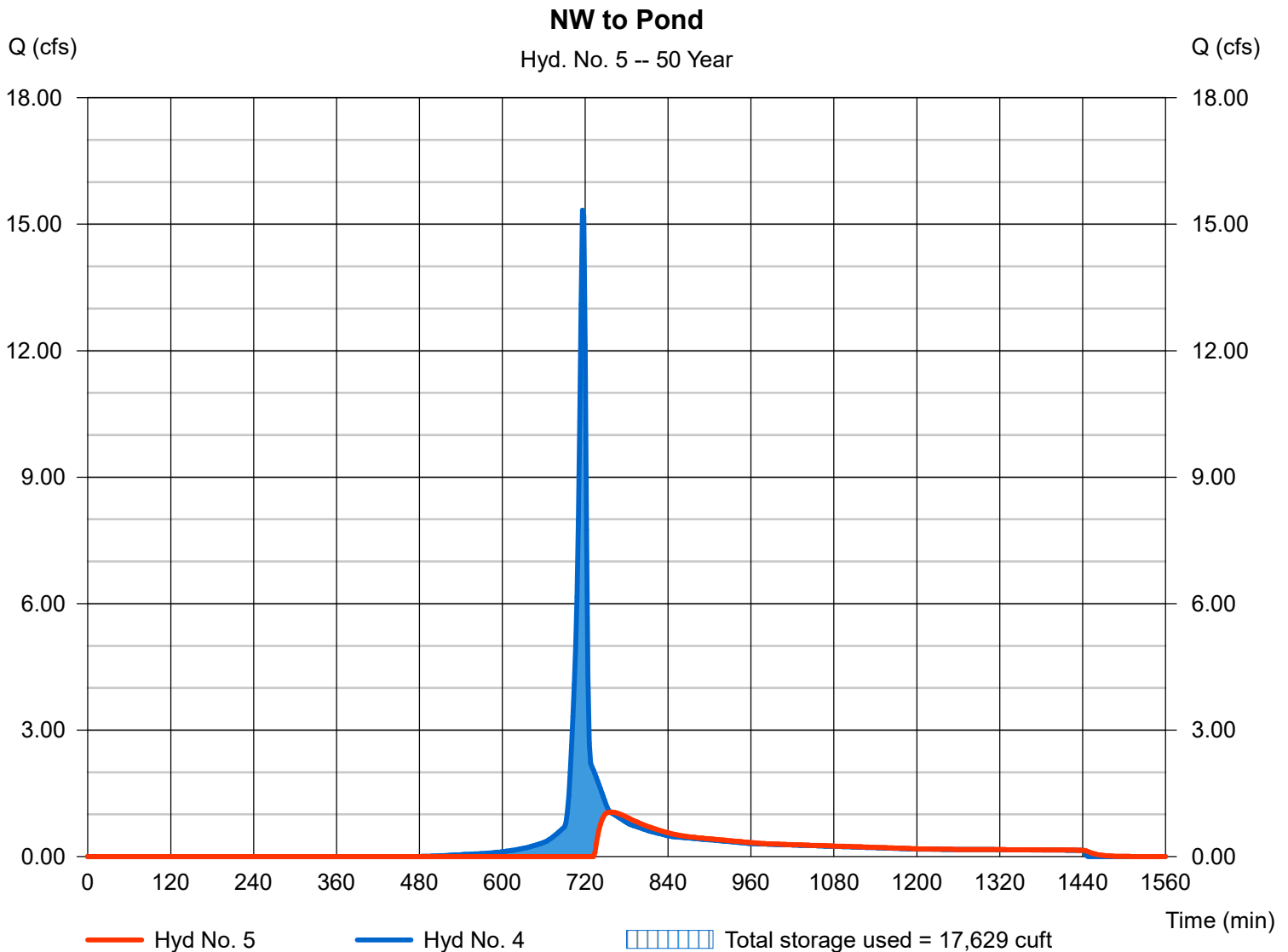
Hyd. No. 5

NW to Pond

Hydrograph type = Reservoir
 Storm frequency = 50 yrs
 Time interval = 2 min
 Inflow hyd. No. = 4 - Proposed to NW
 Reservoir name = Retention Basin

Peak discharge = 1.058 cfs
 Time to peak = 756 min
 Hyd. volume = 14,394 cuft
 Max. Elevation = 221.11 ft
 Max. Storage = 17,629 cuft

Storage Indication method used.



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

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	Rational	2.583	1	15	8,135	-----	-----	-----	Existing to NE
2	Rational	2.480	1	15	7,814	-----	-----	-----	Proposed to NE
3	SCS Runoff	2.455	2	724	9,258	-----	-----	-----	Existing to NW
4	SCS Runoff	18.40	2	716	37,363	-----	-----	-----	Proposed to NW
5	Reservoir	2.441	2	732	20,735	4	221.24	18,939	NW to Pond
7049 - Drainage Calcs TR55 6-7-22.gpw					Return Period: 100 Year			Tuesday, Jun 7, 2022	

Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

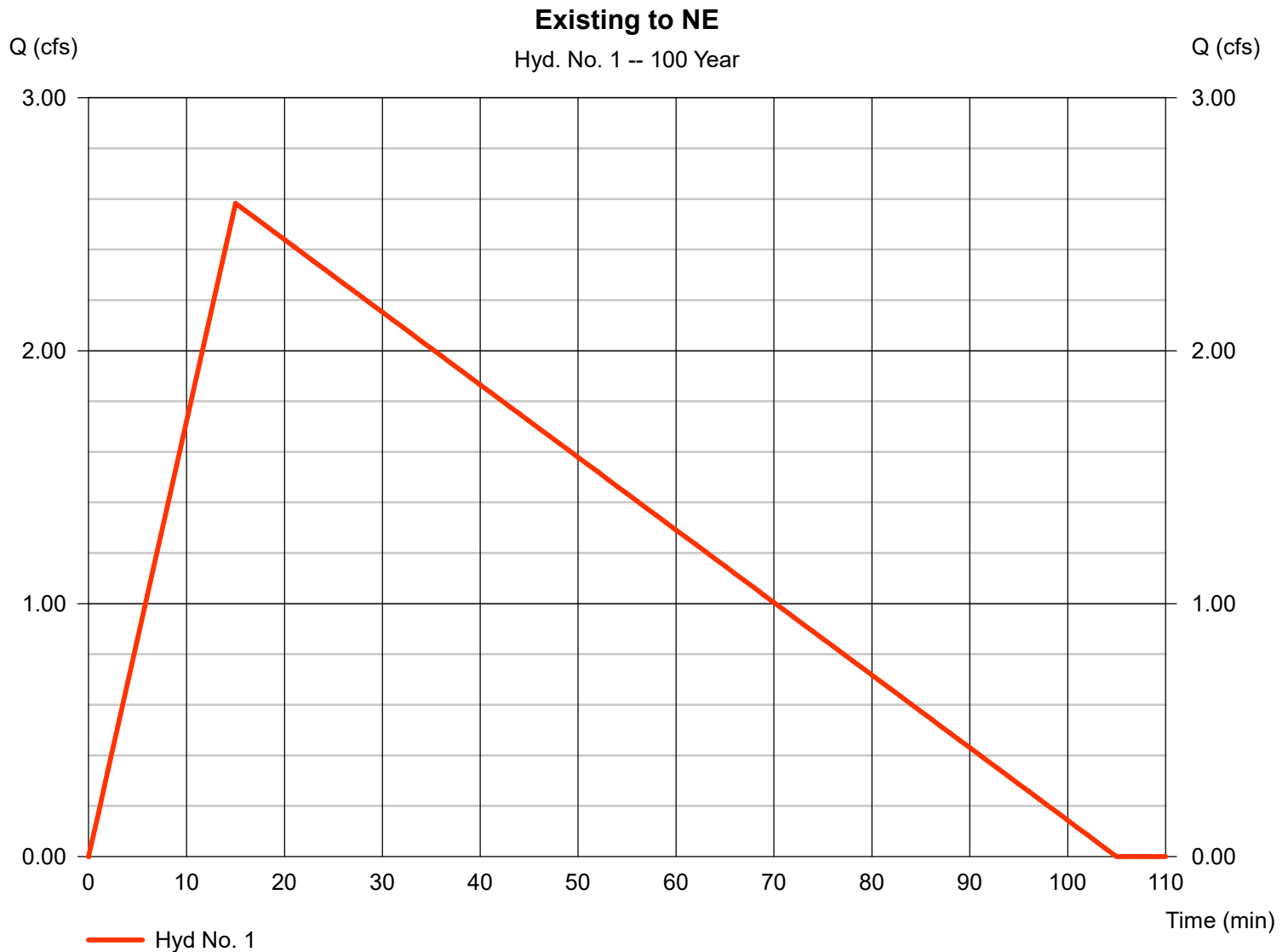
Hyd. No. 1

Existing to NE

Hydrograph type = Rational
 Storm frequency = 100 yrs
 Time interval = 1 min
 Drainage area = 1.300 ac
 Intensity = 5.676 in/hr
 IDF Curve = CTDOT2000.IDF

Peak discharge = 2.583 cfs
 Time to peak = 15 min
 Hyd. volume = 8,135 cuft
 Runoff coeff. = 0.35*
 Tc by User = 15.00 min
 Asc/Rec limb fact = 1/6

* Composite (Area/C) = $[(1.200 \times 0.30) + (0.100 \times 0.90)] / 1.300$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

