

BOARD OF COMMISSIONERS

AGENDA - Amended July 9, 2021

Monday, July 12, 2021 - 6:30 pm

**Please note, this meeting is being held at the Radnor Township Building, Radnorshire Room*

Pledge of Allegiance

1. Recognition of Retirement from the Radnor Township Police Department for 42 years of service - Joseph Maguire
2. Public Participation

3. Consent Agenda

- a) Disbursement Review & Approval
- b) Approval of minutes of the Board of Commissioners Meeting of June 14, 2021
- c) Chief's Monthly Report – June 2021 and July 2021
- d) Final Staff Traffic Committee Meeting Minutes – May 19, 2021 and June 16, 2021
- e) Resolution 2021-77 - Authorizing Playground Repairs at Cowan Park that includes Replacement of a Transfer Bridge and Decking in the Amount of \$10,096.
- f) Resolution 2021-78 – Authorizing the Renewal of the Township's Microsoft Office 365 Licensing, with a cost of \$19,722
- g) Authorizing the Community Development Department to Receive Proposals for 3rd party Uniform Construction Code (UCC), Rental Housing, and Fire Safety Inspection Services for the years 2022, 2023, and 2024.
- h) Authorizing the Engineering Department to Receive Sealed Bids for the N. Wayne Ave/Poplar Ave/Pennsylvania Ave/West Ave/Station Rd Intersection and Pedestrian Safety Improvement Project, Project Funded by 2019 Bonds.

4. Committee Reports

- A. Requesting Authorization to Receive Bids and/or Proposals to Remove 29 Hazardous Trees at Fenimore Woods.
- B. 235 Pembroke Avenue – Stormwater Management Groundwater Recharge Waiver Request
- C. 608 West Wayne Avenue - Stormwater Ordinance Waiver Request
- D. 309 Conestoga Road Stormwater Waiver Request
- E. Resolution 2021-79 - 200 South Ithan Avenue- Discussion - Preliminary Land Development Approval
- F. Ordinance 2021-05 (Adoption) – New Handicap Parking Space in front of 166 Meredith Avenue
- ~~G. Eagle Road, Hamilton Estate – Discussion – Preliminary Land Development Approval~~ (***Applicant has requested item be removed from Agenda***)

5. Reports of Standing Committees

6. New Business
7. Old Business
8. Public Participation
9. Adjournment

Meeting Notice

There will be a Regular Board of Commissioners meeting held on Monday, July 12, 2021, beginning at 6:30 PM in the Radnorshire Room of the Radnor Township Building, 301 Iven Avenue Wayne, PA 19087

1. Recognition of
Retirement from
the Radnor
Township Police
Department for
42 years of service -
Joseph Maguire

Public Participation

***RADNOR TOWNSHIP
DISBURSEMENTS SUMMARY
July 12, 2021***

The table below summarizes the accounts payable disbursements made since the last public meeting held on June 14, 2021. As approved by the Board, the Administration is making bi-weekly accounts payable disbursement batches and publishing those lists on the Township's web site at the following link. Please refer to those files for a detailed listing of the amounts paid by vendor by account code. Also, please visit the [Open Finance](#) program to view the Township's [Checkbook](#), where all vendor payments are available.

Link: <http://radnor.com/728/Disbursements-List>

Fund (Fund Number)	2021-6A June 10, 2021	2021-6B June 18, 2021	2021-7A July 2, 2021	Total
General Fund (01)	\$193,353.47	\$427,328.66	\$270,883.56	\$891,565.69
Sewer Fund (02)	15,460.52	5,648.85	1,044,238.37	1,065,347.74
Storm Sewer Management (04)	4,254.23	18,044.60	6,517.28	28,816.11
Capital Improvement Fund (05)	699.96	48,812.07	0.00	49,512.03
Police Pension Fund (07)	0.00	10,432.14	0.00	10,432.14
OPEB Fund (08)	0.00	122,841.76	0.00	122,841.76
Escrow Fiduciary Fund (10)	0.00	0.00	98,645.18	98,645.18
Civilian Pension Fund (11)	0.00	9,777.65	0.00	9,777.65
Investigation Fund (12)	178.72	0.00	0.00	178.72
\$8M Settlement Fund (18)	0.00	0.00	652.00	652.00
The Willows Fund (23)	71.97	0.00	3,188.28	3,260.25
Park & Trail Improvement Fund (501)	960.00	660.00	3,192.00	4,812.00
GOB19 Project Fund (502)	384,502.00	254,903.00	23,241.42	662,646.42
Total Accounts Payable Disbursements	\$599,480.87	\$898,448.73	\$1,450,558.09	\$2,948,487.69
Grand Total	\$599,480.87	\$898,448.73	\$1,450,558.09	\$2,948,487.69

In addition to the accounts payable checks, the Township also makes various electronic payments including payroll, debt service, credit card purchases and fees from time to time which are not reflected in the attached table.

The Administration has adopted various internal control and processing procedures to ensure that amounts obligated are within the budgetary limits established by the Board of Commissioners. Those procedures are monitored daily by members of the Finance Department and responsible employees of the various departments. The amounts included in the table above have been scrutinized as part of the internal control and processing procedures and have obtained the required approvals prior to disbursement.

If you should have any questions, please contact the Finance Department.

Respectfully Submitted,

Robert V. Tate, Jr.
Finance Director

TOWNSHIP OF RADNOR
Minutes of the Regular Board of Commissioners Meeting of June 14, 2021

The Radnor Township Board of Commissioners met via Zoom at approximately 6:35 pm

Commissioners Present

Jack Larkin, President	Moirra Mulrone, Vice President	Lisa Borowski
Richard Booker	Catherine Agnew	Jake Abel
		Sean Farhy

Also Present: William White, Township Manager, John Rice, Township Solicitor, Robert Tate, Director of Finance, Steve Norcini, PE, Township Engineer, Ricky Foster, Acting Director of Public Works, Kevin Kochanski, Director of Community Development, Christopher Flanagan, Chief of Police, Peggy Hagan, Executive Assistant to the Township Manager.

President Larkin called the meeting to order and led the assembly in the Pledge of Allegiance.

1. Public Participation

Howard Holden, Willows Park Preserve – He is happy to be at the meeting and will wait his turn to present.

Beverlee Barnes, Delaware County Planning Department, Historic Preservation Manager – She spoke on the Historic Scattered Site Ordinance and offered to help with the development of the Ordinance.

2. Consent Agenda

- a) Disbursement Review & Approval
- b) Approval of minutes of the Board of Commissioners Meetings, May 13, 2021, and May 24, 2021.
- c) HARB 2021-13-340 Louella, Wayne. Adding an addition to extend the carriage house; Shortening two windows at the side of elevation; Replacing side door; Revising the existing off-center garage.
- d) HARB 2021-14-45 Louella, Wayne. Build new kitchen and den.
- e) Resolution 2021-66 – Authorizing the Preparation and Execution of a Grant Application to the Pennsylvania Department of Transportation under the Automated Red Light Enforcement (ARLE) Program for the Lancaster Avenue Traffic Adaptive Project to Gilmore and Associates in the Amount of \$1,500
- f) ~~Resolution 2021-67 – Authorizing the Preparation and Execution of a Grant Application to the Pennsylvania Department of Environmental Protection under the Growing Greener Plus Program for the West Wayne Preserve Stormwater Management and Wetlands Enhancement Project to Meliora Design in the Amount of \$1,759.50~~
- g) ~~Resolution 2021-68 – Authorizing Gannett Fleming, Incorporated to Perform an Inspection and Load rating Analysis of the Hunt Road Bridge, in the Amount of \$15,000~~
- h) Resolution 2021-69 – Authorization for the repair to dump truck #53, in an amount not to exceed \$10,000.
- i) ~~Resolution 2021-70 – Authorizing the payment for the emergency repairs to the Tub Grinder in the amount of \$25,300.~~
- j) Resolution 2021-71 – Authorizing the payment to Upper Merion Township for the disposal of yard waste for the months of April & May in the amount of \$10,080.

- k) Resolution 2021-72 - Authorizing the payment for the emergency repairs to Pump #1 at the King of Prussia Pump Station in the amount of \$8,468.32.
- l) Resolution 2021-73- Authorizing the emergency replacement to the Controller at the King of Prussia Pump Station in the amount of \$15,240.

Commissioner Larkin asked if any Commissioner(s) wanted to pull any item(s) from the Consent Agenda. Commissioner Farhy asked for item 2 i), Commissioner Booker asked for item 2 g) and Commissioner Abel asked for item 2 f), be pulled from the Consent Agenda.

- i) Resolution 2021-70 – Authorizing the payment for the emergency repairs to the Tub Grinder in the amount of \$25,300.

Commissioner Larkin moved to approve Resolution 2021-70, seconded by Commissioner Farhy.

Ricky Foster, Acting Public Works Director, spoke on the repairs made to the Tub Grinder. There was discussion among Commissioners and Staff on the expense and warranty coverage. Commissioner Farhy moved to table the item to the next meeting, seconded by Commissioner Booker. The motion to table passed 5-2 with Commissioners Borowski and Mulronee against.

- g) Resolution 2021-68 – Authorizing Gannett Fleming, Incorporated to Perform an Inspection and Load rating Analysis of the Hunt Road Bridge, in the Amount of \$15,000

Commissioner Larkin moved to approve Resolution 2021-68, seconded by Commissioner Borowski. Steve Norcini, Township Engineer spoke on the request from Bryn Mawr Fire Company for the load requirement of the Hunt Road Bridge, Commissioner Borowski also stated that the Broomall Fire Company had the same request. There was discussion among Commissioners and Staff.

The motion passed 6-1 with Commissioner Booker against.

- f) Resolution 2021-67 - Authorizing the Preparation and Execution of a Grant Application to the Pennsylvania Department of Environmental Protection under the Growing Greener Plus Program for the West Wayne Preserve Stormwater Management and Wetlands Enhancement Project to Meliora Design in the Amount of \$1,759.50

Commissioner Larkin moved to approve Resolution 2021-67, seconded by Commissioner Abel. Steve Norcini, Township Engineer, spoke on the project. There was discussion among Commissioners and Staff.

The motion passed 7-0.

3. Committee Reports

A. Resolution 2021-75 – Support of LGTQ+ Pride Month

Commissioner Mulronee moved to approve Resolution 2021-75, seconded by Commissioner Larkin. There was discussion among Commissioners and Staff.

The motion passed 6-0 with Commissioner Booker off the dais.

B. Resolution 2021-76 - Support of Juneteenth National Freedom Day

Commissioner Mulroney moved to approve Resolution 2021-76, seconded by Commissioner Larkin. The motion passed 6-0 with Commissioner Booker off the dais.

C. Willows Park Preserve – Presentation of Bi-Annual Report and Request to Extend Township Responsibility for Annual Utility and Maintenance Costs

Howard Holden and Will Nord presented the Willows Park Preserve Bi-Annual Report and requested the Township extend their financial responsibility for annual utility and maintenance costs. There was discussion among Commissioners.

Commissioner Larkin moved to extend the Township Responsibility for Annual Utility and Maintenance Costs to be paid for out of the funds already earmarked by the Township for the Willows, seconded by Commissioner Mulroney. The motion passed 7-0.

D. CARFAC Update on OPEB Project

Jay Osterholm presented the CARFAC update on the OPEB Project. There was discussion among Commissioners. CARFAC will be submitting a report to the Board of Commissioners mid to late Fall.

E. 235 Pembroke Avenue – Stormwater Management Groundwater Recharge Waiver Request

John McCurdy, Applicant and Nick Caniglia, Attorney for Applicant, spoke on the request for stormwater management groundwater recharge waiver for the proposed single-family dwelling at 235 Pembroke Avenue. There was discussion among Commissioners, Applicant, and Staff. The applicant will return with plans showing a larger basin, rain garden and less trees to be removed.

Commissioner Larkin moved to table the item, seconded by Commissioner Mulroney. The motion to table passed 7-0.

F. 608 West Wayne Avenue – Stormwater Management Groundwater Recharge Waiver Request

Chris Yohn, Applicant Representative, spoke on the stormwater management groundwater recharge waiver request. Mr. Yohn spoke on the basin to be used and the managed release concept – a rain garden with a stone bed. There was discussion among the Commissioners, Applicant, and Staff. The Applicant will return with plans showing an expanded system.

Commissioner Larkin moved to table the item, seconded by Commissioner Booker. The motion to table passed 7-0.

G. 200 South Ithan Avenue – Preliminary Land Development Application – CAUCUS (pending the outcome of the June 7 PC meeting)

Nick Caniglia, Attorney for the Applicant, presented the Preliminary Land Development plans

and spoke on the request for waivers for interior sidewalks and sidewalks in the front of the property.

H. Resolution 2021-63 – Authorizing the Engineering Department to Receive Sealed Bids for the King of Prussia Rd/Eagle Rd/Pine Tree Rd intersection & Storm Sewer Project

Commissioner Larkin moved to approve Resolution 2021-63, seconded by Commissioner Mulroney. Brian Eury, Cabrini College, spoke on the project.

The motion passed 6-0 with Commissioner Booker away from the dais.

O. Ordinance No. 2021-06 (Introduction) – Amending the Zoning Map of Radnor Township by Rezoning Delaware County Tax Parcel No. 36-05-03203-00 from R-1 Residence District to PI Planned Institutional District.

Commissioner Larkin moved to approve the introduction of Ordinance 2021-06, seconded by Commissioner Mulroney. Jamie Jun, Attorney for Applicant, and Josh Ticktin, Applicant, spoke on the request for rezoning parcel 36-05-03203-00 for the Main Line Classical Academy project. There was discussion among Commissioners, Applicant and Staff.

The motion to introduce Ordinance 2021-06 failed 6-1 with Commission Mulroney in favor.

I. Resolution 2021-64 – Authorizing the Engineering Department to Receive Sealed Bids for the 2021 Superpave Resurfacing Project

Commissioner Larkin moved to approve Resolution 2021-64, seconded by Commissioner Farhy. Steve Norcini, Township Engineer, spoke on the 2021 Superpave Resurfacing Project. There was discussion among Commissioners and Staff.

Commissioner Larkin moved to amend the road list for the project to add Wyldhaven Road single lane paving from Marlbridge to Ithan Avenue, seconded by Commissioner Borowski. The motion to amend passed 7-0.

The motion to approve the amended Resolution 2021-64 passed 7-0.

J. Resolution 2021-55 – Engaging McCarthy & Company CPA’s for Act 511 Business Tax Auditing Services

Commissioner Larkin moved to approve Resolution 2021-55, seconded by Commissioner Mulroney. The motion passed 6-1 with Commissioner Booker against.

K. Resolution 2021-62 – Appointment of Deputy Tax Collector

Commissioner Larkin moved to approve Resolution 2021-62, seconded by Commissioner Booker. There was discussion among Commissioners and John Rice, Township Solicitor, about the Duties and term of the Deputy Tax Collector.

The motion passed 7-0.

Linda Dowd, appointed Deputy Tax Collector, introduced herself to the Board of Commissioners.

L. Authorization to Solicit Capital Lease RFP's to Purchase (x8) 1200 Vehicle Barrier System Units with Hydraulic Trailer

Commissioner Larkin moved to approve Authorization to Solicit Capital Lease RFP's to Purchase (x8) 1200 Vehicle Barrier System Units with Hydraulic Trailer, seconded by Commissioner Mulroney.

Chris Flanagan, Police Chief and Kevin Gallagher, Evidence Technician and Departmental Support, presented the 122 Vehicle Barrier System Units with Hydraulic Trailer to the Board of Commissioners. There was discussion among the Commissioners and Staff.

The motion passed 4-3 with Commissioners Mulroney, Abel, and Booker against.

M. Ordinance 2021-05 (Introduction) – New Handicap Parking Space in front of 166 Meredith Avenue

Commissioner Larkin moved to approve the introduction of Ordinance 2021-05, seconded by Commissioner Farhy. There was discussion among Commissioners and Staff.

The motion to introduce Ordinance 2021-05 passed 7-0.

N. Motion to Authorize the Petition Process for the West Wayne Cemetery (Commissioner Abel) Continued from May 24, 2021

Commissioner Larkin moved to Authorize the Petition Process for the West Wayne Cemetery, seconded by Commissioner Abel. There was discussion among the Commissioners and Staff about the Township maintaining, not owning the cemetery and the need for a formal process to define the parameters of the maintenance.

The motion passed 6-1 with Commissioner Farhy against.

4. Reports of Standing Committees

None

5. New Business

a. Historic Sites Preservation Ordinance (Commissioner Borowski)

Commissioner Borowski opened the discussion on an Historic Sites Preservation Ordinance and asked to get the process started to see if it would be viable. She asked if it is the will of the Board to move the proposed Ordinance to committees for review. John Rice, Township Solicitor, stated that the Planning Commission would be the Commission to review the proposed Ordinance. Commission Borowski asked what the next step would be. John Rice, Township Solicitor, said he would look at the Ordinance and provide the information to the Planning Commission. There was a consensus among the Board to send the proposed Ordinance to the Planning Commission.

At 11:15 pm, Commissioner Borowski moved to extend the meeting 15 minutes, seconded by Commissioner Agnew. The motion passed 5- 2 with Commissioners Farhy and Booker against.

b. SLF Pesticide Spraying

Commissioner Borowski spoke on an email sent to her from Sara Pilling regarding DEP SLF Spraying, not in Radnor Township but in adjacent Townships. The pesticide they are using is particularly dangerous to bees and other wildlife. She is asking if the Board would oppose the spraying.

Margaret Reinhart, EAC Chair, spoke on the use of the pesticide, it does kill all insects, including beneficial insects and is a central nervous systems toxin to all animals, including humans. Sara Pilling spoke on the pesticide being lethal to beneficial insects, fish, and damaging to children. The Board of Commissioners is asking the Board of Health and EAC to research the pesticide and get back to the Board of Commissioners.

Commissioner Abel spoke on the need for new bathroom facilities at Odorisio Park. There is a consensus of the Board to have Tammy Cohen draw up plans for the new facilities along with plans for Cowan Park updates to be put in next year’s budget for review.

6. Old Business

a. Wireless Facility Ordinance Review Guidance

Bill White, Township Manager, is asking for direction from the Board on how they would like the draft ordinance to go publicly. The draft is ready to roll out to the public, should it go before the Citizens Communication Council or just to the Board of Commissioners for review.

John Rice, Township Solicitor, suggested the draft Ordinance be reviewed by the Planning Commission and the Citizens Communication Council prior to coming back to the Board of Commissioners.

7. Public Participation

None

8. Adjournment of Regular Meeting

There being no further business, the regular meeting adjourned on a motion duly made and seconded.

Respectfully submitted.

Peggy Hagan

RADNOR TOWNSHIP POLICE DEPARTMENT

Monthly Report



JUNE 2021

**Christopher B. Flanagan
Police Superintendent**



Radnor Twp PD

DAILY INCIDENT COUNTS

05/01/2021 to 05/31/2021



Day of Month Responses	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
911 HANG UP	0	0	0	0	0	0	1	1	1	0	2	0	1	0	0	1	0	0	2	0	0	1	0	0	1	1	0	0	0	0	1	15
MV ACCIDENT (BRIDGE STRIKE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	3	
MV ACCIDENT (REPORTABLE)	1	0	0	0	0	0	0	0	0	0	1	2	0	1	0	0	1	2	0	2	0	0	0	1	0	0	1	0	0	0	13	
ADDED PATROL BUSINESS	4	2	2	2	1	7	2	2	1	1	0	1	2	1	3	3	2	3	3	1	5	1	3	5	4	3	2	2	3	5	3	80
ADDED PATROL	11	14	14	12	6	18	14	8	3	11	7	6	4	7	11	7	11	5	10	8	7	12	8	7	9	15	15	9	10	16	3	300
ADDED PATROL REQUEST	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
ADDED PATROL SCHOOL	3	2	2	4	4	13	5	0	0	4	3	3	4	1	6	2	2	1	2	1	3	1	0	6	11	3	2	3	2	3	0	100
ALARM (ALL TYPES)	3	7	7	2	5	2	2	3	5	4	4	2	2	0	8	4	5	4	3	3	4	2	2	5	8	6	2	2	4	3	111	
ANIMALS - BITES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	
ANIMAL COMPLAINTS	2	1	1	2	1	1	1	2	1	1	1	1	2	1	1	2	2	0	0	1	1	1	1	0	1	1	0	2	3	0	36	
ANIMALS - DEER	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	5	
ASSAULT	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	
ASSAULT SEXUAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
ASSIST ANOTHER PD	1	3	3	1	3	1	1	0	0	0	0	0	0	0	1	1	1	0	0	1	0	0	0	0	2	0	1	0	0	0	18	
ASSIST AGENCY NON LAW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
ASSIST PUBLIC	1	0	0	3	0	0	2	1	0	0	0	0	0	2	1	0	1	1	1	1	4	1	1	1	0	2	0	1	2	1	0	28
ASSIST VUPD	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
TRAFFIC CITATIONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
CIVIL DISPUTE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	1	1	5	
CRIMINAL MISCHIEF TO AUTO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	
CRIMINAL MISCHIEF / VANDALISM	2	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	7	
DISORDERLY CONDUCT	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	5	
DELCOM INFO ONLY	4	2	2	2	1	3	2	5	3	0	0	0	0	3	2	2	5	2	1	1	4	1	1	0	2	3	5	1	0	2	60	
NEIGHBOR DISPUTE	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	
DISTURBANCE NO CITATION	4	3	3	1	3	0	4	2	4	1	2	1	7	3	4	1	4	1	1	1	2	1	2	1	0	1	0	0	0	0	53	
DEATH DOA	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	



MAY

Description _____ Primary Count

Parking Tickets

Month of May 2021	246
January - May 2021	1,443

Residential and Commercial False Alarm Violations

Month of May 2021	70
January - May 2021	309

Moving Violations

Month of May 2021	236
January - May 2021	1,052

Radnor Police Training – May 2021

Mental Health Awareness Seminar – Sgt Gluck and Ofc Matijasich

FBI Cyber Crimes – Det. Jagodinski and Det. Schreiber

Pepper Ball Deployment Training – SWAT officers Steve Ryan and Nick Laffredo

CRIME ALERTS
MAY 2021

Sometime between 4/30/2021 and 5/1/2021 the resident of the 200 block of Midland Av. reports several signs were removed from their property.

On 5/1/2021 a resident of the 100 block of Montrose Av. report that their mailbox was vandalized on 4/18/2021. Video from the victim's "ring doorbell" showed two white males walking on the street and one male punches the mailbox and knocks it over.

On Sunday, 5/2/2021, at approximately 1:30 PM hours, the victim had their purse stolen out of their vehicle while parked at the Harford Dog Park. The vehicle was parked and left unlocked. At this time no illegal activity had occurred on the victim's credit cards.

On Sunday, 5/2/2021, the resident of the unit block of Forrest La. reports an American Flag was stolen from the front of their property.

Recently a resident of the unit block of Garrett Av. reports finding drug paraphernalia in the street in front of their home. While speaking with the homeowner they related that they had also recently found drug paraphernalia in Tunnell Field at an earlier time but did not report the matter to Police. The Radnor Police wanted to remind all residents that if anything suspicious is observed or located in your neighborhoods to please contact the Radnor Police at 911 right away.

On Wednesday, 5/5/2021, at approximately 10:48 PM the resident of the 100 block of Windermere Av. observed someone looking at them through a window of their residence. The victim could only advise that the actor had a deep, "male" voice, and dark eyes.

Overnight of between Thursday, 5/6/2021 and Friday, 5/7/2021, several vehicles were entered along Barcladen Rd. and Debaran Lane. In each incident, the vehicles entered were left unlocked and had various amounts of U. S. currency removed from inside of them.

On Sunday, 5/9/2021, at approximately 1:30 AM, the mailbox and political signs of a resident of the 500 block of S. Devon Rd. were damaged. The victim's "Ring Doorbell Camera" showed two teenagers, wearing dark hoodies, kick his mailbox and knock over his U.S. flag and political signs.

A resident of the 200 block of Iven Av. had a package delivered to their apartment, on Sunday, 5/9/2021 at approximately 1228 PM. When the resident went to retrieve the package, it was not there. Taken was a neon colored 32 GB Nintendo Switch.

On Thursday, 5/20/2021, the resident of the 700 block of King of Prussia Rd. reported that their vehicle was stolen from their driveway. The vehicle was a black 2019 Audi Q7, bearing PA registration LGT4721 and was last seen on Wednesday, 5/19/2021, at 9:30 PM. The vehicle was left unlocked, and the keys are with the vehicle.

On Saturday 5/23/2021 between 7 PM and 9 PM, the victim discovers their credit card and driver's license had been stolen from their vehicle while it was parked at the Radnor High School. The vehicle was parked while victim attended their prom and was left unlocked at the time of the theft.

On Monday, 5/24/2021, a resident from the 300 block of Strathmore Rd. advises a theft from their vehicle which had occurred sometime overnight. The vehicle reports their unlocked Acura DX was entered and rummaged. The only thing taken was a small amount of loose change.

The Radnor Police respects citizens' privacy, civil rights, and civil liberties by emphasizing behavior, rather than appearance, in identifying suspicious activity. Factors such as race, ethnicity, and/or religious affiliation are not suspicious. The public should only report suspicious behavior and situations (e.g., an unattended backpack or package, or someone breaking into a vehicle or restricted area). Moreover, any physical descriptions are based on victim and witness statements provided to the Radnor Police at the time the incident was reported or developed through investigation.

RADNOR TOWNSHIP POLICE DEPARTMENT

COMMUNITY EVENTS

Certificate of Recognition

PRESENTED TO

Chief Christopher Flangan

**In recognition of National Police Week & their
tireless dedication to service and their selfless
sacrifice to the community and residents.**

Attested to in the County of Delaware, the
Commonwealth of Pennsylvania and certified with
the affixed signature:



Jennifer O'Mara

Rep. Jennifer O'Mara
165th Legislative District
Pennsylvania House of Representatives



National Police Week 2021
Sunday, May 9 - Saturday, May 15

Tuesday, May 11, 2021 - 11am-1pm -Lt. Pinto and Sgt. Radico will be on North Wayne Avenue under the tent handing out gun locks, hand sanitizer, key chains, police stickers, crayons/coloring books, and glow sticks

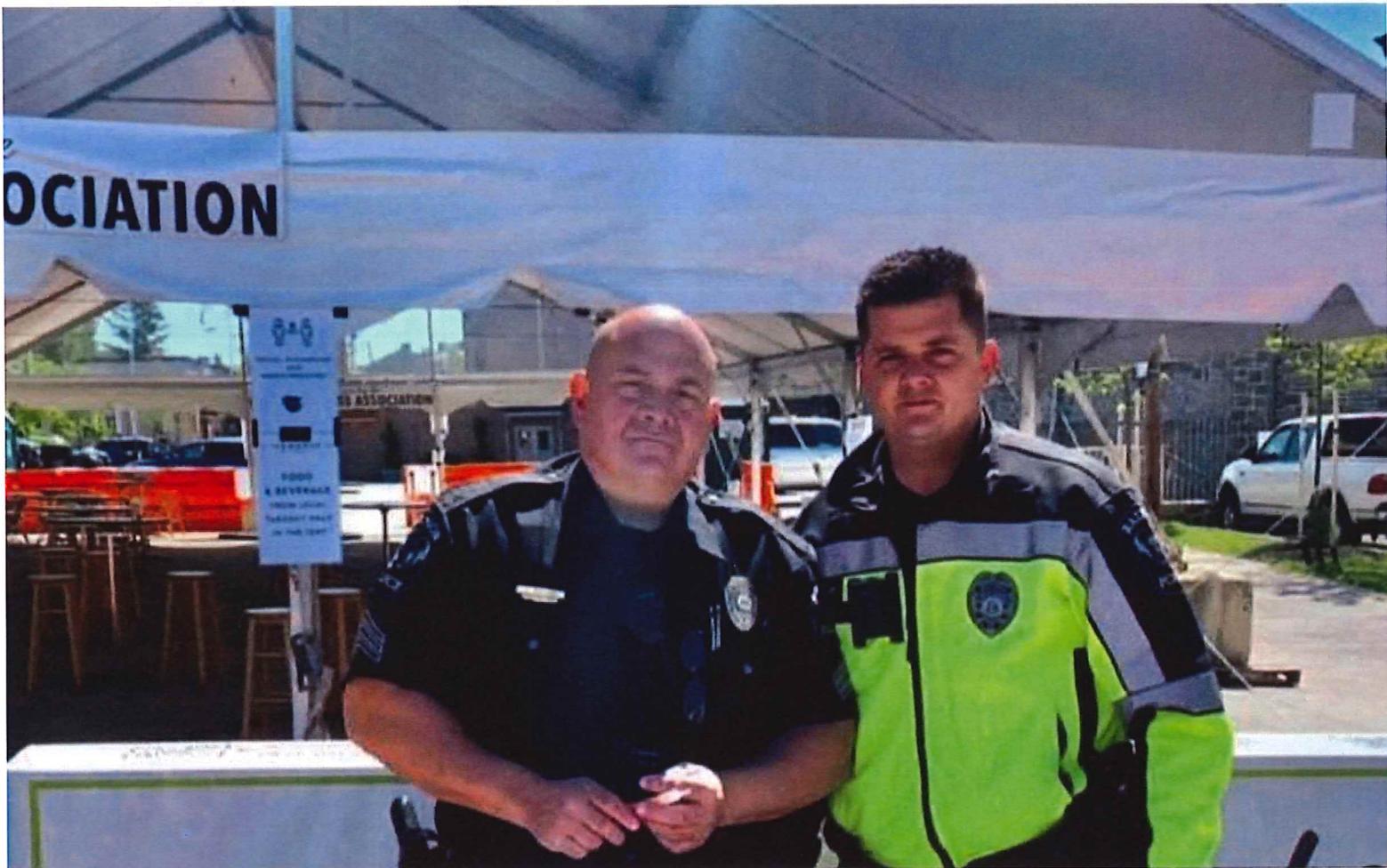
Wednesday, May 12, 2021 - 7:15am - Representative Jennifer O'Mara will present certificates to the squad working and bring coffee/donuts

Wednesday, May 12, 2021 - 3pm-5pm - Capri Water Ice/Ice Cream Social - Officers will be scooping ice cream and water ice for those in attendance

Thursday, May 13, 2021 - 1:30pm - Virtual Police Reading with the Library
See attached flyer

Thursday, May 13, 2021 - 3pm-5pm - Police Reading at Clem Macrone Park

Lt. Joe Pinto, Sgt. Anthony Radico, Highway Patrol Officer Pat Lacey, Officer Richard Braxton were on North Wayne Avenue at the tent handing out police goodies.



Roll Call Visit from Rep. Jennifer O'Mara!
Pennsylvania State Representative
Jennifer O' Mara presented Certificates of
Appreciation to our Officers this morning
at Roll Call in recognition of National Police
Week. She also provided breakfast before
they hit the road!



CAPRI HOMEADE ITALIAN ICE/ICE CREAM SOCIAL

May 12, 2021









Aron and the Police Give Back to
the Community

Story by Nahjee Grant
Pictures by Trinity Rakowski

Join Radnor Township Police Chief Flanagan as he reads
from local author Nahjee Grant's NEW children's book!

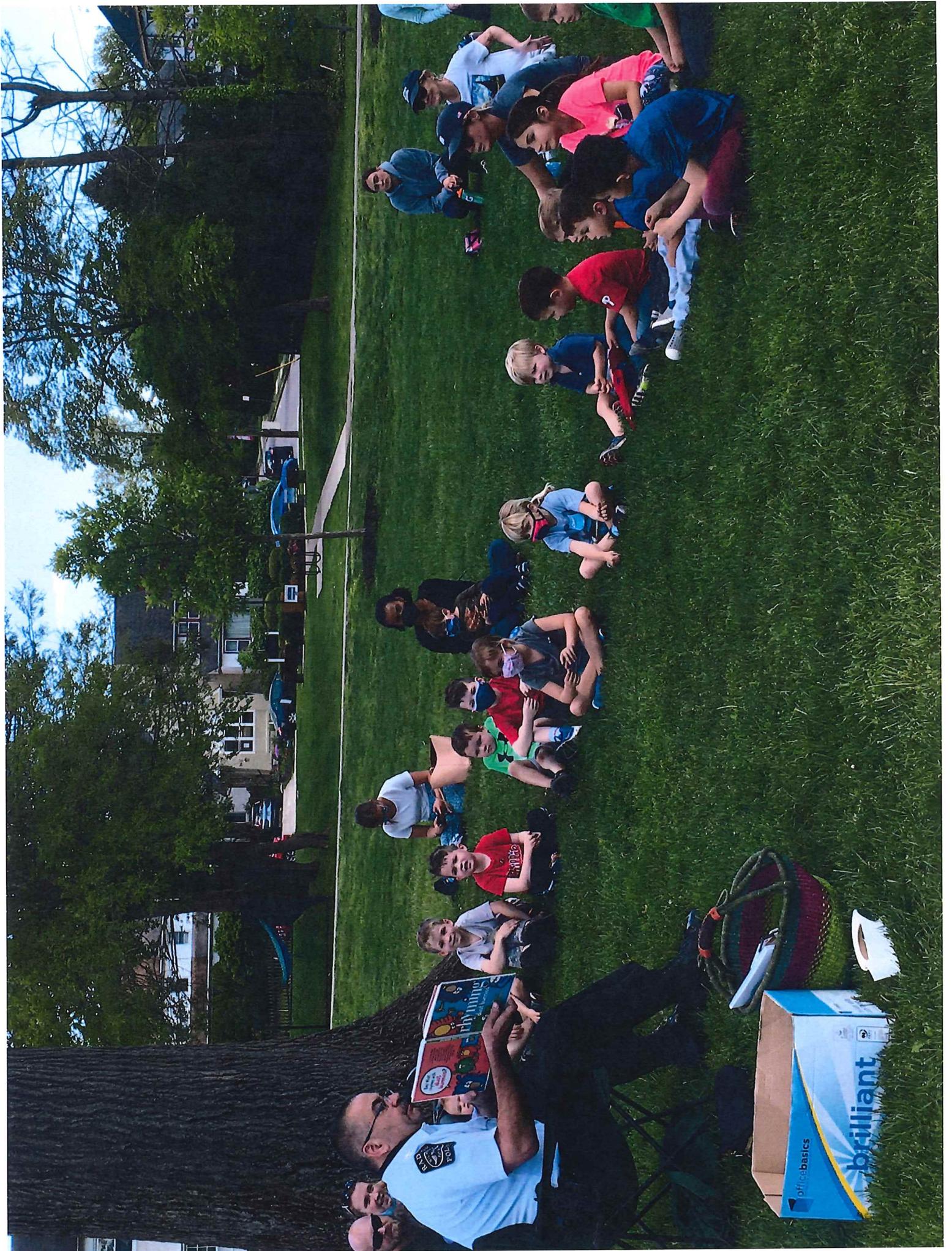
CELEBRATE NATIONAL POLICE WEEK!
THURSDAY, MAY 13 AT 1:30 PM

LIVE ON ZOOM! REGISTER IN ADVANCE!



POLICE READING AT CLEM MACRONE PARK

May 13, 2021

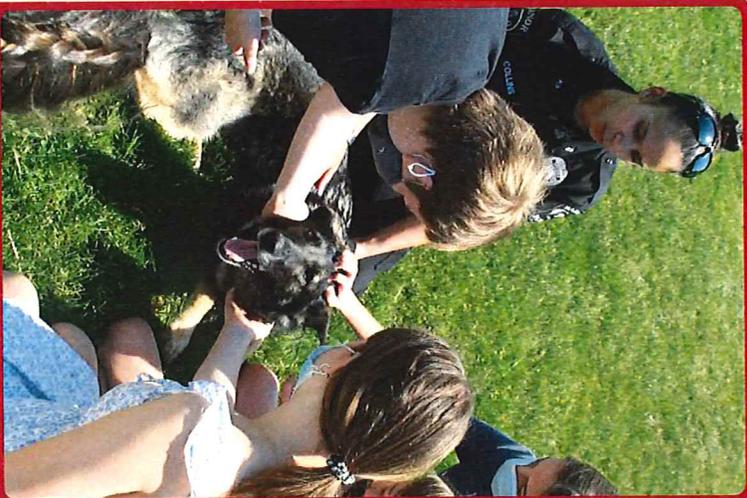








Radnor Middle School
K9 Presentation Event



Community Helpers Week





central nursery school

since 1963

1.800.688.9563





central nursery school

since 1963

(614) 688-8563

cnsc@cnsc.org



Wayne Senior Center picnic at The Willows in honor of Older American's Month
May 26, 2021

Picnic grove of The Willows Park





**DELAWARE COUNTY
LAW ENFORCEMENT
MEMORIAL FOUNDATION**



We Remember

**Wednesday, May 5, 2021
11:00 A.M.**

ROSE TREE PARK

Upper Providence



Delaware County Council

Chair: Brian P. Zidek

Vice Chair: Dr. Monica Taylor

Kevin M. Madden

Elaine P. Schaefer

Christine A. Reuther

Police Memorial Service Rose Tree Park May 5, 2021

MASTER OF CEREMONIES:	Past President Thomas Worrilow
ENTRANCE:	Bagpipers
ROLL CALL OF HEROES AND TITLES:	Chief Jim Nolan <i>(Chester City Police Department)</i> Captain John McKenna <i>(Pennsylvania State Police, CID)</i> Joseph Fitzgerald <i>(President FOP #27)</i>
OPENING PRAYER:	Reverend Perry Messick <i>First Baptist Church Collingdale, FOP #27 Chaplain</i>
NATIONAL ANTHEM	Victoria Mayo
SPEECH:	Chairman Brian P. Zidek <i>Delaware County Council</i>
SPEECH:	District Attorney Jack Stolsteimer <i>Delaware County</i>
MEMORIAL PLAQUE DEDICATION:	Thomas Worrilow
PRESIDENT'S REMARKS:	Sergeant Henry O'Neill <i>Prospect Park PD</i>
BLESSING OF THE BADGES:	Pastor Chris Heisey-Terrell <i>Prospect Hill Baptist Church (Birthplace of "In God We Trust")</i>
TAPS:	Ridley High School Alumni
GOD BLESS AMERICA:	Victoria Mayo
CLOSING PRAYER:	Reverend Warren D Mays Sr. <i>Pastor Second Baptist Church of Media</i>
CLOSING REMARKS:	Thomas Worrilow
ROSE PLACEMENT:	Survivors



In early 1998, a group of Law Enforcement personnel, their families and concerned citizens from across Delaware County generated an idea. That idea was to honor the men and women of law enforcement who so freely gave their lives to protect the lives of our loved ones within Delaware County.

In May of 1998, the first memorial service was held at Notre Dame de Lourdes in Swarthmore. Approximately, two hundred and fifty (250) Law enforcement, families, and friends attended the service.

Over the following years the Delaware County Law Enforcement Memorial Foundation (DCLEMF) would be established. Bi-Laws were created to govern the foundation and our non-profit status was obtained. Today, we have five (5) executive board members, ten (10) board of Directors which is comprised of active and retired Police Officers.

In May of 2002, the Dream of the Foundation came true. A permanent monument to honor our Fallen Brothers and Sisters was dedicated to an audience of almost one thousand (1,000) supporters. Today we have forty three (43) stanchions in honor of our heroes. In April 2014 our memorial was recognized by the Federal Bureau of Investigations Law Enforcement Bulletin, a true honor.

In 2020, the Executive board, the board of directors had a zoom meeting and had to make a difficult decision to cancel our annual day of remembrance. We all agreed, that we could not allow our heroes to not be recognized; we adapted to the change and had an evening virtual ceremony.

On Behalf of the President of the Delaware County Law Enforcement Memorial Foundation, the Past presidents, Executive board, board of Directors, volunteers, material suppliers and financial contributors, Welcome to the twenty second (24th) annual "WE REMEMBER" 2021 memorial service. Without you the "dream" cannot continue.

Please continue to check our website (www.delcoheroes.org) for upcoming special fundraising events and news, we can also be found on Facebook.

P.O. Box 101
Media, PA 19063
www.delcoheroes.org



**DOMESTIC ABUSE PROJECT OF DELAWARE
COUNTY**

LETHALITY ASSESSMENT PROGRAM TRAINING

Wednesday, April 14th

Wednesday, May 19th

Wednesday, June 9th

Time: 11:00 am - 1:00 pm

**RADNORSHIRE ROOM: 301
IVEN AVENUE
WAYNE, PA
19087**

Refreshments will be provided
Follow the link below to register

<https://www.surveymonkey.com/r/KNPJZ5Z>



RADNOR TOWNSHIP POLICE DEPARTMENT
THANK YOU LETTERS

Chief,

I spoke with Terry McCue who advised that on Thursday, 5/20/2021, he and his wife were out for dinner in Wayne. They were trying to use the kiosks in front of Christopher's Restaurant and could not get a printout to prove they paid to park. They flagged down Ofc. Royce who he described as very polite and helpful. They still could not get the kiosks to function properly but Ofc. Royce ensured Mr. McCue he could enjoy his dinner and not be concerned about a parking ticket.

I also contacted Joe Hammonds and have him checking on the Kiosk in question.

Thanks.

Lieutenant Joseph W. Pinto
Radnor Township Police Department
301 Iven Avenue
Wayne, PA 19087
610-688-5606 ext 104
jpinto@radnor.org



Prepared. For Life.®

18 May 2021

Radnor Scout Troop 284
Radnor PA 19087

Sgt. Christopher A. Gluck #301
Radnor Township Police Department
Patrol Division/Emergency Management Coordinator
301 Iven Avenue
Wayne, PA 19087

Dear Sgt Gluck

On behalf of the scouts and trailblazers of Radnor Scout Troop 284, we wish to thank you for describing Radnor township, County and National emergency services available. Your lesson also fulfilled a requirement for Emergency Preparedness Merit badge. Over 40 scouts, boys and girls, were in this class and appreciated your lesson. Your stepwise approach to the lesson and the pace of presentation also showed that you have real teaching talent.

The badge and lesson are particularly important to Scouts. The scout motto is "Be Prepared". When the Scout founder, Lord Baden-Powell, was asked, "Prepared for what?" He replied, "prepared to help others". Your lesson both fulfilled a requirement to understand how to be prepared and importantly gave an example of a professional that does that every day.

Many thanks for your effort

Regards

A handwritten signature in cursive script that reads "Paul".

Paul Wissel MD
Assistant Scoutmaster
Radnor Troop 284
214 St Davids Ct
St Davids, PA 19087

CC Police Superintendent Christopher B. Flanagan

Sgt. Lunger

The Agnes Irwin School would like to thank you for making the arrangements for the K-9 Unit to put on a K-9 demonstration for the Lower School students. Officer Cocco and Officer Greaves did an excellent job explaining their duties and showing the skills each K-9 is trained in. It was an exciting afternoon for the girls and faculty !

Thanks again

--

Raymond Matus
Security Supervisor
The Agnes Irwin School
275 S. Ithan Ave.
Bryn Mawr, Pa. 19010
610-801-1294

Hi Just wanted to say what a fantastic video clip that is of your day at Capris! Really great to hear these young kids with such positive comments.

Great community outreach!

Have a nice holiday weekend, see you at the parade.

Best,
Patti

28 May 2021

Dear Chief Hanagan,

Thank you so much for approving
my ride along.

Josh did a super job of going over
the pd's facility & operation,
plus how a shift can go.

It renewed & increased my
appreciation of all you do
for us.

Thank you,
Marilyn Luehrs

RMS PTO

A Meaningful Difference In Our Community

Dear Chris,

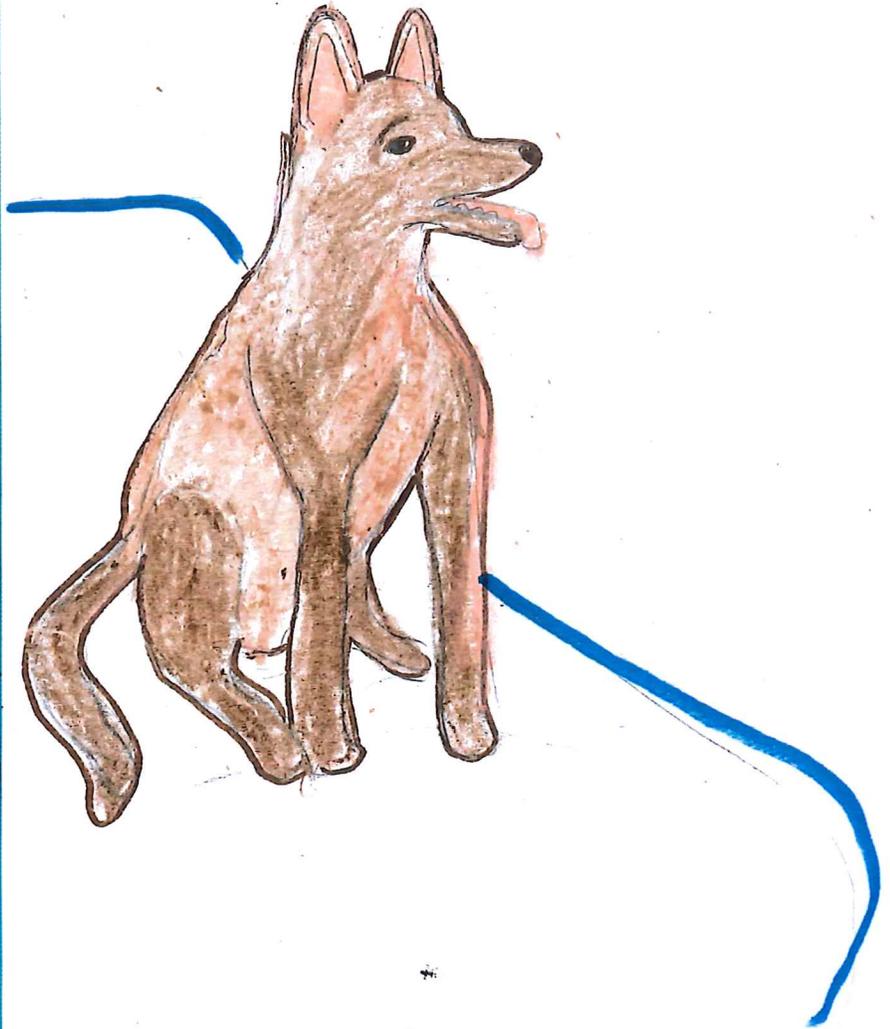
Thank you for taking the time to make a Career Day video for RMS students. This year's career day will be on June 11th. We could not be more excited to share your career! I'm sure you will inspire many students to consider a career in law enforcement.

Kind regards,
Gina Visov

THANK
You

— f · o · r —

Coming!!



Dear Officer Cocco,
Officer Simons, and
Officer Greaves,

I appreciate all of
you giving your time to
demonstrate your dogs
skills and answer my
classes questions. I
think everyone learned a
lot about Police K-9s.
And, it added to my
presentation! Thank
you!

From,

Brenna Kent

Dear Radnor Police,

This is a long overdue thank you but we wanted to express our gratitude for helping our family on Feb 27th. Your care, compassion, professionalism and expertise helped us through a very difficult time. Thank you for all you do. Feel lucky to live in this community and have such support from our police.



Our thanks to all the
officers who assisted.

LONG Family
[redacted] West Wayne Ave
Wayne PA



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Illustration by Wendy MacFarlane
for Jane Mosse Designs
978-1-59359-278-3

Officers Involved:

Officer Jen Cocco

Officer Kyle Hand

Officer William Meyer

Sgt. Anthony Radico

Officer Brian Bell

Officer Nicholas DeMayo

K9 Officer Rocky



COUNTY OF DELAWARE
DEPARTMENT OF PUBLIC SAFETY
BUREAU OF PARK POLICE & FIRE SAETY



201 WEST FRONT STREET
MEDIA, PENNSYLVANIA 19063

PHONE 610-891-5000
FAX 610-891-0569

COUNCIL

BRIAN ZIDEK
CHAIRMAN

DR. MONICA TAYLOR
VICE CHAIR

KEVIN M. MADDEN
ELAINE PAUL SCHAEFER
CHRISTINE A. REUTHER

SCOTT D. MAHONEY
SUPERINTENDENT
POLICE & FIRE SAFETY

June 3, 2021

Chief Christopher Flanagan
Radnor Twp. Police Department
301 Iven Ave.
Radnor, Pa. 19087-5297

Dear Chris,

It is with a heavy heart that I am writing this letter once again to thank you for all your help in making the tribute to Superintendent Mahoney a great success. The love and professionalism that was shown during this difficult time was overwhelming. I still get choked up thinking of the long procession of police vehicles and officers standing at attention and saluting, along the roadway, during Scott's escort to his final resting place. It would have been impossible to take on this great task alone. No one can understand the amount of time and preparation that goes into honoring a fallen officer. The countless hours spent on your own time, away from your family, to help your extended law enforcement family speaks for itself. Again, I thank you from the bottom of my heart for all that you did.

If there is anything that I or my department can ever do for you professionally or personally, please let me know. Be safe and God Bless.

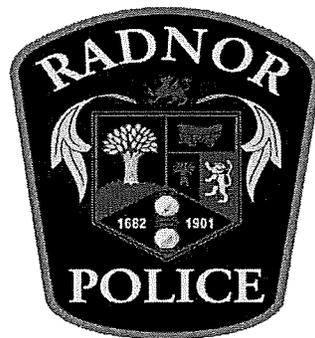
Thank you,

A handwritten signature in blue ink that reads "John".

Captain John S. Deihl
Department of Public Safety
Bureau of Park Police and Fire Safety

RADNOR TOWNSHIP POLICE DEPARTMENT

Monthly Report



July 2021

**Christopher B. Flanagan
Police Superintendent**



JUNE

<u>Description</u>	<u>Primary Count</u>
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Parking Tickets

Month of June 2021	120
January - June 2021	1,563

Residential and Commercial False Alarm Violations

Month of June 2021	69
January - June 2021	378

Moving Violations

Month of June 2021	374
January - June 2021	1,426

Radnor Police Training - June 2021

Interviewing Series – Ofc Stephanie Racht

PA Inspections Enforcement – Ofc Ray Rodden

Perception of Danger – Ofc Kaitlin Karmilowicz

Medical Marijuana – Ofc Kate Reardon, Ofc Joshua McCann, Ofc Tom Kester, and Ofc Kyle Hand

Drug Identification Certification (NIK) – Ofc Kate Reardon

Cannabis Concerns for Law Enforcement – Lt. Joe Pinto, Sgt Anthony Radico, Det Jon Jagodinski, and Ofc Nick Demayo



Radnor Twp PD DAILY INCIDENT COUNTS

06/01/2021 to 06/30/2021

Day of Month Responses	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
911 HANG UP	2	0	0	0	1	0	2	1	0	0	1	0	0	2	0	0	1	1	1	0	0	1	0	2	0	0	0	0	1	2	0	18
MV ACCIDENT (BRIDGE STRIKE)	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4
MV ACCIDENT (REPORTABLE)	0	2	2	0	1	1	0	0	1	0	0	0	0	0	0	0	2	1	0	0	1	0	1	0	0	1	0	0	2	0	0	13
ADDED PATROL BUSINESS	4	3	3	2	2	3	2	1	1	1	3	2	3	4	2	3	3	3	4	1	2	5	1	1	1	7	3	2	2	0	76	
ADDED PATROL	3	5	5	6	7	6	9	5	5	5	8	8	8	7	12	11	2	8	8	10	7	5	4	10	6	12	7	9	7	3	215	
ADDED PATROL REQUEST	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
ADDED PATROL SCHOOL	2	2	2	0	0	0	0	1	1	1	4	0	0	2	1	3	0	1	1	0	4	1	0	0	1	3	1	1	1	0	0	38
ALARM (ALL TYPES)	3	3	3	6	9	4	4	10	6	4	5	2	2	4	2	8	2	5	4	7	6	7	3	3	4	2	2	1	4	5	0	131
ANIMAL COMPLAINTS	2	0	0	0	2	0	2	1	0	2	1	1	0	0	3	0	0	3	1	1	1	0	2	2	1	0	0	1	1	1	0	29
ANIMALS - DEER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
ASSAULT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	
ASSIST ANOTHER PD	0	1	1	0	0	0	0	0	0	1	0	0	0	1	1	2	0	0	1	1	0	3	0	0	2	1	2	0	0	1	0	17
ASSIST AGENCY NON LAW	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
ASSIST PUBLIC	0	0	0	1	0	0	1	2	2	0	1	2	1	2	0	1	0	0	0	0	0	0	0	1	0	0	0	2	1	0	0	18
ASSIST VUPD	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
BURGLARY NON RESIDENTIAL	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
CITIZEN COMPLAINT REPORT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
CIVIL DISPUTE	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	1	0	0	0	1	0	0	0	8
CRIMINAL MISCHIEF / VANDALISM	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	5
DISORDERLY CONDUCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
DELCOM INFO ONLY	4	0	0	0	3	0	3	4	4	2	0	1	0	0	1	3	2	3	1	0	6	5	1	0	0	4	0	3	2	3	0	56
DISTURBANCE NO CITATION	0	0	0	1	2	0	0	0	0	1	0	3	1	0	0	2	0	1	0	3	1	1	1	1	0	0	2	0	0	1	0	20
DEATH DOA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
DOMESTIC (NO ARREST)	1	1	1	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	2	1	0	0	11
DRIVING UNDER THE INFLUENCE	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	5
DUI ACCIDENT	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2

ASSIST SICK/INJURED/EIMS	5	2	2	1	1	3	5	4	3	3	1	3	4	2	4	5	4	2	5	4	3	3	3	0	94
FIRE (ALL TYPES)	1	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	1	0	14
FRAUD (ALL TYPES)	1	0	0	0	0	0	0	0	0	0	1	1	1	2	2	1	0	0	2	0	1	2	3	0	23
HARASSMENT ALL OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
HARASSMENT BY COMMUNICATION	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	6	
HAZARDOUS CONDITION	0	0	0	0	1	3	2	2	1	1	0	0	2	3	1	0	1	0	0	2	1	1	0	27	
JUVENILE PROBLEMS (NO ARREST)	1	0	0	1	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	6	
K9 ASSIST	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
MENTAL HEALTH (EMER 302)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	3	
MENTAL HEALTH (ALL OTHERS)	0	0	0	0	1	1	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	1	0	8	
MISSING JUVENILE	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
MOTOR CARRIER ENFORCEMENT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
NARCOTICS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	6	
NARCOTICS - DTF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
NOTIFICATION - ELECTRICIAN	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	5	
NOTIFICATION - TOWNSHIP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	
OPEN DOORS / WINDOWS	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	4	
ORDINANCE VIOLATION CITATION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	0	6	
ORDINANCE VIOLATION NO	0	1	1	1	0	0	1	1	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	12	
PARKING COMPLAINTS	0	0	0	0	1	0	0	0	3	3	1	1	0	1	2	0	1	0	0	0	1	0	1	18	
PEDESTRIAN STOP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
POLICE INFORMATION	0	1	1	2	2	5	0	3	2	1	0	1	1	1	3	1	1	2	1	1	2	3	4	52	
FOUND PROPERTY	0	1	1	0	0	0	0	0	0	0	1	0	1	1	0	1	0	1	0	0	0	0	0	9	
LOST PROPERTY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	
REFERRED TO VILLANOVA PD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4	
ROBBERY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
SELECTIVE ENFORCEMENT	2	3	3	1	0	2	2	2	1	3	4	3	2	3	4	4	3	4	11	3	1	2	7	75	
SUSPICIOUS CIRCUMSTANCE	1	1	1	0	4	0	0	0	0	1	0	1	0	1	0	0	2	1	0	0	1	0	2	20	
SUSPICIOUS PERSON	1	0	0	2	0	0	0	0	1	1	2	0	0	2	0	1	3	0	0	0	1	0	1	20	
SUSPICIOUS VEHICLE	2	0	0	1	2	1	0	0	1	2	0	0	0	0	2	0	1	2	0	2	1	0	0	23	

CRIME ALERTS
JUNE 2021

On Monday, 5/31/2021, the resident to of the 200 block of N. Wayne Av., reports the theft of a bicycle from their storage unit. The resident reports that this morning they discovered their unlocked storage unit had been ransacked and a Huffy cruiser style bicycle was missing. The victim reports they have not checked their storage unit for at least the past 7-10 days.

On Monday, 6/14/2021, a resident of the 400 block of E. Lancaster Av. reports receiving a phone call from someone reporting to be from Homeland Security, threatening to have the subject's partner arrested. The caller stated the victim's wife's Visa was not properly completed and unless payment was made in Apple Gift Cards, DHS would be arresting and deporting his wife. Fortunately the victim realized this was a scam before any money was paid.

Sometime between the evening of 6/17/2021 and the morning of 6/18/2021 a resident of the 100 block of Wentworth La. had the catalytic converter stolen from their vehicle. The vehicle was Toyota Prius and the catalytic converter was sawed off of the car.

Sometime between 8:00 PM on 6/18/2021 and 6:30 PM on 6/19/2021 the resident of the Radcliffe House Apartments had their vehicle stolen. The vehicle is a 2016 Dodge Charger, that is yellow and blue in color and was displaying a PA license plate with a "Flyers" vanity plate in the front of the vehicle.

Sometime between 6/19/2021 and 6/20/2021 the victim had several items stolen from inside of their vehicle which was parked in the lot of the Aberwyck Apts. The vehicle, a black Mitsubishi Outlander, was unlocked at the time of the theft. Taken were several items including cash from the center console.

Sometime over night between 6/20/2021 and 8:00 AM on 6/21/2021 in the 300 block of Overhill Road, the victim's vehicle was entered and had items removed. The vehicle was left unlocked at the time of the theft and the victim believes he heard his car door slam closed at around midnight. Taken was several dollars in loose change.

The Radnor Police respects citizens' privacy, civil rights, and civil liberties by emphasizing behavior, rather than appearance, in identifying suspicious activity. Factors such as race, ethnicity, and/or religious affiliation are not suspicious. The public should only report suspicious behavior and situations (e.g., an unattended backpack or package, or someone breaking into a vehicle or restricted area). Moreover, any physical descriptions are based on victim and witness statements provided to the Radnor Police at the time the incident was reported or developed through investigation.

RADNOR TOWNSHIP POLICE DEPARTMENT
COMMUNITY EVENTS

Reading with the Radnor Police

Join us this summer to hear our Radnor Police officers read your favorite childhood stories!

