NOTICE OF PUBLIC MEETING
SUDBURY CONSERVATION COMMISSION
Monday, October 30, 2023 at 7:00 PM
Virtual Meeting

The Sudbury Conservation Commission will hold a public meeting to review the Request for Determination of Applicability filing under the Wetlands Protection Act and the Sudbury Wetlands Administration Bylaw to within the 100-foot Buffer Zone at 11 Hunt Road, in Sudbury, MA. Doug Schow, Applicant. The meeting will be held on Monday, October 30, 2023 at 7:00 pm, via Zoom.

Copies of the application may be reviewed on the Conservation Department web page at:

https://sudbury.ma.us/conservationcommission/meeting/conservation-commission-meeting-monday-october-30-2023/

Please contact the Conservation Office with any questions at 978-440-5470.

SUDBURY CONSERVATION COMMISSION
10/17/2023

CONNORSTONE ENGINEERING, INC.
10 SOUTHWEST CUTOFF, SUITE #1
NORTHBOROUGH, MASSACHUSETTS 01532
T: (508) 393-9727
121 BOSTON POST ROAD
SUDBURY, MASSACHUSETTS 01776
T: (978) 443-9566

Conservation Commission
Department of Public Works Building
275 Old Lancaster Road
Sudbury, MA 01776

October 2, 2023

Subject: **Request for Determination of Applicability – 11 Hunt Road**
Proposed Septic System Repair

Dear Members of the Commission:

On behalf of the applicant (Doug Schow), please find the enclosed WPA Form 1 Request for Determination of Applicability for the proposed septic system repair at 11 Hunt Road, including:

1. Copies of the RDA application package and signed WPA Form 1
2. Wetland Report by Goddard Consulting;
3. Copies of the plans "Proposed Sewage Disposal System" for 11 Hunt Road, Sudbury, MA, prepared by Connorstone Engineering, Inc. dated 09/21/2023.

Existing Conditions: The site is located at 11 Hunt Road, and consists of a 0.9-acre parcel currently developed with a single-family dwelling. Areas around the house include lawn/landscaped areas with a paved driveway off of Hunt Road leading to the rear / side of the house. There are wooded areas with Bordering Vegetated Wetlands (BVW) associated with the intermittent stream located along the rear property line.

The home is serviced by an on-site septic system located to the front of the house near Hunt Road. This system has been evaluated and determined to be in failure requiring replacement.

Wetland Resource Areas: Regulated wetland resource areas were delineated along the rear property line consisting of Bordering Vegetated Wetlands (BVW) and an intermittent stream that runs in a northeasterly direction leading to a stone culvert. The delineation was performed by Goddard Consulting in September of 2023, and a copy of the 'Wetland Border Report' is attached for reference.

Proposed work: The proposed project includes the replacement of the existing failed septic system. The existing system is in failure mostly likely due to the overall age of the system and must be replaced per the Board of Health and Title 5 regulations. The proposed design would locate the system in the same general location and the existing leach field, but at a higher elevation to provide greater separation to groundwater. The leach field and septic system components would be maintained outside the 100-foot buffer zone. The work within the buffer zone would include the excavation and grading adjacent to the leach field, and the poly barrier (to reduce grading). The work area is separated from the wetland by the existing driveway and the overall limit of work would be maintained 65 feet or greater from the edge of wetlands. Erosion controls including straw wattles and silt fence has been proposed along the limit of grading and upgradient edge of existing driveway.

Should you have any questions or require any additional information please contact this office at (508) 393-9727.

Sincerely,
Connorstone Engineering, Inc.

Vito Colonna, P.E.

cc. MassDEP Central Regional Office

Massachusetts Department of Environmental Protection
Bureau of Water Resources - Wetlands

WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Sudbury
Municipality

A. General Information

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

1. Applicant:

Doug	Schow	
First Name	Last Name	
11 Hunt Road		
Address		
Sudbury	Ma	01776
City/Town	State	Zip Code
(978)460-0339	dougschow100@gmail.com	
Phone Number	Email Address	

2. Property Owner (if different from Applicant):

Daniel & Catherine	Hession	
First Name	Last Name	
11 Hunt Road		
Address		
Sudbury	Ma	01776
City/Town	State	Zip Code
Phone Number	Email Address (if known)	

3. Representative (if any)

Vito	Colonna	
First Name	Last Name	
Connorstone Engineering Inc.		
Company Name		
10 Southwest Cutoff, Suite #7		
Address		
Northborough	Ma	01532
City/Town	State	Zip Code
(508)393-9727	vc@csei.net	
Phone Number	Email Address (if known)	

B. Project Description

1. a. Project Location (use maps and plans to identify the location of the area subject to this request):

11 Hunt Road	Sudbury
Street Address	City/Town
42.40097	-71.40905
Latitude (Decimal Degrees Format with 5 digits after decimal e.g. XX.XXXXX)	Longitude (Decimal Degrees Format with 5 digits after decimal e.g. -XX.XXXXX)
Map E 09	Parcel 128
Assessors' Map Number	Assessors' Lot/Parcel Number

How to find Latitude and Longitude

and how to convert to decimal degrees

b. Area Description (use additional paper, if necessary):

0.9 acre single family house lot with Bordering Vegetated Wetland and Intermittent Stream to the rear of the site.

c. Plan and/or Map Reference(s): (use additional paper if necessary)

"Proposed Sewage Disposal System" of 11 Hunt Road in Sudbury, Ma	09/21/23
Title	Date
Title	Date

B. Project Description (cont.)

2. a. Activity/Work Description (use additional paper and/or provide plan(s) of Activity, if necessary):

The proposed project includes the replacement of the existing failed septic system. The existing system is in failure mostly likely due to the overall age of the system and must be replaced per the Board of Health and Title 5 regulations. The proposed design would locate the system in the same general location and the existing leach field, but at a higher elevation to provide greater separation to groundwater. The leach field and septic system components would be maintained outside the 100-foot buffer zone. The work within the buffer zone would include the excavation and grading adjacent to the leach field, and the poly barrier (to reduce grading). The work area is separated from the wetland by the existing driveway and the overall limit of work would be maintained 65 feet or greater from the edge of wetlands. Erosion controls including straw wattles and silt fence has been proposed along the limit of grading and upgradient edge of existing driveway.

b. Identify provisions of the Wetlands Protection Act or regulations which may exempt the applicant from having to file a Notice of Intent for all or part of the described work (use additional paper, if necessary).

3. a. If this application is a Request for Determination of Scope of Alternatives for work in the Riverfront Area, indicate the one classification below that best describes the project.

- ☐ Single family house on a lot recorded on or before 8/1/96
- ☐ Single family house on a lot recorded after 8/1/96
- ☐ Expansion of an existing structure on a lot recorded after 8/1/96
- ☐ Project, other than a single-family house or public project, where the applicant owned the lot before 8/7/96
- ☐ New agriculture or aquaculture project
- ☐ Public project where funds were appropriated prior to 8/7/96
- ☐ Project on a lot shown on an approved, definitive subdivision plan where there is a recorded deed restriction limiting total alteration of the Riverfront Area for the entire subdivision
- ☐ Residential subdivision; institutional, industrial, or commercial project
- ☐ Municipal project
- ☐ District, county, state, or federal government project
- ☐ Project required to evaluate off-site alternatives in more than one municipality in an Environmental Impact Report under MEPA or in an alternatives analysis pursuant to an application for a 404 permit from the U.S. Army Corps of Engineers or 401 Water Quality Certification from the Department of Environmental Protection.

b. Provide evidence (e.g., record of date subdivision lot was recorded) supporting the classification above (use additional paper and/or attach appropriate documents, if necessary.)

