

September 1, 2020

Bolton Conservation Commission
Bolton Town Hall
663 Main Street
Bolton, MA 01740

Re: Century Mill Road, Bolton MA, (Assessors Map: 3D, Lot: 75)

Dear Bolton Conservation Commission:

Goddard Consulting, LLC is pleased to submit this Notice of Intent (NOI) on behalf of 21 Century Mill LLC for the construction of 3 single family homes and the paving of an existing gravel driveway at the property located on Century Mill Road in Bolton, Massachusetts (Assessors Map: 3D, Lot: 75). This is a joint filing under the Massachusetts Wetlands Protection Act (WPA) and Bolton Wetland Protection Bylaw.

Titles of all enclosed documents are as follows:

- NOI (WPA Form 3) Application Form
- NOI Wetland Fee Transmittal Form
- Copy of Checks
- Abutters List, Abutter Notification, Affidavit of Service
- USGS *Topographic View of Site*
- *Orthophoto View of Site*
- ORAD (DEP #112-0656)
- Ortho View – Resource Area Alteration, Goddard Consulting, August 31, 2020
- Ortho View – Resource Area Preservation, Goddard Consulting, August 31, 2020
- *Bordering Land Subject to Flooding Restoration Plan*, August 17, 2020, Goddard Consulting, LLC
- *Stormwater Report*, Foresite Engineering 9/20/2018
- Denial Orders of Conditions (DEP File #s 112-066, 122-0671, 122-0672)
- *Potential Vernal Pool Evaluation, 21 Century Mill Road*, Matt Burne, June 17, 2019.
- *Common Driveway Plan & Profile – Lots 1-4 Century Mill Road, Bolton, Massachusetts*. Foresite Engineering, 8/11/2020.
- *Sewage Disposal System Design Plan, Lot 2 Century Mill Road*, Foresite Engineering, 8/22/2018
- *Sewage Disposal System Design Plan, Lot 3 Century Mill Road*, Foresite Engineering, 8/15/2018
- *Sewage Disposal System Design Plan, Lot 4 Century Mill Road*, Foresite Engineering, 8/20/2018

Permitting History

In September of 2017, an Abbreviated Notice of Resource Area Delineation (ANRAD) was filed with the Bolton Conservation Commission for this site. This ANRAD sought to confirm the boundaries of the on site Bordering Vegetated Wetlands (BVW), Riverfront Area, and Bordering Land Subject to Flooding (BLSF). On November 7, 2017, an Order of Resource Area Delineation (ORAD) was issued that confirmed the boundaries of BVW, Riverfront Area, Riverine, Freshwater Forested/Shrub Wetland, Freshwater Pond, and BLSF resource areas. No other resource areas were listed on the ORAD.

In September of 2018, separate Notices of Intent (NOI) were filed for Lots 3 (DEP File Number 112-0672) and 4 (DEP File Number 112-0671), and the common driveway (DEP File Number 112-0666). A request for Determination of Applicability was filed for Lot 2. An application was also submitted to the Bolton Planning Board for the common driveway but was withdrawn due the Planning Board requesting that the driveway be approved by the Conservation Commission prior to being considered by the Planning Board.

The public hearing process for the previous filings was continued many times and was then closed on September 17th, 2019. On October 1, 2019 a positive Determination of Applicability (DOA) was issued for Lot 2, and on October 3rd, 2019, denial Orders of Conditions (OOC) were issued for each NOI Filing for Lots 3 and 4 as well as the driveway.

On October 15, 2019, appeals were submitted to the Massachusetts Department of Environmental Protection (DEP) for a superseding DOA for Lot 2, and superseding OOCs for Lots 3 and 4 as well as the driveway. On November 8, 2019, all four of the appeals were withdrawn.

This project is now being re-introduced to the Conservation Commission as a single project with multiple revisions that were made in response to issues raised by the Commission during the public hearing process and on the denial OOCs. Details about these revisions can be found within the Review and Response to 2019 Denial section of this letter.

Existing Conditions

The property addressed as 0 Century Mill Rd is a mainly forested lot which features only an existing gravel driveway of variable width (10-12'). Resource Areas on site consist of Bordering Vegetated Wetland (BVW), Bordering Land Subject to Flooding (BLSF), Riverfront Area associated with Danforth Brook, and Adjacent Upland Resource Area (AURA, defined as a Resource Area under Bolton Wetlands Protection Bylaw.). These resources were designated in the ORAD issued for the property on November 9, 2017 (DEP file #112-0656). These findings are binding upon both the owner and the Commission for a period of 3 years, and further tolled by the governor's office in response to COVID-19. The ORAD states that "The boundaries described on the referenced plan(s) above and in the Abbreviated Notice of Resource Area Delineation are accurately drawn for the following resource area(s): Bordering Vegetated Wetland, Riverfront Area, Riverine, Freshwater Forested/Shrub Wetland, Freshwater Pond,

BLSF". No other resource areas were listed on the ORAD. There are two potential vernal pools shown on MassGIS on site. These areas were determined to not meet the criteria for certification by both Goddard and by independent peer review by Matt Burne (see attached letter) and are not listed on the ORAD.

Proposed Conditions

The applicant is proposing to construct 3 single family houses that will require associated site preparation and grading within the 100' buffer zone to BVW/AURA. No work besides the proposed mitigation is located within 25' of any BVW boundary. The actual houses as well as the proposed septic systems (except for very small portions of the leach fields for lots 3 and 4) are located outside of the buffer zone. Total work within the buffer zone will total $\pm 27,947$ sq. ft. and includes the grading and site preparation for the house lots as well as the paving of the driveway. The installation of the wells on lots 3 and 4 will require minor alteration within BLSF to create separation from the septic leach fields. Total BLSF alteration will be $\pm 2,322$ sq. ft., and will involve the removal of vegetation and drilling of the wells. No grading is proposed, and therefore no loss of flood storage will occur.

The applicant is also proposing to pave the existing gravel driveway and cause a de minimis increase in the width in areas to achieve a uniform width of 12'. As stated above, the existing driveway is of variable width, and ranges from 10-12'. The existing driveway currently serves a single family home and this project proposes to turn it into a common driveway to serve the existing home on the adjacent lot as well as the 3 proposed houses. The driveway of 12' is specified in the Bolton Zoning Bylaw requirements for common driveways, which state the required minimum width is 12' (Bolton Zoning Bylaw Section 250-17 (5)(a)(2)). The Zoning Bylaw also has requirements for turnarounds, which the driveway has been designed to meet (Bolton Zoning Bylaw Section 250-17 (5)(a)(7)). The driveway will be paved using pervious pavement, which will improve stormwater infiltration on site (see attached stormwater report). A small portion of the driveway is located in Riverfront Area, and therefore the paving and widening will require ± 307 square feet of work within the outer 100' of Riverfront Area. The driveway is located entirely within the buffer zone to BVW, and therefore the improvements will require work within buffer zone. It should be noted that this impact is limited to improving an existing driveway and will involve only very minimal encroachment into previously undisturbed areas. As stated above, total work within buffer zone will total $\pm 27,947$ sq. ft. While the driveway itself is raised above the FEMA Flood Zone AE base flood elevation of 310 ft., a portion of the driveway is surrounded by BLSF. The only work proposed in this surrounding BLSF is the removal of trees, which are marked on the plan. The removal of trees will not permanently alter the grade of the land or result in any loss of flood storage.

A small shed is located on the proposed lot line of lots 2 and 4. This shed is proposed to be relocated to be entirely within lot 4.

As part of the mitigation proposed for this project, an old fill pile is proposed to be restored to Bordering Land Subject to Flooding. This will require $\pm 3,928$ sq. ft. of work within Buffer Zone

for the excavation of the area down to the original elevation. This work will result in a new gain of ±3,928 sq. ft. of BLSF. See the attached Bordering Land Subject to Flooding Restoration plan for greater detail regarding this restoration.

No impact to Bordering Vegetated Wetland is proposed as part of this project. Furthermore, no impacts are proposed within the first 25 feet of the buffer zone to BVW.

Below is a table summarizing all of the proposed work within regulated areas.

Table 1: Impact Chart

Regulated Area	Work Area (sq. ft.)	Total Area on Site (sq. ft.)	Percentage of Regulated Area Impacted
100' BVW Buffer Zone/AURA	27,947	164,397	17.0%
First 25' of BVW Buffer Zone	0	42,754	0%
Bordering Land Subject to Flooding	2,322	115,432	2.0%
Riverfront Area	307	32,382	0.1%



Photo 1: View of the exiting gravel driveway. Note how the driveway is raised above the elevation of the surrounding land.

Performance Standards Under the Wetlands Protection Act

Bordering Land Subject to Flooding

Section 10.57(4)(a) of the Wetlands Protection Act lists the following general performance standards associated with Bordering Land Subject to Flooding. The standards are shown in italics, with responses stating how this project meets each standard provided below in bold.

1. Compensatory storage shall be provided for all flood storage volume that will be lost as the result of a proposed project within Bordering Land Subject to Flooding, when in the judgment of the issuing authority said loss will cause an increase or will contribute incrementally to an increase in the horizontal extent and level of flood waters during peak flows.

Compensatory storage shall mean a volume not previously used for flood storage and shall be incrementally equal to the theoretical volume of flood water at each elevation, up to and

including the 100-year flood elevation, which would be displaced by the proposed project. Such compensatory volume shall have an unrestricted hydraulic connection to the same waterway or water body. Further, with respect to waterways, such compensatory volume shall be provided within the same reach of the river, stream or creek.

The proposed project will not result in any loss of flood storage volume. Work within BLSF is limited to vegetation removal and drilling of wells, with no grading or structures proposed within BLSF. However, compensatory flood storage is being provided in the form of a BLSF Restoration Area as part of the overall mitigation package for this project. Additional information on the BLSF Restoration Area can be found in the attached Bordering Land Subject to Flooding Restoration Plan. Overall, the project will result in a net increase in flood storage volume.

2. Work within Bordering Land Subject to Flooding, including that work required to provide the above-specified compensatory storage, shall not restrict flows so as to cause an increase in flood stage or velocity.

The proposed project will not restrict flows within any floodway or flood area. Work within BLSF does not involve grading or the placement of any structures, therefore there will be no possibility for the restriction of flows.

3. Work in those portions of bordering land subject to flooding found to be significant to the protection of wildlife habitat shall not impair its capacity to provide important wildlife habitat functions. Except for work which would adversely affect vernal pool habitat, a project or projects on a single lot, for which Notice(s) of Intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 5,000 square feet (whichever is less) of land in this resource area found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. Additional alterations beyond the above threshold, or altering vernal pool habitat, may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures contained in 310 CMR 10.60.

Work within BLSF for this project totals ±2,322 sq. ft. The total amount of BLSF on site is ±115,431 sq. ft. Based on the above numbers, this project is well below the threshold of 10% or 5,000 sq. ft. of BLSF alteration that would require a wildlife habitat evaluation.

Riverfront Area

Work within Riverfront Area for this project is limited to the paving of a portion of the existing gravel driveway, with no encroachment into previously undisturbed portions of Riverfront Area. Section 10.58(5) of the Wetlands Protection Act lists the following performance standards for

redevelopment within previously developed riverfront areas. The standards are shown in italics, with responses to each standard below in bold.

Redevelopment Within Previously Developed Riverfront Areas; Restoration and Mitigation.

Notwithstanding the provisions of 310 CMR 10.58(4)(c) and (d), the issuing authority may allow work to redevelop a previously developed riverfront area, provided the proposed work improves existing conditions. Redevelopment means replacement, rehabilitation or expansion of existing structures, improvement of existing roads, or reuse of degraded or previously developed areas. A previously developed riverfront area contains areas degraded prior to August 7, 1996 by impervious surfaces from existing structures or pavement, absence of topsoil, junkyards, or abandoned dumping grounds. Work to redevelop previously developed riverfront areas shall conform to the following criteria:

The work within Riverfront Area for this project involves the paving/ minor expansion of the existing gravel driveway and is limited to 307 sq. ft. The driveway will be paved using pervious materials, and therefore will be an improvement to the current gravel driveway.

(a) At a minimum, proposed work shall result in an improvement over existing conditions of the capacity of the riverfront area to protect the interests identified in M.G.L. c. 131 § 40. When a lot is previously developed but no portion of the riverfront area is degraded, the requirements of 310 CMR 10.58(4) shall be met.

The paving of the existing gravel driveway using pervious materials will result in an improved surface that will allow for increased stormwater infiltration and reduced runoff.

(b) Stormwater management is provided according to standards established by the Department.

The driveway has been designed to meet the Stormwater Management Standards. See the attached stormwater report for more information regarding this.

(c) Within 200 foot riverfront areas, proposed work shall not be located closer to the river than existing conditions or 100 feet, whichever is less, or not closer than existing conditions within 25 foot riverfront areas, except in accordance with 310 CMR 10.58(5)(f) or (g).

The proposed paving/expansion of the driveway will result in de minimis further encroachment into Riverfront Area (±50 sq. ft. located ±3 linear ft. closer to the river).

(d) Proposed work, including expansion of existing structures, shall be located outside the riverfront area or toward the riverfront area boundary and away from the river, except in accordance with 310 CMR 10.58(5)(f) or (g).

The proposed expansion of the driveway in this area is located further away from the river, and outside of Riverfront Area. The work within Riverfront Area is limited to the footprint of the existing gravel driveway.

(e) The area of proposed work shall not exceed the amount of degraded area, provided that the proposed work may alter up to 10% if the degraded area is less than 10% of the riverfront area, except in accordance with 310 CMR 10.58(5)(f) or (g).

The proposed work within Riverfront Area is limited to the footprint of the exiting gravel driveway, with no encroachment into previously undisturbed portions of Riverfront Area.

(f) When an applicant proposes restoration on-site of degraded riverfront area, alteration may be allowed notwithstanding the criteria of 310 CMR 10.58(5)(c), (d), and (e) at a ratio in square feet of at least 1:1 of restored area to area of alteration not conforming to the criteria. Areas immediately along the river shall be selected for restoration. Alteration not conforming to the criteria shall begin at the riverfront area boundary. Restoration shall include:

- 1. removal of all debris, but retaining any trees or other mature vegetation;*
- 2. grading to a topography which reduces runoff and increases infiltration;*
- 3. coverage by topsoil at a depth consistent with natural conditions at the site; and*
- 4. seeding and planting with an erosion control seed mixture, followed by plantings of herbaceous and woody species appropriate to the site;*

This project does not propose restoration of Riverfront Area.

(g) When an applicant proposes mitigation on-site or in the riverfront area within the same general area of the river basin, alteration may be allowed notwithstanding the criteria of 310 CMR 10.58(5)(c), (d), or (e) at a ratio in square feet of at least 2:1 of mitigation area to area of alteration not conforming to the criteria or an equivalent level of environmental protection where square footage is not a relevant measure. Alteration not conforming to the criteria shall begin at the riverfront area boundary. Mitigation may include off-site restoration of riverfront areas, conservation restrictions under M.G.L. c. 184, §§ 31 through 33 to preserve undisturbed riverfront areas that could be otherwise altered under 310 CMR 10.00, the purchase of development rights within the riverfront area, the restoration of bordering vegetated wetland, projects to remedy an existing adverse impact on the interests identified in M.G.L. c. 131, § 40 for which the applicant is not legally responsible, or similar activities undertaken voluntarily by the applicant which will support a determination by the issuing authority of no significant adverse impact. Preference shall be given to potential mitigation projects, if any, identified in a River Basin Plan approved by the Secretary of the Executive Office of Energy and Environmental Affairs.

This project proposes mitigation within Riverfront Area in the form of the addition of stormwater management. This more than satisfies the above requirement.

Stormwater Management Standards

The house lots associated with this project are exempt from the Stormwater Management Standards as the project consists of a housing development consisting of four or fewer single-family homes. A portion of the proposed common driveway is located within Riverfront Area of Danforth Brook, which is a cold-water fishery. For this reason, a stormwater report has been prepared that outlines how the driveway was designed to meet the Stormwater Management Standards. Said report is included in this submittal. The proposed pervious driveway will reduce runoff from the existing compact gravel and will improve infiltration over the existing conditions on site.

Performance Standards Under the Bolton Wetlands Protection Bylaw

The Bolton Wetlands Protection Bylaw and associated regulations list the following general performance standards. The performance standards are shown below in italics, and responses to each standard are given below each standard in bold.

- (a) *The Commission must find that any proposed activity shall not impair in any manner the ability of the Resource Area to perform any of its functions that protect relevant Resource Interests.*

This project will not impair the ability of any Resource Areas to perform any of the functions that protect relevant resource interest. This project does not involve significant alteration to Resource Areas other than Adjacent Upland Resource Areas. Work within to Land Subject to Flooding are limited to vegetation removal and will not impair the areas ability to store floodwater. This work has been avoided and minimized to the maximum extent practicable (see Avoidance and Minimization section below). Proper sediment and erosion controls measures are proposed to prevent impact to downgradient Resource Areas. Mitigation is proposed in the form of BLSF Restoration, utilization of pervious technologies, and the conservation of significant portions of Adjacent Upland Resource Areas.

- (b) *The Commission shall not permit any activity, other than the maintenance of an already existing structure, that will result in building within or upon, removing, filling, or otherwise altering a Resource Area, except for activity that the Commission allows under a Bylaw Order of Condition and, in appropriate circumstances, under a Bylaw Determination of Applicability.*

This project does not involve the construction of any structures within any Resource Areas, including Adjacent Upland Resource Areas. The proposed houses are located entirely outside of AURA. The only structure located within AURA is the driveway, which is an existing structure and therefore is considered the maintenance of an

existing structure. The proposed expansions of the driveway are minimal and are necessary to meet the requirements of the Bolton Zoning Bylaws regarding common driveways. The turnarounds required by said bylaw were located outside of Resource Areas to the maximum extent practicable.

Lands Subject to Flooding or Inundation by Ground Water or Surface Water

The Bolton Wetlands Protection Bylaw and associated regulations list the following performance standards regarding Lands Subject to Flooding (LSF). The performance standards are shown below in italics, and responses to each standard are given below each standard in bold.

(a) No project shall reduce the ability of the land to absorb and contain floodwaters.

The proposed work within LSF will not reduce the ability of the land to absorb and contain floodwaters. Work within LSF is limited to tree clearing and drilling of wells. No grading or structures other than the small wells are proposed in LSF, and therefore no loss of flood storage will occur. Flood storage will be added to the site via a 3,928 sq. ft. BLSF restoration area within the footprint of a historic fill pile.

(b) No project shall displace or direct floodwaters to areas beyond Lands Subject to Flooding or Inundation by Ground Water or Surface Water.

No grading or any structures other than the small wells are proposed within LSF, and therefore no floodwater will be displaced as a result of this project.

(c) Compensatory storage shall be provided within the same immediate watershed of the Lands Subject to Flooding or Inundation by Ground Water or Surface Water.

This project will not result in any loss in flood storage, therefore no compensatory storage is required. However, a Bordering Land Subject to Flooding Restoration Area is proposed as part of the overall mitigation package for this project, and will result in a net gain of flood storage volume.

(d) Projects shall not obstruct floodways within Lands Subject to Flooding or Inundation by Ground Water or Surface Water.

This project does not propose any grading or structures other than the small wells within floodways/LSF, and therefore will not result in the obstruction of floodways/LSF.

(e) Any structure permitted in Lands Subject to Flooding or Inundation by Ground Water or Surface Water shall be adequately anchored to prevent floatation, collapse or lateral movement of the structure and shall be designed to equalize hydrostatic flood forces on

exterior walls and any mechanical or utility equipment in a structure must be elevated to or above the flood levels of the area.

The proposed wells located within LSF will be adequately anchored to prevent flotation, collapse or lateral movement. Any mechanical equipment within the well will be located above the flood elevation.

- (f) Proposed work shall not cause a significant adverse effect or cumulative adverse effect on the interests identified.*

This project will not result in a significant adverse effect on the interests identified in the bylaw. No loss of flood storage will occur, and mitigation is proposed to offset any adverse impacts that may occur as a result of this project. See the mitigation section for a more detailed explanation of the proposed mitigation package.

- (g) Notwithstanding the above provisions, no project may be permitted which will have any adverse effect on a rare species habitat.*

This project is not located within rare species habitat.

Adjacent Upland Resource Area

The Bolton Wetlands Protection Bylaw and associated regulations list the following performance standards regarding Adjacent Upland Resource Areas (AURA). The performance standards are shown below in italics, and responses to each standard are given below each standard in bold.

- (a) Mitigation shall be commensurate with the size and scope of the project.*

Mitigation is proposed for this project in the form of Bordering Land Subject to Flooding Restoration, utilization of pervious technologies for the driveway for stormwater management, and the conservation of 83% of the AURA on site. See the mitigation section for a more detailed explanation of the proposed mitigation package.

- (b) Replications shall be within the reach of the wetland system and shall improve Bylaw resource interests.*

This project does not involve wetland replication but does involve restoration of BLSF. This BLSF restoration is located directly adjacent to the BVW and pond and will increase flood storage volume on site. See the attached BLSF Restoration Plan for details regarding the construction and planting of this area.

- (c) Replication and Restoration of AURA's shall be stabilized and functional within two growing seasons from when they are disturbed.*

This project does not involve replication or restoration of AURA. Very little work within AURA is proposed, with no new structures other than the driveway expansion being located within AURA. Mitigation will be provided in other forms (see mitigation section below).

- (d) Any portions of the AURA disturbed by temporary or limited action shall be at a minimum restored to the original condition of the site within two growing seasons from when they are disturbed.*

Proposed work within AURA includes mainly grading and site preparation for the proposed house lots. These impacts are permanent in nature, and therefore no restoration is proposed. The paths to the wells will be seeded upon installation of the wells and will be allowed to return to a natural state.

- 1. Proposed work shall not cause a significant adverse effect or cumulative adverse effect on the interests identified*

This project will not result in a significant adverse effect on the interests identified in the bylaw. Impacts to resource areas have been avoided and minimized to the maximum extent practicable, and mitigation is proposed to offset any adverse effects that may occur as a result of this project.

- 2. Notwithstanding the above provisions, no project may be permitted which will have any adverse effect on a rare species habitat.*

This project is not located within rare species habitat.

The preamble of the Bolton Wetland Protection states that “*In May of 2005, the Town revised the Wetlands Bylaw making the first 25 feet from wetlands, excepting riverfront areas (RFA’s), part of the wetland resource area*”. This project has been designed to completely avoid all work within 25’ of wetlands, which respects this provision of the Bolton Wetland Bylaw and Regulations.

Riverfront Area

The Bolton Wetlands Protection Bylaw and associated regulations do not provide any performance standards regarding Riverfront Area in addition to the Wetlands Protection Act Regulations.

Avoidance and Minimization

This project has avoided and minimized impacts to the maximum extent practicable. The specific ways that impacts were avoided and minimized for each lot and the driveway are listed below.

Lot 2

The majority of work within Lot 2 is located complete outside of any resource area or buffer zone. The only work within buffer zone/AURA within Lot 2 is for the relocation of the existing shed to be entirely within Lot 3. Proper sediment and erosion controls will be installed to avoid any potential impact to adjacent resource areas and/or buffer zone. No work is proposed within the first 25' of wetlands, which is regulated as part of the wetland resource area under the Bolton Wetlands Protection Bylaw.

Lot 3

The original plan that was submitted in the 2019 NOI had a portion of the proposed house on Lot 3 located within buffer zone/AURA. The new design has relocated the house completely outside of buffer zone/AURA. Portions of the septic system and the yard for this house are proposed within buffer zone/AURA, but these areas were made as small as possible in order to minimize impact. There is a small amount of work proposed within BLSF in Lot 3 for the installation of the well. This work is limited to the clearing of vegetation and drilling of the well and will not affect the ability of the land to absorb and contain floodwater. Disturbed areas will be seeded upon completion of the drilling of the well. No work is proposed within the first 25' of wetlands, which is regulated as part of the wetland resource area under the Bolton Wetlands Protection Bylaw.

Lot 4

The original design for Lot 4 had some proposed grading for the septic system within BLSF. This work within BLSF has been avoided in the new design by proposing a retaining wall as opposed to a graded slope. The proposed house is located completely outside of buffer zone/AURA. Similar to Lot 3, there is some minor work proposed within BLSF for the installation of the well. This work is limited to clearing of vegetation and the drilling of the proposed well. No loss of flood storage will occur, and disturbed areas will be seeded upon completion of the drilling of the well. No work is proposed within the first 25' of wetlands, which is regulated as part of the wetland resource area under the Bolton Wetlands Protection Bylaw.

Common Driveway

The exiting common driveway is of variable width, ranging from 10-12' feet. This project proposes to improve the driveway to a consistent width of 12', which is the required minimum width for common driveways under the Bolton Zoning Bylaw. There are also two proposed turnarounds that were designed to meet the minimum standards for common driveways under the Zoning Bylaw. Work within Riverfront Area was minimized by not extending any portion of the current footprint of the driveway within Riverfront Area closer to the river. This driveway is proposed to be paved using pervious materials, which will reduce stormwater runoff compared to the current compacted gravel driveway.

Overall Avoidance and Minimization

Overall, this project will impact $\pm 27,947$ sq. ft. of buffer zone/aura while preserving $\pm 136,446$ sq. ft. No work except for the BLSF restoration is proposed within 25' of BVW, preserving all of the $\pm 42,754$ sq. ft. of the first 25' of BVW buffer on site. Only ± 307 sq. ft. of the $\pm 32,382$ sq. ft. of riverfront area on site is proposed to be altered, and this alteration is limited to the footprint of the exiting driveway. Only $\pm 2,322$ sq. ft. of the $\pm 115,431$ sq. ft. of BLSF is proposed to be altered, preserving $\pm 113,109$ sq. ft. of BLSF. Additionally, $\pm 3,928$ sq. ft. of BLSF is proposed to be restored, resulting in a net gain of $\pm 1,606$ sq. ft. of BLSF.

This project has been designed to avoid all impacts to the first 25' of the buffer zone to BVW, which are regulated as part of the wetland resource area under the Bolton Wetland Protection Bylaw.

Mitigation

Mitigation is being proposed for this project in many ways, including a Bordering Land Subject to Flooding Restoration Area, utilization of pervious technologies for the driveway, and the conservation of most of the Adjacent Upland Resource Area on site.

Bordering Land Subject to Flooding (BLSF) Restoration:

There is an old fill pile located in the southwestern portion of the site adjacent to the pond. This pile is surrounded by BLSF. As part of the overall proposed mitigation, this area is proposed to be graded down to the elevation of the surrounding land (310 ft). This will result in the restoration of $\pm 3,928$ sq. ft. of BLSF. This will greatly increase flood storage on site and reduce runoff during large storm events. See the attached Bordering Land Subject to Flooding Restoration Plan for greater detail on this proposed restoration.



Photo 2: View of Proposed BLSF Restoration Area

Self-Mitigating Driveway:

The widening and paving of the common driveway using pervious pavement is a self-mitigating activity. The current driveway is constructed with compacted gravel and is therefore an impervious surface that causes stormwater runoff and provides little to no infiltration. The driveway is proposed to be paved using pervious pavement. This will convert an existing impervious surface to a pervious surface, which will reduce stormwater runoff and increase infiltration.

Adjacent Upland Resource Area Conservation

This project was designed to maximize the amount of Adjacent Upland Resource Area that will be conserved. This was done by minimizing the footprints of the proposed houses, septic systems, and lawns and by locating them outside of AURA to the maximum extent practicable. More information on the avoidance and minimization of AURA impact can be found within the Avoidance and Minimization section of this letter.

Review and Responses to 2019 Denial

As stated above in the permitting history section of this letter, this project was originally submitted as separate NOIs for each lot and the driveway. In 2019, each of the NOI submittals was denied by the Bolton Conservation Commission. The following is a review and response to the issues mentioned within the denial Orders of Conditions.

The denial Orders of Conditions state that the proposed project was denied because the project could not be conditioned to meet the performance standards set forth in the wetland regulation, and that the information submitted was not sufficient to describe the site work and the effect of the interests identified in the Wetlands Protection Act. This new NOI submittal contains revised and additional information that Goddard Consulting believes is sufficient to describe the site work and complies with the performance standards set forth in the Wetlands Protection Act and the Bolton Wetlands Protection Bylaw. This review and analysis of the denial will further discuss how the project was changed to reflect the issues stated in the denial Orders of Conditions.

The denial discusses excavation that occurred in 2016 that could potentially have occurred within jurisdictional areas. Peer review determined that these areas, or any other areas on site, do not meet the criteria to be classified as vernal pools (see attached letter). Furthermore, the ORAD issued for this site (DEP File #112-0656) does not list these areas as resource areas, where full confirmation of resource areas was requested. Lastly, these areas are not within 100 feet of any other resource areas, or within 200 feet of Danforth Brook. Based on the above information, the excavation performed in 2016 was not within any jurisdictional areas, and therefore was not a violation of the Wetlands Protection Act or the Bolton Wetlands Protection Bylaw.

The denial also discusses the unpermitted removal of a beaver dam on the property. This area has been left as is since this issue was brought up, and the denial discusses that beaver activity has been observed to resume on site. No further alteration of any beaver dam on site will occur.

The denial discusses the lack of an alternatives analysis and mitigation for the proposed project. Mitigation is being offered in the form of Bordering Land Subject to Flooding Restoration, and in the form of a self-mitigating pervious driveway that will increase infiltration and reduce runoff. Greater detail on proposed mitigation can be found in the Mitigation and section of this letter. An alternatives analysis is not necessary for this project, as the work within Riverfront Area falls under than redevelopment standards which do not require an alternatives analysis. However, this project was the least impacting alternative considered, with original designs having some of the proposed house within buffer zone. More information on alternatives can be found within the Avoidance and Minimization Section of this letter.

The denial discusses relocating the proposed house on lot 3 outside of any resource areas. This request has been honored, and the new location of the house on lot 3 is now located completely outside of the 100' buffer zone/Adjacent Upland Resource Area.

The denial discusses the observation by abutters that the existing gravel driveway has been overtopped by 100-year flood events. The FEMA 100-year flood zone in this area has an established base elevation of 310 ft. The existing driveway is raised slightly above the surrounding land, and an on-ground survey determined that the elevation of the driveway is above 310 ft, and therefore the driveway is not within the FEMA 100-year flood zone/Bordering Land Subject to Flooding. Flooding greater than the 100-yr flood elevations are not regulated, and neither is flooding due to reasons outside of control such as culvert clogging.

The denial discusses impacts to Adjacent Upland Resource Area, Bordering Land Subject to Flooding, and Riverfront Area. The issue stated in the denial was that the total amount of impact to each resource area was not accurately reported. This new submittal provides accurate impact amounts to each resource area that is proposed to be altered. These numbers can be found above in Table 1.

The denial discusses that the original submittals were submitted separately and as single-family home projects. The denial further discussed that the project should be considered as a whole, rather than separating the houses from the driveway. This new submittal is for the entire project as a whole, consisting of the three proposed single-family homes and the improvements to the exiting driveway.

The denial discusses the impact to BLSF and the necessity for compensatory flood storage. The proposed work within BLSF for this project is limited to vegetation removal and the drilling of wells. There is no grading proposed within BLSF, and therefore no flood storage will be lost. However, compensatory flood storage is being proposed in the form of BLSF restoration as part of the overall mitigation package for this project. Further information regarding the BLSF restoration can be found in the mitigation section of this letter as well as within the Bordering Land Subject to Flooding Restoration Plan included in this submittal.

The denial discusses that the Bolton Wetlands Protection Bylaw has additional performance standards than what is stated in the Wetlands Protection Act, and that the project did not meet those standards. A full description of how the proposed project meets those standards can be found in the Performance Standards Under the Bolton Wetlands Protection Bylaw section above.

The denial discusses that the project as a whole would require a wildlife habitat evaluation due to impacts to Riverfront Area. The alterations to Riverfront Area are minimal and are limited to the footprint of the existing gravel driveway, and therefore is only subject to the requirements of CMR 10.58(5): Redevelopment within Previously Developed Riverfront Areas. There is no requirement for wildlife habitat evaluation for redevelopment within previously developed Riverfront Area. All work within Riverfront Area is limited to the footprint of the existing driveway, with the expansion being located outside of Riverfront Area.

Summary of Denial Review and Response

The main issues addressed in the denial were that the project should be considered as a single project rather than separating the house lots and driveway, the lack of mitigation, the potential for alternatives with less adverse impact to resource areas, and the unpermitted work from 2016. We are pleased to report that all of these issues have all been addressed in this application. This submittal is for the entire project as a whole and contains an alternatives analysis as well as a mitigation package. The house in lot 3 was relocated outside of any buffer zone or resource area, which results in less adverse impact than the original submittal. Mitigation is being offered in the form of BLSF restoration, a self-mitigating pervious driveway, and the reduction in impact to buffer zone/AURA. The unpermitted work from 2016 was determined to be outside of any resource area or buffer zone, and therefore is not a violation of the Wetlands Protection Act or the Bolton Wetlands Protection Bylaw.

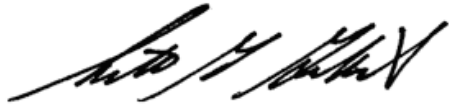
Goddard believes that this new submittal addresses all of the issues raised in the 2019 denial, and that the proposed project meets all of the applicable standards of both the Wetlands Protection act and the Bolton Wetlands Protection Bylaw.

Conclusion

It is our opinion that the proposed project will not have a significant adverse impact to any Resource Areas. Adequate sedimentation and erosion controls have been proposed to protect downgradient Resource Areas during construction. Goddard Consulting respectfully requests that the Commission approve this application with the issuance of an Order of Conditions.

If there are any questions concerning this submission, please do not hesitate to contact us.

Very truly yours,



Scott Goddard,
Principal & PWS

CC: Wetlands Division, MassDEP Central Regional Office, 8 New Bond Street, Worcester, MA 01606



Massachusetts Department of Environmental Protection
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Provided by MassDEP:

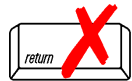
MassDEP File Number

Document Transaction Number

City/Town

Important:

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



Note:
Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

<u>Century Mill Road</u>	<u>Bolton</u>	<u>01740</u>
a. Street Address	b. City/Town	c. Zip Code
<u>Latitude and Longitude:</u>	<u>42.41753</u>	<u>71.58587</u>
	d. Latitude	e. Longitude
<u>3D</u>	<u>75</u>	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. Applicant:

<u>Scott</u>	<u>Goddard</u>	
a. First Name	b. Last Name	
<u>21 Century Mill LLC</u>		
c. Organization		
<u>291 Main St. Suite 8</u>		
d. Street Address		
<u>Northborough</u>	<u>MA</u>	<u>01532</u>
e. City/Town	f. State	g. Zip Code
<u>(508) 393-3784</u>	<u>scott@goddardconsultingllc.com</u>	
h. Phone Number	i. Fax Number	j. Email Address

3. Property owner (required if different from applicant): Check if more than one owner

<u></u>	<u></u>	
a. First Name	b. Last Name	
<u></u>		
c. Organization		
<u></u>		
d. Street Address		
<u></u>	<u></u>	<u></u>
e. City/Town	f. State	g. Zip Code
<u></u>	<u></u>	<u></u>
h. Phone Number	i. Fax Number	j. Email address

4. Representative (if any):

<u>Scott</u>	<u>Goddard</u>	
a. First Name	b. Last Name	
<u>Goddard Consulting LLC</u>		
c. Company		
<u>291 Main St.</u>		
d. Street Address		
<u>Northborough</u>	<u>MA</u>	<u>01532</u>
e. City/Town	f. State	g. Zip Code
<u>(508) 393-3784</u>	<u>scott@goddardconsultingllc.com</u>	
h. Phone Number	i. Fax Number	j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

<u>\$1,905</u>	<u>\$940</u>	<u>\$965</u>
a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid



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A. General Information (continued)

6. General Project Description:

The applicant is proposing to construct 3 single family homes and widen and pave an existing gravel driveway. The houses are located outside of the buffer zone, but associated site work will be located within the buffer zone. Minor vegetation removal is proposed within BLSF. The driveway is located within buffer zone and Riverfront Area.

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

- 1. Single Family Home
- 2. Residential Subdivision
- 3. Commercial/Industrial
- 4. Dock/Pier
- 5. Utilities
- 6. Coastal engineering Structure
- 7. Agriculture (e.g., cranberries, forestry)
- 8. Transportation
- 9. Other

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

- 1. Yes No If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Worcester

a. County

55620

c. Book

b. Certificate # (if registered land)

109

d. Page Number

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

- 1. Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
- 2. Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.



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B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users:
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	1. square feet 2. cubic yards dredged	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. <input type="checkbox"/> Coastal Dunes	1. square feet	2. cubic yards dune nourishment

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
f. <input type="checkbox"/> Coastal Banks	1. linear feet	
g. <input type="checkbox"/> Rocky Intertidal Shores	1. square feet	
h. <input type="checkbox"/> Salt Marshes	1. square feet	2. sq ft restoration, rehab., creation
i. <input type="checkbox"/> Land Under Salt Ponds	1. square feet 2. cubic yards dredged	
j. <input type="checkbox"/> Land Containing Shellfish	1. square feet	
k. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above 1. cubic yards dredged	
l. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	1. square feet	

4. Restoration/Enhancement
If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.

a. square feet of BVW	b. square feet of Salt Marsh
-----------------------	------------------------------

5. Project Involves Stream Crossings

a. number of new stream crossings	b. number of replacement stream crossings
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C. Other Applicable Standards and Requirements

- This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

- Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm.

- a. Yes No **If yes, include proof of mailing or hand delivery of NOI to:**

**Natural Heritage and Endangered Species Program
Division of Fisheries and Wildlife
1 Rabbit Hill Road
Westborough, MA 01581**

- August 2017
b. Date of map

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

- c. Submit Supplemental Information for Endangered Species Review*

- Percentage/acreage of property to be altered:
 - (a) within wetland Resource Area _____ percentage/acreage
 - (b) outside Resource Area _____ percentage/acreage

- Assessor's Map or right-of-way plan of site

- Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **
 - (a) Project description (including description of impacts outside of wetland resource area & buffer zone)
 - (b) Photographs representative of the site

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/>). Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.



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C. Other Applicable Standards and Requirements (cont'd)

- (c) MESA filing fee (fee information available at http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/ mesa/ mesa_fee_schedule.htm). Make check payable to "Commonwealth of Massachusetts - NHESP" and **mail to NHESP** at above address

Projects altering 10 or more acres of land, also submit:

- (d) Vegetation cover type map of site
- (e) Project plans showing Priority & Estimated Habitat boundaries
- (f) OR Check One of the Following
1. Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/ mesa/ mesa_exemptions.htm; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)
 2. Separate MESA review ongoing. a. NHESP Tracking # _____ b. Date submitted to NHESP _____
 3. Separate MESA review completed.
Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.
3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?
- a. Not applicable – project is in inland resource area only b. Yes No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: DMF.EnvReview-South@state.ma.us

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: DMF.EnvReview-North@state.ma.us

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.



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C. Other Applicable Standards and Requirements (cont'd)

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?
- a. Yes No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.
- b. ACEC
5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?
- a. Yes No
6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?
- a. Yes No
7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?
- a. Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:
1. Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)
 2. A portion of the site constitutes redevelopment
 3. Proprietary BMPs are included in the Stormwater Management System.
- b. No. Check why the project is exempt:
1. Single-family house
 2. Emergency road repair
 3. Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

- This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1. USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
2. Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.

Online Users:
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.



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D. Additional Information (cont'd)

- 3. Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.
- 4. List the titles and dates for all plans and other materials submitted with this NOI.

<u>Common Driveway Plan & Profile-Lots 1-4, Century Mill Rd, Bolton, Massachusetts</u>	
a. Plan Title	
<u>Foresite Engineering</u>	<u>Scott Hayes</u>
b. Prepared By	c. Signed and Stamped by
<u>8/11/2020</u>	<u>1"=40'</u>
d. Final Revision Date	e. Scale
<u>Sewage Disposal System Design Plan (3 plans, one for each Lot)</u>	<u>8/15/18-8/22/18</u>
f. Additional Plan or Document Title	g. Date
- 5. If there is more than one property owner, please attach a list of these property owners not listed on this form.
- 6. Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.
- 7. Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.
- 8. Attach NOI Wetland Fee Transmittal Form
- 9. Attach Stormwater Report, if needed.

E. Fees

- 1. Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

<u>3561</u>	<u>9/1/20</u>
2. Municipal Check Number	3. Check date
<u>3568</u>	<u>9/1/20</u>
4. State Check Number	5. Check date
<u>Scott</u>	<u>Goddard</u>
6. Payor name on check: First Name	7. Payor name on check: Last Name



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Bolton

City/Town

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

	2. Date <u>9/1/20</u>
1. Signature of Applicant	
3. Signature of Property Owner (if different)	4. Date
	<u>9/1/20</u>
5. Signature of Representative (if any)	6. Date

For Conservation Commission:

Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:

One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a copy of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:

If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.