This new FREE program is a great opportunity to get to know your local police officers! We will read a story, have some snacks, and then there will be an opportunity to ask questions about some of the things our police officers do each day. There might even be tours of the police vehicles or surprise visits from our K-9 officers!



Dates:

Tuesday, June 22, 2021 - 6:00 pm at Browning Lane Little Free Library (134 Browning Lane, Rosemont, PA)

Tuesday, July 6, 2021 – 11:00 am at Encke Park

Thursday, July 22, 2021 - 4:00 pm at Clem Macrone Park

Tuesday, August 10, 2021 - 4:00 pm at Odorisio Park

Radnor Township
Recreation & Community Programming Department

**CHRIST CHURCH
ITHAN** VILLANOVA, PA

For more information please call 610-688-5600 ext. 109

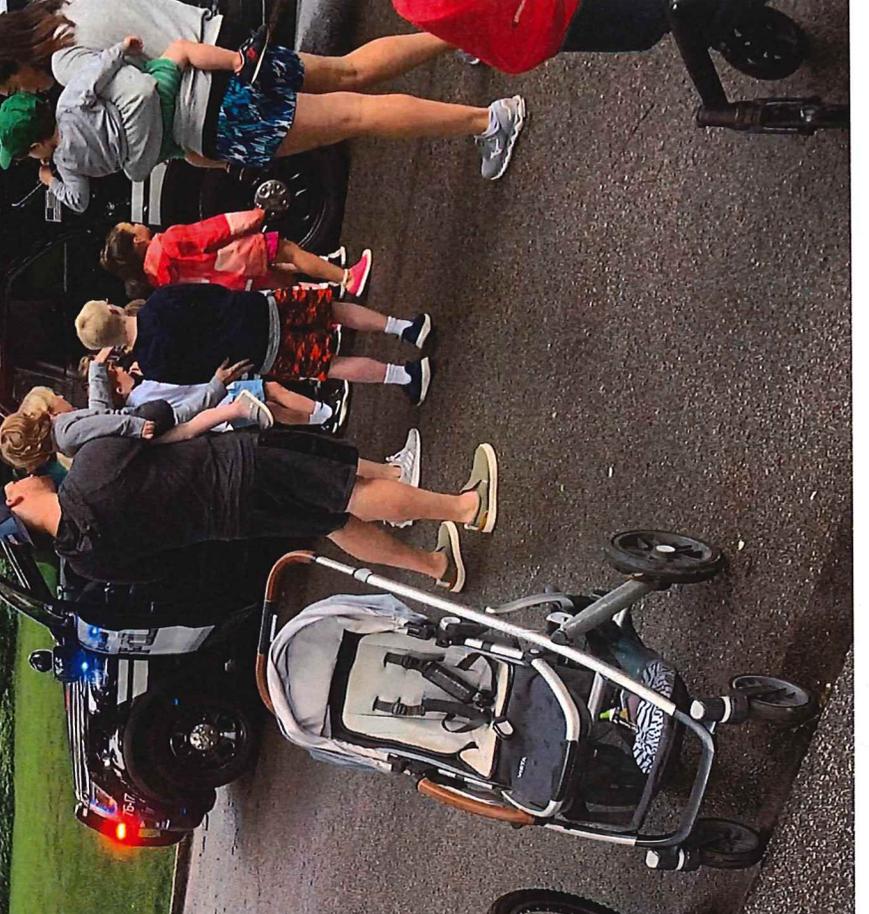
RADNOR POLICE READING
Browning Lane Little Free Library
June 22, 2021





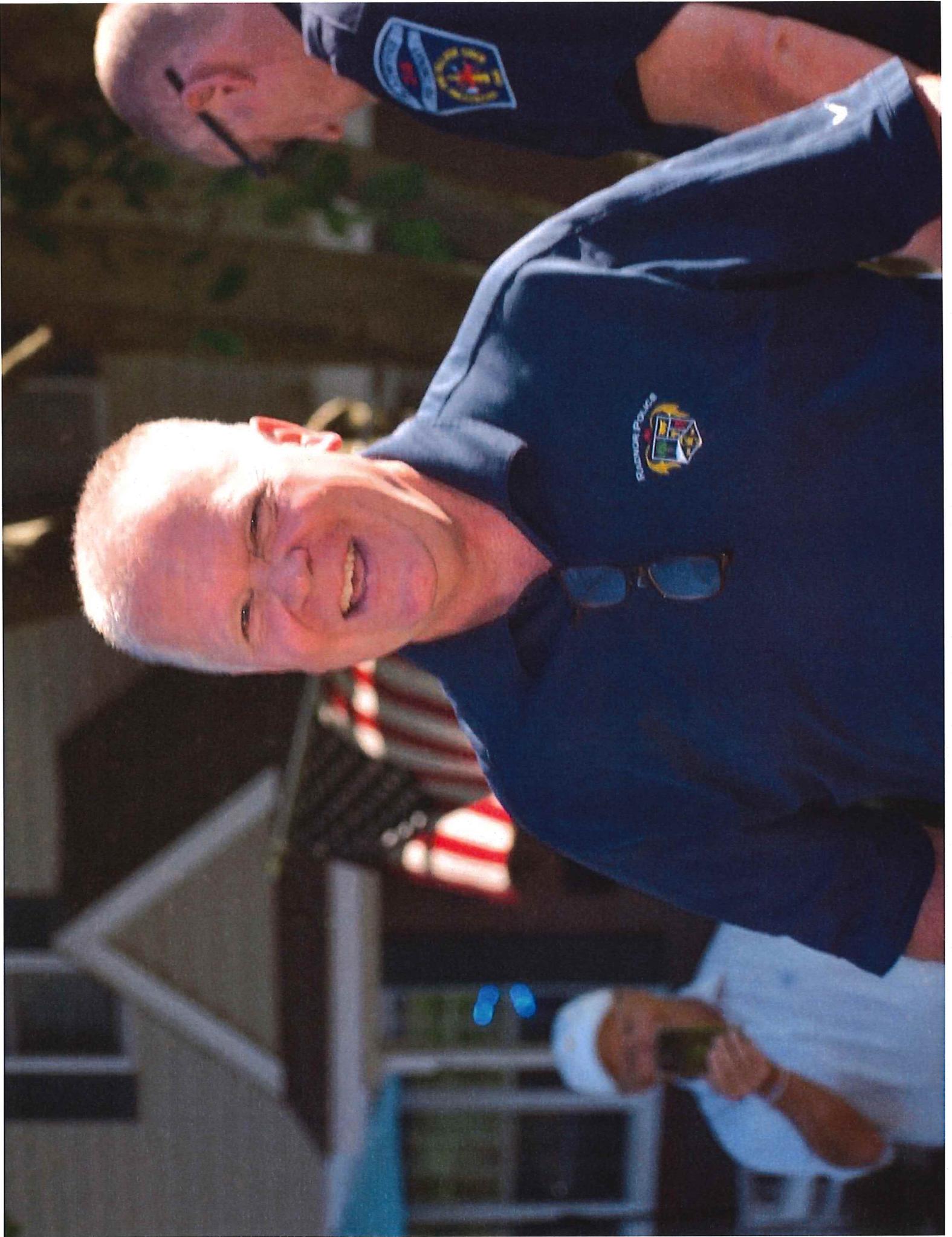






“LAST RIDE” FOR SGT JOSEPH MAGUIRE
JUNE 30, 2021









SERVICE OF TRANSFER AND DEDICATION

Radnor United Methodist Church
and
St. John African Methodist Episcopal Church

MONDAY, JUNE 7, 2021 | 5:00 PM

Radnor United Methodist Church
930 Conestoga Road | Bryn Mawr, PA 19010
To RSVP, please contact stjohnradnor@gmail.com

This is an outdoor event.

**In the event of inclement weather, service will take place in the Social Hall.*



*In light of COVID-19, all attendees
are asked to wear a mask during the Service.
Social distancing guidelines will be observed.*



Bishop Peggy A. Johnson
Presiding Bishop
Eastern PA and Peninsula Delaware
Annual Conferences - UMC

Rev. Evelyn Kent Clark
Superintendent
South District
Eastern PA Conference

Bishop Gregory G.M. Ingram
Presiding Prelate
First Episcopal District AME Church

Rev. Dr. Charles H. Lett
Presiding Elder, West Main Line District
Philadelphia Conference

Rev. Dr. Manuel A. Howard
Pastor, St. John AME Church, Wayne

A big "Welcome" to RevDr M Howard
and his AME Congregation for
choosing Garrett Hill's Radnor United
Methodist Church as their new home. I
am in awe of all the people that
attended tonight's service and I can't
wait to see how the church transforms
back to greatness. Miracles do
happen and Garrett Hill's most
precious treasure has been saved.



al Church
2021
Bishop
siding Elder
Pastor
If possible,
op







RACE FOR PEACE

**COME ONE COME ALL AS WE
CELEBRATE UNITY IN THE
COMMUNITY**

JUNE 12, 2021

KING OF PRUSSIA MALL

**110 N GULPH ROAD KING OF PRUSSIA, PA 19406
NEAR NEIMAN MARCUS ENTRANCE**

*Uniting law enforcement, social and recreational resources
with community organizations. Resource spaces available.*

11:00AM UNTIL 2:00PM



This Photo by Unknown Author



IT'S IN OUR HANDS



This Photo by Unknown Author

For further information contact:

ANDREWS HOWELL (267)339-4313 OR HAMEEN DIGGENS (484)620-4816

ANY POLICE DEPARTMENT COMMUNITY RELATIONS OFFICER



RADNOR TOWNSHIP POLICE DEPARTMENT
301 Iven Ave., Wayne, PA 19087

Office of Emergency Management

To: Superintendent Christopher Flanagan

From: Radnor Township Office of Emergency Management

Date: 6/30/2021

Subject: OEM Actions:
Joint Radnor Emergency Services Meeting 2021-#02

On Wednesday, June 30, 2021, at 1300 hrs. the fourth overall Joint Emergency Services Meeting was held virtually using Microsoft Teams. In attendance were members of Police, Fire, Codes, and IT who provide service to the Radnor Township Community.

The representatives included:

Police: Radnor PD - Superintendent Flanagan
Fire: Bryn Mawr Fire - Chief Kincade
Codes: Kevin Kochanski, Andy Pancoast
IT: Bob Hale, Steve Giancristoforo
Emergency Management: EM/Sgt. Gluck

This meeting was held to discuss new topics and to follow up on previous items.

Topics which were discussed at this meeting include the following:

-Discussed a Unified Response to Flooding Incidents

-Sgt. Gluck advised the group that storm related flooding incidents are possible in the near future. Any major storms which are forecasted and expected to cause flooding will be reviewed and if need be, the Township EOC will be activated. This activation includes the use of the group online EOC activation log which each organization can update in real time. Sgt. Gluck also advised the group a donation of 25 yellow magnetic flags was obtained for use during flooding events. These flags will be placed on submerged vehicles after a rescue has been conducted in flood waters. This will advise other responders that this particular vehicle has been cleared and there is no need to enter flood waters to confirm it is empty. In doing so we will prevent putting First Responders in danger by entering flood waters to check an empty vehicle and responding to an un-needed call.

-Updating the current Fire/Burglar Alarm Ordinance

-Previously, RFC requested the Township alarm ordinance be reviewed and updated so false alarms which are generated multiple times at the same location receive citations to prevent future activations. The proposed alterations to the current ordinance was reviewed with the group including Community Development Director Kevin Kochanski. The group was given a due date for any further changes. Once completed the updates will be sent to the Township Solicitor for review before being put before the Township Board of Commissioners for approval.

-Discussed the status of the Knox Box Program

The group was advised the pricing has been collected and the total number of Key Secure 6 units has been obtained. A final discussion will be had between Lower Merion Township Fire Officials and Bryn Mawr Fire Co. before the final purchase request will be put before the Township Board of Commissioners for purchase approval.

Respectfully,

Sgt. Christopher Gluck #301
Emergency Management Coordinator

RADNOR TOWNSHIP POLICE DEPARTMENT
THANK YOU LETTERS

RADNOR TOWNSHIP POLICE DEPARTMENT

THANK YOU LETTERS

Superintendent Flanagan,

The "Last Ride" that my family and I experienced yesterday left us with unbelievable memories. Our friends and family who were at the house also described it as a once in a lifetime experience. We are still collecting numerous photos and videos from a number of different sources. It is something that we will remember and cherish for the rest of our lives.

While I was watching the approaching vehicles, it occurred to me what an incredible experience my career has been.

Please extend to the department, my extended family, our sincere thanks for their support and well wishes.

Please remind everyone that they are always welcome to stop by my house (here and in OCNJ) and visit.

Thanks again.

Joe Maguire

Good afternoon,

Ms. Mary Aceto of Hardwicke Lane donated multiple boxes of pizza to the police department as thanks for all the help they provided her in the past in caring for her husband (deceased).

The pizza is in the Police lunchroom.

Thank you.

Vera DiMaio
Radnor Township Police Department
Executive Assistant to the Superintendent
301 Iven Avenue
Wayne, PA 19087
610-688-5600, Ext. 157
vdimaio@radnor.org

Dear Employees of Radnor
Township -

Thank you for taking
time from your busy
weekend to attend my
husband's funeral. It
was comforting to know
so many people were
there to support us.

Thank you kindly!
Thank you for the flowers!

During a time
like this
we realize how much
our friends and relatives
really mean
to us....

Your expression
of sympathy will always
be remembered

Sincerely,
Carol Royce

Dear Radnor Township Police
Family,

I would like to thank
you from the bottom of
my heart for the
turnout of your police
force at my husband's
funeral. I was honored
to have you in attendance
and many people expressed
to me how impressed
they were to see you
there. Thank you!

During a time
like this
we realize how much
our friends and relatives
really mean
to us....

Your expression
of sympathy will always
be remembered

Sincerely,
Carol Royce

RADNOR TOWNSHIP POLICE DEPARTMENT

301 Iven Avenue

Wayne, Pennsylvania 19087-5297

(610) 688-0503 ☐ Fax (610) 688-1238

Christopher B. Flanagan

Police Superintendent

TO: Radnor Township Commissioners; William M. White, Township Manager; Robert Tate, Director of Finance; Stephen F. Norcini, Township Engineer; Michael Simmons, Acting Public Works Director; Tammy Cohen, Director of Recreation and Community Programming; Kevin W. Kochanski, Director of Community Development; Bill Cassidy, Field Leader; Lt. Shawn Dietrich; Lt. Joseph Pinto; Sgt. Mark Stiansen, Officer Alex Janoski; Officer Pat Lacey, Officer Ken Piree, Highway Patrol Unit; William Gallagher, Supervisor of Parking; Damon Drummond, Senior Transportation Engineer for Gilmore and Associates; Vera DiMaio, Executive Assistant

FR: Christopher B. Flanagan

RE: STAFF TRAFFIC COMMITTEE MEETING HELD IN THE POLICE ROLL CALL ROOM, WEDNESDAY, MAY 19, 2021 AT 10:00 AM.

NEW BUSINESS

1. Commissioner Abel requests the following:

- ✓ (a) One Way Sign on Clover Lane
- ✓ (b) Stop Sign on Highland Avenue and Fairview Avenue
- ✓ (c) Crosswalks on Conestoga Road and South Devon Avenue
- ✓ (d) Crosswalks on Conestoga Road and Bloomingdale Avenue

Commissioner Abel and Ms. Bullock were both present. They both stated their concerns regarding the above.

- a. The one-way sign cannot be clearly seen showing its one-way. A new sign clearly showing this will be placed on Clover Lane.
- b. A stop sign will not qualify at this location; A sign with “Children at Play” or “Watch Children” may be considered.
- c. Neighbors spoke to Commissioner Abel and wanted speed humps/crosswalks on South Devon Avenue – It was stated that there will be a discussion on this when the neighbors formally request it.

Conestoga Road is a state road. There is already a crosswalk here. Any changes to the crosswalk or roadway will need to be approved by PennDOT. In addition, a new crosswalk will require ADA compliance.

d. Conestoga Road is a state road. RPD cannot put in a crosswalk without PennDOT approval. Midblock crosswalks are generally not encouraged. Also, a new crosswalk will require new curb cuts which meet ADA compliance. No Pedestrian signs are only used where there are crosswalks.

A No Left Turn sign RPD HP will look at the feasibility of a No Left Turn at Conestoga and Maplewood.

2. Morris Road Streetscape Project Update – Pavement Markings

Township Engineer, Steve Norcini, was not present at this meeting to speak on this matter.

3. Ms. Stephanie Payne requests a “Hidden Drive” sign be placed on 718 S Bryn Maws Avenue

Staff Traffic Committee stated PennDOT will have to be contacted to gain permission for this request.

4. Ms. Jennifer Kamienski and Mr. Kevin Peragine requests to hold a discussion regarding speed, stop sign enforcement, and truck traffic in the 200 Block of North Aberdeen Avenue

Mr. Peragine and Ms. Kamienski were both present at this meeting. They both voiced their many concerns regarding the above. Sgt. Mark Stiansen suggested:

- Field Leader Bill Cassidy will place new bridge height advisory signs on the North side, near Pennsylvania Avenue.
- Stop sign enforcement will continue and is already being done.
- The request for a crosswalk will need to meet ADA compliance. Stop bar may be completed.
- Speed board will be put on the schedule and will be used one month at a time
- Officer Janoski stated during the period of May 7-14, stats showed that speed was not an issue at this location.
- A sign attached to the stop sign with the fees listed may be a possibility to be placed at this location to help with education.

5. Mr. Brian Reilly requests a stop sign be installed at the intersection of Old Oaks Road and Buckingham Drive

Staff Traffic Committee stated that this intersection does not meet the qualifications of a stop sign.

See attached spreadsheet for pending issues and updates

RADNOR TOWNSHIP POLICE DEPARTMENT
301 Iven Avenue
Wayne, Pennsylvania 19087-5297
(610) 688-0503 □ Fax (610) 688-1238

Christopher B. Flanagan
Police Superintendent

TO: Radnor Township Commissioners; William M. White, Township Manager; Robert Tate, Director of Finance; Stephen F. Norcini, Township Engineer; Ricky Foster, Acting Public Works Director; Tammy Cohen, Director of Recreation and Community Programming; Kevin W. Kochanski, Director of Community Development; Bill Cassidy, Field Leader; Lt. Shawn Dietrich; Lt. Joseph Pinto; Sgt. Mark Stiansen, Officer Alex Janoski; Officer Pat Lacey, Officer Ken Piree, Highway Patrol Unit; William Gallagher, Supervisor of Parking; Damon Drummond, Senior Transportation Engineer for Gilmore and Associates; Vera DiMaio, Executive Assistant

FR: Christopher B. Flanagan

RE: STAFF TRAFFIC COMMITTEE MEETING HELD IN THE POLICE ROLL CALL ROOM, WEDNESDAY, JUNE 16, 2021 AT 10:00 AM.

NEW BUSINESS

Commissioner Abel requests discussion of the following 3 items:

1. Traffic/safety on Highland Avenue.

Commissioner Abel stated that a neighbor wants to place a speed hump on Highland Avenue at Fairview. Staff Traffic Committee states that a Petition would be required to formally proceed with this request.

2. Stop sign enforcement/fail to obey stop signs at Maplewood Avenue and Valley Forge Road (near Dittmar Park). Two schools are in area and neighbors walk on Valley Forge Road. Some have raised concern with both speed on Maplewood Avenue and Valley Forge Road, as well as lack of stopping at the stop sign.

RPD Highway Patrol and Patrol Units will be advised to watch for Stop Sign violations, in addition to the monitoring of speed.

3. Speed enforcement on South Devon Avenue near Valley Forge Circle and Calvarese Lane.

Staff Traffic Committee stated the Highway Patrol Unit recently performed enforcement at this location. Staff Traffic Committee further states that continued enforcement will occur. Commissioner Abel requests enforcement be between the hours of 3pm-4pm and results be provided.

4. Discussion on selective enforcements on Midland Avenue due to residents complaining about parents turning around in private driveways during pickup times at St. Katharine's School.

Staff Traffic Committee states RPD officers were out monitoring Midland Ave. during the final weeks of the school year and will revisit the location in September to see if the problem persists.

5. Hill Top Preparatory School requests school zone signs be installed on South Ithan Avenue to deter speeding.

Staff Traffic Committee denies this request per Section 212, subsection 501 – School Zone Speed Limits

6. Harry Furey requests lines be painted in front of 136 Garrett Avenue.

This request has already been completed.

7. Commissioner Borowski requests discussion of traffic calming options on S. Ithan Avenue between Conestoga Road and Lancaster Avenue.

Sgt. Stiansen advised Commissioner Borowski that a Petition needs to be obtained to formally proceed with this request. Additionally, the Highway Patrol Unit has been enforcing the posted speed limit.

8. Liz McNulty has concerns about the truck traffic on S. Aberdeen Avenue.

Highway Patrol Officer Alex Janoski reviewed the Radnor Code. Trucks are permitted to use the road to conduct business and local deliveries.

OLD BUSINESS

1. Update on crosswalk area at Conestoga Road and South Devon Avenue.

Conestoga Road is a State Road. If requested, an application needs to be submitted to PennDOT for any changes such as an ADA ramp, crosswalk, and rapid flashing beacons.

Township Engineer, Steve Norcini, can obtain a cost proposal from Gilmore and Associates and submit to PennDOT.

2. Update on Maplewood Avenue - no left turn during designated hours.

See attached spreadsheet for pending issues and updates



RADNOR TOWNSHIP POLICE DEPARTMENT

301 Iven Ave., Wayne, PA 19087

June 2021 Staff Traffic Status Report

Project Name	Project Information	Status Update
County Line Corridor Study (from Lancaster Avenue to Conestoga Road)	<p>Radnor Township along with Lower Merion funded the County Line Corridor Study (posted on the Township's website). Both Townships agreed that the first project to be constructed from the study would be a traffic signal at County Line Road and Montrose Avenue.</p> <p>Pennoni Engineering Associates was awarded the design contractor for traffic signal.</p>	The signal design has been designed and submitted to Penn DOT. Penn DOT comments have been received and reviewed with both Townships. Currently, it is anticipated the project will be bid in 2021.
King of Prussia Rd & Eagle Rd intersection improvements	<p>Radnor Township, in partnership with Cabrini and Eastern Universities, received a DCED MTF grant to construct intersection improvements including turning lanes, storm sewer, and signal improvements. The project is in the design phase. Rd</p>	The project is to bid in the summer of 2021.

**RESOLUTION 2021-77
RADNOR TOWNSHIP**

A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA, AUTHORIZING PLAYGROUND REPAIRS AT COWAN PARK THAT INCLUDES REPLACEMENT OF A TRANSFER BRIDGE AND DECKING IN THE AMOUNT OF \$10,096.

WHEREAS, Radnor Township strives to maintain and improve its parks and recreational facilities at the highest standard for a positive impact to the quality of life for its residents; and

WHEREAS, the playground at Cowan Park was built in 1994 and various pieces of equipment and components are reaching the end of their useful life; and

WHEREAS, there is a transfer bridge within the playground that has deteriorated to the point where it can no longer be maintained with supplemental repairs and has become a safety hazard to users; and

WHEREAS, this project includes the replacement the transfer bridge, corresponding decking, and installation by a certified Playworld Systems Installer with purchase price reflective of the Pennsylvania State Purchasing Program (COSTARS).

NOW THEREFORE, BE IT RESOLVED that the Board of Commissioners of Radnor Township does hereby authorize playground repairs at Cowan Park that includes replacement of a transfer bride and decking in the amount of \$10,096.00 from George Ely Associates, Inc. through the Pennsylvania State Purchasing Program (COSTARS) as outlined below:

Vendor: George Ely Associates, Inc. - Vendor # 152823
Contract #: Costars – 014-11
Amount: \$10,096.00 (Equipment and Installation)

SO RESOLVED this 14th day of July, 2021.

RADNOR TOWNSHIP

By: _____
Name: Jack Larkin
Title: President

ATTEST: _____
Name: William M. White
Title: Township Manager/Secretary

Radnor Township



PROPOSED LEGISLATION

DATE: June 22, 2021

TO: Board of Commissioners

FROM: Tammy Cohen, Recreation & Community Programming Director 

LEGISLATION: Resolution #2021-77 Authorizing Playground Repairs at Cowan Park that includes Replacement of a Transfer Bridge and Decking in the Amount of \$10,096.00.

LEGISLATIVE HISTORY: This is the first legislative action on this topic.

PURPOSE AND EXPLANATION: Request is being made to authorize playground repairs at Cowan Park that includes replacement of a transfer bridge and decking in the amount of \$10,096.00. The playground at Cowan Park was built approximately 27 years ago in 1994 and various pieces of equipment and components are reaching the end of their useful life. The transfer bridge within the playground structure has deteriorated to the point where it can no longer be maintained with supplemental repairs and has become a safety hazard to users. The transfer bridge has been removed by the Township Public Works Department and the corresponding area has been closed to users so they can no longer transfer from deck to deck. (see attached images). This project includes the replacement the transfer bridge, corresponding decking, and installation by a certified Playworld Systems Installer (the playground's manufacturer). The replacement equipment will conform to the American Society for Testing and Materials (ASTM) Guidelines.

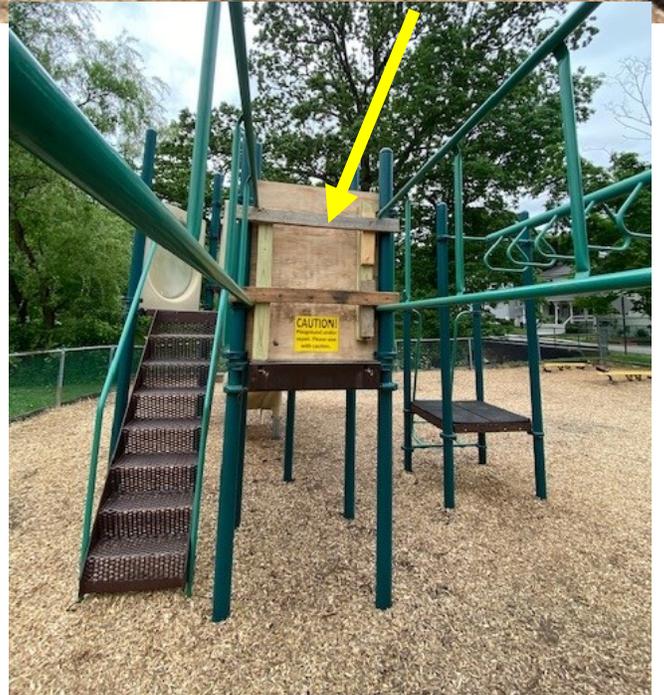
Replacement of the transfer bridge and decking will continue to provide a highly utilized and safe playground feature for the community in a densely populated neighborhood of Radnor Township. It will continue to promote healthy, active lifestyles for users who frequently visit the park and utilize it as a highly regarded recreational facility in Radnor Township.

IMPLEMENTATION SCHEDULE: Upon approval of Resolution 2021-77, the replacement equipment will be ordered and will take approximately 8 to 12 weeks for delivery. Project completion is anticipated by October 2021.

FISCAL IMPACT: Funding for this expenditure will be designated from the Parks Capital Budget.

Vendor: George Ely Associates, Inc. - Vendor # 152823
Contract #: Pennsylvania State Contract (COSTARS) – 014-11
Amount: \$10,096.00 (Equipment and Installation)

RECOMMENDED ACTION: I would like to respectfully request that the Board to approve Resolution #2021-77 Authorizing Playground Repairs at Cowan Park that includes Replacement of a Transfer Bridge and Decking in the Amount of \$10,096.00



Visual Example Only:
Colors will match existing
playground equipment
color scheme of brown
and forest green.



**RESOLUTION 2021-78
RADNOR TOWNSHIP**

**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE COUNTY,
PENNSYLVANIA AUTHORIZING THE RENEWAL SUBSCRIPTION FOR
MICROSOFT OFFICE 365 LICENSING**

WHEREAS, The Board of Commissioners adopted Resolution 2015-64 in June 2015 which authorized the migration of the Township’s email and office productivity software to the Microsoft Office 365 “Cloud” platform; and

WHEREAS, the Microsoft Office 365 program requires renewal annually and administration secured a 3-year guaranteed pricing arrangement; and.

NOW, THEREFORE, it is hereby *RESOLVED* that the Board of Commissioners of Radnor Township hereby authorizes the Township Manager to renew the Township’s Microsoft Office 365 licensing for a one-year term at the following prices:

Product	Monthly Cost per User	Estimated Number of Licenses	Renewal Pricing Estimate
Annual Licensing:			
O365GovE3	\$17.60	58	\$12,249.60
ExchangeOnlinePlan2Gov	\$7.04	53	4,477.44
O365GovK1	\$3.52	14	591.36
O365 Adv Threat Protection	\$1.76	111	2,344.32
Azure Active Directory P1	\$59.28	1	59.28
Annual Licensing Total			\$19,722.00

SO RESOLVED, at a duly convened meeting of the Board of Commissioners of Radnor Township conducted on this 12th day of July, A.D., 2021.

RADNOR TOWNSHIP

By: _____
Name: Jack Larkin
Title: President

ATTEST: _____
William M. White
Township Manager / Secretary

Radnor Township



PROPOSED LEGISLATION

DATE: July 12, 2021

TO: Board of Commissioners

FROM: Robert V. Tate, Jr, Finance Director

A handwritten signature in blue ink that reads "Robert V. Tate, Jr." with a stylized flourish at the end.

LEGISLATION: Resolution 2021-78 authorizing the renewal of the Township's Microsoft Office 365 licensing.

LEGISLATIVE HISTORY: The Board of Commissioners adopted Resolution 2015-64 in June 2015 which authorized the migration of the Township's email and office productivity software to move from in-house server based to the "Cloud." The migration occurred during the fall/winter of 2015/2016 and the licensing renews annually in August.

PURPOSE AND EXPLANATION: This resolution is for the annual renewal and continuation of the licensing of the "cloud based" Microsoft Office 365 and related suite of products.

On an ongoing basis, the Township purchases email service from Office 365 with a cloud-based email server. Additionally, the Township purchases Microsoft Office products, including Word, Office, Excel, PowerPoint, Access Teams and Outlook, on an ongoing basis as part of the computer replacement program. We are currently running the most up to date version of the Microsoft Office products and will continue to receive updates as part of our renewal agreement¹

In researching solutions to improve IT efficiencies, we sought out solutions that would enhance the following:

- Greater data security (audit comment)
- Documented disaster recovery (audit comment)
- Cloud based email and document storage and access for cheaper storage costs and availability
- Document sharing, collaboration, remote access, version control
- Improved virus scanning and spam filtering
- Improved Right-to-know archiving, searching, and reporting
- Eliminate the need for an on-premise e-mail server
- Eliminate the need for third party email archiving system
- Affordability versus the costs currently incurred for replacement Office products and email system

FISCAL IMPACT: The annual subscription for the various licensing packages totals \$19,722.00. The monthly licensing cost is locked in for three years and will vary only to the extent of an increase or decrease in the number of users.

RECOMMENDED ACTION: The Administration respectfully recommends approving the renewal at the July 12, 2021 Board meeting.

Radnor Township



PROPOSED LEGISLATION

DATE: July 12, 2021

TO: Board of Commissioners

FROM: Kevin W. Kochanski, Community Development Director

SUBJECT: UNIFORM CONSTRUCTION CODE (UCC) SERVICES RFP

LEGISLATION: The Community Development is seeking authorization to receive proposals for 3rd party Uniform Construction Code (UCC), Rental Housing, and Fire Safety Inspection Services for the years 2022, 2023, and 2024.

PURPOSE AND EXPLANATION: In accordance with Charter requirements, Contracted Services are to be bid out every 3 years. 2021 marks the 3rd year since the last time these services were bid out for the Community Development Department. The Department has historically utilized 3rd party consulting firms to assist Department Staff with enforcing the adopted codes of the Township to include: UCC plan review, UCC inspections, and Rental Housing Inspections. We are also seeking bids to provide assistance to establish a code authorized Fire Safety Inspection Program for all non-residential buildings.

FISCAL IMPACT: There is no anticipated impact to the Township budget. This has been a budgeted item since at least 2010.

RECOMMENDED ACTION: Authorize Staff to advertise the RFP and to receive bids for the needed services.

Radnor Township

PROPOSED LEGISLATION

DATE: July 7, 2021
TO: Radnor Township Board of Commissioners
FROM: Dennis P. Capella, Engineering Project Manager
CC: William M. White, Township Manager
Stephen F. Norcini, P.E., Township Engineer

LEGISLATION: Authorizing the Engineering Department to Receive Sealed Bids for the N. Wayne Ave/Poplar Ave/Pennsylvania Ave/West Ave/Station Rd Intersection and Pedestrian Safety Improvement Project

LEGISLATIVE HISTORY: The Board of Commissioners approved several resolutions associated with the N. Wayne Ave/Poplar Ave/Pennsylvania Ave/West Ave/Station Rd Intersection project starting with the authorization to apply for a Pennsylvania Department of Community and Economic Development Multimodal Transportation Fund (MTF) Grant in 2015. This current request to receive sealed bids has not been before the Commissioners previously.

PURPOSE AND EXPLANATION: The project consists of several improvements, including upgrades of pedestrian signal heads and push buttons, upgrades of existing ADA ramps, replacement of portions of existing sidewalks, emergency vehicle pre-emption, a video detection system and upgrade and relocation of the controller cabinet. Attached are the current plans for the project. The project will provide an overall improvement to this heavily traveled intersection of the Wayne Business Overlay District (WBOD).

IMPLEMENTATION SCHEDULE: Pending Board of Commissioners' approval, the project will be advertised for sealed bids. A subsequent contract award recommendation will be presented to the Board of Commissioners. It is anticipated that the award recommendation will occur in the fall, at which time the selected contractor may begin to acquire materials, although we will request that work not start until after January 1, 2022, which is a period of less activity in the area and less disruptive to the WBOD.

FISCAL IMPACT: The estimated cost of construction and contingency for this project is \$275,000. The MTF grant is \$147,634. The remainder of the project costs will be funded by the proceeds of the 2019 General Obligation Bond (\$163,812).

RECOMMENDED ACTION: *Staff respectfully requests the Board of Commissioners of Radnor Township to Authorize the Engineering Department to Receive Sealed Bids for the N. Wayne Ave/Poplar Ave/Pennsylvania Ave/West Ave/Station Rd Intersection and Pedestrian Safety Improvement Project.*

GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

ALL MAINTENANCE WORK INCLUDING TRIMMING OF TREES, NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS IS THE RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED MAINTAINED IN ACCORDANCE WITH PUBLICATION NO. 212.

POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF CURB OR THE EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM CLEARANCE HORIZONTALLY OF 2 FEET.

SIGNALS ERECTED OVER THE ROADWAY SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK OR PAVEMENT.

ALL OVERHEAD SIGNALS MUST BE RIGIDLY MOUNTED, TOP AND BOTTOM, AND EQUIPPED WITH BACKPLATES.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNALS MEASURED AT RIGHT ANGLES TO THE APPROACH SHALL BE 8 FEET.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

CURBING TO BE INSTALLED BY MUNICIPALITY AND WHERE NOTED, SHALL BE PLAIN CEMENT CONCRETE CURB OR GRANITE CURB, INSTALLED IN ACCORDANCE WITH DEPARTMENT SPECIFICATIONS FROM PUB. 408.

ALL ADA RAMPS & PUSH BUTTON ACCESS MUST MEET FEDERAL AND STATE GUIDELINES.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, EFFECTIVE DATE DECEMBER 20, 1974.

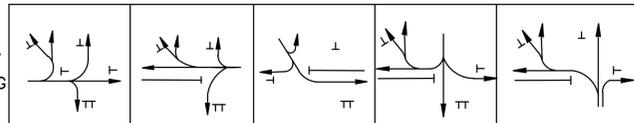
WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT FOR REVIEW PRIOR TO BIDDING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-8800 SERIES.

EMERGENCY PRE-EMPTION:

MOVEMENT, SEQUENCE, AND TIMING DIAGRAM



INTERVAL	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
SIGNALS	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R
1,2	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R
3,4,25	G	Y	R	R	R	R	G	Y	R	R	R	R	R	R	R
5,6,7,24	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
8,9	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R
10,11	R	R	R	G	Y	R	R	R	G	Y	R	G	Y	R	
12,22	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
13,14	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	
15,16	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
17,18	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	
19,20	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	
21,23	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
FIXED TIME	*	4	3	*	4	3	*	4	3	*	4	3	*	4	3

OPERATION NOTES

⊙ G WHEN RETURNING TO NORMAL OPERATION

EMERGENCY PRE-EMPTION NOTES

CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION FOR THE NORTHBOUND AND SOUTHBOUND APPROACHES OF N. WAYNE AVENUE (S.R. 1046) AND THE WESTBOUND APPROACHES OF STATION ROAD AND POPLAR AVENUE AND THE EASTBOUND APPROACH OF WEST AVENUE WITH A FAIL SAFE DEVICE FOR EACH DIRECTION OF OPERATION.

THIS FAIL SAFE DEVICE SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SHALL FLASH WHEN THE EMERGENCY VEHICLE HAS CONTROL OF THE INTERSECTION FOR THE APPROPRIATE APPROACH. LOCATION OF THE EMERGENCY VEHICLE DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLES, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS, ACCORDINGLY. THEN THE GREEN INTERVAL FOR THE PRE-EMPTION PHASE SHALL FOLLOW. ONLY THOSE PHASES NOT POSING A YELLOW TRAP CONDITION MAY REMAIN GREEN (PHASE 5 AND 6) WHEN GOVERNED BY APPROACHING EMERGENCY VEHICLE.

THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLES, SHALL TIME OUT ALL YELLOW AND RED INDICATIONS, FOLLOWED BY THE INTERVAL OF THE PRE-EMPTION PHASE GOVERNED BY THE ACTUATION OF THE APPROACHING PHASE GOVERNING THE EMERGENCY VEHICLE.

IF THE SIGNALS HAVE BEEN ACTUATED BY PEDESTRIAN PUSHBUTTON, AND THE SIGNAL IS PRE-EMPTED DURING THE "MAN" PHASE, THE MAN PHASE SHALL TERMINATE IMMEDIATELY, FOLLOWED BY THE "FLASHING HAND" INDICATION IN ITS ENTIRETY, FOLLOWED BY THE APPROPRIATE SELECTIVE CLEARANCES BEFORE PROCEEDING TO THE PRE-EMPTION PHASE.

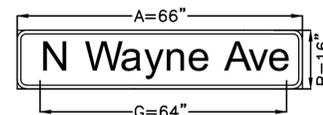
IF THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLES, ARE FLASHING, ALL SIGNALS SHALL REMAIN FLASHING.

UPON COMPLETION OF PRE-EMPTION PHASE 1+2, 1+4, 5+7, 6+7, OR 1+8, IN RETURNING TO NORMAL OPERATION, PHASE 1+2+6+7, INTERVAL 1 SHALL FOLLOW.

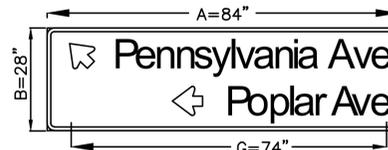
IF ADDITIONAL PRE-EMPTION PHASES ARE ACTIVATED WHILE IN PRE-EMPTION, THE ORIGINAL PRE-EMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PRE-EMPTION PHASE.

IN EMERGENCY PRE-EMPTION, NO PRIORITY SHALL BE ESTABLISHED, PRE-EMPTION SHALL BE A "FIRST COME, FIRST SERVE" OPERATION.

THE FIELD LOCATIONS OF THE PRE-EMPTION DETECTORS MAY DIFFER FROM THE LOCATIONS DEPICTED ON THE CONDITION DIAGRAM, AS THE DETECTORS MAY NEED TO BE RELOCATED AND/OR ADJUSTED TO PROVIDE ACCEPTABLE OPERATION AS DEEMED APPROPRIATE BY DEPARTMENT PERSONNEL.



SIGN N
FONT: HIGHWAY GOTHIC SERIES B
8" UPPER CASE
6" LOWER CASE



SIGN V
FONT: HIGHWAY GOTHIC SERIES B
8" UPPER CASE
6" LOWER CASE

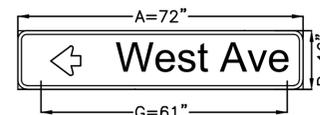


SIGN U
FONT: HIGHWAY GOTHIC SERIES B
8" UPPER CASE
6" LOWER CASE

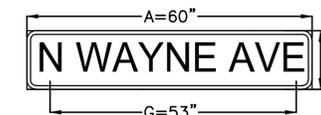
NOTE: ALL OVERHEAD STREET NAME SIGNS ARE TO BE EQUIPPED WITH SWINGING BRACKETS.



SIGN R
FONT: HIGHWAY GOTHIC SERIES B
10.6" UPPER CASE
8" LOWER CASE



SIGN P
FONT: HIGHWAY GOTHIC SERIES B
10.6" UPPER CASE
8" LOWER CASE



SIGN T
FONT: HIGHWAY GOTHIC SERIES B
6" UPPER CASE
6" LOWER CASE

SIGNAL SHALL BE EQUIPPED WITH ACCESSIBLE PEDESTRIAN SIGNALS (APS) WITH THE FOLLOWING FEATURES:

1. ADA COMPLIANT PUSHBUTTON WITH LATCHING LED INDICATOR AND TONE.
2. A TACTILE DIRECTIONAL ARROW ALIGNED PARALLEL TO THE CROSSING AND WHICH VIBRATES DURING THE WALK INDICATION.
3. A PUSHBUTTON LOCATOR TONE. THE LOCATOR TONE SHALL HAVE A DURATION OF 0.15 SECONDS AND REPEAT AT 1 SECOND INTERVALS, SHALL BE INTENSITY RESPONSIVE TO AMBIENT SOUNDS, AND AUDIBLE FROM 6 TO 12 FEET FROM THE PUSHBUTTON.
4. ACTUATION OF THE PEDESTRIAN PUSHBUTTON SHALL BE ACCOMPANIED BY THE SPEECH MESSAGE "WAIT" WHEN THE WALK INTERVAL IS NOT TIMING.
5. AN AUDIBLE WALK INDICATION AS FOLLOWS:
THE WALK INDICATION SHALL BE THE SPEECH WALK MESSAGE: "WALK SIGN IS ON TO CROSS [STATION ROAD]." "WALK SIGN IS ON TO CROSS [NORTH WAYNE AVENUE]."

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: DELAWARE COUNTY
MUNICIPALITY: RADNOR TOWNSHIP
INTERSECTION: NORTH WAYNE AVENUE (S.R. 1046)
AND POPLAR AVENUE AND WEST AVENUE

REVIEWED: _____ DATE _____

MUNICIPAL OFFICIAL _____ DATE _____

RECOMMENDED: _____ DATE _____

DISTRICT TRAFFIC ENGINEER _____ DATE _____

NO.	REVISION	DES./REVW.	DATE	REVW.	DATE	RECOM.	DATE
1	New Dwg. 12/8/94						
2	Rev. Phasing Timing 3/23/95						
3	As-Built Plan	McM	3/5/12	PLUTZ	3/12/12	LRB	3/14/12
4	INSTALL COUNTDOWN PED SIGNALS VIDEO DETECTION, ADA MODIFICATIONS	G&A	1/3/20				
5							
6							
7							
8							

REVISION NUMBER	REVISIONS	DATE	BY

TRAFFIC SIGNAL NOTES

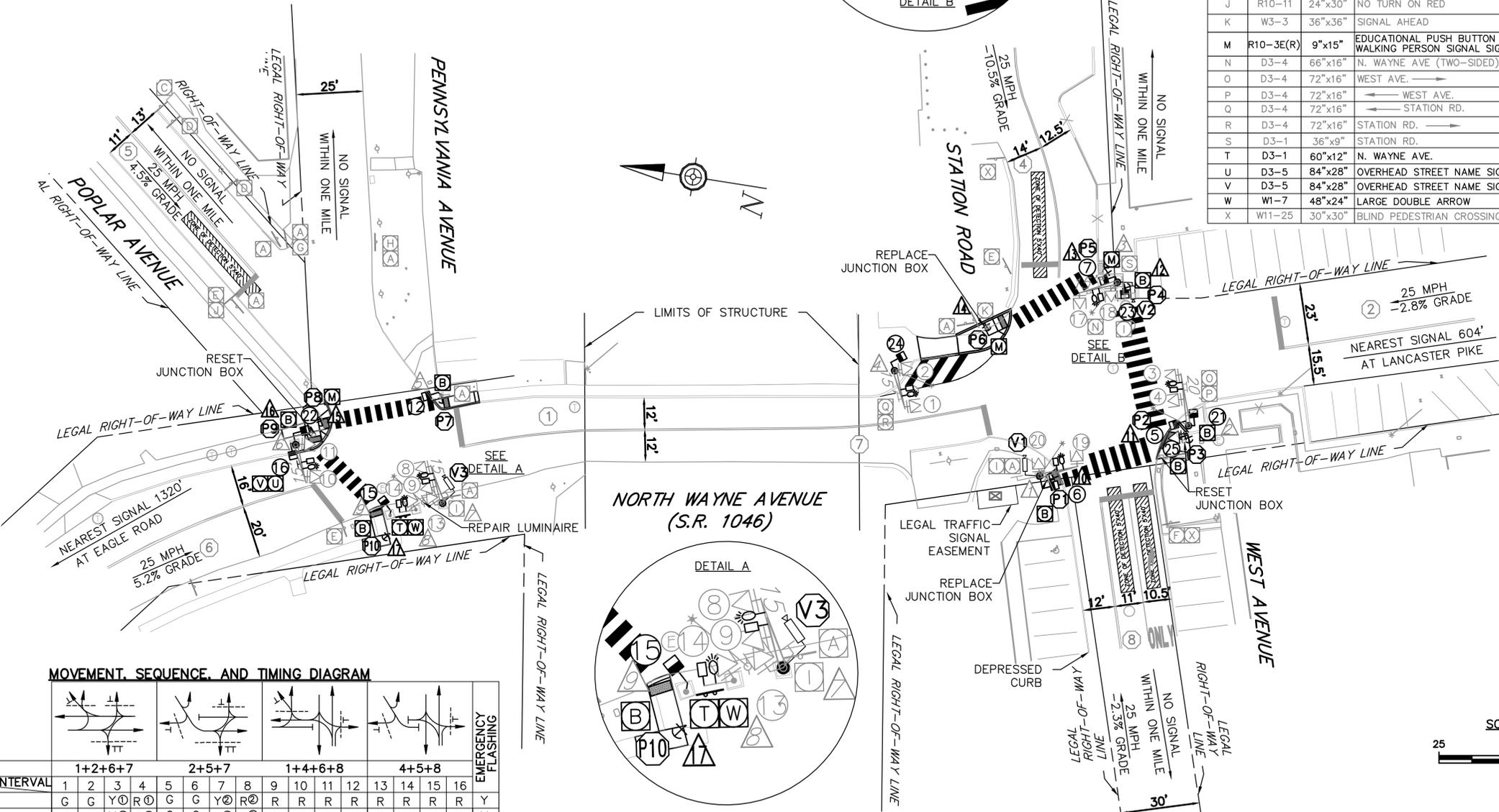
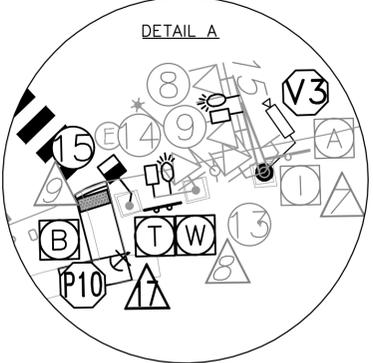
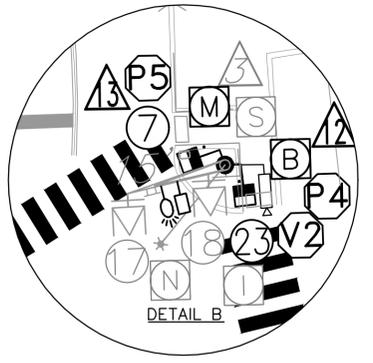
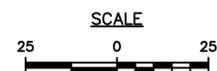
NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED WITHOUT PRIOR WRITTEN APPROVAL.
ALL SIGNS AND PAVEMENT MARKINGS INDICATED ARE PART OF THE PERMIT. INSTALL AND MAINTAIN IN ACCORDANCE WITH PUBLICATION 236.
POST MOUNTED SIGNALS: INSTALL WITH A MINIMUM SIGNAL HEAD CLEARANCE OF 2 FEET BEHIND FACE OF CURB OR EDGE OF SHOULDER; AND 8 FEET ABOVE SIDEWALK OR PAVEMENT GRADE.
OVERHEAD SIGNALS: INSTALL WITH A MINIMUM SIGNAL HEAD CLEARANCE OF 16 FEET BEHIND FACE OF CURB OR EDGE OF SHOULDER. PROVIDE A MINIMUM SIGNAL HEAD CLEARANCE OF 16 FEET ABOVE ROADWAY. RIGIDLY MOUNT TOP AND BOTTOM: AND EQUIP WITH BACKPLATES. PROVIDE A MINIMUM HORIZONTAL DISTANCE OF 8 FEET BETWEEN SIGNALS AS MEASURED AT RIGHT ANGLES TO THE APPROACH.
DETERMINE WITH A PENNDOT REPRESENTATIVE, THE EXACT LOCATION OF DETECTORS PRIOR TO INSTALLATION.
CONSULT WITH LOCAL OFFICIALS AND UTILITIES TO RESOLVE CONFLICTS PRIOR TO CONSTRUCTION.
THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

SIGN TABULATION

PLAN SYMBOL	SERIES	SIZE	REMARKS
A	R9-3	18"x18"	NO PEDESTRIAN CROSSING
B	R10-3E(L)	9"x15"	EDUCATIONAL PUSH BUTTON FOR WALKING PERSON SIGNAL SIGN ←
C	R7-4	12"x18"	NO PARKING HERE TO CORNER
D	R7-4	12"x18"	NO STOPPING OR STANDING →
E	R10-6L	24"x30"	STOP HERE ON RED
F	R3-7R	30"x30"	RIGHT LANE MUST TURN RIGHT
G	R6-1R	36"x12"	HORIZONTAL RIGHT ONE WAY
H	R6-1L	36"x12"	HORIZONTAL LEFT ONE WAY
I	R10-11	30"x36"	NO TURN ON RED
J	R10-11	24"x30"	NO TURN ON RED
K	W3-3	36"x36"	SIGNAL AHEAD
M	R10-3E(R)	9"x15"	EDUCATIONAL PUSH BUTTON FOR WALKING PERSON SIGNAL SIGN →
N	D3-4	66"x16"	N. WAYNE AVE (TWO-SIDED)
O	D3-4	72"x16"	WEST AVE. →
P	D3-4	72"x16"	← WEST AVE.
Q	D3-4	72"x16"	← STATION RD.
R	D3-4	72"x16"	STATION RD. →
S	D3-1	36"x9"	STATION RD.
T	D3-1	60"x12"	N. WAYNE AVE.
U	D3-5	84"x28"	OVERHEAD STREET NAME SIGN (SEE DETAIL)
V	D3-5	84"x28"	OVERHEAD STREET NAME SIGN (SEE DETAIL)
W	W1-7	48"x24"	LARGE DOUBLE ARROW
X	W11-25	30"x30"	BLIND PEDESTRIAN CROSSING

LEGEND

25' EXISTING MAST ARM	25' NEW MAST ARM
⊕ EXISTING SIGNAL HEAD	▲ NEW SIGNAL HEAD
⊕ EXISTING PEDESTRIAN HEAD	■ NEW PEDESTRIAN HEAD
○ EXISTING STRAIN POLE/PEDESTAL	● NEW STRAIN POLE/PEDESTAL
⊕ EXISTING PRE-EMPTION HEAD	⊕ NEW PRE-EMPTION HEAD
⊕ EXISTING FLASHING BEACON	⊕ NEW FLASHING BEACON
⊕ EXISTING TRAFFIC SIGNAL SUPPORT	⊕ NEW PHASE
⊕ EXISTING SIGN W/ IDENTIFYING LETTER	⊕ EXISTING PEDESTRIAN PUSHBUTTON
⊕ NEW SIGN W/ IDENTIFYING LETTER	⊕ NEW PEDESTRIAN PUSHBUTTON
⊕ EXISTING JUNCTION BOX	⊕ NEW JUNCTION BOX
⊕ EXISTING LOOP DETECTOR	⊕ NEW LOOP DETECTOR
⊕ EXISTING CONTROLLER CABINET	⊕ NEW CONTROLLER CABINET
⊕ EXISTING UTILITY POLE	⊕ NEW UTILITY POLE
⊕ EXISTING INLET	⊕ NEW INLET
- A - NEW AERIAL WIRE	⊕ NEW QUEUE DETECTOR
- C - NEW CONDUIT	⊕ NEW RADAR DETECTOR
- FO - NEW FIBER OPTIC	⊕ LUMINAIRE
C/2" NEW CONDUIT/SIZE	⊕ VIDEO DETECTOR
W/4" NEW SOLID WHITE LINE/WIDTH	
BW/4" NEW BROKEN WHITE LINE/WIDTH	
Y/4" NEW SOLID YELLOW LINE/WIDTH	
BY/4" NEW BROKEN YELLOW LINE/WIDTH	
DY/4" NEW DOUBLE SOLID YELLOW LINE/WIDTH	
- A - EXISTING AERIAL WIRE	
- C - EXISTING CONDUIT	
- FO - EXISTING FIBER OPTIC	
C/2" EXISTING CONDUIT/SIZE	
W/4" EXISTING SOLID WHITE LINE/WIDTH	
BW/4" EXISTING BROKEN WHITE LINE/WIDTH	
Y/4" EXISTING SOLID YELLOW LINE/WIDTH	
BY/4" EXISTING BROKEN YELLOW LINE/WIDTH	
DY/4" EXISTING DOUBLE SOLID YELLOW LINE/WIDTH	



MOVEMENT, SEQUENCE, AND TIMING DIAGRAM

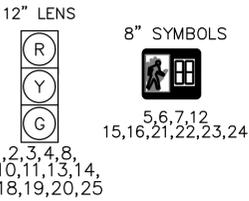
PHASE	1+2+6+7				2+5+7				1+4+6+8				4+5+8				EMERGENCY FLASHING
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1,2	G	G	Y	R	G	G	Y	R	R	R	R	R	R	R	R	Y	
3,4,25	G	G	Y	R	G	G	Y	R	R	R	R	R	R	R	R	Y	
5,6,7,24	M	FH	H	H	M	FH	H	H	H	H	H	H	H	H	H	OUT	
8,9	G	G	Y	R	R	R	R	G	G	Y	R	R	R	R	R	Y	
10,11	G	G	Y	R	R	R	R	G	G	Y	R	R	R	R	R	Y	
12,22	M	FH	H	H	H	H	H	M	FH	H	H	H	H	H	H	OUT	
13,14	R	R	R	R	G	G	Y	R	R	R	R	G	G	Y	R	R	
15,16	H	H	H	H	M	FH	H	H	H	H	H	H	H	H	H	OUT	
17,18	R	R	R	R	R	R	R	G	G	Y	R	G	G	Y	R	R	
19,20	R	R	R	R	R	R	R	G	G	Y	R	G	G	Y	R	R	
21,23	H	H	H	H	H	H	H	M	FH	H	H	M	FH	H	H	OUT	
FIXED			4	3			4	3			4	3			4	3	
MINIMUM	10≠				4				4				4				
PASSAGE	30				24				24				24				
MAXIMUM 1	30				24				24				24				
MAXIMUM 2	35				35				35				35				
PEDESTRIAN*	7	15			7	15			7	15			7	15			
MEMORY	MX				L				NL				NL				
PROGRAM 1	30	4	3		23	4	3		23	4	3		23	4	3		65 SEC. CYCLE

OPERATION NOTES

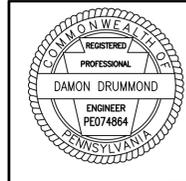
- ① G IF FOLLOWED BY 2+5+7
- ② G IF FOLLOWED BY 1+2+6+7
- ③ G IF FOLLOWED BY 1+4+6+8
- ④ M IF FOLLOWED BY 2+5+7
- ⑤ M IF FOLLOWED BY 4+5+8
- ⑥ M IF FOLLOWED BY 1+2+6+7
- ⑦ M IF FOLLOWED BY 1+4+6+8
- ⑧ G IF FOLLOWED BY 4+5+8

• PROGRAM 1 TO OPERATE MON.-SUN. 07:00-19:00
CONTROLLER TO OPERATE "FREE" AT ALL OTHER TIMES

SIGNAL INDICATIONS



SIGNALS EQUIPPED WITH TUNNEL VISORS 1,2,3,4,8,9,10,11,13,14,17,18,19,20,25
SIGNALS EQUIPPED WITH TUNNEL VISORS & LOUVERS



ENGINEER, P.E. # 074864

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION ENGINEERING DISTRICT 6-0

COUNTY: DELAWARE COUNTY
MUNICIPALITY: RADNOR TOWNSHIP
INTERSECTION: NORTH WAYNE AVENUE (S.R. 1046),
AND POPLAR AVENUE AND WEST AVENUE

REVIEWED:	DATE
MUNICIPAL OFFICIAL:	DATE
RECOMMENDED:	DATE
DISTRICT TRAFFIC ENGINEER:	DATE

PERMIT # 63-2772

* UPON PEDESTRIAN ACTUATION ONLY

EMERGENCY PRE-EMPTION:

MOVEMENT, SEQUENCE, AND TIMING DIAGRAM	6+7		1+2		5+7		1+4		1+8						
INTERVAL	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
SIGNALS	R	R	R	G	Y⊙	R⊙	R	R	R	R	R	R	R	R	R
3,4,25	G	Y⊙	R⊙	R	R	R	G	Y⊙	R⊙	R	R	R	R	R	R
5,6,7,24	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
8,9	G	Y⊙	R⊙	R	R	R	R	R	R	R	R	R	R	R	R
10,11	R	R	R	G	Y⊙	R⊙	R	R	R	G	Y	R	G	Y	R
12,22	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
13,14	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R
15,16	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
17,18	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R
19,20	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R
21,23	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
FIXED TIME	*	4	3	*	4	3	*	4	3	*	4	3	*	4	3

OPERATION NOTES

⊙ G WHEN RETURNING TO NORMAL OPERATION

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THIS FAIL SAFE DEVICE SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SHALL FLASH WHEN THE EMERGENCY VEHICLE HAS CONTROL OF THE INTERSECTION FOR THE APPROPRIATE APPROACH. LOCATION OF THE EMERGENCY VEHICLE DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

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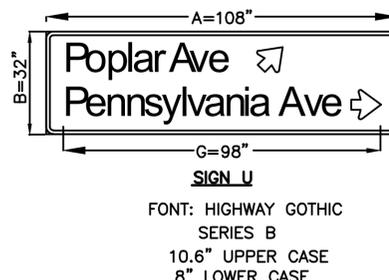
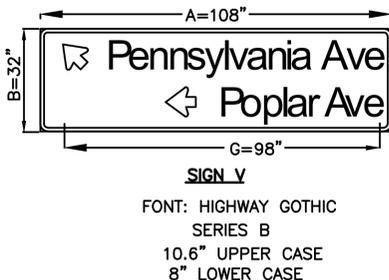
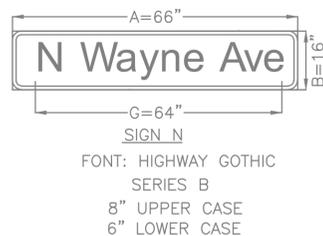
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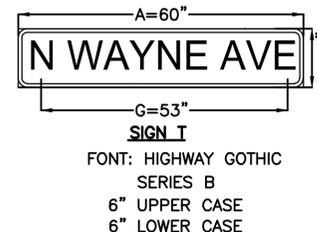
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NOTE: ALL OVERHEAD STREET NAME SIGNS ARE TO BE EQUIPPED WITH SWINGING BRACKETS.



