Brooklyn Inland Wetlands Commission
Regular Meeting Agenda
Tuesday, November 9, 2021
Web Ex and In-Person Meeting
Clifford B. Green Memorial Center
69 South Main Street
6:00 p.m.

To join this meeting via the web or phone, follow the below instructions:

Web
www.webex.com
On the top right, click Join
Enter meeting information: 126 058 8201
Enter meeting password: gRAPe88439
Click join meeting

Phone
Dial 1-415-655-0001
Enter meeting number 126 058 8201
Enter password: 47273884

Call to Order:

Roll Call:

Seating of Alternates:

Public Commentary:

Additions to Agenda:

Approval of Minutes:

1. Regular Meeting Minutes 10/12/2021.

Public Hearings:

1. 100421A Heather & Matt Allen (applicant) and David & Gail Allen (Owner), 0 Christian Hill Rd., Map 31, Lot 19, Excavation and construction of an agricultural pond and dry hydrant.

Old Business:

1. 100421A Heather & Matt Allen (applicant) and David & Gail Allen (Owner), 0 Christian Hill Rd., Map 31, Lot 19, Excavation and construction of an agricultural pond and dry hydrant.

New Business:

1. 110921A Joann & Frank Titus, River Farm Dr., Map 43, Lot 15, Residential Home, septic tank, driveway, shed, & minor grading.

Communications:

1. Wetlands Agent Monthly Report.
2. Budget Update.

Public Commentary:

Adjourn:

_____
Richard Oliverson, Chairman

RECEIVED
OCT 0 4 2021

Date _____

INLAND WETLANDS & WATERCOURSES COMMISSION
TOWN OF BROOKLYN, CONECTICUT

Application # 1004al A

APPLICATION -- INLAND WETLANDS & WATERCOURSES

APPLICANT Heather & Matt Allen MAILING ADDRESS 115 Christian Hill Rd
APPLICANT'S INTEREST IN PROPERTY Son PHONE 860-705-4396 EMAIL _____

PROPERTY OWNER IF DIFFERENT David & Gail Allen PHONE 860-576-6867
MAILING ADDRESS 129 Christian Hill Rd EMAIL rockin-rollin2@yahoo.com

ENGINEER/SURVEYOR (IF ANY) Archer Surveying LLC (Paul Archer)
ATTORNEY (IF ANY) N/A

PROPERTY LOCATION/ADDRESS 0 Christian Hill Rd
MAP # 31 LOT # 19 ZONE RA TOTAL ACRES 4.64 ACRES OF WETLANDS ON PROPERTY 0.89

PURPOSE AND DESCRIPTION OF THE ACTIVITY Excavation and construction of an agricultural pond and dry well

WETLANDS EXCAVATION AND FILL:
FILL PROPOSED N/A CUBIC YDS _____ SQ FT _____
EXCAVATION PROPOSED N/A CUBIC YDS _____ SQ FT _____
LOCATION WHERE MATERIAL WILL BE PLACED: ON SITE Yes OFF SITE _____
TOTAL REGULATED AREA ALTERED: SQ FT 10,452 ACRES 0.24

EXPLAIN ALTERNATIVES CONSIDERED (REQUIRED): Silt Fence (see plan)

MITIGATION MEASURES (IF REQUIRED): WETLANDS/WATERCOURSES CREATED: CY _____ SQFT 10,452 ACRES 0.24

IS PARCEL LOCATED WITHIN 500FT OF AN ADJOINING TOWN? No IF YES, WHICH TOWN(S) _____
IS THE ACTIVITY LOCATED WITHIN THE WATERSHED OF A WATER COMPANY AS DEFINED IN CT GENERAL STATUTES 25-32A? _____

THE OWNER AND APPLICANT HEREBY GRANT THE BROOKLYN IWWC, THE BOARD OF SELECTMAN AND THEIR AUTHORIZED AGENTS PERMISSION TO ENTER THE SUBJECT PROPERTY FOR THE PURPOSE OF INSPECTION AND ENFORCEMENT OF THE IWWC REGULATIONS OF THE TOWN OF BROOKLYN. IF THE COMMISSION DETERMINES THAT OUTSIDE REVIEW IS REQUIRED, APPLICANT WILL PAY CONSULTING FEE.

NOTE: DETERMINATION THAT THE INFORMATION PROVIDED IS INACCURATE MAY INVALIDATE THE IWWC DECISION AND RESULT IN ENFORCEMENT ACTION.

APPLICANT: Heather L. Allen DATE 10/4/21

OWNER: David H. Allen DATE 10/4/21

Revised 10/26/16

REQUIREMENTS

_____ Application Fee $_____ State Fee ($60.00) _____

_____ Completion of CT DEEP Reporting Form

_____ Original plus copies of all materials required - **NUMBER TO BE DETERMINED BY STAFF**

_____ Pre-application meeting with the Wetlands Agent is recommended to examine the scope of the activity

_____ Site Plan showing location of the wetlands with existing and proposed conditions. Applicant may be required to have a certified **soil scientist identify the wetlands.**

_____ Compliance with the Connecticut Erosion & Sedimentation Control Manual

_____ If the proposed activity is deemed to be a "significant impact activity" a Public Hearing is required along with the following information:

- Names and addresses of abutting property owners
- Additional Information as contained in IWWC Regulations Article 7.6

ADDITIONAL INFORMATION/ACTION NEEDED:

_____

_____

_____

Other applications may be required. Contact these agencies for further information:

Application to State of Connecticut DEEP
Inland Water Resources Division
79 Elm St.
Hartford, Ct. 06106
1-860-424-3019

Department of the Army Corps of Engineers
696 Virginia Road
Concord, Ma. 01742
1-860-343-4789

_____

STAFF USE ONLY:

_____ Declaratory Ruling: As of Right & Non-Regulated Uses (see IWWC Regulations Section 4)

_____ Permit Required:

_____ Authorized by Staff/Chair (no activity in wetlands/watercourse and minimal impact)

_____ _____
Chair, Brooklyn IWWC Wetlands Officer

_____ Authorized by IWWC

_____ Significant Activity/Public Hearing

_____ No permit required

_____ outside of upland review area

_____ no impact

_____ _____
Chair, Brooklyn IWWC Wetlands Officer

_____ Timber Harvest

Connecticut Department of
ENERGY & ENVIRONMENTAL PROTECTION

GIS CODE #: ____ ____ ____ ____ ____ ____ ____ ____
For DEEP Use Only

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

Statewide Inland Wetlands & Watercourses Activity Reporting Form

Please complete and mail this form in accordance with the instructions on pages 2 and 3 to:
DEEP Land & Water Resources Division, Inland Wetlands Management Program, 79 Elm Street, 3rd Floor, Hartford, CT 06106
Incomplete or incomprehensible forms will be mailed back to the inland wetlands agency.

PART I: Must Be Completed By The Inland Wetlands Agency

1. DATE ACTION WAS TAKEN: year: _____ month: _____
2. ACTION TAKEN (see instructions, only use one code): _____
3. WAS A PUBLIC HEARING HELD (check one)? yes ☐ no ☐
4. NAME OF AGENCY OFFICIAL VERIFYING AND COMPLETING THIS FORM:
   (print name) _____ (signature) _____

PART II: To Be Completed By The Inland Wetlands Agency Or The Applicant

5. TOWN IN WHICH THE ACTION IS OCCURRING (print name): Brooklyn
   does this project cross municipal boundaries (check one)? yes ☐ no ☒
   if yes, list the other town(s) in which the action is occurring (print name(s)): _____, _____
6. LOCATION (see instructions for information): USGS quad name: Danielson or number: 43
   subregional drainage basin number: _____
7. NAME OF APPLICANT, VIOLATOR OR PETITIONER (print name): Heather & Matt Allen
8. NAME & ADDRESS / LOCATION OF PROJECT SITE (print information): Christian Hill Rd
   briefly describe the action/project/activity (check and print information): temporary ☐ permanent ☒ description: agricultural pond
9. ACTIVITY *PURPOSE* CODE (see instructions, only use one code): G
10. ACTIVITY *TYPE* CODE(S) (see instructions for codes): 11, _____, _____, _____
11. WETLAND / WATERCOURSE AREA ALTERED (must provide acres or linear feet):
    wetlands: _____ acres open water body: _____ acres stream: _____ linear feet
12. UPLAND AREA ALTERED (must provide acres): 0.24 acres
13. AREA OF WETLANDS / WATERCOURSES RESTORED, ENHANCED OR CREATED (must provide acres): _____ acres

DATE RECEIVED:

PART III: To Be Completed By The DEEP

DATE RETURNED TO DEEP:

FORM COMPLETED: YES NO

FORM CORRECTED / COMPLETED: YES NO

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION
79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

STATEWIDE INLAND WETLANDS & WATERCOURSES ACTIVITY REPORTING FORM

Pursuant to section 22a-39(m) of the General Statutes of Connecticut and section 22a-39-14 of the Regulations of Connecticut State Agencies, inland wetlands agencies must complete the Statewide Inland Wetlands & Watercourses Activity Reporting Form for **each** action taken by such agency.

This form may be made part of a municipality's inland wetlands application package. If the municipality chooses to do this, it is recommended that a copy of the Town and Quadrangle Index of Connecticut and a copy of the municipality's subregional drainage basin map be included in the package.

Please remember, the inland wetlands agency is responsible for ensuring that the information provided is **accurate** and that it reflects the **final** action of the agency. Incomplete or incomprehensible forms will be mailed back to the agency. Instructions for completing the form are located on the following pages.

The inland wetlands agency shall mail completed forms for actions taken during a calendar month no later than the 15th day of the following month to the Department of Energy and Environmental Protection (DEEP). Do **not** mail this cover page or the instruction pages. Please mail **only** the **completed** reporting form to:

DEEP Land & Water Resources Division
Inland Wetlands Management Program
79 Elm Street, 3rd Floor
Hartford, CT 06106

Questions may be directed to the DEEP's Inland Wetlands Management Program at (860) 424-3019.

INSTRUCTIONS FOR COMPLETING

THE STATEWIDE INLAND WETLANDS & WATERCOURSES ACTIVITY REPORTING FORM

Use a separate form to report EACH action taken by the Agency. Complete the form as described below. Do NOT submit a reporting form for withdrawn actions.

PART I: Must Be Completed By The Inland Wetlands Agency

1. Choose the year and month the Inland Wetlands Agency took the action being reported. If multiple actions were taken regarding the same project or activity then multiple forms need to be completed.

2. Choose ONE code letter to describe the final action or decision taken by the Inland Wetlands Agency. Do NOT submit a reporting form for withdrawn actions. Do NOT enter multiple code letters (for example: if an enforcement notice was given and subsequent permit issued - two forms for the two separate actions are to be completed).

   A = A Permit Granted by the Inland Wetlands Agency (not including map amendments, see code D below)
   B = Any Permit Denied by the Inland Wetlands Agency
   C = A Permit Renewed or Amended by the Inland Wetlands Agency
   D = A Map Amendment to the Official Town Wetlands Map - or -
   An Approved/Permitted Wetland or Watercourse Boundary Amendment to a Project Site Map
   E = An Enforcement Action: Permit Revocation, Citation, Notice of Violation, Order, Court Injunction, or Court Fines
   F = A Jurisdictional Ruling by the Inland Wetlands Agency (i.e.: activities "permitted as of right" or activities considered non-regulated)
   G = An Agent Approval pursuant to CGS 22a-42a(c)(2)
   H = An Appeal of Agent Approval Pursuant to 22a-42a(c)(2)

3. Check "yes" if a public hearing was held in regards to the action taken; otherwise check "no".

4. Enter the name of the Inland Wetlands Agency official verifying that the information provided on this form is accurate and that it reflects the FINAL action of the agency.

PART II: To Be Completed By The Inland Wetlands Agency Or The Applicant - If Part II is completed by the applicant, the applicant MUST return the form to the Inland Wetlands Agency. The Inland Wetlands Agency MUST ensure that the information provided is accurate and that it reflects the FINAL action of the Agency.

5. Enter the name of the municipality for which the Inland Wetlands Agency has jurisdiction and in which the action/project/activity is occurring.

   Check "yes" if the action/project/activity crosses municipal boundaries and enter the name(s) of the other municipality(ies) where indicated. Check "no" if it does not cross municipal boundaries.

6. Enter the USGS Quad Map name or number (1 through 115) as found on the Connecticut Town and Quadrangle Index Map (the directory to all USGS Quad Maps) that contains the location of the action/project/activity. Click on the following website for USGS Quad Map information: http://ct.gov/deep/lib/deep/gis/resources/Index_NamedQuadTown.pdf

   ALSO enter the four-digit identification number of the corresponding Subregional Drainage Basin in which the action/project/activity is located. If the action/project/activity is located in more than one subregional drainage basin, enter the number of the basin in which the majority of the action/project/activity is located. Town subregional drainage basin maps can be found at UConn CLEAR's website: http://clear.uconn.edu/data/map_set/index.htm (no roads depicted) or at CTECO: http://www.cteco.uconn.edu/map_catalog.asp (depicts roads, choose town and a natural drainage basin map).

7. Enter the name of the individual applying for, petitioning, or receiving the action.

8. Enter the name and address or location of the action/project/activity. Check if the action/project/activity is TEMPORARY or PERMANENT in nature. Also provide a brief DESCRIPTION of the action/project/activity. It is always best to provide as much information as possible (i.e., don't just state "forestry", provide details such as "20 acre forestry harvest, permit required for stream crossing".)

9. Carefully review the list below and enter ONLY ONE code letter which best characterizes the action/project/activity. All state agency projects must code "N".

A = Residential Improvement by Homeowner
B = New Residential Development for Single Family Units
C = New Residential Development for Multi-Family / Condos
D = Commercial / Industrial Uses
E = Municipal Project
F = Utility Company Project
G = Agriculture, Forestry or Conservation
H = Wetland Restoration, Enhancement, Creation
I = Storm Water / Flood Control
J = Erosion / Sedimentation Control
K = Recreation / Boating / Navigation
L = Routine Maintenance
M = Map Amendment
N = State Agency Project
P = Other (this code includes the approval of concept plans with no-on-the-ground work)

10. Enter between one and four code numbers to best characterize the project or activity being reported. Enter "NA" if this form is being completed for the action of map amendment. You MUST provide code 12 if the activity is located in an established upland review area. You MUST provide code 14 if the activity is located beyond the established upland review area or no established upland review area exists.

1 = Filling
2 = Excavation
3 = Land Clearing / Grubbing (no other activity)
4 = Stream Channelization
5 = Stream Stabilization (includes lakeshore stabilization)
6 = Stream Clearance (removal of debris only)
7 = Culverting (not for roadways)
8 = Underground Utilities Only (no other activities)
9 = Roadway / Driveway Construction
10 = Drainage Improvements
11 = Pond, Lake Dredging / Dam Construction
12 = Activity In an Established Upland Review Area
14 = Activity in Upland

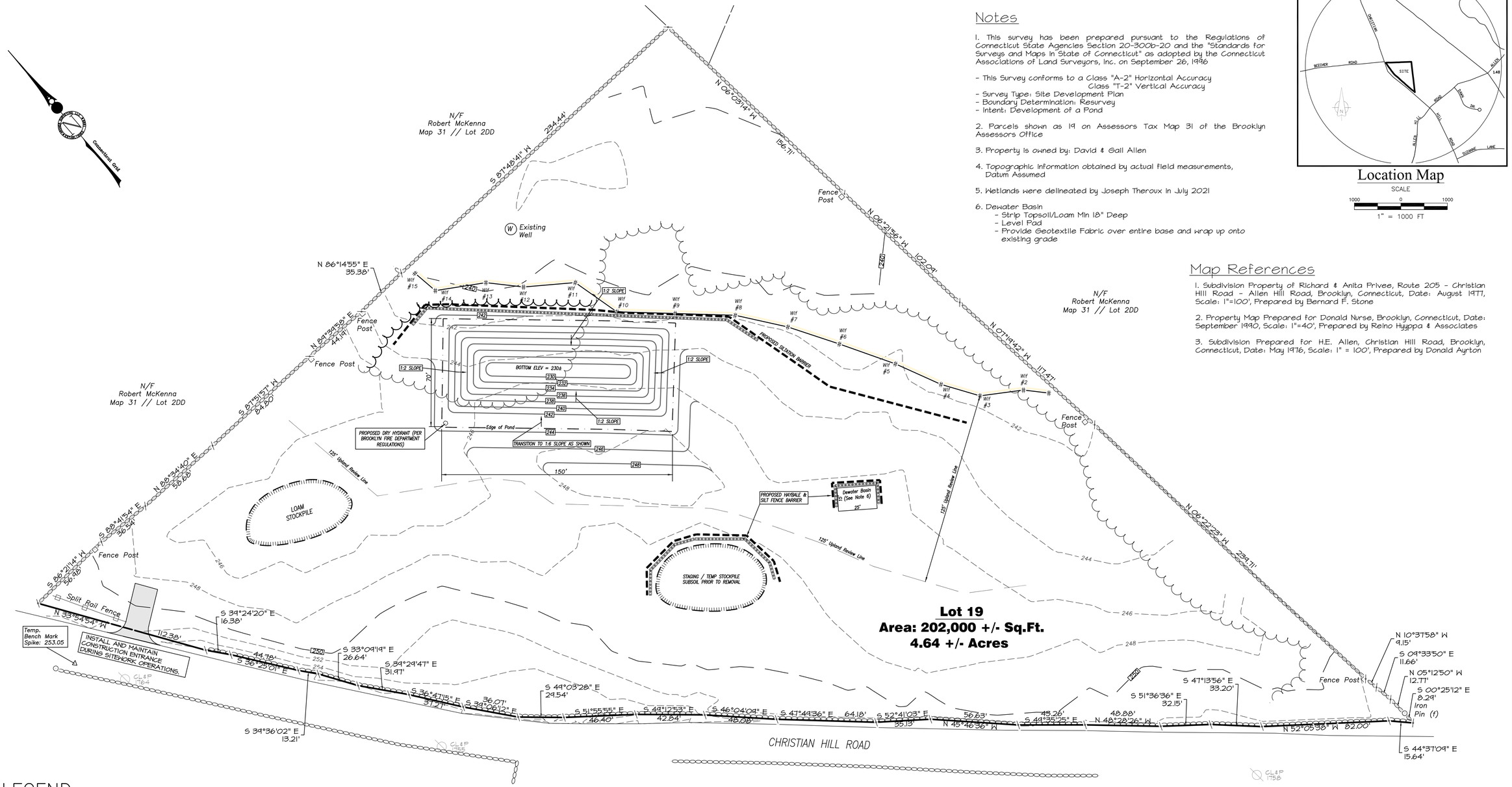
Examples: Jurisdictional ruling allowing construction of a parking lot in an upland where the municipality does not have an established upland review area must use code 14, other possible codes are 2 and 10. Permitted construction of a free standing garage (residential improvement by homeowner) partially in an established upland review area with the remainder in the upland must use code 12 and 14, other possible codes are 1 and 2.

