

**Project Narrative &
Stormwater Memorandum**

**Kingdom of the Hawk
Tasting Room
113 Pendleton Hill Road
Map 122 Lot 2660
North Stonington, Connecticut**

Prepared for

Kingdom of the Hawk, LLC
349 Elm Street
Stonington, CT 06378

Prepared by

Cherenzia & Associates, Ltd
c/o Sergio F. Cherenzia, PE
99 Mechanic Street
Pawcatuck, CT 06379



**CHERENZIA
& ASSOCIATES, LTD.**

Civil Engineers • Land Surveyors
Land Use Planners • Environmental Engineers
Raymond F. Cherenzia, P.E., L.S., Founder

Date: May 2021
Project No. 219099

received
3/6/21

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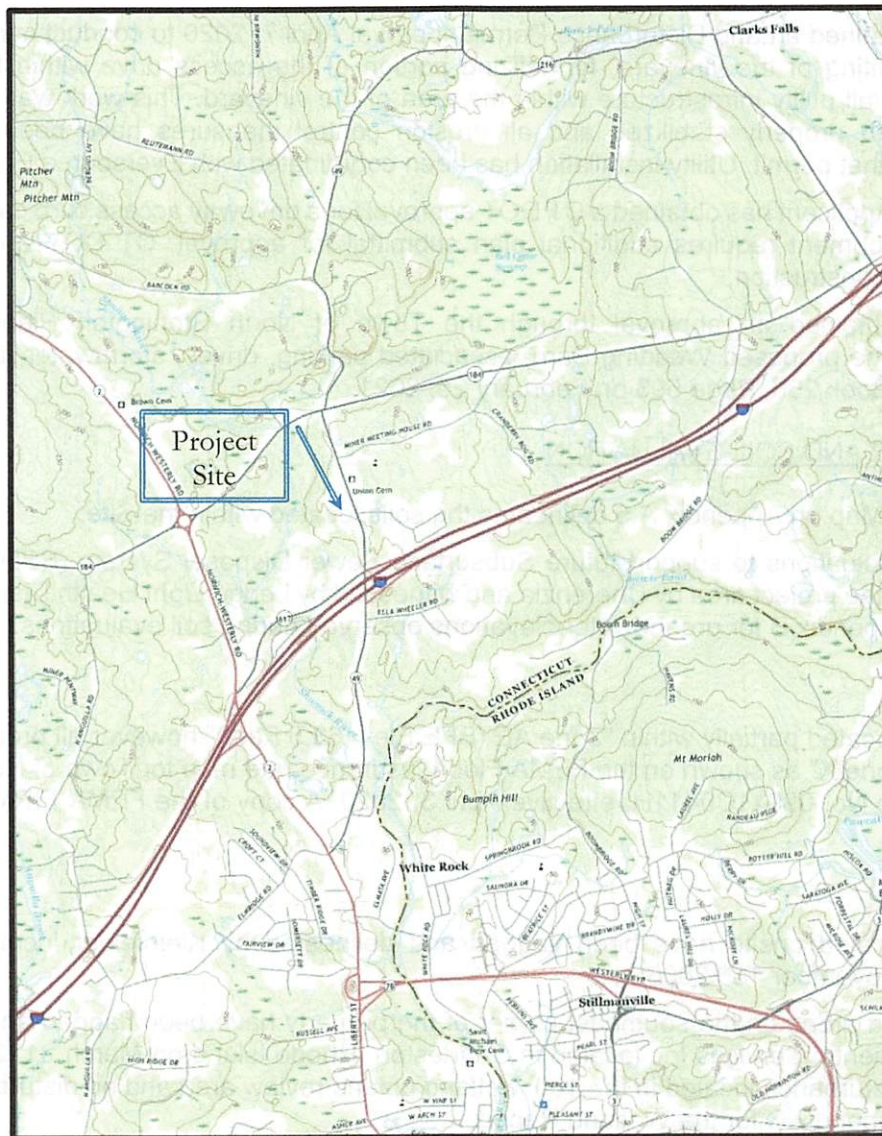
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1. INTRODUCTION

On behalf of Kingdom of the Hawk, LLC (Applicant), Cherenzia & Associates, Ltd. (Cherenzia) has prepared this Project Narrative in support of a proposed Tasting Room, Apartment and Vineyard (“the Site” or “the Project”) located at 113 Pendleton Hill Road in North Stonington, Connecticut (Assessor’s Parcel # 122-2660).

The proposed area shall occupy 3.93± acres of the 55.05± acre Site. The Project includes the re-model of the existing structure to a Tasting Room on the first floor with a one-bedroom apartment on the second floor, adjacent deck, associated grass access drives and parking, event lawn, existing potable well, subsurface sewage disposal system (SSDS), walkways, hardscapes, landscaping, and stormwater BMPs.

An overall Project Site location is shown below. As a requirement the Assessment Parcel Map, Property Card, Tax Map/Plot Plan, and Property Deed are provided as Appendix A.1 – A.4.



2. EXISTING CONDITIONS

The existing site was previously Crider Farm, owned by Jim Crider who passed away July 20, 2019. Under current existing conditions, the Site has an existing unoccupied residential building with dirt trails and four curb-cut accesses along Pendleton Hill Road. A portion of the site is still maintained as farm fields, a portion as wooded, and other portions disturbed by excavation and earthmoving operations. The Property has frontage on and is accessed by Pendleton Hill Road. Stormwater generally flows overland southwest to the Shunock River.

The Property is located within the Economic Development District (EDD). The surrounding properties consist of Quinlan Enterprises, LLC to the south, Kampgrounds of America (KOA) across the street to the east, and single-family residences to the north and east. A partially developed vacant parcel of land is located southeast of the subject property across Pendleton Hill Road, owned by Robert H. Boissevain, Trustee. A cemetery is located on a parcel to the northeast across Pendleton Hill Road. Vacant, previously disturbed parcels zoned EDD exist to the west and southwest, accessed from Route 184 and 617 (respectively).

The Applicant obtained a Land Disturbance Permit approval April 7, 2020 to conduct minor site clearing and grading, planting of the vineyard, formalizing portion of the access drive within the area of the vineyard, and install utility infrastructure within the area of the vineyard. This work was completed and the site has been properly stabilized and all erosion control measures have been adhered to in accordance with that permit. Utility installation has been coordinated with Eversource Energy.

Additionally, the Applicant has obtained a CT DOT approval for a driveway access curb cut, with condition that future development requires additional plan submittal for approval. CT DOT approval shall be obtained prior to construction.

The Applicant obtained an approval through the Town of North Stonington Planning & Zoning Commission for the proposed Wedding Barn, associated parking, drives, stormwater, and utilities and was recorded in Book 236, Page 593 on February 25, 2021.

GROUNDWATER AND SOIL EVALUATION

The NRCS Soils Map on Appendix A.5 delineates the soils located within the Site.

Seven (7) soil evaluations to support future Subsurface Sewer Disposal System (SSDS) design were performed within the project area by Cherenzia and witnessed by Ledge Light Health District on February 11, 2021. See Appendix B for groundwater elevations observed during soil evaluations.

FEMA

The Property is located partially within "Zone AE (BFE Elev. 63.5 Feet)" however all proposed activity is located within "Zone X" as shown on the FEMA Flood Insurance rate map for Town of North Stonington, Connecticut, Map No. 09011C0411H, effective April 3, 2020. A copy of the FEMA FIRM is included as Appendix A.6.

WETLANDS

The wetlands located onsite have been flagged and delineated by Kleinfelder located in Windsor, Connecticut on November 18th 2006.