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1. ADA COMPLIANT PUSHBUTTON WITH LATCHING LED INDICATOR AND TONE.
2. A TACTILE DIRECTIONAL ARROW ALIGNED PARALLEL TO THE CROSSING AND WHICH VIBRATES DURING THE WALK INDICATION.
3. A PUSHBUTTON LOCATOR TONE. THE LOCATOR TONE SHALL HAVE A DURATION OF 0.15 SECONDS AND REPEAT AT 1 SECOND INTERVALS, SHALL BE INTENSITY RESPONSIVE TO AMBIENT SOUNDS, AND AUDIBLE FROM 6 TO 12 FEET FROM THE PUSHBUTTON.
4. ACTUATION OF THE PEDESTRIAN PUSHBUTTON SHALL BE ACCOMPANIED BY THE SPEECH MESSAGE "WAIT" WHEN THE WALK INTERVAL IS NOT TIMING.
5. AN AUDIBLE WALK INDICATION AS FOLLOWS: THE WALK INDICATION SHALL BE THE SPEECH WALK MESSAGE: "WALK SIGN IS ON TO CROSS [STATION ROAD]." "WALK SIGN IS ON TO CROSS [NORTH WAYNE AVENUE]."

DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
6-0	DELAWARE	1046	-	2 OF 3	
RADNOR TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY

TRAFFIC SIGNAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED WITHOUT PRIOR WRITTEN APPROVAL.
 ALL SIGNS AND PAVEMENT MARKINGS INDICATED ARE PART OF THE PERMIT. INSTALL AND MAINTAIN IN ACCORDANCE WITH PUBLICATION 236.
 POST MOUNTED SIGNALS: INSTALL WITH A MINIMUM SIGNAL HEAD CLEARANCE OF 2 FEET BEHIND FACE OF CURB OR EDGE OF SHOULDER; AND 8 FEET ABOVE SIDEWALK OR PAVEMENT GRADE.
 OVERHEAD SIGNALS: INSTALL WITH A MINIMUM SIGNAL HEAD CLEARANCE OF 2 FEET BEHIND FACE OF CURB OR EDGE OF SHOULDER. PROVIDE A MINIMUM SIGNAL HEAD CLEARANCE OF 16 FEET ABOVE ROADWAY. RIGIDLY MOUNT TOP AND BOTTOM: AND EQUIP WITH BACKPLATES. PROVIDE A MINIMUM HORIZONTAL DISTANCE OF 8 FEET BETWEEN SIGNALS AS MEASURED AT RIGHT ANGLES TO THE APPROACH.
 DETERMINE WITH A PENNDOT REPRESENTATIVE, THE EXACT LOCATION OF DETECTORS PRIOR TO INSTALLATION.
 CONSULT WITH LOCAL OFFICIALS AND UTILITIES TO RESOLVE CONFLICTS PRIOR TO CONSTRUCTION.
 THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

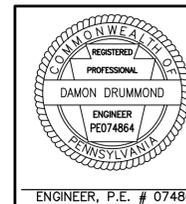
LEGEND

25'	EXISTING MAST ARM	25'	NEW MAST ARM
⊕	EXISTING SIGNAL HEAD	▲	NEW SIGNAL HEAD
⊕	EXISTING PEDESTRIAN HEAD	■	NEW PEDESTRIAN HEAD
○	EXISTING STRAIN POLE/PEDESTAL	●	NEW STRAIN POLE/PEDESTAL
Ⓐ	EXISTING PRE-EMPTION HEAD	Ⓐ	NEW PRE-EMPTION HEAD
⚡	EXISTING FLASHING BEACON	⚡	NEW FLASHING BEACON
△	EXISTING TRAFFIC SIGNAL SUPPORT	①	PHASE
Ⓐ	EXISTING SIGN W/ IDENTIFYING LETTER	⊕	EXISTING PEDESTRIAN PUSHBUTTON
Ⓐ	NEW SIGN W/ IDENTIFYING LETTER	⊕	NEW PEDESTRIAN PUSHBUTTON
Ⓜ	EXISTING JUNCTION BOX	Ⓜ	NEW JUNCTION BOX
Ⓜ	EXISTING LOOP DETECTOR	Ⓜ	NEW LOOP DETECTOR
Ⓜ	EXISTING CONTROLLER CABINET	Ⓜ	NEW CONTROLLER CABINET
Ⓜ	EXISTING UTILITY POLE	Ⓜ	NEW UTILITY POLE
Ⓜ	EXISTING INLET	Ⓜ	NEW INLET
- A -	NEW AERIAL WIRE	Ⓜ	QUEUE DETECTOR
- C -	NEW CONDUIT	Ⓜ	RADAR DETECTOR
- FO -	NEW FIBER OPTIC	Ⓜ	LUMINAIRE
C/2"	NEW CONDUIT/SIZE	Ⓜ	VIDEO DETECTOR
W/4"	NEW SOLID WHITE LINE/WIDTH		
BW/4"	NEW BROKEN WHITE LINE/WIDTH		
Y/4"	NEW SOLID YELLOW LINE/WIDTH		
BY/4"	NEW BROKEN YELLOW LINE/WIDTH		
DY/4"	NEW DOUBLE SOLID YELLOW LINE/WIDTH		
- A -	EXISTING AERIAL WIRE		
- C -	EXISTING CONDUIT		
- FO -	EXISTING FIBER OPTIC		
C/2"	EXISTING CONDUIT/SIZE		
W/4"	EXISTING SOLID WHITE LINE/WIDTH		
BW/4"	EXISTING BROKEN WHITE LINE/WIDTH		
Y/4"	EXISTING SOLID YELLOW LINE/WIDTH		
BY/4"	EXISTING BROKEN YELLOW LINE/WIDTH		
DY/4"	EXISTING DOUBLE SOLID YELLOW LINE/WIDTH		

**PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0**

COUNTY: DELAWARE COUNTY
 MUNICIPALITY: RADNOR TOWNSHIP
 INTERSECTION: NORTH WAYNE AVENUE (S.R. 1046),
AND POPLAR AVENUE AND WEST AVENUE

REVIEWED:	DATE
MUNICIPAL OFFICIAL:	DATE
RECOMMENDED:	
DISTRICT TRAFFIC ENGINEER:	DATE



ENGINEER, P.E. # 074864

PERMIT # **63-2772**

RADNOR TOWNSHIP

PROPOSED MOTION

DATE: July 12, 2021

TO: Radnor Township Board of Commissioners

FROM: Ricky Foster, Jr., Acting Director of Public Works

LEGISLATION: Requesting Authorization to Receive bids and/or Proposals for the removal of 29 Hazardous Trees at Fenimore Woods Park

LEGISLATIVE HISTORY: This has been discussed as part of the ongoing Fenimore Park Project. Most recently, the hazardous trees were discussed at the Special Board of Commissioner Meeting held on June 23, 2021, where there seemed to be agreement from all parties that the hazardous trees should be addressed immediately.

PURPOSE AND EXPLANATION: The Public Works Department is responsible for trees within the Parks in Radnor Township. There are 29 trees within the boundary of Fenimore Woods Park that have been deemed hazardous by the Township Arborist, and need to be removed, including the grinding of the stumps. All 29 trees have been tagged by the Arborist so they can be identified upon visiting the park. The park plan is attached showing the hazardous trees by location.

To be clear, the removal of these hazardous trees can be accomplished separate from the larger park project. The removal of these trees is in no way moving the larger park project discussed on June 23, 2021 forward.

IMPLEMENTATION SCHEDULE: 1.) Authorization by the Board of Commissioners to Receive Bids 2.) Project to be advertised 3.) Request award of contract by the Board of Commissioners 4.) Work to be completed within 30 days of contract award.

FISCAL IMPACT: The estimated cost is expected to exceed the \$25,000 bid limit total and funding for this project is to be provided from the 2016 Bond Fund for Fenimore Woods Park Improvements, Account 5180501H-48110.

RECOMMENDED ACTION: I respectfully request that the Board of Commissioners authorize the Receipt of Bids and/or proposals for Tree Removal, and Stump Grinding of 29 hazardous trees at Fenimore Woods Park as provided in the attached plan.

EAGLE ROAD (SR 1042)

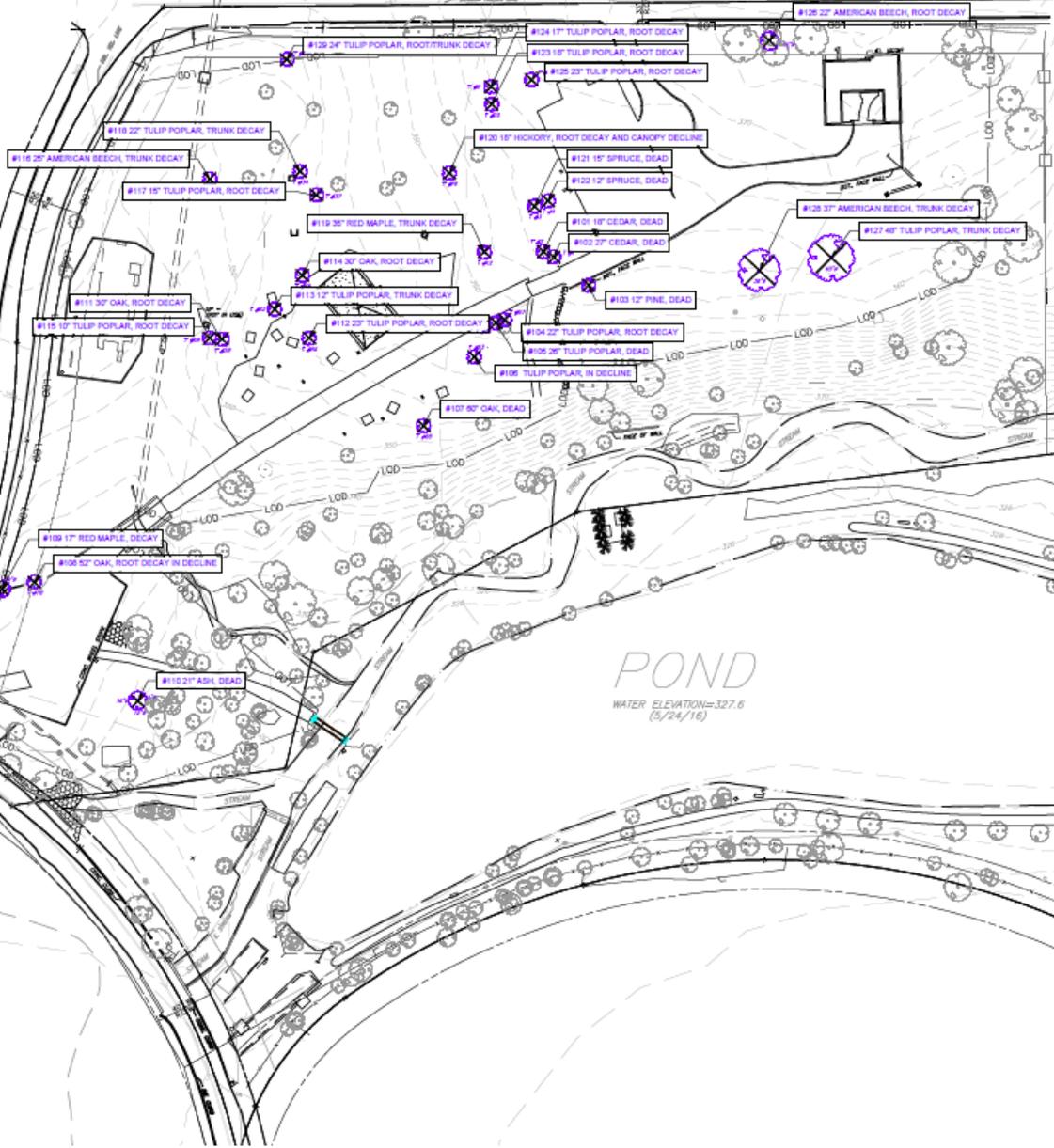
LEGEND: TREE REMOVAL



EXISTING TREE TO BE REMOVED

PAUL ROAD

POND
WATER ELEVATION=327.6
(5/24/16)



NOTE:

1. PRUNE ALL EXISTING TREES TO CLEAN OUT DEAD LIMBS 1" DIAMETER AND GREATER. PERFORM SELECTIVE THINNING AND LATERAL REDUCTION TO ENCOURAGE A STRONG BRANCHING STRUCTURE. LOW LIMBS SHOULD BE ELEVATED TO A HEIGHT OF 15FTMS TO ALLOW CLEARANCE FOR PLAY STRUCTURES. PRUNING SHOULD BE DONE UNDER SUPERVISION OF SOMEONE WHO IS A BOARD CERTIFIED MASTER ARBORIST.
2. SEE SHEET L-4.2 FOR TREE PROTECTION FENCING DETAIL.

GILMORE & ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE & CONSULTING SERVICES

WE ARE AN EQUAL OPPORTUNITY EMPLOYER. MINORITY AND FEMALE OWNERS AND MANAGERS ARE ENCOURAGED TO APPLY. ONLY THOSE STATES THAT PERMIT THE PROFESSIONAL SEAL SHALL BE USED. THIS PLAN IS THE PROPERTY OF GILMORE & ASSOCIATES, INC. AND SHALL BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. ANY REUSE OR REPRODUCTION OF THIS PLAN WITHOUT THE WRITTEN PERMISSION OF GILMORE & ASSOCIATES, INC. IS STRICTLY PROHIBITED.



JOB NO.:		TOWN & PARCEL NO.:	
MUNICIPAL FILE NO.:		DATE:	
TOTAL AREA:	SCALE:	DATE:	DATE:
DATE:	DATE:	DATE:	DATE:

OWNER:		DATE:	
TOTAL AREA:	SCALE:	DATE:	DATE:
DATE:	DATE:	DATE:	DATE:

RENOVATIONS FOR FENMORE WOODS PARK

PROJECT TOWNSHIP: DELAWARE COUNTY, PENNSYLVANIA

SHEET NO.:		DATE:	
DATE:		DATE:	



L-2.1

1 TREE REMOVAL AND PRESERVATION PLAN - AS PER ARBORIST

L-2.1

1"=40'-0"



LEGEND: TREE REMOVAL

X EXISTING TREE TO BE REMOVED

- NOTE:
1. PRUNE ALL EXISTING TREES TO CLEAN OUT DEAD LIMBS 1" DIAMETER AND GREATER. PERFORM SELECTIVE THINNING AND LATERAL REDUCTION TO ENCOURAGE A STRONG BRANCHING STRUCTURE. LOW LIMBS SHOULD BE ELEVATED TO A HEIGHT OF 15(MIN) TO ALLOW CLEARANCE FOR PLAY STRUCTURES. PRUNING SHOULD BE DONE UNDER SUPERVISION OF A IS A BOARD CERTIFIED MASTER ARBORIST.
 2. SEE SHEET L-4.2 FOR TREE PROTECTION FENCING DETAIL.
 3. PURPLE TREES REPRESENT TREES AT RISK. ORANGE TREES INDICATE TREES WITHIN PROPOSED PROJECT LIMITS.
 4. TREES NOTED FOR REMOVAL AROUND PATH DUE TO TRIPPING HAZARD AND EXPOSED ROOTS IN PATHWAYS.

GILMORE & ASSOCIATES, INC.
 LANDSCAPE ARCHITECTURE & CONSULTING SERVICES
 100 WEST 10TH AVENUE, SUITE 100, DENVER, CO 80202
 (303) 733-1100
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JOB NO.:	TAX MAP PARCEL NO.:
MUNICIPAL FILE NO.:	
DATE:	DATE:
SCALE:	SCALE:
DATE:	DATE:

OWNER:	TITLEBLOCK:
	SCALE:
	DATE:
	DATE:

FENIMORE WOODS PARK
 TREE REMOVAL AND PRESERVATION PLAN
RENNOVATIONS FOR FENIMORE WOODS PARK
 PROJECT NUMBER: DELAWARE COUNTY, PENNSYLVANIA

PROJECT:	DATE:
DATE:	DATE:
DATE:	DATE:
DATE:	DATE:



SHEET NO.:
L-22

1 TREE REMOVAL AND PRESERVATION PLAN - AS PER DESIGN AND ARBORIST

L-22

1"=40'-0"

AT RISK TREE REMOVAL

TAG #	SPECIES	SIZE	REASON FOR REMOVAL
101	Cedar	18"	Dead
102	Cedar	27"	Dead
103	Pine	12"	Dead
104	Tulip Poplar	22"	Root Decay
105	Tulip Poplar	26"	Dead
106	Tulip Poplar		Dead
107	Oak	60"	Dead
108	Oak	52"	Root Decay in Decline
109	Red Maple	17"	Decay
110	Ash	21"	Dead
111	Oak	30"	Root Decay
112	Tulip Poplar	23"	Root Decay
113	Tulip Poplar	12"	Trunk Decay
114	Oak	30"	Root Decay
115	Tulip Poplar	10"	Root Decay
116	American Beech	25"	Trunk Decay
117	Tulip Poplar	15"	Root Decay
118	Tulip Poplar	22"	Trunk Decay
119	Red Maple	35"	Trunk Decay
120	Hickory	18"	Root Decay and Canopy Decline
121	Spruce	15"	Dead
122	Spruce	12"	Dead
123	Tulip Poplar	18"	Root Decay
124	Tulip Poplar	17"	Root Decay
125	Tulip Poplar	23"	Root Decay
126	American Beech	22"	Root Decay
127	Tulip Poplar	48"	Trunk Decay
128	American Beech	37"	Trunk Decay
129	Tulip Poplar	24"	Root/Trunk Decay

RADNOR TOWNSHIP

ENGINEERING DEPARTMENT



Memorandum

To: Radnor Township Board of Commissioners

From: Stephen F. Norcini, PE, Township Engineer

Stephen F. Norcini

CC: William M. White, Township Manager

Date: July 6th, 2021

Re: 235 Pembroke Avenue - Stormwater Management Waiver Request

The infiltration requirements could not be met due to existing soil conditions. The applicant for 235 Pembroke avenue was before the Commissioners previously, and his waiver request was not granted.

The applicant is proposing to construct the following:

- 2,186 SF dwelling
- 618 SF driveway expansion
- 268 SF walks
- 323 SF patio

The plans have been revised based on comments the applicant received at the previous Commissioners meeting; these latest plans were not reviewed by Gannett Fleming.

RADNOR TOWNSHIP

ENGINEERING DEPARTMENT



Memorandum

To: Radnor Township Board of Commissioners

From: Stephen F. Norcini, PE, Township Engineer *Stephen F. Norcini*

CC: William M. White, Township Manager

Date: July 6th, 2021

608 West Wayne Avenue: Stormwater Waiver Request

The applicant has determined that the ground does not meet the Township's Stormwater Management Ordinance's infiltration requirements.

The applicant has reduced the size of the proposed driveway since the last Commissioners meeting. These plans have not been reviewed by Gannett Fleming.

Serial Number:
CALL BEFORE YOU DIG!
 PENNSYLVANIA LAW REQUIRES
**3 WORKING DAYS NOTICE FOR
 CONSTRUCTION PHASE AND 10 WORKING
 DAYS IN DESIGN STAGE-STOP CALL**
 Pennsylvania One Call System, Inc.
 1-800-242-1776

ALL LOCATIONS OF EXISTING UTILITIES, SHOWN ON THIS PLAN, HAVE BEEN DEVELOPED FROM FIELD LOCATIONS OF VISIBLE ABOVE GROUND UTILITY STRUCTURES AND/OR INFORMATION FURNISHED BY THE UTILITY COMPANIES.

ALL LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. COMPLETENESS OR ACCURACY OF THE LOCATIONS AND DEPTH OF ALL STRUCTURES CANNOT BE GUARANTEED. CONTRACTORS MUST VERIFY ALL LOCATIONS AND DEPTHS OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE THE START OF ANY WORK.

AS PER ACT 187 HOUSE BILL 2627, BEFORE THE START OF ANY EXCAVATION WORK THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANIES THROUGH THE PENNSYLVANIA "ONE CALL SYSTEM" 1-800-242-1776 ACCORDING TO THE FOLLOWING SCHEDULE:

- PRELIMINARY NOTICE: MORE THAN 90 DAYS FROM THE START OF CONSTRUCTION
- FINAL NOTICE: 10-30 DAYS FROM THE START OF CONSTRUCTION
- ROUTINE NOTICE: 3-10 DAYS FROM THE START OF CONSTRUCTION

REFERENCE PLANS:

- TOPOGRAPHIC SURVEY PLAN PREPARED FOR THEODORE, III & ANNA HUMPHREY BY JEFFREY P. TURNER, P.L.S., COLLEGEVILLE, PA. DATED JANUARY 11, 2021. PLAN NO. D-36-19-209
- LIDAR TOPOGRAPHY AND OTHER GIS INFORMATION OBTAINED ELECTRONICALLY FROM SHAPE FILES DISTRIBUTED BY DELAWARE VALLEY REGIONAL PLANNING COMMISSION. FILES WERE OBTAINED VIA WWW.PASADAPLIEDU.
- AERIAL PHOTOGRAPH OBTAINED FROM THE MICROSOFT CORPORATION BING MAPS.
- SOILS INFORMATION VIA THE NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY (WEBSOILSURVEY.SC.EGOV.USDA.GOV.)

REFERENCE PLAN #1 NOTES:

- OUTLINE DESCRIPTION AND LOCATION SHOWN IN ACCORDANCE WITH ACTUAL FIELD INSTRUMENT SURVEY CONDUCTED UPON THE GROUNDS BY JEFFREY P. TURNER, P.L.S. FROM VARIOUS DEEDS AND PLANS OF RECORD; SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT; PROPERTY MAY BE SUBJECT TO CERTAIN RIGHTS OF OTHERS.
- THIS SURVEY IS NOT TO BE USED FOR TREE REMOVAL ALONG PROPERTY LINES. TREE LOCATIONS ARE APPROXIMATE. FOR TREE REMOVAL PURPOSES, PROPERTY LINES MUST BE FIELD MARKED WITH STAKES SET TO ESTABLISH EXACT TREE OWNERSHIP.
- CONTOURS PLOTTED FROM FIELD RUN SURVEY. GPS CONTROL PERFORMED ON SITE TO ESTABLISH BENCHMARK, DATUM NAD83/NAVD88.
- THERE IS AN IDENTIFIABLE FLOOD PLAIN AREA WITHIN THE PROJECT SITE AS ILLUSTRATED ON COMMUNITY PANEL NUMBER 420428 00177 OF THE FLOOD INSURANCE RATE MAP AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE TOWNSHIP OF RADNOR, PENNSYLVANIA.
- EXISTING SUBSURFACE UTILITY INFORMATION INDICATED IS BASED UPON VISUAL FIELD INSPECTION BY JEFFREY P. TURNER, P.L.S. SUCH INFORMATION CONCERNING THE SIZE, LOCATION, DEPTH, QUANTITY, ETC. OF SUBSURFACE UTILITIES IS APPROXIMATE IN NATURE AND HAS BEEN OBTAINED AS A SUPPLEMENT TO THE SITE SURVEY. THE INFORMATION PROVIDED IS REPRESENTATIVE OF SUBSURFACE CONDITIONS ONLY AT LOCATIONS AND DEPTHS WHERE SUCH INFORMATION WAS OBTAINED. THERE IS NO EXPRESSED OR IMPLIED AGREEMENT THAT UTILITY SIZE, LOCATION, DEPTH, QUANTITY, ETC. AS SHOWN EXISTS BETWEEN EXPLORED LOCATIONS. ACCORDINGLY, UTILITY INFORMATION SHOWN SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. IT IS INCUMBENT UPON THE CONTRACTOR TO VERIFY THE SIZE, LOCATION, DEPTH, QUANTITY, ETC. OF ALL UTILITIES BEFORE EXCAVATION.
- BEARINGS SHOWN ARE BASED ON A MERIDIAN ESTABLISHED USING PA STATE PLANE COORDINATES. THIS MERIDIAN DIFFERS FROM THE RECORDED DEED BY -8°05'26".
- PLANS REFERENCED: EASEMENT EXHIBIT PREPARED FOR RICHARD A. AND NANCY G. KLAVANS, PREPARED BY YERKES ASSOCIATES, INC. DATED JULY 13, 2020.

STEEP SLOPE NOTE:
 THE LOT HAS BEEN IN EXISTENCE SINCE 1972 AND CAN NOT BE FURTHER SUBDIVIDED, THEREFORE IT IS EXEMPT OF THE STEEP SLOPE ORDINANCE.

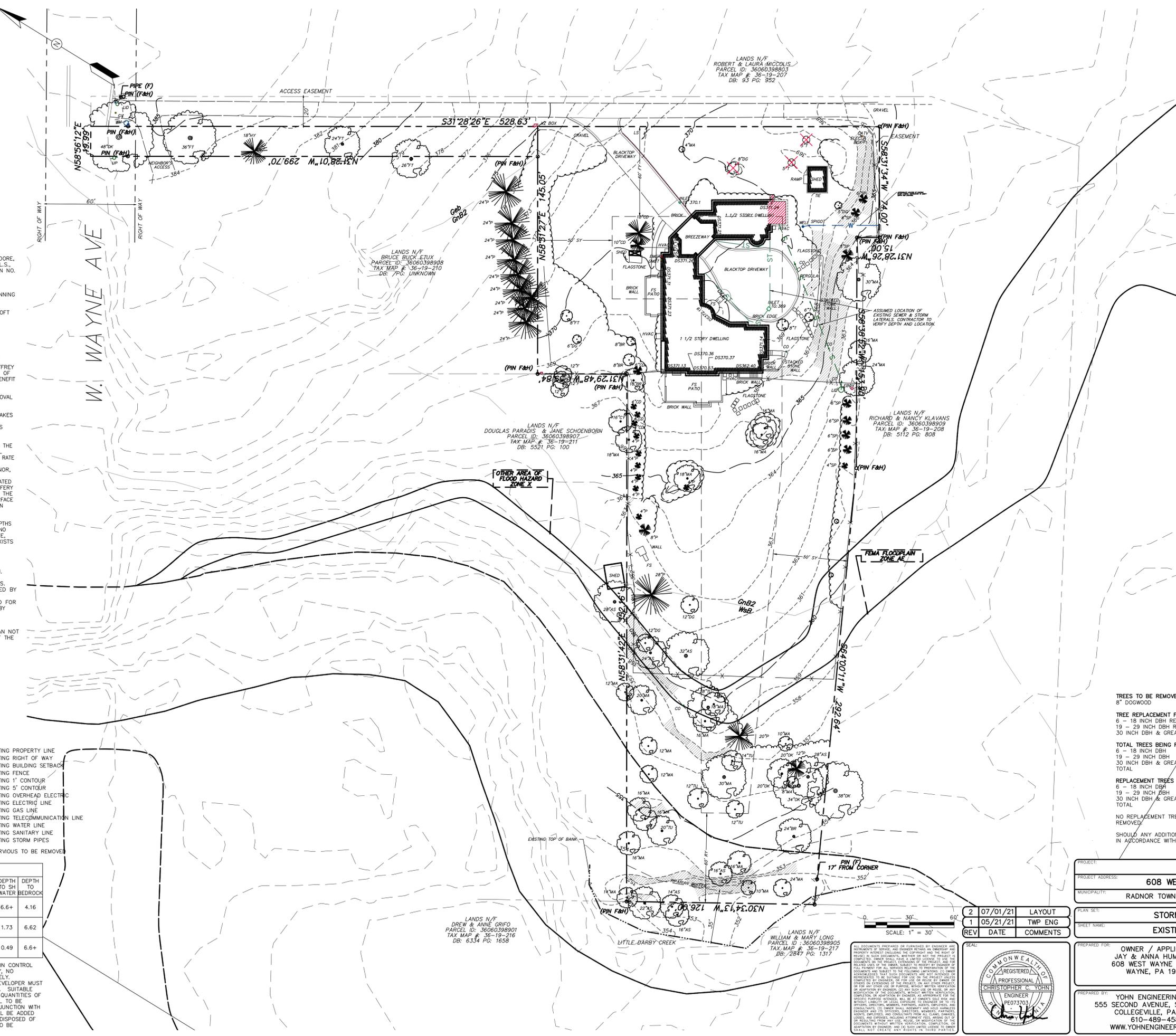
LINE/TYPE LEGEND

---	EXISTING PROPERTY LINE
- - -	EXISTING RIGHT OF WAY
- - -	EXISTING BUILDING SETBACK
- - -	EXISTING FENCE
- - -	EXISTING 1' CONTOUR
- - -	EXISTING 5' CONTOUR
- - -	EXISTING OVERHEAD ELECTRIC
- - -	EXISTING ELECTRIC LINE
- - -	EXISTING GAS LINE
- - -	EXISTING TELECOMMUNICATION LINE
- - -	EXISTING WATER LINE
- - -	EXISTING SANITARY LINE
- - -	EXISTING STORM PIPES
- - -	IMPERVIOUS TO BE REMOVED

SOILS INFORMATION

SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
Wsb	WORSHAM VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	D	0.49	6.6+

NOTES: IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.



ZONING DATA AC (RESIDENCE DISTRICT):

REQUIRED	REQUIRED
MINIMUM LOT AREA	2.0 AC
MINIMUM LOT WIDTH	180 FT
MINIMUM FRONT YARD	60 FT
MINIMUM SIDE YARD EACH	50 FT
MINIMUM SIDE YARD AGGREGATE	100 FT
MINIMUM REAR YARD	60 FT
MAXIMUM BUILDING HEIGHT	38 FT
MAXIMUM BUILDING COVERAGE	15%

FOR MORE DETAILED INFORMATION REFER TO THE ZONING CODE OF RADNOR TOWNSHIP, LATEST EDITION.

EXISTING LOT DATA:

RECORD OWNER:	THEODORE, III AND ANNA HUMPHREY
TAXMAP ID:	608 WEST WAYNE AVENUE
PARCEL ID:	WAYNE, PA 19087
DEED BOOK & PAGE NO:	36-06-03989-00
GROSS LOT AREA:	36-19-209-000
NET LOT AREA:	6558 - 703
NET LOT AREA:	92,746 SF (2.1292 AC)
NET LOT AREA:	86,750 SF (1.9915 AC)

EXISTING IMPERVIOUS COVERAGE:

BUILDING	5,421 SF (5.8%)
WALKWAY/SIDEWALK	2,313 SF
PATIOS/DECKS	969 SF
DRIVEWAY	2,381 SF
OTHER	404 SF
TOTAL	11,488 SF (12.4%)

IMPERVIOUS COVERAGE TO BE REMOVED:

BUILDING	180 SF (0.2%)
WALKWAY/SIDEWALK	14 SF
PATIOS/DECKS	0 SF
DRIVEWAY	0 SF
OTHER	0 SF
TOTAL	194 SF (0.2%)

STEEP SLOPE NOTE:
 STEEP AND VERY STEEP SLOPES SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SLOPES ARE EXEMPT FROM SLOPE CONTROLS AS PERMITTED BY §280-112.J. THE SLOPE CONTROLS ORDINANCE WAS ADOPTED DECEMBER 1977 AND THE LOT HAS BEEN IN EXISTENCE SINCE NOVEMBER 15, 1972 PER DEED BOOK 6558, PAGE 703.

TREES TO BE REMOVED:

8\"/>

TREE REPLACEMENT FORMULA:

6 - 18 INCH DBH REMOVED	= 1 REPLACEMENT TREE
19 - 29 INCH DBH REMOVED	= 3 REPLACEMENT TREES
30 INCH DBH & GREATER REMOVED	= 6 REPLACEMENT TREES, 4 BEING LARGE CANOPY TREES

TOTAL TREES BEING REMOVED:

6 - 18 INCH DBH	= 1
19 - 29 INCH DBH	= 0
30 INCH DBH & GREATER	= 0
TOTAL	= 1

REPLACEMENT TREES REQUIRED:

6 - 18 INCH DBH	= 0 TREES X 1 = 0 REPLACEMENT TREES
19 - 29 INCH DBH	= 0 TREE X 3 = 0 REPLACEMENT TREES
30 INCH DBH & GREATER	= 0 TREES X 6 = 0 REPLACEMENT TREES
TOTAL	= 0 REPLACEMENT TREES

NO REPLACEMENT TREES ARE REQUIRED BECAUSE LESS THAN SIX TREES ARE PROPOSED TO BE REMOVED.
 SHOULD ANY ADDITIONAL TREES BE REMOVED, ADDITIONAL REPLACEMENT TREES SHALL BE PROVIDED IN ACCORDANCE WITH THE RADNOR TOWNSHIP ORDINANCE No. 2012-05.

PROJECT: RESIDENTIAL ADDITION

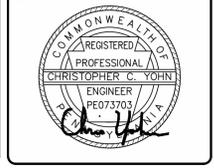
PROJECT ADDRESS: 608 WEST WAYNE AVENUE, WAYNE, PA 19087

MUNICIPALITY: RADNOR TOWNSHIP COUNTY: DELAWARE COUNTY

PLAN SET: STORMWATER MANAGEMENT PERMIT PLANS

SHEET NAME: EXISTING CONDITIONS / DEMOLITION PLAN

2	07/01/21	LAYOUT
1	05/21/21	TWP ENG
REV	DATE	COMMENTS



OWNER / APPLICANT: JAY & ANNA HUMPHREY, 608 WEST WAYNE AVENUE, WAYNE, PA 19087

DATE: APRIL 14, 2021
 SCALE: 1\"/>

PREPARED BY: YOHN ENGINEERING, LLC
 555 SECOND AVENUE, SUITE B-205
 COLLEGEVILLE, PA 19426
 610-489-4580
 WWW.YOHNENGINEERING.COM



Serial Number:
CALL BEFORE YOU DIG!
 PENNSYLVANIA LAW REQUIRES
**3 WORKING DAYS NOTICE FOR
 CONSTRUCTION PHASE AND 10 WORKING
 DAYS IN DESIGN STAGE-STOP CALL**
 Pennsylvania One Call System, Inc.
 1-800-242-1776

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REFERENCE PLAN #1 NOTES:

1. OUTLINE DESCRIPTION AND LOCATION SHOWN IN ACCORDANCE WITH ACTUAL FIELD INSTRUMENT SURVEY CONDUCTED UPON THE GROUNDS BY JEFFREY P. TURNER, P.L.S. FROM VARIOUS DEEDS AND PLANS OF RECORD; SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT; PROPERTY MAY BE SUBJECT TO CERTAIN RIGHTS OF OTHERS.
2. THIS SURVEY IS NOT TO BE USED FOR TREE REMOVAL ALONG PROPERTY LINES. TREE LOCATIONS ARE APPROXIMATE. FOR TREE REMOVAL PURPOSES, PROPERTY LINES MUST BE FIELD MARKED WITH STAKES SET TO ESTABLISH EXACT TREE OWNERSHIP.
3. CONTOURS PLOTTED FROM FIELD RUN SURVEY. GPS CONTROL PERFORMED ON SITE TO ESTABLISH BENCHMARK, DATUM NAD83/NAVD88.
4. THERE IS AN IDENTIFIABLE FLOOD PLAIN AREA WITHIN THE PROJECT SITE AS ILLUSTRATED ON COMMUNITY PANEL NUMBER 420429 0017E OF THE FLOOD INSURANCE RATE MAP AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE TOWNSHIP OF RADNOR, PENNSYLVANIA.
5. EXISTING SUBSURFACE UTILITY INFORMATION INDICATED IS BASED UPON VISUAL FIELD INSPECTION BY JEFFREY P. TURNER, P.L.S. SUCH INFORMATION CONCERNING THE SIZE, LOCATION, DEPTH, QUANTITY, ETC. OF SUBSURFACE UTILITIES IS APPROXIMATE IN NATURE AND HAS BEEN OBTAINED AS A SUPPLEMENT TO THE SITE SURVEY. THE INFORMATION PROVIDED IS REPRESENTATIVE OF SUBSURFACE CONDITIONS ONLY AT LOCATIONS AND DEPTHS WHERE SUCH INFORMATION WAS OBTAINED. THERE IS NO EXPRESSED OR IMPLIED AGREEMENT THAT UTILITY SIZE, LOCATION, DEPTH, QUANTITY, ETC. AS SHOWN EXISTS BETWEEN EXPLORED LOCATIONS. ACCORDINGLY, UTILITY INFORMATION SHOWN SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. IT IS INCUMBENT UPON THE CONTRACTOR TO VERIFY THE SIZE, LOCATION, DEPTH, QUANTITY, ETC. OF ALL UTILITIES BEFORE EXCAVATION.
6. BEARINGS SHOWN ARE BASED ON A MERIDIAN ESTABLISHED USING PA STATE PLANE COORDINATES. THIS MERIDIAN DIFFERS FROM THE RECORDED DEED BY -8°05'26".
7. PLANS REFERENCED: EASEMENT EXHIBIT PREPARED FOR RICHARD A. AND NANCY G. KLAVANS, PREPARED BY YERKES ASSOCIATES, INC. DATED JULY 13, 2020.

LINE/TYPE LEGEND

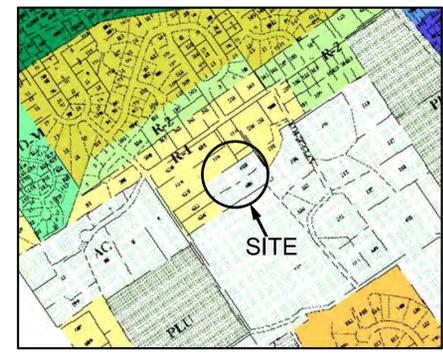
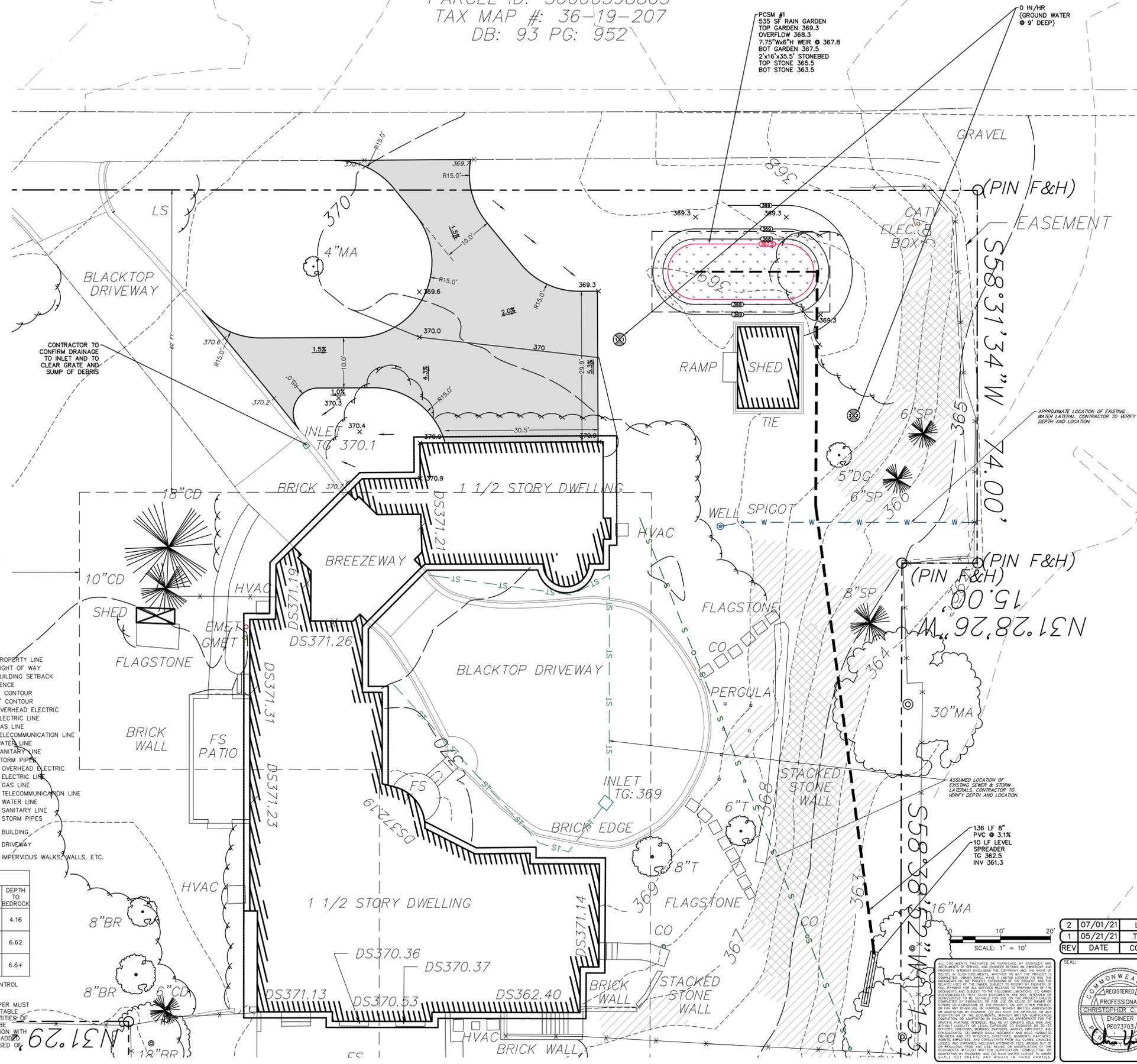
---	EXISTING PROPERTY LINE
---	EXISTING RIGHT OF WAY
---	EXISTING BUILDING SETBACK
---	EXISTING FENCE
---	EXISTING 1" CONTOUR
---	EXISTING 5" CONTOUR
---	EXISTING OVERHEAD ELECTRIC
---	EXISTING ELECTRIC LINE
---	EXISTING GAS LINE
---	EXISTING TELECOMMUNICATION LINE
---	EXISTING WATER LINE
---	EXISTING SANITARY LINE
---	EXISTING STORM PIPES
---	PROPOSED OVERHEAD ELECTRIC
---	PROPOSED ELECTRIC LINE
---	PROPOSED GAS LINE
---	PROPOSED TELECOMMUNICATION LINE
---	PROPOSED WATER LINE
---	PROPOSED SANITARY LINE
---	PROPOSED STORM PIPES
---	PROPOSED BUILDING
---	PROPOSED DRIVEWAY
---	PROPOSED IMPERVIOUS WALKS, WALLS, ETC.

SOILS INFORMATION

SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GnB2	GLENEVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
Wsb	WORSHAM VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	D	0.49	6.6+

NOTES: IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST MULTIPLELY SEED AND MULCH AREAS OF DISTURBED SOIL. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONSULTATION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

LANDS N/F
 ROBERT & LAURA MICCOLIS
 PARCEL ID: 36060398803
 TAX MAP #: 36-19-207
 DB: 93 PG: 952



ZONING DATA AC (RESIDENCE DISTRICT):

REQUIRED	PROPOSED
MINIMUM LOT AREA	2.0 AC
MINIMUM LOT WIDTH	180 FT
MINIMUM FRONT YARD	50.2 FT*
MINIMUM SIDE YARD EACH	50 FT
MINIMUM SIDE YARD AGGREGATE	100 FT
MINIMUM REAR YARD	60 FT
MAXIMUM BUILDING HEIGHT	38 FT
MAXIMUM BUILDING COVERAGE	15%

* EXISTING NON-CONFORMITY
 FOR MORE DETAILED INFORMATION REFER TO THE ZONING CODE OF RADNOR TOWNSHIP, LATEST EDITION.

EXISTING LOT DATA:
 RECORD OWNER: THEODORE, III AND ANNA HUMPHREY
 608 WEST WAYNE AVENUE
 WAYNE, PA 19087
 PARCEL ID: 36-06-03989-00
 TAXMAP ID: 36-19-209:000
 DEED BOOK & PAGE NO: 6558 - 703
 GROSS LOT AREA: 922,748 SF (2,1292 AC)
 NET LOT AREA: 86,750 SF (1.9915 AC)

EXISTING IMPERVIOUS COVERAGE:

BUILDING	5,241 SF (5.8%)
WALKWAY/SIDEWALK	2,313 SF
PATIOS/DECKS	969 SF
DRIVEWAY	2,381 SF
OTHER	404 SF
TOTAL	11,488 SF (12.4%)

IMPERVIOUS COVERAGE TO BE REMOVED:

BUILDING	180 SF (0.2%)
WALKWAY/SIDEWALK	14 SF
PATIOS/DECKS	0 SF
DRIVEWAY	0 SF
OTHER	0 SF
TOTAL	194 SF (0.2%)

IMPERVIOUS COVERAGE TO BE ADDED:

BUILDING	0 SF (0.0%)
WALKWAY/SIDEWALK	0 SF
PATIOS/DECKS	0 SF
DRIVEWAY	1,784 SF
OTHER	0 SF
TOTAL	1,784 SF (1.9%)

PROPOSED IMPERVIOUS COVERAGE:

BUILDING	5,241 SF (5.7%)
WALKWAY/SIDEWALK	2,299 SF
PATIOS/DECKS	969 SF
DRIVEWAY	4,165 SF
OTHER	404 SF
TOTAL	13,078 SF (14.1%)

NET INCREASE 1,590 SF (1.7%)

- GENERAL NOTES:**
1. THE INTENT OF THIS PLAN IS TO ILLUSTRATE THE CONSTRUCTION OF A NEW DRIVEWAY ADDITION.
 2. THE STORMWATER MANAGEMENT FACILITIES HAVE BEEN DESIGNED FOR 2,783 SF OF IMPERVIOUS, WHICH INCLUDES THE PROPOSED IMPERVIOUS (1,784 SF), IMPERVIOUS WITHIN THE ROW (112 SF), AND IMPERVIOUS TO REMAIN (887 SF).
 3. THE RESPONSIBILITY FOR THE CONTINUED MAINTENANCE AND OPERATION OF THE STORMWATER MANAGEMENT SYSTEMS AND OTHER ASSOCIATED FACILITIES WILL BE THE OBLIGATION OF THE PROPERTY OWNER.

WAIVER REQUEST:
 §245-22 - PROVIDE GROUNDWATER RECHARGE - THE RAIN GARDEN HAS BEEN DESIGNED IN ACCORDANCE WITH THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S WHITEPAPER TITLED "MANAGED RELEASE CONCEPT" - VERSION 1.1 RELEASED MAY 15, 2019 IN ORDER TO PROVIDE THE REQUIRED NET 2 YEAR VOLUME.

I HEREBY CERTIFY, THAT TO THE BEST OF MY KNOWLEDGE, THE DRAINAGE PLAN MEETS ALL DESIGN REQUIREMENTS AND CRITERIA OF THE RADNOR TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.
 Christopher C. Yohn, P.E., CPESC
 07/01/21 DATE

PROJECT: RESIDENTIAL ADDITION

PROJECT ADDRESS: 608 WEST WAYNE AVENUE, WAYNE, PA 19087

MUNICIPALITY: RADNOR TOWNSHIP COUNTY: DELAWARE COUNTY

PLAN SET: STORMWATER MANAGEMENT PERMIT PLANS

SHEET NAME: POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

PREPARED FOR: OWNER / APPLICANT
 JAY & ANNA HUMPHREY
 608 WEST WAYNE AVENUE
 WAYNE, PA 19087

DATE: APRIL 14, 2021
 SCALE: 1" = 10'

ONE CALL NUMBER:
 DRAWN BY: CCY
 PROJECT NUMBER: 20-146

PREPARED BY: YOHN ENGINEERING, LLC
 555 SECOND AVENUE, SUITE B-205
 COLLEGEVILLE, PA 19426
 610-489-4580
 WWW.YOHNEENGINEERING.COM

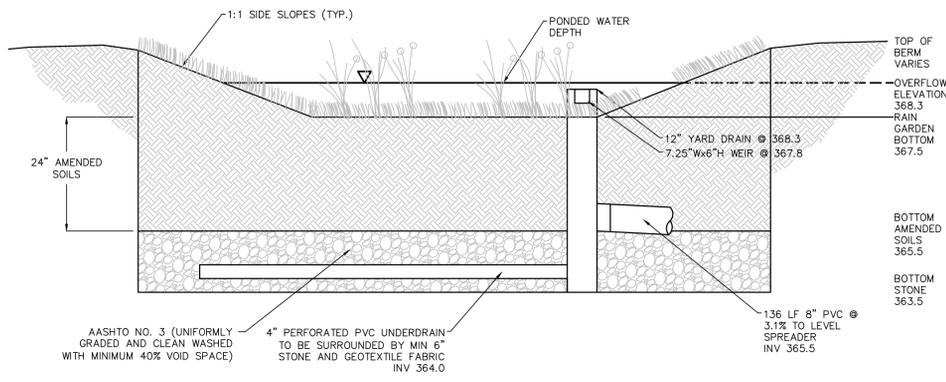
SEAL: CHRISTOPHER C. YOHN, P.E., CPESC
 ENGINEER
 PE073703

SHEET: 2 OF 5

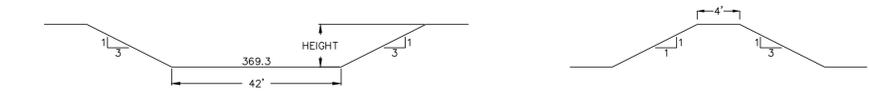
2 07/01/21 LAYOUT
 1 05/21/21 TWP ENG
 REV DATE COMMENTS

SCALE: 1" = 10'

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RAIN GARDEN DETAIL
NOT TO SCALE



RAIN GARDEN OVERFLOW DETAIL
NOT TO SCALE

RAIN GARDEN BERM DETAIL
NOT TO SCALE

RAIN GARDEN BERM CONSTRUCTION:
AREA UNDER BERM TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO A DEPTH OF TWO FEET PRIOR TO ANY PLACEMENT AND COMPACTION OF EARTHEN FILL. FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6 TO 9 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS. UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE EKS PLAN DRAWINGS. TREES SHALL NOT BE PLANTED ON THE EMBANKMENT.

- POST CONSTRUCTION STORMWATER MANAGEMENT INSTALLATION:**
- THE EXISTING SUBGRADE UNDER THE RAIN GARDEN AREAS SHOULD NOT BE COMPACTED OR SUBJECT TO EXCESSIVE CONSTRUCTION EQUIPMENT TRAFFIC PRIOR TO INSTALLATION.
 - STABILIZE GRADING WITHIN THE LIMIT OF DISTURBANCE EXCEPT WITHIN THE RAIN GARDEN AREA.
 - EXCAVATE RAIN GARDEN TO PROPOSED INVERT DEPTH AND SCARIFY THE EXISTING SOIL SURFACES. DO NOT COMPACT IN-SITU SOILS. WHERE EROSION OF SUBGRADE HAS CAUSED ACCUMULATION OF FINE MATERIALS AND/OR SURFACE PONDING, THIS MATERIAL SHOULD BE REMOVED WITH LIGHT EQUIPMENT AND THE UNDERLYING SOILS SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES WITH A YORK RAKE (OR EQUIVALENT) AND LIGHT TRACTOR. ALL FINE GRADING SHOULD BE DONE BY HAND. ALL RAIN GARDEN BOTTOMS SHOULD BE AT LEVEL GRADE.
 - SITE PLANTING SOIL SHALL BE NATIVE ON-SITE SOILS CAPABLE OF SUPPORTING A HEALTHY VEGETATIVE COVER. SOILS SHOULD BE AMENDED WITH A COMPOSTED ORGANIC MATERIAL. A TYPICAL ORGANIC AMENDED SOIL IS COMBINED WITH 5-10% ORGANIC MATERIAL (COMPOST), AND 70-80% SOIL BASE (PREFERABLY TOPSOIL). PLANTING SOIL SHOULD BE APPROXIMATELY 4 INCHES DEEPER THAN THE BOTTOM OF THE LARGEST ROOT BALL.
 - THE MODIFIED SOILS / PLANTING MIX SHALL BE PLACED IMMEDIATELY AFTER SUBGRADE PREPARATION. OVERFILLING IS RECOMMENDED TO ACCOUNT FOR SETTLEMENT. LIGHT HAND TAMPING IS ACCEPTABLE IF NECESSARY.
 - PRESOAK THE PLANTING SOIL PRIOR TO PLANTING VEGETATION TO AID IN SETTLEMENT.
 - SPREAD ERNST ERNMX-180 RAIN GARDEN MIX (OR EQUAL) TO SUPPLIER'S RECOMMENDATIONS AND ONLY FROM MID-MARCH THROUGH THE END OF JUNE OR FROM MID-SEPTEMBER THROUGH MID-NOVEMBER.
 - COMPLETE FINAL GRADING TO ACHIEVE PROPOSED DESIGN ELEVATIONS, LEAVING SPACE FOR UPPER LAYER OF COMPOST, MULCH OR TOPSOIL.
 - INSTALL 2-3" SHREDDED HARDWOOD MULCH (MINIMUM AGE 6 MONTHS,) LEAF COMPOST MULCH OR OTHER COMPARABLE PRODUCT UNIFORMLY IMMEDIATELY AFTER RAIN GARDEN IS SEEDING WITH RAIN GARDEN MIX. DO NOT APPLY MULCH IN AREAS WHERE GROUND COVER IS TO BE GRASS OR WHERE COVER WILL BE ESTABLISHED BY SEEDING. WOOD CHIPS SHOULD BE AVOIDED AS THEY TEND TO FLOAT DURING INUNDATION PERIODS.
 - WATER VEGETATION AT THE END OF EACH DAY FOR TWO WEEKS AFTER PLANTING IS COMPLETED. WHILE VEGETATION IS BEING ESTABLISHED, PRUNING AND WEEDING MAY BE REQUIRED.
 - CONTRACTOR SHOULD PROVIDE A ONE-YEAR 80% CARE AND REPLACEMENT WARRANTY FOR ALL PLANTING BEGINNING AFTER INSTALLATION AND INSPECTION OF ALL PLANTS.

STORMWATER MANAGEMENT OPERATION AND MAINTENANCE PROCEDURES:
RESPONSIBLE PARTY:
JAY & ANNA HUMPHREY

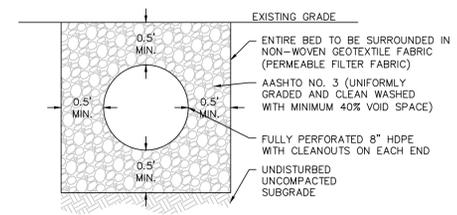
- THE RESPONSIBILITY FOR THE INSTALLATION, MAINTENANCE AND OPERATION OF THE STORMWATER MANAGEMENT SYSTEM AND OTHER ASSOCIATED FACILITIES DURING CONSTRUCTION SHALL BE THE OBLIGATION OF THE CONTRACTOR.
- THE RESPONSIBILITY FOR THE CONTINUED MAINTENANCE AND OPERATION OF THE STORMWATER MANAGEMENT SYSTEM AND OTHER ASSOCIATED FACILITIES SHALL BE THE OBLIGATION OF THE PROPERTY OWNER.
- THE PERMITTED STORMWATER CONTROLS AND BMP'S ARE FIXTURES OF THE PROPERTY THAT CAN BE ALTERED OR REMOVED ONLY AFTER APPROVAL BY THE TOWNSHIP.