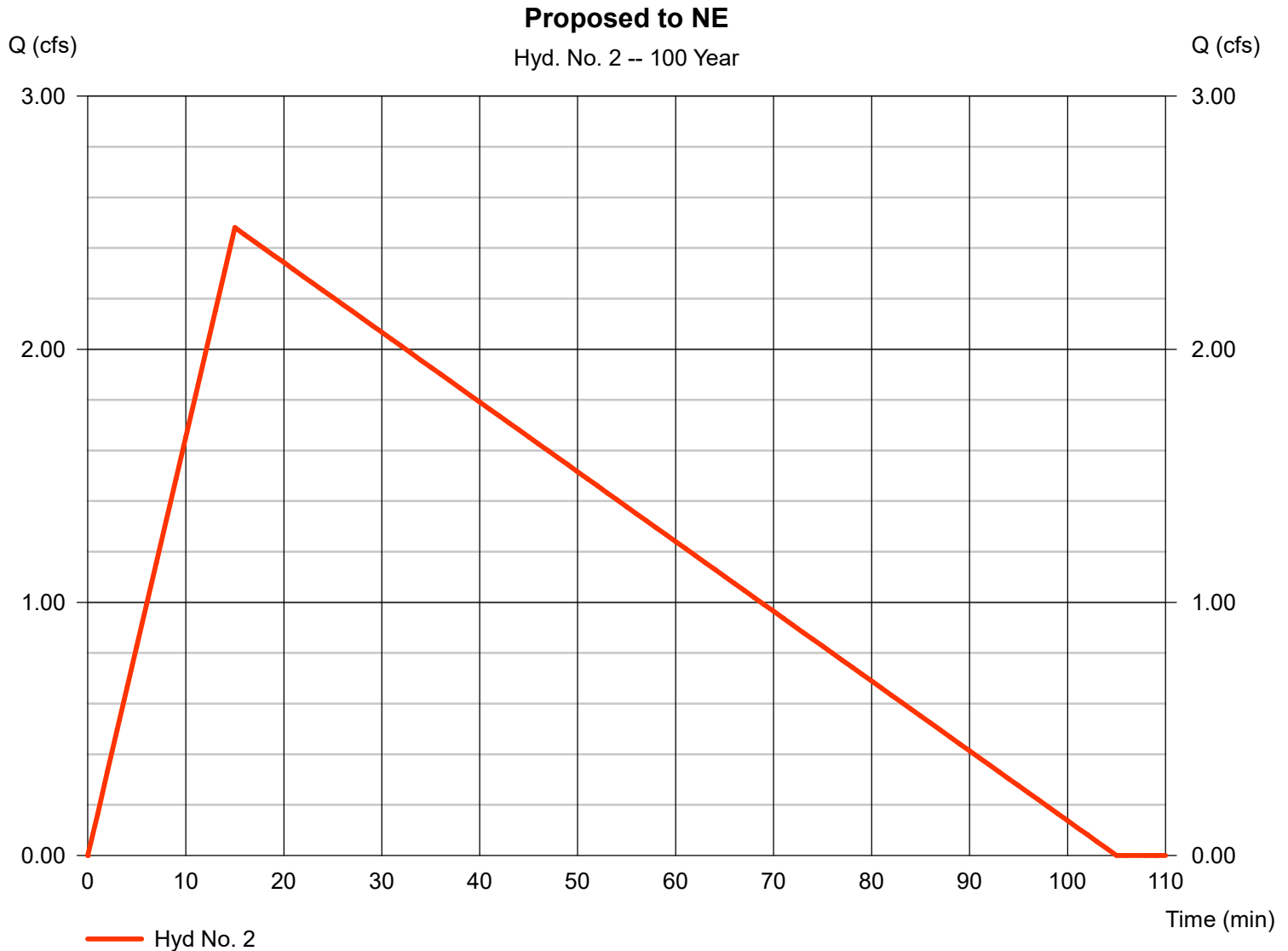
Hyd. No. 2

Proposed to NE

Hydrograph type = Rational
 Storm frequency = 100 yrs
 Time interval = 1 min
 Drainage area = 0.950 ac
 Intensity = 5.676 in/hr
 IDF Curve = CTDOT2000.IDF

Peak discharge = 2.480 cfs
 Time to peak = 15 min
 Hyd. volume = 7,814 cuft
 Runoff coeff. = 0.46*
 Tc by User = 15.00 min
 Asc/Rec limb fact = 1/6

* Composite (Area/C) = $[(0.690 \times 0.30) + (0.260 \times 0.90)] / 0.950$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