100 foot Abutters List Report

Bolton, MA
July 23, 2020

Subject Property:

Parcel Number:	003.D-0075.0	Mailing Address:	21 CENTURY MILL LLC
CAMA Number:	003.D-0075.0		291 MAIN ST, STE 8
Property Address:	0 CENTURY MILL RD		NORTHBOROUGH, MA 01532

Abutters:

Parcel Number:	003.D-0004.0	Mailing Address:	FOOTE JAKE GORDON
CAMA Number:	003.D-0004.0		40 CENTURY MILL RD
Property Address:	40 CENTURY MILL RD		BOLTON, MA 01740
Parcel Number:	003.D-0005.0	Mailing Address:	MCCARTHY MARY C
CAMA Number:	003.D-0005.0		6 CENTURY MILL RD
Property Address:	6 CENTURY MILL RD		BOLTON, MA 01740
Parcel Number:	003.D-0007.0	Mailing Address:	FOOTE JAKE GORDON
CAMA Number:	003.D-0007.0		40 CENTURY MILL RD
Property Address:	0 CENTURY MILL RD		BOLTON, MA 01740
Parcel Number:	003.D-0011.0	Mailing Address:	BIRSE WILLIAM A & SUSAN M
CAMA Number:	003.D-0011.0		206 HUDSON RD
Property Address:	206 HUDSON RD		BOLTON, MA 01740
Parcel Number:	003.D-0019.0	Mailing Address:	JOHANSEN JOHN & JAMIE
CAMA Number:	003.D-0019.0		174 HUDSON RD
Property Address:	174 HUDSON RD		BOLTON, MA 01740
Parcel Number:	003.D-0021.1	Mailing Address:	ALGONQUIN CNCL BSA
CAMA Number:	003.D-0021.1		490 UNION AVE
Property Address:	75 HUDSON RD E SHOR		FRAMINGHAM, MA 01702
Parcel Number:	003.D-0021.1	Mailing Address:	ALGONQUIN CNCL BSA
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www.cai-tech.com



100 foot Abutters List Report

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Mailing Address: ALGONQUIN CNCL BSA
490 UNION AVE
FRAMINGHAM, MA 01702

Parcel Number: 003.D-0021.1
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100 foot Abutters List Report

Bolton, MA
July 23, 2020

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7/23/2020

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100 foot Abutters List Report

Bolton, MA
July 23, 2020

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7/23/2020

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100 foot Abutters List Report

Bolton, MA
July 23, 2020

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Parcel Number: 003.D-0022.0 CAMA Number: 003.D-0022.0 Property Address: 185 HUDSON RD	Mailing Address: DAVIS RICHARD M SUSAN D MOLLER 185 HUDSON RD BOLTON, MA 01740
Parcel Number: 003.D-0023.0 CAMA Number: 003.D-0023.0 Property Address: 1 CENTURY MILL RD	Mailing Address: MONTEIRO DAVID 445 MAIN ST HUDSON, MA 01749
Parcel Number: 003.D-0024.0 CAMA Number: 003.D-0024.0 Property Address: 211 HUDSON RD	Mailing Address: STEPHEN P DEMEO REVOCABLE TRUST 211 HUDSON RD BOLTON, MA 01740
Parcel Number: 003.D-0027.0 CAMA Number: 003.D-0027.0 Property Address: 16 CENTURY MILL RD	Mailing Address: ABYSALH JONATHAN & KRISTINA M CIOCIOLA 16 CENTURY MILL RD BOLTON, MA 01740



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7/23/2020

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100 foot Abutters List Report

Bolton, MA
July 23, 2020

Parcel Number: 003.D-0028.0
CAMA Number: 003.D-0028.0
Property Address: 28 CENTURY MILL RD

Mailing Address: LUNDBERG KEITH M & MICHELE A
WADE
28 CENTURY MILL RD
BOLTON, MA 01740

Parcel Number: 003.D-0029.0
CAMA Number: 003.D-0029.0
Property Address: 32 CENTURY MILL RD

Mailing Address: HANLEY RYAN O & JULIE O
32 CENTURY MILL RD
BOLTON, MA 01740

Parcel Number: 003.D-0032.0
CAMA Number: 003.D-0032.0
Property Address: 21 CENTURY MILL RD

Mailing Address: GERAGHTY JAMES M & KIMBERLY
BROWN
21 CENTURY MILL RD
BOLTON, MA 01740

As set forth in the Assessor's records as of July 23, 2020.

Kelly Garlock
Assistant Assessor

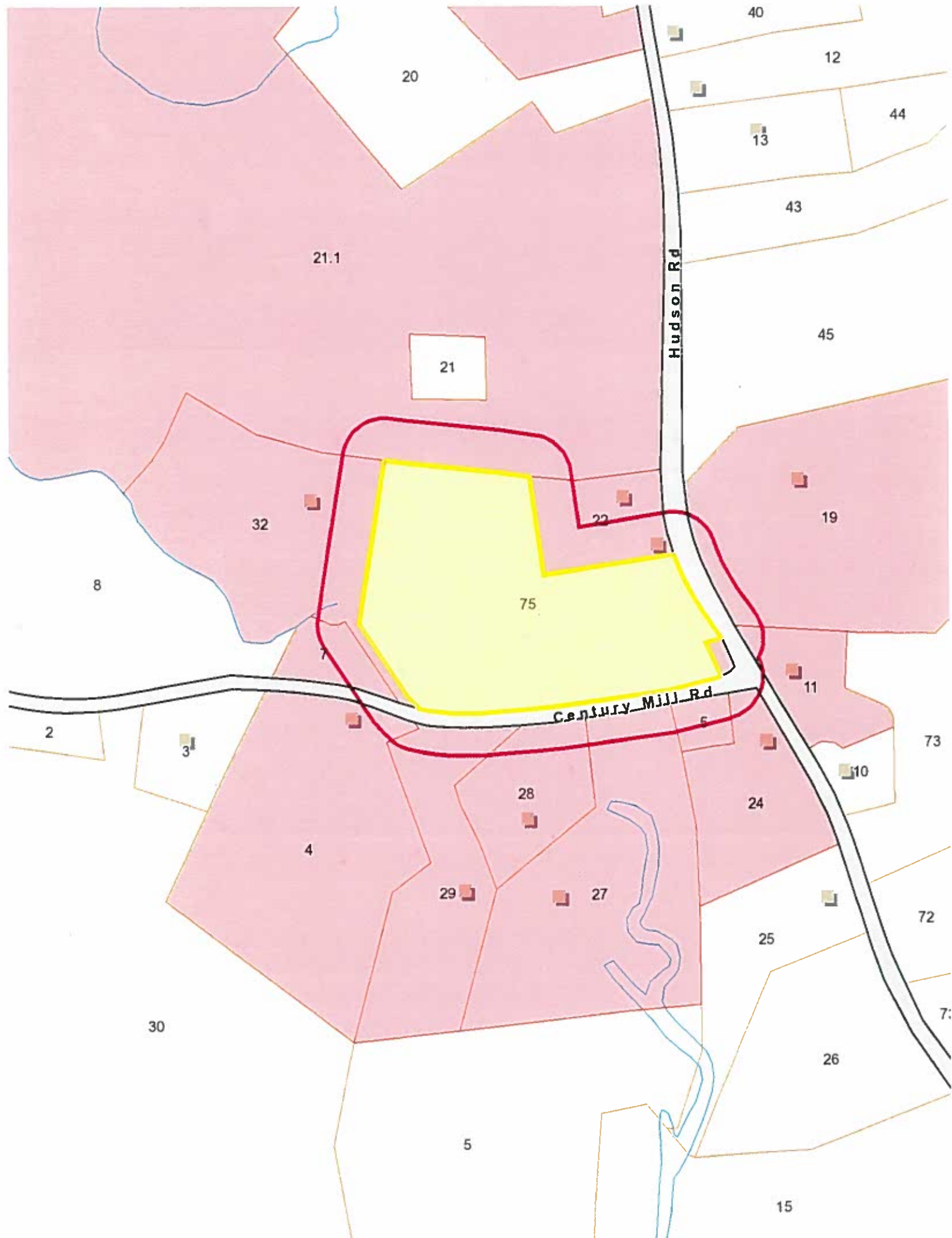


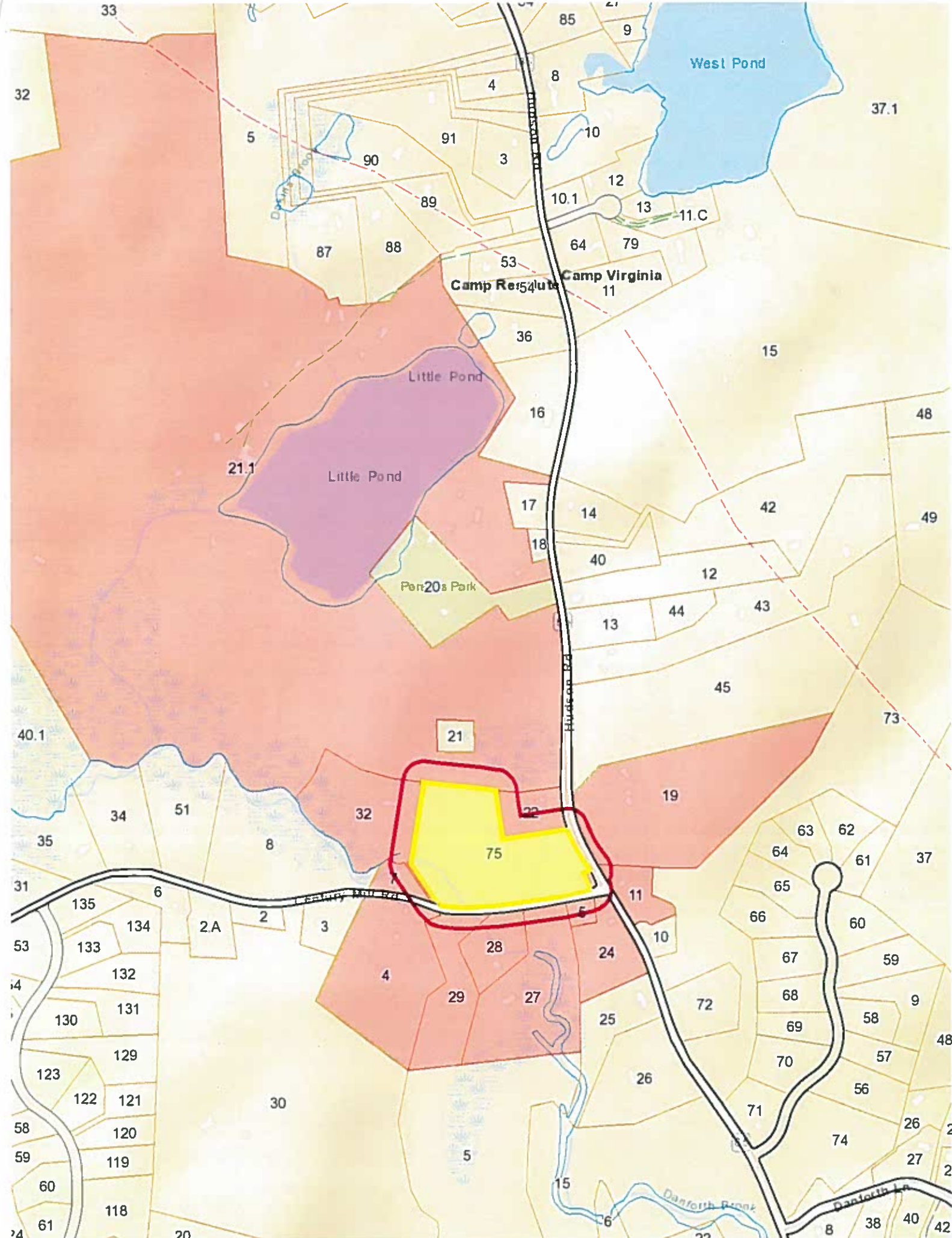
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7/23/2020

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**Notification to Abutters Under the
Massachusetts Wetlands Protection Act
& Bolton Wetlands Protection Bylaw**

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

- A. The name of the applicant is: **21 Century Mill LLC**
- B. The applicant has filed a Notice of Intent (NOI) with the Conservation Commission for the municipality of **Bolton, MA** seeking permission to alter Areas Subject to Protection under the Wetlands Protection Act (General Laws Chapter 131, Section 40).
- C. The project scope is: **The construction of 3 single family homes and a common driveway.**
- D. The address of the lot where the activity is proposed is: **Century Mill Road (Assessors Map 3D, Parcel 75)**
- E. Copies of the NOI may be examined at the **Bolton Town Hall - Conservation Commission**, contact the Commission for more information. For more information, call **(978-779-3304)**
- F. Copies of the NOI may be obtained for a reasonable fee from the applicant, by calling **(508) 393-3784** between the hours of **10 and 3** on the following days of the week: **M-F**.
- G. A public hearing will be held at **Bolton Town Hall, 663 Main Street**. For information regarding the date, time, and place of the public hearing, please contact the **Bolton Conservation Commission** at **(978) 779-3304** or the applicant at **(508) 393-3784**.

NOTE: Notice of the public hearing, including its date, time, and place, will be published at least five (5) days in advance in **Local Newspaper**.

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

Note: You also may contact your local Conservation Commission or the nearest Department of Environmental Protection Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call:

Central Region: (508) 792-7650
 Southeast Region: (508) 946-2700

Northeast Region: (978) 694-3200
 Western Region: (413) 784-1100

AFFIDAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act and the Bolton Wetlands Protection Bylaw

I, Kyle Macdonald hereby certify under the pains and penalties of perjury that on 9/2/2020 I gave notification to abutters in compliance with the second paragraph of Massachusetts General Law Chapter 131, Section 40, and the DEP Guide to Abutter Notification dating April 8, 1994 in connection with the following matter:

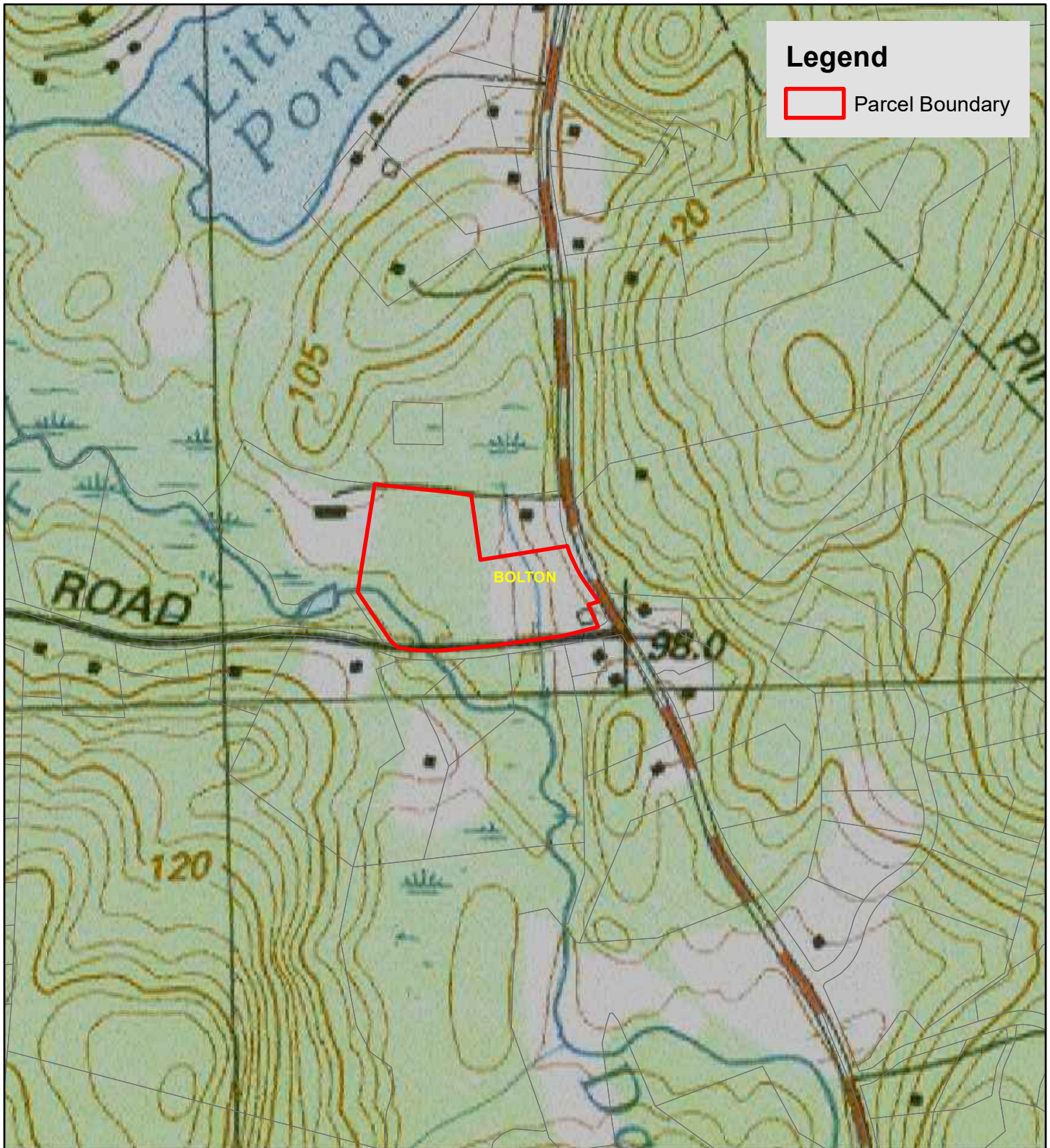
A Notice of Intent (NOI) was filed under the Massachusetts Wetlands Protection Act and the Bolton Wetlands Protection Bylaw by Goddard Consulting LLC with the Bolton Conservation Commission on 9/2/2020 for the property located at 0 Century Mill Road in Bolton, MA.

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

(Name)

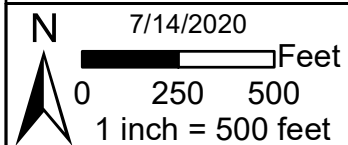
(Date)





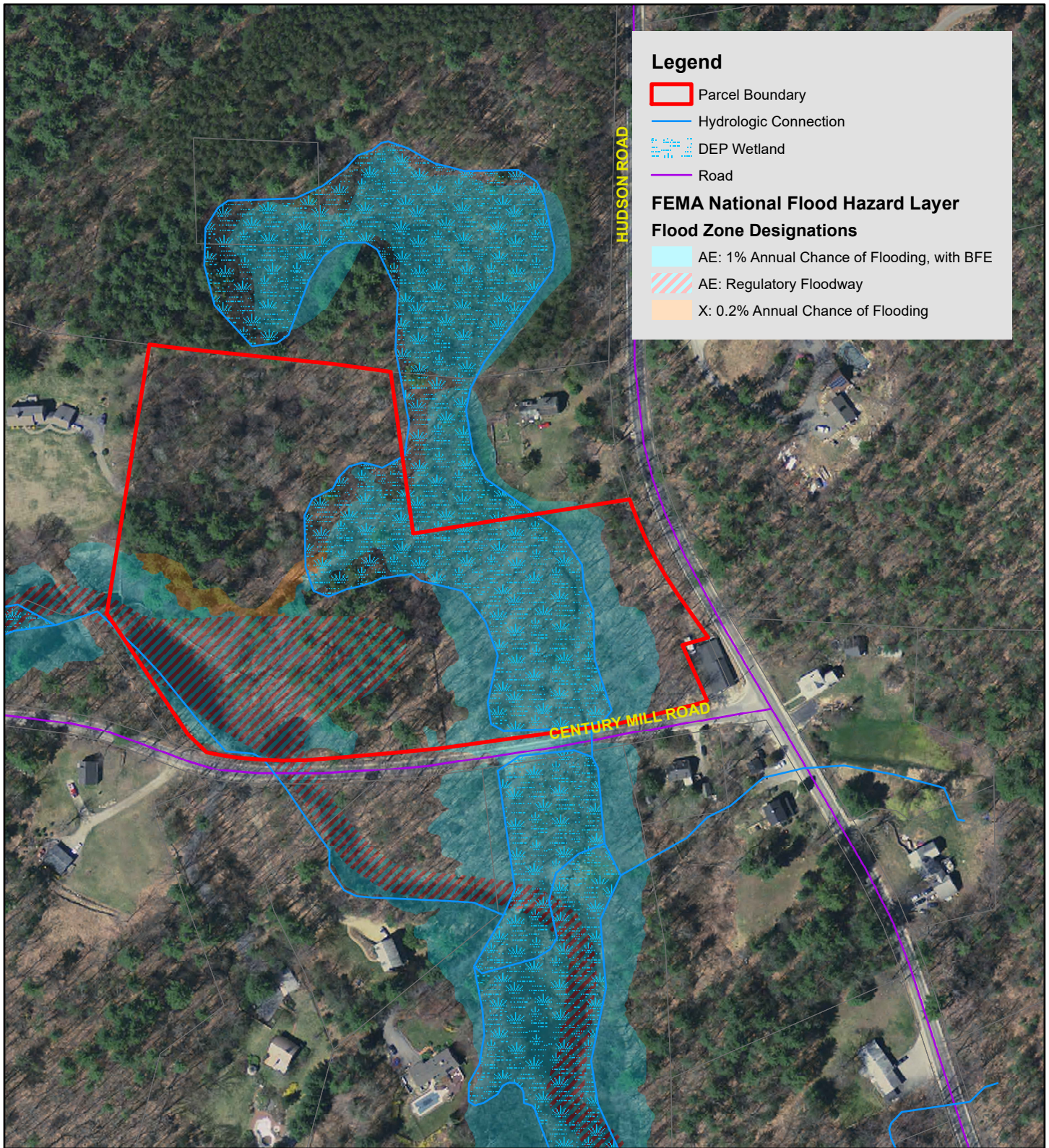
USGS Locus of Site

0 Century Mill Road - Bolton, MA
(Map:3D, Lot:75)



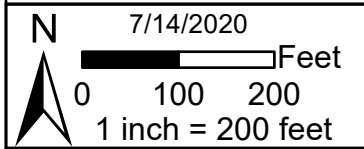
GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"





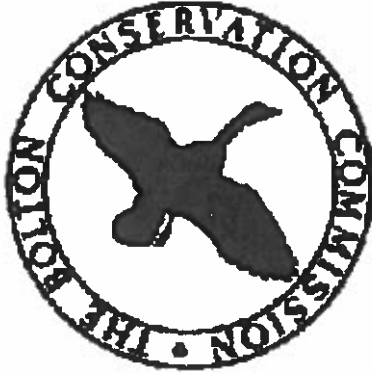
Ortho View of Site

0 Century Mill Road - Bolton, MA
(Map:3D, Lot:75)



GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"





663 Main Street, Bolton, Ma 01740
(978) 779-3304

November 9, 2017

21 Century Mill Rd.
Bolton, Ma 01740

RE: ORAD DEP File #112-0656
Order of Resource Delineation located at 21 Century Mill Road, Bolton, MA 01740

Enclosed is the original copy of the Order of Resource Area Delineation issued by the Bolton Conservation Commission. Please record these Certificate with Worcester County Registry of Deeds and provide the Commission with the recording confirmation on page 1 of 1 "Recording Information".

If you have any questions, please feel free to call me Monday through Thursday between 9 a.m. and 2:30 p.m.

For the Commission,

Rebecca A. Longvall
Conservation Agent

cc: Scott Goddard, Foresite Engineering



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
**WPA Form 4B – Order of Resource Area
Delineation**

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

Provided by MassDEP:

112-0656

MassDEP File Number

eDEP Transaction Number

Bolton

City/Town

A. General Information

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



Note: Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

From: Bolton
1. Conservation Commission

2. This Issuance is for (check one):

- a. Order of Resource Area Delineation
- b. Amended Order of Resource Area Delineation

3. Applicant:

Scott Goddard
a. First Name b. Last Name

Goddard Consulting, LLC
c. Organization

291 Main Street Suite 8
d. Mailing Address

Northborough Ma 01532
e. City/Town f. State g. Zip Code

4. Property Owner (if different from applicant):

a. First Name b. Last Name

c. Organization

d. Mailing Address

e. City/Town f. State g. Zip Code

5. Project Location:

21 Century Mill Road Bolton 01740
a. Street Address b. City/Town c. Zip Code

3D 32
d. Assessors Map/Plat Number e. Parcel/Lot Number

Latitude and Longitude 42d417m531s -71d585m866s
(in degrees, minutes, seconds): f. Latitude g. Longitude

6. Dates: 9/13/2017
a. Date ANRAD filed b. Date Public Hearing Closed c. Date of Issuance



WPA Form 4B – Order of Resource Area Delineation

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

A. General Information (cont.)

7. Title and Date (or Revised Date if applicable) of Final Plans and Other Documents:

Resource Area Location Plan

10/23/2017

a. Title

b. Date

c. Title

d. Date

B. Order of Delineation

1. The Conservation Commission has determined the following (check whichever is applicable):

a. **Accurate:** The boundaries described on the referenced plan(s) above and in the Abbreviated Notice of Resource Area Delineation are accurately drawn for the following resource area(s):

1. Bordering Vegetated Wetlands

2. Other resource area(s), specifically:

a. Riverfront Area, Riverine, FreshwaterForested/Shrub Wetland, Freshwater Pond, *PLSE*

b. **Modified:** The boundaries described on the plan(s) referenced above, as modified by the Conservation Commission from the plans contained in the Abbreviated Notice of Resource Area Delineation, are accurately drawn from the following resource area(s):

1. Bordering Vegetated Wetlands

2. Other resource area(s), specifically:

a.

c. **Inaccurate:** The boundaries described on the referenced plan(s) and in the Abbreviated Notice of Resource Area Delineation were found to be inaccurate and cannot be confirmed for the following resource area(s):

1. Bordering Vegetated Wetlands

2. Other resource area(s), specifically:



WPA Form 4B – Order of Resource Area Delineation

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

Provided by MassDEP:

112-0656

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Bolton

City/Town

B. Order of Delineation (cont.)

3. The boundaries were determined to be inaccurate because:

C. Findings

This Order of Resource Area Delineation determines that the boundaries of those resource areas noted above, have been delineated and approved by the Commission and are binding as to all decisions rendered pursuant to the Massachusetts Wetlands Protection Act (M.G.L. c.131, § 40) and its regulations (310 CMR 10.00). This Order does not, however, determine the boundaries of any resource area or Buffer Zone to any resource area not specifically noted above, regardless of whether such boundaries are contained on the plans attached to this Order or to the Abbreviated Notice of Resource Area Delineation.

This Order must be signed by a majority of the Conservation Commission. The Order must be sent by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate DEP Regional Office (see <http://www.mass.gov/eea/agencies/massdep/about/contacts/find-the-massdep-regional-office-for-your-city-or-town.html>).

D. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate DEP Regional Office to issue a Superseding Order of Resource Area Delineation. When requested to issue a Superseding Order of Resource Area Delineation, the Department's review is limited to the objections to the resource area delineation(s) stated in the appeal request. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order of Resource Area Delineation will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order or Determination, or providing written information to the Department prior to issuance of a Superseding Order or Determination.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act, (M.G.L. c. 131, § 40) and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal bylaw or ordinance, and not on the Massachusetts Wetlands Protection Act or regulations, the Department of Environmental Protection has no appellate jurisdiction.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 4B – Order of Resource Area
Delineation

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

Provided by MassDEP:

112-0656

MassDEP File Number

eDEP Transaction Number

Bolton

City/Town

E. Signatures

11/7/2017
Date of Issuance

Please indicate the number of members who will sign this form.

3
1. Number of Signers

[Signature]
Signature of Conservation Commission Member

Signature of Conservation Commission Member

[Signature]
Signature of Conservation Commission Member

Signature of Conservation Commission Member

[Signature]
Signature of Conservation Commission Member

Signature of Conservation Commission Member

Signature of Conservation Commission Member

This Order is valid for three years from the date of issuance.

If this Order constitutes an Amended Order of Resource Area Delineation, this Order does not extend the issuance date of the original Final Order, which expires on _____ unless extended in writing by the issuing authority.

This Order is issued to the applicant and the property owner (if different) as follows:

2. By hand delivery on
11/9/2017
a. Date

3. By certified mail, return receipt requested on
a. Date



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
**Request for Departmental Action Fee
 Transmittal Form**

DEP File Number:

112-0656

Provided by DEP

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

A. Request Information

1. Location of Project

a. Street Address

b. City/Town, Zip

c. Check number

d. Fee amount

2. Person or party making request (if appropriate, name the citizen group's representative):

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

3. Applicant (as shown on Determination of Applicability (Form 2), Order of Resource Area Delineation (Form 4B), Order of Conditions (Form 5), Restoration Order of Conditions (Form 5A), or Notice of Non-Significance (Form 6)):

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

4. DEP File Number:

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



B. Instructions

1. When the Departmental action request is for (check one):

- Superseding Order of Conditions – Fee: \$120.00 (single family house projects) or \$245 (all other projects)
- Superseding Determination of Applicability – Fee: \$120
- Superseding Order of Resource Area Delineation – Fee: \$120

Send this form and check or money order, payable to the *Commonwealth of Massachusetts*, to:

Department of Environmental Protection
 Box 4062
 Boston, MA 02211



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
**Request for Departmental Action Fee
Transmittal Form**

DEP File Number:

112-0656

Provided by DEP

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

B. Instructions (cont.)

2. On a separate sheet attached to this form, state clearly and concisely the objections to the Determination or Order which is being appealed. To the extent that the Determination or Order is based on a municipal bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.
3. Send a **copy** of this form and a **copy** of the check or money order with the Request for a Superseding Determination or Order by certified mail or hand delivery to the appropriate DEP Regional Office (see <http://www.mass.gov/eea/agencies/massdep/about/contacts/>).
4. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands

**WPA Form 4B – Order of Resource Area
 Delineation**

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

Provided by MassDEP:

112-0656

MassDEP File Number

eDEP Transaction Number

Bolton

City/Town

Recording Information

Prior to commencement of work, this Order of Resource Area Delineation must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Resource Area Delineation. The recording information on this page shall be submitted to the Conservation Commission listed below.

Bolton

Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Bolton

Conservation Commission

Please be advised that the Order of Resource Area Delineation for the Project at:

21 Century Mill Road

Project Location

112-0656

MassDEP File Number

Has been recorded at the Registry of Deeds of:

Worcester

County

Book

Page

For:

Property Owner

and has been noted in the chain of title of the affected property in:

Book

Page

In accordance with the Order of Resource Area Delineation issued on:

Date

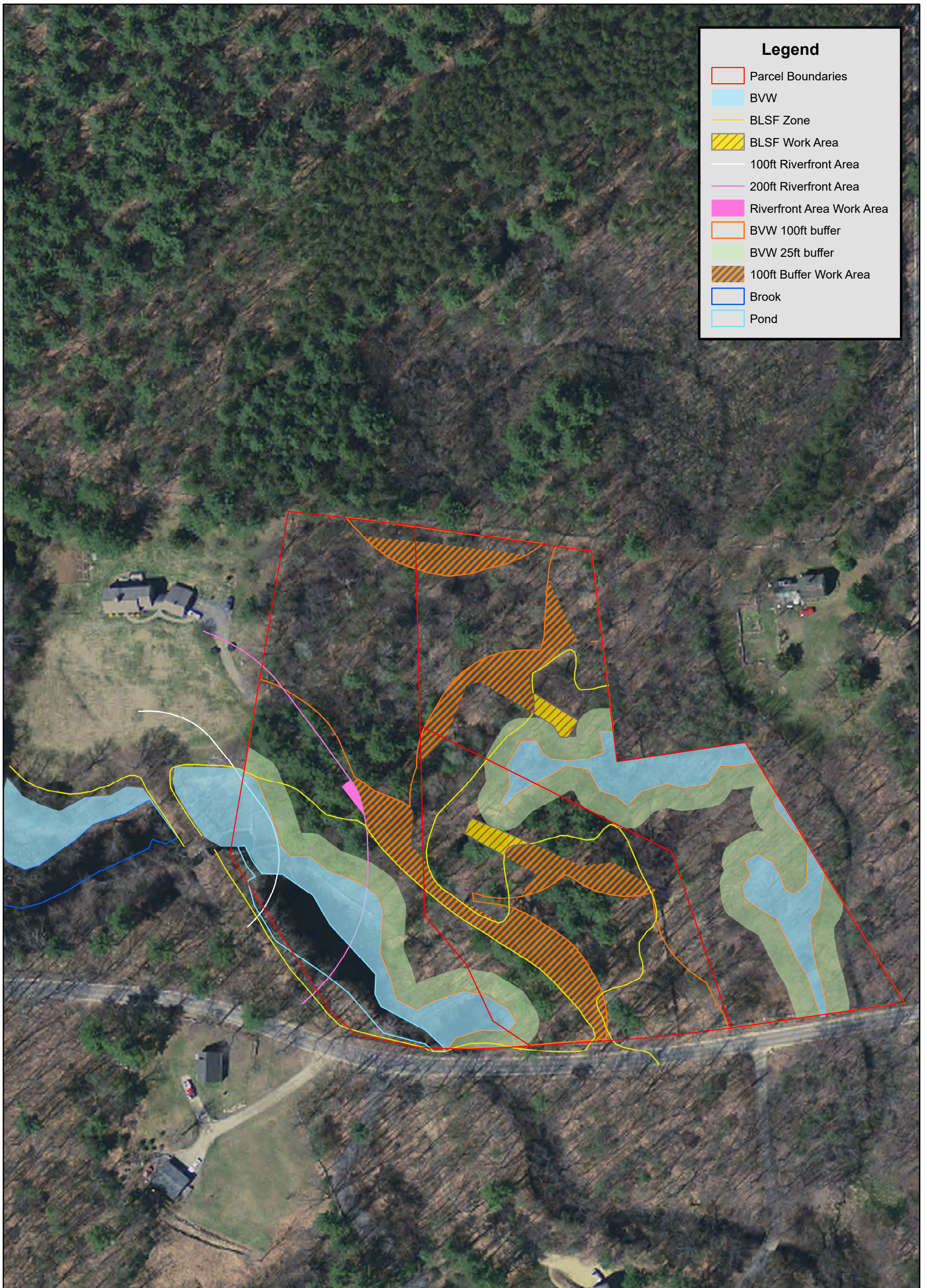
If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant



Legend

- Parcel Boundaries
- BVW
- BLSF Zone
- BLSF Work Area
- 100ft Riverfront Area
- 200ft Riverfront Area
- Riverfront Area Work Area
- BVW 100ft buffer
- BVW 25ft buffer
- 100ft Buffer Work Area
- Brook
- Pond

Orthoview - Resource Area Alteration

21 Century Mill Road - Bolton, MA
(Map: 3D, Lot: 75)

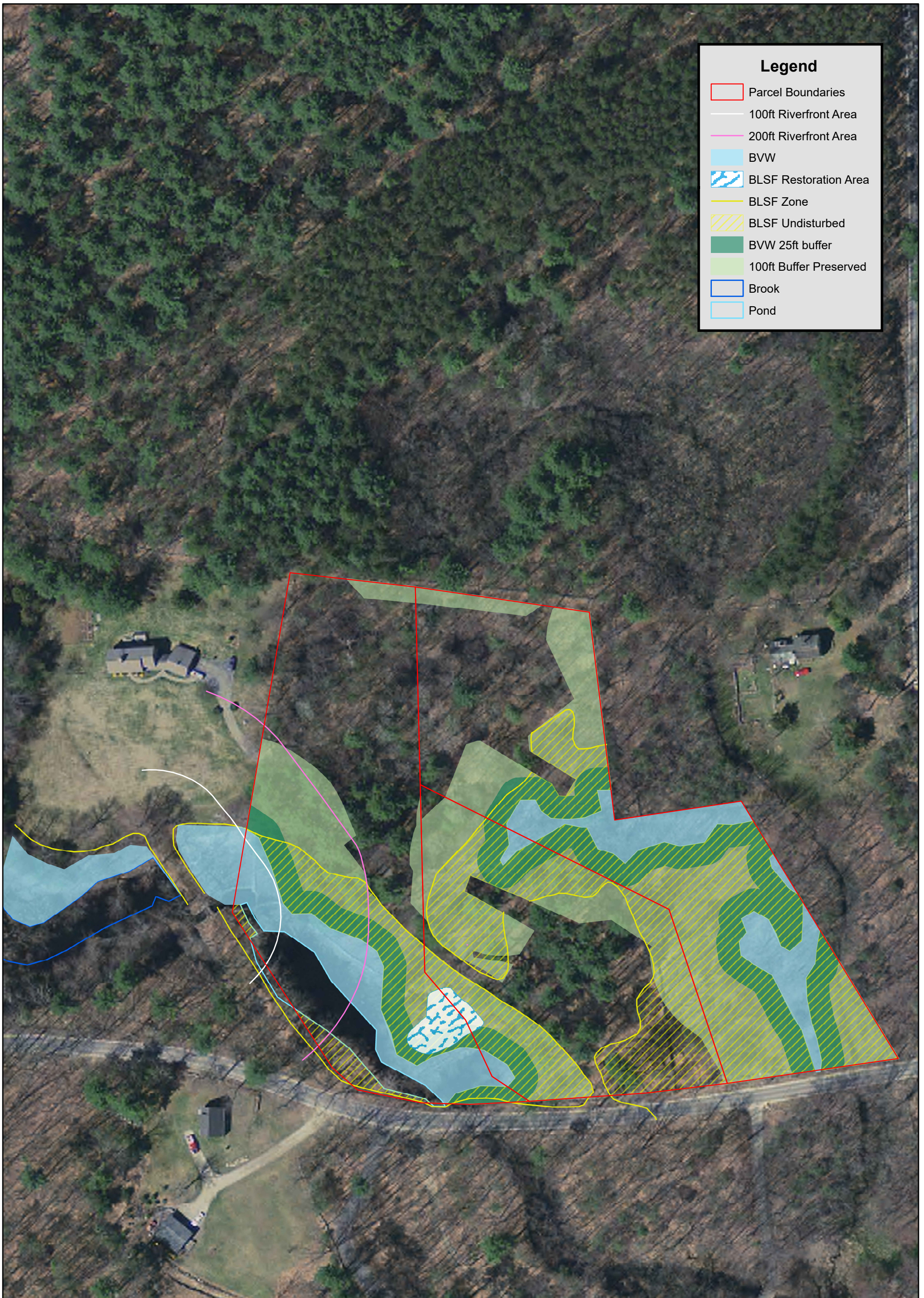
8/31/2020

0 50 100
Feet

1 inch = 100 feet

GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"

GODDARD CONSULTING
Strategic Wetland Permitting LLC



Legend

- Parcel Boundaries
- 100ft Riverfront Area
- 200ft Riverfront Area
- BVW
- BLSF Restoration Area
- BLSF Zone
- BLSF Undisturbed
- BVW 25ft buffer
- 100ft Buffer Preserved
- Brook
- Pond

Orthoview - Resource Area Preservation

21 Century Mill Road - Bolton, MA
(Map: 3D, Lot: 75)

N

 8/31/2020

 0 50 100 Feet
 1 inch = 100 feet

GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"

GODDARD CONSULTING
Strategic Wetland Permitting LLC

August 17, 2020

Bordering Land Subject to Flooding Restoration Plan

Century Mill Road (Map 3D, Parcel 75)
Bolton, MA 01740

Submitted to:

Bolton Conservation Commission
Bolton Town Hall
663 Main Street
Bolton, MA 01740

Prepared for:

21 Century Mill LLC
291 Main St. Suite 8
Northborough, MA 01532

1. Introduction

Goddard Consulting LLC is pleased to submit this Bordering Land Subject to Flooding (BLSF) Restoration Plan as part of the overall mitigation package for a proposed project located on Century Mill Road in Bolton, Massachusetts. The proposed project involves the construction of three single family homes and the widening and paving of an existing gravel driveway. The proposed work will require impact within Buffer Zone to Bordering Vegetated Wetland, BLSF, and Riverfront Area. A $\pm 3,928$ sq. ft. BLSF restoration area is proposed to mitigate these impacts.

2. Existing Conditions in BLSF Restoration Area

The proposed restoration area is an old fill pile next to a pond, that is likely the result of a dredging of the pond in the past. This area is currently dominated by black birch, paper birch wild sarsaparilla and Canada mayflower.



Photo 1: View of the proposed restoration area.

3. Restoration Area Construction:

The restoration area shall be constructed in the following steps:

1. Erosion control barriers shall be installed around the entire perimeter of the restoration area except for a construction access point on the upgradient side.
2. Small trees, shrubs and larger groundcover plants shall be dug up and stored for re-planting within the completed restoration area.

3. The entire restoration area shall be excavated down to a depth of 4-6 inches below the elevation of the surrounding BLSF (± 309.5 ft). Excavated soil must be stockpiled and/or disposed of outside of any Resource Area or Buffer Zone. Suitable topsoil may be stockpiled for re-use in the following step. The suitability of the topsoil will be determined by a qualified professional. If it is determined that the topsoil is not suitable for re-use, topsoil from other disturbance areas within the site can be used. If suitable topsoil is not available on site, topsoil shall be brought in from an offsite source. No topsoil from areas with invasive species shall be used within the restoration area.
4. 4-6 inches of suitable topsoil shall be placed on top of excavated area. The elevation of the restoration area is not to exceed 310 ft.
5. Plantings shall be installed according to the below planting list and schematic. Plants saved from before excavation shall be planted along with the proposed plantings.
6. The restoration area shall then be seeded with the seed mix stated in the below planting list.
7. Once the area is stabilized with 75% or greater vegetative coverage, the erosion controls shall be removed.

4. Plant List

The vegetation selected for the restoration area includes species that are native to the area and are also found within the surrounding areas.

Trees

- 8 Red Maple (*Acer rubrum*) (6-8' height)
- 8 Black Birch (*Betula lenta*) (6-8' height)
- 8 White Pine (*Pinus strobus*) (6-8' height)

Shrubs

- 27 Witch Hazel (*Hamamelis virginiana*) (30-36" height)
- 27 Sweetpepper Bush (*Clethra alnifolia*) (30-36" height)

Seed Mix

- 8 lb. Ernst Conservation Shade Mix

Plantings shall be placed randomly and not arranged in rows. Trees will be planted on approximately 12-foot centers. Shrubs will be planted in groups of 3, with groups being planted on approximately 8-foot centers. Any plants saved from before excavation shall be planted randomly in the remaining open areas. The entire area will be seeded with the above listed seed mix after the plantings have been installed.

Step 11: Monitoring

a. **Seasonal monitoring reports** shall be prepared for the restoration area by a qualified professional for a period of 2 years after installation. This monitoring program will consist of early summer and early fall inspections and will include photographs and details about the vitality of the restoration area. Monitoring reports shall be submitted to the Commission by October 30th of each year. Monitoring reports shall describe, using narratives, plans, and color photographs, the physical characteristics of the restoration area with respect to stability, survival of vegetation and plant mortality, aerial extent and distribution, species diversity and vertical stratification (i.e. herb, shrub and tree layers).

b. **At least 75% of the surface area** of the restoration area shall be re-established with indigenous plant species within two growing seasons. If the restoration area does not meet the 75% re-vegetation requirement by the end of the second growing season after installation, the Applicant shall submit a remediation plan to the Commission for approval that will achieve, under the supervision of a qualified professional, the restoration goals. This plan must include an analysis of why the areas have not successfully re-vegetated and how the Applicant intends to resolve the problem.

If there are any questions concerning this submission, please do not hesitate to contact us.

