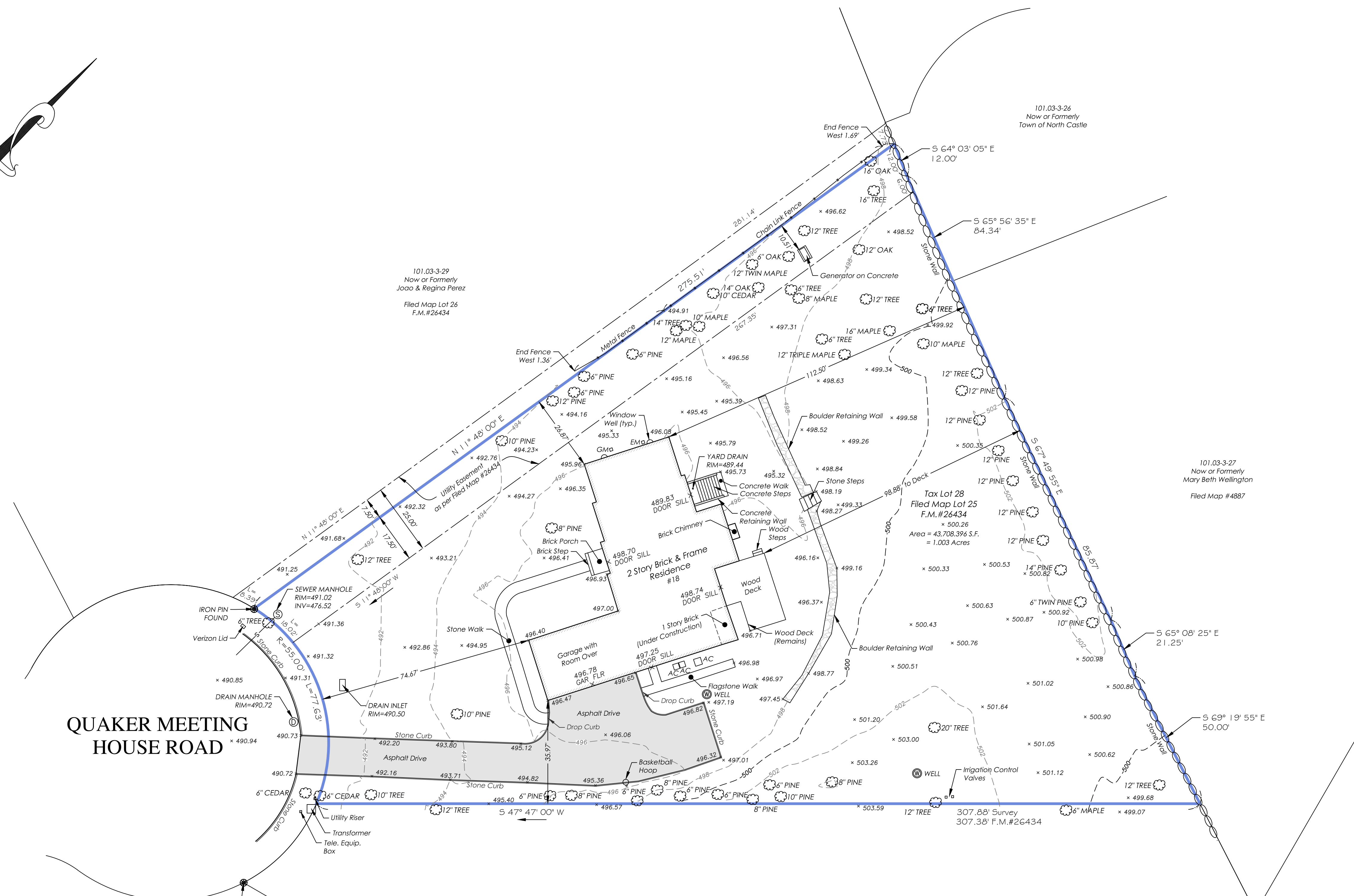


QUAKER MEETING HOUSE ROAD



Only copies from the original of this topography map marked with an original of the Land Surveyors embossed seal or red colored seal shall be considered to be true, valid copies.

Unauthorized alteration or addition to a map bearing a licensed Land Surveyors seal is a violation of Section 7209, Subdivision 2 of the New York State Education Law.

Possession only where indicated.

Adjacent property lines and easements not surveyed or certified. Access to adjacent rights of way, easements and public or private lands not guaranteed or certified.

Underground utilities shown hereon are approximate and should be verified before excavating. Additional underground utilities are not shown or certified. Encroachments and structures below grade, if any, not shown or certified.

Subject to covenants, easements, restrictions, conditions and agreements of record.

This map is prepared to show topography only and is not to be used for title transfer purposes. Map may not be certified to title companies and/or banks.

Tree species shown hereon to be verified by a licensed arborist and are not certified by surveyor.

Elevations shown hereon generally in accordance with North American Vertical Datum 88.

Premises hereon being Lot 25 as shown on a certain map entitled, "Amended Map of Subdivision of Leisure Farm, in the Town of North Castle, Westchester County, New York." Said map filed in the Westchester County Clerk's Office, Division of Land Records October 8, 1999 as map number 26434.

Surveyed in accordance with Deed Control Number 612173550.

Premises shown hereon designated on the Town of North Castle Tax Maps as: Section 101.03, Block 3, Lot 28.

Property Address: 18 Quaker Meeting House Road Armonk, NY 10504

TOPOGRAPHIC SURVEY PREPARED FOR CHARLES SWIFT AND NANCY SWIFT SITUATE IN THE TOWN OF NORTH CASTLE WESTCHESTER COUNTY, NEW YORK

SCALE: 1" = 20'

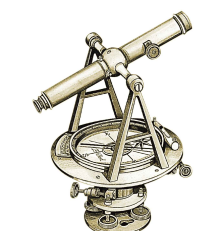
GRAPHIC SCALE



(IN FEET)

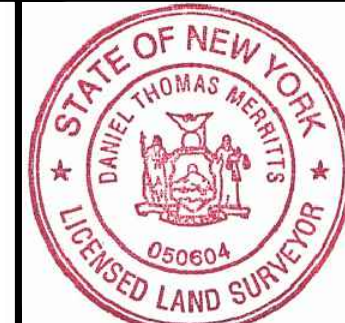
1 inch = 20 ft.

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ALL RIGHTS RESERVED. UNAUTHORIZED DUPLICATION OR
ELECTRONIC TRANSMISSION WITHOUT PRIOR PERMISSION
IS A VIOLATION OF APPLICABLE LAWS.