11. Leave blank for TEMPORARY alterations but please indicate action/project/activity is temporary under question #8 on the form. For PERMANENT alterations, enter in acres the area of wetland soils or watercourses altered. Include areas that are permanently altered, or are proposed to be, for all agency permits, denials, amendments, renewals, jurisdictional rulings, and enforcement actions. For those activities that involve filling or dredging of lakes, ponds or similar open water bodies enter the acres filled or dredged under "open water body". For those activities that involve directly altering a linear reach of a brook, river, lakeshore or similar linear watercourse, enter the total linear feet altered under "stream". Remember that these figures represent only the acreage altered not the total acreage of wetlands or watercourses on the site. You MUST provide all information in ACRES (or linear feet as indicated) including those areas less than one acre. To convert from square feet to acres, divide square feet by the number 43,560. If this report is being completed for an agency jurisdictional ruling and detailed information is not available, provide an estimate. Enter zero if there is no alteration.

12. Enter in acres the area of upland altered as a result of an ACTIVITY REGULATED BY the inland wetlands agency, or as a result of an AGENT APPROVAL pursuant to CGS section 22a-42a(c)(2). Leave blank for TEMPORARY alterations but please indicate action/project/activity is temporary under question #8 on the form. Include areas that are permanently altered, or proposed to be permanently altered, for all agent approvals, agency permits, denials, amendments, renewals, jurisdictional rulings, and enforcement actions. You MUST provide all information in ACRES including those areas less than one acre. See directions above (#11) for conversion factor. If this report is being completed for an agent approval or an agency jurisdictional ruling and detailed information is not available, provide an estimate. Enter zero if there is no alteration.

13. Enter the acres that are, or are proposed to be, restored, enhanced or created for all agency permits, denials, amendments, renewals, jurisdictional rulings and enforcement actions. NOTE restored or enhanced applies to previously existing wetlands or watercourses. Created applies to a non-wetland or non-watercourse area which is converted into wetlands or watercourses (question #10 must provide 12 and/or 14 as an answer, and question #12 must also be answered). You MUST provide all information in ACRES including those areas less than one acre. See directions above (#11) for conversion factor. Enter zero if there is no restoration, enhancement or creation.

PART III: To Be Completed By The DEEP - Please leave this area blank. Incomplete or incomprehensible forms will be mailed back to the inland wetlands agency.



Notes

1. This survey has been prepared pursuant to the Regulations of Connecticut State Agencies Section 20-300b-20 and the "Standards for Surveys and Maps in State of Connecticut" as adopted by the Connecticut Associations of Land Surveyors, Inc. on September 26, 1996

- This Survey conforms to a Class "A-2" Horizontal Accuracy
  Class "T-2" Vertical Accuracy
- Survey Type: Site Development Plan
- Boundary Determination: Resurvey
- Intent: Development of a Pond

2. Parcels shown as 19 on Assessors Tax Map 31 of the Brooklyn Assessors Office

3. Property is owned by: David & Gail Allen

4. Topographic information obtained by actual field measurements, Datum Assumed

5. Wetlands were delineated by Joseph Theroux in July 2021

6. Dewater Basin
   - Strip Topsoil/Loam Min 18" Deep
   - Level Pad
   - Provide Geotextile Fabric over entire base and wrap up onto existing grade

Location Map

SCALE

1000 0 1000

1" = 1000 FT

Map References

1. Subdivision Property of Richard & Anita Privee, Route 205 - Christian Hill Road - Allen Hill Road, Brooklyn, Connecticut, Date: August 1977, Scale: 1"=100', Prepared by Bernard F. Stone

2. Property Map Prepared for Donald Nurse, Brooklyn, Connecticut, Date: September 1990, Scale: 1"=40', Prepared by Reino Hyyppa & Associates

3. Subdivision Prepared for H.E. Allen, Christian Hill Road, Brooklyn, Connecticut, Date: May 1976, Scale: 1" = 100', Prepared by Donald Ayrton

LEGEND

- PROPERTY LINE
- 125' UPLAND REVIEW LINE
- STONEWALL
- EXISTING TREELINE
- WETLANDS FLAG
- SILT FENCE
- STAKED HAYBALES
- PROPOSED TREELINE
- EXISTING INDEX CONTOUR
- EXISTING CONTOUR
- PROPOSED CONTOUR
- IRON PIN
- DRILL HOLE
- PROPERTY POINT
- UTILITY POLE

CL&P 1645

CONSTRUCTION SEQUENCE OF OPERATIONS:

1. Install siltation barrier
2. Strip and stockpile topsoil from area to be excavated
3. Remove subsoil as needed to shape pond bottom
4. Provide discharge area for dewatering pumps
5. Loam and re-seed disturbed areas at the completion of excavation
6. Pond spoils to be removed from this area and deposited elsewhere on the farm outside the upland review area

K W P associates

DAVID A. SMITH, P.E. #14173 DATE 11/02/2021

NOT VALID UNLESS SEAL IS AFFIXED HERETO

KWP associates

SURVEYING ~ ENGINEERING ~ SITE PLANNING

18 Providence Road
Brooklyn, CT 06234

REVISIONS	
DATE	DESCRIPTION
11/01/21	Engineers Comments
11/02/21	Misc.

Site Development Plan

Prepared For:

Matt & Heather Allen

Christian Hll Road
Brooklyn, Connecticut

DRAWING SCALE: 1"=30' 0 15 30 60

ARCHER Surveying LLC

18 Providence Road, Brooklyn, CT
(860) 779-2240

Sheet No.	Project No.	Date:
1 OF 2	AS 1935	September 8, 2021

ARCHER Surveying LLC

EROSION AND SEDIMENT CONTROL PLAN:

REFERENCE IS MADE TO:

1. Connecticut Guidelines for Soil Erosion and Sediment Control 2002 (2002 Guidelines).
2. Soil Survey of Windham County Connecticut, U.S.D.A. Soil Conservation Service 1983.

DEVELOPMENT SCHEDULE: (Individual Lots):

1. Prior to any work on site, the limits of disturbance shall be clearly flagged in the field by a Land Surveyor, licensed in the State of Connecticut. Once the limits of clearing are flagged, they shall be reviewed and approved by an agent of the Town.
2. Install and maintain erosion and sedimentation control devices as shown on these plans. All erosion control devices shall be inspected by an agent of the Town. Any additional erosion control devices required by the Town's Agent shall be installed and inspected prior to any construction on site. (See silt fence installation notes.)
3. Install construction entrance.
4. Construction will begin with clearing, grubbing and rough grading of the proposed site. The work will be confined to areas adjacent to the proposed building, septic system and driveway. Topsoil will be stockpiled on site and utilized during final grading.
5. Begin construction of Pond.
6. Disturbed areas shall be seeded and stabilized as soon as possible to prevent erosion.
7. The site will be graded so that all possible trees on site will be saved to provide buffers to adjoining lots.

DEVELOPMENT CONTROL PLAN:

1. Development of the site will be performed by the individual lot owner, who will be responsible for the installation and maintenance of erosion and sediment control measures required throughout construction.
2. The sedimentation control mechanisms shall remain in place from start of construction until permanent vegetation has been established. The representative for the Town will be notified when sediment and erosion control structures are initially in place. Any additional soil & erosion control measures requested by the Town or its agent, shall be installed immediately. Once the proposed development, seeding and planting have been completed, the representative shall again be notified to inspect the site. The control measures will not be removed until this inspection is complete.
3. All stripping is to be confined to the immediate construction area. Topsoil shall be stockpiled so that slopes do not exceed 2 to 1. A hay bale sediment barrier is to surround each stockpile and a temporary vegetative cover shall be provided.
4. Dust control will be accomplished by spraying with water and if necessary, the application of calcium chloride.
5. The proposed planting schedule is to be adhered to during the planting of disturbed areas throughout the proposed construction site.
6. Final stabilization of the site is to follow the procedures outlined in "Permanent Vegetative Cover". If necessary a temporary vegetative cover is to be provided until a permanent cover can be applied.

SILT FENCE INSTALLATION AND MAINTENANCE:

1. Dig a 6" deep trench on the uphill side of the barrier location.
2. Position the posts on the downhill side of the barrier and drive the posts 1.5 feet into the ground.
3. Lay the bottom 6" of the fabric in the trench to prevent undermining and backfill.
4. Inspect and repair barrier after heavy rainfall.
5. Inspections will be made at least once per week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater to determine maintenance needs.
6. Sediment deposits are to be removed when they reach a height of 1 foot behind the barrier or half the height of the barrier and are to be deposited in an area which is not regulated by the inland wetlands commission.
7. Replace or repair the fence within 24 hours of observed failure. Failure of the fence has occurred when sediment fails to be retained by the fence because:
   – the fence has been overtopped, undercut or bypassed by runoff water,
   – the fence has been moved out of position (knocked over), or
   – the geotextile has decomposed or been damaged.

HAY BALE INSTALLATION AND MAINTENANCE:

1. Bales shall be placed as shown on the plans with the ends of the bales tightly abutting each other.
2. Each bale shall be securely anchored with at least 2 stakes and gaps between bales shall be wedged with straw to prevent water from passing between the bales.
3. Inspect bales at least once per week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inches or greater to determine maintenance needs.
4. Remove sediment behind the bales when it reaches half the height of the bale and deposit in an area which is not regulated by the Inland Wetlands Commission.
5. Replace or repair the barrier within 24 hours of observed failure. Failure of the barrier has occurred when sediment fails to be retained by the barrier because:
   – the barrier has been overtopped, undercut or bypassed by runoff water,
   – the barrier has been moved out of position, or
   – the hay bales have deteriorated or been damaged.

TEMPORARY VEGETATIVE COVER:

SEED SELECTION

Grass species shall be appropriate for the season and site conditions. Appropriate species are outlined in Figure TS–2 in the 2002 Guidelines.

TIMING CONSIDERATIONS

Seed with a temporary seed mixture within 7 days after the suspension of grading work in disturbed areas where the suspension of work is expected to be more than 30 days but less than 1 year.

SITE PREPARATION

Install needed erosion control measures such as diversions, grade stabilization structures, sediment basins and grassed waterways.

Grade according to plans and allow for the use of appropriate equipment for seedbed preparation, seeding, mulch application, and mulch anchoring.

SEEDBED PREPARATION

Loosen the soil to a depth of 3–4 inches with a slightly roughened surface. If the area has been recently loosened or disturbed, no further roughening is required. Soil preparation can be accomplished by tracking with a bulldozer, discing, harrowing, raking or dragging with a section of chain link fence. Avoid excessive compaction of the surface by equipment traveling back and forth over the surface. If the slope is tracked, the cleat marks shall be perpendicular to the anticipated direction of the flow of surface water.

If soil testing is not practical or feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 300 pounds per acre or 7.5 pounds per 1,000 square feet of 10–10–10 or equivalent. Additionally, lime may be applied using rates given in Figure TS–1 in the 2002 Guidelines.

SEEDING

Apply seed uniformly by hand cyclone seeder, drill, cultipacker type seeder or hydroseeder at a minimum rate for the selected species. Increase seeding rates by 10% when hydroseeding.

MULCHING

Temporary seedings made during optimum seeding dates shall be mulched according to the recommendations in the 2002 Guidelines. When seeding outside of the recommended dates, increase the application of mulch to provide 95%–100% coverage.

MAINTENANCE

Inspect seeded area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater for seed and mulch movement and rill erosion.

Where seed has moved or where soil erosion has occurred, determine the cause of the failure. Repair eroded areas and install additional controls if required to prevent reoccurrence of erosion.

Continue inspections until the grasses are firmly established. Grasses shall not be considered established until a ground cover is achieved which is mature enough to control soil erosion and to survive severe weather conditions (approximately 80% vegetative cover).

PERMANENT VEGETATIVE COVER:

Refer to Permanent Seeding Measure in the 2002 Guidelines for specific applications and details related to the installation and maintenance of a permanent vegetative cover. In general, the following sequence of operations shall apply:

1. Topsoil will be replaced once the excavation and grading has been completed. Topsoil will be spread at a minimum compacted depth of 4".
2. Once the topsoil has been spread, all stones 2" or larger in any dimension will be removed as well as debris.
3. Apply agricultural ground limestone at a rate of 2 tons per acre or 100 lbs. per 1000 s.f. Apply 10–10–10 fertilizer or equivalent at a rate of 300 lbs. per acre or 7.5 lbs. per 1000 s.f. Work lime and fertilizer into the soil to a depth of 4".
4. Inspect seedbed before seeding. If traffic has compacted the soil, retill compacted areas.
5. Apply the chosen grass seed mix. The recommended seeding dates are: April 1 to June 15 & August 15 – October 1.
6. Following seeding, firm seedbed with a roller. Mulch immediately following seeding. If a permanent vegetative stand cannot be established by September 30, apply a temporary cover on the topsoil such as netting, mat or organic mulch.

EROSION AND SEDIMENT CONTROL NARRATIVE:

PRINCIPLES OF EROSION AND SEDIMENT CONTROL

The primary function of erosion and sediment controls is to absorb erosional energies and reduce runoff velocities that force the detachment and transport of soil and/or encourage the deposition of eroded soil particles before they reach any sensitive area.

KEEP LAND DISTURBANCE TO A MINIMUM

The more land that is in vegetative cover, the more surface water will infiltrate into the soil, thus minimizing stormwater runoff and potential erosion. Keeping land disturbance to a minimum not only involves minimizing the extent of exposure at any one time, but also the duration of exposure. Phasing, sequencing and construction scheduling are interrelated. Phasing divides a large project into distinct sections where construction work over a specific area occurs over distinct periods of time and each phase is not dependent upon a subsequent phase in order to be functional. A sequence is the order in which construction activities are to occur during any particular phase. A sequence should be developed on the premise of "first things first" and "last things last" with proper attention given to the inclusion of adequate erosion and sediment control measures. A construction schedule is a sequence with time lines applied to it and should address the potential overlap of actions in a sequence which may be in conflict with each other.

– Limit areas of clearing and grading. Protect natural vegetation from construction equipment with fencing, tree armoring, and retaining walls or tree wells.
– Route traffic patterns within the site to avoid existing or newly planted vegetation.
– Phase construction so that areas which are actively being developed at any one time are minimized and only that area under construction is exposed. Clear only those areas essential for construction.
– Sequence the construction of storm drainage systems so that they are operational as soon as possible during construction. Ensure all outlets are stable before outletting storm drainage flow into them.
– Schedule construction so that final grading and stabilization is completed as soon as possible.

SLOW THE FLOW

Detachment and transport of eroded soil must be kept to a minimum by absorbing and reducing the erosive energy of water. The erosive energy of water increases as the volume and velocity of runoff increases. The volume and velocity of runoff increases during development as a result of reduced infiltration rates caused by the removal of existing vegetation, removal of topsoil, compaction of soil and the construction of impervious surfaces.