Sincerely,

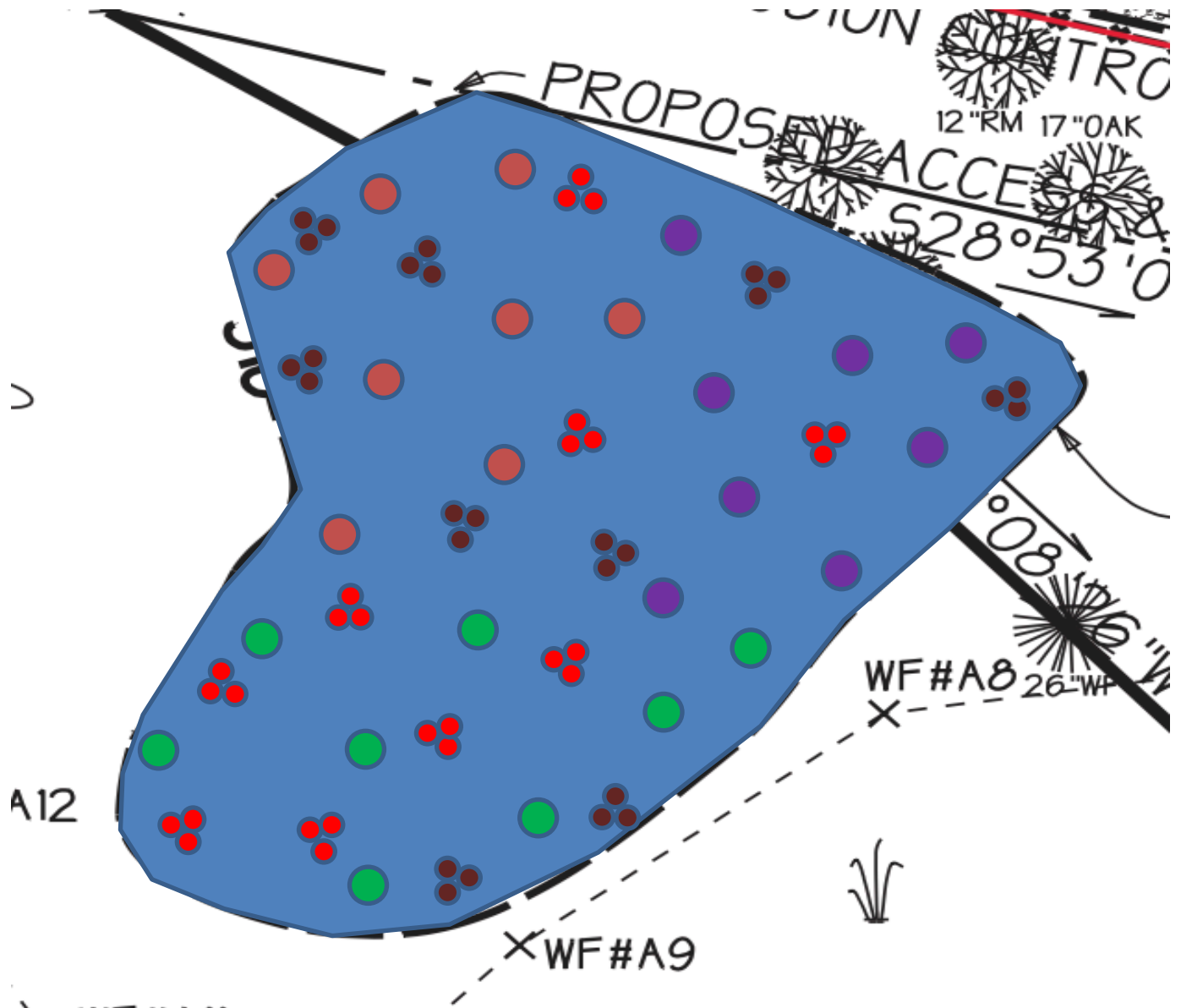
Goddard Consulting, LLC






A handwritten signature in black ink, appearing to read "Scott Goddard", written in a cursive style.

Scott Goddard, PWS
Principal

Bordering Land Subject to Flooding Restoration Planting Plan

Not to Scale



	Red Maple
	Black Birch
	White Pine
	Sweetpepper Bush
	Witch Hazel

STORMWATER REPORT AND CALCULATIONS

FOR

A Proposed Common Driveway Serving 4 Lots

21 Century Mill Road
Bolton, Massachusetts 01740

Assessors Map 3D Parcel 32

September 20, 2018

Prepared for:

21 Century Mill LLC
291 Main Street, Suite 8
Northborough, Massachusetts 01532

Prepared by:

FORESITE Engineering Associates, Inc.
16 Gleasondale Road, Suite 1-1
Stow, Massachusetts 01775

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III. Results

IV. Conclusions

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Appendix B: Stormwater Operation & Maintenance Plan

Appendix C: Pre-development Drainage Plan (Scale: 1" =40')

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I. Introduction

21 Century Mill Road is the site of an existing single-family home located on 13-acres of level to rolling wooded upland and wetlands on Century Mill Road and Hudson Road with approximately 2.5 acres of the tract currently under active residential use. The remaining 10 acres are upland and wetland woodland with the centerline of Danforth Brook and an abandoned railroad bed along the western boundary, Century Mill Road along the southern boundary, an existing business (David Monteiro Contracting at 1 Century Mill Road) and dwelling (#185 Hudson Road) and frontage on Hudson Road along the eastern boundary and a large mostly undeveloped tract owned by the Boy Scouts of America. The site is proposed to be subdivided into four (4) lots, a backland lot to contain the existing dwelling, and three (3) new dwelling lots. The existing driveway location and alignment are proposed to be utilized and improved to meet the Town of Bolton Common Driveway standards to serve the lots and to mitigate drainage impacts.

Soils within the study area of the driveway are identified by the U.S. Natural Resource Conservation Service (NRCS) as Ridgebury Fine Sandy Loam, which is characterized by nearly level to gently sloping poorly drained soils in depressions and shallow drainageways of uplands that formed in compact glacial till. Major limitations of this soil group are related to wetness, slow permeability and stoniness. On site deep observation tests were performed in October of 2017 and showed estimated seasonal high groundwater in the vicinity of the driveway to be at approximately 60" in closest proximity to the driveway (DTH 1017-1 on Lot 3).

Topography is level to very gentle in the area of the driveway. Surface drainage is ultimately tributary to Danforth Brook; however, a portion of the site drains east and thence to a culvert under Century Mill Road to a Danforth Brook tributary to the east of the driveway entrance, and a portion of the site flows west Danforth Brook directly and thence under Century Mill Road.

The drainage study area is limited to the extents of proposed common driveway construction and contains the existing gravel driveway serving the house plus the extents of proposed common driveway improvements. The change in surface cover from a compacted gravel driveway and woodland to less pervious surface covers of pavement and grass shoulders will increase the rate and volume of runoff from the site if unmitigated.

Increase in runoff is proposed to be mitigated by utilizing a Low Impact Development (LID) design Best Management Practices (BMP's) in the form of limiting site disturbance to the extent necessary for development, utilizing a porous asphalt paving for the drainage system which is comprised of a porous asphalt wearing surface over an engineered crushed stone bed reservoir beneath for attenuation and infiltration of driveway runoff. Increases in the rate and volume of runoff will be managed with the selected BMP. The hydrologic analysis was performed on the pre-development and post-development study areas for the 2-yr, 10-yr and 100-yr design storms.

II. Methodology & References

Methodology:

SCS TR-55 & SCS TR-20 utilizing HydroCAD (v 10.0) software.

References:

A Guide to Hydrologic Analysis Using SCS Methods, Richard McCuen, copyright 1982, Prentice Hall, Inc.

Natural Resources Conservation Service (NRCS), Web Soil Survey

USGS Quadrangle Map, Hudson, Massachusetts, 1987

Rawls Infiltration Rates, Rawls Brakensiek and Saxton, 1982

III. Results

The drainage study area was divided into two (2) sections (or sub catchments as they are referred to in the HydroCAD software) each of which drains to a different off-site location. Under pre-development conditions these areas are:

Subcatchment 1S draining off site west (west side driveway drainage)

Subcatchment 2S draining off site east (east side driveway drainage)

Reach 50R (combined total off-site drainage)

Under post development conditions, the entirety of the driveway area including paving and 2-ft grass shoulders drain to the proposed subsurface stone reservoir beneath the porous asphalt wearing surface. The stone bed reservoir has been designed to attenuate up to a 100-yr design storm with no off-site discharge from the study area for any of the design storms analyzed.

Comparison of the off-site rates and volumes of runoff under pre-development conditions to the off-site runoff to the same areas under post-development conditions illustrates the effectiveness of the proposed stormwater controls. The results in Table 1 show that runoff rates and volumes are effectively maintained at similar values by the proposed drainage system.

TABLE 1**Pre-development & Post-development Runoff Rates and Volumes**

<u>2-YR DESIGN STORM</u>	<u>PRE-DEVELOPMENT</u>		<u>POST-DEVELOPMENT</u>	
	Q (cfs)	V (cu-ft)	Q (cfs)	V (cu-ft)
Off-site West (1S)	0.18	560	0	0
Off-site East (2S)	0.22	695	0	0
Cumulative Off-site flow (50R)	0.40	1,255	0	0

<u>10-YR DESIGN STORM</u>	<u>PRE-DEVELOPMENT</u>		<u>POST-DEVELOPMENT</u>	
	Q (cfs)	V (cu-ft)	Q (cfs)	V (cu-ft)
Off-site West (1S)	0.27	887	0	0
Off-site East (2S)	0.38	1,192	0	0
Cumulative Off-site flow (50R)	0.65	2,078	0	0

<u>100-YR DESIGN STORM</u>	<u>PRE-DEVELOPMENT</u>		<u>POST-DEVELOPMENT</u>	
	Q (cfs)	V (cu-ft)	Q (cfs)	V (cu-ft)
Off-site West (1S)	0.43	1,431	0	0
Off-site East (2S)	0.64	2,053	0	0
Cumulative Off-site flow (50R)	1.07	3,484	0	0

IV. Conclusions

The proposed drainage system adequately controls both the rate and volume of runoff from proposed site improvements at the proposed 21 Century Mill Road common driveway. There is no increase in runoff rate or volume from the site above predevelopment rates and volumes to the same off-site areas. The storm water management controls proposed adequately detain and recharge the increase in runoff generated by development to lesser rates and volumes as under predevelopment conditions through on-site infiltration. All storm water controls have been sized to properly manage storm events up to and including the 100-year, 24-hour design storm. Runoff rates and volumes from the site are reduced or maintained following development and runoff quality is improved or maintained through implementation of proposed Low Impact Development (LID) design. The proposed drainage system has been designed in compliance with the Massachusetts Stormwater Management Policy and Standards.

APPENDIX A

DEP STORMWATER MANAGEMENT STANDARDS COMPLIANCE

Standard 1: No new untreated stormwater discharges; no erosion or scour to wetland resource areas proposed by construction activities.

Standard 2: Peak rate attention. Stormwater calculations performed for the, 2-yr, 10-yr, and 100-yr 24-hr design storms; no increase in peak rate runoff rates or volumes; no increase in off-site flooding during the 100-yr storm.

Standard 3: Recharge. Required recharge volume (HSG C) = Target Depth Factor, F x Total Post Development Impervious Area = $0.25''/12''/\text{ft} \times 6,794 \text{ s.f.} = \mathbf{142 \text{ cubic feet}}$. Storage volume of crushed stone reservoir = 2,853 cubic feet; standard met.

Standard 4: Water Quality. Required water quality volume is 1'' (critical areas – cold water fishery) of runoff over tributary area:

To Driveway Reservoir: $8,660 \text{ s.f.} \times 1.0''/12''/\text{ft} = 722 \text{ cubic feet}$

Storage capacity of stone reservoir underlying porous asphalt = 2,853 cubic feet >> than 722 cubic feet min. req'd.

80% or greater TSS removal provided by porous asphalt BMP.

Standard 5: Land Uses With Higher Potential Pollutant Loads. (Not Applicable)

Standard 6: Critical Areas. Standard met. 1'' of runoff utilized for required recharge in Standard 3. 80% TSS Removal provided in selected BMP. Porous asphalt is a recommended BMP in critical areas.

Standard 7: Redevelopment and Other Projects Subject to the Standards to the maximum extent practicable. Not applicable, project complies with the Standards.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control. Provided on project plans.

Standard 9: Stormwater Operation & Maintenance Plan. Provided; included in this report.

Standard 10: Prohibition of Illicit Discharges:

Illicit Discharge Compliance Statement

(1) Prohibition of Illicit Discharges.

(a) Prohibition. No person shall throw, drain, discharge, cause to be discharged, or allow others under their control to discharge into the storm sewer system or watercourse any materials other than stormwater, including but not limited to pollutants or waters containing pollutants.

(b) Exemptions. The following non-stormwater discharges are excluded from (a) above:

(1) waterline flushing or other potable water sources;

(2) landscape irrigation or lawn watering;

(3) diverted, natural riparian habitat and/or wetland flows;

(4) rising ground water, ground water infiltration to storm drains, and/or uncontaminated pumped groundwater;

(5) foundation or footing drains (not including active ground water dewatering systems) and crawl space pumps;

(6) air conditioning condensation;

(7) springs;

(8) other water sources determined by the Massachusetts Department of Environmental Protection, in writing, as not containing pollutants that cause or contribute to waterway degradation, including but not limited to a violation of applicable water quality standards and/or degradation of the biotic integrity of surface water bodies and their floodplains.

POROUS PAVEMENT OPERATION AND MAINTENANCE PROTOCOL

General Maintenance

The primary goal of porous pavement maintenance is to prevent the pavement surface and/or the underlying infiltration bed from being clogged with fine sediments. To keep the system clean throughout the year and prolong its lifespan, the pavement surface should be vacuumed biannually with a commercial cleaning unit. All inlet structures within or draining to the infiltration beds should also be cleaned out on a biannual basis.



Figure 1: Routine and adequate maintenance has allowed the porous asphalt parking lot at the Morris Arboretum to still be effective 20 years after installation.

Planted areas adjacent to porous pavement should be well maintained to prevent soil washout onto the pavement. If any washout does occur it should be cleaned off the pavement immediately to prevent further clogging of the pores. Furthermore, if any bare spots or eroded areas are observed within the planted areas, they should be replanted and/or stabilized at once. Planted areas should be inspected on a semi-annual basis. All trash and other litter that is observed during these inspections should be removed.

Superficial dirt does not necessarily clog the pavement voids. However, dirt that is ground in repeatedly by tires can lead to clogging. Therefore, trucks or other heavy vehicles should be prevented from tracking or spilling dirt onto the pavement. Furthermore, all construction or hazardous materials carriers should be prohibited from entering a porous pavement lot.

Descriptive signage is recommended to maintain institutional memory of porous pavement



Figure 2: Example of soil wash-on/dumping from unstabilized landscaping.

Vacuuming

FORESITE recommends vacuuming porous asphalt and concrete pavement with a vacuum sweeper on a biannual basis. Acceptable types of vacuum sweepers include the Elgin Whirlwind and the Allianz Model 650. Though much less effective than “pure” vacuum sweepers, regenerative air sweepers, such as the Tymco Model 210, Schwarze 348, Victory, and others, are sometimes used. These units contain a blower system that generates a high velocity air column, which forces the air against the pavement at an angle, creating a ‘peeling’ or ‘knifing’ effect. The high volume air blast loosens the debris from the pavement surface, then transports it across the width of the sweeping head and lifts it into the containment hopper via a suction tube. Thus, sediment and debris are loosened from the pavement and sucked into the unit. (Note: simple broom sweepers are not recommended for porous pavement maintenance.)

If the pavement surface has become significantly clogged such that routine vacuum sweeping does not restore permeability, then a more intensive level of treatment may be required. Recent studies have revealed the usefulness of washing porous pavements with clean, low pressure water, followed by immediate vacuuming. Combinations of washing and vacuuming techniques have proved effective in cleaning both organic clogging as well as sandy clogging. Research in Florida found that a “power head cone nozzle” that “concentrated the water in a narrowly rotating cone” worked best. (Note: if the pressure of

the washing nozzle is too great, contaminants may be driven further into the porous surface.) Maintenance crews are encouraged to determine the most effective strategy of cleaning their porous installations.



Figure 3: Photo of Elgin Whirlwind Vacuum Air Sweeper, example of effective vacuuming device

For smaller installations, such as sidewalks, plazas, or small parking lots, “walk behind” vacuum units may prove most effective. Though these units can be loud and somewhat messy to the operator due to the lack of dust suppression, they are also relatively easy to operate and inexpensive. Examples of acceptable “walk behind” units include the Billy Goat models, the 5700 industrial-strength Scrubber by Tennant, and the sidewalk class vacuum sweepers made by Nilfisk, Advance and Hako. If “walk behind” units are used, it is recommended that the scrub pressure be kept relatively low. The dirtiest areas may need to be power washed after scrubbing to get out the dirt that has been deeply ground in.

Winter Maintenance

Winter maintenance for a porous parking lot may be necessary, but is usually less intensive than that required for a standard asphalt lot. By its very nature, a porous pavement system with subsurface aggregate bed has superior snow melting characteristics than does standard pavement. Therefore, ice and light snow accumulation are generally not as problematic. However, snow will accumulate during heavier storms. Abrasives such as sand or cinders should not be applied on or adjacent to the porous pavement. Snow plowing is necessary for significant snow accumulation, but should be done carefully (i.e. by setting the blade slightly higher than usual, about an inch). Standard road salt is acceptable for use as a deicer on porous pavement, although a non-toxic, organic deicer, applied either as a blended, magnesium chloride-based liquid product or as pretreated rock salt, is

recommended. Acceptable liquid deicers include Magic-O, Ice B' Gone, Ice Ban, and Geomelt, among others. Magic Salt is an example of an acceptable pretreated salt product. Other acceptable deicer alternatives to standard sodium chloride include calcium chloride, magnesium chloride, potassium chloride, urea, and calcium magnesium acetate. Follow supplier recommendations when applying deicers to pavement.



Figures 4 and 5: Neither the porous asphalt parking lot at the University of Rhode Island nor the one at the Ford Rouge Plant in Dearborn, Michigan have experienced significant snow accumulations on the pavement after multiple harsh winters.

Repairs

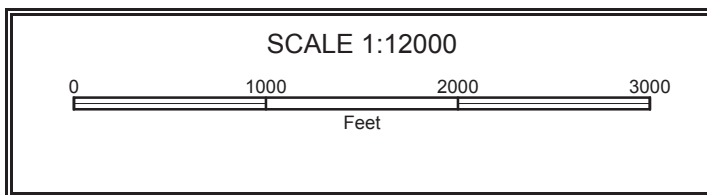
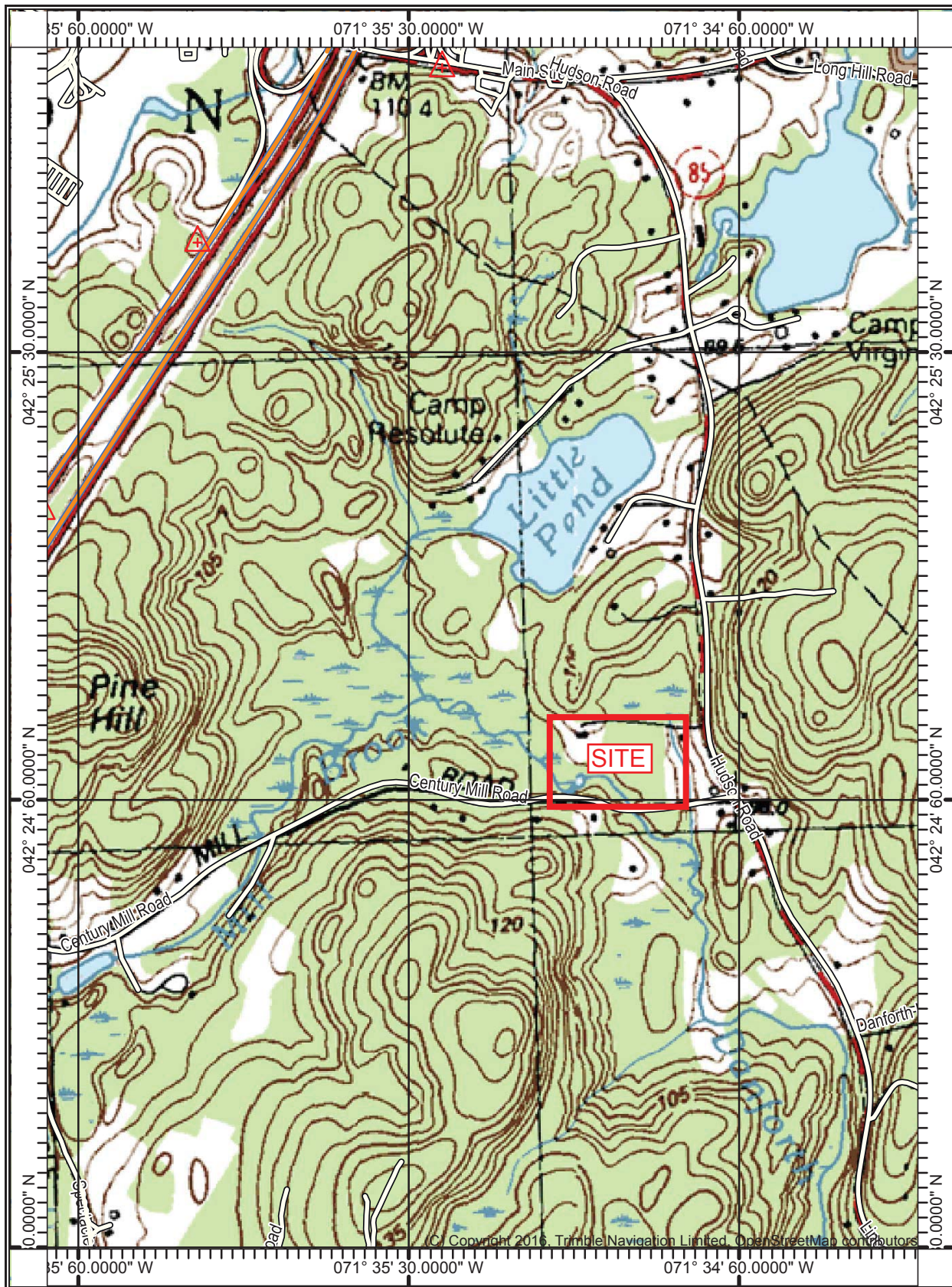
Potholes in the porous pavement are extremely unlikely, though settling might occur if a soft spot in the subgrade is not removed during construction. For damaged areas of less than 50 square feet, a declivity could be patched by any means suitable with standard pavement, with the loss of porosity of that area being insignificant. The declivity can also be filled with porous mix. If an area greater than 50 SF is in need of repair, approval of patch type must be sought from either the engineer or owner. Under no circumstance is the pavement surface to ever be seal coated. Any required repair of drainage structures should be done promptly to ensure continued proper functioning of the system.

With minimal maintenance, porous bituminous asphalt can function effectively for well over 20 years. However, in the event that maintenance of the porous pavement is neglected and it becomes clogged over time, the Owner shall vacuum the lot until the original permeability is restored. (If the original permeability of the lot cannot be restored, the pavement should be removed and replaced with a new porous mix.) Recent research has shown that one of the most effective ways of restoring porous pavement is applying a pressurized dose of a non-toxic detergent cleaning solution, allowing adequate soak time, and then vacuuming with a high performance unit (Elgin Whirlwind and the Allianz Model 650). Once again, it is important to note that high pressure washing may drive contaminants further into the porous surface and even into the underlying aggregate. It is therefore recommended that, prior to vacuum sweeping, a low performance pressure washer is used to get the solution to break the surface tension and reach into the pores.



Figure 6: Standard bituminous patch in porous asphalt parking lot. This lot was constructed with an unmodified porous mix (i.e. no polymer modification) and had rutted in the center of the aisle due to construction traffic.

- **Summary**
 - **Prevent Clogging of Pavement Surface with Sediment**
 - Vacuum pavement twice per year
 - Maintain planted areas adjacent to pavement
 - Immediately clean any soil deposited on pavement
 - Do not allow construction staging, soil/mulch storage, etc. on unprotected pavement surface
 - Clean inlets draining to the subsurface bed twice per year
 - **Snow/Ice Removal**
 - Porous pavement systems generally perform better and require less treatment than standard pavements
 - **Do not apply abrasives such as sand or cinders on or adjacent to porous pavement**
 - Snow plowing is fine but should be done carefully (i.e. set the blade slightly higher than usual)
 - Salt application is acceptable, although more environmentally-benign deicers are preferable
 - **Repairs**
 - **Surface should never be seal-coated**
 - Inspect for pavement rutting/raveling on an annual basis (some minor ruts may occur in the porous pavement from stationary wheel rotation)
 - Damaged areas less than 50 square feet can be patched with porous or standard asphalt
 - Larger areas should be patched with an approved porous asphalt



Map Unit Legend

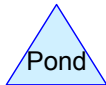
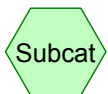
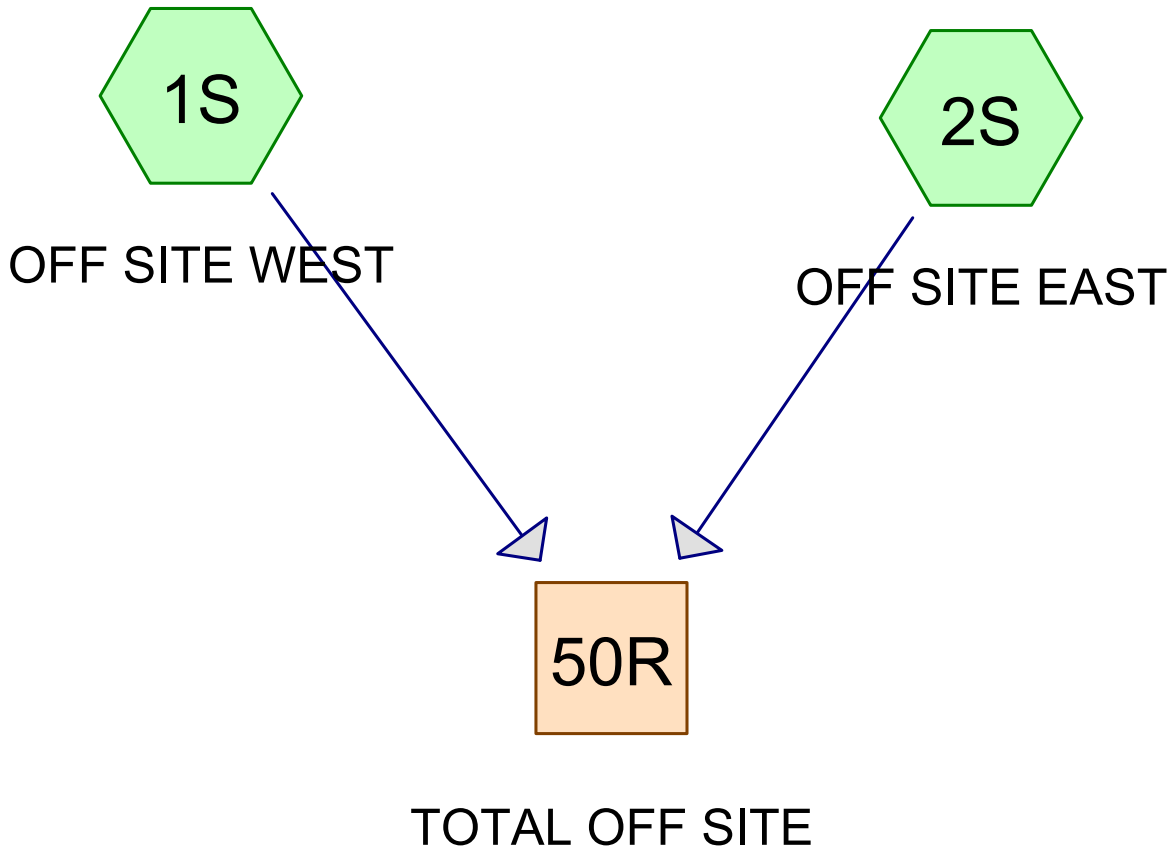
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Water	4.4	2.7%
6A	Scarboro mucky fine sandy loam, 0 to 3 percent slopes	5.5	3.3%
51A	Swansea muck, 0 to 1 percent slopes	2.8	1.7%
52A	Freetown muck, 0 to 1 percent slopes	30.7	18.7%
71A	Ridgebury fine sandy loam, 0 to 3 percent slopes, extremely stony	4.9	3.0%
102C	Chatfield-Hollis-Rock outcrop complex, 0 to 15 percent slopes	33.1	20.1%
102D	Chatfield-Hollis-Rock outcrop complex, 15 to 35 percent slopes	19.5	11.9%
245B	Hinckley loamy sand, 3 to 8 percent slopes	30.4	18.5%
245C	Hinckley loamy sand, 8 to 15 percent slopes	3.4	2.1%
245E	Hinckley loamy sand, 25 to 35 percent slopes	1.6	1.0%
254B	Merrimac fine sandy loam, 3 to 8 percent slopes	21.9	13.3%
310B	Woodbridge fine sandy loam, 3 to 8 percent slopes	1.8	1.1%
422C	Canton fine sandy loam, 8 to 15 percent slopes, extremely stony	4.1	2.5%
Totals for Area of Interest		164.0	100.0%

Table D.13.1 Hydrologic Soil Properties Classified by Soil Texture*

Texture Class	Effective Water Capacity (C_w) (inch per inch)	Minimum Infiltration Rate (f) (inches per hour)	Hydrologic Soil Grouping
Sand	0.35	8.27	A
Loamy Sand	0.31	2.41	A
Sandy Loam	0.25	1.02	A
Loam	0.19	0.52	B
Silt Loam	0.17	0.27	B
Sandy Clay Loam	0.14	0.17	C
Clay Loam	0.14	0.09	D
Silty Clay Loam	0.11	0.06	D
Sandy Clay	0.09	0.05	D
Silty Clay	0.09	0.04	D
Clay	0.08	0.02	D

* Source: Rawls, Brakensiek and Saxton, 1982

Based on the soil textural classes and the corresponding minimum infiltration rates, a restriction is established to eliminate unsuitable soil conditions. Soil textures with minimum infiltration rates less than 0.52 inches per hour are not suitable for usage of infiltration practices. These include soils that have a 30 percent clay content, making these soils susceptible to frost heaving and structurally unstable, in addition to having a poor capacity to percolate runoff. Soil textures that are recommended for infiltration systems include those soils with infiltration rates of 0.52 inches per hour or greater, which include loam, sandy loam, loamy sand, and sand.



Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
4,432	96	Gravel surface, HSG C (1S, 2S)
4,228	73	Woods, Fair, HSG C (1S, 2S)
8,660	85	TOTAL AREA

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
8,660	HSG C	1S, 2S
0	HSG D	
0	Other	
8,660		TOTAL AREA

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Subcatchment Numbers
0	0	4,432	0	0	4,432	Gravel surface	1 S, 2 S
0	0	4,228	0	0	4,228	Woods, Fair	1 S, 2 S
0	0	8,660	0	0	8,660	TOTAL AREA	

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: OFF SITE WEST Runoff Area=3,231 sf 0.00% Impervious Runoff Depth>2.08"
Flow Length=30' Slope=0.0200 '/' Tc=6.0 min CN=89 Runoff=0.18 cfs 560 cf

Subcatchment 2S: OFF SITE EAST Runoff Area=5,429 sf 0.00% Impervious Runoff Depth>1.54"
Flow Length=50' Slope=0.0200 '/' Tc=6.0 min CN=82 Runoff=0.22 cfs 695 cf

Reach 50R: TOTAL OFF SITE Inflow=0.40 cfs 1,255 cf
Outflow=0.40 cfs 1,255 cf

Total Runoff Area = 8,660 sf Runoff Volume = 1,255 cf Average Runoff Depth = 1.74"
100.00% Pervious = 8,660 sf 0.00% Impervious = 0 sf

Summary for Subcatchment 1S: OFF SITE WEST

Runoff = 0.18 cfs @ 12.09 hrs, Volume= 560 cf, Depth> 2.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YR Rainfall=3.20"

Area (sf)	CN	Description
2,216	96	Gravel surface, HSG C
1,015	73	Woods, Fair, HSG C
3,231	89	Weighted Average
3,231		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	10	0.0200	0.87		Sheet Flow, TR-55 Sheet Flow Smooth surfaces n= 0.011 P2= 3.20"
0.5	20	0.0200	0.71		Shallow Concentrated Flow, Overland flow Woodland Kv= 5.0 fps
0.7	30	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 2S: OFF SITE EAST

Runoff = 0.22 cfs @ 12.09 hrs, Volume= 695 cf, Depth> 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YR Rainfall=3.20"

Area (sf)	CN	Description
2,216	96	Gravel surface, HSG C
3,213	73	Woods, Fair, HSG C
5,429	82	Weighted Average
5,429		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	10	0.0200	0.87		Sheet Flow, SHEET FLOW Smooth surfaces n= 0.011 P2= 3.20"
0.9	40	0.0200	0.71		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
1.1	50	Total, Increased to minimum Tc = 6.0 min			

Summary for Reach 50R: TOTAL OFF SITE

Inflow Area = 8,660 sf, 0.00% Impervious, Inflow Depth > 1.74" for 2-YR event
 Inflow = 0.40 cfs @ 12.09 hrs, Volume= 1,255 cf
 Outflow = 0.40 cfs @ 12.09 hrs, Volume= 1,255 cf, Atten= 0%, Lag= 0.0 min

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Type III 24-hr 2-YR Rainfall=3.20"

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Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: OFF SITE WEST Runoff Area=3,231 sf 0.00% Impervious Runoff Depth>3.29"
Flow Length=30' Slope=0.0200 '/' Tc=6.0 min CN=89 Runoff=0.27 cfs 887 cf

Subcatchment 2S: OFF SITE EAST Runoff Area=5,429 sf 0.00% Impervious Runoff Depth>2.63"
Flow Length=50' Slope=0.0200 '/' Tc=6.0 min CN=82 Runoff=0.38 cfs 1,192 cf

Reach 50R: TOTAL OFF SITE Inflow=0.65 cfs 2,078 cf
Outflow=0.65 cfs 2,078 cf

Total Runoff Area = 8,660 sf Runoff Volume = 2,078 cf Average Runoff Depth = 2.88"
100.00% Pervious = 8,660 sf 0.00% Impervious = 0 sf

Summary for Subcatchment 1S: OFF SITE WEST

Runoff = 0.27 cfs @ 12.09 hrs, Volume= 887 cf, Depth> 3.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.50"

Area (sf)	CN	Description
2,216	96	Gravel surface, HSG C
1,015	73	Woods, Fair, HSG C
3,231	89	Weighted Average
3,231		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	10	0.0200	0.87		Sheet Flow, TR-55 Sheet Flow Smooth surfaces n= 0.011 P2= 3.20"
0.5	20	0.0200	0.71		Shallow Concentrated Flow, Overland flow Woodland Kv= 5.0 fps
0.7	30	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 2S: OFF SITE EAST

Runoff = 0.38 cfs @ 12.09 hrs, Volume= 1,192 cf, Depth> 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.50"

Area (sf)	CN	Description
2,216	96	Gravel surface, HSG C
3,213	73	Woods, Fair, HSG C
5,429	82	Weighted Average
5,429		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	10	0.0200	0.87		Sheet Flow, SHEET FLOW Smooth surfaces n= 0.011 P2= 3.20"
0.9	40	0.0200	0.71		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
1.1	50	Total, Increased to minimum Tc = 6.0 min			

Summary for Reach 50R: TOTAL OFF SITE

Inflow Area = 8,660 sf, 0.00% Impervious, Inflow Depth > 2.88" for 10-YR event
Inflow = 0.65 cfs @ 12.09 hrs, Volume= 2,078 cf
Outflow = 0.65 cfs @ 12.09 hrs, Volume= 2,078 cf, Atten= 0%, Lag= 0.0 min

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Type III 24-hr 10-YR Rainfall=4.50"

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Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: OFF SITE WEST Runoff Area=3,231 sf 0.00% Impervious Runoff Depth>5.31"
Flow Length=30' Slope=0.0200 '/' Tc=6.0 min CN=89 Runoff=0.43 cfs 1,431 cf

Subcatchment 2S: OFF SITE EAST Runoff Area=5,429 sf 0.00% Impervious Runoff Depth>4.54"
Flow Length=50' Slope=0.0200 '/' Tc=6.0 min CN=82 Runoff=0.64 cfs 2,053 cf

Reach 50R: TOTAL OFF SITE Inflow=1.07 cfs 3,484 cf
Outflow=1.07 cfs 3,484 cf

Total Runoff Area = 8,660 sf Runoff Volume = 3,484 cf Average Runoff Depth = 4.83"
100.00% Pervious = 8,660 sf 0.00% Impervious = 0 sf

Summary for Subcatchment 1S: OFF SITE WEST

Runoff = 0.43 cfs @ 12.09 hrs, Volume= 1,431 cf, Depth> 5.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR Rainfall=6.60"

Area (sf)	CN	Description
2,216	96	Gravel surface, HSG C
1,015	73	Woods, Fair, HSG C
3,231	89	Weighted Average
3,231		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	10	0.0200	0.87		Sheet Flow, TR-55 Sheet Flow Smooth surfaces n= 0.011 P2= 3.20"
0.5	20	0.0200	0.71		Shallow Concentrated Flow, Overland flow Woodland Kv= 5.0 fps
0.7	30	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 2S: OFF SITE EAST

Runoff = 0.64 cfs @ 12.09 hrs, Volume= 2,053 cf, Depth> 4.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR Rainfall=6.60"

Area (sf)	CN	Description
2,216	96	Gravel surface, HSG C
3,213	73	Woods, Fair, HSG C
5,429	82	Weighted Average
5,429		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	10	0.0200	0.87		Sheet Flow, SHEET FLOW Smooth surfaces n= 0.011 P2= 3.20"
0.9	40	0.0200	0.71		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
1.1	50	Total, Increased to minimum Tc = 6.0 min			

Summary for Reach 50R: TOTAL OFF SITE

Inflow Area = 8,660 sf, 0.00% Impervious, Inflow Depth > 4.83" for 100-YR event
Inflow = 1.07 cfs @ 12.09 hrs, Volume= 3,484 cf
Outflow = 1.07 cfs @ 12.09 hrs, Volume= 3,484 cf, Atten= 0%, Lag= 0.0 min

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Type III 24-hr 100-YR Rainfall=6.60"

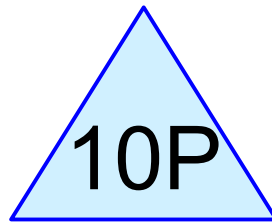
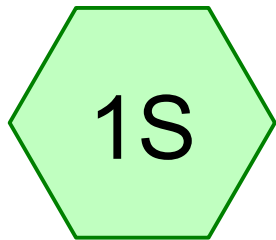
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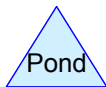
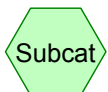
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Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs



DRIVEWAY

POROUS ASPHALT



Routing Diagram for 1975_POST

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Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
1,866	74	>75% Grass cover, Good, HSG C (1S)
6,794	98	Paved parking, HSG C (1S)
8,660	93	TOTAL AREA

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Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
8,660	HSG C	1S
0	HSG D	
0	Other	
8,660		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover
0	0	1,866	0	0	1,866	>75% Grass cover, Good
0	0	6,794	0	0	6,794	Paved parking
0	0	8,660	0	0	8,660	TOTAL AREA

Sub
Num

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Type III 24-hr 2-YR Rainfall=3.20"

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Time span=5.00-20.00 hrs, dt=0.01 hrs, 1501 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: DRIVEWAY

Runoff Area=8,660 sf 78.45% Impervious Runoff Depth>2.31"
Tc=0.1 min CN=93 Runoff=0.67 cfs 1,669 cf

Pond 10P: POROUS ASPHALT

Peak Elev=308.91' Storage=882 cf Inflow=0.67 cfs 1,669 cf
Outflow=0.03 cfs 1,046 cf

Total Runoff Area = 8,660 sf Runoff Volume = 1,669 cf Average Runoff Depth = 2.31"
21.55% Pervious = 1,866 sf 78.45% Impervious = 6,794 sf

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Type III 24-hr 2-YR Rainfall=3.20"

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Summary for Subcatchment 1S: DRIVEWAY

Runoff = 0.67 cfs @ 12.00 hrs, Volume= 1,669 cf, Depth> 2.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.20"

Area (sf)	CN	Description
6,794	98	Paved parking, HSG C
1,866	74	>75% Grass cover, Good, HSG C
8,660	93	Weighted Average
1,866		21.55% Pervious Area
6,794		78.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1					Direct Entry, Porous asphalt

Summary for Pond 10P: POROUS ASPHALT

Inflow Area = 8,660 sf, 78.45% Impervious, Inflow Depth > 2.31" for 2-YR event
 Inflow = 0.67 cfs @ 12.00 hrs, Volume= 1,669 cf
 Outflow = 0.03 cfs @ 10.90 hrs, Volume= 1,046 cf, Atten= 96%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 10.90 hrs, Volume= 1,046 cf

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.01 hrs
 Peak Elev= 308.91' @ 14.43 hrs Surf.Area= 6,794 sf Storage= 882 cf

Plug-Flow detention time= 184.2 min calculated for 1,045 cf (63% of inflow)
 Center-of-Mass det. time= 110.5 min (868.1 - 757.5)

Volume	Invert	Avail.Storage	Storage Description
#1	308.54'	3,472 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 9,919 cf Overall x 35.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
308.54	6,794	0	0
309.00	6,794	3,125	3,125
309.50	6,794	3,397	6,522
310.00	6,794	3,397	9,919

Device	Routing	Invert	Outlet Devices
#1	Discarded	308.54'	0.170 in/hr Exfiltration over Horizontal area

Discarded OutFlow Max=0.03 cfs @ 10.90 hrs HW=308.55' (Free Discharge)
 ↑**1=Exfiltration** (Exfiltration Controls 0.03 cfs)

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Type III 24-hr 10-YR Rainfall=4.50"

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Time span=5.00-20.00 hrs, dt=0.01 hrs, 1501 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: DRIVEWAY

Runoff Area=8,660 sf 78.45% Impervious Runoff Depth>3.51"
Tc=0.1 min CN=93 Runoff=1.00 cfs 2,530 cf

Pond 10P: POROUS ASPHALT

Peak Elev=309.19' Storage=1,534 cf Inflow=1.00 cfs 2,530 cf
Outflow=0.03 cfs 1,160 cf

Total Runoff Area = 8,660 sf Runoff Volume = 2,530 cf Average Runoff Depth = 3.51"
21.55% Pervious = 1,866 sf 78.45% Impervious = 6,794 sf

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Type III 24-hr 10-YR Rainfall=4.50"

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Summary for Subcatchment 1S: DRIVEWAY

Runoff = 1.00 cfs @ 12.00 hrs, Volume= 2,530 cf, Depth> 3.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.50"

Area (sf)	CN	Description
6,794	98	Paved parking, HSG C
1,866	74	>75% Grass cover, Good, HSG C
8,660	93	Weighted Average
1,866		21.55% Pervious Area
6,794		78.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1					Direct Entry, Porous asphalt

Summary for Pond 10P: POROUS ASPHALT

Inflow Area = 8,660 sf, 78.45% Impervious, Inflow Depth > 3.51" for 10-YR event

Inflow = 1.00 cfs @ 12.00 hrs, Volume= 2,530 cf

Outflow = 0.03 cfs @ 9.85 hrs, Volume= 1,160 cf, Atten= 97%, Lag= 0.0 min

Discarded = 0.03 cfs @ 9.85 hrs, Volume= 1,160 cf

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.01 hrs
Peak Elev= 309.19' @ 15.61 hrs Surf.Area= 6,794 sf Storage= 1,534 cfPlug-Flow detention time= 178.4 min calculated for 1,159 cf (46% of inflow)
Center-of-Mass det. time= 84.6 min (833.6 - 749.0)

Volume	Invert	Avail.Storage	Storage Description
#1	308.54'	3,472 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 9,919 cf Overall x 35.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
308.54	6,794	0	0
309.00	6,794	3,125	3,125
309.50	6,794	3,397	6,522
310.00	6,794	3,397	9,919

Device	Routing	Invert	Outlet Devices
#1	Discarded	308.54'	0.170 in/hr Exfiltration over Horizontal area

Discarded OutFlow Max=0.03 cfs @ 9.85 hrs HW=308.55' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.03 cfs)

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Type III 24-hr 100-YR Rainfall=6.60"

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Time span=5.00-20.00 hrs, dt=0.01 hrs, 1501 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: DRIVEWAY

Runoff Area=8,660 sf 78.45% Impervious Runoff Depth>5.44"
Tc=0.1 min CN=93 Runoff=1.51 cfs 3,929 cf

Pond 10P: POROUS ASPHALT

Peak Elev=309.68' Storage=2,716 cf Inflow=1.51 cfs 3,929 cf
Outflow=0.03 cfs 1,278 cf

Total Runoff Area = 8,660 sf Runoff Volume = 3,929 cf Average Runoff Depth = 5.44"
21.55% Pervious = 1,866 sf 78.45% Impervious = 6,794 sf

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Type III 24-hr 100-YR Rainfall=6.60"

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Summary for Subcatchment 1S: DRIVEWAY

Runoff = 1.51 cfs @ 12.00 hrs, Volume= 3,929 cf, Depth> 5.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-YR Rainfall=6.60"

Area (sf)	CN	Description
6,794	98	Paved parking, HSG C
1,866	74	>75% Grass cover, Good, HSG C
8,660	93	Weighted Average
1,866		21.55% Pervious Area
6,794		78.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1					Direct Entry, Porous asphalt

Summary for Pond 10P: POROUS ASPHALT

Inflow Area = 8,660 sf, 78.45% Impervious, Inflow Depth > 5.44" for 100-YR event
 Inflow = 1.51 cfs @ 12.00 hrs, Volume= 3,929 cf
 Outflow = 0.03 cfs @ 8.54 hrs, Volume= 1,278 cf, Atten= 98%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 8.54 hrs, Volume= 1,278 cf

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.01 hrs
 Peak Elev= 309.68' @ 17.11 hrs Surf.Area= 6,794 sf Storage= 2,716 cf

Plug-Flow detention time= 183.9 min calculated for 1,277 cf (33% of inflow)
 Center-of-Mass det. time= 57.2 min (798.8 - 741.6)

Volume	Invert	Avail.Storage	Storage Description
#1	308.54'	3,472 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 9,919 cf Overall x 35.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
308.54	6,794	0	0
309.00	6,794	3,125	3,125
309.50	6,794	3,397	6,522
310.00	6,794	3,397	9,919

Device	Routing	Invert	Outlet Devices
#1	Discarded	308.54'	0.170 in/hr Exfiltration over Horizontal area

Discarded OutFlow Max=0.03 cfs @ 8.54 hrs HW=308.55' (Free Discharge)
 ↑**1=Exfiltration** (Exfiltration Controls 0.03 cfs)



Massachusetts Department of Environmental Protection

eDEP Transaction Copy

Here is the file you requested for your records.

