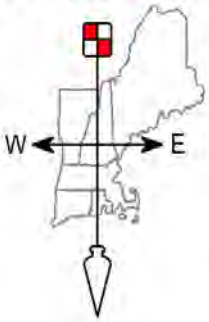
NHDES Wetland Dredge & Fill Permit Application

Tax Map A Lot 44-1
Barrett Hill Road
Wilton, NH 03086

Prepared for and Land of:
San-Ken Homes, LLC
586 Turnpike Road
New Ipswich, NH 03071

December 2022

Surveying ◆ Engineering ◆ Land Planning ◆ Permitting ◆ Septic Designs



FIELDSTONE
LAND CONSULTANTS, PLLC

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www.FieldstoneLandConsultants.com

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STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION

Water Division/Land Resources Management
Wetlands Bureau

Check the Status of your Application

RSA/Rule: RSA 482-A/Env-Wt 100-900

APPLICANT'S NAME: **San Ken Homes, Inc** **TOWN NAME:** Wilton

Administrative Use Only	Administrative Use Only	Administrative Use Only	File No.:
			Check No.:
			Amount:
			Initials:

A person may request a waiver of the requirements in Rules Env-Wt 100-900 to accommodate situations where strict adherence to the requirements would not be in the best interest of the public or the environment but is still in compliance with RSA 482-A. A person may also request a waiver of the standards for existing dwellings over water pursuant to RSA 482-A:26, III(b). For more information, please consult the Waiver Request Form.

SECTION 1 - REQUIRED PLANNING FOR ALL PROJECTS (Env-Wt 306.05; RSA 482-A:3, I(d)(2)) Please use the Wetland Permit Planning Tool (WPPT), the Natural Heritage Bureau (NHB) DataCheck Tool, the Aquatic Restoration Mapper, or other sources to assist in identifying key features such as: priority resource areas (PRAs), protected species or habitats, coastal areas, designated rivers, or designated prime wetlands.	
Has the required planning been completed?	☒ Yes ☐ No
Does the property contain a PRA? If yes, provide the following information:	☐ Yes ☒ No
• Does the project qualify for an Impact Classification Adjustment (e.g. NH Fish and Game Department (NHF&G) and NHB agreement for a classification downgrade) or a Project-Type Exception (e.g. Maintenance or Statutory Permit-by-Notification (SPN) project)? See Env-Wt 407.02 and Env-Wt 407.04.	☐ Yes ☒ No
• Protected species or habitat? o If yes, species or habitat name(s): o NHB Project ID #: 22-3772	☐ Yes ☒ No
• Bog?	☐ Yes ☒ No
• Floodplain wetland contiguous to a tier 3 or higher watercourse?	☐ Yes ☒ No
• Designated prime wetland or duly-established 100-foot buffer?	☐ Yes ☒ No
• Sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone?	☐ Yes ☒ No
Is the property within a Designated River corridor? If yes, provide the following information: • Name of Local River Management Advisory Committee (LAC): • A copy of the application was sent to the LAC on Month: Day: Year:	☐ Yes ☒ No

For dredging projects, is the subject property contaminated? • If yes, list contaminant:	☐ Yes ☒ No
Is there potential to impact impaired waters, class A waters, or outstanding resource waters?	☐ Yes ☒ No
For stream crossing projects, provide watershed size (see WPPT or Stream Stats): Not applicable	

SECTION 2 - PROJECT DESCRIPTION (Env-Wt 311.04(i))

Provide a **brief** description of the project and the purpose of the project, outlining the scope of work to be performed and whether impacts are temporary or permanent. DO NOT reply "See attached"; please use the space provided below.

Construct a wetland crossing to access the buildable portion of a 18.951-acre lot which is isolated by palustrine forested wetlands. Proposed is a 36" CPP to be embedded 1'.

SECTION 3 - PROJECT LOCATION

Separate wetland permit applications must be submitted for each municipality within which wetland impacts occur.

ADDRESS: Barrett Hill Road

TOWN/CITY: Wilton

TAX MAP/BLOCK/LOT/UNIT: A/44-1

US GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME:
☒ N/A

(Optional) LATITUDE/LONGITUDE in decimal degrees (to five decimal places): ° North

° West

SECTION 4 - APPLICANT (DESIRED PERMIT HOLDER) INFORMATION (Env-Wt 311.04(a))

If the applicant is a trust or a company, then complete with the trust or company information.

NAME: San-Ken Homes, Inc.		
MAILING ADDRESS: 586 Turnpike Road		
TOWN/CITY: New Ipswich	STATE: NH	ZIP CODE: 03071
EMAIL ADDRESS:		
FAX:	PHONE:	

ELECTRONIC COMMUNICATION: By initialing here: , I hereby authorize NHDES to communicate all matters relative to this application electronically.

SECTION 5 - AUTHORIZED AGENT INFORMATION (Env-Wt 311.04(c))

☐ N/A

LAST NAME, FIRST NAME, M.I.: Robinson, Kenneth M		
COMPANY NAME: Fieldstone Land Consultants, PLLC		
MAILING ADDRESS: 206 Elm Street		
TOWN/CITY: Milford	STATE: NH	ZIP CODE: 03055
EMAIL ADDRESS: KMRobinson@FieldstoneLandConsultants.com		
FAX:	PHONE: (603) 672-5456	

ELECTRONIC COMMUNICATION: By initialing here , I hereby authorize NHDES to communicate all matters relative to this application electronically.

SECTION 6 - PROPERTY OWNER INFORMATION (IF DIFFERENT THAN APPLICANT) (Env-Wt 311.04(b))

If the owner is a trust or a company, then complete with the trust or company information.

☐ Same as applicant

NAME: San-Ken Homes, Inc		
MAILING ADDRESS: 586 Turnpike Road		
TOWN/CITY: New Ipswich	STATE: NH	ZIP CODE: 03071
EMAIL ADDRESS: kenny@san-ken.com		
FAX:	PHONE: 603-966-6769	

ELECTRONIC COMMUNICATION: By initialing here KL, I hereby authorize NHDES to communicate all matters relative to this application electronically.

SECTION 7 - RESOURCE-SPECIFIC CRITERIA ESTABLISHED IN Env-Wt 400, Env-Wt 500, Env-Wt 600, Env-Wt 700, OR Env-Wt 900 HAVE BEEN MET (Env-Wt 313.01(a)(3))

Describe how the resource-specific criteria have been met for each chapter listed above (please attach information about stream crossings, coastal resources, prime wetlands, or non-tidal wetlands and surface waters):
The project does not use wetlands or surface waters to serve as stormwater or water quality treatment; The project maintains or restores hydrologic connections to maintain flows necessary to preserve adjacent wetland functions; The project maintains existing wetland-dependent wildlife habitat and its associated migratory pathways, reproductive sites, and associated wetland complex or wetland community system. Per Env-wt 524.06 the project is minor impact as it is part of a new subdivision greater than 4 lots.

SECTION 8 - AVOIDANCE AND MINIMIZATION

Impacts within wetland jurisdiction must be avoided to the maximum extent practicable (Env-Wt 313.03(a)).* Any project with unavoidable jurisdictional impacts must then be minimized as described in the Wetlands Best Management Practice Techniques For Avoidance and Minimization and the Wetlands Permitting: Avoidance, Minimization and Mitigation Fact Sheet. For minor or major projects, a functional assessment of all wetlands on the project site is required (Env-Wt 311.03(b)(10)).*

Please refer to the application checklist to ensure you have attached all documents related to avoidance and minimization, as well as functional assessment (where applicable). Use the Avoidance and Minimization Checklist, the Avoidance and Minimization Narrative, or your own avoidance and minimization narrative.

**See Env-Wt 311.03(b)(6) and Env-Wt 311.03(b)(10) for shoreline structure exemptions.*

SECTION 9 - MITIGATION REQUIREMENT (Env-Wt 311.02)

If unavoidable jurisdictional impacts require mitigation, a mitigation pre-application meeting must occur at least 30 days but not more than 90 days prior to submitting this Standard Dredge and Fill Permit Application.

Mitigation Pre-Application Meeting Date: Month: Day: Year:

(☒ N/A - Mitigation is not required)

SECTION 10 - THE PROJECT MEETS COMPENSATORY MITIGATION REQUIREMENTS (Env-Wt 313.01(a)(1)c)

Confirm that you have submitted a compensatory mitigation proposal that meets the requirements of Env-Wt 800 for all permanent unavoidable impacts that will remain after avoidance and minimization techniques have been exercised to the maximum extent practicable: ☐ I confirm submittal.

(☒ N/A – Compensatory mitigation is not required)

SECTION 11 - IMPACT AREA (Env-Wt 311.04(g))

For each jurisdictional area that will be/has been impacted, provide square feet (SF) and, if applicable, linear feet (LF) of impact, and note whether the impact is after-the-fact (ATF; i.e., work was started or completed without a permit).

For intermittent and ephemeral streams, the linear footage of impact is measured along the thread of the channel. *Please note, installation of a stream crossing in an ephemeral stream may be undertaken without a permit per Rule Env-Wt 309.02(d), however other dredge or fill impacts should be included below.*

For perennial streams/rivers, the linear footage of impact is calculated by summing the lengths of disturbances to the channel and banks.

Permanent impacts are impacts that will remain after the project is complete (e.g., changes in grade or surface materials).

Temporary impacts are impacts not intended to remain (and will be restored to pre-construction conditions) after the project is completed.

JURISDICTIONAL AREA		PERMANENT			TEMPORARY		
		SF	LF	ATF	SF	LF	ATF
Wetlands	Forested Wetland	769		☐	206		☐
	Scrub-shrub Wetland			☐			☐
	Emergent Wetland			☐			☐
	Wet Meadow			☐			☐
	Vernal Pool			☐			☐
	Designated Prime Wetland			☐			☐
	Duly-established 100-foot Prime Wetland Buffer			☐			☐
Surface Water	Intermittent / Ephemeral Stream			☐			☐
	Perennial Stream or River			☐			☐
	Lake / Pond			☐			☐
	Docking - Lake / Pond			☐			☐
	Docking - River			☐			☐
Banks	Bank - Intermittent Stream			☐			☐
	Bank - Perennial Stream / River			☐			☐
	Bank / Shoreline - Lake / Pond			☐			☐
Tidal	Tidal Waters			☐			☐
	Tidal Marsh			☐			☐
	Sand Dune			☐			☐
	Undeveloped Tidal Buffer Zone (TBZ)			☐			☐
	Previously-developed TBZ			☐			☐
	Docking - Tidal Water			☐			☐
TOTAL							

SECTION 12 - APPLICATION FEE (RSA 482-A:3, I)

☐ **MINIMUM IMPACT FEE**: Flat fee of $400.

☐ **NON-ENFORCEMENT RELATED, PUBLICLY-FUNDED AND SUPERVISED RESTORATION PROJECTS, REGARDLESS OF IMPACT CLASSIFICATION:** Flat fee of $400 (refer to RSA 482-A:3, 1(c) for restrictions).

☒ **MINOR OR MAJOR IMPACT FEE:** Calculate using the table below:

Permanent and temporary (non-docking):	975 SF	× $0.40 =	$	390
Seasonal docking structure:	SF	× $2.00 =	$	
Permanent docking structure:	SF	× $4.00 =	$	
Projects proposing shoreline structures (including docks) add $400 =			$	
Total =			$	390

The application fee for minor or major impact is the above calculated total or $400, whichever is greater = $ 400

SECTION 13 - PROJECT CLASSIFICATION (Env-Wt 306.05)
Indicate the project classification.

☐ Minimum Impact Project	☒ Minor Project	☐ Major Project

SECTION 14 - REQUIRED CERTIFICATIONS (Env-Wt 311.11)

Initial each box below to certify:

Initials:	
	To the best of the signer's knowledge and belief, all required notifications have been provided.
	The information submitted on or with the application is true, complete, and not misleading to the best of the signer's knowledge and belief.
	The signer understands that: • The submission of false, incomplete, or misleading information constitutes grounds for NHDES to: 1. Deny the application. 2. Revoke any approval that is granted based on the information. 3. If the signer is a certified wetland scientist, licensed surveyor, or professional engineer licensed to practice in New Hampshire, refer the matter to the joint board of licensure and certification established by RSA 310-A:1. • The signer is subject to the penalties specified in New Hampshire law for falsification in official matters, currently RSA 641. • The signature shall constitute authorization for the municipal conservation commission and the Department to inspect the site of the proposed project, except for minimum impact forestry SPN projects and minimum impact trail projects, where the signature shall authorize only the Department to inspect the site pursuant to RSA 482-A:6, II.
	If the applicant is not the owner of the property, each property owner signature shall constitute certification by the signer that he or she is aware of the application being filed and does not object to the filing.

SECTION 15 - REQUIRED SIGNATURES (Env-Wt 311.04(d); Env-Wt 311.11)

SIGNATURE (OWNER):	PRINT NAME LEGIBLY:	DATE:
	Kenneth Lehtonen II	12/14/2022
SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER):	PRINT NAME LEGIBLY:	DATE:
SIGNATURE (AGENT, IF APPLICABLE):	PRINT NAME LEGIBLY:	DATE:
	Kenneth Robinson	12/22/22

SECTION 16 - TOWN / CITY CLERK SIGNATURE (Env-Wt 311.04(f))

As required by RSA 482-A:3, I(a)(1), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.

TOWN/CITY CLERK SIGNATURE:	PRINT NAME LEGIBLY:
Melissa J Schultz, Deputy	Melissa J. Schultz
TOWN/CITY: Wilton	DATE: 12/22/22

DIRECTIONS FOR TOWN/CITY CLERK:
Per RSA 482-A:3, I(a)(1)

1. IMMEDIATELY sign the original application form and four copies in the signature space provided above.
2. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
3. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board.
4. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:
Submit the original permit application form bearing the signature of the Town/City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery at the address at the bottom of this page. Make check or money order payable to “Treasurer – State of NH”.

US Army Corps of Engineers ®
New England District

Appendix B
New Hampshire General Permits
Required Information and USACE Section 404Checklist

USACE Section 404 Checklist

1. Attach any explanations to this checklist. Lack of information could delay a USACE permit determination.
2. All references to "work" include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
3. See GC 3 for information on single and complete projects.
4. Contact USACE at (978) 318-8832 with any questions.
5. The information requested below is generally required in the NHDES Wetland Application. See page 61 for NHDES references and Admin Rules as they relate to the information below.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See the following to determine if there is an impaired water in the vicinity of your work area. * https://nhdes-surface-water-quality-assessment-site-nhdes.hub.arcgis.com/ https://www.des.nh.gov/water/rivers-and-lakes/water-quality-assessment https://www4.des.state.nh.us/onestopdatamapper/onestopmapper.aspx		X
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?		X
2.2 Are there proposed impacts to tidal SAS, prime wetlands, or priority resource areas? Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) DataCheck Tool for information about resources located on the property at https://www4.des.state.nh.us/NHB-DataCheck/.		X
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	X	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)		X
2.5 The overall project site is more than 40 acres?	X	
2.6 What is the area of the previously filled wetlands?	0 SF	
2.7 What is the area of the proposed fill in wetlands?	769 SF	
2.8 What % of the overall project sire will be previously and proposed filled wetlands?	< 1%	
3. Wildlife	Yes	No
3.1 Has the NHB & USFWS determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require an NHB ID number & a USFWS IPAC determination.) NHB DataCheck Tool: https://www4.des.state.nh.us/NHB-DataCheck/. USFWS IPAC website: https://ipac.ecosphere.fws.gov/		X

3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"? (These areas are colored magenta and green, respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological Condition.") Map information can be found at: • PDF: https://wildlife.state.nh.us/wildlife/wap-high-rank.html. • Data Mapper: www.granit.unh.edu. • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html.		X
3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		X
3.5 Are stream crossings designed in accordance with the GC 31?	N/A	
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?		X
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?	N/A	
5. Historic/Archaeological Resources		
For a minimum, minor or major impact project - a copy of the RPR Form (www.nh.gov/nhdhr/review) with your DES file number shall be sent to the NH Division of Historical Resources as required on Page 37 GC 14(d) of the GP document**	X	
6. Minimal Impact Determination (for projects that exceed 1 acre of permanent impact)	Yes	No
Projects with greater than 1 acre of permanent impact must include the following: • Functional assessment for aquatic resources in the project area. • On and off-site alternative analysis. • Provide additional information and description for how the below criteria are met.	N/A	
6.1 Will there be complete loss of aquatic resources on site?		
6.2 Have the impacts to the aquatic resources been avoided and minimized to the greatest extent practicable?		
6.3 Will all aquatic resource function be lost?		
6.4 Does the aquatic resource (s) have regional significance (watershed or ecoregion)?		
6.5 Is there an on-site alternative with less impact?		
6.6 Is there an off-site alternative with less impact?		
6.7 Will there be a loss to a resource dependent species?		
6.8 Are indirect impacts greater than 1 acre within and adjacent to the project area?		
6.9 Does the proposed mitigation replace aquatic resource function for direct, indirect, and cumulative impacts?		

*Although this checklist utilizes state information, its submittal to USACE is a federal requirement.

** If your project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law.

STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION ATTACHMENT A: MINOR AND MAJOR PROJECTS

Water Division/Land Resources Management

Wetlands Bureau

Check the Status of your Application

RSA/ Rule: RSA 482-A/ Env-Wt 311.10; Env-Wt 313.01(a)(1); Env-Wt 313.03

APPLICANT'S NAME: **San-Ken Homes, Inc.** **TOWN NAME:** Wilton

Attachment A is required for *all minor and major projects*, and must be completed *in addition* to the Avoidance and Minimization Narrative or Checklist that is required by Env-Wt 307.11.

For projects involving construction or modification of non-tidal shoreline structures over areas of surface waters having an absence of wetland vegetation, only Sections I.X through I.XV are required to be completed.

PART I: AVOIDANCE AND MINIMIZATION

In accordance with Env-Wt 313.03(a), the Department shall not approve any alteration of any jurisdictional area unless the applicant demonstrates that the potential impacts to jurisdictional areas have been avoided to the maximum extent practicable and that any unavoidable impacts have been minimized, as described in the Wetlands Best Management Practice Techniques For Avoidance and Minimization.

SECTION I.I - ALTERNATIVES (Env-Wt 313.03(b)(1))

Describe how there is no practicable alternative that would have a less adverse impact on the area and environments under the Department's jurisdiction.

PROPOSED CROSSING IS AT THE NARROWEST SECTION OF WETLANDS ON THE 18.951 ACRE LOT. LOCATION OF CROSSING AVOIDS AREA OF LOT WITHIN WATERSHED DISTRICT AND AVOIDS INFRASTRUCTURE DEVELOPMENT/DRIVEWAY WITHIN MORE THAN 250-FT OF POSSIBLE VERNAL POOLS IDENTIFIED ON THE PROPERTY. PROPOSED CONFIGURATION AVOIDS IMPACTS IN THE WATERSHED PROTECTION OVERLAY ZONE. THIS UPLAND PORTION OF THE PROPERTY REPRESENTS APPROXIMATELY 25% OF THE PARENT LOT AND THIS IS THE LEAST IMPACTFUL MEANS OF ACCESS.

SECTION I.II - MARSHES (Env-Wt 313.03(b)(2))

Describe how the project avoids and minimizes impacts to tidal marshes and non-tidal marshes where documented to provide sources of nutrients for finfish, crustacean, shellfish, and wildlife of significant value.

Not applicable.

SECTION I.III - HYDROLOGIC CONNECTION (Env-Wt 313.03(b)(3))

Describe how the project maintains hydrologic connections between adjacent wetland or stream systems.

Project proposes use of an oversized 36" culvert to be embedded 1'.

SECTION I.IV - JURISDICTIONAL IMPACTS (Env-Wt 313.03(b)(4))

Describe how the project avoids and minimizes impacts to wetlands and other areas of jurisdiction under RSA 482-A, especially those in which there are exemplary natural communities, vernal pools, protected species and habitat, documented fisheries, and habitat and reproduction areas for species of concern, or any combination thereof.

Project proposes crossing at the narrowest section of wetlands to access the buildable portion of a proposed 18.951 acre lot. Access is proposed through an easement in order to facilitate crossing at the narrowest section of wetlands. The proposed building area has been located away from the two wetland areas identified as potential vernal pools.

SECTION I.V - PUBLIC COMMERCE, NAVIGATION, OR RECREATION (Env-Wt 313.03(b)(5))

Describe how the project avoids and minimizes impacts that eliminate, depreciate or obstruct public commerce, navigation, or recreation.

Project is proposed on private property and does not depreciate or obstruct public commerce, navigation, or recreation.

SECTION I.VI - FLOODPLAIN WETLANDS (Env-Wt 313.03(b)(6))

Describe how the project avoids and minimizes impacts to floodplain wetlands that provide flood storage.

Wetlands are not associated with a waterway or floodplains. Wetlands are palustrine.

SECTION I.VII - RIVERINE FORESTED WETLAND SYSTEMS AND SCRUB-SHRUB – MARSH COMPLEXES (Env-Wt 313.03(b)(7))

Describe how the project avoids and minimizes impacts to natural riverine forested wetland systems and scrub-shrub – marsh complexes of high ecological integrity.

Project does not propose impacts to riverine or scrub-shrub-marsh complexes.

SECTION I.VIII - DRINKING WATER SUPPLY AND GROUNDWATER AQUIFER LEVELS (Env-Wt 313.03(b)(8))

Describe how the project avoids and minimizes impacts to wetlands that would be detrimental to adjacent drinking water supply and groundwater aquifer levels.

Wetland crossing shall be installed in accordance with standard best management practices. Shared driveways are proposed to minimize amount of impervious surfaces and associated runoff. Site grading has been designed to maintain existing hydrology and not relocate stormwater flows to different watersheds.

SECTION I.IX - STREAM CHANNELS (Env-Wt 313.03(b)(9))

Describe how the project avoids and minimizes adverse impacts to stream channels and the ability of such channels to handle runoff of waters.

Project does not propose any impact to stream channels.

SECTION I.X - SHORELINE STRUCTURES - CONSTRUCTION SURFACE AREA (Env-Wt 313.03(c)(1))

Describe how the project has been designed to use the minimum construction surface area over surface waters necessary to meet the stated purpose of the structures.

Project does not propose any impacts to surface waters or contemplate the construction of shoreline structures.

SECTION I.XI - SHORELINE STRUCTURES - LEAST INTRUSIVE UPON PUBLIC TRUST (Env-Wt 313.03(c)(2))

Describe how the type of construction proposed is the least intrusive upon the public trust that will ensure safe docking on the frontage.

Project does not propose any impacts to surface waters or contemplate the construction of shoreline structures.

SECTION I.XII - SHORELINE STRUCTURES – ABUTTING PROPERTIES (Env-Wt 313.03(c)(3))

Describe how the structures have been designed to avoid and minimize impacts on ability of abutting owners to use and enjoy their properties.

Project does not propose any impacts to surface waters or contemplate the construction of shoreline structures.

SECTION I.XIII - SHORELINE STRUCTURES – COMMERCE AND RECREATION (Env-Wt 313.03(c)(4))

Describe how the structures have been designed to avoid and minimize impacts to the public's right to navigation, passage, and use of the resource for commerce and recreation.

Project does not propose any impacts to surface waters or contemplate the construction of shoreline structures.

SECTION I.XIV - SHORELINE STRUCTURES – WATER QUALITY, AQUATIC VEGETATION, WILDLIFE AND FINFISH HABITAT (Env-Wt 313.03(c)(5))

Describe how the structures have been designed, located, and configured to avoid impacts to water quality, aquatic vegetation, and wildlife and finfish habitat.

Project does not propose any impacts to surface waters or contemplate the construction of shoreline structures.

SECTION I.XV - SHORELINE STRUCTURES – VEGETATION REMOVAL, ACCESS POINTS, AND SHORELINE STABILITY (Env-Wt 313.03(c)(6))

Describe how the structures have been designed to avoid and minimize the removal of vegetation, the number of access points through wetlands or over the bank, and activities that may have an adverse effect on shoreline stability.

Project does not propose any impacts to surface waters or contemplate the construction of shoreline structures.

PART II: FUNCTIONAL ASSESSMENT
REQUIREMENTS Ensure that project meets the requirements of Env-Wt 311.10 regarding functional assessment (Env-Wt 311.04(j); Env-Wt 311.10).
FUNCTIONAL ASSESSMENT METHOD USED: US ACOE - Highway Method
NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT: KENNETH M. ROBINSON, C.W.S.
DATE OF ASSESSMENT: 12/12/22
Check this box to confirm that the application includes a NARRATIVE ON FUNCTIONAL ASSESSMENT: ☒
For minor or major projects requiring a standard permit without mitigation, the applicant shall submit a wetland evaluation report that includes completed checklists and information demonstrating the RELATIVE FUNCTIONS AND VALUES OF EACH WETLAND EVALUATED. Check this box to confirm that the application includes this information, if applicable: ☒ Note: The Wetlands Functional Assessment worksheet can be used to compile the information needed to meet functional assessment requirements.

AVOIDANCE AND MINIMIZATION CHECKLIST

Water Division/Land Resources Management
Wetlands Bureau

Check the Status of your Application

RSA/Rule: RSA 482-A/ Env-Wt 311.07(c)

This checklist can be used in lieu of the written narrative required by Env-Wt 311.07(a) to demonstrate compliance with requirements for Avoidance and Minimization (A/M), pursuant to RSA 482-A:1 and Env-Wt 311.07(c).

For the construction or modification of non-tidal shoreline structures over areas of surface waters without wetland vegetation, complete only Sections 1, 2, and 4 (or the applicable sections in Attachment A: Minor and Major Projects (NHDES-W-06-013).

The following definitions and abbreviations apply to this worksheet:

- "A/M BMPs" stands for Wetlands Best Management Practice Techniques for Avoidance and Minimization dated 2019, published by the New England Interstate Water Pollution Control Commission (Env-Wt 102.18).
- "Practicable" means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes (Env-Wt 103.62).

SECTION 1 - CONTACT/LOCATION INFORMATION	
APPLICANT LAST NAME, FIRST NAME, M.I.: San-Ken Homes, Inc	
PROJECT STREET ADDRESS: Barrett Hill Road	PROJECT TOWN: Wilton
TAX MAP/LOT NUMBER: A/44-1	

SECTION 2 - PRIMARY PURPOSE OF THE PROJECT		
Env-Wt 311.07(b)(1)	Indicate whether the primary purpose of the project is to construct a water-access structure or requires access through wetlands to reach a buildable lot or the buildable portion thereof.	☒ Yes ☐ No
If you answered "no" to this question, describe the purpose of the "non-access" project type you have proposed:		

SECTION 3 - A/M PROJECT DESIGN TECHNIQUES Check the appropriate boxes below in order to demonstrate that these items have been considered in the planning of the project. Use N/A (not applicable) for each technique that is not applicable to your project.		
Env-Wt 311.07(b)(2)	For any project that proposes new permanent impacts of more than one acre or that proposes new permanent impacts to a Priority Resource Area (PRA), or both, whether any other properties reasonably available to the applicant, whether already owned or controlled by the applicant or not, could be used to achieve the project's purpose without altering the functions and values of any jurisdictional area, in particular wetlands, streams, and PRAs.	☐ Check ☒ N/A
Env-Wt 311.07(b)(3)	Whether alternative designs or techniques, such as different layouts, construction sequencing, or alternative technologies could be used to avoid impacts to jurisdictional areas or their functions and values.	☒ Check ☐ N/A
Env-Wt 311.07(b)(4) Env-Wt 311.10(c)(1) Env-Wt 311.10(c)(2)	The results of the functional assessment required by Env-Wt 311.03(b)(10) were used to select the location and design for the proposed project that has the least impact to wetland functions.	☒ Check ☐ N/A
Env-Wt 311.07(b)(4) Env-Wt 311.10(c)(3)	Where impacts to wetland functions are unavoidable, the proposed impacts are limited to the wetlands with the least valuable functions on the site while avoiding and minimizing impacts to the wetlands with the highest and most valuable functions.	☒ Check ☐ N/A
Env-Wt 313.01(c)(1) Env-Wt 313.01(c)(2) Env-Wt 313.03(b)(1)	No practicable alternative would reduce adverse impact on the area and environments under the department's jurisdiction and the project will not cause random or unnecessary destruction of wetlands.	☒ Check ☐ N/A
Env-Wt 313.01(c)(3)	The project would not cause or contribute to the significant degradation of waters of the state or the loss of any PRAs.	☒ Check ☐ N/A
Env-Wt 313.03(b)(3) Env-Wt 904.07(c)(8)	The project maintains hydrologic connectivity between adjacent wetlands or stream systems.	☒ Check ☐ N/A
Env-Wt 311.10 A/M BMPs	Buildings and/or access are positioned away from high function wetlands or surface waters to avoid impact.	☒ Check ☐ N/A
Env-Wt 311.10 A/M BMPs	The project clusters structures to avoid wetland impacts.	☒ Check ☐ N/A
Env-Wt 311.10 A/M BMPs	The placement of roads and utility corridors avoids wetlands and their associated streams.	☒ Check ☐ N/A
A/M BMPs	The width of access roads or driveways is reduced to avoid and minimize impacts. Pullouts are incorporated in the design as needed.	☐ Check ☒ N/A
A/M BMPs	The project proposes bridges or spans instead of roads/driveways/trails with culverts.	☐ Check ☒ N/A

A/M BMPs	The project is designed to minimize the number and size of crossings, and crossings cross wetlands and/or streams at the narrowest point.	☒ Check ☐ N/A
Env-Wt 500 Env-Wt 600 Env-Wt 900	Wetland and stream crossings include features that accommodate aquatic organism and wildlife passage.	☒ Check ☐ N/A
Env-Wt 900	Stream crossings are sized to address hydraulic capacity and geomorphic compatibility.	☒ Check ☐ N/A
A/M BMPs	Disturbed areas are used for crossings wherever practicable, including existing roadways, paths, or trails upgraded with new culverts or bridges.	☐ Check ☒ N/A
SECTION 4 - NON-TIDAL SHORELINE STRUCTURES		
Env-Wt 313.03(c)(1)	The non-tidal shoreline structure has been designed to use the minimum construction surface area over surfaces waters necessary to meet the stated purpose of the structure.	☐ Check ☒ N/A
Env-Wt 313.03(c)(2)	The type of construction proposed for the non-tidal shoreline structure is the least intrusive upon the public trust that will ensure safe navigation and docking on the frontage.	☐ Check ☒ N/A
Env-Wt 313.03(c)(3)	The non-tidal shoreline structure has been designed to avoid and minimize impacts on the ability of abutting owners to use and enjoy their properties.	☐ Check ☒ N/A
Env-Wt 313.03(c)(4)	The non-tidal shoreline structure has been designed to avoid and minimize impacts to the public's right to navigation, passage, and use of the resource for commerce and recreation.	☐ Check ☒ N/A
Env-Wt 313.03(c)(5)	The non-tidal shoreline structure has been designed, located, and configured to avoid impacts to water quality, aquatic vegetation, and wildlife and finfish habitat.	☐ Check ☒ N/A
Env-Wt 313.03(c)(6)	The non-tidal shoreline structure has been designed to avoid and minimize the removal of vegetation, the number of access points through wetlands or over the bank, and activities that may have an adverse effect on shoreline stability.	☐ Check ☒ N/A

FIELDSTONE
LAND CONSULTANTS, PLLC
Surveying ⌖ Engineering
Land Planning ⌖ Septic Designs
206 Elm Street, Milford, NH 03055 - Phone: 603-672-5456 - Fax: 603-413-5456
www.FieldstoneLandConsultants.com

December 6, 2022

RE: Barrett Hill Road
Wilton, NH 03086
Tax Map A, Lot 44-1

To Whom It May Concern:

The undersigned being the owner of the above referenced lot hereby authorizes Fieldstone Land Consultants, PLLC to act as their agent in filing and seeking all necessary local, state, and federal approvals.

