



Application(s) #: _____

Fees Paid: _____

Check #: _____

Receipt #: _____

PLANNING BOARD APPLICATION

Project Name: 116 Hilliard Road

Project Address: 116 Hilliard Road, Laconia, NH 03246

Tax Map/ Lot # (s): 161-107-3 Zoning District (s): CR Parcel Size Acres: 3.5 Acres

Number of Lots: 1 Total Developed Land Area: N/A Building(s) and/or additions Total Sq. Ft. N/A

Submittal Request (Check all that apply):

- Alternative Parking CUP
- Boundary Line Agreement
- Cluster Subdivision
- Discretionary Easement
- Performance Zoning CUP
- Steep Slope CUP
- Amendment
- Change of Use
- Condominium Subdivision
- Marinas and Yacht Club CUP
- Site Plan (Commercial)
- Wetland/Wetland Buffer CUP
- Boundary Line Adjustment
- Cluster Development CUP
- Conventional Subdivision
- Minor Site Plan
- Site Plan (Multi-family)
- Other _____

Proposal Description: Proposal to build one single-family dwelling on a lot where currently there is already a duplex. The total number of units that will be on the lot is three. City water is located on the lot and a new septic system proposal has been attached that is within 75 feet of wetlands requiring a CUP for the Subsurface disposal system.

I hereby make application to the City of Laconia for the above-referenced property(ies) and the development as described. To the best of my knowledge the information provided herein is accurate and is in accordance with the Zoning Ordinance and land use regulations of the City, except where waivers are requested. The City of Laconia Planning Board, Minor Site Plan Committee, Technical Review Committee and/or city employees are authorized to enter the property(ies) for purposes of reviewing this proposal and for inspecting improvements as a result of an approval of this proposal. I understand that I am responsible for appearing, or having someone appear on my behalf, at any and all meetings before the Planning Board, Minor Site Plan Committee or Technical Review Committee.

Sign as appropriate (If agent or non-person please attach certification)

NOTE: Please attach an Applicant Contact Worksheet

PROPERTY OWNER 1

PROPERTY OWNER 2

AGENT / APPLICANT

Printed Name: JOHN J SHEEHY

IMELDA B SHEEHY

Signature: John J Sheehy

Imelda B Sheehy

Date: 11/12/2020

11/12/2020



DEPARTMENT OF PLANNING, ZONING & CODE
 45 BEACON STREET, EAST
 ☎ 603-527-1264
 📠 603-524-2164

CERTIFIED LIST OF ABUTTERS

RSA 672:3 "Abutter" means any person whose property is located in New Hampshire and adjoins or is directly across the street or stream from the land under consideration by the local land use board. For purposes of receiving testimony only, and not for purposes of notification, the term "abutter" shall include any person who is able to demonstrate that his land will be directly affected by the proposal under consideration. For purposes of receipt of notification by a municipality of a local land use board hearing, in the case of an abutting property being under a condominium or other collective form of ownership, the term abutter means the officers of the collective or association, as defined in RSA 356-B:3, XXIII. For purposes of receipt of notification by a municipality of a local land use board hearing, in the case of an abutting property being under a manufactured housing park form of ownership as defined in RSA 205-A:1, II, the term "abutter" includes the manufactured housing park owner and the tenants who own manufactured housing which adjoins or is directly across the street or stream from the land under consideration by the local land use board.

The following information must be completed by the applicant in order to begin the application process to the Planning Board or Zoning Board of Adjustment. Below, list the verified names and mailing addresses of the applicant, authorized agent(s), engineer, architect, land surveyor, soil scientist, consultant, abutter, holders of conservation easements or restrictions on adjacent lands, municipal/regional planning commissions (if a regional notice is required), associations, etc., not more than five (5) days prior to submission, per RSA 676:4,I(b). Abutters' names and mailing addresses must be verified against the records kept in the Laconia Assessor's Office. Attach additional copies of this form if necessary. Include an addressed #10 envelope and certified mail receipt for each person/professional listed below.