– Use diversions, stone dikes, silt fences and similar measures to break flow lines and dissipate storm water energy.
– Avoid diverting one drainage system into another without calculating the potential for downstream flooding or erosion.

KEEP CLEAN RUNOFF SEPARATED

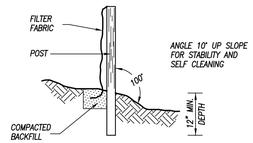
Clean runoff should be kept separated from sediment laden water and should not be directed over disturbed areas without additional controls. Additionally, prevent the mixing of clean off–site generated runoff with sediment laden runoff generated on–site until after adequate filtration of on–site waters has occurred.

– Segregate construction waters from clean water.
– Divert site runoff to keep it isolated from wetlands, watercourses and drainage ways that flow through or near the development until the sediment in that runoff is trapped or detained.

REDUCE ON SITE POTENTIAL INTERNALLY AND INSTALL PERIMETER CONTROLS

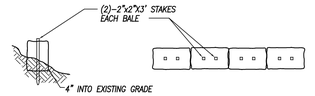
While it may seem less complicated to collect all waters to one point of discharge for treatment and just install a perimeter control, it can be more effective to apply internal controls to many small sub–drainage basins within the site. By reducing sediment loading from within the site, the chance of perimeter control failure and the potential off–site damage that it can cause is reduced. It is generally more expensive to correct off–site damage than it is to install proper internal controls.

– Control erosion and sedimentation in the smallest drainage area possible. It is easier to control erosion than to contend with sediment after it has been carried downstream and deposited in unwanted areas.
– Direct runoff from small disturbed areas to adjoining undisturbed vegetated areas to reduce the potential for concentrated flows and increase settlement and filtering of sediments.
– Concentrated runoff from development should be safely conveyed to stable outlets using rip rapped channels, waterways, diversions, storm drains or similar measures.
– Determine the need for sediment basins. Sediment basins are required on larger developments where major grading is planned and where it is impossible or impractical to control erosion at the source. Sediment basins are needed on large and small sites when sensitive areas such as wetlands, watercourses, and streets would be impacted by off–site sediment deposition. Do not locate sediment basins in wetlands or permanent or intermittent watercourses. Sediment basins should be located to intercept runoff prior to its entry into the wetland or watercourse.
– Grade and landscape around buildings and septic systems to divert water away from them.



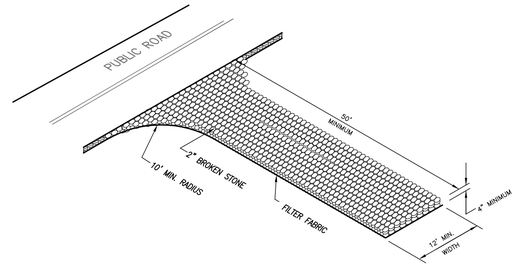
SILT FENCE

NOT TO SCALE



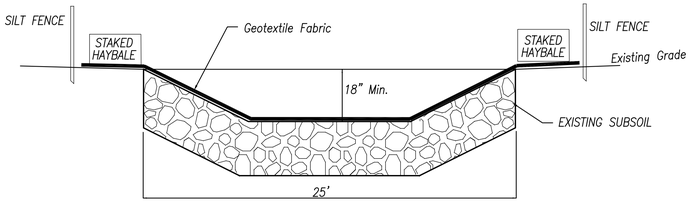
HAYBALE BARRIER

NOT TO SCALE



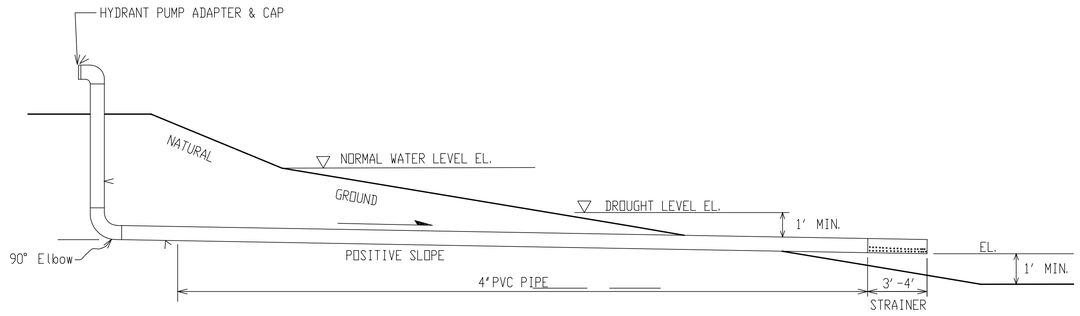
CONSTRUCTION ENTRANCE

NOT TO SCALE



MODIFIED DEWATERING BASIN

NOT TO SCALE



DRY HYDRANT PROFILE

NOT TO SCALE

Site Development Plan

"Detail Sheet"

Prepared For:

Matt & Heather Allen

Christian Hll Road

Brooklyn, Connecticut

KWP associates

SURVEYING ~ ENGINEERING ~ SITE PLANNING

18 Providence Road
Brooklyn, CT 06234

REVISIONS	
DATE	DESCRIPTION
11/01/21	Engineers Comments

ARCHER Surveying LLC

18 Providence Road, Brooklyn, CT
(860) 779–2240

Sheet No.	Project No.	Date:
2 OF 2	AS 1935	September 8, 2021

Matt and Heather Allen – Christian Hill Road (Map 31 // Lot 19)

Andrew & Janet Pusczynski
108 Christian Hill Road
Brooklyn, CT 06234
Map 31 // Lot 15A & 15

Timothy & Christine Clark
443 Wauregan Road
Brooklyn, CT 06234
Map 31 // Lot 2HH

Robert & Naoni McKenna
152 Christian Hill Road
Brooklyn CT 06234
Map 31 // Lot 2DD

Brooklyn Land Use Department

69 South Main Street
Brooklyn CT 06234
(860) 779-3411 x 31

Inland Wetlands ✓ Zoning Enforcement _____ Blight Enforcement _____

SITE INSPECTION NUMBER 1 2 3 4 5

0 Christian Hill Rd — Address

10-12-21 — Date

Map 31 Lot 19

I have a question about 1) why upland review area is not shown and 2) why there is no legend showing what the sediment barrier consists of and 3) why there is no "bathtub" where dewatering discharge is shown, and 4) is excavated material going to be spread in the upland review area and 5) I have concerns about possible dewatering discharge flowing into wetland onto the abutting property to the north. The land slopes towards the property line. There is a stone wall there. I met Paul Archer, took photos and inspected.

Commission Representative M. Washburn

Owner or Authorized Signature _____

dewatering area ↓

↑ area for proposed pond ↓

Dewatering discharge would flow toward abutter's wetlands.

Joseph R. Theroux

~ Certified Forester/ Soil Scientist ~
Phone 860-428-7992~ Fax 860-376-6842
P.O. Box 32, Voluntown, CT. 06384
Forestry Services ~ Wetland Impact Assessments
Wetland Delineations and Permitting ~ E&S/Site Monitoring
Wetland function/value assessments

8/19/2021

Archer Surveying
P.O. Box 22
Brooklyn, CT. 06234

Re: Wetland delineation, Allen property, Christian Hill Rd, Brooklyn, CT.

Dear Mr. Archer,

At your request I have delineated the inland wetlands on the subject property.

These wetlands have been delineated in accordance with the standards of the National Cooperative Soil Survey and the definitions of wetlands and watercourses as found in the Connecticut Statutes, Chapter 440, Section 22A-38 (15 & 16).

Fluorescent pink flags with a corresponding location number delineate the boundaries of the inland wetlands and the adjacent upland soils.

Flag series WF- 1 through WF- 15 delineate the wetland soils found along the northeast portion of the hayfield and wooded portion of the parcel.

These wetland soils exhibited characteristics such as thick organic "A" horizons with oxidized rhizospheres, shallow redoximorphic features and low chroma colors within 20 inches of the soil surface.

In conclusion, if you have any questions concerning the delineation or this report, please feel free to contact me.

Thank you,

Joseph R. Theroux

Joseph R. Theroux
Certified Soil Scientist
Member SSSSNE, NSCSS, SSSA.

NORTHEASTERN CONNECTICUT COUNCIL OF GOVERNMENTS

ENGINEERING PLAN REVIEW
PERTAINING TO A
CONSTRUCTION OF AN AGRICULTURAL POND
(ASSESSOR'S MAP 31, LOT 19)
ON PROPERTY OWNED BY DAVID AND GAIL ALLEN
0 CHRISTIAN HILL ROAD
BROOKLYN, CT

(October 26, 2021)

The comments contained herein pertain to my review of a plan, entitled "Site Development Plan, Prepared for Matt & Heather Allen, Christian Hill Road, Brooklyn, Connecticut," prepared by Archer Surveying, LLC, dated September 8, 2021.

1. A "north arrow" is missing in the Location Map.
2. Wetlands upland review area boundary is not shown.
3. The plan does not indicate any test pit locations. At least two (2) deep test pits are needed within the footprint of the proposed pond in order to estimate the level of high water level in the finished pond and the consistency of the soils to evaluate their ability to maintain a functional pond. Deep test pit data needs to be displayed on the plan.
4. Overall pond dimensions are missing and need to be drawn on the plan.
5. Longitudinal and transverse profiles of the proposed pond and surrounding area 100' from all edges of the proposed top of slope are required including the maximum surface elevation of stored water.
6. The average volume of stored water needs to be stipulated on the plan. Additionally, an engineering analysis should be submitted for review to address whether or not an emergency spillway on the wetland side of the pond needs to be included in the design, considering the heavy rainstorms we have experienced over the past several years. A formal spillway will help mitigate or reduce impacts to the wetland from erosion and sediment transport that can be caused by an undefined and unprotected discharge of water.
7. The pond needs to incorporate a wide submerged shelf with mild slope around its perimeter running to the top of the steep bank with the downward 2:1 slope to provide a safer environment if animals are to drink directly from the pond. Otherwise having a steep 2:1 downward sloped bank around the perimeter of the pond with its top at maximum water level presents a safety hazard to both livestock and people.
8. If livestock are not to drink directly from the pond and/or a pump is used to discharge water from the pond to irrigate the surrounding meadow, a location needs to be stipulated for the pump along with any electric supply if it is not gas or propane operated. In any event, the pump needs to be located on a Portland cement pad of sufficient size for stability and to prevent any fuel or lubricant spills falling directly onto unprotected ground (bare soil) where they can possibly migrate down into groundwater. Any secure structure needed to protect the pump, hoses any other ancillary

equipment from the elements or theft needs to be shown on the plan. A construction detail for the pump pad and any building needs to be included on the plan.

9. The plan indicates a dry hydrant, which is typically used by a fire department, is to be installed at the northwest corner of the pond. The hydrant can also serve to facilitate pumping water from the pond for agricultural purposes. Either way, access to the hydrant will require a driveway with an area large enough to turn a fire truck around, if the pond is to serve that additional function. Therefore, a formal gravel driveway with turnaround, if required, needs to be shown on the plan leading from Christian Hill Road to the hydrant. A cross-section detail of the composition of the driveway needs to be added to the plan.
10. Standing water in the pond may lend itself to eutrophication and/or become a mosquito breeding ground. If this happens, how can either of these conditions be avoided?
11. A temporary sediment basin is not shown on the plan to treat pump discharge during pond construction. A sediment basin is required in order to minimize silt laden water from impacting existing ground with silt and especially to the wetland which is not far from the pump discharge location noted on the plan. The "dewatering discharge" location noted on the plan is unacceptable due to it 1) being too close to the side property line and the wetland boundary, 2) cutting down more trees that serve as a natural visual buffer to the neighbor to create a temporary sediment basin, and 3) removing trees that serve to take up a portion of storm water that percolates into the ground. An alternative area for placing pump discharge with a temporary sedimentation basin is on the opposite end of the proposed pond in the area of the temporary subsoil stockpile where there is existing pasture and thus would not require any tree cutting and there is considerably more distance to the lot's sidelines. A note should be added to the plan on the frequency of removing accumulated sediment from the basin and disposal of the same. When use of the temporary sediment basin ceases, it shall be filled with compacted layers of suitable native soil and covered with at least 6" of topsoil to match the elevation of surrounding ground along with an application of grass seed, lime and fertilizer. A construction detail for the "temporary sediment basin" needs to be added to the plan with restoration notes.
12. There is no statement on the plans as to the accuracy of the topography, however, Note #4 under "Notes" only states that the "*topographic information obtained by actual field measurements, datum assumed.*" The actual field measurements should be explained more fully. In order for the pond to be constructed as depicted on the plan, a T2 topographic survey will be required and needs to be stated in Note #4. A benchmark with an assumed elevation should also be noted on the plan outside of but not far from the construction area for a contractor to use during construction.
13. A "Siltation Barrier" is noted on the plan but it is unclear of what this consists of. I recommend silt socks or compost socks to be used for the barrier as over the past several years they have 1) been demonstrated to more effective than a silt fence or hay bales, 2) are quicker to install/remove, and 3) installation does not disturb (digging into) more ground. A construction detail for the silt barrier is required to be included on the plan.
14. Under "Construction Sequence of Operations"…
    - Note 5 – There should be more than enough topsoil to cover disturbed areas outside of the portion of the dug pond that will be flooded. However, a seed mix should be specified on the plan along with application rates for lime and fertilizer.
    - Note 6 – What constitutes "pond spoils," the volume of such spoils, and a location of where they are to be deposited on the property needs to be identified on the plan to be sure they are not placed in the wetland or within wooded areas.

- Note 7 - Proposed contour lines cannot be “suggested” as stipulated. For this type of construction the contour lines drawn on the plan are what will be expected to be constructed in the field if the plan is approved by the IWWC. Accordingly, Note #7 needs to be removed.

15. If heavy construction vehicles, e.g. dump trucks, will be entering and leaving the construction site, a construction entrance needs to be shown on the plan. If this will occur, a construction detail for a construction entrance will be needed on the plan.

By: Syl Pauley, Jr., P.E.

Syl Pauley, Jr., P.E., NECCOG Regional Engineer

storage and withdrawal of water in connection with public water supplies except as provided in sections 22a-401 and 22a-403;

(6) Maintenance relating to any drainage pipe which existed before the effective date of any municipal regulations adopted pursuant to section 22a-42a or July 1, 1974, whichever is earlier, provided such pipe is on property which is zoned as residential but which does not contain hydrophytic vegetation. For purposes of this subdivision, "maintenance" means the removal of accumulated leaves, soil, and other debris whether by hand or machine, while the pipe remains in place; and

(7) Withdrawals of water for fire emergency purposes.

(b) The following operations and uses shall be permitted, as nonregulated uses in wetlands and watercourses, provided they do not disturb the natural and indigenous character of the wetland or watercourse by removal or deposition of material, alteration or obstruction of water flow or pollution of the wetland or watercourse:

(1) Conservation of soil, vegetation, water, fish, shellfish and wildlife;

(2) Outdoor recreation including play and sporting areas, golf courses, field trials, nature study, hiking, horseback riding, swimming, skin diving, camping, boating, water skiing, trapping, hunting, fishing and shellfishing where otherwise legally permitted and regulated; and

(3) The installation of a dry hydrant by or under the authority of a municipal fire department, provided such dry hydrant is only used for firefighting purposes and there is no alternative access to a public water supply. For purposes of this section, "dry hydrant" means a non-pressurized pipe system that: (A) Is readily accessible to fire department apparatus from a proximate public road, (B) provides for the withdrawal of water by suction to such fire department apparatus, and (C) is permanently installed into an existing lake, pond or stream that is a dependable source of water.

(c) Any dredging or any erection, placement, retention or maintenance of any structure, fill, obstruction or encroachment, or any work incidental to such activities, conducted by a state agency, which activity is regulated under sections 22a-28 to 22a-35, inclusive, or sections 22a-359b to 22a-363f, inclusive, shall not require any permit or approval under sections 22a-36 to 22a-45, inclusive.

(1972, P.A. 155, S. 3; P.A. 73-571, S. 1, 9; P.A. 77-599, S. 2, 7; P.A. 87-533, S. 2, 14; P.A. 88-364, S. 33, 123; P.A. 94-89, S. 15; P.A. 97-289, S. 5, 9; P.A. 98-209, S. 4; P.A. 11-80, S. 1; 11-184, S. 1.)

