



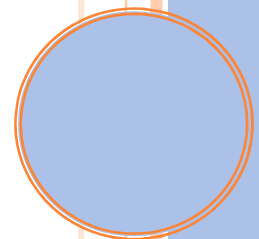
NOTICE OF INTENT NARRATIVE REVISION and RESTORATION PLAN

4 Demarco Road. Sudbury

The following is a restoration plan for altered wetlands and the retroactive Filing of a Notice of Intent for alterations and riverfront mitigation at the above listed address.

Matthew S. Marro Environmental Consulting

August 2023



RIVERFRONT NARRATIVE AND RESTORATION PLAN

4 Demarco Road, Sudbury

The following is a narrative plan for the restoration and mitigation of Riverfront located at 4 Demarco Road. The activity proposed is the restoration of a riverfront identified as altered on 4 Demarco Road as defined by 310 CMR 10.58. This narrative is in response to Conservation Commission requirements due to unauthorized alterations. The current condition of the site designated for restoration is a mixed shrub and herbaceous planting area. This conceptual restoration narrative is based on a revised plan by New England Engineering entitled "Horizon Holding LLC, 4 Demarco Road with a revision date of July 19, 2023 signed and stamped by Carlos Quintal.

This supplement to the Notice of Intent proposes the restoration of riverfront of the portion of the affected property where work had commenced within the rear yard and in the front of the property.

Restoration of Riverfront

As the result of activities conducted on site a current estimate of 1650 square feet of riverfront is proposed to be restored in total equivalent square feet equivalent to a 2:1 mitigation. The shrub layer and over story in the area surrounding the proposed restoration area are in excellent condition. The over-story, herbaceous and a shrub layer will be maintained in this area.

The soil in the area of alteration, if required for augmentation purposes will utilize existing loom soils and any supplemental loom will be utilized to make up for any volume shortages. The area to be restored will be re-established in a naturalized state. Prior to the spread of soils into the restoration area, I recommend the area be viewed by a member of the Conservation office to ensure satisfaction with elevation and area shape for conformity with approved plan. After inspection, soils obtained from the site and any commercial sources will be spread with loom added to the soils to allow for the restoration. There shall be no heavy equipment to enter the wetland resource area as this is not related to a replication. Restoration areas that require planting will be seeded with a standard conservation wetland mix, similar to the vegetation, which is native in the town of Sudbury, as noted in a subsequent section of this plan in order to blend in with the existing resource areas. Shrubbery will be added to the planting area as well.

The area will then be allowed to stabilize. It is estimated that the majority of any re-seeding and the re-growth of the herbaceous layer should be well established within the first growing season. A second growing season may be needed to re- seed any areas that did not take from¹ the first seeding. A schedule of monitoring is at the end section of this proposed plan.

It is also noted that there are ten invasive broad stemmed burning bush at the property line, which will be removed. It appears by spacing and symmetry, the shrubs may have been planted by a former owner in years past, prior to being banned for commercial sale. The removal will also ensure the invasive does not establish in the mitigation area.



Shrub Layer Planting Proposal
 Consisting of Serviceberry (*Amelanchier arborea*) and Nannyberry (*Viburnum lentago*)

The following shrub layer planting plan assumes coverage of shrubs across the majority of the restoration area as noted in the box outline planting area on revised plans. All plants to be utilized are native.

The proposal for the planting plan is to plant the following:

1. All varieties will be spread throughout the total 1650 square feet to the rear yard/property line.
2. The berry bush varieties proposed will provide some flowering aspects to the shrubbery. Annual flowering shrubs will provide bird and butterfly habitat. The fruit will also provide food sources to various smaller wildlife already present in the undeveloped area of the property.
3. Nanny Berry will also provide a well-rounded shrub planting for habitat value and will be scattered in all portions of the restoration area.

Based on the density required for good growth that will not result in competing with each other for survival, it is assumed a triangular planting grid pattern as shown on the plans with shrubs planted at a minimum 5 feet off center will be the standard to be used in the replanting in this area.

The mix of planting was calculated based on the planting offsets cited above and assuming a triangular landscaped planting pattern for an approximate total of 23 (+/- 5) within the restoration area.

HERBACEOUS MIX

The flowing meadow/upland mix is proposed for the entirety of the riverfront and is native to the commonwealth.

