
Appendix B

Figure 1: Total Riverfront Area on the Site

Figure 2: Onsite Coverage Areas (Existing) within Riverfront Area

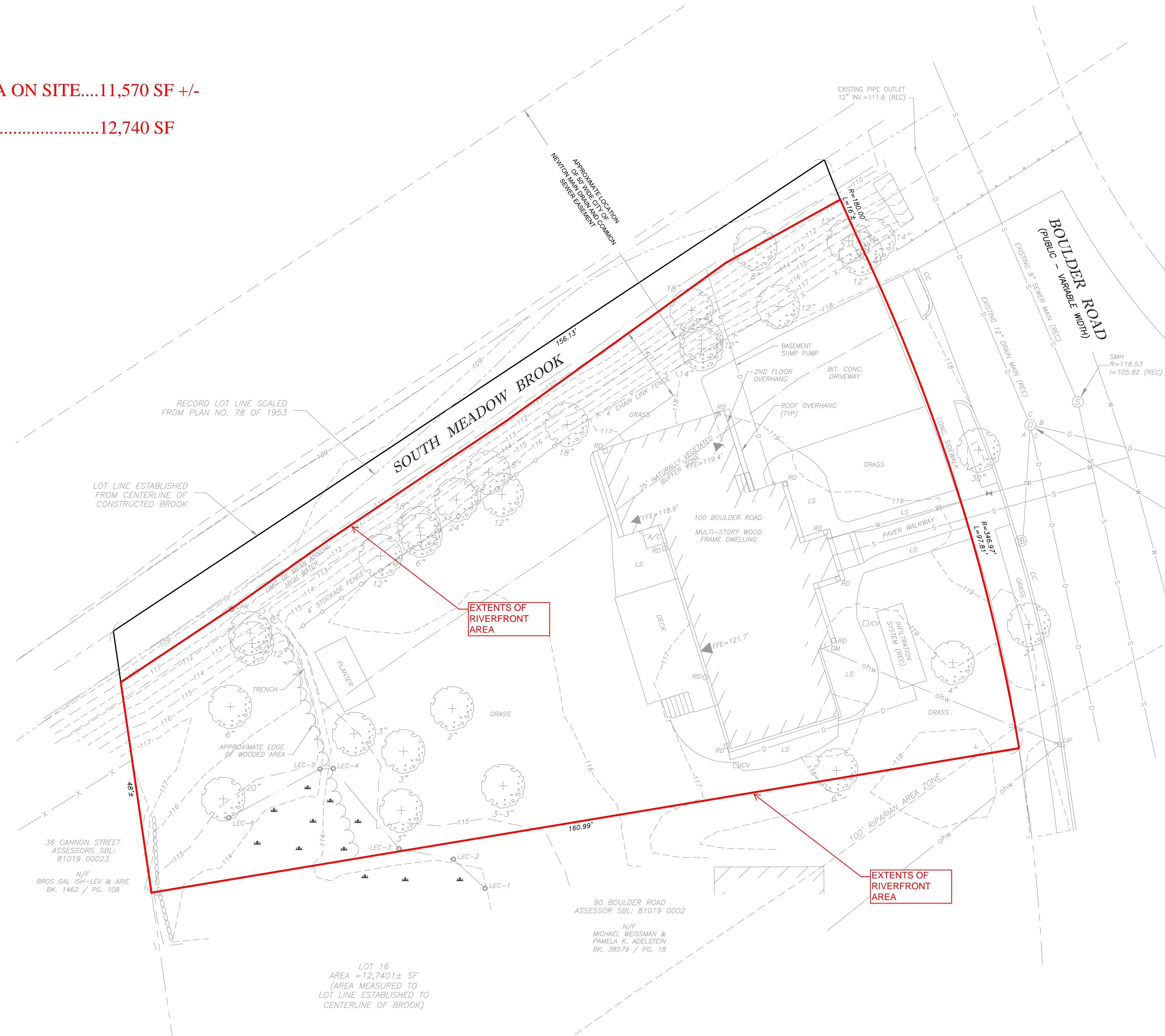
Figure 3: Onsite Coverage Areas (Proposed) within Riverfront Area

Figure 4: Onsite Areas (Existing) within 25-foot Buffer from Top of Bank

Figure 5: Onsite Areas (Proposed) within 25-foot Buffer from Top of Bank

EXISTING RIVERFRONT AREA ON SITE....11,570 SF +/-

TOTAL LOT AREA.....12,740 SF



TOTAL RIVERFRONT AREA ON THE SITE

DEGRADED AREAS

- DRIVEWAY.....810 SF +/-
- BUILDING (1ST FLOOR)...1,350 SF +/-
- WALKWAY (FRONT).....95 SF +/-
- STOOP.....30 SF +/-
- DECK.....265 SF +/-
- REAR STAIR.....20 SF +/-
- FIELD STONE PATH.....95 SF +/-