History: P.A. 73-571 allowed usage of wetlands and watercourses for grazing, farming, etc. purposes, for residential purposes, for boat anchorage or mooring and for water supply purposes "as of right" as was previously the case deleting exception "as they involve regulated activities", but allowed usage "as a nonregulated use ... provided they do not disturb the natural and indigenous character of the land" for conservation of soil, vegetation, etc. and outdoor regulation, where previously these uses too had been "as of right"; P.A. 77-599 amended Subsec. (a)(2) for clarity adding references to approval by municipal planning and zoning commissions and to July 1, 1974, as alternate approval date, amended (a)(4) for clarity by adding words "equal to or smaller than" with reference to lot size, by specifying that incidental uses include "maintenance of existing structures and landscaping" but exclude "removal or deposition of significant amounts of material from or onto a wetland or watercourse or diversion or alteration of a watercourse", amended Subsec. (b) to specifically prohibit removal or deposition of material, alteration or obstruction of water flow or pollution of wetlands or watercourses and to refer to field "trials" rather than field "trails" in Subdiv. (2); P.A. 87-533 amended Subsec. (a)(1) to require permits for farm ponds not essential to the farming operation, and certain road construction, relocation of

Re: Fire Pond

From: joetheroux426@comcast.net

To: paul@archersurveying.com

Date: Tuesday, November 2, 2021, 02:53 PM EDT

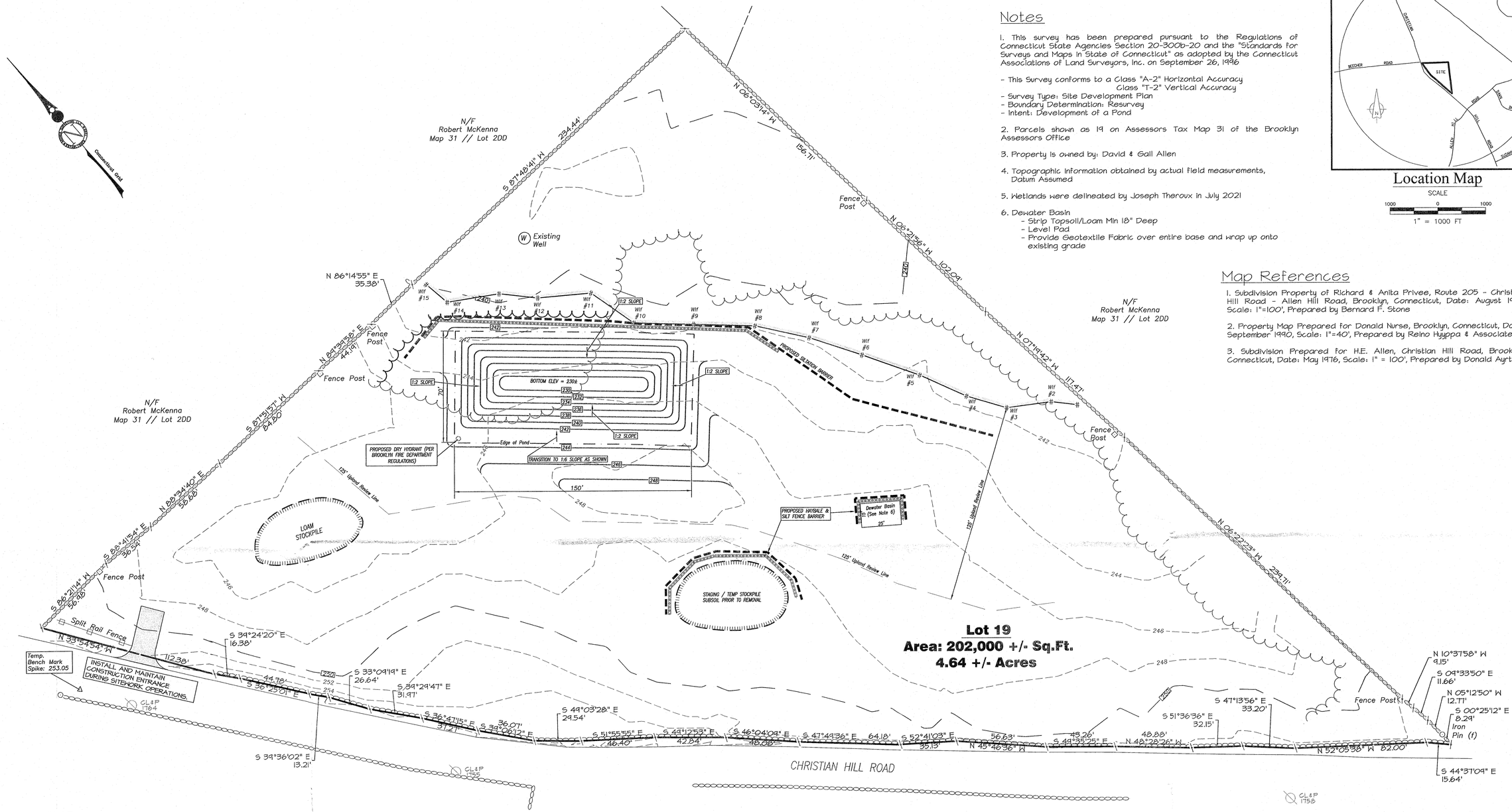
Hi Paul,
I reviewed the plan for the proposed farm/fire pond and have the following comments:

1). As this property is an existing farm, I see no reason why this would not be deemed a farm pond and fall under sec. 4 as a permitted use as of right. If it is going to be a fire pond then it is also considered as of right.
2). I would add staked haybales around the de-watering basin, on which the geotex fabric is wrapped around. This gives the basin a higher volume. Revise detail.
3). Locate the de-watering basin further away from the pond so when the basin overflows there is a greater distance for the water to infiltrate as it flows down slope.
4). Add a detail for the dry hydrant.
5). Upgrade the silt fencing with staked hay bales between the wetlands and proposed pond.

Overall, I see no direct impacts to the adjacent wetlands provided that the E&S measures are correctly installed, maintained and inspected.

Thanks,
Joe

On 11/02/2021 9:47 AM PAUL ARCHER <paul@archersurveying.com> wrote:



Notes

1. This survey has been prepared pursuant to the Regulations of Connecticut State Agencies Section 20-300b-20 and the "Standards for Surveys and Maps in State of Connecticut" as adopted by the Connecticut Associations of Land Surveyors, Inc. on September 26, 1996

- This Survey conforms to a Class "A-2" Horizontal Accuracy
  Class "T-2" Vertical Accuracy
- Survey Type: Site Development Plan
- Boundary Determination: Resurvey
- Intent: Development of a Pond

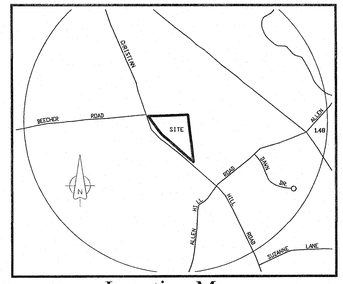
2. Parcels shown as 19 on Assessors Tax Map 31 of the Brooklyn Assessors Office

3. Property is owned by: David & Gail Allen

4. Topographic information obtained by actual field measurements, Datum Assumed

5. Wetlands were delineated by Joseph Theroux in July 2021

6. Dewater Basin
   - Strip Topsoil/Loam Min 18" Deep
   - Level Pad
   - Provide Geotextile Fabric over entire base and wrap up onto existing grade



Location Map

SCALE

1000 0 1000

1" = 1000 FT

Map References

1. Subdivision Property of Richard & Anita Privee, Route 205 - Christian Hill Road - Allen Hill Road, Brooklyn, Connecticut, Date: August 1977, Scale: 1"=100', Prepared by Bernard F. Stone

2. Property Map Prepared for Donald Nurse, Brooklyn, Connecticut, Date: September 1990, Scale: 1"=40', Prepared by Reino Hyyppa & Associates

3. Subdivision Prepared for H.E. Allen, Christian Hill Road, Brooklyn, Connecticut, Date: May 1976, Scale: 1" = 100', Prepared by Donald Ayrton

Lot 19
Area: 202,000 +/- Sq.Ft.
4.64 +/- Acres

LEGEND

- PROPERTY LINE
- 125' UPLAND REVIEW LINE
- STONEWALL
- EXISTING TREELINE
- WETLANDS FLAG
- SILT FENCE
- STAKED HAYBALES
- PROPOSED TREELINE
- EXISTING INDEX CONTOUR
- EXISTING CONTOUR
- PROPOSED CONTOUR
- IRON PIN
- DRILL HOLE
- PROPERTY POINT
- UTILITY POLE

CONSTRUCTION SEQUENCE OF OPERATIONS:

1. Install siltation barrier
2. Strip and stockpile topsoil from area to be excavated
3. Remove subsoil as needed to shape pond bottom
4. Provide discharge area for dewatering pumps
5. Loam and re-seed disturbed areas at the completion of excavation
6. Pond spoils to be removed from this area and deposited elsewhere on the farm outside the upland review area

STATE OF CONNECTICUT · DAVID A. SMITH · 14173 · REGISTERED LAND SURVEYOR

K W P associates

11/02/2021

DAVID A. SMITH, P.E. #14173 DATE

NOT VALID UNLESS SEAL IS AFFIXED HERETO

Version 2

Site Development Plan

Prepared For:

RECEIVED NOV 4 2021

Matt & Heather Allen

Christian Hill Road

Brooklyn, Connecticut

DRAWING SCALE: 1"=30' 0 15 30 60

KWP associates

SURVEYING ~ ENGINEERING ~ SITE PLANNING

18 Providence Road
Brooklyn, CT 06234

REVISIONS	
DATE	DESCRIPTION
11/01/21	Engineers Comments
11/02/21	Misc.

ARCHER Surveying LLC

18 Providence Road, Brooklyn, CT
(860) 779-2240

Sheet No.	1 OF 2	Project No.	AS 1935	Date:	September 8, 2021

ARCHER Surveying LLC

EROSION AND SEDIMENT CONTROL PLAN:

REFERENCE IS MADE TO:

1. Connecticut Guidelines for Soil Erosion and Sediment Control 2002 (2002 Guidelines).
2. Soil Survey of Windham County Connecticut, U.S.D.A. Soil Conservation Service 1983.

DEVELOPMENT SCHEDULE: (Individual Lots):

1. Prior to any work on site, the limits of disturbance shall be clearly flagged in the field by a Land Surveyor, licensed in the State of Connecticut. Once the limits of clearing are flagged, they shall be reviewed and approved by an agent of the Town.
2. Install and maintain erosion and sedimentation control devices as shown on these plans. All erosion control devices shall be inspected by an agent of the Town. Any additional erosion control devices required by the Town's Agent shall be installed and inspected prior to any construction on site. (See silt fence installation notes.)
3. Install construction entrance.
4. Construction will begin with clearing, grubbing and rough grading of the proposed site. The work will be confined to areas adjacent to the proposed building, septic system and driveway. Topsoil will be stockpiled on site and utilized during final grading.
5. Begin construction of Pond.
6. Disturbed areas shall be seeded and stabilized as soon as possible to prevent erosion.
7. The site will be graded so that all possible trees on site will be saved to provide buffers to adjoining lots.

DEVELOPMENT CONTROL PLAN:

1. Development of the site will be performed by the individual lot owner, who will be responsible for the installation and maintenance of erosion and sediment control measures required throughout construction.
2. The sedimentation control mechanisms shall remain in place from start of construction until permanent vegetation has been established. The representative for the Town will be notified when sediment and erosion control structures are initially in place. Any additional soil & erosion control measures requested by the Town or its agent, shall be installed immediately. Once the proposed development, seeding and planting have been completed, the representative shall again be notified to inspect the site. The control measures will not be removed until this inspection is complete.
3. All stripping is to be confined to the immediate construction area. Topsoil shall be stockpiled so that slopes do not exceed 2 to 1. A hay bale sediment barrier is to surround each stockpile and a temporary vegetative cover shall be provided.
4. Dust control will be accomplished by spraying with water and if necessary, the application of calcium chloride.
5. The proposed planting schedule is to be adhered to during the planting of disturbed areas throughout the proposed construction site.
6. Final stabilization of the site is to follow the procedures outlined in "Permanent Vegetative Cover". If necessary a temporary vegetative cover is to be provided until a permanent cover can be applied.

SILT FENCE INSTALLATION AND MAINTENANCE:

1. Dig a 6" deep trench on the uphill side of the barrier location.
2. Position the posts on the downhill side of the barrier and drive the posts 1.5 feet into the ground.
3. Lay the bottom 6" of the fabric in the trench to prevent undermining and backfill.
4. Inspect and repair barrier after heavy rainfall.
5. Inspections will be made at least once per week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater to determine maintenance needs.
6. Sediment deposits are to be removed when they reach a height of 1 foot behind the barrier or half the height of the barrier and are to be deposited in an area which is not regulated by the inland wetlands commission.
7. Replace or repair the fence within 24 hours of observed failure. Failure of the fence has occurred when sediment fails to be retained by the fence because:
   - the fence has been overtopped, undercut or bypassed by runoff water,
   - the fence has been moved out of position (knocked over), or
   - the geotextile has decomposed or been damaged.

HAY BALE INSTALLATION AND MAINTENANCE:

1. Bales shall be placed as shown on the plans with the ends of the bales tightly abutting each other.
2. Each bale shall be securely anchored with at least 2 stakes and gaps between bales shall be wedged with straw to prevent water from passing between the bales.
3. Inspect bales at least once per week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inches or greater to determine maintenance needs.
4. Remove sediment behind the bales when it reaches half the height of the bale and deposit in an area which is not regulated by the Inland Wetlands Commission.
5. Replace or repair the barrier within 24 hours of observed failure. Failure of the barrier has occurred when sediment fails to be retained by the barrier because:
   - the barrier has been overtopped, undercut or bypassed by runoff water,
   - the barrier has been moved out of position, or
   - the hay bales have deteriorated or been damaged.

TEMPORARY VEGETATIVE COVER:

SEED SELECTION

Grass species shall be appropriate for the season and site conditions. Appropriate species are outlined in Figure TS-2 in the 2002 Guidelines.

TIMING CONSIDERATIONS

Seed with a temporary seed mixture within 7 days after the suspension of grading work in disturbed areas where the suspension of work is expected to be more than 30 days but less than 1 year.

SITE PREPARATION

Install needed erosion control measures such as diversions, grade stabilization structures, sediment basins and grassed waterways.

Grade according to plans and allow for the use of appropriate equipment for seedbed preparation, seeding, mulch application, and mulch anchoring.

SEEDBED PREPARATION

Loosen the soil to a depth of 3-4 inches with a slightly roughened surface. If the area has been recently loosened or disturbed, no further roughening is required. Soil preparation can be accomplished by tracking with a bulldozer, discing, harrowing, raking or dragging with a section of chain link fence. Avoid excessive compaction of the surface by equipment traveling back and forth over the surface. If the slope is tracked, the cleat marks shall be perpendicular to the anticipated direction of the flow of surface water.

If soil testing is not practical or feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 300 pounds per acre or 7.5 pounds per 1,000 square feet of 10-10-10 or equivalent. Additionally, lime may be applied using rates given in Figure TS-1 in the 2002 Guidelines.

SEEDING

Apply seed uniformly by hand cyclone seeder, drill, cultipacker type seeder or hydroseeder at a minimum rate for the selected species. Increase seeding rates by 10% when hydroseeding.

MULCHING

Temporary seedings made during optimum seeding dates shall be mulched according to the recommendations in the 2002 Guidelines. When seeding outside of the recommended dates, increase the application of mulch to provide 95%-100% coverage.

MAINTENANCE

Inspect seeded area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater for seed and mulch movement and rill erosion.

Where seed has moved or where soil erosion has occurred, determine the cause of the failure. Repair eroded areas and install additional controls if required to prevent reoccurrence of erosion.

Continue inspections until the grasses are firmly established. Grasses shall not be considered established until a ground cover is achieved which is mature enough to control soil erosion and to survive severe weather conditions (approximately 80% vegetative cover).

PERMANENT VEGETATIVE COVER:

Refer to Permanent Seeding Measure in the 2002 Guidelines for specific applications and details related to the installation and maintenance of a permanent vegetative cover. In general, the following sequence of operations shall apply:

1. Topsoil will be replaced once the excavation and grading has been completed. Topsoil will be spread at a minimum compacted depth of 4".
2. Once the topsoil has been spread, all stones 2" or larger in any dimension will be removed as well as debris.
3. Apply agricultural ground limestone at a rate of 2 tons per acre or 100 lbs. per 1000 s.f. Apply 10-10-10 fertilizer or equivalent at a rate of 300 lbs. per acre or 7.5 lbs. per 1000 s.f. Work lime and fertilizer into the soil to a depth of 4".
4. Inspect seedbed before seeding. If traffic has compacted the soil, retill compacted areas.
5. Apply the chosen grass seed mix. The recommended seeding dates are: April 1 to June 15 & August 15 – October 1.
6. Following seeding, firm seedbed with a roller. Mulch immediately following seeding. If a permanent vegetative stand cannot be established by September 30, apply a temporary cover on the topsoil such as netting, mat or organic mulch.

EROSION AND SEDIMENT CONTROL NARRATIVE:

PRINCIPLES OF EROSION AND SEDIMENT CONTROL

The primary function of erosion and sediment controls is to absorb erosional energies and reduce runoff velocities that force the detachment and transport of soil and/or encourage the deposition of eroded soil particles before they reach any sensitive area.