Botanical Name	Common Name	Indicator
<i>Elymus virginicus</i>	Virginia Wild Rye	FACW-
<i>Schizachyrium scoparium</i>	Little Bluestem	FACU
<i>Andropogon gerardii</i>	Big Bluestem	FAC
<i>Festuca rubra</i>	Red Fescue	FACU
<i>Sorghastrum nutans</i>	Indian Grass	UPL
<i>Panicum virgatum</i>	Switch Grass	FAC
<i>Chamaecrista fasciculata</i>	Partridge Pea	FACU
<i>Desmodium canadense</i>	Showy Tick Trefoil	FAC
<i>Asclepias tuberosa</i>	Butterfly Milkweed	NI
<i>Bidens frondosa</i>	Beggar Ticks	FACW
<i>Eupatorium purpureum</i> (<i>Eutrochium maculatum</i>)	Purple Joe Pye Weed	FAC
<i>Rudbeckia hirta</i>	Black Eyed Susan	FACU-
<i>Aster pilosus</i> (<i>Symphotrichum pilosum</i>)	Heath (or Hairy) Aster	UPL
<i>Solidago juncea</i>	Early Goldenrod	

The New England Conservation/Wildlife Mix provides a permanent cover of grasses, wildflowers, and legumes. For both good erosion control and wildlife habitat value. The mix is designed to be a no maintenance seeding, and is appropriate for cut and fill slopes, detention basin side slopes, and disturbed areas adjacent to commercial and residential projects.

In consideration of riverfront regulation with respect to redevelopment, the measurements of degraded area on the property following are listed:

1. Existing Driveway- 480 Square Feet
2. Roof Line house and garage – 1260 Square Feet (there is no additional roof line).
3. Proposed added driveway – 480 square feet
4. Proposed Decking – 144 Square Feet
5. Added Steps – 12 Square Feet
6. A paver walkway – 151 Square Feet

The mitigation proposed is calculated on the following:

1. 62 square feet above the 10% threshold: at 2:1 mitigation- 124 square feet
2. 144 square feet of new decking located closer to the perennial stream- at 2:1 mitigation 288 square feet.
3. Alterations that took place to the site to be incorporated into the restoration area at a 1:1 ratio – 1,238 square feet.

Total square footage proposed for mitigation: 1,650 square feet.

TABLE OF PROPOSED EVENTS

Proposed Restoration

EVENT	START	END	PROPOSED MONITORING
Area to be prepared for planting.	Summer 2023* (see note below)	Fall 2023	upon site preparation and completion
Soils spreading Vegetation planting for riverfront reclamation.	Summer 2023	Fall 2023	Once per month-during growing Season.
Allow for growth. (Re-seeding if necessary to occur during 2 growing seasons)	Spring 2023	Fall 2023	Once per month May-October

Note: Monitoring reports to be submitted yearly. Schedule is subject to change for reasons including, but not limited to, items such as the time required for any required supplemental permit approvals or construction mobilization and inclement weather. Any change in schedule shall be submitted to the Conservation Agent for review and approval.