Additional wetland areas on the southeast corner of the property have been flagged and delineated by Avizinis Environmental Services Inc located in Charleston, Rhode Island on March 31, 2021. There will be very limited disturbance located in the 100' wetland upland review area and no disturbance within the wetlands. See Appendix C for the Wetland Report.

3. PROPOSED CONDITIONS

The proposed development consists of a remodel of a 2-story, 2,854± square foot, Tasting Room on the first floor and a one-bedroom apartment on the second floor with adjacent deck, associated grass access drives and parking, event lawn, existing utilities, existing potable well, subsurface sewage disposal system (SSDS), walkways, hardscape, landscaping, and stormwater BMPs. The proposed development shall be permitted under the 'Hospitality' use which falls under the 602.3 Commercial Use.

The proposed development will utilize the approved CT DOT curb cut on Pendleton Road for patron access. There shall be an additional curb cut for overflow patron access and deliveries off of Pendleton Hill Road and shall consist of a two-way entrance/exit.

The parking areas shall consist of two (2) ADA parking spaces in closest proximity to the building as well as seventy-nine (79) standard parking spaces. There are two general parking areas; north of the building that will be generally used by patrons and immediately southwest of the building for overflow patron parking, staff, and deliveries.

A 5-foot-wide pervious paver sidewalk shall be located off the ADA spaces to access the building. Landscaping shall be low maintenance with areas of mow mix and conservation mix grassed areas, along with landscape beds containing shrubs.

The SSDS will be submitted to Ledge Light Health District (LLHD) for review and permit approval for a 55-person Tasting Room and one-bedroom apartment. All applicable minimum setbacks shall be observed to applicable site features, including stormwater facilities.

This traffic impact analysis consists of trip generation calculations which provides estimates of proposed average number of trips by vehicles entering and exiting the site. The trip generation calculation is based on "Trip Generation (10th Editions)," and information report published by the Institute of Transportation Engineers (ITE).

The trip generation is based on the GFA (Gross Floor Area) of the proposed tasting room and one-bedroom apartment.

The closest defined use within the ITE that is closest to the proposed use is a combined category as "Winery", land use 970. Which is defined as:

"Winery", land use 970

"A winery is a property used primarily for the production of wine. Wineries typically include tasting room facilities and may offer special events such as weddings or parties. Wineries often offer complimentary tours and wine tasting. Visitors also may purchase wine or wine-related products."

The following table identifies the estimated trips based on the average rate for weekday and PM Peak for the and the proposed office. The proposed tasting room is 2,854 s.f. or 3 KSF. KSF being units of 1,000 square feet. The one-bedroom apartment is classified as '2-persons'.

ITE Vehicle Trip Generation

Land Use	Trips	
	Daily	PM Peak
Winery	87	10
Apartment	7	1
Total	94	11

Appendices are referenced in the table of contents and provide additional relevant background information and mapping.

HYDROLOGIC ANALYSIS

Based on evaluation of existing conditions and topography, Cherenzia concluded that one sub-watershed is present within the project area that discharges to one design point. Design Point 1 is the southern side of the proposed development which drains to the existing wetlands on the property and then ultimately to the Shunock River.

Under proposed conditions, the project draining to Design Point 1 is as described below:

- Sub-watershed area PR-1 consists of areas draining to the proposed infiltration basin, P-1. This area consists of the building, vineyard, and grass drive/parking. Grassed areas between the sidewalks and basin will act as a grass filter strip providing pretreatment for the sidewalk. The infiltration basin has been sized to provide stormwater treatment and mitigate peak flow rates. Stormwater discharged from the system will be directed to Design Point 1.

One stormwater BMP are included in the proposed project area, an infiltration basin to manage stormwater quality and quantity.

An infiltration basin, shall be constructed on the southern end of the project. The basin is sized so the volume below the first outlet is greater than the water quality volume; therefore, sufficient stormwater treatment is provided.

The grass driveways are designed meeting the CT Water Quality Manual requirements; therefore, they are not considered impervious surfaces for the water quality calculations. According to the Water Quality Manual, grass drives and parking are for low traffic areas. The manual defines low traffic as generally 500 or fewer average daily trips. The proposed property will have less than 500 average daily trips.

Table 1: Proposed Stormwater Treatment

		PR-1
	Pretreatment	Proposed Area to Basin Not required for roof, grass filter strip for sidewalk
	Treatment	Infiltration Basin
	Total Area, sq.ft.	171,116
	Percent Impervious, I	3.3
	Runoff Coefficient, R	0.079
WQV	Imp. Area, sq.ft. (sidewalk & roof)	5,582
	Water Quality Volume, cu.ft. (CTSQM 7.4.1)	1,132
Infiltration Basin	Total Storage Volume Provided Below First Outlet, cu.ft.	9,464

This project has been designed in accordance with the latest edition of the *Connecticut DEEP Stormwater Quality Manual* with no adverse impact to the surrounding area. The proposed stormwater design addresses water quality, by treating the WQv through an Infiltration Basin, by reducing or matching peak discharge rates from existing to proposed conditions.

SOIL EROSION SEDIMENT CONTROL PLAN

All soil erosion sediment control devices shall be installed per the “2002 Connecticut Guidelines for Soil Erosion and Sediment Control”. Soil erosion sediment control devices include straw wattles, concrete washout area, and a construction entrance.

Straw Wattles/Silt Fence will be installed throughout construction on the downslope side of the Limit of Disturbance and around basins. A **Concrete Washout Area** shall be installed to allow an area for concrete trucks to washout during construction. A **Construction Entrance** shall be installed at the entrance of the project.

OPERATION & MAINTENANCE

The stormwater system must be inspected regularly and maintained as described herein to ensure that it continues to perform as designed. Inspections shall be performed by someone that has knowledge or experience with stormwater systems. When the routine inspection reveals a question of integrity an inspection shall be performed by a registered professional engineer. The inspection process shall document observations made in the field and shall cover structural conditions, evidence of vandalism, condition of vegetation, occurrence of obstructions, unsafe conditions, and build-up of trash, sediments, and pollutants. Routine maintenance activities shall be performed on a regular basis and generally do not depend on findings from inspections. These tasks shall include such things as vegetation maintenance (such as mowing), and trash/debris removal. These tasks shall be performed on a fixed time interval, depending on the season and type of actions required. Corrective tasks such as sediment removal shall be performed on an as-needed basis, based on inspection results or in response to complaints. These tasks may require specialized personnel to perform the required actions appropriately.

INFILTRATION BASIN

Infiltration facilities shall be inspected annually to ensure than design infiltration rates are being met. If sediment or organic debris build-up has limited the infiltration capabilities (infiltration basins) to below the design rate, the top six inches shall be removed and the surface roto-tilled to a depth of 12 inches. The basin bottom shall be restored according to original design specifications. Any oil or grease found at the time of inspection shall be cleaned with oil absorption pads and disposed of in an approved location.