KEEP LAND DISTURBANCE TO A MINIMUM

The more land that is in vegetative cover, the more surface water will infiltrate into the soil, thus minimizing stormwater runoff and potential erosion. Keeping land disturbance to a minimum not only involves minimizing the extent of exposure at any one time, but also the duration of exposure. Phasing, sequencing and construction scheduling are interrelated. Phasing divides a large project into distinct sections where construction work over a specific area occurs over distinct periods of time and each phase is not dependent upon a subsequent phase in order to be functional. A sequence is the order in which construction activities are to occur during any particular phase. A sequence should be developed on the premise of "first things first" and "last things last" with proper attention given to the inclusion of adequate erosion and sediment control measures. A construction schedule is a sequence with time lines applied to it and should address the potential overlap of actions in a sequence which may be in conflict with each other.

- Limit areas of clearing and grading. Protect natural vegetation from construction equipment with fencing, tree armoring, and retaining walls or tree wells.
- Route traffic patterns within the site to avoid existing or newly planted vegetation.
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- Sequence the construction of storm drainage systems so that they are operational as soon as possible during construction. Ensure all outlets are stable before outletting storm drainage flow into them.
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SLOW THE FLOW

Detachment and transport of eroded soil must be kept to a minimum by absorbing and reducing the erosive energy of water. The erosive energy of water increases as the volume and velocity of runoff increases. The volume and velocity of runoff increases during development as a result of reduced infiltration rates caused by the removal of existing vegetation, removal of topsoil, compaction of soil and the construction of impervious surfaces.

- Use diversions, stone dikes, silt fences and similar measures to break flow lines and dissipate storm water energy.
- Avoid diverting one drainage system into another without calculating the potential for downstream flooding or erosion.

KEEP CLEAN RUNOFF SEPARATED

Clean runoff should be kept separated from sediment laden water and should not be directed over disturbed areas without additional controls. Additionally, prevent the mixing of clean off-site generated runoff with sediment laden runoff generated on-site until after adequate filtration of on-site waters has occurred.

- Segregate construction waters from clean water.
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REDUCE ON SITE POTENTIAL INTERNALLY AND INSTALL PERIMETER CONTROLS

While it may seem less complicated to collect all waters to one point of discharge for treatment and just install a perimeter control, it can be more effective to apply internal controls to many small sub-drainage basins within the site. By reducing sediment loading from within the site, the chance of perimeter control failure and the potential off-site damage that it can cause is reduced. It is generally more expensive to correct off-site damage than it is to install proper internal controls.

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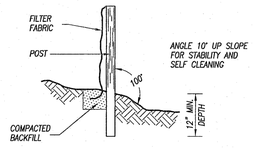
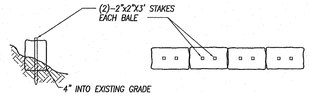
- Grade and landscape around buildings and septic systems to divert water away from them.



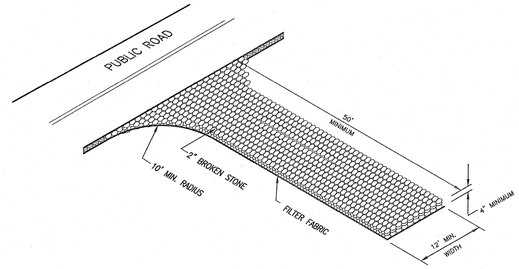
SILT FENCE

NOT TO SCALE



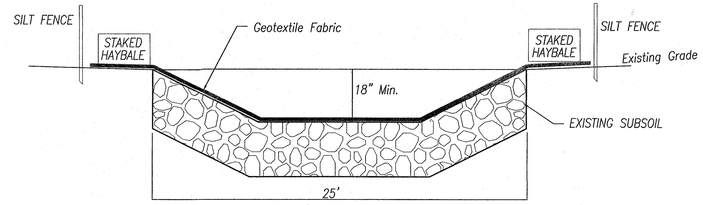
HAYBALE BARRIER

NOT TO SCALE



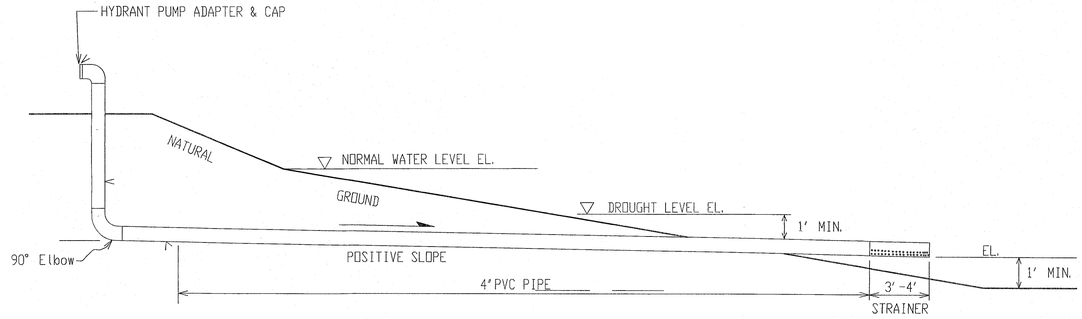
CONSTRUCTION ENTRANCE

NOT TO SCALE



MODIFIED DEWATERING BASIN

NOT TO SCALE



DRY HYDRANT PROFILE

NOT TO SCALE

Site Development Plan

"Detail Sheet"

Prepared For:

Matt & Heather Allen

Christian Hll Road

Brooklyn, Connecticut

KWP associates

SURVEYING ~ ENGINEERING ~ SITE PLANNING

18 Providence Road
Brooklyn, CT 06234

REVISIONS

DATE	DESCRIPTION
11/01/21	Engineers Comments

ARCHER Surveying LLC

18 Providence Road, Brooklyn, CT
(860) 779-2240

Sheet No.	2 OF 2	Project No.	AS 1935	Date:	September 8, 2021

INLAND WETLANDS & WATERCOURSES COMMISSION
TOWN OF BROOKLYN, CONECTICUT

Date 11/1/21 Application # 11021

APPLICATION -- INLAND WETLANDS & WATERCOURSES

APPLICANT Leonard "Frank" Titus's MAILING ADDRESS 7 Charles ST
APPLICANT'S INTEREST IN PROPERTY _____ PHONE 860 559 5242 EMAIL _____

PROPERTY OWNER IF DIFFERENT _____ PHONE _____
MAILING ADDRESS _____ EMAIL _____

ENGINEER/SURVEYOR (IF ANY) Heather Sowerby / VNP Associates
ATTORNEY (IF ANY) _____

PROPERTY LOCATION/ADDRESS River Farm Drive
MAP # 43 LOT # 15 ZONE RA TOTAL ACRES 10± ACRES OF WETLANDS ON PROPERTY .41 AC

PURPOSE AND DESCRIPTION OF THE ACTIVITY Residential Home, Septic System Driveway, Shed & Mowed Gardens

WETLANDS EXCAVATION AND FILL:
FILL PROPOSED 0 CUBIC YDS _____ SQ FT _____
EXCAVATION PROPOSED 6 CUBIC YDS _____ SQ FT _____
LOCATION WHERE MATERIAL WILL BE PLACED: ON SITE ✓ OFF SITE _____
TOTAL REGULATED AREA ALTERED: SQ FT 20,000 ACRES .47

EXPLAIN ALTERNATIVES CONSIDERED (REQUIRED): None

MITIGATION MEASURES (IF REQUIRED): WETLANDS/WATERCOURSES CREATED: CY _____ SQFT _____ ACRES _____

IS PARCEL LOCATED WITHIN 500FT OF AN ADJOINING TOWN? ✓ IF YES, WHICH TOWN(S) Killingly
IS THE ACTIVITY LOCATED WITHIN THE WATERSHED OF A WATER COMPANY AS DEFINED IN CT GENERAL STATUTES 25-32A? _____

THE OWNER AND APPLICANT HEREBY GRANT THE BROOKLYN IWWC, THE BOARD OF SELECTMAN AND THEIR AUTHORIZED AGENTS PERMISSION TO ENTER THE SUBJECT PROPERTY FOR THE PURPOSE OF INSPECTION AND ENFORCEMENT OF THE IWWC REGULATIONS OF THE TOWN OF BROOKLYN. IF THE COMMISSION DETERMINES THAT OUTSIDE REVIEW IS REQUIRED, APPLICANT WILL PAY CONSULTING FEE.

NOTE: DETERMINATION THAT THE INFORMATION PROVIDED IS INACCURATE MAY INVALIDATE THE IWWC DECISION AND RESULT IN ENFORCEMENT ACTION.

APPLICANT: Jo Ann L Titus DATE 10/22/21

OWNER: Jo Ann L Titus DATE 11/22/21

Revised 10/26/16

REQUIREMENTS

_____ Application Fee $_____ State Fee ($60.00) _____

_____ Completion of CT DEEP Reporting Form

_____ Original plus copies of all materials required - **NUMBER TO BE DETERMINED BY STAFF**

_____ Pre-application meeting with the Wetlands Agent is recommended to examine the scope of the activity

_____ Site Plan showing location of the wetlands with existing and proposed conditions. Applicant may be required to have a certified **soil scientist identify the wetlands.**

_____ Compliance with the Connecticut Erosion & Sedimentation Control Manual

_____ If the proposed activity is deemed to be a "significant impact activity" a Public Hearing is required along with the following information:

- Names and addresses of abutting property owners
- Additional Information as contained in IWWC Regulations Article 7.6

ADDITIONAL INFORMATION/ACTION NEEDED:

_____

_____

_____

Other applications may be required. Contact these agencies for further information:

Application to State of Connecticut DEEP
Inland Water Resources Division
79 Elm St.
Hartford, Ct. 06106
1-860-424-3019

Department of the Army Corps of Engineers
696 Virginia Road
Concord, Ma. 01742
1-860-343-4789

_____

STAFF USE ONLY:

_____ Declaratory Ruling: As of Right & Non-Regulated Uses (see IWWC Regulations Section 4)

_____ Permit Required:

_____ Authorized by Staff/Chair (no activity in wetlands/watercourse and minimal impact)

_____ _____
Chair, Brooklyn IWWC Wetlands Officer

_____ Authorized by IWWC

_____ Significant Activity/Public Hearing

_____ No permit required

_____ outside of upland review area

_____ no impact

_____ _____
Chair, Brooklyn IWWC Wetlands Officer

_____ Timber Harvest

Connecticut Department of
ENERGY & ENVIRONMENTAL PROTECTION

GIS CODE #: _____
For DEEP Use Only

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

Statewide Inland Wetlands & Watercourses Activity Reporting Form

Please complete and mail this form in accordance with the instructions on pages 2 and 3 to:
DEEP Land & Water Resources Division, Inland Wetlands Management Program, 79 Elm Street, 3rd Floor, Hartford, CT 06106
Incomplete or incomprehensible forms will be mailed back to the inland wetlands agency.

PART I: Must Be Completed By The Inland Wetlands Agency

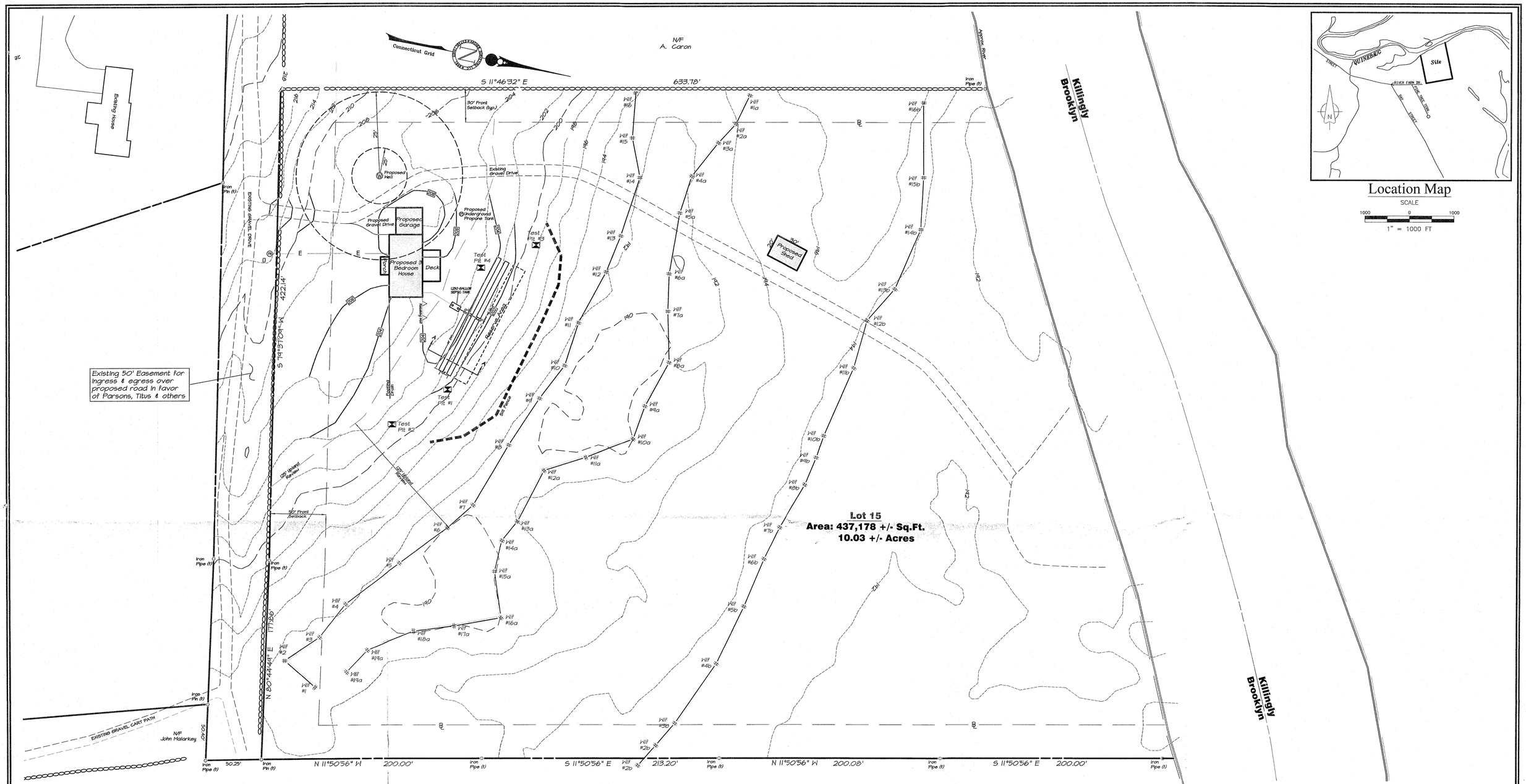
1. DATE ACTION WAS TAKEN: year: _____ month: _____
2. ACTION TAKEN (see instructions, only use one code): _____
3. WAS A PUBLIC HEARING HELD (check one)? yes ☐ no ☐
4. NAME OF AGENCY OFFICIAL VERIFYING AND COMPLETING THIS FORM:
   (print name) _____ (signature) _____

PART II: To Be Completed By The Inland Wetlands Agency Or The Applicant

5. TOWN IN WHICH THE ACTION IS OCCURRING (print name): Brooklyn
   does this project cross municipal boundaries (check one)? yes ☐ no ☒
   if yes, list the other town(s) in which the action is occurring (print name(s)): _____, _____
6. LOCATION (see instructions for information): USGS quad name: Danielson or number: 43
   subregional drainage basin number: _____
7. NAME OF APPLICANT, VIOLATOR OR PETITIONER (print name): Johnny Titus
8. NAME & ADDRESS / LOCATION OF PROJECT SITE (print information): River Farm Drive
   briefly describe the action/project/activity (check and print information): temporary ☐ permanent ☐ description: _____
9. ACTIVITY *PURPOSE* CODE (see instructions, only use one code): B A
10. ACTIVITY *TYPE* CODE(S) (see instructions for codes): 14 _____, _____, _____, _____
11. WETLAND / WATERCOURSE AREA ALTERED (must provide acres or linear feet):
    wetlands: 0 acres open water body: 0 acres stream: 9 linear feet
12. UPLAND AREA ALTERED (must provide acres): 3.4 acres
13. AREA OF WETLANDS / WATERCOURSES RESTORED, ENHANCED OR CREATED (must provide acres): 0 acres

DATE RECEIVED: **PART III: To Be Completed By The DEEP** DATE RETURNED TO DEEP:

FORM COMPLETED: YES NO FORM CORRECTED / COMPLETED: YES NO



Location Map

SCALE

1000 0 1000

1" = 1000 FT

LEGEND

- PROPERTY LINE
- EASEMENT
- STONEWALL
- EXISTING TREELINE
- PROPOSED CLEARING LIMITS
- SILT FENCE
- EXISTING INDEX CONTOUR
- EXISTING CONTOUR
- PROPOSED CONTOUR
- WETLANDS FLAG
- BUILDING SETBACK
- IRON PIN
- DRILL HOLE
- MONUMENT
- PERCOLATION TEST
- TEST PIT
- PROPERTY POINT
- UTILITY POLE

MAP REFERENCE:

1. Subdivision of River Farm Acres, Section "B", Owned by Henry F. & Mary A. Weaver, Brooklyn, Connecticut, Date: August 1965, Prepared by: Robert Kieltyka

2. River Farm Acres, Lot 22, River Farm Drive, Brooklyn, Connecticut, Date: Sept. 1988, Prepared by: Kieltyka, Woodis & Pike

3. Boundary Stake Out Map, Prepared for John Paul Malarkey, off River Farm Drive, Brooklyn, Connecticut, Date: September 2017, Prepared by: PC Survey

4. Boundary Survey, Prepared for: Roland Joly & Mary Ann Seyford, 14 & 30 Pine Tree Terrace, Brooklyn, Connecticut, Date: June 2008, Prepared by: Archer Surveying LLC

N/F
A. Caron

To My Knowledge and Belief, This Map is substantially Correct as noted hereon. — Paul M. Archer LLS — 11-01-21 Date

Notes

1. This survey has been prepared pursuant to the Regulations of Connecticut State Agencies Section 20-300b-20 and the "Standards for Surveys and Maps in State of Connecticut" as adopted by the Connecticut Associations of Land Surveyors, Inc. on September 26, 1996

- This Survey conforms to a Class "A-2" Horizontal Accuracy
- Survey Type: Site Development Plan
- Boundary Determination: Resurvey
- Intent: Site Plan

2. Parcels shown as Lots 15 on Assessors Tax Map 43 of the Brooklyn Assessors Office

3. Wetlands were delineated by Joseph Theroux and field located by Archer Surveying LLC

4. Property is Zoned: R30

KWP associates
P.O. BOX 106, POMFRET CENTER, CT. 06259
DAVID A. SMITH, P.E. #14713 DATE
NOT VALID UNLESS SEAL IS AFFIXED HERETO

Site Development Plan

Prepared For:

RECEIVED
NOV 0 1 2021

Joann & Frank Titus

River Farm Drive
Brooklyn, Connecticut

DRAWING SCALE: 1"=40'

0 40 80

KWP associates
SURVEYING ~ ENGINEERING ~ SITE PLANNING
18 Providence Road
Brooklyn, CT 06234

ARCHER Surveying LLC
18 Providence Road, Brooklyn, CT
(860) 779-2240

REVISIONS	
DATE	DESCRIPTION

Sheet No.	Project No.	Date:
1 OF 2	AS 1969	September 30, 2021 Revised: October 29, 2021

ARCHER Surveying LLC

EROSION AND SEDIMENT CONTROL PLAN:

REFERENCE IS MADE TO:

1. Connecticut Guidelines for Soil Erosion and Sediment Control 2002 (2002 Guidelines).
2. Soil Survey of Windham County Connecticut, U.S.D.A. Soil Conservation Service 1983.

DEVELOPMENT SCHEDULE: (Individual Lots).

1. Prior to any work on site, the limits of disturbance shall be clearly flagged in the field by a Land Surveyor, licensed in the State of Connecticut. Once the limits of clearing are flagged, they shall be reviewed and approved by an agent of the Town.
2. Install and maintain erosion and sedimentation control devices as shown on these plans. All erosion control devices shall be inspected by an agent of the Town. Any additional erosion control devices required by the Town's Agent shall be installed and inspected prior to any construction on site. (See silt fence installation notes)
3. Install construction entrance.
4. Construction will begin with clearing, grubbing and rough grading of the proposed site. The work will be confined to areas adjacent to the proposed building, septic system and driveway. Topsoil will be stockpiled on site and utilized during final grading.
5. Begin construction of the house, septic system and well.
6. Disturbed areas shall be seeded and stabilized as soon as possible to prevent erosion.
7. The site will be graded so that all possible trees on site will be saved to provide buffers to adjoining lots.

DEVELOPMENT CONTROL PLAN:

1. Development of the site will be performed by the individual lot owner, who will be responsible for the installation and maintenance of erosion and sediment control measures required throughout construction.
2. The sedimentation control mechanisms shall remain in place from start of construction until permanent vegetation has been established. The representative for the Town of Brooklyn will be notified when sediment and erosion control structures are initially in place. Any additional soil & erosion control measures requested by the Town or its agent, shall be installed immediately. Once the proposed development, seeding and planting have been completed, the representative shall again be notified to inspect the site. The control measures will not be removed until this inspection is complete.
3. All stripping is to be confined to the immediate construction area. Topsoil shall be stockpiled so that slopes do not exceed 2 to 1. A hay bale sediment barrier is to surround each stockpile and a temporary vegetative cover shall be provided.
4. Dust control will be accomplished by spraying with water and if necessary, the application of calcium chloride.
5. The proposed planting schedule is to be adhered to during the planting of disturbed areas throughout the proposed construction site.
6. Final stabilization of the site is to follow the procedures outlined in "Permanent Vegetative Cover". If necessary a temporary vegetative cover is to be provided until a permanent cover can be applied.

SILT FENCE INSTALLATION AND MAINTENANCE:

1. Dig a 6" deep trench on the uphill side of the barrier location.
2. Position the posts on the downhill side of the barrier and drive the posts 1.5 feet into the ground.
3. Lay the bottom 6" of the fabric in the trench to prevent undermining and backfill.
4. Inspect and repair barrier after heavy rainfall.
5. Inspections will be made at least once per week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater to determine maintenance needs.
6. Sediment deposits are to be removed when they reach a height of 1 foot behind the barrier or half the height of the barrier and are to be deposited in an area which is not regulated by the Inland Wetlands commission.
7. Replace or repair the fence within 24 hours of observed failure. Failure of the fence has occurred when sediment fails to be retained by the fence because:
   - the fence has been overtopped, undercut or bypassed by runoff water,
   - the fence has been moved out of position (knocked over), or
   - the geotextile has decomposed or been damaged.

HAY BALE INSTALLATION AND MAINTENANCE:

1. Bales shall be placed as shown on the plans with the ends of the bales tightly abutting each other.
2. Each bale shall be securely anchored with at least 2 stakes and gaps between bales shall be wedged with straw to prevent water from passing between the bales.
3. Inspect bales at least once per week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inches or greater to determine maintenance needs.
4. Remove sediment behind the bales when it reaches half the height of the bale and deposit in an area which is not regulated by the Inland Wetlands Commission.
5. Replace or repair the barrier within 24 hours of observed failure. Failure of the barrier has occurred when sediment fails to be retained by the barrier because:
   - the barrier has been overtopped, undercut or bypassed by runoff water,
   - the barrier has been moved out of position, or
   - the hay bales have deteriorated or been damaged.

TEMPORARY VEGETATIVE COVER:

SEED SELECTION

Grass species shall be appropriate for the season and site conditions. Appropriate species are outlined in Figure TS-2 in the 2002 Guidelines.

TIMING CONSIDERATIONS

Seed with a temporary seed mixture within 7 days after the suspension of grading work in disturbed areas where the suspension of work is expected to be more than 30 days but less than 1 year.

SITE PREPARATION

Install needed erosion control measures such as diversions, grade stabilization structures, sediment basins and grassed waterways.

Grade according to plans and allow for the use of appropriate equipment for seedbed preparation, seeding, mulch application, and mulch anchoring.

SEEDBED PREPARATION

Loosen the soil to a depth of 3-4 inches with a slightly roughened surface. If the area has been recently loosened or disturbed, no further roughening is required. Soil preparation can be accomplished by tracking with a bulldozer, discing, harrowing, raking or dragging with a section of chain link fence. Avoid excessive compaction of the surface by equipment traveling back and forth over the surface. If the slope is tracked, the cleat marks shall be perpendicular to the anticipated direction of the flow of surface water.

If soil testing is not practical or feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 300 pounds per acre or 7.5 pounds per 1,000 square feet of 10-10-10 or equivalent. Additionally, lime may be applied using rates given in Figure TS-1 in the 2002 Guidelines.

SEEDING

Apply seed uniformly by hand cyclone seeder, drill, cultipacker type seeder or hydroseeder at a minimum rate for the selected species. Increase seeding rates by 10% when hydroseeding.

MULCHING

Temporary seedings made during optimum seeding dates shall be mulched according to the recommendations in the 2002 Guidelines. When seeding outside of the recommended dates, increase the application of mulch to provide 95%-100% coverage.

MAINTENANCE

Inspect seeded area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater for seed and mulch movement and rill erosion.

Where seed has moved or where soil erosion has occurred, determine the cause of the failure. Repair eroded areas and install additional controls if required to prevent reoccurrence of erosion.

Continue inspections until the grasses are firmly established. Grasses shall not be considered established until a ground cover is achieved which is mature enough to control soil erosion and to survive severe weather conditions (approximately 80% vegetative cover).

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4. Inspect seedbed before seeding. If traffic has compacted the soil, retill compacted areas.
5. Apply the chosen grass seed mix. The recommended seeding dates are: April 1 to June 15 & August 15 - October 1.
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Clean runoff should be kept separated from sediment laden water and should not be directed over disturbed areas without additional controls. Additionally, prevent the mixing of clean off-site generated runoff with sediment laden runoff generated on-site until after adequate filtration of on-site waters has occurred.

- Segregate construction waters from clean water.
- Divert site runoff to keep it isolated from wetlands, watercourses and drainage ways that flow through or near the development until the sediment in that runoff is trapped or detained.

REDUCE ON SITE POTENTIAL INTERNALLY AND INSTALL PERIMETER CONTROLS

While it may seem less complicated to collect all waters to one point of discharge for treatment and just install a perimeter control, it can be more effective to apply internal controls to many small sub-drainage basins within the site. By reducing sediment loading from within the site, the chance of perimeter control failure and the potential off-site damage that it can cause is reduced. It is generally more expensive to correct off-site damage than it is to install proper internal controls.

- Control erosion and sedimentation in the smallest drainage area possible. It is easier to control erosion than to contend with sediment after it has been carried downstream and deposited in unwanted areas.
- Direct runoff from small disturbed areas to adjoining undisturbed vegetated areas to reduce the potential for concentrated flows and increase settlement and filtering of sediments.
- Concentrated runoff from development should be safely conveyed to stable outlets using rip rapped channels, waterways, diversions, storm drains or similar measures.
- Determine the need for sediment basins. Sediment basins are required on larger developments where major grading is planned and where it is impossible or impractical to control erosion at the source. Sediment basins are needed on large and small sites when sensitive areas such as wetlands, watercourses, and streets would be impacted by off-site sediment deposition. Do not locate sediment basins in wetlands or permanent or intermittent watercourses. Sediment basins should be located to intercept runoff prior to its entry into the wetland or watercourse.
- Grade and landscape around buildings and septic systems to divert water away from them.

SEPTIC SYSTEM CONSTRUCTION NOTES

1. The building, septic system and well shall be accurately staked in the field by a licensed Land Surveyor in the State of Connecticut, prior to construction.
2. Topsoil shall be removed and in the area of the primary leaching field scarified, prior to placement of septic fill. Septic fill specifications are as follows:

   - Max. percent of gravel (material between No. 4 & 3 inch sieves) = 45%

   GRADATION OF FILL (MINUS GRAVEL)

SIEVE SIZE	PERCENT PASSING (WET SIEVE)	PERCENT PASSING (DRY SIEVE)
No. 4	100%	100%
No. 10	70% - 100%	70% - 100%
No. 40	10% - 50%	10% - 75%
No. 100	0% - 20%	0% - 5%
No. 200	0% - 5%	0% - 2.5%

   Fill material shall be approved by the sanitarian prior to placement. It shall be compacted in 6" lifts and shall extend a minimum of ten feet (10') beyond the last leaching trench before tapering off.
3. Septic tank shall be two compartment precast 1000 gallon tank with gas deflector and outlet filter as manufactured by Jolley Precast, Inc. or equal.
4. Distribution boxes shall be 4 hole precast concrete as manufactured by Jolley Precast, Inc. or equal.
5. All precast structures such as septic tanks, distribution boxes, etc. shall be set level on six inches (6") of compacted gravel base at the elevations specified on the plans.
6. Solid distribution pipe shall be 4" diameter PVC meeting ASTM D-3034 SDR 35 with compression gasket joints. It shall be laid true to the lines and grades shown on the plans and in no case have a slope less than 0.125 inches per foot.
7. Perforated distribution pipe shall be 4" diameter PVC meeting ASTM D-2729 or ASTM D-3350, 1500 lb. minimum crush.
8. Sewer pipe from the foundation wall to the septic tank shall be schedule 40 PVC meeting ASTM D 1785. It shall be laid true to the grades shown on the plans and in no case shall have a slope less than 0.25 inches per foot.
9. Force main pressure pipe from pump chamber to the leaching field shall be 2" diameter pvc meeting ASTM D 2241 SDR 21.
10. Solid footing drain outlet pipe shall be 4" Diameter PVC meeting ASTM D 3034, SDR 35 with compression gasketed joints. Footing drain outlet pipe shall not be backfilled with free draining material, such as gravel, broken stone, rock fragments, etc.

F/L IN = 205.45

SEPTIC TANK
1250 GALLON
TWO COMPARTMENT
F/L IN = 204.2
F/L OUT = 204.45
DISTRIBUTION BOXES
D-1 (OVERFLOW)
F/L IN = 203.7
F/L OUT TO TRENCH = 203.7
F/L OUT TO D-2 = 203.45
D-2 (STANDARD)
F/L IN = 202.7
F/L OUT TO TRENCH = 202.7
F/L OUT TO D-2 = 202.45
D-3 (STANDARD)
F/L IN = 201.7
F/L OUT TO TRENCH = 201.7

DEEP TEST PIT DATA / SOIL DESCRIPTIONS

PERFORMED BY: Lynette Swanson

WITNESSED BY: Northeast District Department of Health DATE: 6/17/2004

TEST PIT: 1	
0"-5"	Topsoil w/organics
5"-28"	Yellow brown FLS w/rocks
28"-37"	Tan LS & gravel
37"-58"	Gray VFSL mottled w/lg rocks
58"-84"	Dark Gray VFSL w/Decomposing rocks
MOTTLES:	37"
GROUNDWATER:	NO
LEDGE:	NO
ROOTS:	NO
RESTRICTIVE:	33"

TEST PIT: 2	
0"-4"	Organics
4"-24"	Yellow brown FSL w/stone
24"-36"	Rotten Rock w/VFSL
36"-83"	Dark gray compact FSL, mottled
MOTTLES:	36"
GROUNDWATER:	NO
LEDGE:	NO
ROOTS:	35"
RESTRICTIVE:	35"

DEEP TEST PIT DATA / SOIL DESCRIPTIONS

PERFORMED BY: Lynette Swanson

WITNESSED BY: Northeast District Department of Health DATE: 6/17/2004

TEST PIT: 3	
0"-3"	Organics
3"-27"	Reddish brwon FSL w/gravel
27"-45"	Gray VFSL compact & gravel
45"-84"	Gray VFSL compact w/lg rocks mottled
MOTTLES:	45"
GROUNDWATER:	NO
LEDGE:	NO
ROOTS:	26"
RESTRICTIVE:	27"

TEST PIT: 4	
0"-4"	Topsoil / organics
4"-31"	Redddish brown FSL & gravel
31"-80"	Dark gray VFSL & gravel, Compact, Mottled
MOTTLES:	36"
GROUNDWATER:	NO
LEDGE:	NO
ROOTS:	28"
RESTRICTIVE:	31"

PERCOLATION DATA

PERC A - DEPTH 26"

TIME	Drop (Inches)
2:04	5"
2:14	9"
2:23	11.75"
2:34	14"
2:50	16.5"

PERCOLATION RATE > 6.4 MIN./IN.

NOTES:
PERCOLATION TEST PERFORMED ON 6/17/2004
PERFORMED BY L. Swanson

PERCOLATION DATA

PERC B - DEPTH 24"

TIME	Drop (Inches)
2:06	7"
2:15	8.75"
2:25	10.75"
2:35	12.5"
2:51	14"

PERCOLATION RATE > 10.6 MIN./IN

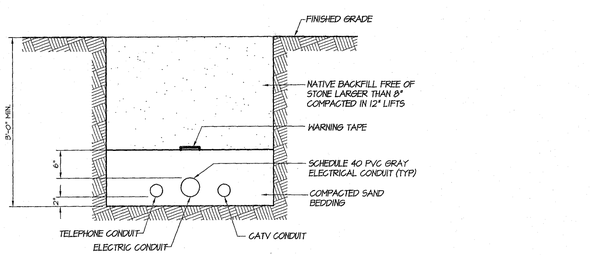
NOTES:
PERCOLATION TEST PERFORMED ON 6/17/2004
PERFORMED BY L. Swanson

SEPTIC SYSTEM DESIGN DATA

Percolation Rate	=	10.6 min. / in.
3 bedroom house requires	=	675 s.f. effective leaching area
Effective Leaching area	=	3 s.f. / l.f. of trench
Length Required	=	675/3 = 225 l.f.
Length Provided	=	2 (115') = 230 l.f.
Min. Leaching System Spread (MLSS)		N/A
MLSS Provided	=	N/A

LEACHING FIELD

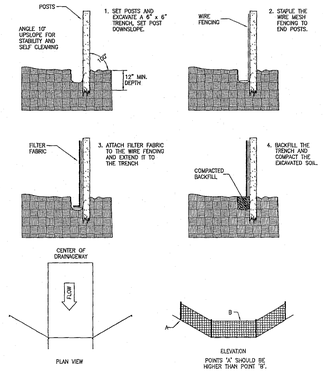
2 Trenches @ 115 l.f. each
Maximum depth into existing grade = 13"



NOTE: CONTRACTOR SHALL PROVIDE SILT/CLAY DAMS AT 100' INTERVALS ALONG PROPOSED UTILITY TRENCH TO AVOID TRANSPORTING INTERCEPTED WATER.