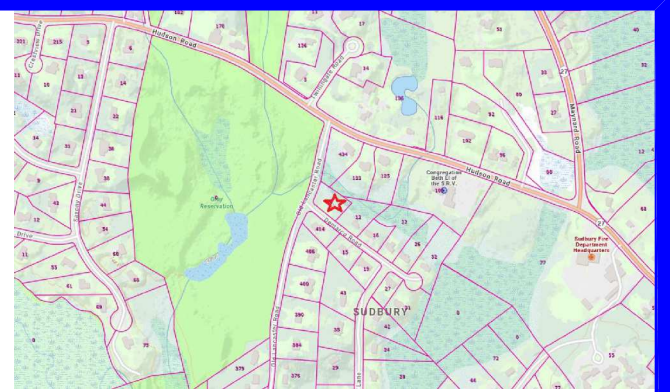
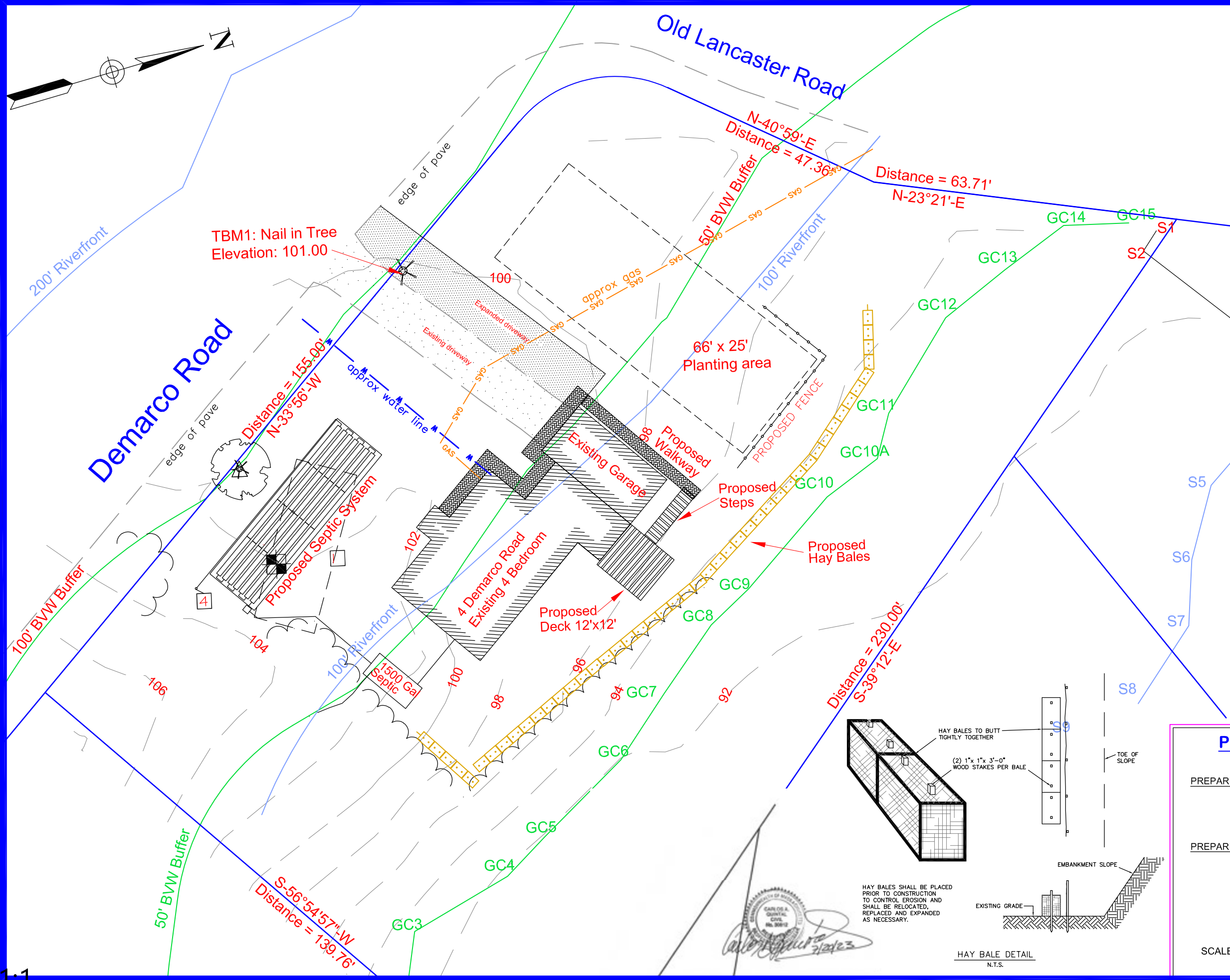
* This will commence after the expiration of the appeal period of the Order of Conditions once issued by the Conservation Commission. (10 business days). This timeline is also weather dependent. Work will not commence or continue during inclement weather events; this could mildly affect the completion timeline.

In conclusion, the overall restoration area is in an area abutting a very large and forested wetland resource area within the riverfront. The restored resources as a result of this proposal will be targeted to enhance the overall existing wetland resource area and riverfront by allowing for the restored area to have some control of water generated from stormwater runoff, protect and enhance wildlife habitat to an area that is more cohesive and of value than current conditions allow and will better protect overall ground water quality due to the added plantings.