TC MERRITTS LAND SURVEYORS

394 BEDFORD ROAD • PLEASANTVILLE • NY 10570
(914) 769-8003 • survey@tcmerriitts.com



Surveyed: April 11, 2022
Map Prepared: April 13, 2022

By: *Daniel T. Merritt*
New York State Licensed Land Surveyor No. 050604

Project: 22-095	Reference: 03-116
Field Survey By: AN/CTW	Drawn By: CMP
Project Manager: CMP	Checked By: DA

June 6, 2022

Mr. Adam Kaufman, AICP
Director of Planning
Town of North Castle
15 Bedford Road
Armonk, New York 10504

**Regarding: Swift Residence Pool
18 Quaker Meeting House Road
Residential Site Plan Application**

Dear Mr. Kaufman:

Our firm has been working with the owners, Charles and Nancy Swift of 18 Quaker Meeting House Road, in order to prepare an application to construct an in-ground swimming pool on their property. The property is part of the Leisure Farm subdivision which depicts a clearing and grading limit line for each lot in the subdivision. The pool is proposed to be located in the rear yard of the property which is currently lawn. The pool will be partially located outside of the Clearing and Grading Limit Line. While no trees are proposed to be removed there will be disturbance outside of the Limit Line and as such, Planning Board, site plan approval may be required.

The project will result in the creation of approximately 1,029 square feet of new impervious surface including pool, terrace and mechanical equipment. A stormwater infiltration system is proposed to serve the dual purpose of mitigating stormwater runoff and providing volume for pool drawdown. Soil testing in the form of deep hole and percolation tests were performed on April 12, 2022 and witnessed by the Town's Consultant Engineer.

There will not be any impact to Town regulated Wetland buffer areas or Town regulated steep slopes.

In support of this application the following material is provided:

- A Residential Site Plan Application
- Short Environmental Assessment Form
- Property Survey
- Site Plan Set and Details
- Gross Land Coverage Worksheet
- Stormwater Report and Calculations

The owners respectfully request to be placed on the next Planning Boards agenda to be considered for review. If you have any questions or require additional information, please do not hesitate to contact me at (914) 559-67455 or via email me at pgregory@dtsprovident.com. We look forward to meeting with you and discussing the project with the Board.

Very truly yours,

DTS-Provident Design Engineering, LLP



Peter J. Gregory, P.E.
Senior Associate



TOWN OF NORTH CASTLE
WESTCHESTER COUNTY
17 Bedford Road
Armonk, New York 10504-1898

PLANNING DEPARTMENT
Adam R. Kaufman, AICP
Director of Planning

Telephone: (914) 273-3542
Fax: (914) 273-3554
www.northcastleny.com

Application for Site Development Plan Approval

Application Name

18 Quaker Meeting House Road - Pool

I. IDENTIFICATION OF PROPERTY OWNER, APPLICANT AND PROFESSIONAL REPRESENTATIVES

Name of Property Owner: <u>Charles & Nancy Swift</u>
Mailing Address: <u>18 Quaker Meeting House Road</u>
Telephone: _____ Fax: _____ e-mail <u>cswiftjr@gmail.com</u>
Name of Applicant (if different): <u>Same as Owner</u>
Address of Applicant: _____
Telephone: _____ Fax: _____ e-mail _____
Interest of Applicant, if other than Property Owner: _____
Is the Applicant (if different from the property owner) a Contract Vendee? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
If yes, please submit affidavit stating such. If no, application cannot be reviewed by Planning Board
Name of Professional Preparing Site Plan: <u>Peter J. Gregory, P.E. DTS Provident Design Engineering, LLP</u>
Address: <u>One North Broadway, White Plains, New York 10601</u>
Telephone: <u>914 - 559 - 6745</u> Fax: _____ e-mail <u>pgregory@dtsprovident.com</u>
Name of Other Professional: <u>T.C. Merritts Land Surveyors, P.C.</u>
Address: <u>394 Bedford Road, Pleasantville, New York 10570</u>
Telephone: <u>914 - 769 - 8003</u> Fax: _____ e-mail <u>daniel@tcmerritts.com</u>
Name of Attorney (if any): _____
Address: _____
Telephone: _____ Fax: _____ e-mail _____


Applicant Acknowledgement

By making this application, the undersigned Applicant agrees to permit Town officials and their designated representatives to conduct on-site inspections in connection with the review of this application.

The Applicant also agrees to pay all expenses for the cost of professional review services required for this application.

It is further acknowledged by the Applicant that all bills for the professional review services shall be mailed to the Applicant, unless the Town is notified in writing by the Applicant at the time of initial submission of the application that such mailings should be sent to a designated representative instead.

Signature of Applicant:  Date: 6-1-22

Signature of Property Owner:  Date: 6-1-22

MUST HAVE BOTH SIGNATURES

II. IDENTIFICATION OF SUBJECT PROPERTY

Street Address: 18 Quaker Meeting House Road

Location (in relation to nearest intersecting street):

350 feet (north, south, east or west) of Leisure Farm Drive

Abutting Street(s): Quaker Meeting House Road

Tax Map Designation (NEW): Section 101.03 Block 3 Lot 28

Tax Map Designation (OLD): Section _____ Block _____ Lot _____

Zoning District: R-1A Total Land Area 1.003

Land Area in North Castle Only (if different) _____

Fire District(s) Armonk School District(s) Byram Hills

Is any portion of subject property abutting or located within five hundred (500) feet of the following:

The boundary of any city, town or village?

No Yes (adjacent) _____ Yes (within 500 feet) _____

If yes, please identify name(s): _____

The boundary of any existing or proposed County or State park or any other recreation area?

No Yes (adjacent) _____ Yes (within 500 feet) _____

The right-of-way of any existing or proposed County or State parkway, thruway, expressway, road or highway?

No Yes (adjacent) _____ Yes (within 500 feet) _____

The existing or proposed right-of-way of any stream or drainage channel owned by the County or for which the County has established channel lines?

No Yes (adjacent) _____ Yes (within 500 feet) _____

The existing or proposed boundary of any county or State owned land on which a public building or institution is situated?

No Yes (adjacent) _____ Yes (within 500 feet) _____

The boundary of a farm operation located in an agricultural district?

No Yes (adjacent) _____ Yes (within 500 feet) _____

Does the Property Owner or Applicant have an interest in any abutting property?

No Yes _____

If yes, please identify the tax map designation of that property:

III. DESCRIPTION OF PROPOSED DEVELOPMENT

Proposed Use: Residential - Swimming Pool

Gross Floor Area: Existing _____ S.F. Proposed _____ S.F.

