



January 23, 2023

Town of Franklin
Conservation Commission
355 East Central Street
Franklin, Massachusetts 02038

Re: Notice of Intent – Response Letter #1
121 Grove Street
Map 295, Lot 1 & Map 294, Lot 7
Franklin, Massachusetts 02038
MassDEP File #159-1261

Members of the Franklin Conservation Commission:

On behalf of Fairfield Residential Company LLC, and in association with RJO'Connell & Associates, Inc., LLC, Lucas Environmental, LLC is pleased to submit this letter in response to the BETA Comment Letter, dated January 6, 2023. This response is submitted as a supplement to the Abbreviated Notice of Resource Area Delineation (ANRAD) for the subject property located at 121 Grove Street (Map 295, Lot 1 & Map 294, Lot 7) in Franklin, Massachusetts (MassDEP File #159-1261).

The following details the project team's responses to BETA's comments W1 to W9.

1. The attached Existing Conditions Site Plan prepared by Guerriere & Halnon, Inc., dated May 20, 2022, and revised through January 19, 2023, was updated to include the following:
 - a. A survey benchmark with a referenced NAVD88 elevation.
 - b. Assessor references for all abutting properties.
 - c. Buffer Zones:
 - i. 25-Foot No Disturb Buffer Zone.
 - ii. 50-Foot No Structure Buffer Zone.
 - iii. 100-Foot Buffer Zone.
 - d. The off-site resource areas that may constrain the site are limited to the New England Power Company parcel, identified as Map 294, Lot 6, to the south of the subject property. These resource areas will be identified and/or approximated on any future permitting plans. The Applicant is amenable to a Special Condition or Fact-of-Finding in the Order of Resource Area Delineation (ORAD) to note this.
2. BETA stated that they concur that the on-site streams are intermittent, and that Riverfront Area does not exist on the property. No further response required.

3. BETA stated that they concur with the delineation of the intermittent streams BF1, BF2, and BF3. No further response required.
4. LE disagrees with BETA's contention that six additional groundwater seeps meet the definition of intermittent stream per 310 CMR 10.04 of the Wetlands Protection Act (WPA). The WPA defines "Stream" as the following:

A body of running water, including brooks and creeks, which moves in a definite channel in the ground due to a hydraulic gradient, and which flows within, into or out of an Area Subject to Protection under M.G.L. c. 131, § 40.

Unlike BF1, BF2, and BF3, which have defined channels and were flagged by LE as intermittent streams, these additional six areas in question should not be classified as streams as there are no definitive channels present. Due to the rolling topography of the land, a hydraulic gradient is present and water will flow downhill through these areas; however, as a definite channel is lacking, LE would not consider these six additional areas as jurisdictional streams.

5. BETA concurs with LE's delineation of the BVW WFB series and recommends extending the delineation from WFB-49 towards the drillhole in the stone wall. The Existing Conditions Site Plan has been updated to reflect this revision.
6. BETA concurs that the area within the WFB series (previously identified by LE near flags WFB-72 to WFB-76) are likely too shallow to support breeding habitat of vernal pool indicator species. No further response required.
7. BETA concurs with LE's delineation of the BVW WFA series, except for the area south of flags WFA-29 to WFA-31 noted in BETA's letter and discussed further in Comment #8. No further response required; however, LE notes that the area in question was verified between flags WFA-30 & 31 and WFC-5 & 6, not flag WFA-29, per the discussion during the site walk conducted on December 21, 2022 with BETA and the Conservation Agent.
8. BETA concurs with LE's delineation of wetland WFC-1 to 3 and WFC-6 to 11; however, has questioned the areas between flags WFA-30 & 31 and WFC-5 & 6. LE respectfully disagrees with BETA's assessment and summary of said area based upon the following points of fact.

LE has inspected this area numerous times on April 20th, April 21st, October 27th, and December 21st, 2022, and January 19th, 2023. LE staff included two Professional and Certified Wetland Scientists (PWS/CWS) and Registered Professional Soil Scientists (RPSS). Mr. Thomas Liddy, PWS, CWS, RPSS, and CESSWI delineated and inspected this area in April and October. I delineated this area with Mr. Liddy in April, and was present for all subsequent inspections. In addition to being an RPSS, I also have a Master's Degree in Soil Science from UMASS – Amherst. LE staff resumes are attached.

Wetlands on-site were delineated in accordance with the Massachusetts Department of Environmental Protection (MassDEP) publication "Delineating Bordering Vegetated Wetlands" under the Massachusetts Wetlands Protection Act (1995) (Delineation Manual).

As the review before this Commission is subject to the Wetlands Protection Act, LE has followed the criteria for identification of wetlands per the state's requirements. As the field is mowed and vegetation is disturbed, LE has conducted a detailed and through assessment of the soils and groundwater in the area in question.

BETA has not demonstrated that this area meets any of the MassDEP criteria required for hydric soils identification (see below). BETA's assessment uses the federal indicators associated with delineations for Waters of the U.S. subject to the Clean Water Act.

LE does not concur with the designation of Hydric Soil Indicator F6 for Redox Dark Surfaces using this methodology. LE disagrees with BETA's conclusion and average soil profile through the area in question. LE has conducted at least two dozen auger holes through this area and notes the following typical profile. LE did observe one hole that generally aligns with BETA's comment; however, this was located approximately two feet upgradient of flag WFA-31.