Very truly yours,

Signature: _____ Print: Kenneth Lehtonen II Date 12/14/2022

3029.01

FIELDSTONE
LAND CONSULTANTS, PLLC
Surveying ⌖ Engineering
Land Planning ⌖ Septic Designs
206 Elm Street, Milford, NH 03055 - Phone: 603-672-5456 - Fax: 603-413-5456
www.FieldstoneLandConsultants.com

December 8, 2022

RE: San-Ken Homes, Inc.
Barrett Hill Road
NH DES Wetlands Bureau – Dredge and Fill Permit Application
Map A, Lot 44-1

Project Overview:

The subject property is identified by the Town of Wilton as parcel A-44-1, consists of approximately 45.423 acres of land, and has frontage along Barrett Hill Road. The property is currently undeveloped. A (7) seven lot subdivision is currently being reviewed by the Wilton Planning Board. The layout of the development has been designed to avoid and minimize any wetland and wetland buffer impacts to the greatest extent practicable. Through multiple design revisions we have been able to completely avoid any impact the Watershed Overlay Zoning District and reduce the need for wetlands crossings to a single location. The single crossing locations is necessary due to the fact that a large portion of upland area, approximately 13 acres, is isolated by wetlands transecting the lot with no other way to access this area of the property without crossing wetlands. While several locations could have been chosen to provide access to the rear of the property, our proposed development selects one crossing area located at the narrowest portion of wetland with the least amount of impact. It is important to consider that even without the proposed subdivision, a wetlands crossing is necessary to obtain access to the isolated upland areas in the rear of the property.

The proposed use is that of a driveway for a single-family residence, serving one new home. The potential building site is located 300+/- feet south of the crossing and any additional development on the property is also subject to the Town Regulations. The proposed wetland impact area is 975 sf Total (206 SF of temporary impact and 769 SF of permanent impact) necessary to allow access to the rear of the property where the suitable building area exists. An oversized 36” culvert, embedded with 12” of natural material will be installed per the final driveway plans which will minimize impact to wetlands on site. Headwalls are proposed to minimize impacts associated with grading. Earthen fill over the culvert has been minimized to the greatest degree practicable to maintain structural integrity of the crossing. The vegetative disturbance within the wetland area has been minimized to the greatest extent possible and will not significantly diminish the functions and values of the onsite wetlands.

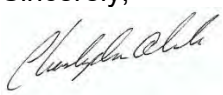
On October 29, 2022 Fieldstone led a site walk with the Town of Wilton Conservation Commission to review the proposed driveway and wetland crossing. The Conservation Commission has written a letter following this site walk that unfortunately contains many inaccuracies and factually incorrect statements. These comments have been included in draft form with this application. The crossing has been designed to meet the state and local engineering requirements, and oversized beyond that required diameter to provide hydraulic connectivity and facilitate embedment. These drainage calculations have been provided to the Town of Wilton as part of the HydroCAD analysis included in the drainage report. All wetland areas have been shown on the plan. Multiple wetland scientists have reviewed the property and a third party hydrogeologic review of the property as part of a watershed delineation was completed by Aries Engineering per the request of the Town of Wilton. During the Town of Wilton Zoning Board of

Adjustment review of the proposed wetland crossing special exception application, the Town of Wilton did not feel additional review of wetland delineation or engineering calculations was necessary. The third-party watershed delineation review has been included with this application. Drainage calculations for the project are based upon proposed final grades, as is standard engineering practice. An additional culvert is proposed along the driveway, as shown on Sheet WT-01. This information was provided to the Town of Wilton prior to the site walk. The Conservation Commission asserts Barrett Hill Road is experiencing a six-year drought. Reports from National Integrated Drought Information System (NIDIS) indicate this is not the case. These reports have been included with this application. The Conservation Commission claims the crossing is proposed for a stream with 4-ft high banks, which is also not the case. The proposed crossing is through palustrine forested wetlands. There are no streams associated with the proposed crossing. Conditions of the proposed crossing are documented in the photographs which accompany this application. Wetlands are classified on three parameters in the State of New Hampshire: hydric soils, hydrophytic vegetation, and hydrology. These parameters do not change based upon seasonal variations in precipitation. The proposed culvert is to be embedded 1-ft and match the existing grade to ensure hydraulic connectivity and maintain existing water velocities through the wetlands. By maintaining existing grade and velocities, conditions resulting in a perched culvert are not applicable. Best management practices shall be followed to ensure the culvert is properly installed and all appropriate erosion control measures are implemented. There is one single-family residential lot is proposed on the large upland area to be accessed via the proposed wetland crossing. This is a very modest development and is a reasonable use in line with the existing use and character of the surrounding residential properties. Regardless of the proposed subdivision, this wetland crossing should still be approved as it is the least impactful means to access a substantial portion of the upland property. The Town of Wilton Zoning Board of Adjustment is aware of the Conservation Commission letter/comments and found them not germane to the required wetland crossing. On November 8, 2022 the Town of Wilton Zoning Board of Adjustment approved the Special Exception application for the proposed wetland crossing.

The subject wetlands are classified as palustrine, forested, broad-leaved deciduous/needle-leaved evergreen, seasonally flooded/saturated (PFO1/4E). Other wetlands on site, located in the southwestern corner of the property are classified as palustrine, open water (POW) and palustrine, scrub-shrub, broad-leaved deciduous/needle-leaved evergreen, semi-permanently flooded (PSS1/4F). The PSS1/4F wetlands are associated with the POW wetlands and form a transition area along the upland/wetland boundary. The primary functions and values associated with all of the wetland classes on site are sediment/toxicant retention and nutrient removal. There are two separate watersheds on this property. The watershed delineation has been shown on the attached plan sets as well as in the third party hydrogeologic engineering review report. The watershed contributing to the proposed wetland crossing is

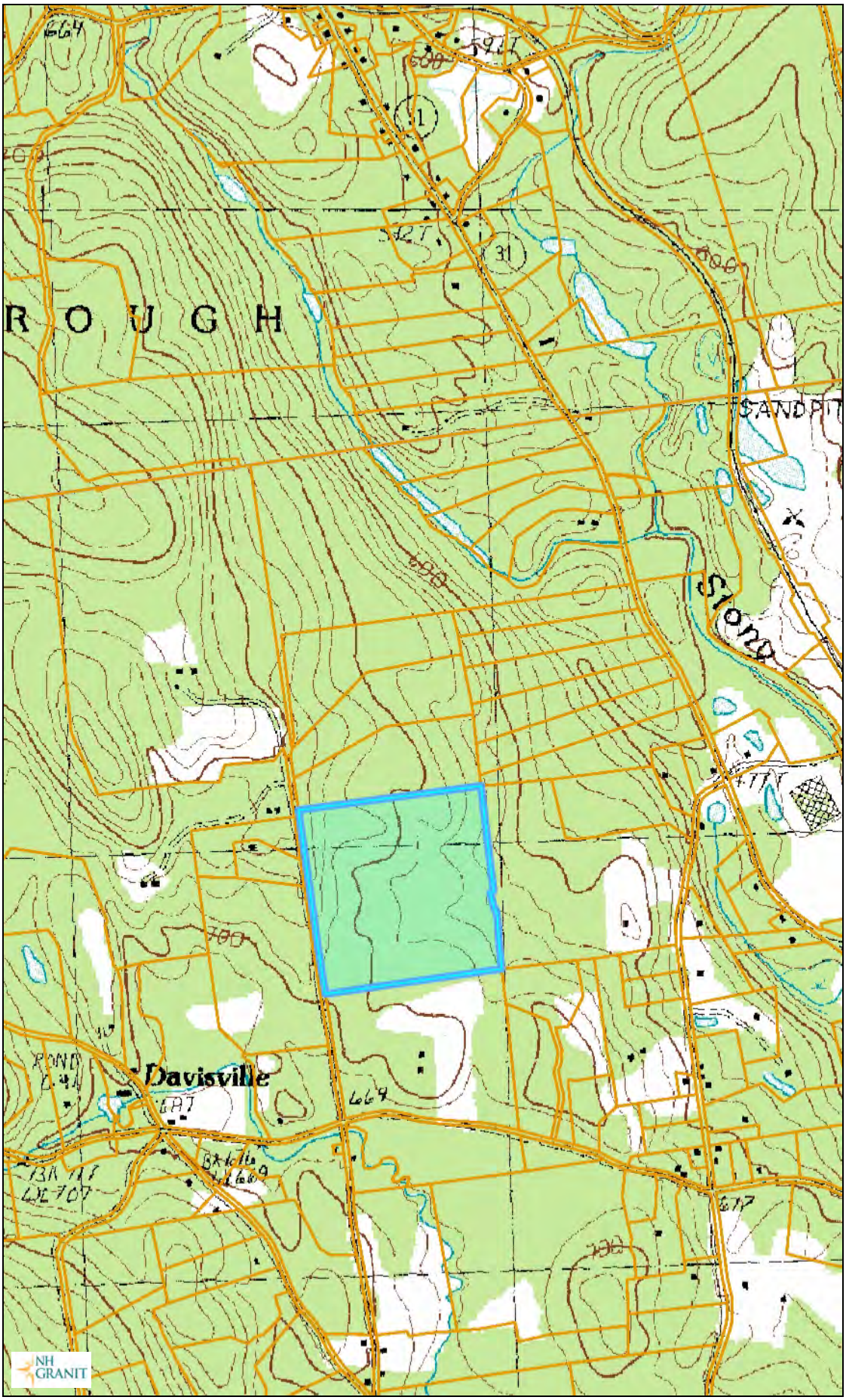
We believe the current proposal provides a practicable alternative with the least total wetland impacts while addressing the applicable design standards. We appreciate your time and as always please do not hesitate to reach out should you have any additional questions or comments.

Sincerely,



Christopher A. Guida, CSS, CWS
Fieldstone Land Consultants, PLLC

Map A Lot 44-1



Legend

Parcels
- Parcel Polygons
- Attributes for Additional Lines

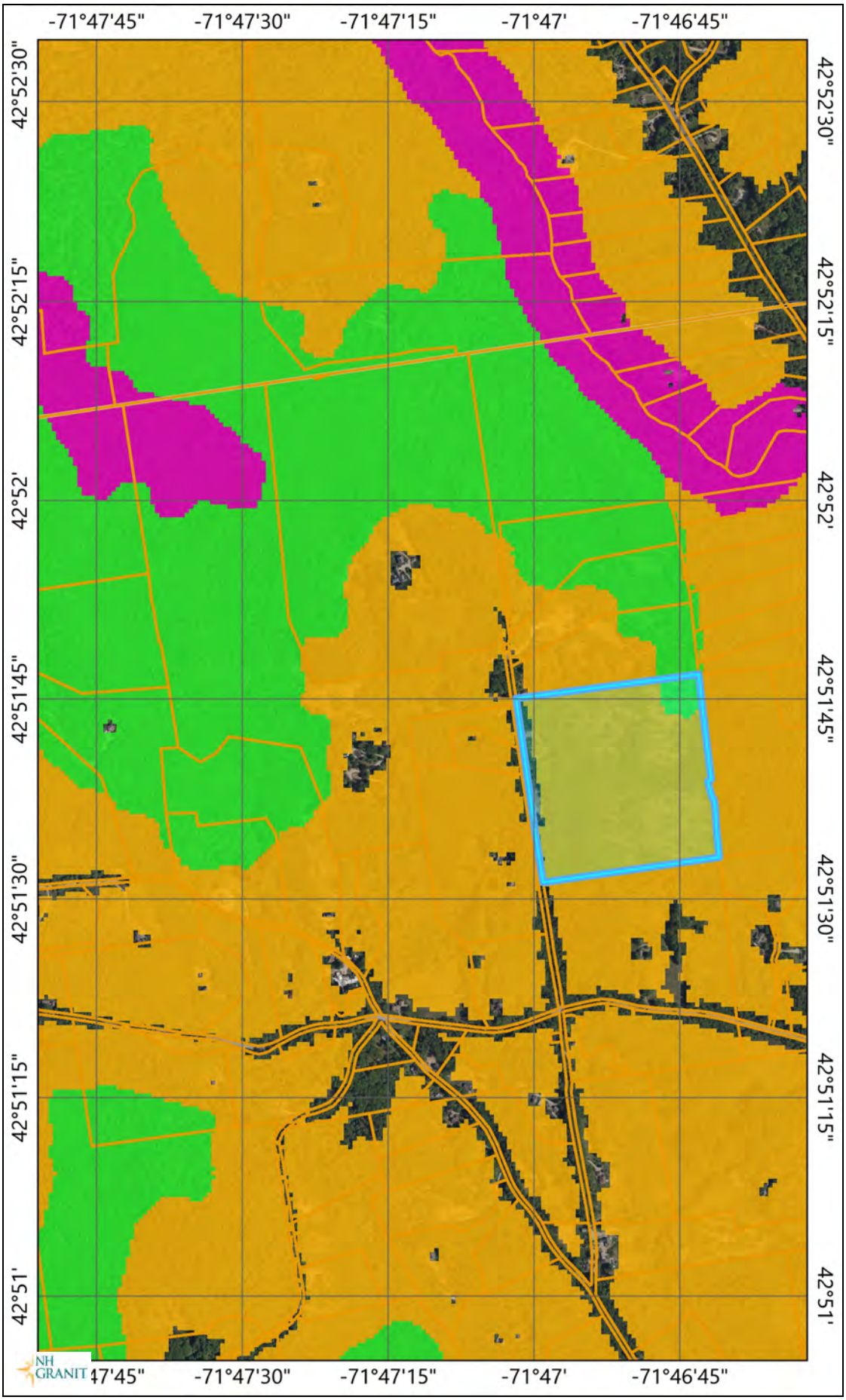
State
County
City/Town

Map Scale
1: 12,988

Map Generated: 12/6/2022

Notes

NHFG WAP 2020



Legend

Parcels
- Parcel Polygons
- Attributes for Additional Lines

State

County

City/Town

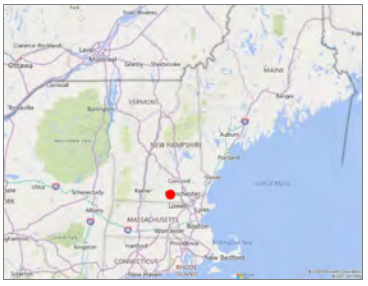
WAP 2020: Highest Ranked Wildlife Habitat
- 1 Highest Ranked Habitat in NH
- 2 Highest Ranked Habitat in Regior
- 3 Supporting Landscape

Map Scale

1: 12,988

Map Generated: 12/12/2022

Notes



MATCH SHEET B
MATCH SHEET C
MATCH SHEET D
MATCH LINE
COLLINS RD
OLD COUNTY FARM RD
OLD COUNTY FARM CEMETERY
STILES FARM RD
BURTON HWY
DAVISVILLE RD
ISAAC FRYE HWY
HEARTHSTONE DR
BARRETT HILL RD
STAGECOACH RD
BENNINGTON BATTLE TRL (CLASS VI)
STONEY BROOK
POND
BROOK
MILL
1 40.30 Ac
2 4.00 Ac
3 37.00 Ac
4-1 6.20 Ac
4-2 40.30 Ac
4-3 0.57 Ac
5 7.40 Ac
6 60.90 Ac
7 0.30 Ac
8 78.60 Ac
9 56.80 Ac
10 4.20 Ac
11 2.30 Ac
12 6.40 Ac
13 7.50 Ac
14 11.80 Ac
15 6.70 Ac
16 8.50 Ac
17 10.10 Ac
18 1.30 Ac
19 2.50 Ac
20 4.00 Ac
21-1 6.41 Ac
21-2 17.41 Ac
22 7.10 Ac
23 2.40 Ac
24 0.30 Ac
26 0.80 Ac
27 25.00 Ac
28 4.50 Ac
29 24.00 Ac
30 12.80 Ac
31 30.90 Ac
31-1 11.70 Ac
31-2-1 25.02 Ac
31-2-2 23.94 Ac
31-2-3 23.32 Ac
32 116.00 Ac
34 78.80 Ac
35 40.00 Ac
36 12.70 Ac
37 14.10 Ac
38 15.80 Ac
39 95.00 Ac
40 5.00 Ac
41 2.89 Ac
42 23.25 Ac
43 7.60 Ac
44 32.10 Ac
44-1 45.70 Ac
45 11.80 Ac
46 3.00 Ac
47-1 12.60 Ac
47-2 16.30 Ac
47-3 26.50 Ac
P/O 47-1
48-1 10.12 Ac
48-2 2.28 Ac
49 10.00 Ac
50 0.10 Ac
51 2.50 Ac
52 2.40 Ac
53 0.50 Ac
54 1.90 Ac
55 4.50 Ac
56 1.00 Ac
57 5.10 Ac
58-1 5.00 Ac
58-2 8.40 Ac
58-3 9.20 Ac
58-4 5.10 Ac
58-5 18.40 Ac
58-6 28.48 Ac
59-1 25.80 Ac
59-2 94.30 Ac
61 11.02 Ac
62 1.22 Ac
63 1.30 Ac
64 19.81 Ac
65 2.20 Ac
65-1 1.90 Ac
67 7.58 Ac
67-1 13.10 Ac
68 31.00 Ac
69 12.00 Ac
70 8.20 Ac
71 293.60 Ac
P/O 71
71-1 14.70 Ac
72 170.00 Ac
73 59.00 Ac
74 3.00 Ac
75 16.20 Ac
76 136.50 Ac
P/O 76
77 1.70 Ac
78 6.60 Ac
79 23.20 Ac
80 12.60 Ac

For Tax Assessment Purposes
Not to be Used for Conveyances

Zoning Lines Depicted are
Unofficial and Approximate

Prepared by:
Nashua Regional Planning Commission
Merrimack, New Hampshire

NRPC
September 1, 2016

1 inch = approx. 400 feet
Scale Applies to Paper Size ARCH D
5 2.5 0 5 Miles

Parcel	Cemetery
Old Tract Lines	Local Road
Building	Private Road
Leader Line	Class VI Road
Tie In	
Lake/Pond	
Swamp/Marsh	
Stream/River	

7.89	Area
123.45	Dimension
25-64	Lot Number

TAX MAP
TOWN OF WILTON
HILLSBOROUGH COUNTY
NEW HAMPSHIRE

Map A

For Tax Assessment Purposes
Not to be Used for Conveyances

Zoning Lines Depicted are
Unofficial and Approximate

Prepared by:
Nashua Regional Planning Commission
Merrimack, New Hampshire

NRPC
September 1, 2016

1 inch = approx. 400 feet
Scale Applies to Paper Size ARCH D
5 2.5 0 5 Miles

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Old Tract Lines	Local Road
Building	Private Road
Leader Line	Class VI Road
Tie In	

Lake/Pond
Swamp/Marsh
Stream/River

7.89	Area
123.45	Dimension
25-64	Lot Number

TAX MAP
TOWN OF WILTON
HILLSBOROUGH COUNTY
NEW HAMPSHIRE

Map B

FIELDSTONE
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206 Elm Street, Milford, NH 03055 - Phone: 603-672-5456 - Fax: 603-413-5456
www.FieldstoneLandConsultants.com

December 12, 2022

FLC#3209.01 / KMR

List of Abutters
Tax Map A Lot 44-1
Wilton, New Hampshire

Map A Lot 44-1
San-Ken Homes, Inc.
586 Turnpike Road
New Ipswich, NH 03071

Map A Lot 38
Rachelle Newman
93 Barrett Hill Road
Wilton, NH 03086

Map A Lot 44
Occhialini 2015 Family Trust
189 Burton Highway
Wilton, NH 03086

Map B Lot 144
Highfields Revocable Trust
1020 Isaac Frye Highway
Wilton, NH 03086

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Land Planning ⌖ Septic Designs
206 Elm Street, Milford, NH 03055 - Phone: 603-672-5456 - Fax: 603-413-5456
www.FieldstoneLandConsultants.com

December 12, 2022

RE: **NH DES Dredge and Fill Permit Application**
Map A Lot 44-1
Barrett Hill Road Wilton, NH 03086
San-Ken Homes, LLC

Dear Abutter:

In compliance with NHDES Wetlands rules you are hereby notified San-Ken Homes, LLC has applied to the New Hampshire Wetland Bureau for a permit to conduct work on the above referenced property, to which you are an abutter.

Plans are on file at this office, and the Town of Wilton upon submission. If you have any questions or comments concerning this application, please contact Christopher A. Guida at Fieldstone Land Consultants, PLLC at 603-672-5456.

If you have any comments relative to this submission, please send them to:

State of New Hampshire - D.E.S.
Wetlands Bureau
P. O. Box 95
Concord, New Hampshire 03302-0095

Sincerely,
FIELDSTONE LAND CONSULTANTS, PLLC

Christopher A. Guida, C.S.S., C.W.S.
Certified Soil &Wetland Scientist

3029.01

3029.01

7021 0950 0000 7640 0658

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Wilton NH 03086

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Certified Mail Fee $4.00	0055 16
$ $0.00	
Extra Services & Fees *(check box, add fee as appropriate)*	
☐ Return Receipt (hardcopy) $ $0.00	
☐ Return Receipt (electronic) $ $0.00	Postmark Here
☐ Certified Mail Restricted Delivery $ $0.00	
☐ Adult Signature Required $ $0.00	
☐ Adult Signature Restricted Delivery $	
Postage $0.60	
$	12/12/2022
Total Postage and Fees $4.60	
$	

Sent To Occhialini 2015 Family Trust
Street and Apt. No., or PO Box No. 189 Burton Highway
City, State, ZIP+4® Wilton NH 03086

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7021 0950 0000 7640 0665

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Wilton NH 03086

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$ $0.00	
Extra Services & Fees *(check box, add fee as appropriate)*	
☐ Return Receipt (hardcopy) $ $0.00	
☐ Return Receipt (electronic) $ $0.00	Postmark Here
☐ Certified Mail Restricted Delivery $ $0.00	
☐ Adult Signature Required $ $0.00	
☐ Adult Signature Restricted Delivery $	
Postage $0.60	
$	12/12/2022
Total Postage and Fees $4.60	
$	

Sent To Highfields Revocable Trust
Street and Apt. No., or PO Box No. 1020 Isaac Frye Highway
City, State, ZIP+4® Wilton NH 03086

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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$ $0.00	
Extra Services & Fees *(check box, add fee as appropriate)*	
☐ Return Receipt (hardcopy) $ $0.00	
☐ Return Receipt (electronic) $ $0.00	Postmark Here
☐ Certified Mail Restricted Delivery $ $0.00	
☐ Adult Signature Required $ $0.00	
☐ Adult Signature Restricted Delivery $	
Postage $0.60	
$	12/12/2022
Total Postage and Fees $4.60	
$	

Sent To Rachelle Newman
Street and Apt. No., or PO Box No. 93 Barrett Hill Rd
City, State, ZIP+4® Wilton NH 03086

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

PHOTO 1
Wetlands to North of Proposed Crossing

12/8/22

PHOTO 2
Proposed Wetland Crossing Area 1

12/8/22

San-Ken Homes, LLC
Barrett Hill Road Wilton, NH

PHOTO 3
Wetland Area to South of Proposed Crossing
12/8/22

PHOTO 4
Upland Area to be Accessed by Crossing
12/8/22

San-Ken Homes, LLC
Barrett Hill Road Wilton, NH

Wetland Function-Value Evaluation Form

Total area of wetland 5 Acres Human made? NO Is wetland part of a wildlife corridor? y or a "habitat island"? -

Adjacent land use Residential / RURAL Distance to nearest roadway or other development 400'

Dominant wetland systems present Palustrine Contiguous undeveloped buffer zone present yes

Is the wetland a separate hydraulic system? NO If not, where does the wetland lie in the drainage basin? bisects watershed Boundary

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. PFO 1/4E

Latitude 42.8598 Longitude -71.7821

Prepared by: KmR Date 12/12/22

Wetland Impact:
Type Perm. 7695F
Temp. 2065F

Evaluation based on:
Office ✓ Field ✓

Corps manual wetland delineation completed? Y ✓ N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	y	1, 2, 8, 13, 14, 15		Glacial Till deposits + areas of shallow ledge
Floodflow Alteration				
Fish and Shellfish Habitat				
Sediment/Toxicant Retention	y	1, 3, 4, 5, 6, 7	y	Slow moving water w/ variable gradient exists
Nutrient Removal	y	2, 3, 5, 7, 10, 11	y	diverse vegetation w/ established wetland buffer
Production Export				
Sediment/Shoreline Stabilization				
Wildlife Habitat				
Recreation				
Educational/Scientific Value				
Uniqueness/Heritage				
Visual Quality/Aesthetics				
ES Endangered Species Habitat				
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland .7Acre Human made? N Is wetland part of a wildlife corridor? y or a "habitat island"? -

Adjacent land use Residential/Rural Distance to nearest roadway or other development 150'

Dominant wetland systems present Palustrine Contiguous undeveloped buffer zone present Partial

Is the wetland a separate hydraulic system? NO If not, where does the wetland lie in the drainage basin? Upper

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. POW

Latitude 428598 Longitude -71.7821

Prepared by: KMR Date 12/12/22

Wetland Impact:
Type NONE Area 0

Evaluation based on:
Office ✓ Field ✓

Corps manual wetland delineation completed? Y ✓ N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	y	1, 2, 8, 13, 14, 15		
Floodflow Alteration	y	2, 3.5, 6, 7, 9, 15	y	Upper area of watershed w/ restricted outlet under Barrett Hill Rd.
Fish and Shellfish Habitat				
Sediment/Toxicant Retention	y	1, 3, 4, 5, 6, 7	y	open/deeper water allows sediments to drop out
Nutrient Removal	y		y	Bordered by wetland + upland vegetation
Production Export				
Sediment/Shoreline Stabilization				
Wildlife Habitat				
Recreation				
Educational/Scientific Value				
Uniqueness/Heritage				
Visual Quality/Aesthetics				
ES Endangered Species Habitat				
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland ~5 acre Human made? N Is wetland part of a wildlife corridor? Y or a "habitat island"? –

Adjacent land use Residential / Rural Distance to nearest roadway or other development 150'

Dominant wetland systems present Palustrine Contiguous undeveloped buffer zone present Partial

Is the wetland a separate hydraulic system? NO If not, where does the wetland lie in the drainage basin? Upper

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. PSS 1/4 F

Latitude 42.8548 Longitude -71.7821

Prepared by: KMR Date 12/12/22

Wetland Impact:
Type NONE Area 0

Evaluation based on:
Office ✓ Field ✓

Corps manual wetland delineation completed? Y ✓ N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	1, 2, 8, 13, 14, 15		Glacial till w/ shallow ledge
Floodflow Alteration				
Fish and Shellfish Habitat				
Sediment/Toxicant Retention	Y	1, 3-7	Y	Slow moving water w/ varied topo gradient
Nutrient Removal	Y	2, 3, 5, 7, 10, 11	Y	Diverse vegetation w/ established buffer
Production Export				
Sediment/Shoreline Stabilization				
Wildlife Habitat				
Recreation				
Educational/Scientific Value				
Uniqueness/Heritage				
Visual Quality/Aesthetics				
ES Endangered Species Habitat				
Other				

Notes:

* Refer to backup list of numbered considerations.

New Hampshire Natural Heritage Bureau
NHB DataCheck Results Letter

To: KEN ROBINSON
206 ELM STREET
MILFORD, NH 03055

From: NH Natural Heritage Bureau

Date: 12/6/2022 (This letter is valid through 12/6/2023)

Re: Review by NH Natural Heritage Bureau of request dated 12/6/2022

Permit Type: Wetland Standard Dredge & Fill - Minor

NHB ID: NHB22-3772

Applicant: KEN ROBINSON

Location: wilton
Tax Map: A, Tax Lot: 44-1
Address: Barrett Hill Road

Proj. Description: Wetland crossing to access rear portion of lot for residential development

The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded occurrences for sensitive species near this project area.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

MAP OF PROJECT BOUNDARIES FOR: NHB22-3772

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord NH 03301

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Hillsborough County, New Hampshire

Local office

New England Ecological Services Field Office

(603) 223-2541
(603) 223-0104

70 Commercial Street, Suite 300

70 Commercial Street, Suite 300
Concord, NH 03301-5094

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Northern Long-eared Bat Myotis septentrionalis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Endangered

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Flowering Plants

NAME	STATUS
Small Whorled Pogonia Isotria medeoloides No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1890	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Dec 1 to Aug 31

Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler *Cardellina canadensis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
Cape May Warbler *Setophaga tigrina* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Jun 1 to Jul 31
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will *Antrostomus vociferus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Evening Grosbeak *Coccothraustes vespertinus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Aug 10
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Prairie Warbler *Dendroica discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

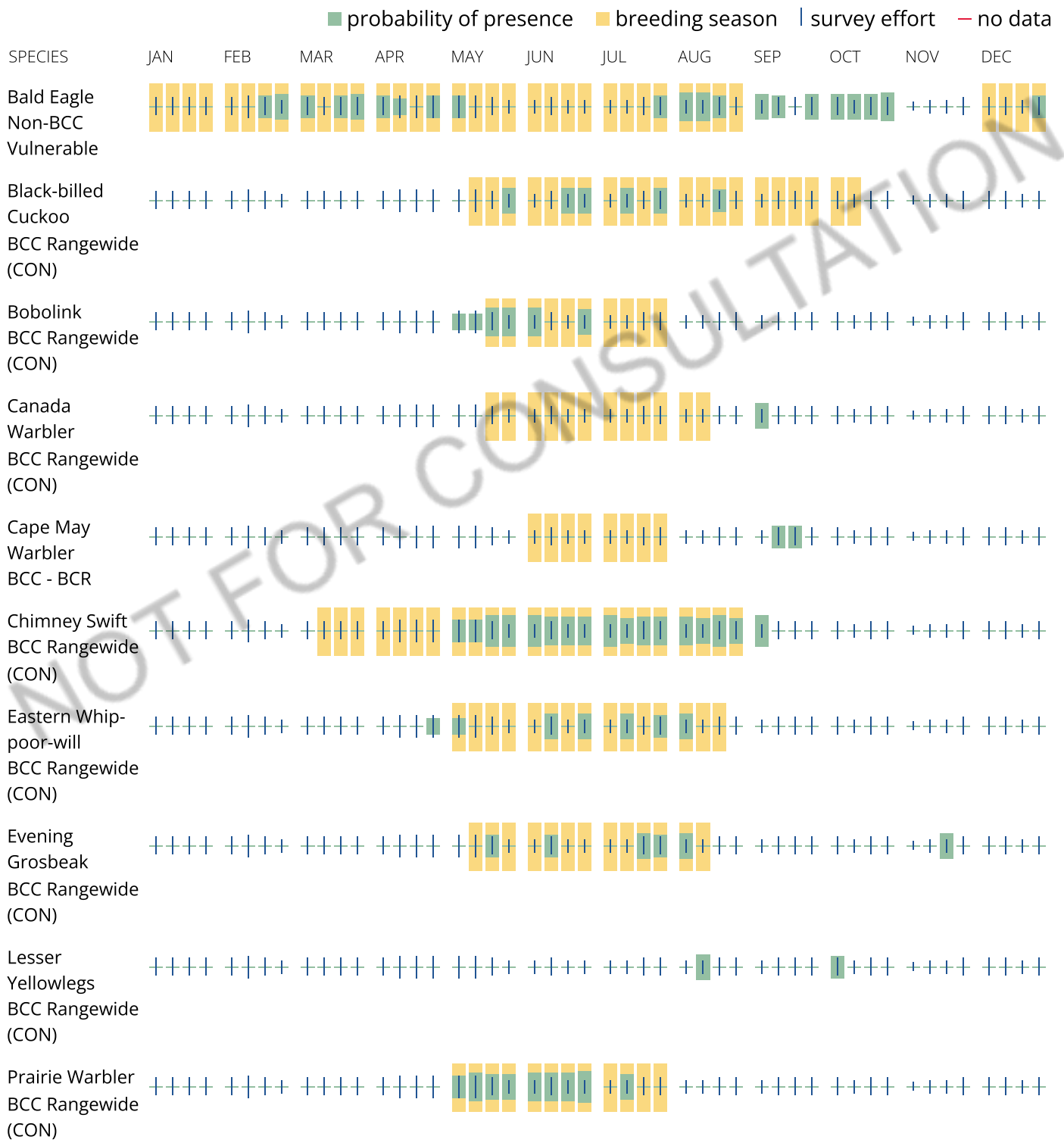
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)

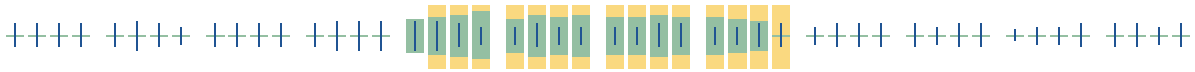
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Wood Thrush
BCC Rangewide
(CON)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird

on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is

the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Coastal Barrier Resources System

Projects within the John H. Chafee Coastal Barrier Resources System (CBRS) may be subject to the restrictions on Federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local Ecological Services Field Office or visit the CBRA Consultations website. The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

There are no known coastal barriers at this location.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the official CBRS maps. The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Please mail the completed form and required material to:

New Hampshire Division of Historical Resources
State Historic Preservation Office
Attention: Review & Compliance
19 Pillsbury Street, Concord, NH 03301-3570

DHR Use Only	
R&C #	_____
Log In Date	____ / ____ / ____
Response Date	____ / ____ / ____
Sent Date	____ / ____ / ____

Request for Project Review by the New Hampshire Division of Historical Resources

☒ This is a new submittal
☐ This is additional information relating to DHR Review & Compliance (R&C) #:

GENERAL PROJECT INFORMATION

Project Title San-Ken Homes, Inc

Project Location Barrett Hill Road

City/Town Wilton Tax Map A Lot # 44-1

NH State Plane - Feet Geographic Coordinates: Easting 953608 Northing 131567
(See RPR Instructions and R&C FAQs for guidance.)