- THE POST CONSTRUCTION STORMWATER MANAGEMENT SYSTEM MUST BE INSPECTED FOR ROUTINE MAINTENANCE A MINIMUM OF TWO TIMES A YEAR, ONCE IN THE EARLY SPRING AND ONCE IN THE FALL AFTER THE MAJORITY OF THE LEAVES HAVE FALLEN.
- VISUAL OBSERVATIONS OF THE GROUND SURFACE TO DETECT PONDING OF WATER OR GROUND SETTLEMENTS THAT WOULD PREVENT RUNOFF FROM ENTERING INLETS AS DESIGNED MUST BE MADE. THE DRAINAGE AREAS DESIGNED FOR THE SYSTEM MUST BE MAINTAINED. ADJUSTMENTS TO THE GRADING OR INLETS MUST BE MADE TO ENSURE THAT THE SYSTEM IS FUNCTIONING AS DESIGNED. SMALL SINKHOLES CAN BE REPAIRED EASILY BY FILLING WITH TOPSOIL AND MAY BE THE RESULT OF SETTLEMENT OF THE SOIL. LARGER SINKHOLES OR SINKHOLES THAT REAPPEAR IN THE SAME LOCATION MAY INDICATE A BREACH IN THE GEOTEXTILE LINER, INLET BOX STRUCTURE, PIPE CONNECTION OR A BREAK IN A STORM CONVEYANCE LINE. THESE TYPES OF SINKHOLES MUST BE EXCAVATED AND THE FAILURE IDENTIFIED AND REPAIRED IMMEDIATELY IN ORDER TO PREVENT SOIL FROM ENTERING THE POST CONSTRUCTION STORMWATER MANAGEMENT SYSTEM AND CLOGGING IT OR REDUCING THE CAPACITY OF THE BMP FOR RECHARGE OF RUNOFF.
- ALL SEDIMENT TRAPS AND INLETS MUST BE VISUALLY INSPECTED SEVERAL TIMES A YEAR FOR ACCUMULATED SOIL AND DEBRIS. INLET GRATES MUST BE KEPT FREE OF LEAVES, STICKS, MULCH, AND OTHER LAWN DEBRIS OR TRASH THAT WOULD PREVENT INFLOW OF RUNOFF. SUMPS IN SEDIMENT TRAPS OR INLET BOTTOMS MUST HAVE ACCUMULATED SEDIMENT REMOVED TO ENSURE DESIGN CAPACITY SUFFICIENT TO TRAP SEDIMENT AND DEBRIS FROM ENTERING ANY SEEPAGE BED. ANY WEEP HOLES IN THE BOTTOM OF THE INLETS OR SEDIMENT TRAP SHOULD BE CLEARED TO ALLOW WATER TO SEEP OUT.
- ONCE A YEAR, THE POST CONSTRUCTION STORMWATER MANAGEMENT SYSTEM MUST BE INSPECTED TO DETERMINE IF IT IS DRAINING WITHIN THE REQUIRED TIME PERIOD (USUALLY TWENTY-FOUR HOURS.) THE INSPECTION PORT SHALL BE OPENED AT LEAST TWENTY-FOUR HOURS FOLLOWING A STORM AND THE LEVEL OF WATER IN THE BED NOTED. VENTED CLEAN-OUTS MUST BE CHECKED TO ENSURE OPENINGS ARE CLEAR. ADJUSTMENTS TO THE CLEAN-OUTS MUST BE MADE IF SOIL OR OTHER LAWN DEBRIS IS OBSERVED TO BE ENTERING THE SYSTEM.
- RAIN GARDEN: SHALL BE INSPECTED 72 HOURS FOLLOWING ALL RAIN EVENTS EXCEEDING 1" OF RAINFALL. IF STANDING WATER IS VISIBLE AT THAT TIME WITHIN THE RAIN GARDEN, THE RAIN GARDEN MUST BE EXCAVATED AND RECONSTRUCTED TO OBTAIN AN INFILTRATION RATE APPROVED BY TRAPPEE BOROUGHS.
- RAIN GARDEN MAINTENANCE:
 - DETRITUS MAY ALSO NEED TO BE REMOVED EVERY YEAR. PERENNIAL PLANTINGS MAY BE CUT DOWN AT THE END OF THE GROWING SEASON.
 - MULCH SHOULD BE RE-SPREAD WHEN EROSION IS EVIDENT AND BE REPLISHED AS NEEDED. ONCE EVERY 2 TO 3 YEARS THE ENTIRE AREA MAY REQUIRE MULCH REPLACEMENT.
 - BIORETENTION AREAS SHOULD BE INSPECTED AT LEAST TWO TIMES PER YEAR FOR SEDIMENT BUILDUP, EROSION, VEGETATIVE CONDITIONS, ETC.
 - DURING PERIODS OF EXTENDED DROUGHT, BIORETENTION AREAS MAY REQUIRE WATERING.
 - TREES AND SHRUBS SHOULD BE INSPECTED TWICE PER YEAR TO EVALUATE HEALTH.
- ANY CLEAN-OUT, INLET OR LEVEL SPREADER THAT HAS BEEN DAMAGED BY LAWN EQUIPMENT MUST BE REPAIRED OR REPLACED. CLEAN-OUTS THAT BECOME BURIED SHOULD BE RAISED TO GRADE. THE CONFIGURATION MUST NOT ALLOW SOIL OR OTHER DEBRIS TO CLOG THE COLLECTION PIPE. ALL COLLECTION PIPES MUST BE CHECKED ANNUALLY TO ENSURE THEY ARE FLOWING FREELY. IF THE COLLECTION PIPES BECOME CLOGGED, JET CLEANING MUST BE PERFORMED AT THE CLEAN-OUT-OUTS. ADDITIONAL PROTECTION MUST BE MADE AT THE SEDIMENT TRAP DURING JET CLEANING TO ENSURE THAT DEBRIS IS NOT TRANSMITTED TO THE SEEPAGE BED.
- SMALL TREES THAT BEGIN TO GROW IN THE VICINITY OF SEEPAGE BEDS OR STRUCTURES MUST BE REMOVED TO ENSURE THAT THE ROOTS DO NOT PUNCTURE THE FILTER FABRIC OF THE SEEPAGE BED OR DAMAGE ANY STORMWATER COLLECTION/CONVEYANCE STRUCTURE.
- ROOF GUTTER SYSTEMS THAT ARE INTEGRAL WITH THE SEEPAGE BED MUST BE FUNCTIONAL. REPAIRS TO GUTTERS THAT BECOME SEPARATED, SAC OR OTHERWISE DO NOT FUNCTION AS DESIGNED MUST BE MADE.
- PREVENTATIVE MAINTENANCE WOULD INCLUDE REMOVAL OF LEAVES FROM GUTTER SYSTEMS AND LAWN AREAS AS SOON AS POSSIBLE TO AVOID CONTAMINATION OF CLOGGING OF THE SYSTEM. LOCATING LANDSCAPE-MULCHED AREAS AWAY FROM CONCENTRATED RUNOFF AREAS OR SWALES THAT COULD WASH MULCH INTO INLET OR LEVEL SPREADER IS RECOMMENDED.

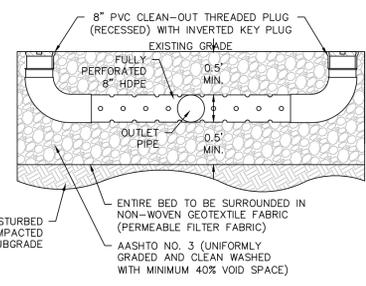
- CONSTRUCTION NOTES:**
- THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES WITH THE PLANS FOUND IN THE FIELD SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE OWNER AND ENGINEER.
 - PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL APPLY FOR AND SECURE ALL PROPER PERMITS FROM THE APPROPRIATE AUTHORITIES.
 - A HIGHWAY PERMIT IS REQUIRED FOR ALL WORK WITHIN THE RIGHT OF WAY FROM THE RADNOR TOWNSHIP PUBLIC WORKS DEPARTMENT.
 - A SEWER PERMIT IS REQUIRED FOR THE CONNECTION OF THE SEWER LATERAL FROM THE RADNOR TOWNSHIP PUBLIC WORKS DEPARTMENT.
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE RADNOR TOWNSHIP STANDARDS. ALL EXCAVATIONS AND PEOPLE ENTERING EXCAVATIONS OR OTHER BELOW GRADE STRUCTURES SHALL COMPLY WITH OSHA REQUIREMENTS.
 - THE OWNER AND ENGINEER ARE NOT RESPONSIBLE FOR THE CONTRACTOR'S MEANS AND METHODS OF CONSTRUCTION.
 - ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., NOT PLANNED FOR REPAIR OR REMOVAL THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED AT CONTRACTOR'S EXPENSE.
 - ALL PVC STORMWATER PIPES SHALL BE SDR 35 OR GREATER.
 - ALL HDPE STORMWATER PIPES SHALL BE SMOOTHLINE INTERIOR.
 - ALL HDPE SHALL BE ALUMINUM OR ALUMINIZED STEEL.
 - ALL STORMWATER FITTINGS SHALL BE WATERTIGHT.
 - GEOTEXTILE FABRIC (PERMEABLE FILTER FABRIC) SHALL BE CLASS 1 NON-WOVEN AND SHALL COMPLY WITH PENNDOT SPECIFICATIONS.
 - STONE WITHIN THE STORMWATER MANAGEMENT SYSTEM SHALL BE CLEAN-WASHED, UNIFORMLY GRADED AGGREGATE WITH MINIMUM 40% VOID SPACE.
 - BASEMENT WALLS WITHIN 20' OF SWALES SHALL BE WATERPROOFED.
 - ALL YARD DRAINS SHALL BE GRADED IN A 12" MINIMUM SUMP CONDITION.
 - ALL YARD DRAINS AND SUMP BOXES SHALL INCLUDE A 12" MINIMUM SUMP BELOW THE LOWEST INVERT ELEVATION.
 - CLEANOUTS ARE REQUIRED AT ALL CHANGES IN SLOPE OR DIRECTION.
 - ALL RAINWATER CONDUCTOR (RWC) PIPING SHALL BE DIRECTED TO UNDERGROUND STORMWATER MANAGEMENT SYSTEM.
 - PIPE PERFORATIONS SHALL BE NOT LESS THAN 5/16 INCH IN DIAMETER AND PROVIDE AN OPENING AREA NOT LESS THAN 3.31 SQUARE INCHES PER SQUARE FOOT OF PIPE SURFACE.
 - THERE SHALL BE NO GRADING WITHIN 3' OF THE PROPERTY LINE.
 - IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE SECTION 1804.3 SITE GRADING, THE GROUND IMMEDIATELY ADJACENT TO THE FOUNDATION SHALL BE SLOPED AWAY FROM THE BUILDING AT A SLOPE OF NOT LESS THAN FIVE (5%) PERCENT FOR A MINIMUM DISTANCE OF 10 FEET MEASURED PERPENDICULAR TO THE FACE OF THE WALL. IF PHYSICAL OBSTRUCTIONS OR LOT LINES PROHIBIT 10 FEET OF HORIZONTAL DISTANCE, A FIVE (5%) PERCENT SLOPE SHALL BE PROVIDED TO AN APPROVED ALTERNATIVE METHOD OF DIVERTING WATER AWAY FROM THE FOUNDATION. SWALES USED FOR THIS PURPOSE SHALL BE SLOPED A MINIMUM OF TWO (2%) PERCENT WHERE LOCATED WITHIN 10 FEET OF THE BUILDING FOUNDATION. IMPERVIOUS SURFACES WITHIN 10 FEET OF THE BUILDING FOUNDATION SHALL BE SLOPED A MINIMUM OF TWO (2%) PERCENT AWAY FROM THE BUILDING.
 - THE EXCAVATION OUTSIDE THE FOUNDATION SHALL BE BACKFILLED WITH SOIL THAT IS FREE OF ORGANIC MATERIAL, CONSTRUCTION DEBRIS, COBBLES AND BOULDERS OR WITH A CONTROLLED LOW-STRENGTH MATERIAL (CLSM). THE BACKFILL SHALL BE PLACED IN LIFTS AND COMPACTED IN A MANNER THAT DOES NOT DAMAGE THE FOUNDATION OR THE WATERPROOFING OR DAMPROOFING MATERIAL.
 - THE PROCEDURE USED TO ESTABLISH THE FINAL GROUND LEVEL ADJACENT TO THE FOUNDATION SHALL ACCOUNT FOR ADDITIONAL SETTLEMENT OF THE BACKFILL.
 - STAIRS AND RAILINGS (IF REQUIRED) SHALL BE IN ACCORDANCE WITH THE RADNOR TOWNSHIP STANDARDS.

PIPE SIZE	PIPE PERFORATION SPECIFICATIONS	
	HOLES PER LINEAR FOOT (8" HOLES)	HOLES PER LINEAR FOOT (3" HOLES)
6"	68	12
8"	90	16
10"	113	20
12"	136	24
15"	169	30
18"	203	36
24"	271	48
30"	339	60
36"	407	72
48"	542	96
60"	678	120
72"	813	144

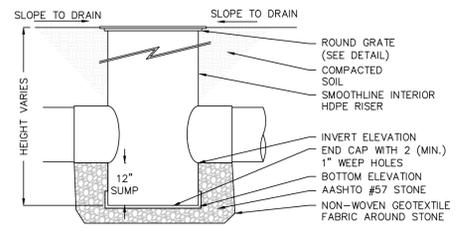
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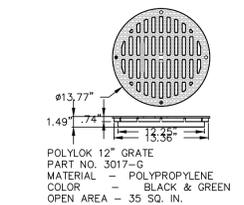
SPREADER CROSS SECTION
NOT TO SCALE



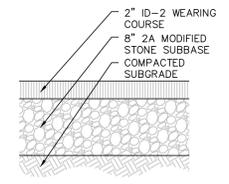
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YARD DRAIN DETAIL (OR APPROVED EQUAL)
NOT TO SCALE

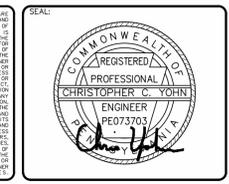


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DRIVEWAY CROSS SECTION
NOT TO SCALE

REV	DATE	COMMENTS
2	07/01/21	LAYOUT
1	05/21/21	TWP ENG



PROJECT: **RESIDENTIAL ADDITION**

PROJECT ADDRESS: **608 WEST WAYNE AVENUE, WAYNE, PA 19087**

MUNICIPALITY: **RADNOR TOWNSHIP** COUNTY: **DELAWARE COUNTY**

PLAN SET: **STORMWATER MANAGEMENT PERMIT PLANS**

SHEET NAME: **POST CONSTRUCTION STORMWATER MANAGEMENT NOTES & DETAILS**

PREPARED FOR: **OWNER / APPLICANT
JAY & ANNA HUMPHREY
608 WEST WAYNE AVENUE
WAYNE, PA 19087**

DATE: **APRIL 14, 2021**

SCALE: **NO SCALE**

ONE CALL NUMBER: **CCY**

DRAWN BY: **20-146**

PROJECT NUMBER:

PREPARED BY: **YOHN ENGINEERING, LLC
555 SECOND AVENUE, SUITE B-205
COLLEGEVILLE, PA 19426
610-489-4580
WWW.YOHNEENGINEERING.COM**

YOHN Engineering, LLC

SHEET: **3 of 5**

ALL DOCUMENTS PREPARED OR FURNISHED BY ENGINEER AND ARCHITECT OR ENGINEER AND ARCHITECT ARE HEREBY ACCEPTED AND APPROVED BY ENGINEER AND ARCHITECT AND THE SIGNATURE OF ENGINEER AND ARCHITECT SHALL BE A LIMITED LICENSE TO USE THE ENGINEER OR ARCHITECT'S NAME AND PROFESSIONAL SEAL FOR THE PROJECT AND FOR THE PURPOSES OF THE PROJECT ONLY. THE ENGINEER OR ARCHITECT'S NAME AND PROFESSIONAL SEAL SHALL NOT BE USED FOR ANY OTHER PROJECT OR FOR ANY OTHER USE OR PURPOSE WITHOUT WRITTEN VERIFICATION OR APPROVAL BY ENGINEER AND ARCHITECT. THE ENGINEER OR ARCHITECT'S LIABILITY IS LIMITED TO THE PROJECT AND THE PROFESSIONAL SEAL SHALL NOT BE USED FOR ANY OTHER PROJECT OR FOR ANY OTHER USE OR PURPOSE WITHOUT WRITTEN VERIFICATION OR APPROVAL BY ENGINEER AND ARCHITECT.

Serial Number:
CALL BEFORE YOU DIG!
 PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL
 Pennsylvania One Call System, Inc.
 1-800-242-1776

ALL LOCATIONS OF EXISTING UTILITIES, SHOWN ON THIS PLAN, HAVE BEEN DEVELOPED FROM FIELD LOCATIONS OF VISIBLE ABOVE GROUND UTILITY STRUCTURES AND/OR INFORMATION FURNISHED BY THE UTILITY COMPANIES.

ALL LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. COMPLETENESS OR ACCURACY OF THE LOCATIONS AND DEPTH OF ALL STRUCTURES CANNOT BE GUARANTEED. CONTRACTORS MUST VERIFY ALL LOCATIONS AND DEPTHS OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE THE START OF ANY WORK.

AS PER ACT 187 HOUSE BILL 2627, BEFORE THE START OF ANY EXCAVATION WORK THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANIES THROUGH THE PENNSYLVANIA "ONE CALL SYSTEM" 1-800-242-1776 ACCORDING TO THE FOLLOWING SCHEDULE:
 • PRELIMINARY NOTICE: MORE THAN 90 DAYS FROM THE START OF CONSTRUCTION
 • FINAL NOTICE: 10-30 DAYS FROM THE START OF CONSTRUCTION
 • ROUTINE NOTICE: 3-10 DAYS FROM THE START OF CONSTRUCTION

REFERENCE PLANS:
 1. TOPOGRAPHIC SURVEY PLAN PREPARED FOR THEODORE, III & ANNA HUMPHREY BY JEFFREY P. TURNER, P.L.S., COLLEGEVILLE, PA. DATED JANUARY 11, 2021. PLAN NO. D-36-19-209
 2. REAR TOPOGRAPHY AND OTHER GIS INFORMATION OBTAINED ELECTRONICALLY FROM SHAPE FILES DISTRIBUTED BY DELAWARE VALLEY REGIONAL PLANNING COMMISSION. FILES WERE OBTAINED VIA WWW.PASADAPLANS.EDU
 3. AERIAL PHOTOGRAPH OBTAINED FROM THE MICROSOFT CORPORATION BING MAPS.
 4. SOILS INFORMATION VIA THE NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY (WEBSOILSURVEY.SC.GOV.USDA.GOV.)

REFERENCE PLAN #1 NOTES:
 1. OUTLINE DESCRIPTION AND LOCATION SHOWN IN ACCORDANCE WITH ACTUAL FIELD INSTRUMENT SURVEY CONDUCTED UPON THE GROUNDS BY JEFFREY P. TURNER, P.L.S. FROM VARIOUS DEEDS AND PLANS OF RECORD; SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT; PROPERTY MAY BE SUBJECT TO CERTAIN RIGHTS OF OTHERS.
 2. THIS SURVEY IS NOT TO BE USED FOR TREE REMOVAL ALONG PROPERTY LINES. TREE LOCATIONS ARE APPROXIMATE FOR TREE REMOVAL PURPOSES. PROPERTY LINES MUST BE FIELD MARKED WITH STAKES SET TO ESTABLISH EXACT TREE OWNERSHIP.
 3. CONTOURS PLOTTED FROM FIELD RUN SURVEY. GPS CONTROL PERFORMED ON SITE TO ESTABLISH BENCHMARK, DATUM NAD83/NAVD88.
 4. THERE IS AN IDENTIFIABLE FLOOD PLAIN AREA WITHIN THE PROJECT SITE AS ILLUSTRATED ON COMMUNITY PANEL NUMBER 420429 00177E OF THE FLOOD INSURANCE RATE MAP AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE TOWNSHIP OF RADNOR, PENNSYLVANIA.
 5. EXISTING SUBSURFACE UTILITY INFORMATION INDICATED IS BASED UPON VISUAL FIELD INSPECTION BY JEFFREY P. TURNER, P.L.S. SUCH INFORMATION CONCERNING THE SIZE, LOCATION, DEPTH, QUANTITY, ETC. OF SUBSURFACE UTILITIES IS APPROXIMATE IN NATURE AND HAS BEEN OBTAINED AS A SUPPLEMENT TO THE SITE SURVEY. THE INFORMATION PROVIDED IS REPRESENTATIVE OF SUBSURFACE CONDITIONS ONLY AT LOCATIONS AND DEPTHS WHERE SUCH INFORMATION WAS OBTAINED. THERE IS NO EXPRESSED OR IMPLIED AGREEMENT THAT UTILITIES LOCATION, DEPTH, QUANTITY, ETC. AS SHOWN EXISTS BETWEEN EXPLORED LOCATIONS. ACCORDINGLY, UTILITY INFORMATION SHOWN SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. IT IS INCIDENT UPON THE CONTRACTOR TO VERIFY THE SIZE, LOCATION, DEPTH, QUANTITY, ETC. OF ALL UTILITIES BEFORE EXCAVATION.
 6. BEARINGS SHOWN ARE BASED ON A MERIDIAN ESTABLISHED USING PA STATE PLANE COORDINATES. THIS MERIDIAN DIFFERS FROM THE RECORDED DEED BY -8°05'26".
 7. PLANS REFERENCED: EASEMENT EXHIBIT PREPARED FOR RICHARD A. AND NANCY G. KLAUVANS, PREPARED BY YERKES ASSOCIATES, INC. DATED JULY 13, 2020.

LINE/TYPE LEGEND

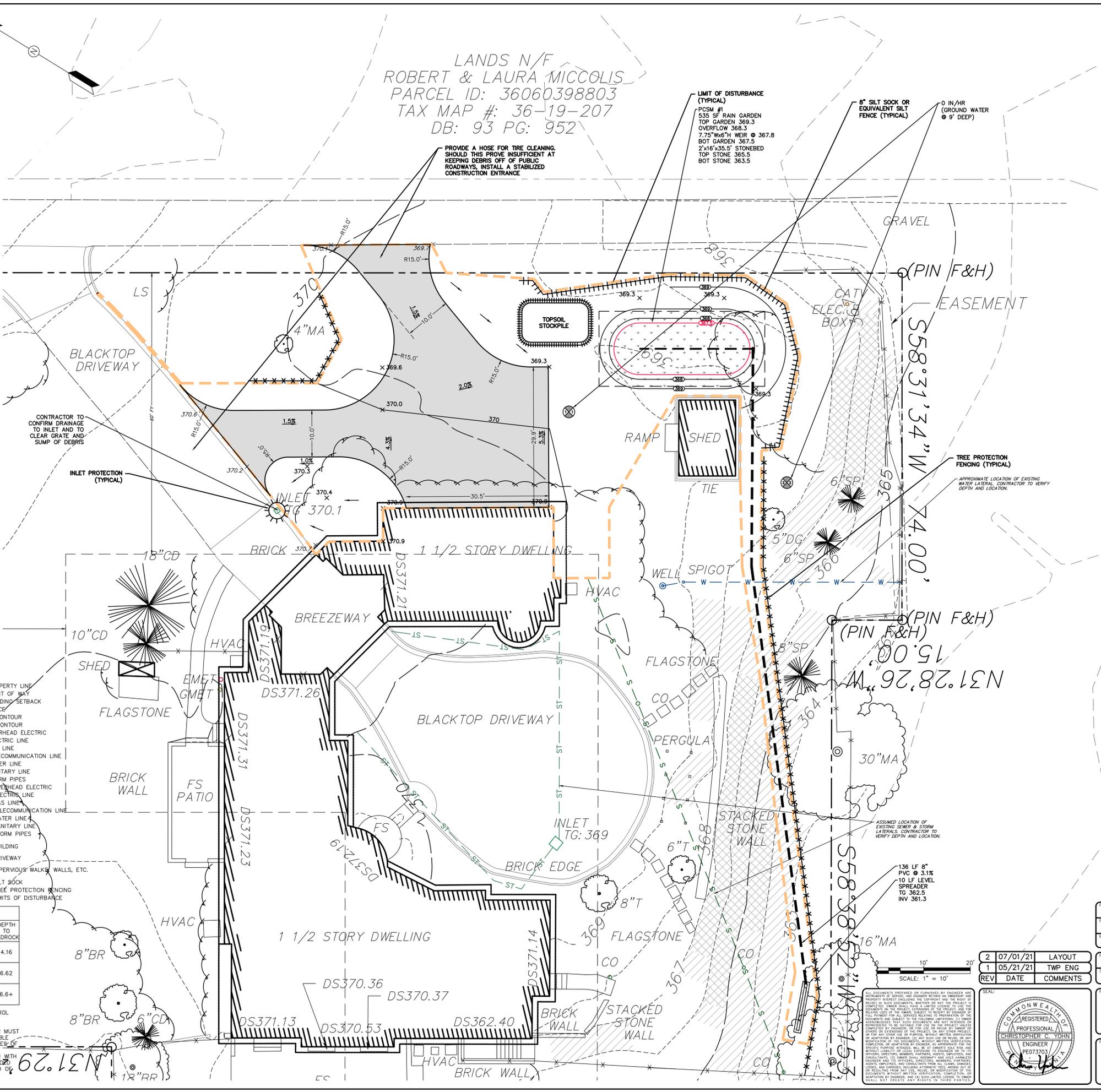
---	EXISTING PROPERTY LINE
- - -	EXISTING RIGHT OF WAY
- - -	EXISTING BUILDING SETBACK
- - -	EXISTING FENCE
- - -	EXISTING 1' CONTOUR
- - -	EXISTING 5' CONTOUR
- - -	EXISTING OVERHEAD ELECTRIC
- - -	EXISTING ELECTRIC LINE
- - -	EXISTING GAS LINE
- - -	EXISTING TELECOMMUNICATION LINE
- - -	EXISTING WATER LINE
- - -	EXISTING SANITARY LINE
- - -	EXISTING STORM PIPES
- - -	PROPOSED OVERHEAD ELECTRIC
- - -	PROPOSED ELECTRIC LINE
- - -	PROPOSED GAS LINE
- - -	PROPOSED TELECOMMUNICATION LINE
- - -	PROPOSED WATER LINE
- - -	PROPOSED SANITARY LINE
- - -	PROPOSED STORM PIPES
- - -	PROPOSED BUILDING
- - -	PROPOSED DRIVEWAY
- - -	PROPOSED IMPERVIOUS WALKS, WALLS, ETC.
- - -	PROPOSED SILT SOCK
- - -	PROPOSED TREE PROTECTION FENCING
- - -	PROPOSED LIMITS OF DISTURBANCE

SOILS INFORMATION

SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GnB2	GLENEVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
WnB	WORSHAM VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	D	0.49	6.6+

NOTES: IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY RESTORE THE DISTURBED AREA TO SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

LANDS N/F
 ROBERT & LAURA MICCOLIS
 PARCEL ID: 36060398803
 TAX MAP #: 36-19-207
 DB: 93 PG: 952



DISTURBED AREA: 6,000± SF (0.14 AC)
 UNDISTURBED AREA: 87,000± SF (2.00 AC)

- CONSTRUCTION TIMING AND SEQUENCE NOTES:**
1. THE TOWNSHIP ENGINEER SHALL BE NOTIFIED FOLLOWING THE INSTALLATION OF PROTECTIVE BARRIERS AND 48 HOURS PRIOR TO THE START OF EARTHMOVING ACTIVITIES AS WELL AS 48 HOURS PRIOR TO THE INSTALLATION OF THE PERVIOUS WALKWAYS AND STORMWATER MANAGEMENT SYSTEM AND ASSOCIATED FACILITIES.
 2. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE OF CONSTRUCTION. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.
- CONSTRUCTION TIMING AND SEQUENCE:**
1. ANTICIPATED START OF CONSTRUCTION: MAY 2021.
 2. INSTALL THE TREE PROTECTION FENCING AND SILT FENCE OR COMPOST FILTER SOCKS AND NOTIFY TOWNSHIP FOR APPROVAL AND 48 HOURS PRIOR TO THE START OF EARTHMOVING ACTIVITIES.
 3. PROVIDE A HOSE FOR TIRE CLEANING. SHOULD THIS PROVE INSUFFICIENT AT KEEPING DEBRIS OFF OF PUBLIC ROADWAYS, INSTALL A STABILIZED CONSTRUCTION ENTRANCE. ALL CONSTRUCTION VEHICLES SHALL UTILIZE THIS ENTRANCE TO EXIT THE SITE.
 4. STRIP TOPSOIL AND STOCKPILE FOR FUTURE USE. SURROUND STOCKPILE WITH SILT FENCE AND IMMEDIATELY STABILIZE.
 5. BEGIN REMOVAL OF ALL FEATURES DESIGNATED TO BE REMOVED AND CLEAR AND GRUB THE SITE WITHIN THE LIMITS OF DISTURBANCE. UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE OR ANY STAGE OR PHASE OF AN ACTIVITY WHERE A CESSATION OF EARTH DISTURBANCE ACTIVITIES EXCEED 4 DAYS, THE SITE SHALL BE IMMEDIATELY SEED, MULCHED OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES.
 6. CONCURRENT WITH REMOVALS, ROUGH GRADE THE SITE. ANY WATER PUMPED FROM WORK AREAS SHALL BE TREATED FOR SEDIMENT REMOVAL PRIOR TO DISCHARGING TO A SURFACE WATER THROUGH THE USE OF A PUMPED WATER FILTER BAG OR OTHER APPROVED DEVICE.
 7. INSTALL THE STONE BASE FOR THE DRIVEWAY.
 8. FINAL GRADE THE SITE AND INSTALL THE WALKWAYS AND FINAL PAVING. NEWLY GRADED SLOPES OF OVER TWENTY-FIVE (25%) PERCENT MUST BE STABILIZED WITH SOD OR JUTE NETTING AND SEED.
 9. SPREAD TOPSOIL, SEED AND IMMEDIATELY STABILIZE.
 10. UPON SITE STABILIZATION INSTALL THE POST CONSTRUCTION STORMWATER MANAGEMENT FACILITIES. NOTIFY THE TOWNSHIP ENGINEER 48 HOURS PRIOR TO THE INSTALLATION OF THE STORMWATER MANAGEMENT SYSTEMS AND ASSOCIATED FACILITIES. THE STORMWATER MANAGEMENT SYSTEMS SHALL NOT RECEIVE RUNOFF WITHOUT THE PRIOR APPROVAL FROM THE TOWNSHIP ENGINEER AND UNTIL THE ENTIRE DRAINAGE AREA CONTRIBUTORY HAS ACHIEVED FINAL STABILIZATION.
 11. REMOVE THE EROSION AND SEDIMENTATION CONTROLS AND IMMEDIATELY STABILIZE DENIED AREAS. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
 12. ANTICIPATED END OF CONSTRUCTION: NOVEMBER 2021.

REV	DATE	COMMENTS
2	07/01/21	LAYOUT
1	05/21/21	TWP ENG

SEAL
 COMMONWEALTH OF PENNSYLVANIA
 REGISTERED PROFESSIONAL ENGINEER
 CHRISTOPHER C. YOHN
 ENGINEER
 PE073703

PROJECT: RESIDENTIAL ADDITION	
PROJECT ADDRESS: 608 WEST WAYNE AVENUE, WAYNE, PA 19087	
MUNICIPALITY: RADNOR TOWNSHIP	COUNTY: DELAWARE COUNTY
PLAN SET: STORMWATER MANAGEMENT PERMIT PLANS	
SHEET NAME: EROSION AND SEDIMENTATION CONTROL PLAN	

PREPARED FOR: OWNER / APPLICANT JAY & ANNA HUMPHREY 608 WEST WAYNE AVENUE WAYNE, PA 19087	DATE: APRIL 14, 2021 SCALE: 1" = 10'
PREPARED BY: YOHN ENGINEERING, LLC 555 SECOND AVENUE, SUITE B-205 COLLEGEVILLE, PA 19426 610-489-4580 WWW.YOHNEENGINEERING.COM	DRAWN BY: CCY PROJECT NUMBER: 20-146
SHEET: 4 OF 5	

STANDARD E&S PLAN NOTES:

- ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
- AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE MUNICIPALITY PRIOR TO IMPLEMENTATION.
- AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, AND ROOTS AND OTHER OBSTACLES. MATERIALS TO BE REMOVED SHALL BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
- TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 15 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE MUNICIPALITY.
- ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- ALL WASTE AND MULCH MUST BE Hauled to a site PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORMER FILL MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALITY FILL USED TO ANALYTICAL TESTING.
- ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
- UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, AND RETREATING MUST BE COMPLETED IMMEDIATELY. IF THE E&S BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELLED, OR SWEEP INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
- SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
- AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES - 6 TO 12 INCHES ON COMPACTED SOILS PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 6 INCHES OF TOPSOIL TO BE PLACED TO A 4 TO 6-INCH DEPTH.
- ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH THE DEPARTMENT'S CONSTRUCTION SPECIFICATIONS.
- ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
- FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, RODS, SOIL, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
- FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
- SEDS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
- ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
- IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE AREAS WITH MULCH, OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
- PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UPMULCH, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION, CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING SLIDING, OR OTHER MOVEMENTS.
- E&S BMPs SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE MUNICIPALITY.
- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION ALL DISTURBED AREAS, THE OPERATOR AND/OR OPERATOR SHALL CONTACT THE MUNICIPALITY FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPs.
- AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT AREAS. AREAS TO BE REMOVED DURING REMOVAL OR CONVERSION OF THE BMPs SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.
- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE MUNICIPALITY TO SCHEDULE A FINAL INSPECTION.
- FAILURE TO CORRECTLY INSTALL E&S BMPs, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPs MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO \$100,000 PER DAY IN CIVIL PENALTIES, UP TO \$10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.
- CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS.
- SEDIMENT BASINS AND/OR TRAPS SHALL BE KEPT FREE OF ALL CONSTRUCTION WASTE, WASH WATER, AND OTHER DEBRIS HAVING POTENTIAL TO CLOG THE BASIN/TRAP OUTLET STRUCTURES AND/OR POLLUTE THE SURFACE WATERS.
- SEDIMENT BASINS AND/OR TRAPS SHALL BE PROTECTED FROM UNAUTHORIZED ACTS BY THIRD PARTIES.
- ANY DAMAGE THAT OCCURS IN WHOLE OR IN PART AS A RESULT OF BASIN OR TRAP DISCHARGE SHALL BE IMMEDIATELY REPAIRED BY THE OPERATOR TO THE SATISFACTORY HISTORY TO THE MUNICIPALITY, LOCAL CONSERVATION DISTRICT, AND THE OWNER OF THE DAMAGED PROPERTY.
- SOD OR EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 4H:1V OR STEEPER, WITHIN 50 FEET OF A SURFACE WATER AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.
- HAY OR STRAW MULCH MUST BE APPLIED AT 3.0 TONS PER ACRE.
- STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.
- GRADING AND EARTHMOVING SHALL BE MINIMIZED DURING THE PERIOD FROM NOVEMBER 15 TO APRIL 1 WHEN RE-VEGETATION OF EXPOSED GROUND SURFACE IS DIFFICULT. MULCH, STRAW, STONE AND/OR SOD SHALL BE USED TO STABILIZE ALL AREAS DENuded DURING THIS TIME PERIOD.
- THE RUNOFF CROSSING TO THE ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASE OF THE PROJECT SHALL BE MANAGED SO THAT THE WATER QUALITY / QUANTITY IMPACT IS MINIMIZED TO THE ADJACENT PROPERTIES. ADDITIONAL DIVERSION BERMS, STONED CONSTRUCTION STAGING AREAS, AND INLETS/PIPING SHALL BE PROVIDED AS NECESSARY / DIRECTED IN ORDER TO ENSURE ACCEPTABLE CONDITIONS DURING THE CONSTRUCTION PHASE.
- ALL TOPSOIL SHALL REMAIN ON SITE UNLESS OTHERWISE DIRECTED BY THE OWNER.
- FILL MATERIAL AND TOPSOIL STOCKPILES AND ACCESS TO THEM SHALL NOT BE LOCATED WITHIN THE DRIPLINE OF EXISTING TREES.
- THE MAXIMUM TIME OF EXPOSURE FOR BARE SOIL AREAS SHALL BE TWENTY (20) DAYS BEFORE STABILIZATION MEASURES ARE IMPLEMENTED.

CLEAN FILL AND ENVIRONMENTAL DUE DILIGENCE NOTES:

- IF THE SITE WILL HAVE EXCESS FILL THAT WILL NEED TO BE EXPORTED TO AN OFF SITE LOCATION, THE RESPONSIBILITY OF CLEAN FILL DETERMINATION AND ENVIRONMENTAL DUE DILIGENCE RESTS ON THE APPLICANT. IF ALL CUT AND FILL MATERIALS WILL BE USED ON THE SITE, A CLEAN FILL DETERMINATION IS NOT REQUIRED BY THE OPERATOR UNLESS THERE IS A BELIEF THAT A SPILL OR RELEASE OF REGULATED SUBSTANCE OCCURRED ON SITE.
- APPLICANTS AND/OR OPERATORS MUST USE ENVIRONMENTAL DUE DILIGENCE TO ENSURE THAT THE FILL MATERIAL ASSOCIATED WITH THE PROJECT QUALIFIES AS CLEAN FILL. ALL FILL MATERIAL MUST BE USED IN ACCORDANCE WITH THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL", DOCUMENT NUMBER 258-2182-773. A COPY OF THIS POLICY IS AVAILABLE ONLINE AS WWW.DEPWATER.PA.GOV.
- CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.)
- CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS IN TABLES FP-1A AND FP-1B FOUND IN THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".
- ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL. A COPY OF FORM FP-001 CAN BE FOUND AT THE END OF THESE INSTRUCTIONS.
- ENVIRONMENTAL DUE DILIGENCE: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRIC FIELD SEARCHES, VISUAL INSPECTION OF PROPERTY RECORDS, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".
- FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE DEPARTMENT'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA. CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE.

TOPSOIL APPLICATION:

- GRADED AREAS SHOULD BE SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES TO PERMIT BONDING OF THE TOPSOIL TO THE SURFACE AREAS AND TO PROVIDE A ROUGHENED SURFACE TO PREVENT TOPSOIL FROM SLIDING DOWN SLOPE.
- TOPSOIL SHOULD BE UNIFORMLY DISTRIBUTED ACROSS THE DISTURBED AREA TO A DEPTH OF 4 TO 8 INCHES MINIMUM. 2 INCHES ON FILL AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES. SPREADING SHOULD BE DONE IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL PREPARATION OR TILLAGE. IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOIL PLACEMENT SHOULD BE CORRECTED IN ORDER TO PREVENT FORMATION OF DEPRESSIONS UNLESS SUCH DEPRESSIONS ARE PART OF THE PCSM PLAN.
- TOPSOIL SHOULD NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION. WET OR MOIST TOPSOIL PLACEMENT SHOULD BE CORRECTED IN ORDER TO FACILITATE UNIFORM DISTRIBUTION OF TOPSOIL.

TURFGROSS ESTABLISHMENT:

- SOIL TESTING
 - A SOIL TEST TO DETERMINE LIME AND FERTILIZER REQUIREMENTS PROVIDES THE BEST GUIDE FOR PROPER TURFGROSS ESTABLISHMENT. ROUGH-GRADING
 - REMOVE ALL DEBRIS, INCLUDING LARGE STONES.
 - TILL SOIL AND BRING AREA TO ROUGH-GRADE PRIOR TO LIMING OR FERTILIZATION.
 - WHERE TOPSOIL IS TO BE REPLACED OR BROUGHT IN, FIRST ROUGH-GRADE THE AREA TO THE CONTOUR OF THE FINISHED GRADE TO FACILITATE UNIFORM DISTRIBUTION OF TOPSOIL.

LIMING:

- WHERE A TEST HAS BEEN MADE, BROADCAST AND WORK INTO A 4 TO 6-INCH SOIL DEPTH TO MEET THE REQUIREMENT SHOWN BY THE TEST.
- WHERE LIME REQUIREMENT EXCEEDS 200 LBS. PER 1,000 SF, APPLY ONE HALF THE TOTAL REQUIREMENT, TILL, APPLY THE REMAINING ONE HALF, AND RETILL.
- WHERE A TEST IS NOT AVAILABLE, BROADCAST AND WORK INTO A 4 TO 6-INCH SOIL DEPTH A MINIMUM OF 100 LBS. PER 1,000 SF BASIC FERTILIZATION
 - WHERE A TEST HAS BEEN MADE, BROADCAST THE RECOMMENDED FERTILIZER AND WORK INTO THE SOIL TO A 4 TO 6-INCH DEPTH.
 - WHERE A TEST HAS NOT BEEN MADE, BROADCAST AND WORK INTO THE SOIL TO A 4 TO 6-INCH DEPTH 25 TO 35 LBS. OF 0-46-0 FERTILIZER OR EQUIVALENT PER 1,000 SF.

SOIL AMENDMENTS:

- WHERE A TEST INDICATES THE SOIL HAS A LOW ORGANIC MATTER CONTENT, WORK THE RECOMMENDED ORGANIC MATTER INTO THE SOIL TO A 4 TO 6-INCH DEPTH BEFORE APPLYING THE STARTER FERTILIZER.
- REED SEDGE PEAT, MOSS PEAT, OR A COMBINATION OF THE TWO MATERIALS IS RECOMMENDED AS A SOURCE OF ORGANIC MATTER.

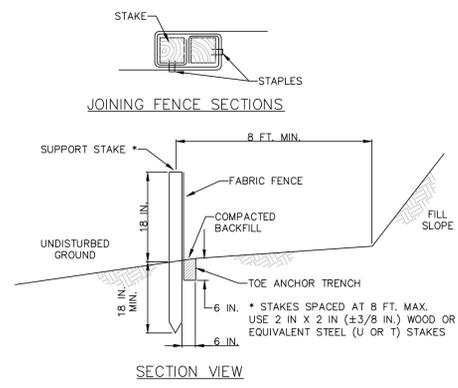
FINISH-GRADING:

- RAKE AREA TO FINISH-GRADE PRIOR TO SEEDING. LIGHT ROLLING WILL INDICATE LOW SPOTS OR OTHER IRREGULARITIES OF THE AREA. STARTER FERTILIZATION
 - IMMEDIATELY PRIOR TO SEEDING, BROADCAST AND WORK INTO THE TOP INCH OF SOIL 40 LBS. OF A 10-5-5, 10-6-4 OR 25 LBS. OF A 16-6-8 FERTILIZER OR THE EQUIVALENT PER 1,000 SF. THE FERTILIZER MUST BE TURF GRADE, HAVING AN APPROXIMATE 2-1-1 RATIO AND CONTAINING 35 PERCENT OR MORE OF THE TOTAL NITROGEN AS WATER INSOLUBLE OR CONTROLLED RELEASE NITROGEN.
- LATE SUMMER TO EARLY FALL IS THE BEST TIME FOR SEEDING PERMANENT TURFGROSS.
 - SOW RECOMMENDED SEED MIXTURE ADAPTED TO USE AND CLIMATIC CONDITIONS OF THE AREA.
 - DIVIDE TOTAL SEED QUANTITY INTO TWO EQUAL LOTS, SOWING ONE LOT IN ONE DIRECTION AND THE SECOND LOT AT RIGHT ANGLES TO THE FIRST WITH A MECHANICAL SEEDER OR SPREADER.
- COVER SEED
 - RAKE LIGHTLY OR DRAG AREA TO COVER SEED NO DEEPER THAN 1/4 IN. SOIL CONTACT
 - ROLL LIGHTLY TO FIRM SOIL AROUND SEED.
- MULCHING
 - MULCH SEEDED AREA WITH CLEAN STRAW OR MARSH HAY AT 3.0 TONS PER ACRE. LIGHT MULCHES (SOME SOIL SHOWING THROUGH MULCH) MAY BE LEFT ON THE AREA TO DECOMPOSE. HEAVY MULCHES (COMPLETE SOIL COVERAGE) SHOULD BE REMOVED FROM THE AREA WITHIN A FEW DAYS AFTER SEED GERMINATION.

PERMANENT SEED MIXTURES		
SPECIES	% OF MIXTURE	SEED RATE
SUNNY AREAS AND WELL-DRAINED SOILS		
KENTUCKY BLUEGRASS	100%	2-3 LB/1,000 SF
KENTUCKY BLUEGRASS	80-90%	3-4 LB/1,000 SF
PERENNIAL RYEGRASS	10-20%	
KENTUCKY BLUEGRASS	40-60%	3-4 LB/1,000 SF
FINE FESCUES	30-40%	
PERENNIAL RYEGRASS	10-20%	
TURF-TYPE TALL FESCUE	100%	6-8 LB/1,000 SF
TURF-TYPE PERENNIAL RYEGRASS	100%	4-5 LB/1,000 SF
PARTIALLY SHADED AREAS		
FINE FESCUES	40-50%	
KENTUCKY BLUEGRASS	40-50%	4 LB/1,000 SF
PERENNIAL RYEGRASS	10-20%	
FINE FESCUES	100%	4-5 LB/1,000 SF
TURF-TYPE TALL FESCUE	100%	6-8 LB/1,000 SF
FINE FESCUES	100%	4-5 LB/1,000 SF
FINE FESCUES	100%	4-5 LB/1,000 SF
FINE FESCUES	100%	4-5 LB/1,000 SF
ROUGH BLUEGRASS	100%	2-3 LB/1,000 SF
TEMPORARY SEED MIXTURE		
SPECIES	% OF MIXTURE	SEED RATE
ANNUAL OR ITALIAN RYEGRASS	100%	4-5 LB/1,000 SF

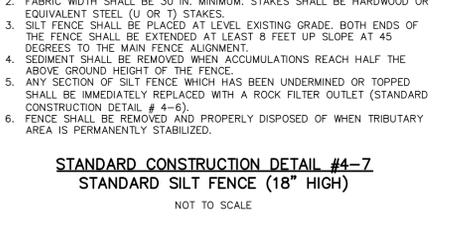
SEED MIXTURE NOTES:

- SEEDING AND TURFGROSS INFORMATION TAKEN FROM THE PENN STATE COLLEGE OF AGRICULTURAL SCIENCES. FOR ADDITIONAL INFORMATION REFER TO <http://plantscience.psu.edu/research/centers/turf/>.
- THE PERCENTAGE OF WEED SEEDS SHOULD NOT EXCEED 1.0% BY WEIGHT IN THE CONTAINER. GOOD QUALITY GRASS SEED USUALLY CONTAINS NO MORE THAN 0.5% WEED SEEDS.
- SEDS OR SEED MIXTURES CONTAINING TIMOTHY, MEADOW FESCUE, ORCHARDGRASS, TALL FESCUE, ANNUAL RYEGRASS OR CLOVER ARE GENERALLY NOT SUGGESTED FOR TURFGROSS USE.
- ALL SEEDING RATES IN THIS PUBLICATION ARE IN POUNDS PER 1000 SQUARE FEET. IF CONVERTING TO AN ACRE BASIS, MULTIPLY BY 43.
- IT IS SUGGESTED THAT 3-5 VARIETIES OF KENTUCKY BLUEGRASS BE USED IN THE BLEND OR MIXTURE.
- WHEREVER SEED AND MULCH IS APPLIED BY HYDROSEEDING METHODS, THE SEED AND MULCH SHOULD BE SEPARATELY APPLIED TO AREAS WITH THE SEED BEING APPLIED FIRST AND THE MULCH SPRAYED ON TOP OF THE SEED.
- IN CRITICAL AREAS (E.G. ADJACENT TO OR WITHIN 50 FEET OF STREAMS, PONDS, OR WETLANDS) A PROTECTIVE BLANKET SHOULD BE PROVIDED FOR ALL SEEDED AREAS.



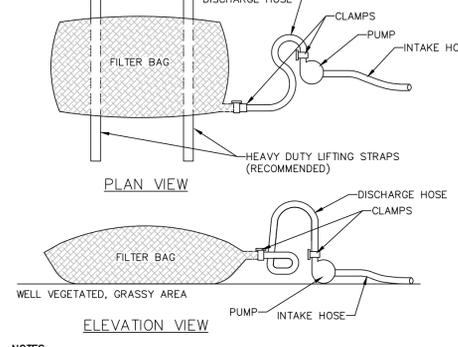
STANDARD CONSTRUCTION DETAIL #4-7 STANDARD SILT FENCE (18" HIGH)

NOT TO SCALE



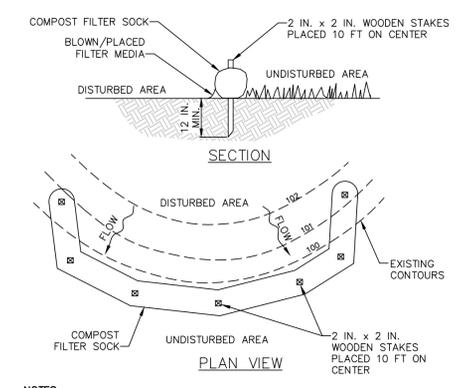
STANDARD CONSTRUCTION DETAIL #4-1 COMPOST FILTER SOCK

NOT TO SCALE



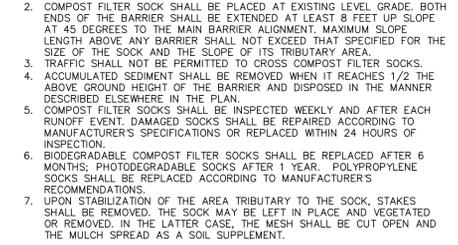
STANDARD CONSTRUCTION DETAIL #3-16 PUMPED WATER FILTER BAG

NOT TO SCALE



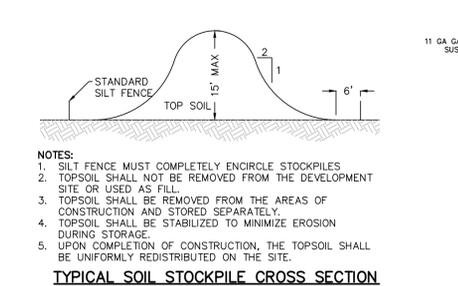
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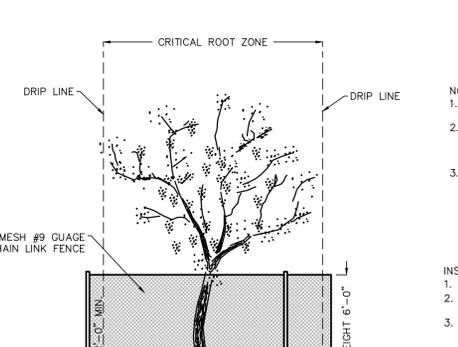
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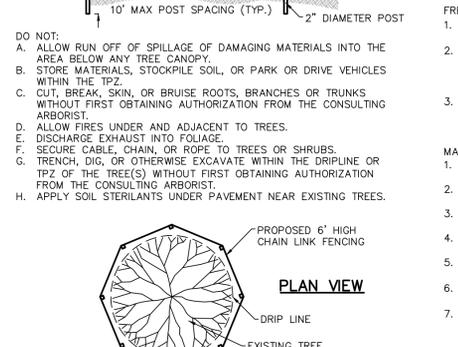
TYPICAL SOIL STOCKPILE CROSS SECTION

NOT TO SCALE



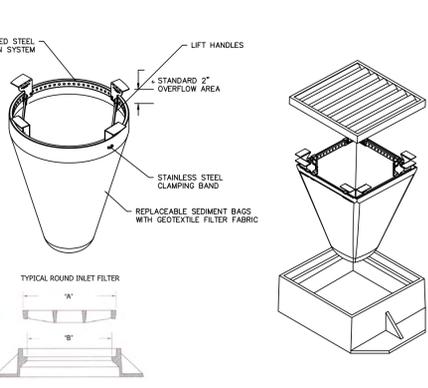
STANDARD CONSTRUCTION DETAIL #4-1 COMPOST FILTER SOCK

NOT TO SCALE



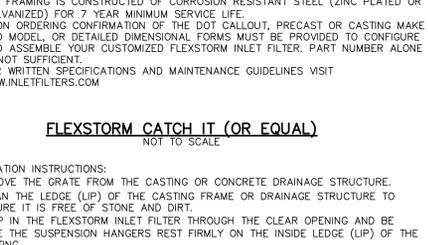
STANDARD CONSTRUCTION DETAIL #3-16 PUMPED WATER FILTER BAG

NOT TO SCALE



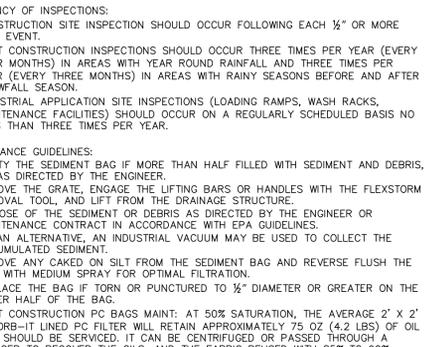
TYPICAL ROUND INLET FILTER

NOT TO SCALE



STANDARD CONSTRUCTION DETAIL #4-1 COMPOST FILTER SOCK

NOT TO SCALE



STANDARD CONSTRUCTION DETAIL #3-16 PUMPED WATER FILTER BAG

NOT TO SCALE

NOTES:

- REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.
- RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
- ROCK CONSTRUCTION ENTRANCE SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.
- MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY THE OPERATOR. AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY. EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

STANDARD CONSTRUCTION DETAIL #3-16 PUMPED WATER FILTER BAG

NOT TO SCALE



STANDARD CONSTRUCTION DETAIL #3-16 PUMPED WATER FILTER BAG

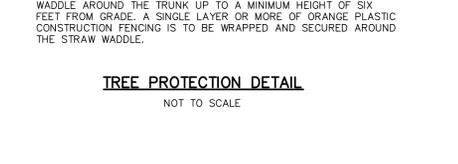
NOT TO SCALE

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STANDARD CONSTRUCTION DETAIL #3-16 PUMPED WATER FILTER BAG

NOT TO SCALE



STANDARD CONSTRUCTION DETAIL #3-16 PUMPED WATER FILTER BAG

NOT TO SCALE

NOTES:

- ALLOW RUN OFF OF SPILLAGE OF DAMAGING MATERIALS INTO THE AREA BELOW ANY TREE CANOPY.
- STORE MATERIALS, STOCKPILE SOIL, OR PARK OR DRIVE VEHICLES WITHIN THE TREE CANOPY.
- CUT, BRUSH SKIN, OR BRUISE ROOTS, BRANCHES OR TRUNKS WITHOUT FIRST OBTAINING AUTHORIZATION FROM THE CONSULTING ARBORIST.
- ALLOW FIRES UNDER AND ADJACENT TO TREES.
- DISCHARGE EXHAUST INTO FOULAGE.
- SECURE CABLE, CHAIN, OR ROPE TO TREES OR SHRUBS.
- TRENCH, DIG, OR OTHERWISE EXCAVATE THE DRIPLINE OR TRUNK OF THE TREE(S) WITHOUT FIRST OBTAINING AUTHORIZATION FROM THE CONSULTING ARBORIST.
- APPLY SOIL STERILANTS UNDER PAVEMENT NEAR EXISTING TREES.

STANDARD CONSTRUCTION DETAIL #3-16 PUMPED WATER FILTER BAG

NOT TO SCALE



STANDARD CONSTRUCTION DETAIL #3-16 PUMPED WATER FILTER BAG

NOT TO SCALE

PROJECT:	RESIDENTIAL ADDITION	
PROJECT ADDRESS:	608 WEST WAYNE AVENUE, WAYNE, PA 19087	
MUNICIPALITY:	RADDOR TOWNSHIP	COUNTY: DELAWARE COUNTY
PLAN SET:	STORMWATER MANAGEMENT PERMIT PLANS	
SHEET NAME:	EROSION AND SEDIMENTATION CONTROL NOTES & DETAILS	
DATE:	2 07/01/21	LAYOUT
REV:	1 05/21/21	TWP ENG
REV:	DATE	COMMENTS
PREPARED FOR:	OWNER / APPLICANT JAY ANNA HUMPHREY 608 WEST WAYNE AVENUE WAYNE, PA 19087	DATE: APRIL 14, 2021 SCALE: NO SCALE
PREPARED BY:	YOHN ENGINEERING, LLC 555 SECOND AVENUE, SUITE B-205 COLLEGEVILLE, PA 19426 610-489-4580 WWW.YOHNEENGINEERING.COM	DRAWN BY: CCY
PROJECT NO.:	2021-001	PROJECT NUMBER: 20-146
REGISTERED PROFESSIONAL ENGINEER	CHRISTOPHER C. YOHN	ENGINEER PE073703
SHEET:		5 OF 5

POST CONSTRUCTION STORMWATER MANAGEMENT CALCULATIONS

608 WEST WAYNE AVENUE

RADNOR TOWNSHIP, DELAWARE COUNTY

APRIL 13, 2021
REVISED MAY 21, 2021
REVISED JULY 1, 2021

FILE # 20-146

YOHN ENGINEERING, LLC
555 Second Avenue, Suite B-205
Collegeville, PA 19426-3674
610-489-4580
www.yohnengineering.com



Stormwater Management Narrative

A driveway addition is proposed at 608 West Wayne Avenue in Wayne, PA 19087. The property is a 2.1 acre lot within Radnor Township, Delaware County. The property is developed with a residence and associated driveway, walls, walks, etc. The Applicant proposes to remove a portion of the existing residence and construct a driveway addition. In accordance with the Stormwater Management Permit requirements and the Stormwater Management Ordinance of the Township code, the following are stormwater management calculations for the increased impervious coverage associated with the new driveway.