Map/Block/Lot	Name of Property Owner/Professional	Mailing Address of Owner/Professional
	See attached	

Name of Person Preparing List _____ Date Prepared _____
 Preparer's Signature N/A _____ Date _____

***Fee per Abutter \$10.00**



**Wetlands Conservation Overlay District
Conditional Use Requirements**

Documentation must be submitted to support that the activity or use (waiver requests should be submitted on the appropriate form):

1. Ensures the protection of wetland resources from activities that would adversely affect their functions and values [see 235-17B.(1)(a)-(h), (2)(a)-(e), and (3)]; [submittal of erosion and sedimentation control plan, list of fish/wildlife habitat affected, location of surface/ground water locations, listing of any representative or rare examples of wetland plants or animals, unique characteristics of the wetland/buffer, existing use of the site for recreational or educational purposes, and picture of the wetlands site] The proposed design will minimize soil erosion and located more than fifty feet from the wetland. There should not be any loss to any wildlife habitats. The state has already approved the subsurface system that is being proposed.

2. Minimizes the degradation to or loss of wetlands or wetlands buffer; an evaluation may be required using the New Hampshire Method, authored by the Audubon Society [The applicant should demonstrate that an evaluation is not warranted if a waiver is requested]; This is out of the fifty foot wetland buffer and within the 75 foot wetland buffer for subsurface disposal systems.

3. Minimizes the environmental impact to abutting or downstream property and/or hydrologically connected water and/or wetland resources [drainage analysis and watershed map should be included to show wetland located in the local watershed]; The leach field has been designed with the state requirements. The down gradient is 104.8 feet while the side gradient is 75 feet. Thought the leach field is still within 75 of the delineated wetlands.

4. Cannot be practically located elsewhere on the site to eliminate or reduce the impact to the wetland and/or its buffer area [applicant should demonstrate that the avoidance, minimization, mitigation method has been utilized in site design]; and The septic system can not be practically relocated due to the steep slopes that are present.



DEPARTMENT OF PLANNING, ZONING & CODE
45 BEACON STREET, EAST
☎ 603-527-1264
📠 603-524-2164

**Wetlands Conservation Overlay District
Conditional Use Requirements**

5. Is or is in the process of permitting for any other applicable state or federal permits [copies of the applications should be submitted with this application]. An approval is required from NH DES subsurface systems.

Robert Mora

From: Craig T. Bailey, PE, LLS <ctbailey@bailey-associates.com>
Sent: Tuesday, November 10, 2020 2:35 PM
To: Robert Mora
Cc: 'Bryan L. Bailey, LLS'
Subject: RE: 110 Hilliard Road
Attachments: 3308_SHEEHY_SEPTIC-SITE PLAN 111020.pdf

Hi Rob,

Thanks for giving us the heads up that Mr. Sheehy is ready to proceed with the Conditional Use permit application.

The soils in the vicinity of the proposed leach bed are consistent with "hydrologic Group B" soils, with a percolation rate of 10 minutes per inch, as we observed on site with test pits.

The SCS (now NRCS) soil survey has mapped the entire parcel as 443D soils, including the abutting parcels to the East.

443 is a Chichester sandy loam, well drained. Hydrologic group B, depth to water table greater than 80 inches. Although septic regulations require a falling head "percolation rate" in terms of minutes per inch, the soil survey classifies soil water transmissivity in terms of a constant head test to determine the K_{sat} , or the saturated transmissivity factor.

The K_{sat} for Chichester is listed as 0.6 -> 2.0 inches per hour.

2 inches per hour is equivalent to 2/60 inches per minute, or 0.03 inches per minute.

.03 inch/minute = 1 minute/0.03 inch and if we multiple both sides by 100, we calculate this soil as 100 minutes/inch (of course this calculation is based on the K_{sat} , which is tested much differently than a "perc rate."

The perc rate (falling head test) is 10 minutes per inch

The K_{sat} (constant head test) is 100 minutes per inch

In conclusion, this soil type would not trigger the 125 foot setback requirement which is speaking to "2 minutes per inch", with either test method, since the underlying soil is certainly not considered sand and gravel.

Regarding the 75-foot rule... I set the leach field in accordance with the State requirements of 50 foot setback.

In terms of downgradient, the field is greater than 100 feet from the delineated wetland.

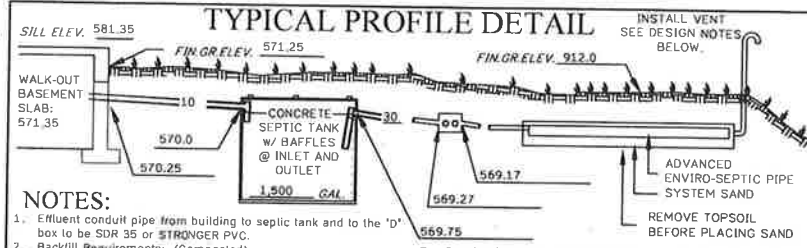
In terms of sidegradient, the field is 50 feet from the delineated wetland.

