RECEIVED

APR 0 5 2021

Date _____

INLAND WETLANDS & WATERCOURSES COMMISSION
TOWN OF BROOKLYN, CONECTICUT

0413213

Application # _____

APPLICATION -- INLAND WETLANDS & WATERCOURSES

APPLICANT Paul Lehto MAILING ADDRESS 40 Almada Drive

APPLICANT'S INTEREST IN PROPERTY Owner PHONE 860-208-9789 _____ EMAIL N.A.

PROPERTY OWNER IF DIFFERENT Same PHONE _____ _____

MAILING ADDRESS _____ EMAIL _____

ENGINEER/SURVEYOR (IF ANY) CLA Engineers, Inc., 317 Main Street, Norwich, Ct 06360

ATTORNEY (IF ANY) _____

PROPERTY LOCATION/ADDRESS 40 Almada Drive

MAP # 21 LOT # 6 ZONE RA TOTAL ACRES 104.46 ACRES OF WETLANDS ON PROPERTY 7.48

PURPOSE AND DESCRIPTION OF THE ACTIVITY

Proposed 2 lot residential subdivision

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 _____ OFF SITE _____

TOTAL REGULATED AREA ALTERED: SQ FT 56,350 ACRES 1.29

EXPLAIN ALTERNATIVES CONSIDERED (REQUIRED):

Alternate house and driveway locations were considered, but would require direct inland wetland impacts.

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

IS PARCEL LOCATED WITHIN 500FT OF AN ADJOINING TOWN? _____ 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.

X APPLICANT: Paul Lehto DATE 4-1-21

X OWNER: Paul Lehto DATE 4-1-21

HECKER ROBERT G & ELIZABETH A
58 ALMADA DR
BROOKLYN CT 6234

CARMODY THOMAS
1643 WARWICK AVE #145
WARWICK RI 02886-1544

FORTE BARBARA A
425 CANTERBURY RD
BROOKLYN CT 06234-0192

COSTA JOSHUA N & HAILEY
67 ALMADA DR
BROOKLYN CT 6234

LEHTO PAUL R
40 ALMADA DR
BROOKLYN CT 6234

MEEHAN BUILDERS LLC
89 WAUREGAN RD
BROOKLYN CT 6234

MEEHAN BRIAN
89 WAUREGAN RD
BROOKLYN CT 6234

CLARK JOSEPH G
68 ALMADA DR
BROOKLYN CT 6234

MESSORE PATRICIA A & ALBERT E
36 ALMADA DR
BROOKLYN CT 06234-2435

SEABURY ELIZABETH J ET AL
63 FIELDSTONE LN
BEACON FALLS CT 6403

DOYLE SEAN
42 ALMADA DR
BROOKLYN CT 6234

HECKER TIMOTHY D & PLATT HEATHER L
59 ALMADA DR
BROOKLYN CT 6234

LAFRAMBOISE EDWARD & BEVERLY TRUSTE
PO BOX 467
BROOKLYN CT 6234

WEAVER JEFFREY
PO BOX 9
BROOKLYN CT 6234

LEHTO PAUL R
40 ALMADA DR
BROOKLYN CT 6234

MESSA ANTHONY F & THERESA D
PO BOX 711
BROOKLYN CT 6234

BUNN DAVID P
P O BOX 306
WAUREGAN CT 06387-0306

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.
If completing by hand - please print and use the pdf version.
Incomplete or incomprehensible forms will be mailed back to the municipal inland wetlands agency.