C. Determinations

1. I request the Sudbury Conservation Commission make the following determination(s). Check any that apply:

☐ a. whether the **area** depicted on plan(s) and/or map(s) referenced above is an area subject to jurisdiction of the Wetlands Protection Act.

☐ b. whether the **boundaries** of resource area(s) depicted on plan(s) and/or map(s) referenced above are accurately delineated.

■ c. whether the **Activities** depicted on plan(s) referenced above is subject to the Wetlands Protection Act and its regulations.

■ d. whether the area and/or Activities depicted on plan(s) referenced above is subject to the jurisdiction of any **municipal wetlands' ordinance** or bylaw of:

Sudbury
Name of Municipality

☐ e. whether the following **scope of alternatives** is adequate for Activities in the Riverfront Area as depicted on referenced plan(s).

D. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Request for Determination of Applicability and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge.

I further certify that the property owner, if different from the applicant, and the appropriate DEP Regional Office were sent a complete copy of this Request (including all appropriate documentation) simultaneously with the submittal of this Request to the Conservation Commission.

Failure by the applicant to send copies in a timely manner may result in dismissal of the Request for Determination of Applicability.

Signatures:

I also understand that notification of this Request will be placed in a local newspaper at my expense in accordance with Section 10.05(3)(b)(1) of the Wetlands Protection Act regulations.

Signature of Applicant — Date: 10-11-23

Signature of Representative (if any) — Date: 10/11/23

Wetland Border Report

Site Locus: 11 Hunt Road, Sudbury MA
Prepared for: Connorstone Engineering, Inc.
Prepared by: Goddard Consulting LLC, 291 Main St, Suite 8, Northborough MA 01532
Date: 9/18/2023

INTRODUCTION

On September 12, 2023, wetland resources were delineated for Connorstone Engineering, Inc. on land located on or near 11 Hunt Road, Sudbury MA (refer to enclosed locus maps). The wetland border was flagged using the criteria in the most recent edition of MA Wetland Protection Act (WPA) and Regulations 310 CMR 10.00 et al. Hydric soil indicators, vegetation changes, hydrological indicators, and topography were all considered for delineation purposes.

The titles of attached documents are as follows:

- DEP Bordering Vegetated Wetland Determination Form
- Orthophoto of Locus Site, Goddard Consulting LLC, 8/29/2023
- Orthophoto with NRCS Soil Survey, Goddard Consulting LLC, 8/29/2023
- Orthophoto with DEP Mapped Wetlands, Goddard Consulting LLC, 8/29/2023
- USGS of Locus Site, Goddard Consulting LLC, 8/29/2023

SUMMARY OF FINDINGS

The boundary of the Bordering Vegetated Wetland (BVW) partially on and off-site was delineated with flag series GCA1-GCA14. The sampling point for the BVW determination took place near flag GCA5. Vegetation upgradient of the BVW consists of red maple, white pine, glossy buckthorn, pachysandra, and multiflora rose. Vegetation downgradient of the BVW consists of red maple, glossy buckthorn, winterberry, cinnamon fern, and royal fern.

Soils identified on the property include sandy loams. In the wetland soil sample, fine sandy loam (FSL) with matrix color 10YR2/1 was found from 0-16", and FSL (10YR5/1) was found from 16-24". In the upland soil sample, FSL (10YR2/2) was found from 0-2", FSL (10YR3/4) was found from 2-8", and FSL (10YR5/6) was found from 8-24". More detailed information about soils is included in the attached NRCS Soil Map and the DEP Bordering Vegetated Wetland Determination Forms.

Additionally, the bank of a stream internal to the BVW system was flagged with series GCS1-20. This stream is identified on the USGS map of the area as being intermittent.

According to the MassGIS data layers for the Natural Heritage & Endangered Species Program (NHESP), the locus site is not located within Estimated and/or Priority Habitat of Rare Wildlife or an Area of Critical Environmental Concern (ACEC). The site is not located in an Outstanding Resource Waters Area (ORW). The site does not fall within a jurisdictional FEMA Flood Zone. There are no mapped certified or potential vernal pools on or abutting the site.

The MA Wetlands Protection Act and the Town of Sudbury takes jurisdiction over Bordering Vegetated Wetlands (BVW). The BVW partially on and off-site has a jurisdictional 100-foot Buffer Zone that casts onto the locus site.

Any work within these resource areas including the 100-foot Buffer Zones requires a Request for Determination (RDA) or Notice of Intent (NOI) to be filed with the Sudbury Conservation Commission.

DESCRIPTION OF REGULATED INLAND RESOURCE AREA

The table below provides the regulatory jurisdiction, flag numbers/colors, and wetland types and locations for the resource areas delineated.

Resource Area	Regulatory Jurisdiction	Flag Numbers and Color	Wetland Types and Locations
Bordering Vegetated Wetland (BVW)	BVW & 100-foot Buffer Zone	GCA1-GCA14 (Blue flags)	The boundary of BVW located in the east of the locus site.
Intermittent Stream	Intermittent Stream (Land Under Water)	GCS1-GCS20 (Pink flags)	The bank of the stream internal to the flagged BVW.

SITE PHOTOS

Photo 1. View of wetland and stream at rear of the locus site.

Photo 2. Upland soil sample pulled upgradient of flag GCA5.

Photo 3. Wetland soil sample pulled downgradient of flag GCA5.

Sincerely,
Goddard Consulting, LLC

Chris Frattaroli
Wetland Scientist

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site:	11 Hunt Road	City/Town: Sudbury	Sampling Date: 9/12/23
Applicant/Owner:	Connorstone Engineering, Inc.	Sampling Point or Zone:	GCAS
Investigator(s):	Chris Frattaroli	Latitude/Longitude:	42.40112846043393, -71.40888167768091
Soil Map Unit Name:	Freetown Muck, Hinckley Loamy Sand	NWI or DEP Classification:	Wooded Swamp Deciduous

UPGRADIENT

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? (If yes, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc

Wetland vegetation criterion met?	Yes _____	No X	Is the Sampled Area within a Wetland?	Yes _____	No X
Hydric Soils criterion met?	Yes _____	No X			
Wetlands hydrology present?	Yes _____	No X			

Remarks, Photo Details, Flagging, etc.:

HYDROLOGY

Field Observations:			
Surface Water Present?	Yes	No X	Depth (in)
Water Table Present?	Yes	No X	Depth (in)
Saturation Present (including capillary fringe)?	Yes	No X	Depth (in)

Wetland Hydrology Indicators

Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
___ Water-stained leaves	___ Hydrological records	___ Direct observation of inundation
___ Evidence of aquatic fauna	___ Free water in a soil test hole	___ Drainage patterns
___ Iron deposits	___ Saturated soil	___ Drift lines
___ Algal mats or crusts	___ Water marks	___ Scoured areas
___ Oxidized rhizospheres/pore linings	___ Moss trim lines	___ Sediment deposits
___ Thin muck surfaces	___ Presence of reduced iron	___ Surface soil cracks
___ Plants with air-filled tissue (aerenchyma)	___ Woody plants with adventitious roots	___ Sparsely vegetated concave surface
___ Plants with polymorphic leaves	___ Trees with shallow root systems	___ Microtopographic relief
___ Plants with floating leaves	___ Woody plants with enlarged lenticels	___ Geographic position (depression, toe of slope, fringing lowland)
___ Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