I think the consideration of sidegradient versus downgradient is valuable. The state utilizes a sliding scale of setbacks for Nitrates depending on the topography. "Straight down" the hill being downgradient. And "side slope across the slope" being sidegradient. This sets a precedence on the consideration of effluent plume movement, since water will always favor going with gravity, instead of against it.

I believe a very good case can be made that the Sheehy leachfield is 104 feet away from the wetlands in the downgradient dimension, and the overall plume will favor gravity down gradient. I think the Planning Board can safely issue the Conditional use permit since the spirit and intent of the ordinance is met.

I've attached an annotated version of the sheet 2, soils plan of the septic plan set to show my thoughts.

Thanks very much



NOTES:

- Effluent conduit pipe from building to septic tank and to the "D" box to be SDR 35 or STYROFOAM PVC.
- Backfill Requirements: (Compacted) OVER SEPTIC TANK 18"-24" Area of the bed: 568.20
- Material Specifications: Del R. Gilbert & Son Block Co. Inc septic tank.
- Septic tank inlet and outlet vented baffles shall be installed in strict accordance with NH DES Env-Wq 1010.07. Inlet Baffles shall penetrate at least 8 inches below liquid level, but in no case greater than the depth of the outlet baffle. Vented tees shall extend above the liquid line to not less than 1 inch from the interior of the top of the septic tank or cover.
- Outlet baffle shall be a vented tee that extends to a distance below the surface of the liquid equal to 40% of the liquid depth.

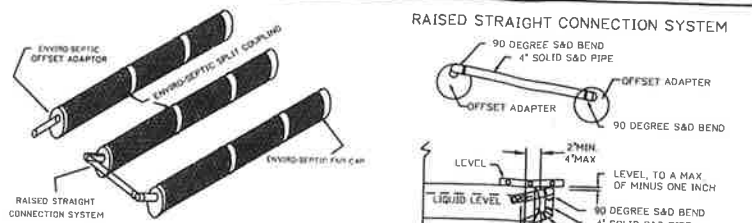
SYSTEM SAND REQUIREMENTS:

Provide a minimum of 6" of system sand around the circumference of the advanced enviro-septic pipe. Sand specification as shown at right. * SAND MUST BE WASHED UTILIZING ASTM C-117 to obtain #200 sieve requirements.

SIEVE	% PASSING LOWER	% PASSING UPPER
3/8"	100	100
#4	95	100
#10	80	100
#15	50	85
#30	25	60
#50	5	35
#100	0	10
#200 *	0	2

SAND FILL REQUIREMENTS:

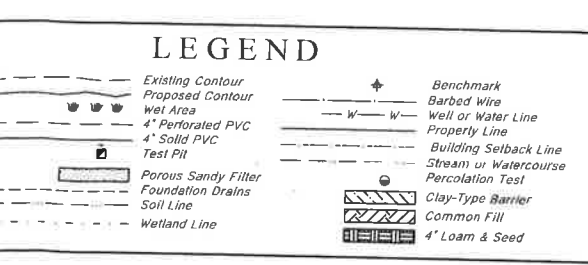
Medium to coarse textured sand, meeting ASTM C-33 spec. This material does not need to be washed.



ADVANCED ENVIRO-SEPTIC™
U.S. PATENT NOS. 6,461,078; 5,954,451; 6,290,429; OTHERS PENDING
ADVANCED ENVIRO-SEPTIC LINE ELEVATION TABLE
ADVANCED ENVIRO-SEPTIC PIPE LINE ELEVATIONS

SECTION	1	2	3	4	5	6	7	8	9	10
TOP OF LINE	569.50	569.50	569.50	569.50	569.50	569.50	N/A	N/A	N/A	N/A
BOTTOM OF LINE	568.50	568.50	568.50	568.50	568.50	568.50	N/A	N/A	N/A	N/A