The site is located in the Darby-Cobbs Watershed District A. As a result, several stormwater requirements shall be met:

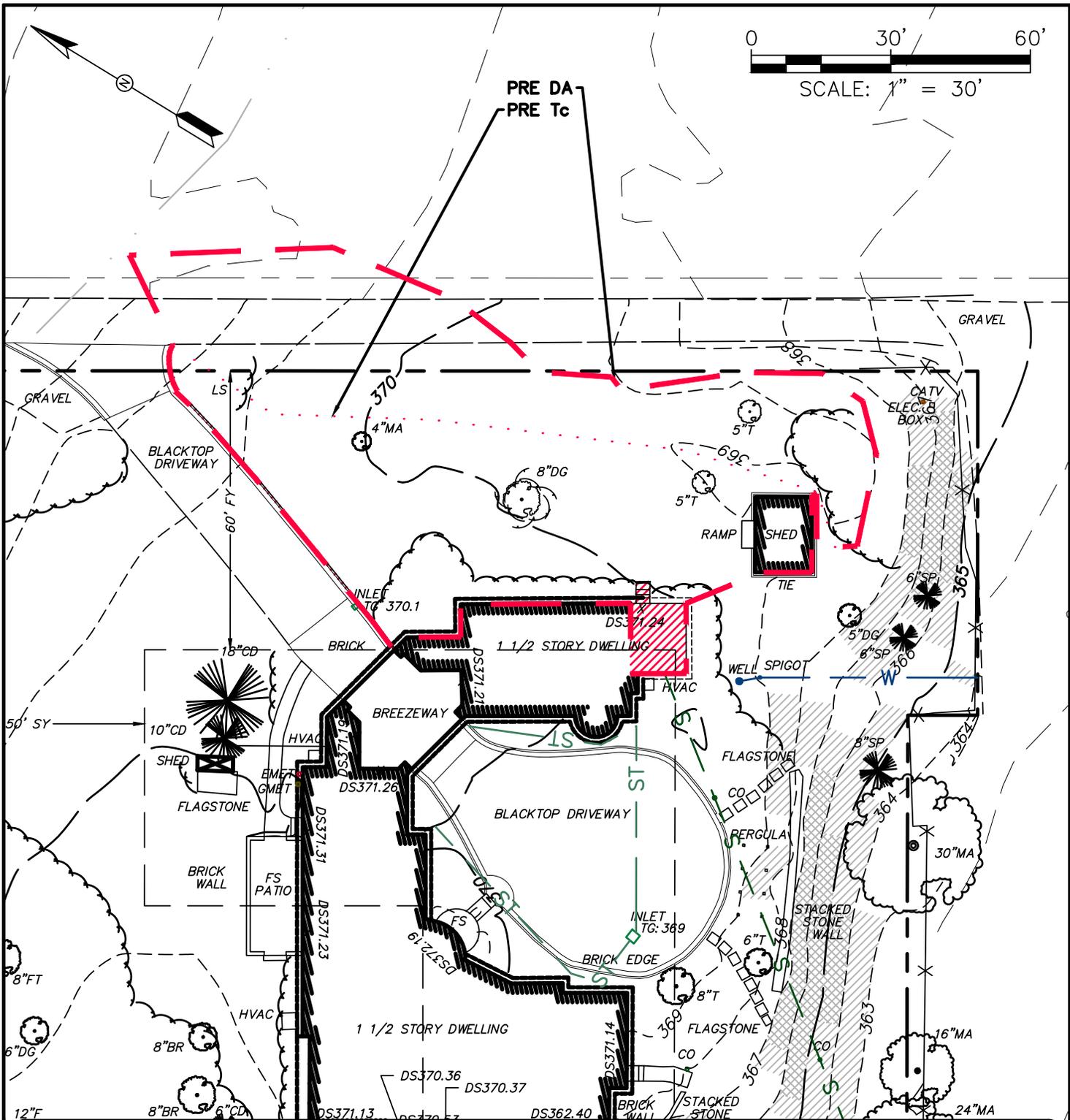
- Provide Groundwater Recharge Volume in accordance with §245-22.
 - The increase in the runoff volume for the 2-year storm event shall be infiltrated into the ground as calculated using the SCS Method where feasible.
 - The net 2-year volume plus an additional 9% of volume has been provided in a stonebed below the rain garden according to the DEP Managed Release Concept.
 - 1" over all proposed impervious shall be infiltrated into the ground.
 - 2" over all proposed and existing impervious within the drainage area has been provided in a stonebed below the rain garden according to the DEP Managed Release Concept.
- Provide Water Quality Volume in accordance with Section §245-23.
 - The required water quality volume plus an additional 47% of volume is provided in a stonebed below the rain garden according to the DEP Managed Release Concept.
- Provide Peak Rate Control in accordance with Section §245-25.
 - The 2-year post development runoff rate shall be reduced to the 1-year predevelopment rate utilizing the Rational Method.
 - The 2-year post-development runoff rate is reduced to 97% of the 1-year pre-development rate via the above ground volume of the rain garden.
 - The 5-year through 100-year post development runoff rates shall be reduced to their respective predevelopment rates utilizing the Rational Method.
 - The 5-year post-development runoff rate is reduced to 88% of the 5-year pre-development rate via the above ground volume of the rain garden.
 - The 10-year post-development runoff rate is reduced to 90% of the 10-year pre-development rate via the above ground volume of the rain garden.
 - The 25-year post-development runoff rate is reduced to 92% of the 25-year pre-development rate via the above ground volume of the rain garden.
 - The 50-year post-development runoff rate is reduced to 93% of the 50-year pre-development rate via the above ground volume of the rain garden.
 - The 100-year post-development runoff rate is reduced to 95% of the 100-year pre-development rate via the above ground volume of the rain garden.

The required rate controls have been provided for the site through the above ground volume of a rain garden and the required volume controls have been provided for the site through a stonebed located

below the rain garden in the front yard. Overflow from the system is to a level spreader. Due to the provided rate and volume controls and the location of the discharge, we do not believe the proposed development will adversely affect adjacent properties or existing Township stormwater facilities.

Double Ring Infiltrometer Testing was performed in several locations on the site, near and downslope of the proposed improvements in order to verify the characteristics of the existing soils and limiting zones. Tests indicated a limiting zone at 3 & 4 feet deep due to mottling and zero infiltration, which was unfortunately, likely, due to the proximity to Little Darby Creek, which traverses through the site as well as the associated floodplain. Due to the shallow limiting zone, a rain garden is proposed and although infiltrating the net 2-year volume was unachievable, the full REV volume and net 2 year volume was provided in a stonebed below the rain garden in accordance with the Pennsylvania Department of Environmental Protection's whitepaper titled "Managed Release Concept", version 1.1, released May 15, 2019 in order to provide the water quality treatment.

The following calculations demonstrate compliance with the requirements noted above.



SHEET NAME: **PRE DEVELOPMENT DRAINAGE AREA MAP**

PROJECT ADDRESS: **608 WEST WAYNE AVENUE, WAYNE, PA 19087**

MUNICIPALITY: **RADNOR TOWNSHIP**

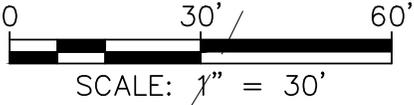
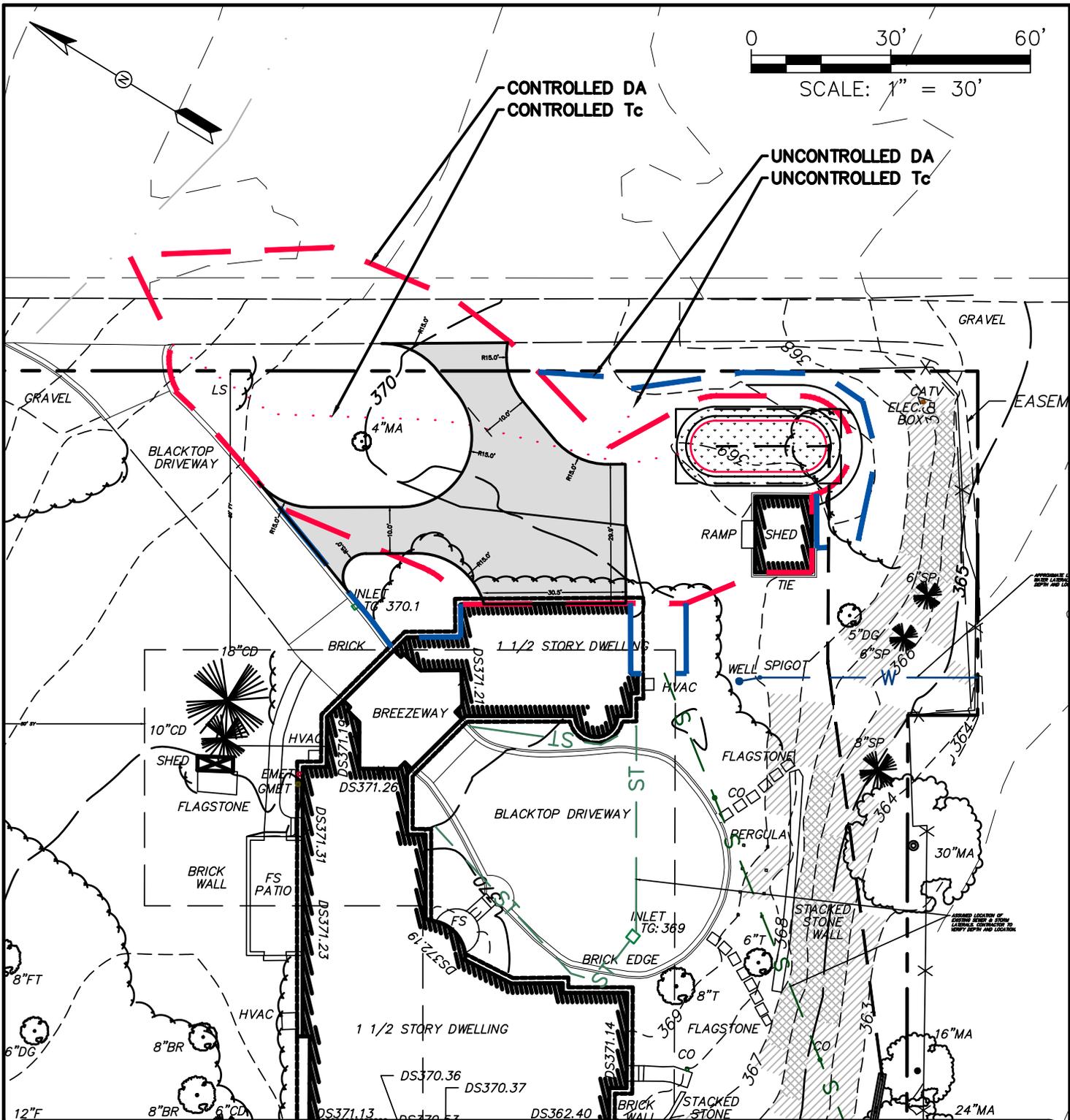
COUNTY: **DELAWARE COUNTY**

PREPARED BY: **YOHN ENGINEERING, LLC
555 SECOND AVENUE, SUITE B-205
COLLEGEVILLE, PA 19426
610-489-4580
WWW.YOHNEENGINEERING.COM**

PREPARED FOR:

DATE:
PROJECT NUMBER:

**JAY & ANNA HUMPHREY
608 W. WAYNE AVE
WAYNE, PA 19087
JULY 1, 2021
20-146**



SHEET NAME: **POST DEVELOPMENT DRAINAGE AREA MAP**

PROJECT ADDRESS: **608 WEST WAYNE AVENUE, WAYNE, PA 19087**

MUNICIPALITY: **RADNOR TOWNSHIP**

COUNTY: **DELAWARE COUNTY**

PREPARED BY: **YOHN ENGINEERING, LLC
555 SECOND AVENUE, SUITE B-205
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PREPARED FOR:

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**JAY & ANNA HUMPHREY
608 W. WAYNE AVE
WAYNE, PA 19087
JULY 1, 2021
20-146**

YOHN ENGINEERING, LLC

555 Second Avenue, Suite B-205

Collegeville, PA 19426-3674

610-489-4580

www.yohnengineering.com

Date:	July 1, 2021
Project:	608 West Wayne Avenue
Municipality:	Radnor Township

File No.:	20-146
County:	Delaware

RUNOFF RATE CONTROL SUMMARY

Watershed:	Darby and Cobbs Creek
Watershed District:	A
Runoff Calculation Method:	Rational Method

PRE-DEVELOPMENT RUNOFF RATES

	1-Year	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Entire Watershed (CFS):	0.426	0.490	0.564	0.639	0.713	0.799	0.894

PEAK ALLOWABLE RUNOFF RATES

	1-Year	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Event or Percent Reduction:	1-Year	1-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Entire Watershed (CFS):	0.426	0.426	0.564	0.639	0.713	0.799	0.894

POST-DEVELOPMENT RUNOFF RATES

	1-Year	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Controlled Area Routed:	0.302	0.360	0.429	0.496	0.565	0.645	0.738
Uncontrolled Areas:	0.066	0.076	0.087	0.099	0.110	0.124	0.138
Entire Watershed (CFS):	0.349	0.415	0.494	0.573	0.653	0.744	0.849

NET DECREASE (CFS):	0.077	0.075	0.070	0.066	0.060	0.055	0.045
PERCENT REDUCTION:	18%	15%	12%	10%	8%	7%	5%

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Date:	July 1, 2021
Project:	608 West Wayne Avenue
Municipality:	Radnor Township

File No.:	20-146
County:	Delaware

DRAINAGE AREA AND WEIGHTED C CALCULATIONS

Development Condition:	Pre	Through Subarea:	Entire Watershed		
Cover		Type	C	Area (SF)	Area (AC)
Meadow - Good Condition		C	0.44	0	0.000
Lawn - Good Condition		C	0.51	7044	0.162
Impervious		-	0.99	1081	0.025
TOTAL:			0.57	8125	0.187
					100.0%

Development Condition:	Post	Through Subarea:	Controlled #1		
Cover		Type	C	Area (SF)	Area (AC)
Lawn - Good Condition		C	0.51	4156	0.095
Impervious		-	0.99	2682	0.062
Future Impervious		-	0.99	0	0.000
TOTAL:			0.70	6838	0.157
					100.0%

Development Condition:	Post	Through Subarea:	Uncontrolled		
Cover		Type	C	Area (SF)	Area (AC)
Lawn - Good Condition		C	0.51	1186	0.027
Impervious		-	0.99	101	0.002
Future Impervious		-	0.99	0	0.000
TOTAL:			0.55	1287	0.030
					100.0%

Development Condition:	Post	Through Subarea:	Entire Watershed		
Cover		Type	C	Area (SF)	Area (AC)
Lawn - Good Condition		C	0.51	5342	0.123
Impervious		-	0.99	2783	0.064
Future Impervious		-	0.99	0	0.000
TOTAL:			0.67	8125	0.187
					100.0%

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 Municipality: Radnor Township

File No.: 20-146
 County: Delaware

TIME OF CONCENTRATION / TRAVEL TIME CALCULATIONS

Development Condition:	PRE						
Through Subarea:	ENTIRE WATERSHED						
Surface Description:	Pasture						
Flow Length (FT):	157						157
Watercourse Slope (%):	2%						
Average Velocity (FPS):	0.8						
Travel Time (MIN):	3.3	0.0	0.0	0.0	0.0	0.0	3.3

Development Condition:	POST						
Through Subarea:	CONTROLLED						
Surface Description:	Pasture	Pavement	Pasture				
Flow Length (FT):	67	24	23				114
Watercourse Slope (%):	2%	2%	2%				
Average Velocity (FPS):	0.8	5.0	0.8				
Travel Time (MIN):	1.4	0.1	0.5	0.0	0.0	0.0	2.0

Development Condition:	POST						
Through Subarea:	UNCONTROLLED						
Surface Description:	Pasture						
Flow Length (FT):	15						15
Watercourse Slope (%):	2%						
Average Velocity (FPS):	0.8						
Travel Time (MIN):	0.3	0.0	0.0	0.0	0.0	0.0	0.3

TABLE 10.2.2 RECOMMENDED AVERAGE VELOCITIES OF OVERLAND FLOW FOR DETERMINING TIME OF CONCENTRATION (FROM PENNDOT DESIGN MANUAL PART 2 - PUBLICATION 13M - AUGUST 2009 EDITION)							
DESCRIPTION	SLOPE (%)						
	0-3	4-7	8-10	11-15	16-20	21-25	26-30
	VELOCITIES (ft/s)						
Woodland	0.5	1.0	1.5	1.7	2.0	2.7	3.5
Pasture	0.8	1.5	2.2	2.6	3.0	4.1	4.5
Pavement	5.0	12.0	15.5	18.0	-	-	-

*To be conservative, use minimum Tc = 5 minutes

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County:	Delaware

RUNOFF VOLUME CALCULATIONS

Rainfall: Year Inches Through Subarea:

PRE-DEVELOPMENT DRAINAGE AREA

Cover Type	Soil Type	Area (SF)	Area (AC)	CN	S	Q Runoff (IN)	Runoff Volume (CF)
Meadow - Good Condition	C	7238	0.166	71	4.085	0.976	589
Lawn - Good Condition	C	0	0.000	74	3.514	1.144	0
Impervious to Remain	-	887	0.020	98	0.204	3.127	231
TOTAL:		8125	0.187				820

POST-DEVELOPMENT DRAINAGE AREA

Cover Type	Soil Type	Area (SF)	Area (AC)	CN	S	Q Runoff (IN)	Runoff Volume (CF)
Lawn - Good Condition	C	5342	0.123	74	3.514	1.144	509
Impervious	-	2783	0.064	98	0.204	3.127	725
Future Impervious	-	0	0.000	98	0.204	3.127	0
TOTAL:		8125	0.187				1235

NET INCREASE:

VOLUME PROVIDED:

INCREASE OVER REQUIRED:

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Municipality:	Radnor Township

File No.:	20-146
County:	Delaware

WATER QUALITY VOLUME CALCULATIONS

Water Quality Formula: $P * R_v * A / 12$

P is design Rainfall amount:	1	(IN)
A is Drainage Area:	8125	(SF)
R _v is 0.05 + 0.009 * I:	0.187	(AC)
I is percent Impervious:	0.358	
	34.3	(%)

WQ: **243** (CF)

Volume Provided:	454	(CF)
Increase Over Required:	47%	(CF)

REV VOLUME CALCULATIONS

Rev Formula: $I * \text{Impervious Area} / 12$

I is design Infiltration amount:	1.0	(IN)
Impervious Increase:	2783	(SF)

Rev: **232** (CF)

Volume Provided:	454	(CF)
Increase Over Required:	49%	(CF)
Infiltration Amount Provided:	2.0	(IN)



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DELAWARE VALLEY

SEPTIC • SEWER • STORM

PA # 108248

PERCOLATION REPORT

Client: Jay and Anna Humphrey
 Location: 608 West Wayne Avenue (TP#1)
 Municipality: Radnor County: Delaware
 Date: 2-27-21 Degrees: 40 Rain: No
 On-Site Septic System: _____ Storm Water Testing: X
 Falling Head Testing: _____ Double Ring Testing: X

Hole #	Depth	Water	Time	PS1	PS2	1	2	3	4	5	6	7	8
#1	5		30			0	0	0					
#2	6		30			0	0	0					
#3	7		30			0	0	0					
#4													
#5													
#6													

Final Reading	
#1	0
#2	0
#3	0
#4	
#5	
#6	

Inches / Hour	
#1	0
#2	0
#3	0
#4	
#5	
#6	

NOTES
Limiting Zone Ground Water at 9'.
0-6 Top Soil
6-42 Mottled Silty Clay Loam
42-72 Mottled Silty Clay
72-108 Clay Loam
108 Ground Water

RUN RATE=



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DELAWARE VALLEY

SEPTIC • SEWER • STORM

PA # 108248

PERCOLATION REPORT

Client: Jay and Anna Humphrey
 Location: 608 West Wayne Avenue (TP#2)
 Municipality: Radnor County: Delaware
 Date: 2-27-21 Degrees: 40 Rain: No
 On-Site Septic System: Storm Water Testing: X
 Falling Head Testing: Double Ring Testing: X

Hole #	Depth	Water	Time	PS1	PS2	1	2	3	4	5	6	7	8
#1	2		30			0	0	0					
#2	3		30			0	0	0					
#3	4		30			0	0	0					
#4													
#5													
#6													

Final Reading	
#1	0
#2	0
#3	0
#4	
#5	
#6	

Inches / Hour	
#1	0
#2	0
#3	0
#4	
#5	
#6	

NOTES
Limiting Zone Ground Water at 9'.
0-6 Top Soil
6-14 Mottled Silty Clay Loam
14-48 Mottled Silty Clay

RUN RATE=	0
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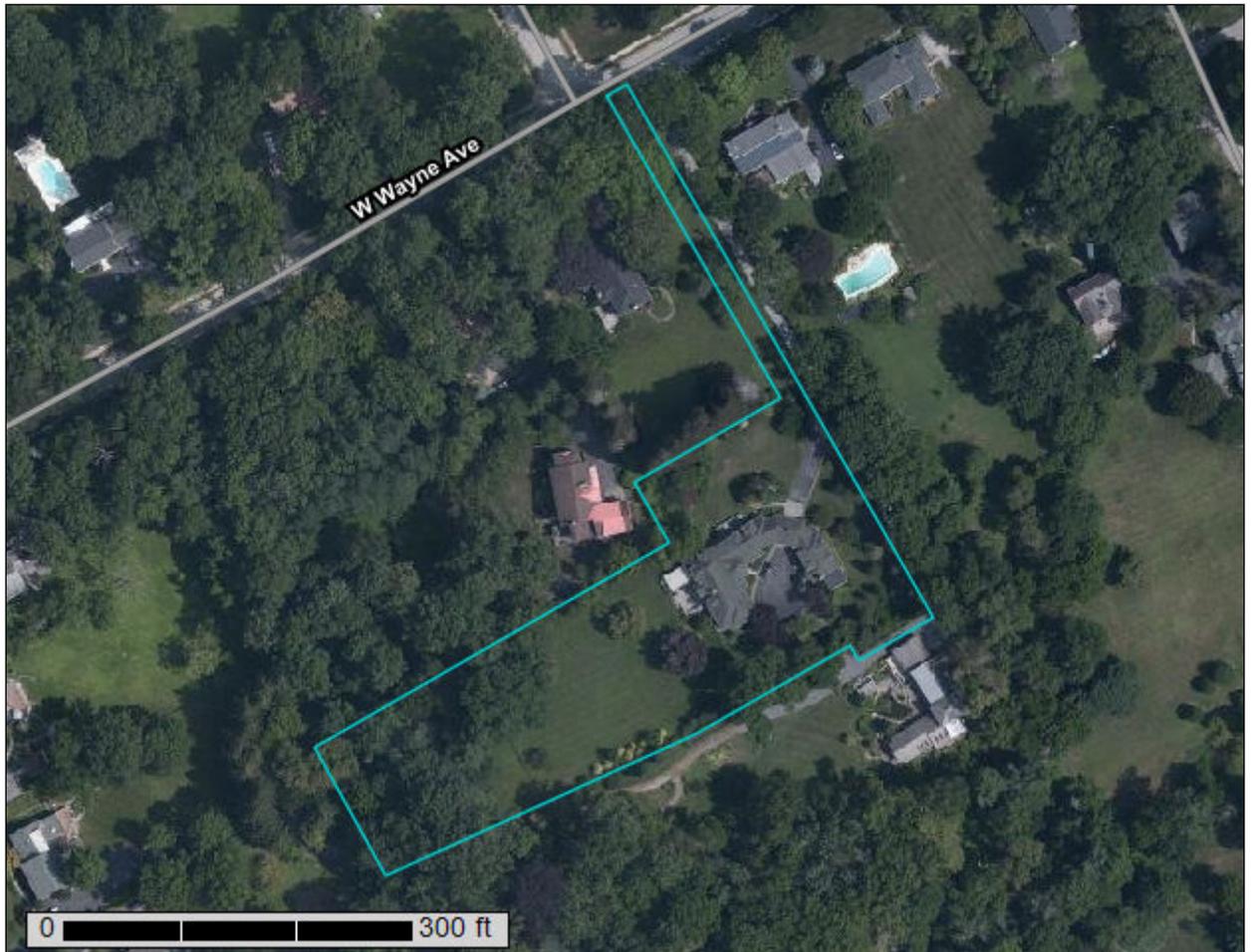
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Delaware County, Pennsylvania**



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

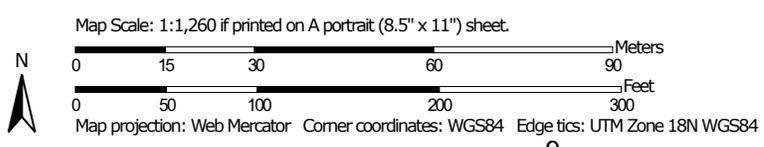
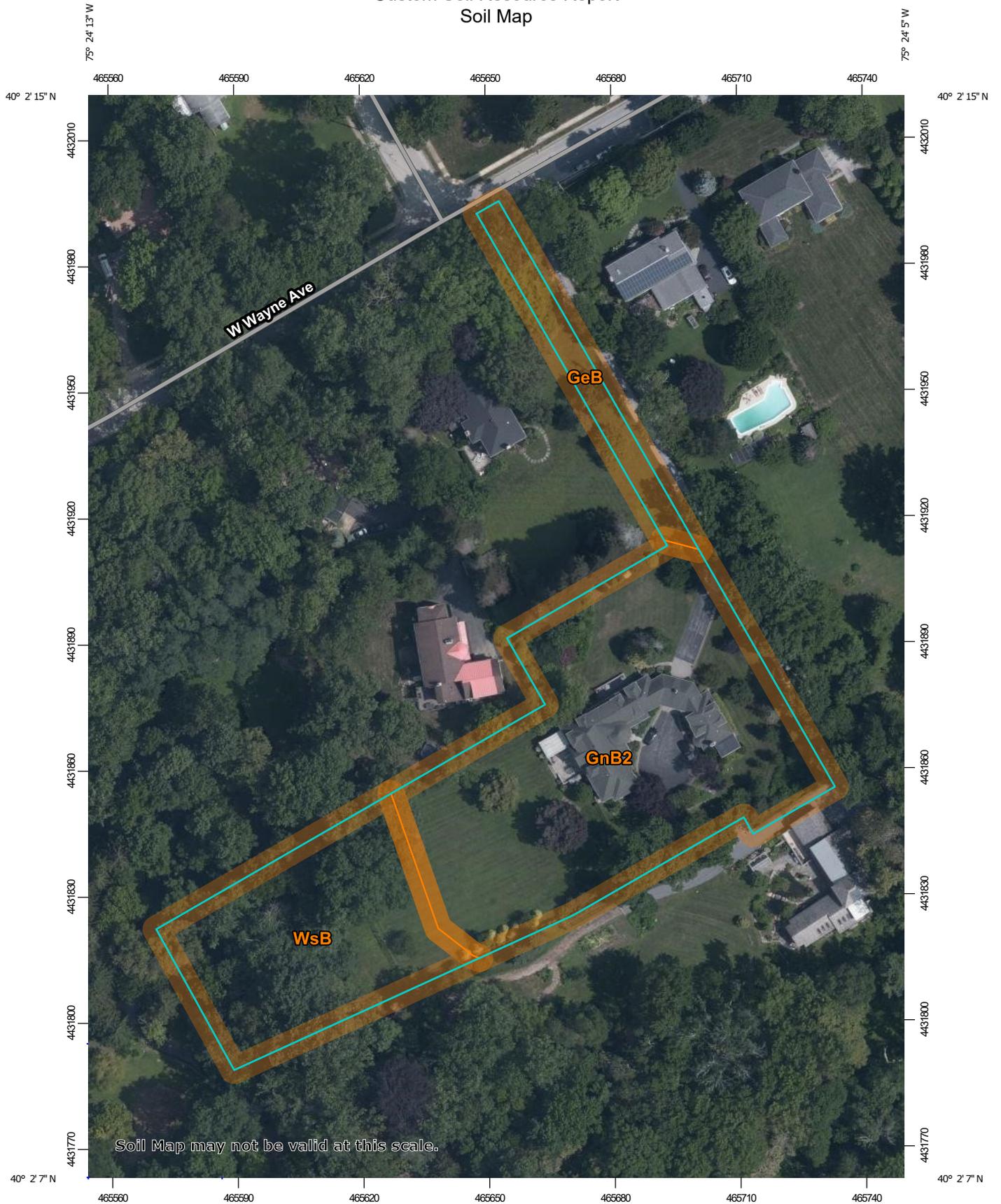
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



MAP LEGEND

- Area of Interest (AOI)**
 - Area of Interest (AOI)
- Soils**
 - Soil Map Unit Polygons
 - Soil Map Unit Lines
 - Soil Map Unit Points
- Special Point Features**
 - Blowout
 - Borrow Pit
 - Clay Spot
 - Closed Depression
 - Gravel Pit
 - Gravelly Spot
 - Landfill
 - Lava Flow
 - Marsh or swamp
 - Mine or Quarry
 - Miscellaneous Water
 - Perennial Water
 - Rock Outcrop
 - Saline Spot
 - Sandy Spot
 - Severely Eroded Spot
 - Sinkhole
 - Slide or Slip
 - Sodic Spot
- Water Features**
 - Streams and Canals
- Transportation**
 - Rails
 - Interstate Highways
 - US Routes
 - Major Roads
 - Local Roads
- Background**
 - Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Delaware County, Pennsylvania
 Survey Area Data: Version 18, Jun 5, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 26, 2019—Jul 10, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GeB	Glenelg channery loam, 3 to 8 percent slopes	0.1	6.6%
GnB2	Glenville silt loam, 3 to 8 percent slopes, moderately eroded	1.4	63.8%
WsB	Worsham very stony silt loam, 0 to 8 percent slopes	0.6	29.7%
Totals for Area of Interest		2.1	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Delaware County, Pennsylvania

GeB—Glenelg channery loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tt7v
Elevation: 20 to 1,260 feet
Mean annual precipitation: 40 to 55 inches
Mean annual air temperature: 48 to 57 degrees F
Frost-free period: 150 to 192 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Glenelg and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Glenelg

Setting

Landform: Hillslopes, interfluves
Landform position (two-dimensional): Shoulder, backslope, summit
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Linear
Across-slope shape: Linear, concave, convex
Parent material: Residuum weathered from mica schist

Typical profile

Ap - 0 to 10 inches: channery loam
Bt1 - 10 to 25 inches: loam
Bt2 - 25 to 30 inches: loam
BCt - 30 to 54 inches: channery loam
C - 54 to 76 inches: very channery sandy loam
Cr - 76 to 94 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 56 to 98 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 10.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Gladstone

Percent of map unit: 10 percent

Custom Soil Resource Report

Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Brinklow

Percent of map unit: 5 percent
Landform: Interfluves, hillslopes
Landform position (two-dimensional): Summit, backslope, shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Glenville

Percent of map unit: 5 percent
Landform: Swales, drainageways
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Blocktown

Percent of map unit: 5 percent
Landform: Hillslopes, interfluves
Landform position (two-dimensional): Shoulder, backslope, summit
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Linear
Across-slope shape: Linear, concave, convex
Hydric soil rating: No

GnB2—Glenville silt loam, 3 to 8 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 121fq
Elevation: 200 to 2,000 feet
Mean annual precipitation: 35 to 50 inches
Mean annual air temperature: 45 to 57 degrees F
Frost-free period: 120 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Glenville and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Glenville

Setting

Landform: Hillslopes

Landform position (two-dimensional): Foothlope, backslope

Landform position (three-dimensional): Side slope, head slope

Down-slope shape: Linear, concave

Across-slope shape: Concave, linear

Parent material: Loamy colluvium and/or residuum weathered from mica schist

Typical profile

H1 - 0 to 10 inches: silt loam

H2 - 10 to 16 inches: silt loam

H3 - 16 to 50 inches: silt loam

H4 - 50 to 70 inches: channery loam

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: 60 to 99 inches to

Drainage class: Somewhat poorly drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)

Depth to water table: About 6 to 36 inches

Frequency of flooding: None

Frequency of ponding: None

Available water capacity: Moderate (about 6.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C/D

Hydric soil rating: No

Minor Components

Chester

Percent of map unit: 8 percent

Hydric soil rating: No

Worsham

Percent of map unit: 7 percent

Landform: Depressions

Hydric soil rating: Yes

WsB—Worsham very stony silt loam, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 121h8

Elevation: 200 to 2,000 feet

Mean annual precipitation: 35 to 50 inches

Custom Soil Resource Report

Mean annual air temperature: 45 to 57 degrees F
Frost-free period: 140 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Worsham and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Worsham

Setting

Landform: Drainageways
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Local alluvium derived from granite and gneiss

Typical profile

H1 - 0 to 9 inches: channery silty clay loam
H2 - 9 to 50 inches: clay loam
H3 - 50 to 60 inches: clay loam

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 10.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

Minor Components

Glenville

Percent of map unit: 6 percent
Hydric soil rating: No

Watchung

Percent of map unit: 6 percent
Landform: Depressions
Hydric soil rating: No

Chewacla

Percent of map unit: 3 percent
Landform: Flood plains
Landform position (two-dimensional): Toeslope, footslope

Custom Soil Resource Report

Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

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Custom Soil Resource Report

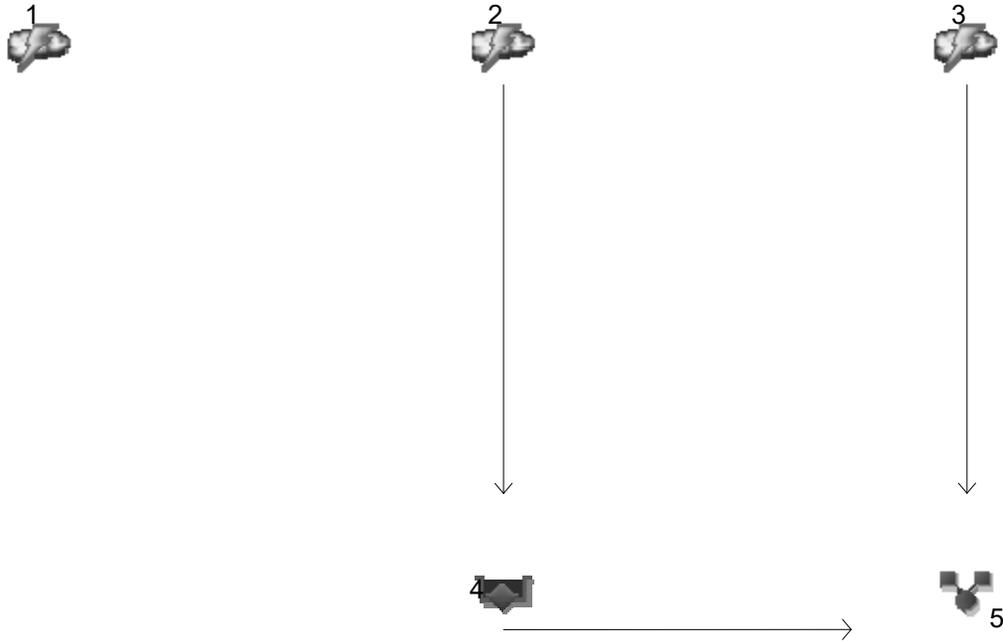
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United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Watershed Model Schematic

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



Legend

Hyd. Origin	Description
1 Rational	PRE - ENTIRE WATERSHED
2 Rational	CONTROLLED
3 Rational	UNCONTROLLED
4 Reservoir	PCSM ROUTED
5 Combine	POST - ENTIRE WATERSHED

Hydrograph Return Period Recap

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

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	Rational	-----	0.426	0.490	-----	0.564	0.639	0.713	0.799	0.894	PRE - ENTIRE WATERSHED
2	Rational	-----	0.439	0.505	-----	0.581	0.659	0.735	0.823	0.922	CONTROLLED
3	Rational	-----	0.066	0.076	-----	0.087	0.099	0.110	0.124	0.138	UNCONTROLLED
4	Reservoir	2	0.302	0.360	-----	0.429	0.496	0.565	0.645	0.738	PCSM ROUTED
5	Combine	3, 4	0.349	0.415	-----	0.494	0.573	0.653	0.744	0.849	POST - ENTIRE WATERSHED

Hydrograph Summary Report

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

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	0.426	1	15	383	-----	-----	-----	PRE - ENTIRE WATERSHED	
2	Rational	0.439	1	15	395	-----	-----	-----	CONTROLLED	
3	Rational	0.066	1	15	59	-----	-----	-----	UNCONTROLLED	
4	Reservoir	0.302	1	20	295	2	368.08	200	PCSM ROUTED	
5	Combine	0.349	1	19	354	3, 4	-----	-----	POST - ENTIRE WATERSHED	
20146.gpw					Return Period: 1 Year			Friday, 07 / 2 / 2021		33

Hydrograph Report

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

Friday, 07 / 2 / 2021

Hyd. No. 1

PRE - ENTIRE WATERSHED

Hydrograph type	= Rational	Peak discharge	= 0.426 cfs
Storm frequency	= 1 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 383 cuft
Drainage area	= 0.187 ac	Runoff coeff.	= 0.57
Intensity	= 3.994 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

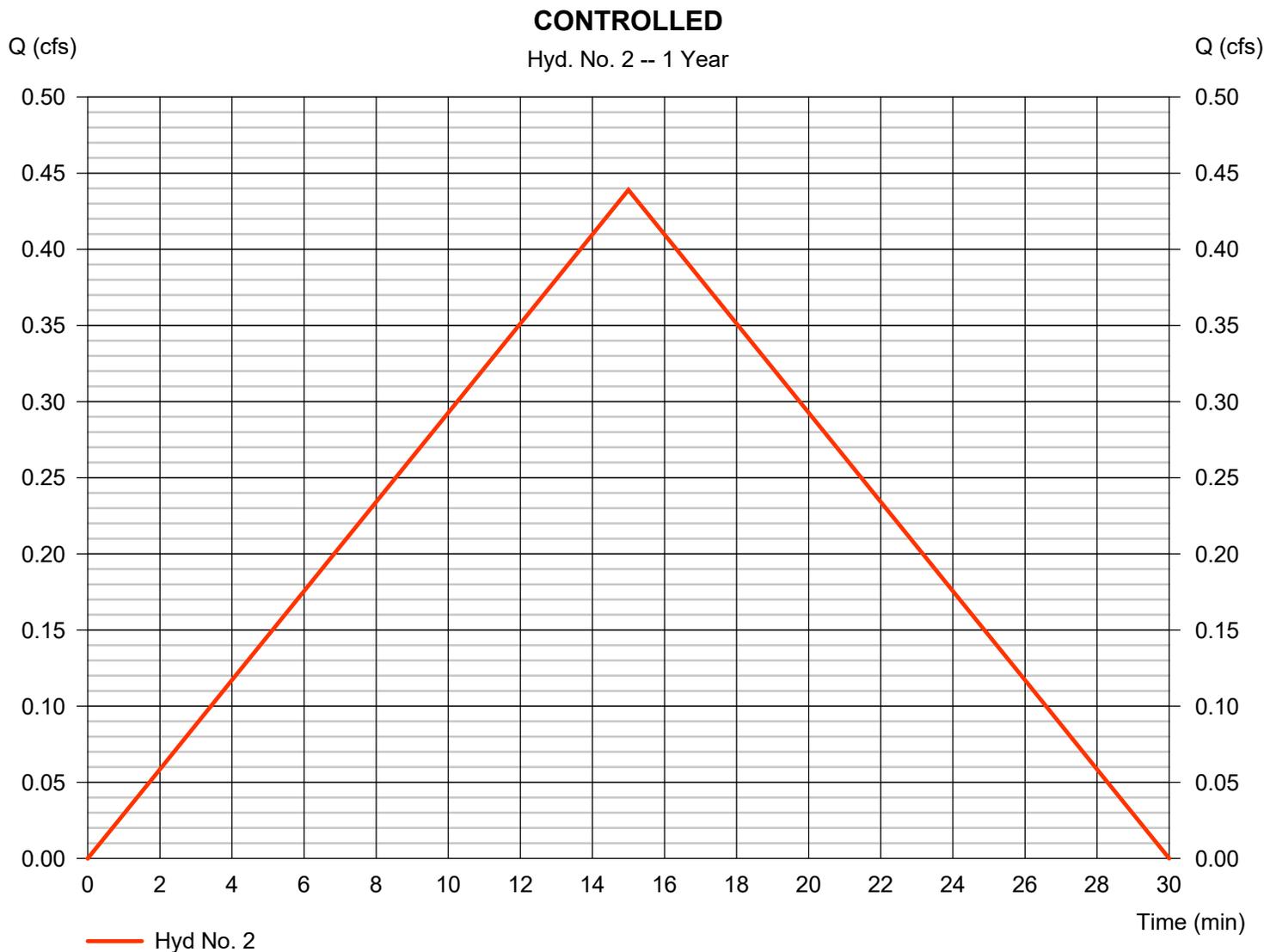
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Friday, 07 / 2 / 2021

Hyd. No. 2

CONTROLLED

Hydrograph type	= Rational	Peak discharge	= 0.439 cfs
Storm frequency	= 1 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 395 cuft
Drainage area	= 0.157 ac	Runoff coeff.	= 0.7
Intensity	= 3.994 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

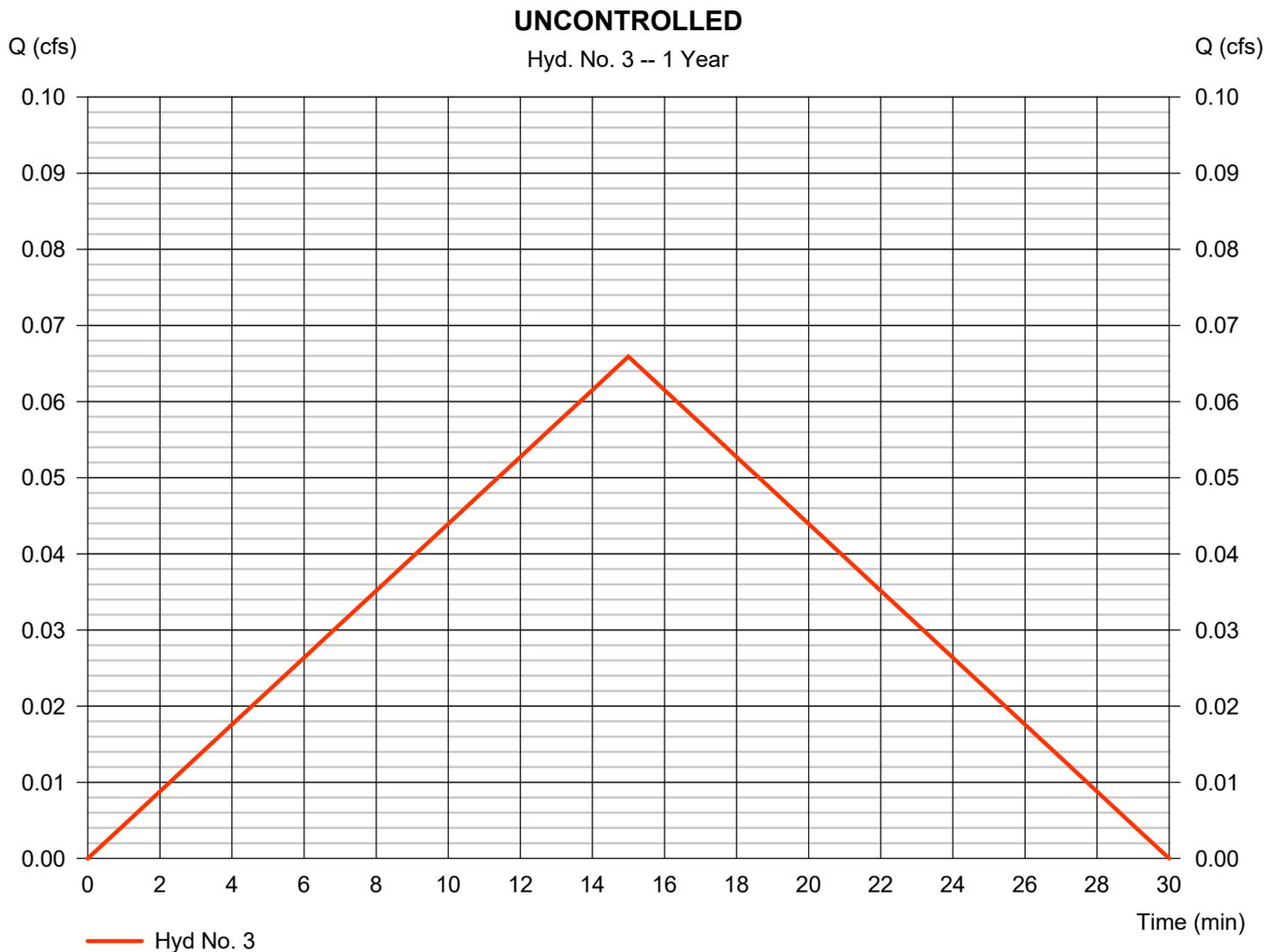
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 07 / 2 / 2021

Hyd. No. 3

UNCONTROLLED

Hydrograph type	= Rational	Peak discharge	= 0.066 cfs
Storm frequency	= 1 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 59 cuft
Drainage area	= 0.030 ac	Runoff coeff.	= 0.55
Intensity	= 3.994 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

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

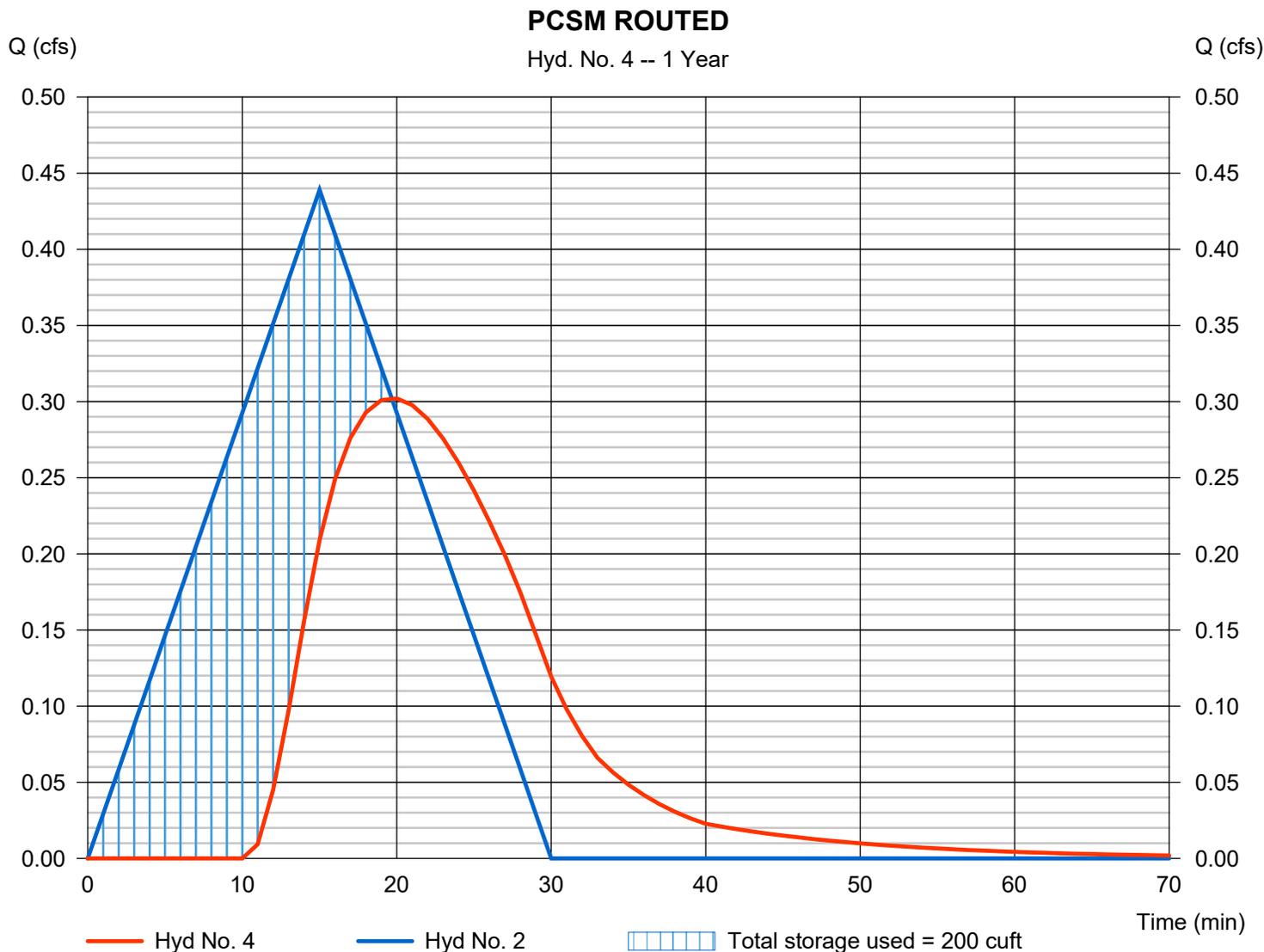
Friday, 07 / 2 / 2021

Hyd. No. 4

PCSM ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 0.302 cfs
Storm frequency	= 1 yrs	Time to peak	= 20 min
Time interval	= 1 min	Hyd. volume	= 295 cuft
Inflow hyd. No.	= 2 - CONTROLLED	Max. Elevation	= 368.08 ft
Reservoir name	= PCSM	Max. Storage	= 200 cuft

Storage Indication method used.



Pond No. 1 - PCSM

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Beginning Elevation = 367.50 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	367.50	294	0	0
0.50	368.00	368	166	166
1.50	369.00	535	452	617
1.80	369.30	596	170	787

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 8.00	6.00	0.00	0.00
Span (in)	= 8.00	7.25	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 365.50	367.80	0.00	0.00
Length (ft)	= 136.00	0.00	0.00	0.00
Slope (%)	= 3.10	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	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 3.14	42.00	0.00	0.00
Crest El. (ft)	= 368.30	369.30	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= 1	Ciplti	---	---
Multi-Stage	= Yes	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	367.50	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
0.05	17	367.55	2.17 ic	0.00	---	---	0.00	0.00	---	---	---	---	0.000
0.10	33	367.60	2.17 ic	0.00	---	---	0.00	0.00	---	---	---	---	0.000
0.15	50	367.65	2.17 ic	0.00	---	---	0.00	0.00	---	---	---	---	0.000
0.20	66	367.70	2.17 ic	0.00	---	---	0.00	0.00	---	---	---	---	0.000
0.25	83	367.75	2.17 ic	0.00	---	---	0.00	0.00	---	---	---	---	0.000
0.30	99	367.80	2.17 ic	0.00	---	---	0.00	0.00	---	---	---	---	0.000
0.35	116	367.85	2.17 ic	0.02 ic	---	---	0.00	0.00	---	---	---	---	0.023
0.40	132	367.90	2.17 ic	0.06 ic	---	---	0.00	0.00	---	---	---	---	0.065
0.45	149	367.95	2.17 ic	0.12 ic	---	---	0.00	0.00	---	---	---	---	0.119
0.50	166	368.00	2.17 ic	0.18 ic	---	---	0.00	0.00	---	---	---	---	0.184
0.60	211	368.10	2.17 ic	0.34 ic	---	---	0.00	0.00	---	---	---	---	0.338
0.70	256	368.20	2.17 ic	0.52 ic	---	---	0.00	0.00	---	---	---	---	0.520
0.80	301	368.30	2.17 ic	0.73 ic	---	---	0.00	0.00	---	---	---	---	0.727
0.90	346	368.40	2.17 ic	0.86 ic	---	---	0.33	0.00	---	---	---	---	1.191
1.00	391	368.50	2.17 ic	0.98 ic	---	---	0.94	0.00	---	---	---	---	1.911
1.10	436	368.60	2.40 oc	0.73 ic	---	---	1.67 s	0.00	---	---	---	---	2.399
1.20	482	368.70	2.44 oc	0.52 ic	---	---	1.92 s	0.00	---	---	---	---	2.440
1.30	527	368.80	2.47 oc	0.40 ic	---	---	2.06 s	0.00	---	---	---	---	2.467
1.40	572	368.90	2.49 oc	0.33 ic	---	---	2.16 s	0.00	---	---	---	---	2.490
1.50	617	369.00	2.51 oc	0.27 ic	---	---	2.24 s	0.00	---	---	---	---	2.510
1.53	634	369.03	2.52 oc	0.26 ic	---	---	2.26 s	0.00	---	---	---	---	2.517
1.56	651	369.06	2.52 oc	0.24 ic	---	---	2.27 s	0.00	---	---	---	---	2.520
1.59	668	369.09	2.53 oc	0.23 ic	---	---	2.29 s	0.00	---	---	---	---	2.528
1.62	685	369.12	2.53 oc	0.22 ic	---	---	2.31 s	0.00	---	---	---	---	2.535
1.65	702	369.15	2.54 oc	0.21 ic	---	---	2.33 s	0.00	---	---	---	---	2.539
1.68	719	369.18	2.55 oc	0.20 ic	---	---	2.34 s	0.00	---	---	---	---	2.542
1.71	736	369.21	2.55 oc	0.20 ic	---	---	2.35 s	0.00	---	---	---	---	2.551
1.74	753	369.24	2.56 oc	0.19 ic	---	---	2.37 s	0.00	---	---	---	---	2.556
1.77	770	369.27	2.56 oc	0.18 ic	---	---	2.38 s	0.00	---	---	---	---	2.558
1.80	787	369.30	2.57 oc	0.18 ic	---	---	2.39 s	0.00	---	---	---	---	2.566

Hydrograph Report

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

Friday, 07 / 2 / 2021

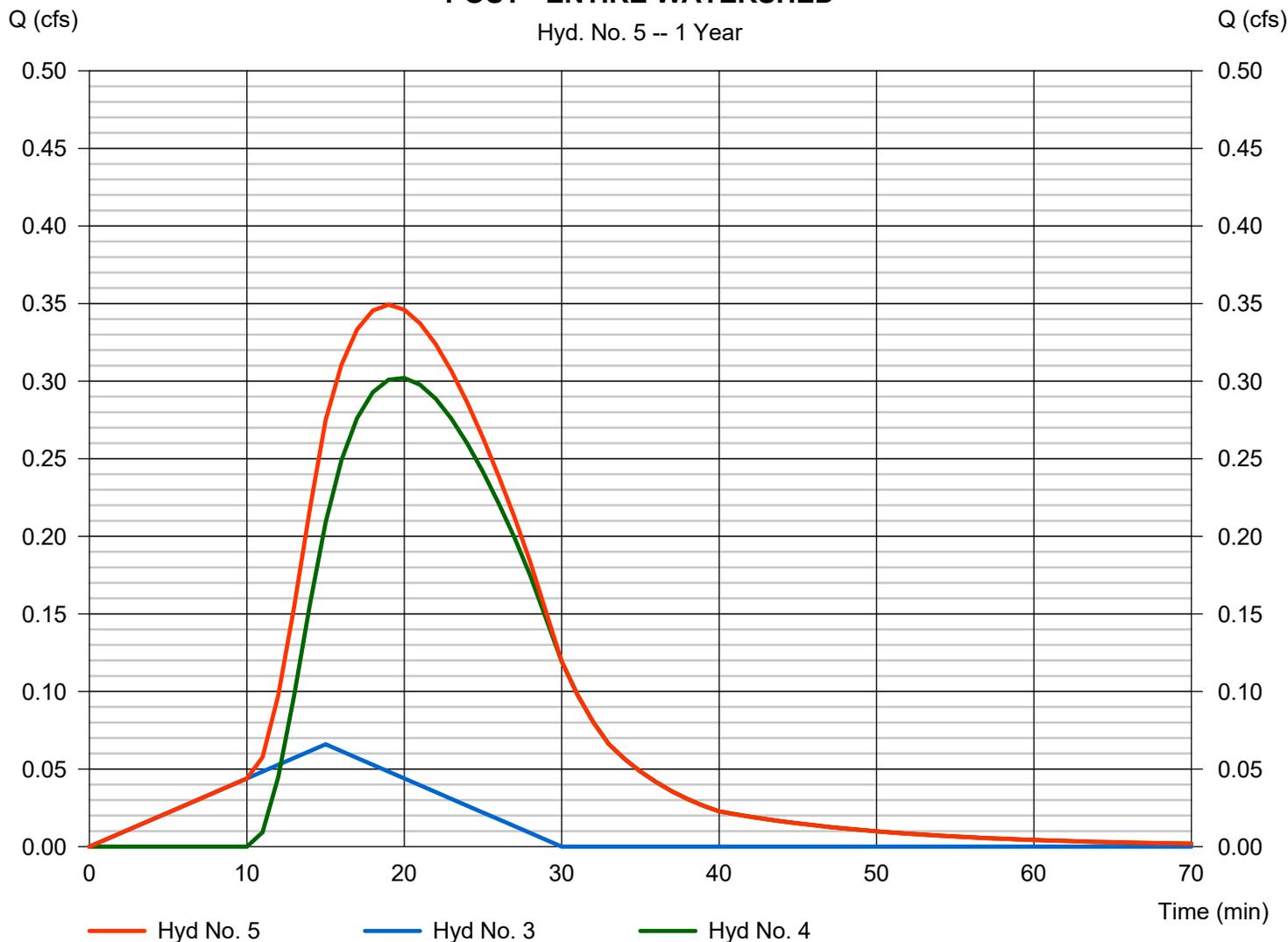
Hyd. No. 5

POST - ENTIRE WATERSHED

Hydrograph type	= Combine	Peak discharge	= 0.349 cfs
Storm frequency	= 1 yrs	Time to peak	= 19 min
Time interval	= 1 min	Hyd. volume	= 354 cuft
Inflow hyds.	= 3, 4	Contrib. drain. area	= 0.030 ac

POST - ENTIRE WATERSHED

Hyd. No. 5 -- 1 Year



Hydrograph Summary Report

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

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	0.490	1	15	441	-----	-----	-----	PRE - ENTIRE WATERSHED	
2	Rational	0.505	1	15	455	-----	-----	-----	CONTROLLED	
3	Rational	0.076	1	15	68	-----	-----	-----	UNCONTROLLED	
4	Reservoir	0.360	1	19	355	2	368.11	216	PCSM ROUTED	
5	Combine	0.415	1	19	423	3, 4	-----	-----	POST - ENTIRE WATERSHED	
20146.gpw					Return Period: 2 Year			Friday, 07 / 2 / 2021		40

Hydrograph Report

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

Friday, 07 / 2 / 2021

Hyd. No. 1

PRE - ENTIRE WATERSHED

Hydrograph type	= Rational	Peak discharge	= 0.490 cfs
Storm frequency	= 2 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 441 cuft
Drainage area	= 0.187 ac	Runoff coeff.	= 0.57
Intensity	= 4.596 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

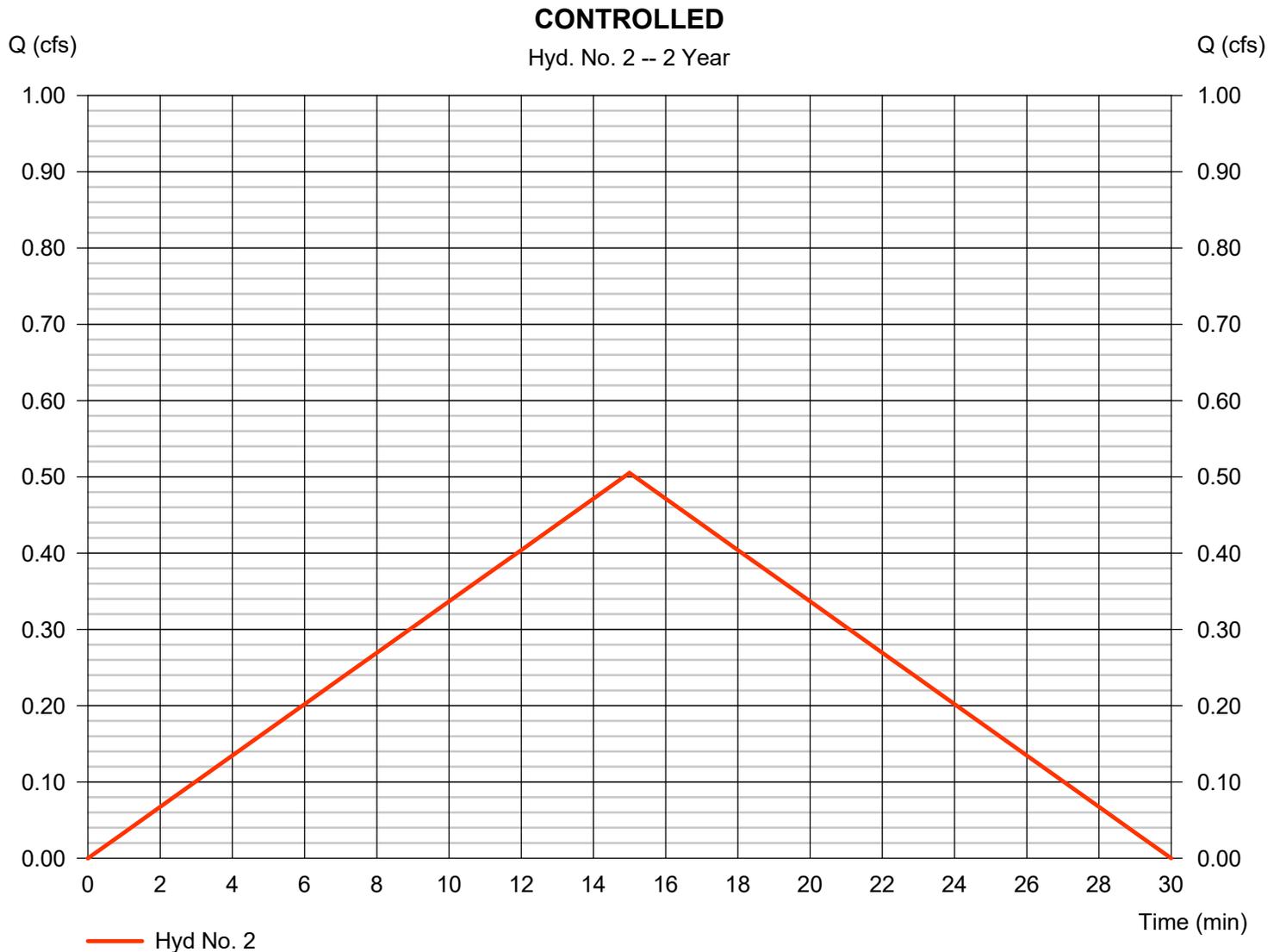
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 07 / 2 / 2021

Hyd. No. 2

CONTROLLED

Hydrograph type	= Rational	Peak discharge	= 0.505 cfs
Storm frequency	= 2 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 455 cuft
Drainage area	= 0.157 ac	Runoff coeff.	= 0.7
Intensity	= 4.596 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

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

Friday, 07 / 2 / 2021

Hyd. No. 3

UNCONTROLLED

Hydrograph type	= Rational	Peak discharge	= 0.076 cfs
Storm frequency	= 2 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 68 cuft
Drainage area	= 0.030 ac	Runoff coeff.	= 0.55
Intensity	= 4.596 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

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

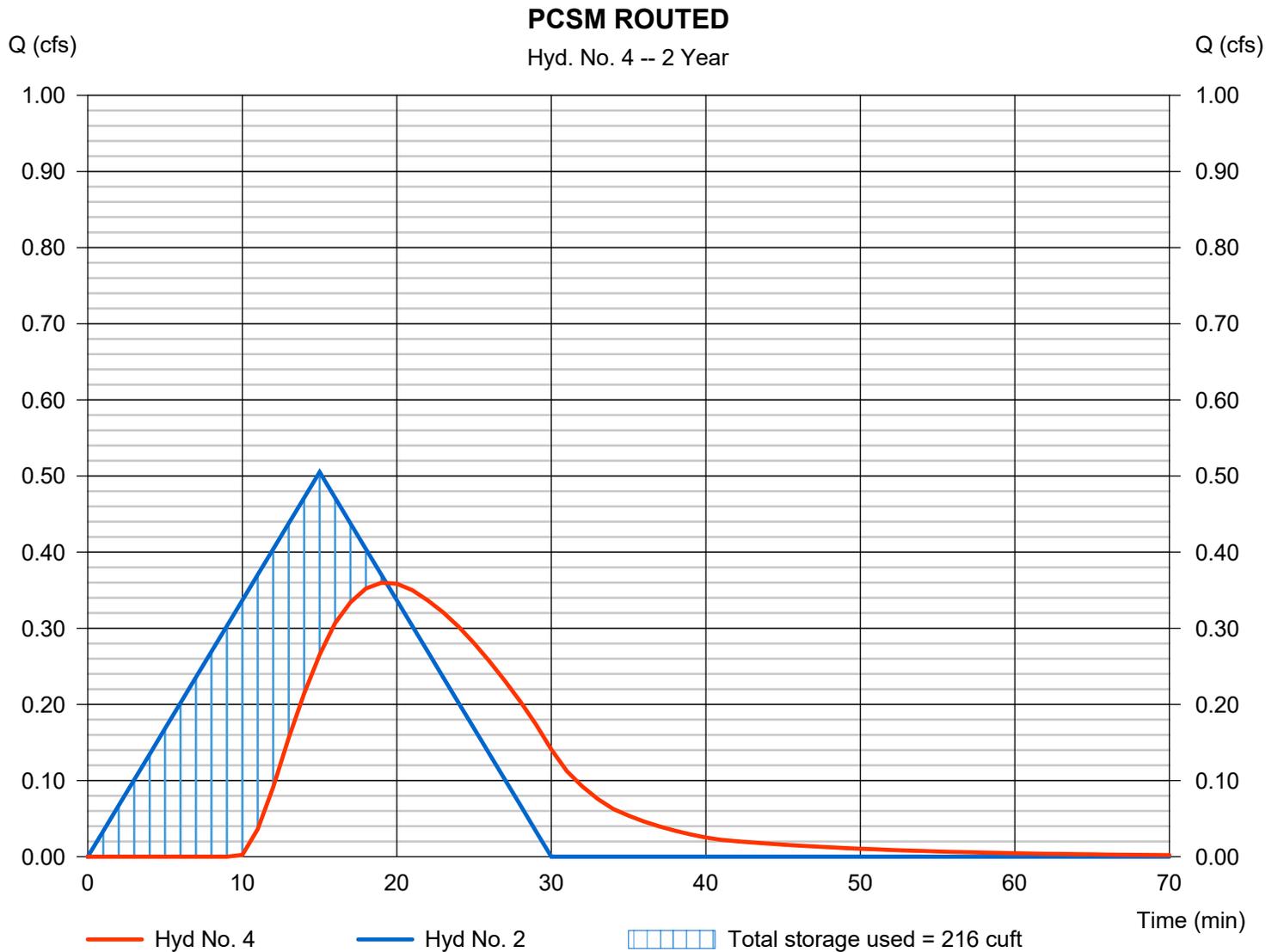
Friday, 07 / 2 / 2021

Hyd. No. 4

PCSM ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 0.360 cfs
Storm frequency	= 2 yrs	Time to peak	= 19 min
Time interval	= 1 min	Hyd. volume	= 355 cuft
Inflow hyd. No.	= 2 - CONTROLLED	Max. Elevation	= 368.11 ft
Reservoir name	= PCSM	Max. Storage	= 216 cuft

Storage Indication method used.