Lead Federal Agency and Contact *(if applicable)* US ACOE
(Agency providing funds, licenses, or permits)
Permit Type and Permit or Job Reference #

State Agency and Contact *(if applicable)* NH DES - Wetlands Bureau

Permit Type and Permit or Job Reference # Dredge & Fill

APPLICANT INFORMATION

Applicant Name San-Ken Homes LLC

Mailing Address 586 Turnpike Road Phone Number

City New Ipswich State NH Zip 03071 Email

CONTACT PERSON TO RECEIVE RESPONSE

Name/Company Ken Robinson / Fieldstone Land Consultants, PLLC

Mailing Address 206 Elm Street Phone Number 6036725456

City Milford State NH Zip 03055 Email KMRobinson@FieldstoneLandConsultants.com

This form is updated periodically. Please download the current form at www.nh.gov/nhdhr/review. *Please refer to the Request for Project Review Instructions for direction on completing this form.* Submit one copy of this project review form for each project for which review is requested. Please include a self-addressed stamped envelope. Project submissions will not be accepted via facsimile or e-mail. This form is required. Review request form must be complete for review to begin. Incomplete forms will be sent back to the applicant without comment. Please be aware that this form may only initiate consultation. For some projects, additional information will be needed to complete the Section 106 review. All items and supporting documentation submitted with a review request, including photographs and publications, will be retained by the DHR as part of its review records. Items to be kept confidential should be clearly identified. For questions regarding the DHR review process and the DHR's role in it, please visit our website at: www.nh.gov/nhdhr/review or contact the R&C Specialist at marika.s.labash@dncr.nh.gov or 603.271.3558.

PROJECTS CANNOT BE PROCESSED WITHOUT THIS INFORMATION

Project Boundaries and Description

- ☒ Attach the Project Mapping ***using EMMIT or relevant portion of a 7.5' USGS Map.*** *(See RPR Instructions and R&C FAQs for guidance.)*
- ☒ Attach a detailed narrative description of the proposed project.
- ☒ Attach a site plan. The site plan should include the project boundaries and areas of proposed excavation.
- ☒ Attach photos of the project area (overview of project location and area adjacent to project location, and specific areas of proposed impacts and disturbances.) *(Informative photo captions are requested.)*
- ☒ A DHR records search must be conducted to identify properties within or adjacent to the project area. Provide records search results via EMMIT or in **Table 1**. *(Blank table forms are available on the DHR website.)* Please note, using EMMIT Guest View for an RPR records search does not provide the necessary information needed for DHR review.
  EMMIT or in-house records search conducted on 12/12/22.

Architecture

Are there any buildings, structures (bridges, walls, culverts, etc.) objects, districts or landscapes within the project area? ☐ Yes ☒ No
If no, skip to Archaeology section. If yes, submit all of the following information:

Approximate age(s):

- ☐ Photographs of ***each*** resource or streetscape located within the project area, with captions, along with a mapped photo key. (Digital photographs are accepted. All photographs must be clear, crisp and focused.)
- ☐ If the project involves rehabilitation, demolition, additions, or alterations to existing buildings or structures, provide additional photographs showing detailed project work locations. (i.e. Detail photo of windows if window replacement is proposed.)

Archaeology

Does the proposed undertaking involve ground-disturbing activity? ☒ Yes ☐ No
If yes, submit all of the following information:

- ☒ Description of current and previous land use and disturbances. Project to impact raw land
- ☒ Available information concerning known or suspected archaeological resources within the project area (such as cellar holes, wells, foundations, dams, etc.)

Please note that for many projects an architectural and/or archaeological survey or other additional information may be needed to complete the Section 106 process.

DHR Comment/Finding Recommendation *This Space for Division of Historical Resources Use Only*

☐ Insufficient information to initiate review. ☐ Additional information is needed in order to complete review.

☐ No Potential to cause Effects ☐ No Historic Properties Affected ☐ No Adverse Effect ☐ Adverse Effect

Comments:_____

_____

_____

_____

_____

_____

If plans change or resources are discovered in the course of this project, you must contact the Division of Historical Resources as required by federal law and regulation.

Authorized Signature: _____ Date: _____

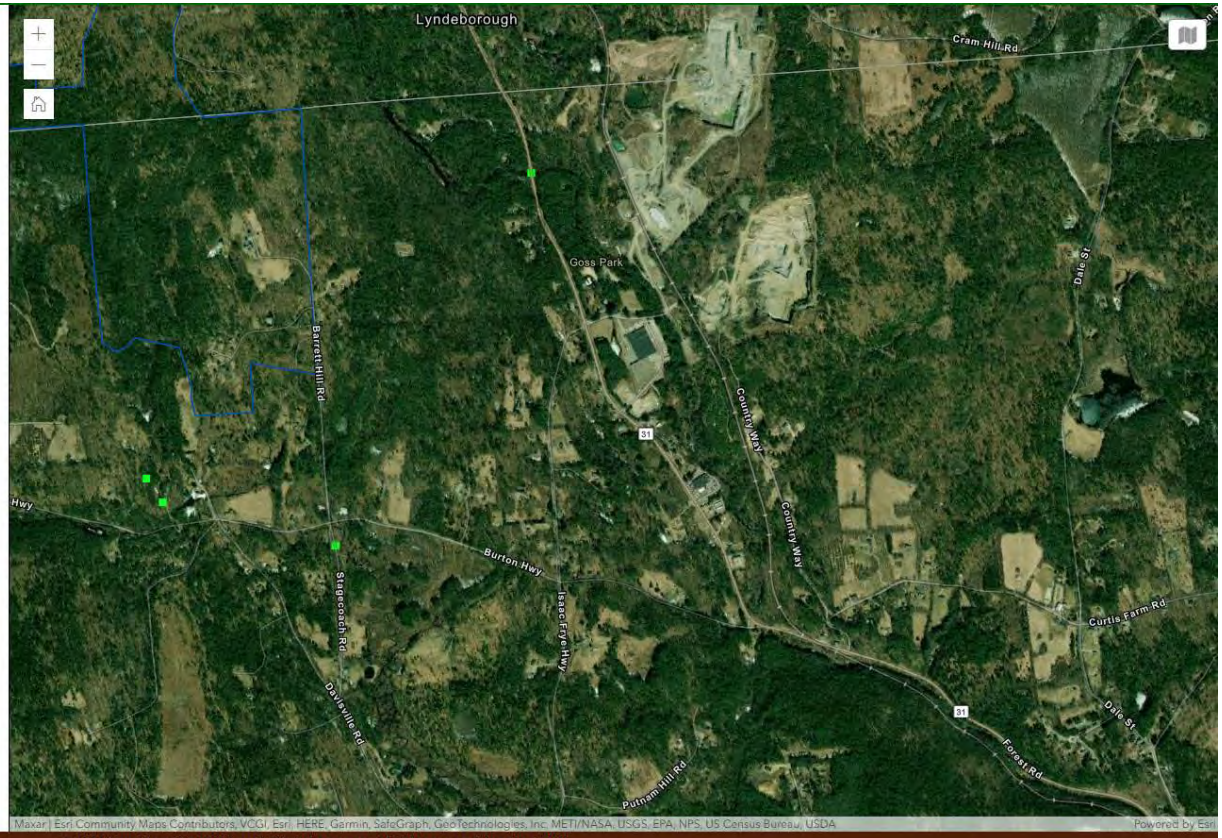
NEW HAMPSHIRE DIVISION OF HISTORICAL RESOURCES

EMMIT

Enhanced Mapping & Management Information Tool

The guest view only has limited components, such as viewing features on the map. For more robust functionality, or to use EMMIT for an RPR records search, please register as a subscriber.

NEW HAMPSHIRE DIVISION OF HISTORICAL RESOURCES



June 28, 2022
File No. 2020-076

Alec MacMartin, Chairperson
Town of Wilton Planning Board
Town Hall - 42 Main Street
PO Box 83, Wilton, NH 03086
aajjmac@tds.net

Re: Watershed District Boundary Location Services
Proposed 8-Lot Subdivision
Tax Lot A-44-1
Wilton, New Hampshire

Dear Mr. MacMartin:

On behalf of the Town of Wilton Planning Board, Aries Engineering, LLC (Aries) prepared this letter report to describe our review and field location of the Town Watershed District Boundary on the property identified as Tax Lot A-44-1 (site), which is located on Barrett Hill Road in Wilton, New Hampshire and the site of an 8-Lot Subdivision proposed by San Ken Homes, Inc. (Applicant) of New Ipswich, New Hampshire.

The findings and conclusions presented herein are not scientific certainties, but rather our professional opinions concerning our evaluation of information and data submitted by others. Aries anticipates variations in actual site conditions beyond those interpreted, and would have to re-evaluate the report conclusions and recommendations if additional site data are made available. Aries conducted this report in general accordance with accepted consulting practices. Aries makes no warranty, either expressed or implied.

OBJECTIVE

As requested by the Planning Board, Aries' objective was to delineate the Town Watershed District Boundary, which is based on both seepage (groundwater) and flow (surface water), in the vicinity of the site property. To accomplish this objective, Aries delineated the inferred Watershed District Boundary, conducted a site visit to observe and verify the inferred Watershed District Boundary, and reviewed available overburden deposits and bedrock formations to assess groundwater flow patterns in the vicinity of the site.

Aries prepared this report on behalf of and for the exclusive use of the Planning Board. This report shall not be transmitted to any other party, or relied upon by any other party, without Aries' written consent. However, Aries acknowledges the report may be conveyed to the Applicant and other Town of Wilton representatives.

SITE DOCUMENTS AND MAPS

In preparing this report, Aries reviewed the following documents and data:

1. A "*Topographic & Soils Plan*", prepared by Fieldstone Land Consultants, PLLC (Fieldstone), of Milford, New Hampshire, dated April 11, 2022;
2. "*Unpublished Surficial Geology of the Greenville Quadrangle, Hillsborough County, New Hampshire*", Source: New Hampshire Department of Environmental Services (NHDES) Publications: https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/geo-194-024000-smof-greenville.pdf
3. "*Geologic Summary for the Surficial Geologic Map of the Greenville Quadrangle*", Source: NHDES Publications: https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/geo-194-024000-smof-greenville-legend.pdf;
4. "*Geologic Map and Structure Sections of the Peterborough Quadrangle, New Hampshire*", geology by Robert C. Greene, 1964, Source: NHDES Publications: https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/geo-054-062500-bmap-peterborough.pdf:
5. "*Bedrock Geologic Map of New Hampshire*", jointly published by the U.S. Department of the Interior and the U.S. Geological Survey (USGS), dated 1997;
6. "*The Wilton, NH Wellhead Protection Area Pilot Project*", prepared by U.S. Environmental Protection Agency (EPA), the New Hampshire Department of Environmental Services (NHDES), and the Town of Wilton, dated October 1993; and
7. Geographic Information System (GIS) data provided by New Hampshire Geographically Referenced Analysis and Information Transfer System (NH GRANIT), which is maintained by University of New Hampshire and the NH Office of Strategic Initiatives.

WATERSHED DELINEATION

Aries' delineation of the Town Watershed District Boundary involved the following general methods:

1. Aries initially mapped the watershed boundary upstream from the outlets of the Old Wilton Reservoir and New Wilton Reservoir using the USGS Stream Stats online watershed analysis tool.
2. Aries then used 2011-2012 Light Detection and Ranging (LIDAR) Bare Earth Digital Elevation Model (DEM) imagery data obtained from the NH GRANIT to develop 1-foot ground surface elevation contours for the site area. The elevations are based on the North American Vertical Datum of 1988 (NAVD88), while site features were georeferenced to the NH State Plane Coordinate System, which is based on the North American Datum of 1983 (NAD83). LIDAR technology has been proven to provide a vertical accuracy of +/- 6 inches.

3. Aries then used the 1-foot contour mapping to refine and adjust the Watershed District Boundary within approximately 1,000 feet of the site property.

Figure 1 depicts the Watershed District Boundary, which encompasses an area of approximately 5,401 acres surrounding the Old Wilton Reservoir's watershed and approximately 243 acres surrounding the New Wilton Reservoir's watershed. A detail plan of Aries' 1-foot contours in the vicinity of the Watershed District Boundary and the site are depicted on attached Figure 2, while an overlay of the Watershed District Boundary on the Fieldstone *Topographic & Soils Plan* is provided on Figure 3.

SITE WALK

On June 17, 2022, Aries conducted a site walk with the Applicant's wetland scientist, Mr. Chris Guida, CSS, CWS, and Town Planning Board members, Alec MacMartin and Shannen Coffey, to observe site conditions and field locate the Watershed District boundary based on observed site topography and Aries' GIS mapping of the Watershed District Boundary.

During the site walk, Aries used a hand-held global positioning system (GPS) device to display site area topography and locate the Watershed District Boundary. During the site walk, there was general consensus that Aries' Watershed District Boundary was generally consistent with the boundary depicted by Fieldstone, with the exception of the divergence noted in the field in the open area along the Barrett Hill Road, as depicted on Figure 3.

SITE GEOLOGY

Overlays of site bedrock and surficial geology maps for the site area are respectively provided on attached Figures 4 and 5. According to 1997 Bedrock Geologic Map of New Hampshire, jointly published by the U.S. Department of the Interior and the U.S. Geological Survey (USGS) (Lyons et. Al., 1997), bedrock underlying the site is identified as:

1. The Upper part of Rangeley Formation (Sru), comprised of pelitic schist and metasandstone, with rusty weathering, and local coarse grained metasandstone lentils; calc silicate pods common; minor coticule. The *Geologic Map and Structure Sections of the Peterborough Quadrangle, New Hampshire*, dated 1964, (depicted on Figure 4), describe site-area bedrock as the Peterborough Member of the Littleton Formation, which is similarly comprised of fine- to coarse-grains mica schists with occasional thin beds of lime-silicate granulite and biotite granulite; and
2. The Spaulding Tonalite (Ds1–6), formerly known as the Spaulding Quartz Diorite (sqd), which is composed of weakly foliated to non-foliated, spotted biotite quartz diorite, tonalite, granodiorite, and granite.

Geologic faults are depicted to the west and east of the site property, but not in the vicinity of the site property.

The surficial geologic map of Greenville, New Hampshire depicts several geologic features of glacial origin, including:

1. Glacial Till, generally comprised of dense, well-graded mixtures of gravel, sand, silt and clay of varying percentages, with general low permeability.
2. Elongated drumoidal hills with a north, northwesterly axis;
3. Melt water channels depicted by flow arrows in Figure 5; and
4. Areas of bedrock outcrops located along the southern site property boundary; and
5. Glacial stream alluvial deposits located to the south of the site.

In general, site overburden deposits, comprised glacial till, and bedrock formations reported for the site vicinity are anticipated to be of low permeability and not likely to be considered significant aquifers. In the absence of highly permeable soils or bedrock structural features, Aries anticipates that groundwater flow in the site area is unlikely to flow across identified watershed boundaries.

CONCLUSIONS

Aries considers the depicted Watershed District Boundary on Figures 2 and 3 to be representative of the hydrogeologic divide for the Watershed District Boundary that is based on both groundwater seepage and surface water flow.

Please contact me at (603) 228-0008 if you have any questions regarding this finding.

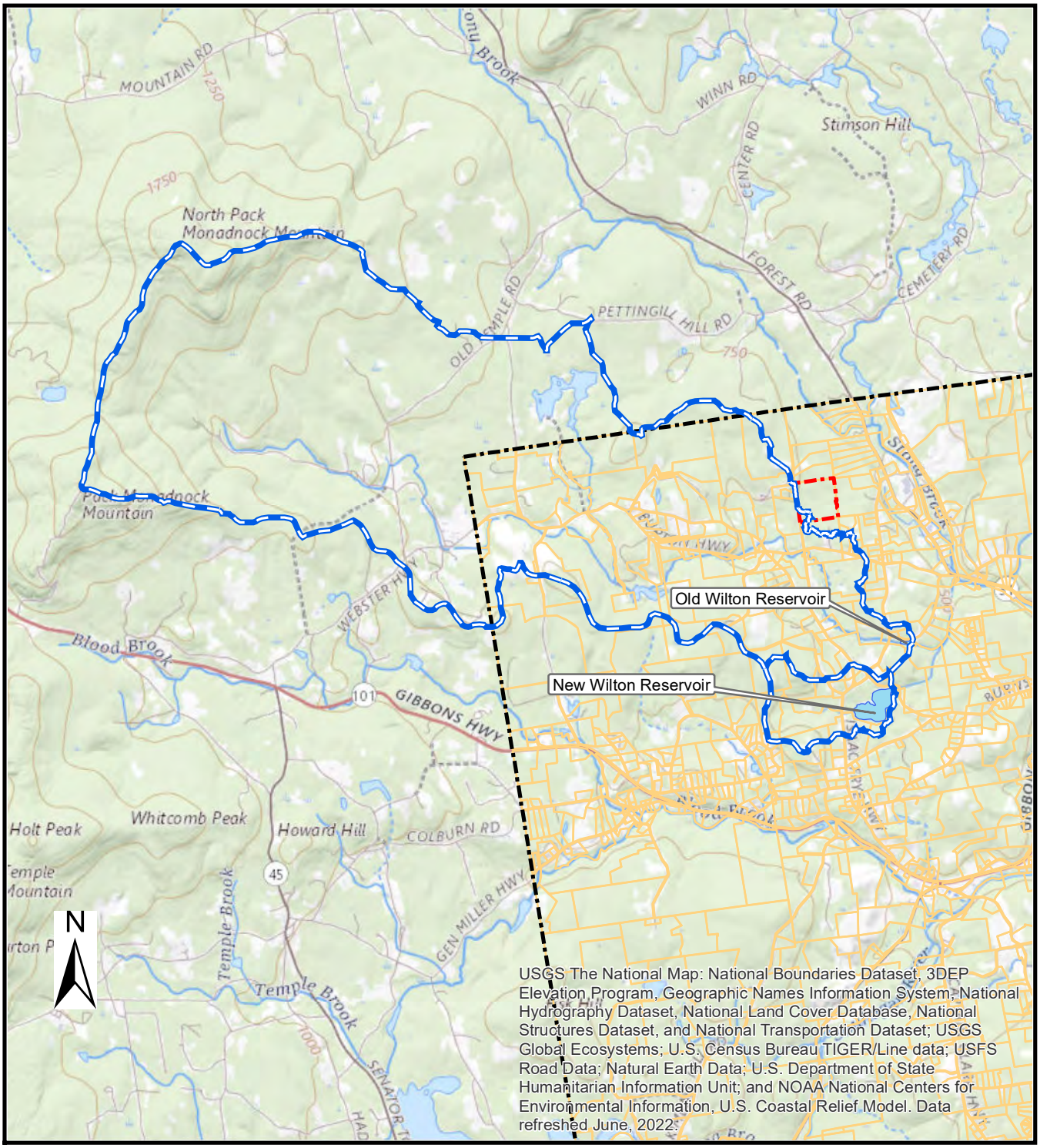
Sincerely,
Aries Engineering, LLC

George C. Holt, P.G.
Principal Hydrogeologist

Kathryn A. Ward, P.E.
Principal Engineer

GCH:pj

Attachments: Figure 1 – Watershed Boundary Plan
Figure 2 – Topographic Detail Plan
Figure 3 – Fieldstone Overlay Plan
Figure 4 – Area Bedrock Geology Map
Figure 5 – Area Surficial Geology Map



Legend

- Site Boundary
- WIlton Town Boundary
- Wilton Reservoirs
- Wilton NH Tax Parcels
- Approximate Watershed District Boundary

1 0.5 0 1 2 Miles

Aries Project # 2022-076
File # 2022-076(1)06.22.mxd

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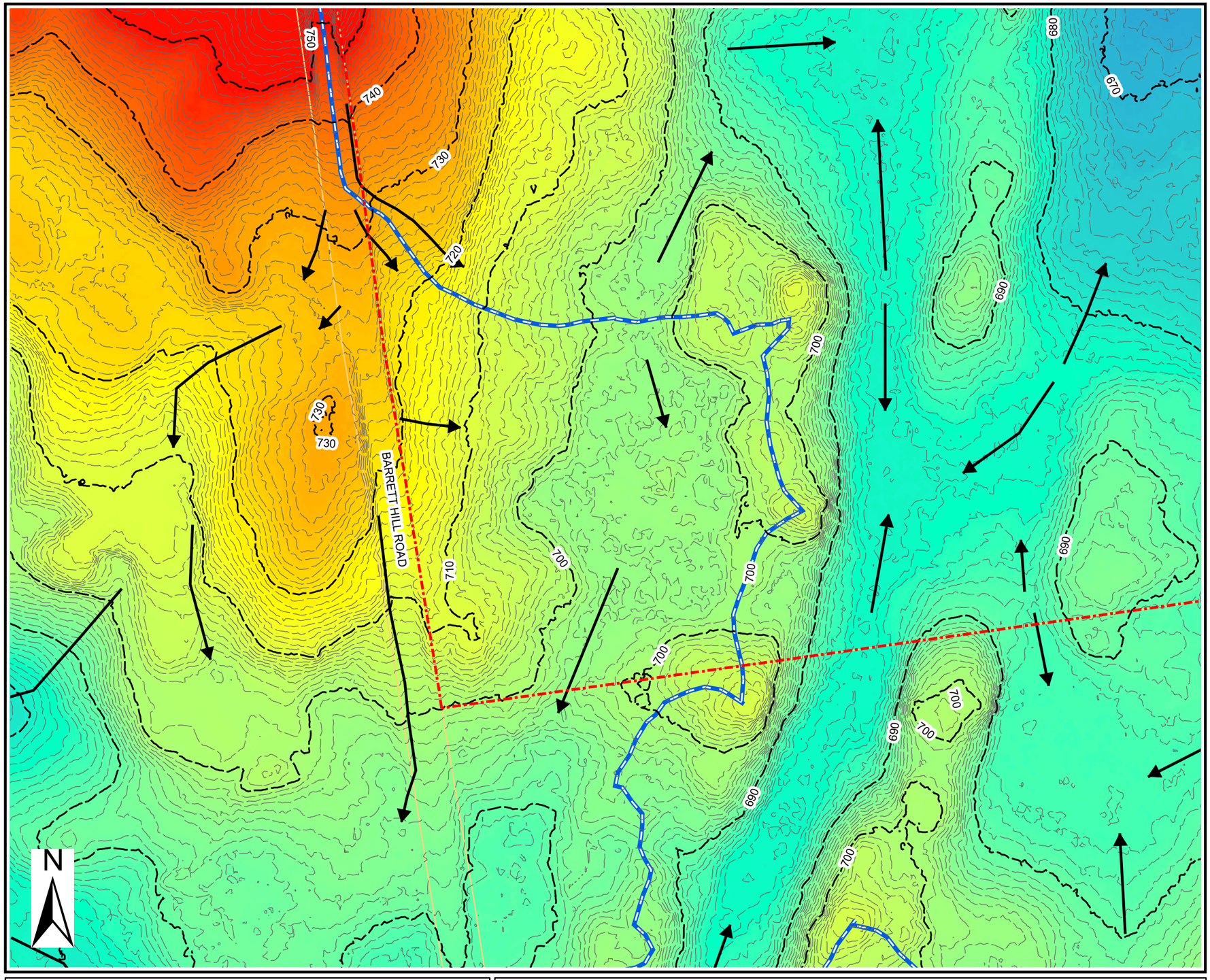
LOT A-44-1
WILTON, NEW HAMPSHIRE

WATERSHED BOUNDARY PLAN

JUNE 2022 FIGURE 1



NOTES:

1. Plan prepared from: an overlay of a "Topographic & Soil Plan", prepared by Fieldstone Land Consultants, PLLC, dated 4/11/22; and Geographic Information System (GIS) data and basemaps provided by the New Hampshire Geographically Referenced Analysis and Information Transfer System (NH GRANIT) maintained by the University of New Hampshire and the NH Office of Strategic Initiatives.

2. Site boundary and building locations are based on an overlay of the site features on GIS data. Therefore, all site features are approximately located.

3. This plan is not to be used for survey, building or boundary purposes.

4. Ground surface elevations based on 2011-2012 Light Detection and Ranging (LIDAR) Bare Earth Digital Elevation Model (DEM) imagery data obtained from the NH GRANIT. Elevations are based on the North American Vertical Datum of 1988 (NAVD88).

Legend

- Site Boundary
- Surface Water Flow Direction
- Minor 1-Foot Contour
- 10-Foot Contour
- Delineated Watershed District Boundary
- Wilton Tax Parcels

LIDAR Groundsurface Elevation in Feet

High : 750

Low : 650

0 50 100 200 300 400 Feet

Aries Project # 2022-067
File # 2022-076(2)06.22.MXD

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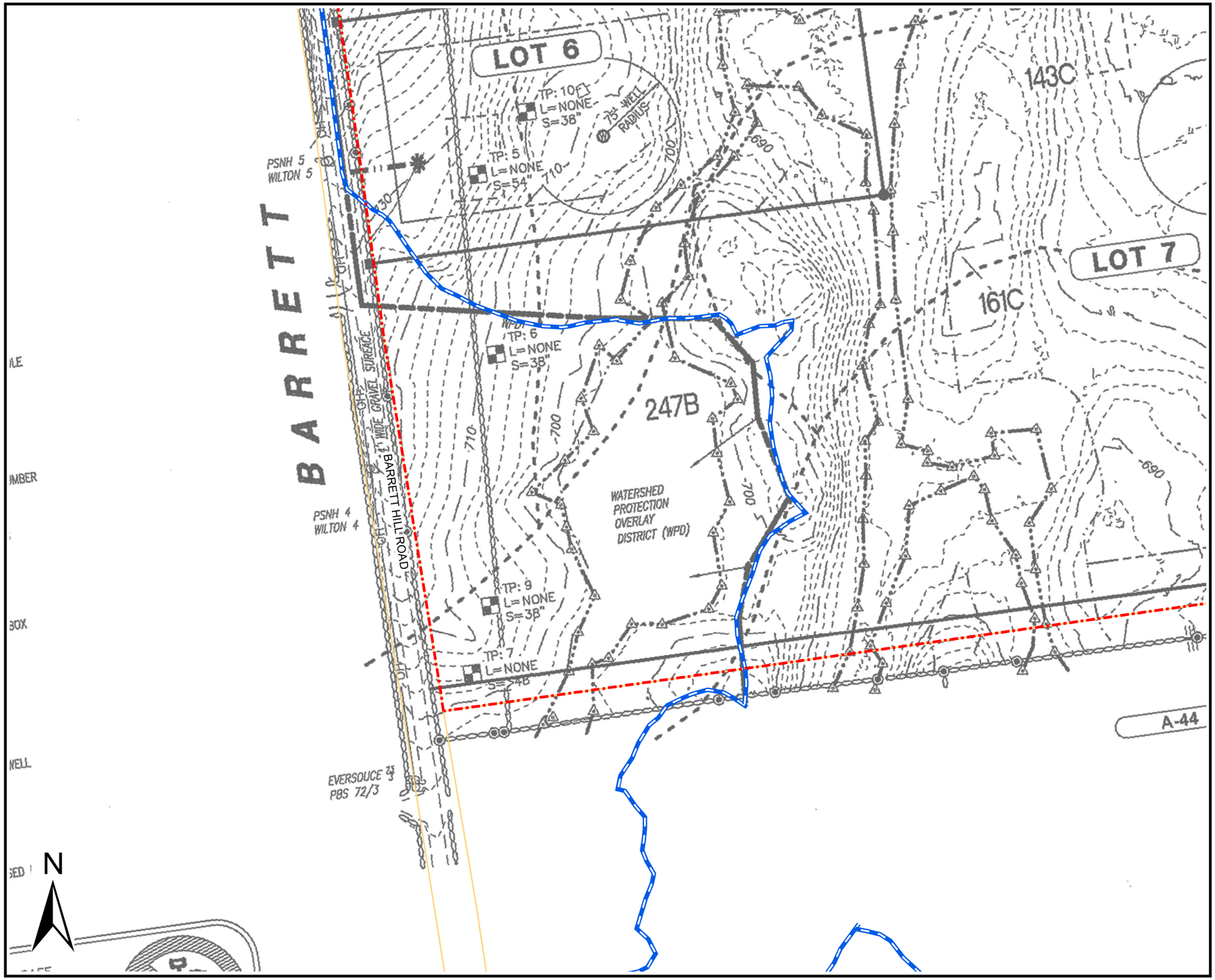
TOPOGRAPHIC DETAIL PLAN

JUNE 2022 FIGURE 2



NOTES:

1. Plan prepared from: an overlay of a "Topographic & Soil Plan", prepared by Fieldstone Land Consultants, PLLC, dated 4/11/22; and Geographic Information System (GIS) data and basemaps provided by the New Hampshire Geographically Referenced Analysis and Information Transfer System (NH GRANIT) maintained by the University of New Hampshire and the NH Office of Strategic Initiatives.

2. Site boundary and building locations are based on an overlay of the site features on GIS data. Therefore, all site features are approximately located.

3. This plan is not to be used for survey, building or boundary purposes.

4. Ground surface elevations based on 2011-2012 Light Detection and Ranging (LIDAR) Bare Earth Digital Elevation Model (DEM) imagery data obtained from the NH GRANIT. Elevations are based on the North American Vertical Datum of 1988 (NAVD88).