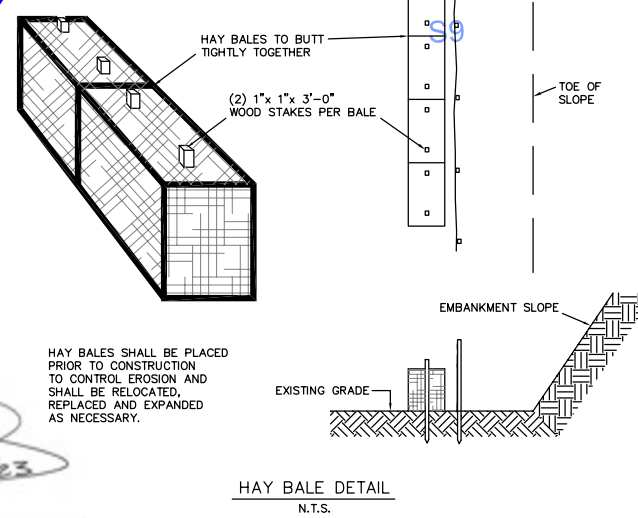
Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'MSM', is positioned above the typed name.

Matthew S. Marro, WP, PWTPO, CSI
Consulting Agent/Principle



- NOTES:**
1. PROPERTY LINE INFORMATION SHOWN HEREON WAS COMPILED FROM VARIOUS SOURCES WHICH INCLUDE PLANS OF RECORD ON FILE AT THIS OFFICE.
 2. TOPOGRAPHY SHOWN HEREON IS DERIVED FROM PLAN PREPARED BY INNOVATED SEPTIC DESIGN, INC. PLAN NUMBER 02212301 AND ON SITE INFORMATION FROM THIS OFFICE.
 3. UTILITY LOCATIONS AND ELEVATIONS SHOWN HEREON SHALL BE CONSIDERED APPROXIMATE. ALL UTILITIES, WHETHER SHOWN ON THIS PLAN OR NOT, THAT ARE DAMAGED BY THE CONTRACTOR, ARE TO BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
 4. RELOCATION OF ANY UTILITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE PROVISIONS OF THE APPROPRIATE UTILITY COMPANY AND/OR REGULATORY AGENCY.
 5. *** DIG SAFE NOTE ***
IN ACCORDANCE WITH MGL CH 82, SEC. 40 INCLUDING AMENDMENTS, ALL CONTRACTORS SHALL NOTIFY UTILITY COMPANIES AND GOVERNMENT AGENCIES IN WRITING, OF THE INTENT TO EXCAVATE NO LESS THAN 72 HOURS PRIOR TO SUCH EXCAVATION (EXCLUSIVE OF SATURDAYS, SUNDAYS, AND HOLIDAYS.) OR CALL "DIG SAFE" AT 1-888-DIG-SAFE.
 6. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE MASSACHUSETTS D.P.W. SPECIFICATIONS OF HIGHWAYS AND BRIDGES AS LAST REVISED AND/OR THE APPROPRIATE LOCAL AUTHORITIES.
 7. ANY DEVIATIONS, i.e. "FIELD CHANGES" FROM THE DESIGN PLAN(S) MUST BE APPROVED BY THE DESIGN ENGINEER IN WRITING. CONTRACTOR SHOULD BE AWARE THAT LOCAL AND STATE AUTHORITIES HAVE JURISDICTION AND APPROVALS MUST BE OBTAINED THROUGH THOSE RESPECTIVE OFFICE(S) PRIOR TO THE IMPLEMENTATION OF THE "FIELD CHANGE". WHITMAN & BINGHAM ASSOCIATES, INC. ASSUMES NO LIABILITY OR RESPONSIBILITY FOR WORK COMPLETED WITHOUT REGARD TO THE PRIOR MENTIONED "FIELD CHANGE" PROCEDURE.
 8. ALL SLOPES UNLESS OTHERWISE SPECIFIED, SHALL BE LOAMED AND SEEDED. SLOPES SHALL BE PROTECTED FROM EROSION VIA THE USE OF EROSION CONTROL BLANKET AS SHOWN HEREON. EROSION BLANKET SHALL BE "NORTH AMERICAN GREEN" C-150 OR EQUIVALENT.



PROPOSED SITE IMPROVEMENT PLAN

PREPARED FOR:
 HORIZON HOLDING, LLC
 4 DEMARCO ROAD
 SUDBURY, MA 01776
 978-621-8278

PREPARED BY:
 NEW ENGLAND ENGINEERING, LLC
 601 SHEA STREET
 FITCHBURG, MASSACHUSETTS 01420
 508.921.9021
 WWW.NEEGLLC.COM

SCALE: 1"=20' DATE: JULY 19, 2023

Carolea Quinlan
 CAROLEA QUINLAN
 CIVIL ENGINEER
 No. 36919