Sampling Point GCA5

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30'

	Common Name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)	% Dominant
1	Red maple	Acer rubrum	FAC	63.0%	X	X	85.7%
2	White pine	Pinus strobus	FACU	10.5%			14.3%
3							
4							
5							
6							
7							
8							
9							

73.5% =Total Cover

Shrub/Sapling Stratum Plot size 15'

	Common Name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)	% Dominant
1	Glossy buckthorn	Frangula alnus	FAC	10.5%	X	X	50.0%
2	Multiflora rose	Rosa multiflora	FACU	10.5%	X		50.0%
3							
4							
5							
6							
7							
8							
9							

21.0% =Total Cover

Herb Stratum Plot size 5'

	Common Name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)	% Dominant
1	Pachysandra	Pachysandra sp.	FACU	63.0%	X		73.7%
2	Oriental bittersweet	Celastrus orbiculatus	FACU	10.5%			12.3%
3	New York fern	Parathelypteris noveboracensis	FAC	3.0%		X	3.5%
4	Common cinquefoil	Potentilla simplex	FACU	3.0%			3.5%
5	Common dewberry	Rubus flagellaris	FACU	3.0%			3.5%
6	Eastern poison ivy	Toxicodendron radicans	FAC	3.0%		X	3.5%
7							
8							
9							
10							
11							
12							

85.5% =Total Cover

VEGETATION – continued.

Woody Vine Stratum	Plot size 30'						
	Common Name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)	% Dominant
1							
2							
3							
4							
				0.0%	=Total Cover		

Rapid Test:	Do all dominant species have an indicator status of OBL or FACW?			Yes		No	X
Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants		Do wetland indicator plants make up ≥ 50% of dominant plant species?			
	4	2		Yes X		No	
Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result			
	OBL species	0%	x1	=	0%		
	FACW species	0%	x2	=	0%		
	FAC species	80%	x3	=	239%		
	FACU species	101%	x4	=	402%		
	UPL species	0%	x5	=	0%		
	Column Totals (A)	180%		(B)	641%		
	Prevalence Index	B/A=	3.56	Is the Prevalence Index ≤ 3.0?			
				Yes	No X		
Wetland vegetation criterion met?	Yes	No X					

Definitions of Vegetation Strata

Tree	Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height
Shrub/Sapling	Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall
Herb	All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall
Woody vines	All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.00%
6-15 %	10.50%
15-25 %	20.50%
26-50 %	38.00%
51-75 %	63.00%
76-95 %	85.50%
96-100 %	98.00%

Sampling Point GCA5

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Location[2]	Texture	Remarks
0-2	10YR2/2	100					FSL	
2-8	10YR3/4	100					FSL	
8-24	10YR5/6	100					FSL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)

___ Histosol (A1)	___ Sandy Redox (S5)	___ 2 cm Muck (A10)
___ Histic Epipedon (A2)	___ Stripped Matrix (S6)	___ 5 cm Mucky Peat or Peat (S3)
___ Black Histic (A3)	___ Polyvalue Below Surface (S8)	___ Dark Surface (S7)
___ Hydrogen Sulfide (A4)	___ Thin Dark Surface (S9)	___ Polyvalue Below Surface (S8)
___ Stratified Layers (A5)	___ Loamy Mucky Mineral (F1)	___ Thin Dark Surface (S9)
___ Depleted Below Dark Surface (A11)	___ Loamy Gleyed Matrix (F2)	___ Iron-Manganese Masses (F12)
___ Thick Dark Surface (A12)	___ Depleted Matrix (F3)	___ Mesic Spodic (A17)
___ Sandy Mucky Mineral (S1)	___ Redox Dark Surface (F7)	___ Red Parent Material (F21)
___ Sandy Gleyed Matrix (S4)	___ Depleted Dark Surface (F8)	___ Very Shallow Dark Surface (TF12)
___ Dark Surface (S7)		___ Other (Include Explanation in Remarks)

Restrictive Layer (if observed) Type: Depth (inches):

Remarks

Hydric Soils criterion met? Yes No X

DOWNGRADIENT

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ___X___ No _____ (if no, explain in Remarks)
Are Vegetation _____ , Soil _____ , or Hydrology _____ significantly disturbed? (if yes, explain in Remarks)
Are Vegetation _____ , Soil _____ , or Hydrology _____ naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc

Wetland vegetation criterion met?	Yes X	No	Is the Sampled Area within a Wetland?	Yes X	No
Hydric Soils criterion met?	Yes X	No			
Wetlands hydrology present?	Yes X	No			

Remarks, Photo Details, Flagging, etc.:

HYDROLOGY

Field Observations:				
Surface Water Present?	Yes X	No	Depth (in)	0
Water Table Present?	Yes X	No	Depth (in)	7
Saturation Present (including capillary fringe)?	Yes X	No	Depth (in)	4

Wetland Hydrology Indicators

Reliable Indicators of Wetlands	Indicators that can be Reliable with	Indicators of the Influence of Water
X Water-stained leaves	Hydrological records	X Direct observation of inundation
Evidence of aquatic fauna	X Free water in a soil test hole	Drainage patterns
Iron deposits	X Saturated soil	Drift lines
Algal mats or crusts	Water marks	Scoured areas
Oxidized rhizospheres/pore linings	Moss trim lines	Sediment deposits
Thin muck surfaces	Presence of reduced iron	Surface soil cracks
Plants with air-filled tissue (aerenchyma)	Woody plants with adventitious roots	Sparsely vegetated concave surface
Plants with polymorphic leaves	X Trees with shallow root systems	Microtopographic relief
Plants with floating leaves	Woody plants with enlarged lenticels	X Geographic position (depression, toe of slope, fringing lowland)
Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

Sampling Point GCAS

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30'

	Common Name	Scientific name	Indicator	Absolute %	Dominant?	Wetland Indictor?	% Dominant
1	Red maple	Acer rubrum	FAC	38.0%	X	X	61.8%
2	White pine	Pinus strobus	FACU	20.5%	X		33.3%
3	Black cherry	Prunus serotina	FACU	3.0%			4.9%
4							
5							
6							
7							
8							
9							

61.5% =Total Cover

Shrub/Sapling Stratum Plot size 15'

	Common Name	Scientific name	Indicator	Absolute %	Dominant?	Wetland Indictor?	% Dominant
1	Glossy buckthorn	Frangula alnus	FAC	20.5%	X	X	66.1%
2	Winterberry	Ilex verticillata	FACW	10.5%	X	X	33.9%
3							
4							
5							
6							
7							
8							
9							

31.0% =Total Cover

Herb Stratum Plot size 5'

	Common Name	Scientific name	Indicator	Absolute %	Dominant?	Wetland Indictor?	% Dominant
1	Cinnamon fern	Osmundastrum cinnamomeum	FACW	63.0%	X	X	76.4%
2	Royal fern	Osmunda spectabilis	OBL	10.5%		X	12.7%
3	Common cinquefoil	Potentilla simplex	FACU	3.0%			3.6%
4	Eastern poison ivy	Toxicodendron radicans	FAC	3.0%		X	3.6%
5	Starflower	Trientalis borealis	FAC	3.0%		X	3.6%
6							
7							
8							
9							
10							
11							
12							

82.5% =Total Cover

VEGETATION – continued.