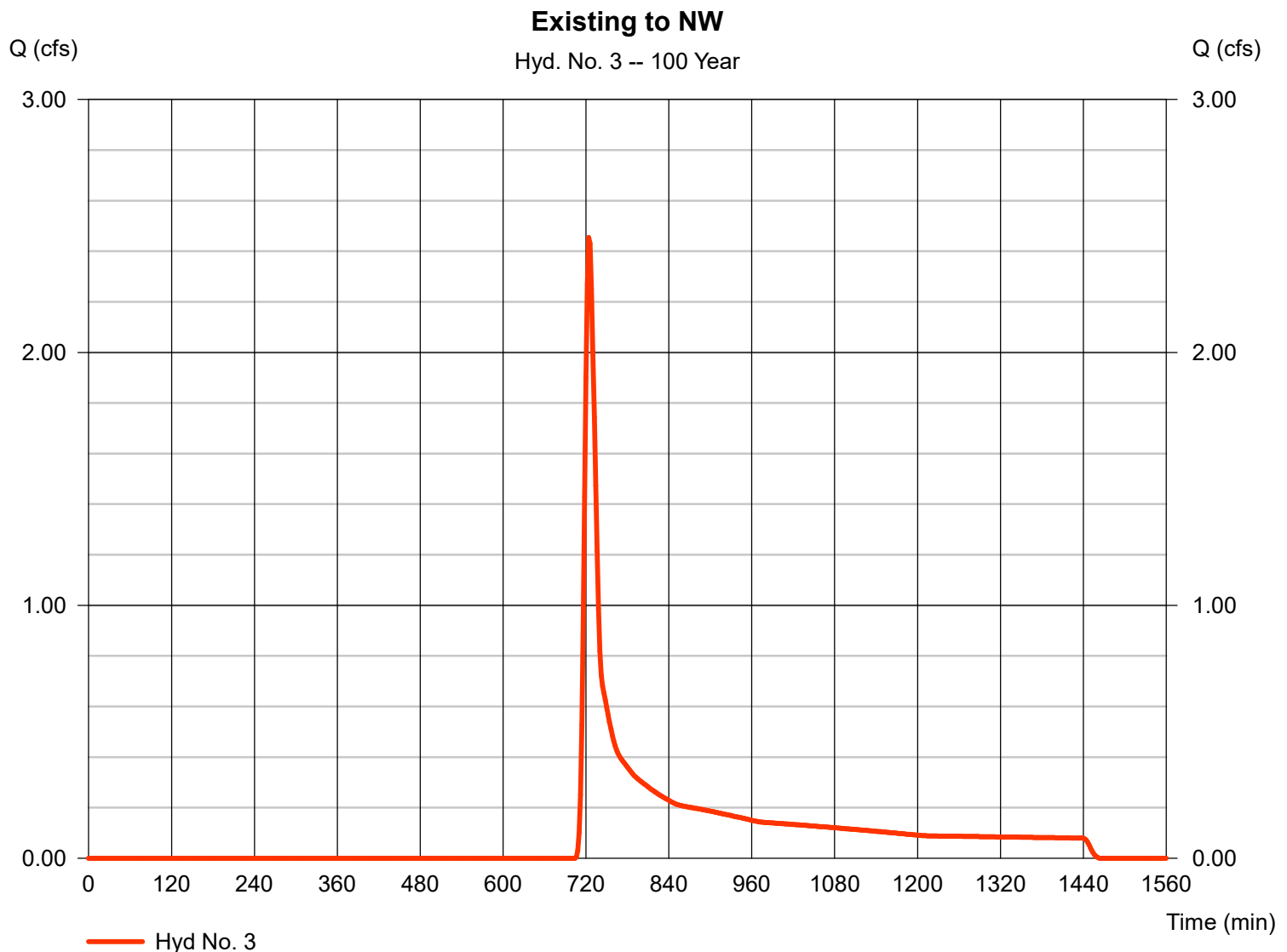
Hyd. No. 3

Existing to NW

Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Time interval = 2 min
 Drainage area = 2.340 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 7.10 in
 Storm duration = 24 hrs

Peak discharge = 2.455 cfs
 Time to peak = 724 min
 Hyd. volume = 9,258 cuft
 Curve number = 43*
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 15.00 min
 Distribution = Type II
 Shape factor = 484

* Composite (Area/CN) = $[(2.200 \times 39) + (0.140 \times 98)] / 2.340$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

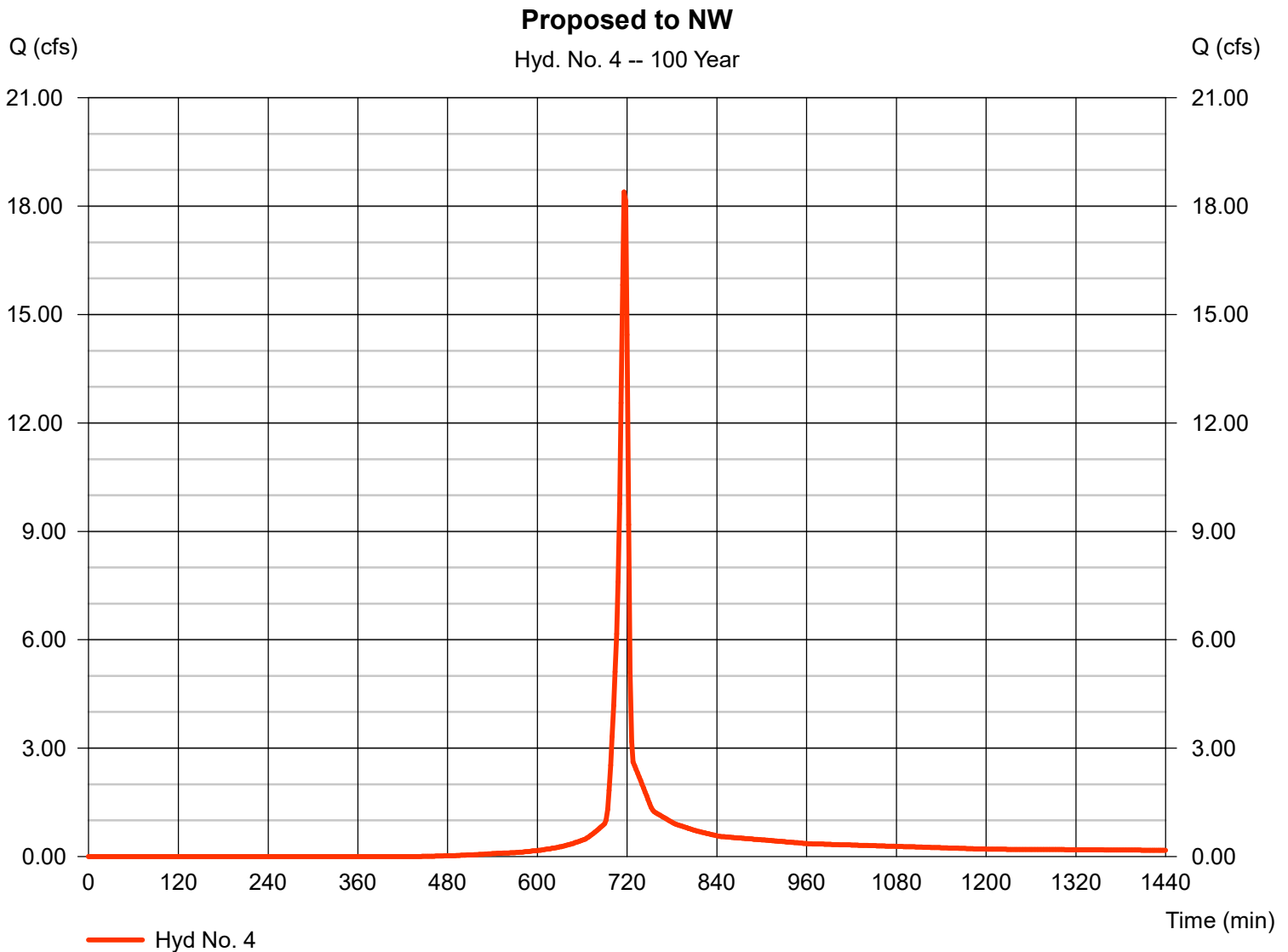
Hyd. No. 4

Proposed to NW

Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Time interval = 2 min
 Drainage area = 2.730 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 7.10 in
 Storm duration = 24 hrs

Peak discharge = 18.40 cfs
 Time to peak = 716 min
 Hyd. volume = 37,363 cuft
 Curve number = 73*
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 5.00 min
 Distribution = Type II
 Shape factor = 484