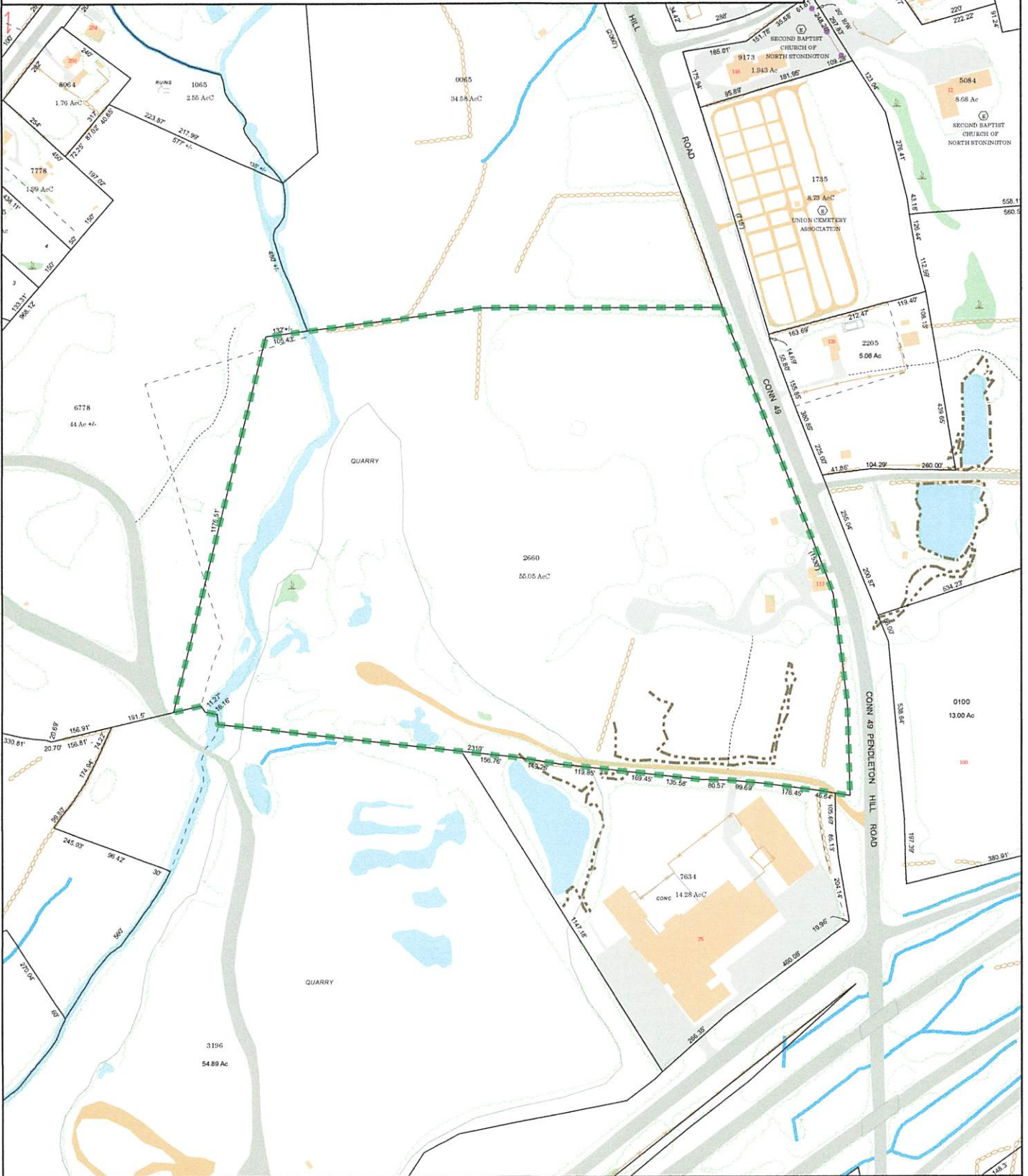
Inspect facility for signs of wetness or damage to the structure and note any eroded areas. If dead or dying grass on the bottom is observed, check to ensure that water percolates 2-3 days following storms. Mow or remove litter and debris. Stabilize eroded banks and repair undercut and eroded areas at inflow and outflow structures.

APPENDIX A:
Background Information

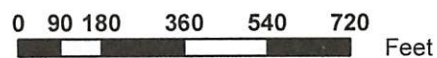
Town of North Stonington, Connecticut - Assessment Parcel Map

Parcel: 122-2660

Address: 113 PENDLETON HL



Approximate Scale: 1:4,800



Map Produced
November 2019

Disclaimer: This map is for informational purposes only.
All information is subject to verification by any user.
The Town of North Stonington and its mapping contractors assume
no legal responsibility for the information contained herein.

APPENDIX A.2:

Property Card



Town of North Stonington, CT

Property Listing Report

Map Block Lot

122-2660

Account

C3400000

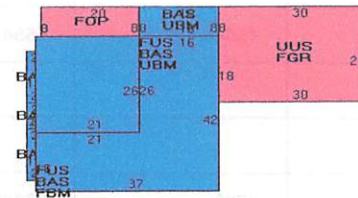
Property Information

Property Location	113 PENDLETON HL
Owner	KINGDOM OF THE HAWK LLC
Co-Owner	
Mailing Address	349 ELM STREET STONINGTON CT 06378
Land Use	0101 SINGLE FAM
Land Class	R
Zoning Code	EDD
Census Tract	7071
Sub Lot	
Neighborhood	0500
Acreage	55.05
Utilities	Well,Septic
Lot Setting/Desc	Industrial Level
Survey Map	
Additional Info	