Woody Vine Stratum	Plot size 30'						
	Common Name	Scientific name	Indicator	Absolute %	Dominant?	Wetland Indictor?	% Dominant
1	Virginia creeper	Parthenocissus quinquefolia	FACU	3.0%	X		100.0%
2							
3							
4							
				3.0%	=Total Cover		

Rapid Test:	Do all dominant species have an indicator status of OBL or FACW?			Yes		No	X	
Dominance Test:	Number of dominant species	Number of dominant species that are		Do wetland indicator plants make				
	6	4		Yes	X	No		
Prevalence Index:		Total % Cover	Multiply by:	Result				
	OBL species	11%	x1	=	11%			
	FACW species	74%	x2	=	147%			
	FAC species	65%	x3	=	194%			
	FACU species	30%	x4	=	118%			
	UPL species	0%	x5	=	0%			
	Column Totals (A)	178%		(B)	469%			
	Prevalence Index	B/A=	2.63	Is the Prevalence Index ≤3.0?				
				Yes	X	No		
Wetland vegetation criterion met?	Yes X	No						

Definitions of Vegetation Strata

Tree	Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height
Shrub/Sapling	Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall
Herb	All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall
Woody vines	All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.00%
6-15 %	10.50%
15-25 %	20.50%
26-50 %	38.00%
51-75 %	63.00%
76-95 %	85.50%
96-100 %	98.00%

Sampling Point GCA5

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Location[2]	Texture	Remarks
0-16	10YR2/1	100					FSL	
16-24	10YR5/1	100					FSL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

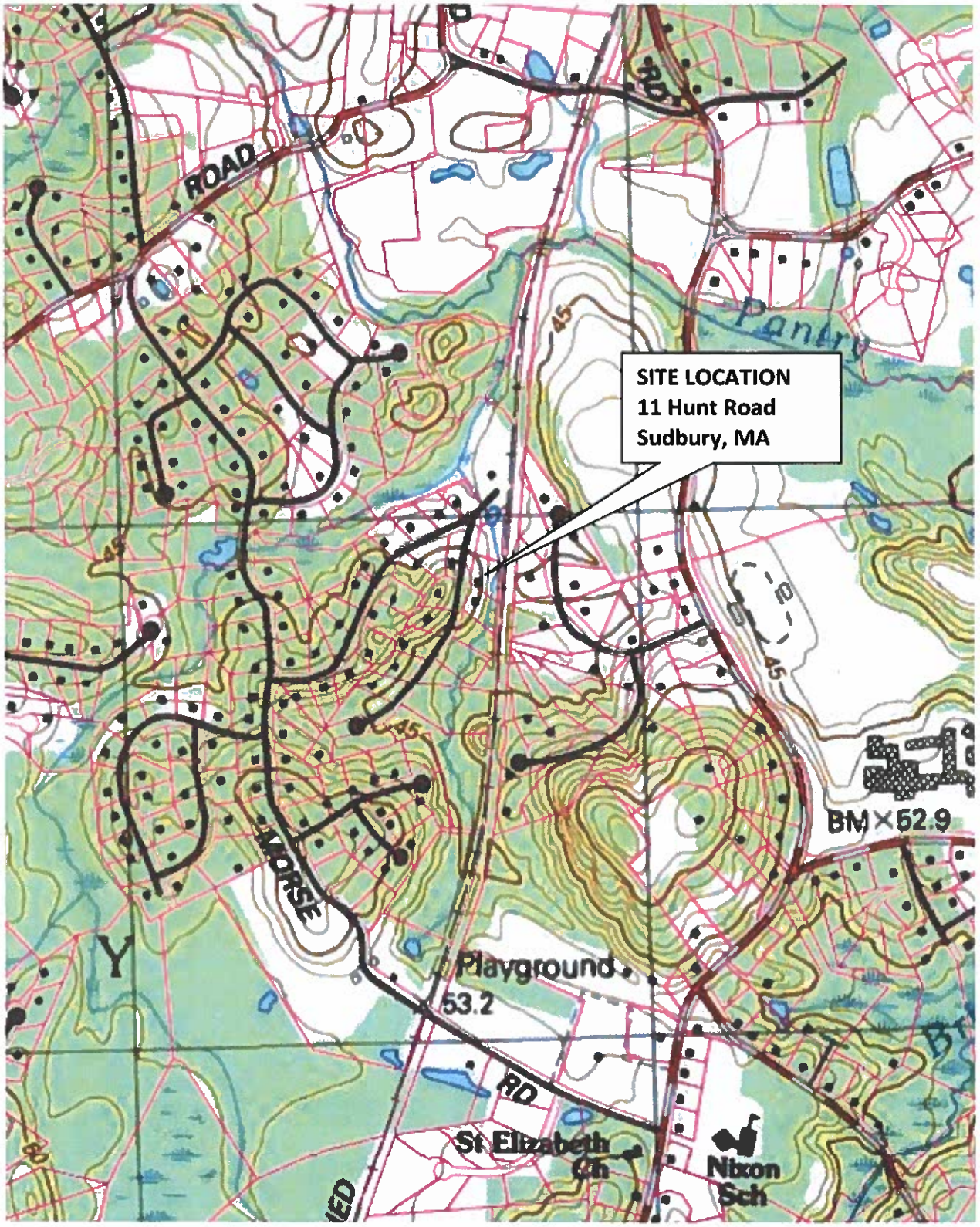
Hydric Soil Indicators (Check all that apply)		Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Redox (S5)	___ 2 cm Muck (A10)
X Histic Epipedon (A2)	___ Stripped Matrix (S6)	___ 5 cm Mucky Peat or Peat (S3)
___ Black Histic (A3)	___ Polyvalue Below Surface (S8)	___ Dark Surface (S7)
___ Hydrogen Sulfide (A4)	___ Thin Dark Surface (S9)	___ Polyvalue Below Surface (S8)
___ Stratified Layers (A5)	___ Loamy Mucky Mineral (F1)	___ Thin Dark Surface (S9)
___ Depleted Below Dark Surface (A11)	___ Loamy Gleyed Matrix (F2)	___ Iron-Manganese Masses (F12)
___ Thick Dark Surface (A12)	X Depleted Matrix (F3)	___ Mesic Spodic (A17)
___ Sandy Mucky Mineral (S1)	___ Redox Dark Surface (F7)	___ Red Parent Material (F21)
___ Sandy Gleyed Matrix (S4)	___ Depleted Dark Surface (F8)	___ Very Shallow Dark Surface (TF12)
___ Dark Surface (S7)		___ Other (Include Explanation in Remarks)

Restrictive Layer (if observed) Type: Depth (inches):