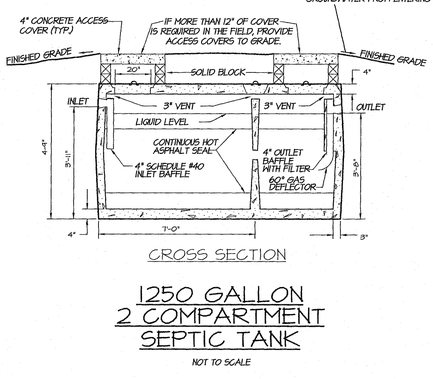
UNDERGROUND UTILITY TRENCH

NOT TO SCALE



SILT FENCE

NOT TO SCALE

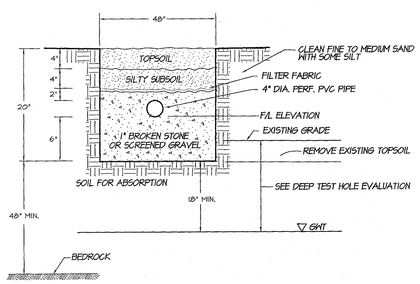


PLAN

CROSS SECTION

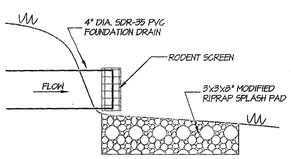
1250 GALLON 2 COMPARTMENT SEPTIC TANK

NOT TO SCALE



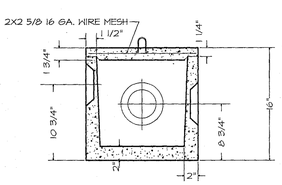
TYPICAL LEACHING TRENCH SECTION

NOT TO SCALE



FOUNDATION DRAIN OUTLET

NOT TO SCALE



STANDARD D-BOX

NOT TO SCALE

RECEIVED
NOV 0 1 2021

Detail Sheet

Prepared For:
Joann & Frank Titus
River Farm Drive
Brooklyn, Connecticut

ARCHER Surveying
18 Providence Road, Brooklyn
(860) 779-2240

Sheet No.	2 OF 2	Project No.	AS 1969	Date:

Brooklyn Land Use Department

69 South Main Street
Brooklyn CT 06234
(860) 779-3411 x 31

Inland Wetlands ✓ Zoning Enforcement _____ Blight Enforcement _____

SITE INSPECTION NUMBER 1 2 3 4 5

River Farm Dr. Titus
Map 43 Lot 15 — Address

11-3-21 — Date

I met Paul Archer, inspected and took photographs.

The floodplain needs to be shown on the plan. The shed has to be relocated because of floodplain.

Paul Archer pointed out that the property is within 500 ft of the Town Line. ☒ Notify Killingly.

Paul will show upland review areas projected off of all the wetlands.

Commission Representative M. Washburn

Owner or Authorized Signature _____

Brooklyn Inland Wetlands
Commission
P.O. Box 356
Brooklyn, Connecticut 06234

CERTIFIED # 9489 0090 0027 6215 8988 65

Elizabeth Wilson
Killingly Town Clerk
172 Main Street
Killingly, CT 06239

November 3, 2021

Re: Wetlands application 110921A – River Farm Drive, Brooklyn, CT Map 43/Parcel 15

Dear Ms. Wilson,

In accordance with the Connecticut General Statutes, I am hereby notifying you that the Town of Brooklyn Inland Wetlands and Watercourses Commission (IWWC) is in receipt of an application for an Inland Wetlands and Watercourses permit for Map 43/Parcel 15 on River Farm Drive, owned by Frank and Joann Titus. The property is within 500 feet of the Killingly municipal boundary.

The project is the construction of a single-family house, driveway, septic system and shed, plus associated grading.

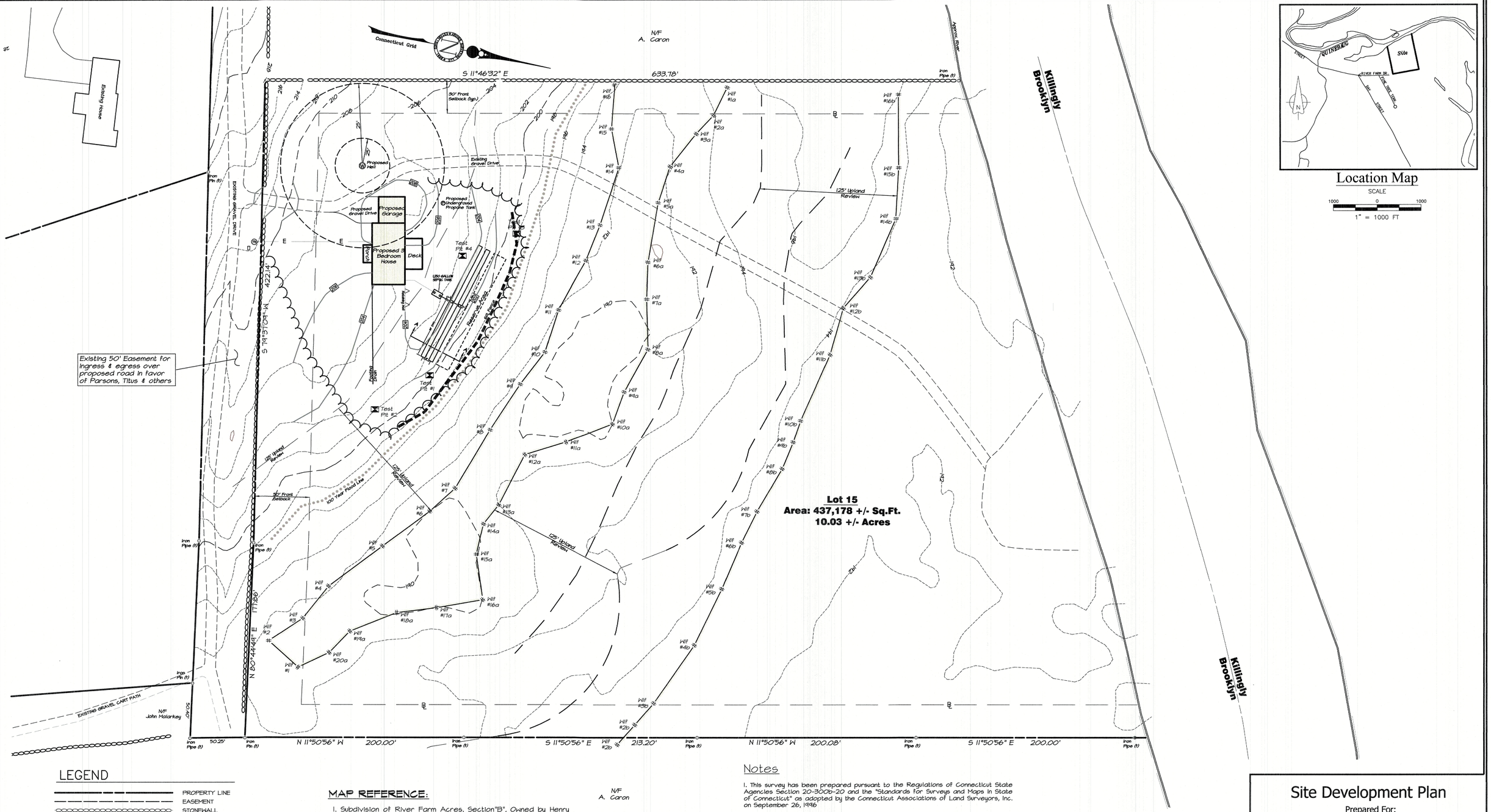
The application will be received at the 11/9/21 meeting of the Brooklyn IWWC. Please refer to the attached draft agenda.

Please feel free to contact me if you have any questions.

Sincerely,

Margaret Washburn

Margaret Washburn
ZEO/WEO/Blight Enforcement Officer
69 South Main Street
Brooklyn, CT 06234
(860) 779-3411 ext. 31
m.washburn@brooklynct.org



Location Map

SCALE

1000 0 1000

1" = 1000 FT

LEGEND

- PROPERTY LINE
- EASEMENT
- STONEWALL
- EXISTING TREELINE
- PROPOSED CLEARING LIMITS
- SILT FENCE
- 100 FLOOD LINE
- EXISTING INDEX CONTOUR
- EXISTING CONTOUR
- PROPOSED CONTOUR
- WETLANDS FLAG
- BUILDING SETBACK
- IRON PIN
- DRILL HOLE
- MONUMENT
- PERCOLATION TEST
- TEST PIT
- PROPERTY POINT
- UTILITY POLE

MAP REFERENCE:

1. Subdivision of River Farm Acres, Section"B", Owned by Henry F. & Mary A. Weaver, Brooklyn, Connecticut, Date: August 1965, Prepared by: Robert Kieltyka

2. River Farm Acres, Lot 22, River Farm Drive, Brooklyn, Connecticut, Date: Sept. 1988, Prepared by: Kieltyka, Woodis & Pike

3. Boundary Stake Out Map, Prepared for John Paul Malarkey, off River Farm Drive, Brooklyn, Connecticut, Date: September 2017, Prepared by: PC Survey

4. Boundary Survey, Prepared for: Roland Joly & Mary Ann Seyford, 14 & 30 Pine Tree Terrace, Brooklyn, Connecticut, Date: June 2008, Prepared by: Archer Surveying LLC

N/F
A. Caron

Notes

1. This survey has been prepared pursuant to the Regulations of Connecticut State Agencies Section 20-300b-20 and the "Standards for Surveys and Maps in State of Connecticut" as adopted by the Connecticut Associations of Land Surveyors, Inc. on September 26, 1996

- This Survey conforms to a Class "A-2" Horizontal Accuracy
"T-2" Vertical Accuracy
- Survey Type: Site Development Plan
- Boundary Determination: Resurvey
-Intent: Site Plan

2. Parcels shown as Lots 15 on Assessors Tax Map 43 of the Brooklyn Assessors Office

3. Wetlands were delineated by Joseph Theroux and field located by Archer Surveying LLC

4. Property is Zoned: R30

5. Property lies within the 100 year Flood Zone as shown on the Flood Insurance Rate Map, Town of Brooklyn, Connecticut, Windham County, Panel 3 of 10, 090164 0003 A, Effective Date: January 3, 1985

To My Knowledge and Belief, this Map is substantially Correct as noted Hereon

Paul M. Archer LLS #16078 — 11-1-2021 Date

KWP associates
P.O. BOX 106, POMFRET CENTER, CT. 06259
DAVID A. SMITH, P.E. #24173 — Nov. 7, 2021 DATE
NOT VALID UNLESS SEAL IS AFFIXED HERETO

Site Development Plan

Prepared For:

Joann & Frank Titus

River Farm Drive

Brooklyn, Connecticut

DRAWING SCALE: 1"=40' (0 40 80)

KWP associates

SURVEYING ~ ENGINEERING ~ SITE PLANNING

18 Providence Road
Brooklyn, CT 06234

REVISIONS

DATE	DESCRIPTION
11-7-21	100 Year Flood, Removed Shed

ARCHER Surveying LLC

18 Providence Road, Brooklyn, CT
(860) 779-2240

Sheet No. 1 OF 2 | Project No. AS 1969 | Date: September 30, 2021 Revised: October 29, 2021

ARCHER Surveying LLC

EROSION AND SEDIMENT CONTROL PLAN:

REFERENCE IS MADE TO:

1. Connecticut Guidelines for Soil Erosion and Sediment Control 2002 (2002 Guidelines).
2. Soil Survey of Windham County Connecticut, U.S.D.A. Soil Conservation Service 1983.

DEVELOPMENT SCHEDULE: (Individual Lots):

1. Prior to any work on site, the limits of disturbance shall be clearly flagged in the field by a Land Surveyor, licensed in the State of Connecticut. Once the limits of clearing are flagged, they shall be reviewed and approved by an agent of the Town.
2. Install and maintain erosion and sedimentation control devices as shown on these plans. All erosion control devices shall be inspected by an agent of the Town. Any additional erosion control devices required by the Town's Agent shall be installed and inspected prior to any construction on site. (See silt fence installation notes.)
3. Install construction entrance.
4. Construction will begin with clearing, grubbing and rough grading of the proposed site. The work will be confined to areas adjacent to the proposed building, septic system and driveway. Topsoil will be stockpiled on site and utilized during final grading.
5. Begin construction of the house, septic system and well.
6. Disturbed areas shall be seeded and stabilized as soon as possible to prevent erosion.
7. The site will be graded so that all possible trees on site will be saved to provide buffers to adjoining lots.

DEVELOPMENT CONTROL PLAN:

1. Development of the site will be performed by the individual lot owner, who will be responsible for the installation and maintenance of erosion and sediment control measures required throughout construction.
2. The sedimentation control mechanisms shall remain in place from start of construction until permanent vegetation has been established. The representative for the Town of Brooklyn will be notified when sediment and erosion control structures are initially in place. Any additional soil & erosion control measures requested by the Town or its agent, shall be installed immediately. Once the proposed development, seeding and planting have been completed, the representative shall again be notified to inspect the site. The control measures will not be removed until this inspection is complete.
3. All stripping is to be confined to the immediate construction area. Topsoil shall be stockpiled so that slopes do not exceed 2 to 1. A hay bale sediment barrier is to surround each stockpile and a temporary vegetative cover shall be provided.
4. Dust control will be accomplished by spraying with water and if necessary, the application of calcium chloride.
5. The proposed planting schedule is to be adhered to during the planting of disturbed areas throughout the proposed construction site.
6. Final stabilization of the site is to follow the procedures outlined in "Permanent Vegetative Cover". If necessary a temporary vegetative cover is to be provided until a permanent cover can be applied.

SILT FENCE INSTALLATION AND MAINTENANCE:

1. Dig a 6" deep trench on the uphill side of the barrier location.
2. Position the posts on the downhill side of the barrier and drive the posts 1.5 feet into the ground.
3. Lay the bottom 6" of the fabric in the trench to prevent undermining and backfill.
4. Inspect and repair barrier after heavy rainfall.
5. Inspections will be made at least once per week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater to determine maintenance needs.
6. Sediment deposits are to be removed when they reach a height of 1 foot behind the barrier or half the height of the barrier and are to be deposited in an area which is not regulated by the Inland Wetlands commission.
7. Replace or repair the fence within 24 hours of observed failure. Failure of the fence has occurred when sediment fails to be retained by the fence because:
   - the fence has been overtopped, undercut or bypassed by runoff water,
   - the fence has been moved out of position (knocked over), or
   - the geotextile has decomposed or been damaged.

HAY BALE INSTALLATION AND MAINTENANCE:

1. Bales shall be placed as shown on the plans with the ends of the bales tightly abutting each other.
2. Each bale shall be securely anchored with at least 2 stakes and gaps between bales shall be wedged with straw to prevent water from passing between the bales.
3. Inspect bales at least once per week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inches or greater to determine maintenance needs.
4. Remove sediment behind the bales when it reaches half the height of the bale and deposit in an area which is not regulated by the Inland Wetlands Commission.
5. Replace or repair the barrier within 24 hours of observed failure. Failure of the barrier has occurred when sediment fails to be retained by the barrier because:
   - the barrier has been overtopped, undercut or bypassed by runoff water,
   - the barrier has been moved out of position, or
   - the hay bales have deteriorated or been damaged.

TEMPORARY VEGETATIVE COVER:

SEED SELECTION

Grass species shall be appropriate for the season and site conditions. Appropriate species are outlined in Figure TS-2 in the 2002 Guidelines.

TIMING CONSIDERATIONS

Seed with a temporary seed mixture within 7 days after the suspension of grading work in disturbed areas where the suspension of work is expected to be more than 30 days but less than 1 year.

SITE PREPARATION

Install needed erosion control measures such as diversions, grade stabilization structures, sediment basins and grassed waterways.

Grade according to plans and allow for the use of appropriate equipment for seedbed preparation, seeding, mulch application, and mulch anchoring.

SEEDBED PREPARATION

Loosen the soil to a depth of 3-4 inches with a slightly roughened surface. If the area has been recently loosened or disturbed, no further roughening is required. Soil preparation can be accomplished by tracking with a bulldozer, discing, harrowing, raking or dragging with a section of chain link fence. Avoid excessive compaction of the surface by equipment traveling back and forth over the surface. If the slope is tracked, the cleat marks shall be perpendicular to the anticipated direction of the flow of surface water.