PART I: Must Be Completed By The Inland Wetlands Agency

1. DATE ACTION WAS TAKEN: year: **Click Here for Year** month: **Click Here for Month**
2. CHOOSE ACTION TAKEN (see instructions for code): **Click Here to Choose a Code**
3. WAS A PUBLIC HEARING HELD (check one)? yes ☐ no ☐
4. NAME OF AGENCY OFFICIAL VERIFYING AND COMPLETING THIS FORM:

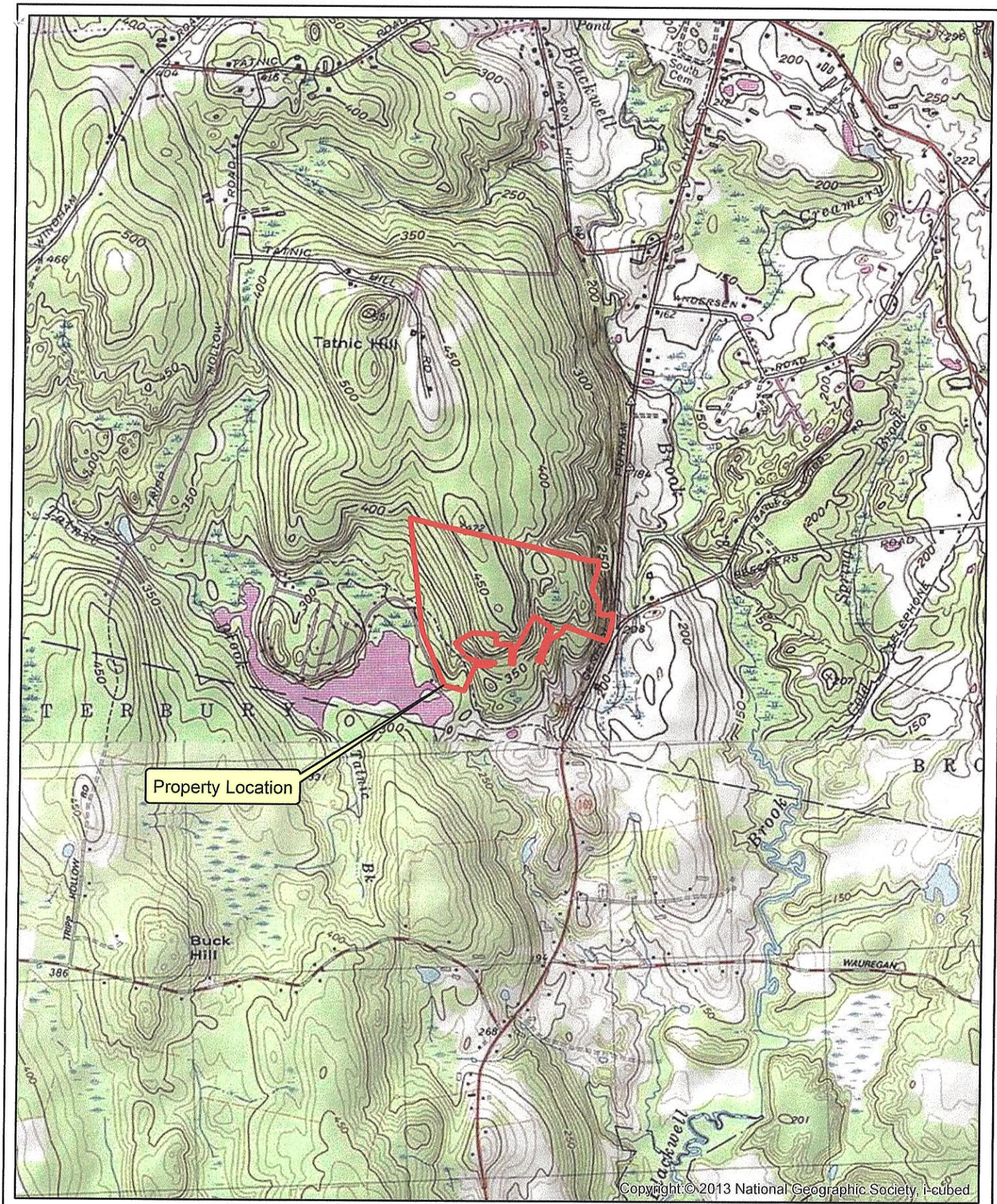
   (type name) _____ (signature) _____

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

5. TOWN IN WHICH THE ACTIVITY IS OCCURRING (type name): **Brooklyn**
   does this project cross municipal boundaries (check one)? yes ☐ no ☒
   if yes, list the other town(s) in which the activity is occurring (type name(s)): _____, _____
6. LOCATION (click on hyperlinks for information): USGS quad map name: **Danielson** or quad number: **43**
   subregional drainage basin number: **3711**
7. NAME OF APPLICANT, VIOLATOR OR PETITIONER (type name): **Paul Lehto**
8. NAME & ADDRESS OF ACTIVITY / PROJECT SITE (type information): **40 Almada Drive, Brooklyn, CT**
   briefly describe the action/project/activity (check and type information): temporary ☐ permanent ☒ description: **Residential 2 lot subdivision. House, driveway, septic system, and well construction**
9. ACTIVITY *PURPOSE* CODE (see instructions for code): **B**
10. ACTIVITY *TYPE* CODE(S) (see instructions for codes): **1, 2, 12, Click for Code**
11. WETLAND / WATERCOURSE AREA ALTERED (see instructions for explanation, type acres or linear feet as indicated):
    wetlands: **0.00** acres open water body: **0.00** acres stream: **0.00** linear feet
12. UPLAND AREA ALTERED (type acres as indicated): **2.70** acres
13. AREA OF WETLANDS / WATERCOURSES RESTORED, ENHANCED OR CREATED (type acres as indicated): **0.00** acres

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

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



CLA Engineers, Inc.
CIVIL • STRUCTURAL • SURVEYING
317 Main Street Norwich, Connecticut
860-886-1966 claengineers.com

LOCATION MAP

Two Lot Resubdivision
40 Almada Drive, Brooklyn, CT
Quad Map #43, Danielson

DATE: Mar. 31, 2021
SCALE: 1 in = 2,000 ft
SOURCE: USGS Quad
N

FIGURE
1

CLA Engineers, Inc.
Civil • Structural • Survey

317 MAIN STREET • NORWICH, CT 06360 • (860) 886-1966 • (860) 886-9165 FAX

April 5, 2021

Inland Wetlands Commission
Town of Brooklyn
69 South Main Street
Suite 22
Brooklyn, CT 06234

RE: Paul R. Lehto