To retain a copy of this file you must save and/or print.

Username: **CCATOBOLTON**

Transaction ID: **1044981**

Document: **WPA Form 5 - OOC**

Size of File: **132.66K**

Status of Transaction: **In Process**

Date and Time Created: **10/1/2019:3:16:01 PM**

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Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

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

Provided by MassDEP:
MassDEP File #:112-0666
eDEP Transaction #:1044981
City/Town:BOLTON

A. General Information

1. Conservation Commission BOLTON

2. Issuance a. OOC b. Amended OOC

3. Applicant Details

a. First Name	SCOTT	b. Last Name	GODDARD		
c. Organization	21 CENTURY MILL LLC				
d. Mailing Address	291 MAIN STREET, SUITE 8				
e. City/Town	NORTHBOROUGH	f. State	MA	g. Zip Code	01532

4. Property Owner

a. First Name	SCOTT	b. Last Name	GODDARD		
c. Organization	21 CENTURY MILL LLC				
d. Mailing Address	291 MAIN STREET, SUITE 8				
e. City/Town	NORTHBOROUGH	f. State	MA	g. Zip Code	01532

5. Project Location

a. Street Address	21 CENTURY MILL ROAD		
b. City/Town	BOLTON	c. Zip Code	01740
d. Assessors	3D	e. Parcel/Lot#	32
Map/Plat#			
f. Latitude	42.41753N	g. Longitude	71.58587W

6. Property recorded at the Registry of Deed for:

a. County	b. Certificate	c. Book	d. Page
WORCESTER		16823	400

7. Dates

a. Date NOI Filed : 7/27/2018 b. Date Public Hearing Closed: 9/17/2019 c. Date Of Issuance: 10/1/2019

8. Final Approved Plans and Other Documents

a. Plan Title:	b. Plan Prepared by:	c. Plan Signed/Stamped by:	d. Revised Final Date:	e. Scale:
COMMON DRIVEWAY PLAN & PROFILE	FORESITE ENGINEERING	SCOTT P. HAYES	July 30th 2019	1" = 40'

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act
Following the review of the the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act.

Check all that apply:

a. <input checked="" type="checkbox"/> Public Water Supply	b. <input type="checkbox"/> Land Containing Shellfish	c. <input checked="" type="checkbox"/> Prevention of Pollution
d. <input checked="" type="checkbox"/> Private Water Supply	e. <input checked="" type="checkbox"/> Fisheries	f. <input checked="" type="checkbox"/> Protection of Wildlife Habitat
g. <input checked="" type="checkbox"/> Ground Water Supply	h. <input checked="" type="checkbox"/> Storm Damage Prevention	i. <input checked="" type="checkbox"/> Flood Control

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2. Commission hereby finds the project, as proposed, is:

Approved subject to:

a. The following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.

Denied because:

b. The proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**

c. The information submitted by the applicant is not sufficient to describe the site, the work or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**

3. Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310CMR10.02(1)(a).

_____ a. linear feet

Inland Resource Area Impacts:(For Approvals Only):				
Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	_____ a. linear feet	_____ b. linear feet	_____ c. linear feet	_____ d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
6. <input type="checkbox"/> Land under Waterbodies and Waterways	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
	_____ e. c/y dredged	_____ f. c/y dredged		
7. <input checked="" type="checkbox"/> Bordering Land Subject to Flooding	0	0		
	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
Cubic Feet Flood Storage	_____ e. cubic feet	_____ f. cubic feet	_____ g. cubic feet	_____ h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	_____ a. square feet	_____ b. square feet		
	_____ c. cubic feet	_____ d. cubic feet	_____ e. cubic feet	_____ f. cubic feet

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9. <input checked="" type="checkbox"/> Riverfront Area	809	475		
	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft				
	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft				
	g. square feet	h. square feet	i. square feet	j. square feet

Coastal Resource Area Impacts:

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	a. square feet	b. square feet	c. c/y nourishment	d. c/y nourishment
14. <input type="checkbox"/> Coastal Dunes	a. square feet	b. square feet	c. c/y nourishment	d. c/y nourishment
15. <input type="checkbox"/> Coastal Banks	a. linear feet	b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	a. square feet	b. square feet		
17. <input type="checkbox"/> Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	a. square feet	b. square feet	c. square feet	d. square feet
20. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	c. c/y dredged	d. c/y dredged		
21. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	a. square feet	b. square feet		

22.

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Restoration/Enhancement (For Approvals Only)

If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c & d or B.17.c & d above, please entered the additional amount here.

_____ a. square feet of BVW

_____ b. square feet of Salt Marsh

23.

Streams Crossing(s)

If the project involves Stream Crossings, please enter the number of new stream crossings/number of replacement stream crossings.

_____ a. number of new stream crossings

_____ b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. the work is a maintenance dredging project as provided for in the Act; or
 - b. the time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order.
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not exceed the issuance date of the original Final Order of Conditions.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.
8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work..
10. A sign shall be displayed at the site not less then two square feet or more than three square feet in size bearing the words,

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" Massachusetts Department of Environmental Protection"

[or 'MassDEP']

File Number : "112-0666"

11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before Mass DEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.
17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.

NOTICE OF STORMWATER CONTROL AND MAINTENANCE REQUIREMENTS

19. The work associated with this Order(the "Project") is (1) is not (2) subject to the Massachusetts Stormwater Standards. If the work is subject to Stormwater Standards, then the project is subject to the following conditions;
 - a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollutant Discharge Elimination System Construction General Permit as required by Stormwater Standard 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
 - b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that: *i.* all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures; *ii.* as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is

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- fully stabilized; *iii.* any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10; *iv.* all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition; *v.* any vegetation associated with post-construction BMPs is suitably established to withstand erosion.
- c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 19(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following: *i.*) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and *ii.*) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.
- d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollutant Discharge Elimination System Multi-Sector General Permit.
- e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 19(f) through 19(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 19(f) through 19(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.
- f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.
- g) The responsible party shall:
1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.

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- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions:

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? Yes No

2. The Conservation Commission hereby (check one that applies):

a. DENIES the proposed work which cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw specifically:

1. Municipal Ordinance or Bylaw TOWN OF BOLTON WETLAND BYLAW

2. Citation CHAPTER 233

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order or Conditions is issued. Which are necessary to comply with a municipal ordinance or bylaw:

b. APPROVES the proposed work, subject to the following additional conditions.

1. Municipal Ordinance or _____
Bylaw

2. Citation _____

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows:
SEE ATTACHMENT REGARDING 112-0666 DENIAL ORDER OF CONDITIONS.

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E. Signatures

This Order is valid for three years from the date of issuance, unless otherwise specified pursuant to General Condition #4. If this is an Amended Order of Conditions, the Amended Order expires on the same date as the original Order of Conditions. 10/1/2019
1. Date of Original Order

Please indicate the number of members who will sign this form. This Order must be signed by a majority of the Conservation Commission. 4
2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

Kim Maman
Jeffrey Boyer

Van Dyne
D. D. De

by hand delivery on

by certified mail, return receipt requested, on

Date

Date October 3rd 2019

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

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G. Recording Information

This Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

BOLTON
Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

BOLTON
Conservation Commission

Please be advised that the Order of Conditions for the Project at:

21 CENTURY MILL ROAD
Project Location

112-0666
MassDEP File Number

Has been recorded at the Registry of Deeds of:

<u>County</u>	<u>Book</u>	<u>Page</u>
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for:

Property Owner SCOTT GODDARD

and has been noted in the chain of title of the affected property in:

<u>Book</u>	<u>Page</u>
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In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant

Rev. 4/1/2010

Scott Goddard, 21 Century Mill LLC
21 Century Mill Road, 3.D-32
DENIAL ORDER OF CONDITIONS
Massachusetts Wetlands Protection Act & Regulations
Town of Bolton Wetlands Protection Bylaw & Regulations
DEP File #112-666

I. List of Submittals for the Record

From the Applicant:

- A. Original Notice of Intent and supporting materials received July 25th 2018 with Narrative from Sam Larabee of Goddard Consulting LLC and Original Submittal Plan: *"Common Driveway Plan and Profile prepared, signed, and stamped by Scott Hayes P.E., P.L.S., Dated 6/21/2018 with a scale of 1" = 40'.*
- B. Supplemental Submittal received September 25th 2018 submitted by Scott Goddard of Goddard Consulting LLC, and 21 Century Mill, LLC. Inclusive of drainage report and proposed tree removals for driveway.
- C. Final Submittal received August 5th 2019, with narrative from Scott Goddard including Final Submittal Plans: *"Common Driveway Plan and Profile Lots 1-4 Century Mill Road, Bolton Massachusetts Assessors Map 3D Parcel 32" prepared for 21 Century Mill LLC, signed and stamped by Scott Hayes P.E., P.L.S., Dated 6/21/2018 with a scale of 1" = 40' Revision Date July 30th 2019."*
- D. All application materials, photos, meeting minutes, correspondence and Orders associated with the record of DEP#112-0666, 21 Century Mill road.
- E. Public Hearing continuations dated August 7th 2018, August 21st 2018, September 4th 2018, September 18th 2018, October 2nd 2018, October 16th 2018, November 6th 2018, December 12th 2018 (request for continuance until April Meeting of the Conservation Commission), April 2nd 2019, May 7th 2019, May 21st 2019, June 4th 2019, June 18th 2019, July 9th 2019, August 6th 2019, and September 3rd 2019.

From Staff:

- K. ANRAD Process Staff Report October 17th, 2017
- L. National Flood Hazard Layer Firmette.
- M. Map of Coldwater Fisheries in the Town of Bolton
- N. Maps establishing local interests
- O. Map showing overlay establishing two potential vernal pools
- P. Report submittal by Matt Burne regarding assessment of two depressional areas specific to vernal pools
- Q. Email to applicant re alternatives analysis and team dated October 18th 2018 and response
- R. Submittal of material regarding violation from abutting resident
- S. Decision from Planning Board regarding ANR plan.
- T. Deed for 21 Century Mill Road.
- U. Email to applicant regarding follow up from October 2nd 2018 hearing requesting information dated October 15th 2018 and response.

II. Background and Procedural History

The applicant/owner, Scott Goddard, Principal of Goddard Consulting and PWS (hereinafter "Scott") filed a Notice of Intent pursuant to the Wetlands Protection Act and Town of Bolton Wetlands Bylaw Chapter 233 for certain work as "21 Century Mill Road Assessor's Map and Parcel 3.D – 32" on July 25th 2018. This work included widening and paving of an existing gravel driveway to an existing single-family home. The work along the driveway includes grass swales along the driveway within flood plain. Since the filing of the NOI on July 25th 2018

there has been an ANR approved by the Town of Bolton Planning Board with a revision date of October 8th 2018 associated with the location of the proposed project. There had also been supplemental filings for two additional notice of intents and one request for determination of applicability for what proved to be the same project area, and the same project overall. Now 21 Century Mill Road has a different owner and the parcel currently owned by Scott Goddard's entity is now Assessor's Map 3.D and Parcel 75 (hereinafter "lot"). The Notice of Intent and Order of Conditions identified 10 linear feet (LF) of impact to Bank and no impact to Land Under Water or Bordering Land Subject to Flooding from the proposed work, based on the submitted plans.

No record exists for approval of the excavation of material within jurisdictional resource areas nor record of what was present before removal.



Depressional Areas during unpermitted excavation 2016

There is a history of unpermitted work on the subject lot. Documented in the record via an email from an abutter, Richard Davis on Hudson Road through images of excavation of areas adjacent to and within definitive jurisdictional areas in 2016 and submitted to the Conservation Commission in 2019. The images submitted depict the following: excavation of material from 100' buffer area, disturbance of vegetation in Adjacent Upland Resource Area and isolated areas undetermined as jurisdictional. No Conservation Commission permits were issued for this work.

Beaver infrastructure had been removed without permit or authorization from the Board of Health or Conservation Commission during the public hearing process as well.

During the Abbreviated Notice of Resource Area Delineation process 2017, the Conservation Commission received a telephone complaint about removal of a beaver dam or lodge on site. There was no permit in place for any related work. In response, the Conservation Administrator met with Scott on the lot and viewed the remnants of beaver activity that had been removed. The Conservation Administrator reminded Scott of the necessary requirement to receive an emergency permit from the Board of Health and Conservation Commission for such work. Adjacent Photo shows the beaver activity again establishing itself within the landscape.



Source Conservation Commission, October 17th 2017

During a public meeting of the Conservation Commission the abutter presented the commission with the verbal communication of the violation, specific to excavation of material. The abutter later submitted the images with date stamps from when the violation occurred. The Conservation Administrator requested verbally and via email from Scott, information regarding the work that

took place since he was the owner on record. The Conservation Administrator reminded him that any work within jurisdictional areas or adjacent areas that may adversely impact resource areas needed to be reviewed and approved by the Conservation Commission prior to work being carried out.

There have been few revisions of the submittal aside from the eventual alteration of a pervious driveway, tree removal and reduction of grass swales within the resource area.

III. Notice of Intent Submittal and Public Hearing Review

- A. The Commission opened a duly noticed public hearing on the Notice of Intent for the proposed widening and paving of an existing gravel driveway to a single-family home. The hearing was continued to 8/21/2018, and further continued an additional 16 times at which point the Public Hearing was closed on September 17th 2019. All continuations were assented to by the applicant whether at a public meeting or via email prior to the public meeting. A quorum of the Commission was present at all sessions. Summary was received from the applicant. Members of the public spoke mostly in opposition to the proposed project as there were many inquiries regarding the extent of the project and adverse impacts to resource areas. The Commission requested supplemental information multiple times which was not received in a timely manner. The Commission deliberated at its meetings and voted unanimously to issue the decision on 10/1/2019.
- B. During the public hearing process, it was discovered that the property was sold after the submittal of the Notice of Intent from 21 Century Mill LLC to Jim Geraghty and therefore the applicant/owner/location was listed incorrectly in the application. Jim Geraghty has still not submitted an assent to the filing of the June 25th 2018 Notice of Intent. It was also discovered that the deed explicitly states the new property owner of 21 Century Mill Road (from 21 Century Mill Road, LLC) shall not oppose the owner of (now lot 2) in obtaining subdivision approval from the Town of Bolton.

- C. During the Public Hearing Process, it was discovered there had been an ANR approved by the Town of Bolton Planning Board with a revision date of October 8th 2018 associated with the location of the proposed project. 21 Century Mill Road Map Assessor's 3.D and Parcel 32 is currently owned by Jim Geraghty and the parcel currently owned by 21 Century Mill Road, LLC is now Assessor's Map 3.D and Parcel 75 adjacent to and no longer part of 21 Century Mill Road.
- D. The applicant filed an additional packet of materials on August 5th 2019 (hereinafter "supplemental submittal") which was considered at the Commission's August 21st 2019 public hearing. The supplemental submittal consisted of a revised plan dated July 30th 2019, associated cover letter and storm water report. The Storm Water report stated that the "drainage study area is limited to the extents of the proposed common driveway construction and contains the existing gravel driveway serving the house plus the extents of proposed common driveway improvements". This does not include the total project area of the driveways to the other proposed single-family home structures under other filings and drainage or stormwater impacts.
- E. No additional analysis of alternatives was provided in the supplemental submittal as previously requested by the Conservation Commission. Mitigation measures were also not included within these documents. To date, no mitigation measures appropriate for this proposed project have been proposed or noted.
- F. The Commission requested additional information on this proposal, specific to mitigation measures, alteration of Lot 3 to pull the project outside of the resource areas.
- G. During the May 21st 2019 Public Hearing, the Conservation Commission was informed verbally by Scott that he has direct financial interest in the project; after inquiry from an abutter.
- H. On September 3rd 2019, During the Public Hearing the Commission stated the improvements to the driveway were not necessary unless a common driveway was being proposed. There were still inquiries about an alternative analysis of bringing all of Lot 3 outside of the resource areas, and the area of excavation resulting in violation.
- I. September 17th 2019, the applicant nor a representative was present, there was no supplemental information that had been submitted as requested by the Conservation Commission. No information was submitted at all but more specifically before noon on the Thursday prior to the next public hearing date as required in the Town of Bolton Wetland Bylaw.
- J. The final submittal revision date of July 30th 2019 proposed pervious driveway, tree removal and widening as opposed to the existing gravel drive for the single-family home.
- K. At the final public hearing, the Commission expressed its concern with not receiving information in a timely manner and when there was information submitted, it did not address what was requested of the applicant. The commission during the last public hearing, seeing no new information and no representative of the applicant, closed the public hearing for 21 Century Mill Road regarding the proposed driveway alterations.

IV. Danforth Brook

- A. Danforth Brook is a cold-water fishery whose headwaters begin at Little Pond and flow south East through 21 Century Mill Road and adjacent properties to a property deeded to the Conservation Commission in the Town of Bolton established as a wildlife sanctuary, then continues into Hudson. This waterway constantly experiences beaver activity and other wildlife activity.

- B. The active beavers on the property and throughout Danforth Brook dam construct dams at the pond, as previously mentioned above. The area to the Northwest of the property provides immense wildlife habitat that supports various wildlife inclusive of more beaver activity (beavers are also downstream within and along the brook). The current beaver activity does not pose a threat to existing infrastructure, public health or safety. However, this area (Lot 2) will continuously see impacts from the beavers and other wildlife that inhabit the adjacent properties resulting in flooding of natural floodplain, wetlands, and adjacent land.
- C. The 100-year flood plain extends beyond the banks of Danforth Brook throughout the majority of the property noted on Assessor's Map 3.D and Parcel 75.
- D. The observation that the existing gravel driveway has frequently been overtopped by the 100-year flood has been confirmed by abutters, whose property overlooks the lot and who has lived at that locus since 1992. a period which has encompassed several 100-year rainfall events which have had a tendency to occur more frequently.
- E. The published FEMA Flood Plain Elevation for areas adjacent to Danforth Brook are considered special flood hazard areas. The area consists of 1% annual flood with a base elevation of 310 and Regulatory Floodways.

V. Resource Area Impacts and Significance

A. Adjacent Upland Resource Area (Town of Bolton Wetland Bylaw Chapter 233 Regulations Section 3.02):

- 1. Adjacent Upland Resource Area (AURA) is presumed to be significant to protect private and/or public water supplies; protect groundwater; protect water quality; protect fisheries; protect wildlife habitat; preserve rare species habitat including rare plant species; provide flood control; prevent storm damage; prevent pollution and sedimentation; provide natural resource services and public services, and are best left in an undisturbed and natural state.
- 2. The original submittal does not address the exact alterations to the AURA, yet totals the amount of alteration to the adjacent upland resource area in the amount of 5028 square feet, it does not total the amount of floodplain proposed to be altered. It does total the amount of riverfront area specific to the driveway improvements to be altered in the amount of 543 square feet. The NOI does not establish the amount of riverfront area already altered on the property of 21 Century mill road to establish the allowable threshold. The application states "this project consists of a single-family house and as such is exempt from MassDEP Stormwater Management Standards". Through the documentation of the public hearing process the commission became aware that this is a common driveway proposal not a single-family home driveway as previously established in the NOI submittal.
- 3. The final submittal offered the opinion that the work is only within the existing gravel driveway and requests alteration to only the 100' buffer zone and riverfront area.
- 4. *The Commission finds that applicant has not overcome the presumption that this Adjacent Upland Resource Area is significant to the interests in the Wetlands Protection Act and Town of Bolton Wetlands Protection Bylaw. Based on the presumption, the Conservation Commission concludes that the Adjacent Upland Resource Area and 100' Buffer Zone is significant to and plays a role in contributing to the interests of the Act and Bylaw.*
- 5. *The Commission finds, that the unpermitted excavation of material impacted the extent of bordering land subject to flooding and AURA.*

6. *The Commission finds that the two depressional areas and the excavation of material is in violation of the Wetlands Bylaw. A calculation of the amount of alteration was not provided by the applicant.*

B. Riverfront Area (310 CMR 10.58)

1. Where a proposed activity involves work within the riverfront area, the issuing authority shall presume that the area is significant to protect the private or public water supply; to protect the groundwater; to provide flood control; to prevent storm damage; to prevent pollution; to protect land containing shellfish; to protect wildlife habitat; and to protect fisheries.

2. The original and final submittal does total the amount of riverfront area specific to the driveway improvements to be altered in the amount of 543 square feet. It does not establish the amount of riverfront area already altered on the property of 21 Century mill road to establish the allowable threshold for any proposed alterations.

3. *The Commission finds that applicant has not overcome the presumption that this Riverfront Area is significant to the interests in the Wetlands Protection Act and Town of Bolton Wetlands Protection Bylaw. Based on the presumption, the Conservation Commission concludes that the Riverfront Area is significant to and plays a role in contributing to the interests of the Act and Bylaw.*

C. Bordering Land Subject to Flooding (310 CMR 10.57)

1. Bordering Land Subject to Flooding (hereinafter "BLSF") is presumed to be significant to flood control and storm damage prevention (310 CMR 10.57(1)).
2. Bordering Lands Subject to Flooding or Inundation by Ground Water or Surface Water. The Bolton Conservation Commission presumes that whenever work or an activity is proposed in Lands Subject to Flooding or Inundation by Ground Water or Surface Water that Such areas are likely to be significant to flood control, public and private water supplies, groundwater, water quality, storm damage prevention, prevention of pollution and sedimentation, fisheries, wildlife habitat, rare species habitat including rare plant species, agriculture, aquaculture, adjoining land areas and recreation. Isolated Lands Subject to Flooding or Inundation by Ground Water or Surface Water. The Bolton Conservation Commission presumes that whenever work or an activity is proposed in Lands Subject to Flooding or Inundation by Ground Water or Surface Water that Such areas are likely to be significant to flood control, public and private water supplies, groundwater, water quality, storm damage prevention, prevention of pollution and sedimentation, wildlife habitat, rare species habitat including rare plant species, agriculture, aquaculture, adjoining land areas and recreation (Chapter 233 and associated Town of Bolton Wetland Bylaw regulations)
3. The original submittal does not directly address the BLSF lost. The original plans dated June 21, 2018 show a split rail fence, at least three drainage swales within the BLSF. No BLSF alteration is identified in the Notice of Intent document outside of the submitted plans. The engineered plan contained in the original submittal identifies over 125 linear feet of alteration to BLSF, this does not include all alterations. No compensatory flood storage is provided on this set of plans. The Commission and the applicant agreed after the first hearing that there was additional information necessary to submit inclusive of a drainage and/or storm water report.
4. The final submittal identifies the "drainage study area is limited to the extents of the proposed common driveway construction and contains the existing gravel driveway serving the house plus the extents of proposed common driveway improvements". This does not include the total project area of the

driveways to the other proposed single-family home structures under other filings and drainage or stormwater impacts.

5. This final submittal does not identify the depressional areas as a special flood hazard area.
6. *The Commission finds that additional BLSF is likely to be altered by the proposed alterations inclusive of grass swales, driveway surface and removal of trees. A calculation of the amount of additional alteration to the BLSF was not provided by the applicant.*
7. *The Commission finds that applicant has not overcome the presumption that the BLSF on the site is significant to the interests in the Wetlands Protection Act and Town of Bolton Wetland Bylaw. Based on the presumption, the Conservation Commission concludes that the BLSF is significant to and plays a role in contributing to the interests of the Act and Bylaw.*

VI. Compliance with Performance Standards and Policies

A. Wetland Protection Act and Regulations

1. The original submittal claims that the work is permissible as a single-family home project under 310 CMR 10.53 (3)(i) as maintenance repair and improvement of a structure although the NOI does not identify that this project is eligible to be considered a limited project. The applicant claims that “this project consists of a single-family house and as such is exempt from MassDEP Stormwater Management Standards”. *The Commission rejects the argument that the project as proposed is a single-family home driveway improvement. The referenced section of the regulations excludes the “substantial enlargement” of structures. Photos taken at the site establish the existing roadway maintained as a gravel way is sufficient for the function of access to a single-family home without removal of large diameter trees along the roadway and increased infrastructure within the established protected resource areas.*
2. *The Commission finds that the project is not maintenance of an existing structure.*
3. The resource areas involved with the proposal of the project: Floodplain, Regulatory Floodway, Riverfront Area, and Adjacent Upland Resource Area, Bordering Land Subject to Flooding:
 - a. **Bordering Land Subject to Flooding (BLSF)** – The performance standards for work in BLSF state that “compensatory flood storage shall be provided for all flood storage volume that will be lost as the result of a proposed project within Bordering Land Subject to Flooding, when in the judgment of the issuing authority said loss will cause an increase or will contribute incrementally to an increase in the horizontal extent and level of flood waters during peak flows.” The Act contains details about how that compensatory storage is to be designed.

Town of Bolton Wetland Bylaw states “The following performance standards are in addition to those identified in the Massachusetts Wetlands Protection Act regulations 10.57(4)(a) and (b):

- (a) No project shall reduce the ability of the land to absorb and contain floodwaters.
- (b) No project shall displace or direct floodwaters to areas beyond Lands Subject to Flooding or Inundation by Ground Water or Surface Water.
- (c) Compensatory storage shall be provided within the same immediate watershed of the Lands Subject to Flooding or Inundation by Ground Water or Surface Water.
- (d) Projects shall not obstruct floodways within Lands Subject to Flooding or Inundation by Ground Water or Surface Water.

(e) Any structure permitted in Lands Subject to Flooding or Inundation by Ground Water or Surface Water shall be adequately anchored to prevent floatation, collapse or lateral movement of the structure and shall be designed to equalize hydrostatic flood forces on exterior walls and any mechanical or utility equipment in a structure must be elevated to or above the flood levels of the area.

(f) Proposed work shall not cause a significant adverse effect or cumulative adverse effect on the interests identified.

(g) Notwithstanding the above provisions, no project may be permitted which will have any adverse effect on a rare species habitat”

The Commission finds that the project as proposed shall reduce the expanse of lands ability of land to absorb and contain floodwaters.

The Commission finds that this project will displace but not direct floodwaters to areas beyond Lands Subject to Flooding or Inundation by Ground water or Surface water.

The Commission finds that compensatory flood storage shall be provided within the same immediate watershed of the Lands subject to flooding or inundation by ground or surface water.

The Commission finds the project shall obstruct floodways within lands subject to flooding or inundation by groundwater or surface water.

The Commission finds that this subject matter was not properly addressed by the applicant.

The Commission finds that the proposed work shall not cause a significant adverse effect or cumulative adverse effect on the interests identified.

The Commission finds that this project is not within the NHESP survey areas but is adjacent to a Cold Water Fishery.

- i. *The Commission finds that although this project is below the threshold where it is likely to result in significant impacts to wildlife habitat; the cumulative project proposed would meet the threshold where it is likely to result in significant impact to wildlife habitat.*
 - ii. *The Commission finds that the alteration of this area will increase impacts from a 100-year flood and require that careful consideration be given to the loss of flood storage.*
 - iii. *The Commission finds that no compensatory flood storage has been provided by the applicant.*
 - iv. *With regard to the additional embankment stabilization work proposed in the final submittal (placement of stones at either end of the wall, addition of loam and plantings on the embankment), the Commission lacks sufficient information on the extent of and impact of this work on BLSF as the calculations which were provided by the applicant are limited to a single family home driveway improvement verses the entirety of the common driveway project inclusive of three additional proposed houses.*
 - v. *The Commission finds that there are alternatives available that could decrease the amount of flood storage being lost from the proposed project.*
- b. **Riverfront Area (RFA)** – The performance standards for work in riverfront areas consider proof by the preponderance of evidence that there are no practicable and sustainably equivalent economic alternatives to the proposed project with less adverse effects on the interests identified in MGL c.131 s40 and that the work, including proposed mitigation, will have no significant adverse impact on the riverfront area to protected the interests. Inclusive of protection of other resource areas within the riverfront area, protection of rare species, consideration of practicable and sustainably equivalent economic alternatives, and no significant adverse impacts.
- i. *The Commission finds that the project is under the threshold for wildlife habitat evaluations regarding the single-family home driveway. The total common driveway project would require a wildlife habitat evaluation.*

- ii. *The Commission finds that this project does not include mitigation measures sufficient to overcome the presumption for riverfront areas as established above.*
- iii. *The Commission finds that the maintenance of the existing gravel driveway in its current state is a practicable and sustainably equivalent economic alternative. To the proposed project as a single family home driveway.*

B. Town of Bolton Wetland Bylaw (Chapter 233 and associated regulations)

1. In addition to the interests in the Wetlands Protection Act, the Town of Bolton Wetland Bylaw identifies additional interests to be protected including wildlife and recreation. The Bylaw also regulates lands within 100' of Bordering Land Subject to Flooding and lands bordering on or within 100' of the 100-year flood elevation.
2. Performance Standards established under the Town of Bolton Wetlands Bylaw Regulations Chapter 233 Regulations 3.0(1)(b) Performance Standards states "The Commission Shall not permit any activity, other than the maintenance of an already existing structure, that will result in building within or upon, removing, filling or otherwise altering a resource area...". *The Commission finds the project as proposed is the proposal for construction (or permitting) of a common driveway in all intents and purposes not for a single-family home. The Notice of Intent filing fee for the project is also inconsistent with such interpretation, identifying the project other than its original "Single Family Home".*
3. *The Commission finds that the proposed project will alter riverfront area, Adjacent Upland Resource Area, Land Subject to Flooding and lands within 100' of these areas as defined in the Bylaw and Regulations. The Commission finds that for the reasons stated above, the project is also not in compliance with the Town of Bolton Wetland Bylaw and Regulations and the performance standards contained in "Part Three: Performance Standards for the Areas Protected Under the Bylaw" of the Regulations.*
4. 3.05(3) Performance standards of Bordering lands Subject to Flooding or Inundation by Groundwater or Surface water of the Bolton Wetland Bylaw Regulations requires that projects shall not obstruct floodways within lands subject to flooding or inundation by ground water or surface water. The Regulations also contain specific design standards for compensatory flood storage that are more stringent than those in the Wetlands Protection Act and Regulations. For these reasons and those established above, *The Commission finds that the project does not meet these performance standards of the Town of Bolton Wetlands Protection Regulations for impacts to Bordering lands Subject to Flooding or Inundation by Groundwater or Surface water.*
5. Section 2.06(2)(e)3.a. of the Town of Bolton Wetland Bylaw Regulations provide that "The Commission shall prohibit any work or any portion thereof that cannot be conditioned to meet the applicable Performance Standards or has not overcome the presumptions of the Bylaw. b. if the commission finds that the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Bylaw, it may issue a bylaw order prohibiting the work. The information lacking is stated within this document above. C. if the commission finds that the project in its entirety cannot be conditioned to meet the applicable performance standards, the commission shall issue a bylaw order denial.

C. Policies and Past Precedent

1. The Commission has consistently requested that no alteration to resource areas take place. Had the applicant applied for an Order of Conditions or a Request for Determination of Applicability prior to the excavation of material and access created within a protected resource area, the Commission would almost certainly have required project modifications that would have significantly reduced or eliminated the extent of work carried out. The Commission would have also been notified of the material being removed and therefore able to properly assess the unpermitted work carried out in 2016.
2. During the public hearing process for this project, the Commission and/or its staff requested, in writing and at meetings, on at least a dozen occasions between August 2018 and the close of the public hearing that the applicant present evidence of the material excavated, and fill added to the area specific to the unpermitted work and the relatively recent communicated project goal to reduce impacts to resource areas. Specific alternatives requested for evaluation including images, receipts, and material accounts. *The Commission finds that it is reasonable and appropriate for the applicant to take measures to protect the impacted resource areas, in compliance with the Act and Bylaw. The Commission also finds that this area is now included in another filing with the Conservation Commission for a proposed project to build a single-family home structure, well, septic system and associated grading. The record indicates that the the Conservation Commission requested information to establish what was removed from the resource area without a permit and why this was not addressed by the applicant with the Conservation Commission in 2016.*
3. *the Commission finds that the assessment by the applicant of alternatives to reduce impact on resource areas protected by the Act and Bylaw is inadequate, as noted above, and that measures are available that would accomplish the project purpose without the adverse impact on resource areas protected by the Act and Bylaw that are presented by the project as constructed and as proposed for expansion.*
4. *The Commission finds that the impacts of the proposed project, if permitted, while relatively small at the single lot level, would set a precedent for development within protected resource areas on other lots that would result in unacceptable cumulative impacts to resource areas projected by the Act and Bylaw.*
5. At the 12/4/18 public hearing, it was suggested that it was likely that the unpermitted work within jurisdictional areas beyond that as established on the 2017 ORAD which the applicant and his employees carried out the wetland delineation on the property. The applicant presented verbal recollection of what was removed and brought into the areas in question. *The Commission makes no finding at this time with regard to whether the unpermitted work of 2016 was carried out in other resource areas aside from the confirmed Adjacent Upland Resource Area. The Commission finds that this area is presumed significant and the applicant has not provided significant information to overcome the presumption.*

VII. Conclusions and Decision

- A. *The Commission finds that the applicant has failed to overcome the presumption that the resource areas are significant to one more interest of the Wetlands Protection Act and Town of Bolton Wetland Bylaw and that the performance standards have been met. Under its authority provided in 310 CMR 10.05(6)(b), the Commission may issue an Order of Conditions that prohibits any work that cannot be conditioned to meet the performance standards set forth in the regulations at 310 CMR 10.21 through 10.60. Similarly, under Part "Two Procedures: Work Prohibition and Bylaw Order Denial" and "Part Three: Performance Standards for areas protected under the bylaw" of the Bolton Wetland Bylaw Regulations, the Commission may deny approval if the applicant did not demonstrate that the interests of the Bylaw could be protected in a manner*

consistent with these regulations and if the proposed safeguards are inadequate to protect the interests of the Bylaw.

- B. The Commission finds that the applicant has not met their burden of proof under Chapter 233-3 of the Bylaw Bolton Wetlands Bylaw Regulations to prove by a preponderance of the credible evidence that the work proposed in the application will contribute to the interests protected by this Bylaw and comply with the performance standards established by the regulations, or that the affected areas are not significant to the protection of any of the interests of the Bylaw. The Bylaw states that "where the presumption set forth is not overcome...the applicant shall prove that the work, including proposed mitigation will have no significant adverse or cumulative adverse effect on the resource areas or resource interests. If the Commission finds that the applicant has failed to make either of said proofs, it shall...in a written determination deny the activity as it cannot be conditioned to protect the interests of this bylaw and/or its regulations."*
- C. The Commission finds that it lacks sufficient information with regard to impacts of the unpermitted work, as well as there is no proposed mitigation as required under the Wetland Bylaw, from the applicant. The Commission also lacks sufficient information on alternatives that would avoid or minimize impacts to resource areas. In accordance with 310 CMR 10.05(6)(c), "if the conservation commission finds that the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act, M.G.L.c.131, Section 40..., it may issue an Order prohibiting the work." Similarly, the Town of Bolton Wetland Protection Bylaw regulations provide in "Part Two: Procedures" if the Commission finds that the "The Commission that the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Bylaw, it may issue a Bylaw Order prohibiting the work."*
- D. For the reasons stated above, the Commission hereby denies the work proposed in this application under the Massachusetts Wetlands Protection Act and the Town of Bolton Wetland Bylaw.*
- E. The Commission further finds that the unpermitted excavation and fill within the Adjacent Upland Resource Area are an ongoing violation of the Town of Bolton Wetland Bylaw and undetermined as a Wetland Protection Act violation. The Commission presumes the two depressional areas reviewed for potential vernal pool characteristics, as special flood hazard areas contributing to the overall Bordering lands Subject to Flooding or Inundation by Groundwater or Surface water on site with their performance standards as established in the Town of Bolton Wetland Bylaw.*
- F. This decision is binding on the applicant/owner and his successors in title, "Any person who purchases, inherits or otherwise acquires real estate upon which work has been done in violation of the provisions of this bylaw or in violation of any permit issued pursuant to this bylaw shall forthwith comply with any such order to restore such land to its condition prior to any such violation."*
- G. This decision shall be recorded in the Worcester Registry of Deeds within 30 days of issuance. If the applicant fails to record, the Commission may record the Order at the applicant's expense.*

Plans Submitted for Notice of Intent 21 Century Mill Road Driveway Improvements

DEP File #112-666

- Order of Resource Area Delineation DEP file# 112-656 Bk59662 Pg284
- *"Common Driveway Plan and Profile Lots 1-4 Century Mill Road, Bolton Massachusetts Assessors Map 3D Parcel 32" prepared for 21 Century Mill LLC, signed and stamped by Scott Hayes P.E., P.L.S., Dated 6/21/2018 with a scale of 1" = 40'.*
- *"Common Driveway Plan and Profile Lots 1-4 Century Mill Road, Bolton Massachusetts Assessors Map 3D Parcel 32" prepared for 21 Century Mill LLC, signed and stamped by Scott Hayes P.E., P.L.S., Dated 6/21/2018 with a scale of 1" = 40' revision date August 31, 2018.*
- **September 4th 2018** submittal of images from abutting resident regarding proof of violation in 2016; unpermitted work within jurisdictional resource areas the extent of which is undecided consisting of substantial excavation of material.
- *"Common Driveway Plan and Profile Lots 1-4 Century Mill Road, Bolton Massachusetts Assessors Map 3D Parcel 32" prepared for 21 Century Mill LLC, signed and stamped by Scott Hayes P.E., P.L.S., Dated 6/21/2018 with a scale of 1" = 40' revision date September 21, 2018.*
- **September 25th 2018** submittal time stamps for images from abutting resident regarding proof of violation in 2016; unpermitted work within jurisdictional resource areas the extent of which is undecided consisting of substantial excavation of material.
- **October 2nd 2018** submittal of plans *"Common Driveway Plan and Profile Lots 1-4 Century Mill Road, Bolton Massachusetts Assessors Map 3D Parcel 32" prepared for 21 Century Mill LLC, signed and stamped by Scott Hayes P.E., P.L.S., Dated 6/21/2018 with a scale of 1" = 40' revision date August 20, 2018*
- **June 17th 2019** Vernal Pool Report submitted by Matthew Burnes
- **July 30th 2019** revision dates for plans *"Common Driveway Plan and Profile Lots 1-4 Century Mill Road, Bolton Massachusetts Assessors Map 3D Parcel 32" prepared for 21 Century Mill LLC, signed and stamped by Scott Hayes P.E., P.L.S., Dated 6/21/2018 with a scale of 1" = 40'.* And associated cover letters received Saturday 8/3/2019 1:01 PM
- **August 3rd 2019** storm water report sent via email Saturday 8/3/2019 1:01 PM

**Timeline of Meeting Minutes for Notice of Intent 21 Century Mill Road Driveway
Improvements**

DEP File #112-666

- 1) August 7th 2018 7:30pm Houghton Building** - The Conservation Commission opened the Public Hearing to address the proposed pavement and improvement of a single family home located at 21 Century Mill Road. Scott Goddard is present to represent the applicant. The Chair states the proposal is for a single family home therefore not practicable to pave. There is mention of a potential future common driveway not before the commission at this time. The Chair specifies the conversation and filing for the evening was for a single family home driveway improvement. Richard Davis of Hudson road was present and requested explanation of the Red line which is the 100 year floodplain depicted on the plans before the commission. The Conservation Agent brought up the two uninvestigated vernal pools on the property. The Commission requested any potential tree removal to be marked. Richard Davis expressed to the commission the water flows over the driveway with increased precipitation during heavy storms. Historically it has been known to do so, to the extent there had been a drainage ditch dug to alleviate the flooding of the access way when the property was actively hayed. The Conservation Agent also notes the property is within a Priority Heritage Landscape. The Conservation Agent also requests runoff calculations that are required under the bylaw showing pre-and-post runoff conditions. Lori states the commission would prefer a whole project up front verses being piece mealed various aspects without properly conveying the extent of the work.

Chair Brian makes a motion to continue the public hearing regarding 21 Century Mill Road until August 21st 2018 at 7:30pm in the Houghton Building. Chris seconded, all unanimously approve.
- 2) August 21st 2018 7:30pm Houghton Building** - The Conservation Commission continued the Public Hearing to address the proposed pavement and improvement of a single family home located at 21 Century Mill Road. The applicant had sent an email requesting a continuation of the public hearing until the conservation commission's next meeting.

Chair Brian makes a motion to continue the public hearing regarding 21 Century Mill Road until September 4th at 7:45pm in the Houghton Building. Emily seconded, all unanimously approve.