Depth	Matrix Color	Redox
0-3"	10YR 3/1 and 10YR 3/2	limited to no redox
3-6"	10YR 3/2	variable redox of 1% to 5%
6-12"	10YR 4/4, 10YR 5/4, 10YR 5/6	variable redox
12-R/18"	10YR 4/4, 10YR 5/4, 10YR 5/6	10-20% redox
*R=Refusal at variable depths of 14-18"		

The MassDEP Delineation Manual states that *when evaluating mineral soils for low-chroma colors or other evidence of saturation, **look for indicators directly below the A-horizon** and within the top 12 inches of the soil surface* [emphasis added]. Four soil criteria listed by MassDEP that were analyzed for this site include the following (there are other indicators; however this site did not include any histosols, histic epipedons, sulfidic material or gleyed soils):

- *Soils with a matrix chroma of 0 or 1 and values of 4 or higher within 12 inches from the bottom of the O-horizon.* The soils observed have a chroma of 1 or 2, and values of 3 and less, therefore the soils would not classify as hydric per this criterion.
- *Within 12 inches from the bottom of the O-horizon, soils with a chroma of 2 or less and values of 4 or higher in the matrix, and mottles with a chroma of 3 or higher.* The soils observed have a chroma of 1 or 2, and values of 3 and less, OR chroma 4 or higher and values of 4 or higher, and therefore would not classify as hydric per this criterion.
- *Within 12 inches from the bottom of the O-horizon, soils with a matrix chroma of 3 and values of 4 or higher, with 10 percent or more low-chroma mottles, as well as indicators of saturation (i.e., mottles, oxidized rhizospheres, concretions, nodules) within 6 inches of the soil surface.* The soils observed have a chroma of 1 or 2, and values of 3 and less, therefore the soils would not classify as hydric per this criterion.

- *A-horizons that are thick and very dark. A-horizons greater than or equal to 12 inches thick with values less than 3 and chroma of 2 or less are difficult to analyze because indicators of saturation are difficult to see. Therefore, look directly below the A-horizon for a matrix chroma of 1 or less and values of 4 or higher. If the matrix color directly below the thick and dark A-horizon is chroma 2 and value 4 or higher, other indicators of saturation need to be present in the soil directly below the A-horizon. In uncommon situations, it may be necessary to dig deeper to evaluate colors below the A-horizon.* The A horizon is not 12 inches thick at this location; however, the principal applies to look directly below the A horizon. The soils observed have a chroma 4 or higher and values of 4 or higher, and therefore would not classify as hydric per this criterion. For comparison, evaluation of the soils within Wetland A and Wetland C show a depleted matrix, or low chromas of 1 and values of 6 with significant redox of approximately 40% directly below the A horizon, which are indicative of hydric soils and influenced by a high groundwater table. This is not present in the area in question.

Furthermore, LE rebuts BETA's opinion that a high groundwater table exists sufficient to create anaerobic conditions within this area. The Delineation Manual states the following in relation to the evaluation of groundwater: *some of these hydrologic indicators can be affected by recent heavy rain or seasons with above average amounts of precipitation. Conversely, these indicators may not be present during the entire year or may be absent during prolonged periods of drought.*

LE has attached rainfall data for April, October, and December for Franklin, obtained from the National Weather Service (<https://www.weather.gov/wrh/Climate?wfo=box>). LE did not observe groundwater in this area above 18 inches during the October and January site visits. LE evaluated the rainfall data and notes that there was no precipitation in the 11 days prior to the October 27th site visit, and less than a total of one inch the two weeks preceding that site visit.

There was 1.62 inches of rainfall in the two (2) days preceding BETA's site inspection in December, and a total of approximately 2.88 inches of rainfall in the two weeks preceding BETA's site walk. It is expected that water would be at or near the surface following these rain events outside the growing season. Groundwater must be analyzed closely, and if there was a high groundwater table in this area, lower chroma and higher value soils would be observed below the A horizon.

LE included April data to demonstrate that rainfall was close to normal the month the wetlands were delineated. LE was on-site after rain events and considered the rain in assessing groundwater in consideration of the 1.75 inches prior to the initial delineation.

In conclusion of the groundwater discussion, the observation of hydrology by BETA was very likely influenced by the storm events that preceded the December site walk and should not be used as a basis for concluding wetland hydrology exists at this location.

9. BETA noted potential areas of isolated wetland near test pit TP-6; however, the location reviewed in the field during the December site visit with BETA is actually TP-16. Three Professional/Certified Wetland Scientists inspected this area during the April delineation and did not identify sufficient hydrophytic vegetation or hydric soils to delineate this area. Although there is a hydric profile identified in one small area adjacent to the test pit, the vegetation in and surrounding this area is not greater than 50% hydrophytic vegetation.



500A Washington Street, Quincy, MA 02169

The vegetation primarily consists of northern red oak (*Quercus rubra*) – FACU, eastern white pine (*Pinus strobus*) – FACU, American beech (*Fagus grandifolia*) – FACU, American witch hazel (*Hamamelis virginiana*) – FACU, sassafras (*Sassafras albidum*) – FACU, black cherry (*Prunus serotina*) – FACU, and princess pine (*Dendrolycopodium obscurum*) – FACU. The overstory consists of red oak and white pine with a few red maple (*Acer rubrum*) – FAC observed. Highbush blueberry (*Vaccinium corymbosum*) – FACW and sweet pepperbush (*Clethra alnifolia*) – FAC were also observed in a few locations.

LE conducted numerous soils plugs throughout this area, and found the A horizon to be on average, 6-8 inches deep, with soils consisting of a 10YR 5/6 below. Redox was not present or less than 1-2% were observed below 12 inches. Based upon LE's assessment of this area, it does not contain sufficient hydrophytic vegetation or development of hydric soils to be classified as wetland per the MassDEP Delineation Manual or federal criteria.

As one final point, the site has a history of previous wetland delineations that demonstrate Wetland C is isolated. The Draft Existing Conditions Plan, prepared by Alpha Survey Group, dated, January 13, 2022, is attached. The wetlands identified were delineated by LEC Environmental Consultants, Inc. (LEC) in August 2021, with many flags still visible during the recent site inspections. LEC is a reputable firm known for peer review work through the Commonwealth. Their delineation shows a smaller IVW than LE's and no connection to the currently delineated Wetland A. LEC did not identify wetlands in the vicinity of TP-16. This plan is submitted to demonstrate another perspective on these two areas in dispute.

Enclosed please find one (1) original and one (1) copy of the ANRAD supplemental response and full-size plan, and six (6) copies of the reduced 11x17 plans. A link to an electronic copy of the pdf file of this response will be provided concurrently with this submittal via email.

If you have any questions, please do not hesitate to contact me at 617.405.4140 or cml@lucasenviro.com. Thank you for your consideration in this matter.

Sincerely,
LUCAS ENVIRONMENTAL, LLC

A handwritten signature in blue ink that reads 'Christopher M. Lucas'.