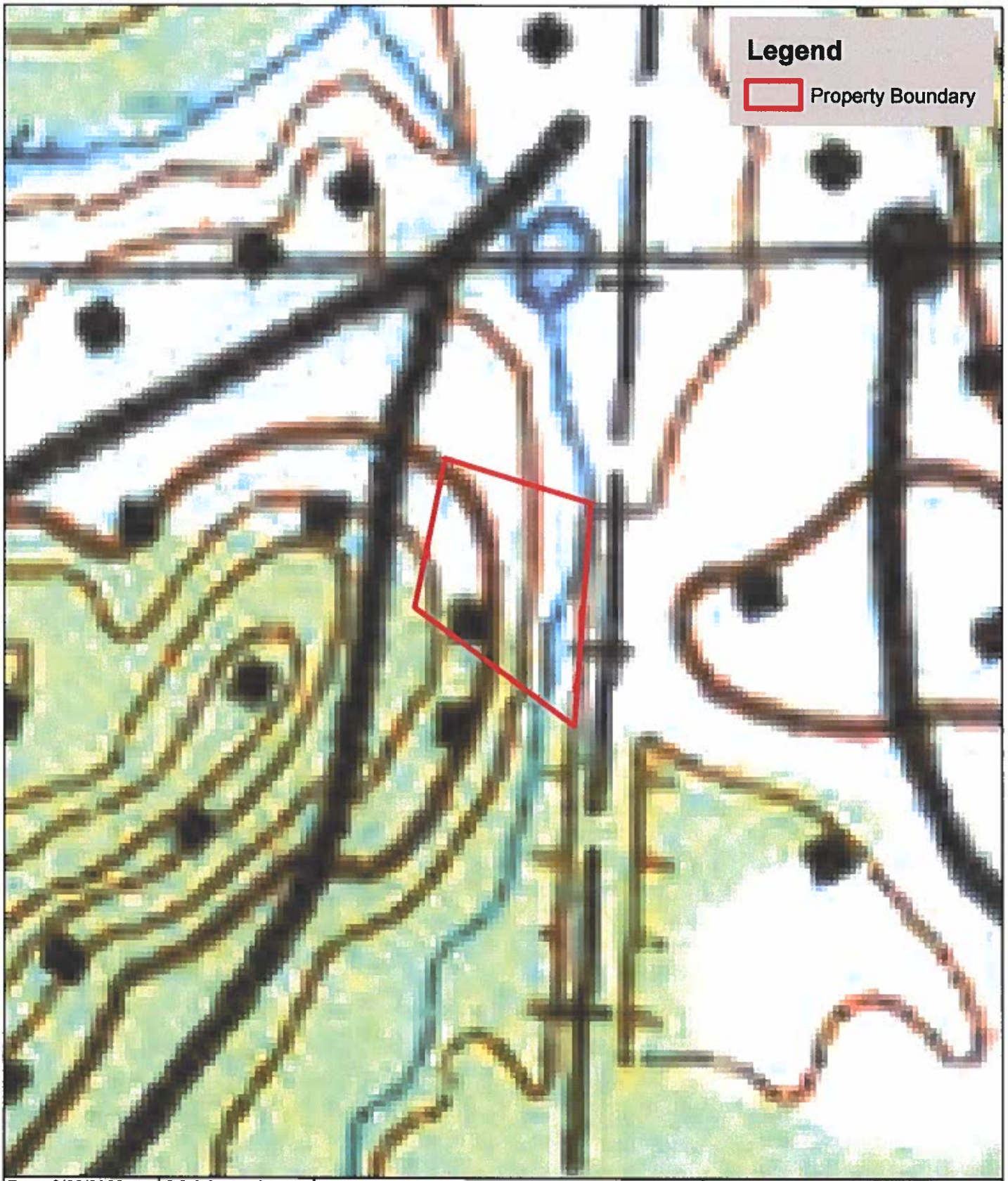
Remarks

Hydric Soils criterion met? Yes X No

USGS LOCUS MAP



Date: 8/29/2023	GC Job Number: 288-110	Wetland Border Report Orthophoto of Locus Site	0 25 50 Feet
GODDARD CONSULTING Strategic Ecological Consulting			1 in = 50 ft N W E S
		11 Hunt Road Sudbury, MA	Map: E09, Lot: 128



Date: 8/29/2023	GC Job Number: 288-110	Wetland Border Report USGS of Locus Site	0 75 150 Feet
GODDARD CONSULTING Strategic Ecological Consulting			1 in = 150 ft
		11 Hunt Road Sudbury, MA	Map: E09, Lot: 128

N
W E
S

CERTIFIED LIST OF ABUTTER & FORMS

abutters_id_field	abutters_owner1	abutters_owner2	abutters_address	abutters_town	abutters_state	abutters_zip	abutters_location
E09-0113	BARDJIS CONSTANTINE S &	OSTLUND PEGGY J	61 RIDGE HILL RD	SUDBURY	MA	01776	61 RIDGE HILL RD
E09-0114	CASTRO ALFREDO A & MARIA ANA		20 HUNT RD	SUDBURY	MA	01776	20 HUNT RD
E09-0127	WHITE GERALD KIMBER &	WHITE MEREDITH KIMBER	19 HUNT RD	SUDBURY	MA	01776	19 HUNT RD
E09-0128	SCHOW JOAN M		11 HUNT RD	SUDBURY	MA	01776	11 HUNT RD
E09-0129	ALBEE RICHARD S		5 HUNT RD	SUDBURY	MA	01776	5 HUNT RD
E09-0509	BLOOM JEFFREY & TIFFANY		53 THOMPSON DRIVE	SUDBURY	MA	01776	53 THOMPSON DR
E09-0510	WRY CHARLES A JR & RUTHANN		45 THOMPSON DRIVE	SUDBURY	MA	01776	45 THOMPSON DR
F09-0218	CRARY MINER A & HELEN H TRS	THE 1 HUNT ROAD NOMINEE TRUST	1 HUNT RD	SUDBURY	MA	01776	1 HUNT RD
E09-5100	EOT	MASS BAY TRANSPORTATION	10 PARK PLAZA	BOSTON	MA	02116	RAILWAY

Cynthia Berry
9/22/2023

11 Hunt Rd
100' Abutters

AFFIDAVIT OF SERVICE
Under the Massachusetts Wetlands Protection Act
&
Sudbury Wetlands Administration Bylaw

I, Vito Colonna of Connorstone Engineering, Inc., hereby certify under the pains and penalties of perjury that on October 12, 2023 I gave notification to abutters in compliance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, and the DEP Guide to Abutter Notification dated April 8, 1994, in connection with the following matter:

A Request for Determination of Applicability filed under the Sudbury Wetlands Administration Bylaw and Massachusetts Wetlands Protection Act by *Doug Schow* with the Sudbury Conservation Commission on October 12, 2023 for property located at 11 Hunt Road in Sudbury Ma .

The form of the notification, and a list of the abutters to whom it was given and their addresses are attached to this Affidavit of Service.

Name

10-12-23
Date

Notification to Abutters Under the
Massachusetts Wetlands Protection Act
Sudbury Wetlands Administration Bylaw

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, you are hereby notified of the following:

A. The name of the Applicant is **Doug Schow.**

B. The Applicant has filed a Request for Determination of Applicability with the Conservation Commission of the Town of **Sudbury** seeking permission to discharge to, remove, fill, dredge or alter an Area Subject to Protection (Wetland Resource Area and/or Buffer Zone) Under the Massachusetts Wetlands Protection Act (General Laws Chapter 131, Section 40) and Sudbury Wetlands Administration Bylaw.