NON-DEGRADED AREAS

- GRASSED AREA.....5,115 SF +/-
- WOODED AREA.....3,005 SF +/-
- LANDSCAPED AREA.....785 SF +/-



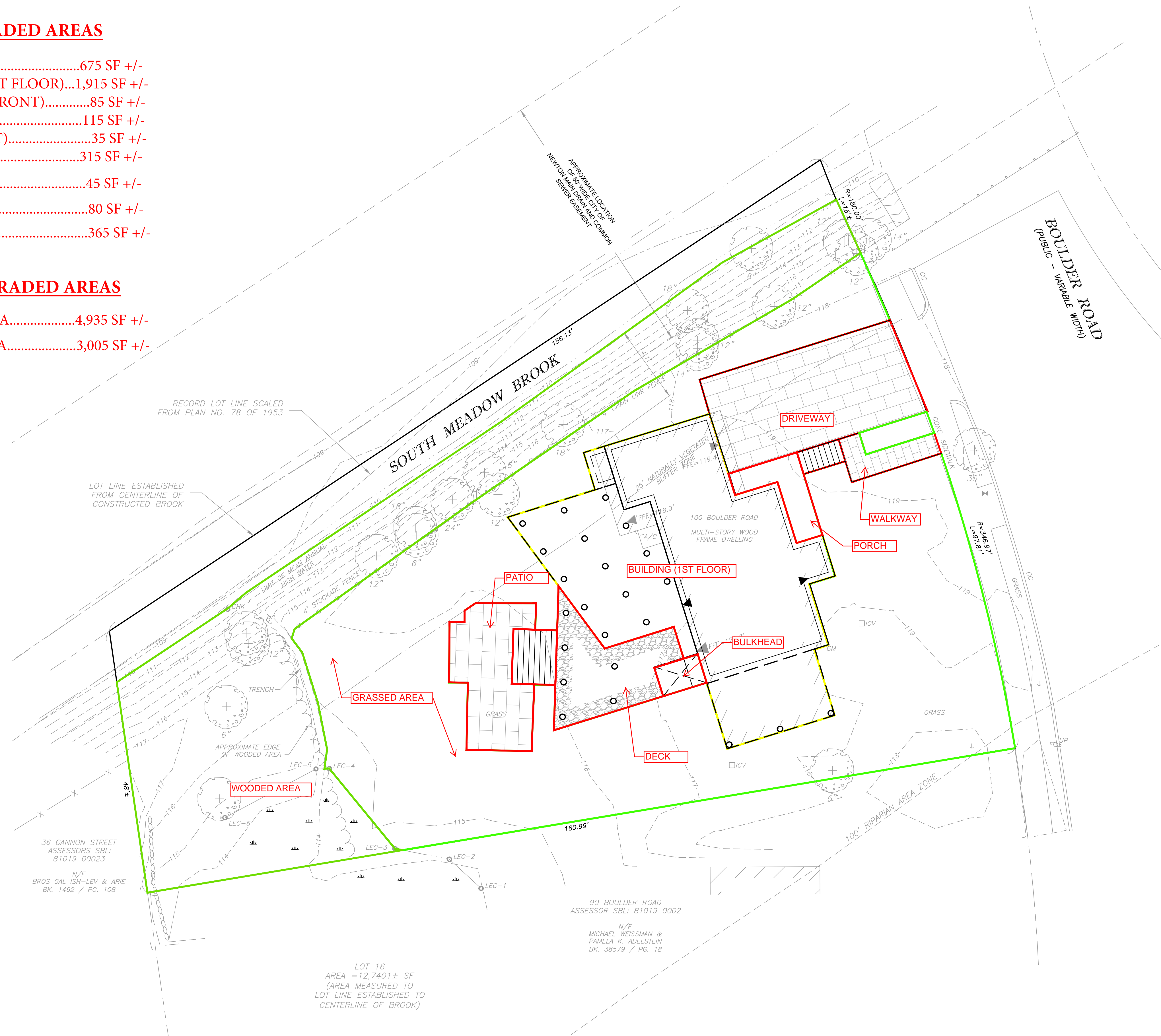
ONSITE SURFACE COVERAGE AREAS (EXISTING) WITHIN RIVERFRONT AREA

DEGRADED AREAS

DRIVEWAY.....675 SF +/-
 BUILDING (1ST FLOOR)...1,915 SF +/-
 WALKWAY (FRONT).....85 SF +/-
 PORCH.....115 SF +/-
 STAIR (FRONT).....35 SF +/-
 DECK.....315 SF +/-
 BULKHEAD.....45 SF +/-
 REAR STAIR.....80 SF +/-
 PATIO.....365 SF +/-

NON-DEGRADED AREAS

GRASSED AND LANDSCAPED AREA.....4,935 SF +/-
 WOODED AREA.....3,005 SF +/-



ONSITE SURFACE COVERAGE AREAS (PROPOSED) WITHIN RIVERFRONT AREA

ONSITE AREAS:

- DRIVEWAY.....330 SF +/-
- BUILDING (1ST FLOOR).....150 SF +/-
- FIELD STONE PATH.....95 SF +/-
- GRASSED & LANDSCAPED AREAS.....1,280 SF +/-
- WOODED AREA.....2,225 SF +/-



ONSITE AREAS (EXISTING) WITHIN 25-FOOT BUFFER FROM TOP OF BANK

ONSITE AREAS:

DRIVEWAY.....190 SF +/-

BUILDING (1ST FLOOR).....285 SF +/-

GRASSED & LANDSCAPED AREAS.....1,380 SF +/-

WOODED AREA.....2,225 SF +/-



ONSITE AREAS (PROPOSED) WITHIN 25-FOOT BUFFER FROM TOP OF BANK

Appendix C

Riverfront Area Mitigation Planting Plan dated October 11, 2021 prepared by LEC

Riverfront Area Mitigation Planting Plan

100 Boulder Road
Newton, MA

Monday October 11, 2021

PREPARED BY:

LEC
Environmental Consultants, Inc.
100 Grove Street
Suite 302
Worcester, MA 01605
508-753-3077
508-753-3177 Fax
email: northlec@leceenvironmental.com
www.leceenvironmental.com



SCALE: 1" = 10'
(11 x 17" Print Size)

LEC File: RJOA/20-423.04

SHEET 1 of 2



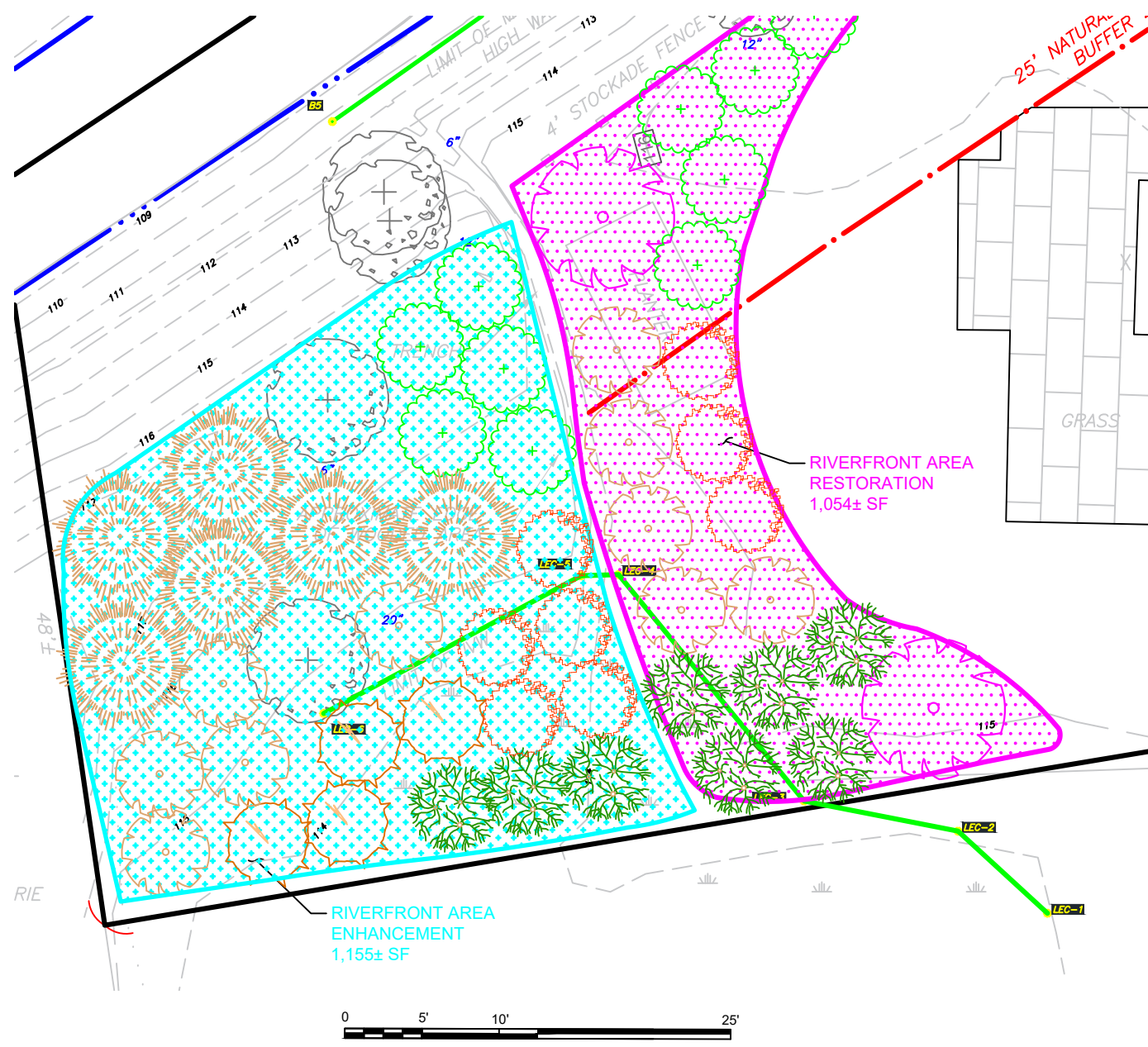
Plan adapted by:
LEC Environmental Consultants, Inc.
from plan entitled;