Photo



Sketch



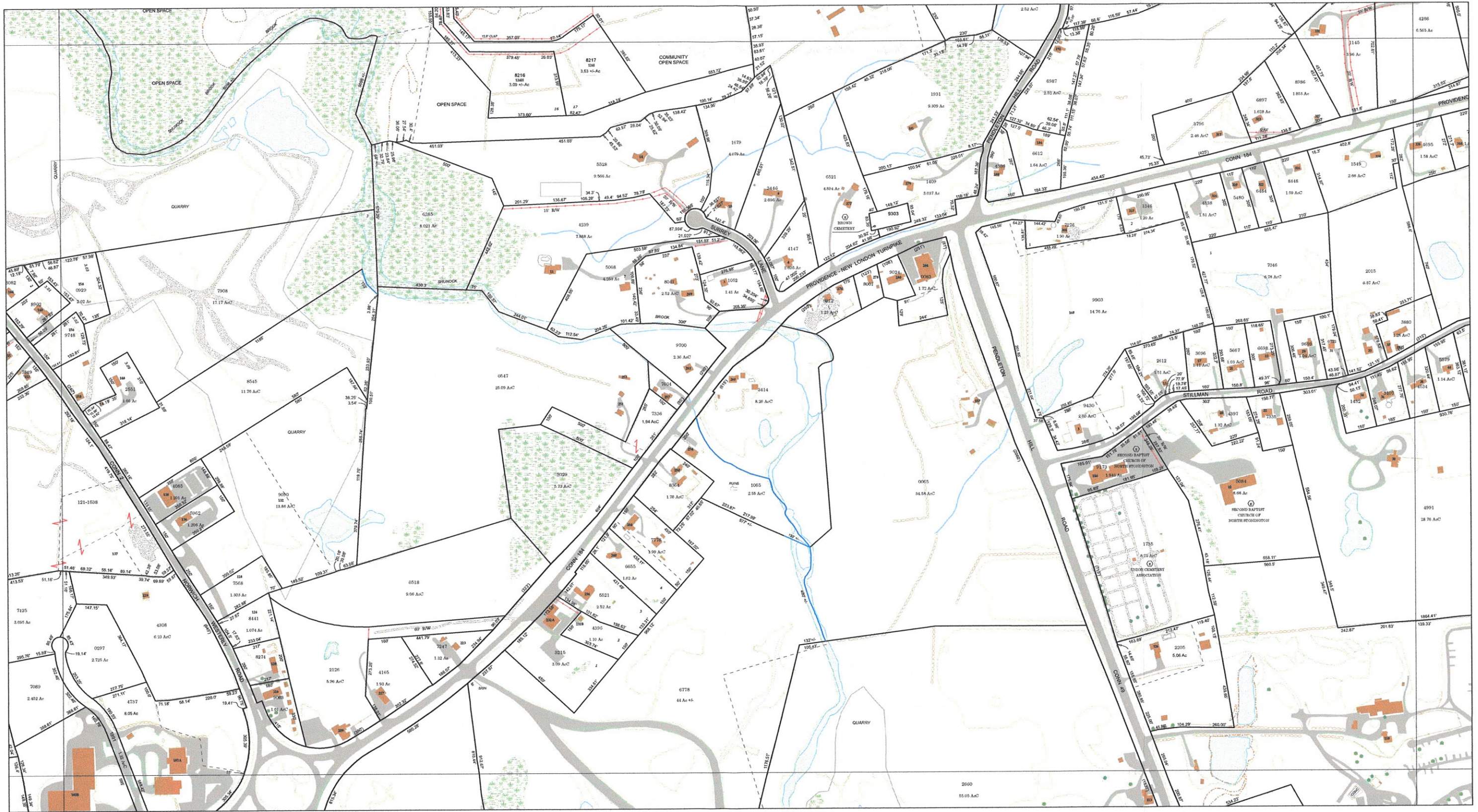
Primary Construction Details

Year Built	1924
Stories	2
Building Style	Colonial
Building Use	Residential
Building Condition	Below Average
Floors	Pine/Soft Wood
Total Rooms	4 Rooms

Bedrooms	3 Bedrooms
Full Bathrooms	2
Half Bathrooms	0
Bath Style	Average
Kitchen Style	Average
Roof Style	Gable
Roof Cover	Asphalt Shingl

Exterior Walls	Wood Shingle
Interior Walls	Drywall/Sheet
Heating Type	Hot Water
Heating Fuel	Oil
AC Type	None
Gross Bldg Area	6708
Total Living Area	3306

APPENDIX A.1:
Assessment Parcel Map



Map Number: **117**

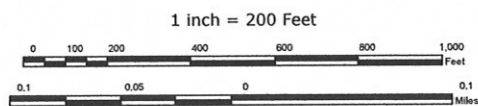
THIS MAP IS PREPARED FOR THE INVENTORY OF REAL PROPERTY FOUND WITHIN THESE JURISDICTIONS AND IS COMPILED FROM RECORDED DEEDS, PLATS, AND OTHER PUBLIC RECORDS AND DATA. USERS OF THIS MAP ARE HEREBY NOTIFIED THAT THE AFORESAID PUBLIC PRIMARY INFORMATION CONTAINED ON THIS MAP, THE TOWNS AND THE MAPPING COMPANIES ASSUME NO LEGAL RESPONSIBILITIES FOR THE INFORMATION CONTAINED ON THIS MAP.



Photography Dates:
 March 24, 1996 (120 Series)
 April 29, 1997 (449 Series)
 December 16, 1997
 (449 Series, 5-1, 5-3, 5-5)
 Completion Date: April 28, 2000
 Planimetric Update based on 2010 Photo
 Revised Date: October 1, 2019

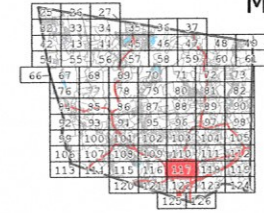


Town of North Stonington Connecticut
Planimetric Data and Property Maps 2019

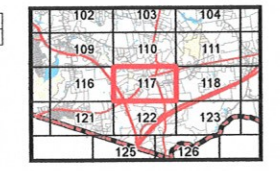


- Property Line
- Property Line Along Water
- Parcel in Dispute
- Town Line
- State Line
- ROW / Easement
- Surveyed Wetland
- Parcel Hook and Sub Lot
- Building / Street No.
- Exempt Property
- Record Dimension
- Surveyed Dimension
- Surveyed Acreage
- Computed Acreage
- Wall / Fence

- Deciduous Tree
- Evergreen Tree
- Vegetation
- Water
- Swamps
- Roads, Driveways, Trails, Flat Areas and Structures

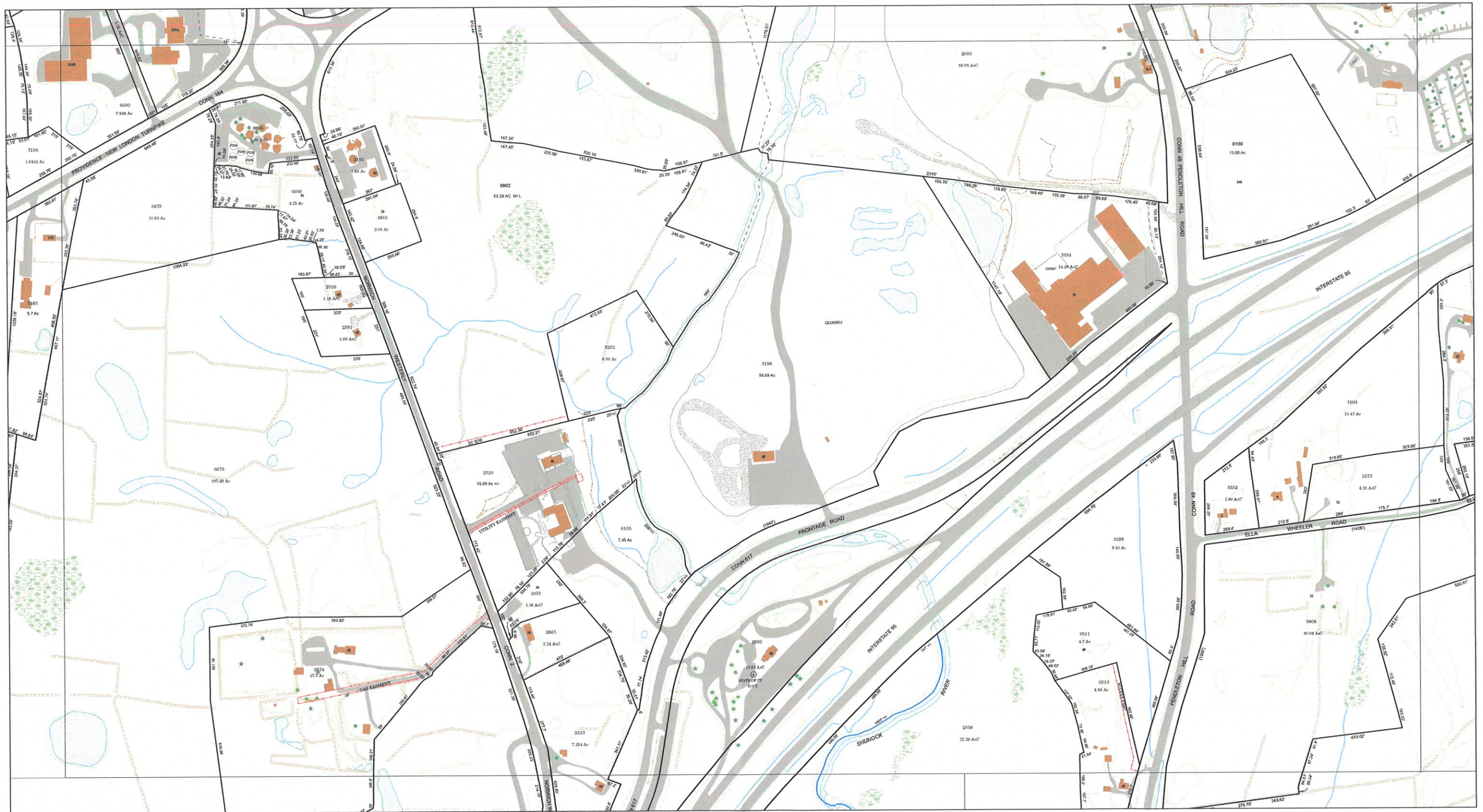


Map Number: **117**



Map Produced: November 2019

APPENDIX A.3:
Tax Map/Plot Plan



Map Number: 122

THIS MAP IS PREPARED FOR THE INVENTORY OF REAL PROPERTY FOUND WITHIN THESE JURISDICTIONS AND IS COMPILED FROM RECORDED DEEDS, PLATS, AND OTHER PUBLIC RECORDS AND DATA. USERS OF THIS MAP ARE HEREBY NOTIFIED THAT THE AFOREMENTIONED PUBLIC PRIMARY INFORMATION CONTAINED ON THIS MAP, THE TOWNS AND THE MAPPING COMPANIES ASSUME NO LEGAL RESPONSIBILITIES FOR THE INFORMATION CONTAINED ON THIS MAP.