An abutter, Richard Davis was present and inquired where he may send photos of the flooding drive/roadway. The agent specified to the Conservation Department email.
- 3) September 4th 2018 7:30pm Houghton Building** - The Conservation Commission continued the Public Hearing to address the proposed pavement and improvement of a single family home located at 21 Century Mill Road. The applicant had sent an email requesting a continuation of the public hearing until the conservation commission's next meeting. Chair Brian makes a motion to continue the public hearing regarding 21 Century Mill Road until September 18th at 7:15pm in the Houghton Building. Jeff seconded, all unanimously approve.

- 4) **September 18th 2018 7:15pm Houghton Building** - The Conservation Commission continued the public hearing for 21 Century Mill Road regarding upgrades to an existing single family home driveway. The applicant Scott Goddard was present and inquired if there were other applicants present that they may be heard prior.

7:30pm The Conservation Commission opens the public hearings regarding the Notice of Intent for Lots 3 and 4 along with the Request for Determination regarding Lot 2. The Conservation Agent inquires about total alteration to site depicting quantitative look at alteration of resource areas within the +/- 12 acre parcel located at 21 Century Mill Road, pre and post calculations relative to runoff and flood storage capacity, the Potential Vernal Pool locations, the excavation work completed without review or permitting and reiterating the question from Planning Board of reducing the number of Lots. The Commission reiterates if Planning Board does not approve other lots to be subdivided from the original 12 acre lot there would be no reason to consider the proposed improvements to the existing single family home driveway. The new plans submitted September 18th 2018 to the commission proposes pervious pavement which would greatly reduce any need to widen the existing roadway. The Commission inquires about excavation and impact to vegetation relative to any improvement proposed to the driveway. A turn out has been added to the plans as well increasing the area of disturbance related to the driveway under DEP file # 112-666. The Commission requested the shed be established on one lot or the other as it is proposed to be moved from the lot line of "proposed Lots 2 and Lot 4". Lot 2 and Lot 4 include the area the Commission viewed at the site visit at 5pm on the 18th to be the only viable area for the potential vernal pools shown on the Natural Heritage Endangered Species Overlay. The Conservation Agent will be reviewing the Order of Resource Area Delineation issued to investigate if the potential vernal pool resource area is included within this determination within the narrative as it is not shown on the plans. The Commission requested an alternative analysis for Lot 3 to reconfigure the layout to potentially reduce the size of the septic system and pull the single family home outside of the jurisdictional area to the Conservation Commission. The abutter Rich Davis was present to reiterate the extent of flooding which occurs on the property. In addition input related to the potential vernal pools and request that the commission consider to preserve large diameter trees within the property. There was also question as to whom delineated the resource areas, the commission confirmed Goddard Consulting. The applicant requested a continuance for the public hearings of 21 Century Mill Road, RDA for Lot 2 and NOIs for Lot 3 and Lot 4.

Chair Brian made a motion to continue the public hearings for 21 Century Mill Road, RDA for Lot 2, NOI for Lot 3 and NOI for Lot 4 until October 2nd at 7:30pm, 7:45pm, 7:50pm and 8:00pm. Jeff seconded, all unanimously approve.

- 5) **October 2nd 2018 7:45pm Houghton Building** - The Conservation Commission continued the public hearing for 21 Century Mill Road regarding upgrades to an existing single family home driveway. The applicant Scott Goddard was present and requested all hearings related to 21 Century Mill Road proposal be opened. Therefore, The Conservation Commission continued the public hearing for 21 Century Mill Road, along with the public hearings regarding the Notice of Intent for Lots 3 and 4 along with the Request for Determination regarding Lot 2. A summary was given for revision to the single family home driveway improvements of pervious pavement in addition to some site design on Lot 3.

The Conservation Commission again requests plans showing Potential Vernal Pool locations and an alternative analysis for Lot 3, specifically reducing the single family home structure and septic system to three bedroom. The applicant requested a continuance for the public hearings of 21 Century Mill Road, RDA for Lot 2 and NOIs for Lot 3 and Lot 4.

Chair Brian made a motion to continue the public hearings for 21 Century Mill Road, RDA for Lot 2, NOI for Lot 3 and NOI for Lot 4 until October 16th at 7:45pm, 7:50pm, 8:00pm and 8:15pm. Jeff seconded, all unanimously approve.

- 6) October 16th 2018 7:00pm Houghton Building** - The Conservation Commission continued the public hearing for 21 Century Mill Road regarding upgrades to an existing single family home driveway. The applicant submitted a request to continue until the first meeting of November.

Jeff makes a motion to continue the public hearing until November 6th 2018 at 7:45pm. Kip seconded, all unanimously approve.

The Conservation Commission continued the public hearing for Lot 3 Century Mill Road. The applicant submitted a request to continue until the first meeting of November.

Jeff makes a motion to continue the public hearing until November 6th 2018 at 7:50pm. William seconded, all unanimously approve.

The Conservation Commission continued the public hearing for Lot 4 Century Mill Road. The applicant submitted a request to continue until the first meeting of November.

Jeff makes a motion to continue the public hearing until November 6th 2018 at 8:00pm. Emily seconded, all unanimously approve.

The Conservation Commission continued the public hearing for Lot 2 Century Mill Road. The applicant submitted a request to continue until the first meeting of November.

Jeff makes a motion to continue the public hearing until November 6th 2018 at 8:15pm. Kip seconded, all unanimously approve.

- 7) November 6th 2018 7:00pm Houghton Building - 7:45pm** The Conservation Commission continued the public hearing for 21 Century Mill Road regarding upgrades to an existing single family home driveway. The applicant Scott Goddard requested via email all hearings related to 21 Century Mill Road proposal be continued. Chair Brian made a motion to continue the public hearing for 21 Century Mill Road, along with the public hearings regarding the Notice of Intent for Lots 3 and 4 along with the Request for Determination regarding Lot 2 until December 4th from 7:20pm until 7:30pm.
- 8) December 12th 2018 7:45pm** The Conservation Commission continued the public hearing for 21 Century Mill Road regarding upgrades to an existing single family home driveway. The applicant Scott Goddard requested via email all hearings related to 21 Century Mill Road proposal be continued until the Conservation Commission's first meeting in April of 2019. The commission determined their first meeting in April shall be April 2nd 2019.

Chair Brian made a motion to continue the public hearing for 21 Century Mill Road, along with the public hearings regarding the Notice of Intent for Lots 3 and 4 along with the Request for Determination regarding Lot 2 until April 2nd 2019 from 7:00pm until 7:30pm.

- 9) April 2nd 2019 7:00pm Houghton Building** - The Conservation Commission (“the Commission”) continued the public hearings regarding the Notice of Intent for 21 Century Mill Road, Lot 3 and Lot 4 at the request of the applicant.

Chair Brian makes a motion to continue the Public Hearings as requested until May 7th 2019 at 7:00pm, 7:15pm, and 7:30pm. Emily seconded, all unanimously approve

The Commission continued the public hearing regarding the Request for Determination of Applicability for Lot 2 Century Mill Road at the request of the applicant.

Chair Brian makes a motion to continue the Public Hearing as requested until May 7th 2019 at 7:45pm. Kip seconded, all unanimously approve

- 10) May 7th 2019 7:00pm Houghton Building** - After opening the meeting, the Conservation Commission (“the Commission”) at the approval of the applicant continued the public hearings regarding the Notices of Intent for 21 Century Mill Road, Lot 3, Lot 4 and the Request for Determination for Applicability for Lot 2. After some discussion and review the commission had not received the requested supplemental information and alternative analysis. Therefore, the applicant requested a continuance until the next public meeting. Richard Davis was present to inquire about pooling water on the property.

Chair Brian made a motion to continue the public hearings regarding:

21 Century Mill Road to be held at 7:30pm at the Houghton Building on May 21st 2019. Jeff seconded; all unanimously agree.

Proposed Lot 3 to be held at 7:40pm at the Houghton Building on May 21st 2019. Emily seconded; all unanimously agree.

Proposed Lot 4 to be held at 7:50pm at the Houghton Building on May 21st 2019. Kip seconded; all unanimously agree.

RDA for Proposed Lot 2 to be held at 8:00pm at the Houghton Building on May 21st 2019. William seconded; all unanimously agree.

- 11) May 21st 2019 7:00pm Houghton Building** - At the approval of the applicant, the commission continued the public hearings regarding the **Notices of Intent for 21 Century Mill Road, Lot 3, Lot 4 and the Request for Determination for Applicability for Lot 2**. The applicant requested the commission make a decision solely on the status of the two potential vernal pools. The applicant had only presented verbal observations and no accompanying data. The applicant was also requested to provide additional information and a narrative regarding excavation work that had occurred within the two potential vernal pool (PVP) areas and the Adjacent Upland Resource Area as delineated by the applicant. The applicant stated they will provide this information for the next meeting and asked for a

determination on the PVPs. Commission members gave brief summary of their site visit which the applicant was unable to attend. As a result, they requested auger borings and other evidence to define the PVP basin areas. The abutter Richard Davis of 185 Hudson Road inquired if the commission had visited the property in the evening to observe the chorus of amphibians. The Commission also requested information be provided establishing what was removed from the site and to provide new plans displaying the potential vernal pools and the excavation work. There was a question regarding a potential conflict of interest as the applicant divulged that he had financial interest in the project, after inquiry from the chair and abutter. The Commission inquired whether the applicant had collected data over a course of consecutive dates regarding the PVP areas. The applicant had not collected this data. The commission requested a third-party review by a professional of their choosing to assess the two PVP areas and excavated site. Specifically, inquire whether vernal pool species may remain viable through such an alteration/disturbance. The commission will provide the applicant with professional who will be appropriate to work for the commission regarding the review. Therefore, the applicant requested a continuance until the next public meeting.

Chair Brian made a motion to continue the public hearings regarding:

21 Century Mill Road to be held at 7:00pm at the Houghton Building on June 4th 2019. Kip seconded; all unanimously agree.

Proposed Lot 3 to be held at 7:05pm at the Houghton Building on May 21st 2019. Emily seconded; all unanimously agree.

Proposed Lot 4 to be held at 7:10pm at the Houghton Building on May 21st 2019. William seconded; all unanimously agree.

RDA for Proposed Lot 2 to be held at 7:15pm at the Houghton Building on May 21st 2019. Lori seconded; all unanimously agree.

- 12) At the approval of the applicant, the commission continued the public hearings regarding the **Notices of Intent for 21 Century Mill Road, Lot 3, Lot 4 and the Request for Determination for Applicability for Lot 2**. The applicant requested via email prior to the public meeting that the hearing items be continued until the next meeting of the Conservation Commission.

Chair Brian made a motion to continue the public hearings regarding:

21 Century Mill Road to be held at 7:00pm at the Houghton Building on June 18th 2019. Jeff seconded; all unanimously agree.

Proposed Lot 3 to be held at 7:05pm at the Houghton Building on June 18th 2019. Kip seconded; all unanimously agree.

Proposed Lot 4 to be held at 7:10pm at the Houghton Building on June 18th 2019. William seconded; all unanimously agree.

RDA for Proposed Lot 2 to be held at 7:15pm at the Houghton Building on June 18th 2019. Jeff seconded; all unanimously agree.

- 13) At the approval of the applicant, the commission continued the public hearings regarding the **Notices of Intent for 21 Century Mill Road, Lot 3, Lot 4 and the Request for Determination for Applicability for Lot 2**. The commission discussed the recent report received from Matt Burne who carried out the PVP assessment. The applicant requested

via email prior to the public meeting that the hearing items be continued until the next meeting of the Conservation Commission. The abutter from 21 Century Mill Road was present to listen to the public hearing. The abutter Richard Davis of 185 Hudson road was also present and requested a copy of the report, sharing concerns about the valuation of the violation regarding the disturbance. The applicant requested a continuance until the next meeting of the conservation commission.

Chair Brian made a motion to continue the public hearings regarding:

21 Century Mill Road to be held at 7:00pm at Town Hall on July 9th 2019. Emily seconded; all unanimously agree.

Proposed Lot 3 to be held at 7:05pm at Town Hall on July 9th 2019. Jeff seconded; all unanimously agree.

Proposed Lot 4 to be held at 7:10pm at Town Hall on July 9th 2019. Lori seconded; all unanimously agree.

RDA for Proposed Lot 2 to be held at 7:15pm at Town Hall on July 9th 2019. William seconded; all unanimously agree.

- 14) At the request of the applicant, the commission continued the public hearings regarding the Notices of Intent for 21 Century Mill Road, Lot 3, Lot 4 and the Request for Determination for Applicability for Lot 2.**

Emily made a motion to continue the public hearings regarding:

21 Century Mill Road to be held at 7:10pm at the Houghton Building on August 6th 2019. Jeff seconded; all unanimously agree.

Proposed Lot 3 to be held at 7:15pm at the Houghton Building on August 6th 2019. Kip seconded; all unanimously agree.

Proposed Lot 4 to be held at 7:20pm at the Houghton Building on August 6th 2019. Lori seconded; all unanimously agree.

RDA for Proposed Lot 2 to be held at 7:25pm at the Houghton Building on August 6th 2019. Jeff seconded; all unanimously agree.

- 15) August 6th 2019 Houghton Building Public Hearing – Continued Notice of Intent – 21 Century Mill Road proposed driveway improvements**

Emily makes a motion to continue the public hearing until September 3rd 2019 at 7:00pm. Jeff Seconded all unanimously approve.

- Public Hearing – Continued Notice of Intent – Lot 3 Century Mill Road proposed construction of a single-family home and septic system**

Emily makes a motion to continue the public hearing until September 3rd 2019 at 7:05pm. Jeff Seconded all unanimously approve.

- Public Hearing – Continued Notice of Intent – Lot 4 Century Mill Road proposed construction of a single-family home and septic system**

Emily makes a motion to continue the public hearing until September 3rd 2019 at 7:10pm. Jeff Seconded all unanimously approve.

- Public Hearing – Continued Request for Determination of Applicability – Lot 2 Century Mill Road proposed resurfacing of a**

Emily makes a motion to continue the public hearing until September 3rd 2019 at 7:15pm. Jeff Seconded all unanimously approve.

35'x20' section of driveway adjacent to the garage along with vegetation clearing along the side of the driveway, including reseeding of the disturbed area.

16) September 3rd 2019 Houghton Building Public Hearing – Notice of Intent – 21 Century Mill Road – proposed driveway improvements Commission determined the work seems to be contingent upon number of houses approved

Chair Brian made a motion to continue the public hearing for 21 Century Mill Road until September 17th at 7:05pm.

17) Public Hearing – Notice of Inten
proposed driveway improvements
The information requested during the mee
has not been submitted. The applicant nor

Chair Brian made a motion to close the public hearing for 21 Century Mill Road.
Kip seconded; all unanimously approve.



Massachusetts Department of Environmental Protection

eDEP Transaction Copy

Here is the file you requested for your records.

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Username: **CCATOBOLTON**

Transaction ID: **1141582**

Document: **WPA Form 5 - OOC**

Size of File: **132.27K**

Status of Transaction: **In Process**

Date and Time Created: **10/1/2019:4:11:10 PM**

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Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

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

Provided by MassDEP:

MassDEP File #:112-0672

eDEP Transaction #:1141582

City/Town:BOLTON

A. General Information

1. Conservation Commission BOLTON

2. Issuance a. OOC b. Amended OOC

3. Applicant Details

a. First Name _____ b. Last Name _____

c. Organization 21 CENTURY MILL LLC

d. Mailing Address 291 MAIN STREET, SUITE 8

e. City/Town NORTHBOROUGH f. State MA g. Zip Code 01532

4. Property Owner

a. First Name _____ b. Last Name _____

c. Organization _____

d. Mailing Address _____

e. City/Town _____ f. State _____ g. Zip Code _____

5. Project Location

a. Street Address 21 CENTURY MILL ROAD LOT 3

b. City/Town BOLTON c. Zip Code 01740

d. Assessors 3D e. Parcel/Lot# 32

f. Latitude 42.41687N g. Longitude 71.58482W

6. Property recorded at the Registry of Deed for:

a. County	b. Certificate	c. Book	d. Page
WORCESTER		16823	400

7. Dates

a. Date NOI Filed : 9/10/2018 b. Date Public Hearing Closed: 9/17/2019 c. Date Of Issuance: 10/1/2019

8. Final Approved Plans and Other Documents

a. Plan Title:	b. Plan Prepared by:	c. Plan Signed/Stamped by:	d. Revised Final Date:	e. Scale:
SEWAGE DISPOSAL SYSTEM DESIGN PLAN	FORESITE ENGINEERING	SCOTT P HAYES	7/30/2019	1"=40'

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act

Following the review of the the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act.

Check all that apply:

- | | | |
|---|--|---|
| a. <input checked="" type="checkbox"/> Public Water Supply | b. <input type="checkbox"/> Land Containing Shellfish | c. <input checked="" type="checkbox"/> Prevention of Pollution |
| d. <input checked="" type="checkbox"/> Private Water Supply | e. <input checked="" type="checkbox"/> Fisheries | f. <input checked="" type="checkbox"/> Protection of Wildlife Habitat |
| g. <input checked="" type="checkbox"/> Ground Water Supply | h. <input checked="" type="checkbox"/> Storm Damage Prevention | i. <input checked="" type="checkbox"/> Flood Control |

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2. Commission hereby finds the project, as proposed, is:

Approved subject to:

a. The following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.

Denied because:

- b. The proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. The information submitted by the applicant is not sufficient to describe the site, the work or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**

3. Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310CMR10.02(1)(a).

_____ a. linear feet

Inland Resource Area Impacts:(For Approvals Only):

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	_____ a. linear feet	_____ b. linear feet	_____ c. linear feet	_____ d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
6. <input type="checkbox"/> Land under Waterbodies and Waterways	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
	_____ e. c/y dredged	_____ f. c/y dredged		
7. <input checked="" type="checkbox"/> Bordering Land Subject to Flooding	4607	0	4607	4607
Cubic Feet Flood Storage	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
	0		0	
	_____ e. cubic feet	_____ f. cubic feet	_____ g. cubic feet	_____ h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	_____ a. square feet	_____ b. square feet		
Cubic Feet Flood Storage				

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	c. cubic feet	d. cubic feet	e. cubic feet	f. cubic feet
9. <input type="checkbox"/> Riverfront Area				
	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft				
	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft				
	g. square feet	h. square feet	i. square feet	j. square feet

Coastal Resource Area Impacts:

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	a. square feet	b. square feet	c. c/y nourishment	d. c/y nourishment
14. <input type="checkbox"/> Coastal Dunes	a. square feet	b. square feet	c. c/y nourishment	d. c/y nourishment
15. <input type="checkbox"/> Coastal Banks	a. linear feet	b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	a. square feet	b. square feet		
17. <input type="checkbox"/> Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	a. square feet	b. square feet	c. square feet	d. square feet
20. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	c. c/y dredged	d. c/y dredged		
21. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	a. square feet	b. square feet		

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22.

Restoration/Enhancement (For Approvals Only)

If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c & d or B.17.c & d above, please entered the additional amount here.

_____ a. square feet of BVW

_____ b. square feet of Salt Marsh

23.

Streams Crossing(s)

If the project involves Stream Crossings, please enter the number of new stream crossings/number of replacement stream crossings.

_____ a. number of new stream crossings

_____ b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. the work is a maintenance dredging project as provided for in the Act; or
 - b. the time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order.
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not exceed the issuance date of the original Final Order of Conditions.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.
8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work..
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing

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the words,

" Massachusetts Department of Environmental Protection"

[or 'MassDEP']

File Number : "112-0672"

11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before Mass DEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.
17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.

NOTICE OF STORMWATER CONTROL AND MAINTENANCE REQUIREMENTS

19. The work associated with this Order(the "Project") is (1) is not (2) subject to the Massachusetts Stormwater Standards. If the work is subject to Stormwater Standards, then the project is subject to the following conditions;
 - a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollutant Discharge Elimination System Construction General Permit as required by Stormwater Standard 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
 - b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that: *i.* all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures; *ii.* as-built final construction

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BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized; *iii.* any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10; *iv.* all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition; *v.* any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

- c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 19(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following: *i.*) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and *ii.*) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.
- d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollutant Discharge Elimination System Multi-Sector General Permit.
- e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 19(f) through 19(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 19(f) through 19(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.
- f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.
- g) The responsible party shall:
 - 1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 - 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 - 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.

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- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions:

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? Yes No

2. The Conservation Commission hereby (check one that applies):

a. DENIES the proposed work which cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw specifically:

1. Municipal Ordinance or Bylaw TOWN OF BOLTON WETLAND BYLAW

2. Citation CHAPTER 233

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order or Conditions is issued. Which are necessary to comply with a municipal ordinance or bylaw:

b. APPROVES the proposed work, subject to the following additional conditions.

1. Municipal Ordinance or _____
Bylaw

2. Citation _____

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows:

SEE ATTACHED DOCUMENT REGARDING DECISION 112-0672 DENIAL ORDER OF CONDITIONS.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
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Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
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E. Signatures

This Order is valid for three years from the date of issuance, unless otherwise specified pursuant to General Condition #4. If this is an Amended Order of Conditions, the Amended Order expires on the same date as the original Order of Conditions. 10/1/2019
1. Date of Original Order

Please indicate the number of members who will sign this form. This Order must be signed by a majority of the Conservation Commission. 4
2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

Jeffrey Bryan
Kay Maman

[Signature]
Lin Payne

by hand delivery on

by certified mail, return receipt requested, on

Date

Date October 3rd 2019

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 - Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File #:112-0672
eDEP Transaction #:1141582
City/Town:BOLTON

G. Recording Information

This Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

BOLTON
Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

BOLTON
Conservation Commission

Please be advised that the Order of Conditions for the Project at:

21 CENTURY MILL ROAD LOT 3
Project Location

112-0672
MassDEP File Number

Has been recorded at the Registry of Deeds of:

County	Book	Page
_____	_____	_____

for: _____
Property Owner

and has been noted in the chain of title of the affected property in:

_____ Book _____ Page

In accordance with the Order of Conditions issued on:

_____ Date

If recorded land, the instrument number identifying this transaction is:

_____ Instrument Number

If registered land, the document number identifying this transaction is:

_____ Document Number

_____ Signature of Applicant

Rev. 4/1/2010

Scott Goddard, 21 Century Mill LLC
21 Century Mill Road, 3.D-32
DENIAL ORDER OF CONDITIONS
Massachusetts Wetlands Protection Act & Regulations
Town of Bolton Wetlands Protection Bylaw & Regulations
Lot 3, DEP File #112-0672

I. List of Submittals for the Record

From the Applicant:

- A. Original Notice of Intent and supporting materials received July 25th 2018 with Narrative from Sam Larabee of Goddard Consulting LLC and Original Submittal Plan: *"Common Driveway Plan and Profile prepared, signed, and stamped by Scott Hayes P.E., P.L.S., Dated 6/21/2018 with a scale of 1" = 40'.*
- B. Supplemental Submittal received September 25th 2018 submitted by Scott Goddard of Goddard Consulting LLC, and 21 Century Mill, LLC. Inclusive of drainage report and proposed tree removals for driveway.
- C. Final Submittal received August 5th 2019, with narrative from Scott Goddard including Final Submittal Plans: *"Common Driveway Plan and Profile Lots 1-4 Century Mill Road, Bolton Massachusetts Assessors Map 3D Parcel 32" prepared for 21 Century Mill LLC, signed and stamped by Scott Hayes P.E., P.L.S., Dated 6/21/2018 with a scale of 1" = 40' Revision Date July 30th 2019."*
- D. All application materials, photos, meeting minutes, correspondence and Orders associated with the record of DEP#112-0666, 21 Century Mill road.
- E. Public Hearing continuations dated September 18th 2018, October 2nd 2018, October 16th 2018, November 6th 2018, December 12th 2018 (request for continuance until April Meeting of the Conservation Commission), April 2nd 2019, May 7th 2019, May 21st 2019, June 4th 2019, June 18th 2019, July 9th 2019, August 6th 2019, and September 3rd 2019.

From Staff:

- K. ANRAD Process Staff Report October 17th, 2017
- L. National Flood Hazard Layer Firmette.
- M. Map of Coldwater Fisheries in the Town of Bolton
- N. Maps establishing local interests
- O. Map showing overlay establishing two potential vernal pools
- P. Report submittal by Matt Burne regarding assessment of two depressional areas specific to vernal pools
- Q. Email to applicant re alternatives analysis and team dated October 18th 2018 and response
- R. Submittal of material regarding violation from abutting resident
- S. Decision from Planning Board regarding ANR plan.
- T. Deed for 21 Century Mill Road.
- U. Email to applicant regarding follow up from October 2nd 2018 hearing requesting information dated October 15th 2018 and response.

II. Background and Procedural History

The applicant/owner, Scott Goddard, Principal of Goddard Consulting and PWS (hereinafter "Scott") filed a Notice of Intent pursuant to the Wetlands Protection Act and Town of Bolton Wetlands Bylaw Chapter 233 for certain work as "21 Century Mill Road Assessor's Map and Parcel 3.D – 32" on September 9th 2018. The work proposing the construction of a single-family home, with associated well, septic system and grading. Since the filing of the NOI on September 9th 2018, there has been an ANR approved by the Town of Bolton Planning Board

with a revision date of October 8th 2018 associated with the location of the proposed project. There had also been supplemental filings for two additional notice of intents and one request for determination of applicability for what proved to be the same project area, and the same project overall. Now 21 Century Mill Road has a different owner and the parcel currently owned by Scott Goddard's entity is now Assessor's Map 3.D and Parcel 75 (hereinafter "lot"). The Notice of Intent and Order of Conditions identified impact to Adjacent Upland Resource Area, and Bordering Land Subject to Flooding.

No record exists for approval of the excavation of material within jurisdictional resource areas nor record of what was present before removal.



Depressional Areas during unpermitted excavation 2016

There is a history of unpermitted work on the subject lot. Documented in the record via an email from an abutter, Richard Davis on Hudson Road through images of excavation of areas adjacent to and within definitive jurisdictional areas in 2016 and submitted to the Conservation Commission in 2019. The images submitted depict the following: excavation of material from 100' buffer area, disturbance of vegetation in Adjacent Upland Resource Area and isolated areas undetermined as jurisdictional. No Conservation Commission permits were issued for this work.

Beaver infrastructure had been removed without permit or authorization from the Board of Health or Conservation Commission during the public hearing process as well.

During the Abbreviated Notice of Resource Area Delineation process 2017, the Conservation Commission received a telephone complaint about removal of a beaver dam or lodge on site. There was no permit in place for any related work. In response, the Conservation Administrator met with Scott on the lot and viewed the remnants of beaver activity that had been removed. The Conservation Administrator reminded Scott of the necessary requirement to receive an emergency permit from the Board of Health and Conservation Commission for such work. Adjacent Photo shows the beaver activity again establishing itself within the landscape.



Source Conservation Commission, October 17th 2017

During a public meeting of the Conservation Commission the abutter presented the commission with the verbal communication of the violation, specific to excavation of material. The abutter later submitted the images with date stamps from when the violation occurred. The Conservation Administrator requested verbally and via email from Scott, information regarding the work that

took place since he was the owner on record. The Conservation Administrator reminded him that any work within jurisdictional areas or adjacent areas that may adversely impact resource areas needed to be reviewed and approved by the Conservation Commission prior to work being carried out.

There have been few revisions of the submittal aside from the eventual alteration of a pervious driveway, tree removal and reduction of grass swales within the resource area.

III. Notice of Intent Submittal and Public Hearing Review

- A. The Commission opened a duly noticed public hearing on the Notice of Intent for the proposed widening and paving of an existing gravel driveway to a single-family home. The hearing was continued to 8/21/2018, and further continued an additional 16 times at which point the Public Hearing was closed on September 17th 2019. All continuations were assented to by the applicant whether at a public meeting or via email prior to the public meeting. A quorum of the Commission was present at all sessions. Summary was received from the applicant. Members of the public spoke mostly in opposition to the proposed project as there were many inquiries regarding the extent of the project and adverse impacts to resource areas. The Commission requested supplemental information multiple times which was not received in a timely manner. The Commission deliberated at its meetings and voted unanimously to issue the decision on 10/1/2019.
- B. During the public hearing process, it was discovered that the property was sold after the submittal of the Notice of Intent from 21 Century Mill LLC to Jim Geraghty and therefore the applicant/owner/location was listed incorrectly in the application. Jim Geraghty has still not submitted an assent to the filing of the June 25th 2018 Notice of Intent. It was also discovered that the deed explicitly states the new property owner of 21 Century Mill Road (from 21 Century Mill Road, LLC) shall not oppose the owner of (now lot 2) in obtaining subdivision approval from the Town of Bolton.

- C. During the Public Hearing Process, it was discovered there had been an ANR approved by the Town of Bolton Planning Board with a revision date of October 8th 2018 associated with the location of the proposed project. 21 Century Mill Road Map Assessor's 3.D and Parcel 32 is currently owned by Jim Geraghty and the parcel currently owned by 21 Century Mill Road, LLC is now Assessor's Map 3.D and Parcel 75 adjacent to and no longer part of 21 Century Mill Road.
- D. The applicant filed an additional packet of materials on August 5th 2019 (hereinafter "supplemental submittal") which was considered at the Commission's August 21st 2019 public hearing. The supplemental submittal consisted of a revised plan dated July 30th 2019, associated cover letter and storm water report. The Storm Water report stated that the "drainage study area is limited to the extents of the proposed common driveway construction and contains the existing gravel driveway serving the house plus the extents of proposed common driveway improvements". This does not include the total project area of the driveways to the other proposed single-family home structures under other filings and drainage or stormwater impacts.
- E. No additional analysis of alternatives was provided in the supplemental submittal as previously requested by the Conservation Commission. Mitigation measures were also not included within these documents. To date, no mitigation measures appropriate for this proposed project have been proposed or noted.
- F. The Commission requested additional information on this proposal, specific to mitigation measures, alteration of Lot 3 to pull the project outside of the resource areas.
- G. During the May 21st 2019 Public Hearing, the Conservation Commission was informed verbally by Scott that he has direct financial interest in the project; after inquiry from an abutter.
- H. On September 3rd 2019, During the Public Hearing the Commission stated the improvements to the driveway were not necessary unless a common driveway was being proposed. There were still inquiries about an alternative analysis of bringing all of Lot 3 outside of the resource areas, and the area of excavation resulting in violation.
- I. September 17th 2019, the applicant nor a representative was present, there was no supplemental information that had been submitted as requested by the Conservation Commission. No information was submitted at all but more specifically before noon on the Thursday prior to the next public hearing date as required in the Town of Bolton Wetland Bylaw.
- J. The final submittal revision date of July 30th 2019 proposed pervious driveway, tree removal and widening as opposed to the existing gravel drive for the single-family home.
- K. At the final public hearing, the Commission expressed its concern with not receiving information in a timely manner and when there was information submitted, it did not address what was requested of the applicant. The commission during the last public hearing, seeing no new information and no representative of the applicant, closed the public hearing for 21 Century Mill Road regarding the proposed driveway alterations.

IV. Danforth Brook

- A. Danforth Brook is a cold-water fishery whose headwaters begin at Little Pond and flow south East through 21 Century Mill Road and adjacent properties to a property deeded to the Conservation Commission in the Town of Bolton established as a wildlife sanctuary, then continues into Hudson. This waterway constantly experiences beaver activity and other wildlife activity.

- B. The active beavers on the property and throughout Danforth Brook dam construct dams at the pond, as previously mentioned above. The area to the Northwest of the property provides immense wildlife habitat that supports various wildlife inclusive of more beaver activity (beavers are also downstream within and along the brook). The current beaver activity does not pose a threat to existing infrastructure, public health or safety. However, this area (Lot 2) will continuously see impacts from the beavers and other wildlife that inhabit the adjacent properties resulting in flooding of natural floodplain, wetlands, and adjacent land.
- C. The 100-year flood plain extends beyond the banks of Danforth Brook throughout the majority of the property noted on Assessor's Map 3.D and Parcel 75.
- D. The observation that the existing gravel driveway has frequently been overtopped by the 100-year flood has been confirmed by abutters, whose property overlooks the lot and who has lived at that locus since 1992. a period which has encompassed several 100-year rainfall events which have had a tendency to occur more frequently.
- E. The published FEMA Flood Plain Elevation for areas adjacent to Danforth Brook are considered special flood hazard areas. The area consists of 1% annual flood with a base elevation of 310 and Regulatory Floodways.

V. Resource Area Impacts and Significance

A. Adjacent Upland Resource Area (Town of Bolton Wetland Bylaw Chapter 233 Regulations Section 3.02):

1. Adjacent Upland Resource Area (AURA) is presumed to be significant to protect private and/or public water supplies; protect groundwater; protect water quality; protect fisheries; protect wildlife habitat; preserve rare species habitat including rare plant species; provide flood control; prevent storm damage; prevent pollution and sedimentation; provide natural resource services and public services, and are best left in an undisturbed and natural state.
2. The original submittal does not address the exact alterations to the AURA, yet totals the amount of alteration to the adjacent upland resource area in the amount of 12,913 square feet, and the amount of BLSF to be altered in the amount of 4,607 square feet. It does total the amount of riverfront area specific to the driveway improvements to be altered in the amount of 543 square feet. The NOI does not establish the amount of riverfront area already altered on the property of 21 Century mill road to establish the allowable threshold. The application states "this project consists of a single-family house and as such is exempt from MassDEP Stormwater Management Standards". Through the documentation of the public hearing process the commission became aware that this is a common driveway proposal not a single-family home driveway as previously established in the NOI submittal.
3. The final submittal offered the opinion that the work is only a single-family home, septic, well and associated grading and requests alteration to only the 100' buffer zone and riverfront area.
4. *The Commission finds that applicant has not overcome the presumption that this Adjacent Upland Resource Area is significant to the interests in the Wetlands Protection Act and Town of Bolton Wetlands Protection Bylaw. Based on the presumption, the Conservation Commission concludes that the Adjacent Upland Resource Area and 100' Buffer Zone is significant to and plays a role in contributing to the interests of the Act and Bylaw.*
5. *The Commission finds, that the unpermitted excavation of material impacted the extent of bordering land subject to flooding and AURA.*

6. *The Commission finds that the two depressional areas and the excavation of material is in violation of the Wetlands Bylaw. A calculation of the amount of alteration was not provided by the applicant.*

C. Bordering Land Subject to Flooding (310 CMR 10.57)

1. Bordering Land Subject to Flooding (hereinafter "BLSF") is presumed to be significant to flood control and storm damage prevention (310 CMR 10.57(1)).
2. Bordering Lands Subject to Flooding or Inundation by Ground Water or Surface Water. The Bolton Conservation Commission presumes that whenever work or an activity is proposed in Lands Subject to Flooding or Inundation by Ground Water or Surface Water that Such areas are likely to be significant to flood control, public and private water supplies, groundwater, water quality, storm damage prevention, prevention of pollution and sedimentation, fisheries, wildlife habitat, rare species habitat including rare plant species, agriculture, aquaculture, adjoining land areas and recreation. Isolated Lands Subject to Flooding or Inundation by Ground Water or Surface Water. The Bolton Conservation Commission presumes that whenever work or an activity is proposed in Lands Subject to Flooding or Inundation by Ground Water or Surface Water that Such areas are likely to be significant to flood control, public and private water supplies, groundwater, water quality, storm damage prevention, prevention of pollution and sedimentation, wildlife habitat, rare species habitat including rare plant species, agriculture, aquaculture, adjoining land areas and recreation (Chapter 233 and associated Town of Bolton Wetland Bylaw regulations)
3. The original submittal does not directly address the BLSF lost. The original plans dated June 21, 2018 show a split rail fence, at least three drainage swales within the BLSF. No BLSF alteration is identified in the Notice of Intent document outside of the submitted plans. The engineered plan contained in the original submittal identifies over 125 linear feet of alteration to BLSF, this does not include all alterations. No compensatory flood storage is provided on this set of plans. The Commission and the applicant agreed after the first hearing that there was additional information necessary to submit inclusive of a drainage and/or storm water report.
4. The final submittal identifies the "drainage study area is limited to the extents of the proposed common driveway construction and contains the existing gravel driveway serving the house plus the extents of proposed common driveway improvements". This does not include the total project area of the driveways to the other proposed single-family home structures under other filings and drainage or stormwater impacts.
5. This final submittal does not identify the depressional areas as a special flood hazard area.
6. *The Commission finds that additional BLSF is likely to be altered by the proposed alterations inclusive of grass swales, driveway surface and removal of trees. A calculation of the amount of additional alteration to the BLSF was not provided by the applicant.*
7. *The Commission finds that applicant has not overcome the presumption that the BLSF on the site is significant to the interests in the Wetlands Protection Act and Town of Bolton Wetland Bylaw. Based on the presumption, the Conservation Commission concludes that the BLSF is significant to and plays a role in contributing to the interests of the Act and Bylaw.*

VI. Compliance with Performance Standards and Policies

A. Wetland Protection Act and Regulations

1. The original submittal claims that the work is permissible as a single-family home project under 310 CMR 10.53 (3)(i) as maintenance repair and improvement of a structure although the NOI does not identify that this project is eligible to be considered a limited project. The applicant claims that "this project consists of a single-family house and as such is exempt from MassDEP Stormwater Management Standards". *The Commission rejects the argument that the project as proposed is a single-family home driveway improvement. The referenced section of the regulations excludes the "substantial enlargement" of structures. Photos taken at the site establish the existing roadway maintained as a gravel way is sufficient for the function of access to a single-family home without removal of large diameter trees along the roadway and increased infrastructure within the established protected resource areas.*

2. *The Commission finds that the project is not maintenance of an existing structure.*

3. The resource areas involved with the proposal of the project: Floodplain, Regulatory Floodway, Riverfront Area, and Adjacent Upland Resource Area, Bordering Land Subject to Flooding:
 - a. **Bordering Land Subject to Flooding (BLSF)** – The performance standards for work in BLSF state that "compensatory flood storage shall be provided for all flood storage volume that will be lost as the result of a proposed project within Bordering Land Subject to Flooding, when in the judgment of the issuing authority said loss will cause an increase or will contribute incrementally to an increase in the horizontal extent and level of flood waters during peak flows." The Act contains details about how that compensatory storage is to be designed.

Town of Bolton Wetland Bylaw states "The following performance standards are in addition to those identified in the Massachusetts Wetlands Protection Act regulations 10.57(4)(a) and (b):

- (a) No project shall reduce the ability of the land to absorb and contain floodwaters.
- (b) No project shall displace or direct floodwaters to areas beyond Lands Subject to Flooding or Inundation by Ground Water or Surface Water.
- (c) Compensatory storage shall be provided within the same immediate watershed of the Lands Subject to Flooding or Inundation by Ground Water or Surface Water.
- (d) Projects shall not obstruct floodways within Lands Subject to Flooding or Inundation by Ground Water or Surface Water.
- (e) Any structure permitted in Lands Subject to Flooding or Inundation by Ground Water or Surface Water shall be adequately anchored to prevent floatation, collapse or lateral movement of the structure and shall be designed to equalize hydrostatic flood forces on exterior walls and any mechanical or utility equipment in a structure must be elevated to or above the flood levels of the area.
- (f) Proposed work shall not cause a significant adverse effect or cumulative adverse effect on the interests identified.
- (g) Notwithstanding the above provisions, no project may be permitted which will have any adverse effect on a rare species habitat"

The Commission finds that the project as proposed shall reduce the expanse of lands ability of land to absorb and contain floodwaters.

The Commission finds that this project will displace but not direct floodwaters to areas beyond Lands Subject to Flooding or Inundation by Ground water or Surface water.

The Commission finds that compensatory flood storage shall be provided within the same immediate watershed of the Lands subject to flooding or inundation by ground or surface water.

The Commission finds the project shall obstruct floodways within lands subject to flooding or inundation by groundwater or surface water.

The Commission finds that this subject matter was not properly addressed by the applicant.

The Commission finds that the proposed work shall not cause a significant adverse effect or cumulative adverse effect on the interests identified.

The Commission finds that this project is not within the NHESP survey areas but is adjacent to a Cold Water Fishery.

- i. The Commission finds that although this project is below the threshold where it is likely to result in significant impacts to wildlife habitat; the cumulative project proposed would meet the threshold where it is likely to result in significant impact to wildlife habitat.
 - ii. The Commission finds that the alteration of this area will increase impacts from a 100-year flood and require that careful consideration be given to the loss of flood storage.
 - iii. The Commission finds that no compensatory flood storage has been provided by the applicant.
 - iv. With regard to the additional embankment stabilization work proposed in the final submittal (placement of stones at either end of the wall, addition of loam and plantings on the embankment), the Commission lacks sufficient information on the extent of and impact of this work on BLSF as the calculations which were provided by the applicant are limited to a single family home driveway improvement verses the entirety of the common driveway project inclusive of three additional proposed houses.
 - v. The Commission finds that there are alternatives available that could decrease the amount of flood storage being lost from the proposed project.
- b. **Riverfront Area (RFA)** – The performance standards for work in riverfront areas consider proof by the preponderance of evidence that there are no practicable and sustainably equivalent economic alternatives to the proposed project with less adverse effects on the interests identified in MGL c.131 s40 and that the work, including proposed mitigation, will have no significant adverse impact on the riverfront area to protected the interests. Inclusive of protection of other resource areas within the riverfront area, protection of rare species, consideration of practicable and sustainably equivalent economic alternatives, and no significant adverse impacts.
- i. The Commission finds that the cumulative common driveway project/subdivision would require a wildlife habitat evaluation.
 - ii. The Commission finds that this project does not include mitigation measures sufficient to overcome the presumption for riverfront areas as established above.

B. Town of Bolton Wetland Bylaw (Chapter 233 and associated regulations)

1. In addition to the interests in the Wetlands Protection Act, the Town of Bolton Wetland Bylaw identifies additional interests to be protected including wildlife and recreation. The Bylaw also regulates lands within 100' of Bordering Land Subject to Flooding and lands bordering on or within 100' of the 100-year flood elevation.
2. Performance Standards established under the Town of Bolton Wetlands Bylaw Regulations Chapter 233 Regulations 3.0(1)(b) Performance Standards states "The Commission Shall not permit any activity, other than the maintenance of an already existing structure, that will result in building within or upon, removing, filling or otherwise altering a resource area...". The Commission finds the project as proposed is the proposal for construction (or permitting) of a common driveway in all intents and purposes not for a single-family home. The Notice of Intent filing fee for the project is also inconsistent with such interpretation, identifying the project other than its original "Single Family Home".