Proposed Floor Area Breakdown:

Retail _____ S.F.; Office _____ S.F.;

Industrial _____ S.F.; Institutional _____ S.F.;

Other Nonresidential _____ S.F.; Residential _____ S.F.;

Number of Dwelling Units: _____

Number of Parking Spaces: Existing _____ Required _____ Proposed _____

Number of Loading Spaces: Existing _____ Required _____ Proposed _____

Earthwork Balance: Cut 100 C.Y. Fill 10 C.Y.

Will Development on the subject property involve any of the following:

Areas of special flood hazard? No Yes _____

(If yes, application for a Development Permit pursuant to Chapter 177 of the North Castle Town Code may also be required)

Trees with a diameter at breast height (DBH) of 8" or greater?

No Yes _____

(If yes, application for a Tree Removal Permit pursuant to Chapter 308 of the North Castle Town Code may also be required.)

Town-regulated wetlands? No Yes _____

(If yes, application for a Town Wetlands Permit pursuant to Chapter 340 of the North Castle Town Code may also be required.)

State-regulated wetlands? No Yes _____

(If yes, application for a State Wetlands Permit may also be required.)

IV. SUBMISSION REQUIREMENTS

The site development plan application package shall include all materials submitted in support of the application, including but not limited to the application form, plans, reports, letters and SEQR Environmental Assessment Form. **Submission of the following shall be required:**

- One (1) set of the site development plan application package (for distribution to the Town Planner for preliminary review purposes).
- Once a completed preliminary site plan checklist has been received from the Planning Department, eight (8) additional sets of the site development plan application package (for distribution to Planning Board, Town Engineer, Town Attorney, Town Planner, Planning Board Secretary, police, fire department and ambulance corps).
- One (1) additional reduced sized set (11" x 17") of the site development plan application package if any portion of the subject property abuts or is located within five hundred (500) feet of the features identified in Section II of this application form (for distribution to Westchester County Planning Board).
- A check for the required application fee and a check for the required Escrow Account, both made payable to "Town of North Castle" in the amount specified on the "Schedule of Application Fees."

(continued next page)

V. INFORMATION TO BE INCLUDED ON SITE DEVELOPMENT PLAN

The following checklist is provided to enable the Applicant to determine if he/she has provided enough information on the site development plan for the Planning Board to review his/her proposal. Applicants are advised to review ARTICLE VIII, Site Development Plan of the North Castle Town Code for a complete enumeration of pertinent requirements and standards prior to making application for site development plan approval.

The application for site development plan approval will not be accepted for Planning Board review unless all items identified below are supplied and **so indicated with a check mark in the blank line provided**. If a particular item is not relevant to the subject property or the development proposal, **the letters "NA" should be entered instead**. In addition, the project will not be scheduled on a Planning Board agenda until the Applicant receives an initialed "site plan checklist" from the Planning Department.

The information to be included on a site development plan shall include:

Legal Data:

- Name of the application or other identifying title.
- Name and address of the Property Owner and the Applicant, (if different).
- Name, address and telephone number of the architect, engineer or other legally qualified professional who prepared the plan.
- Names and locations of all owners of record of properties abutting and directly across any and all adjoining streets from the subject property, including the tax map designation of the subject property and abutting and adjoining properties, as shown on the latest tax records.
- Existing zoning, fire, school, special district and municipal boundaries.
- Size of the property to be developed, as well as property boundaries showing dimensions and bearings as determined by a current survey; dimensions of yards along all property lines; name and width of existing streets; and lines of existing lots, reservations, easements and areas dedicated to public use.
- Reference to the location and conditions of any covenants, easements or deed restrictions that cover all or any part of the property, as well as identification of the document where such covenants, easements or deed restrictions are legally established.
- Schedule of minimum zoning requirements, as well as the plan's proposed compliance with those requirements, including lot area, frontage, lot width, lot depth, lot coverage, yards, off-street parking, off-street loading and other pertinent requirements.
- Locator map, at a convenient scale, showing the Applicant's entire property in relation to surrounding properties, streets, etc., within five hundred (500) feet of the site.
- North arrow, written and graphic scales, and the date of the original plan and all revisions, with notation identifying the revisions.
- A signature block for Planning Board endorsement of approval.

Existing Conditions Data:

- Location of existing use and design of buildings, identifying first floor elevation, and other structures.
- Location of existing parking and truck loading areas, with access and egress drives thereto.
- Location of existing facilities for water supply, sanitary sewage disposal, storm water drainage, and gas and electric service, with pipe sizes, grades, rim and inverts, direction of flow, etc. indicated.
- Location of all other existing site improvements, including pavement, walks, curbing, retaining walls and fences.
- NA- Location, size and design of existing signs.
- NA- Location, type, direction, power and time of use of existing outdoor lighting.
- NA- Location of existing outdoor storage, if any.
- Existing topographical contours with a vertical interval of two (2) feet or less.
- Location of existing floodplains, wetlands, slopes of 15% or greater, wooded areas, landscaped areas, single trees with a DBH of 8" or greater, rock outcrops, stone walls and any other significant existing natural or cultural features.

Proposed Development Data:

- NA- Proposed location of lots, streets, and public areas, and property to be affected by proposed easements, deed restrictions and covenants.
- NA- Proposed location, use and architectural design of all buildings, including proposed floor elevations and the proposed division of buildings into units of separate occupancy.
- NA- Proposed means of vehicular and pedestrian access to and egress from the site onto adjacent streets.
- NA- Proposed sight distance at all points of vehicular access.
- NA- Proposed number of employees for which buildings are designed
- NA- Proposed streets, with profiles indicating grading and cross-sections showing the width of the roadway; the location and width of sidewalks; and the location and size of utility lines.
- NA- Proposed location and design of any pedestrian circulation on the site and off-street parking and loading areas, including handicapped parking and ramps, and including details of construction, surface materials, pavement markings and directional signage.
- Proposed location and design of facilities for water supply, sanitary sewage disposal, storm water drainage, and gas and electric service, with pipe sizes, grades, rim and inverts, direction of flow, etc. indicated.

- Proposed location of all structures and other uses of land, such as walks, retaining walls, fences, designated open space and/or recreation areas and including details of design and construction.
- Location, size and design of all proposed signs.
- Location, type, direction, power and time of use of proposed outdoor lighting.
- Location and design of proposed outdoor garbage enclosure.
- Location of proposed outdoor storage, if any.
- Location of proposed landscaping and buffer screening areas, including the type (scientific and common names), size and amount of plantings.
- Type of power to be used for any manufacturing
- Type of wastes or by-products to be produced and disposal method
- In multi-family districts, floor plans, elevations and cross sections
- The proposed location, size, design and use of all temporary structures and storage areas to be used during the course of construction.
- Proposed grade elevations, clearly indicating how such grades will meet existing grades of adjacent properties or the street.
- Proposed soil erosion and sedimentation control measures.
- For all proposed site development plans containing land within an area of special flood hazard, the data required to ensure compliance with Chapter 177 of the North Castle Town Code.
- For all proposed site development plans involving clearing or removal of trees with a DBH of 8" or greater, the data required to ensure compliance with Chapter 308 of the North Castle Town Code.
- For all proposed site development plans involving disturbance to Town-regulated wetlands, the data required to ensure compliance with Chapter 340 of the North Castle Town Code.