Legend

- Site Boundary
- Delineated Watershed District Boundary
- Wilton Tax Parcels

0 50 100 200 300 400 Feet

Aries Project # 2022-067
File # 2022-076(3)06.22.MXD

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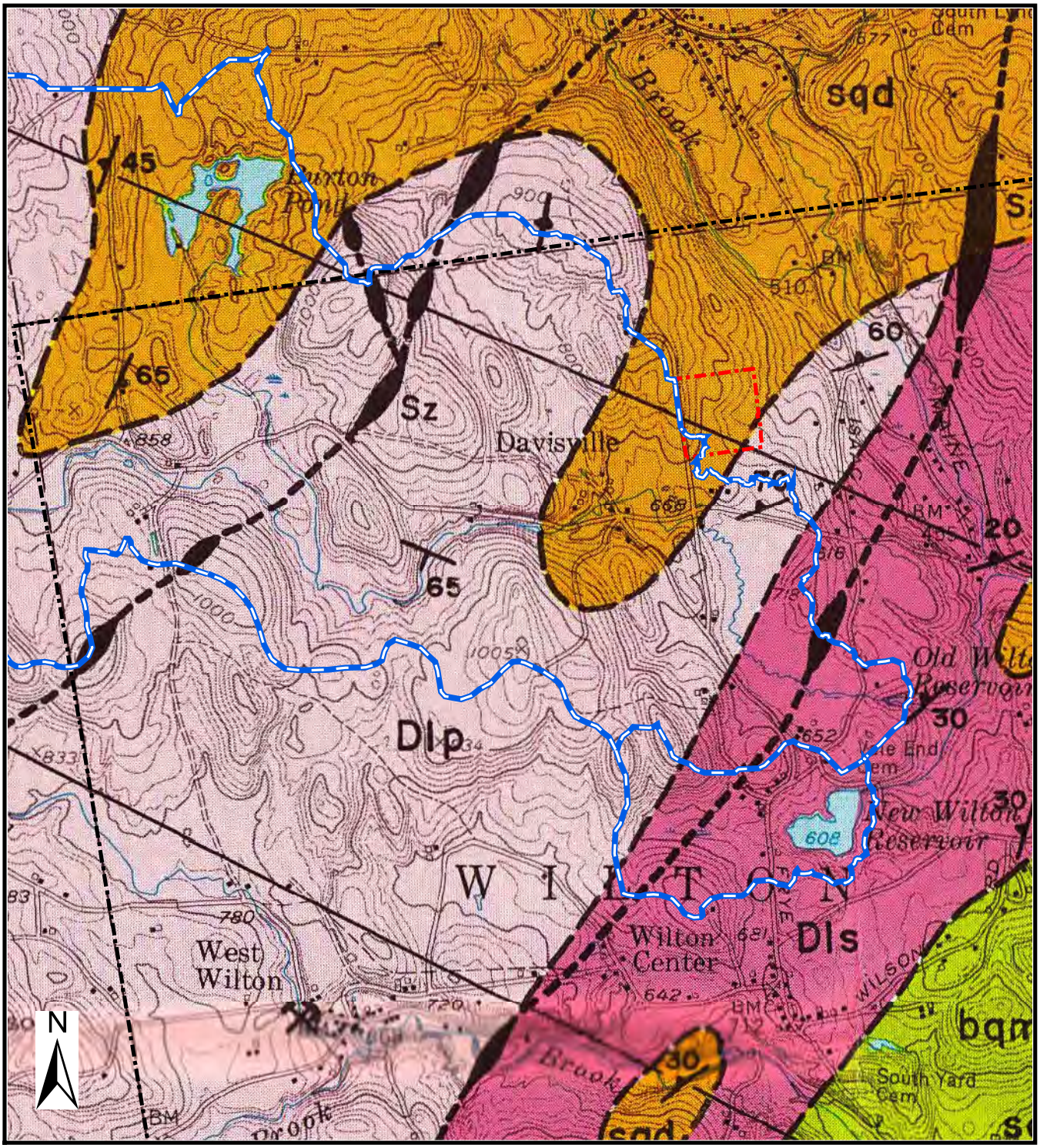
WILTON, NEW HAMPSHIRE

FIELDSTONE OVERLAY PLAN

JUNE 2022 FIGURE 3



Legend

- Approximate Watershed District Boundary
- WIlton Town Boundary
- Site Boundary

Aries Project # 2022-076
File # 2022-076(4)06.22.mxd

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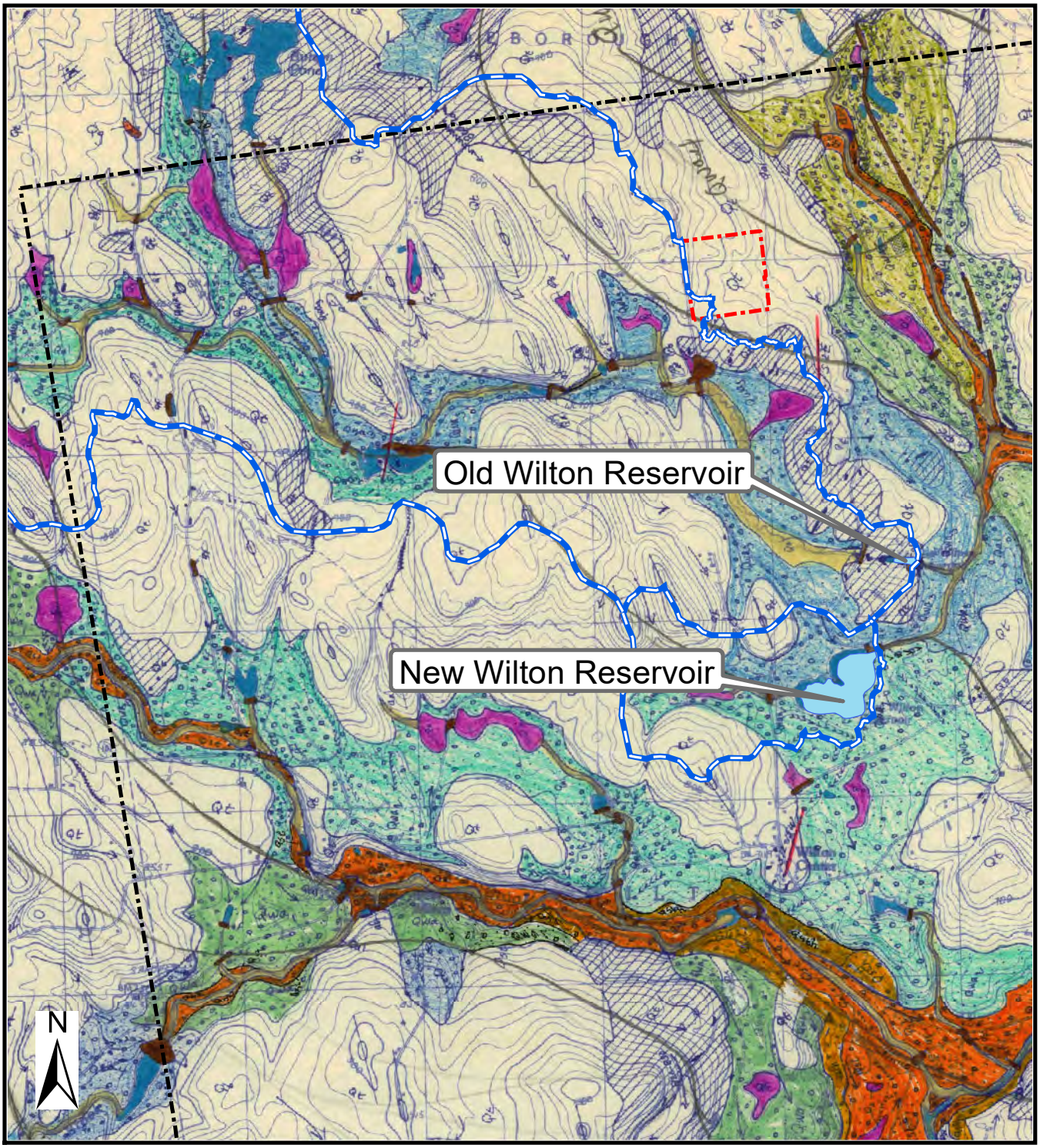
TECHNICAL ASSISTANCE SERVICES
LOT A-44-1
WILTON, NEW HAMPSHIRE

AREA BEDROCK GEOLOGY MAP

JUNE 2022 FIGURE 4



0.5 0.25 0 0.5 1 Miles

Legend

- Site Boundary
- WIlton Town Boundary
- Wilton Reservoirs
- Approximate Watershed District Boundary

Aries Project # 2022-076
File # 2022-076(4)06.22.mxd

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AREA SURFICIAL GEOLOGY MAP

JUNE 2022 FIGURE 4

Wilton Conservation Commission
Site Walk Report
Barrett Hill Road
Saturday, October 29, 2022

The commissioners in attendance: H. Alan Preston, Chair, Nikki Andrews, Jennifer Beck

The walk was led by Chris Guida, CWS, with Fieldstone, who minimized the impact of the proposed driveway and wetland crossing, due to existing conditions. He provided no engineering data to back up the claim that the proposed culvert would be sufficient to carry the water. This area is a wildlife corridor according to Fish and Game's Highly Ranked Wildlife Habitats set amidst wetlands that flow into Mill Brook and Stony Brook, a protected river. Proposed Lot 7 borders the watershed protection district.

The Commission recommends the area in question be surveyed by an independent wetland scientist and additional core samples taken. According to the Aries Engineering report, there are areas of wetland not identified on the current development plan, according to the town's NRI. So we recommend another independent hydrology study be done and presented to both the zoning and planning board with updated maps and plans.

All the calculations for drainage and sizing the culvert have been based on existing conditions. The downslope part of the driveway is planned to be placed on what looks like 2-3' of fill with ditches on both sides, making it a very effective dam and channel. The uphill side of the driveway ditch appears to empty into the incised wetland drainage we saw today. We have questions about whether the flow models were run on as-built conditions, and if any additional culvert locations are planned along the driveway.

We're in the sixth year of a drought. The banks of the stream in question are more than 4 feet high, suggesting a considerable amount of water has run through that area creating that channel in the past. And we are witnessing this all in late fall when the area will be at its driest. The upstream moss-covered rock formations and natural bowl suggest a saturated area which might likely be filled with water during heavy rainfall or winter snow melt.

An improperly designed, sized, or installed culvert can block animals and natural materials from moving downstream. Culverts can lead to streambed and bank erosion on the downstream side of the culvert due to the increased water velocities exiting the pipe. The result is a perched culvert with its downstream end above the water. The resulting waterfall can prevent animal passage and further unnaturally erode the land downstream.

Continuing the natural substrate of the stream through the culvert ensures animal passage. To Fieldstone's credit, they are recommending the addition of natural materials in the culvert bottom to assist with this. However, given the upstream conditions of a forest floor, experience suggests this culvert will most likely fail during storms and heavy rainfall which will wash additional material into the culvert, preventing flow. The developer stated the maintenance of the culvert would be the home owner's responsibility.

An additional concern is the development of this 13 acre upland land area isolated by wetlands. The developer stated these lots would likely be installed with lawns and gardens at the buyers discretion. With no restrictions in place, fertilizers and insecticides will be applied and run directly into the aquifers that feed Mill Brook and Stony Brook.

The Commission strongly recommends denying this application for a wetland crossing to grant access to this Lot 7 on the San-Ken development plan due to the sensitivity of this area based on concerns stated above. In addition, we ask that the ZBA consider the impact to this highly ranked wildlife corridor, the impact of any soils brought in during construction and the likelihood of increased stormwater impacts on the watershed area surrounding this property.

Town of Wilton, NH
Zoning Board of Adjustment

Notice of Decision

The request by San-Ken Homes, Inc. for a special exception under section 11.4 of the Wilton Zoning Ordinance has been granted. It will allow construction of a driveway that will cross a wetland area in conjunction with a proposed subdivision of Lot A-44-1, Barrett Hill Road.

The decision is subject to the following conditions:

- The wetland crossing is to be in the location shown in the "Lot 3 / Lot 7" section on the plan labeled "Driveway Plan and Profiles / Lots 1, 2, 3, & 7 / Tax Map Lot 44-1 / Wilton, New Hampshire" Revision D, 11/04/22, which was submitted to the Zoning Board and is included in the case file.
- The construction details are to be as shown in the "Embedded Culvert Cross Section and Detail at Sta. 12+94 through Sta 12+84" section on the same plan, or with such modifications as may be required to obtains State Wetland Board approval.

This decision shall expire if the construction or use permitted by it has not begun by Friday, November 8, 2024. (Wilton Zoning Ordinance section 17.4)

The selectmen, any party to the action or proceedings, or any person directly affected thereby may apply for a rehearing of this decision. A request for a rehearing must be filed in writing with the Zoning Board of Adjustment on or before Thursday, December 8, 2022, and must fully specify all grounds on which the rehearing is requested. (N.H. RSA 677:2)

Findings of Fact

- These findings of fact are based on the ZBA application and attachments, on the testimony of the applicant's representative, Christopher Guida, a New Hampshire Certified Wetland Scientist employed by Fieldstone Land Consultants, and on observations and testimony at a site visit conducted by the Zoning Board on October 29, 2022.
- The Zoning Board of Adjustment found Mr. Guida's testimony and submissions to be credible, and chose not to require independent field studies to confirm the wetland delineation or independent review of Fieldstone's flow and culvert sizing computations.
- The applicant proposes a subdivision of 45 acre Lot A-44-1 ("the Lot") into 7 residential building lots.
- All of the road frontage of the Lot is on Barrett Hill Road.
- The southeast corner of the Lot comprises a contiguous dry (i.e., non-wetland) area of approximately 15 acres, which has no direct road frontage, and which is entirely separated from the remainder of the Lot by areas of wetland.
- The applicant proposes a driveway which would cross a wetland area to access the dry southeast corner of the Lot.
- The wetland area to be crossed is a small seasonal runoff stream.
- The applicant proposes a 36" culvert, 40 feet in length, which would be more than adequate to meet tne Town's requirements.
- The permanent wetland impact would be 769 sq. ft, with an additional 206 sq. ft. of temporary construction impact.

- There is no way to reach the southeast dry corner of the Lot from the road frontage of the Lot that would result in less wetland impact than the proposed crossing.

Reasons for the Decision

- The proposal is for an access way which is essential to the productive use of the 15 acre dry southeast corner of Lot B-44-1.
- The proposed wetland crossing will be located and constructed so as to minimize any detrimental impact upon the wetland.
- The proposal therefore satisfies the requirements for a special exception under section 11.4(a) of the Wilton Zoning Ordinance.
- For the purposes of Section 4.12 of the Ordinance, the “proposed use, structure, or activity” permitted by the special exception is the proposed wetland crossing, which will be consistent with all the requirements of that section and of sections 4.10–4.10.11.

Sincerely,

Neil Faiman, Chairperson
Wilton ZBA
November 8, 2022

Case #10/11/22-3, decided Tuesday, November 8, 2022

Drought.gov
National Integrated Drought Information System

BY LOCATION | LOCAL

Conditions for Wilton, NH (Hillsborough County)

Get notified when conditions change

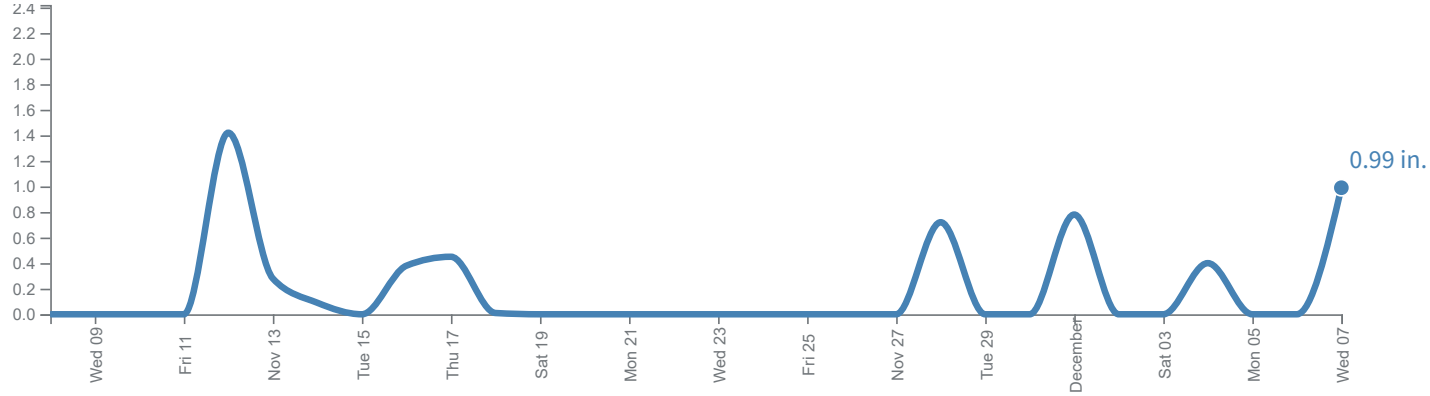
Sign Up for Alerts (/drought-alerts/signup?location=Barrett Hill Rd, Wilton, New Hampshire, 03086&x=-71.783696241361&y=42.861393817811)

Go To New Hampshire State Page

Go To Hillsborough County Page

Precipitation (Total)

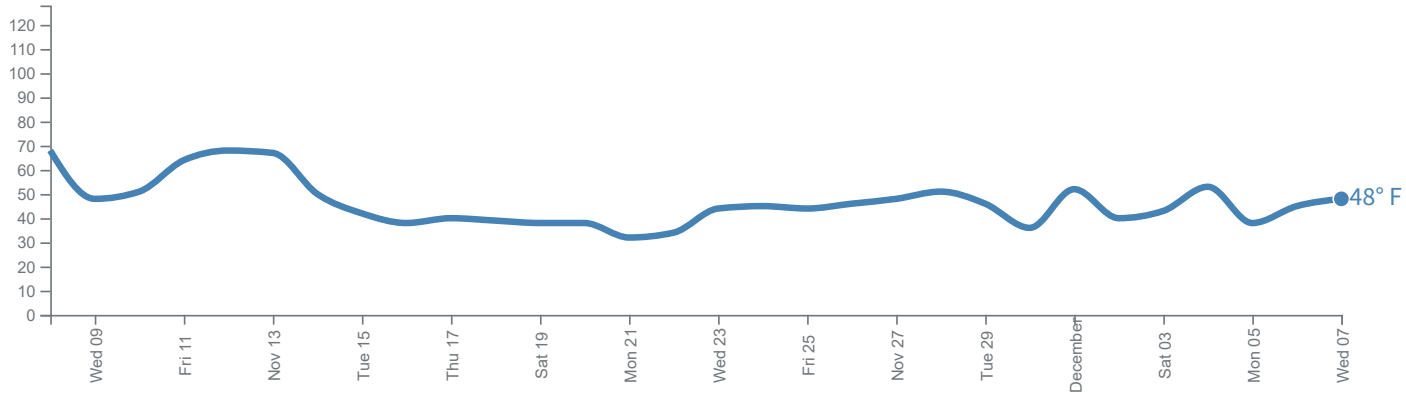
Data Available
No Data Available



Total 7-day precipitation: **2.17 in**. ↑ **51%** since last week.
Data Valid: 12/07/2022

Temperature (Maximum)

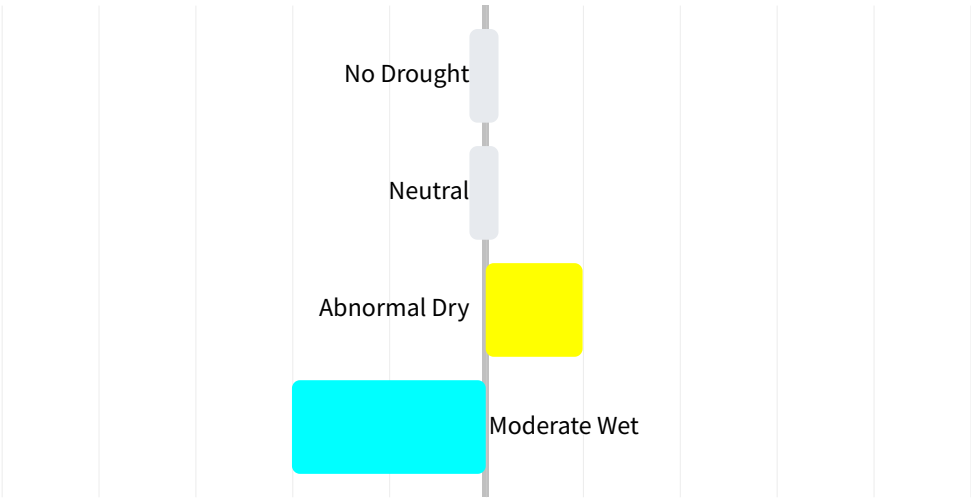
Data Available
No Data Available



Avg. 7-day max temperature: **46° F**. ↓ **50%** since last week.
Data Valid: 12/07/2022

Drought Indicators

Indicators are variables used to describe drought conditions (e.g., precipitation, temperature, streamflow, groundwater and reservoir levels, soil moisture, and snowpack). In order to get a complete picture of drought conditions, several drought indicators should be examined.

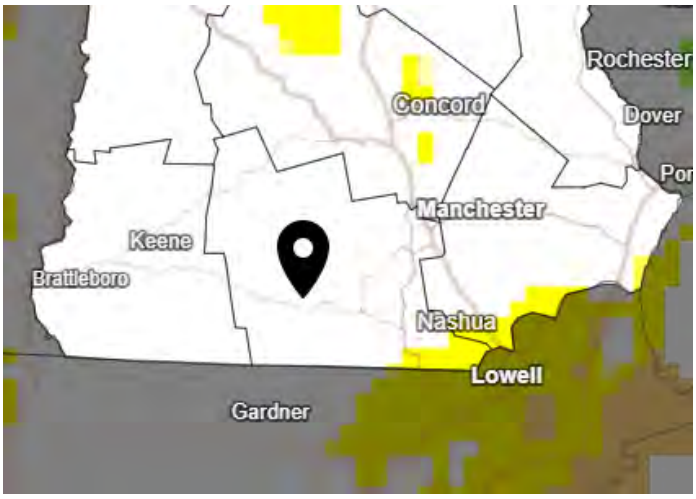


For maps and detailed analysis, visit the Climate Toolbox Water Watcher (https://climatetoolbox.org/tool/Historical-Water-Watcher)

Exceptional Wet — Exceptional Drought

Short-Term Drought Indicator Blend EXPERIMENTAL

Short-Term



These experimental drought blends integrate several key drought monitoring products and indices into a single short-term or long-term product, based on the methodology developed at the NOAA Climate Prediction Center. The blends are created using the Climate Engine tool, and apply the CPC weighting ratios to the high-resolution gridMET gridded research dataset.

The short-term blend combines PDSI, Z-Index, 1-month SPI, and 3-month SPI to estimate the overall short-term drought. This product is an example of current NIDIS-funded research (/drought-research/climate-engine-enhancing-on-demand-cloud-computing).

The data are updated every 5 days, with a delay of 4 to 5 days to allow for data collection and quality control. Learn more (/data-maps-tools/short-and-long-term-drought-indicator-blends).

Click here for more information about this legend (/explaining-drought-category-maps)

Dry Conditions (Percentile Categories)

D4 (0-2)	D3 (2-5)	D2 (5-10)	D1 (10-20)	D0 (20-30)	(30-70)

Wet Conditions (Percentile Categories)

W0 (70-80)	W1 (80-90)	W2 (90-95)	W3 (95-98)	W4 (98-100)

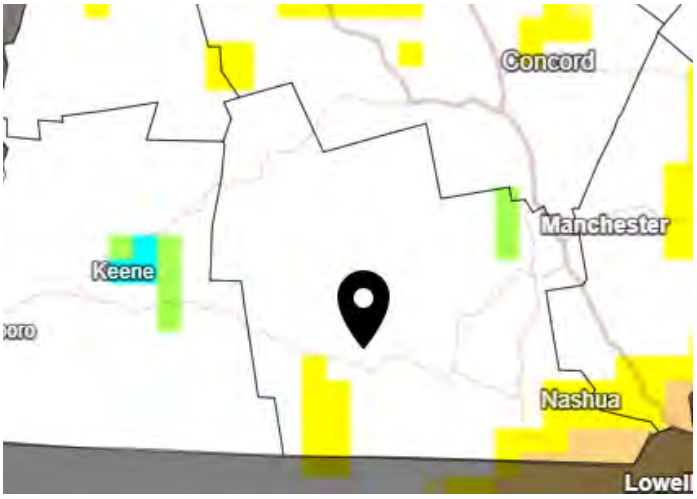
***Currently, data are only available for the contiguous U.S.**

Source(s): UC Merced (https://www.drought.gov/about/partners/university-california-merced), Climate Engine (https://www.drought.gov/data-maps-tools/climate-engine)

Data Valid - 11/26/22

Long-Term Drought Indicator Blend EXPERIMENTAL

Long-Term



These experimental drought blends integrate several key drought monitoring products and indices into a single short-term or long-term product, based on the methodology developed at the NOAA Climate Prediction Center. The blends are created using the Climate Engine tool, and apply the CPC weighting ratios to the high-resolution gridMET gridded research dataset.

The long-term blend combines PDSI, Z-Index, and 6-month, 1-year, 2-year, and 5-year SPI to estimate the overall long-term drought. This product is an example of current NIDIS-funded research (/drought-research/climate-engine-enhancing-on-demand-cloud-computing).

The data are updated every 5 days, with a delay of 4 to 5 days to allow for data collection and quality control. Learn more (/data-maps-tools/short-and-long-term-drought-indicator-blends).

Click here for more information about this legend (/explaining-drought-category-maps)

Dry Conditions (Percentile Categories)

D4 (0-2)	D3 (2-5)	D2 (5-10)	D1 (10-20)	D0 (20-30)	(30-70)

Wet Conditions (Percentile Categories)

W0 (70-80)	W1 (80-90)	W2 (90-95)	W3 (95-98)	W4 (98-100)

***Currently, data are only available for the contiguous U.S.**

Source(s): UC Merced (https://www.drought.gov/about/partners/university-california-merced), Climate Engine (https://www.drought.gov/data-maps-tools/climate-engine)

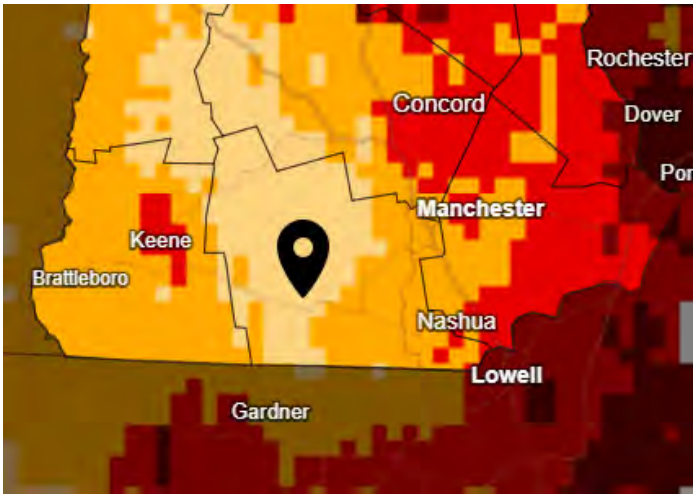
Data Valid - 11/26/22

Future Conditions for Hillsborough County

Evaporative Demand (EDDI) Forecast

EXPERIMENTAL

Two Week



The Evaporative Demand Drought Index (EDDI) is an experimental drought monitoring and early warning guidance tool. It examines how anomalous the atmospheric evaporative demand (E0; also known as "the thirst of the atmosphere") is for a given location and across a time period of interest. This experimental subseasonal EDDI forecast shows projected evaporative demand for the next 2 weeks and 4 weeks from the CFS-gridMET dataset at 4-km gridded resolution. Learn more (https://www.drought.gov/data-maps-tools/evaporative-demand-drought-index-eddi-subseasonal-forecasts).

Dry Conditions

D4	D3	D2	D1	D0

Wet Conditions

Near Normal	W0	W1	W2	W3	W4

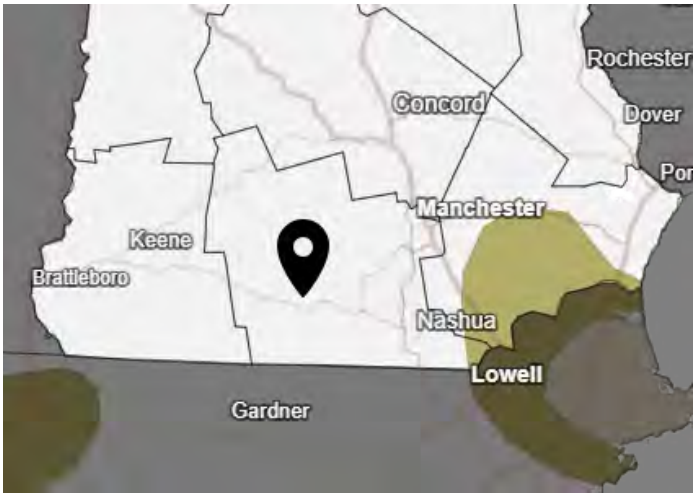
***Currently, data are only available for the contiguous U.S.**

Source(s): UC Merced (/about/partners/university-california-merced)

Updates Daily - 12/05/22

Climate Prediction Center Drought Outlooks

Monthly



NOAA's Climate Prediction Center issues Monthly and Seasonal Drought Outlooks each month.

The Monthly Drought Outlook predicts whether drought will emerge, stay the same, improve, or be removed in the next month. Learn more (https://www.drought.gov/data-maps-tools/us-monthly-drought-outlook).

- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely
- No drought present

Source(s): Climate Prediction Center (/about/partners/climate-prediction-center)
Updates Monthly - 11/30/22

Historical Conditions for Hillsborough County

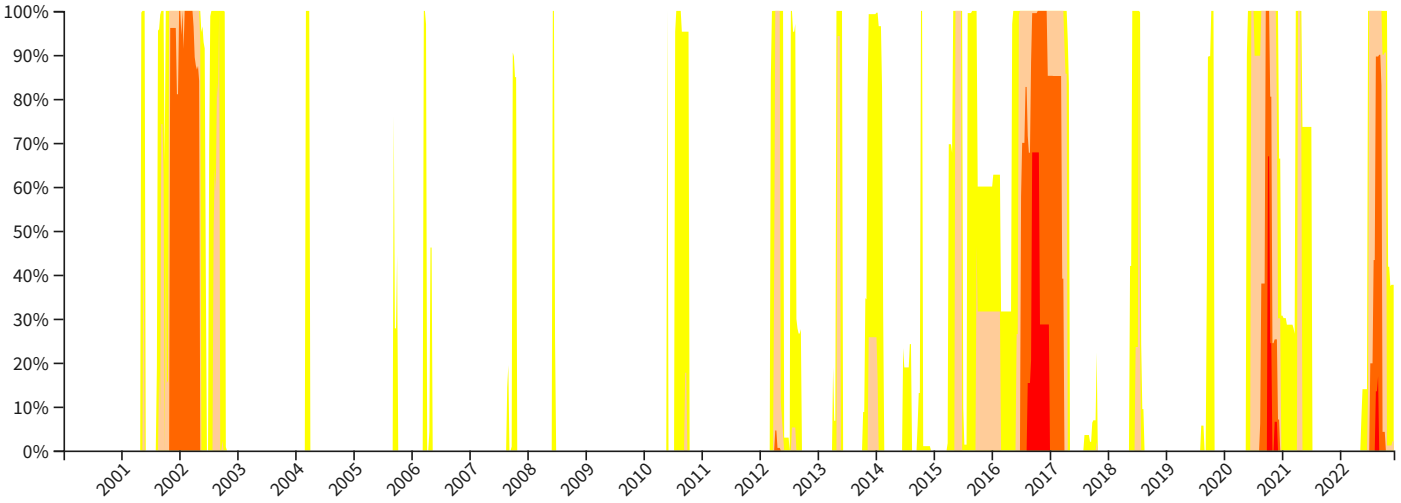
Explore Historical Maps

2000 - Present (Weekly)
1895 - Present (Monthly)
0 - 2017 (Yearly)

The U.S. Drought Monitor (USDM) is a national map released every Thursday, showing parts of the U.S. that are in drought. The USDM relies on drought experts to synthesize the best available data and work with local observers to interpret the information. The USDM also incorporates ground truthing and information about how drought is affecting people, via a network of more than 450 observers across the country, including state climatologists, National Weather Service staff, Extension agents, and hydrologists. Learn more.

Time Period (Years): to **Update Graph** **Reset Graph**

Latest Available Data:2022-12-06



Click or hover on legend boxes to interact with the graph.

Download screenshot of this panel Learn more about these data

Drought Numbers in Hillsborough County

8,567

people in Hillsborough County are affected by drought

No change since last week

↑ 88% since last month

2.1%

of people in Hillsborough County are affected by drought

No change since last week

↑ 1% since last month

59th

wettest October on record, over the past 128 years

↑ 0.19

inches from normal

45th

driest year to date over the past 128 years (January-October 2022)

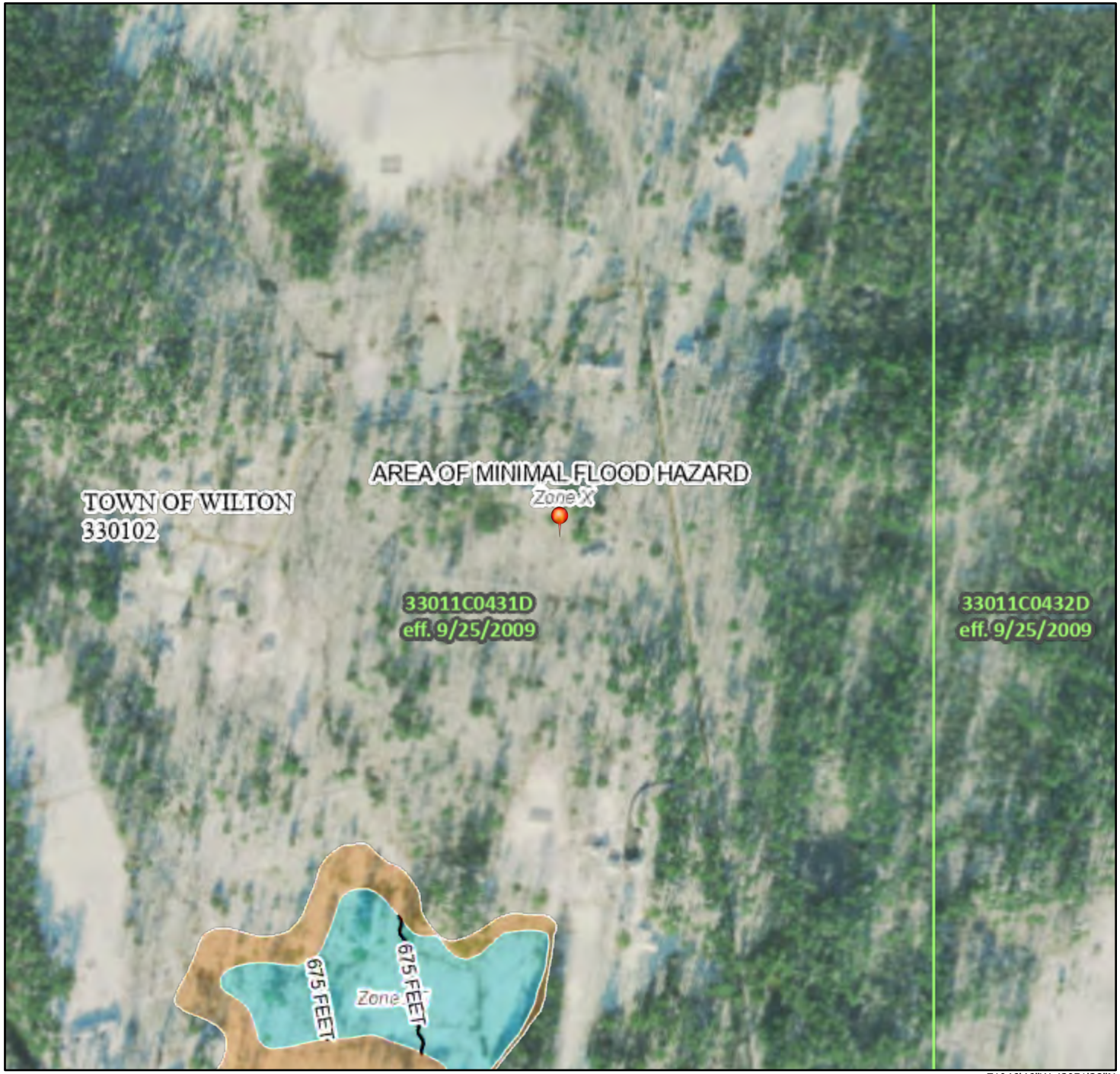
↓ 1.77

inches from normal

National Flood Hazard Layer FIRMette

FEMA

71°47'24"W 42°51'54"N



71°46'46"W 42°51'28"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 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 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- 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

N

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 2/7/2022 at 1:05 PM 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.