- GENERAL NOTES** 6CA200091002
- SEE STATE OF NH APPROVAL FOR CONSTRUCTION OF DESIGN OR INSPECTION FOR ADDITIONAL CONDITIONS.
 - CONTRACTOR TO VERIFY ALL SITE CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
 - TURNING POINT LAND SURVEYORS & LAND PLANNERS, ASSUME NO RESPONSIBILITY FOR THE CONSTRUCTION OR OPERATION OF THIS SYSTEM UNLESS CONTRACTED TO INSPECT AND APPROVE ALL MATERIALS AND INSTALLATION PROCEDURES USED.
 - ALL SYSTEMS ARE TO BE INSPECTED AND APPROVED BY THE STATE OF NH OR LOCAL MUNICIPAL AUTHORITY BEFORE BACKFILLING.
 - THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS ON THIS SUBJECT.
 - SYSTEM IS TO BE RECONSTRUCTED IN PLACE UPON FAILURE UNLESS AN ALTERNATE SITE IS DESIGNATED ON THE PLAN. ALL COMMERCIAL SEPTIC SYSTEMS REQUIRE RESUBMITTAL AND REAPPROVAL PRIOR TO REPLACEMENT OF A FAILED SEPTIC SYSTEM.
 - THIS SEPTIC DESIGN PLAN IS BASED ON A LIMITED TOPOGRAPHIC SURVEY AND LIMITED SUBSURFACE SOIL INVESTIGATION. IF ANY DEVIATION FROM SPECIFIED SITE CONDITIONS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR/INSTALLER SHALL IMMEDIATELY NOTIFY TURNING POINT LAND SURVEYORS & LAND PLANNERS AND THE DESIGNER OF SUCH CONDITIONS.
 - ANY DEVIATIONS FROM THIS APPROVED SEPTIC DESIGN PLAN MAY REQUIRE REDESIGN AND REAPPROVAL FROM LOCAL AND/OR STATE OF NH REGULATORS.
 - ADVANCED ENVIRO-SEPTIC WASTE WATER TREATMENT SYSTEMS ARE APPROVED BY NHDES INNOVATIVE TECHNOLOGY APPROVAL COMMITTEE BY LETTER DATED 12 NOVEMBER, 2017, IFA APPROVAL #2018-07-01. THE SYSTEM, INCLUDING ANY PRELIMINARY MAZE OR PRELIMINARY ENVIRO-SEPTIC SUBSYSTEMS ATTACHED HERETO MUST BE INSTALLED IN STRICT ACCORDANCE WITH THE PRELIMINARY ENVIRONMENTAL, INC. TECHNICAL BULLETIN DATED 03/28/2008 OR LATER, & THE MOST RECENT DESIGN AND INSTALLATION MANUAL.
 - THIS PLAN IS NOT A BOUNDARY SURVEY PLAN.



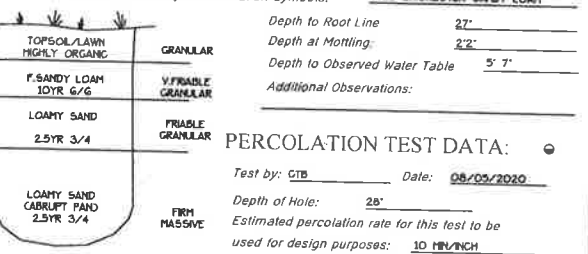
State Subdivision Approval Number: _____ Dated: _____
Elevation Reference Assumed: _____
Elevation Benchmark Set: _____ (See Plan)

TEST PIT DATA:

Test Pit By: CTB
Dated: 06/05/2020
Elevation: 569.61

Depth to Lodge: NONE OBS.
Estimated Seasonal High Water Table: 2'2"
USDA Soil Survey Classification Symbols: 4430 CHESTER SANDY LOAM