GRADING DRAINAGE AND UTILITY PLAN

DATED October 8 2021

Prepared by:

RJO'CONNELL & ASSOCIATES, INC.
CIVIL ENGINEERS, SURVEYORS & LAND PLANNERS
80 Montvale Ave., Suite 201
Stoneham, MA 02180
Tel: 781-279-0180 ext. 142
Cell: 617-797-0046
Fax: 781-279-0173



Common Name	Genus/Species	Size	Planting Specifications	No.
Shrubs				
arrowwood	<i>Viburnum dentatum</i>	2 - 3' min.	clusters 3-7, 4 - 6 feet o.c.	10
alternate leaved dogwood	<i>Cornus alterniflora</i>	2 - 3' min.	clusters 3-7, 4 - 6 feet o.c.	2
witchhazel	<i>Hamamelis virginiana</i>	2 - 3' min.	clusters 3-7, 4 - 6 feet o.c.	6
American hazelnut	<i>Corylus americana</i>	2 - 3' min.	clusters 3-7, 4 - 6 feet o.c.	10
red twig dogwood	<i>Cornus sericea</i>	2 - 3' min.	clusters 3-7, 4 - 6 feet o.c.	8
winterberry	<i>Ilex verticillata</i>	2 - 3' min.	clusters 3-7, 4 - 6 feet o.c.	4
nannyberry	<i>Viburnum lentago</i>	2 - 3' min.	clusters 3-7, 4 - 6 feet o.c.	13
Total:				53

GROUNDCOVER

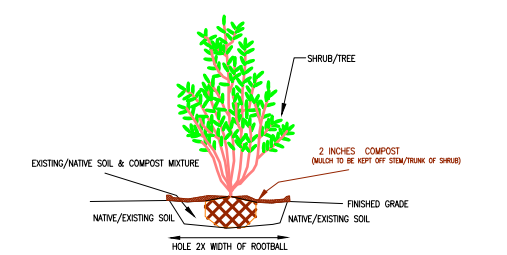
A MINIMUM OF 40 OF THE FOLLOWING HALF GALLON POTS TO BE PLANTED IN GROUPINGS OF 3-7, SPACED 1-3' O.C.

UPLAND AREA:
30 DENNSTAEDTIA PUNCTILOBULA (HAY-SCENTED FERN)

UPLAND AND WETLAND AREA:
10 OSMUNDA CINNAMOMEA (CINNAMON FERN)

SHRUB PLANTING DETAIL

(NOT TO SCALE)



- EXCAVATE HOLE TO THE APPROXIMATE DEPTH FOR THE ROOT BALL.
- PREVENT BURYING OF ROOT FLARE (WHERE THE FIRST MAIN ROOTS ATTACH TO THE TRUNK).
- LOOSEN EXPOSED ROOTS AS NECESSARY.
- WATER THOROUGHLY UNTIL ROOTBALL AND SURROUNDING SOIL IS COMPLETELY SATURATED.
- PLANTS THAT PREFER ACIDIC ORGANIC RICH SOIL (E.G. AZALEAS, RHODODENDRONS) SHALL INCLUDE PEAT IN SOIL AMENDMENT AND/OR ON SURFACE BENEATH MULCH.

NOTES

- THE LIMITS OF THE RESTORATION AREA SHALL BE STAKED IN THE FIELD PRIOR TO CONSTRUCTION AND ACCURATELY LOCATED BY A PLS.
- EROSION CONTROLS SHALL BE INSTALLED AT THE LIMIT OF WORK.
- IF TOPSOIL IS ABSENT, APPROXIMATELY 4-6 INCHES OF TOPSOIL (50/50 LEAF COMPOST AND LOAM MIXTURE) SHALL BE ESTABLISHED WITHIN THE RESTORATION AREA.
- ALL PLANTINGS SHALL BE NATIVE VARIETIES WITH NO LANDSCAPE CULTIVARS PROPOSED.
- SPECIFIC PLACEMENT OF SHRUBS AND TREES WITHIN THE PLANTING AREA ARE APPROXIMATE AND MAY BE ADJUSTED IN THE FIELD.
- IF NECESSARY, ANY REQUIRED SUBSTITUTE NATIVE PLANTS SHALL BE REVIEWED BY A WETLAND SCIENTIST PRIOR TO INSTALLATION.
- A DEEP WATERING SHALL OCCUR AT THE TIME OF INSTALLATION.
- PLANTING IN THE EARLY SPRING OR EARLY FALL IS RECOMMENDED.
- IMPLEMENTATION OF A WATERING SCHEDULE IN THE FIRST GROWING SEASON FOR THE PLANTINGS IS RECOMMENDED TO ENSURE ESTABLISHMENT.
- A ONE TIME APPLICATION OF 2 INCHES OF LEAF COMPOST MULCH SHALL BE APPLIED TO THE PLANTING AREA.

**Riverfront Area
Mitigation
Planting Plan**

100 Boulder Road
Newton, MA

Monday October 27, 2021

PREPARED BY:

LEC
Environmental Consultants, Inc.
100 Grove Street
Suite 302
Worcester, MA 01605
508-753-3077
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email: northlec@lecenvironmental.com
www.lecenvironmental.com



SCALE: 1" = 10'
(11 x 17" Print Size)

LEC File: RJOA\20-423.04

SHEET 2 OF 2



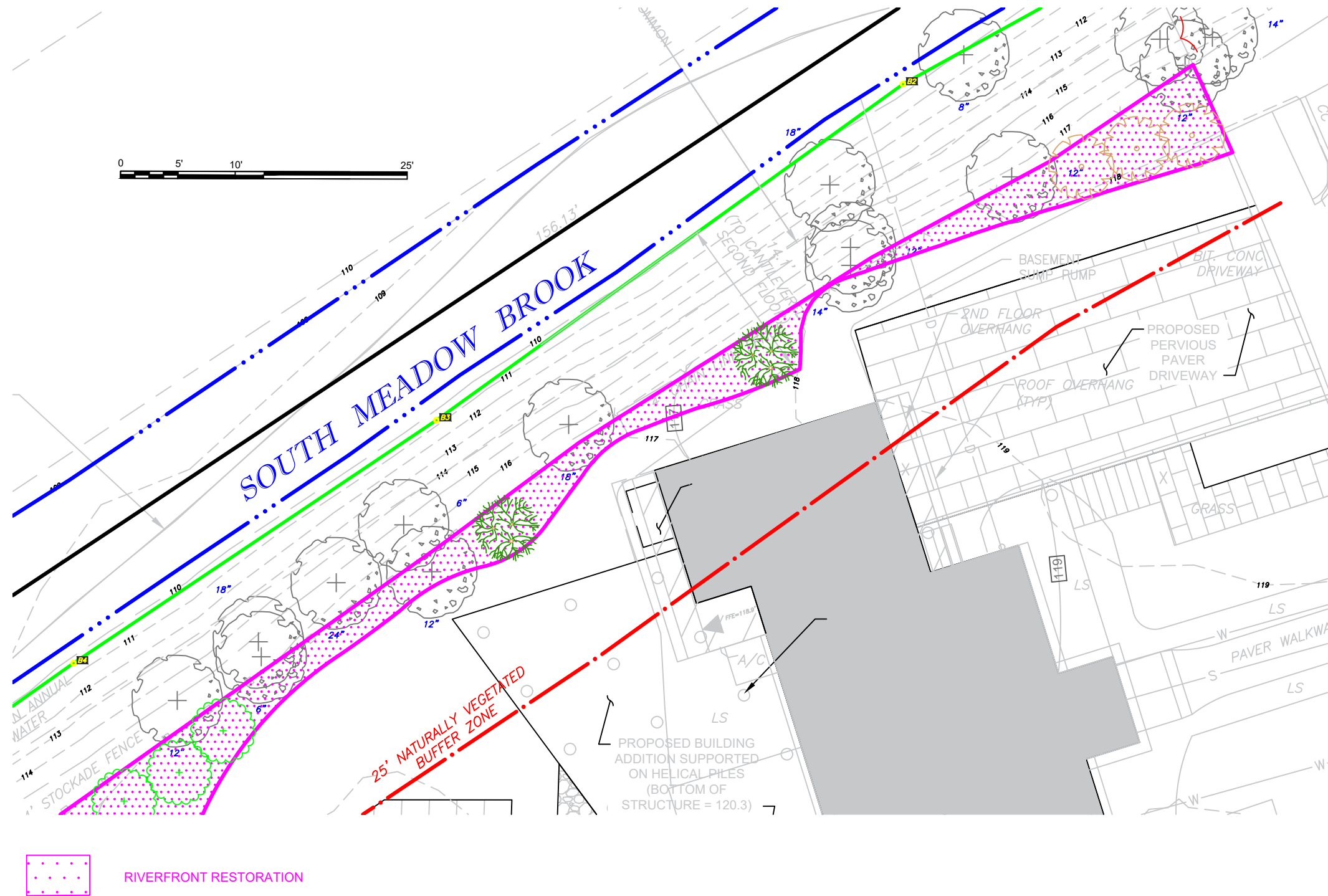
Plan adapted by:
LEC Environmental Consultants, Inc.
from plan entitled;