Christopher M. Lucas, PWS, CWS, RPSS
Environmental Consultant/Wetland & Soil Scientist

Enclosures:

1. Resumes
2. Rainfall Data
3. Existing Conditions Site Plan, prepared by Guerriere & Halnon, Inc.
4. Existing Conditions Plan, prepared by Alpha Survey Group

cc: Bryn Smith – Owner (electronic copy)
Fairfield Residential Company LLC – Applicant (electronic copy)
R.J. O'Connell & Associates, Inc. (electronic copy)
MassDEP – CERO

Christopher M. Lucas, PWS, CWS, RPSS

Environmental Consultant | Professional Wetland & Soil Scientist
Land Development & Permitting

Biography

Christopher Lucas has an extensive background in ecology and wildlife biology as well as marine biology, ornithology and Geographic Information Systems (GIS). His responsibilities include preparation and coordination of the environmental science aspects of a variety of project types including railroad and roadways, residential and commercial development, and telecommunications facilities. Chris is skilled in wetland delineations, wildlife habitat evaluations and analysis, and preparation of documents associated with environmental permit applications.

Chris's expertise lies in document preparation and coordination for environmental permitting. He has prepared documentation for federal and state permits under the jurisdiction of the U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, Department of Environmental Protection, Department of Conservation and Recreation, Massachusetts Environmental Policy Act, Natural Heritage and Endangered Species Program, and Massachusetts Wetlands Protection Regulations. Additionally, Chris has conducted extensive local environmental permitting within New England.

Professional Experience

Municipal Review and Consulting Services

Tasks related to municipal services include on-call peer review of various projects. On-call services include review of local permitting documents for compliance with the Wetlands Protection Act and Town/City Wetland By-laws, in addition to analysis of environmental impacts. On-call tasks also include review of wetland delineations, wildlife habitat assessments, vernal pool investigations, and rare species work as applicable under the Wetlands Protection Act and Town/City By-laws. Other municipal tasks include work for various Towns to conduct wetland delineations, assist with local permitting and enforcement actions.

Commercial Site Developments – MA

Conducted wetland delineations, wildlife habitat evaluations, and rare species surveys under local, state and federal guidelines for the construction of various commercial developments. Work included consulting and coordination with local, state and federal agencies to obtain all applicable permits required for development. Tasks also integrated wildlife and habitat evaluations for rare species to minimize and mitigate construction impacts.

Residential Site Developments – MA

Prepared and coordinated MEPA, NPDES, USACE, MassDEP, DCR, and local wetland permitting for various residential subdivisions throughout Massachusetts. Site development issues included endangered species work, wetland fill of Outstanding Resource Waters, work within Watershed Protection Areas, impacts to historic properties, and balancing the needs and concerns of local, state, and federal agencies.

Transportation, Railways and Roads – MA

Chris has worked on several roadway and pipeline projects of various lengths (ranging from two miles to over 25 miles) that included wetland delineation and permitting under local, state, and federal regulations. Conducted wetland delineation and wildlife surveys under state and federal guidelines for the reconstruction of the existing railway from Boston to New Bedford/Fall River for an improved commuter rail service.* Work included over 25 miles of wetland delineation involving classification of vernal pools. Tasks also integrated wildlife and habitat evaluations for eighteen rare species with telemetry tracking and monitoring of such species. Duties also involved creation of a database to store and analyze all information collected.

*Some work performed while working for another firm.



Education

Cornell University
Bachelor of Science, Biology
(Double Concentration in
Marine Biology & Ecology)

Stanford University
Master of Science, Biology

UMASS – Amherst
Master of Science, Soil Science

Certifications

Professional Wetland Scientist #1884
Society of Wetland Scientists

Certified Wetland Scientist (NH) #274
Joint Board of Licensure and
Certification – State of NH

Registered Professional Soil Scientist
Society of Soil Scientists of Southern
New England

Geographic Information Systems
(GIS) Certificate - San Francisco State
University

Professional Affiliations

Society of Wetland Scientists

Massachusetts Association of
Conservation Commissions

Association of Massachusetts Wetland
Scientists

Society of Soil Scientists of Southern
New England

Thomas E. Liddy, PWS, CWS, RPSS, CESSWI

Environmental Consultant | Professional Wetland & Soil Scientist
Land Development & Permitting

Biography

Thomas Liddy is a Professional and Certified Wetland Scientist (PWS/CWS) has assisted clients with environmental permit issuance at the federal, state, and local levels since 2001. He routinely conducts wetland delineations and identification of regulated wetland resource areas, as well as natural resource site assessments, including rare species surveys, wildlife habitat assessments, and terrestrial and aquatic vegetative cover type mapping. Tom's project experience ranges from siting and permitting of energy generation facilities and infrastructure, commercial development, lake and pond management and ecological and environmental monitoring. Tom is also experienced as an environmental monitor for erosion control and endangered species, and he performs peer reviews of permit applications for various municipalities. His technical expertise includes wetland delineation, soil profile descriptions, soil evaluations, terrestrial and aquatic vegetation mapping, and rare species survey and habitat assessments.

Tom has knowledge in a variety of ecological disciplines including soil science, wetland ecology, biology, Geographic Information Systems (GIS), and watershed hydrology. He is experienced in regulatory disciplines, specifically the Massachusetts Wetlands Protection Act (WPA), Massachusetts Environmental Policy Act, Massachusetts Endangered Species Act (MESA), Section 401 and 404 of the Clean Water Act, New Jersey Department of Environmental Protection (DEP) Division of Land Use Regulation Permitting, and New York State Article 7 Certificate of Environmental Compatibility and Public Need for Electric and Gas Transmission Facilities.

Professional Experience

Wetland Delineation and Permitting

Tom has routinely worked on projects that included wetland delineation and permitting under local, state, and federal regulations for commercial, residential, and industrial projects. Site development issues have included endangered species work, wetland fill and mitigation plans, work within Watershed Protection Areas, impacts to historic properties, and balancing the needs and concerns of local, state, and federal agencies.

Energy Generation and Permitting – locations throughout New England

Tom has led technical writing and permit application preparation associated with the siting and construction of energy generation facilities (fossil fuel combustion, wind generation, solar and gas storage) and linear transmission (pipelines and electrical transmission interconnections) for projects throughout New England and the Mid-Atlantic states.