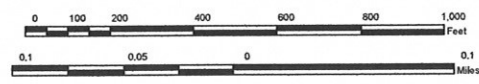


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 Completion Date: April 28, 2000
 Planimetric Update based on 2010 Photo
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Town of North Stonington Connecticut
Planimetric Data and Property Maps 2019

1 inch = 200 Feet

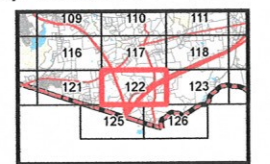


- Property Line
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- Deciduous Tree
- Evergreen Tree
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Map Number: 122



Map Produced: November 2019

APPENDIX A.4:

Property Deed

Return to:
Kingdom of the Hawk LLC
349 Elm Street
Stonington, CT 06378

STATUTORY FORM WARRANTY DEED

KNOW YE, THAT I, **JAMES P. CRIDER A/K/A JAMES P. CRIDER, SR.**, acting herein by James P. Crider, Jr. duly authorized by Power of Attorney dated July 18, 2017 and recorded in the North Stonington Land Records prior to the recording of this instrument, of 182 Fenner Hill Road, Hope Valley, Rhode Island 02832, for consideration of FIVE HUNDRED EIGHTY THOUSAND and 00/100 (\$580,000.00) Dollars and other valuable consideration paid, grant to **KINGDOM OF THE HAWK LLC**, a Connecticut Limited Liability Company, organized and existing under the laws of the State of Connecticut, with a mailing address of 349 Elm Street, Stonington, Connecticut 06378, with **WARRANTY COVENANTS for property known as 113 PENDLETON ROAD, NORTH STONINGTON, CONNECTICUT:**

SEE SCHEDULE "A" ATTACHED HERETO AND MADE A PART HEREOF.

As partial consideration for this conveyance, the herein Grantee agrees to assume and pay all real estate taxes and other municipal charges hereafter coming due on the within described premises.

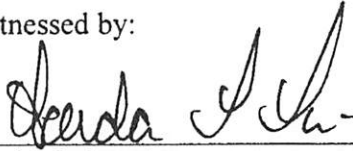
SAID PREMISES ARE SUBJECT TO THE FOLLOWING ENCUMBRANCES:
Any and all provisions of any ordinance, municipal regulation, public or private law. Any assessments or pending assessments for which a lien or liens have not as yet been filed, if any. Any provisions, if applicable, or any inland/wetlands or coastal wetland statutes, ordinances, rules and regulations.

CONVEYANCE TAX RECEIVED
STATE \$ 4,350.00
LOCAL \$ 1,450.00
Antoinette Pancaro
NORTH STONINGTON Town Clerk

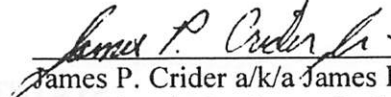
THE LAW FIRM OF
BORNER, SMITH, ALEMAN,
HERZOG & CERRONE, LLC
155 PROVIDENCE STREET, P.O. Box 166, PUTNAM, CONNECTICUT 06260
P: 860.928.2429 • F: 860.928.7539 • www.nectlaw.com

Signed this 21st day of February, 2019.

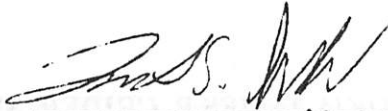
Witnessed by:



Sandra L. Lemire



James P. Crider a/k/a James P. Crider, Sr.
acting herein by James P. Crider, Jr., his
Attorney-In-Fact



(Witness) Josh Hacerik

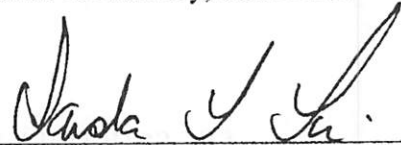
STATE OF CONNECTICUT)

) SS. Putnam

February 21, 2019

COUNTY OF WINDHAM)

Personally, appeared James P. Crider, Jr., Attorney-In-Fact for James P. Crider a/k/a James P. Crider, Sr., Signer of the foregoing Instrument, and acknowledged the same to be his free act and deed and the free act and deed under said Power of Attorney, before me.



Sandra L. Lemire, Notary Public
My Commission Expires: 07/31/2023

THE LAW FIRM OF
BORNER, SMITH, ALEMAN,
HERZOG & CERRONE, LLC
155 PROVIDENCE STREET, P.O. Box 166, PUTNAM, CONNECTICUT 06260
P: 860.928.2429 • F: 860.928.7539 • www.nectlaw.com

SCHEDULE "A"

All that certain tract or parcel of land, together with all the buildings and improvements thereon, situated in the Town of North Stonington, County of New London and State of Connecticut, being that part of the farm known as the "Reuben W. York Farm" which lies west of the public highway leading from Westerly, Rhode Island, to Pendleton Hill, Connecticut, bounded northerly by land formerly of Charles Vincent, easterly by the public highway, and southerly and westerly by land now or formerly of George E. Champlin, formerly owned by Joseph P. Crider, bounded and described more particularly as follows:

Beginning on the westerly side of the public highway at land now or formerly of John Wilkinson; running thence by said land westerly 2310 feet, more or less, to the strip of land formerly owned by the Norwich and Westerly Railway Company for a right of way; thence crossing said strip of land in a Westerly direction 105 feet, more or less, across Shunoc Brook to a stone wall; thence in a northeasterly direction by land of John Wilkinson 210 feet, more or less, to a wire fence; thence northerly along a wire fence, and by land of John Wilkinson 1260 feet, more or less, to an intersecting wire fence; thence easterly along a wire fence and by land of John Wilkinson 150 feet, more or less, to Shunoc Brook; thence crossing Shunoc Brook in an easterly direction along a stone wall and by land of Irving Main 200 feet, more or less; thence easterly along a wire fence 300 feet, more or less, by said Main land to a stone wall; thence easterly by said stone wall 1660 feet, more or less still by said Main land to the public highway; and thence southerly by said public highway 1605 feet, more or less, to the point or place of beginning; containing 60 acres, more or less.