GRADING DRAINAGE AND UTILITY PLAN

DATED October 8 2021

Prepared by:

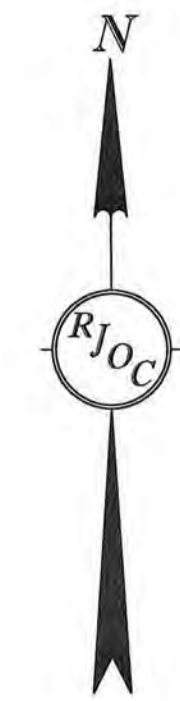
RJO'CONNELL & ASSOCIATES, INC.
CIVIL ENGINEERS, SURVEYORS & LAND PLANNERS
80 Montvale Ave., Suite 201
Stonham, MA 02180
Tel: 781-279-0180 ext. 142
Cell: 617-797-0046
Fax: 781-279-0173



Appendix D

Layout Demo and Erosion Control Plan (Sheet DEMO-1), dated November 1, 2021
prepared by RJ O'Connell & Associates, Inc.

Grading, Drainage, and Utility Plan, dated November 1, 2021
prepared by RJ O'Connell & Associates, Inc.



NO.	REVISION	DATE

Record Owner:
 AMIR H. NASHAT &
 CARMEN M. BARNES
 100 BOULDER CENTER
 NEWTON CENTRE, MA 02459
 BK 43058 / PG 29

Location:
 PROPERTY SBL: 81019 0001
 100 BOULDER ROAD
 NEWTON CENTRE, MA

PREPARED BY:
RJO'CONNELL & ASSOCIATES, INC.
 CIVIL ENGINEERS, SURVEYORS & LAND PLANNERS
 80 MONTVALE AVENUE, SUITE 201 STONEHAM, MA 02180
 PHONE: 781.279.9199 RJOCONNELL.COM

PREPARED FOR:
**AMIR H. NASHAT
 CARMEN M. BARNES**
 100 BOULDER ROAD
 NEWTON CENTRE, MA 02459

PROJECT NAME:
**100 BOULDER ROAD
 ROAD**
 NEWTON, MA

THIS PLAN IS THE RESULT OF AN ON THE GROUND SURVEY PERFORMED BETWEEN 01/04/2021 AND 02/03/2021.



PROFESSIONAL LAND SURVEYOR FOR
 RJ O'CONNELL & ASSOCIATES, INC. DATE: 10/18/2021

DRAWN BY: RJK
 REVIEWED BY: ML
 SCALE: 1" = 10'
 FIELD CROW: RJK / CMM
 FIELD BOOK: FIELD BOOK 37 / PG 74
 DATE: 10/18/2021
 DRAWING NAME:

**EXISTING
 CONDITIONS PLAN**

DRAWING NUMBER:
EX-1
 PROJECT NUMBER:
 20150

LEGEND

(NOT ALL FEATURES CONTAINED IN THIS LEGEND APPEAR ON THE PLAN)

	PROPERTY LINE		CONCRETE CURB
	ABUTTING PROPERTY LINE		VERTICAL GRANITE CURB
	EASEMENT LINE		BITUMINOUS CONCRETE CURB
	SEWER SERVICE		HIGH DENSITY POLYETHYLENE
	DRAIN SERVICE		CONCRETE
	WATER SERVICE		LANDSCAPE AREA
	GAS LINE		DOOR
	ELECTRIC LINE		SIGN
	TELEPHONE LINE		IRRIGATION CONTROL VALVE
	OVERHEAD WIRES		SPOT GRADE
	GUARDRAIL		DECIDUOUS TREE
	CHAIN LINK FENCE		CONIFEROUS TREE
	STOCKADE FENCE		FROM RECORD PLANS
	INDEX CONTOUR		RETAINING WALL
	98		

	UTILITY POLE		CONCRETE CURB
	LIGHT POLE		VERTICAL GRANITE CURB
	ELECTRIC HAND HOLE		BITUMINOUS CONCRETE CURB
	CABLE MANHOLE		HIGH DENSITY POLYETHYLENE
	SEWER MANHOLE		CONCRETE
	DRAIN MANHOLE		LANDSCAPE AREA
	CATCH BASIN		DOOR
	WATER VALVE		SIGN
	FIRE HYDRANT		IRRIGATION CONTROL VALVE
	SPRINKLER CONNECTION		SPOT GRADE
	POST INDICATOR VALVE		DECIDUOUS TREE
	BOLLARD		CONIFEROUS TREE
	GAS METER		FROM RECORD PLANS
	GAS VALVE		RETAINING WALL
	ROOF DRAIN		
	AREA DRAIN		
	WETLAND FLAG		
	MEAN HIGH WATER FLAG		