* Composite (Area/CN) = $[(1.160 \times 39) + (1.570 \times 98)] / 2.730$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

Hyd. No. 5

NW to Pond

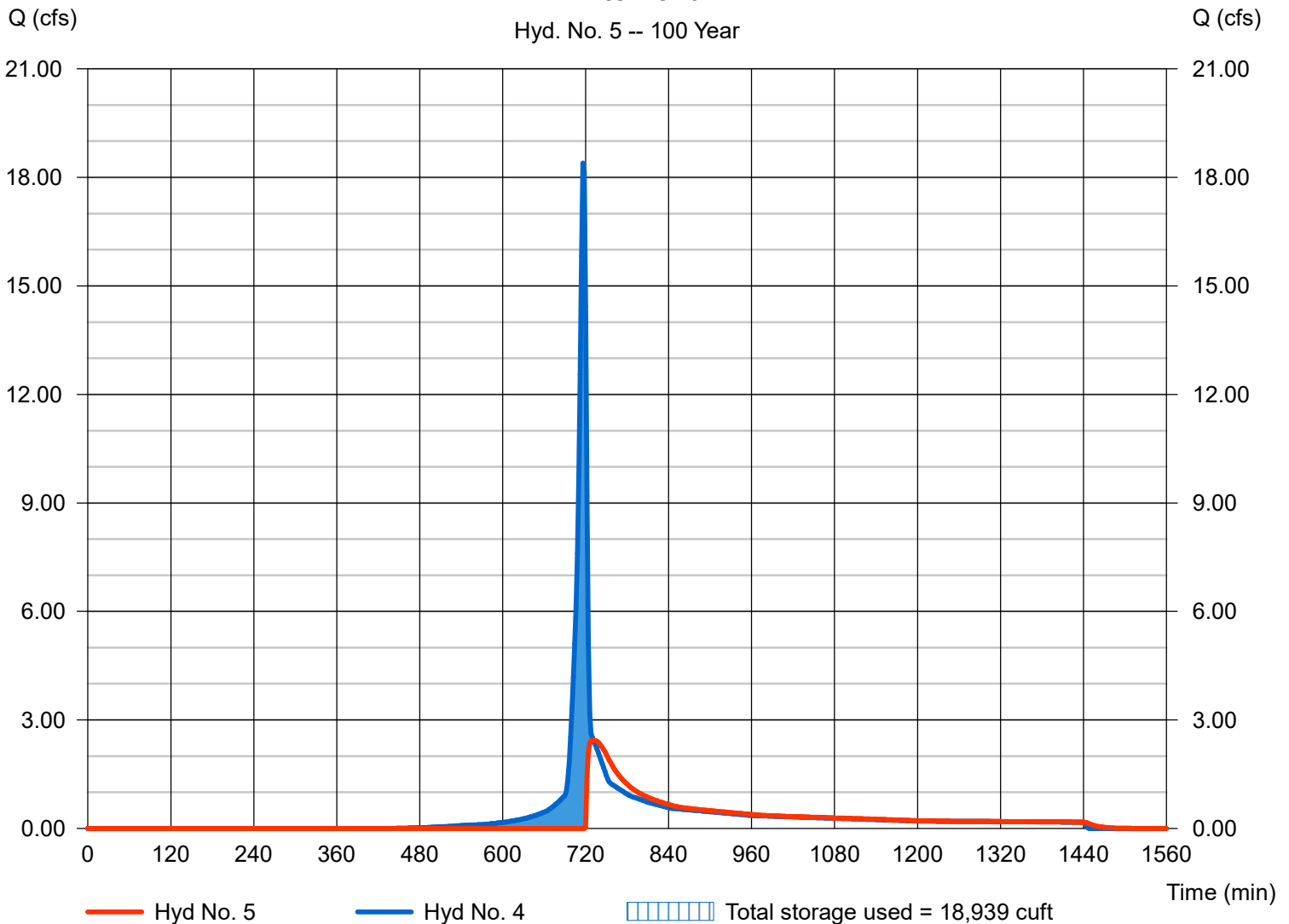
Hydrograph type = Reservoir
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyd. No. = 4 - Proposed to NW
 Reservoir name = Retention Basin

Peak discharge = 2.441 cfs
 Time to peak = 732 min
 Hyd. volume = 20,735 cuft
 Max. Elevation = 221.24 ft
 Max. Storage = 18,939 cuft

Storage Indication method used.

NW to Pond

Hyd. No. 5 -- 100 Year



Hydraflow Rainfall Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Tuesday, Jun 7, 2022

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	0.0000	0.0000	0.0000	-----
2	30.1225	6.6000	0.7676	-----
3	0.0000	0.0000	0.0000	-----
5	52.3308	9.8000	0.8367	-----
10	54.7383	10.8000	0.8016	-----
25	101.9813	15.8000	0.8971	-----
50	98.1551	15.7000	0.8577	-----
100	106.5909	17.0000	0.8462	-----

File name: CTDOT2000.IDF

$$\text{Intensity} = B / (T_c + D)^E$$

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	4.59	3.49	2.85	2.43	2.13	1.90	1.72	1.58	1.46	1.36	1.27	1.20
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	5.49	4.30	3.57	3.06	2.69	2.40	2.17	1.99	1.84	1.71	1.60	1.50
10	5.99	4.81	4.04	3.51	3.11	2.80	2.55	2.35	2.18	2.03	1.91	1.80
25	6.70	5.52	4.71	4.12	3.66	3.30	3.01	2.76	2.56	2.38	2.23	2.10
50	7.30	6.06	5.20	4.57	4.09	3.70	3.38	3.12	2.90	2.71	2.54	2.40
100	7.79	6.55	5.68	5.02	4.51	4.10	3.76	3.48	3.24	3.04	2.86	2.70

T_c = time in minutes. Values may exceed 60.