Almada Drive
CLA-6383

To the Commission:

CLA Engineers was retained by Paul Lehto to conduct a wetlands investigation and functional assessment on the parcel of land, located at Almada Drive that is proposed to be further developed for a residential subdivision. The site is located within the Town of Brooklyn and currently has residences, a partially paved, part gravel road and woodlands. The purposes of the investigation were to: delineate the wetland delineation, provide background data regarding the existing wetland crossing, and assess the potential for wetland impacts due to the proposed development.

CLA delineated the wetlands according to the State of Connecticut statutory definition as described in Section 22a of the State Statutes. CLA conducted field work in June and July of 2020 using a hand held Dutch auger. Sequentially numbered pink flags were hung along the edge of the wetland.

After wetland delineation confirmation was complete, the wetland resources of the site were surveyed by conducting a deliberate walk through of the site, traversing the wetland in order to collect data characteristic of that wetland. During the walk through, identifiable vegetation was noted, described and divided into communities.

Site Setting

The site has two natural vegetative cover types, wooded upland and wooded swamp. Other areas have been developed as roadway and lawn for residential use. The abundant stonewalls that remain in the wooded portions of the site indicate that nearly all of the land was previously cleared and used (as was most of Connecticut) for farm fields until the early 20th century.

The upland forest type is mixed hardwood uplands and the wetland is predominantly red maple swamp. The areas of upland have mixed hardwoods such as red oak, white oak, red maple, American beech, locust and black birch. The wetlands are dominated by red maple trees with other species such as yellow birch and pin oak in lesser numbers.

The land uses surrounding the site include residential, agricultural and woodland. The residential development is primarily located to the south. Undeveloped woodland occurs to the north.

Throughout the site slopes vary from moderate to steep. The surface water from the area proposed for development drains to a centrally located wetland which contains an intermittent watercourse. The watercourse exists on the site to the east and flows through a nearby man made pond.