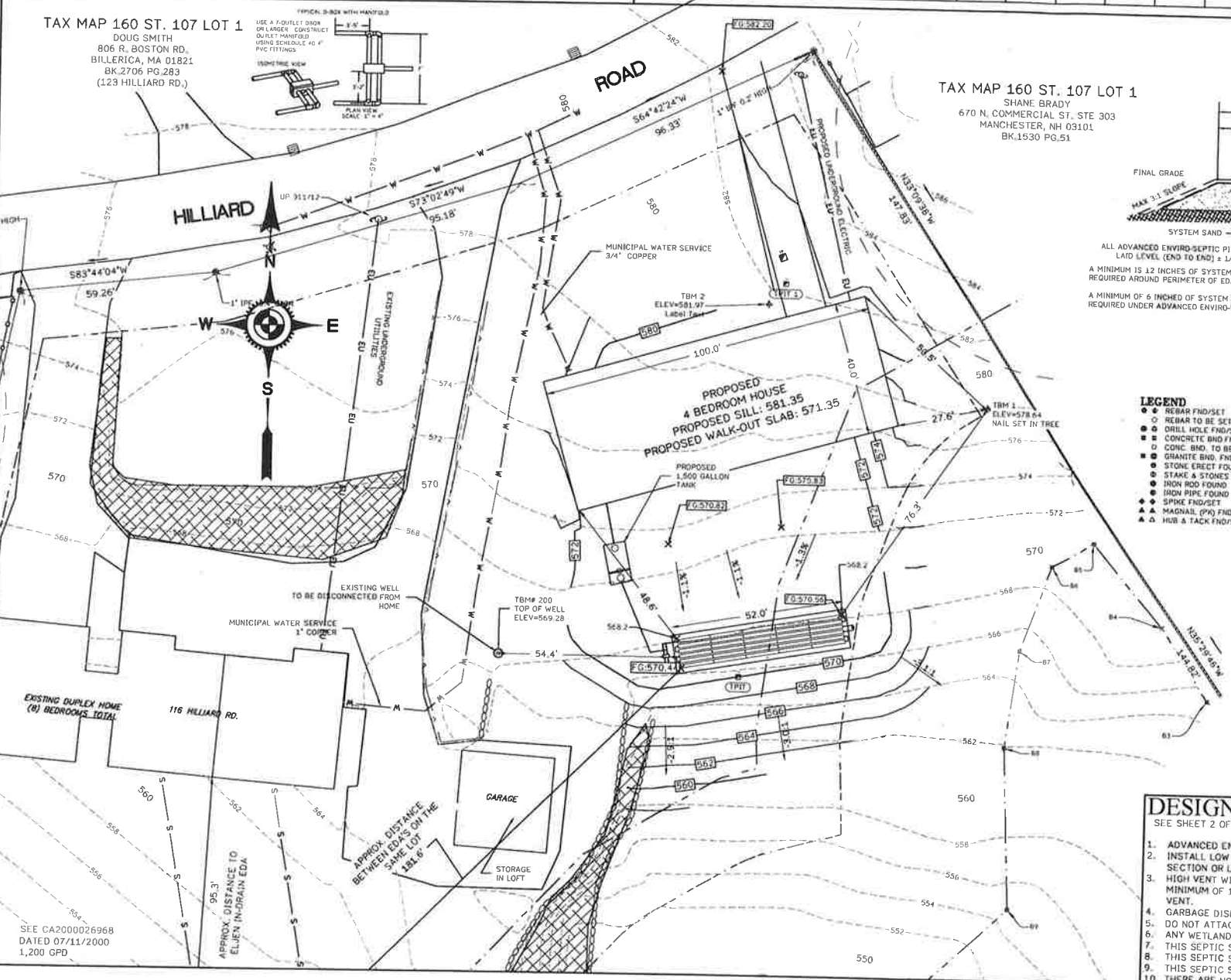
Depth to Root Line: 27"
Depth at Mottling: 2'2"
Depth to Observed Water Table: 5'7"
Additional Observations:



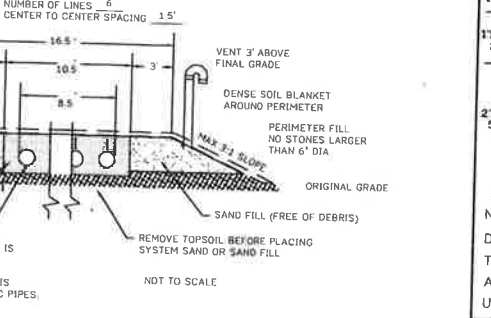
ADVANCED ENVIRO-SEPTIC® DESIGN NOTES

DESIGN INTENT
The bottom of the highest Adv. Enviro Septic® Pipe shall be constructed at elevation 568.50
The bottom of the Advanced Enviro Septic® Pipe is approximately 0.3 feet above existing grade.

NUMBER OF BEDROOMS: 4
DAILY FLOW VOLUME: 600 GPD
TANK VOLUME PROVIDED: 1,500 GAL.
AMOUNT OF ENVIRO-SEPTIC REQUIRED 280 FT.
USE: 300 LINEAR FT. OF ADVANCED ENVIRO-SEPTIC



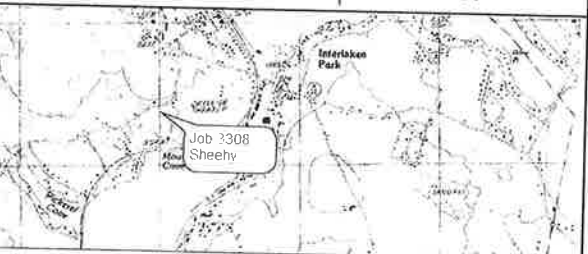
SECTIONAL VIEW
SYSTEMS 10% SLOPES OR LESS
NUMBER OF LINES: 6
CENTER TO CENTER SPACING: 15"