3. *The Commission finds that the proposed project will alter Adjacent Upland Resource Area, Land Subject to Flooding and lands within 100' of these areas as defined in the Bylaw and Regulations. The Commission finds that for the reasons stated above, the project is also not in compliance with the Town of Bolton Wetland Bylaw and Regulations and the performance standards contained in "Part Three: Performance Standards for the Areas Protected Under the Bylaw" of the Regulations.*
4. 3.05(3) Performance standards of Bordering lands Subject to Flooding or Inundation by Groundwater or Surface water of the Bolton Wetland Bylaw Regulations requires that projects shall not obstruct floodways within lands subject to flooding or inundation by ground water or surface water. The Regulations also contain specific design standards for compensatory flood storage that are more stringent than those in the Wetlands Protection Act and Regulations. For these reasons and those established above, *The Commission finds that the project does not meet these performance standards of the Town of Bolton Wetlands Protection Regulations for impacts to Bordering lands Subject to Flooding or Inundation by Groundwater or Surface water.*
5. Section 2.06(2)(e)3.a. of the Town of Bolton Wetland Bylaw Regulations provide that "The Commission shall prohibit any work or any portion thereof that cannot be conditioned to meet the applicable Performance Standards or has not overcome the presumptions of the Bylaw. b. if the commission finds that the information submitted by the applicant is not sufficient to described the site, the work, or the effect of the work on the interests identified in the Bylaw, it may issue a bylaw order prohibiting the work. The information lacking is stated within this document above. C. if the commission finds that the project in its entirety cannot be conditioned to meet the applicable performance standards, the commission shall issue a bylaw order denial.

C. Policies and Past Precedent

1. The Commission has consistently requested that no alteration to resource areas take place. Had the applicant applied for an Order of Conditions or a Request for Determination of Applicability prior to the excavation of material and access created within a protected resource area, the Commission would almost certainly have required project modifications that would have significantly reduced or eliminated the extent of work carried out. The Commission would have also been notified of the material being removed and therefore able to properly assess the unpermitted work carried out in 2016.
2. During the public hearing process for this project, the Commission and/or its staff requested, in writing and at meetings, on at least a dozen occasions between August 2018 and the close of the public hearing that the applicant present evidence of the material excavated, and fill added to the area specific to the unpermitted work and the relatively recent communicated project goal to reduce impacts to resource areas. Specific alternatives requested for evaluation including images, receipts, and material accounts. *The Commission finds that it is reasonable and appropriate for the applicant to take measures to protect the impacted resource areas, in compliance with the Act and Bylaw. The Commission also finds that this area is now included in another filing with the Conservation Commission for a proposed project to build a single-family home structure, well, septic system and associated grading. The record indicates that the the Conservation Commission requested information to establish what was removed from the resource area without a permit and why this was not addressed by the applicant with the Conservation Commission in 2016.*
3. *the Commission finds that the assessment by the applicant of alternatives to reduce impact on resource areas protected by the Act and Bylaw is inadequate, as noted above, and that measures are available*

that would accomplish the project purpose without the adverse impact on resource areas protected by the Act and Bylaw that are presented by the project as constructed and as proposed for expansion.

4. *The Commission finds that the impacts of the proposed project, if permitted, while relatively small at the single lot level, would set a precedent for development within protected resource areas on other lots that would result in unacceptable cumulative impacts to resource areas projected by the Act and Bylaw.*
5. *At the 12/4/18 public hearing, it was suggested that it was likely that the unpermitted work within jurisdictional areas beyond that as established on the 2017 ORAD which the applicant and his employees carried out the wetland delineation on the property. The applicant presented verbal recollection of what was removed and brought into the areas in question. The Commission makes no finding at this time with regard to whether the unpermitted work of 2016 was carried out in other resource areas aside from the confirmed Adjacent Upland Resource Area. The Commission finds that this area is presumed significant and the applicant has not provided significant information to overcome the presumption.*

VII. Conclusions and Decision

- A. *The Commission finds that the applicant has failed to overcome the presumption that the resource areas are significant to one more interest of the Wetlands Protection Act and Town of Bolton Wetland Bylaw and that the performance standards have been met. Under its authority provided in 310 CMR 10.05(6)(b), the Commission may issue an Order of Conditions that prohibits any work that cannot be conditioned to meet the performance standards set forth in the regulations at 310 CMR 10.21 through 10.60. Similarly, under Part "Two Procedures: Work Prohibition and Bylaw Order Denial" and "Part Three: Performance Standards for areas protected under the bylaw" of the Bolton Wetland Bylaw Regulations, the Commission may deny approval if the applicant did not demonstrate that the interests of the Bylaw could be protected in a manner consistent with these regulations and if the proposed safeguards are inadequate to protect the interests of the Bylaw.*
- B. *The Commission finds that the applicant has not met their burden of proof under Chapter 233-3 of the Bylaw Bolton Wetlands Bylaw Regulations to prove by a preponderance of the credible evidence that the work proposed in the application will contribute to the interests protected by this Bylaw and comply with the performance standards established by the regulations, or that the affected areas are not significant to the protection of any of the interests of the Bylaw. The Bylaw states that "where the presumption set forth is not overcome...the applicant shall prove that the work, including proposed mitigation will have no significant adverse or cumulative adverse effect on the resource areas or resource interests. If the Commission finds that the applicant has failed to make either of said proofs, it shall...in a written determination deny the activity as it cannot be conditioned to protect the interests of this bylaw and/or its regulations."*
- C. *The Commission finds that it lacks sufficient information with regard to impacts of the unpermitted work, as well as there is no proposed mitigation as required under the Wetland Bylaw, from the applicant. The Commission also lacks sufficient information on alternatives that would avoid or minimize impacts to resource areas. In accordance with 310 CMR 10.05(6)(c), "if the conservation commission finds that the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act, M.G.L.c.131, Section 40..., it may issue an Order prohibiting the work." Similarly, the Town of Bolton Wetland Protection Bylaw regulations provide in "Part Two: Procedures" if the Commission finds that the "The Commission that the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Bylaw, it may issue a Bylaw Order prohibiting the work."*

- D. *For the reasons stated above, the Commission hereby denies the work proposed in this application under the Massachusetts Wetlands Protection Act and the Town of Bolton Wetland Bylaw.*
- E. *The Commission further finds that the unpermitted excavation and fill within the Adjacent Upland Resource Area are an ongoing violation of the Town of Bolton Wetland Bylaw and undetermined as a Wetland Protection Act violation. The Commission presumes the two depressional areas reviewed for potential vernal pool characteristics, as special flood hazard areas contributing to the overall Bordering lands Subject to Flooding or Inundation by Groundwater or Surface water on site with their performance standards as established in the Town of Bolton Wetland Bylaw.*
- F. This decision is binding on the applicant/owner and his successors in title, "Any person who purchases, inherits or otherwise acquires real estate upon which work has been done in violation of the provisions of this bylaw or in violation of any permit issued pursuant to this bylaw shall forthwith comply with any such order to restore such land to its condition prior to any such violation."
- G. This decision shall be recorded in the Worcester Registry of Deeds within 30 days of issuance. If the applicant fails to record, the Commission may record the Order at the applicant's expense.



Massachusetts Department of Environmental Protection

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Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 - Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File #:112-0671
eDEP Transaction #:1141587
City/Town:BOLTON

A. General Information

1. Conservation Commission BOLTON
2. Issuance a. OOC b. Amended OOC

3. Applicant Details

a. First Name _____ b. Last Name _____
c. Organization 21 CENTURY MILL LLC
d. Mailing Address 291 MAIN STREET, SUITE 8
e. City/Town NORTHBOROUGH f. State MA g. Zip Code 01532

4. Property Owner

a. First Name _____ b. Last Name _____
c. Organization _____
d. Mailing Address _____
e. City/Town _____ f. State _____ g. Zip Code _____

5. Project Location

a. Street Address 21 CENTURY MILL ROAD, LOT 4
b. City/Town BOLTON c. Zip Code 01740
d. Assessors Map/Plat# 3D e. Parcel/Lot# 32
f. Latitude 42.41791N g. Longitude 71.58533W

6. Property recorded at the Registry of Deed for:

a. County	b. Certificate	c. Book	d. Page
WORCESTER		16823	400

7. Dates

a. Date NOI Filed : 9/10/2018 b. Date Public Hearing Closed: 9/17/2019 c. Date Of Issuance: 10/1/2019

8. Final Approved Plans and Other Documents

a. Plan Title:	b. Plan Prepared by:	c. Plan Signed/Stamped by:	d. Revised Final Date:	e. Scale:
COMMON DRIVEWAY PLAN AND PROFILE LOTS 1-4 CENTURY MILL ROAD, BOLTON MASSACHUSETTS ASSESSORS MAP 3D PARCEL 32	FORESITE ENGINEERING	SCOTT PHAYES	July 30th 2019	1"=40'

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act

Following the review of the the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is

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significant to the following interests of the Wetlands Protection Act.

Check all that apply:

a. <input checked="" type="checkbox"/> Public Water Supply	b. <input type="checkbox"/> Land Containing Shellfish	c. <input checked="" type="checkbox"/> Prevention of Pollution
d. <input checked="" type="checkbox"/> Private Water Supply	e. <input checked="" type="checkbox"/> Fisheries	f. <input checked="" type="checkbox"/> Protection of Wildlife Habitat
g. <input checked="" type="checkbox"/> Ground Water Supply	h. <input checked="" type="checkbox"/> Storm Damage Prevention	i. <input checked="" type="checkbox"/> Flood Control

2. Commission hereby finds the project, as proposed, is:

Approved subject to:

a. The following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.

Denied because:

b. The proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**

c. The information submitted by the applicant is not sufficient to describe the site, the work or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**

3. Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310CMR10.02(1)(a).

a. linear feet

Inland Resource Area Impacts:(For Approvals Only):

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	<u> </u> a. linear feet	<u> </u> b. linear feet	<u> </u> c. linear feet	<u> </u> d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
6. <input type="checkbox"/> Land under Waterbodies and Waterways	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
	<u> </u> e. c/y dredged	<u> </u> f. c/y dredged		
7. <input checked="" type="checkbox"/> Bordering Land Subject to Flooding	3322 <u> </u> a. square feet	0 <u> </u> b. square feet	701 <u> </u> c. square feet	701 <u> </u> d. square feet

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Cubic Feet Flood Storage	<u>326</u> e. cubic feet	<u>0</u> f. cubic feet	<u>326</u> g. cubic feet	<u>326</u> h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u>	<u> </u>
Cubic Feet Flood Storage	<u> </u> c. cubic feet	<u> </u> d. cubic feet	<u> </u> e. cubic feet	<u> </u> f. cubic feet
9. <input type="checkbox"/> Riverfront Area	<u> </u> a. total sq. feet	<u> </u> b. total sq. feet		
Sq ft within 100 ft	<u> </u> c. square feet	<u> </u> d. square feet	<u> </u> e. square feet	<u> </u> f. square feet
Sq ft between 100-200 ft	<u> </u> g. square feet	<u> </u> h. square feet	<u> </u> i. square feet	<u> </u> j. square feet

Coastal Resource Area Impacts:

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	<u> </u> a. square feet	<u> </u> b. square feet		
	<u> </u> c. c/y dredged	<u> </u> d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. c/y nourishment	<u> </u> d. c/y nourishment
14. <input type="checkbox"/> Coastal Dunes	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. c/y nourishment	<u> </u> d. c/y nourishment
15. <input type="checkbox"/> Coastal Banks	<u> </u> a. linear feet	<u> </u> b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	<u> </u> a. square feet	<u> </u> b. square feet		
17. <input type="checkbox"/> Salt Marshes	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	<u> </u> a. square feet	<u> </u> b. square feet		
	<u> </u> c. c/y dredged	<u> </u> d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
20. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			

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21. Land Subject to Coastal Storm Flowage

c. c/y dredged d. c/y dredged

a. square feet b. square feet

22.

Restoration/Enhancement (For Approvals Only)

If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c & d or B.17.c & d above, please entered the additional amount here.

a. square feet of BVW

b. square feet of Salt Marsh

23.

Streams Crossing(s)

If the project involves Stream Crossings, please enter the number of new stream crossings/number of replacement stream crossings.

a. number of new stream crossings

b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. the work is a maintenance dredging project as provided for in the Act; or
 - b. the time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order.
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not exceed the issuance date of the original Final Order of Conditions.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.
8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under

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the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work..

10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

" Massachusetts Department of Environmental Protection"
[or 'MassDEP']
File Number : "112-0671"

11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before Mass DEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.
17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.

NOTICE OF STORMWATER CONTROL AND MAINTENANCE REQUIREMENTS

19. The work associated with this Order (the "Project") is (1) is not (2) subject to the Massachusetts Stormwater Standards. If the work is subject to Stormwater Standards, then the project is subject to the following conditions;
- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollutant Discharge Elimination System Construction General Permit as required by Stormwater Standard 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a

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- Registered Professional Engineer provides a Certification that: *i.* all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures; *ii.* as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized; *iii.* any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10; *iv.* all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition; *v.* any vegetation associated with post-construction BMPs is suitably established to withstand erosion.
- c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 19(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following: *i.*) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and *ii.*) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.
- d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollutant Discharge Elimination System Multi-Sector General Permit.
- e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 19(f) through 19(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 19(f) through 19(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.
- f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.
- g) The responsible party shall:
1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in

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the O&M Plan approved by the issuing authority.

- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions:

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? Yes No

2. The Conservation Commission hereby (check one that applies):

a. DENIES the proposed work which cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw specifically:

1. Municipal Ordinance or Bylaw TOWN OF BOLTON WETLAND BYLAW

2. Citation CHAPTER 233

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order or Conditions is issued. Which are necessary to comply with a municipal ordinance or bylaw:

b. APPROVES the proposed work, subject to the following additional conditions.

1. Municipal Ordinance or _____
Bylaw

2. Citation _____

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows:
SEE ATTACHED DECISION REGARDING DEPFILE #112-0671.

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E. Signatures

This Order is valid for three years from the date of issuance, unless otherwise specified pursuant to General Condition #4. If this is an Amended Order of Conditions, the Amended Order expires on the same date as the original Order of Conditions.

10/1/2019

1. Date of Original Order

Please indicate the number of members who will sign this form. This Order must be signed by a majority of the Conservation Commission.

4

2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

Jeffrey Boyer

K. M. Maramba
L. M. Payne

by hand delivery on

by certified mail, return receipt requested, on

Date

Date

October 3rd 2019

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

Scott Goddard, 21 Century Mill LLC
21 Century Mill Road, 3.D-32
DENIAL ORDER OF CONDITIONS
Massachusetts Wetlands Protection Act & Regulations
Town of Bolton Wetlands Protection Bylaw & Regulations
Lot 4, DEP File #112-0671

I. List of Submittals for the Record

From the Applicant:

- A. Original Notice of Intent and supporting materials received July 25th 2018 with Narrative from Sam Larabee of Goddard Consulting LLC and Original Submittal Plan: *"Common Driveway Plan and Profile prepared, signed, and stamped by Scott Hayes P.E., P.L.S., Dated 6/21/2018 with a scale of 1" = 40'.*
- B. Supplemental Submittal received September 25th 2018 submitted by Scott Goddard of Goddard Consulting LLC, and 21 Century Mill, LLC. Inclusive of drainage report and proposed tree removals for driveway.
- C. Final Submittal received August 5th 2019, with narrative from Scott Goddard including Final Submittal Plans: *"Common Driveway Plan and Profile Lots 1-4 Century Mill Road, Bolton Massachusetts Assessors Map 3D Parcel 32" prepared for 21 Century Mill LLC, signed and stamped by Scott Hayes P.E., P.L.S., Dated 6/21/2018 with a scale of 1" = 40' Revision Date July 30th 2019."*
- D. All application materials, photos, meeting minutes, correspondence and Orders associated with the record of DEP#112-0666, 21 Century Mill road.
- E. Public Hearing continuations dated September 18th 2018, October 2nd 2018, October 16th 2018, November 6th 2018, December 12th 2018 (request for continuance until April Meeting of the Conservation Commission), April 2nd 2019, May 7th 2019, May 21st 2019, June 4th 2019, June 18th 2019, July 9th 2019, August 6th 2019, and September 3rd 2019.

From Staff:

- K. ANRAD Process Staff Report October 17th, 2017
- L. National Flood Hazard Layer Firmette.
- M. Map of Coldwater Fisheries in the Town of Bolton
- N. Maps establishing local interests
- O. Map showing overlay establishing two potential vernal pools
- P. Report submittal by Matt Burne regarding assessment of two depressional areas specific to vernal pools
- Q. Email to applicant re alternatives analysis and team dated October 18th 2018 and response
- R. Submittal of material regarding violation from abutting resident
- S. Decision from Planning Board regarding ANR plan.
- T. Deed for 21 Century Mill Road.
- U. Email to applicant regarding follow up from October 2nd 2018 hearing requesting information dated October 15th 2018 and response.

II. Background and Procedural History

The applicant/owner, Scott Goddard, Principal of Goddard Consulting and PWS (hereinafter "Scott") filed a Notice of Intent pursuant to the Wetlands Protection Act and Town of Bolton Wetlands Bylaw Chapter 233 for certain work as "21 Century Mill Road Assessor's Map and Parcel 3.D – 32" on September 9th 2018. This work included widening and paving of an existing gravel driveway to an existing single-family home. The work proposing the construction of a single-family home, with associated well, septic system and grading. Since the

filing of the NOI on September 9th 2018, there has been an ANR approved by the Town of Bolton Planning Board with a revision date of October 8th 2018 associated with the location of the proposed project. There had also been supplemental filings for two additional notice of intents and one request for determination of applicability for what proved to be the same project area, and the same project overall. Now 21 Century Mill Road has a different owner and the parcel currently owned by Scott Goddard's entity is now Assessor's Map 3.D and Parcel 75 (hereinafter "lot"). The Notice of Intent and Order of Conditions identified impact to Adjacent Upland Resource Area, and Bordering Land Subject to Flooding.

No record exists for approval of the excavation of material within jurisdictional resource areas nor record of what was present before removal.



Depressional Areas during unpermitted excavation 2016

There is a history of unpermitted work on the subject lot. Documented in the record via an email from an abutter, Richard Davis on Hudson Road through images of excavation of areas adjacent to and within definitive jurisdictional areas in 2016 and submitted to the Conservation Commission in 2019. The images submitted depict the following: excavation of material from 100' buffer area, disturbance of vegetation in Adjacent Upland Resource Area and isolated areas undetermined as jurisdictional. No Conservation Commission permits were issued for this work.

Beaver infrastructure had been removed without permit or authorization from the Board of Health or Conservation Commission during the public hearing process as well.

During the Abbreviated Notice of Resource Area Delineation process 2017, the Conservation Commission received a telephone complaint about removal of a beaver dam or lodge on site. There was no permit in place for any related work. In response, the Conservation Administrator met with Scott on the lot and viewed the remnants of beaver activity that had been removed. The Conservation Administrator reminded Scott of the necessary requirement to receive an emergency permit from the Board of Health and Conservation Commission for such work. Adjacent Photo shows the beaver activity again establishing itself within the landscape.



Source Conservation Commission, October 17th 2017

During a public meeting of the Conservation Commission the abutter presented the commission with the verbal communication of the violation, specific to excavation of material. The abutter later submitted the images with date stamps from when the violation occurred. The Conservation Administrator requested verbally and via email from Scott, information regarding the work that

took place since he was the owner on record. The Conservation Administrator reminded him that any work within jurisdictional areas or adjacent areas that may adversely impact resource areas needed to be reviewed and approved by the Conservation Commission prior to work being carried out.

There have been few revisions of the submittal aside from the eventual alteration of a pervious driveway, tree removal and reduction of grass swales within the resource area.

III. Notice of Intent Submittal and Public Hearing Review

- A. The Commission opened a duly noticed public hearing on the Notice of Intent for the proposed widening and paving of an existing gravel driveway to a single-family home. The hearing was continued to 8/21/2018, and further continued an additional 16 times at which point the Public Hearing was closed on September 17th 2019. All continuations were assented to by the applicant whether at a public meeting or via email prior to the public meeting. A quorum of the Commission was present at all sessions. Summary was received from the applicant. Members of the public spoke mostly in opposition to the proposed project as there were many inquiries regarding the extent of the project and adverse impacts to resource areas. The Commission requested supplemental information multiple times which was not received in a timely manner. The Commission deliberated at its meetings and voted unanimously to issue the decision on 10/1/2019.
- B. During the public hearing process, it was discovered that the property was sold after the submittal of the Notice of Intent from 21 Century Mill LLC to Jim Geraghty and therefore the applicant/owner/location was listed incorrectly in the application. Jim Geraghty has still not submitted an assent to the filing of the June 25th 2018 Notice of Intent. It was also discovered that the deed explicitly states the new property owner of 21 Century Mill Road (from 21 Century Mill Road, LLC) shall not oppose the owner of (now lot 2) in obtaining subdivision approval from the Town of Bolton.

- C. During the Public Hearing Process, it was discovered there had been an ANR approved by the Town of Bolton Planning Board with a revision date of October 8th 2018 associated with the location of the proposed project. 21 Century Mill Road Map Assessor's 3.D and Parcel 32 is currently owned by Jim Geraghty and the parcel currently owned by 21 Century Mill Road, LLC is now Assessor's Map 3.D and Parcel 75 adjacent to and no longer part of 21 Century Mill Road.
- D. The applicant filed an additional packet of materials on August 5th 2019 (hereinafter "supplemental submittal") which was considered at the Commission's August 21st 2019 public hearing. The supplemental submittal consisted of a revised plan dated July 30th 2019, associated cover letter and storm water report. The Storm Water report stated that the "drainage study area is limited to the extents of the proposed common driveway construction and contains the existing gravel driveway serving the house plus the extents of proposed common driveway improvements". This does not include the total project area of the driveways to the other proposed single-family home structures under other filings and drainage or stormwater impacts.
- E. No additional analysis of alternatives was provided in the supplemental submittal as previously requested by the Conservation Commission. Mitigation measures were also not included within these documents. To date, no mitigation measures appropriate for this proposed project have been proposed or noted.
- F. The Commission requested additional information on this proposal, specific to mitigation measures, alteration of Lot 3 to pull the project outside of the resource areas.
- G. During the May 21st 2019 Public Hearing, the Conservation Commission was informed verbally by Scott that he has direct financial interest in the project; after inquiry from an abutter.
- H. On September 3rd 2019, During the Public Hearing the Commission stated the improvements to the driveway were not necessary unless a common driveway was being proposed. There were still inquiries about an alternative analysis of bringing all of Lot 3 outside of the resource areas, and the area of excavation resulting in violation.
- I. September 17th 2019, the applicant nor a representative was present, there was no supplemental information that had been submitted as requested by the Conservation Commission. No information was submitted at all but more specifically before noon on the Thursday prior to the next public hearing date as required in the Town of Bolton Wetland Bylaw.
- J. The final submittal revision date of July 30th 2019 proposed pervious driveway, tree removal and widening as opposed to the existing gravel drive for the single-family home.
- K. At the final public hearing, the Commission expressed its concern with not receiving information in a timely manner and when there was information submitted, it did not address what was requested of the applicant. The commission during the last public hearing, seeing no new information and no representative of the applicant, closed the public hearing for 21 Century Mill Road regarding the proposed driveway alterations.

IV. Danforth Brook

- A. Danforth Brook is a cold-water fishery whose headwaters begin at Little Pond and flow south East through 21 Century Mill Road and adjacent properties to a property deeded to the Conservation Commission in the Town of Bolton established as a wildlife sanctuary, then continues into Hudson. This waterway constantly experiences beaver activity and other wildlife activity.

- B. The active beavers on the property and throughout Danforth Brook dam construct dams at the pond, as previously mentioned above. The area to the Northwest of the property provides immense wildlife habitat that supports various wildlife inclusive of more beaver activity (beavers are also downstream within and along the brook). The current beaver activity does not pose a threat to existing infrastructure, public health or safety. However, this area (Lot 2) will continuously see impacts from the beavers and other wildlife that inhabit the adjacent properties resulting in flooding of natural floodplain, wetlands, and adjacent land.
- C. The 100-year flood plain extends beyond the banks of Danforth Brook throughout the majority of the property noted on Assessor's Map 3.D and Parcel 75.
- D. The observation that the existing gravel driveway has frequently been overtopped by the 100-year flood has been confirmed by abutters, whose property overlooks the lot and who has lived at that locus since 1992. a period which has encompassed several 100-year rainfall events which have had a tendency to occur more frequently.
- E. The published FEMA Flood Plain Elevation for areas adjacent to Danforth Brook are considered special flood hazard areas. The area consists of 1% annual flood with a base elevation of 310 and Regulatory Floodways.

V. Resource Area Impacts and Significance

A. Adjacent Upland Resource Area (Town of Bolton Wetland Bylaw Chapter 233 Regulations Section 3.02):

1. Adjacent Upland Resource Area (AURA) is presumed to be significant to protect private and/or public water supplies; protect groundwater; protect water quality; protect fisheries; protect wildlife habitat; preserve rare species habitat including rare plant species; provide flood control; prevent storm damage; prevent pollution and sedimentation; provide natural resource services and public services, and are best left in an undisturbed and natural state.
2. The original submittal does not address the exact alterations to the AURA, yet totals the amount of alteration to the adjacent upland resource area in the amount of 19,312 square feet, and the amount of BLSF to be altered in the amount of 3,322 square feet. It does total the amount of riverfront area specific to the driveway improvements to be altered in the amount of 543 square feet. The NOI does not establish the amount of riverfront area already altered on the property of 21 Century mill road to establish the allowable threshold. The application states "this project consists of a single-family house and as such is exempt from MassDEP Stormwater Management Standards". Through the documentation of the public hearing process the commission became aware that this is a common driveway proposal not a single-family home driveway as previously established in the NOI submittal.
3. The final submittal offered the opinion that the work is only within the existing gravel driveway and requests alteration to only the 100' buffer zone and riverfront area.
4. *The Commission finds that applicant has not overcome the presumption that this Adjacent Upland Resource Area is significant to the interests in the Wetlands Protection Act and Town of Bolton Wetlands Protection Bylaw. Based on the presumption, the Conservation Commission concludes that the Adjacent Upland Resource Area and 100' Buffer Zone is significant to and plays a role in contributing to the interests of the Act and Bylaw.*
5. *The Commission finds, that the unpermitted excavation of material impacted the extent of bordering land subject to flooding and AURA.*

6. *The Commission finds that the two depressional areas and the excavation of material is in violation of the Wetlands Bylaw. A calculation of the amount of alteration was not provided by the applicant.*

C. Bordering Land Subject to Flooding (310 CMR 10.57)

1. Bordering Land Subject to Flooding (hereinafter "BLSF") is presumed to be significant to flood control and storm damage prevention (310 CMR 10.57(1)).
2. Bordering Lands Subject to Flooding or Inundation by Ground Water or Surface Water. The Bolton Conservation Commission presumes that whenever work or an activity is proposed in Lands Subject to Flooding or Inundation by Ground Water or Surface Water that Such areas are likely to be significant to flood control, public and private water supplies, groundwater, water quality, storm damage prevention, prevention of pollution and sedimentation, fisheries, wildlife habitat, rare species habitat including rare plant species, agriculture, aquaculture, adjoining land areas and recreation. Isolated Lands Subject to Flooding or Inundation by Ground Water or Surface Water. The Bolton Conservation Commission presumes that whenever work or an activity is proposed in Lands Subject to Flooding or Inundation by Ground Water or Surface Water that Such areas are likely to be significant to flood control, public and private water supplies, groundwater, water quality, storm damage prevention, prevention of pollution and sedimentation, wildlife habitat, rare species habitat including rare plant species, agriculture, aquaculture, adjoining land areas and recreation (Chapter 233 and associated Town of Bolton Wetland Bylaw regulations)
3. The original submittal does not directly address the BLSF lost. The original plans dated June 21, 2018 show a split rail fence, at least three drainage swales within the BLSF. No BLSF alteration is identified in the Notice of Intent document outside of the submitted plans. The engineered plan contained in the original submittal identifies over 125 linear feet of alteration to BLSF, this does not include all alterations. No compensatory flood storage is provided on this set of plans. The Commission and the applicant agreed after the first hearing that there was additional information necessary to submit inclusive of a drainage and/or storm water report.
4. The final submittal identifies the "drainage study area is limited to the extents of the proposed common driveway construction and contains the existing gravel driveway serving the house plus the extents of proposed common driveway improvements". This does not include the total project area of the driveways to the other proposed single-family home structures under other filings and drainage or stormwater impacts.
5. This final submittal does not identify the depressional areas as a special flood hazard area.
6. *The Commission finds that additional BLSF is likely to be altered by the proposed alterations inclusive of grass swales, driveway surface and removal of trees. A calculation of the amount of additional alteration to the BLSF was not provided by the applicant.*
7. *The Commission finds that applicant has not overcome the presumption that the BLSF on the site is significant to the interests in the Wetlands Protection Act and Town of Bolton Wetland Bylaw. Based on the presumption, the Conservation Commission concludes that the BLSF is significant to and plays a role in contributing to the interests of the Act and Bylaw.*

VI. Compliance with Performance Standards and Policies

A. Wetland Protection Act and Regulations

1. The original submittal claims that the work is permissible as a single-family home project under 310 CMR 10.53 (3)(i) as maintenance repair and improvement of a structure although the NOI does not identify that this project is eligible to be considered a limited project. The applicant claims that "this project consists of a single-family house and as such is exempt from MassDEP Stormwater Management Standards". *The Commission rejects the argument that the project as proposed is a single-family home driveway improvement. The referenced section of the regulations excludes the "substantial enlargement" of structures. Photos taken at the site establish the existing roadway maintained as a gravel way is sufficient for the function of access to a single-family home without removal of large diameter trees along the roadway and increased infrastructure within the established protected resource areas.*

2. *The Commission finds that the project is not maintenance of an existing structure.*

3. The resource areas involved with the proposal of the project: Floodplain, Regulatory Floodway, Riverfront Area, and Adjacent Upland Resource Area, Bordering Land Subject to Flooding:
 - a. **Bordering Land Subject to Flooding (BLSF)** – The performance standards for work in BLSF state that "compensatory flood storage shall be provided for all flood storage volume that will be lost as the result of a proposed project within Bordering Land Subject to Flooding, when in the judgment of the issuing authority said loss will cause an increase or will contribute incrementally to an increase in the horizontal extent and level of flood waters during peak flows." The Act contains details about how that compensatory storage is to be designed.

Town of Bolton Wetland Bylaw states "The following performance standards are in addition to those identified in the Massachusetts Wetlands Protection Act regulations 10.57(4)(a) and (b):

- (a) No project shall reduce the ability of the land to absorb and contain floodwaters.
- (b) No project shall displace or direct floodwaters to areas beyond Lands Subject to Flooding or Inundation by Ground Water or Surface Water.
- (c) Compensatory storage shall be provided within the same immediate watershed of the Lands Subject to Flooding or Inundation by Ground Water or Surface Water.
- (d) Projects shall not obstruct floodways within Lands Subject to Flooding or Inundation by Ground Water or Surface Water.
- (e) Any structure permitted in Lands Subject to Flooding or Inundation by Ground Water or Surface Water shall be adequately anchored to prevent floatation, collapse or lateral movement of the structure and shall be designed to equalize hydrostatic flood forces on exterior walls and any mechanical or utility equipment in a structure must be elevated to or above the flood levels of the area.
- (f) Proposed work shall not cause a significant adverse effect or cumulative adverse effect on the interests identified.
- (g) Notwithstanding the above provisions, no project may be permitted which will have any adverse effect on a rare species habitat"

The Commission finds that the project as proposed shall reduce the expanse of lands ability of land to absorb and contain floodwaters.

The Commission finds that this project will displace but not direct floodwaters to areas beyond Lands Subject to Flooding or Inundation by Ground water or Surface water.

The Commission finds that compensatory flood storage shall be provided within the same immediate watershed of the Lands subject to flooding or inundation by ground or surface water.

The Commission finds the project shall obstruct floodways within lands subject to flooding or inundation by groundwater or surface water.

The Commission finds that this subject matter was not properly addressed by the applicant.

The Commission finds that the proposed work shall not cause a significant adverse effect or cumulative adverse effect on the interests identified.

The Commission finds that this project is not within the NHESP survey areas but is adjacent to a Cold Water Fishery.

- i. The Commission finds that although this project is below the threshold where it is likely to result in significant impacts to wildlife habitat; the cumulative project proposed would meet the threshold where it is likely to result in significant impact to wildlife habitat.*
 - ii. The Commission finds that the alteration of this area will increase impacts from a 100-year flood and require that careful consideration be given to the loss of flood storage.*
 - iii. The Commission finds that no compensatory flood storage has been provided by the applicant.*
 - iv. With regard to the additional embankment stabilization work proposed in the final submittal (placement of stones at either end of the wall, addition of loam and plantings on the embankment), the Commission lacks sufficient information on the extent of and impact of this work on BLSF as the calculations which were provided by the applicant are limited to a single family home driveway improvement verses the entirety of the common driveway project inclusive of three additional proposed houses.*
 - v. The Commission finds that there are alternatives available that could decrease the amount of flood storage being lost from the proposed project.*
- b. Riverfront Area (RFA)** – The performance standards for work in riverfront areas consider proof by the preponderance of evidence that there are no practicable and sustainably equivalent economic alternatives to the proposed project with less adverse effects on the interests identified in MGL c.131 s40 and that the work, including proposed mitigation, will have no significant adverse impact on the riverfront area to protected the interests. Inclusive of protection of other resource areas within the riverfront area, protection of rare species, consideration of practicable and sustainably equivalent economic alternatives, and no significant adverse impacts.
- i. The Commission finds that the cumulative common driveway project/subdivision would require a wildlife habitat evaluation.*
 - ii. The Commission finds that this project does not include mitigation measures sufficient to overcome the presumption for riverfront areas as established above.*

B. Town of Bolton Wetland Bylaw (Chapter 233 and associated regulations)

1. In addition to the interests in the Wetlands Protection Act, the Town of Bolton Wetland Bylaw identifies additional interests to be protected including wildlife and recreation. The Bylaw also regulates lands within 100' of Bordering Land Subject to Flooding and lands bordering on or within 100' of the 100-year flood elevation.
2. Performance Standards established under the Town of Bolton Wetlands Bylaw Regulations Chapter 233 Regulations 3.0(1)(b) Performance Standards states "The Commission Shall not permit any activity, other than the maintenance of an already existing structure, that will result in building within or upon, removing, filling or otherwise altering a resource area...". *The Commission finds the project as proposed is the proposal for construction (or permitting) of a common driveway in all intents and purposes not for a single-family home. The Notice of Intent filing fee for the project is also inconsistent with such interpretation, identifying the project other than its original "Single Family Home".*

3. *The Commission finds that the proposed project will alter Adjacent Upland Resource Area, Land Subject to Flooding and lands within 100' of these areas as defined in the Bylaw and Regulations. The Commission finds that for the reasons stated above, the project is also not in compliance with the Town of Bolton Wetland Bylaw and Regulations and the performance standards contained in "Part Three: Performance Standards for the Areas Protected Under the Bylaw" of the Regulations.*
4. 3.05(3) Performance standards of Bordering lands Subject to Flooding or Inundation by Groundwater or Surface water of the Bolton Wetland Bylaw Regulations requires that projects shall not obstruct floodways within lands subject to flooding or inundation by ground water or surface water. The Regulations also contain specific design standards for compensatory flood storage that are more stringent than those in the Wetlands Protection Act and Regulations. For these reasons and those established above, *The Commission finds that the project does not meet these performance standards of the Town of Bolton Wetlands Protection Regulations for impacts to Bordering lands Subject to Flooding or Inundation by Groundwater or Surface water.*
5. Section 2.06(2)(e)3.a. of the Town of Bolton Wetland Bylaw Regulations provide that "The Commission shall prohibit any work or any portion thereof that cannot be conditioned to meet the applicable Performance Standards or has not overcome the presumptions of the Bylaw. b. if the commission finds that the information submitted by the applicant is not sufficient to described the site, the work, or the effect of the work on the interests identified in the Bylaw, it may issue a bylaw order prohibiting the work. The information lacking is stated within this document above. C. if the commission finds that the project in its entirety cannot be conditioned to meet the applicable performance standards, the commission shall issue a bylaw order denial.

C. Policies and Past Precedent

1. The Commission has consistently requested that no alteration to resource areas take place. Had the applicant applied for an Order of Conditions or a Request for Determination of Applicability prior to the excavation of material and access created within a protected resource area, the Commission would almost certainly have required project modifications that would have significantly reduced or eliminated the extent of work carried out. The Commission would have also been notified of the material being removed and therefore able to properly assess the unpermitted work carried out in 2016.
2. During the public hearing process for this project, the Commission and/or its staff requested, in writing and at meetings, on at least a dozen occasions between August 2018 and the close of the public hearing that the applicant present evidence of the material excavated, and fill added to the area specific to the unpermitted work and the relatively recent communicated project goal to reduce impacts to resource areas. Specific alternatives requested for evaluation including images, receipts, and material accounts. *The Commission finds that it is reasonable and appropriate for the applicant to take measures to protect the impacted resource areas, in compliance with the Act and Bylaw. The Commission also finds that this area is now included in another filing with the Conservation Commission for a proposed project to build a single-family home structure, well, septic system and associated grading. The record indicates that the the Conservation Commission requested information to establish what was removed from the resource area without a permit and why this was not addressed by the applicant with the Conservation Commission in 2016.*

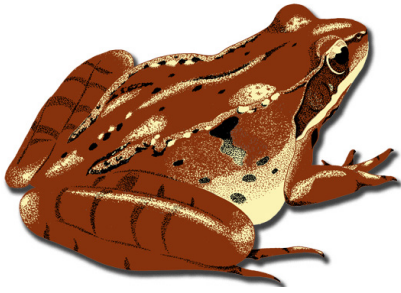
3. *the Commission finds that the assessment by the applicant of alternatives to reduce impact on resource areas protected by the Act and Bylaw is inadequate, as noted above, and that measures are available that would accomplish the project purpose without the adverse impact on resource areas protected by the Act and Bylaw that are presented by the project as constructed and as proposed for expansion.*
4. *The Commission finds that the impacts of the proposed project, if permitted, while relatively small at the single lot level, would set a precedent for development within protected resource areas on other lots that would result in unacceptable cumulative impacts to resource areas projected by the Act and Bylaw.*
5. *At the 12/4/18 public hearing, it was suggested that it was likely that the unpermitted work within jurisdictional areas beyond that as established on the 2017 ORAD which the applicant and his employees carried out the wetland delineation on the property. The applicant presented verbal recollection of what was removed and brought into the areas in question. The Commission makes no finding at this time with regard to whether the unpermitted work of 2016 was carried out in other resource areas aside from the confirmed Adjacent Upland Resource Area. The Commission finds that this area is presumed significant and the applicant has not provided significant information to overcome the presumption.*

VII. Conclusions and Decision

- A. *The Commission finds that the applicant has failed to overcome the presumption that the resource areas are significant to one more interest of the Wetlands Protection Act and Town of Bolton Wetland Bylaw and that the performance standards have been met. Under its authority provided in 310 CMR 10.05(6)(b), the Commission may issue an Order of Conditions that prohibits any work that cannot be conditioned to meet the performance standards set forth in the regulations at 310 CMR 10.21 through 10.60. Similarly, under Part "Two Procedures: Work Prohibition and Bylaw Order Denial" and "Part Three: Performance Standards for areas protected under the bylaw" of the Bolton Wetland Bylaw Regulations, the Commission may deny approval if the applicant did not demonstrate that the interests of the Bylaw could be protected in a manner consistent with these regulations and if the proposed safeguards are inadequate to protect the interests of the Bylaw.*
- B. *The Commission finds that the applicant has not met their burden of proof under Chapter 233-3 of the Bylaw Bolton Wetlands Bylaw Regulations to prove by a preponderance of the credible evidence that the work proposed in the application will contribute to the interests protected by this Bylaw and comply with the performance standards established by the regulations, or that the affected areas are not significant to the protection of any of the interests of the Bylaw. The Bylaw states that "where the presumption set forth is not overcome...the applicant shall prove that the work, including proposed mitigation will have no significant adverse or cumulative adverse effect on the resource areas or resource interests. If the Commission finds that the applicant has failed to make either of said proofs, it shall...in a written determination deny the activity as it cannot be conditioned to protect the interests of this bylaw and/or its regulations."*
- C. *The Commission finds that it lacks sufficient information with regard to impacts of the unpermitted work, as well as there is no proposed mitigation as required under the Wetland Bylaw, from the applicant. The Commission also lacks sufficient information on alternatives that would avoid or minimize impacts to resource areas. In accordance with 310 CMR 10.05(6)(c), "if the conservation commission finds that the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act, M.G.L.c.131, Section 40..., it may issue an Order prohibiting the work." Similarly, the Town of Bolton Wetland Protection Bylaw regulations provide in "Part Two: Procedures" if the Commission finds that the "The Commission that the information submitted by*

the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Bylaw, it may issue a Bylaw Order prohibiting the work."

- D. *For the reasons stated above, the Commission hereby denies the work proposed in this application under the Massachusetts Wetlands Protection Act and the Town of Bolton Wetland Bylaw.*
- E. *The Commission further finds that the unpermitted excavation and fill within the Adjacent Upland Resource Area are an ongoing violation of the Town of Bolton Wetland Bylaw and undetermined as a Wetland Protection Act violation. The Commission presumes the two depressional areas reviewed for potential vernal pool characteristics, as special flood hazard areas contributing to the overall Bordering lands Subject to Flooding or Inundation by Grounder water or Surface water on site with their performance standards as established in the Town of Bolton Wetland Bylaw.*
- F. This decision is binding on the applicant/owner and his successors in title, "Any person who purchases, inherits or otherwise acquires real estate upon which work has been done in violation of the provisions of this bylaw or in violation of any permit issued pursuant to this bylaw shall forthwith comply with any such order to restore such land to its condition prior to any such violation."
- G. This decision shall be recorded in the Worcester Registry of Deeds within 30 days of issuance. If the applicant fails to record, the Commission may record the Order at the applicant's expense.