Short Environmental Assessment Form

Part 1 - Project Information

Instructions for Completing

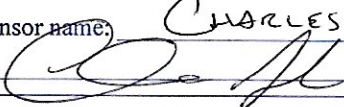
Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

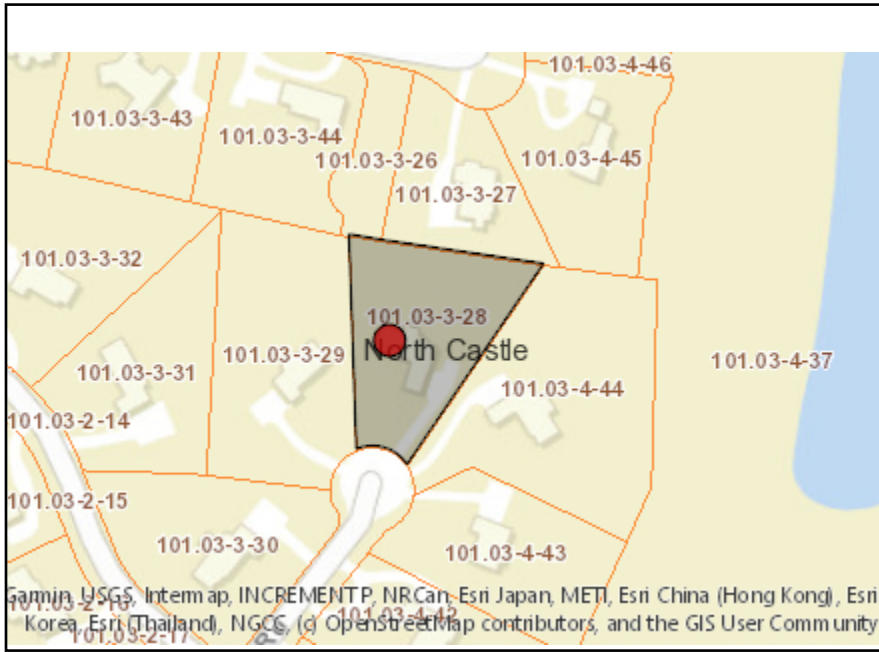
Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 – Project and Sponsor Information			
Name of Action or Project:			
Project Location (describe, and attach a location map):			
Brief Description of Proposed Action:			
Name of Applicant or Sponsor:		Telephone:	
		E-Mail:	
Address:			
City/PO:		State:	Zip Code:
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.		NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval:		NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>
3. a. Total acreage of the site of the proposed action? _____ acres			
b. Total acreage to be physically disturbed? _____ acres			
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? _____ acres			
4. Check all land uses that occur on, are adjoining or near the proposed action:			
5. Urban Rural (non-agriculture) Industrial Commercial Residential (suburban)			
<input type="checkbox"/> Forest Agriculture Aquatic Other(Specify):			
<input type="checkbox"/> Parkland			

5. Is the proposed action,	NO	YES	N/A
a. A permitted use under the zoning regulations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Consistent with the adopted comprehensive plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
b. Are public transportation services available at or near the site of the proposed action?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: _____ _____	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____ _____	NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____ _____	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency? b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody? If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____ _____ _____	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply: <input type="checkbox"/> Shoreline <input type="checkbox"/> Forest Agricultural/grasslands Early mid-successional <input type="checkbox"/> Wetland <input type="checkbox"/> Urban Suburban		
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
16. Is the project site located in the 100-year flood plan?	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes, a. Will storm water discharges flow to adjacent properties? b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe: _____ _____	NO	YES
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment: _____ _____	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
49. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe: _____ _____	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: _____ _____	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE Applicant/sponsor/name: _____ Date: _____ Signature: _____ Title: _____		

18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size: _____ _____ _____	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe: _____ _____ _____	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: _____ _____ _____	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
<p>I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE</p> <p>Applicant/sponsor name: <u>CHARLES SWIFT</u> Date: <u>6-1-22</u></p> <p>Signature: <u></u></p>		



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.



Map data © OpenStreetMap contributors, and the GIS User Community
 Data provided by Esri, USGS, Intermap, INCREMENT, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	No
Part 1 / Question 12b [Archeological Sites]	Yes
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	No
Part 1 / Question 16 [100 Year Flood Plain]	No
Part 1 / Question 20 [Remediation Site]	No



TOWN OF NORTH CASTLE
WESTCHESTER COUNTY
17 Bedford Road
Armonk, New York 10504-1898

PLANNING DEPARTMENT
Adam R. Kaufman, AICP
Director of Planning

Telephone: (914) 273-3542
Fax: (914) 273-3554
www.northcastleny.com

GROSS LAND COVERAGE CALCULATIONS WORKSHEET

Application Name or Identifying Title: 18 Quaker Meeting House Road - Pool Date: June 1, 2022

Tax Map Designation or Proposed Lot No.: 101.03 - 3 - 28

Gross Lot Coverage

1.	Total lot Area (Net Lot Area for Lots Created After 12/13/06):	<u>43,708</u>
2.	Maximum permitted gross land coverage (per Section 355-26.C(1)(b)): $9,350 + (0.09)(148)$	<u>9,363</u>
3.	BONUS maximum gross land cover (per Section 355-26.C(1)(b)): Distance principal home is beyond minimum front yard setback <u>24.67</u> x 10 = <u>246.7</u>	<u>246</u>
4.	TOTAL Maximum Permitted gross land coverage = Sum of lines 2 and 3	<u>9,609</u>
5.	Amount of lot area covered by principal building : <u>3,517</u> existing + _____ proposed =	<u>3,517</u>
6.	Amount of lot area covered by accessory buildings : _____ existing + _____ proposed =	<u>0</u>
7.	Amount of lot area covered by decks : <u>392</u> existing + _____ proposed =	<u>392</u>
8.	Amount of lot area covered by porches : _____ existing + _____ proposed =	<u>0</u>
9.	Amount of lot area covered by driveway, parking areas and walkways : <u>3,242</u> existing + _____ proposed =	<u>3,242</u>
10.	Amount of lot area covered by terraces : _____ existing + <u>509</u> proposed =	<u>509</u>
11.	Amount of lot area covered by tennis court, pool and mechanical equip : <u>29</u> existing + <u>520</u> proposed =	<u>549</u>
12.	Amount of lot area covered by all other structures : <u>437</u> existing + _____ proposed =	<u>437</u>
13.	Proposed gross land coverage : Total of Lines 5 – 12 =	<u>8,646</u>

If Line 13 is less than or equal to Line 4, your proposal **complies** with the Town's maximum gross land coverage regulations and the project may proceed to the Residential Project Review Committee for review. If Line 13 is greater than Line 4 your proposal does not comply with the Town's regulations.