Ecological Monitoring and Research

Tom has conducted and participated in numerous biological surveys, studies, and long term studies of terrestrial and aquatic ecosystems. Studies were associated with avian studies in support of wind turbine projects and of long term trends of vegetation, hydrology, water levels, and rare species in a variety of ecosystems ranging from rare Atlantic white cedar swamps to upland forests to lakes and ponds.

Peer Review – Massachusetts

Tom has assisted municipalities with review of Notice of Intent (NOI) and Abbreviated Notice of Resource Area Delineation (ANRAD) applications for compliance with the Wetlands Protection Act. Tasks often include review of resource area identification and delineation and intermittent vs. perennial stream determinations. Municipalities include Scituate, Southborough, Spencer, Marlborough, Milton, Hanover, Andover, Wellesley, Wrentham, Hopkinton, and Brookline, Massachusetts.



Education

University of Rhode Island, Bachelor of Science, Environmental Science and Management, 2001

Certifications

Professional Wetland Scientist #1723
Society of Wetland Scientists

Certified Wetland Scientist (NH) #243
Joint Board of Licensure and Certification – State of NH

Registered Professional Soil Scientist
Society of Soil Scientists of Southern New England

Certified Erosion, Sediment and Stormwater Inspection #5855

Professional Affiliations

Society of Wetland Scientists

Massachusetts Association of Conservation Commissions

Association of Massachusetts Wetland Scientists

Society of Soil Scientists of Southern New England

Climatological Data for FRANKLIN, MA - April 2022

Date	Precipitation	New Snow	Snow Depth
2022-04-01	0.14	0.0	0
2022-04-02	0.00	0.0	0
2022-04-03	0.07	0.0	0
2022-04-04	0.00	0.0	0
2022-04-05	0.06	0.0	0
2022-04-06	0.23	0.0	0
2022-04-07	0.66	0.0	0
2022-04-08	0.00	0.0	0
2022-04-09	0.03	0.0	0
2022-04-10	0.25	0.0	0
2022-04-11	0.00	0.0	0
2022-04-12	0.02	0.0	0
2022-04-13	0.04	0.0	0
2022-04-14	0.00	0.0	0
2022-04-15	0.23	0.0	0
2022-04-16	0.00	0.0	0
2022-04-17	0.27	0.0	0
2022-04-18	0.00	0.0	0
2022-04-19	1.62	0.0	0
2022-04-20	0.13	0.0	0
2022-04-21	0.00	0.0	0
2022-04-22	0.00	0.0	0
2022-04-23	0.00	0.0	0
2022-04-24	0.00	0.0	0
2022-04-25	0.00	0.0	0
2022-04-26	0.00	0.0	0
2022-04-27	0.15	0.0	0
2022-04-28	0.00	0.0	0
2022-04-29	0.00	0.0	0
2022-04-30	0.00	0.0	0
Sum	3.90	0.0	-
Average	-	-	0.0
Normal	4.51	1.2	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).

Precipitation : 7am

Snowfall : unknown

Snow Depth : 7am

Climatological Data for FRANKLIN, MA - November 2022

Date	Precipitation	New Snow	Snow Depth
2022-11-01	0.10	0.0	0
2022-11-02	0.00	0.0	0
2022-11-03	0.00	0.0	0
2022-11-04	0.00	0.0	0
2022-11-05	0.00	0.0	0
2022-11-06	0.00	0.0	0
2022-11-07	0.00	0.0	0
2022-11-08	0.00	0.0	0
2022-11-09	0.00	0.0	0
2022-11-10	0.00	0.0	0
2022-11-11	0.00	0.0	0
2022-11-12	0.57	0.0	0
2022-11-13	0.05	0.0	0
2022-11-14	0.12	0.0	0
2022-11-15	0.00	0.0	0
2022-11-16	0.70	0.0	0
2022-11-17	0.15	0.0	0
2022-11-18	0.00	0.0	0
2022-11-19	0.00	0.0	0
2022-11-20	0.00	0.0	0
2022-11-21	0.00	0.0	0
2022-11-22	0.00	0.0	0
2022-11-23	0.00	0.0	0
2022-11-24	0.00	0.0	0
2022-11-25	0.00	0.0	0
2022-11-26	0.00	0.0	0
2022-11-27	0.00	0.0	0
2022-11-28	0.77	0.0	0
2022-11-29	0.00	0.0	0
2022-11-30	0.00	0.0	0
Sum	2.46	0.0	-
Average	-	-	0.0
Normal	4.08	1.4	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).