Hydrograph Report

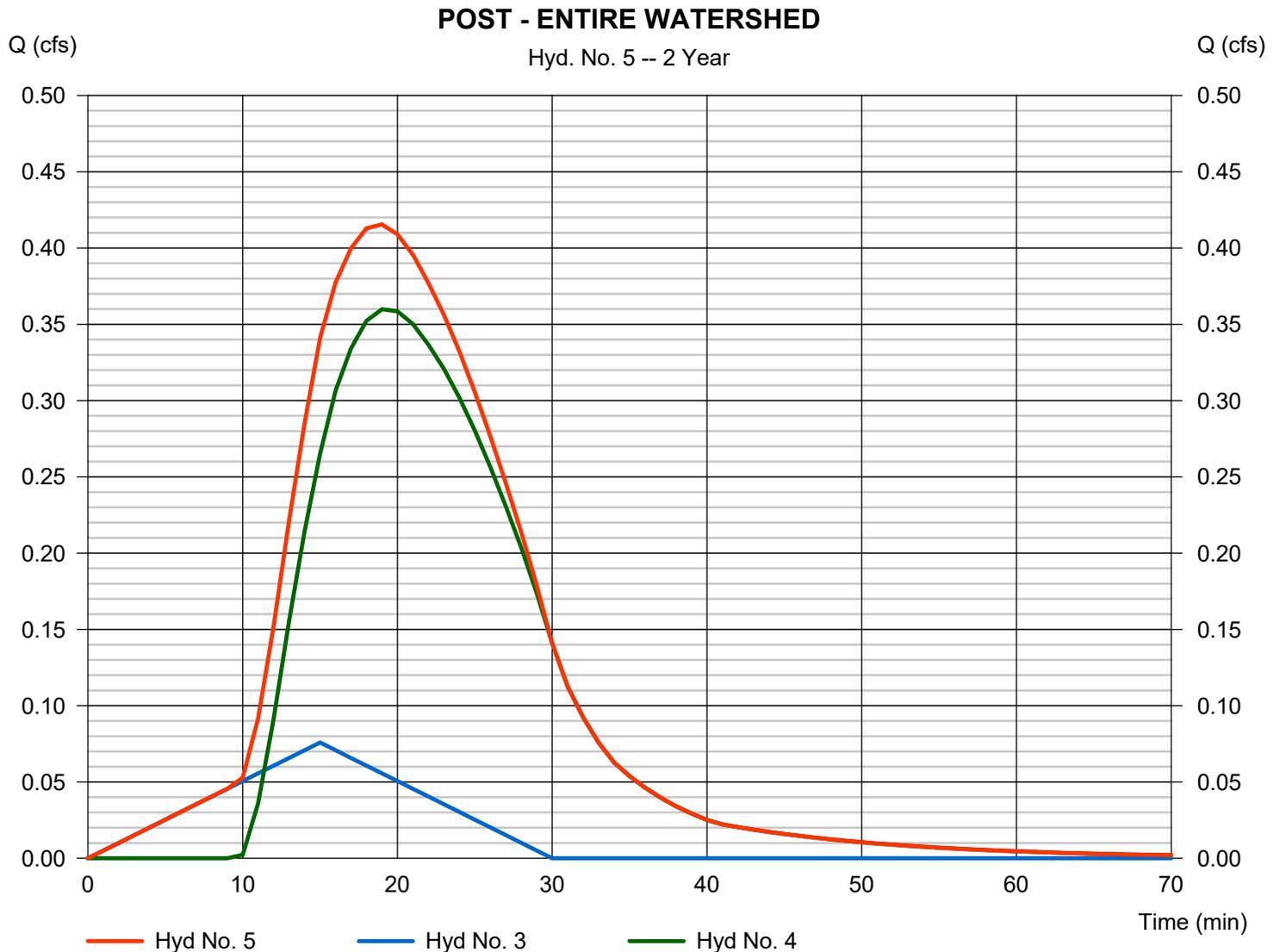
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 07 / 2 / 2021

Hyd. No. 5

POST - ENTIRE WATERSHED

Hydrograph type	= Combine	Peak discharge	= 0.415 cfs
Storm frequency	= 2 yrs	Time to peak	= 19 min
Time interval	= 1 min	Hyd. volume	= 423 cuft
Inflow hyds.	= 3, 4	Contrib. drain. area	= 0.030 ac



Hydrograph Summary Report

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

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	0.564	1	15	508	-----	-----	-----	PRE - ENTIRE WATERSHED	
2	Rational	0.581	1	15	523	-----	-----	-----	CONTROLLED	
3	Rational	0.087	1	15	79	-----	-----	-----	UNCONTROLLED	
4	Reservoir	0.429	1	19	423	2	368.15	233	PCSM ROUTED	
5	Combine	0.494	1	18	502	3, 4	-----	-----	POST - ENTIRE WATERSHED	
20146.gpw					Return Period: 5 Year			Friday, 07 / 2 / 2021		46

Hydrograph Report

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

Friday, 07 / 2 / 2021

Hyd. No. 1

PRE - ENTIRE WATERSHED

Hydrograph type	= Rational	Peak discharge	= 0.564 cfs
Storm frequency	= 5 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 508 cuft
Drainage area	= 0.187 ac	Runoff coeff.	= 0.57
Intensity	= 5.291 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

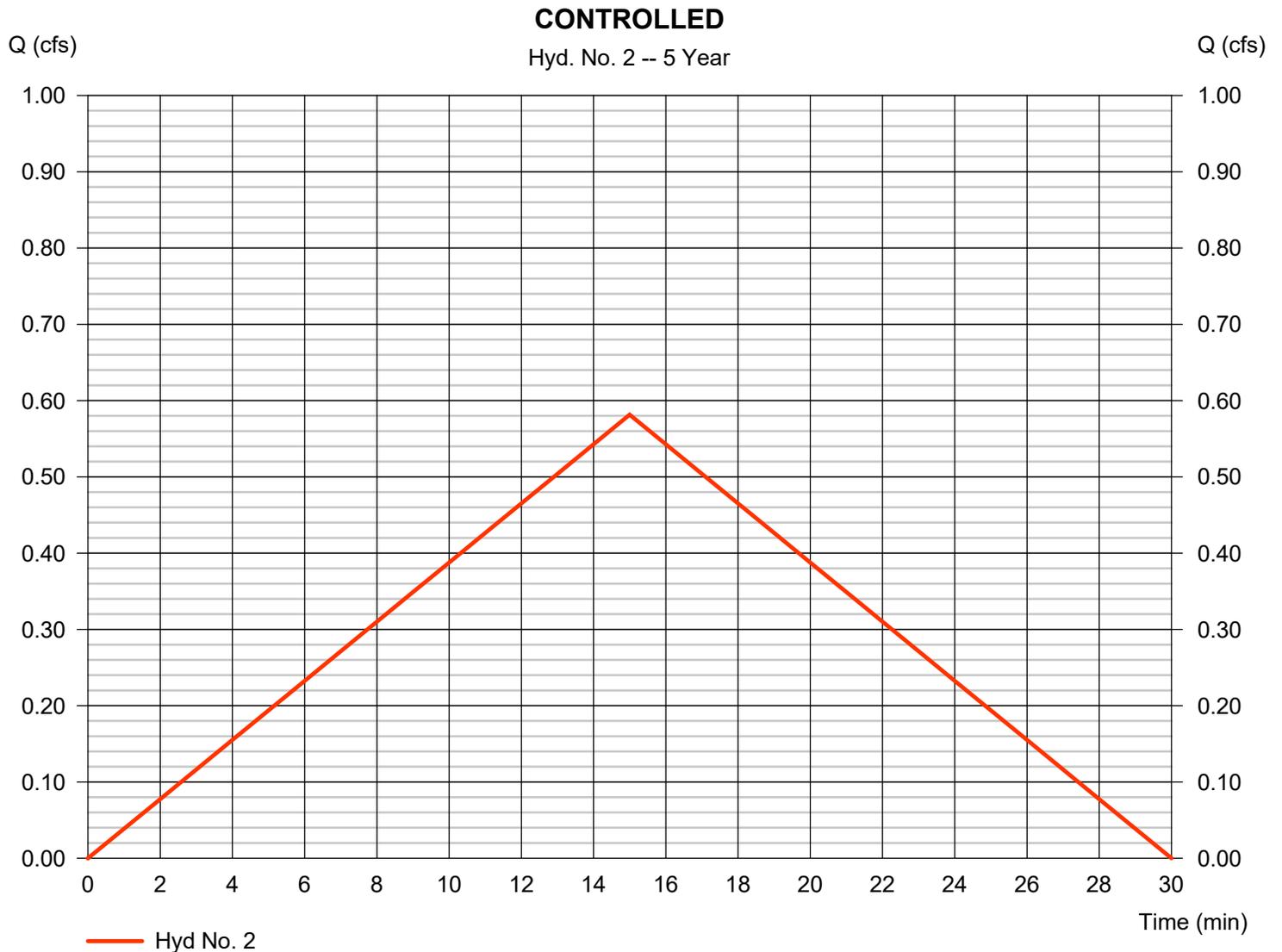
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 07 / 2 / 2021

Hyd. No. 2

CONTROLLED

Hydrograph type	= Rational	Peak discharge	= 0.581 cfs
Storm frequency	= 5 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 523 cuft
Drainage area	= 0.157 ac	Runoff coeff.	= 0.7
Intensity	= 5.291 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

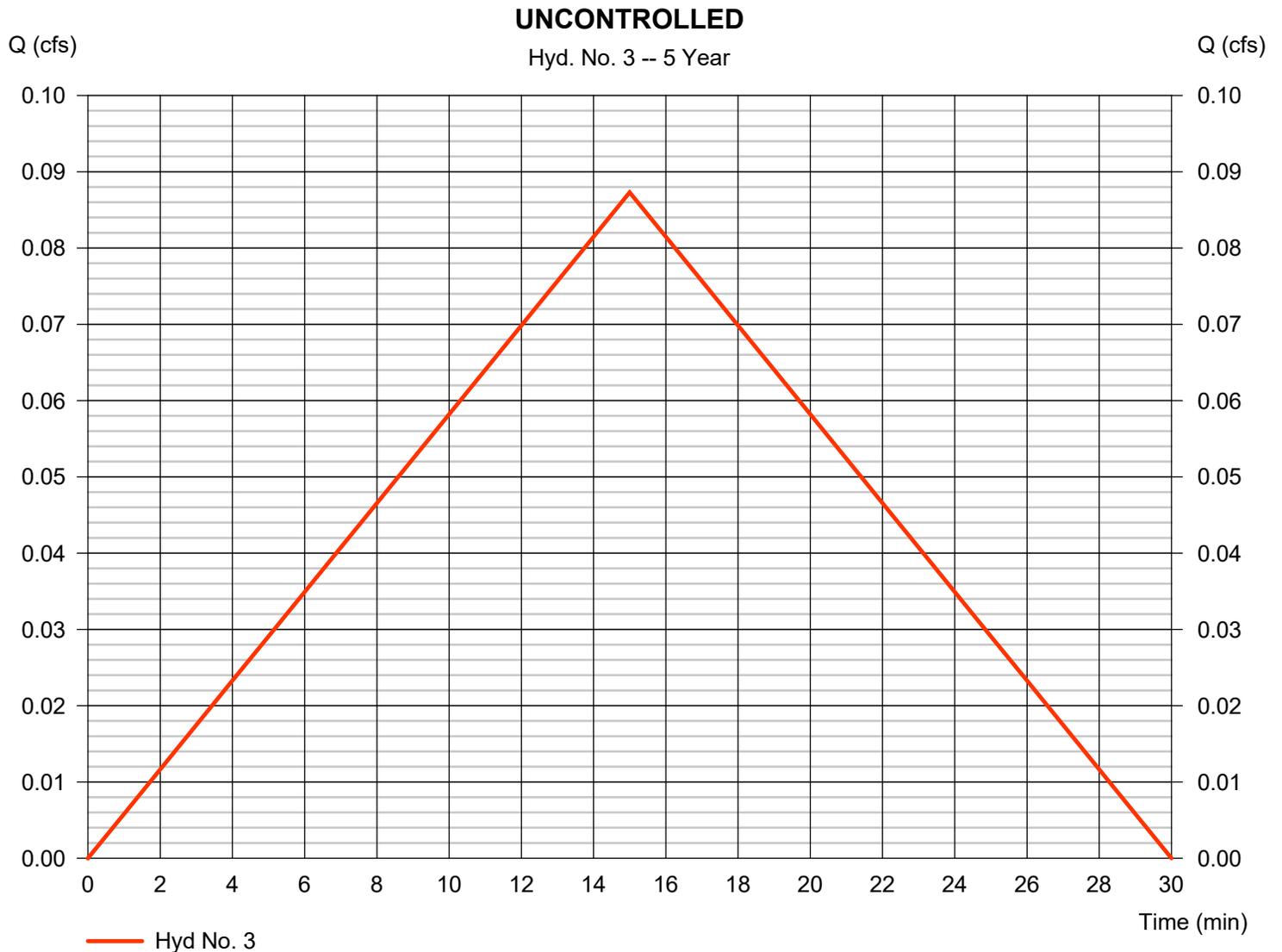
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 07 / 2 / 2021

Hyd. No. 3

UNCONTROLLED

Hydrograph type	= Rational	Peak discharge	= 0.087 cfs
Storm frequency	= 5 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 79 cuft
Drainage area	= 0.030 ac	Runoff coeff.	= 0.55
Intensity	= 5.291 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

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

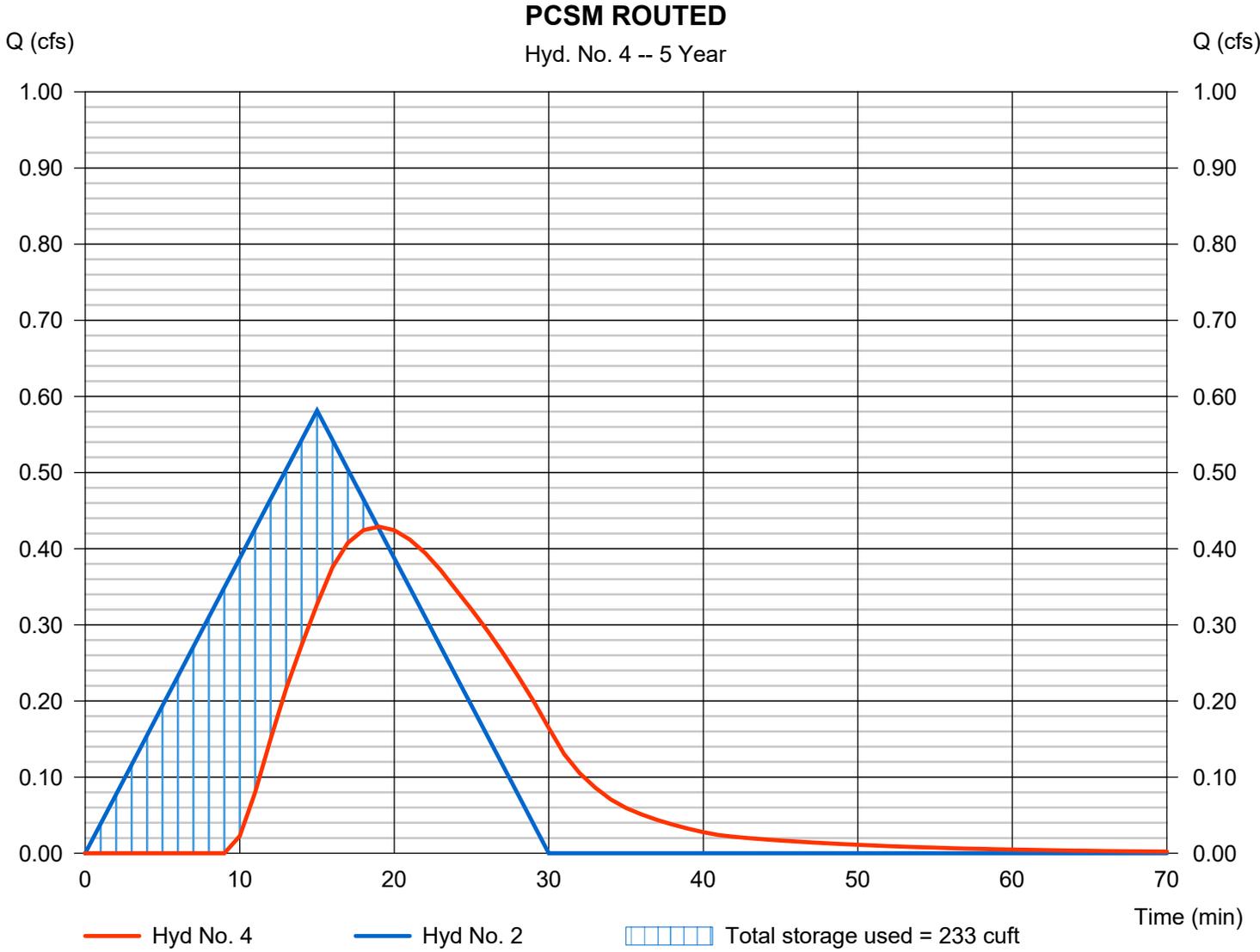
Friday, 07 / 2 / 2021

Hyd. No. 4

PCSM ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 0.429 cfs
Storm frequency	= 5 yrs	Time to peak	= 19 min
Time interval	= 1 min	Hyd. volume	= 423 cuft
Inflow hyd. No.	= 2 - CONTROLLED	Max. Elevation	= 368.15 ft
Reservoir name	= PCSM	Max. Storage	= 233 cuft

Storage Indication method used.



Hydrograph Report

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

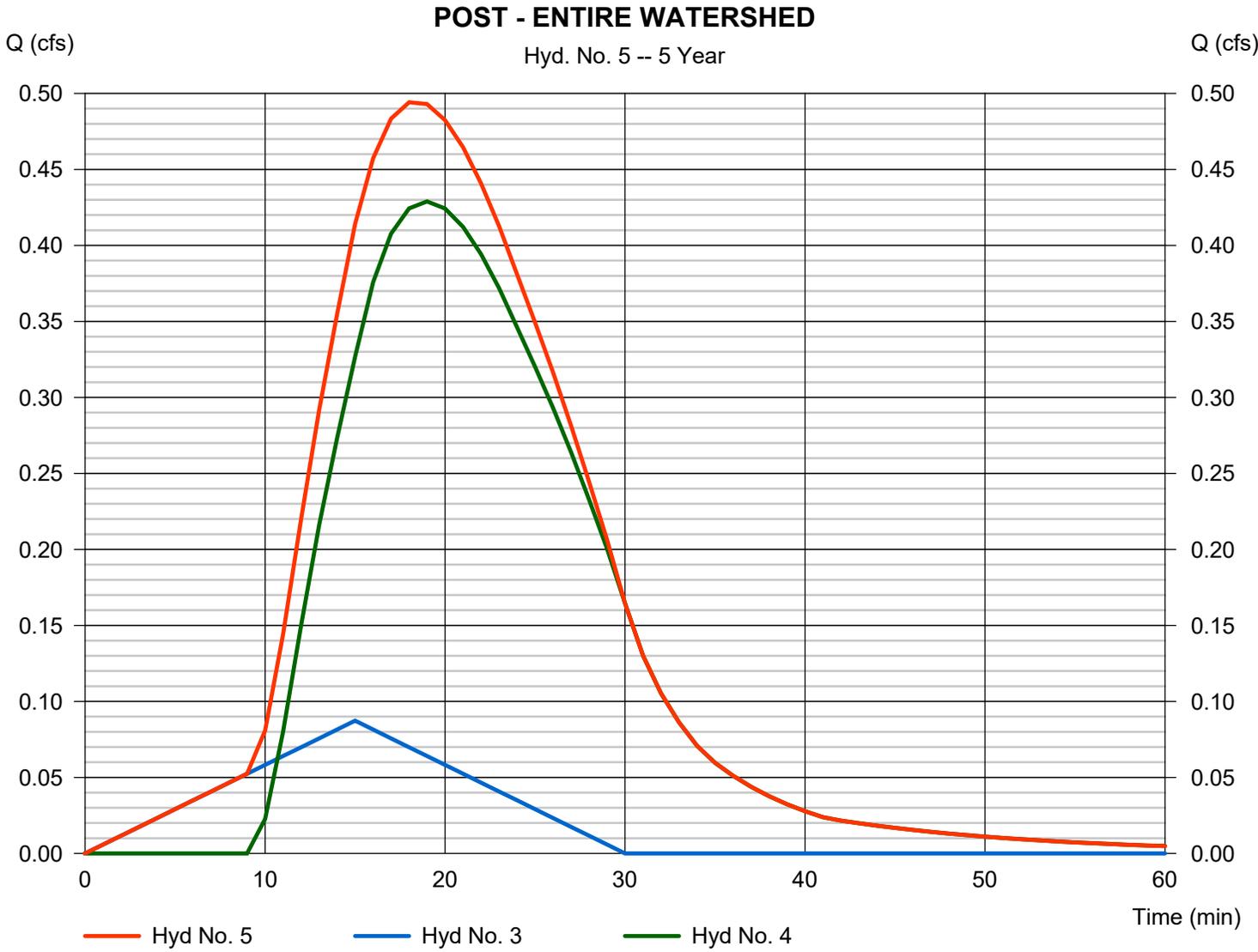
Friday, 07 / 2 / 2021

Hyd. No. 5

POST - ENTIRE WATERSHED

Hydrograph type = Combine
 Storm frequency = 5 yrs
 Time interval = 1 min
 Inflow hyds. = 3, 4

Peak discharge = 0.494 cfs
 Time to peak = 18 min
 Hyd. volume = 502 cuft
 Contrib. drain. area = 0.030 ac



Hydrograph Summary Report

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

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	0.639	1	15	575	-----	-----	-----	PRE - ENTIRE WATERSHED	
2	Rational	0.659	1	15	593	-----	-----	-----	CONTROLLED	
3	Rational	0.099	1	15	89	-----	-----	-----	UNCONTROLLED	
4	Reservoir	0.496	1	19	493	2	368.19	250	PCSM ROUTED	
5	Combine	0.573	1	18	582	3, 4	-----	-----	POST - ENTIRE WATERSHED	
20146.gpw					Return Period: 10 Year			Friday, 07 / 2 / 2021		52

Hydrograph Report

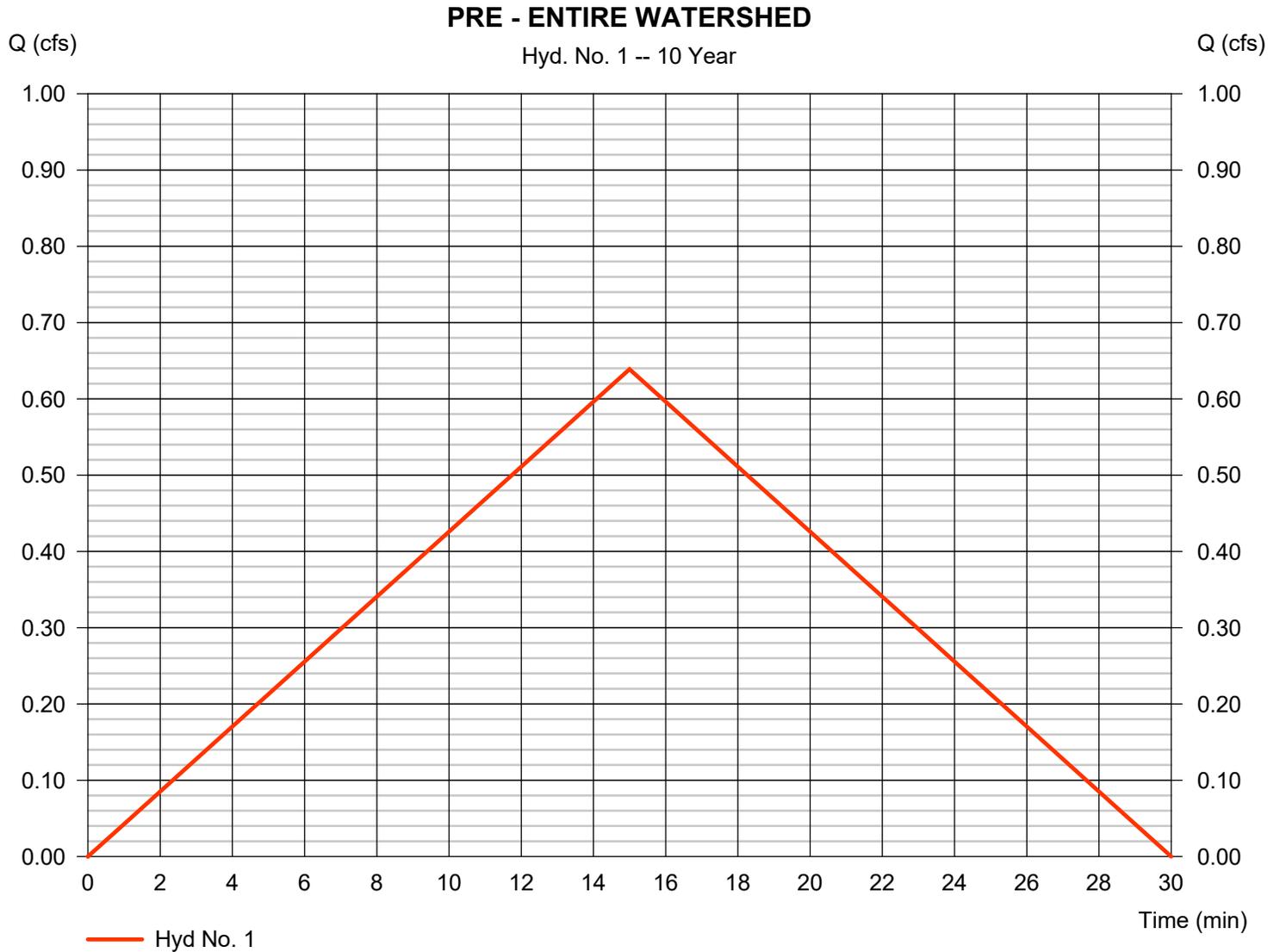
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 07 / 2 / 2021

Hyd. No. 1

PRE - ENTIRE WATERSHED

Hydrograph type	= Rational	Peak discharge	= 0.639 cfs
Storm frequency	= 10 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 575 cuft
Drainage area	= 0.187 ac	Runoff coeff.	= 0.57
Intensity	= 5.993 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

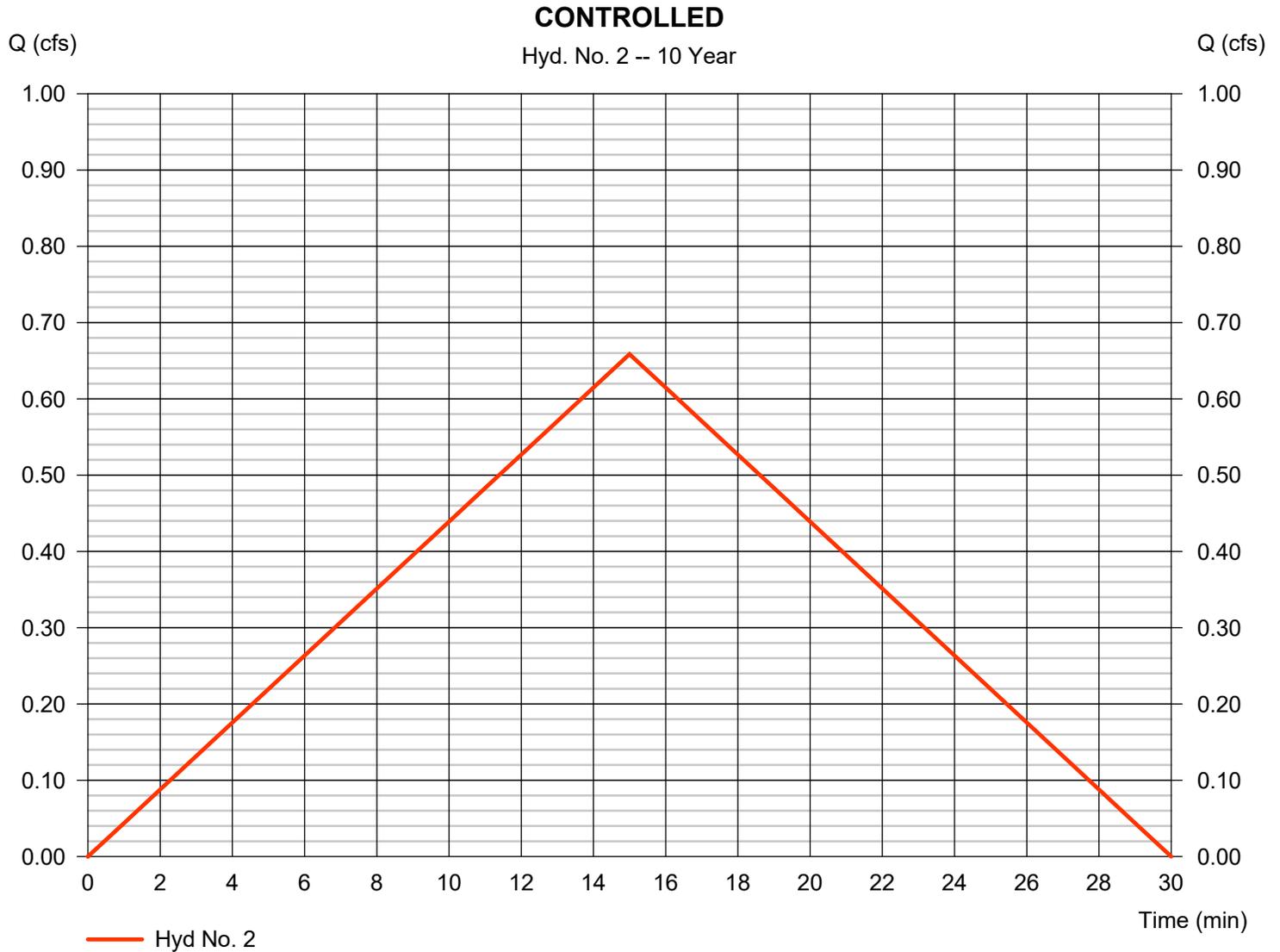
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 07 / 2 / 2021

Hyd. No. 2

CONTROLLED

Hydrograph type	= Rational	Peak discharge	= 0.659 cfs
Storm frequency	= 10 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 593 cuft
Drainage area	= 0.157 ac	Runoff coeff.	= 0.7
Intensity	= 5.993 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

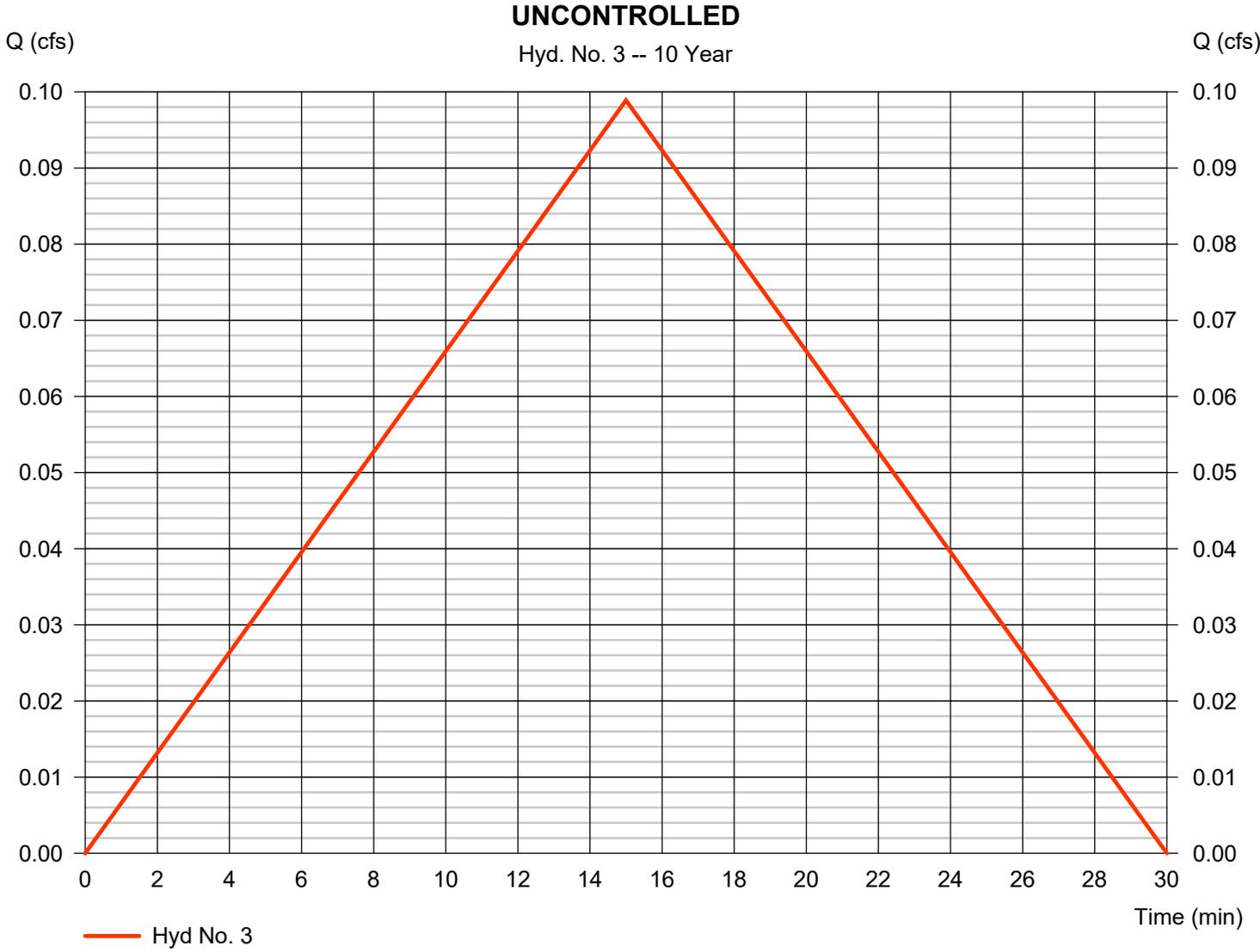
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 07 / 2 / 2021

Hyd. No. 3

UNCONTROLLED

Hydrograph type	= Rational	Peak discharge	= 0.099 cfs
Storm frequency	= 10 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 89 cuft
Drainage area	= 0.030 ac	Runoff coeff.	= 0.55
Intensity	= 5.993 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

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

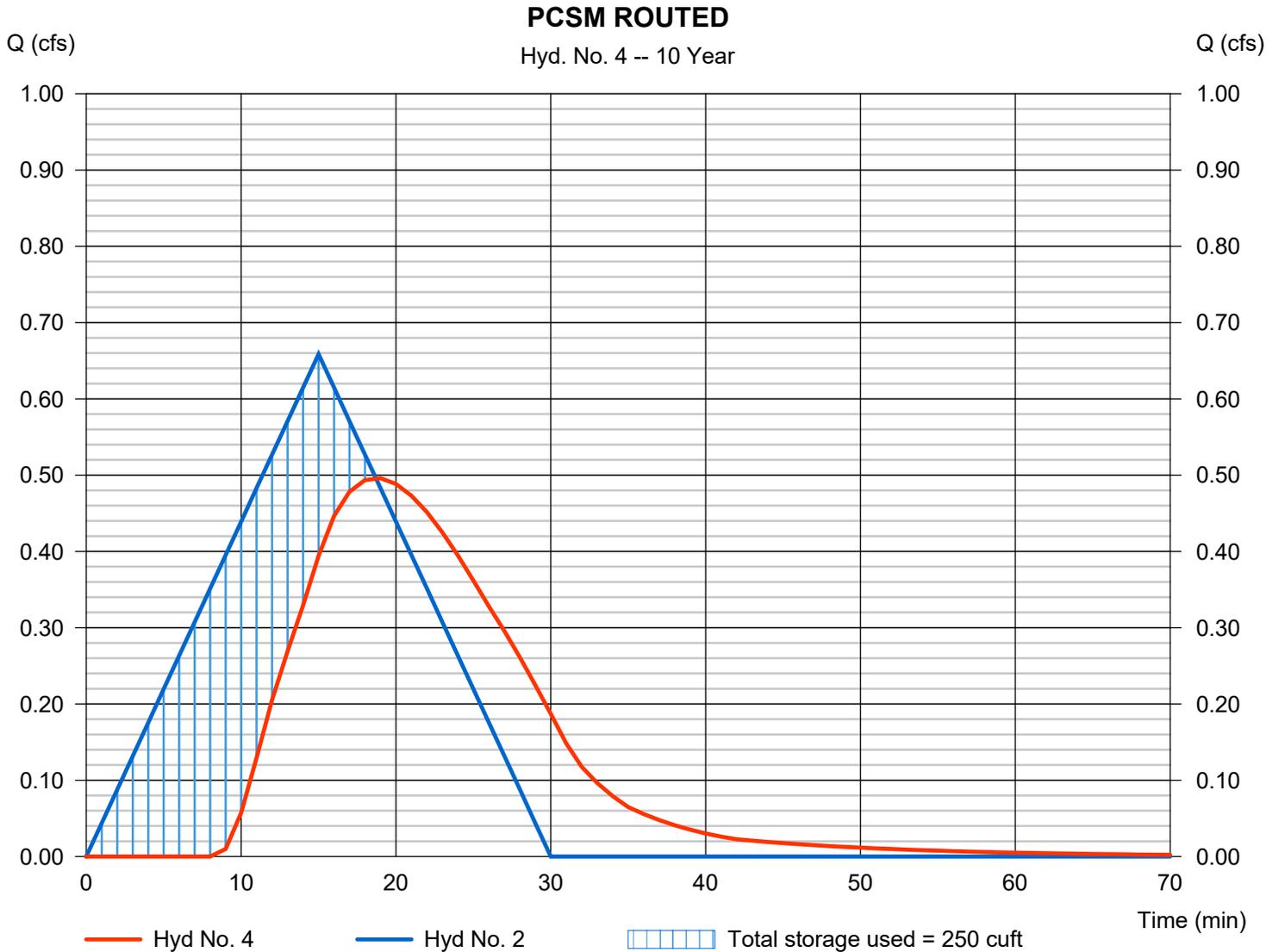
Friday, 07 / 2 / 2021

Hyd. No. 4

PCSM ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 0.496 cfs
Storm frequency	= 10 yrs	Time to peak	= 19 min
Time interval	= 1 min	Hyd. volume	= 493 cuft
Inflow hyd. No.	= 2 - CONTROLLED	Max. Elevation	= 368.19 ft
Reservoir name	= PCSM	Max. Storage	= 250 cuft

Storage Indication method used.



Hydrograph Report

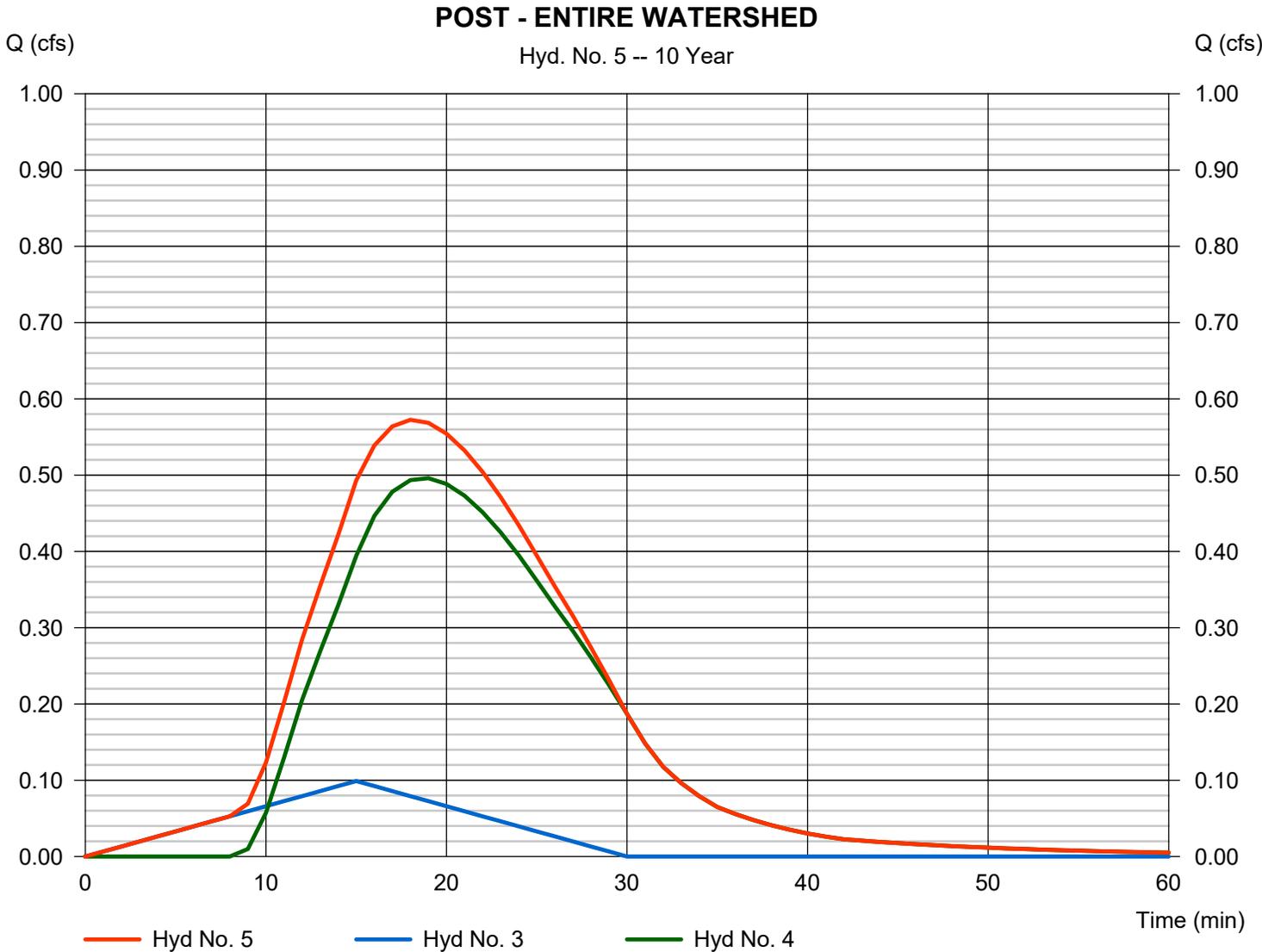
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 07 / 2 / 2021

Hyd. No. 5

POST - ENTIRE WATERSHED

Hydrograph type	= Combine	Peak discharge	= 0.573 cfs
Storm frequency	= 10 yrs	Time to peak	= 18 min
Time interval	= 1 min	Hyd. volume	= 582 cuft
Inflow hyds.	= 3, 4	Contrib. drain. area	= 0.030 ac



Hydrograph Summary Report

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

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	0.713	1	15	642	-----	-----	-----	PRE - ENTIRE WATERSHED	
2	Rational	0.735	1	15	662	-----	-----	-----	CONTROLLED	
3	Rational	0.110	1	15	99	-----	-----	-----	UNCONTROLLED	
4	Reservoir	0.565	1	18	562	2	368.22	265	PCSM ROUTED	
5	Combine	0.653	1	18	661	3, 4	-----	-----	POST - ENTIRE WATERSHED	
20146.gpw					Return Period: 25 Year			Friday, 07 / 2 / 2021		58

Hydrograph Report

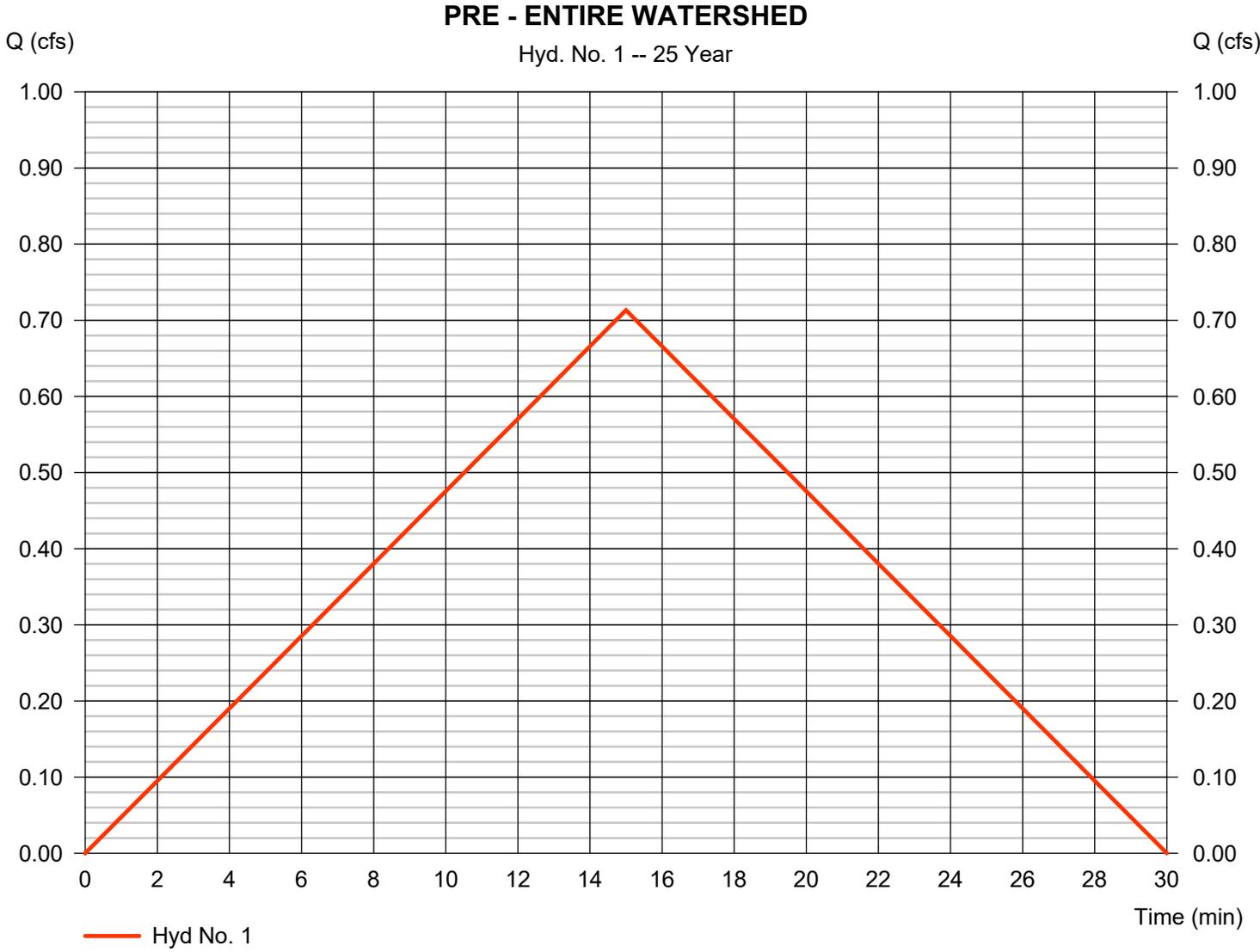
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 07 / 2 / 2021

Hyd. No. 1

PRE - ENTIRE WATERSHED

Hydrograph type	= Rational	Peak discharge	= 0.713 cfs
Storm frequency	= 25 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 642 cuft
Drainage area	= 0.187 ac	Runoff coeff.	= 0.57
Intensity	= 6.692 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

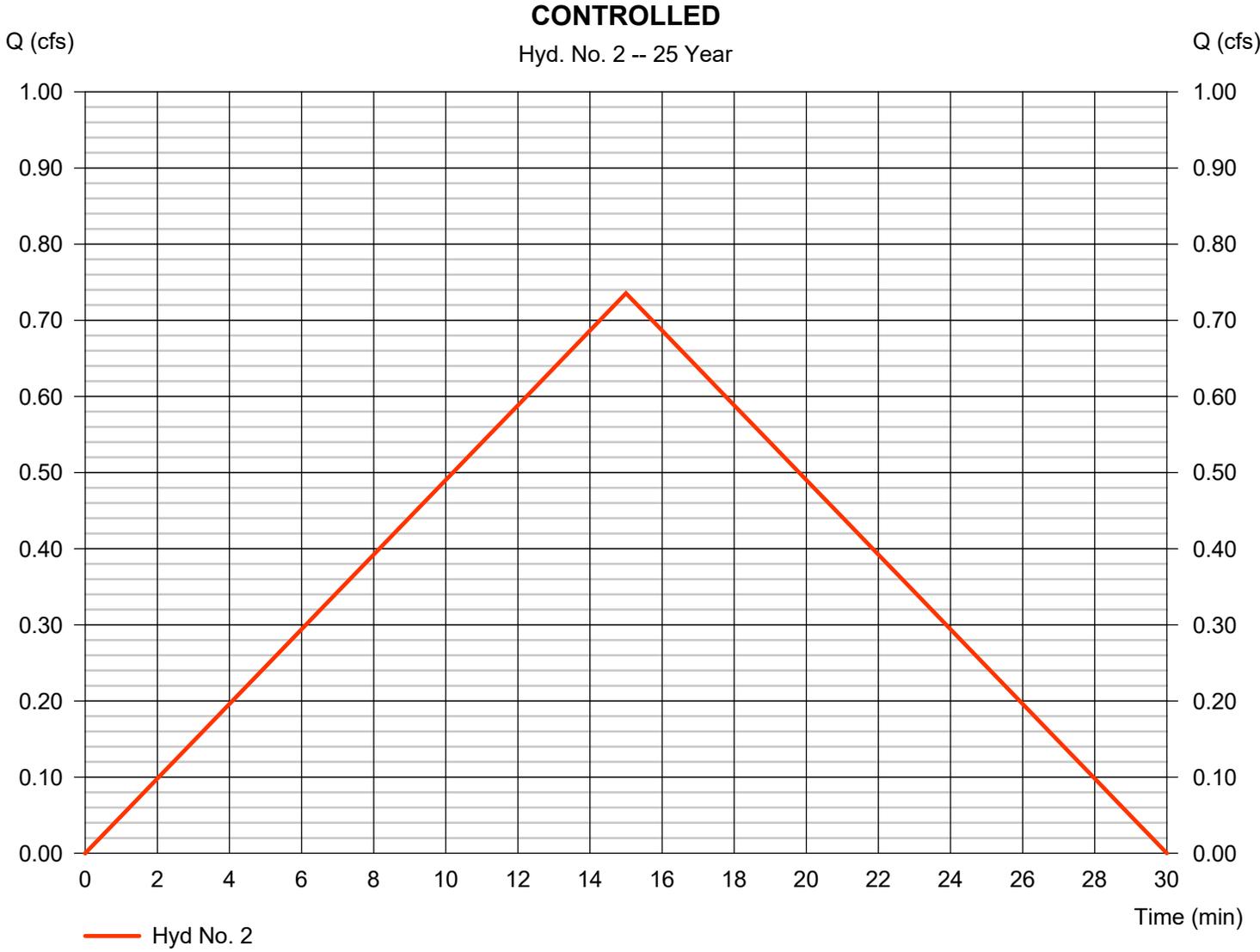
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 07 / 2 / 2021

Hyd. No. 2

CONTROLLED

Hydrograph type	= Rational	Peak discharge	= 0.735 cfs
Storm frequency	= 25 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 662 cuft
Drainage area	= 0.157 ac	Runoff coeff.	= 0.7
Intensity	= 6.692 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

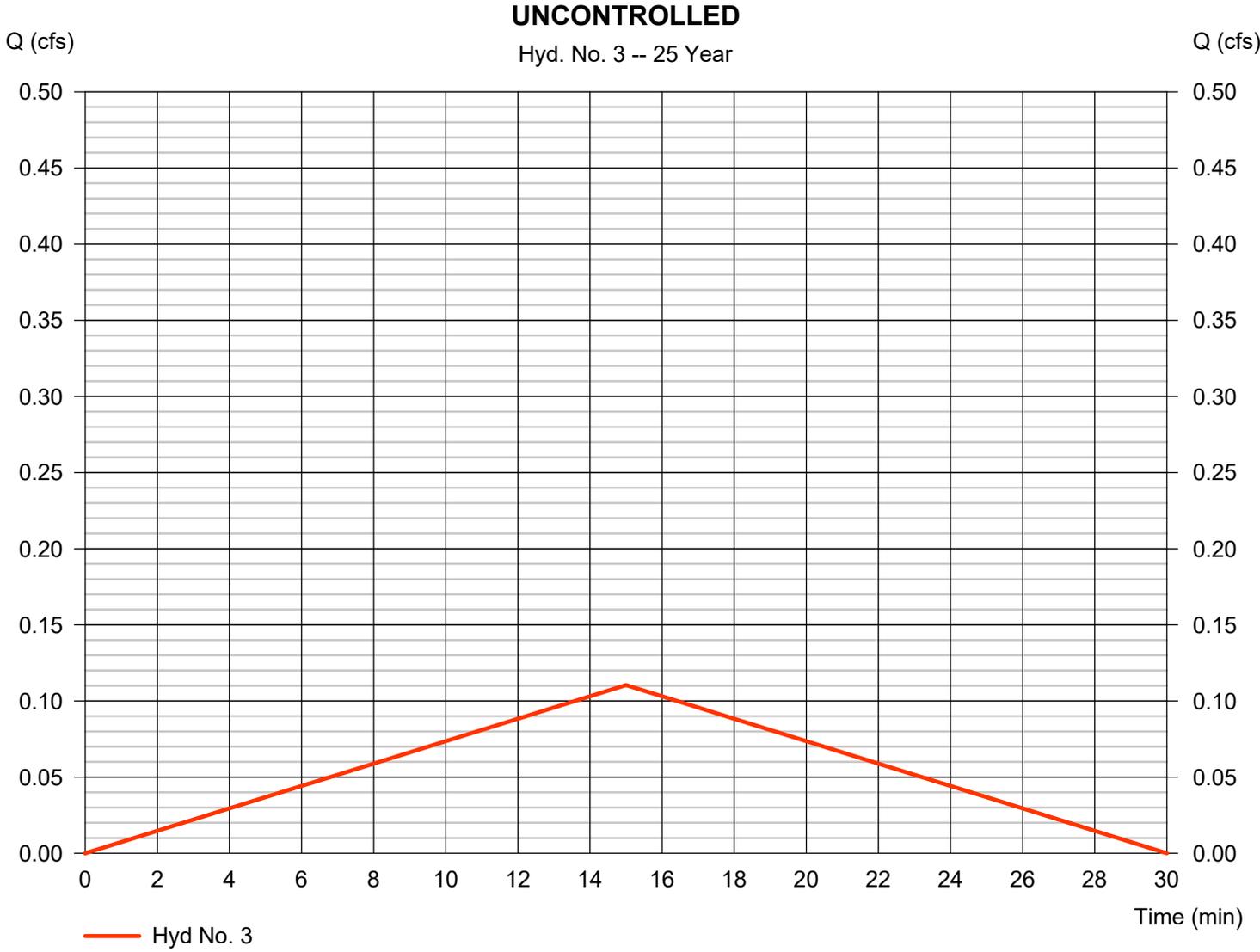
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 07 / 2 / 2021

Hyd. No. 3

UNCONTROLLED

Hydrograph type	= Rational	Peak discharge	= 0.110 cfs
Storm frequency	= 25 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 99 cuft
Drainage area	= 0.030 ac	Runoff coeff.	= 0.55
Intensity	= 6.692 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

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

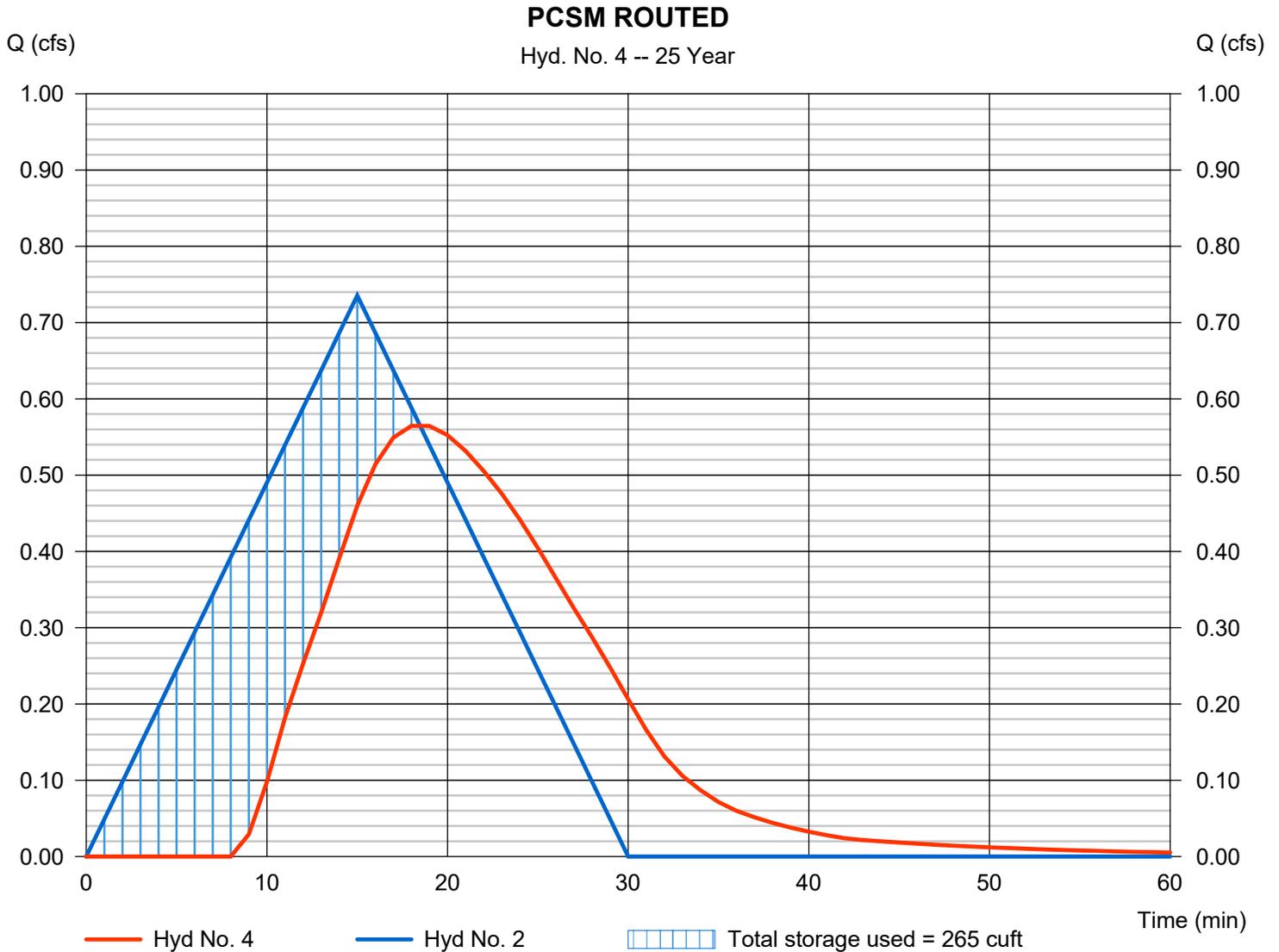
Friday, 07 / 2 / 2021

Hyd. No. 4

PCSM ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 0.565 cfs
Storm frequency	= 25 yrs	Time to peak	= 18 min
Time interval	= 1 min	Hyd. volume	= 562 cuft
Inflow hyd. No.	= 2 - CONTROLLED	Max. Elevation	= 368.22 ft
Reservoir name	= PCSM	Max. Storage	= 265 cuft

Storage Indication method used.