Storm Water Management Report

TAX MAP A, LOT 44-1

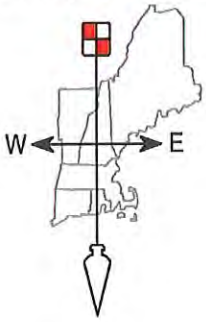
(RESIDENTIAL SUBDIVISION)

Project Location:
Tax Map A, Lot 44-1
Barrett Hill Road
Wilton, NH

Prepared for:
San-Ken Homes, LLC
586 Turnpike Road
New Ipswich, NH 03071

Date: November 9, 2022
Revised: na

Surveying ⌖ Engineering ⌖ Land Planning ⌖ Permitting ⌖ Septic Designs



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LAND CONSULTANTS, PLLC

206 Elm Street, Milford NH 03055
Phone: (603)-672-5456 Fax: (603)-413-5456
www.FieldstoneLandConsultants.com

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STORM WATER MANAGEMENT REPORT
TAX MAP A, LOT 44-1
WILTON, NEW HAMPSHIRE

Prepared for:
San-Ken Homes, Inc.

November 9, 2022

I) INTRODUCTION

The following are storm water drainage calculations for a proposed single-family residential subdivision in Wilton, NH. The land is being developed under the Town of Wilton's Subdivision Regulations. The 45± acre parcel is currently undeveloped and is surrounded by single family residential development. The applicant is proposing to subdivide the existing 45.423-acre parcel into 7 single family lots. Three of the proposed lots will have access directly off of Barrett Hill Road and the remaining 4 lots will be accessed by a 990-foot common drive. The common drive will be 16 feet wide with 2-foot shoulders for a total width of 20 feet. The proposed common drive will terminate in a hammerhead turnaround. The terrain alteration associated with the common drive and the access to Lot 7 is 96,000± Sq.Ft. The amount of impervious area (pavement & buildings) proposed for this project is approximately 1.00 acre.

The purpose of this report is to analyze the qualitative and quantitative impacts of the proposed development. The objective of the proposed stormwater management system for this project is to mitigate any increases resulting from the proposed development and to meet the drainage guidelines set forth in the Town of Wilton Subdivision Regulations.

II) SITE DESCRIPTION (EXISTING)

The subject property consists of 45.423 acres of land fronting on the east side of Barrett Hill Road. A subdivision of the parcel was previously approved in 2006. The parcel is bordered by single family residential development. The subject parcel is located in the Town of Wilton's General Residence & Agricultural District and has frontage on Barrett Hill Road. The parcel is primarily wooded with some cleared areas along Barrett Hill Road. Barrett Hill Road runs along a ridge in the vicinity of the property and the entire property is moderately sloped away from the road in an easterly direction. The area of the proposed development consists primarily of Monadnock Sandy Loam and Tunbridge-Lyman-Monadnock complex which are well-drained soils with a Hydrologic Soil Group (HSG) "B' rating that are suitable for infiltration BMP's. The south/southeast portion of the parcel consists of Lyman-Tunbridge Rock Outcrop soils, which, though they're well drained soils are HSG D soils. There is also a small amount of Lyme find sandy loam which is a poorly-drained, HSG "D" soil. The presence of these soil types has been confirmed by field examination. The existing wetlands on-site have been mapped and are shown on the plans. A wetland crossing is proposed to access Lot 7.

III) METHODOLOGY

The quantity of runoff and the conveyance of that flow through the site are determined using the software package HydroCAD r 10.0 by HydroCAD Software Solutions, LLC. HydroCAD is a computer aided design program for modeling storm water hydrology based on the Soil Conservation Service (SCS) TR-20 method combined with standard hydraulics calculations used to model detention basins and culverts.

Stormwater management systems and erosion control outlet protection aprons (riprap aprons) are designed in accordance with the methodology for the "Best Management Practices" (BMP's), as outlined in the New Hampshire Storm Water Manual, Volume 2.

IV) DRAINAGE DESIGN

In accordance with the Town of Wilton, the twenty-five (25) year frequency storm event has been evaluated. This design storm has been analyzed to compare the pre and post-development peak flow rates for the site (see attached comparison tables).

Pre-Development Drainage Conditions:

As can be seen on the Pre-Development Drainage Area Plans, the site is situated on the top of an eastern slope. There is a small portion of the property (E1S) flows to the south and the northern portion flows to the north (E5S) and subsequently drains back onto the subject parcel. There is a ridge south of the property and a portion of the abutting property to the south drains onto the subject parcel. A portion of the abutting parcel to the north also drains onto the subject parcel but is downstream of the proposed wetland crossing so it was not included in the analysis. There are two existing low areas where runoff collects before spilling over toward the proposed wetland crossing. The flow to these areas subcatchments associated with these areas are E2S and E3S and the ponded areas are identified as E1p and E2P in the attached analysis. Three wetland areas converge in the middle of the property in the vicinity of the proposed wetland crossing. The flow to this convergence is modeled in subcatchment E4S. This wetland continues in an easterly direction (Reach E1S) to a point where it converges with the flow from the north of the property the flow to this convergence is modeled in subcatchment E6S. The wetland continues to the eastern boundary (Reach E2S) where it continues in and easterly direction toward Stony Brook and the Souhegan River. Finally, Subcatchment E7S consists the remaining, eastern portion of the property. There are three observation points in the analysis and the consist of the stormwater runoff to the south (OP1), north (OP2) and east (OP3).

Post-Development Drainage Conditions:

As can be seen on the Post-Development Drainage Area Plans, the areas draining to observation point are relatively close to the predevelopment condition. There are a number of additional subcatchments in the post-development condition in the area of the proposed development but the overall drainage patterns are the same. Though there is a significant number of wetlands on

the property there is only one wetland crossing proposed for access to Lot 7. Though the flow to OP1 drains back onto the property, the proposed design maintains the pre-development flow at his location. This is accomplished by routing the runoff from the driveway to a small infiltration basin (IB1) is proposed near Station 6+00 of the common driveway. This basin only receives runoff from outer portion of the driveway. A second, larger infiltration basin (IB2) is proposed on the inside of the driveway at Station 8+00±. This basin will mitigate the increase in runoff resulting from the proposed common driveway.

V) SUMMARY

The intent of the stormwater management system for this project is to address the qualitative and quantitative aspects of the stormwater runoff so that there are no downstream adverse impacts created by the project. To mitigate the resulting increases in runoff volume and peak rates due to the development of Lot A-44-1 this project proposes two infiltration basins to mitigate the increase in runoff resulting from the proposed development. The net result is that proposed driveway will receive qualitative treatment and that due to the detention capabilities of the basins there will be no increase in the peak rates of runoff leaving the site.

The stormwater management design for this project therefore complies with the stormwater standards set forth in the Town of Wilton's Subdivision Review Regulations and the NHDES Alteration of Terrain regulations.

The following tables are a summary of the attached calculations and show a comparison of the peak flow rates at the outlet point for the site. The values presented are based on pre- and post-development conditions.

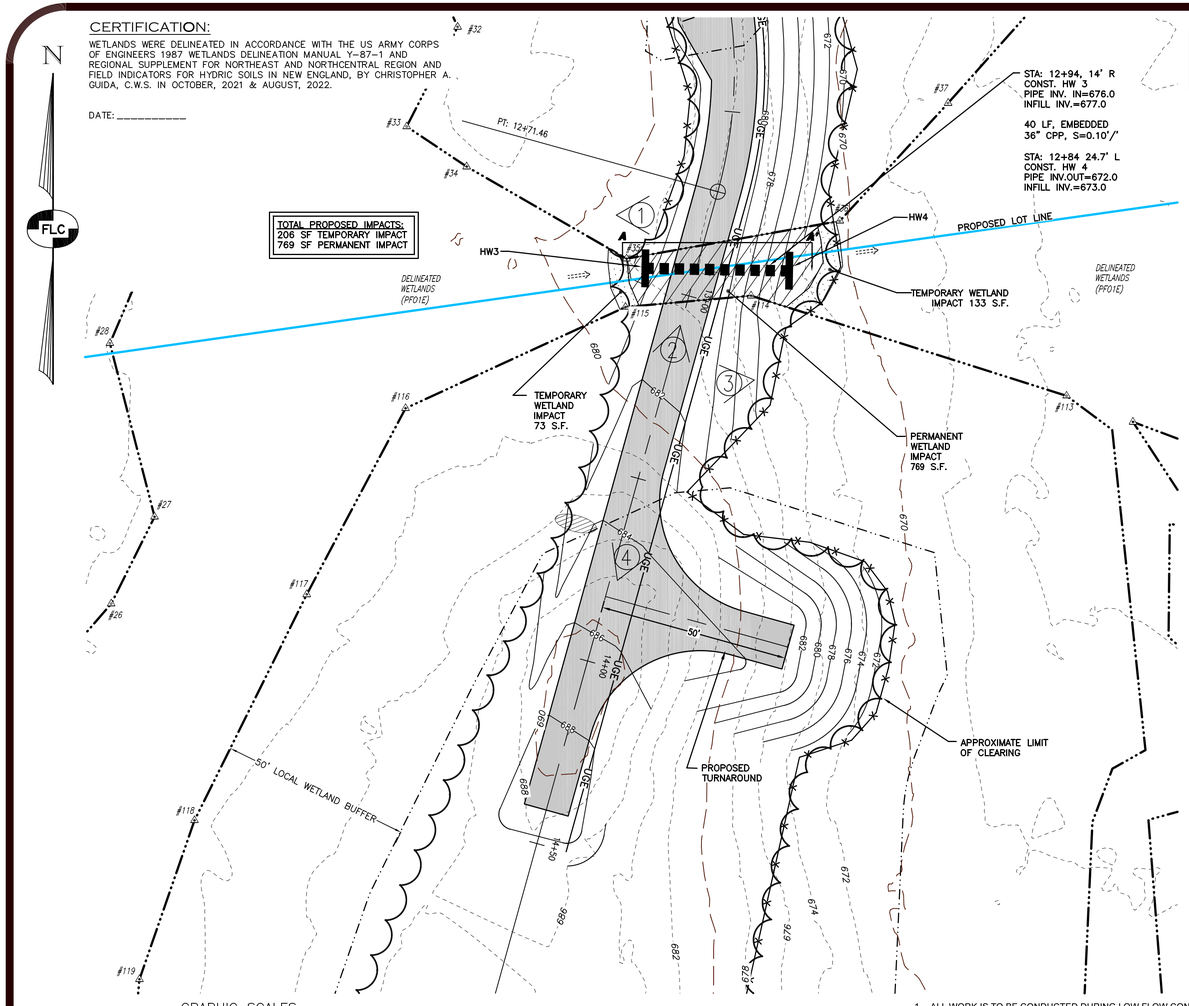
Table 1: Peak Flow Rate Discharge to Observation Points

OBSERVATION POINT	PRE-DEV. RUNOFF (CFS)	POST-DEV. RUNOFF (CFS)	CHANGE (CFS)	CHANGE (%) (CFS)
OP1	0.49	0.49	-	0
OP2	2.07	1.82	-0.25	88%
OP3	43.51	42.14	-1.37	97%

CERTIFICATION:

WETLANDS WERE DELINEATED IN ACCORDANCE WITH THE US ARMY CORPS OF ENGINEERS 1987 WETLANDS DELINEATION MANUAL Y-87-1 AND REGIONAL SUPPLEMENT FOR NORTHEAST AND NORTHCENTRAL REGION AND FIELD INDICATORS FOR HYDRIC SOILS IN NEW ENGLAND, BY CHRISTOPHER A. GUIDA, C.W.S. IN OCTOBER, 2021 & AUGUST, 2022.

DATE: _____



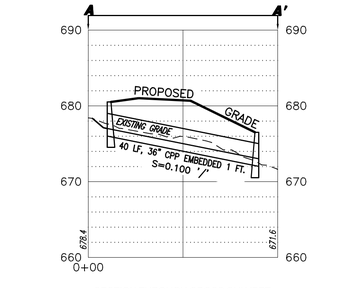
GRAPHIC SCALES

20' 10' 0 20' 40' 60'

IMPERIAL: 1"=20'

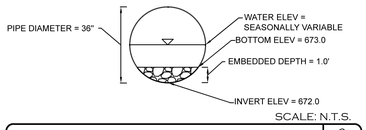
1. ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REQUIREMENTS AND SPECIFICATIONS OF THE TOWN OF WILTON.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, SIZE, AND ELEVATION OF ALL EXISTING UTILITIES SHOWN OR NOT SHOWN ON THESE PLANS AND SHALL VERIFY THAT ALL THE INFORMATION SHOWN HEREON IS CONSISTENT, COMPLETE, ACCURATE, AND CAN BE CONSTRUCTED PRIOR TO AND/OR DURING CONSTRUCTION. THE DESIGN ENGINEER, SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES, ERRORS, OMISSIONS, OR EXISTING UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION SO THAT REMEDIAL ACTION MAY BE TAKEN BEFORE PROCEEDING WITH THE WORK.
3. THE CONTRACTOR SHALL CONTACT "DIGSAFE" 72 HOURS PRIOR TO THE START OF CONSTRUCTION (1-800-255-4977 IN NH).
4. COMPLIANCE WITH ALL APPLICABLE REGULATIONS AND SPECIAL CONDITIONS OF WILTON AGENCIES, SUCH AS THE PLANNING BOARD, ZONING BOARD, CONSERVATION COMMISSION, AND OTHERS, IS MANDATORY AND IS THE RESPONSIBILITY OF THE OWNER.
5. ANY ALTERATION OF THIS DESIGN OR CHANGE DURING CONSTRUCTION MAY REQUIRE APPROVAL OF VARIOUS TOWN/CITY BOARDS OR AGENCIES AND SHALL BE DISCUSSED WITH THE OWNER AND FIELDSTONE LAND CONSULTANTS, PLLC PRIOR TO CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE APPROPRIATE TOWN DEPARTMENTS PRIOR TO CONSTRUCTION TO ARRANGE FOR NECESSARY INSPECTIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCURATE AS-BUILT INFORMATION OF ALL WORK, ESPECIALLY UNDERGROUND CONSTRUCTION OF UTILITY LINES, SERVICES, CONNECTIONS, ETC. AND APPROPRIATE TIES TO ABOVE GROUND PERMANENT STRUCTURES, FIELD SURVEY COORDINATES, OR SOME OTHER METHOD OF ESTABLISHING THE AS-BUILT CONDITION OF ALL CONSTRUCTION.
8. THE CONTRACTOR AND OWNER ARE RESPONSIBLE FOR OBSERVING AND MANAGING THE PROJECT PER RSA 430:53 AND AGR 3800 REGARDING INVASIVE SPECIES (PLANTS AND INSECTS). NO INVASIVE SPECIES PLANT OR INSECT SHALL BE INTRODUCED ONTO THE SITE.

GENERAL CONSTRUCTION NOTES | 1 | WT-1



SECTION THROUGH CROSS CULVERT

SCALE: 1" = 20' HORIZ. / 10' VERT.



SCALE: N.T.S.

EMBEDDED CULVERT | 2 | WT-1

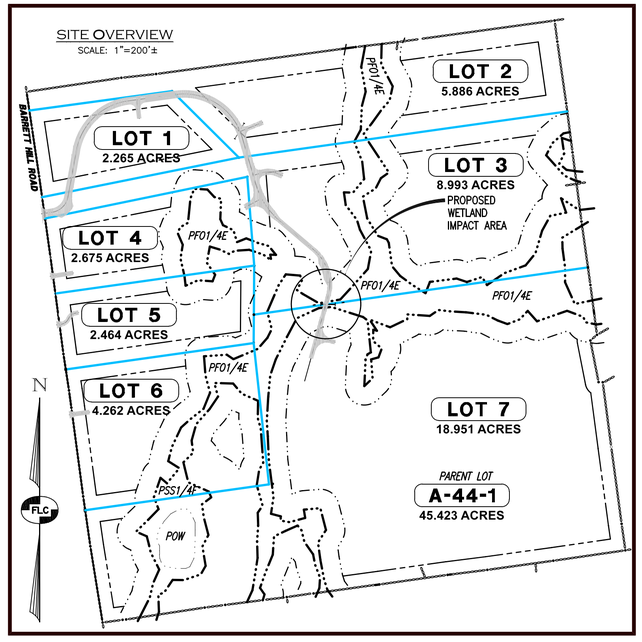
PERMITTING NOTE:

THIS PLAN IS FOR NHDES WETLAND PERMITTING PURPOSES ONLY AND IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.

CONTACT DIG SAFE 72 HOURS PRIOR TO CONSTRUCTION
DIGSAFE.COM
OR DIAL 8 1 1
CALL 811 - KNOW WHAT'S BELOW

SITE OVERVIEW

SCALE: 1"=200'±

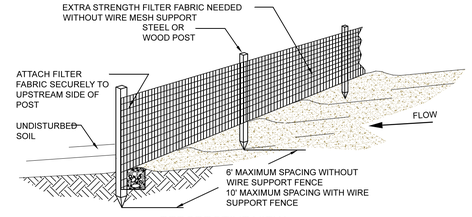


WETLAND NOTE:

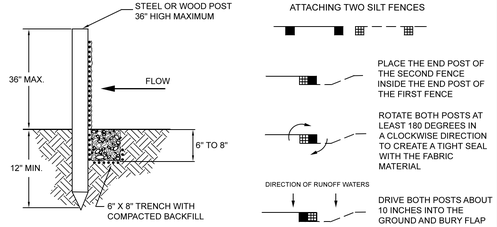
PFO1/4E: PALUSTRINE FORESTED BROAD-LEAVED DECIDUOUS/NEEDLE-LEAVED EVERGREEN SEASONALLY FLOODED/SATURATED
PSS1/4F: PALUSTRINE SCRUB-SHRUB BROAD-LEAVED DECIDUOUS/NEEDLE-LEAVED EVERGREEN SEMIPERMANENTLY FLOODED
POW: PALUSTRINE OPEN WATER

1. ALL WORK IS TO BE CONDUCTED DURING LOW FLOW CONDITIONS.
2. INSTALL STONE CHECK DAMS AND SILTATION CONTROL DEVICES IN LOCATIONS SHOWN ON PLANS. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATION.
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE(S).
4. CUT AND CLEAR TREES; DISPOSE OF DEBRIS. STUMPS ARE TO BE GROUND ON-SITE AND TAILINGS USED FOR EROSION CONTROL.
5. REMOVE TOPSOIL AND STOCKPILE AWAY FROM ANY WETLAND. STABILIZE STOCKPILE IMMEDIATELY BY SEEDING. PLACE SILT FENCE AROUND THE DOWN SLOPE SIDE OF EARTH STOCKPILES.
6. ROUGH GRADE DRIVEWAY - INSTALL CROSS CULVERTS, CONSTRUCT DRAINAGE SWALES DURING INITIAL PORTION OF CONSTRUCTION. STABILIZE IMMEDIATELY PER THE CONSTRUCTION AND EROSION CONTROL DETAILS. DO NOT DIRECT STORM WATER RUNOFF TO THESE STRUCTURES UNTIL A HEALTHY VEGETATIVE COVER IS ESTABLISHED.
7. CONSTRUCT ROAD AND INSTALL DRAINAGE PIPES AND STRUCTURES. ALL CUT AND FILL SLOPES SHALL BE STABILIZED UPON COMPLETION OF ROUGH GRADING PER THE THE EROSION CONTROL NOTES.
8. PLACE STONE CHECK DAMS AROUND INLETS AROUND ALL STRUCTURES UNTIL ROAD IS PAVED AND ALL NON-PAVED DISTURBED AREAS HAVE A HEALTHY VEGETATIVE COVER.
9. INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A WEEKLY BASIS AND AFTER EVERY 0.5" OR GREATER RAINFALL.
10. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, CULVERTS, DITCHES, SILTATION FENCES, SEDIMENT TRAPS, ETC. MULCH AND SEED AS REQUIRED.
11. FINISH GRADING TO PREPARE FOR LOAMING. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 72 HOURS AFTER FINAL GRADING.
12. PERMANENT SEEDING SHALL BE PERFORMED UPON COMPLETION OF DRIVEWAY CONSTRUCTION.
13. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
14. TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WHEN ALL DISTURBED AREAS HAVE BEEN STABILIZED.
15. ALL STRUCTURES SHALL BE CLEANED OF SEDIMENTS ONCE CONSTRUCTION IS COMPLETE.

CONSTRUCTION SEQUENCE NOTES | 3 | WT-1



PERSPECTIVE VIEW



SECTION VIEW

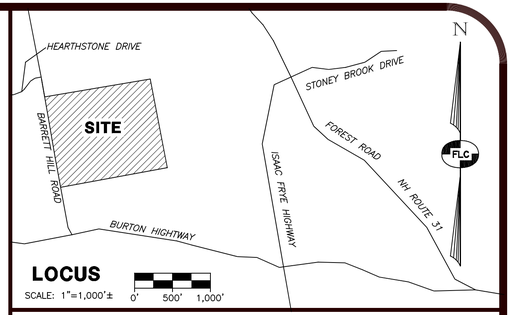
ATTACHING TWO SILT FENCES

NOTES:

1. SILT FENCES SHOULD NOT BE USED ACROSS STREAMS, CHANNELS, SWALES, DITCHES OR OTHER DRAINAGE WAYS.
2. SILT FENCE SHOULD BE INSTALLED FOLLOWING THE CONTOUR OF THE LAND AS CLOSELY AS POSSIBLE AND THE ENDS OF THE SILT FENCE SHOULD BE FLARED UPSLOPE.
3. IF THE SITE CONDITIONS INCLUDE FROZEN GROUND, LEDGE OR THE PRESENCE OF HEAVY ROOTS THE BASE OF THE FABRIC SHOULD BE EMBEDDED WITH A MINIMUM THICKNESS OF 8 INCHES OF 3/4-INCH STONE.
4. SILT FENCES PLACED AT THE TOE OF SLOPES SHOULD BE INSTALLED AT LEAST 6 FEET FROM THE TOE TO ALLOW SPACE FOR SHALLOW PONDING AND ACCESS FOR MAINTENANCE.
5. THE MAXIMUM SLOPE ABOVE THE FENCE SHOULD BE 2:1 AND THE MAXIMUM LENGTH OF SLOPE ABOVE THE FENCE SHOULD BE 100 FEET.
6. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE TO SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
7. SILT FENCES SHOULD BE REMOVED WHEN THE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.

SCALE: N.T.S.

SILT FENCE | 4 | WT-1



LOCUS

SCALE: 1"=1,000'± 0' 500' 1,000'

LEGEND:

EXISTING FEATURES:		PROPOSED FEATURES:	
	RIGHT-OF-WAY LINE		PROPOSED CULVERT WITH HEADWALL
	BOUNDARY LINE		PROPOSED LOT LINE
	ABUTTING LOT LINE		PROPOSED DRIVEWAY
	BUILDING SETBACK LINE		EROSION CONTROL / SILT FENCE
300	10' CONTOUR INTERVAL		CHECK DAM
302	2' CONTOUR INTERVAL	360	10' CONTOUR INTERVAL
	WETLAND SETBACK LINE	358	2' CONTOUR INTERVAL
	EDGE OF WETLANDS		PERMANENT IMPACT
#33	DELINEATION FLAG & NUMBER		TEMPORARY IMPACT
	EDGE OF GRAVEL		
	STONE WALL		
D.H.(F)	DRILL HOLE FOUND		
D.H.(S)	DRILL HOLE SET		
I.PIPE(F)	IRON PIPE FOUND		
I.PIN[TBS]	IRON PIN OR DRILL HOLE TO BE SET		
G.B.[TBS]	GRANITE BOUND TO BE SET		
W	WELL		
A-44-1	TAX MAP & LOT NUMBER		
3	PHOTO LOCATION AND DIRECTION		

NOTES:

1. THE OWNER OF RECORD FOR TAX MAP LOT A-44-1 IS SAN-KEN HOMES, INC – 586 TURNPIKE ROAD, NEW IPSWICH NH 03071 SEE H.C.R.D. BK. 9511 PG. 1239 DATED: AUGUST 13, 2021.
2. THE PURPOSE OF THIS PLAN IS TO DEPICT A PROPOSED WETLAND CROSSING LOCATION FOR PERMITTING THROUGH NH DES WETLAND BUREAU. TOWN OF WILTON ZONING BOARD OF ADJUSTMENT APPROVAL CASE#10/11/22-3, DECIDED TUESDAY, NOVEMBER 8, 2022.
3. THE BOUNDARY INFORMATION SHOWN WAS DEVELOPED FROM THE REFERENCE PLANS CITED HEREON TOGETHER WITH AN ON THE GROUND FIELD SURVEY PERFORMED BY THIS OFFICE DURING THE MONTH OF SEPTEMBER, 2021.
4. THE SUBJECT PARCEL LIES OUTSIDE THE WELLHEAD PROTECTION AREA (WHPA). PORTIONS OF THE SITE LIE WITHIN THE WETLANDS CONSERVATION DISTRICT, BUILDINGS MUST BE SETBACK 50 FEET FROM DELINEATED WETLANDS. THE ENTIRE SITE LIES OUTSIDE THE AQUIFER PROTECTION DISTRICT. A PORTION OF PROPOSED LOT 7 IS SUBJECT TO THE WATERSHED PROTECTION OVERLAY DISTRICT.
5. PROPOSED LOTS ARE TO BE SERVICED BY INDIVIDUAL SEPTIC SYSTEMS AND WELLS.
6. SUBJECT PARCELS LIE OUTSIDE THE FLOOD HAZARD AREA AS DETERMINED FROM THE FLOOD INSURANCE STUDY (FIRM), HILLSBOROUGH COUNTY, NEW HAMPSHIRE, TOWN OF WILTON, COMMUNITY NO. 330102 PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, MAP 33011C0431D, DATED SEPTEMBER 25, 2009.
7. HORIZONTAL ORIENTATION AND VERTICAL DATUM ARE NAD_83 AND NAVD 88 RESPECTIVELY PER A GPS CORS SOLUTION.

REV.	DATE	DESCRIPTION	C/O	DR	CK

WETLAND PERMITTING PLAN

TAX MAP A LOT 44-1

(BARRETT HILL ROAD)

WILTON, NEW HAMPSHIRE

PREPARED FOR AND LAND OF:

SAN-KEN HOMES, INC.

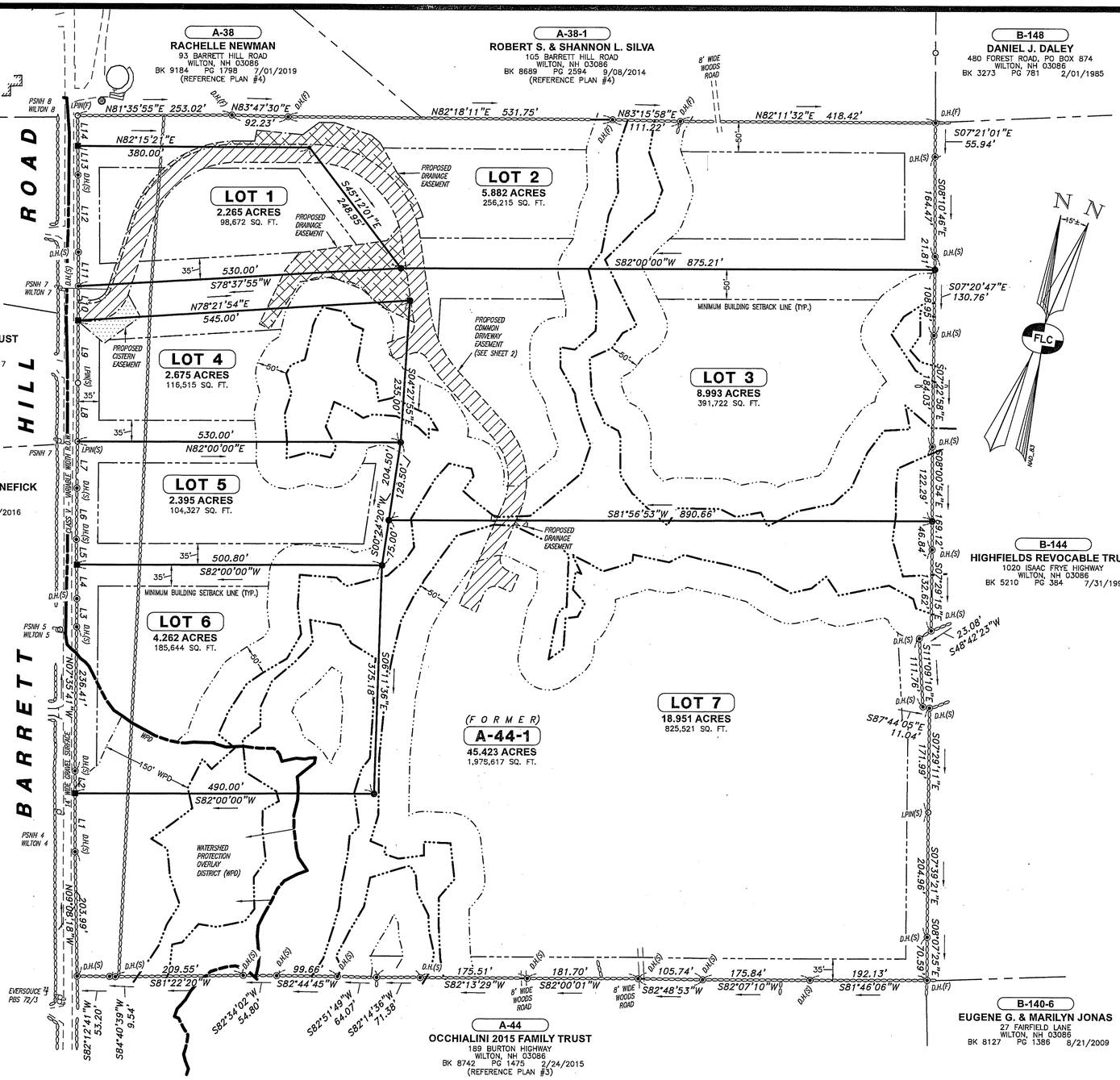
586 TURNPIKE ROAD - NEW IPSWICH NH 03071

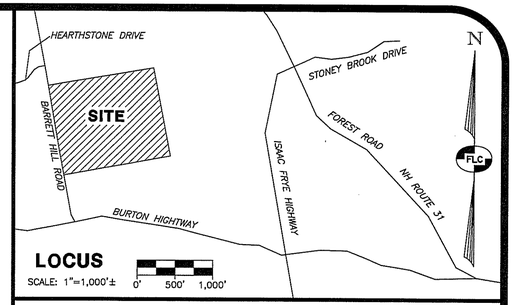
SCALE: 1" = 20' DECEMBER 7, 2022

Surveying ⌖ Engineering ⌖ Land Planning ⌖ Permitting ⌖ Septic Designs

FIELDSTONE LAND CONSULTANTS, PLLC

206 Elm Street, Milford, NH 03055
Phone: (603) 672-5456 Fax: (603) 413-5456
www.FieldstoneLandConsultants.com





LINE TABLE

LINE	BEARING	DISTANCE
L1	N08°09'38"W	96.02'
L2	N08°09'38"W	36.90'
L3	N07°51'21"W	46.03'
L4	N08°40'27"W	55.66'
L5	N08°40'27"W	41.35'
L6	N07°33'54"W	84.09'
L7	N07°35'49"W	76.86'
L8	N07°42'10"W	96.60'
L9	N07°57'15"W	103.41'
L10	N07°57'15"W	56.81'
L11	N08°01'12"W	55.90'
L12	N08°26'23"W	127.44'
L13	N08°30'57"W	47.79'
L14	N08°30'57"W	50.00'

NOTES CONTINUED:

12. THE BUILDING INSPECTOR MAY REQUIRE AN ACCEPTABLE PLAN TO ADDRESS EROSION AND SEDIMENT CONTROL, AS WELL AS ANY APPLICABLE STORMWATER OR OTHER REQUIREMENTS, FOR FUTURE RESIDENTIAL DEVELOPMENT WITHIN THIS SUBDIVISION.