Precipitation : 7am

Snowfall : unknown

Snow Depth : 7am

Climatological Data for FRANKLIN, MA - December 2022

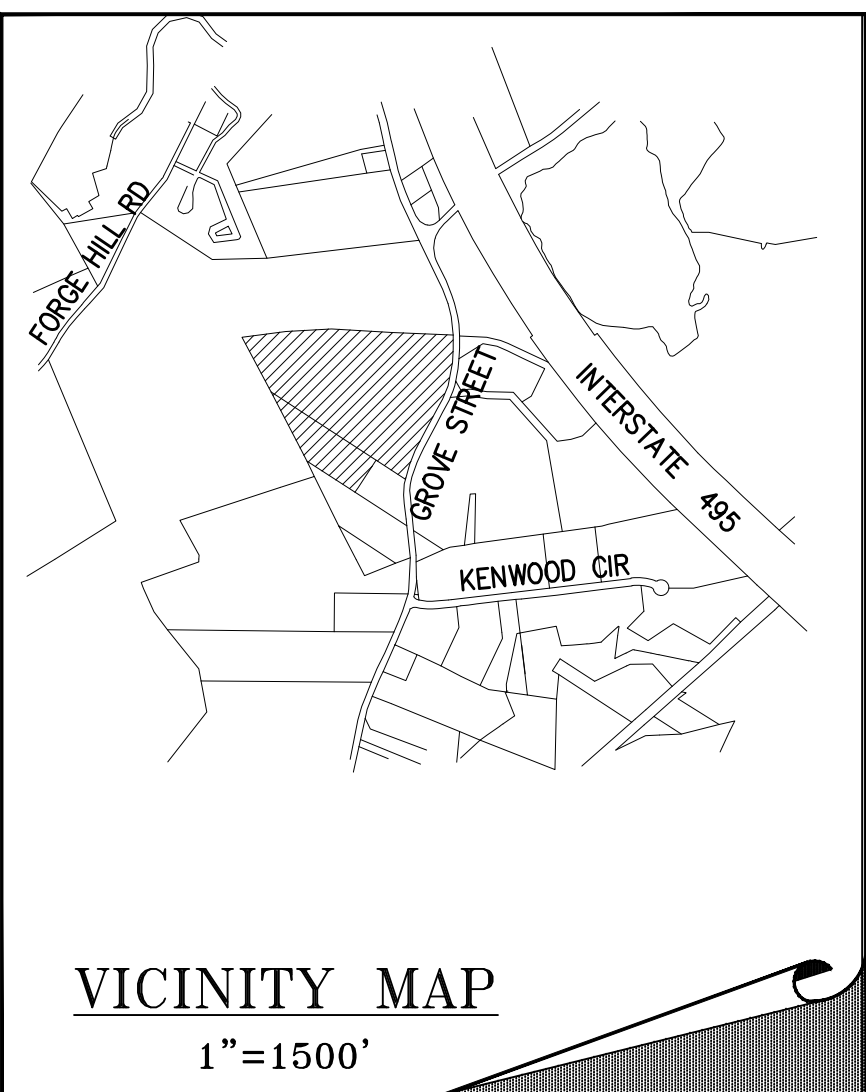
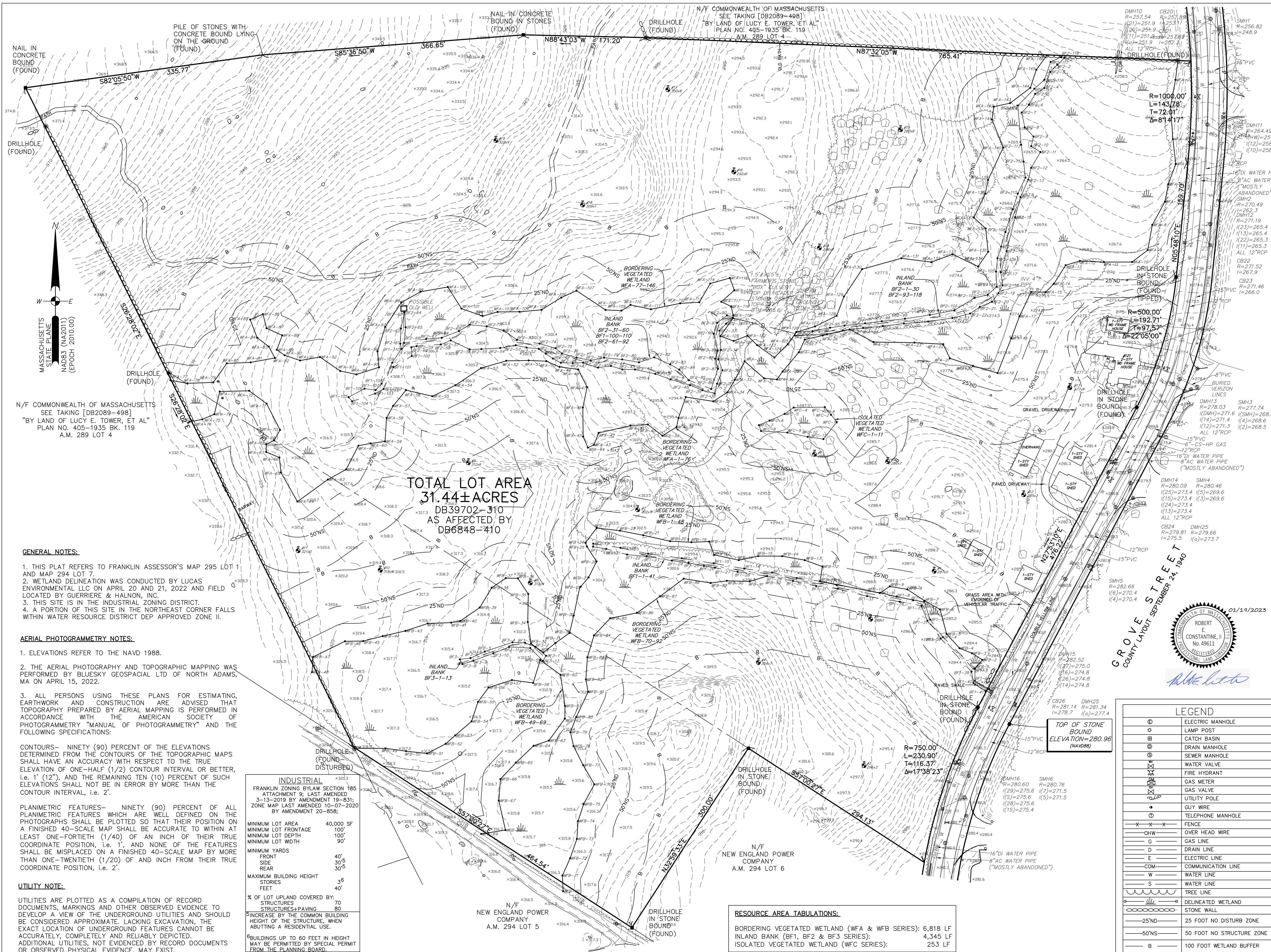
Date	Precipitation	New Snow	Snow Depth
2022-12-01	0.00	0.0	0
2022-12-02	0.00	0.0	0
2022-12-03	0.00	0.0	0
2022-12-04	0.29	0.0	0
2022-12-05	0.00	0.0	0
2022-12-06	0.00	0.0	0
2022-12-07	0.45	0.0	0
2022-12-08	0.52	0.0	0
2022-12-09	0.00	0.0	0
2022-12-10	0.00	0.0	0
2022-12-11	0.00	0.0	0
2022-12-12	0.10	M	M
2022-12-13	0.00	0.0	M
2022-12-14	0.00	0.0	M
2022-12-15	0.00	0.0	0
2022-12-16	0.44	M	M
2022-12-17	1.18	M	M
2022-12-18	0.00	0.0	0
2022-12-19	0.00	0.0	0
2022-12-20	0.00	0.0	0
2022-12-21	0.00	0.0	0
2022-12-22	0.00	0.0	0
2022-12-23	1.63	0.0	0
2022-12-24	0.53	0.0	0
2022-12-25	0.00	0.0	0
2022-12-26	0.00	0.0	0
2022-12-27	0.00	0.0	0
2022-12-28	0.00	0.0	0
2022-12-29	0.00	0.0	0
2022-12-30	0.00	0.0	0
2022-12-31	0.00	0.0	0
Sum	5.14	0.0	-
Average	-	-	0.0
Normal	4.92	8.9	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).