Hydrograph Report

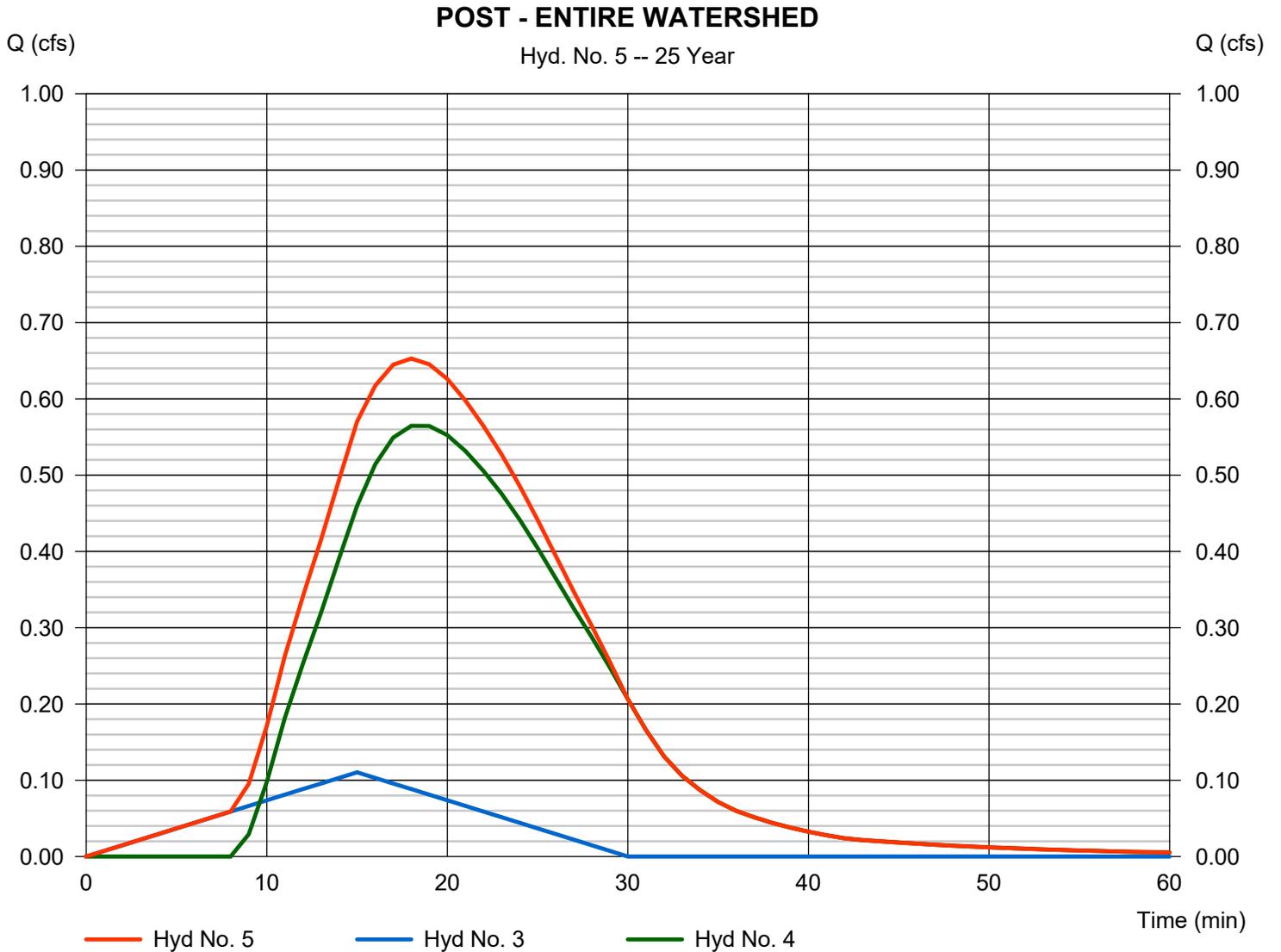
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 07 / 2 / 2021

Hyd. No. 5

POST - ENTIRE WATERSHED

Hydrograph type	= Combine	Peak discharge	= 0.653 cfs
Storm frequency	= 25 yrs	Time to peak	= 18 min
Time interval	= 1 min	Hyd. volume	= 661 cuft
Inflow hyds.	= 3, 4	Contrib. drain. area	= 0.030 ac



Hydrograph Summary Report

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

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	0.799	1	15	719	-----	-----	-----	PRE - ENTIRE WATERSHED	
2	Rational	0.823	1	15	741	-----	-----	-----	CONTROLLED	
3	Rational	0.124	1	15	111	-----	-----	-----	UNCONTROLLED	
4	Reservoir	0.645	1	18	641	2	368.26	283	PCSM ROUTED	
5	Combine	0.744	1	18	752	3, 4	-----	-----	POST - ENTIRE WATERSHED	
20146.gpw					Return Period: 50 Year			Friday, 07 / 2 / 2021		64

Hydrograph Report

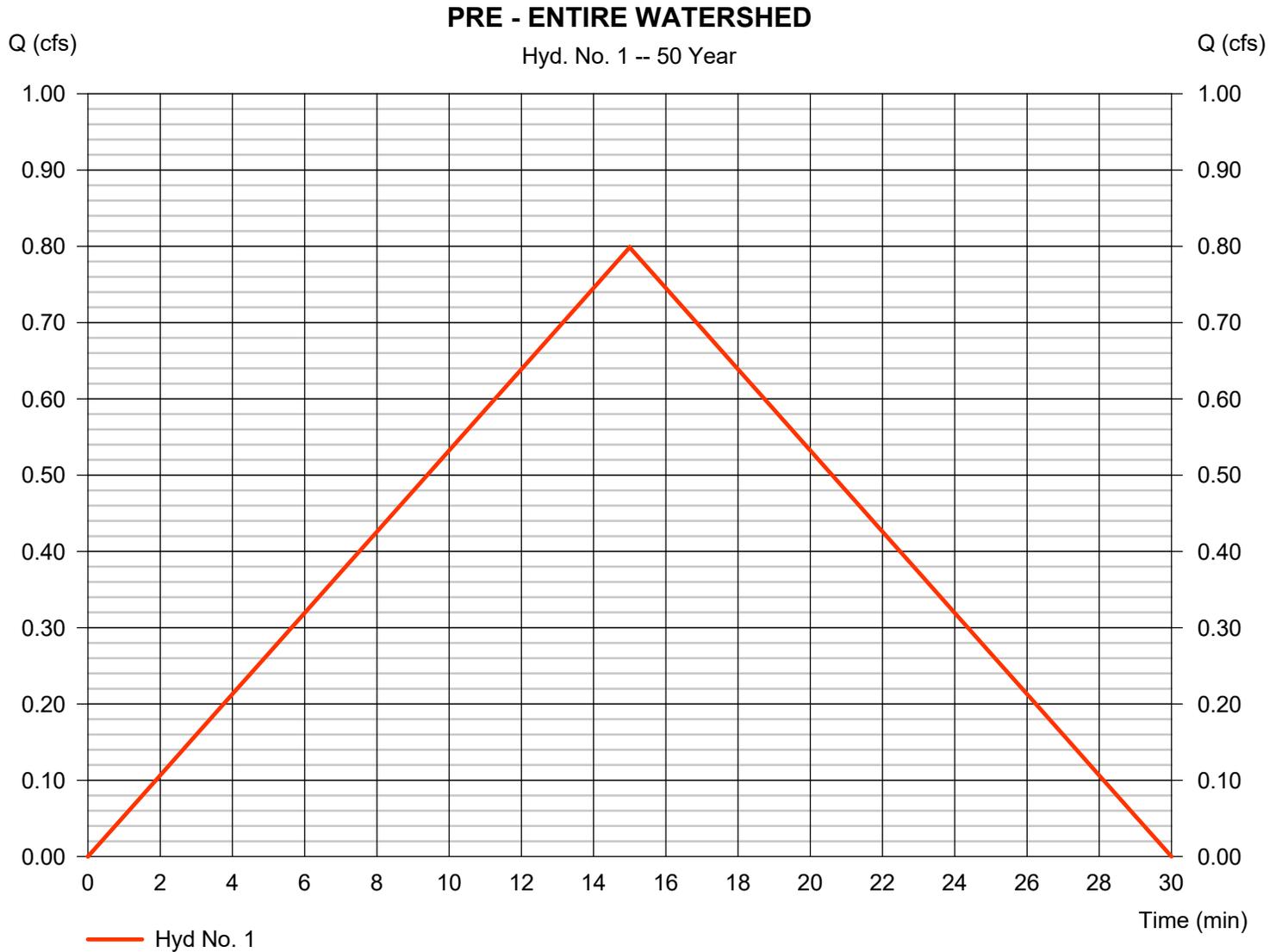
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 07 / 2 / 2021

Hyd. No. 1

PRE - ENTIRE WATERSHED

Hydrograph type	= Rational	Peak discharge	= 0.799 cfs
Storm frequency	= 50 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 719 cuft
Drainage area	= 0.187 ac	Runoff coeff.	= 0.57
Intensity	= 7.492 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

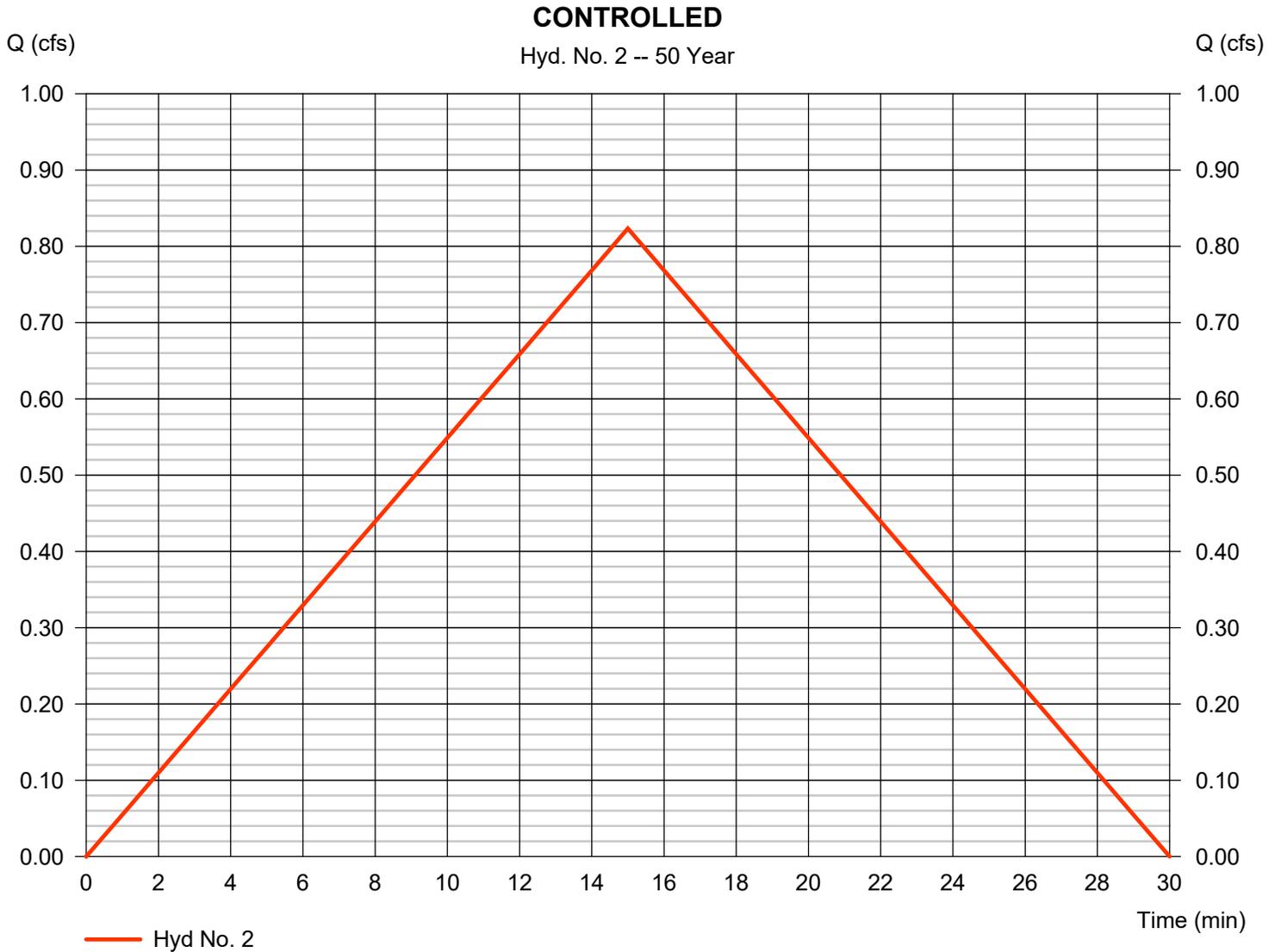
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 07 / 2 / 2021

Hyd. No. 2

CONTROLLED

Hydrograph type	= Rational	Peak discharge	= 0.823 cfs
Storm frequency	= 50 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 741 cuft
Drainage area	= 0.157 ac	Runoff coeff.	= 0.7
Intensity	= 7.492 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

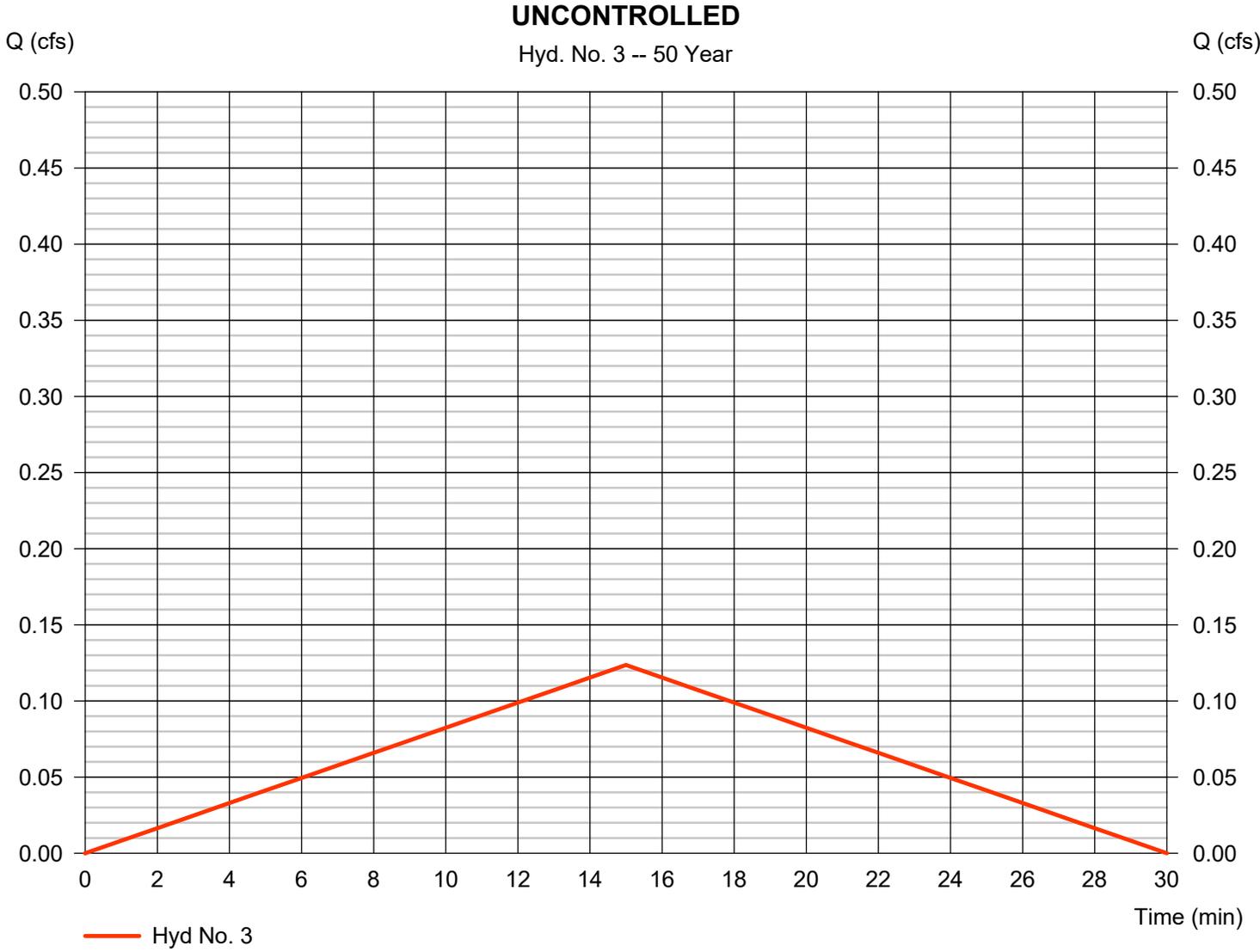
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 07 / 2 / 2021

Hyd. No. 3

UNCONTROLLED

Hydrograph type	= Rational	Peak discharge	= 0.124 cfs
Storm frequency	= 50 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 111 cuft
Drainage area	= 0.030 ac	Runoff coeff.	= 0.55
Intensity	= 7.492 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

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

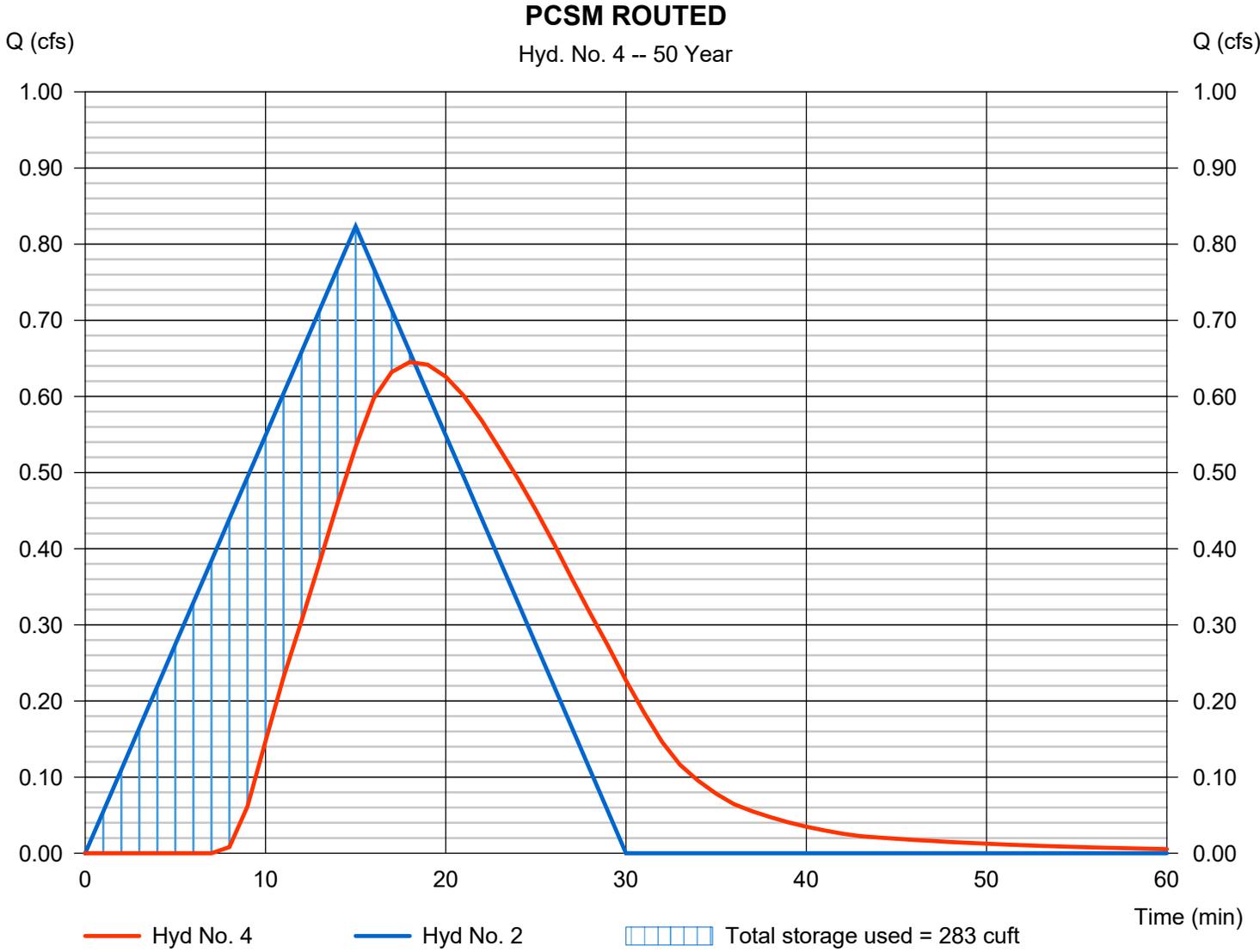
Friday, 07 / 2 / 2021

Hyd. No. 4

PCSM ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 0.645 cfs
Storm frequency	= 50 yrs	Time to peak	= 18 min
Time interval	= 1 min	Hyd. volume	= 641 cuft
Inflow hyd. No.	= 2 - CONTROLLED	Max. Elevation	= 368.26 ft
Reservoir name	= PCSM	Max. Storage	= 283 cuft

Storage Indication method used.



Hydrograph Report

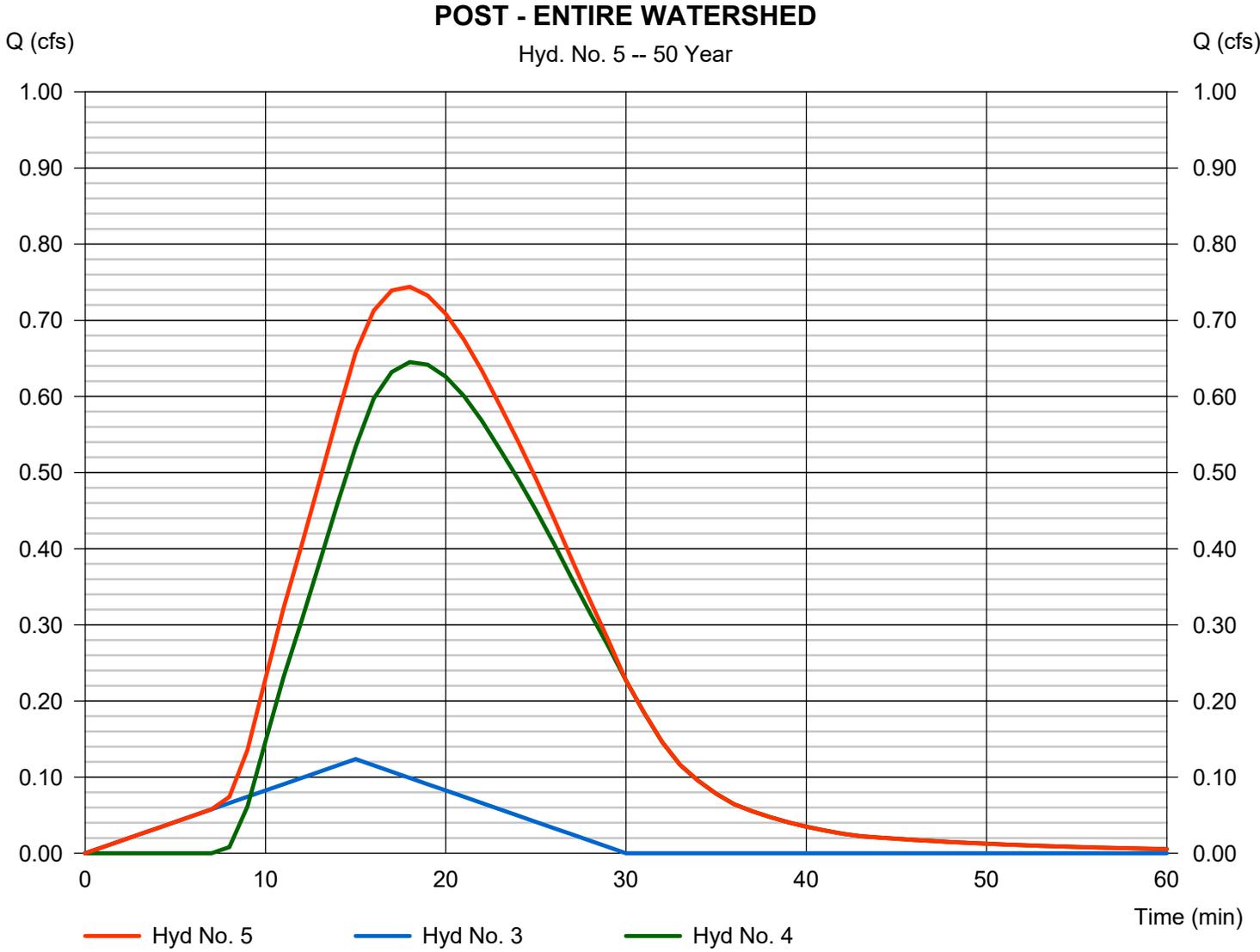
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 07 / 2 / 2021

Hyd. No. 5

POST - ENTIRE WATERSHED

Hydrograph type	= Combine	Peak discharge	= 0.744 cfs
Storm frequency	= 50 yrs	Time to peak	= 18 min
Time interval	= 1 min	Hyd. volume	= 752 cuft
Inflow hyds.	= 3, 4	Contrib. drain. area	= 0.030 ac



Hydrograph Summary Report

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

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	0.894	1	15	805	-----	-----	-----	PRE - ENTIRE WATERSHED	
2	Rational	0.922	1	15	830	-----	-----	-----	CONTROLLED	
3	Rational	0.138	1	15	125	-----	-----	-----	UNCONTROLLED	
4	Reservoir	0.738	1	18	730	2	368.30	302	PCSM ROUTED	
5	Combine	0.849	1	18	854	3, 4	-----	-----	POST - ENTIRE WATERSHED	
20146.gpw					Return Period: 100 Year			Friday, 07 / 2 / 2021		70

Hydrograph Report

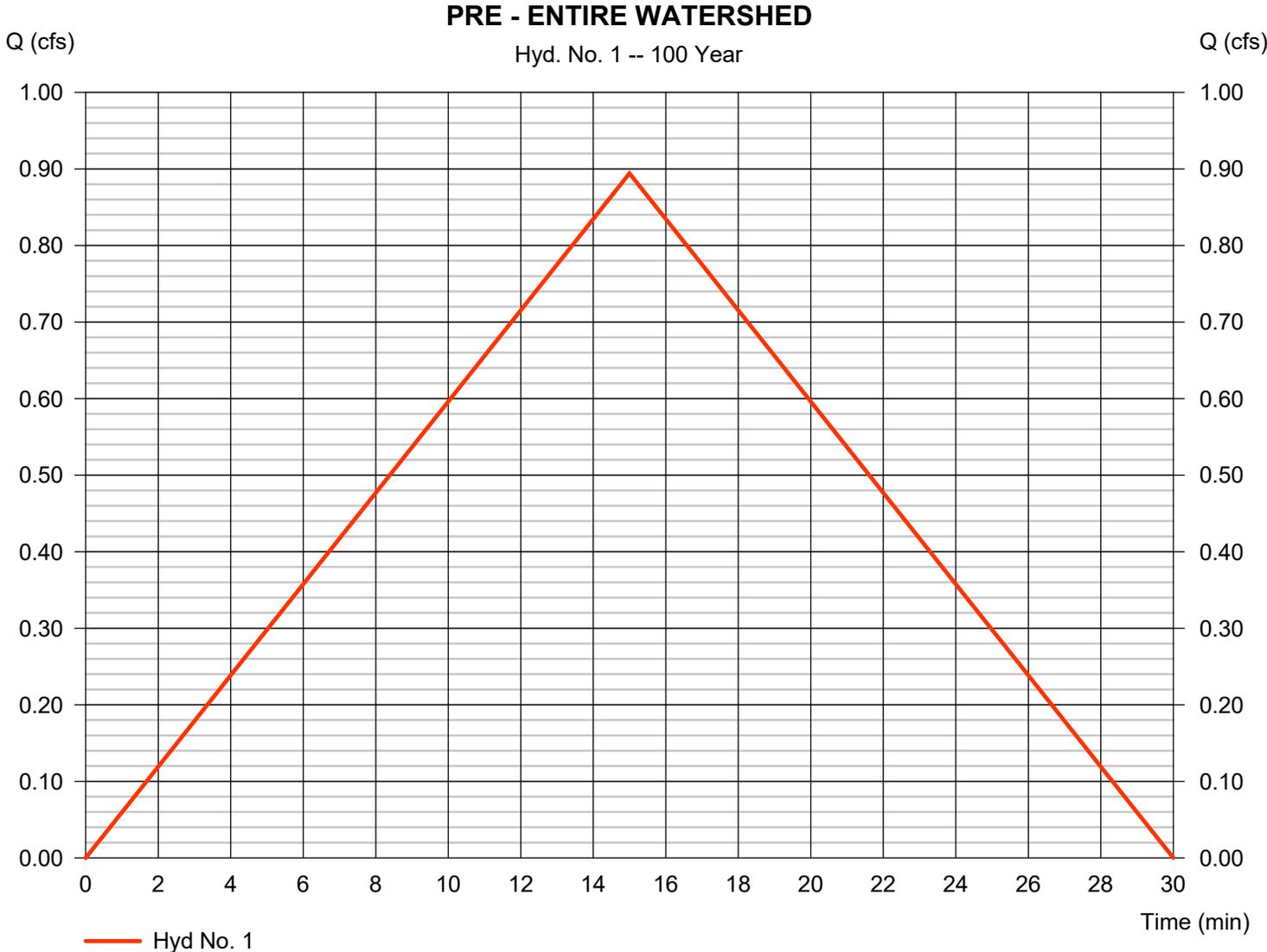
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 07 / 2 / 2021

Hyd. No. 1

PRE - ENTIRE WATERSHED

Hydrograph type	= Rational	Peak discharge	= 0.894 cfs
Storm frequency	= 100 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 805 cuft
Drainage area	= 0.187 ac	Runoff coeff.	= 0.57
Intensity	= 8.389 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

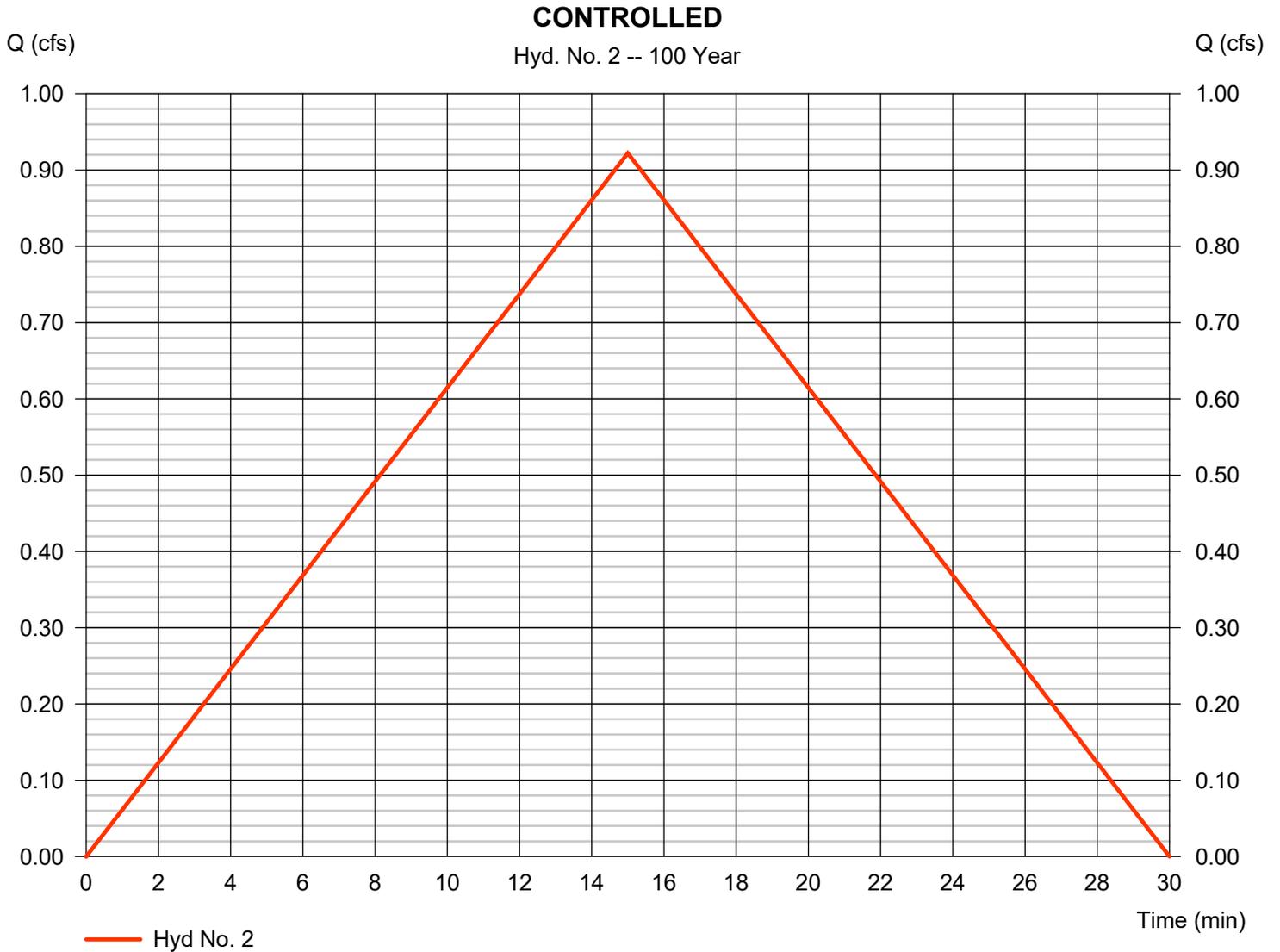
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 07 / 2 / 2021

Hyd. No. 2

CONTROLLED

Hydrograph type	= Rational	Peak discharge	= 0.922 cfs
Storm frequency	= 100 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 830 cuft
Drainage area	= 0.157 ac	Runoff coeff.	= 0.7
Intensity	= 8.389 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

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

Friday, 07 / 2 / 2021

Hyd. No. 3

UNCONTROLLED

Hydrograph type	= Rational	Peak discharge	= 0.138 cfs
Storm frequency	= 100 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 125 cuft
Drainage area	= 0.030 ac	Runoff coeff.	= 0.55
Intensity	= 8.389 in/hr	Tc by User	= 5.00 min
IDF Curve	= Region 5.IDF	Asc/Rec limb fact	= 3/3



Hydrograph Report

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

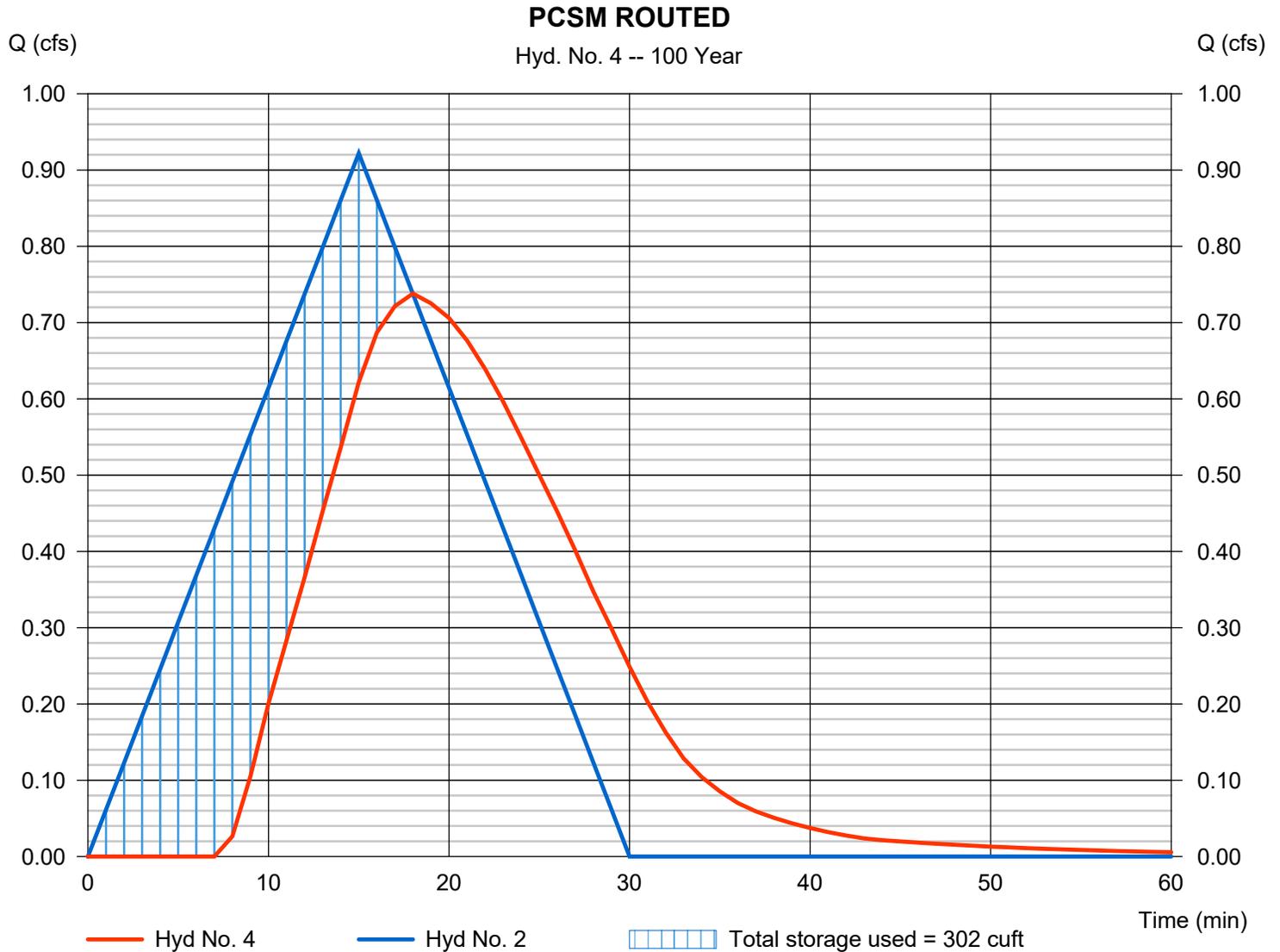
Friday, 07 / 2 / 2021

Hyd. No. 4

PCSM ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 0.738 cfs
Storm frequency	= 100 yrs	Time to peak	= 18 min
Time interval	= 1 min	Hyd. volume	= 730 cuft
Inflow hyd. No.	= 2 - CONTROLLED	Max. Elevation	= 368.30 ft
Reservoir name	= PCSM	Max. Storage	= 302 cuft

Storage Indication method used.



Hydrograph Report

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

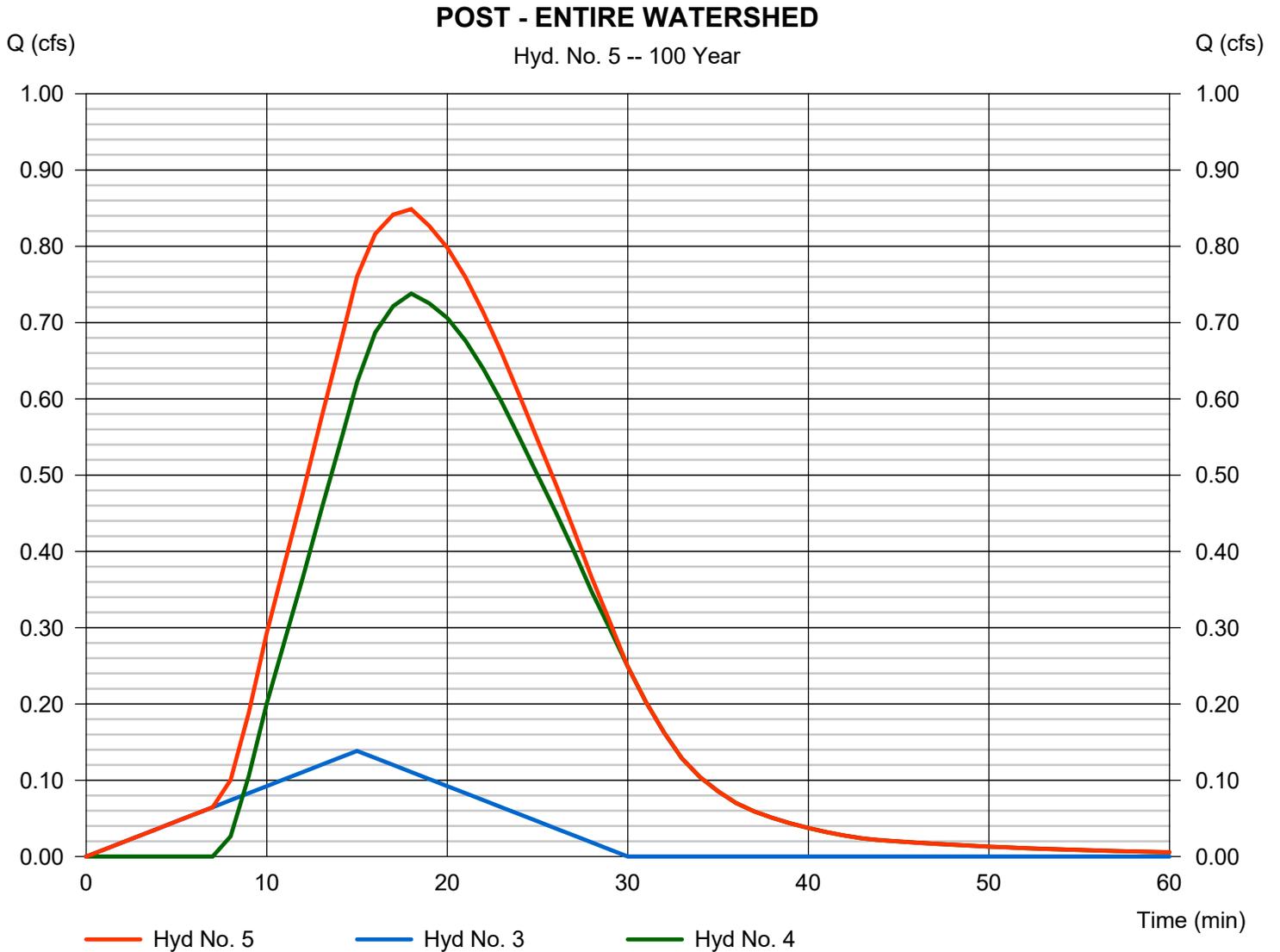
Friday, 07 / 2 / 2021

Hyd. No. 5

POST - ENTIRE WATERSHED

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 1 min
Inflow hyds. = 3, 4

Peak discharge = 0.849 cfs
Time to peak = 18 min
Hyd. volume = 854 cuft
Contrib. drain. area = 0.030 ac



Hydraflow Rainfall Report

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

Friday, 07 / 2 / 2021

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	22.1293	5.9000	0.7167	-----
2	65.5692	13.4000	0.9127	-----
3	0.0000	0.0000	0.0000	-----
5	26.5614	6.1000	0.6703	-----
10	27.5380	5.9000	0.6384	-----
25	28.9539	5.8000	0.6156	-----
50	78.9131	13.8000	0.8026	-----
100	61.8249	11.8000	0.7079	-----

File name: Region 5.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	3.99	3.05	2.51	2.15	1.89	1.70	1.55	1.43	1.32	1.24	1.16	1.10
2	4.60	3.69	3.09	2.67	2.35	2.10	1.90	1.74	1.60	1.49	1.39	1.30
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	5.29	4.12	3.44	2.98	2.65	2.40	2.20	2.04	1.90	1.79	1.69	1.60
10	5.99	4.71	3.96	3.45	3.08	2.80	2.58	2.39	2.24	2.11	2.00	1.90
25	6.69	5.29	4.47	3.91	3.51	3.20	2.95	2.75	2.58	2.43	2.31	2.20
50	7.49	6.20	5.32	4.68	4.19	3.80	3.48	3.22	3.00	2.81	2.64	2.50
100	8.39	6.98	6.03	5.34	4.82	4.40	4.06	3.78	3.54	3.34	3.16	3.00

T_c = time in minutes. Values may exceed 60.

Precip. file name: Sample.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	2.80	3.30	0.00	4.20	5.00	6.00	7.20	8.40
SCS 6-Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Watershed Model Schematic.....	1
Hydrograph Return Period Recap.....	2
1 - Year	
Summary Report.....	3
Hydrograph Reports.....	4
Hydrograph No. 1, Rational, PRE - ENTIRE WATERSHED.....	4
Hydrograph No. 2, Rational, CONTROLLED.....	5
Hydrograph No. 3, Rational, UNCONTROLLED.....	6
Hydrograph No. 4, Reservoir, PCSM ROUTED.....	7
Pond Report - PCSM.....	8
Hydrograph No. 5, Combine, POST - ENTIRE WATERSHED.....	9
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Summary Report.....	10
Hydrograph Reports.....	11
Hydrograph No. 1, Rational, PRE - ENTIRE WATERSHED.....	11
Hydrograph No. 2, Rational, CONTROLLED.....	12
Hydrograph No. 3, Rational, UNCONTROLLED.....	13
Hydrograph No. 4, Reservoir, PCSM ROUTED.....	14
Hydrograph No. 5, Combine, POST - ENTIRE WATERSHED.....	15
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Summary Report.....	16
Hydrograph Reports.....	17
Hydrograph No. 1, Rational, PRE - ENTIRE WATERSHED.....	17
Hydrograph No. 2, Rational, CONTROLLED.....	18
Hydrograph No. 3, Rational, UNCONTROLLED.....	19
Hydrograph No. 4, Reservoir, PCSM ROUTED.....	20
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Hydrograph No. 2, Rational, CONTROLLED.....	24
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Hydrograph No. 2, Rational, CONTROLLED.....	30
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Hydrograph No. 2, Rational, CONTROLLED.....	42
Hydrograph No. 3, Rational, UNCONTROLLED.....	43
Hydrograph No. 4, Reservoir, PCSM ROUTED.....	44
Hydrograph No. 5, Combine, POST - ENTIRE WATERSHED.....	45
IDF Report.....	46

Impervious Surface

Complete the impervious surface table (required).

Location: 608 West Wayne Avenue

Project Description: Driveway Addition

Gross Lot Area 92,746 **Sq. Ft.**

To be Completed by Radnor Township	
Permit Number:	_____
Submission Date:	_____
Shade Tree Approval Date:	_____
Final Approval Date:	_____
Zoning Approval:	_____
	Zoning Officer
Grading Permit Approval:	_____
	Township Engineer

Complete All Yellow Fields						
Cover Type	Existing Area (square feet)	Percentage of existing impervious surface area of your lot	Area of Impervious Removed (square feet)	Area of Added Impervious Cover (square feet)	Total Area (square feet)	Percentage of total impervious surface of your lot, as proposed
Building	5421		180	0	5241	
Walkway/sidewalk	2313		14	0	2299	
Patios, decks	969		0	0	969	
Driveway	2381		0	1784	4165	
Other	404		0	0	404	
Total	11488	12.4 %	194	1784	13078	14.1 %

Estimated Cubic Yards of Dirt Involved 500 Will this fill be taken off site ___ Yes No

Number of trees to be removed (over 6" in diameter) 1 Is Property in Historical District ___ Yes No

Place a check in the box of the Zoning District applicable to your lot. (required)

Zoning Table							
Zoning District	Maximum Impervious Cover (%)		Zoning District	Maximum Impervious Cover (%)		Zoning District	Maximum Impervious Cover (%)
R-1	22	<input type="checkbox"/>	CO 2,3 stories	50	<input type="checkbox"/>	GH_CR	95
R-2	30	<input type="checkbox"/>	C1	60	<input type="checkbox"/>	GH-BC	50
R-3	35	<input type="checkbox"/>	C-2	70	<input type="checkbox"/>	GH-OS	15
R-4	40	<input type="checkbox"/>	C-3	65	<input type="checkbox"/>	WBOD	NA
R-5 Semi/2 family detached	40	<input type="checkbox"/>	PI	45	<input type="checkbox"/>	PB	55
R-5 Multi Dwelling	36	<input type="checkbox"/>	PA	50	<input type="checkbox"/>	PLO	55
R-6	70	<input type="checkbox"/>	GH-N	60	<input type="checkbox"/>	FC	NA
R-IA	30	<input type="checkbox"/>	GH-GA	80	<input type="checkbox"/>	PLU	45

AC

N/A



RADNOR TOWNSHIP

ENGINEERING DEPARTMENT



Memorandum

To: Radnor Township Board of Commissioners

From: Stephen F. Norcini, PE, Township Engineer *Stephen F. Norcini*

CC: William M. White, Township Manager

Date: July 6th, 2021

309 Conestoga Road: Stormwater Waiver Request

The applicant is proposing to construct an 800 SF addition, and has determined that the ground does not meet the Township's Stormwater Management Ordinance's infiltration requirements.

The applicant is proposing to install rain barrels, and notes that the total impervious surface of the lot is reduced.

The plans and Gannett Fleming review letters are attached.



Gannett Fleming

*Excellence Delivered **As Promised***

Date: June 21, 2021

To: Stephen Norcini, P.E. – Township Engineer

From: Roger Phillips, PE

RE: 309 Conestoga Road – Stormwater Waiver Request
Grading Permit Application – GP App #204114

The applicant has submitted a grading permit for the construction of an 800 SF building addition. The applicant is requesting a waiver from §245-22 Groundwater Recharge in accordance with §245-22.A(2)(c)[2] of the Township's Stormwater Management Ordinance. The minimum infiltration requirement of 0.50 inches cannot be achieved.