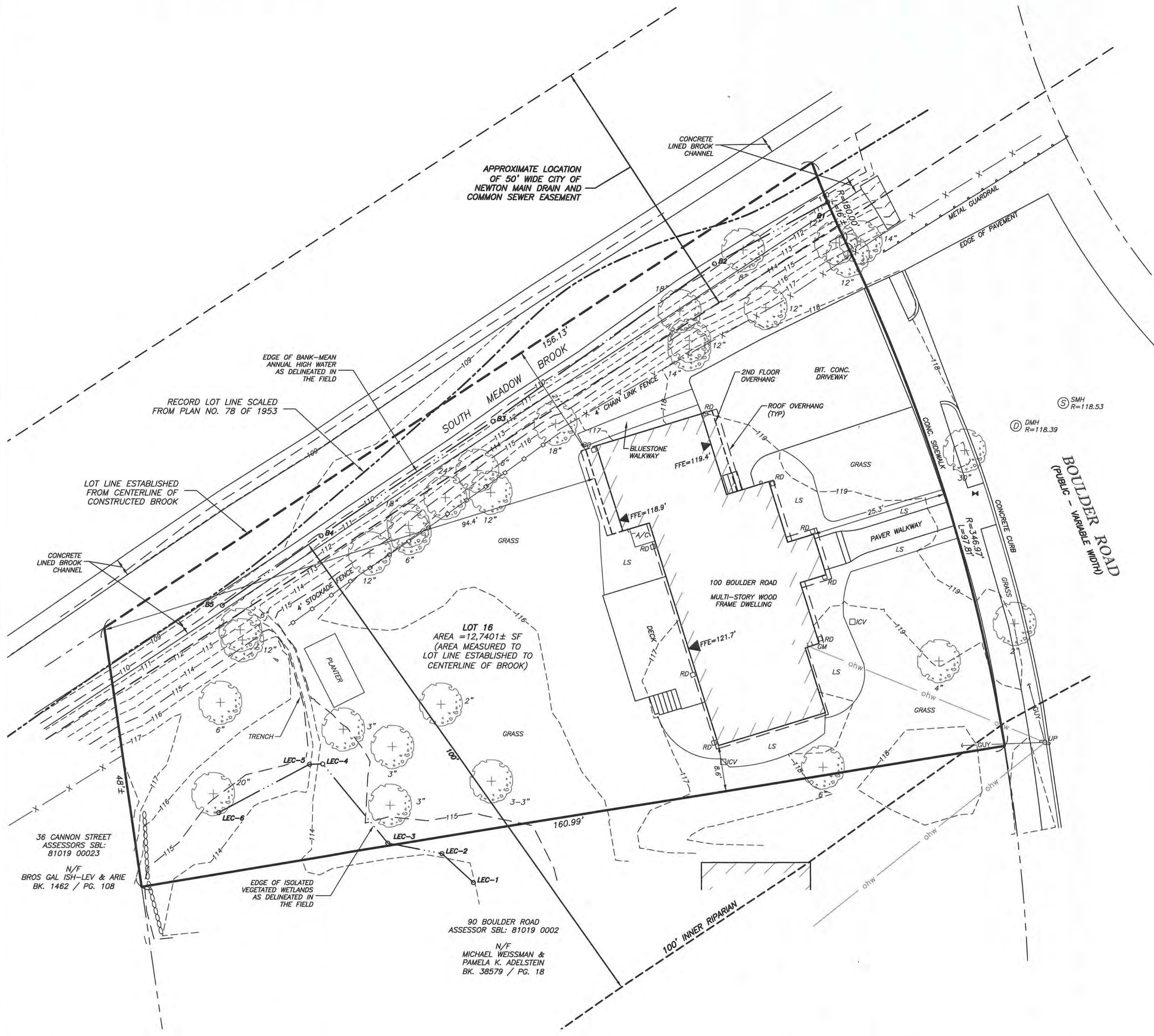
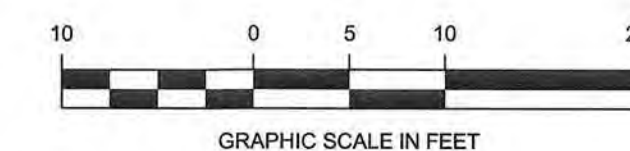
NOTES

1. THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING SITE CONDITIONS, AS THEY EXISTED AT THE TIME OF THE FIELD SURVEY, OF THE LOCUS PARCEL FOR DESIGN PURPOSES. THIS PLAN WAS PREPARED FROM AN ACTUAL SURVEY MADE ON THE GROUND USING TOTAL STATION METHODS BY R. J. O'CONNELL & ASSOCIATES (RJOC).
2. UNDERGROUND UTILITIES SHOWN ARE FROM OBSERVED SURFACE INDICATIONS, SUBSURFACE INDICATIONS, AND COMPILED FROM AVAILABLE RECORD PLANS OF UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE APPROXIMATE ONLY. AS OF THE DATE OF THIS SURVEY, NO INFORMATION REGARDING RECORD UTILITIES HAS BEEN PROVIDED BY ELECTRIC AND GAS PROVIDERS. BEFORE CONSTRUCTION CALL "DIG SAFE" 811.
3. THE HORIZONTAL DATUM IS NAD83, THE VERTICAL DATUM IS CITY OF NEWTON. DATUMS WERE ESTABLISHED USING RTK GPS METHODS.
4. THE POSITIONAL ACCURACY OF THE DATA AND PHYSICAL IMPROVEMENTS ON THIS PLAN MAY BE APPROXIMATE. ANY USE OF ELECTRONIC DATA CONTAINED IN AUTOCAD VERSIONS OF THIS PLAN TO GENERATE COORDINATES OR DIMENSIONS NOT SHOWN ON THE PLAN IS NOT AUTHORIZED.
5. THE ENTIRE PARCEL IS LOCATED IN ZONE AE, BASE ELEVATION 114 (NAV88) (ELEVATION 120.5 AS CONVERTED TO CITY OF NEWTON DATUM), AS SHOWN ON "FLOOD INSURANCE RATE MAP, MIDDLESEX COUNTY, MASSACHUSETTS," PANEL 562 OF 656, MAP NUMBER 25017C0562E, EFFECTIVE DATE JUNE 4, 2010.
6. WETLANDS WERE DELINEATED BY LEC ENVIRONMENTAL CONSULTANTS, INC. ON JANUARY 22, 2021. WETLAND FLAGS WERE LOCATED DURING THE FIELD SURVEY BY TOTAL STATION METHODS BY RJ O'CONNELL & ASSOCIATES.
7. CONTOUR INTERVAL IS ONE FOOT (1').

PLAN REFERENCES

PLAN BOOK AND PAGES REFERENCE THE MIDDLESEX SOUTH REGISTRY OF DEEDS

1. PLAN 78 OF 1953
2. PLAN 421 OF 1953
3. 1955 LAND COURT PLAN 25671-B
4. PLAN 247 OF 1967



DIG SAFE




BEFORE YOU DIG
 CALL 811

NO.	REVISION	DATE

PREPARED BY:
RJO'CONNELL & ASSOCIATES, INC.
 CIVIL ENGINEERS, SURVEYORS & LAND PLANNERS
 80 MONTVALE AVENUE, SUITE 201 STONEHAM, MA 02180
 PHONE: 781.279.0180 RJOCONNELL.COM

PREPARED FOR:
AMIR H. NASHAT
CARMEN M. BARNES
 100 BOULDER ROAD
 NEWTON CENTRE, MA 02459

PROJECT NAME:
100 BOULDER ROAD
 NEWTON, MA

SEAL:


DESIGNED BY: CMM
 DRAWN BY: CMM
 REVIEWED BY: BWT
 SCALE: 1" = 10'

DATE: 11/01/2021
 DRAWING NAME:

LAYOUT, DEMO AND EROSION CONTROL PLAN

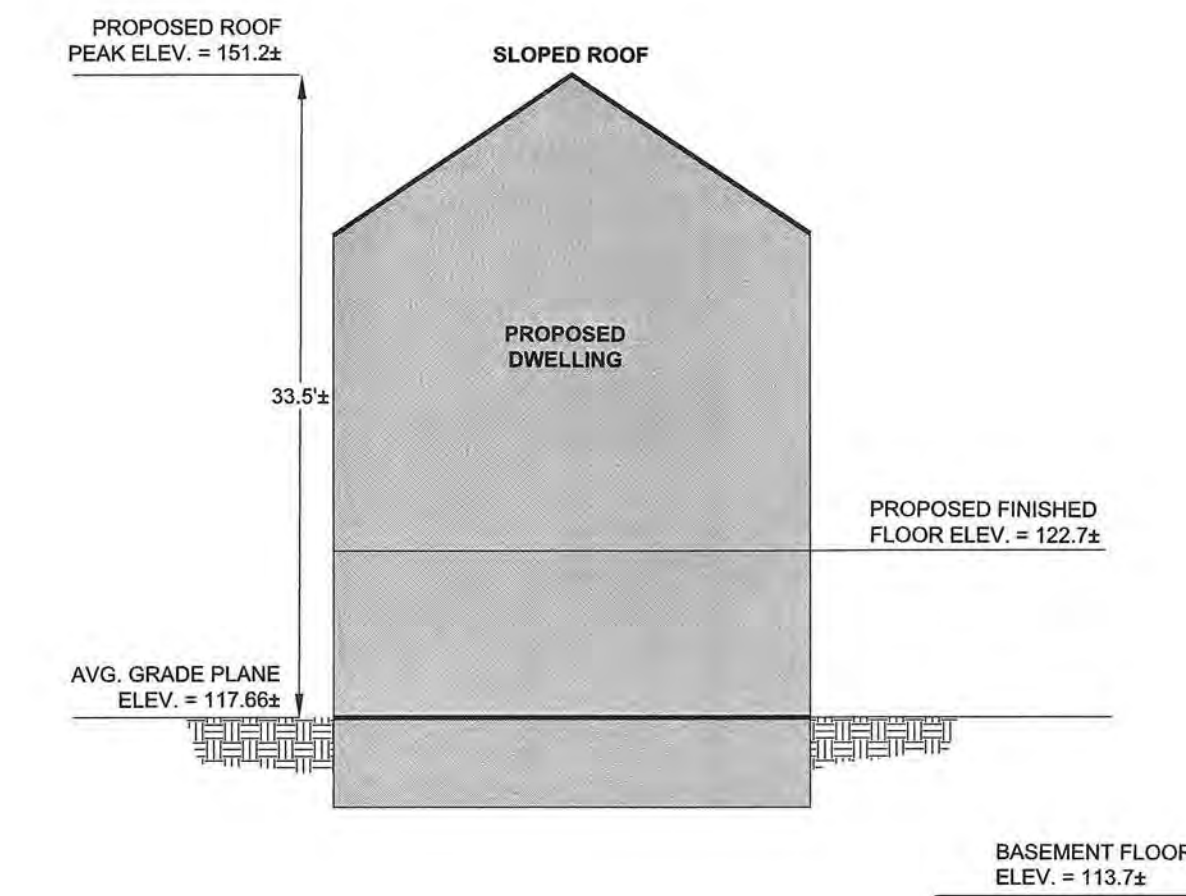
DRAWING NUMBER:
DEMO-1

PROJECT NUMBER:
 20150

NOTES

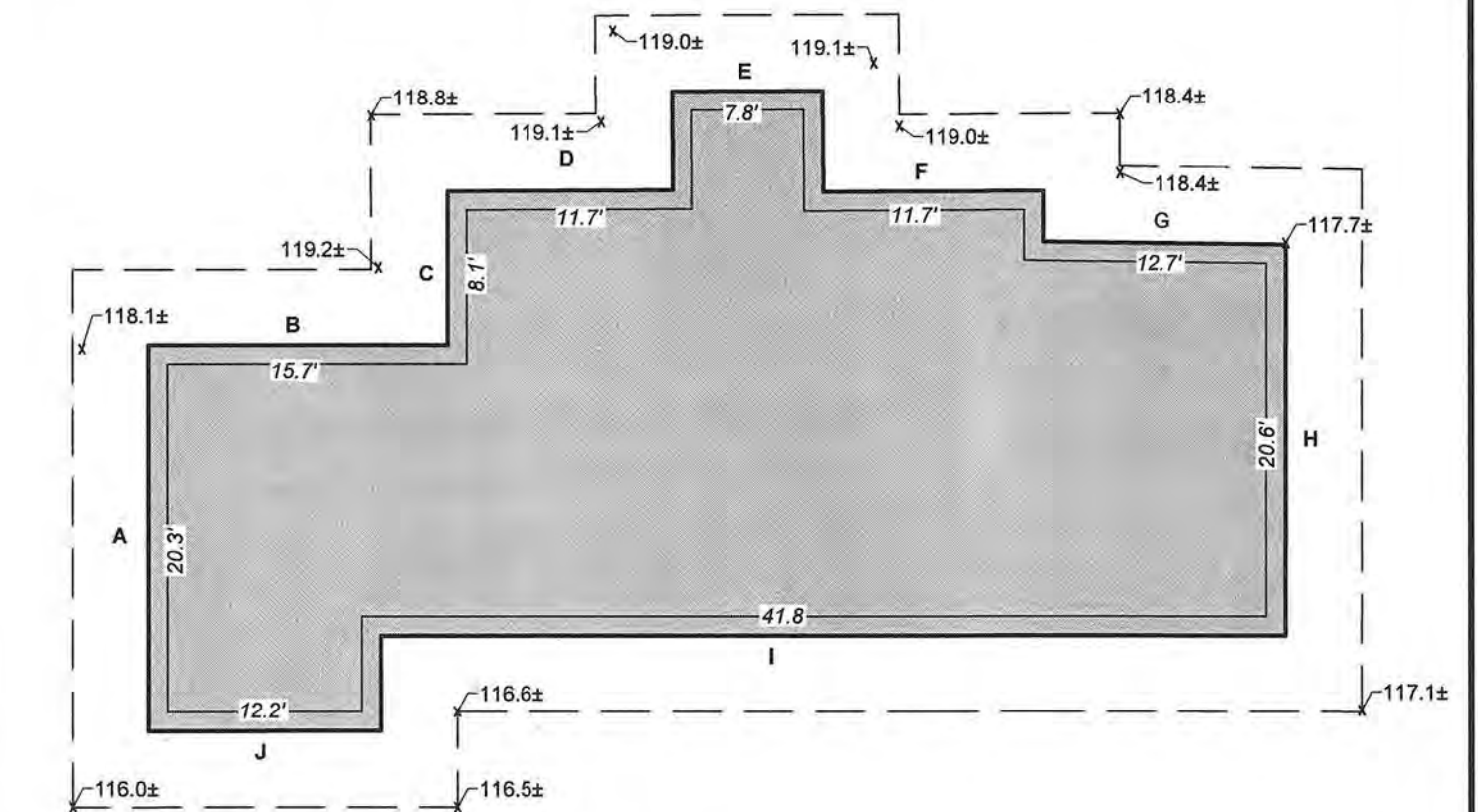
1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE RELATIVE LOCATIONS AND DIMENSIONS OF THE BUILDING, DECK, DRIVEWAY AND WALKWAY PROPOSED TO BE CONSTRUCTED ON SITE. THE DIMENSIONS OF THE PROPOSED BUILDING ARE BASED UPON PLANS PREPARED BY MARYANN THOMPSON ARCHITECTS ENTITLED "NEWTON ZERO ENERGY HOUSE BASEMENT PLAN" AND "FIRST FLOOR PLAN" DATED 9/29/2021.
2. SEE PLANS PREPARED BY LEC ENVIRONMENTAL FOR DETAILS OF THE RIVERFRONT RESTORATION AND RIVERFRONT ENHANCEMENT AREA.
3. EXISTING CONDITIONS DEPICTED ON THIS PLAN ARE BASED UPON A PLAN PREPARED BY RJO'CONNELL & ASSOCIATES, INC. ENTITLED "EXISTING CONDITIONS SURVEY, 100 BOULDER ROAD, NEWTON, MASSACHUSETTS" DATED 10/18/2021.
4. THE LOCATION AND ELEVATIONS OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE APPROXIMATE ONLY. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE LOCATION OF UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, GOVERNING PERMITTING AUTHORITY AND "DIG SAFE" AT 1-888-344-7233 AT LEAST SEVENTY-TWO (72) HOURS (EXCLUDING WEEKENDS AND HOLIDAYS) PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATIONS OF UTILITIES. IF ANY DISCREPANCIES OR CONFLICTS ARE DISCOVERED, THE ENGINEER SHALL BE CONTACTED AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

PROPOSED BUILDING PROFILE (NOT TO SCALE)



NOTE: ELEVATIONS WERE PROVIDED BY MARYANN THOMPSON ARCHITECTS ON A PLAN SET DATED 07/20/2021.