C. The address of the lot where the activity is proposed: **11 Hunt Road in Sudbury Ma .**

D. The activity consists of: **Repair of an existing septic system.**

E. Copies of the Request for Determination of Applicability may be examined at **Sudbury Conservation Commission Office** between the hours of **10:00 am and 3:00 pm on Monday through Friday.** For more information, call: **978-440-5471**. Check One: This is the Applicant___, representative___, or other **X** (Conservation Commission Office).

F. Copies of the Request for Determination of Applicability may be obtained (upon payment of reproduction cost) from the **Applicant's representative (Connorstone Engineering)**, by calling this telephone number **(508) 393-9727** between the hours of **10 am – 4 pm** on the following days of the week: **Mon. – Fri.**

G. Information regarding the date, time, and place of the public hearing may be obtained from **Sudbury Conservation Commission Office** by calling this telephone number **978-440-5471** between the hours of **10:00 am and 3:00 pm on Monday through Friday**. This is the Applicant___, representative___, or other **X** (Conservation Commission Office).

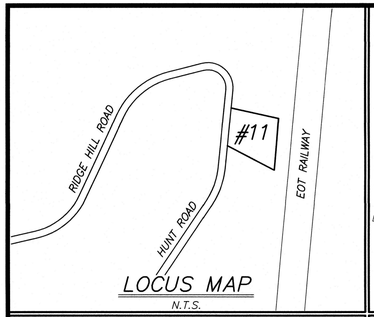
H. **Public Participation will be via Virtual Means Only** - In light of the ongoing COVID-19 coronavirus outbreak, Governor Baker issued an emergency Order on March 12, 2020, allowing public bodies greater flexibility in utilizing technology in the conduct of meetings under the Open Meeting Law. The Town of Sudbury Conservation Commission greatly values the participation of its citizens in the public meeting process, but given the current circumstances and recommendations at both the state and federal levels to limit or avoid public gatherings, including Governor Baker's ban on gatherings of more than 10 people, together with the present closure of Sudbury Town Hall and other public buildings to the public, the Town has decided to implement the "remote participation" procedures allowed under Governor Baker's emergency Order for all boards, committees, and commissions.

Note: Public Hearing Notice, including its date, time, and place, will be published at least five (5) days in advance in the

MetroWest Daily News
(name of newspaper)

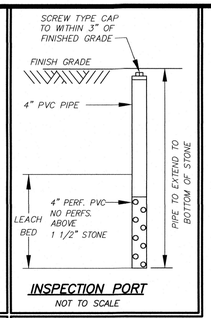
Note: Notice of the public hearing, including its date, time, and place, will be posted in the Town Hall not less than forty-eight (48) hours in advance.

Note: You also may contact your local Conservation Commission or the nearest Department of Environmental Protection (DEP) for more information about this application or the Wetlands Protection Act. To contact DEP, call Northeast region: 978-661-7600



LOCUS MAP

N.T.S.



INSPECTION PORT

NOT TO SCALE

PLAN NOTES:

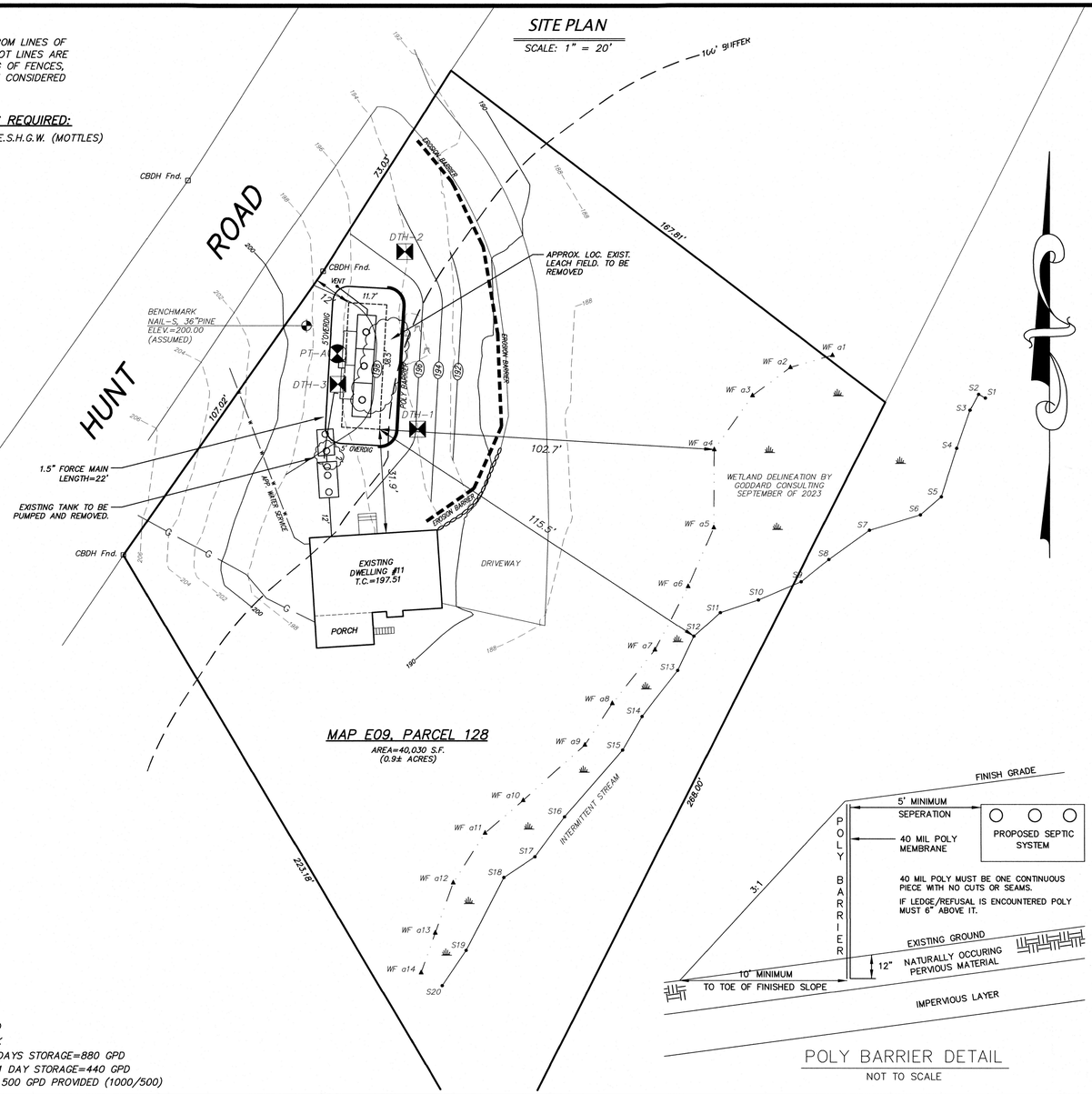
1. THIS PLOT PLAN IS PREPARED FROM LINES OF OCCUPATION. THE TIES TO THE LOT LINES ARE NOT TO BE USED IN THE SETTING OF FENCES, HEDGES, ETC. AND IS NOT TO BE CONSIDERED A PROPERTY LINE SURVEY.