Surficial Geology and Soils

Southern New England was overlain by glacial ice as recently as 12,000-15,000 years ago. The materials that the glaciers deposited over top the local bedrock determine the surficial geology of the region and of the Almada Drive site. Glacial deposits are generally divided into three categories: glacial till (un-stratified sand, silt and rock), glaciofluvial (water sorted, stratified sand and gravel), and glaciolacustrine (stratified sand, silt and clay that settled out in lakebeds). The type of glacial deposit present on the site is limited to glacial till. The soils formed in till deposits typically have sandy loam to silt loam textures and in this case they are coarser, sandy loams. The slopes are moderate to steep throughout the site and this leads to differences in soil mapping classification as listed by the NRCS.

Table 1 is a summary table of the soils found on the site.

Table 1 - Soil Types and Properties at the Alamda Drive Extension Site

Soil Series	Parent Material	Drainage Class	Texture/Characteristics
*3 Ridgebury, Leicester and Whitman	Glacial Till	Somewhat poorly to very poorly drained	Stony sandy loam
73 Charlton and Chatfield	Glacial Till	Well Drained	Fine sandy loam

* Wetland soil type

Wetland Descriptions and Functions

This Almada Drive Extension site has two wetland systems. The first is narrow and surrounds the intermittent watercourse that exits the site to the west. A second is located north of the proposed development and is a wooded swamp system that occupies a depression. Under the USFWS system, on site wetlands are palustrine deciduous swamp (PF01) that are seasonally flooded in some areas and saturated in others..

The typical vegetation of both wetlands includes: trees such as red maple trees and saplings, yellow birch trees and saplings; shrubs such as spice bush, highbush blueberry,

winterberry holly, sweet pepperbush, clammy azalea, and alder and plants such as skunk cabbage, cinnamon fern, sphagnum, royal fern, and sensitive fern.

The principle functions of these wetlands are limited . The CTDEEP NDDB (December 2020) shows no known habitat of threatened, endangered or special concern species. The functions were found to include:

- Wildlife habitat
- Groundwater recharge/discharge

Potential for Impacts

As shown on the project plans there are proposed activities within in the 125 foot upland review zone. Approximately 56,530 sq. ft. within the upland review zone will be disturbed, this work will include:

- Clearing and grading
- Construction of a driveway, installation of erosion and sedimentation controls
- Installation of a portion of a septic system that is not upslope from the wetland

The activities in the upland review zone will not result in direct, permanent wetland impacts. CLA notes that in order to minimize the potential for impacts to wetlands, the E&S has been designed in compliance with the CTDEEP 2002 E&S Manual.

CLA believes that the Best Management Practices (BMPs) measures shown on the plans for erosion and sediment control and stormwater management will be adequate in preventing wetland impacts if properly installed and maintained.

Summary
The proposed development activities will not directly impact wetlands. The work in the upland review zone can be managed with BMPS so as to not impact wetlands during construction. In summary, if the proposed erosion and sedimentation control measures are adhered to, CLA believes that wetland impacts will be minimized.

Please contact me if you have any questions.