13. LOT 4 IS SUBJECT TO A PROPOSED CISTERN EASEMENT WHICH SHALL BE INSTALLED IN ACCORDANCE TO THE TOWN OF WILTON CISTERN REGULATIONS. THE CISTERN SHALL BE APPROVED, INSTALLED AND FULLY OPERATIONAL BEFORE ANY BUILDING PERMIT FOR A STRUCTURE TO BE SERVED BY THE CISTERN MAY BE ISSUED, AND BEFORE ANY COMBUSTIBLE MATERIALS MAY BE STORED ON SITE.

14. PROPOSED LOTS 1, 2, 3 & 7 SHALL BE SUBJECT TO AND HAVE THE BENEFIT FROM A COMMON DRIVEWAY EASEMENT.

15. NHDES SUBDIVISION APPROVAL IS PENDING FOR PROPOSED LOTS 1, 4, 5 & 6.

16. A WAIVER REQUEST FROM SECTION 6.3.I (SUBDIVISION CHECKLIST) & 10.2 (SUBDIVISION REGULATIONS) WAS SUBMITTED AS PART OF THIS APPLICATION.

17. THE FEE SCHEDULE IN APPENDIX VIII OF THE WILTON LAND USE LAWS AND REGULATIONS AS OF THE DATE OF APPROVAL WILL BE APPLICABLE TO ANY NEW DEVELOPMENT ON LOTS CREATED BY THIS SUBDIVISION FOR A TIME PERIOD DETERMINED BY NH RSA 674:39, AFTER WHICH THE FEE SCHEDULE IN EFFECT AT THE TIME OF APPLICATION FOR A BUILDING PERMIT WILL APPLY.

18. NO BUILDING OR OTHER LOCAL PERMITS SHALL BE ISSUED UNLESS AND UNTIL THE PRECONSTRUCTION MEETING REQUIRED BY THE WILTON SUBDIVISION REGULATIONS SECTION 11.0 HAS OCCURRED.

19. SUBSTANTIAL DEVELOPMENT SHALL BE DRIVEWAYS AND FOUNDATIONS FOR 50% OF THE LOTS WITHIN TWO YEARS OF SUBDIVISION APPROVAL. SUBSTANTIAL COMPLETION SHALL BE FOUNDATIONS AND DRIVEWAYS INSTALLED ON ALL REMAINING LOTS, PRIOR TO THE EXPIRATION OF THE 24-MONTH PERIOD DURING WHICH ACTIVE AND SUBSTANTIAL DEVELOPMENT MUST TAKE PLACE, THE BOARD MAY, FOR GOOD CAUSE, EXTEND SUCH PERIOD AND MAY ALSO GRANT FURTHER EXTENSIONS ON SIMILAR CONDITIONS PRIOR TO THE EXPIRATION OF ANY EXTENSION. UPON SUBSTANTIAL COMPLETION OF THIS SUBDIVISION, THE RIGHTS SET FORTH IN RSA 674:39, II, 5-YEAR EXEMPTION, SHALL ACCRUE.

20. A 25 FT. WIDE BUFFER WILL BE RE-PLANTED ALONG THE FRONTAGE OF LOT A-44-1 (BARRETT HILL ROAD) IN ACCORDANCE TO A LETTER DRAFTED BY BRYAN R. COMEAU, LFP OF DALTON MOUNTAIN FORESTRY, LLC AS SUBMITTED TO THE TOWN PLANNING BOARD.

REFERENCE PLANS:

1. "BOUNDARY PLAN – TAX MAP A LOT 44– (BARRETT HILL ROAD) – WILTON, NEW HAMPSHIRE – PREPARED FOR AND LAND OF: – SAN-KEN HOMES, INC." SCALE: 1"=100', DATED DECEMBER 10, 2021, PREPARED BY THIS OFFICE (UN-RECORDED).
2. "SUBDIVISION – PLAN OF LAND – ANTHONY C. BLAIR – WILTON, N.H.", SCALE:1"=200', DATED OCTOBER 10, 1978 AND REVISED THROUGH NOVEMBER 13, 1978 BY THOMAS F. MORAN, INC. & RECORDED AS PLAN #11992 IN THE H.C.R.D.
3. "SUBDIVISION PLAN OF LAND – PREPARED FOR – EDNA CANN REVOCABLE TRUST – WILTON, NEW HAMPSHIRE", SCALE:1"=100', DATED JANUARY 4, 1990 BY THOMAS F. MORAN, INC & RECORDED AS PLAN #24326 IN THE H.C.R.D.
4. "LOT LINE ADJUSTMENT PLAN – TAX MAP A, LOTS 37 & 38 – 105 & 93 BARRETT HILL ROAD – WILTON, NH – PREPARED FOR AND LAND OF – ROBERT & SHANNON SILVA" DATED: MARCH 20, 2019 BY FIELDSTONE LAND CONSULTANTS, PLLC & RECORDED AS PLAN #40186 IN THE H.C.R.D.

LEGEND:

- RIGHT-OF-WAY LINE
- BOUNDARY LINE
- ABUTTING LOT LINE
- BUILDING SETBACK LINE
- WETLAND SETBACK LINE
- PROPOSED EASEMENT
- EDGE OF WETLANDS
- EDGE OF GRAVEL
- STONE WALL
- WATERSHED PROTECTION OVERLAY DISTRICT
- D.H.(F) DRILL HOLE FOUND
- D.H.(S) DRILL HOLE SET
- I.PIPE(F) IRON PIPE FOUND
- I.PIN[TBS] IRON PIN OR DRILL HOLE TO BE SET
- G.B.[TBS] GRANITE BOUND TO BE SET
- UTILITY POLE & GUY
- WELL
- A-44-1 TAX MAP & LOT NUMBER
- EXISTING BUILDING

CERTIFICATION:

"I HEREBY CERTIFY THAT THIS PLAT IS THE RESULT OF AN ACTUAL FIELD SURVEY MADE ON THE GROUND PER THE PRECISION AND ACCURACY STANDARDS FOR AN URBAN CLASSIFICATION SURVEY AS SPECIFIED IN THE NEW HAMPSHIRE LAND SURVEYOR'S ADMINISTRATIVE RULES (LAN 503.04) AND HAS A MAXIMUM ERROR OF CLOSURE OF ONE PART IN TEN THOUSAND (1:10,000) ON ALL PROPERTY LINES WITHIN AND BORDERING THE SUBJECT PROPERTY."

DATE: 12/8/22

STATE OF NEW HAMPSHIRE No. 946 LICENSED LAND SURVEYOR MICHAEL D. PLOOF SIGNATURE

CERTIFICATION:

WETLANDS WERE DELINEATED IN ACCORDANCE WITH THE US ARMY CORPS OF ENGINEERS 1987 WETLANDS DELINEATION MANUAL Y-87-1 AND REGIONAL SUPPLEMENT FOR NORTHEAST AND NORTHCENTRAL REGION AND FIELD INDICATORS FOR HYDRIC SOILS IN NEW ENGLAND, BY CHRISTOPHER A. GUIDA, C.W.S. IN OCTOBER, 2021 & AUGUST, 2022.

DATE: 12/8/22

STATE OF NEW HAMPSHIRE CHRISTOPHER A. GUIDA No. 053 CERTIFIED WETLAND SCIENTIST

12/8/22

NOTES:

1. THE OWNER OF RECORD FOR TAX MAP LOT A-44-1 IS SAN-KEN HOMES, INC – 586 TURNPIKE ROAD, NEW IPSWICH NH 03071 SEE H.C.R.D. BK. 9511 PG. 1239 DATED: AUGUST 13, 2021.
2. THE PURPOSE OF THIS PLAN IS TO DEPICT A SUBDIVISION FOR TAX MAP A LOT 44-1 CREATING SEVEN NEW RESIDENTIAL BUILDING LOTS.
3. THE TOTAL AREA OF LOT A-44-1 IS 45.423 ACRES OR 1,978,617 SQ.FT. WITH 1'415.27 FT. OF FRONTAGE ALONG BARRETT HILL ROAD.
4. THE BOUNDARY INFORMATION SHOWN WAS DEVELOPED FROM THE REFERENCE PLANS CITED HEREON TOGETHER WITH AN ON THE GROUND FIELD SURVEY PERFORMED BY THIS OFFICE DURING THE MONTH OF SEPTEMBER, 2021.
5. ZONING FOR PARCEL A-44-1 IS ENTIRELY R & A – GENERAL RESIDENCE AND AGRICULTURAL. PROPOSED LOTS COMPLY WITH ALL APPLICABLE ZONING REQUIREMENTS.

   MIN. LOT SIZE = (2 ACRES EXCLUDING WETLANDS NORMAL FRONTAGE)
   (5 ACRES WITH 2 ACRES THAT EXCLUDES WETLANDS REDUCED FRONTAGE)
   MIN. ROAD FRONTAGE = 200 FT. (NORMAL FRONTAGE)
   300 FT. (WETLANDS PROTECTION DISTRICT)
   50 FT. (REDUCED FRONTAGE)
   MIN. BUILDING SETBACKS = 35 FT. FROM ALL LINES
   50 FT. FROM ALL LINES (REDUCED FRONTAGE LOT)

6. THE SUBJECT PARCEL LIES OUTSIDE THE WELLHEAD PROTECTION AREA (WHPA). PORTIONS OF THE SITE LIE WITHIN THE WETLANDS CONSERVATION DISTRICT, BUILDINGS MUST BE SETBACK 50 FEET FROM DELINEATED WETLANDS. THE ENTIRE SITE LIES OUTSIDE THE AQUIFER PROTECTION DISTRICT. A PORTION OF PROPOSED LOT 7 IS SUBJECT TO THE WATERSHED PROTECTION OVERLAY DISTRICT.
7. PROPOSED LOTS ARE TO BE SERVICED BY INDIVIDUAL SEPTIC SYSTEMS AND WELLS.
8. SUBJECT PARCELS LIE OUTSIDE THE FLOOD HAZARD AREA AS DETERMINED FROM THE FLOOD INSURANCE STUDY (FIRM), HILLSBOROUGH COUNTY, NEW HAMPSHIRE, TOWN OF WILTON, COMMUNITY NO. 330102 PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, MAP 33011C0431D, DATED SEPTEMBER 25, 2009.
9. HORIZONTAL ORIENTATION AND VERTICAL DATUM ARE NAD_83 AND NAVD 88 RESPECTIVELY PER A GPS CORS SOLUTION.
10. ALL NEW DRIVEWAYS MUST CONFORM TO THE WILTON DRIVEWAY REGULATIONS, INCLUDING OBTAINING A DRIVEWAY PERMIT PRIOR TO CONSTRUCTION AND ANY NECESSARY DRIVEWAY WAIVERS. ANY DRIVEWAY RELOCATION REQUIRES PRIOR APPROVAL OF THE WILTON PLANNING BOARD.
11. TO THE BEST OF MY KNOWLEDGE AND BELIEF, LOT A-44-1 HAS NO KNOWN EASEMENTS ASSOCIATED.

(SEE NOTES CONTINUED)

OWNER(S) SIGNATURE 12/8/2022 DATE

APPROVED BY WILTON PLANNING BOARD

ON: _____ CERTIFIED BY
CHAIR: _____ AND
VICE-CHAIR OR DESIGNATED MEMBER: _____

GRAPHIC SCALE
100' 50' 0 100' 200' 300'
IMPERIAL: 1"=100'

REV.	DATE	DESCRIPTION	C/O	DR	CK
E	12/1/22	PB & REVIEW COMMENTS	WPB	JGL	MDP
D	11/7/22	PB & REVIEW COMMENTS	WPB	JGL	MDP
C	10/10/22	REVISED CONCEPT	WPB	JGL	MDP
B	8/8/22	WATERSHED LOCATION – CONCEPT REVISION	NRPC	JGL	MDP
A	4/11/22	REVIEW COMMENTS	NRPC	JGL	MDP

SUBDIVISION PLAN
TAX MAP A LOT 44-1
(BARRETT HILL ROAD)
WILTON, NEW HAMPSHIRE

PREPARED FOR AND LAND OF:

SAN-KEN HOMES, INC.

586 TURNPIKE ROAD - NEW IPSWICH NH 03071

SCALE: 1" = 100' FEBRUARY 3, 2022

Surveying ⌖ Engineering ⌖ Land Planning ⌖ Permitting ⌖ Septic Designs

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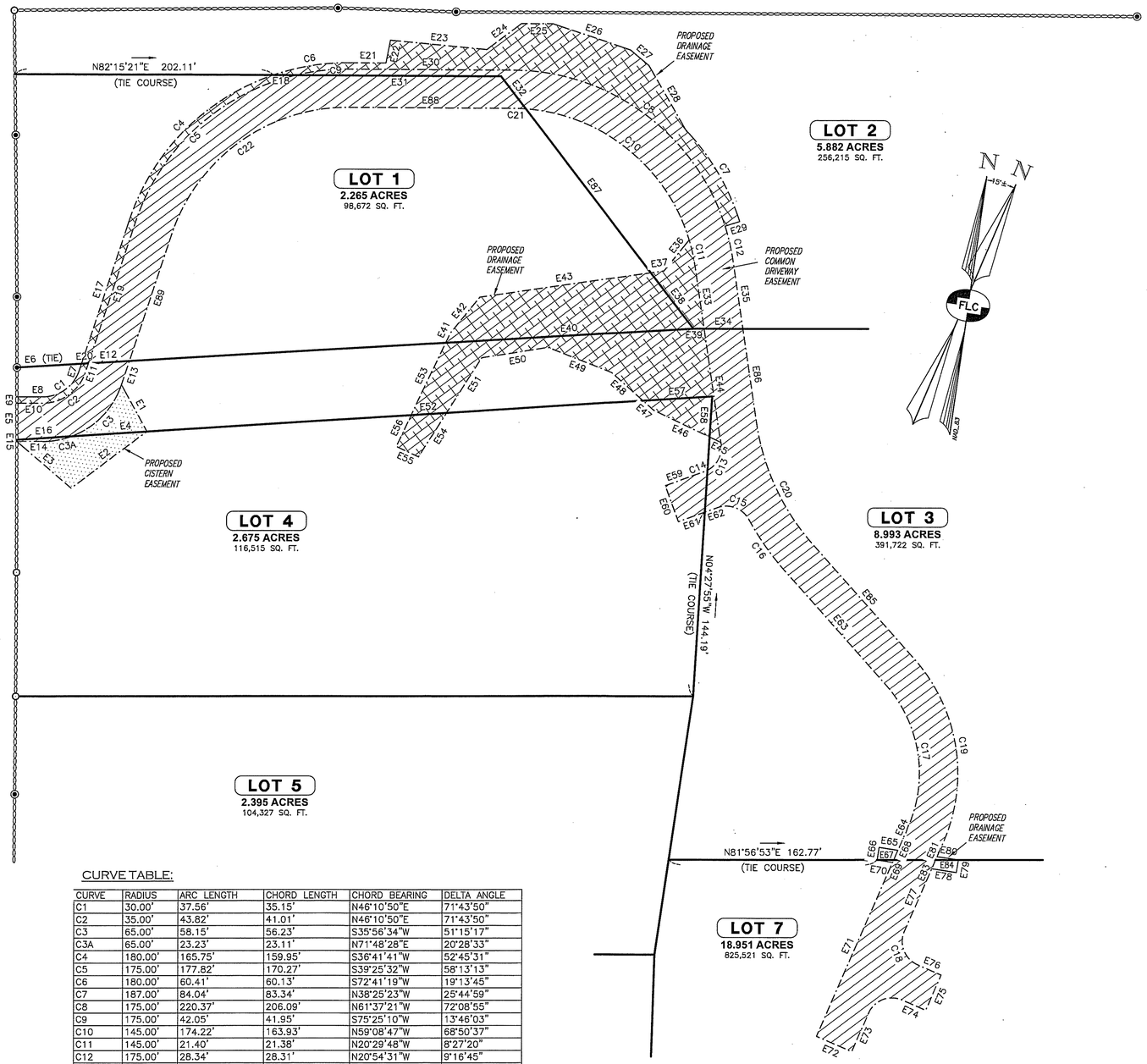

LINE TABLE:

LINE	BEARING	DISTANCE
E1	S36°36'30"E	41.84'
E2	N45°19'10"E	74.08'
E3	N57°29'40"W	56.09'
E4	S78°21'54"W	59.17'
E5	N07°57'26"W	28.66'
E6	S78°38'01"W	50.67'
E7	N10°18'55"E	5.87'
E8	S82°02'45"W	20.26'
E9	S07°57'15"E	5.00'
E10	N82°02'45"E	20.26'
E11	N10°18'55"E	7.86'
E12	S78°37'55"W	32.28'
E13	N10°18'55"E	19.79'
E14	N82°02'45"E	20.26'
E15	S07°53'09"E	1.34'
E16	N78°21'54"E	43.09'
E17	N10°18'55"E	119.60'
E18	N82°15'21"E	17.64'
E19	N10°18'55"E	117.62'
E20	S78°37'55"W	5.38'
E21	N82°18'11"E	28.66'
E22	N03°11'54"E	18.27'
E23	N87°32'03"E	75.58'
E24	N45°06'07"E	33.78'
E25	N82°18'11"E	24.67'
E26	S79°26'13"E	63.75'
E27	S57°46'57"E	18.86'
E28	S37°44'43"E	58.27'
E29	N64°27'06"E	12.00'
E30	N82°18'11"E	127.73'
E31	N82°15'21"E	160.26'
E32	S45°12'01"E	32.12'
E33	S16°16'08"E	49.51'
E34	S82°00'00"W	30.32'
E35	S16°16'08"E	53.87'
E36	S30°51'15"W	31.33'
E37	S73°43'52"W	10.39'
E38	N45°12'01"W	55.21'
E39	S82°00'00"W	8.31'
E40	N78°37'55"E	193.81'
E41	S17°12'22"W	8.42'
E42	S31°09'07"W	36.56'
E43	S73°43'52"W	134.83'
E44	N16°28'36"W	90.44'
E45	S72°25'59"E	9.79'
E46	S72°25'59"E	48.65'
E47	S55°57'38"E	11.05'
E48	N55°57'38"W	32.90'
E49	N76°19'45"W	53.58'
E50	S73°03'17"W	52.44'
E51	S24°16'02"W	51.34'
E52	S78°21'54"W	27.61'
E53	N17°12'22"E	62.93'
E54	S24°16'02"W	40.81'
E55	N72°47'38"W	19.16'
E56	N17°12'22"E	27.18'
E57	S78°21'54"W	54.17'
E58	N04°27'55"W	31.89'
E59	N62°00'08"E	32.62'
E60	N27°59'52"W	30.00'
E61	S62°00'08"W	22.02'
E62	S62°00'08"W	10.60'
E63	N49°36'11"W	118.85'
E64	N15°30'35"E	19.95'
E65	S88°58'42"E	14.83'
E66	N01°01'18"E	10.00'
E67	N81°56'53"E	12.93'
E68	S15°30'35"W	8.22'
E69	S15°30'35"W	2.11'
E70	N88°58'42"W	12.24'
E71	N15°30'35"E	148.26'
E72	N74°29'25"W	30.00'
E73	S15°30'35"W	32.68'
E74	N74°29'25"W	20.00'
E75	S15°30'35"W	30.00'
E76	S74°29'25"E	20.00'
E77	S15°30'35"W	53.33'
E78	N88°58'42"W	19.39'
E79	S01°01'18"W	10.00'
E80	S88°58'42"E	16.81'
E81	N15°30'35"E	2.89'
E83	N15°30'35"E	7.44'
E84	S81°56'53"W	17.75'
E85	S49°36'11"E	118.85'
E86	S16°16'08"E	74.22'
E87	N45°12'01"W	161.62'
E88	N82°18'11"E	127.73'
E89	N10°18'55"E	105.69'

CURVE TABLE:

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	30.00'	37.56'	35.15'	N46°10'50"E	71°43'50"
C2	35.00'	43.82'	41.01'	N46°10'50"E	71°43'50"
C3	65.00'	58.15'	56.23'	S35°56'34"W	51°15'17"
C3A	65.00'	23.23'	23.11'	N71°48'28"E	20°28'33"
C4	180.00'	165.75'	159.95'	S36°41'41"W	52°45'31"
C5	175.00'	177.82'	170.27'	S39°25'32"W	58°13'13"
C6	180.00'	60.41'	60.13'	S72°41'19"W	19°13'45"
C7	187.00'	84.04'	83.34'	N38°25'23"W	25°44'59"
C8	175.00'	220.37'	206.09'	N61°37'21"W	72°08'55"
C9	175.00'	42.05'	41.95'	S75°25'10"W	13°46'03"
C10	145.00'	174.22'	163.93'	N59°08'47"W	68°50'37"
C11	145.00'	21.40'	21.38'	N20°29'48"W	8°27'20"
C12	175.00'	28.34'	28.31'	N20°54'31"W	9°16'45"
C13	20.00'	25.89'	24.12'	N17°38'54"E	74°09'43"
C14	20.00'	2.54'	2.54'	N58°21'56"E	7°16'22"
C15	20.00'	28.43'	26.09'	N77°16'50"W	81°26'05"
C16	215.00'	48.93'	48.83'	S43°04'59"E	13°02'23"
C17	105.00'	119.33'	113.01'	N17°02'48"W	65°06'46"
C18	20.00'	31.42'	28.28'	S29°29'25"E	90°00'00"
C19	135.00'	153.42'	145.29'	N17°02'48"W	65°06'46"
C20	185.00'	107.63'	106.12'	S32°56'09"E	33°20'02"
C21	145.00'	10.45'	10.45'	S84°22'03"W	4°07'44"
C22	145.00'	182.18'	170.43'	S46°18'33"W	71°59'16"

NOTES:

1. THE OWNER OF RECORD FOR TAX MAP LOT A-44-1 IS SAN-KEN HOMES, INC - 586 TURNPIKE ROAD, NEW IPSWICH NH 03071 SEE H.C.R.D. BK. 9511 PG. 1239 DATED: AUGUST 13, 2021.
2. THE PURPOSE OF THIS PLAN IS TO DEPICT A COMMON DRIVEWAY EASEMENT BENEFITTING LOTS 1, 2, 3 & 7 FOR THE PURPOSE OF ACCESS & UTILITIES AS SHOWN HEREON.
3. SEE COMMON DRIVEWAY DECLARATION TO BE RECORDED HEREWITH.

LEGEND:

- RIGHT-OF-WAY LINE
- BOUNDARY LINE
- STONE WALL
- A-44-1 — TAX MAP & LOT NUMBER
- PROPOSED COMMON DRIVEWAY EASEMENT
- PROPOSED DRAINAGE EASEMENT
- PROPOSED CISTERN EASEMENT

APPROVED BY WILTON PLANNING BOARD

ON: _____ CERTIFIED BY
CHAIR: _____ AND
VICE-CHAIR OR DESIGNATED MEMBER: _____

GRAPHIC SCALE

50' 25' 0 50' 100' 150'
IMPERIAL: 1"=50'

REV.	DATE	DESCRIPTION	C/O	DR	CK
E	12/1/22	PB & REVIEW COMMENTS	WPB	JGL	MDP
D	11/7/22	PB & REVIEW COMMENTS	WPB	JGL	MDP
C	10/10/22	REVISED CONCEPT	WPB	JGL	MDP
B	8/8/22	WATERSHED LOCATION - CONCEPT REVISION	NRPC	JGL	MDP
A	4/11/22	REVIEW COMMENTS	NRPC	JGL	MDP

EASEMENT PLAN

TAX MAP A LOT 44-1
(BARRETT HILL ROAD)
WILTON, NEW HAMPSHIRE

PREPARED FOR AND LAND OF:

SAN-KEN HOMES, INC.
586 TURNPIKE ROAD - NEW IPSWICH NH 03071

SCALE: 1" = 50' FEBRUARY 3, 2022

Surveying ⌖ Engineering ⌖ Land Planning ⌖ Permitting ⌖ Septic Designs

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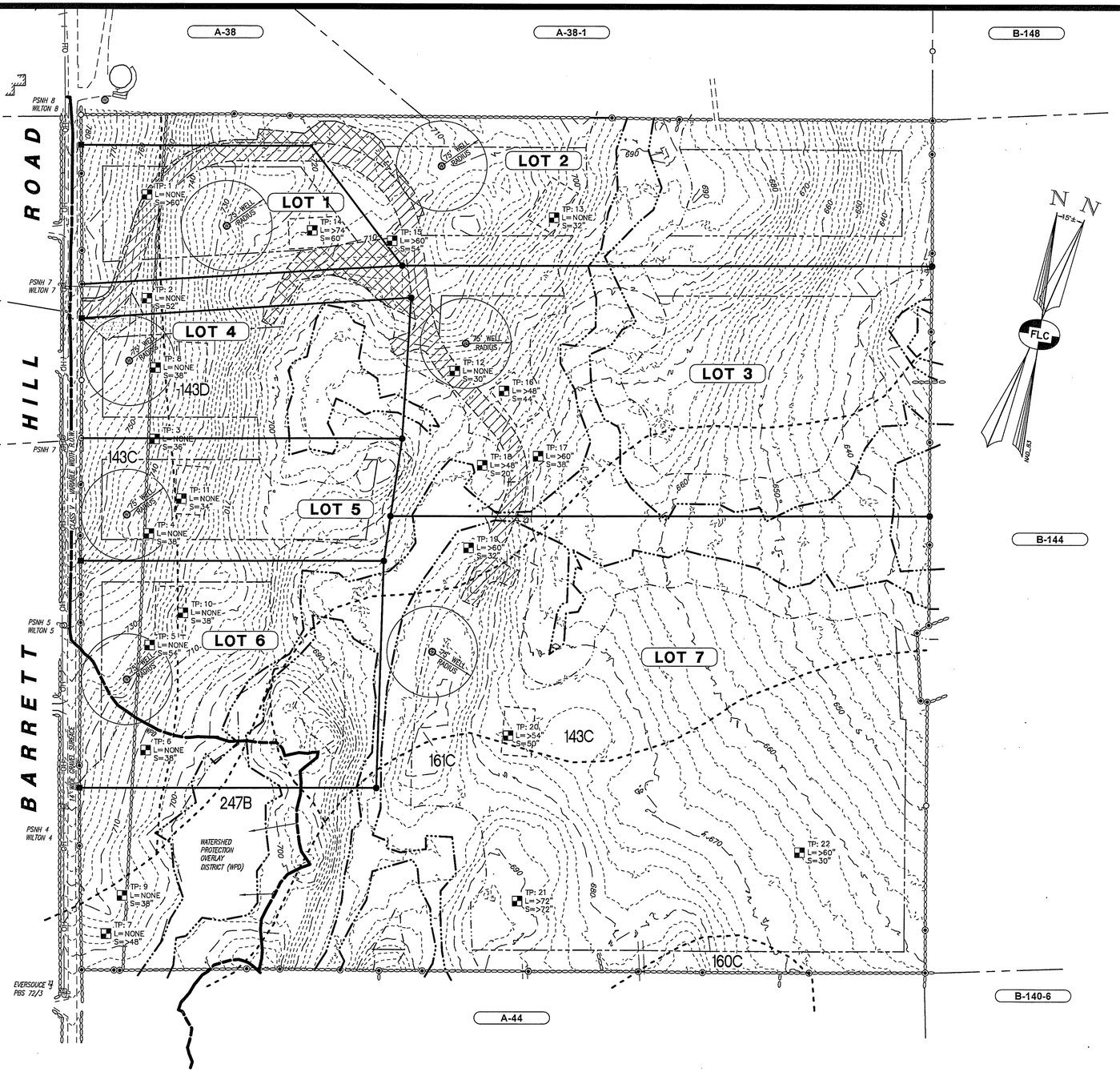

LEGEND:

- RIGHT-OF-WAY LINE
- BOUNDARY LINE
- ABUTTING LOT LINE
- BUILDING SETBACK LINE
- WETLAND SETBACK LINE
- PROPOSED EASEMENT
- EDGE OF WETLANDS
- EDGE OF GRAVEL
- STONE WALL
- D.H.(F) DRILL HOLE FOUND
- D.H.(S) DRILL HOLE SET
- I.PIPE(F) IRON PIPE FOUND
- I.PIN[TBS] IRON PIN OR DRILL HOLE TO BE SET
- G.B.[TBS] GRANITE BOUND TO BE SET
- UTILITY POLE & GUY
- WELL
- A-44-1 TAX MAP & LOT NUMBER
- EXISTING BUILDING
- TP: 8 L=NONE S=38" TEST PIT & 4K BOX
- 75' WELL RADIUS POTENTIAL WELL
- PPROPOSED DRIVE

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TO CONSTRUCTION
DIGSAFE.COM
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1-888-344-7233

CERTIFICATION:

WETLANDS WERE DELINEATED IN ACCORDANCE WITH THE US ARMY CORPS OF ENGINEERS 1987 WETLANDS DELINEATION MANUAL Y-87-1 AND REGIONAL SUPPLEMENT FOR NORTHEAST AND NORTHCENTRAL REGION AND FIELD INDICATORS FOR HYDRIC SOILS IN NEW ENGLAND, BY KENNETH ROBINSON UNDER SUPERVISION OF CHRISTOPHER A. GUIDA, C.W.S. IN OCTOBER, 2021.

DATE:_____

SHEET 2 NOTES:

1. THE PURPOSE OF THIS SHEET IS TO SHOW THE EXISTING TOPOGRAPHIC FEATURES AND SOIL LINES RELATIVE TO THE PROPOSED LOTS.
2. CONTOURS WERE DEVELOPED FROM LIDAR POINT CLOUD DATA (MERRIMACK RIVER WATERSHED CLASSIFIED LAS – PUBLISHED IN 2016) ALONG WITH A FIELD SURVEY PERFORMED BY THIS OFFICE DURING THE MONTH OF SEPTEMBER 2021. LIDAR DATA WAS ACQUIRED FROM THE NH GRANIT GIS CLEARINGHOUSE. VERTICAL DATUM IS REPORTED TO BE NAVD 88 GEOID 12B.