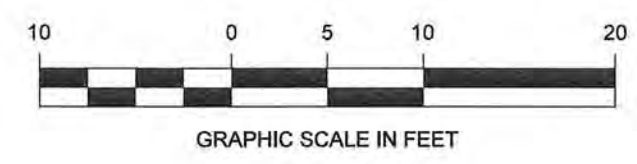
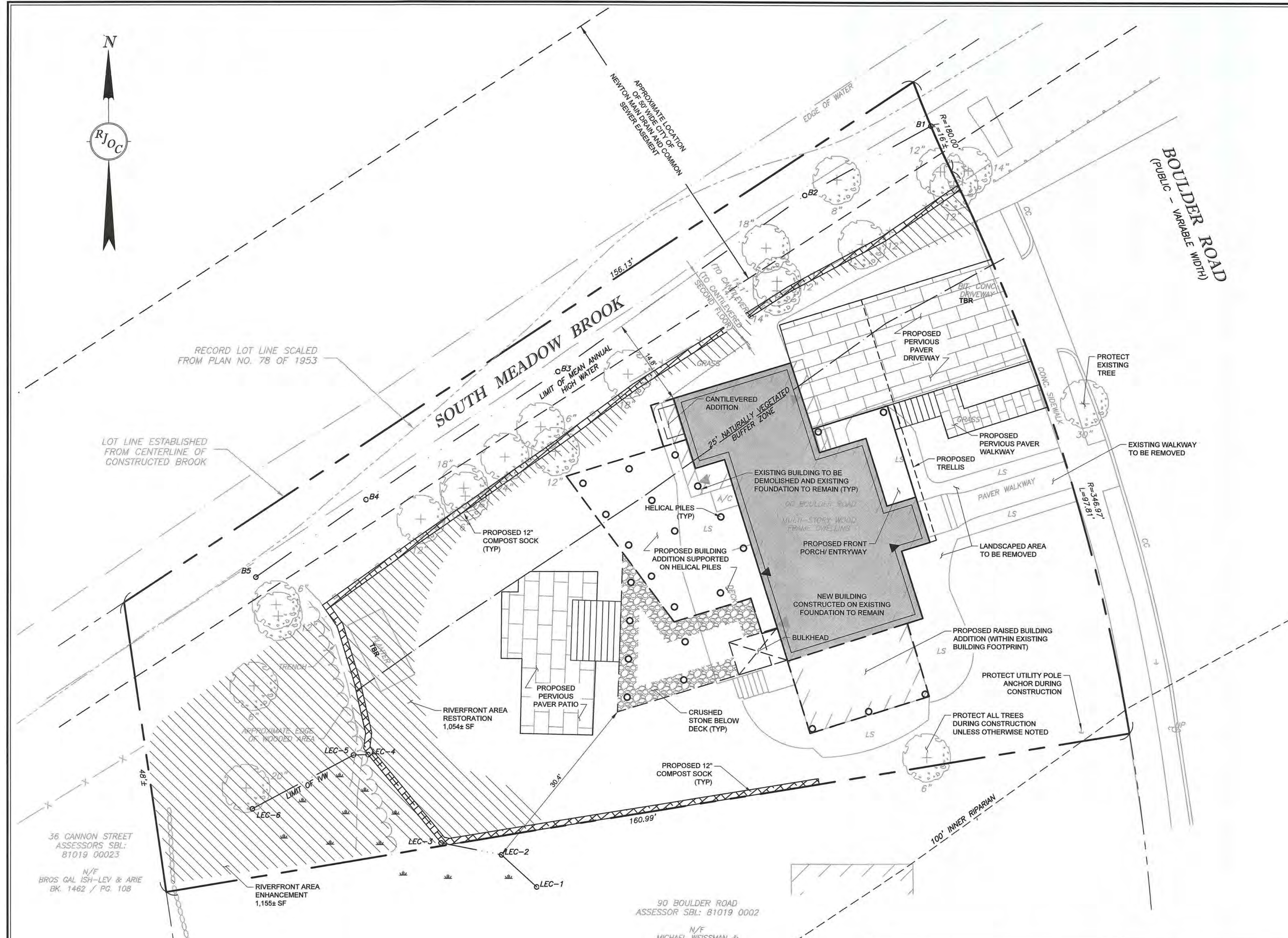
AVERAGE GRADE PLANE (NOT TO SCALE)



NOTE: ELEVATIONS WERE PROVIDED BY MARYANN THOMPSON ARCHITECTS ON A PLAN SET DATED 07/20/2021.