Precip. file name: return data.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	0.00	3.40	0.00	4.30	5.00	5.70	6.30	7.10
SCS 6-Hr	0.00	2.35	0.00	2.95	3.45	4.00	4.55	5.00
Huff-1st	0.00	1.55	0.00	2.75	4.00	5.38	6.50	8.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	1.55	0.00	2.75	4.00	5.38	6.50	8.00
Custom	0.00	2.75	0.00	3.55	4.00	4.85	5.35	6.00

Watershed Model Schematic	1
Hydrograph Return Period Recap	2
2 - Year	
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Hydrograph No. 2, Rational, Proposed to NE	5
Hydrograph No. 3, SCS Runoff, Existing to NW	6
Hydrograph No. 4, SCS Runoff, Proposed to NW	7
Hydrograph No. 5, Reservoir, NW to Pond	8
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10 - Year	
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Hydrograph No. 1, Rational, Existing to NE	11
Hydrograph No. 2, Rational, Proposed to NE	12
Hydrograph No. 3, SCS Runoff, Existing to NW	13
Hydrograph No. 4, SCS Runoff, Proposed to NW	14
Hydrograph No. 5, Reservoir, NW to Pond	15
25 - Year	
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Hydrograph No. 1, Rational, Existing to NE	17
Hydrograph No. 2, Rational, Proposed to NE	18
Hydrograph No. 3, SCS Runoff, Existing to NW	19
Hydrograph No. 4, SCS Runoff, Proposed to NW	20
Hydrograph No. 5, Reservoir, NW to Pond	21
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Hydrograph No. 2, Rational, Proposed to NE	24
Hydrograph No. 3, SCS Runoff, Existing to NW	25
Hydrograph No. 4, SCS Runoff, Proposed to NW	26
Hydrograph No. 5, Reservoir, NW to Pond	27
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Hydrograph No. 1, Rational, Existing to NE	29
Hydrograph No. 2, Rational, Proposed to NE	30
Hydrograph No. 3, SCS Runoff, Existing to NW	31
Hydrograph No. 4, SCS Runoff, Proposed to NW	32

Hydrograph No. 5, Reservoir, NW to Pond	33
IDF Report	34



INLAND WETLAND COMMISSION

APPENDIX A

APPLICATION FOR PERMIT

This application is for the use of inland wetlands and water courses.

The meetings are held on the second Wednesday of every month at 7:00pm in the Town Hall. If an on-site inspection is canceled due to inclement weather, the applicant is asked to call the office at 963-6803 30 minutes before the scheduled inspection to see if or when the inspection will be held.

Name of Applicant ANDREW REYNOLDS - Andrew Reynolds 7/25/22
Applicant's Address 122 David circle Lot 43
Phone # A-774-437-1818 M-508-847-7542
Owner of Land MARC GISLESON - Marc Gisleson 7-25-22
Owner's Address 102 David circle Lot 90

Location and description of proposed activity: Selective clearing of under brush and dead trees. Filling in rear of property within upland review area for the purpose of expanding the yard. No work proposed within flagged wetlands.

Activity & Purpose Code

Please **CHECK** one in each column that best describes the activity proposed.

Code	Activity Type	Code	Activity Purpose
☒	1 Filling	☒	A Residential Improvement by homeowner
☐	2 Excavation	☐	B New residential development - single family
☐	3 Land Clearing	☐	C New residential development - multi- family/condo
☐	4 Stream Channel	☐	D Commercial/Industrial Uses
☐	5 Stream Stabilization	☐	E Municipal Improvements
☐	6 Stream Clearance	☐	F Utility Company Improvements
☐	7 Culverting	☐	G Agriculture, Forestry or Conservation
☐	8 Und. Grd. Util.	☐	H Wetland Creation/Restoration
☐	9 Roadway Construction	☐	I Storm Water/Flood Control
☐	10 Drainage Improvements	☐	J Erosion/Sediment Control
☐	11 Pond Dredge/Dam Construction	☐	K Recreation/Boating/Navigation
☐	12 Activity Buffer/Set Back Area	☐	L Routine Maintenance
☐	13 Other: Please describe: _____		

INLAND WETLAND COMMISSION

APPENDIX A *Continued*

Project Name (if applicable) _____

Estimate of Linear Footage affecting Wetlands _____

0 (All work within buffer)

Affected number of acres in which Wetlands are part of
the impacted area for Multi-Family, Condos and
Commercial Development _____

0

TO BE COMPLETED BY THE COMMISSION

Application Number _____

Date of Receipt _____

7-28-2022 ck# 103
hls

Application Approved (date) _____

Conditions of approval if applicable _____

Application Denied (date) _____

Reason(s) for Denial _____

Signature of Chairman or Secretary of Commission

Date

INLAND WETLAND COMMISSION

APPENDIX A *Continued*

Application Procedure

1. Applicant will have a map showing the property boundaries, any wetlands on the property, proposed buildings, septic area, drainage if applicable and the dimension between these areas in scale 1" - 200' or less
2. Applicant must provide an approximate estimate of the linear footage of the wetlands that are affected by said proposal. This is for multi-family, condominiums or commercial development. Contact with the Zoning Official may clarify the nature of your project
3. Applicant must provide an approximate estimate of the number of acres that are affected by said proposal dealing with multi-family, condominiums and commercial development in which wetlands are part of that impacted area within the watershed.
4. Applicant will supply a copy of the soil scientist report with the application to the Wetlands Commission to be reviewed at the meeting by the Commission.
5. Applicant will have the soil scientist number the wetland flags and record the numbers of the flags on the site plan according to their location in the field. The location on the site map must match the field location.
6. If the applicant's estimates are not accurate, payment of the correct amount must be made before the Wetlands final approval of the application.
7. And any other information deemed necessary by the Commission.