The applicant conducted two test pits on the site. Soil features in test pit 1 exhibited redoximorphic features indicative of a high water table from 29" to 73" and water seeps were encountered at 46" and 80". Permeability testing was conducted for test pit 1 at 18" even though the required 24" isolation distance could not be met and resulted in a permeability rate of 0.27 in/hr. Soil features in test pit 2 exhibited redoximorphic features indicative of a high water table from 23" to 71" but no water was observed. Permeability testing was conducted for test pit 2 at 84" and resulted in an exceedingly slow permeability rate of 0.06 in/hr. The applicant is proposing rain barrels to collect the roof drains. The applicant is also proposing a net reduction in impervious cover.

The applicant has requested to appear before the Board of Commissioners to request a waiver from the above-mentioned section of the Ordinance and the implementation of the above-mentioned stormwater system.

In addition to the waiver request, the applicant must address the following item(s) prior to the issuance of the Grading Permit:

1. The applicant must address all other outstanding grading permit review comments.

If you have any questions or require any additional information, please contact me.

Very truly yours,

GANNETT FLEMING, INC.

Roger A. Phillips, P.E.
Senior Project Manager

Gannett Fleming, Inc.

Valley Forge Corporate Center • 1010 Adams Avenue • Audubon, PA 19403-2402

t: 610.650.8101 • f: 610.650.8190

www.gannettfleming.com

SITE ENGINEERING CONCEPTS, LLC

Consulting Engineering and Land Development Services

June 7, 2021

Board of Commissioners Radnor Township
301 Iven Avenue
Wayne, PA 19087

Re: Section 245-22 , Groundwater Recharge Waiver
309 Conestoga Road
Wayne, PA 19087

Dear Members of the Board:

The owner, Linda J. Casey, respectfully requests a waiver from Section 245-22 of the Township Code requiring groundwater recharge for projects adding new or replacement impervious coverage greater than 500 square feet. As detailed in this request letter, the minimum infiltration requirement of 0.50 inches cannot be achieved and a waiver is sought from the Township in accordance with Section 245-22.A(2)(c)[2].

The owners propose to construct a building addition. The proposed impervious coverage is 800 square feet.

A soil investigation was conducted by Mr. Kevin Sech, P.G., P.E., of HILBEC Engineering as required by Section 245-22. Mr. Sech's evaluation concluded that the soils on site did not achieve the required minimum infiltration requirement of 0.50 inches per hour. See the attached report dated April 15, 2021

The project is under 1,500 square feet and is not required to provide peak rate controls. To compensate for the zero-infiltration rate, the project was designed to decrease the overall impervious coverage. In addition, rain barrels are provided to capture the roof drains from the new addition.

Please refer to the attached engineering plan for the Grading Permit Application.

Should the township have any questions or require additional information, please contact me at psellman@site-engineers.com or 610.523.9002.

Sincerely,



Robert M. Lambert, P.E.

Impervious Surface

Complete the impervious surface table (required).

Location: 309 Conestoga Road

Project Description: Building Addition

Gross Lot Area 15,531 **Sq. Ft.**

To be Completed by Radnor Township	
Permit Number:	_____
Submission Date:	<u>6/15/21</u>
Shade Tree Approval Date:	<u>N/A</u>
Final Approval Date:	_____
Zoning Approval:	_____
	Zoning Officer
Grading Permit Approval:	_____
	Township Engineer

Complete All Yellow Fields						
Cover Type	Existing Area (square feet)	Percentage of existing impervious surface area of your lot	Area of Impervious Removed (square feet)	Area of Added Impervious Cover (square feet)	Total Area (square feet)	Percentage of total impervious surface of your lot, as proposed
Building	1,065		-84	776	1,757	
Walkway/sidewalk	280		-66	0	214	
Patios, decks	341		-153	0	188	
Driveway	94		0	0	94	
Other	542		-528	0	14	
Total	2,322	15.0 %	-831	776	2,267	14.6 %

Estimated Cubic Yards of Dirt Involved 50 Will this fill be taken off site Yes No

Number of trees to be removed (over 6" in diameter) 0 Is Property in Historical District Yes No

Place a check in the box of the Zoning District applicable to your lot. (required)

Zoning Table							
Zoning District	Maximum Impervious Cover (%)		Zoning District	Maximum Impervious Cover (%)		Zoning District	Maximum Impervious Cover (%)
R-1	22		CO 2,3 stories	50		GH_CR	95
R-2	30		C1	60		GH-BC	50
R-3	35	X	C-2	70		GH-OS	15
R-4	40		C-3	65		WBOD	NA
R-5 Semi/2 family detached	40		PI	45		PB	55
R-5 Multi Dwelling	36		PA	50		PLO	55
R-6	70		GH-N	60		FC	NA
R-IA	30		GH-GA	80		PLU	45

TO BE COMPLETED BY APPLICANT

Property Owner(s) Linda J. Casey

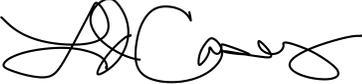
Address of Property 309 Conestoga Road, Wayne, PA 19087

Phone Number 215-200-0165 Email linda.casey@usdoj.gov

Engineer/Surveyor SITE Engineering Concepts, LLC c/o Robert Lambert

Phone Number 610-240-0450 Email rlambert@site-engineers.com

The undersigned hereby makes application for a Permit under Chapter 175 and any amendments there of:

Signature of Applicant 

Please note the following requirements:

1. Submit five (5) copies of the plan set with your application
2. Plans are to be no larger than 24" x 36", and shall be folded
3. Shade Tree Commission: If your project meets any of the following requirements, you will be required to attend the Shade Tree Commission Meeting, as well as submit an additional 2 (two) sets of plans and 1(one) flashdrive:
 - a. Any clearing activity which proposes the removal of six (6) or more trees with a Diameter at Breast Height (DBH) of 6" or greater
 - b. Grading in excess of 200 cubic yards, excavation in excess of 60 cubic yards
 - c. Grading for parking lots of 5 or more cars
 - d. Removal of a Heritage Tree (30" DBH or greater) in a non-emergency situation.
 - e. Forestry management and practices
 - f. Swimming pool permits
 - g. The Shade Tree Commission shall review, if directed by the Township Engineer, applications submitted to the Township for the following: Demolition permits on any building lot whereby the proposed work may impact or cause the removal of trees; and Commercial tree removal.
4. Stormwater Calculations:
 - a. Replacement of impervious surface is considered "new" impervious
 - b. There is no credit for the removal of impervious surface
 - c. Stormwater calculations are to be based on the total of all added impervious (not the net impervious surface)

GENERAL NOTES

- SITE DEED WAS NOT AVAILABLE AT COURTHOUSE. BOUNDARY SHOWN IS BASED ON EXISTING RECORDS AND MAY BE SUBJECT TO CHANGE UPON REVIEW OF DEED.
- PARCEL INFORMATION (309 CONESTOGA ROAD):
FOLIO# 36-03-01585-00 Block 36-12 Unit 451
DEED BOOK 1/4 PAGE 1/4
TOTAL LOT AREA: 15,531 Sq. Ft.
- CONTOURS PLOTTED FROM FIELD RUN SURVEY. APPROXIMATE ELEVATION BENCHMARK IS BASED ON WGS84 DATUM.
- THIS SURVEY IS NOT TO BE USED FOR TREE REMOVAL ALONG PROPERTY LINES. TREE LOCATIONS ARE APPROXIMATE. FOR TREE REMOVAL PURPOSES, PROPERTY LINES MUST BE FIELD MARKED WITH STAKES SET TO ESTABLISH EXACT TREE OWNERSHIP.
- THERE IS NO IDENTIFIABLE FLOOD PLAIN AREAS WITHIN THE PROJECT SITE AS ILLUSTRATED ON COMMUNITY PANEL NUMBER 420428-0017F OF THE FLOOD INSURANCE RATE MAP AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE TOWNSHIP OF RADNOR, PENNSYLVANIA.
- EXISTING SUBSURFACE UTILITY INFORMATION INDICATED IS BASED UPON VISUAL FIELD INSPECTION BY JEFFERY P. TURNER, PLS. SUCH INFORMATION CONCERNING THE SIZE, LOCATION, DEPTH, QUANTITY, ETC. OF SUBSURFACE UTILITIES IS APPROXIMATE IN NATURE AND HAS BEEN OBTAINED AS A SUPPLEMENT TO THE SITE SURVEY. THE INFORMATION PROVIDED IS REPRESENTATIVE OF SUBSURFACE CONDITIONS ONLY AT LOCATIONS AND DEPTHS WHERE SUCH INFORMATION WAS OBTAINED. THERE IS NO EXPRESSED OR IMPLIED AGREEMENT THAT UTILITY SIZE, LOCATION, DEPTH, QUANTITY, ETC. AS SHOWN EXISTS BETWEEN EXPLORED LOCATIONS. ACCORDINGLY, UTILITY INFORMATION SHOWN SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. IT IS INCUMBENT UPON THE CONTRACTOR TO VERIFY THE SIZE, LOCATION, DEPTH, QUANTITY, ETC. OF ALL UTILITIES BEFORE EXCAVATION.

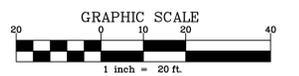
ZONING SUMMARY

ORDINANCE ITEM	REQUIREMENT	EXISTING	PROPOSED
R-3 - RESIDENTIAL DISTRICT			
MIN. LOT AREA	10,000 SF	15,531 SF	15,531 SF
MIN. LOT WIDTH @ BLDG	70 FT	52 FT*	52 FT
MIN. SETBACKS			
FRONT	35 FT	30 FT*	30 FT
REAR	35 FT	191 FT	166 FT
SIDE (INDIVIDUAL/AGGREGATE)	15 FT / 35 FT	6 FT / 15 FT*	6 FT / 15 FT
MAX. BUILDING HEIGHT	35 FT	<35 FT	<35 FT
MAX. BUILDING COVERAGE	25%	6.7%	11.2%
MAX. IMPERVIOUS COVERAGE	35%	15.0%	14.8%

*DENOTES EXISTING NON-CONFORMITY

IMPERVIOUS COVERAGE SUMMARY

309 CONESTOGA RD (36-12-451)				
GROSS LOT AREA	BUILDINGS	REMOVE	ADD	PROPOSED
15,531	1,045	-84	776	1737
ASPHALT	94	0	0	94
WALKS & CONC.	280	-66	24	238
WALLS	65	-51	0	14
WOOD DECK & WOOD STEPS	341	-153	0	188
WINDOW WELLS	20	0	0	20
GRAVEL	477	-477	0	0
TOTAL BUILDING COVERAGE	1045			1737
TOTAL SITE IMPERVIOUS COVERAGE	2322	-831	800	2291



PROJECT NARRATIVE

THE APPLICANT PROPOSES TO CONSTRUCT A BUILDING ADDITION. THIS DEVELOPMENT PROPOSES LESS THAN 1,500 SQUARE FEET OF NEW IMPERVIOUS AREA. PROJECT DOES NOT REQUIRE PEAK RATE DISCHARGE OR WATER QUALITY CONTROLS. THE SITE DOES NOT INFILTRATE DURING FIELD TESTING. A WAIVER IS REQUESTED FOR SECTION 245-22. GROUNDWATER RECHARGE IN LIEU OF INFILTRATION, AN DECREASE IN TOTAL IMPERVIOUS COVERAGE AND RAIN BARRELS ARE PROPOSED.

WAIVER REQUESTED

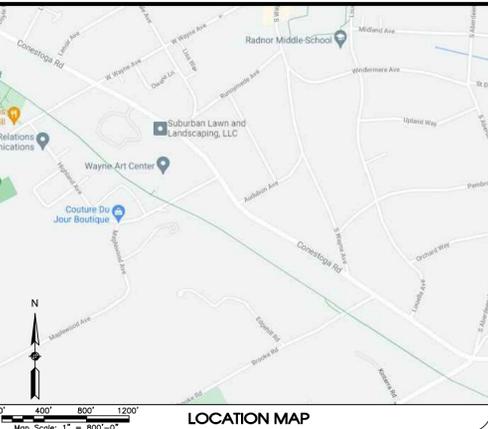
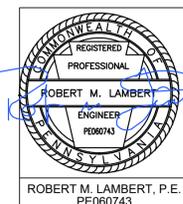
THE APPLICANT RESPECTFULLY REQUESTS A WAIVER OF SECTION 255-22 REGARDING GROUNDWATER RECHARGE. THE MINIMUM INFILTRATION REQUIREMENT OF 0.50 INCHES CANNOT BE ACHIEVED AND A WAIVER IS SOUGHT FROM THE TOWNSHIP IN ACCORDANCE WITH SECTION 245-22.A(2)(C)(2).

NUM.	DATE	REVISION

PLAN PREPARED BY:
SITE ENGINEERING CONCEPTS, LLC
P.O. BOX 1992
SOUTHEASTERN, PA 19399
P: 610-240-0450 F: 610-240-0451 E: INFO@SITE-ENGINEERS.COM

PLAN PREPARED FOR:
LINDA J. CASEY
309 CONESTOGA ROAD
WAYNE, PA 19087
RADNOR TOWNSHIP DELAWARE COUNTY PENNSYLVANIA
JUNE 4, 2021

GRADING PERMIT PLAN
SHEET 1 of 1
SCALE: 1" = 20'



NOTE: THE EXACT LOCATION AND DEPTH OF EXISTING UTILITIES CANNOT BE GUARANTEED. ALL UTILITIES DEPICTED ON THIS PLAN HAVE BEEN DEVELOPED FROM ABOVE GROUND OBSERVATIONS AND/OR EXISTING RECORDS. CONTRACTOR MUST VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. PENNSYLVANIA STATE LAW REQUIRES NOTIFICATION TO 1-800-242-1776 3-10 BUSINESS DAYS PRIOR TO ANY EXCAVATION.



CONSTRUCTION STAGING

- CONTRACTOR MUST NOTIFY TOWNSHIP 48 HOURS PRIOR TO BEGINNING OF CONSTRUCTION TO SCHEDULE ANY REQUIRED TOWNSHIP INSPECTIONS.
- STAGE 1. INSTALL SILT FENCE. THE LIMIT OF DISTURBANCE IS TO BE FIELD DELINEATED TO THE SATISFACTION OF THE TOWNSHIP ENGINEER PRIOR TO THE START OF ANY EARTH DISTURBANCE.
 - STAGE 2. INSTALL ROCK CONSTRUCTION ENTRANCE IF CLEANING OF TIRES ON EXISTING DRIVEWAY IS INEFFECTIVE.
 - STAGE 3. FIELD LOCATE ALL UTILITIES AND COORDINATE WITH UTILITIES FOR SHUTOFF/REMOVAL/CONSTRUCTION AS NECESSARY. IMMEDIATELY STABILIZE ANY DISTURBED AREAS.
 - STAGE 4. BEGIN CONSTRUCTION.
 - STAGE 5. REMOVE EXISTING STRUCTURES AS NOTED ON PLAN. IMMEDIATELY STABILIZE DORMANT DISTURBED AREAS WITH TEMPORARY/PERMANENT SEED MIX AND MULCHING, EROSION CONTROL BLANKET, OR STONE, AS APPROPRIATE. MULCH AT 3 TONS PER ACRE, AND LIME AS PRESCRIBED. AREAS TO BE COVERED WITH IMPERVIOUS SURFACES MUST BE BROUGHT UP TO STONE SUBBASE AS SOON AS PRACTICAL OR OTHERWISE BE SEEDED AND MULCHED WITH TEMPORARY SEED MIX.
 - STAGE 6. COMPLETE CONSTRUCTION. IMMEDIATELY STABILIZE DORMANT DISTURBED AREAS WITH THE APPROPRIATE SEED MIXTURE.
 - STAGE 7. ONCE SITE IS STABILIZED WITH 70% COVERAGE, CONTRACTOR MUST REMOVE EROSION AND SEDIMENTATION CONTROLS. AREAS DISTURBED DURING REMOVAL MUST BE STABILIZED IMMEDIATELY.
- START: SUMMER 2021
END: FALL 2021

SEEDING & MULCHING NOTES

- ANY DISTURBED AREA ON WHICH CONSTRUCTION ACTIVITY HAS CEASED MUST BE IMMEDIATELY SEEDED AND MULCHED. DURING NON-GERMINATION PERIODS, MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE (1) YEAR SHALL BE IMMEDIATELY MULCHED AND SEEDED WITH A QUICK-GROWING TEMPORARY SEED MIXTURE. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE REDISTURBED WITHIN ONE YEAR MUST BE IMMEDIATELY MULCHED AND SEEDED WITH THE PERMANENT SEED MIXTURE.
- DIVERSIONS, CHANNELS, SWALES, SEDIMENT BASINS, SEDIMENT TRAPS AND SOIL STOCKPILES SHALL BE SEEDED AND MULCHED IMMEDIATELY.
- HAY/STRAW MULCH MUST BE APPLIED AT A RATE OF AT LEAST 1 LB PER 100 SF.
- AREAS UTILIZING VEGETATIVE STABILIZATION MUST BE SEEDED AND MULCHED WITHIN THE APRIL 15th TO OCTOBER 15th GERMINATION WINDOW. SEEDING WILL BE ACCOMPLISHED THROUGH HYDROSEEDING OR CONVENTIONAL SEEDING METHODS.
- GEOTEXTILE EROSION CONTROL CHANNEL LINING AND SLOPE PROTECTION SHALL BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS IMMEDIATELY UPON THE COMPLETION OF GRADING ACTIVITIES.

PERMANENT SEED MIXTURE

PARTS BY WEIGHT	PERCENT PURITY	GERMINATION
KENTUCKY BLUE GRASS VARIETIES	33%	95%
FENESTAR OR PENNFINE	33%	95%
PERENNIAL RYEGRASS	33%	95%
ANNUAL RYEGRASS	33%	95%

- MULCH:** SHALL BE HAY WHICH IS FREE OF WEEDS AND SEEDS, NOT MOLDED OR ROTTEN, AND SHALL BE APPLIED TO ALL AREAS AT A RATE OF 3 TONS PER ACRE. ON STEEP SLOPE AREAS (GREATER THAN 3:1), COVER SEEDED AREAS WITH AN ACCEPTABLE GEOTEXTILE EROSION CONTROL BLANKET.
- SOD:** KENTUCKY BLUEGRASS SOD (IF CALLED FOR). SOD SHALL BE GROWN UNDER THE SUPERVISION OF THE PENNSYLVANIA DEPARTMENT OF AGRICULTURE BUREAU OF PLANT INDUSTRY OR SHALL BE COMPOSED OF ONLY BLUE TAC CERTIFIED SEED.
- SEED:** ALL SEED SHALL BE FRESH. ALL NEW CROP SEED SHALL BE LABELED IN ACCORDANCE WITH THE U.S. DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS UNDER THE FEDERAL SEED ACT IN EFFECT ON THE DATE OF INVITATION FOR BIDS. ALL SEED SHALL BE FURNISHED IN SCALE STANDARD TO KIND, PERCENT BY WEIGHT, PURITY AND GERMINATION. THE GRASS SEED SHALL CONTAIN THE PERCENTAGES OF PURITY AND GERMINATION INDICATED ON THE LIST FURNISHED WITH THE APPLICABLE PLAN. SEED MIX SHALL BE AS SPECIFIED. SPREAD AT THE RATE OF 5 POUNDS PER 1,000 SQUARE FEET (MINIMUM). FOR SLOPE 3:1 OR GREATER, USE 7.5 POUNDS OF SEED PER 1,000 SQUARE FEET.

TEMPORARY SEED MIXTURE

SITE PREPARATION: APPLY 1 TON OF AGRICULTURAL-GRADE LIMESTONE PER ACRE PLUS FERTILIZER AT THE RATE OF 50-50-50 PER ACRE. WORK INTO THE SOIL WHERE POSSIBLE. SECURE A SOIL TEST BEFORE APPLICATION OF PERMANENT SEEDING. AFTER SEEDING, MULCH WITH HAY OR STRAW AT A RATE OF 3 TONS PER ACRE.

SPECIES:	LBS/ACRE:
FOR SPRING SEEDING (UP TO JUNE 15)	
ANNUAL RYEGRASS	40
OR SPRING OATS	96 (3 BU)
OR SPRING OATS PLUS RYEGRASS	64 LBS OATS (2 BU) + 20 LBS ANNUAL OR PERENNIAL RYEGRASS
OR WINTER WHEAT	180 (3 BU)
OR WINTER RYE	168 (3 BU)
FOR LATE SPRING & SUMMER SEEDING (JUNE 16 TO AUGUST 15)	
ANNUAL RYEGRASS	40
OR JAPANESE OR FOXTAIL MILLET	35
OR SUDANGRASS	40
OR SPRING OATS	96 (3 BU)
OR WINTER WHEAT	180 (3 BU)
OR WINTER RYE	168 (3 BU)
FOR LATE SUMMER & FALL SEEDING (AUGUST 16 AND LATER)	
ANNUAL RYEGRASS	40
OR WINTER RYE	168 (3 BU)
OR WINTER WHEAT	180 (3 BU)
OR SPRING OATS	96

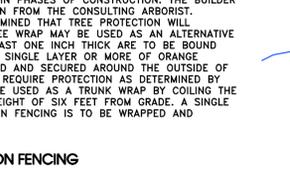
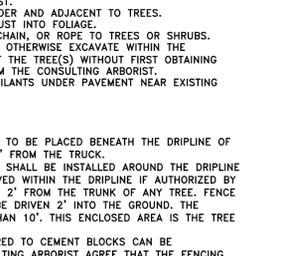
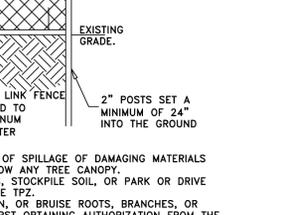
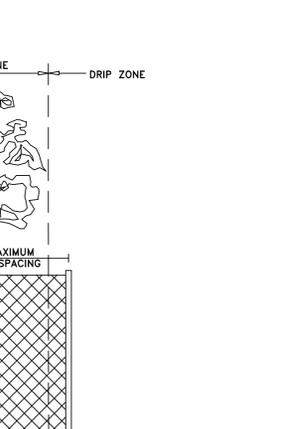
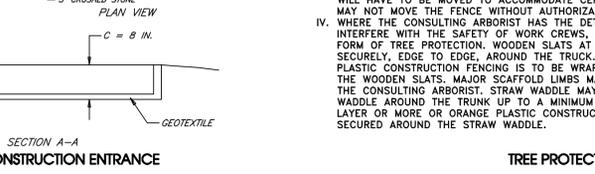
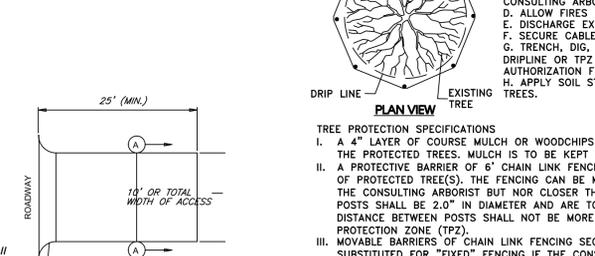
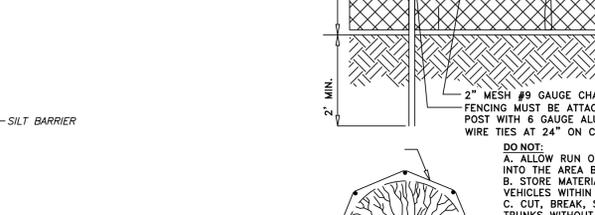
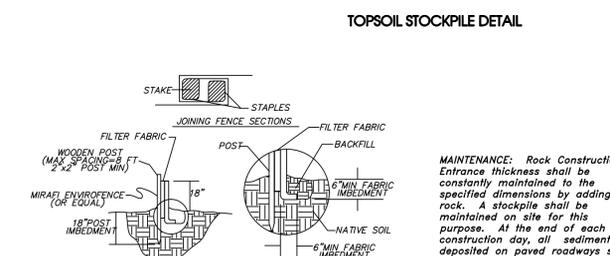
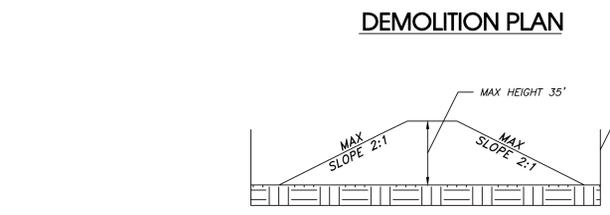
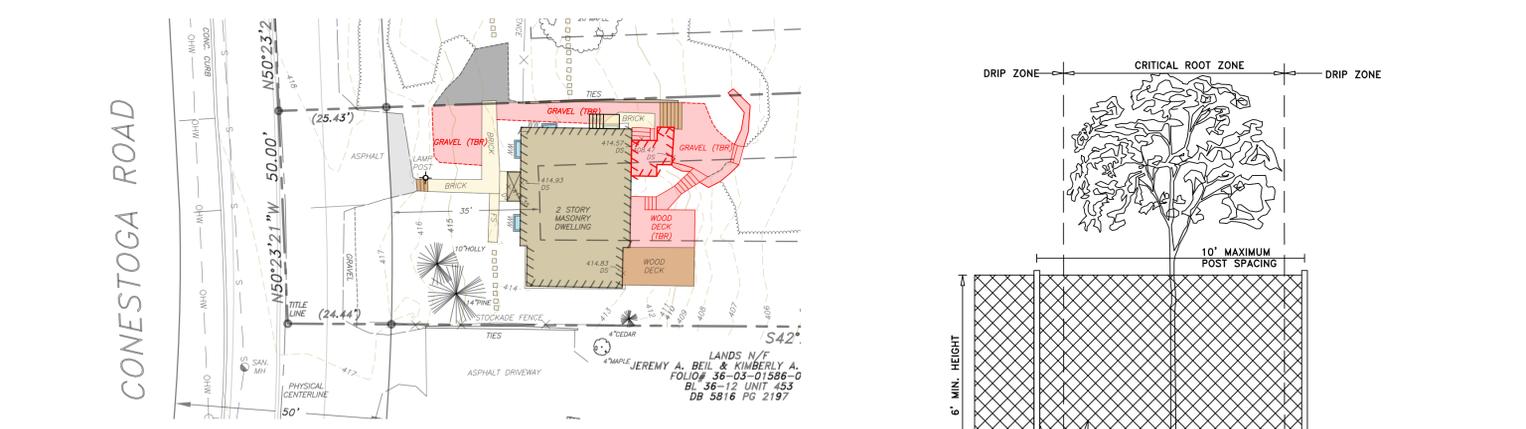
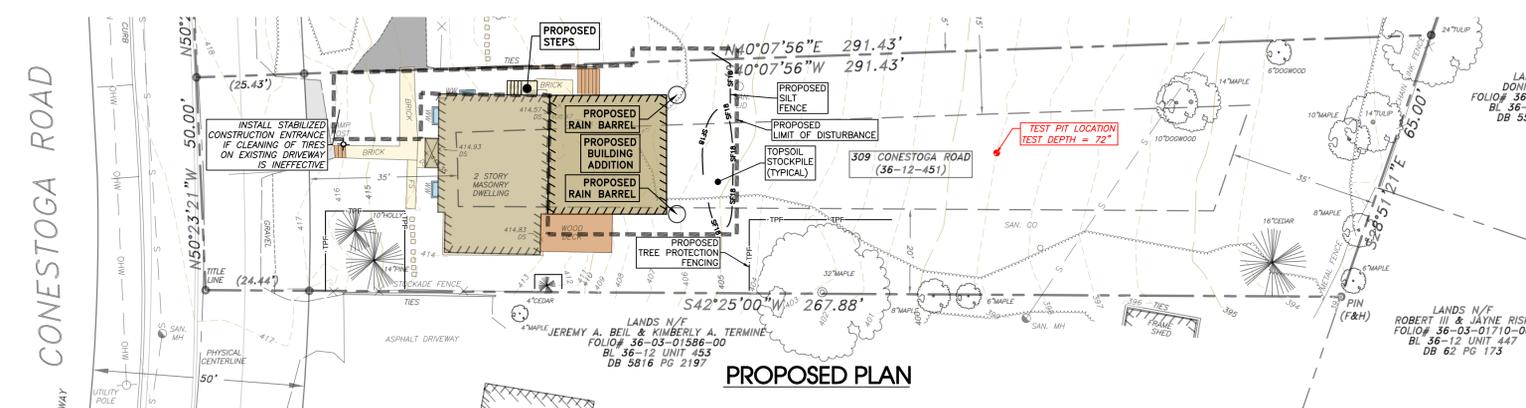
(CAN BE USED BUT WILL WINTER KILL)

EROSION CONTROL MAINTENANCE REQUIREMENTS

- SILT BARRIER, TREE PROTECTION FENCING, AND THE ROCK CONSTRUCTION ENTRANCE MUST BE CHECKED ON A DAILY BASIS AND AFTER ALL STORM EVENTS TO ENSURE THAT THEY ARE STILL FUNCTIONING PROPERLY. IF NOT, THEY SHALL BE REPLACED OR CLEANED OF SEDIMENT.
- SEDIMENT MUST BE REMOVED FROM SILT BARRIER WHEN ACCUMULATIONS REACH 1/2 OF THE ABOVE GROUND HEIGHT OF THE FENCE OR AS RECOMMENDED BY MANUFACTURER.
- ANY SECTION OF SILT BARRIER WHICH HAS BEEN UNDERMINED OR TOPPED MUST BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET.
- DIVERSION BERMS, STONED CONSTRUCTION STAGING AREAS, AND INLETS/PIPING SHALL BE PROVIDED AS REQUIRED OR AS DIRECTED BY THE TOWNSHIP SO AS TO ENSURE ACCEPTABLE CONDITIONS DURING THE CONSTRUCTION PHASE.

EROSION AND SEDIMENTATION CONTROL NOTES

- EROSION AND SEDIMENT B MPS MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE B MPS.
- AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT B MPS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE B MPS MUST BE STABILIZED IMMEDIATELY.
- CONTRACTOR MUST WASH VEHICLE TIRES PRIOR TO LEAVING SITE. SHOULD WASHING TIRES PROVE INEFFECTIVE, CONTRACTOR MUST INSTALL ROCK CONSTRUCTION ENTRANCE.
- CONTRACTOR MUST CLEAN DRIVEWAY AND ROAD OF ANY SEDIMENT AT THE END OF EACH WORK DAY.
- STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.
- UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT B MPS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT B MPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRAVING, RESEEDING, REMULCHING AND RETENNING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL B MPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT B MPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.



RADNOR TOWNSHIP

ENGINEERING DEPARTMENT



Memorandum

To: Radnor Township Board of Commissioners

From: Stephen F. Norcini, PE, Township Engineer *Stephen F. Norcini*

CC: William M. White, Township Manager

Date: July 7, 2021

Re: 200 South Ithan Avenue- Preliminary Land Development Approval

The project proposed is for a nine-lot subdivision on 6.946 acres located at 200 South Ithan Avenue, the site of a former mansion. The street for the nine homes will front on South Ithan Avenue.

The applicant, GPX Ithan Development, was previously before the Commissioners for caucus, they are now seeking **Preliminary Plan approval**. If the Commissioners do grant Preliminary Plan approval, the applicant will be before the Planning Commission and Commissioners again for Final Plan Approval.

The Solicitor has provided the following:

1. Approval Resolution
2. Conditional Use Adjudication
3. The latest consultant review letters (as referenced in the Approval Resolution)

Conditional Use Hearing

The property is located in the R-2 Zoning District. The proposed Density Modification use is permitted only by Conditional Use in the R-2 District. A Conditional Use hearing was held on January 25, 2021. The adjudication is attached. The order is as follows:

1. *Compliance with all applicable requirements of the Township's Subdivision and Land Development ordinance. Applicant's Conditional Use*

plan is a representation of how the use would be developed and this Order does not constitute an approval of that specific plan.

2. *Construction of a 5-foot-wide sidewalk from the existing sidewalk located along the frontage of the Agnes Irwin School along S. Ithan Avenue to its intersection with Meadowood Street as shown on the aerial map attached hereto as Exhibit "B".*

3. *The foregoing sidewalk construction is subject to acquisition by the Township for any necessary construction easements or areas outside of the public right-of-way. In the event that the Township is unable to acquire any of the necessary construction easements or additional right-of-way such that the sidewalks cannot be installed by the Applicant, the cost of such design and construction shall be contributed to the Township in a dedicated sidewalk fund. The sidewalk costs shall be escrowed with all other public improvements prior to recordation of an approved final plan.*

4. *Compliance with applicable County and State rules, regulations, and statutes.*

Land Development Application

After the Conditional Use hearing, the applicant submitted a Land Development application. GPX was before the Planning Commission several times. At the June 7th, 2021 Planning Commission, the planners voted for recommendation (6-0) as follows:

Motion to recommend the grant of Preliminary Plan approval conditioned on:

- 1) compliance with the June 1, 2021 Gannett Fleming and the May 28, 2021 Gilmore and Associates letters*
- 2) redesign of the entrance to be at 90° angle with South Ithan Avenue*
- 3) Upon the removal of barbed wire fencing on the development site and on open space areas, with the cooperation of the HOA.*
- 4) The PC further recommends the grant of all waivers requested provided that the Waiver of sidewalks along the S. Ithan Avenue frontage is expressly conditioned on compliance with conditions regarding sidewalks set forth in the CU Adjudication dated 3/4/21.*

Enclosures: Approval Resolution
Adjudication
Consultant Review Letters
Plan Set

**RESOLUTION NO. 2021-79
RADNOR TOWNSHIP**

**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE
COUNTY, PENNSYLVANIA, APPROVING THE
PRELIMINARY LAND DEVELOPMENT PLAN OF GPX
REALTY PARTNERS FOR THE PROPERTY LOCATED AT
200 SOUTH ITHAN AVENUE**

WHEREAS, GPX Realty Partners (“Applicant”) submitted an application for Preliminary Land Development Plan approval for the property located at 200 South Ithan Avenue;

WHEREAS, the Plan has been reviewed by both the Radnor Township Planning Commission and the Delaware County Planning Commission;

WHEREAS, the Applicant proposes to develop the parcel in order to construct nine (9) single family homes with driveway access to a new cul-de-sac street located between Chalous and Gramont Lane; and

WHEREAS, the Radnor Township Board of Commissioners now intends to approve the Preliminary Land Development Plan, subject to certain terms and conditions.

NOW, THEREFORE, be it hereby *RESOLVED* that the Radnor Township Board of Commissioners does hereby approve the Applicant’s Preliminary Land Development Plan prepared by Schock Group, LLC, consisting of eleven (11) sheets, dated June 29, 2021 (“Plan”), subject to the following Preliminary Plan approval conditions:

1. Compliance with the correspondence of Gannett Fleming dated July 2, 2021, a copy of which is attached hereto and incorporated herein as *Exhibit “A”*.
2. Compliance with the correspondence of Gilmore & Associates dated July 6, 2021, a copy of which is attached hereto and incorporated herein as *Exhibit “B”*.
3. Compliance with the Conditional Use decision of the Radnor Township Board of Commissioners dated February 22, 2021, a copy of which is attached hereto and incorporated herein as *Exhibit “C”*.
4. The Applicant shall comply with all other applicable ordinances with respect to sewage, stormwater management, zoning and building, and all county, state, and federal rules, regulations, and statutes.
5. The Applicant shall execute Development and Financial Security Agreements in a form and manner to be approved by the Township Engineer and Township Solicitor.

6. The Applicant shall remove the barbed wire fencing on the development site and on open space with the cooperation of the proposed Homeowner's Association.

In addition to the foregoing conditions of the Preliminary Land Development Plan approval, the following Subdivision and Land Development Ordinance waivers are resolved as follows:

- a. Section 255-20.B(1)(n) – regarding existing features within 500 ft of the site.

 X Approved _____ Denied

- b. Section 255-27-C(1) – to omit the installation of sidewalks along a minor collector street (South Ithan Avenue).

 X Approved _____ Denied

SO RESOLVED, at a duly convened meeting of the Board of Commissioners of Radnor Township conducted on this _____ day of _____, 2021.

RADNOR TOWNSHIP

By: _____
Name: Jack Larkin
Title: President

ATTEST: _____

EXHIBIT A

EXHIBIT B

EXHIBIT C

**BEFORE THE RADNOR TOWNSHIP
BOARD OF COMMISSIONERS**

IN RE: APPLICATION OF GPX ITHAN DEVELOPMENT LLC

ADJUDICATION

I. Background.

The Radnor Township Board of Commissioners held a conditional use hearing on January 25, 2021 on the application of GPX Ithan Development LLC (“Applicant”). The Applicant’s Conditional Use application was received by the Township on December 16, 2020 for a 9-lot density modification development consisting of single-family homes. The Applicant was represented by Nicholas Caniglia, Esquire at the hearing. The hearing was advertised in the Delco Daily Times on January 11, 2021 and January 18, 2021. Proofs of publication are on file at the Radnor Township Municipal Building. A stenographic record of the hearing was taken. At hearing, the Board of Commissioners was represented by the Township Solicitor, John B. Rice, Esquire. Commissioners Jack Larkin, Moira Mulrone, Lisa Borowski, Jake Abel, Sean Farhy, Damian Enderle and Richard Booker were present for the hearing. No one requested party status nor was anyone granted party status at the hearing.

The following exhibits were admitted without objection at the hearing:

Applicants Exhibits

- A-1 Conditional Use Application with attachments A-G
- A-2 Record Plan dated 10/22/84, last revised 2/17/85 at Plan Volume 14, Page 226 at the Delaware County Recorder of Deeds Office
- A-3 Preliminary Subdivision and Land Development Plan dated January 5, 2021 with attached sheets 1-8 and sheets LOO1 and L101
- A-4 Stormwater analysis prepared by the Shock Group
- A-5 Homeowners Declaration of Trianon
- A-6 Conceptual Home

A copy of Applicant’s exhibit list is attached to this Adjudication as *Exhibit “A”*.

Board Exhibits

- B-1 Proof of Advertisement for hearing
- B-2 Correspondence from Trianon HOA President Michelle Hunn, dated January 22, 2021

Based on the testimony and evidence presented, the Board hereby adopts the following Findings of Fact, Conclusions of Law and Order.

II. Findings of Fact.

1. The Applicant is GPX Ithan Development LLC and is a limited liability company formed under the laws of Pennsylvania with a registered address of 14 Dartmouth Road, Haverford, PA 19041.
2. The Applicant acquired the subject property by Deed dated February 27, 2020 from Julie Charbonneau.
3. The proposed development (“Property”) is located at 200 S. Ithan Road and consists of the following Delaware County Folio Nos:
 - a. #36-04-02700-03
 - b. # 36-04-02700-51
 - c. #36-04-02220-79
 - d. # 36-04-02344-00
4. The Property consists of 6.946 acres and is located in the Township’s R-2 Zoning District.
5. The Property is part of a recorded density modification development which was approved by the Radnor Board of Commissioners pursuant to Resolution No. 84-47 on December 26, 1984 (“1984 Plan”). The property is identified on the 1984 Plan as Lots 1, 2, 57 and 58.
6. The 1984 Plan permitted the construction of 57 single family housing dwelling units.
7. The Applicant’s Plan proposes to construct a cul-de-sac road which would service nine new dwelling units and intersect with S. Ithan Road. There are currently no sidewalks along the property frontage of the original 1984 Trianon Development.
8. The Township received and marked at the hearing correspondence dated January 22, 2021, from the president of the President of the Trianon Homeowners Association in support of Applicant’s proposed Plan.
9. Applicant’s planner testified that he estimated nine new students across all grades would come from the development and that the development would have a positive fiscal impact on the Township and School District revenues.
10. Applicant’s traffic engineer testified that the traffic generated by the project would have a minimal effect on existing traffic conditions. The proposed new road meets all applicable site distance requirements.

III. Conclusions of Law.

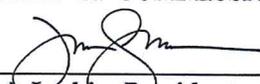
1. The property is located in the R-2 Zoning District.
2. A Density Modification Use is only permitted by conditional use within the R-2 Zoning District and must be served by public water and public sewer.
3. The property is part of the overall 1984 Trianon Subdivision Plan which provides for 5.57 acres of open space maintained by the Trianon Homeowners Association.
4. The proposed subdivision Plan will be incorporated into the Trianon Homeowners Association.
5. Applicant's proposed Plan of 9 lots will bring the total number of dwelling units to 66 and constitutes a revision of the 1984 final Plan.
6. Applicant must still comply with the Township's Subdivision and Land Development ordinance regulations for preliminary and final Plan approval.
7. Applicant's proposed Plan meets all of the dimensional, area and building coverage requirements of the R-2 Zoning District.

ORDER

AND NOW, this 22nd day of February 2021, after due deliberation and discussion at a public hearing, the Radnor Township Board of Commissioners does hereby approve the conditional use application of GPX Ithan Development LLC, subject to the following conditions:

1. Compliance with all applicable requirements of the Township's Subdivision and Land Development ordinance. Applicant's Conditional Use plan is a representation of how the use would be developed and this Order does not constitute an approval of that specific plan.
2. Construction of a 5-foot-wide sidewalk from the existing sidewalk located along the frontage of the Agnes Irwin School along S. Ithan Avenue to its intersection with Meadowood Street as shown on the aerial map attached hereto as *Exhibit "B"*.
3. The foregoing sidewalk construction is subject to acquisition by the Township for any necessary construction easements or areas outside of the public right-of-way. In the event that the Township is unable to acquire any of the necessary construction easements or additional right-of-way such that the sidewalks cannot be installed by the Applicant, the cost of such design and construction shall be contributed to the Township in a dedicated sidewalk fund. The sidewalk costs shall be escrowed with all other public improvements prior to recordation of an approved final plan.
4. Compliance with applicable County and State rules, regulations, and statutes.

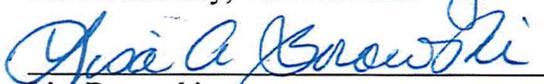
RADNOR TOWNSHIP
BOARD OF COMMISSIONERS



Jack Larkin, President



Moira Mulrone, Vice-President



Lisa Borowski

Nay _____
Jake Abel

Nay _____
Richard F. Booker, Esquire


Damien Enderle

Nay _____
Sean Farhy

Date of Mailing: 3/4/21

NICHOLAS J. CANIGLIA, ESQUIRE
PIERCE, CANIGLIA & TAYLOR
125 Strafford Avenue, Suite 110
Wayne, PA 19087
610-688-2626
nick@piercecanigliataylor.com
Attorney ID# 27968

ATTORNEY FOR APPLICANT
GPX ITHAN DEVELOPMENT LLC

**REQUEST OF GPX ITHAN DEVELOPMENT LLC FOR CONDITIONAL USE OF
PROPERTY LOCATED AT 200 S. ITHAN AVENUE, RADNOR TOWNSHIP, PA**

EXHIBIT LIST

<u>Exhibit #</u>	
A-1	Conditional Use Application Exhibit A – Deed dated 2/26/2020 to Applicant Exhibit B – Resolution No. 84-47 from Board of Commissioners approving Density Modification Development of 38.077 acres Exhibit C – Approved Plan per Resolution No. 84-47 Exhibit D - Generalized Site Plan Exhibit E – Grading Plan Exhibit F – Planting Plan Exhibit G – Developmental Impact Statement
A-2	Recorded Record Plan dated 10/22/84 last revised 2/17/85 recorded in Office of Recorder of Deeds of Delaware County on 2/19/85, Plan Volume 14, page 226
A-3	Preliminary Subdivision and Land Development Plan dated January 5, 2021 submitted to Radnor Township Sheet 1 – Illustrative Site Plan Sheet 2 – Record Plan Sheet 3 – Approved Plan of Trianon Sheet 4 – Existing Conditions Plan Sheet 5 – Soil, Water Resources & Vicinity Plan Sheet 6 – Development Plan Sheet 7 – Construction Details Sheet 8 – Construction Details Sheet L001 – Removals Plan Sheet L101 – Planting Plan
A-4	Stormwater Analysis
A-5	Homeowners Declaration of Trianon
A-6	Conceptual Home

200 South Ithan Ave.

Conditional Use Hearing
Required Sidewalk

200 S. Ithan
Avenue

Meadowood
Road

Sidewalk
-connect to the existing sidewalk at AIS
-terminate at Meadowood Road with
ADA curb ramp
-5' wide, concrete, +/- 1,200 LF

Legend

Agnes Irwin
School

Exhibit "B"

500 ft

Meadowood Rd





*Excellence Delivered **As Promised***

MEMORANDUM

Date: July 2, 2021

To: Stephen Norcini, P.E. – Township Engineer

From: Roger Phillips, PE

cc: Kevin W. Kochanski, RLA, CZO – Director of Community Development
Mary Eberle, Esq. – Grim, Biehn, and Thatcher
Damon Drummond, P.E. – Gilmore & Associates, Inc.
Patricia Sherwin – Radnor Township Engineering Department

RE: 200 Ithan Avenue
Preliminary Subdivision Plans

Date Accepted: 10/06/2020
90 Day Review: 05/30/2021 extended to 07/15/2021

Gannett Fleming, Inc. has completed a review of the Preliminary Land Development Plan submitted for the referenced project for compliance with the Radnor Township Code. The Plan was also reviewed for conformance with Subdivision and Land Development, Zoning and other applicable codes of the Radnor Township.

The applicant is proposing to subdivide the property into nine lots and construct a single-family home on each lot. This project is located within the R-2 district of the Township. The applicant has indicated that this will be developed as a modification to a previous density modification land development plan approved in the 1980's.

The applicant appeared before the Board of Commissioners on January 25, 2021 for a conditional use hearing. A copy of the adjudication is attached to this letter.

The applicant has indicated that the following waivers are being requested:

1. §255-20.B(1)(n) - Existing features within 500ft of the site, the applicant has provided an aerial plan on Sheet 5 of the plan set.
2. §255-27-C(1) – To omit the installation of sidewalks along a minor collector street (South Ithan Avenue)

Gannett Fleming, Inc.

Valley Forge Corporate Center • 1010 Adams Avenue • Audubon, PA 19403-2402
t: 610.650.8101 • f: 610.650.8190
www.gannettfleming.com

200 S. Ithan Avenue

Plans Prepared By: Schock Group LLC

Dated: January 5, 2021, last revised June 29, 2021

Sewage Facilities Planning

1. Final plan approval will not be granted until Planning Approval or a Planning Exemption is received from the PA DEP.

Subdivision

1. §255-20.A(3) – Each sheet shall be numbered and shall show its relationship to the total number of sheets. The numbering must be revised to incorporate the landscape plans.
2. §255-20.B(1)(n) - Existing principal buildings (and their respective uses) and driveways on the adjacent peripheral strip. Sewer lines, storm drains, culverts, bridges, utility easements, quarries, railroads and other significant man-made features within 500 feet of and within the site (this includes properties across streets) must be shown on the plans. The applicant has requested a waiver from this requirement.
3. §255-27-C(1) – Sidewalks must be provided along minor collector streets (South Ithan Avenue). The applicant has requested a waiver from this requirement.
4. §255-43.1.B(1) – For all residential subdivisions or land developments involving a total of four or more lots and/or dwelling units, a minimum of 1,440 square feet or suitable park and recreation land shall be provided per dwelling unit within such subdivision/land development, unless the developer agrees to a fee in lieu of \$3,307 per dwelling unit (existing or proposed).
5. §255-49 – Where appropriate, the developer shall install or cause to be installed, at the developer's expense, metal or fiberglass pole streetlights serviced by underground conduit in accordance with a plan to be prepared by the developer's engineer and approved by the Board of Commissioners. The Township should confirm that the type and location of lighting is adequate.
6. §255-54.B – The central water system should be designed with adequate capacity and appropriately spaced fire hydrants for fire-fighting purposes pursuant to the specification of the National Fire Protection Association. Review and approval by the Township Engineer and the Township Fire Marshall shall be required in order to ensure that adequate fire protection is provided. We note that the applicant is working with the Township Engineer and Township Fire Marshall and will incorporate their input as applicable.

Stormwater

1. All of the stormwater comments required under a preliminary plan submission have been addressed. The final location of the stormwater systems and additional information will be submitted as part of the final plan submission.
2. Final approval of the stormwater management plan will be required as part of the Grading Permit process. Any revisions to the size or location of the individual structures or other features will be addressed at this time.

Sanitary Sewer

1. Profiles of the sanitary sewer laterals must be provided to ensure no conflicts with additional utilities. The applicant has indicated that this will be provided as part of the final plan submission.

The applicant appeared before the Planning Commission on June 7, 2021. The Planning Commission recommended preliminary approval conditioned on compliance with the recommendations set forth in the review letter from Gannett Fleming dated June 1, 2021 and the review letter of Gilmore Associates May 28, 2021, further conditioned on a redesign of the entrance so that it is at a 90 degree angle to S. Ithan Ave, and further conditioned upon the removal of barbed wire fence on the development site and surrounding the open space area with the approval of the HOA. As part of the motion, the PC recommended the grant of all requested waivers, provided that the grant of waivers of sidewalks along the Trianon frontage along Ithan Avenue is expressly conditioned on compliance with the conditions regarding sidewalks set forth in the conditional use adjudication dated March 4, 2021.

If you have any questions or require any additional information, please contact me.

Very truly yours,

GANNETT FLEMING, INC.



Roger A. Phillips, P.E.
Senior Project Manager



MEMORANDUM

Date: July 6, 2021

To: Steve Norcini, P.E.
Radnor Township Engineer

From: Damon Drummond, P.E., PTOE
Senior Transportation Engineer

cc: Roger Phillips, P.E., Senior Project Manager, Gannett Fleming, Inc.
Leslie Salsbury, P.E., Gilmore & Associates, Inc.

Reference: 200 S. Ithan Avenue
Preliminary Subdivision and Land Development Review
Radnor Township, Delaware County, PA
G&A #20-08063

Gilmore & Associates, Inc. (G&A) has completed a transportation review for the preliminary plans and display plans prepared for the above referenced project. We offer the following comments for your consideration:

A. BACKGROUND

The subject parcel located at 200 South Ithan Avenue is in the R-2/D-M Zoning District within Radnor Township, Delaware County. The applicant intends to develop the parcel in order to construct nine (9) single family homes with driveway access to a new cul-de-sac street located between Chalous Lane and Gramont Lane.

B. DOCUMENTS REVIEWED

1. Preliminary Subdivision and Land Development Plans for 200 South Ithan Avenue, prepared by Schock Group, LLC, prepared for GPX Realty Partners, consisting of 11 sheets dated June 29, 2021.
2. Response Letter prepared for South Ithan Avenue prepared by Schock Group, LLC, dated July 1, 2021.

C. WAIVERS REQUESTED

1. In accordance with SALDO §255-27.C, §255-37, & §255-51 – Installation of sidewalk along the site frontage for Ithan Avenue is required unless, in the opinion of the Board of Commissioners, it is unnecessary for public safety and convenience. **The applicant is requesting a waiver from §255-27.C, §255-51.**

D. SALDO COMMENTS

1. §255-27.C(1) – There is a discrepancy between the Land Development Plans and the Sidewalk Plans regarding the right-of-way (60 feet or 50 feet) along Ithan Avenue. Verify the right-of-way and revise the plans for consistency.

E. GENERAL COMMENTS

1. Revise the landscaping plans to reflect the revised alignment.
2. The proposed driveway grading shown on Sheet 6 of 8 extends beyond the adjacent property line. Therefore, a temporary construction easement will be required.
3. Add a note to the plans that full height curbing is to be installed along Ithan Avenue with the removal of the existing driveway entrance.
4. As previously noted, the following Truck Turning Templates should be provided:
 - a. Include a truck turning template for the left-turn movement from Ithan Avenue into the proposed cul-de-sac which was included in a previous submission.
 - b. Include a fire truck turning template for the left-turn movement from Ithan Avenue into the proposed cul-de-sac.
 - c. Include a truck turning and fire truck template for the left-turn movement from the cul-de sac onto Ithan Avenue.
 - d. Additional turning templates may be required to show the truck turning movements clearly. It is recommended no more than two templates per turning template detail.
 - e. Use the 41' Radnor Fire Truck for the Fire Truck Template. A copy of the fire truck specification has been provided.
 - f. Show the Ithan Avenue double yellow centerline.
 - g. Show the proposed stop bar as indicated in the truck template. Show the proposed pavement markings on Sheet 2.
5. As previously noted, the following comments are provided for the proposed sidewalk:
 - a. Label longitudinal slopes along the sidewalk.
 - b. Label passing areas and note they are to be a minimum of 5' x 5'.
 - c. Include spot elevations along the sidewalk for slope grade verification and ADA constructability.
 - d. The driveways appear to be used for passing areas. Provide adequate spot elevations to demonstrate an ADA complaint 5'x 5' area is provided in these driveways.
 - e. Provide additional information at the turning area where the proposed sidewalk connects to the existing sidewalk near Chalous Lane to demonstrate a level ADA turning area is provided.
 - f. Any impacted mailboxes will need to be relocated in accordance with the Postal Office Standards and maintain access from Ithan Avenue.

- g. Provide details for the ADA ramp at Meadow Wood Road at a 1"-10' scale to show ADA compliance.
- h. Show the proposed cul-de-sac site driveway location on the sidewalk plans.
- i. Sheet 8, revise the width on the sidewalk detail to match the proposed width shown on the plans.
- j. The sidewalk detail indicates curbing with the proposed sidewalk along Ithan Avenue. The plan sheets do not indicate proposed curbing. Revise the plans for consistency.
- k. Provide contour lines to verify the proposed grading will be within the temporary grading easements.

If you have any questions regarding the above, please contact this office.

ORDINANCE NO. 2021-05

**AN ORDINANCE OF RADNOR TOWNSHIP, DELAWARE COUNTY,
PENNSYLVANIA, AMENDING THE CODE OF THE TOWNSHIP OF
RADNOR, CHAPTER 270, SECTION 270-31 SPECIAL PURPOSE
PARKING ZONES.**

The Board of Commissioners of the Township of Radnor does hereby ENACT and ORDAIN the following amendments to Section 270-31 as follows:

Section 1. Section 270-31, Special Purpose Parking Zones, is hereby amended establishing a new handicapped parking zone as follows:

Name of Street	Side	Location
166 Meredith Avenue	West	In front of 166 Meredith Avenue, 20 feet starting at a point south and commencing north

Section 2. Repealer. All ordinances or parts of ordinances which are inconsistent herewith are hereby repealed.

Section 3. Severability. If any section, paragraph, subsection, clause, or provision of this Ordinance shall be declared invalid or unconstitutional by a court of competent jurisdiction, such decision shall not affect the validity of this Ordinance as a whole or any part thereof other than that portion specifically declared invalid.

Section 4. Effective Date. This Ordinance shall become effective in accordance with the Home Rule Charter of Radnor Township.

ENACTED and *ORDAINED* this _____ day of _____, 2021.

RADNOR TOWNSHIP

By: _____
Name: Jack Larkin
Title: President

ATTEST: _____
William White
Township Manager/Secretary

MARY C. EBERLE
JOHN B. RICE
DIANNE C. MAGEE *
DALE EDWARD CAYA
DAVID P. CARO ♦
DANIEL J. PACI ♦ †
JONATHAN J. REISS ♦
GREGORY E. GRIM †
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† MASTERS IN TAXATION
♦ ALSO A CERTIFIED PUBLIC ACCOUNTANT

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FAX (215) 538-9588

(215) 348-2199
FAX (215) 348-2520

June 15, 2021

SENT VIA ELECTRONIC CORRESPONDENCE

Delaware County Daily Times
Attn: Legal Department
500 Mildred Avenue
Primos, PA 19018

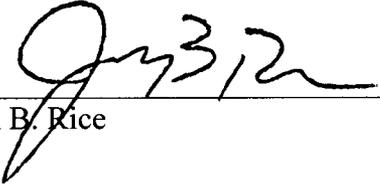
Re: Radnor Township – Special Purpose Parking Ordinance/166 Meredith Avenue

Dear Legal Department:

Enclosed please find for advertisement one (1) time in the June 17th edition of your newspaper, a Legal Notice for the possible enactment of the above ordinance by the Board of Commissioners of Radnor Township at their meeting on June 28, 2021. Kindly provide proof of publication and your invoice for the advertisement directly to Radnor Township, c/o Bill White, 301 Iven Avenue, Wayne, PA 19087. A full copy of the text of the ordinance is enclosed for public inspection. If you have any questions regarding the enclosed, please do not hesitate to contact my office.

Sincerely,

GRIM, BIEHN & THATCHER

By: 
John B. Rice

JBR/hlp

Enclosure

cc: Bill White, Township Manager (w/encl.) – via email
Peggy Hagan (w/encl.) – via email

LEGAL NOTICE

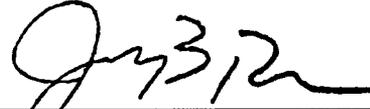
Notice is hereby given that the Board of Commissioners of the Township of Radnor, Delaware County, Pennsylvania, will consider for possible enactment an ordinance, of which this Notice is a summary, amending Chapter 270 of the Radnor Township Code, Vehicles and Traffic, Section 270-31, Special Purpose Parking Zones at 116 Meredith Avenue.

The Board of Commissioners will hold a public hearing on June 28, 2021, at 6:30 p.m., at the Radnor Township Municipal Building, 301 Iven Avenue, Wayne, PA 19087 to consider the ordinance. Copies of the full text of the proposed ordinance are available at the Township offices, the Delaware County Law Library, and the offices of this newspaper during normal business hours.

RADNOR TOWNSHIP
BOARD OF COMMISSIONERS
301 Iven Avenue
Wayne, PA 19087-5297

ATTEST:

I do hereby certify that this is a true and correct copy of the proposed Ordinance of Radnor Township, being advertised for possible adoption by the Radnor Township Board of Commissioners on June 28, 2021.

A handwritten signature in black ink, appearing to read "JBR", written over a horizontal line.

John B. Rice, Esquire
Grim, Benn & Thatcher
Township Solicitor

*Applicant has requested
item be removed from
Agenda*

4 G. Eagle Road,
Hamilton Estate-
Discussion -
Preliminary Land
Development
Approval

Reports of Standing Committees

New Business

Old Business

Public Participation

Adjournment