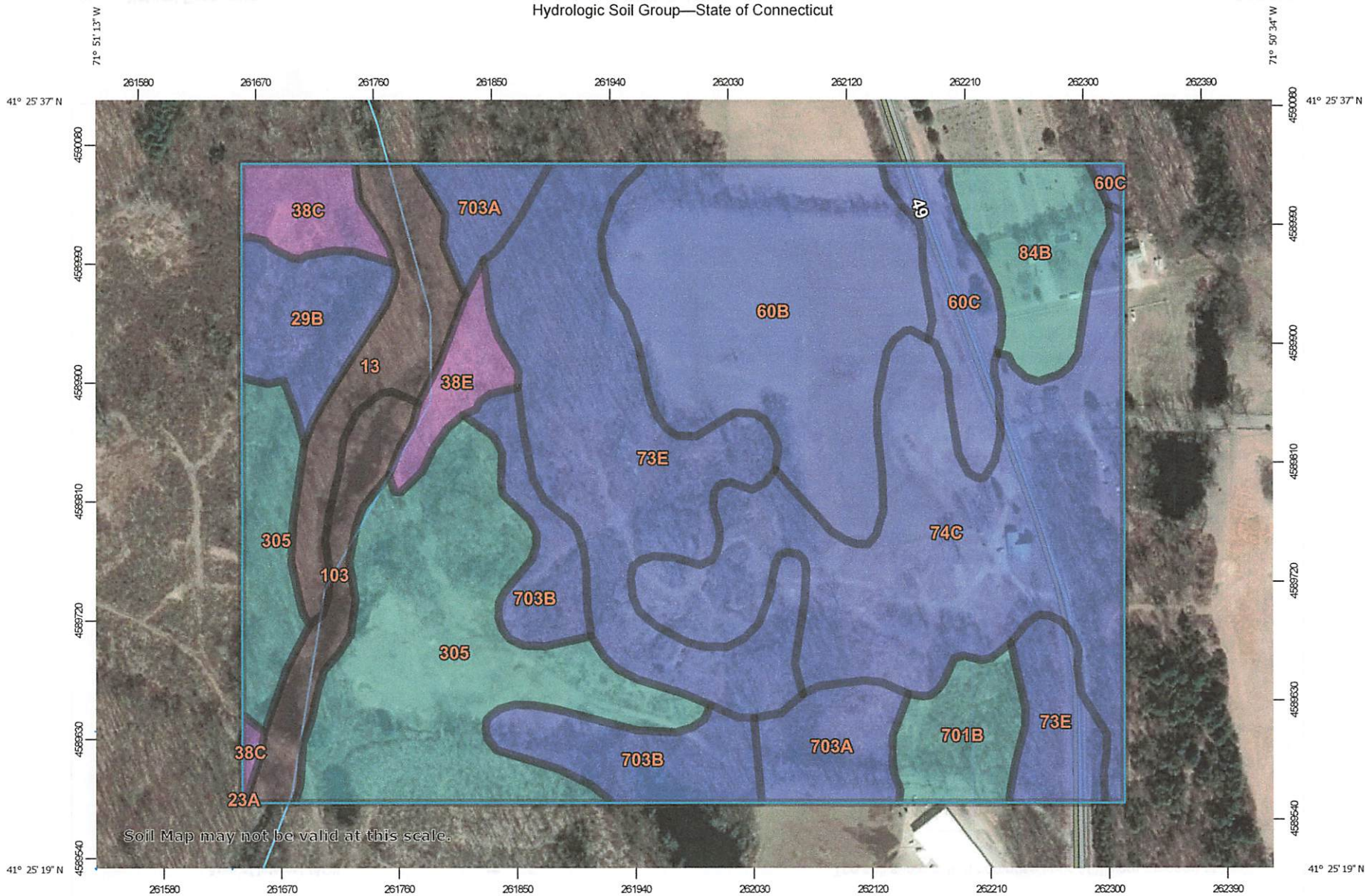
There is excepted from this conveyance a parcel of land containing 0.96 acres conveyed to the State of Connecticut September 20, 1962 by deed recorded in Volume 31, page 154 of the North Stonington Land Records.

Being the same premises conveyed by Warranty Deed from Ruth M. Crider to James P. Crider and Gloria M. Crider dated and recorded March 5, 1973 in Volume 43, Page 146 of the North Stonington Land Records.

THE LAW FIRM OF
BORNER, SMITH, ALEMAN,
HERZOG & CERRONE, LLC
155 PROVIDENCE STREET, P.O. BOX 166, PUTNAM, CONNECTICUT 06260
P: 860.928.2429 • F: 860.928.7539 • www.nectlaw.com

APPENDIX A.5:
NRCS Soils Map

Hydrologic Soil Group—State of Connecticut



































Soil Map may not be valid at this scale.

Map Scale: 1:4,100 if printed on A landscape (11" x 8.5") sheet.



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 Rating Polygons**
 -  A
 -  A/D
 -  B
 -  B/D
 -  C
 -  C/D
 -  D
 -  Not rated or not available
 - Soil Rating Lines**
 -  A
 -  A/D
 -  B
 -  B/D
 -  C
 -  C/D
 -  D
 -  Not rated or not available
 - Soil Rating Points**
 -  A
 -  A/D
 -  B
 -  B/D
- Soils**
 -  C
 -  C/D
 -  D
 -  Not rated or not available
- 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 19, Sep 13, 2019

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

Date(s) aerial images were photographed: Mar 20, 2019—Mar 27, 2019

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
13	Walpole sandy loam, 0 to 3 percent slopes	B/D	3.6	4.5%
23A	Sudbury sandy loam, 0 to 5 percent slopes	B	0.0	0.0%
29B	Agawam fine sandy loam, 3 to 8 percent slopes	B	2.7	3.3%
38C	Hinckley loamy sand, 3 to 15 percent slopes	A	1.8	2.2%
38E	Hinckley loamy sand, 15 to 45 percent slopes	A	1.4	1.7%
60B	Canton and Charlton fine sandy loams, 3 to 8 percent slopes	B	11.8	14.6%
60C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes	B	2.6	3.2%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	B	12.6	15.6%
74C	Narragansett-Hollis complex, 3 to 15 percent slopes, very rocky	B	15.1	18.7%
84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	C	3.3	4.1%
103	Rippowam fine sandy loam	B/D	2.4	3.0%
305	Udorthents-Pits complex, gravelly	C	13.1	16.3%
701B	Ninigret fine sandy loam, 3 to 8 percent slopes	C	2.3	2.8%
703A	Haven silt loam, 0 to 3 percent slopes	B	3.4	4.3%
703B	Haven silt loam, 3 to 8 percent slopes	B	4.5	5.6%
Totals for Area of Interest			80.6	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

APPENDIX A.6:
Flood Insurance Rate Map (FIRM)

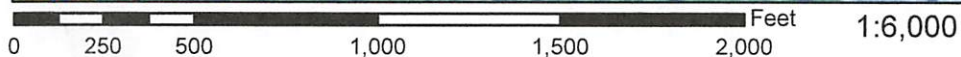
National Flood Hazard Layer FIRMette



71°51'14"W 41°25'42"N



USGS The National Map: Orthoimagery. Data refreshed April 2020



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- | | | |
|------------------------------------|--|---|
| SPECIAL FLOOD HAZARD AREAS | | Without Base Flood Elevation (BFE)
Zone A, V, A99 |
| | | With BFE or Depth Zone AE, AO, AH, VE, AR |
| | | Regulatory Floodway |
| OTHER AREAS OF FLOOD HAZARD | | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X |
| | | Future Conditions 1% Annual Chance Flood Hazard Zone X |
| | | Area with Reduced Flood Risk due to Levee. See Notes. Zone X |
| | | Area with Flood Risk due to Levee Zone D |
| OTHER AREAS | | NO SCREEN Area of Minimal Flood Hazard Zone X |
| | | Effective LOMRs |
| | | Area of Undetermined Flood Hazard Zone D |
| GENERAL STRUCTURES | | Channel, Culvert, or Storm Sewer |
| | | Levee, Dike, or Floodwall |
| OTHER FEATURES | | 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation |
| | | 17.5 Coastal Transect |
| | | Base Flood Elevation Line (BFE) |
| | | Limit of Study |
| | | Jurisdiction Boundary |
| | | Coastal Transect Baseline |
| | | Profile Baseline |
| | | Hydrographic Feature |
| MAP PANELS | | Digital Data Available |
| | | No Digital Data Available |
| | | Unmapped |