NRCS SOILS LEGEND:

SOURCE: USDA NRCS WEB SOIL SURVEY

----------	SOIL BOUNDARY
143C	MONADNOCK FINE SANDY LOAM 8 TO 15% SLOPES, VERY STONY
143D	MONADNOCK FINE SANDY LOAM 15 TO 35% SLOPES, VERY STONY
160C	TUNBRIDGE-LYMAN-MONADNOCK COMPLEX 8 TO 15% SLOPES, STONY
161C	LYMAN-TUNBRIDGE-ROCK OUTCROP COMPLEX 3 TO 15% SLOPES
247B	LYME FINE SANDY LOAM 0 TO 8% SLOPES, STONY

_____ _____
OWNER(S) SIGNATURE DATE

APPROVED BY WILTON PLANNING BOARD

ON: _____ CERTIFIED BY
CHAIR: _____ AND
VICE-CHAIR OR DESIGNATED MEMBER: _____

GRAPHIC SCALE
100' 50' 0 100' 200' 300'
IMPERIAL: 1"=100'

REV.	DATE	DESCRIPTION	C/O	DR	CK
D	11/7/22	PB & REVIEW COMMENTS	WPB	JGL	MDP
C	10/10/22	REVISED CONCEPT	WPB	JGL	MDP
B	8/8/22	WATERSHED LOCATION – CONCEPT REVISION	NRPC	JGL	MDP
A	4/11/22	REVIEW COMMENTS	NRPC	JGL	MDP

TOPOGRAPHIC & SOILS PLAN

TAX MAP A LOT 44-1
(BARRETT HILL ROAD)
WILTON, NEW HAMPSHIRE

PREPARED FOR AND LAND OF:
SAN-KEN HOMES, INC.
586 TURNPIKE ROAD - NEW IPSWICH NH 03071

SCALE: 1" = 100' FEBRUARY 3, 2022

Surveying ✣ Engineering ✣ Land Planning ✣ Permitting ✣ Septic Designs
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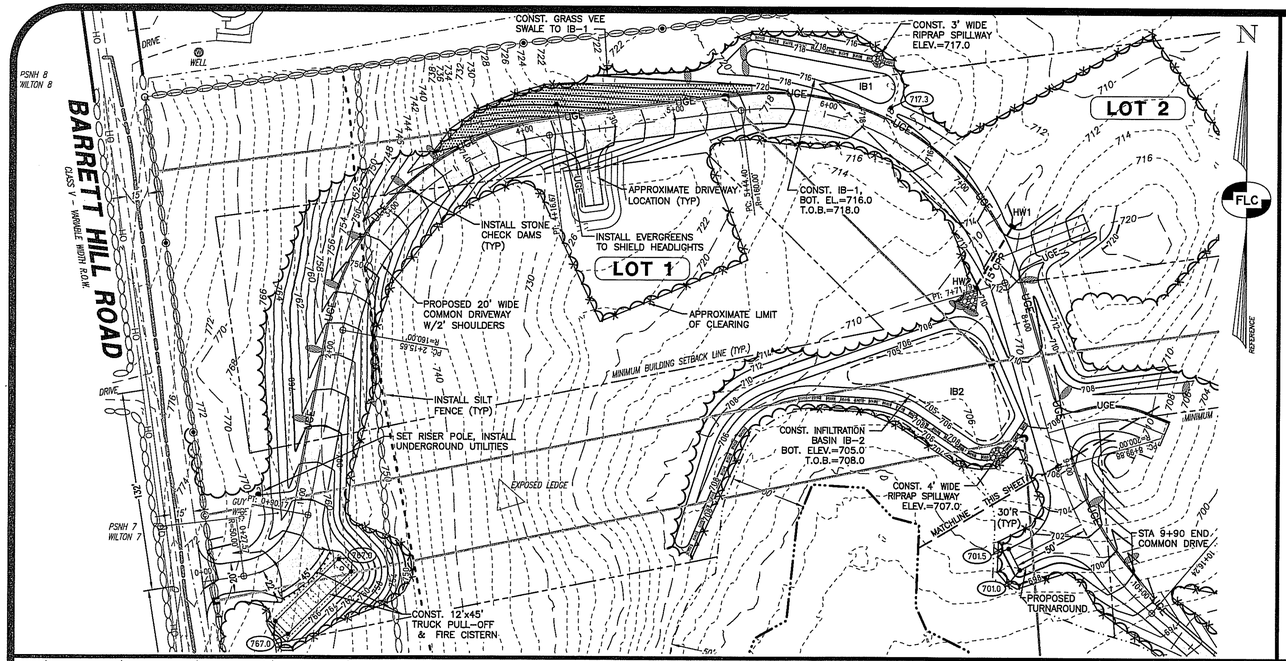

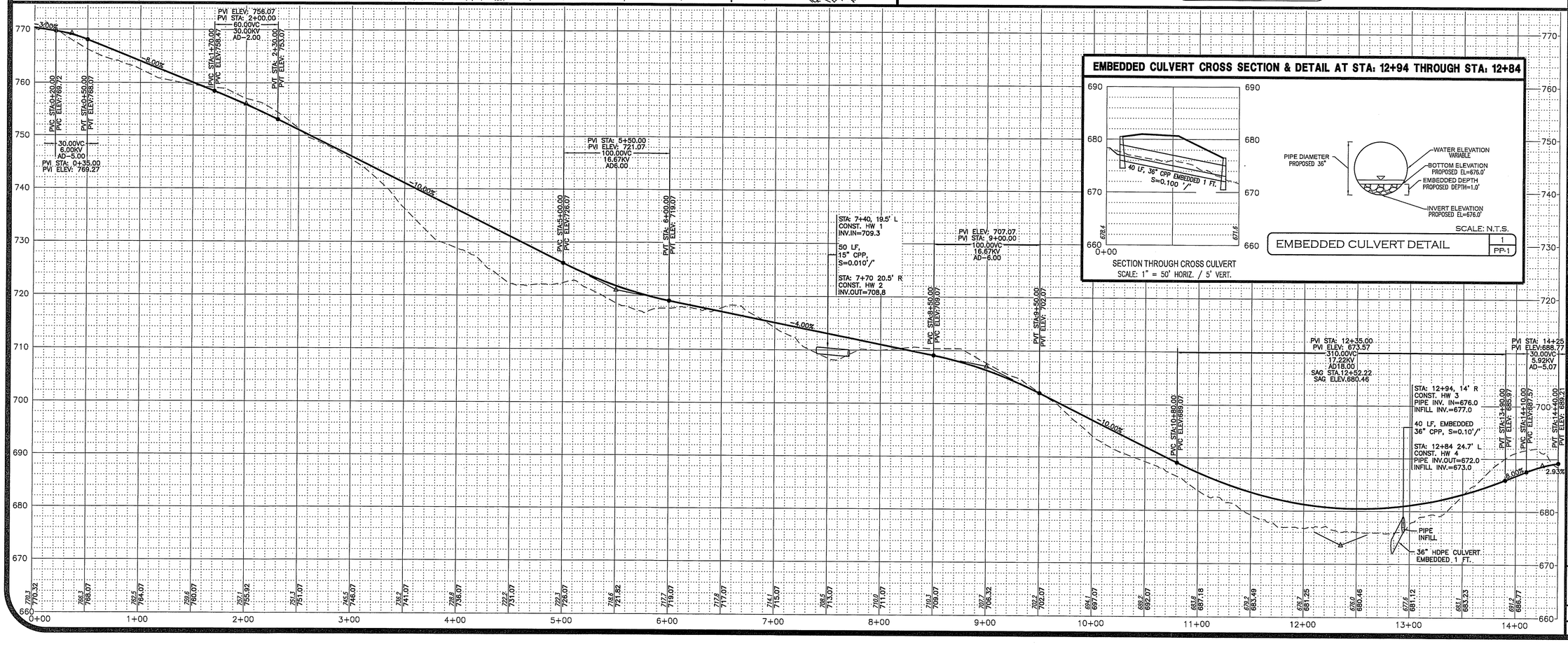

EMBEDDED CULVERT CROSS SECTION & DETAIL AT STA: 12+94 THROUGH STA: 12+84

SECTION THROUGH CROSS CULVERT
SCALE: 1" = 50' HORIZ. / 5' VERT.

SCALE: N.T.S.

EMBEDDED CULVERT DETAIL — PP-1

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STATE OF NEW HAMPSHIRE — NATHAN R. CHAMBERLIN No. 9541 LICENSED PROFESSIONAL ENGINEER

REV.	DATE	DESCRIPTION	DR	CK
E	12/05/22	CISTERN LOCATION & PULL-OFF	NRC	CEB
D	11/30/22	REVISE COMMON DRIVEWAY WIDTH & ALIGNMENT	NRC	CEB
C	11/04/22	REVISE DRIVEWAY LOCATIONS, DRAINAGE DESIGN	NRC	CEB
B	10/10/22	REVISE LOT LAYOUT, DRIVEWAY LOCATIONS	NRC	CEB
A	9/27/22	REVISED PROFILE GRADE ADDED CULVERT	DSL	–

DRIVEWAY PLAN & PROFILES
LOTS 1, 2, 3 & 7

SAN-KEN HOMES, INC.
586 TURNPIKE ROAD
NEW IPSWICH, NH 03071

DRIVEWAY PLAN & PROFILES

PLANS ISSUED FOR: **MUNICIPAL REVIEW**

TAX MAP LOT 44-1
WILTON, NEW HAMPSHIRE

SCALE: 1" = 50' HORIZ. / 10' VERT.

SEPTEMBER 12, 2022

PP-1 SHEET

FILE: 3029PP01E.dwg

PROJECT NO. 3029.01

SHEET NO. 4 OF 9

PLAN - LOT 4

DRIVEWAY PROFILE - LOT 4

PLAN - LOT 5

DRIVEWAY PROFILE - LOT 5

PLAN - LOT 6

DRIVEWAY PROFILE - LOT 6

PLAN - LOT 1

DRIVEWAY PROFILE - LOT 1

PLAN - LOT 2

DRIVEWAY PROFILE - LOT 2

PLAN - LOT 3

DRIVEWAY PROFILE - LOT 3

SECTION THROUGH CROSS CULVERT

SCALE: 1" = 20' HORIZ. / 10' VERT.

SCALE: N.T.S.

EMBEDDED CULVERT | 1 | PP-2

CONTACT DIG SAFE 72 HOURS PRIOR TO CONSTRUCTION
DIGSAFE.COM
OR DIAL 811
CALL 811 - KNOW WHAT'S BELOW

GRAPHIC SCALE

50' 25' 0 50' 100' 150'

IMPERIAL: 1"=50'(H) 10'(V)

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Phone: (603) 672-5456 Fax: (603) 413-5456
www.FieldstoneLandConsultants.com

REV.	DATE	DESCRIPTION	DR	CK
B	11/30/22	REVISE COMMON DRIVEWAY WIDTH & ALIGNMENT	NRC	CEB
A	10/10/22	REVISE LOT LAYOUT, DRIVEWAY LOCATIONS	NRC	CEB

DRIVEWAY PLAN & PROFILES
LOTS 4, 5 & 6

SAN-KEEN HOMES, INC.
586 TURNPIKE ROAD
NEW IPSWICH, NH 03071

DRIVEWAY PLAN & PROFILES

TAX MAP LOT 44-1
WILTON, NEW HAMPSHIRE

PLANS ISSUED FOR:
MUNICIPAL REVIEW

SEPTEMBER 12, 2022

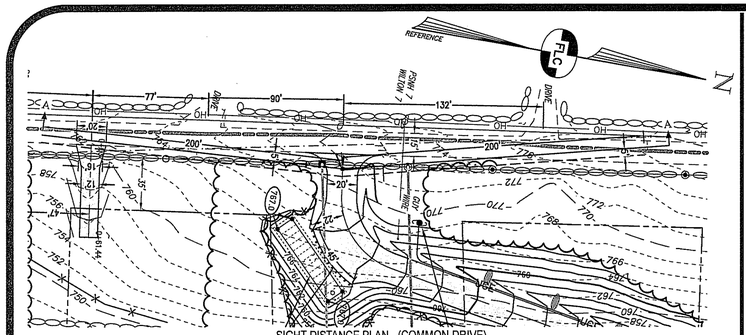
SCALE: 1" = 50' HORIZ. / 10' VERT.

PP-2
SHEET

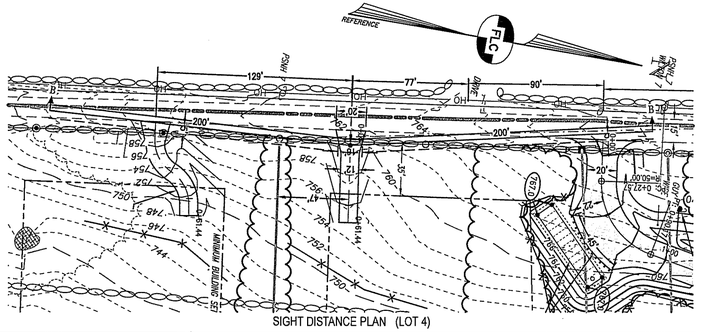
FILE: 3029PPOT.dwg

PROJECT NO. 3029.01

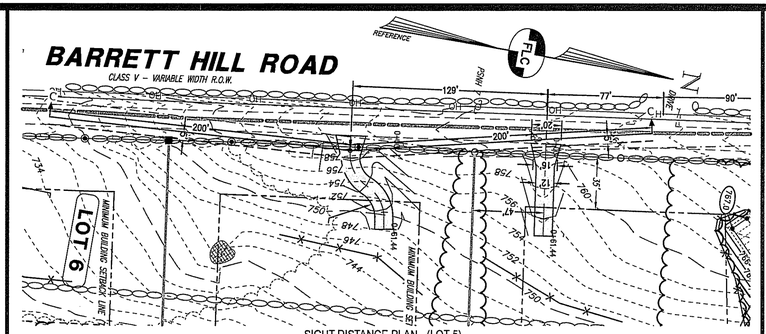
SHEET NO. 5 OF 9



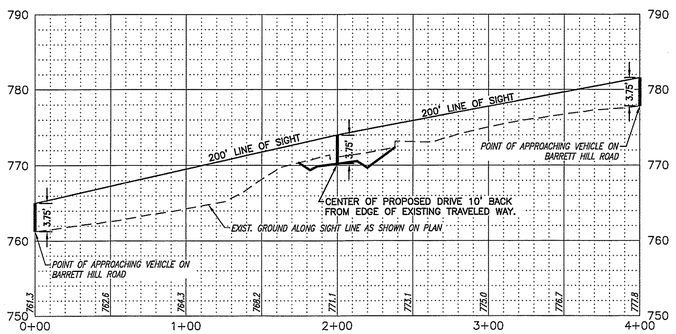
SIGHT DISTANCE PLAN (COMMON DRIVE)



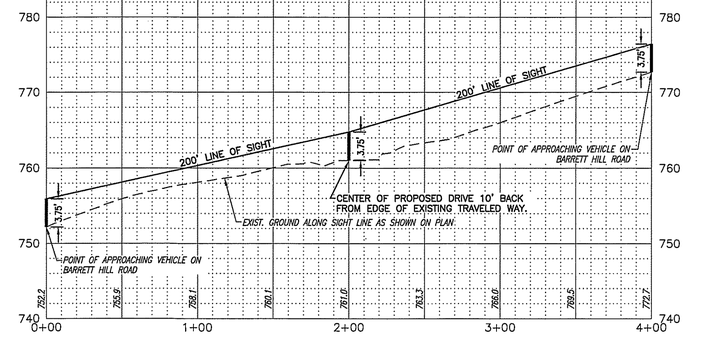
SIGHT DISTANCE PLAN (LOT 4)



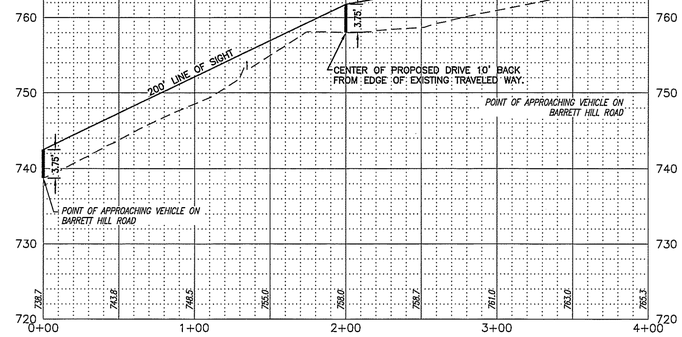
SIGHT DISTANCE PLAN (LOT 5)



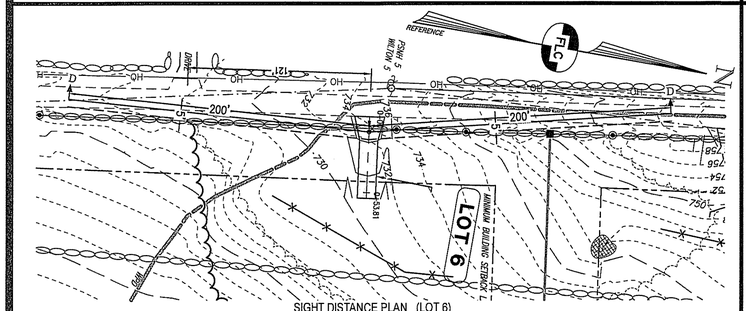
SIGHT DISTANCE PROFILE A-A (COMMON DRIVE)



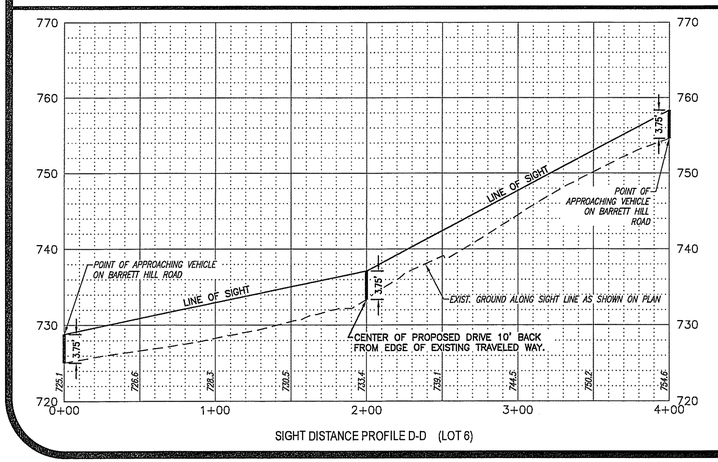
SIGHT DISTANCE PROFILE B-B (LOT 4)



SIGHT DISTANCE PROFILE C-C (LOT 5)



SIGHT DISTANCE PLAN (LOT 6)



SIGHT DISTANCE PROFILE D-D (LOT 6)

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GRAPHIC SCALE
50' 25' 0 50' 100' 150'
IMPERIAL: 1"=50'(H) 10'(V)

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STATE OF NEW HAMPSHIRE
NATHAN R. CHAMBERLIN
No. 9541
LICENSED PROFESSIONAL ENGINEER

REV.	DATE	DESCRIPTION	DR	CK
A	10/10/22	REVISE LOT LAYOUT, DRIVEWAY LOCATION	NRC	CEB

SIGHT DISTANCE PLANS AND PROFILES

SAH-KEN HOMES, INC.
585 TURNPIKE ROAD
NEW IPSWICH, NH 03071

DRIVEWAY PLAN & PROFILES

TAX MAP LOT 44-1
WILTON, NEW HAMPSHIRE

PLANS ISSUED FOR:
MUNICIPAL REVIEW

SCALE: 1" = 50' HORIZ. / 10' VERT.

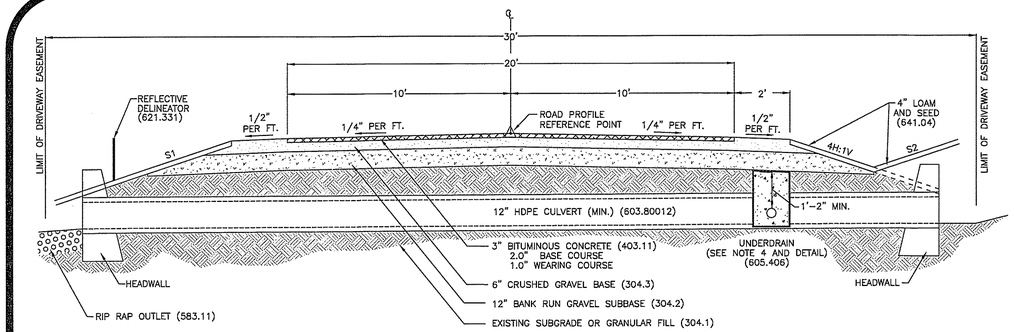
SEPTEMBER 12, 2022

PP-3
SHEET

PROJECT NO. 3029.01

SHEET NO. 6 OF 9

FILE: 3029PP01E.dwg



GENERAL DRIVEWAY CONSTRUCTION NOTES

1. REMOVE ALL LOAM, CLAY, MUCK, STUMPS, AND OTHER IMPROPER ROAD FOUNDATION MATERIAL WITHIN 3' OF SUBGRADE. REPLACE WITH COMPACTED GRANULAR FILL MATERIAL ACCEPTABLE TO THE DIRECTOR OF PUBLIC WORKS. COMPACTION TO BE AT LEAST 95% OF THE DRY WEIGHT AS DETERMINED BY MODIFIED PROCTOR TESTING (ASTM 1557).
2. ALL MATERIALS AND CONSTRUCTION SHALL MEET AND BE COMPLETED IN STRICT ACCORDANCE WITH THE TOWN OF WILTON'S CURRENT DRIVEWAY AND DRAINAGE SPECIFICATIONS.
3. SHOULD UNDERDRAIN PIPE BE REQUIRED IN CUT SECTIONS, THE PIPE SHALL DISCHARGE THROUGH A PRECAST ENDWALL OR INTO A DRAINAGE STRUCTURE.
4. WHERE ROAD GRADE IS 5% OR GREATER, ROAD SWALE SHALL BE LINED WITH RIPRAP (2 LAYERS, 6" TO 8" STONE, 6' WIDE WITH 6" GRAVEL BASE OR EROSION CONTROL FABRIC).
5. ALL UTILITY POLES AND TRANSFORMER SLABS SHALL BE LOCATED AT THE EASEMENT LINE.

MAXIMUM SIDE SLOPES:

DISTANCE TO ORIGINAL GROUND	S1 (FILL)	S2 (CUT)
LESS THAN 10'	3:1	3:1
10' TO 20'	2:1	2:1
GREATER THAN 20'	2:1	2:1
LEDGE	—	1:2

SCALE: N.T.S.

TYPICAL CROSS-SECTION - COMMON DRIVE — 1 / DT - 1

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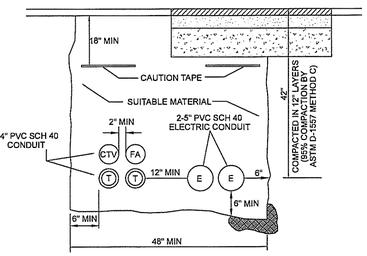
811 DigSafe MA.ME.NH.RI.VT



NOTE:
ALL CONDUIT AND TRENCH WORK SHALL CONFORM TO THEIR RESPECTIVE UTILITY COMPANY REQUIREMENTS

SCALE: N.T.S.

TYPICAL UTILITY TRENCH — 6 / DT - 1

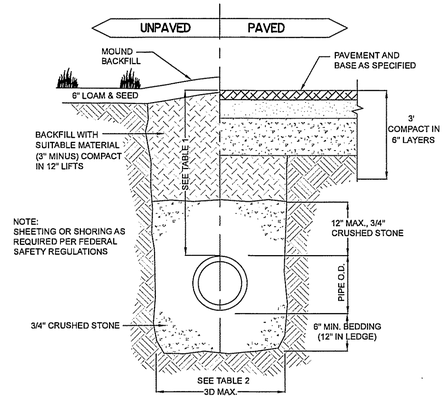


TABLE 1 (RECOMMENDED COVER)

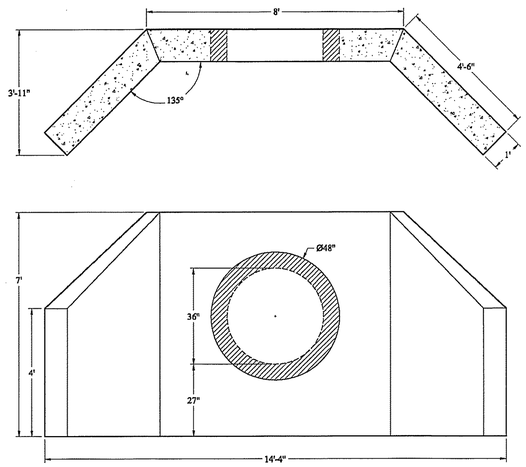
LOCATION	PIPE MATERIAL	MINIMUM COVER
PAVED ROADS	ALL	3 FT.
UNPAVED ROADS	ALL	2 FT.
DRIVEWAYS	ALL	1 FT.
UNPAVED AREAS	ALL	2 FT.

TABLE 2 (RECOMMENDED TRENCH WIDTH)

INSIDE DIAMETER	TOTAL WIDTH
12" TO 24" OVER 24"	I.D. + 24" 2 x I.D.

SCALE: N.T.S.

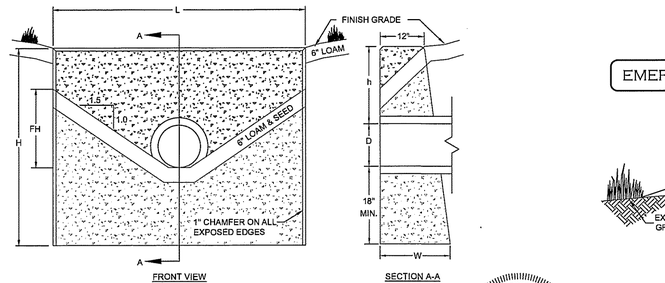
DRAINAGE TRENCH (TYPICAL) — 6 / DT - 4



NOTES:
1. PRECAST HEADWALL WITH 45° WINGWALLS BY PHOENIX PRECAST OR APPROVED EQUAL.

SCALE: N.T.S.

HEADWALL WITH 45° WING WALLS — 1 / DT - 2



CULVERT DIAM.	HEADWALL LENGTH	HEADWALL HEIGHT	FILL HEIGHT	TOP HEIGHT	HEADWALL BOTTOM
D	L	H	FH	h	WIDTH W
INCHES	FEET & INCHES				
12	4'-3"	3'-9"	1'-1"	1'-3"	1'-11.25"
15	6'-0"	4'-3"	1'-7"	1'-6"	2'-0.75"
18	7'-0"	4'-6"	1'-10"	1'-6"	2'-1.50"
24	9'-0"	5'-0"	2'-4"	1'-6"	2'-3.00"

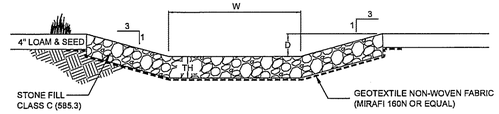
HEADWALL SHALL BE STEEL REINFORCED AND CONFORM TO NHDOT STANDARD PLAN HW-2, LATEST REVISION

SCALE: N.T.S.

HEADWALL - PRECAST CONCRETE — 8 / DT - 4

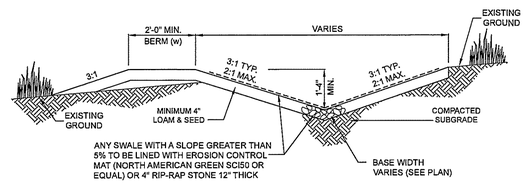
1. INSTALL STONE CHECK DAMS AND SILTATION CONTROL DEVICES IN LOCATIONS SHOWN ON PLANS. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATION.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE(S).
3. CUT AND CLEAR TREES; DISPOSE OF DEBRIS. STUMPS ARE TO BE GROUND ON-SITE AND TAILINGS USED FOR EROSION CONTROL.
4. REMOVE TOPSOIL AND STOCKPILE AWAY FROM ANY WETLAND. STABILIZE STOCKPILE IMMEDIATELY BY SEEDING. PLACE SILT FENCE AROUND THE DOWN SLOPE SIDE OF EARTH STOCKPILES.
5. ROUGH GRADE ROAD - INSTALL CROSS CULVERTS, CONSTRUCT DRAINAGE BASINS AND DRAINAGE SWALES DURING INITIAL PORTION OF CONSTRUCTION. STABILIZE IMMEDIATELY PER THE CONSTRUCTION AND EROSION CONTROL DETAILS. DO NOT DIRECT STORM WATER RUNOFF TO THESE STRUCTURES UNTIL A HEALTHY VEGETATIVE COVER IS ESTABLISHED.
6. CONSTRUCT ROAD AND INSTALL DRAINAGE PIPES AND STRUCTURES. ALL CUT AND FILL SLOPES SHALL BE STABILIZED UPON COMPLETION OF ROUGH GRADING PER THE THE EROSION CONTROL NOTES.
7. PLACE STONE CHECK DAMS AROUND INLETS AROUND ALL STRUCTURES UNTIL ROAD IS PAVED AND ALL NON-PAVED DISTURBED AREAS HAVE A HEALTHY VEGETATIVE COVER.
8. INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A WEEKLY BASIS AND AFTER EVERY 0.5" OR GREATER RAINFALL.
9. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, CULVERTS, DITCHES, SILTATION FENCES, SEDIMENT TRAPS, ETC. MULCH AND SEED AS REQUIRED.
10. FINISH GRADING TO PREPARE FOR PAVING AND LOAMING. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 72 HOURS AFTER FINAL GRADING.
11. FINISH PAVING. PERMANENT SEEDING SHALL BE PERFORMED UPON COMPLETION OF ROADWAY PAVING (SEE EROSION CONTROL NOTES).
12. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
13. TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WHEN ALL DISTURBED AREAS HAVE BEEN STABILIZED.
14. IN AN EFFORT TO RESTORE ADEQUATE INFILTRATION RATES OF THE BASINS PRIOR TO USE, THE BASES OF THE INFILTRATION BASINS SHALL BE DEEPLY TILLED AND THEN FOLLOWED BY A PASS WITH A LEVELING DRAG. STORMWATER FLOWS ARE NOT TO BE DIRECTED INTO THE INFILTRATION BASINS UNTIL THE CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
15. ALL STRUCTURES SHALL BE CLEANED OF SEDIMENTS ONCE CONSTRUCTION IS COMPLETE.

CONSTRUCTION SEQUENCE NOTES — 8 / DT - 1



LOCATION	WIDTH (FT.)	D (IN.)	TH (IN.)	d50 (IN.)	NHDOT SPEC.
IB1	3	10.8	12	4	585.3
IB2	4	12	12	4	585.3

EMERGENCY SPILLWAY DETAIL — 10 / DT - 2

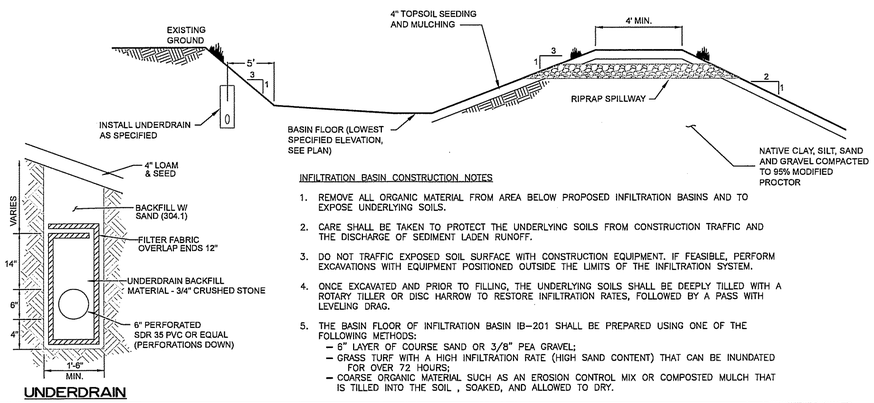


SEE DESIGN PLANS FOR DIMENSIONS
USE EROSION CONTROL FABRIC ON SLOPES OVER 2:1 SLOPE

TYPICAL SWALE DETAIL W/ RIPRAP/ECB — 9 / DT - 4

1. ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REQUIREMENTS AND SPECIFICATIONS OF THE TOWN OF WILTON.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, SIZE, AND ELEVATION OF ALL EXISTING UTILITIES SHOWN OR NOT SHOWN ON THESE PLANS AND SHALL VERIFY THAT ALL THE INFORMATION SHOWN HEREON IS CONSISTENT, COMPLETE, ACCURATE, AND CAN BE CONSTRUCTED PRIOR TO AND/OR DURING CONSTRUCTION. FIELDSTONE LAND CONSULTANTS, PLLC, AS THE DESIGN ENGINEER, SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES, ERRORS, OMISSIONS, OR EXISTING UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION SO THAT REMEDIAL ACTION MAY BE TAKEN BEFORE PROCEEDING WITH THE WORK.
3. THE CONTRACTOR SHALL CONTACT "DIGSAFE" 72 HOURS PRIOR TO THE START OF CONSTRUCTION (1-800-255-4977 IN NH, 1-888-344-7233 IN MA).
4. COMPLIANCE WITH ALL APPLICABLE REGULATIONS AND SPECIAL CONDITIONS OF TOWN/CITY AGENCIES, SUCH AS THE PLANNING BOARD, ZONING BOARD, CONSERVATION COMMISSION, AND OTHERS, IS MANDATORY AND IS THE RESPONSIBILITY OF THE OWNER.
5. ANY ALTERATION OF THIS DESIGN OR CHANGE DURING CONSTRUCTION MAY REQUIRE APPROVAL OF VARIOUS TOWN/CITY BOARDS OR AGENCIES AND SHALL BE DISCUSSED WITH THE OWNER AND FIELDSTONE LAND CONSULTANTS, PLLC PRIOR TO CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE APPROPRIATE TOWN DEPARTMENTS PRIOR TO CONSTRUCTION TO ARRANGE FOR NECESSARY INSPECTIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCURATE AS-BUILT INFORMATION OF ALL WORK, ESPECIALLY UNDERGROUND CONSTRUCTION OF UTILITY LINES, SERVICES, CONNECTIONS, ETC. AND APPROPRIATE TIES TO ABOVE GROUND PERMANENT STRUCTURES, FIELD SURVEY COORDINATES, OR SOME OTHER METHOD OF ESTABLISHING THE AS-BUILT CONDITION OF ALL CONSTRUCTION.
8. THE CONTRACTOR AND OWNER ARE RESPONSIBLE FOR OBSERVING AND MANAGING THE PROJECT PER RSA 430:53 AND AGR 3800 REGARDING INVASIVE SPECIES (PLANTS AND INSECTS). NO INVASIVE SPECIES PLANT OR INSECT SHALL BE INTRODUCED ONTO THE SITE.