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Rebecca Longvall
Conservation Agent
Town of Bolton
663 Main Street
Bolton, MA 01740

Date: June 17, 2019

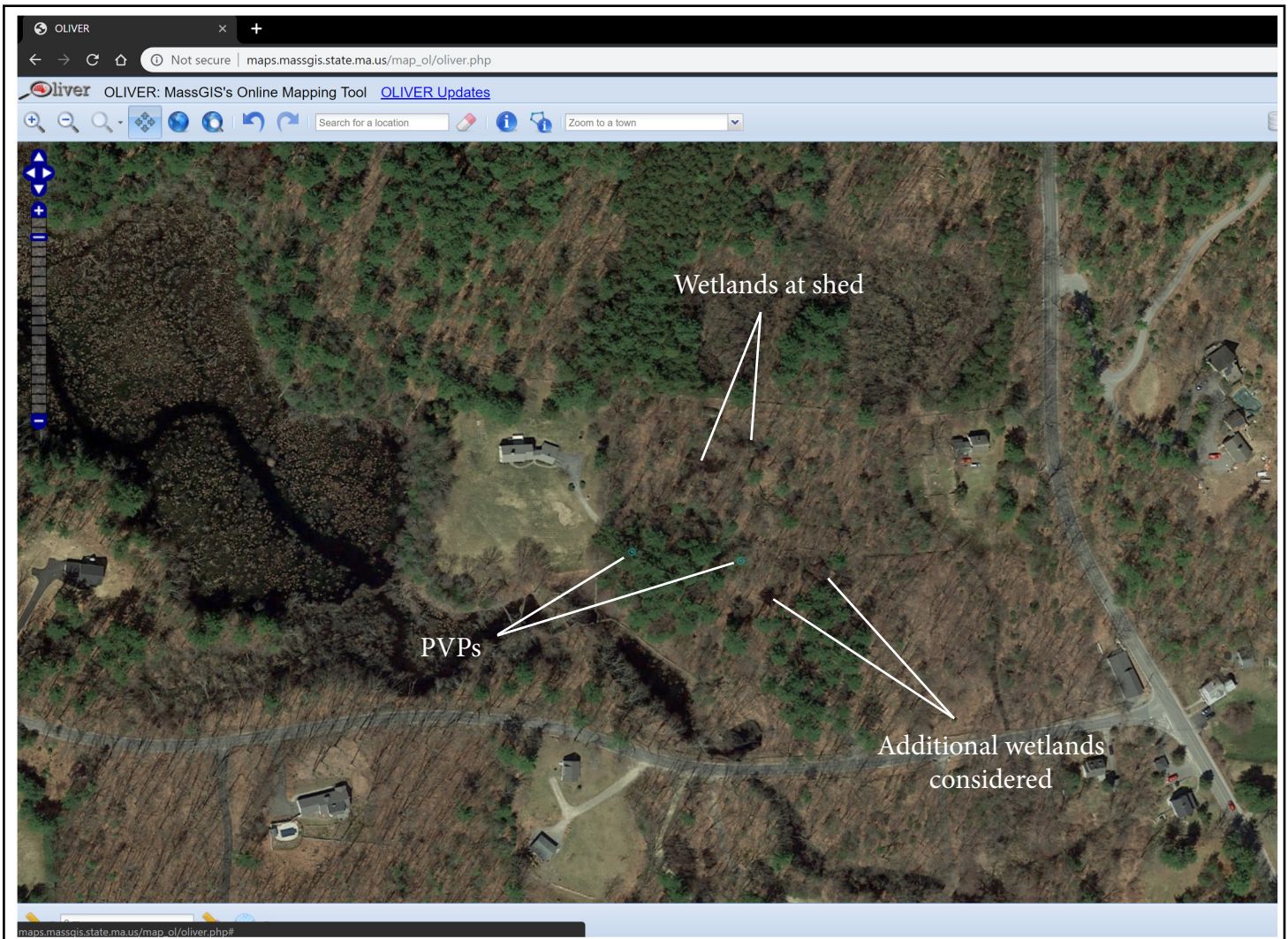
Job: 19-0530
Potential Vernal Pool Evaluation 21 Century
Mill Road

Dear Ms. Longvall,

It was a pleasure to see you on June 6 at 21 Century Mill Road with two members of your Commission and Mr. Goddard. As I understand the situation for which you've engaged my help, the land owner has done some work in the wetland features south of, and adjacent to the existing shed, and there is concern that this may have caused vernal pool habitat to be altered to the point of ceasing to provide wildlife habitat function. I am approaching the evaluation of this site with the goal of giving you an opinion on whether these wetlands are likely to have functioned as vernal pool habitat prior to any work that was done in and adjacent to the wetlands, circa 2016.

In reviewing the maps to prepare for our site visit, I found it rather difficult to determine what the two Potential Vernal Pool loci in the MassGIS data represent. There are no clearly discernable wet depressions on the aerial photographs at the indicated points. In evaluating the whole site, there do appear to be wetland features that may have been the feature intended for marking as PVPs, including the Additional Wetlands Considered, shown on the map on the following page, and what may actually be an evergreen tree shadow, which is a fairly common source of commission across the Potential Vernal Pool data. I'll say that I'm biased against finding errors in those data, having actually performed the Potential Vernal Pool survey in 2001, but will readily admit that the data are not perfect.

The two wetlands of particular concern on this site, south of the existing shed, do not have a strong signature on the aerial photograph, though it's not out the question that they were picked up in the photo-interpretation, because stereo photo pairs were used and they show site topography well. It is therefore not clear that these depressions were picked up as the indicated Potential Vernal Pools, though it's not out of the question that they were.



Current MassGIS Google Orthoimage of project site, MassGIS OLIVER

Our site visit began with a walk into the eastern of two basins immediately adjacent to the existing shed. There was indication of flooding in the basin, and leaf staining that showed water present for extended periods, though no standing water was present at the time of our visit. As we visited in early June and we have had a notably wet spring, my opinion is that the basin does not function as vernal pool habitat, a point on which we all agree. The second, western-most, basin was similar to the first.

The question, then, is whether work done within the last couple of years had the effect of altering the hydroperiod of these basins, resulting in the relative lack of water that we saw on our site visit. Though this is certainly speculative, my opinion is that it is unlikely to be the case that enough fill was placed to raise the basin profile enough to significantly alter the hydroperiod of these basins. I believe that it would have taken rather a lot of fill to accomplish that, and that the basins would therefore have been much more obvious on earlier aerial photographs. I did consult the 2001 aerial photos in the MassGIS, which are the photo series actually used for the Potential Vernal Pool Survey, and did not see features that were markedly different from the current orthoimage above.

The other thing that strikes me about the basins is the density and species richness of wetland plants growing in throughout. I have a hard time imagining that all of the plants growing in the basin would have been able to establish in just a couple of growing seasons if a large quantity of fill had been placed to dramatically alter the basin depth to the point where a functional vernal pool's hydroperiod could be altered in such a fashion.

We discussed the likelihood that these basins were created by gravel extraction in the past. My sense (again, speculative) is that these basins were dug rather near the typical high water mark for the groundwater table, and that they express standing water when groundwater is high and likely respond to relatively minor fluctuation in groundwater levels.

While on site, we also visited the two flagged wetlands indicated as "Additional wetlands considered" in the photo on page 2. Similar to the depressions at the shed, these are wet enough to be picked up as wetlands, but do not have the hydrology to support vernal pool breeding amphibians. It is possible that these were the features picked up in the Potential Vernal Pool data, and that they simply fail to meet the hydrological criteria for functioning as vernal pool habitat.

The property at 21 Century Mill Road has several wetland features that have vernal pool-like characteristics, but that do not appear to meet the hydrological criteria of the Vernal Pool Certification Guidelines.

I hope that I have provided you with an adequate evaluation of the situation on which you are seeking input. If there are additional questions or points that you would like me to address in this review, please let me know.

Thank you very much for this opportunity to help the Bolton Conservation Commission with an evaluation of an unusual situation, and if there are other projects on which I can provide assistance, please don't hesitate to contact me.

Sincerely,

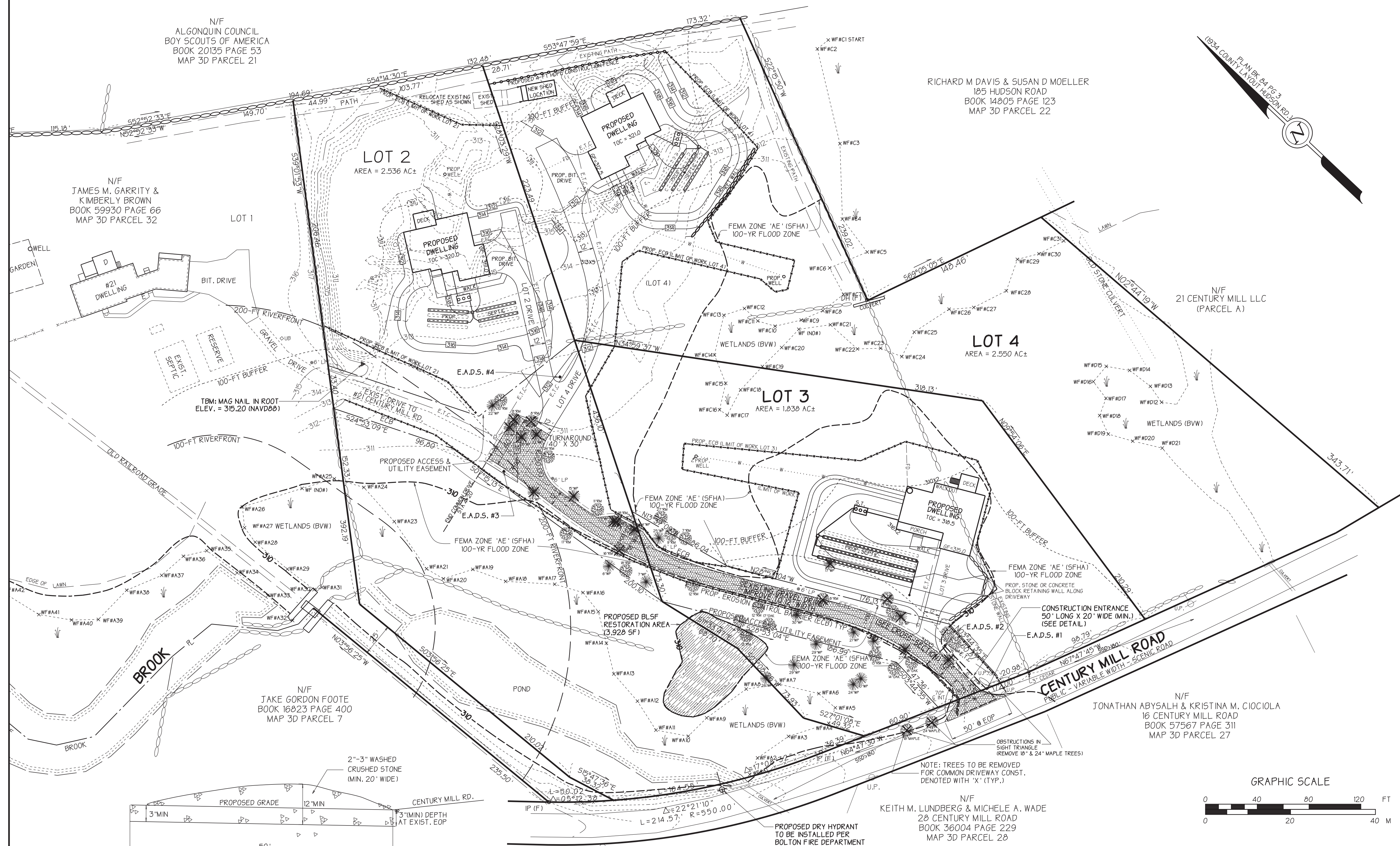
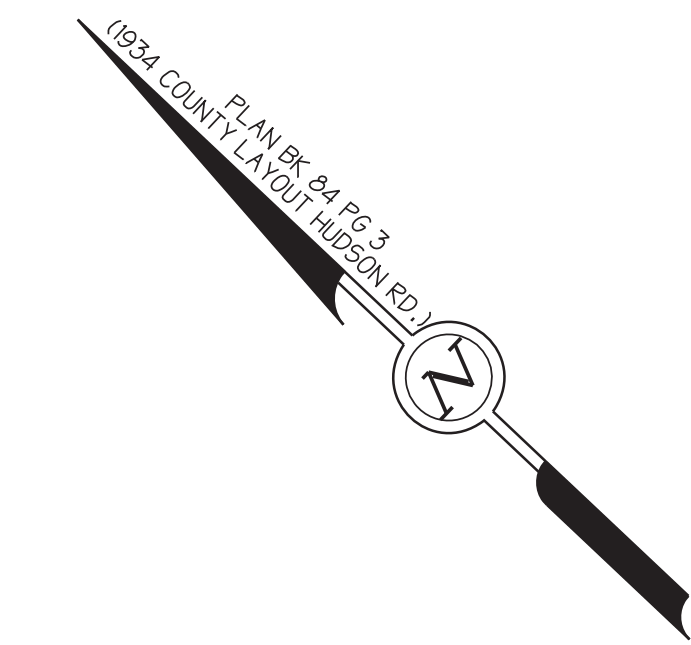


Matt Burne

N/F
ALGONQUIN COUNCIL
BOY SCOUTS OF AMERICA
BOOK 20135 PAGE 53
MAP 3D PARCEL 21

N/F
JAMES M. GARRITY &
KIMBERLY BROWN
BOOK 59930 PAGE 06
MAP 3D PARCEL 32

RICHARD M DAVIS & SUSAN D MOELLER
185 HUDSON ROAD
BOOK 14805 PAGE 123
MAP 3D PARCEL 22

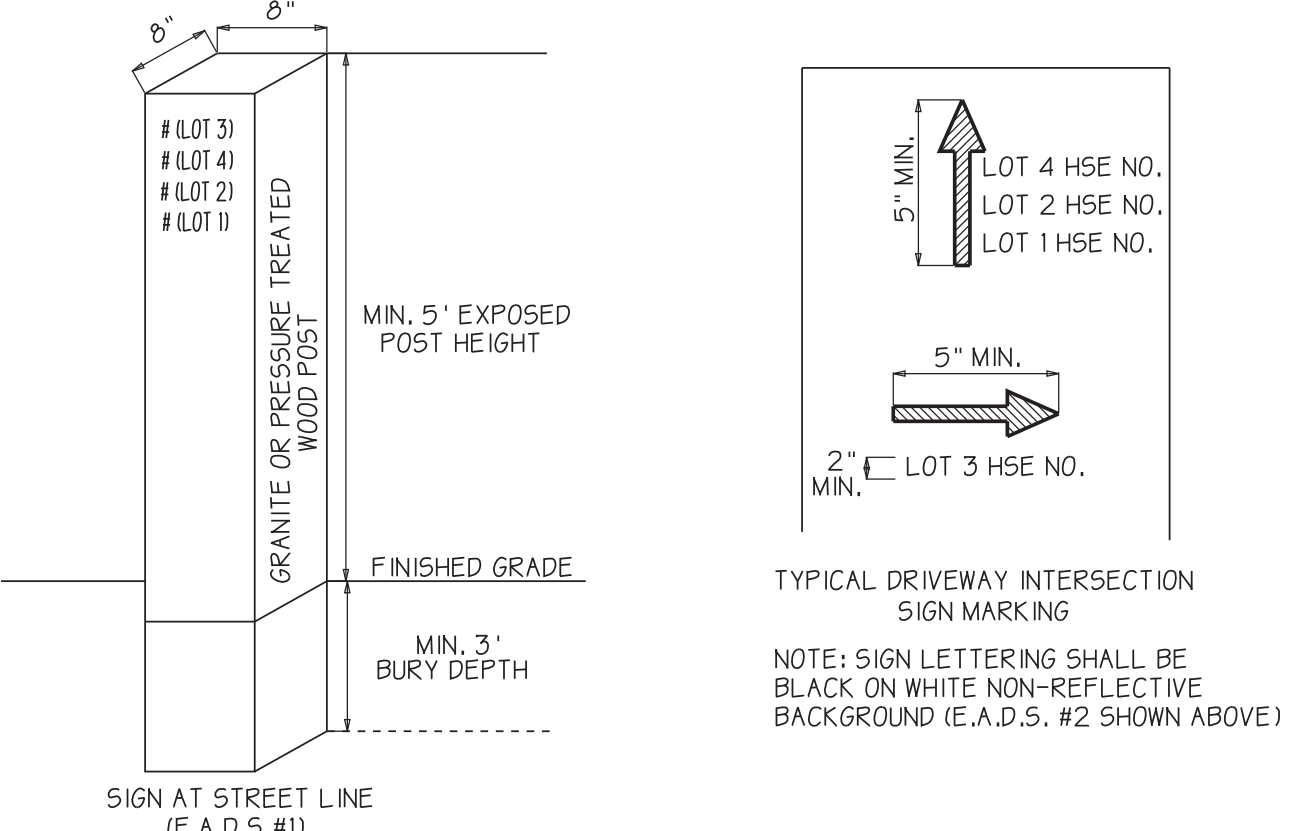


NOTES

1. COMMON DRIVEWAY SHOWN IS SUBJECT TO A MAINTENANCE AGREEMENT TO BE RECORDED AT THE W.D.R.D.
2. NO COMMON DRIVEWAYS OR APPROVED OR ACCEPTED PUBLIC WAYS EXIST ON THE SAME SIDE OF CENTURY MILL ROAD WITHIN 200 FEET OF THE PROPOSED COMMON DRIVEWAY CENTERLINE INTERSECTION WITH CENTURY MILL ROAD.
3. PORTIONS OF THE SITE ARE LOCATED WITHIN FEMA DESIGNATED FLOOD ZONE AE. FLOOD ZONES SHOWN ARE THE RESULT OF AN ON THE GROUND SURVEY REFERENCED TO FEMA SPECIFIED BASE FLOOD ELEVATION (ELEVATION = 310' NAVD88).
4. ALL ELEVATIONS REFER TO NAVD88 DATUM.

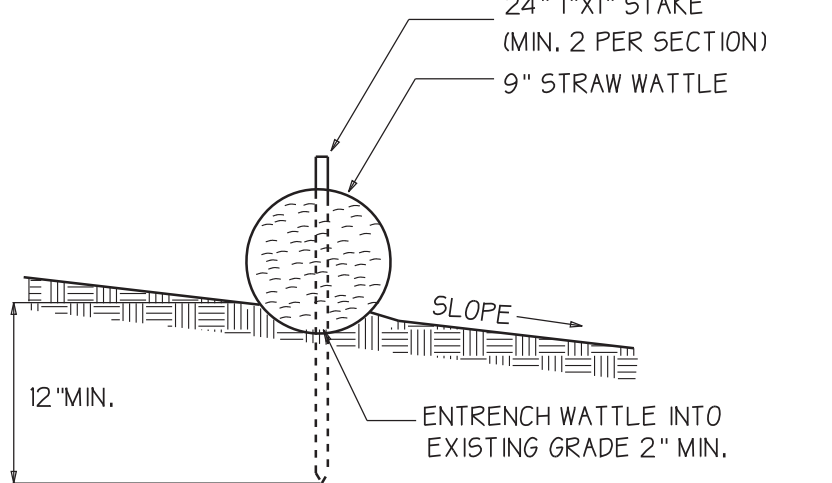
SEE SPECIAL PERMIT ISSUED BY BOLTON PLANNING BOARD DATED: _____

SEE COMMON DRIVEWAY MAINTENANCE AGREEMENT RECORDED AT W.D.R.D. IN BOOK _____ PAGE _____

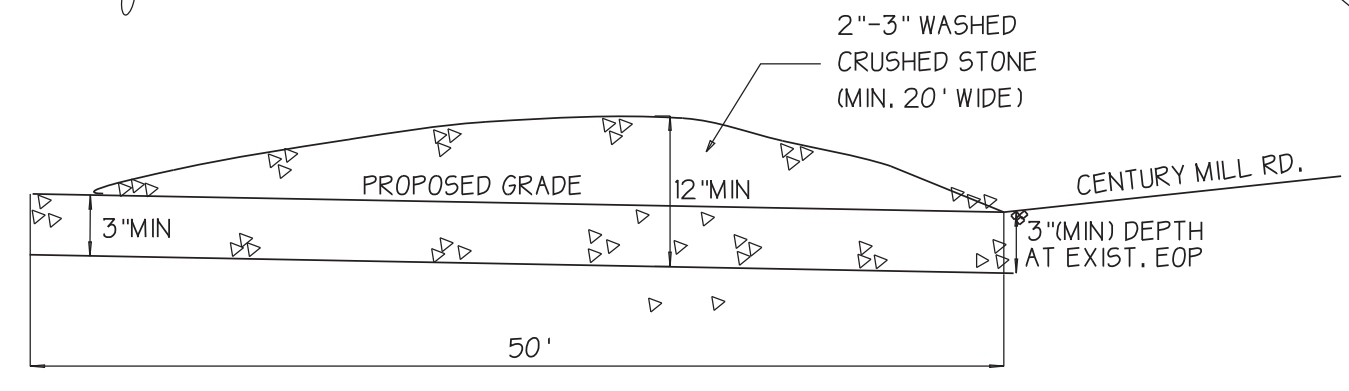


TYPICAL EMERGENCY ACCESS DIRECTION SIGN (E.A.D.S.)
NOT TO SCALE

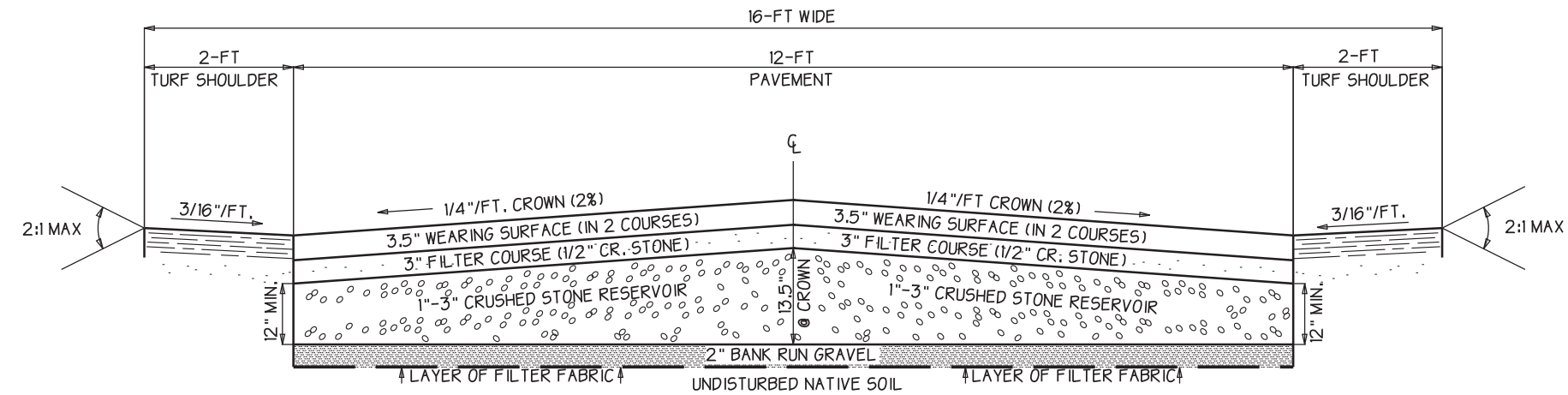
SIGNS TO DIRECT EMERGENCY RESPONSE VEHICLES MUST BE INSTALLED AT STREET LINE AND AT EACH DRIVEWAY INTERSECTION ALONG THE COMMON DRIVEWAY AT LOCATIONS SHOWN. THE SIGN AT THE STREET LINE WILL DESIGNATE ALL ADDRESSES SERVED BY THE COMMON DRIVEWAY. SIGNS AT EACH DRIVEWAY INTERSECTION SHALL INCLUDE ARROWS INDICATING GENERAL DIRECTION TO EACH DWELLING ALONG THE COMMON DRIVEWAY, AS SHOWN TYPICALLY ABOVE. STREET NUMBERS FOR EACH LOT SERVED BY THE COMMON DRIVEWAY SHALL BE ASSIGNED BY THE BOLTON BUILDING INSPECTOR.



STAKED STRAW WATTLE EROSION CONTROL BARRIER
NOT TO SCALE

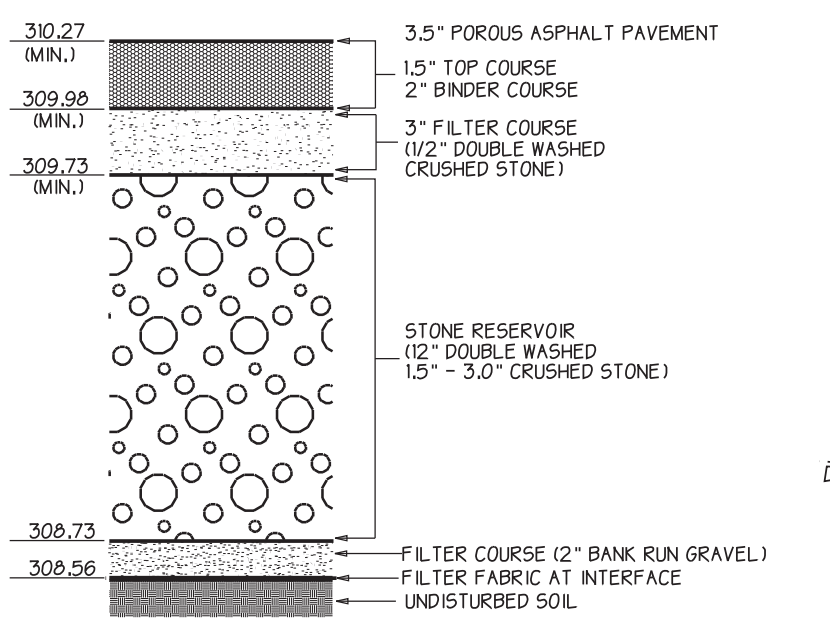


CRUSHED STONE CONSTRUCTION ENTRANCE
NOT TO SCALE

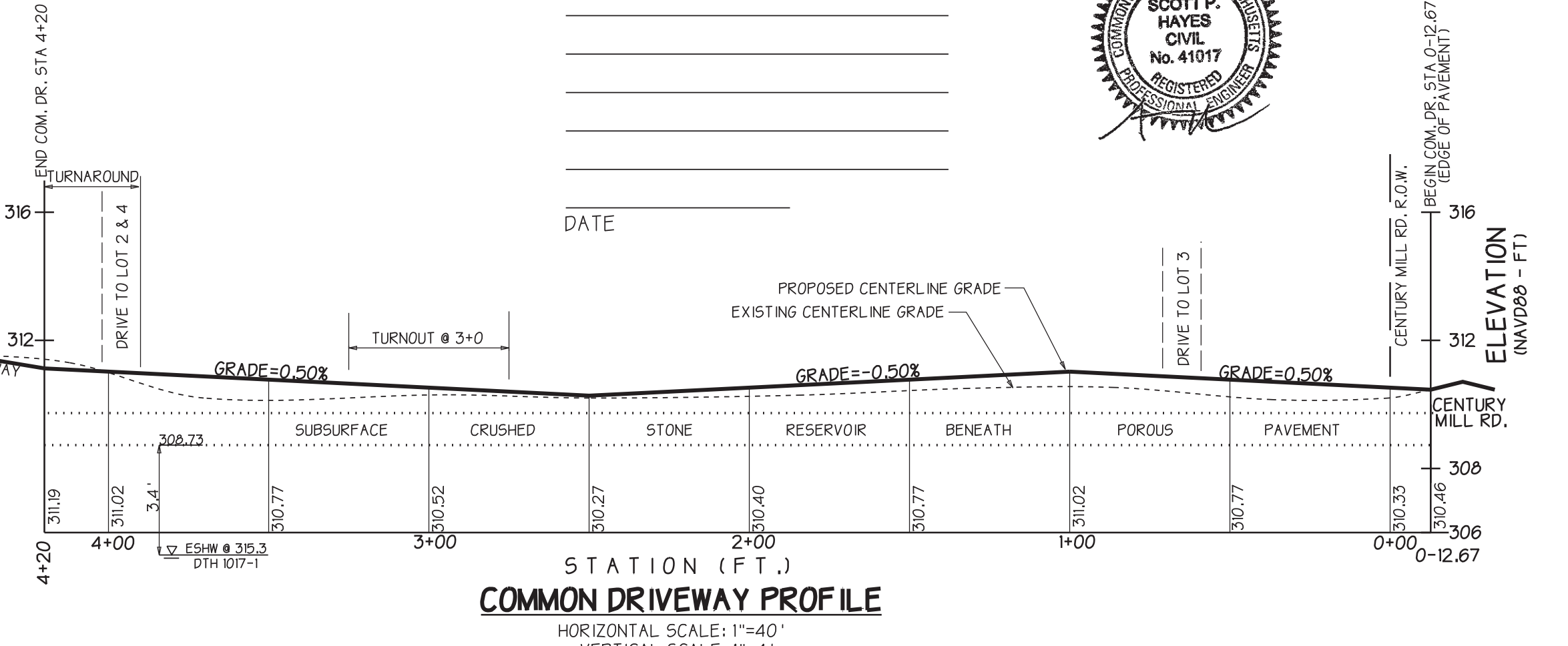


TYPICAL COMMON DRIVEWAY STRUCTURAL SECTION
NOT TO SCALE

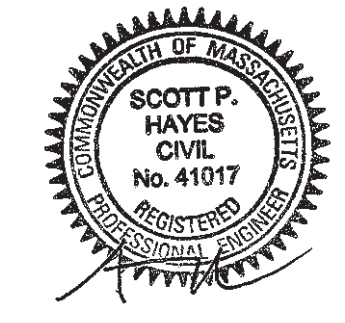
- ROADWAY STRUCTURAL SECTION**
- 3.5" POROUS BITUMINOUS ASPHALT CONCRETE (2 COURSES)
 - 2" PG 58-28 OR PG 64-22 BINDER COURSE
 - 1.5" PG 58-28 OR PG 64-22 TOP COURSE
 - NO PAVING SHALL OCCUR AFTER NOVEMBER 15 OR BEFORE APRIL 15 OF ANY YEAR!
 - 3" FILTER COURSE 1/2" DOUBLE WASHED CRUSHED STONE
 - 12" STONE RESERVOIR 1.5"-3.0" DOUBLE WASHED CRUSHED STONE
 - 2" BANK RUN GRAVEL
 - LAYER OF FILTER FABRIC
- SHOULDERS (ALL OTHER AREAS)**
- 4" COMPACTED GRANULAR FILL
 - 4" COMPACTED DEPTH SCREENED LOAM & SEED WITH PERENNIAL TURF GRASS
- COMMON DRIVEWAY INSPECTIONS**
REQUIRED BY PLANNING BOARD ENGINEER AND CONSTRUCTION PERIOD SITE ENGINEER FOLLOWING:
1. BOTTOM OF EXCAVATION TO NATIVE SOIL.
 2. 2" BANK RUN GRAVEL IN PLACE.
 3. 12" OF 1"-3" STONE RESERVOIR IN PLACE.
 4. 3" FILTER COURSE IN PLACE PRIOR TO BINDER.
 5. PLACEMENT OF BINDER COURSE OF PAVEMENT.



POROUS ASPHALT PAVEMENT SECTION
NOT TO SCALE



COMMON DRIVEWAY PROFILE
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=4'



BOLTON PLANNING BOARD

DATE _____

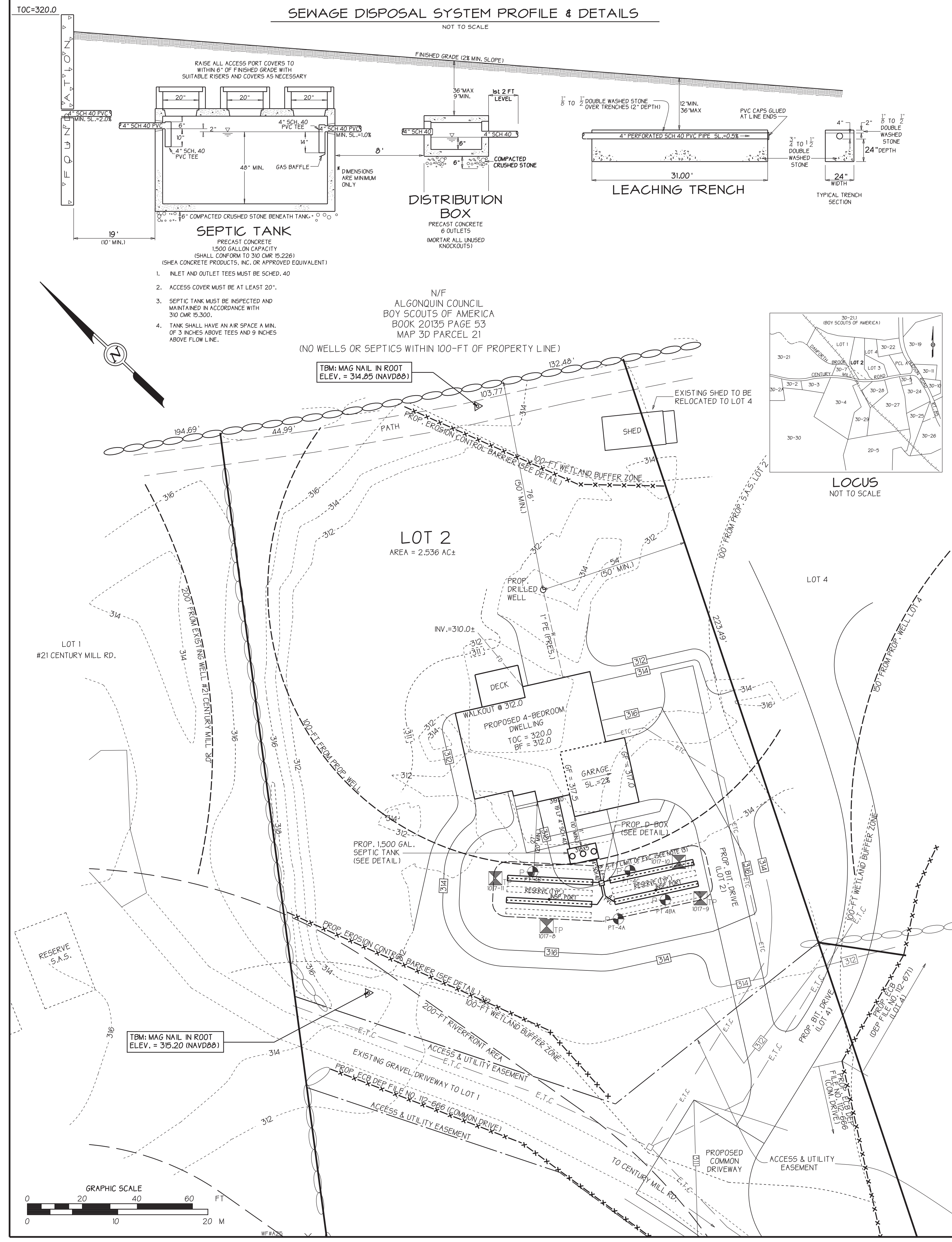
COMMON DRIVEWAY PLAN & PROFILE

LOTS 1-4 CENTURY MILL ROAD
BOLTON, MASSACHUSETTS
ASSESSORS MAP 3D PARCEL 75

PREPARED FOR:
21 CENTURY MILL LLC
291 MAIN STREET SUITE 8
NORTHBOROUGH, MA 01532

DATE: AUGUST 11, 2020 SCALE: 1 INCH = 40 FEET

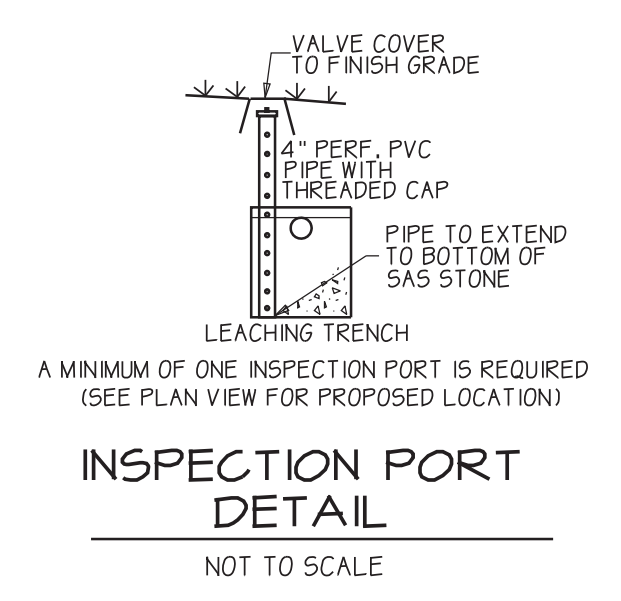
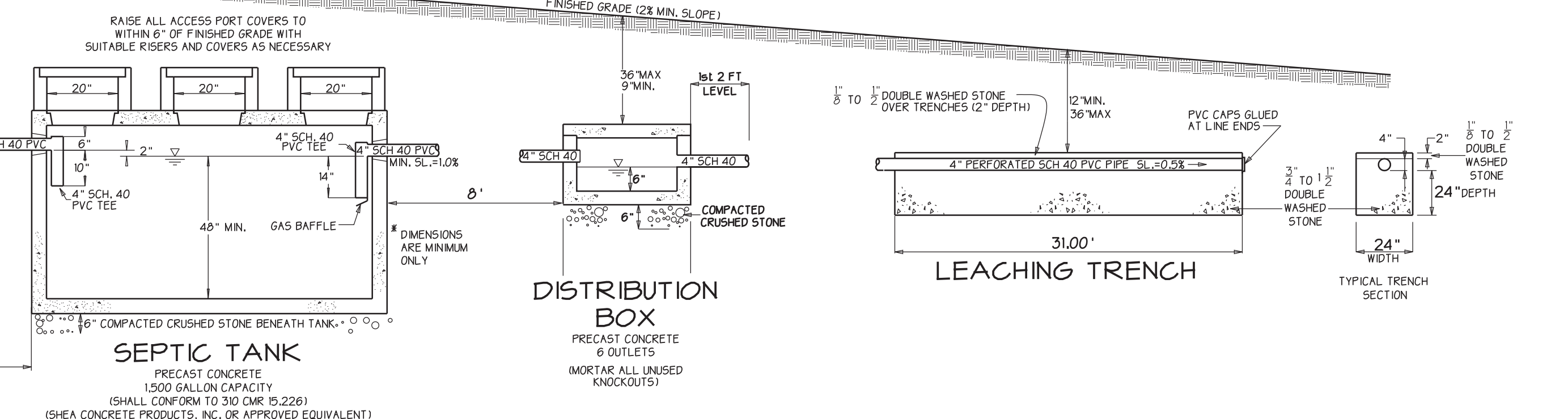
ENGINEERING SURVEYING PLANNING
FORESITE ENGINEERING
16 Gleasondale Road Suite 1-1
Stow, Massachusetts 01775
Phone: (978)461-2350
www.foresitel.com



TOC=320.0

SEWAGE DISPOSAL SYSTEM PROFILE & DETAILS

NOT TO SCALE



A MINIMUM OF ONE INSPECTION PORT IS REQUIRED (SEE PLAN VIEW FOR PROPOSED LOCATION)

INSPECTION PORT
DETAIL
NOT TO SCALE

DESIGN CALCULATIONS

- SEWAGE DISPOSAL SYSTEM IS NOT DESIGNED FOR USE WITH A GARBAGE GRINDER.
- SEPTIC TANK:
A VOLUME EQUAL TO TWICE THE DAILY DESIGN FLOW IS REQUIRED WITH A MINIMUM VOLUME OF 1,500 GALLONS. A 1,500 GALLON TANK IS PROPOSED.
- DESIGN CRITERIA:
NUMBER OF BEDROOMS: 4
DESIGN FLOW: 440
SOIL TEXTURAL CLASS: II
PERCOLATION RATE: 8 MPI
APPLICATION RATE: 0.60 GPD/SF
DESIGN GROUNDWATER ELEVATION: 309.0
GROUNDWATER OFFSET: 5-FT (PT <2 MPI)
- LEACHING FACILITY SIZING:
AREA REQUIRED IS EQUAL TO THE DESIGN FLOW DIVIDED BY THE APPLICATION RATE:
 $\frac{440 \text{ GPD}}{0.60 \text{ GPD/SF}} = 734 \text{ S.F.}$
LEACHING AREA PROVIDED:
UTILIZE (4) 2-FT WIDE X 2-FT DEEP LEACHING TRENCHES
 $31' \text{ TRENCHES} \times 4 \text{ TRENCHES} \times 6 \text{ SF/FT} = 744 \text{ SF}$
- HYDRAULIC LOADING CAPACITY:
 $744 \text{ S.F.} \times 0.60 \text{ GPD/S.F.} = 446 \text{ GPD}$

GENERAL NOTES

- THIS PLAN IS FOR THE CONSTRUCTION OF THE PROPOSED SEWAGE DISPOSAL SYSTEM ONLY. OTHER LOCAL REGULATIONS MAY BE APPLICABLE TO THE PROJECT (I.E. ZONING, WETLANDS, ETC.).
- CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN OBSERVED FIELD CONDITIONS AND THIS DESIGN PLAN PRIOR TO INITIATING CONSTRUCTION.
- PROPERTY LINES AND TOPOGRAPHY FROM FIELD SURVEY BY FORESITE ENGINEERING ASSOCIATES, INC. LOT 2 IS A PORTION OF BOLTON ASSESSORS MAP 3D PARCEL 32. WITH REFERENCE TO WORCESTER COUNTY REGISTRY OF DEEDS BOOK 55620 PAGE 10 AND PLAN BOOK 382 PLAN 21. LAND DIVISION APPROVAL IS PENDING WITH BOLTON PLANNING BOARD.
- THE SYSTEM IS NOT DESIGNED FOR USE WITH A GARBAGE GRINDER.
- THE SEPTIC TANK SHALL BE PUMPED WHEN THE SLUDGE DEPTH EXCEEDS 1/8 OF THE LIQUID CAPACITY OF THE SEPTIC TANK (ABOUT ONCE EVERY 2 YEARS) OR AS REQUIRED BY THE LOCAL BOARD OF HEALTH.
- ANY PROPOSED WORK WITHIN 100 FEET OF A BORDERING VEGETATED WETLAND OR OTHER PROTECTED RESOURCE AREA IS UNDER THE JURISDICTION OF THE WETLANDS PROTECTION ACT AND THE LOCAL CONSERVATION COMMISSION.
- WATER SUPPLY IS FROM PROPOSED ON SITE DRILLED WELL.
- ALL KNOWN DRINKING WATER SUPPLY WELLS AND SEWAGE DISPOSAL SYSTEMS WITHIN 200 FEET OF THE PROPOSED WELL AND SEWAGE DISPOSAL SYSTEM ARE SHOWN OR INDICATED.
- PROPOSED SYSTEM IS NOT WITHIN A DEP DESIGNATED NITROGEN SENSITIVE AREA (ZONE 1, ZONE II OR ZONE III). POTENTIALLY PRODUCTIVE AQUIFER (HGT OR MEDIUM YIELD AQUIFER AS DEFINED BY USGS, 100-YR FLOOD PLAIN OR WITHIN JURISDICTIONAL PROXIMITY TO SURFACE WATER SUPPLIES OR THEIR TRIBUTARIES).