If soil testing is not practical or feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 300 pounds per acre or 7.5 pounds per 1,000 square feet of 10-10-10 or equivalent. Additionally, lime may be applied using rates given in Figure TS-1 in the 2002 Guidelines.

SEEDING

Apply seed uniformly by hand cyclone seeder, drill, cultipacker type seeder or hydroseeder at a minimum rate for the selected species. Increase seeding rates by 10% when hydroseeding.

MULCHING

Temporary seedings made during optimum seeding dates shall be mulched according to the recommendations in the 2002 Guidelines. When seeding outside of the recommended dates, increase the application of mulch to provide 95%-100% coverage.

MAINTENANCE

Inspect seeded area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater for seed and mulch movement and rill erosion.

Where seed has moved or where soil erosion has occurred, determine the cause of the failure. Repair eroded areas and install additional controls if required to prevent reoccurrence of erosion.

Continue inspections until the grasses are firmly established. Grasses shall not be considered established until a ground cover is achieved which is mature enough to control soil erosion and to survive severe weather conditions (approximately 80% vegetative cover).

PERMANENT VEGETATIVE COVER:

Refer to Permanent Seeding Measure in the 2002 Guidelines for specific applications and details related to the installation and maintenance of a permanent vegetative cover. In general, the following sequence of operations shall apply:

1. Topsoil will be replaced once the excavation and grading has been completed. Topsoil will be spread at a minimum compacted depth of 4".
2. Once the topsoil has been spread, all stones 2" or larger in any dimension will be removed as well as debris.
3. Apply agricultural ground limestone at a rate of 2 tons per acre or 100 lbs. per 1000 s.f. Apply 10-10-10 fertilizer or equivalent at a rate of 300 lbs. per acre or 7.5 lbs. per 1000 s.f. Work lime and fertilizer into the soil to a depth of 4".
4. Inspect seedbed before seeding. If traffic has compacted the soil, retill compacted areas.
5. Apply the chosen grass seed mix. The recommended seeding dates are: April 1 to June 15 & August 15 - October 1.
6. Following seeding, firm seedbed with a roller. Mulch immediately following seeding. If a permanent vegetative stand cannot be established by September 30, apply a temporary cover on the topsoil such as netting, mat or organic mulch.

EROSION AND SEDIMENT CONTROL NARRATIVE:

PRINCIPLES OF EROSION AND SEDIMENT CONTROL

The primary function of erosion and sediment controls is to absorb erosional energies and reduce runoff velocities that force the detachment and transport of soil and/or encourage the deposition of eroded soil particles before they reach any sensitive area.

KEEP LAND DISTURBANCE TO A MINIMUM

The more land that is in vegetative cover, the more surface water will infiltrate into the soil, thus minimizing storm-water runoff and potential erosion. Keeping land disturbance to a minimum not only involves minimizing the extent of exposure at any one time, but also the duration of exposure. Phasing, sequencing and construction scheduling are interrelated. Phasing divides a large project into distinct sections where construction work over a specific area occurs over distinct periods of time and each phase is not dependent upon a subsequent phase in order to be functional. A sequence is the order in which construction activities are to occur during any particular phase. A sequence should be developed on the premise of "first things first" and "last things last" with proper attention given to the inclusion of adequate erosion and sediment control measures. A construction schedule is a sequence with time lines applied to it and should address the potential overlap of actions in a sequence which may be in conflict with each other.

- Limit areas of clearing and grading. Protect natural vegetation from construction equipment with fencing, tree armoring, and retaining walls or tree wells.
- Route traffic patterns within the site to avoid existing or newly planted vegetation.
- Phase construction so that areas which are actively being developed at any one time are minimized and only that area under construction is exposed. Clear only those areas essential for construction.
- Sequence the construction of storm drainage systems so that they are operational as soon as possible during construction. Ensure all outlets are stable before outletting storm drainage flow into them.
- Schedule construction so that final grading and stabilization is completed as soon as possible.

SLOW THE FLOW

Detachment and transport of eroded soil must be kept to a minimum by absorbing and reducing the erosive energy of water. The erosive energy of water increases as the volume and velocity of runoff increases. The volume and velocity of runoff increases during development as a result of reduced infiltration rates caused by the removal of existing vegetation, removal of topsoil, compaction of soil and the construction of impervious surfaces.

- Use diversions, stone dikes, silt fences and similar measures to break flow lines and dissipate storm water energy.
- Avoid diverting one drainage system into another without calculating the potential for downstream flooding or erosion.

KEEP CLEAN RUNOFF SEPARATED

Clean runoff should be kept separated from sediment laden water and should not be directed over disturbed areas without additional controls. Additionally, prevent the mixing of clean off-site generated runoff with sediment laden runoff generated on-site until after adequate filtration of on-site waters has occurred.

- Segregate construction waters from clean water.
- Divert site runoff to keep it isolated from wetlands, watercourses and drainage ways that flow through or near the development until the sediment in that runoff is trapped or detained.

REDUCE ON SITE POTENTIAL INTERNALLY AND INSTALL PERIMETER CONTROLS

While it may seem less complicated to collect all waters to one point of discharge for treatment and just install a perimeter control, it can be more effective to apply internal controls to many small sub-drainage basins within the site. By reducing sediment loading from within the site, the chance of perimeter control failure and the potential off-site damage that it can cause is reduced. It is generally more expensive to correct off-site damage than it is to install proper internal controls.

- Control erosion and sedimentation in the smallest drainage area possible. It is easier to control erosion than to contend with sediment after it has been carried downstream and deposited in unwanted areas.
- Direct runoff from small disturbed areas to adjoining undisturbed vegetated areas to reduce the potential for concentrated flows and increase settlement and filtering of sediments.
- Concentrated runoff from development should be safely conveyed to stable outlets using rip rapped channels, waterways, diversions, storm drains or similar measures.
- Determine the need for sediment basins. Sediment basins are required on larger developments where major grading is planned and where it is impossible or impractical to control erosion at the source. Sediment basins are needed on large and small sites when sensitive areas such as wetlands, watercourses, and streets would be impacted by off-site sediment deposition. Do not locate sediment basins in wetlands or permanent or intermittent watercourses. Sediment basins should be located to intercept runoff prior to its entry into the wetland or watercourse.
- Grade and landscape around buildings and septic systems to divert water away from them.

SEPTIC SYSTEM CONSTRUCTION NOTES

1. The building, septic system and well shall be accurately staked in the field by a licensed Land Surveyor in the State of Connecticut, prior to construction.
2. Topsoil shall be removed and in the area of the primary leaching field scarified, prior to placement of septic fill. Septic fill specifications are as follows:

   - Max. percent of gravel (material between No. 4 & 3 inch sieves) = 45%

   GRADATION OF FILL (MINUS GRAVEL)

SIEVE SIZE	PERCENT PASSING (WET SIEVE)	PERCENT PASSING (DRY SIEVE)
No. 4	100%	100%
No. 10	70% - 100%	70% - 100%
No. 40	10% - 50%	10% - 75%
No. 100	0% - 20%	0% - 5%
No. 200	0% - 5%	0% - 2.5%

   Fill material shall be approved by the sanitarian prior to placement. It shall be compacted in 6" lifts and shall extend a minimum of ten feet (10') beyond the last leaching trench before tapering off.
3. Septic tank shall be two compartment precast 1000 gallon tank with gas deflector and outlet filter as manufactured by Jolley Precast, Inc. or equal.
4. Distribution boxes shall be 4 hole precast concrete as manufactured by Jolley Precast, Inc. or equal.
5. All precast structures such as septic tanks, distribution boxes, etc. shall be set level on six inches (6") of compacted gravel base at the elevations specified on the plans.
6. Solid distribution pipe shall be 4" diameter PVC meeting ASTM D-3034 SDR 35 with compression gasket joints. It shall be laid true to the lines and grades shown on the plans and in no case have a slope less than 0.125 inches per foot.
7. Perforated distribution pipe shall be 4" diameter PVC meeting ASTM D-2729 or ASTM D-3350, 1500 lb. minimum crush.
8. Sewer pipe from the foundation wall to the septic tank shall be schedule 40 PVC meeting ASTM D 1785. It shall be laid true to the grades shown on the plans and in no case shall have a slope less than 0.25 inches per foot.
9. Force main pressure pipe from pump chamber to the leaching field shall be 2" diameter pvc meeting ASTM D 2241 SDR 21.
10. Solid footing drain outlet pipe shall be 4" Diameter PVC meeting ASTM D 3034, SDR 35 with compression gasketed joints. Footing drain outlet pipe shall not be backfilled with free draining material, such as gravel, broken stone, rock fragments, etc.

F/L IN = 205.45

SEPTIC TANK

1250 GALLON
TWO COMPARTMENT
F/L IN = 204.2
F/L OUT = 204.45

DISTRIBUTION BOXES

D-1 (OVERFLOW)
F/L IN = 203.7
F/L OUT TO TRENCH = 203.7
F/L OUT TO D-2 = 203.45

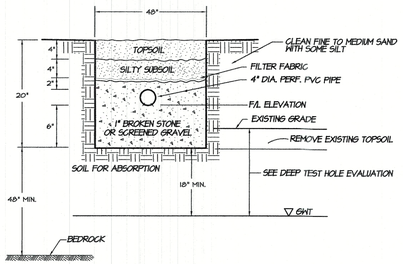
D-2 (STANDARD)
F/L IN = 202.7
F/L OUT TO TRENCH = 202.7
F/L OUT TO D-2 = 202.45

D-3 (STANDARD)
F/L IN = 201.7
F/L OUT TO TRENCH = 201.7

NOTE: CONTRACTOR SHALL PROVIDE SILT/CLAY DAMS AT 100' INTERVALS ALONG PROPOSED UTILITY TRENCH TO AVOID TRANSPORTING INTERCEPTED WATER.

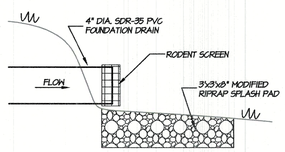
UNDERGROUND UTILITY TRENCH

NOT TO SCALE



TYPICAL LEACHING TRENCH SECTION

NOT TO SCALE



FOUNDATION DRAIN OUTLET

NOT TO SCALE

DEEP TEST PIT DATA / SOIL DESCRIPTIONS

PERFORMED BY: Lynette Swanson
WITNESSED BY: Northeast District Department of Health DATE: 6/17/2004

TEST PIT: 1	
0"-5"	Topsoil w/organics
5"-28"	Yellow brown FLS w/rocks
28"-37"	Tan LS & gravel
37"-58"	Gray VFSL mottled w/lg rocks
58"-84"	Dark Gray VFSL w/Decomposing rocks
MOTTLES:	37"
GROUNDWATER:	NO
LEDGE:	NO
ROOTS:	NO
RESTRICTIVE:	33"

TEST PIT: 2	
0"-4"	Organics
4"-24"	Yellow brown FSL w/stone
24"-36"	Rotten Rock w/VFSL
36"-83"	Dark gray compact FSL, mottled
MOTTLES:	36"
GROUNDWATER:	NO
LEDGE:	NO
ROOTS:	35"
RESTRICTIVE:	35"

DEEP TEST PIT DATA / SOIL DESCRIPTIONS

PERFORMED BY: Lynette Swanson
WITNESSED BY: Northeast District Department of Health DATE: 6/17/2004

TEST PIT: 3	
0"-3"	Organics
3"-27"	Reddish brwon FSL w/gravel
27"-45"	Gray compact FSL & gravel
45"-84"	Gray VFSL compact w/lg rocks mottled
MOTTLES:	45"
GROUNDWATER:	NO
LEDGE:	NO
ROOTS:	26"
RESTRICTIVE:	27"

TEST PIT: 4	
0"-4"	Topsoil / organics
4"-31"	Reddish brown FSL & gravel
31"-80"	Dark gray VFSL & gravel, Compact, Mottled
MOTTLES:	36"
GROUNDWATER:	NO
LEDGE:	NO
ROOTS:	28"
RESTRICTIVE:	31"

PERCOLATION DATA

PERC A - DEPTH 26"

TIME	Drop (Inches)
2:04	5"
2:14	9"
2:23	11.75"
2:34	14"
2:50	16.5"

PERCOLATION RATE > 6.4 MIN./IN.

NOTES:
PERCOLATION TEST PERFORMED ON 6/17/2004
PERFORMED BY L. Swanson

PERCOLATION DATA

PERC B - DEPTH 24"

TIME	Drop (Inches)
2:06	7"
2:15	8.75"
2:25	10.75"
2:35	12.5"
2:51	14"

PERCOLATION RATE > 10.6 MIN./IN.

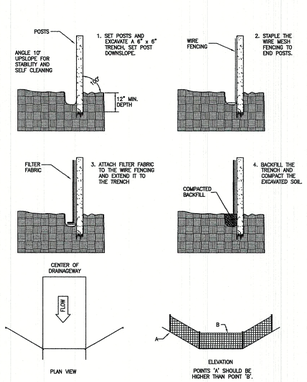
NOTES:
PERCOLATION TEST PERFORMED ON 6/17/2004
PERFORMED BY L. Swanson

SEPTIC SYSTEM DESIGN DATA

Percolation Rate	=	10.6 min. / in.
3 bedroom house requires	=	675 s.f. effective leaching area
Effective Leaching area	=	3 s.f. / l.f. of trench
Length Required	=	675/3 = 225 l.f.
Length Provided	=	2 (115') = 230 l.f.
Min. Leaching System Spread (MLSS)		N/A
MLSS Provided	=	N/A

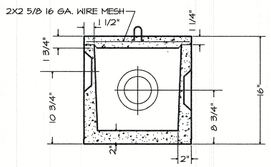
LEACHING FIELD

2 Trenches @ 115 l.f. each
Maximum depth into existing grade = 13"



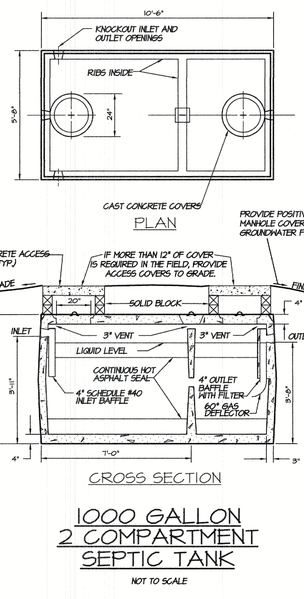
SILT FENCE

NOT TO SCALE

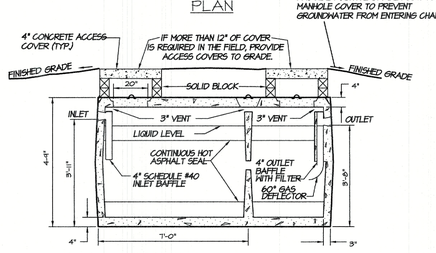


STANDARD D-BOX

NOT TO SCALE



PLAN



CROSS SECTION

1000 GALLON 2 COMPARTMENT SEPTIC TANK

NOT TO SCALE

Detail Sheet

Prepared For:
Joann & Frank Titus
River Farm Drive
Brooklyn, Connecticut

ARCHER Surveying LLC
18 Providence Road, Brooklyn, CT
(860) 779-2240

Sheet No.	2 OF 2	Project No.	AS 1969	Date:	October 29, 2021

TOWN OF BROOKLYN

Copy of Expenditure Report

From Date: 10/1/2021 To Date: 10/31/2021

Fiscal Year: 2021 - 2022

Account Number	Description	Adj. Budget	Current	YTD	Balance	Encumbrance	Budget Bal	%Bud
1005.41.4163.51900	Inland Wetlands-Wages-Recording Secretary	$1,200.00	$25.00	$375.00	$825.00	$0.00	$825.00	68.75%
1005.41.4163.53920	Inland Wetlands-Legal Fees	$3,500.00	$0.00	$146.25	$3,353.75	$0.00	$3,353.75	95.82%
1005.41.4163.53200	Inland Wetlands-Professional	$65.00	$0.00	$0.00	$65.00	$0.00	$65.00	100.00%
1005.41.4163.53400	Affiliations Inland Wetlands-Professional Services	$500.00	$0.00	$0.00	$500.00	$0.00	$500.00	100.00%
1005.41.4163.55400	Inland Wetlands-Advertising & Legal Notices	$500.00	$0.00	$0.00	$500.00	$0.00	$500.00	100.00%
1005.41.4163.55500	Inland Wetlands-Printing & Publications	$100.00	$0.00	$0.00	$100.00	$0.00	$100.00	100.00%
1005.41.4163.56900	Inland Wetlands-Other Supplies	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	0.00%
Grand Total:		**$5,865.00**	**$25.00**	**$521.25**	**$5,343.75**	**$0.00**	**$5,343.75**	**91.11%**

End of Report