Peter Gregory

Signature and Seal of Professional Preparing Worksheet

6-1-22

Date

STORMWATER CALCULATIONS

18 QUAKER MEETING HOUSE ROAD

TOWN OF NORTH CASTLE, NEW YORK

SECTION 101.03, BLOCK 3, LOT 28

OWNERS:

CHARLES & NANCY SWIFT

PREPARED BY:

DTS PROVIDENT DESIGN ENGINEERING, LLP (DTSPDE)

ONE NORTH BROADWAY

WHITE PLAINS, NEW YORK 10601

TEL: (914) 428-0100

PROJECT No.: 20-070

JUNE, 2022

Section I – Project Information

1. Project Description

The purpose of this report is to present the Stormwater Calculations for the sizing of mitigation practices associated with stormwater runoff associated with the construction of a proposed pool, and terrace (the “Project”) located at 18 Quaker Meeting House Road, Town of North Castle, Westchester County, New York. The Project Site, Tax Map Number 101.03-3-28, is comprised of one parcel totaling 1.003 acres located in the R-1A One - Family Residential District.

The proposed work includes the construction of an in-ground swimming pool and terrace in the rear yard of the property. The stormwater runoff will be directed toward a stormwater mitigation system. The Project will result in a net increase of impervious surface totaling approximately 1,029 square feet (sf).

Section II - Storm Water Management

1. Methodology

Since the Project will generate stormwater runoff during and post-construction, the SWPPP includes design of water quantity and water quality controls as set forth in §189 to assure that post-development peak runoff rates will be equal to or less than pre-development peak runoff rates for up to the 25-year storm event. The controls have been designed in accordance with the following publications:

- “Urban Hydrology for Small Watersheds” (Technical Release No. 55), published by the United States Department of Agriculture, Natural Resources Conservation Service (NRCS) (formerly Soil Conservation Service, SCS), dated June 1986.
- *New York State Storm Water Management Design Manual* (DEC Design Manual), January 2015.

As required by the DEC Design Manual, the 24-hour rainfall data value to be used in the hydrologic analysis and computations is based on the updated isohyetal maps from the Northeast Regional Climate Center (NRCC). Current 24-hour NRCC rainfall precipitation and distribution data was used to compute runoff hydrographs for the 25-year design storms. The rainfall value associated with the 25-year design storm is 6.44 inches.

The pre-development and post-development runoff rate for the 25-year storm event was calculated using the computer software program entitled "HydroCAD", Version 10.0, Build 25. This program incorporates the methodology used in NRCS TR-20 and TR-55 to compute and route flood hydrographs.

2. Subsurface Investigation

Test Pit Excavation

One (1) test pit in the rear yard (designated TP-1) of the existing dwelling was excavated on April 12, 2022 and witnessed by DTS-PDE personnel and consultant engineers for the Town of North Castle. The test pit location is shown on Drawing C-101, "Site Plan" prepared by DTS-PDE. The depth of the test pit was 86 inches below existing grade. DTS-PDE personnel and the consultant engineers for the Town of North Castle measured the depths of the contrasting soil layers, performed visual inspections of the excavated material at each layer encountered to determine generalized soil classifications, and logged the measurements and observations.

As shown on the test pit log sheet provided in Appendix A, the test pit yielded positive results with no presence of groundwater or ledge rock. The test pit contained a 6 inch topsoil layer, a 6 inch layer of sandy loam, an 18" layer of silty loam, and finally a 36" layer compacted fine medium sands to the bottom of the test pit.

Infiltration Testing

DTS-PDE personnel also set up a soil infiltration test, adjacent to the test pit (designated P-1) on April 12, 2022. An infiltration test hole was dug to 42" below existing grade with the consultant engineers for Town of North Castle present to witness. The hole was filled with 18 inches of water and an initial reading was taken. A "final" reading was taken after twelve (12) minutes had passed. This procedure was repeated two (2) additional times for a total of three (3) observations to obtain the infiltration rate. The data sheet of test results provided in Appendix A shows that the existing subsoils possess a consistent infiltration rate of 5.5 inches per hour (in/hr.) (11.00 minutes per inch (min/in)), greater than the minimum rate of 0.5 in/hr. required by the standards in the DEC Design Manual for infiltration SMPs.

3. Stormwater Management

a. Drainage Conditions

Existing condition consisting of a lawn convey stormwater runoff in a westerly direction, toward the side yard of the property. Total contributing area is 1,000 square feet, all lawn. The area is slightly sloped and in good condition. Runoff associated with the contributing area consists of 0.06 cfs rate of runoff and 192 cf of runoff volume for the 25 year storm event.

b. Post Development Drainage Condition

Under post-development conditions, drainage patterns to the Design Point will remain similar to existing conditions, and therefore the location of the design point, which is located at the westerly side of the property, will remain unchanged.

However, the land cover area draining to the Design Point will change under post-development conditions as compared to existing conditions. The lawn area will be converted to impervious surface associated with a proposed pool and terrace area and landscaped/lawn area. Approximately 1,000 square feet of impervious surface will be created. Stormwater runoff rate increases to 0.14 cfs and volume increases to 511 cf. The proposed drainage calculations for the stormwater mitigation system are provided in Appendix B.

Water Quantity Control

NYSDEC and Chapter 189 require that post-development rates of storm water runoff from a site must be equal to or less than pre-development runoff rates so that downstream and/or adjacent properties are not adversely impacted. Increases in runoff rates are typically caused by changes in land use that increase the amount of total impervious area.

SMP Application

Based on the results of the investigation summarized in Section 2 above, it is the professional opinion of PDE that a subsurface infiltration/recharge SMP can be provided to capture and recharge the WQv, plus attenuate post-construction runoff associated with the Project construction.

The design of the subsurface infiltration/recharge SMP meets the criteria in Section 6.3 of the DEC Design Manual. The system will consist of 4 Cultec Recharger infiltration chambers Model 150 and a pretreatment box. The stormwater mitigation system effectively provides a storage volume of 162 cf and reduces rates of runoff by 0.11 cfs to 0.03 cfs, lower than pre-development rate of 0.06 cfs.

Swales, drain inlets, and subsurface drainage pipes will direct and capture the post-construction runoff from the new pool and terrace to the proposed subsurface infiltration/recharge SMP as depicted on Drawing C-101 and D-101.