CONSTRUCTION NOTES

- CONTRACTOR SHALL CONTACT 'DIGSAFE' AT 1-888-344-7233 AT LEAST 72 HOURS BEFORE EXCAVATING ON PUBLIC OR PRIVATE PROPERTY.
- CONSTRUCTION MATERIALS AND CONSTRUCTION METHODOLOGY SHALL CONFORM TO THIS PLAN, TITLE 5, AND THE REQUIREMENTS OF THE BOARD OF HEALTH.
- ANY DEVIATION IN CONSTRUCTION FROM THIS PLAN SHALL VOID ANY CERTIFICATION MADE RELATIVE TO THE SYSTEM UNLESS APPROVED IN WRITING BY THE LOCAL APPROVING AUTHORITY AND FORESITE ENGINEERING ASSOCIATES, INC.
- ALL TANKS INCLUDING SEPTIC TANKS, DISTRIBUTION BOXES, DOSING CHAMBERS AND GREASE TRAPS, SHALL EITHER BE WATER TIGHT BY MANUFACTURER'S SPECIFICATIONS AND WARRANTY OR MADE WATER TIGHT WITH ASPHALT OR POLYMER SEALER.
- ALL PRECAST CONCRETE TANKS AND DISTRIBUTION BOXES SHALL BE SET ON A MINIMUM OF SIX INCHES OF WELL COMPACTED CRUSHED STONE AND SHALL BE MADE WATER TIGHT.
- DISTRIBUTION BOX OUTLET PIPES SHALL BE LAID LEVEL FOR THE FIRST TWO FEET OUT OF THE DISTRIBUTION BOX.
- DISTRIBUTION BOX SHALL BE SET ON A FIRM BASE OF EITHER SIX INCHES OF COMPACTED CRUSHED STONE OR A SIX-INCH THICK CONCRETE PAD WITH AN AREA 1.5 TIMES THE BOTTOM AREA OF THE DISTRIBUTION BOX.
- AN INLET TEE SHALL BE INSTALLED IN THE DISTRIBUTION BOX WHEN THE SYSTEM IS A PUMP SYSTEM OR WHEN THE SLOPE OF THE INLET PIPE EXCEEDS 2%.
- SYSTEM SHALL BE VENTED THROUGH THE BUILDING PLUMBING OR AS SHOWN ON THE SYSTEM PROFILE.
- ALL SURFACES SHALL BE SCARIFIED PRIOR TO THE PLACEMENT OF FILL.
- ALL UNSUITABLE MATERIAL ENCOUNTERED IN THE EXCAVATION SHALL BE REMOVED.
- ALL CRUSHED STONE USED IN THE CONSTRUCTION OF THE SEWAGE DISPOSAL SYSTEM SHALL BE THE SIZE SPECIFIED, DURABLE AND DOUBLE WASHED.
- WHEN GRAVEL FILL IS REQUIRED, ALL ORGANIC MATERIAL WITHIN 5 FEET OF THE PROPOSED LEACHING FACILITY SHALL BE REMOVED AND REPLACED WITH WELL COMPACTED GRANULAR FILL MEETING THE REQUIREMENTS OF 310 CMR 15.295. (NOTE Bw LAYER WAS PERC'D AND FOUND SUITABLE)
- ALL BACKFILL AND BREAKOUT FILL REQUIRED SHALL BE CLEAN EARTHEN MATERIAL FREE OF CONSTRUCTION DEBRIS, STUMPS, BOULDERS AND FROZEN EARTH. FILL MATERIAL SHALL BE PLACED IN A MANNER THAT WILL ENSURE RUNOFF AND PREVENT EROSION.
- SEWAGE DISPOSAL SYSTEM CORNERS SHALL BE STAKED AND FLAGGED BY A PROFESSIONAL ENGINEER OR PROFESSIONAL LAND SURVEYOR PRIOR TO THE START OF CONSTRUCTION.
- ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.

DEEP OBSERVATION HOLE LOGS

TEST HOLE: 1017-8
DATE: 10/27/17
SOIL EVALUATOR: SCOTT HAYES, PE
B.O.H. AGENT: WM. BROOKINGS, NABOH

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	REMARKS
0-10"	A	SL	10YR3/2	NONE	WEAK, FRIBLIE
10-20"	Bw	SL	10YR5/6	NONE	WEAK, MASSIVE
20-64"	C	SL	2.5Y5/3	>5% # 48"	WEAK TO MOD. FIRM SOME COBBLES, FEW BOULDERS

TEST HOLE: 1017-9
DATE: 10/27/17
SOIL EVALUATOR: SCOTT HAYES, PE
B.O.H. AGENT: WM. BROOKINGS, NABOH

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	REMARKS
0-12"	A	SL	10YR3/2	NONE	WEAK, FRIBLIE
12-22"	Bw	SL	10YR5/6	NONE	WEAK, MASSIVE
22-66"	C	SL	2.5Y5/3	>5% # 62"	WEAK TO MOD. FIRM SOME COBBLES, FEW BOULDERS

TEST HOLE: 1017-10
DATE: 10/27/17
SOIL EVALUATOR: SCOTT HAYES, PE
B.O.H. AGENT: WM. BROOKINGS, NABOH

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	REMARKS
0-16"	A	SL	10YR3/2	NONE	WEAK, FRIBLIE
16-28"	Bw	SL	10YR5/6	NONE	WEAK, MASSIVE
28-102"	C	LS	2.5Y5/3	>5% # 60"	WEAK, COARSE SAND AND GRAVEL, FEW COBBLES

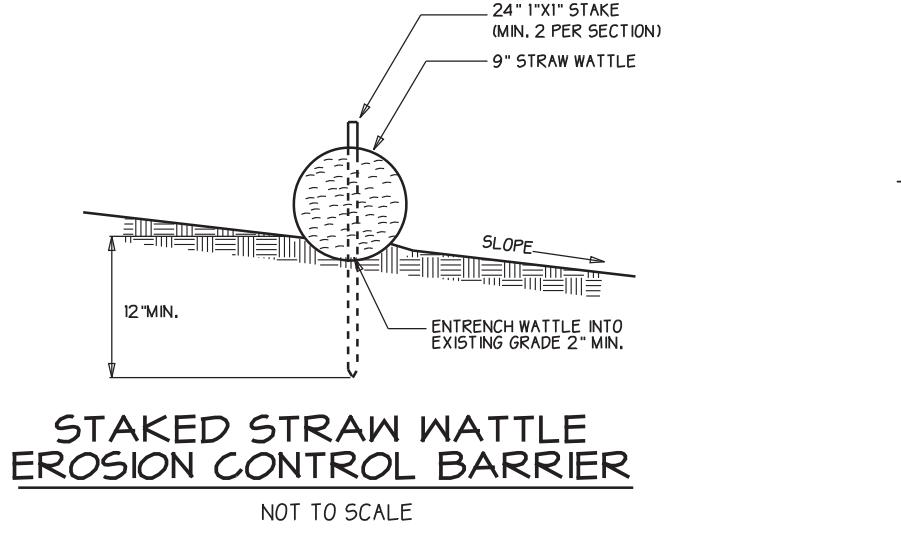
TEST HOLE: 1017-11
DATE: 10/27/17
SOIL EVALUATOR: SCOTT HAYES, PE
B.O.H. AGENT: WM. BROOKINGS, NABOH

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	REMARKS
0-28"	A	SL	10YR3/2	NONE	WEAK, FRIBLIE
28-40"	Bw	LS	10YR5/8	NONE	WEAK, MASSIVE
40-108"	C	S	2.5Y5/4	>5% # 48"	WEAK, COARSE SAND AND GRAVEL, FEW COBBLES

PERCOLATION TESTS

SOIL EVALUATOR: SCOTT P. HAYES, PE - FORESITE ENG.
BOH AGENT: WM. BROOKINGS, NABOH

TEST	PT-4A	PT-4BA	PT-4C	PT-4D
DATE	10/27/17	11/17/17	10/27/17	10/27/17
DEPTH	52"	48"	48"	46"
RATE (MPI)	8	2	<2	<2



STAKED STRAW WATTLE
EROSION CONTROL BARRIER
NOT TO SCALE

ELEVATION SCHEDULE

INVERTS & OTHER ELEVATIONS

TOP OF FOUNDATION	320.00
AT FOUNDATION	317.30
AT SEPTIC TANK INLET	316.85
AT SEPTIC TANK OUTLET	316.60
AT D-BOX INLET	316.43
AT D-BOX OUTLET	316.26
AT TRENCH BEGIN	316.18
AT TRENCH END	316.00
AT TRENCH BOTTOM	314.00
BREAKOUT ELEVATION	316.67
MIN. F.G. OVER TRENCHES	317.42

RESERVE TRENCH ELEVATIONS

AT TRENCH BEGIN	316.17
AT TRENCH END	316.00
AT TRENCH BOTTOM	314.00
BREAKOUT ELEVATION	317.42



LEGEND

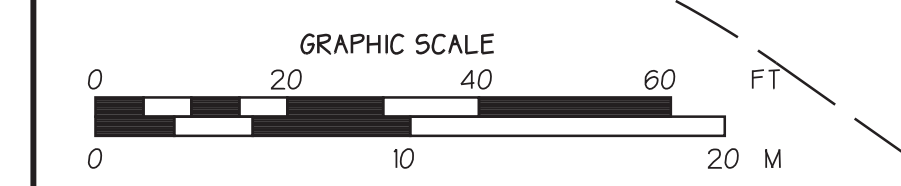
- S.T. PROPOSED 1,500 GAL. PRECAST CONCRETE SEPTIC TANK
- D-BOX 6-OUTLET PRECAST CONCRETE DISTRIBUTION BOX
- TP DEEP TEST HOLE
- P PERCOLATION TEST
- 310 EXISTING 10-FT CONTOUR (TYP.)
- 312 EXISTING 2-FT CONTOUR (TYP.)
- 314 PROPOSED 2-FT CONTOUR (TYP.)

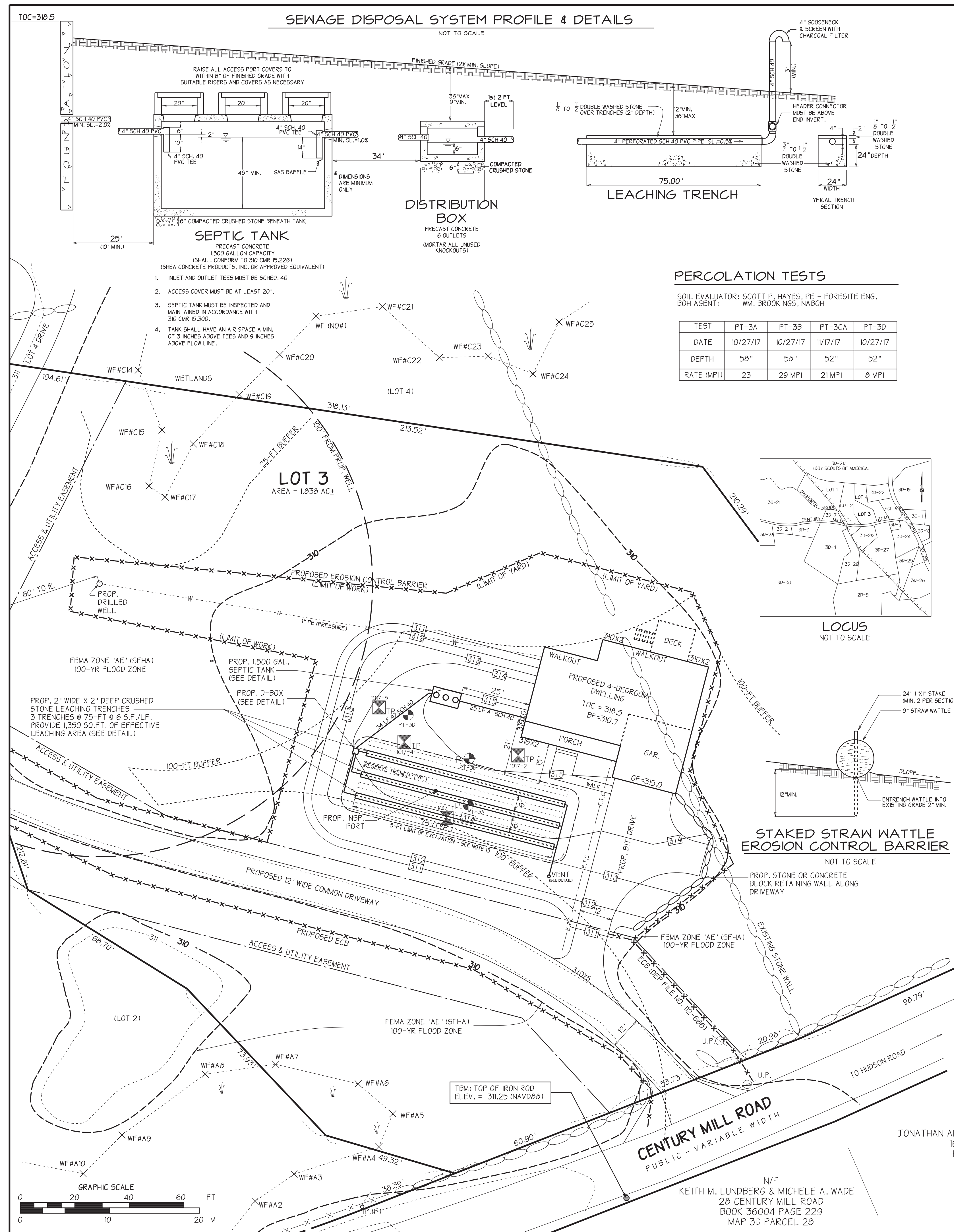
SEWAGE DISPOSAL SYSTEM
DESIGN PLAN

LOT 2 CENTURY MILL ROAD
BOLTON, MASSACHUSETTS
PART OF ASSESSORS MAP 3D PARCEL 32

PREPARED FOR:
21 CENTURY MILL LLC
291 MAIN STREET SUITE 8
NORTHBORO, MASSACHUSETTS 01532

REV. 10/11/18
DATE: AUGUST 22, 2018
SCALE: 1 INCH = 20 FEET





DESIGN CALCULATIONS

- SEWAGE DISPOSAL SYSTEM IS NOT DESIGNED FOR USE WITH A GARBAGE GRINDER.
- SEPTIC TANK: A VOLUME EQUAL TO TWICE THE DAILY DESIGN FLOW IS REQUIRED WITH A MINIMUM VOLUME OF 1,500 GALLONS. A 1,500 GALLON TANK IS PROPOSED.
- DESIGN CRITERIA:
 NUMBER OF BEDROOMS: 4
 DESIGN FLOW: 440
 SOIL TEXTURAL CLASS: II
 PERCOLATION RATE: 30 MPF
 DESIGN GROUNDWATER ELEVATION: 305.5
 GROUNDWATER OFFSET: 4-FT

$$\frac{440 \text{ GPD}}{0.33 \text{ GPD/S.F.}} = 1,334 \text{ S.F.}$$
- LEACHING AREA PROVIDED:
 UTILIZE (3) 2-FT WIDE X 2-FT DEEP LEACHING TRENCHES
 75' TRENCHES X 3 TRENCHES X 6 SF/LF = 1,350 SF
- HYDRAULIC LOADING CAPACITY:
 $1,350 \text{ S.F.} \times 0.33 \text{ GPD/S.F.} = 445 \text{ GPD}$

GENERAL NOTES

- THIS PLAN IS FOR THE CONSTRUCTION OF THE PROPOSED SEWAGE DISPOSAL SYSTEM ONLY. OTHER LOCAL REGULATIONS MAY BE APPLICABLE TO THE PROJECT (I.E. ZONING, WETLANDS, ETC.).
- CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN OBSERVED FIELD CONDITIONS AND THIS DESIGN PLAN PRIOR TO INITIATING CONSTRUCTION.
- PROPERTY LINES AND TOPOGRAPHY FROM FIELD SURVEY BY FORESITE ENGINEERING ASSOCIATES, INC. LOT 3 IS A PORTION OF BOLTON ASSESSORS MAP 3D PARCEL 32, WITH REFERENCE TO WORCESTER COUNTY REGISTER OF DEEDS BOOK 55520 PAGE 110 AND PLAN BOOK 302 PLAN 21. LAND DIVISION APPROVAL IS PENDING WITH BOLTON PLANNING BOARD.
- THE SYSTEM IS NOT DESIGNED FOR USE WITH A GARBAGE GRINDER.
- THE SEPTIC TANK SHALL BE PUMPED WHEN THE SLUDGE DEPTH EXCEEDS 1/3 OF THE LIQUID CAPACITY OF THE SEPTIC TANK (ABOUT EVERY 2 YEARS) OR AS REQUIRED BY THE LOCAL BOARD OF HEALTH.
- ANY PROPOSED WORK WITHIN 100 FEET OF A BORDERING VEGETATED WETLAND OR OTHER PROTECTED RESOURCE AREA IS UNDER THE JURISDICTION OF THE WETLANDS PROTECTION ACT AND THE LOCAL CONSERVATION COMMISSION.
- WATER SUPPLY IS FROM PROPOSED ON SITE DRILLED WELL.
- THERE ARE NO KNOWN DRINKING WATER SUPPLY WELLS OR SEWAGE DISPOSAL SYSTEMS WITHIN 200 FEET OF THE PROPOSED WELL OR PROPOSED SEWAGE DISPOSAL SYSTEM.
- PROPOSED SYSTEM IS NOT WITHIN A DEP DESIGNATED NITROGEN SENSITIVE AREA (ZONE I, ZONE II OR WPA).

CONSTRUCTION NOTES

- CONTRACTOR SHALL CONTACT 'DIGSAFE' AT 1-888-344-7233 AT LEAST 72 HOURS BEFORE EXCAVATING ON PUBLIC OR PRIVATE PROPERTY.
- CONSTRUCTION MATERIALS AND CONSTRUCTION METHODOLOGY SHALL CONFORM TO THIS PLAN, TITLE 5, AND THE REQUIREMENTS OF THE BOARD OF HEALTH.
- ANY DEVIATION IN CONSTRUCTION FROM THIS PLAN SHALL VOID ANY CERTIFICATION MADE RELATIVE TO THE SYSTEM UNLESS APPROVED IN WRITING BY THE LOCAL APPROVING AUTHORITY AND FORESITE ENGINEERING ASSOCIATES, INC.
- ALL TANKS INCLUDING SEPTIC TANKS, DISTRIBUTION BOXES, DOSING CHAMBERS AND GREASE TRAPS, SHALL EITHER BE WATERTIGHT BY MANUFACTURER'S SPECIFICATIONS AND WARRANTY OR MADE WATERTIGHT WITH ASPHALT OR POLYMER SEALER.
- ALL PRECAST CONCRETE TANKS AND DISTRIBUTION BOXES SHALL BE SET ON A MINIMUM OF SIX INCHES OF WELL COMPACTED CRUSHED STONE AND SHALL BE MADE WATER TIGHT.
- DISTRIBUTION BOX OUTLET PIPES SHALL BE LAID LEVEL FOR THE FIRST TWO FEET OUT OF THE DISTRIBUTION BOX.
- DISTRIBUTION BOX SHALL BE SET ON A FIRM BASE OF EITHER SIX INCHES OF COMPACTED CRUSHED STONE OR A SIX-INCH THICK CONCRETE PAD WITH AN AREA 1.5 TIMES THE BOTTOM AREA OF THE DISTRIBUTION BOX.
- AN INLET TEE SHALL BE INSTALLED IN THE DISTRIBUTION BOX WHEN THE SYSTEM IS A PUMP SYSTEM OR WHEN THE SLOPE OF THE INLET PIPE EXCEEDS 8%.
- SYSTEM SHALL BE VENTED THROUGH THE BUILDING PLUMBING OR AS SHOWN ON THE SYSTEM PROFILE.
- ALL SURFACES SHALL BE SCARIFIED PRIOR TO THE PLACEMENT OF FILL.
- ALL UNSUITABLE MATERIAL ENCOUNTERED IN THE EXCAVATION SHALL BE REMOVED.
- ALL CRUSHED STONE USED IN THE CONSTRUCTION OF THE SEWAGE DISPOSAL SYSTEM SHALL BE THE SIZE SPECIFIED, DURABLE AND DOUBLE WASHED.
- WHEN GRAVEL FILL IS REQUIRED, ALL ORGANIC MATERIAL WITHIN 5 FEET OF THE PROPOSED LEACHING FACILITY SHALL BE REMOVED AND REPLACED WITH WELL COMPACTED GRANULAR FILL MEETING THE REQUIREMENTS OF 310 CMR 15.255. (NOTE Bw LAYER WAS PERC'D AND FOUND SUITABLE)
- ALL BACKFILL AND BREAKOUT FILL REQUIRED SHALL BE CLEAN EARTHEN MATERIAL FREE OF CONSTRUCTION DEBRIS, STUMPS, BOULDERS AND FROZEN EARTH. FILL MATERIAL SHALL BE PLACED IN A MANNER THAT WILL ENSURE RUNOFF AND PREVENT EROSION.
- SEWAGE DISPOSAL SYSTEM CORNERS SHALL BE STAKED AND FLAGGED BY A PROFESSIONAL ENGINEER OR PROFESSIONAL LAND SURVEYOR PRIOR TO THE START OF CONSTRUCTION.
- ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.

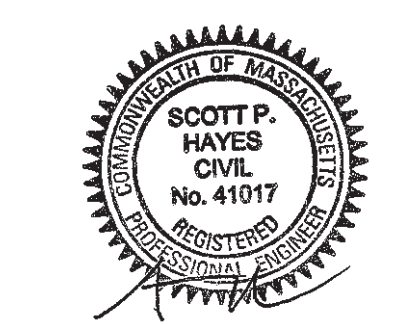
ELEVATION SCHEDULE

INVERTS & OTHER ELEVATIONS

TOP OF FOUNDATION	310.50
AT FOUNDATION	313.75
AT SEPTIC TANK INLET	313.00
AT SEPTIC TANK OUTLET	312.75
AT D-BOX INLET	312.15
AT D-BOX OUTLET	311.90
AT TRENCH BEGIN	311.80
AT TRENCH END	311.50
AT TRENCH BOTTOM	309.50
BREAKOUT ELEVATION	312.38
MIN. F.G. OVER TRENCHES	313.13

RESERVE TRENCH ELEVATIONS

AT TRENCH BEGIN	311.78
AT TRENCH END	311.50
AT TRENCH BOTTOM	309.50
BREAKOUT ELEVATION	313.03



LEGEND

- s-t. PROPOSED 1,500 GAL. PRECAST CONCRETE SEPTIC TANK
- D-BOX 6-OUTLET PRECAST CONCRETE DISTRIBUTION BOX
- TP DEEP TEST HOLE
- P PERCOLATION TEST
- 310- EXISTING 5-FT CONTOUR (TYP.)
- 312- EXISTING 1-FT CONTOUR (TYP.)
- 312- PROPOSED 1-FT CONTOUR (TYP.)
- x-x-x- PROPOSED STAKE STRAW WATTLE EROSION CONTROL BARRIER

SEWAGE DISPOSAL SYSTEM DESIGN PLAN

LOT 3 CENTURY MILL ROAD
BOLTON, MASSACHUSETTS
PART OF ASSESSORS MAP 3D PARCEL 32

PREPARED FOR:
21 CENTURY MILL LLC
291 MAIN STREET SUITE 8
NORTHBORO, MASSACHUSETTS 01532

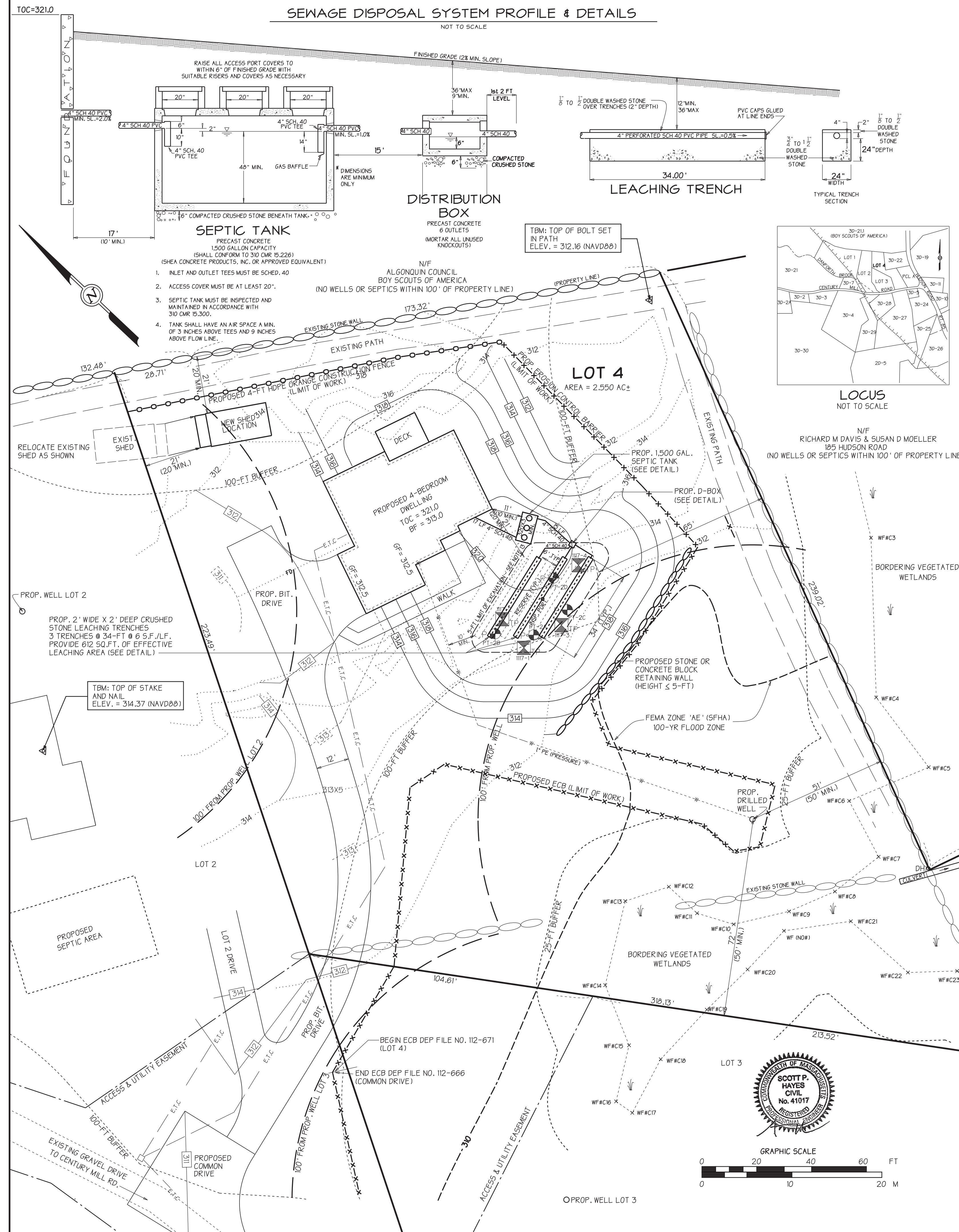
REV. 10/1/18: 8/11/20
DATE: AUGUST 15, 2018 SCALE: 1 INCH = 20 FEET

www.foresite.com

FORESITE ENGINEERING
ENGINEERING · SURVEYING · PLANNING
16 Gleasondale Road Suite 1-1
Stow, Massachusetts 01775
Phone: (978) 461-2350

N/F
JONATHAN ABYSALH & KRISTINA M. CIOCIOLA
16 CENTURY MILL ROAD
BOOK 57567 PAGE 311
MAP 3D PARCEL 27

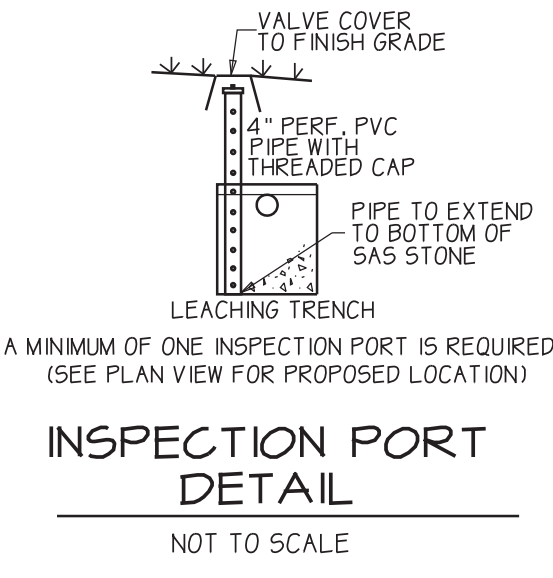
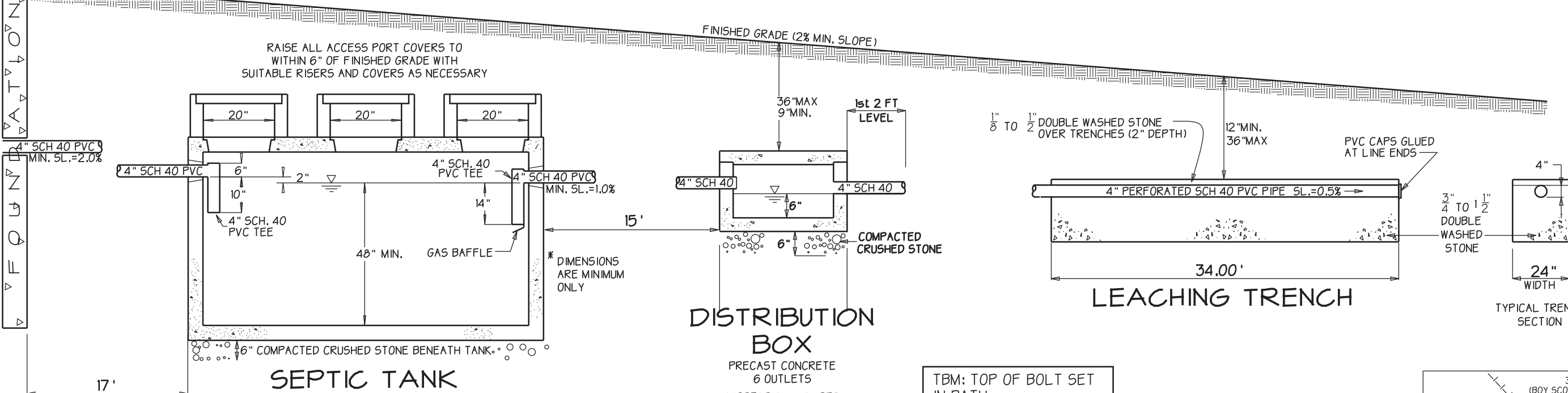
N/F
KEITH M. LUNDBERG & MICHELE A. WADE
28 CENTURY MILL ROAD
BOOK 36004 PAGE 229
MAP 3D PARCEL 28



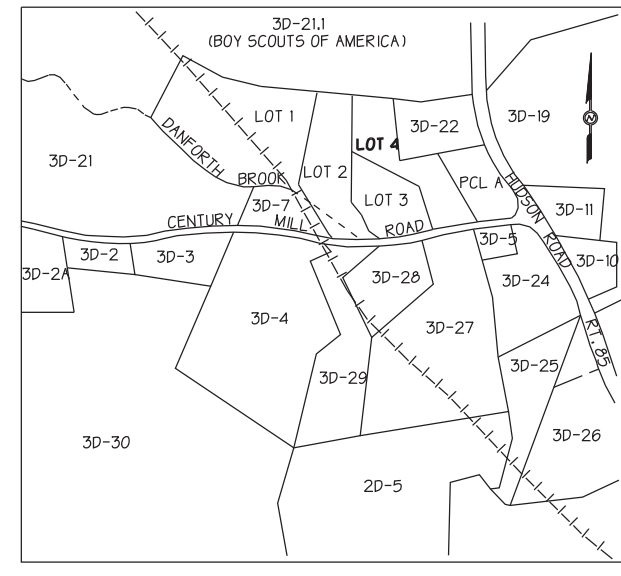
TOC=321.0

SEWAGE DISPOSAL SYSTEM PROFILE & DETAILS

NOT TO SCALE



**INSPECTION PORT
DETAIL**
NOT TO SCALE



LOCUS
NOT TO SCALE

DESIGN CALCULATIONS

- SEWAGE DISPOSAL SYSTEM IS NOT DESIGNED FOR USE WITH A GARBAGE GRINDER.
- SEPTIC TANK: A VOLUME EQUAL TO TWICE THE DAILY DESIGN FLOW IS REQUIRED WITH A MINIMUM VOLUME OF 1,500 GALLONS. A 1,500 GALLON TANK IS PROPOSED.
- DESIGN CRITERIA:
 NUMBER OF BEDROOMS: 4
 DESIGN FLOW: 440
 SOIL TEXTURAL CLASS: 1
 PERCOLATION RATE: 0.74 GPD/SF
 DESIGN GROUNDWATER ELEVATION: 310.0
 GROUNDWATER OFFSET: 5-FT
- LEACHING FACILITY SIZING: AREA REQUIRED IS EQUAL TO THE DESIGN FLOW DIVIDED BY THE APPLICATION RATE:

$$\frac{440}{0.74 \text{ GPD/S.F.}} = 595 \text{ S.F.}$$
 LEACHING AREA PROVIDED:
 UTILIZE (3) 2-FT WIDE X 2-FT DEEP LEACHING TRENCHES
 34" TRENCHES X 3 TRENCHES X 6 SF/LF = 612 SF
- HYDRAULIC LOADING CAPACITY:
 612 S.F.X 0.74 GPD/S.F. = 452 GPD

GENERAL NOTES

- THIS PLAN IS FOR THE CONSTRUCTION OF THE PROPOSED SEWAGE DISPOSAL SYSTEM ONLY. OTHER LOCAL REGULATIONS MAY BE APPLICABLE TO THE PROJECT (I.E. ZONING, WETLANDS, ETC.).
- CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN OBSERVED FIELD CONDITIONS AND THIS DESIGN PLAN PRIOR TO INITIATING CONSTRUCTION.
- PROPERTY LINES AND TOPOGRAPHY FROM FIELD SURVEY BY FORESITE ENGINEERING ASSOCIATES, INC. LOT 4 IS A PORTION OF BOLTON ASSESSORS MAP 3D PARCEL 32, WITH REFERENCE TO WORCESTER COUNTY RECORDS OF DEEDS BOOK 55520 PAGE 10 AND PLAN BOOK 392 PLAN 21. LAND DIVISION APPROVAL IS PENDING WITH BOLTON PLANNING BOARD.
- THE SYSTEM IS NOT DESIGNED FOR USE WITH A GARBAGE GRINDER.
- THE SEPTIC TANK SHALL BE PUMPED WHEN THE SLUDGE DEPTH EXCEEDS 1/3 OF THE LIQUID CAPACITY OF THE SEPTIC TANK (ABOUT ONCE EVERY 2 YEARS) OR AS REQUIRED BY THE LOCAL BOARD OF HEALTH.
- ANY PROPOSED WORK WITHIN 100 FEET OF A BORDERING VEGETATED WETLAND OR OTHER PROTECTED RESOURCE AREA IS UNDER THE JURISDICTION OF THE WETLANDS PROTECTION ACT AND THE LOCAL CONSERVATION COMMISSION.
- WATER SUPPLY IS FROM PROPOSED ON SITE DRILLED WELL.
- ALL KNOWN DRINKING WATER SUPPLY WELLS AND SEWAGE DISPOSAL SYSTEMS WITHIN 200 FEET OF THE PROPOSED WELL AND SEWAGE DISPOSAL SYSTEM ARE SHOWN OR INDICATED.
- PROPOSED SYSTEM IS NOT WITHIN A DEP DESIGNATED NITROGEN SENSITIVE AREA (ZONE 1, ZONE II OR WPA). POTENTIALLY PRODUCTIVE AQUIFER (HIGH OR MEDIUM YIELD AQUIFER AS DEFINED BY USGS, 100-YR FLOOD PLAIN OR WITHIN JURISDICTIONAL PROXIMITY TO SURFACE WATER SUPPLIES OR THEIR TRIBUTARIES).

CONSTRUCTION NOTES

- CONTRACTOR SHALL CONTACT 'DIGSAFE' AT 1-888-344-7233 AT LEAST 72 HOURS BEFORE EXCAVATING ON PUBLIC OR PRIVATE PROPERTY.
- CONSTRUCTION MATERIALS AND CONSTRUCTION METHODOLOGY SHALL CONFORM TO THIS PLAN, TITLE 5, AND THE REQUIREMENTS OF THE BOARD OF HEALTH.
- ANY DEVIATION IN CONSTRUCTION FROM THIS PLAN SHALL VOID ANY CERTIFICATION MADE RELATIVE TO THE SYSTEM UNLESS APPROVED IN WRITING BY THE LOCAL APPROVING AUTHORITY AND FORESITE ENGINEERING ASSOCIATES, INC.
- ALL TANKS INCLUDING SEPTIC TANKS, DISTRIBUTION BOXES, DOSING CHAMBERS AND GREASE TRAPS, SHALL EITHER BE WATERTIGHT BY MANUFACTURER'S SPECIFICATIONS AND WARRANTY OR MADE WATERTIGHT WITH ASPHALT OR POLYMER SEALER.
- ALL PRECAST CONCRETE TANKS AND DISTRIBUTION BOXES SHALL BE SET ON A MINIMUM OF SIX INCHES OF WELL COMPACTED CRUSHED STONE AND SHALL BE MADE WATER TIGHT.
- DISTRIBUTION BOX OUTLET PIPES SHALL BE LAID LEVEL FOR THE FIRST TWO FEET OUT OF THE DISTRIBUTION BOX.
- DISTRIBUTION BOX SHALL BE SET ON A FIRM BASE OF EITHER SIX INCHES OF COMPACTED CRUSHED STONE OR A SIX-INCH THICK CONCRETE PAD WITH AN AREA 15 TIMES THE BOTTOM AREA OF THE DISTRIBUTION BOX.
- AN INLET TEE SHALL BE INSTALLED IN THE DISTRIBUTION BOX WHEN THE SYSTEM IS A PUMP SYSTEM OR WHEN THE SLOPE OF THE INLET PIPE EXCEEDS 8%.
- SYSTEM SHALL BE VENTED THROUGH THE BUILDING PLUMBING OR AS SHOWN ON THE SYSTEM PROFILE.
- ALL SURFACES SHALL BE SCARIFIED PRIOR TO THE PLACEMENT OF FILL.
- ALL UNSUITABLE MATERIAL ENCOUNTERED IN THE EXCAVATION SHALL BE REMOVED.
- ALL CRUSHED STONE USED IN THE CONSTRUCTION OF THE SEWAGE DISPOSAL SYSTEM SHALL BE THE SIZE SPECIFIED, DURABLE AND DOUBLE WASHED.
- WHEN GRAVEL FILL IS REQUIRED, ALL ORGANIC MATERIAL WITHIN 5 FEET OF THE PROPOSED LEACHING FACILITY SHALL BE REMOVED AND REPLACED WITH WELL COMPACTED GRANULAR FILL MEETING THE REQUIREMENTS OF 310 CMR 15.255. (NOTE Bw LAYER WAS PERC'D AND FOUND SUITABLE)
- ALL BACKFILL AND BREAKOUT FILL REQUIRED SHALL BE CLEAN EARTHEN MATERIAL FREE OF CONSTRUCTION DEBRIS, STUMPS, BOULDERS AND FROZEN EARTH. FILL MATERIAL SHALL BE PLACED IN A MANNER THAT WILL ENSURE RUNOFF AND PREVENT EROSION.
- SEWAGE DISPOSAL SYSTEM CORNERS SHALL BE STAKED AND FLAGGED BY A PROFESSIONAL ENGINEER OR PROFESSIONAL LAND SURVEYOR PRIOR TO THE START OF CONSTRUCTION.
- ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING PIPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.

ELEVATION SCHEDULE

INVERTS & OTHER ELEVATIONS

TOP OF FOUNDATION	321.00
AT FOUNDATION	319.20
AT SEPTIC TANK INLET	318.80
AT SEPTIC TANK OUTLET	318.55
AT D-BOX INLET	318.40
AT D-BOX OUTLET	318.23
AT TRENCH BEGIN	318.17
AT TRENCH END	318.00
AT TRENCH BOTTOM	316.00
BREAKOUT ELEVATION	316.67
MIN. F.G. OVER TRENCHES	319.42

RESERVE TRENCH ELEVATIONS

AT TRENCH BEGIN	318.17
AT TRENCH END	318.00
AT TRENCH BOTTOM	316.00
BREAKOUT ELEVATION	319.42

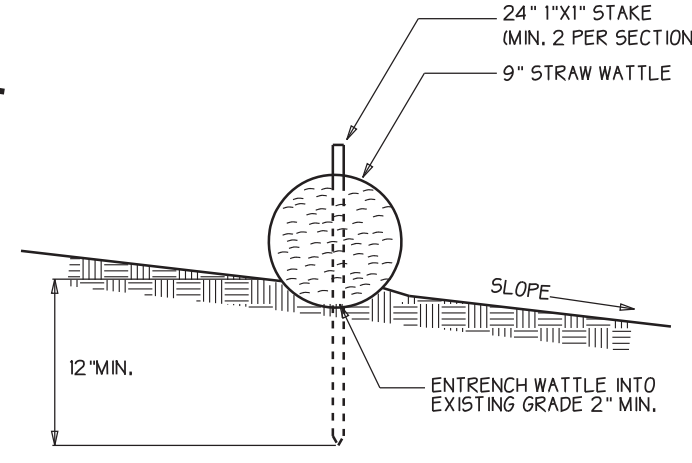
PERCOLATION TESTS

SOIL EVALUATOR: SCOTT P. HAYES, PE - FORESITE ENG.
BOH AGENT: WM. BROOKINGS, NABOH

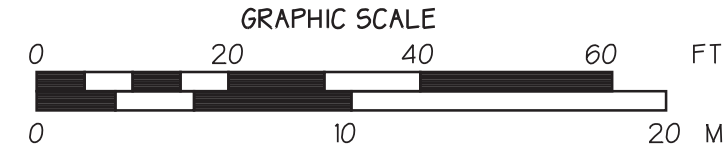
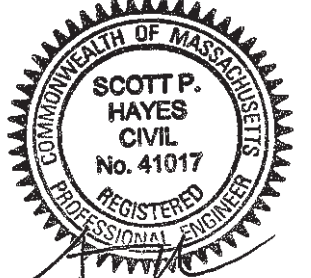
TEST	PT-2A	PT-2B	PT-2C	PT-2D
DATE	11/17/17	11/17/17	11/17/17	11/17/17
DEPTH	38"	38"	42"	44"
RATE (MP1)	4	5	3	<2

LEGEND

- s.t. PROPOSED 1,500 GAL. PRECAST CONCRETE SEPTIC TANK
- d-box 6-OUTLET PRECAST CONCRETE DISTRIBUTION BOX
- TP DEEP TEST HOLE
- P PERCOLATION TEST
- 310- EXISTING 5-FT CONTOUR (TYP.)
- 312- EXISTING 1-FT CONTOUR (TYP.)
- 314- PROPOSED 1-FT CONTOUR (TYP.)
- x-x-x- PROPOSED STAKED STRAW WATTLE EROSION CONTROL BARRIER



**STAKED STRAW WATTLE
EROSION CONTROL BARRIER**
NOT TO SCALE



**SEWAGE DISPOSAL SYSTEM
DESIGN PLAN**

LOT 4 CENTURY MILL ROAD
BOLTON, MASSACHUSETTS
PART OF ASSESSORS MAP 3D PARCEL 32

PREPARED FOR:
21 CENTURY MILL LLC
291 MAIN STREET SUITE 8
NORTHBORO, MASSACHUSETTS 01532

REV. 10/1/18
DATE: AUGUST 20, 2018 SCALE: 1 INCH = 20 FEET



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