Fee Schedule

1.	Permitted and non-regulated	\$40.00
2.	One lot regulated	\$40.00
3.	Regulated Area	
	Two (2) - Ten (10) lots	\$100.00
	Ten (10) - Twenty (20) lots	\$200.00
	Over Twenty (20+) lots	\$300.00
4.	Multi-Family/Condominium Regulated area	
	Zero (0) to Five (5) Acres	\$50.00
	Per linear foot of wetlands additional	\$0.35
	Over Five (5) acres	\$100.00
	Per linear foot of wetlands additional	\$0.35
5.	Commercial	
	Zero (0) to Five (5) Acres	\$100.00
	Per linear foot of wetlands additional	\$0.50
	Over Five (5) acres	\$300.00
	Per linear foot of wetlands additional	\$0.50

All applications must be submitted one week prior to the regularly scheduled monthly meeting.

May 2, 2022

Mr & Mrs Andrew Reynolds
122 David Cir
Putnam CT 06260

Subject: abutting land

Andrew,

This letter grants you permission to fill land behind your house at 122 David Circle, Putnam CT

This permission is given in anticipation of your purchasing said land.

Any costs associated with fill are purely your costs.

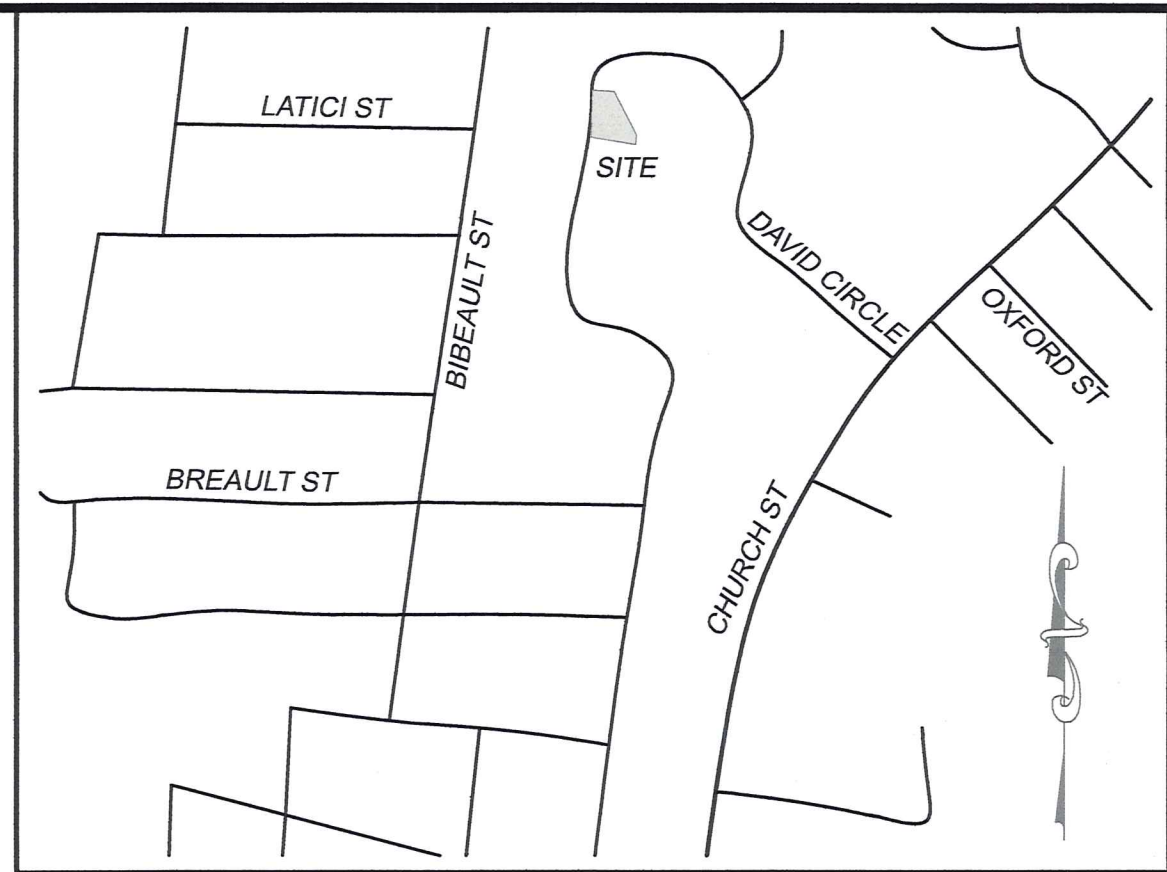
We make no commitment to 'refund' any associated costs if you decide not to pursue the purchase of said land.

I will schedule a meeting with J & D Civil Engineers, Thompson CT as soon all parties are available.

Regards,

A handwritten signature in cursive script that reads "Marc Gisleson".

Marc Gisleson
28 David Cir
Putnam CT 06260
508.847.7542



LOCATION MAP
1" = 500'

SURVEY NOTES

1. THIS MAP HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARD FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.

SURVEY TYPE: TOPOGRAPHIC AND GENERAL LOCATION

BOUNDARY DETERMINATION CATEGORY: NONE

HORIZONTAL ACCURACY: CLASS B, CLASS T2

PURPOSE: TO DESIGN A GRADING PLAN

2. REFERENCE PLANS:

(A) WOODYBROOK ACRES, PREPARED BY ALBERT FITZBACK, PREPARED FOR NORMAN POULIN, DATED MAY 5, 1973. SCALE 1" = 40'. ON FILE WITH THE TOWN OF PUTNAM AS MAP NUMBER 553.