Precipitation : 7am

Snowfall : 7am

Snow Depth : 7am



VICINITY MAP
1"=1500'

LEGAL NOTES

UTILITIES ARE PLOTTED AS A COMPILATION OF RECORD DOCUMENTS, MARKINGS AND OTHER OBSERVED EVIDENCE TO DEVELOP A VIEW OF THE UNDERGROUND UTILITIES AND SHOULD BE CONSIDERED APPROXIMATE. LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED. ADDITIONAL UTILITIES, NOT EVIDENCED BY RECORD DOCUMENTS OR OBSERVED PHYSICAL EVIDENCE, MAY EXIST. CONTRACTORS (IN ACCORDANCE WITH MASS.G.L. CHAPTER 82 SECTION 40 AS AMENDED) MUST CONTACT ALL UTILITY COMPANIES BEFORE EXCAVATING AND DRILLING AND CALL DIGSAFE AT 1(888)DIG-SAFE[7233].

CONSTRUCTION ON THIS LAND IS SUBJECT TO ANY EASEMENTS, RIGHTS-OF-WAY, RESTRICTIONS, RESERVATIONS, OR OTHER LIMITATIONS WHICH MAY BE REVEALED BY AN EXAMINATION OF THE TITLE.

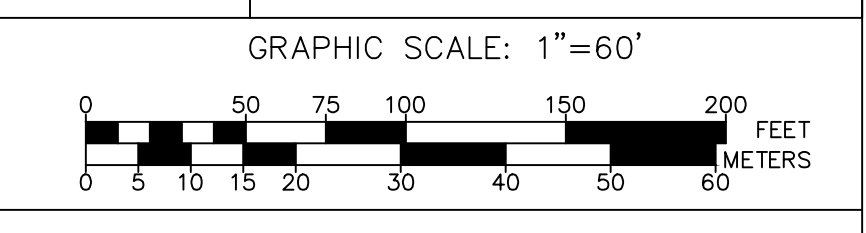
OWNER

BRYN SMITH
106 MENDON STREET
BELLINGHAM, MA 02019
A.M. 295 LOT 1
A.M. 294 LOT 7
DEED BK. 3972 PG 310

EXISTING CONDITIONS SITE PLAN
121 GROVE STREET
FRANKLIN
MASSACHUSETTS

MAY 20, 2022

DATE	REVISION DESCRIPTION
05.25.2022	REVISED EXISTING WATER AND SEWER.
11.16.2022	ADDED LABELS TO RESOURCE AREAS.
01.19.2023	PER PEER REVIEW COMMENTS.



GENERAL NOTES:

- THIS PLAT REFERS TO FRANKLIN ASSESSOR'S MAP 295 LOT 1 AND MAP 294 LOT 7.
- WETLAND DELINEATION WAS CONDUCTED BY LUCAS ENVIRONMENTAL LLC ON APRIL 20 AND 21, 2022 AND FIELD LOCATED BY GUERRIERE & HALNON, INC.
- THIS SITE IS IN THE INDUSTRIAL ZONING DISTRICT.
- A PORTION OF THIS SITE IN THE NORTHEAST CORNER FALLS WITHIN WATER RESOURCE DISTRICT DEP APPROVED ZONE II.

AERIAL PHOTOGRAMMETRY NOTES:

- ELEVATIONS REFER TO THE NAVD 1988.
- THE AERIAL PHOTOGRAPHY AND TOPOGRAPHIC MAPPING WAS PERFORMED BY BLUESKY GEOSPACIAL LTD OF NORTH ADAMS, MA ON APRIL 15, 2022.
- ALL PERSONS USING THESE PLANS FOR ESTIMATING, EARTHWORK AND CONSTRUCTION ARE ADVISED THAT TOPOGRAPHY PREPARED BY AERIAL MAPPING IS PERFORMED IN ACCORDANCE WITH THE AMERICAN SOCIETY OF PHOTOGRAMMETRY "MANUAL OF PHOTOGRAMMETRY" AND THE FOLLOWING SPECIFICATIONS:

CONTOURS— NINETY (90) PERCENT OF THE ELEVATIONS DETERMINED FROM THE CONTOURS OF THE TOPOGRAPHIC MAPS SHALL HAVE AN ACCURACY WITH RESPECT TO THE TRUE ELEVATION OF ONE-HALF (1/2) CONTOUR INTERVAL OR BETTER, I.E. 1' (12"), AND THE REMAINING TEN (10) PERCENT OF SUCH ELEVATIONS SHALL NOT BE IN ERROR BY MORE THAN THE CONTOUR INTERVAL, I.E. 2'.

PLANIMETRIC FEATURES— NINETY (90) PERCENT OF ALL PLANIMETRIC FEATURES WHICH ARE WELL DEFINED ON THE PHOTOGRAPHS SHALL BE PLOTTED SO THAT THEIR POSITION ON A FINISHED 40-SCALE MAP SHALL BE ACCURATE TO WITHIN AT LEAST ONE-FORTIETH (1/40) OF AN INCH OF THEIR TRUE COORDINATE POSITION, I.E. 1', AND NONE OF THE FEATURES SHALL BE MISPLACED ON A FINISHED 40-SCALE MAP BY MORE THAN ONE-TWENTIETH (1/20) OF AN INCH FROM THEIR TRUE COORDINATE POSITION, I.E. 2'.

UTILITY NOTE:

UTILITIES ARE PLOTTED AS A COMPILATION OF RECORD DOCUMENTS, MARKINGS AND OTHER OBSERVED EVIDENCE TO DEVELOP A VIEW OF THE UNDERGROUND UTILITIES AND SHOULD BE CONSIDERED APPROXIMATE. LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED. ADDITIONAL UTILITIES, NOT EVIDENCED BY RECORD DOCUMENTS OR OBSERVED PHYSICAL EVIDENCE, MAY EXIST.