- LEGEND**
- REBAR FND/SET
 - DRILL HOLE FND/SET
 - CONCRETE BND FND/SET
 - GRANITE BND FND/SET
 - STONE ERECT FOUND
 - STAKE & STONES FND
 - IRON ROD FOUND
 - PIPE FOUND
 - SPIKE FND/SET
 - MAGNAIL (PK) FND/SET
 - HUB & TACK FND/SET
 - TEMPORARY BENCHMARK
 - PERMANENT BENCHMARK
 - WETLAND FLAG
 - TREE STUMP FOUND
 - PERCOLATION TEST
 - TEST PIT
 - DECIDUOUS TREE
 - CONIFEROUS TREE
 - SOIL TYPE
 - EDGE OF GRAVEL DRIVE
 - SEWER MAN HOLE
 - DRAIN MAN HOLE
 - WELL
 - HYDRANT
 - WATER SHUTOFF
 - GATE VALVE
 - CATCH BASIN
 - UTILITY POLE
 - LIGHT POLE
 - GUY ANCHOR
 - BUILDING SETBACK LINE
 - STONEWALL
 - TREELINE
 - WETLAND
 - EXISTING WATER
 - EXISTING WATER LINE
 - EXISTING STORM DRAIN
 - LIGHT POLE
 - BUILDING SETBACK LINE

DESIGN NOTES:
SEE SHEET 2 OF 2 FOR SOIL BASED LOT LOADING, AND LEGAL OWNERSHIP.

- ADVANCED ENVIRO-SEPTIC® SYSTEMS MUST BE VENTED.
- INSTALL LOW VENT THROUGH AN OFFSET ADAPTER INSTALLED AT THE END OF A SECTION OR LINE.
- HIGH VENT WILL BE THE VENT STACK AT THE HOUSE. VERIFY THERE IS A MINIMUM OF 10 FOOT ELEVATION DIFFERENCE BETWEEN HIGH VENT AND LOW VENT.
- GARBAGE DISPOSALS SHALL NOT BE USED WITH THIS SYSTEM.
- DO NOT ATTACH ANY WATER CONDITIONING SYSTEM TO THIS SYSTEM.
- ANY WETLANDS SHOWN WERE IDENTIFIED IN ACCORDANCE WITH Env-Wq 1014.06.
- THIS SEPTIC SYSTEM IS GREATER THAN 75' TO VERY POORLY DRAINED SOILS.
- THIS SEPTIC SYSTEM IS GREATER THAN 75' TO SURFACE WATER.
- THIS SEPTIC SYSTEM IS GREATER THAN 60' TO POORLY DRAINED SOILS.
- THERE ARE NO KNOWN BURIAL SITES OR CEMETERIES WITHIN 100' OF THE SYSTEM.



ADVANCED ENVIRO-SEPTIC INDIVIDUAL SEWERAGE SYSTEM DESIGN PLAN

TAX LOT NO. MAP 161 ST. 107 LOT 3 TOWN OF LACONIA
FOR: NAME: ANNASCALL REALTY TR. PHONE: 781-391-7720
ADDRESS: C/O JOHN SHEEHY 112 DAMON RD. MEDFORD, MA 02155