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/6/2020 at 7:16 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

APPENDIX A.7:
Natural Diversity Database Map

Natural Diversity Map



Property Information

Property ID 102-122-2660
Location 113 PENDLETON HL
Owner KINGDOM OF THE HAWK LLC



MAP FOR REFERENCE ONLY
 NOT A LEGAL DOCUMENT

SCCOG makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 05/31/2017
 Data updated 10/1/2013

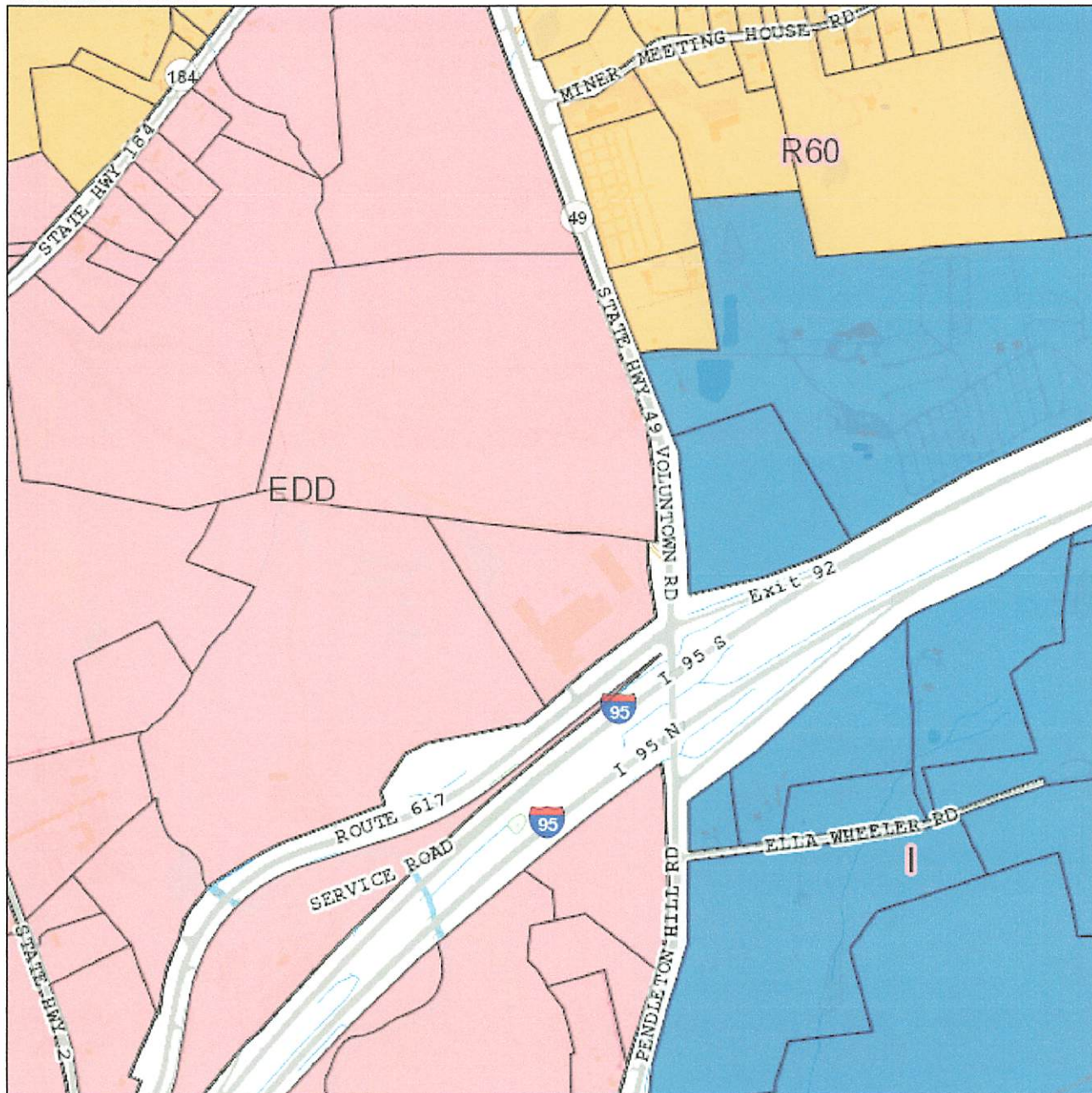
APPENDIX A.8:

Zoning Map

Town of North Stonington Geographic Information System (GIS)



Date Printed: 9/24/2020



MAP DISCLAIMER - NOTICE OF LIABILITY

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The Town of North Stonington and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 800 feet



APPENDIX B:

Test Pit Log



SITE INVESTIGATION FOR A SUBSURFACE SEWAGE DISPOSAL SYSTEM

Property Address: 113 Pendleton Hill Rd Town: North Stonington

DEEP TEST PIT DATA/SOIL DESCRIPTIONS

DATE: 2/11/2021 (Record all Test Pits)

TEST PIT: 1	TEST PIT: 2	TEST PIT: 3	TEST PIT: 4
0-108 Fill Unsuitable	0-90 Fill Unsuitable	0-80 Fill Unsuitable	0-84 Unsuitable
Mottles:	Mottles:	Mottles:	Mottles:
GW:	GW:	GW:	GW: 74
Ledge:	Ledge:	Ledge:	Ledge:
Roots:	Roots: to	Roots to:	Roots to:
Restrictive:	Restrictive:	Restrictive:	Restrictive:
TEST PIT: 5	TEST PIT: 6	TEST PIT: 7	
0-84 Fill Unsuitable	0-24 Top Soil 24-54 Light Br, med sand 54-87 Gray Tan, Med coarse with cobbles The street side of the test hole witnessed faint line of fill	near a catch basin (needs to be relocated). 0-54 Fill 54-86 GrayTan, Med coarse with cobbles	
Mottles:	Mottles:	Mottles:	
GW:	GW:	GW:	
Ledge:	Ledge:	Ledge:	
Roots to:	Roots to:	Roots to:	
Restrictive:	Restrictive: 87	Restrictive: 86	