Summary and Conclusion

Based on the information presented in this report, the implementation of the proposed Storm Water Management Plan will meet the design objectives of Town of North Castle.

Respectfully submitted,

DTS Provident Design Engineering, LLP



Peter J. Gregory, P.E.

Senior Associate

New York PE# 071226

Under New York State Education Law Article 145 - Engineering, Section 7209 (2), it is a violation of this law for any person to alter an item in any way in this Report, unless acting under the direction of a licensed professional engineer. If an item bearing the seal of an engineer is altered, the altering engineer shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

APPENDIX A

SUBSURFACE INVESTIGATION

APPENDIX A-1

TEST PIT LOGS

INFILTRATION TESTING

TEST PIT DATA REQUIRED TO BE SUBMITTED WITH APPLICATION
DESCRIPTION OF SOILS ENCOUNTERED IN TEST HOLE

DEPTH	HOLE NO: 1	HOLE NO:		
G.L	Lawn			
0'-6"	Topsoil			
1'-0"	Br. Loose Fine Sandy Loam			
1'-6"				
2'-0"	Mod. Compact Silty loam			
2'-6"				
3'-0"				
3'-6"				
4'-0"	Fine - Med. Sands			
4'-6"				
5'-0"				
5'-6"				
6'-0"				
6'-6"				
7'-0"				
7'-6"				
8'-0"				
8'-6"				
9'-0"	Total Depth = 86"			
9'-6"				
10'-0"				

WAS GROUND WATER ENCOUNTERED? **No**

INDICATE LEVEL AT WHICH GROUND WATER WAS ENCOUNTERED: **N/A**

INDICATE LEVEL FOR WHICH WATER LEVEL RISES AFTER BEING ENCOUNTERED: **N/A**

DEEP TEST MADE BY: **DTS Provident Design Engineering, LLP**

DATE OF DEEP TESTS: **4/12/22**

Design Professional Name: **Peter J. Gregory, PE**
 Address: **One North Broadway**
White Plains, New York 10601

Signature: *Peter Gregory*

Seal:

APPENDIX B

STORM WATER MANAGEMENT CALCULATIONS

APPENDIX B-1

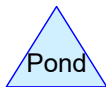
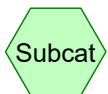
STORMWATER MITIGATION SYSTEM HYDROLOGIC CALCULATIONS



Lawn



Design Point #1



Routing Diagram for 18 Quaker Meeting House - Pre Development

Prepared by Provident Design Engineering, LLC, Printed 6/4/2022
HydroCAD® 10.00-25 s/n 06251 © 2019 HydroCAD Software Solutions LLC

18 Quaker Meeting House - Pre Development

Type III 24-hr 25-yr Rainfall=6.44"

Prepared by Provident Design Engineering, LLC

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Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment Pre Dev.: Lawn

Runoff Area=1,000 sf 0.00% Impervious Runoff Depth=2.31"
Flow Length=50' Tc=6.0 min CN=61 Runoff=0.06 cfs 192 cf

Link DP-1: Design Point #1

Inflow=0.06 cfs 192 cf
Primary=0.06 cfs 192 cf

Total Runoff Area = 1,000 sf Runoff Volume = 192 cf Average Runoff Depth = 2.31"
100.00% Pervious = 1,000 sf 0.00% Impervious = 0 sf

18 Quaker Meeting House - Pre Development

Type III 24-hr 25-yr Rainfall=6.44"

Prepared by Provident Design Engineering, LLC

Printed 6/4/2022

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Summary for Subcatchment Pre Dev.: Lawn

Runoff = 0.06 cfs @ 12.09 hrs, Volume= 192 cf, Depth= 2.31"

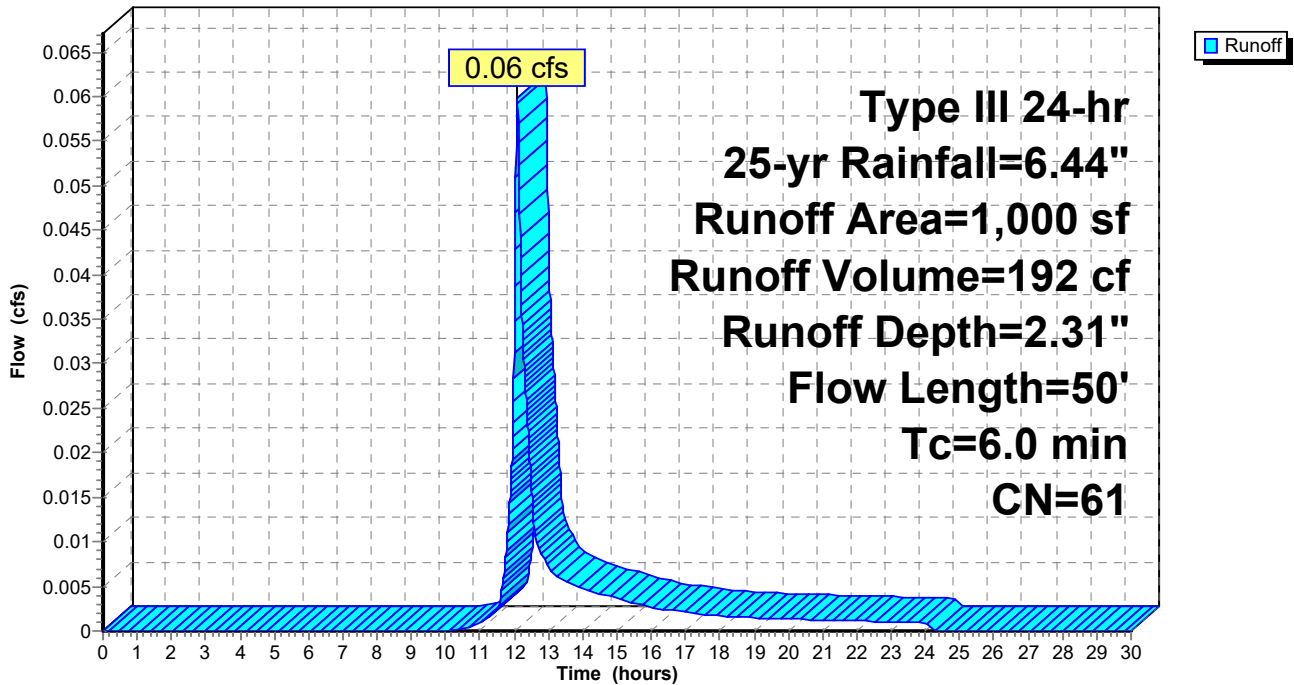
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-yr Rainfall=6.44"