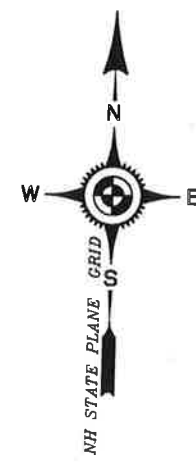
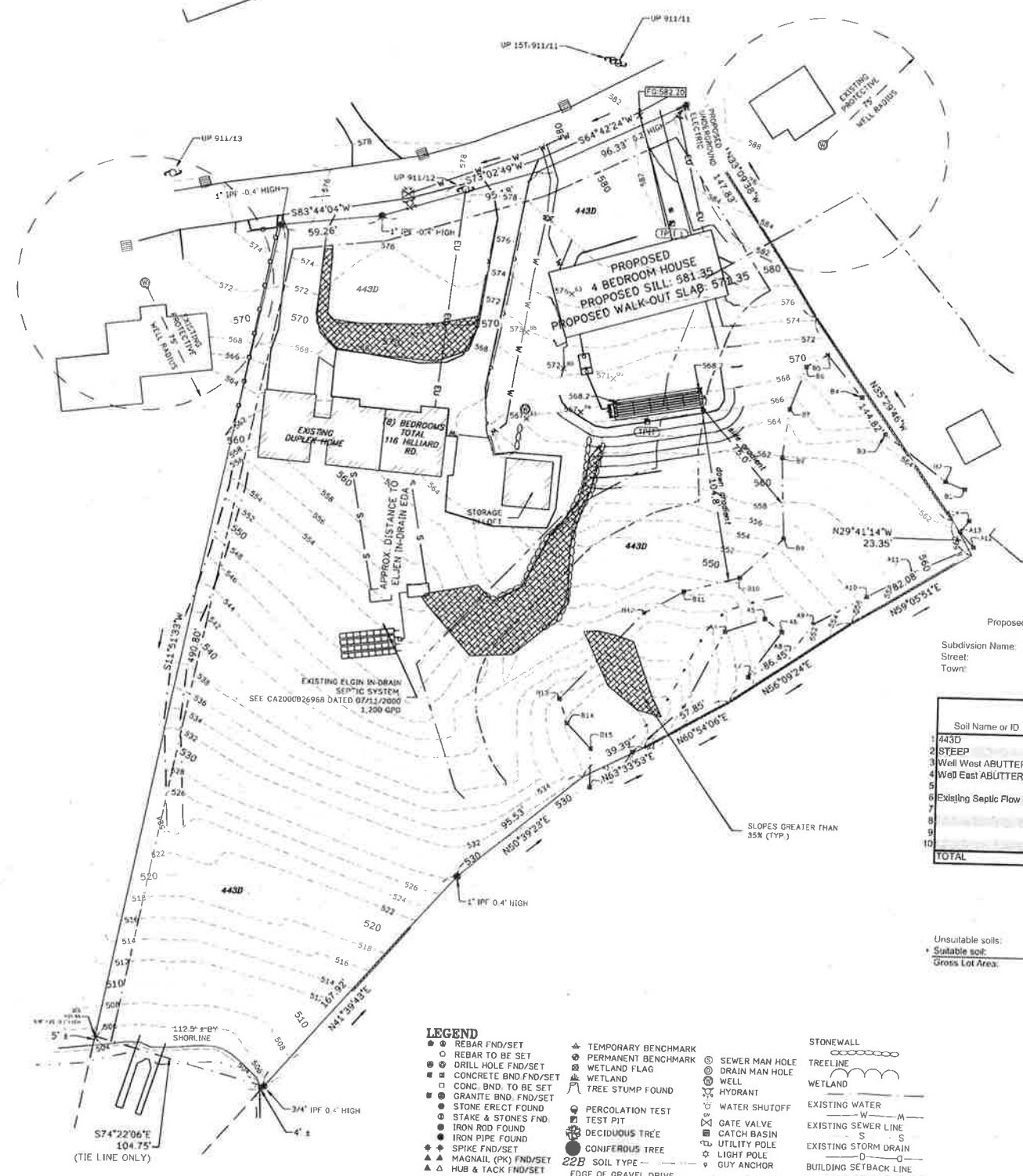
BRYAN L. BAILEY ASSOCIATES, INC.
TURNING POINT
LAND SURVEYORS & LAND PLANNERS
217 Cotton Hill Road
Gilford, NH 03249
Ph 528-3734

DATE	REVISION	INITIALS
09/09/2020	ADDED SECOND SHEET AS PER NHDES	CTB
10/14/2020	MISC. NOTES & DETAILS PER LACONIA TRC MEETING 10/14/20	BLB

DATE 08/14/2020 JOB No. 3308
DRAWN BY: CTB N.H. DESIGNER PERMIT # 1482

SCALE: 1" = 20'





NH DES Env-Ws 1005.03
Minimum Lot Size

Proposed Lot Number: 161-107-3
Subdivision Name: Sheehy Lot
Street: Hilliard Rd.
Town: Laconia, NH

Soil Name or ID	SOIL AREA	DES Soil Group & SLOPE	Suitable Soil Area	Minimum Lot Size	% of Suitable Lot Area	Available Loading (GPD)
1 443D	148,382	20	148,382	45,000	100.00%	4367
2 STEEP	6,564	Sleep				
3 Well West ABUTTER	210	Well				
4 Well East ABUTTER	1,275	Well				
5						
6 Existing Septic Flow						-1200
7						
8						
9						
10						
TOTAL			148,382			3,167