GROUNDWATER TABLE (Near max., below max., etc.): _____

SOIL MOISTURE (High, medium, low, etc.): _____

PERCOLATION TEST DATA

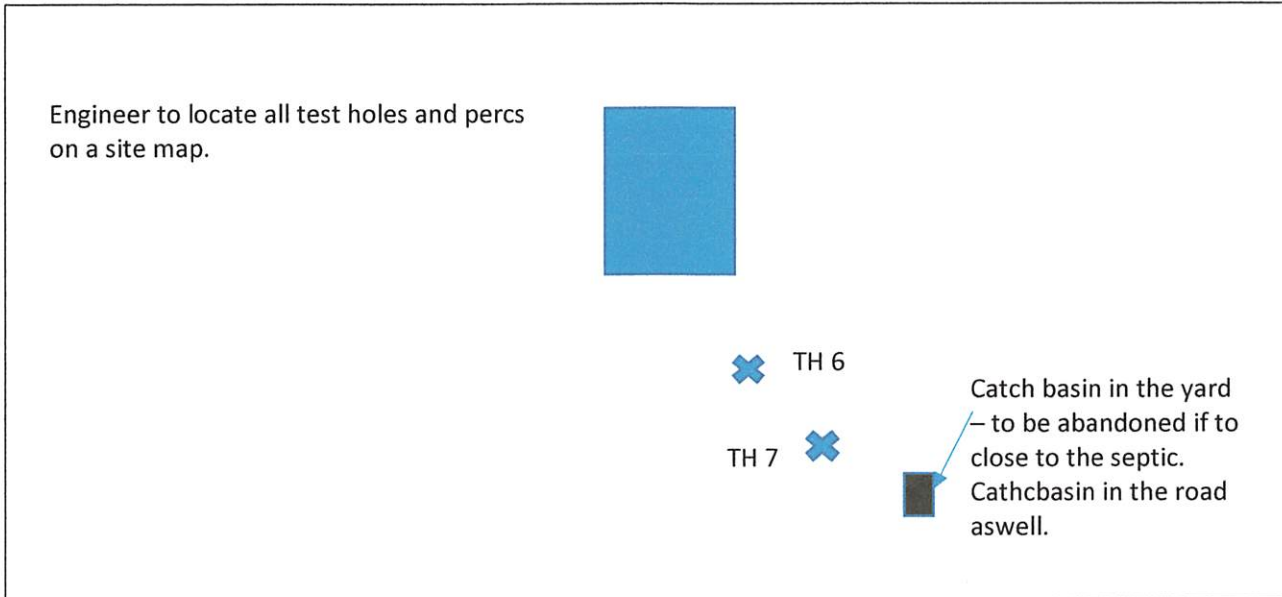
DATE: _____ (Record all Perc Tests)

PERC:			PERC:		
DEPTH:			DEPTH:		
PRESOAK:			PRESOAK:		
TIME	READING	Min/in	TIME	READING	Min/in
PERC RATE:			PERC RATE:		

COMMENTS: Perc To be performed by the Engineer

SPECIAL CONDITIONS		CONCLUSIONS	
Design Flow > 2000 GPD		Suitable for Sewage Disposal	TH 6. TH 7 (remove fill)
Public Water Supply Watershed		Unsuitable for Sewage Disposal	TH 1,2,3,4,5
Probable High Groundwater		Additional Investigation Req'd	
Slope > 25 percent		Wet Season Monitoring Req'd	
Perc Rate < 1 min/inch		Retest During Wet Season	
Perc Rate > 30 min/inch		Licensed Engineer Plan Req'd	
Ledge < 5 feet below grade		Other:	
Limited Suitable Area	X		
Open Watercourse or Wetlands	X		
Flood Plain / Seasonal Flooding			
Max. G.W. < 36 inches below grade			

LOCATION DRAWING INCLUDING ALL TEST PITS AND PERCOLATION HOLES



DESIGN RECOMMENDATIONS/COMMENTS Floor plans to be submitted with B100a application. This property also has a proposed Vineyard and Wedding barn facility. Much of the site has had earth removal and fill material brought in if, during installation fill material is found, it must be stripped down to native soil, and approved fill brought in.

Form completed by: Cheryl Haase

(Certified Local Health Agent or P.E.)

Accuracy assured by (If P.E. completed form): _____

(Certified Local Health Agent)

Others present for site investigation (Engineer, developer, installer etc.) Rachel York and Sergio Cherenzia (Cherenzia & Ass

APPENDIX C:

Wetland Report



AVIZINIS

ENVIRONMENTAL
SERVICES INC

WETLAND REPORT

SITE LOCATION:
Portion of - Map 122, Lot 2660
113 Pendleton Hill Road
North Stonington, Co

PREPARED FOR:
Cherenzia & Associates, Ltd
99 Mechanic Street
Pawcatuck, CT 06379

PREPARED (March 31, 2021) BY:


Edward J. Avizinis, CPSS, PWS | President



INTRODUCTION

Avizinis Environmental Services, Inc., (AES), has completed the requested field work at the 113 Pendleton Hill Road address in North Stonington. I visited the site on March 26, 2021 to delineate regulated inland wetland features that both occur within the closest vicinity of the existing structure on the property.

The State of Connecticut regulates wetlands and watercourses of the state via the 1972 Inland Wetlands and Watercourses Act (Sections 22a-36 to 22a-45, inclusive, of the Connecticut General Statutes). The regulatory authority to uphold the provisions of the act is carried out by the towns therein. The Town of North Stonington subsequently promulgated the latest version of the town regulations, the Inland Wetlands and Watercourses Regulations of the Town of North Stonington (March 22, 2002).

Consistent with these wetland regulations, AES has delineated three wetland features on the property. Flagging and other benchmarks were located with a Spectra SP20 decimetric GPS/GNSS. This data has been forwarded to you should you find it useful in preliminary planni

EXISTING CONDITIONS

The property is located extending west from Pendleton Hill Road and a rural area of North Stonington. The property contains a dilapidated home on an expansive agricultural field. There are inland wetlands on the property to the south and west. There is a watercourse that emanates from a culvert under Pendleton Hill Road that flows southwest through a drainage way. There are pockets of freshwater wetlands associated with the stream that also reside in the drainageway. The closest extent of these features as they are situated in relation to the house and surrounding area have been delineated by AES.

Historic aerial photographs show little change to the property over the past decades. The earliest available photographs from 1934 show the property similar to how it is today however with more open agricultural fields. Slight revegetation of the some of the open space can be seen in the subsequent aerial photographs. Much of the vegetation recolonizing is primarily invasive species including Russian olive (*Eleagnus umbelata*), Asiatic bittersweet (*Celastrus*

orbiculatus), Japanese honeysuckle (*Lonicera japonica*), multiflora rose (*Rosa multiflora*), and Morrow's honeysuckle (*Lonicera morrowii*), among others.

WETLAND FEATURES

There are three regulated features that have been delineated within close proximity to the project area. Flagging labeled A1 – A9 defines the closest bank of a watercourse (intermittent stream) that flows south through the property. Flagging labeled B1 – B6 defines the limit of a pocket of wetland associated with the stream. And finally, flagging labeled C1 – C5 delineates a second portion of wetland associated with the intermittent stream that continues south and west. These flag series receive the same regulatory protection in the form of a 100-foot upland review area.

Any activities that may alter the wetland features or the 100-foot upland review area, will require review from the North Stonington Inland Wetland Agency.

CLOSING

Thank you for the opportunity to provide this service. Any proposed alterations to the lot that may impact the regulated areas as outlined in this report will require a review and approval from the Inland Wetland Agency. Please review the attached information and maps representing the findings of my field work. Do not hesitate to let me know if you have any questions and best of luck moving forward with this project.

SITE MAP

1) WETLAND DELINEATION MAP over 2020 Aerial Photograph



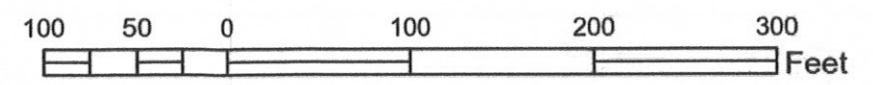
WETLAND DELINEATION MAP
 Portion of - Map 122, Lot 2660
 113 Pendleton Hill Road
 North Stonington, Connecticut

LEGEND

- ◆ Stream Flag
- + Wetland Flag
- Stream
- Property Line
- Wetland
- 100-ft Upland Review Area

General Notes:

1. This map should not be interpreted as a survey quality graphic. It is designed for preliminary planning purposes only. AES recommends consultation with a Professional Land Surveyor for accurate site feature locations.
2. Property lines as depicted on this map have been approximated from plat maps available from the town assessor's online database.
3. Aerial photograph base map acquired from the R1 DEM and RIGIS database.
4. Performed by Edward J. Avizinis, CPSS, PWS on March 26, 2021. Site features located with Spectra SP20 GPS unit.



ESRI Community Maps Contributors, MassGIS, UConn, etc.