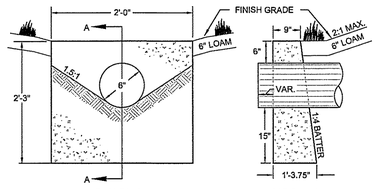
GENERAL CONSTRUCTION NOTES — 4 / DT - 1



INFILTRATION BASIN CONSTRUCTION NOTES

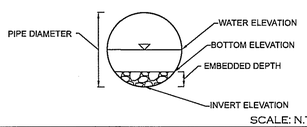
1. REMOVE ALL ORGANIC MATERIAL FROM AREA BELOW PROPOSED INFILTRATION BASINS AND TO EXPOSE UNDERLYING SOILS.
2. CARE SHALL BE TAKEN TO PROTECT THE UNDERLYING SOILS FROM CONSTRUCTION TRAFFIC AND THE DISCHARGE OF SEDIMENT LADEN RUNOFF.
3. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION SYSTEM.
4. ONCE EXCAVATED AND PRIOR TO FILLING, THE UNDERLYING SOILS SHALL BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW TO RESTORE INFILTRATION RATES, FOLLOWED BY A PASS WITH LEVELING DRAG.
5. THE BASIN FLOOR OF INFILTRATION BASIN IB–201 SHALL BE PREPARED USING ONE OF THE FOLLOWING METHODS:
   - 6" LAYER OF COURSE SAND OR 3/8" PEA GRAVEL;
   - GRASS TURF WITH A HIGH INFILTRATION RATE (HIGH SAND CONTENT) THAT CAN BE INUNDATED FOR OVER 72 HOURS;
   - COARSE ORGANIC MATERIAL SUCH AS AN EROSION CONTROL MIX OR COMPOSTED MULCH THAT IS TILLED INTO THE SOIL , SOAKED, AND ALLOWED TO DRY.

TYPICAL INFILTRATION BASIN DETAIL — 2 / DT - 2



SCALE: N.T.S.

UNDERDRAIN HEADWALL — 5 / DT - 4



SCALE: N.T.S.

EMBEDDED CULVERT — 5 / DT - 4

STATE OF NEW HAMPSHIRE — NATHAN R. CHAMBERLIN No. 9541 — LICENSED PROFESSIONAL ENGINEER

REV.	DATE	DESCRIPTION	C/O	DR	CK
–	–	–	–	–	–

CONSTRUCTION DETAILS

TAX MAP A LOT 44-1
(BARRETT HILL ROAD)
WILTON, NEW HAMPSHIRE

PREPARED FOR AND LAND OF:
SAN-KEN HOMES, INC.
586 TURNPIKE ROAD - NEW IPSWICH NH 03071

SCALE: N.T.S. DECEMBER 22, 2014

Surveying ✦ Engineering ✦ Land Planning ✦ Permitting ✦ Septic Designs

FIELDSTONE LAND CONSULTANTS, PLLC

206 Elm Street, Milford, NH 03055
Phone: (603) 672-5456 Fax: (603) 413-5456
www.FieldstoneLandConsultants.com

1. PRIOR TO STARTING ANY WORK ON THE SITE THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES.
2. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS THEREOF IN NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICE STORM WATER MANUALS, VOLUME 1–3, LATEST EDITION.
3. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PER PLANS AND DETAILS. PERIMETER CONTROLS SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF EARTH DISTURBING ACTIVITIES.
4. INSTALL INLET PROTECTION AROUND ALL STORM DRAIN STRUCTURES. INLET PROTECTION BMP'S SHALL REMAIN UNTIL THE SITE IS STABILIZED. CONSTRUCTION OF DETENTION BASINS AND TREATMENT SWALES SHALL OCCUR PRIOR TO AND EARTH MOVING OPERATION THAT WILL INFLUENCE STORM WATER RUNOFF.
5. THE WORK AREA SHALL BE GRADED, SHAPED AND OTHERWISE DRAINED IN SUCH A MANNER AS TO MINIMIZE SOIL EROSION, SILTATION OF DRAINAGE CHANNELS, DAMAGE TO EXISTING VEGETATION, AND DAMAGE TO PROPERTY OUTSIDE THE LIMITS OF THE WORK AREA.
6. EXISTING VEGETATION IS TO REMAIN UNDISTURBED WHEN POSSIBLE.
7. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE KEPT CLEAN DURING CONSTRUCTION. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE A WEEK AND AFTER EVERY 0.25–INCH OR GREATER RAINFALL. SEDIMENTS SHALL BE DISPOSED OF IN AN UPLAND AREA THAT WILL NOT CONTRIBUTE TO SEDIMENT OFF–SITE AND BE PERMANENTLY STABILIZED.
8. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION. AT NO TIME SHALL THE TOTAL UNSTABILIZED DISTURBED AREA, INCLUDING LOT DISTURBANCES, BE GREATER THAN FIVE (5) ACRES.
9. THE LAND AREA EXPOSED SHALL BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME. ALL NON–ACTIVE DISTURBED AREAS SHALL BE STABILIZED WITHIN 30 DAYS OF THE DISTURBANCE. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF FINAL GRADING.
10. DITCHES, SWALES AND DRAINAGE BASINS SHALL BE CONSTRUCTED DURING THE INITIAL PHASE OF CONSTRUCTION AND STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
11. AN AREA SHALL BE CONSIDERED STABILIZED IF ONE OF THE FOLLOWING HAS OCCURED:
    A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
    B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
    C. A MINIMUM OF 3–INCHES OF NON–EROSIVE MATERIAL, SUCH AS STONE OR RIPRAP, HAS BEEN INSTALLED; OR
    D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
12. EROSION CONTROL BLANKETS SHALL BE INSTALLED ON ALL SLOPES THAT ARE STEEPER THAN 3:1 (HORIZONTAL / VERTICAL). UNLESS OTHERWISE SPECIFIED THE CONTRACTOR SHALL USE NORTH AMERICAN GREEN SC150, OR APPROVED EQUAL.
13. ALL AREAS RECIEVING EROSION CONTROL STONE OR RIPRAP SHALL HAVE A GEOTEXTILE MATERIAL INSTALLED BELOW THE STONE (SEE APPROPRIATE DETAILS).
14. ALL DISTURBED AREAS TO TURF FINISHED SHALL BE COVERED WITH A MINIMUM THICKNESS OF 6 INCHES OF COMPACTED LOAM. LOAM SHALL BE COVERED WITH THE APPROPRIATE SEED MIXTURE AS INDICATED BELOW:

PERMANENT SEED (LAWN AREAS)	LBS / 1,000 SQ. FT.	PERMANENT SLOPE SEED MIX	LBS / 1,000 SQ. FT.
CREEPING RED FESCUE	0.92 LBS	CREEPING RED FESCUE	0.80 LBS
PERENNIAL RYEGRASS	1.15 LBS	PERENNIAL RYEGRASS	0.69 LBS
KENTUCKY BLUEGRASS	0.58 LBS	REDTOP	0.12 LBS
REDTOP	0.12 LBS	ALSIKE CLOVER	0.12 LBS
		BIRDSFOOT TREFOIL	
APPLICATION RATE TOTALS 2.8 LBS PER 1,000 SF		**APPLICATION RATE TOTALS *1.85 LBS PER 1,000 SF**	

15. TEMPORARY STABILIZATION OF DISTURBED AREAS:
    STRIPPED SOIL SHALL BE STOCKPILED UNCOMPACTED, AND STABILIZED AGAINST EROSION AS OUTLINED BELOW:

    CONTRACTOR SHALL HAVE SOIL TESTED TO DETERMINE AN ADEQUATE N–P–K RATIO THE USE OF PHOSPHOROUS (P) SHALL BE MINIMIZED (LESS THAN 2%) ONCE DETERMINED, FERTILIZATION TO BE SPREAD AT THE RATE OF 7 LBS. PER 100 SF AND AGRICULTURAL LIMESTONE AT A RATE OF 90 LBS PER 1000 SF AND INCORPORATED INTO THE SOIL. THE SOIL, FERTILIZER AND LIMESTONE SHALL BE TILLED TO PREPARE FOR SEEDING.

A. SEED MIXTURE: USE ANY OF THE FOLLOWING:

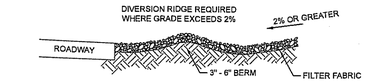
SPECIES	RATE PER 1,000 SF	DEPTH	SEEDING DATES
WINTER RYE	2.5 LBS	1 INCH	8/15 TO 9/15
OATS	2.5 LBS	1 INCH	4/15 TO 10/15
ANNUAL RYEGRASS	1.0 LBS	0.25 INCH	8/15 TO 9/15

B. MULCHING: MULCH SHOULD BE USED ON HIGHLY ERODIBLE AREAS, AND WHERE CONSERVATION OF MOISTURE WILL FACILITATE PLANT ESTABLISHMENT AS FOLLOWS:

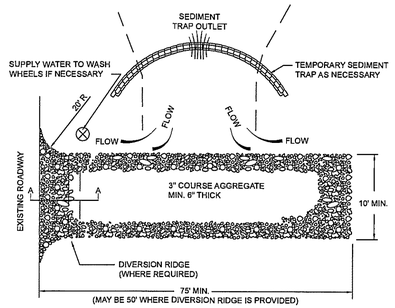
TYPE	RATE PER 1,000 SF	USE AND COMMENTS
STRAW	70 TO 90 LBS	MAY BE USED WITH PLANTINGS, MUST BE ANCHORED TO BE USED ALONE
WOOD CHIPS OR BARK MULCH	460 TO 920 LBS	USED WITH TREE AND SHRUB PLANTINGS
FIBROUS MATTING	AS RECOMMENDED BY MANUFACTURER	MUST BE BIODEGRADABLE. USE IN SLOPE AREAS AND AREAS DIFFICULT TO VEGETATE
CRUSHED STONE 1/4" TO 1–1/2" DIA.	SPREAD TO GREATER THAN 1/2" THICKNESS	USE IN SPECIFIC AREAS AS SHOWN ON PLAN OR AS NEEDED

16. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. IF SOIL TESTING IS NOT FEASIBLE (CRITICAL TIME FRAMES OR VARIABLE SITES) THEN APPLY FERTILIZER AT A RATE OF 11 POUNDS PER 1,000 SF AND LIMESTONE AT A RATE OF 90 POUNDS PER 1,000 SF. FERTILIZER SHALL BE LOW PHOSPHATE (LESS THAN 2% PHOSPHORUS).
17. CAUTION SHOULD BE TAKE WHEN THE PROPERTY IS LOCATED WITHIN 250 FEET OF A WATER BODY. IN THIS CASE ALL FERTILIZERS SHALL BE RESTRICTED TO A LOW PHOSPHATE, SLOW RELEASE NITROGEN FERTILIZER. SLOW RELEASE FERTILIZERS MUST BE AT LEAST 50% SLOW RELEASE NITROGEN COMPONENT. NO FERTILIZER EXCEPT LIMESTONE SHALL BE APPLIED WITHIN 25 FEET OF THE SURFACE WATER. THESE ARE REGULATED LIMITATIONS.
18. PERMANENT OR TEMPORARY COVER MUST BE IN PLACE BEFORE THE GROWING SEASON ENDS (SEE WINTER CONSTRUCTION NOTES). NO DISTURBED AREAS SHALL BE LEFT EXPOSED DURING THE WINTER MONTHS.
19. A VIGOROUS DUST CONTROL PROGRAM SHALL BE APPLIED BY THE SITE CONTRACTOR. DUST SHALL BE MANAGED THROUGH THE USE OF WATER AND/OR ACCEPTABLE METHODS FOR WELL HEAD PROTECTION ZONE.
20. IN NO WAY ARE THE MEASURES INDICATED ON THE PLANS OR IN THESE NOTES TO BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR SHALL USE JUDGEMENT TO INSTALL ADDITIONAL EROSION CONTROL MEASURES AS SITE CONDITIONS, WEATHER OR CONSTRUCTION METHODS WARRANT.
21. FOLLOWING PERMANENT STABILIZATION, TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED AND ACCUMULATED SEDIMENTATION IS TO BE DISPOSED OF IN AN APPROVED LOCATION, OUTSIDE OF JURISDICTIONAL WETLANDS.
22. THE CONTRACTOR AND OWNER ARE RESPONSIBLE FOR OBSERVING AND MANAGING THE PROJECT PER RSA 430:53 AND AGR 3800 REGARDING INVASIVE SPECIES (PLANTS AND INSECTS). NO INVASIVE SPECIES PLANT OR INSECT SHALL BE INTRODUCED ONTO THE SITE.
23. ALL MANUFACTURED EROSION AND SEDIMENT CONTROL PRODUCTS, EXCEPT FOR SILT FENCE INSTALLED IN ACCORDANCE WITH ENV-WQ 1506.04, UTILIZED FOR, BUT NOT LIMITED TO, SLOPE PROTECTION, RUNOFF DIVERSION, SLOPE INTERRUPTION, PERIMETER CONTROL, INLET PROTECTION, CHECK DAMS, AND SEDIMENT TRAPS SHALL NOT CONTAIN WELDED PLASTIC, PLASTIC, OR MULTI-FILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH WITH AN OPENING SIZE OF GREATER THAN 1/8 INCH.
24 TURF REINFORCEMENT MATS SHALL BE COVERED WITH SOIL TO PREVENT EXPOSURE OF THE MATS TO THE SURFACE.

EROSION CONTROL NOTES | 2 | DT - 4



SECTION A-A



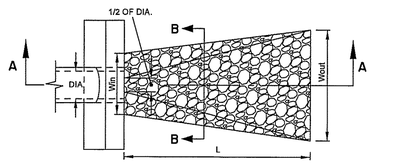
PLAN VIEW

NOTES:

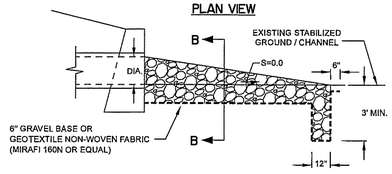
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. THE MINIMUM STONE USED SHOULD BE 3-INCH CRUSHED STONE.
3. THE MINIMUM LENGTH OF THE PAD SHOULD BE 75 FEET, EXCEPT THAT THE MINIMUM LENTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH HIGH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJCT SITE.
4. THE PAD SHOULD EXTEND THE FULL WIDTH OF THE CONSTRUCTION ACCESS ROAD OR 10 FEET, WHICHEVER IS GREATER.
5. THE PAD SHOULD SLOPE AWAY FROM THE EXISTING ROADWAY.
6. THE PAD SHOULD BE AT LEAST 6-INCHES THICK.
7. THE GEOTEXTILE FILTER FABRIC SHOULD BE PLACED BETWEEN THE STONE PAD AND THE EARTH SURFACE BELOW THE PAD.
8. THE PAD SHALL BE MAINTAINED OR REPLACED WHEN MUD AND SOIL PARTICLES CLOG THE VOIDS IN THE STONE SUCH THAT MUD AND SOIL PARTICLES ARE TRACKED OFF-SITE.
9. NATURAL DRAINAGE THAT CROSSES THE LOCATION OF THE STONE PAD SHOULD BE INTERCEPTED AND PIPED BENEATH THE PAD, AS NECESSARY, WITH SUITABLE OUTLET PROTECTION.
10. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
11. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

SCALE: N.T.S.

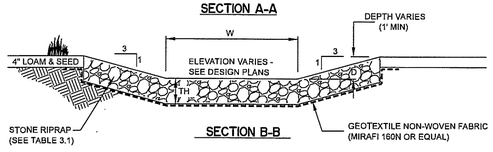
GRAVEL CONSTRUCTION EXIT | 4 | DT - 4



PLAN VIEW



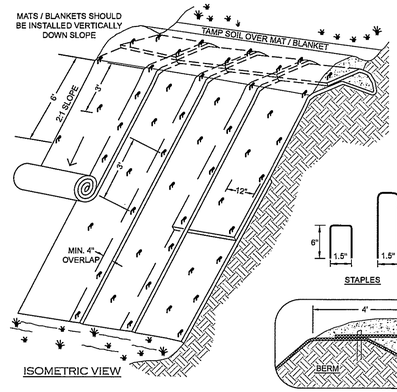
SECTION A-A



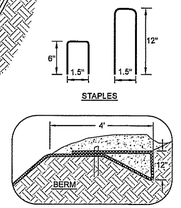
SECTION B-B

SCALE: N.T.S.

RIP-RAP OUTLET PROTECTION | 5 | DT - 4



ISOMETRIC VIEW

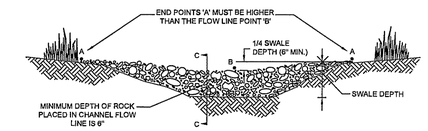


NOTES:

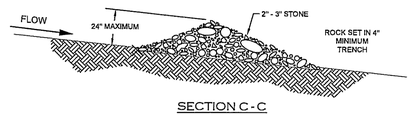
1. DIMENSIONS GIVEN IN THIS DETAIL ARE EXAMPLES: DEVICE SHOULD BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
2. INSTALL STRAW/COCONUT FIBER EROSION CONTROL MAT SUCH AS NORTH AMERICAN GREEN SC150 OR EQUAL ON ALL SLOPES EXCEEDING 3' HORZ : 1' VERT.
3. THE EROSION CONTROL MATERIAL(S) SHALL BE ANCHORED WITH "U" SHAPED 11 GAUGE WIRE STAPLES OR WOODEN STAKES WITH A MINIMUM TOP WIDTH OF 1 INCH AND LENGTH OF 6 INCH.
4. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS / BLANKETS SHALL HAVE GOOD SOIL CONTACT.
5. APPLY LIME, FERTILIZER AND PERMANENT SEEDING BEFORE PLACING BLANKETS.
6. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET AS SHOWN. ROLL THE BLANKETS DOWN THE SLOPE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES OR STAKES IN APPROPRIATE LOCATIONS. REFER TO MANUFACTURERS STAPLE GUIDE FOR CORRECT STAPLE PATTERN.
7. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
8. IN LOOSE SOIL CONDITIONS THE USE OF STAPLES OR STAKE LENGTHS GREATER THAN 6 INCHES MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.
9. THE CONTRACTOR SHALL MAINTAIN THE BLANKET UNTIL ALL WORK ON THE CONTRACT HAS BEEN COMPLETED AND ACCEPTED. MAINTENANCE SHALL CONSIST OF THE REPAIR OF AREAS WHERE DAMAGED BY ANY CAUSE. ALL DAMAGED AREAS SHALL BE REPAIRED TO REESTABLISH THE CONDITIONS AND GRADE OF THE SOIL PRIOR TO APPLICATION OF THE COVERING AND SHALL BE REFERTILIZED, RESEEDED AND REMULCHED AS DIRECTED.

SCALE: N.T.S.

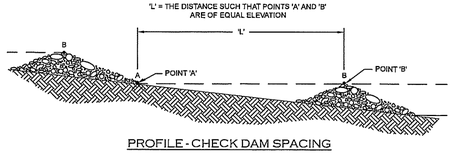
EROSION BLANKETS - SLOPE INSTALLATION | 6 | DT - 4



VIEW LOOKING UPSTREAM



SECTION C - C



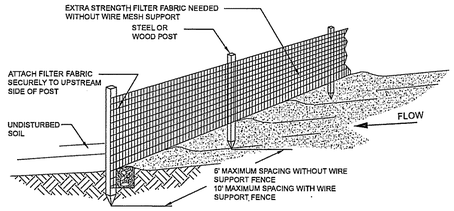
PROFILE - CHECK DAM SPACING

NOTES:

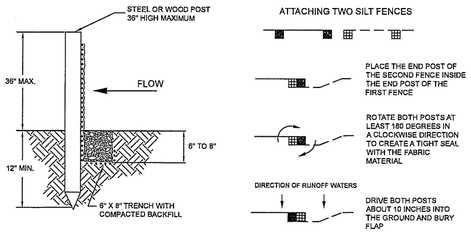
1. STONE CHECK DAMS SHOULD BE INSTALLED BEFORE RUNOFF IS DIRECTED TO THE SWALE OR DRAINAGE DITCH.
2. THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE CHECK DAM SHOULD BE LESS THAN ONE ACRE.
3. STONE CHECK DAMS SHOULD NOT BE USED IN A FLOWING STREAM.
4. STONE CHECK DAMS SHOULD BE CONSTRUCTED OF WELL-GRADED ANGULAR 2 TO 3 INCH STONE. THE INSTALLATION OF 3/4-INCH STONE ON THE UPGRADIENT FACE IS RECOMMENDED FOR BETTER FILTERING.
5. WHEN INSTALLING STONE CHECK DAMS THE CONTRACTOR SHALL KEY THE STONE INTO THE CHANNEL BANKS AND EXTEND THE STONE BEYOND THE ABUTMENTS A MINIMUM OF 18-INCHES TO PREVENT FLOW AROUND THE DAM.
6. STONE CHECK DAMS SHOULD BE REMOVED ONCE THE SWALE OR DITCH HAS BEEN STABILIZED UNLESS OTHERWISE SPECIFIED.

SCALE: N.T.S.

STONE CHECK DAM | 7 | DT - 4



PERSPECTIVE VIEW



SECTION VIEW | ATTACHING TWO SILT FENCES

NOTES:

1. SILT FENCES SHOULD NOT BE USED ACROSS STREAMS, CHANNELS, SWALES, DITCHES OR OTHER DRAINAGE WAYS.
2. SILT FENCE SHOULD BE INSTALLED FOLLOWING THE CONTOUR OF THE LAND AS CLOSELY AS POSSIBLE AND THE ENDS OF THE SILT FENCE SHOULD BE FLARED UPSLOPE.
3. IF THE SITE CONDITIONS INCLUDE FROZEN GROUND, LEDGE OR THE PRESENCE OF HEAVY ROOTS THE BASE OF THE FABRIC SHOULD BE EMBEDDED WITH A MINIMUM THICKNESS OF 8 INCHES OF 3/4-INCH STONE.
4. SILT FENCES PLACED AT THE TOE OF SLOPES SHOULD BE INSTALLED AT LEAST 6 FEET FROM THE TOE TO ALLOW SPACE FOR SHALLOW PONDING AND ACCESS FOR MAINTENANCE.
5. THE MAXIMUM SLOPE ABOVE THE FENCE SHOULD BE 2:1 AND THE MAXIMUM LENGTH OF SLOPE ABOVE THE FENCE SHOULD BE 100 FEET.
6. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE TO SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
7. SILT FENCES SHOULD BE REMOVED WHEN THE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.

SCALE: N.T.S.

SILT FENCE | 8 | DT - 4

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REV.	DATE	DESCRIPTION	C/O	DR	CK
–	–	–	–	–	–

EROSION CONTROL DETAILS

TAX MAP A LOT 44-1
(BARRETT HILL ROAD)
WILTON, NEW HAMPSHIRE

PREPARED FOR AND LAND OF:
SAN-KEN HOMES, INC.
586 TURNPIKE ROAD - NEW IPSWICH NH 03071

SCALE: N.T.S. DECEMBER 22, 2014

Surveying ⌖ Engineering ⌖ Land Planning ⌖ Permitting ⌖ Septic Designs

FIELDSTONE LAND CONSULTANTS, PLLC

206 Elm Street, Milford, NH 03055
Phone: (603) 672-5456 Fax: (603) 413-5456
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William N Lamarre Concrete Products, Inc.
87 Adams Hill Road, PO Box #333
Greenville, NH 03048
603-878-1340
LamarreConcrete.com

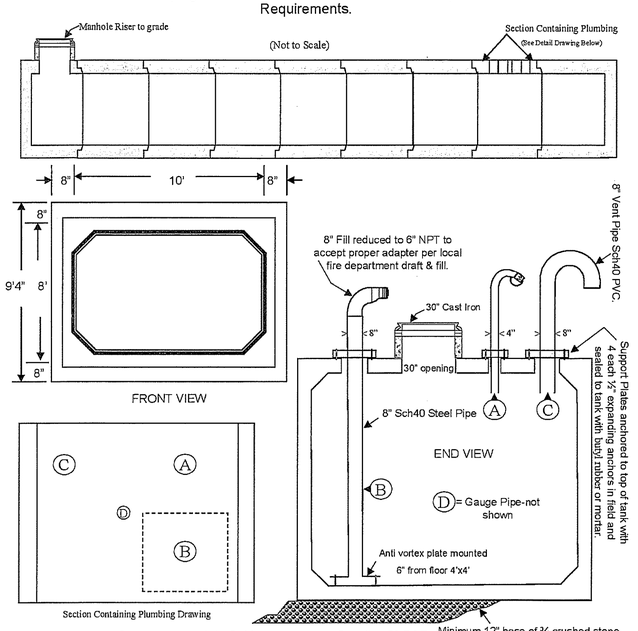
30,000 Tunnel Tank Fire Cistern

SAMPLE PIPE PLACEMENT

William N. Lamarre Concrete Products, Inc.

30,000 Tunnel Tank – Fire Cistern

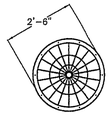
Possible Piping Placement – Actual to meet the Fire Departments Requirements.



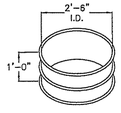
KEY
(A) Fill
(B) Draft
(C) Vent
(D) Gauge

- Concrete strength f'c 5000PSI@28 days. Density 150 PCF.
- Cement, Portland Type II or III, ASTM C150-81
- Admixtures, air & plasticizers per ASTM C233-82
- Reinforcement per ASTM A615 for wire fabric and Grade 60 rebar
- Design Loading AASHTO HS20-40
- Constructions joints sealed with butyl rubber & grouted after backfill
- Access & Piping per job specs.
- Fire Cistern meets NFPA22 requirements.

30,000 Tank to consist of:
2-48" ID Ends 28,500# each
1-48" Center 16,250#
8-68" Centers 23,500# each



30" I.D. LIDS:
–WATER TIGHT SEAL USING MOLDED GASKET
–HIGH STRENGTH POLYPROPYLENE CONTAINING MAXIMUM UV INHIBITORS TO PREVENT DEGRADATION CAUSED BY SUNLIGHT.
SECURED WITH SIX (6) STAINLESS STEEL BOLTS OR SELF TAPPING SCREWS.
–SLIP RESISTANT SURFACE.
–1,500 LB WHEEL LOAD.



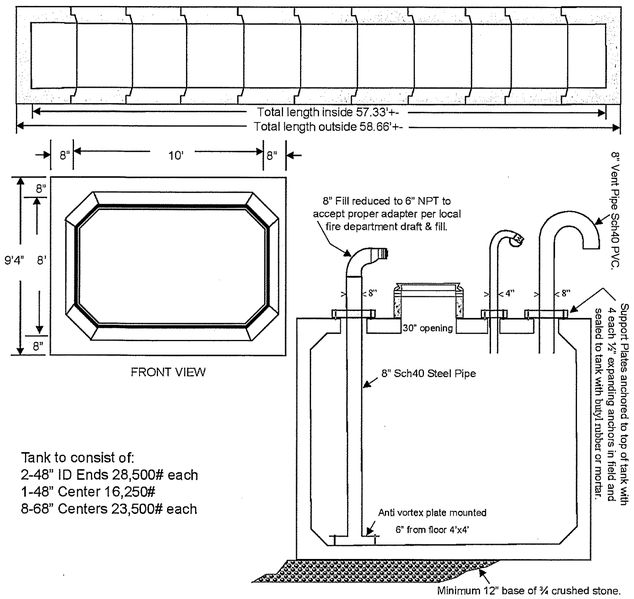
30" I.D. RISERS:
–PRE–CASTING RING FOR INSTALLATION IN CONCRETE TANKS.
–VACUUM TESTED TO 13" Hg W/ZERO DEFLECTION IN SIDEWALLS AND CONNECTION POINTS
–WITH INTERLOCKING DESIGN, E–Z SET RISERS ARE STACKABLE TO ANY HEIGHT.
–RISERS ARE SECURED WITH SIX (6) STAINLESS STEEL BOLTS OR SELF–TAPPING SCREWS.

E–Z SET TANK RISER

30,000 Tunnel Tank – Fire Cistern

(Not to Scale)

Updated 01/2019

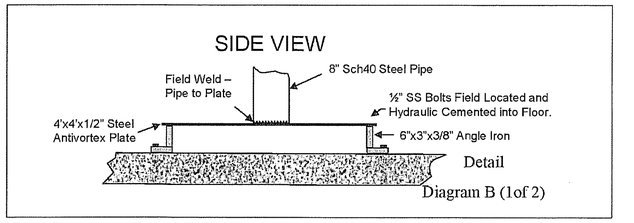


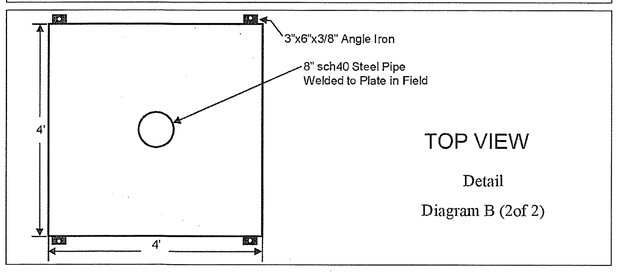
Tank to consist of:
2-48" ID Ends 28,500# each
1-48" Center 16,250#
8-68" Centers 23,500# each

Fire Cistern – Piping Detail

Plumbing – NOT TO SCALE

10/2016

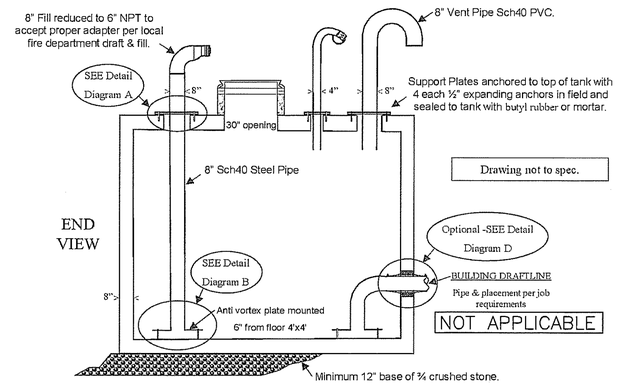


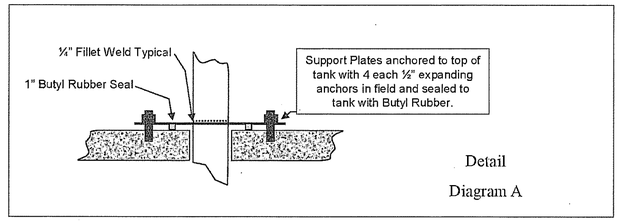


Fire Cistern – Piping Detail

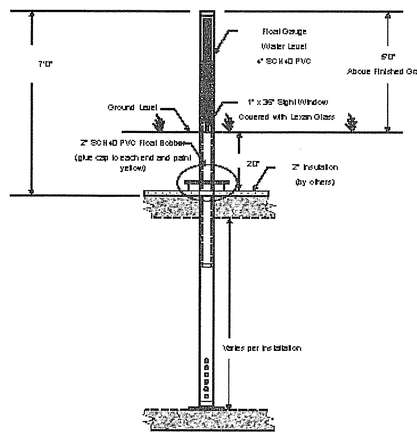
Plumbing – NOT TO SCALE

10/2016



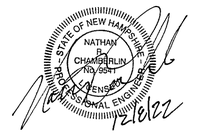


Gauge for Fire Cistern (Optional)



WATER LEVEL FLOAT INDICATOR DETAIL

(not to scale)



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REV.	DATE	DESCRIPTION	C/O	DR	CK
A	12/5/22	REVISED DETAILS	–	DSL	NRC

CISTERN DETAILS
TAX MAP A LOT 44-1
(BARRETT HILL ROAD)
WILTON, NEW HAMPSHIRE

PREPARED FOR AND LAND OF:
SAN-KEN HOMES, INC.
586 TURNPIKE ROAD - NEW IPSWICH NH 03071

SCALE: N.T.S. NOVEMBER 8, 2022

Surveying ⌖ Engineering ⌖ Land Planning ⌖ Permitting ⌖ Septic Designs
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