Unsuitable soils: 7,649 s.f.
Suitable soil: 148,382 s.f.
Gross Lot Area: 156,231 s.f. 3.59

- LEGEND**
- REBAR FND/SET
 - REBAR TO BE SET
 - DRILL HOLE FND/SET
 - CONCRETE BND FND/SET
 - CONC. BND. TO BE SET
 - GRANITE BND. FND/SET
 - STONE ERECT FOUND
 - STAKE & STONES FND.
 - IRON ROD FOUND
 - IRON PIPE FOUND
 - SPIKE FND/SET
 - ▲ MAGNAIL (PK) FND/SET
 - ▲ HUB & TACK FND/SET
 - ◆ TEMPORARY BENCHMARK
 - ◆ PERMANENT BENCHMARK
 - ◆ WETLAND FLAG
 - ◆ WETLAND
 - ◆ TREE STUMP FOUND
 - PERCOLATION TEST
 - TEST PIT
 - DECIDUOUS TREE
 - CONIFEROUS TREE
 - SOIL TYPE
 - EDGE OF GRAVEL DRIVE
 - SEWER MAN HOLE
 - DRAIN MAN HOLE
 - WELL
 - HYDRANT
 - WATER SHUTOFF
 - GATE VALVE
 - CATCH BASIN
 - UTILITY POLE
 - LIGHT POLE
 - GUY ANCHOR
 - STONEWALL
 - TREELINE
 - WETLAND
 - EXISTING WATER
 - EXISTING SEWER LINE
 - EXISTING STORM DRAIN
 - BUILDING SETBACK LINE

LAKE WINNIPESAUKEE
(CHATTLE COVE)

GENERAL NOTES

- OWNER OF RECORD:
ANNASCAUL REALTY TR,
C/O JOHN SHEEHY
112 DAMON RD,
MEDFORD, MA 02155
- THE PURPOSE OF THIS PLAN IS TO SHOW THE ENTIRE LOT, FOR USE IN LOT LOADING CALCULATIONS, IN CONNECTION WITH THE NHDES SUBSURFACE CONSTRUCTION APPLICATION W/N 202004756.
- SEE SHEET 1 OF 2 FOR THE COMPLETE SEPTIC DESIGN.
- THE PARCEL WILL BE MAINTAINED UNDER SINGLE OWNERSHIP, WITH MULTIPLE RESIDENCES ON THE SAME LOT. IF AT ANY TIME SEPERATE OWNERSHIP, OR CONVERSION TO CONDOMINIUM IS CONSIDERED, A COMPLETE STATE OF NEW HAMPSHIRE SUBDIVISION APPROVAL WILL BE REQUIRED AS PER Env-Wq 1005.

SOIL NOTES

THE ENTIRE LOT IS COMPRISED OF 443D "CHICHESTER" AS SHOWN IN THE USDA/NRCS WEB SOIL SURVEY, OF CURRENT DATE.

CHICHESTER IS A WELL DRAINED SOIL WITH DEPTHS GREATER THAN 80 INCHES TO BEDROCK, THEREFORE IT SHALL BE ASSIGNED THE SOIL GROUP "2."

DATE	REVISION	INITIALS
10/14/2020	MISC. NOTES & DETAILS PER LACONIA TRC MEETING 10/14/20	BLB
11/10/20	GRADIENTS ANNOTATED TO WETLAND	CTB
DATE 09/09/2020	JOB No. 3308	
DRAWN BY: CTB		



TAX MAP 161 ST. 107 LOT 3
TOPOGRAPHIC AND SOILS PLAN
LAND OF ANNASCAUL REALTY TR.
LAND LOCATED AT 116 & 110 HILLIARD ROAD, LACONIA NH
PROPERTY OWNER: ANNASCAUL REALTY TR. DEED: BK. 2768 PG. 181
C/O JOHN SHEEHY
112 DAMON RD.
MEDFORD, MA 02155
DATE OF PLAN: November 2020

BRYAN L. BAILEY ASSOCIATES, INC.
TURNING POINT
LAND SURVEYORS & LAND PLANNERS
217 Cotton Hill Road
Gifford, NH 03249
Ph 603-528-3734
www.bailey-associates.com



PER THE REQUIREMENTS OF Env-Wq 1003.01
AS REQUIRED BY RSA 310-A:67,II & RSA 310-A:54,IV

G:\3308_SHEEHY\dwg\3308_SHEEHY_SEPTIC2020.dwg, 11/10/2020 14:27:25
© BRYAN L. BAILEY ASSOCIATES, INC.