LOCAL UPGRADE APPROVALS REQUIRED:

1. LEACH GALLEY SEPARATION TO E.S.H.G.W. (MOTTLES) LESS THAN 5' (4' PROPOSED).

SITE PLAN

SCALE: 1" = 20'



MAP E09, PARCEL 128

AREA=40,030 S.F.
(0.92± ACRES)

SCHEDULE OF ELEVATIONS

TOP OF FOUNDATION T.C. =	197.51
CONTRACTOR TO CONFIRM INVERTS PRIOR TO CONSTRUCTION	
INVERT OF PIPE AT FOUNDATION =	195.4
INVERT AT SEPTIC TANK INLET =	195.0
INVERT AT SEPTIC TANK OUTLET =	194.75
INVERT AT PUMP TANK INLET =	194.5
INVERT AT PUMP TANK OUTLET =	194.25
INVERT AT DISTRIBUTION BOX INLET =	196.9
INVERT AT DISTRIBUTION BOX OUTLET =	196.7
INVERT AT GALLEY IN =	196.5
ELEVATION OF GALLEY BOTTOM =	194.5
FINISH GRADE OVER LEACHING AREA =	198–197±

DESIGN CRITERIA

1. ESTIMATED FLOW = 4 BDRMS X 110 GPD/BR=440 GPD
2. DESIGN PERCOLATION RATE = <2 MPI
3. LEACHING AREA CALCULATION =

TOWN BYLAW REQUIREMENT OF 50 SF OF SIDEWALL PER BDRM (GALLEYS)
SA=(23.33'+77.0')2'=200.6 SF
BA=11.66'X38.5'=448.9 SF >649 SF(0.74 GPD/SF)=480 GPD

PUMP NOTES:

1. THE PUMP CHAMBER SHALL BE A 1,000 GALLON SEPTIC TANK AS PRODUCED BY: E.F. SHEA INC. OR ITS APPROVED EQUAL. ALL JOINTS SHALL BE MORTARED, AND THE TANK WATER TIGHT.
2. THE PUMP SHALL BE A MYERS SRM4 4/10 HP OR EQUAL WITH A 1.5" INCH DISCHARGE LINE AND SHALL BE EQUIPPED WITH 115 VOLT SINGLE PHASE POWER, SM 15NO FLOATS, AND A CE 11S CONTROL PANEL THAT IS EQUIPPED WITH AN AUDIBLE ALARM.
3. HIGH WATER ALARM TO CONSIST OF A MERCURY FLOAT SWITCH (CE 11S ALARM CONTROL) WITH A POWER CIRCUIT SEPERATE OF THE PUMP POWER CIRCUIT, SET TO ACTIVATE ALARM IN THE HOUSE WHEN WATER REACHES THE ELEVATION OF 192.5
4. ALL WIRING TO BE PLACED OUTSIDE OF HOUSE TO BE WATERPROOF AND INSTALLED ACCORDING TO APPLICABLE CODES.
5. THE DISTRIBUTION BOX SHALL BE EQUIPPED WITH A TEE.
6. ANY BAFFLE OR TEE THAT OBSTRUCTS THE DISCHARGE LINE SHALL BE REMOVED.
7. THE ALARM IS TO HAVE AN ALTERNATIVE SUPPLY IN CASE OF POWER FAILURE.
8. WEEPHOLE MUST BE IN 1.5" INCH FORCE MAIN. THE HOLE SHOULD BE LOCATED BETWEEN THE CHECK VALVE AND INSIDE OF TANK.
9. CONTROL PANEL TO BE EQUIPPED WITH ON–OFF AND MANUAL SWITCHING POSITIONS.
10. CHECK VALVE SHALL BE OF BALL TYPE, INSTALLED VERTICALLY WITH A 3/8" WEEP LOCATED ON THE DISCHARGE SIDE OF THE CHECK VALVE BETWEEN VALVE AND INSIDE WALL OF TANK.
11. ALL PRESSURE PIPING SHALL BE SECURED AND SHIELDED FROM ABRASION, AND SHALL BE COUPLED WITH HIGH PRESSURE PVC COUPLINGS.

TOTAL DYNAMIC HEAD CALCULATION:

LINEAL FEET OF 1.5 INCH PIPE	=	22
EQUIVALENT FEET OF PIPE FOR FITTINGS	=	27
TOTAL LINEAL FEET OF PIPE	=	49
FRICTION HEAD LOSS PER 100' AT 40 GPM	=	12.68
STATIC HEAD	=	5.9
EQUIVALENT HEAD = 49 / 100 x 12.68	=	6.2
TOTAL DYNAMIC HEAD	=	12.1

PUMP DISCHARGE CALCULATIONS

DOSE(S) PER DAY = 2 DOSES

1000 GAL. TANK = 7.5 x 4.7 x 1.0 x 7.48 GAL/C.F. = 263.6 GAL./DOSE

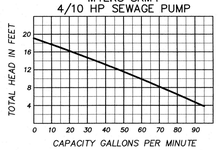
PUMP CAPACITY AT 12.1 FT. OF HEAD = 40 GAL. / MIN.

DOSE TIME = 263.6/40 = 6.6 MIN. / DOSE

SILT FENCE DETAIL

NOT TO SCALE

PERFORMANCE CURVE



TANK SIZING:

4 BEDROOMS = 440 GPD
TWO COMPARTMENT TANK
FIRST COMPARTMENT=2 DAYS STORAGE=880 GPD
SECOND COMPARTMENT=1 DAY STORAGE=440 GPD
1,320 GPD REQUIRED. 1,500 GPD PROVIDED (1000/500)

POLY BARRIER DETAIL

NOT TO SCALE

GENERAL NOTES:

1. Contractor shall call Digsafe at (888) 344–7233 a minimum of 72 hours prior to commencing any construction activities on site.
2. Inspections by Design Engineer and Board of Health are as required by the Board of Health.
3. This plan was prepared for the design of the subsurface sewage disposal system only and is based on the subsurface explorations and percolation tests listed below.
4. System was designed only to accomodate sanitary sewage associated with normal domestic usage, consisting of water carried putrescible waste, and for flows indicated in the design criteria.
5. The system must be vented through the buildings plumbing in accordance with the state building code.
6. Plans show only features that were visually apparent on the date of the topographic survey, and the absence of subsurface structures, utilities, etc. is not guaranteed.
7. Contractor to determine if site conditions are suitable for construction of proposed system, and must promptly notify the Design Engineer and Owner, in writing, of any plan deficiencies, unforseen subsurface conditions, or required changes.
8. There are no wells located within 100' feet of the proposed leaching area or within 100' feet of the proposed septic tank (except as shown).
9. The subject property is in not located within a Zone II of a public drinking water supply well.
10. All construction is to conform to the requirements of the Massachusetts Environmental Code, Title V, and the town of SUDBURY Board of Health regulations.
11. There are no bordering vegetated wetlands, inland banks, or surface waters within 100' of the proposed system.
12. There are no surface or subsurface drains which are used to lower the ground water.
13. All elevations refer to TBM NAIL–S, 36" PINE ELEV.=200
14. For proper performance, septic tank should be pumped annually.
15. System cannot be backfilled or concealed until design firm and board of health have inspected the system and permission to backfill has been given.
16. Design firm must prepare and submit "As–Built" plan to Board of Health. This plan must certify that the system was installed in accordance with state and local regulations and that it complies with the proposed plan.
17. Property lines are approximate and are not to be used for boundary survey purposes. Surface features and topography outside of work area are approximate.
18. System is not designed to accomodate a garbage grinder.