Area (sf)	CN	Description
1,000	61	>75% Grass cover, Good, HSG B
1,000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	50		0.14		Direct Entry, Lawn Area

Subcatchment Pre Dev.: Lawn

Hydrograph

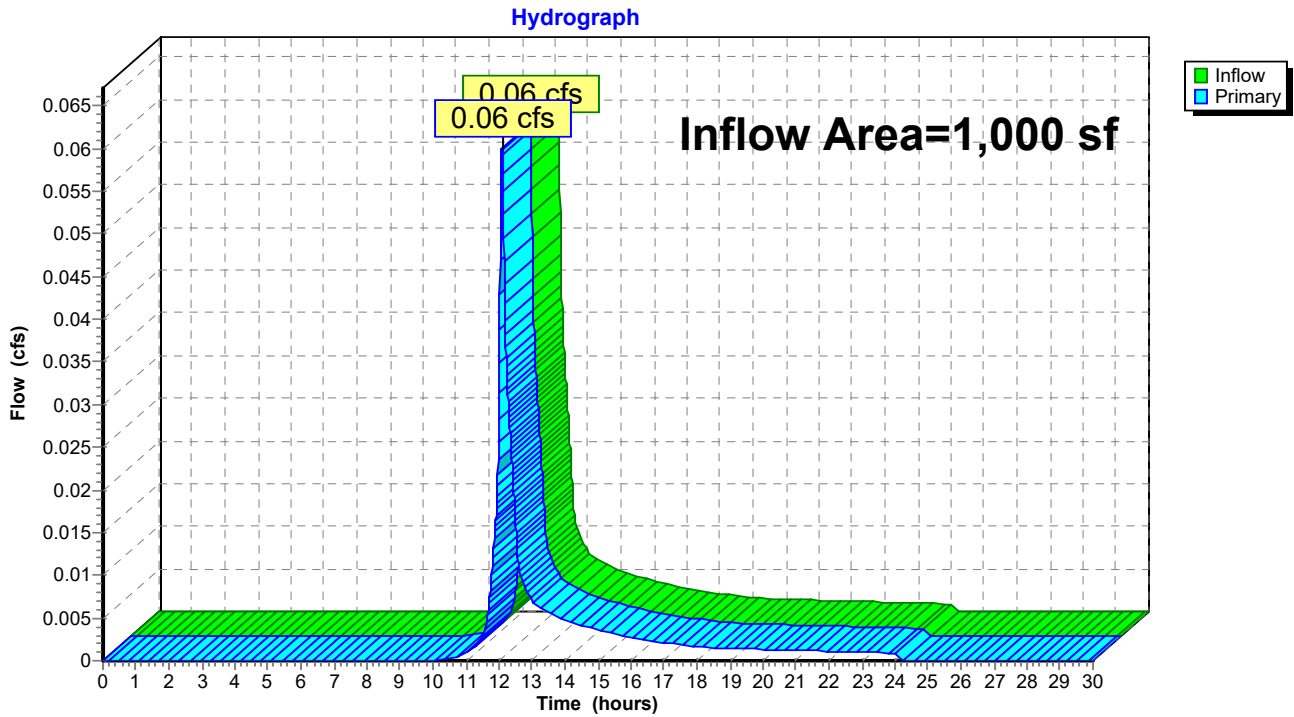


Summary for Link DP-1: Design Point #1

Inflow Area = 1,000 sf, 0.00% Impervious, Inflow Depth = 2.31" for 25-yr event
Inflow = 0.06 cfs @ 12.09 hrs, Volume= 192 cf
Primary = 0.06 cfs @ 12.09 hrs, Volume= 192 cf, Atten= 0%, Lag= 0.0 min

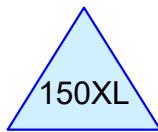
Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

Link DP-1: Design Point #1





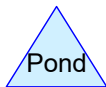
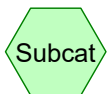
Swimming Pool &
Terrace



Stormwater Infiltration
System



Design Point



Routing Diagram for 18 Quaker Meeting House - HydroCAD Report 25-y
Prepared by Provident Design Engineering, LLC, Printed 6/4/2022
HydroCAD® 10.00-25 s/n 06251 © 2019 HydroCAD Software Solutions LLC

Summary for Subcatchment Post Area: Swimming Pool & Terrace

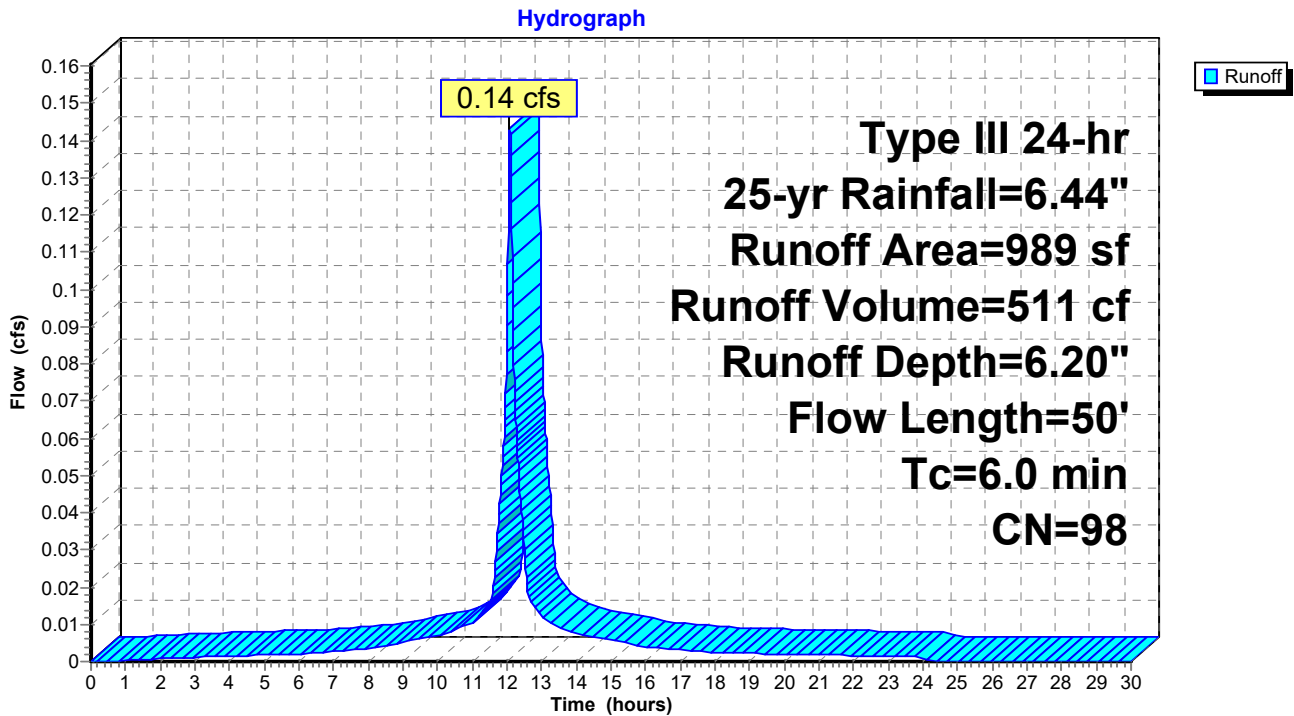
Runoff = 0.14 cfs @ 12.08 hrs, Volume= 511 cf, Depth= 6.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-yr Rainfall=6.44"