(B) BOUNDARY LINE ADJUSTMENT, PREPARED FOR MARC B. GISLESON, PREPARED BY J&D CIVIL ENGINEERS, SCALE 1" = 40'. PREPARED ON SEPTEMBER 25, 2020.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

DENNIS R. BLANCHETTE DATE 7/26/22 LICENSE # 12107

THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE
© 2022 J&D CIVIL ENGINEERS, LLC

LEGEND

- EXISTING IRON ROD DRILL HOLE
- EXISTING PROPERTY LINE
- BUILDING SETBACK
- UTILITIES
- TREELINE
- FENCE
- EDGE OF WETLANDS

GRADING PLAN
PREPARED FOR
ANDREW REYNOLDS
122 DAVID CIRCLE, PUTNAM, CT
MAP 3 LOT 43

J&D CIVIL ENGINEERS, LLC
401 RAVENELLE ROAD
N. GROSVENORDALE, CT 06255
860-923-2920



DESIGNED: DDB
CHECKED: JJB

REVISIONS:

JOB NO: 22174

DATE: JULY 26, 2022

SCALE: 1" = 10'

SHEET: 1 OF 1

ZONING INFORMATION:
ZONE: R-10
MINIMUM LOT AREA: 10,000 S.F.
MINIMUM FRONTAGE: 90'
MINIMUM FRONT YARD: 25'
MINIMUM SIDE YARD: 20'
MINIMUM REAR YARD: 25'

PROPERTY OWNER
ANDREW REYNOLDS

REFERENCE DEED
PUTNAM LAND RECORDS
VOL. 831 PG. 154

ASSESSORS REFERENCE
MAP 3 LOT 43

APPROVED
INLAND WETLANDS COMMISSION

CHAIRMAN

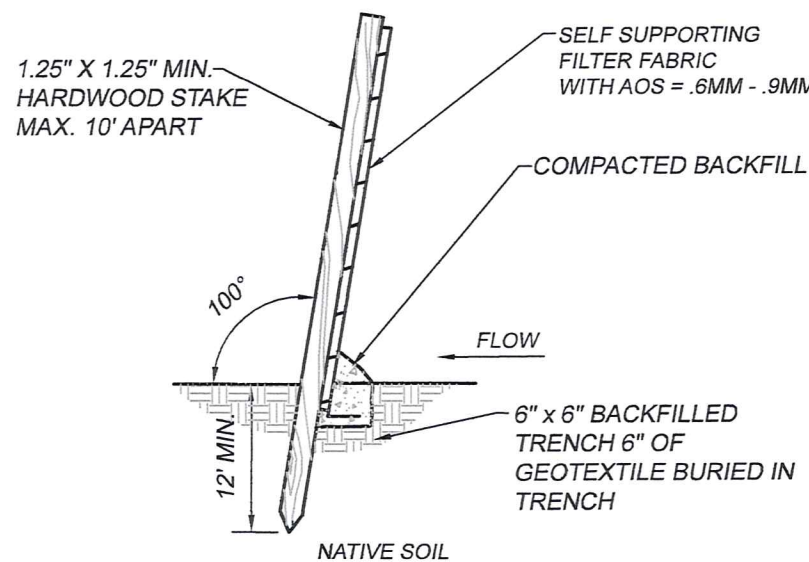
DATE

CONSTRUCTION SEQUENCE

- STRIP TOPSOIL AND STOCKPILE.
- PLACE FILL AS SHOWN ON THE SITE PLAN. ALL FILL SHALL BE PLACED IN 6 INCH LIFTS AND THOROUGHLY COMPACTED TO PREVENT SETTLING OR EROSION.
- SPREAD TOPSOIL OVER DISTURBED AREAS, WITH A MINIMUM THICKNESS OF 4 INCHES, AND PLANT WITH GRASS SEED MIXTURE.
- PLANT NATIVE SHRUBS (SWEET PEPPER BUSH, BLUEBERRY, WINTERBERRY, SERVICEBERRY, ARROWWOOD VIBURNUM, SASSAFRAS, MOUNTAIN LAUREL, WITCH HAZEL, ETC.) ALONG THE STEEP 2:1 SLOPE ABOVE THE WETLANDS.
- ONCE TURF IS ESTABLISHED, REMOVE EROSION CONTROL DEVICES.

EROSION AND SEDIMENT CONTROL NOTES

- THE GOAL OF EROSION CONTROL ON THIS PROJECT SHALL BE ENSURING THAT NO ERODED SEDIMENT TRAVELS INTO THE ADJACENT RIVER OR WETLANDS.
- THE OWNER SHALL INSTALL EROSION CONTROL MEASURES CONSISTING OF SILT FENCE, SILT SOCK, HAY BALES, OR WOOD CHIPS WHERE INDICATED ON THE PLANS PRIOR TO THE START OF EXCAVATION. IF CONDITIONS WARRANT IT, THE OWNER SHALL INSTALL ADDITIONAL EROSION CONTROL DEVICES BEYOND WHAT IS INDICATED ON THE PLAN TO MEET THE GOALS OF EROSION CONTROL.
- EROSION CONTROL DEVICES WILL REMAIN IN PLACE UNTIL PERMANENT VEGETATION IS ESTABLISHED.
- DISTURBED AREAS SHALL BE KEPT TO A MINIMUM, AND SEEDED OR STABILIZED WITH TEMPORARY MULCH AS SOON AS POSSIBLE.



SILT FENCE INSTALLATION
NOT TO SCALE