INDUSTRIAL	
FRANKLIN ZONING BYLAW SECTION 185 ATTACHMENT 9; LAST AMENDED 3-13-2019 BY AMENDMENT 19-831; ZONE MAP LAST AMENDED 10-07-2020 BY AMENDMENT 20-858;	
MINIMUM LOT AREA	40,000 SF
MINIMUM LOT FRONTAGE	100'
MINIMUM LOT DEPTH	100'
MINIMUM LOT WIDTH	90'
MINIMUM YARDS	
FRONT	40'
SIDE	30'
REAR	30'
MAXIMUM BUILDING HEIGHT	
STORIES	5
FEET	40'
% OF LOT UPLAND COVERED BY:	
STRUCTURES	70
STRUCTURES+PAVING	80
INCREASE BY THE COMMON BUILDING HEIGHT OF THE STRUCTURE, WHEN ABUTTING A RESIDENTIAL USE.	
BUILDINGS UP TO 60 FEET IN HEIGHT MAY BE PERMITTED BY SPECIAL PERMIT FROM THE PLANNING BOARD.	

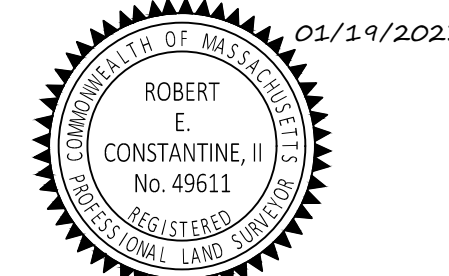
TOTAL LOT AREA
31.44± ACRES
DB39702-310
AS AFFECTED BY
DB6848-410

RESOURCE AREA TABULATIONS:

BORDERING VEGETATED WETLAND (WFA & WFB SERIES):	6,818 LF
INLAND BANK (BF1, BF2 & BF3 SERIES):	4,345 LF
ISOLATED VEGETATED WETLAND (WFC SERIES):	253 LF

LEGEND

⊕	ELECTRIC MANHOLE
⊙	LAMP POST
⊠	CATCH BASIN
⊚	DRAIN MANHOLE
⊛	SEWER MANHOLE
⊜	WATER VALVE
⊝	FIRE HYDRANT
⊞	GAS METER
⊟	GAS VALVE
⊠	UTILITY POLE
⊡	GUY WIRE
⊢	TELEPHONE MANHOLE
⊣	FENCE
⊤	OVER HEAD WIRE
G	GAS LINE
D	DRAIN LINE
E	ELECTRIC LINE
COM	COMMUNICATION LINE
W	WATER LINE
S	WATER LINE
T	TREE LINE
○	DELIMITED WETLAND
—	STONE WALL
—	25' NO DISTURB ZONE
—	50' NO STRUCTURE ZONE
B	100 FOOT WETLAND BUFFER



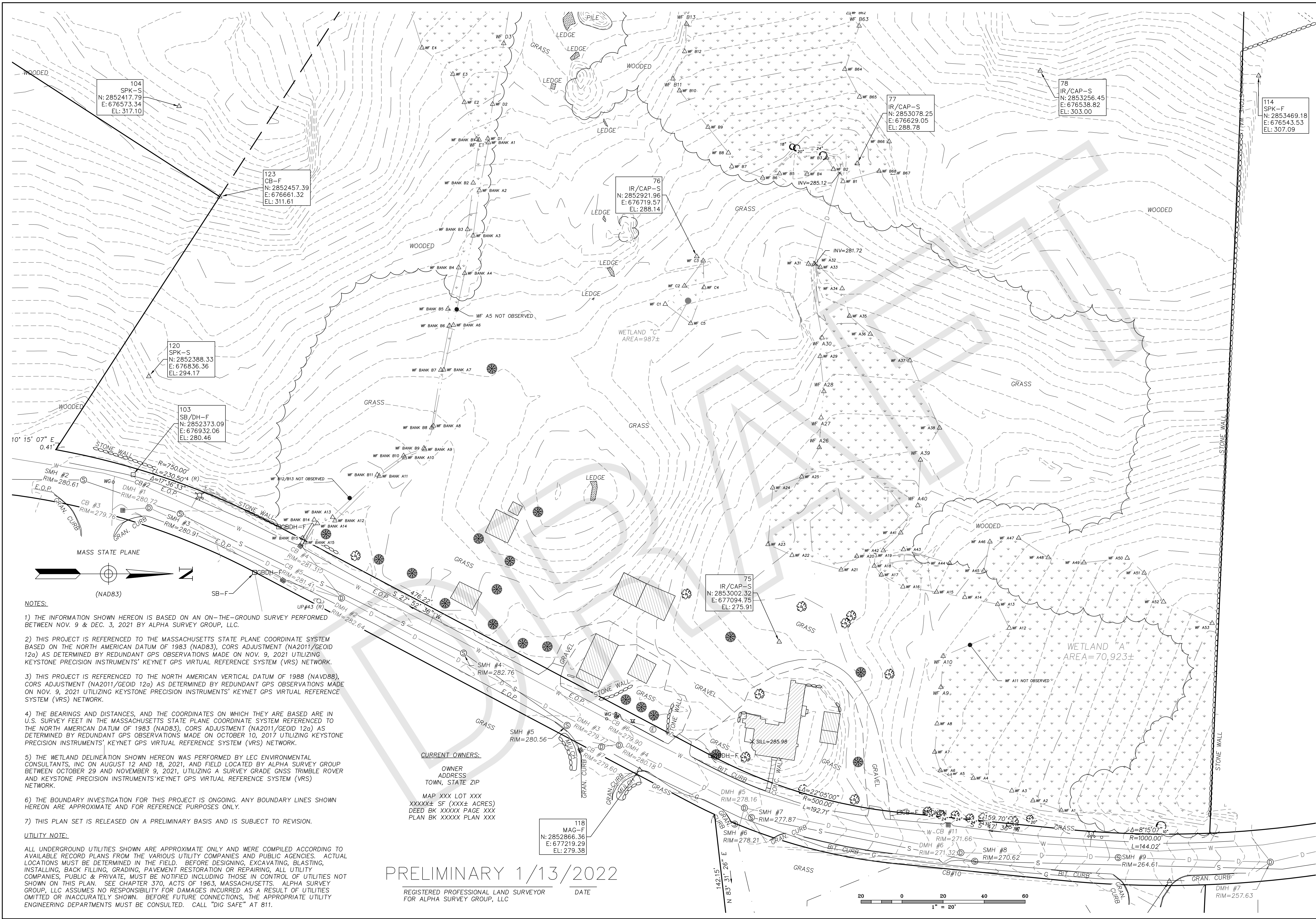
GROVE STREET
COUNTY LAYOUT SEPTEMBER 24, 1940