	Area (sf)	CN	Description
*	480	98	Proposed Pool, HSG B
*	96	98	Pool Coping, HSG B
*	413	98	Pool Terrace, HSG B
	989	98	Weighted Average
	989		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	50		0.14		Direct Entry, Pool Area to System

Subcatchment Post Area: Swimming Pool & Terrace



Pond 150XL: Stormwater Infiltration System - Chamber Wizard Field A

Chamber Model = Cultec R-150 (Cultec Recharger® 150HD - DISCONTINUED, Not for new designs)

Effective Size= 29.8"W x 18.0"H => 2.65 sf x 7.50'L = 19.9 cf

Overall Size= 33.0"W x 18.5"H x 8.50'L with 1.00' Overlap

Row Length Adjustment= +1.00' x 2.65 sf x 2 rows

33.0" Wide + 6.0" Spacing = 39.0" C-C Row Spacing

2 Chambers/Row x 7.50' Long +1.00' Row Adjustment = 16.00' Row Length +6.0" End Stone x 2 = 17.00' Base Length

2 Rows x 33.0" Wide + 6.0" Spacing x 1 + 12.0" Side Stone x 2 = 8.00' Base Width

6.0" Base + 18.5" Chamber Height = 2.04' Field Height

4 Chambers x 19.9 cf +1.00' Row Adjustment x 2.65 sf x 2 Rows = 84.8 cf Chamber Storage

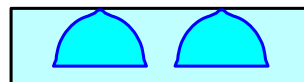
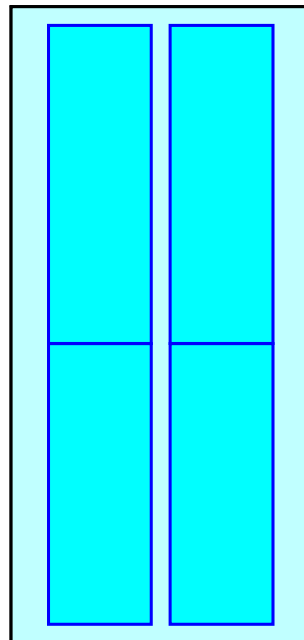
277.7 cf Field - 84.8 cf Chambers = 192.9 cf Stone x 40.0% Voids = 77.2 cf Stone Storage

Chamber Storage + Stone Storage = 161.9 cf = 0.004 af

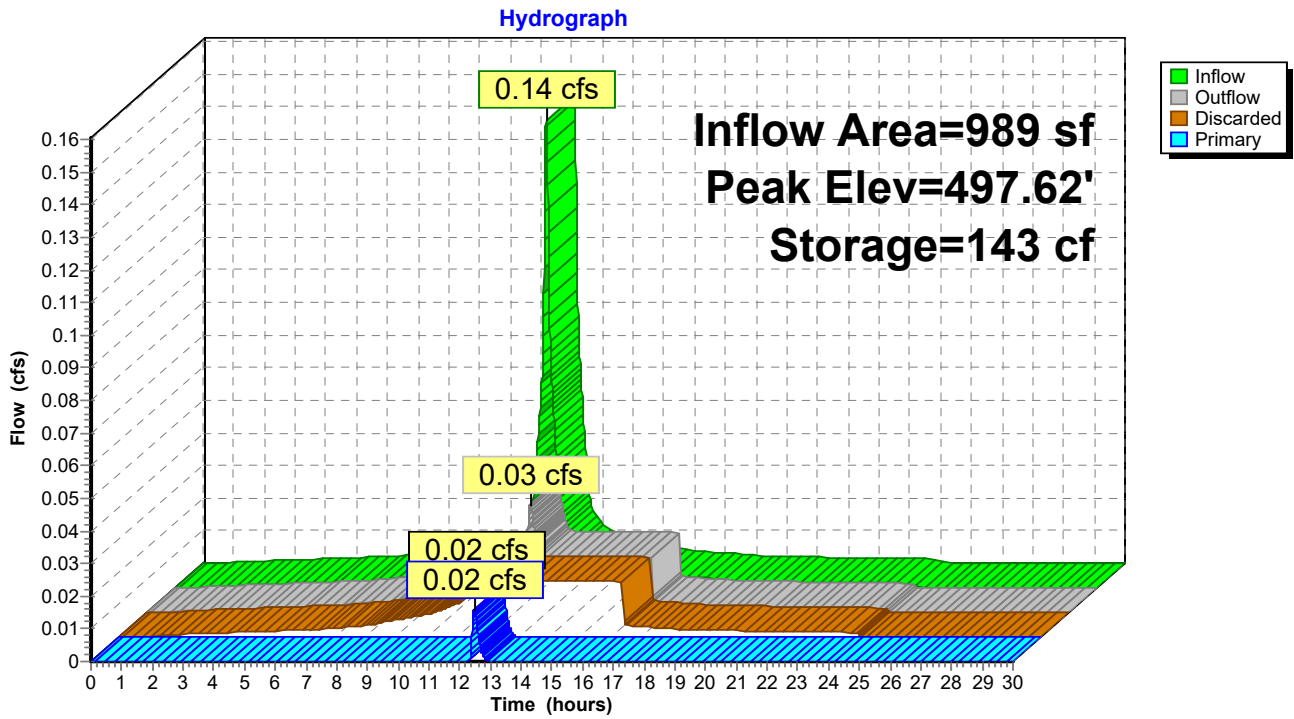
Overall Storage Efficiency = 58.3%

Overall System Size = 17.00' x 8.00' x 2.04'

4 Chambers
 10.3 cy Field
 7.1 cy Stone



Pond 150XL: Stormwater Infiltration System



Summary for Link DP-1: Design Point

Inflow Area = 989 sf, 100.00% Impervious, Inflow Depth = 0.16" for 25-yr event
Inflow = 0.02 cfs @ 12.47 hrs, Volume= 13 cf
Primary = 0.02 cfs @ 12.47 hrs, Volume= 13 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

Link DP-1: Design Point