Very truly yours,

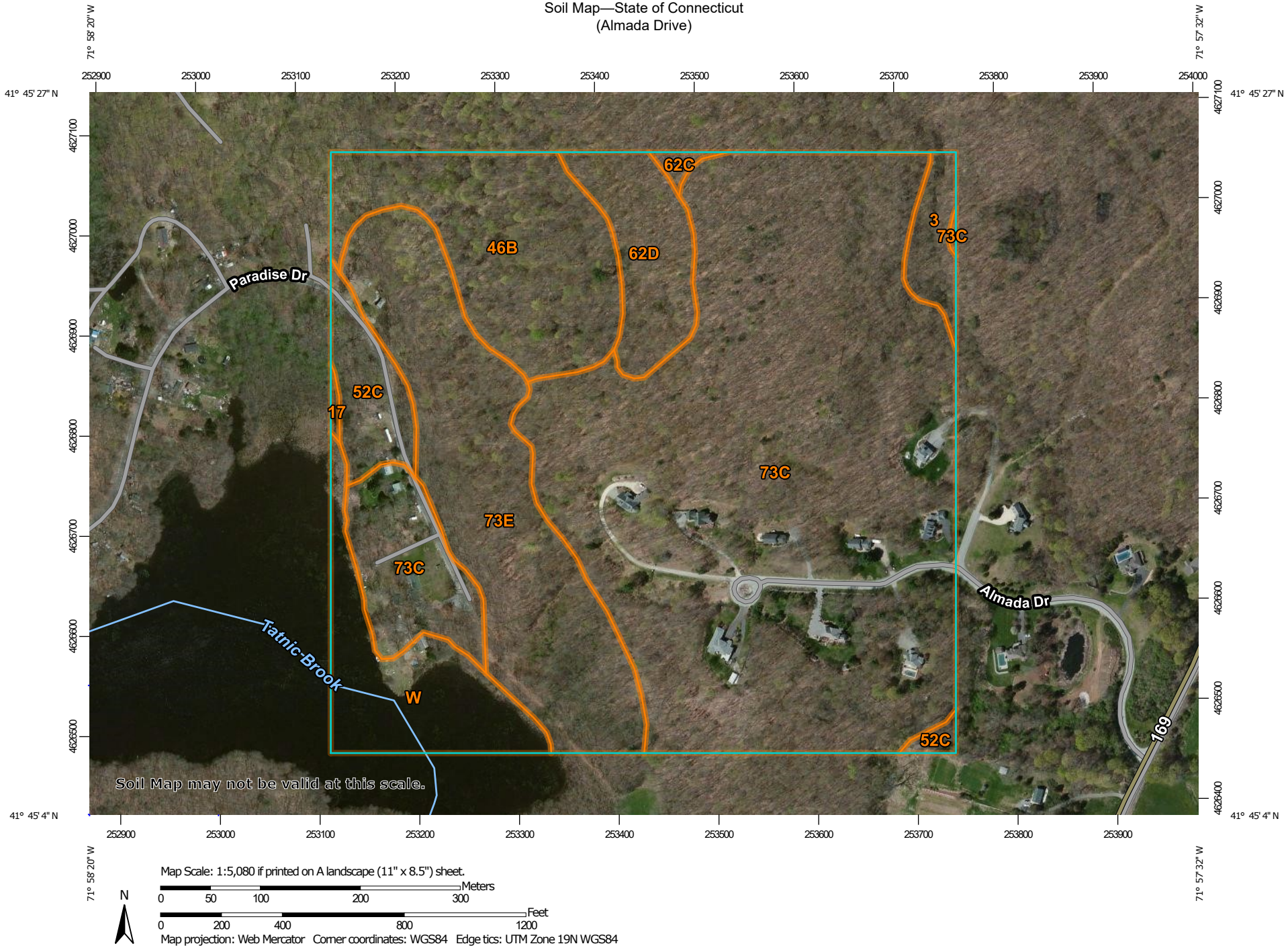
Robert C Russo

Robert C. Russo
Soil Scientist

Appendix A
Soils Data

(3) The Ridgebury series consists of very deep, somewhat poorly and poorly drained soils formed in lodgment till derived mainly from granite, gneiss and/or schist. They are commonly shallow to a densic contact. They are nearly level to gently sloping soils in depressions in uplands. They also occur in drainageways in uplands, in toeslope positions of hills, drumlins, and ground moraines, and in till plains. Slope ranges from 0 to 15 percent. Saturated hydraulic conductivity is moderately high or high in the solum and very low to moderately low in the substratum. Mean annual temperature is about 9 degrees C. and the mean annual precipitation is about 1143 mm.