TECHNICAL NOTES:

1. Building sewer shall be in accordance with state plumbing code and have a minimum of 4" of cover in landscaped areas. A minimum of 12" of cover and/or appropriate sleeving shall be used in areas subject to vehicular traffic.
2. All tanks, including septic tanks, distribution boxes, dosing chambers, and grease traps shall be either watertight through manufacturer's specification and warranty, or made watertight by the manufacturer or other individual by means and persons as approved in 310 CMR 15.221. Septic tank shall be constructed and placed in accordance with 310 CMR 15.223 through 310 CMR 15.228.
3. Septic tanks shall have at least three (3) 20" manholes with at least one (1) of these manholes located no more than 6" below finish grade. (Systems over 1,000 gpd shall have access ports at both the inlet and outlet tees.)
4. Distribution box ("d–box") shall be of watertight construction, installed level on a firm base, and installed in accordance with 310 CMR 15.232.
5. Septic tank covers and d–box are to be brought within 6" and 9" of finish grade respectively by the use of riser sections.
6. When the soil absorption system (SAS) is to be dosed or the slope of the inlet pipe exceeds 0.08 feet per foot, an inlet tee, baffle or splash plate extending to one inch above the outlet invert elevation shall be provided to dissipate velocity of the influent.
7. When the SAS is installed within the top and subsoil layers or above natural grade, all topsoil and subsoil shall be removed below and laterally a minimum of 5 feet surrounding the SAS. Removed material shall be replaced with clean granular material in accordance with 310 CMR 15.255(3).
8. All disturbed areas shall be loamed, seeded, and maintained so as to prevent erosion.
9. All native soil interfaces which will contact the SAS shall be scarified prior to placement of stone.

PERCOLATION TESTS

HOLE NO. & DATE	TOP ELEVATION	DEPTH (In.)	SATURATION (Min.)	12"–9" DROP (Min.)	9"–6" DROP (Min.)	PERC. RATE (Min./In.)
PT–A 09/13/23	197.8	58"	COULD NOT SATURATE			<2 MIN/IN

DEEP OBSERVATION HOLE LOG

NO., DATE & ELEV.	DEPTH (In.)	SOIL HORIZON	TEXTURE (USDA)	COLOR (MUNSELL)	SOIL MOTTLING	OTHER
DTH–1	0–25"		FILL			
09/13/23	25–40"	Bw	LOAMY SAND	10YR6/8		
194.0	40–70"	C1	FINE–MED. SAND	10YR6/3	@ 59"	
	70–110"	C2	SANDY LOAM	2.5Y5/4		
DEPTH TO BEDROCK: –	STANDING WATER: –	WEEPING FROM PIT FACE: –				ESHWT: 189.1
DTH–2	0–9"	Ap	SANDY LOAM	10YR3/2		
09/13/23	9–23"	Bw	LOAMY SAND	10YR6/8		
194.0	23–75"	C1	FINE–MED. SAND	10YR6/3	@ 64"	
	75–100"	C2	SANDY LOAM	2.5Y5/4		
DEPTH TO BEDROCK: –	STANDING WATER: –	WEEPING FROM PIT FACE: –				ESHWT: 189.1
DTH–3	0–20"		FILL			
09/13/23	20–40"	Bw	COURSE SAND	10YR3/2		HEAVY IN FE
196.0	40–85"	C1	FINE–MED. SAND	10YR6/3	@ 66"	
	785–112"	C2	SANDY LOAM	2.5Y5/4		
DEPTH TO BEDROCK: –	STANDING WATER: –	WEEPING FROM PIT FACE: –				ESHWT: 190.5

TESTS CONDUCTED BY: MIKE SULLIVAN
TESTS OBSERVED BY: ROB LAZZO DATE: 09/13/2023

I certify that I have passed the examination approved by the department of Environmental Protection and that the above analysis has been performed by me consistent with the required training, expertise, and experience described in 310 CMR 15.017(2).

Certified: 2374

SEPTIC TANK NOTES

1. MUST BE WATER TIGHT AND SET ON A LEVEL BASE THAT HAS BEEN COMPACTED TO PREVENT SETTLING.
2. TANK MUST HAVE A SEAL STATING THAT ASTM STANDARDS HAVE BEEN MET.

THREE 20" MANHOLES WITH READILY REMOVABLE IMPERMEABLE COVERS OF DURABLE MATERIAL

IF A FILTER IS INSTALLED: BRING COVER OVER FILTER TO FINISH GRADE. MAINTAIN FILTER PER MANUFACT. SPECS./APPROVAL

SYSTEM PROFILE

NOT TO SCALE

SEPTIC TANK

PRECAST REINFORCED CONCRETE
CAPACITY OF TANK = 1500 GAL.

PUMP CHAMBER

PRECAST REINFORCED CONCRETE
CAPACITY OF TANK = 1000 GAL.

DISTRIBUTION BOX

6 OUTLET
3 OUTLETS TO BE PLUGGED

DISTRIBUTION BOX NOTES

1. COVER MUST BE WATER TIGHT.
2. ALL OUTLET PIPES SHALL BE LEVEL FOR THE FIRST 2' OUT OF THE D–BOX. ALL OUTLET PIPES TO BE AT THE SAME ELEVATION.
3. SOIL MUST BE COMPACTED UNDER "D" BOX TO PREVENT SETTLING.
4. MINIMUM INSIDE DIMENSION SHALL BE 12".

NOTE: ALL SYSTEM COMPONENTS ARE TO BE MARKED WITH MAGNETIC MARKING TAPE

LEACHING GALLEYS

LEACH FIELD NOTES

1. SIDES AND BOTTOM OF LEACHING FACILITY TO BE SCARIFIED.
2. BOTTOM OF LEACHING FACILITY MUST BE LEVEL.
3. PIPING MUST BE SCH 40 P.V.C. WITH TIGHT JOINTS.

FINAL GRADING NOTES

1. 2% SLOPE MUST BE PROVIDED OVER AND AROUND SYSTEM.
2. SURFACE DRAINAGE MUST BE AWAY FROM SYSTEM.
3. GRADING MUST BE DONE TO PREVENT PONDING.

GALLEY CROSS SECTION

BUILDING SEWER NOTES

1. SEWER LINE MUST BE LAID ON A FIRM COMPACTED BASE.
2. PIPE MUST BE SLOPED AT A MIN. OF 1% (2% PREFERRED)
3. PIPE MUST BE LAID ON A CONTINUOUS UNIFORM GRADIENT.

APPLICANT
DOUG SCHOW

LOCATION
11 HUNT ROAD
SUDBURY, MA
ASSESSORS MAP E09 & PARCEL 0128

NO.	DATE:	REVISION:	BY:

DIG SAFE 1–888–344–7233

PROPOSED SEWAGE DISPOSAL SYSTEM

COMMONWEALTH OF MASSACHUSETTS VITO COLONNA No. 47635 REGISTERED PROFESSIONAL ENGINEER 9-21-23

CONNORSTONE ENGINEERING
CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS
10 SOUTHWEST CUTOFF, SUITE 7
NORTHBOROUGH, MASSACHUSETTS 01532
PHONE: 508–393–9727 WWW.CSEI.NET
121 BOSTON POST RD. SUDBURY, MA. 01776
PHONE: 978–443–9566 WWW.SULLIVANCONNORS.COM

DATE: 09/21/23 SHEET 1 OF 1