TOP OF STONE BOUND ELEVATION=280.96 (NAVD88)

R=750.00
L=230.90'
T=116.37'
Δ=17°38'23"

R=1000.00'
L=143.78'
T=72.01'
Δ=81°41'17"

R=500.00'
L=192.71'
T=97.57'
Δ=22°05'00"



104
SPK-S
N: 2852417.79
E: 676573.34
EL: 317.10

123
CB-F
N: 2852457.39
E: 676661.32
EL: 311.61

120
SPK-S
N: 2852388.33
E: 676836.36
EL: 294.17

103
SB/DH-F
N: 2852373.09
E: 676932.06
EL: 280.46

76
IR/CAP-S
N: 2852921.96
E: 676719.57
EL: 288.14

77
IR/CAP-S
N: 2853078.25
E: 676629.05
EL: 288.78

78
IR/CAP-S
N: 2853256.45
E: 676538.82
EL: 303.00

114
SPK-F
N: 2853469.18
E: 676543.53
EL: 307.09

75
IR/CAP-S
N: 2853002.32
E: 677094.75
EL: 275.91

118
MAG-F
N: 2852866.36
E: 677219.29
EL: 279.38

- NOTES:**
- 1) THE INFORMATION SHOWN HEREON IS BASED ON AN ON-THE-GROUND SURVEY PERFORMED BETWEEN NOV. 9 & DEC. 3, 2021 BY ALPHA SURVEY GROUP, LLC.
 - 2) THIS PROJECT IS REFERENCED TO THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD83), CORRS ADJUSTMENT (NA2011/GEOD 12a) AS DETERMINED BY REDUNDANT GPS OBSERVATIONS MADE ON NOV. 9, 2021 UTILIZING KEYSTONE PRECISION INSTRUMENTS' KEYNET GPS VIRTUAL REFERENCE SYSTEM (VRS) NETWORK.
 - 3) THIS PROJECT IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), CORRS ADJUSTMENT (NA2011/GEOD 12a) AS DETERMINED BY REDUNDANT GPS OBSERVATIONS MADE ON NOV. 9, 2021 UTILIZING KEYSTONE PRECISION INSTRUMENTS' KEYNET GPS VIRTUAL REFERENCE SYSTEM (VRS) NETWORK.
 - 4) THE BEARINGS AND DISTANCES, AND THE COORDINATES ON WHICH THEY ARE BASED ARE IN U.S. SURVEY FEET IN THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83), CORRS ADJUSTMENT (NA2011/GEOD 12a) AS DETERMINED BY REDUNDANT GPS OBSERVATIONS MADE ON OCTOBER 10, 2017 UTILIZING KEYSTONE PRECISION INSTRUMENTS' KEYNET GPS VIRTUAL REFERENCE SYSTEM (VRS) NETWORK.
 - 5) THE WETLAND DELINEATION SHOWN HEREON WAS PERFORMED BY LEC ENVIRONMENTAL CONSULTANTS, INC ON AUGUST 12 AND 18, 2021, AND FIELD LOCATED BY ALPHA SURVEY GROUP BETWEEN OCTOBER 29 AND NOVEMBER 9, 2021, UTILIZING A SURVEY GRADE GNSS TRIMBLE ROVER AND KEYSTONE PRECISION INSTRUMENTS' KEYNET GPS VIRTUAL REFERENCE SYSTEM (VRS) NETWORK.
 - 6) THE BOUNDARY INVESTIGATION FOR THIS PROJECT IS ONGOING. ANY BOUNDARY LINES SHOWN HEREON ARE APPROXIMATE AND FOR REFERENCE PURPOSES ONLY.
 - 7) THIS PLAN SET IS RELEASED ON A PRELIMINARY BASIS AND IS SUBJECT TO REVISION.

UTILITY NOTE:
ALL UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE ONLY AND WERE COMPILED ACCORDING TO AVAILABLE RECORD PLANS FROM THE VARIOUS UTILITY COMPANIES AND PUBLIC AGENCIES. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD. BEFORE DESIGNING, EXCAVATING, BLASTING, INSTALLING, BACK FILLING, GRADING, PAVEMENT RESTORATION OR REPAIRING, ALL UTILITY COMPANIES, PUBLIC & PRIVATE, MUST BE NOTIFIED INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN. SEE CHAPTER 370, ACTS OF 1963, MASSACHUSETTS. ALPHA SURVEY GROUP, LLC ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN. BEFORE FUTURE CONNECTIONS, THE APPROPRIATE UTILITY ENGINEERING DEPARTMENTS MUST BE CONSULTED. CALL "DIG SAFE" AT 811.

PRELIMINARY 1/13/2022

REGISTERED PROFESSIONAL LAND SURVEYOR
FOR ALPHA SURVEY GROUP, LLC

DATE	01/13/2022	CHECKED	JEP
JOB NO.	21145	DRAWN	GA
SHEET NO.	1 of 2	FIELD RE/AG	
DATE		SCALE	1" = 20'
PREPARED FOR	THE N.I.C.E. COMPANY 9 ROSENFELD DR. HOPEDALE, MA 01747		
EXISTING CONDITIONS PLAN	FRANKLIN, MASSACHUSETTS 02038		
PREPARED BY	ALPHA SURVEY GROUP, LLC 695 WAREHAM STREET MIDDLEBOROUGH, MA 02946 T: (603) 295-5505 WWW.ALPHASURVEY.COM		
DATE	01/13/2022	JOB NO.	21145
SHEET NO.	1 of 2	DATE	
DATE		JOB NO.	21145