Soil Map—State of Connecticut
(Almada Drive)



Map Scale: 1:5,080 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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

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

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

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

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

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

Soil Survey Area: State of Connecticut
Survey Area Data: Version 20, Jun 9, 2020

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

Date(s) aerial images were photographed: Mar 30, 2011—May 1, 2011

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	1.6	1.7%
17	Timakwa and Natchaug soils, 0 to 2 percent slopes	0.1	0.1%
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	10.1	10.8%
52C	Sutton fine sandy loam, 2 to 15 percent slopes, extremely stony	3.1	3.3%
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony	0.3	0.3%
62D	Canton and Charlton fine sandy loams, 15 to 35 percent slopes, extremely stony	4.2	4.5%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	52.8	56.5%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	15.2	16.3%
W	Water	6.0	6.4%
Totals for Area of Interest		**93.3**	**100.0%**

NORTHEASTERN CONNECTICUT COUNCIL OF GOVERNMENTS

ENGINEERING PLAN REVIEW
PERTAINING TO A
2-LOT RESUBDIVISION
(ASSESSOR'S MAP 41, LOT 85)
40 ALMADA DRIVE
BROOKLYN, CT

(May 3, 2021)

The comments contained herein pertain to my review of plans for a proposed 2-lot residential resubdivision located at 40 Almada Drive in Brooklyn, Connecticut, consisting of ten (10) sheets, prepared for Paul R. Lehto by Archer Surveying, LLC and CLA Engineers, dated November 13, 2020 and March 31, 2021, respectively. Comments pertain to both wetlands and planning and zoning regulations.

Sheet 2 of 10 – Existing Conditions Plan

1. A "north arrow" is missing in the Location Map.

2. Note No. 3 under "Notes" states that "topographic information was obtained by actual field measurements, datum assumed." The note needs to define the accuracy that the topographic survey meets and who performed the survey.

3. The wetlands delineations on the plan have been certified as being delineated by R.C. Russo with his "signature" on the plan. When did Mr. Russo flag the wetlands as no flags were visible from Paradise Drive for the 7-X line when a site visit was made on April 30, 2021?

4. Since this plan was prepared November 13, 2021, has the abutter's list been verified as being accurate as of May 3, 2021? Why have abutters on the west side of Paradise Drive opposite the land being resubdivided been omitted (see subparagraph 2.10 under Section 4.2 of the Brooklyn Subdivision Regulations)?

Sheet 7 of 10 – Lot Development Plan Lot 1 & Lot 2

1. On April 30, 2021 the reviewer visited Paradise Drive where the driveway for Lot 2 will be located and found the following conditions:

    - A deep swale along the edge of Pardise Drive with running water, several inches deep, coming from a southerly direction.
    - Bare earth banks on the property side of the swale exhibiting active weeping of groundwater no more than 24" below existing ground.

Considering these observed conditions, the proposed paved driveway needs careful consideration with respect to the proposed cuts that remove more than 24" of existing soil to form new slopes

2. There is no indication on the plan for the conveyance of water in the existing Paradise Drive swale to pass under the apron of the proposed driveway. This needs to be evaluated with drainage calculations submitted for review.

3. Due to the steepness of the Lot 2 driveway gradient and it also being paved, formal drainage swales with velocity attenuators need to be located along both edges of the driveway from Elevation 242 down to Paradise Drive. This is to help guard against degradation of the existing drainage swale, especially during heavy rainfall events. A construction detail is also required.

4. It is not apparent from looking at the plan how soil erosion and sediment transport from driveway construction will minimize sediment transport to the Paradise Drive drainage swale and underground drainage system. This needs an explanation.

5. The straw barrier shown along the edge of Paradise Drive where the driveway is located will not protect the existing swale from accumulating sediment. It needs to be moved to the property side of the swale. In fact, compost/silt socks would be a better choice for this application.

Sheet 8 of 10 – Stormwater Management Plan and Erosion & Sediment Control Details

1. References to CT DOT Form 817 is to be changed to the current Form 818 designation.

2. Note 2 under "Post Construction" it is stated that the "*Proposal is for the Town of Brooklyn to accept Almada Drive Extension as a town road that will be incorporated into the town MS4 Operations and Maintenance Program*." First of all, a designation of the Almada Drive Extension cannot be found on any plan submitted for review. Secondly, has this statement been agreed to by town staff and will the citizens of Brooklyn be the deciding body on whether or not this becomes a town road? If a privately owned road, MS4 can still be observed by its responsible party(s). This note needs an explanation as to why it appears here.

Syl Pauley, Jr., P.E.

By: _____

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