AVERAGE GRADE PLANE CALCULATIONS

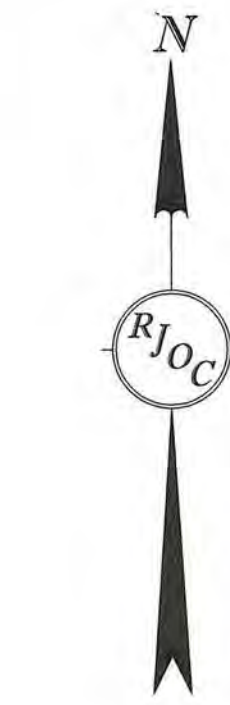
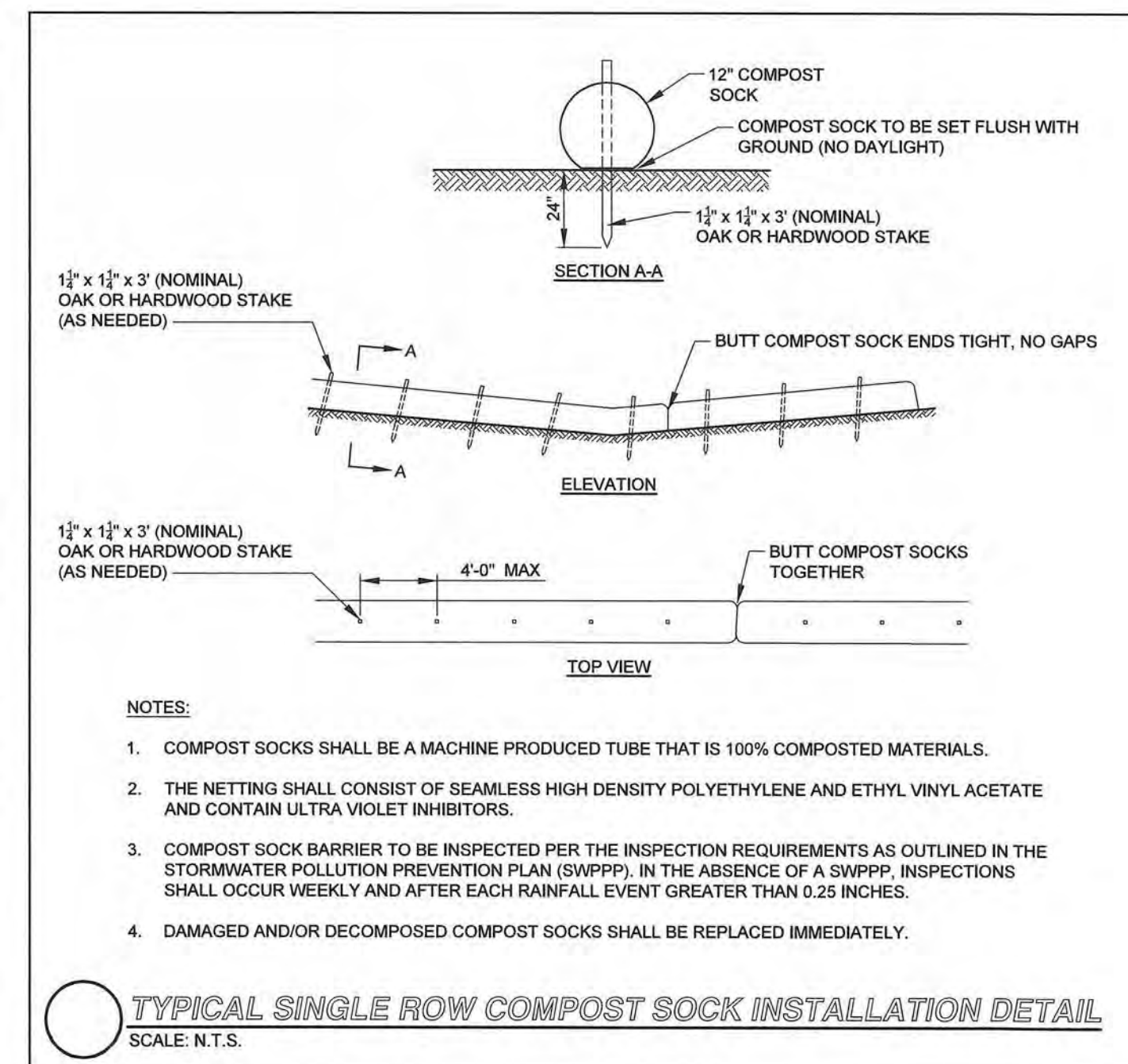
SEGMENT	E1	E2	L	(E1 + E2)/2 x L P
A	118.0±	118.1±	20.3'	14.60
B	118.1±	119.2±	15.7'	11.45
C	119.2±	118.8±	8.1'	5.92
D	118.8±	119.1	11.7'	8.55
E	119.0±	119.1±	7.8'	5.71
F	119.0±	118.4±	11.7'	8.54
G	118.4±	117.7±	12.7'	9.21
H	117.7±	117.1±	20.6'	14.86
I	117.1±	116.6±	41.8'	30.10
J	116.5±	116.0±	12.2'	8.72
SUM			162.6	117.66

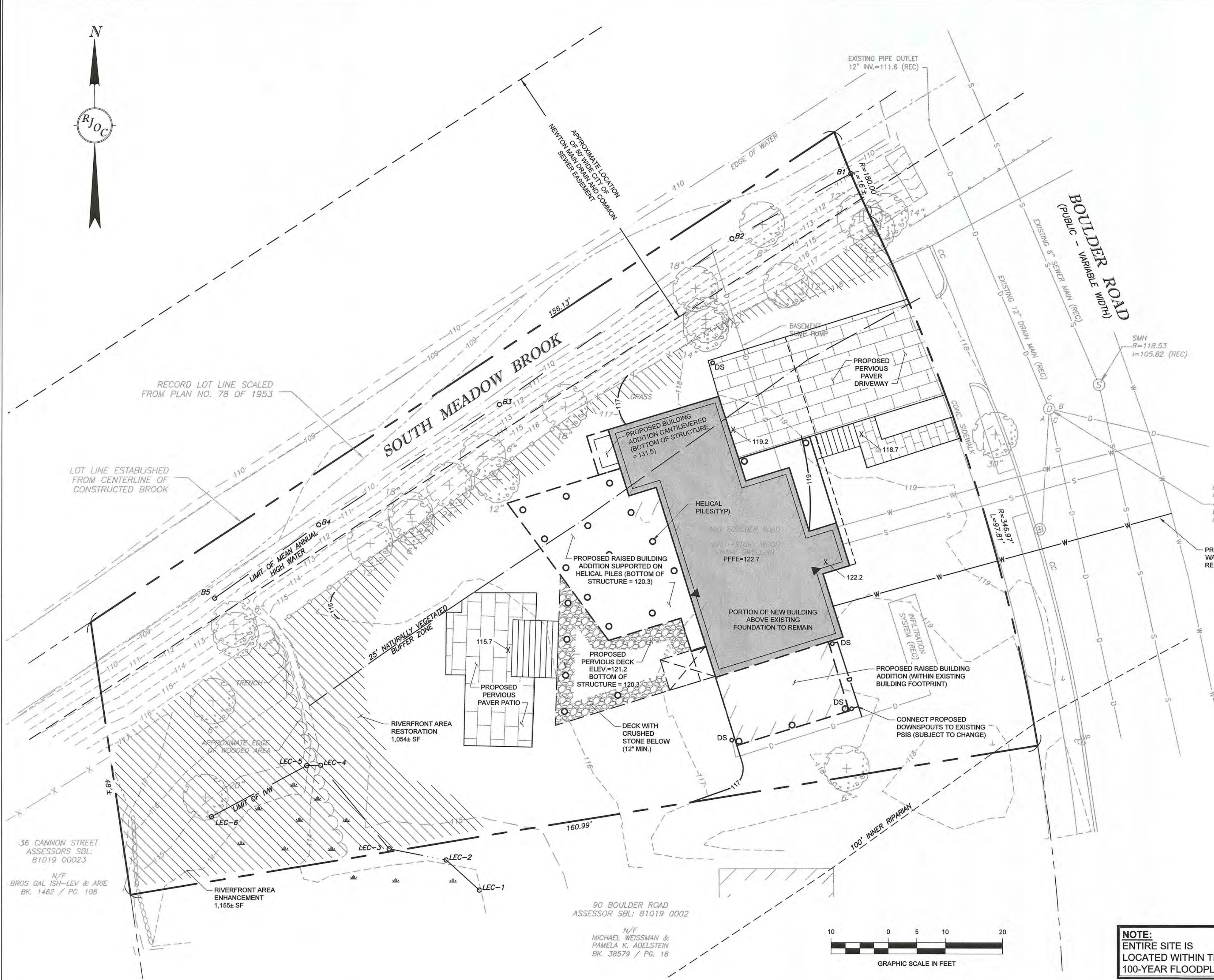


PLAN LEGEND

(NOT ALL FEATURES CONTAINED IN THIS LEGEND APPEAR ON THE PLAN)

EXISTING		PROPOSED	
CONCRETE CURB	CC	PROPOSED BUILDING FOUNDATION	
RECORD PLAN	(REC)	PROPOSED CANTILEVERED BUILDING ADDITION	
PROPERTY LINE		PROPOSED PERVIOUS PAVERS	
ABUTTING PROPERTY LINE		PROPOSED RIVERFRONT RESTORATION AND ENHANCEMENT AREA	
CHAIN LINK FENCE		PROPOSED COMPOST SOCK	
STOCKADE FENCE		PROPOSED HELICAL PILE	
25' NATURALLY VEGETATED BUFFER ZONE			
MEAN ANNUAL HIGH WATER			
BANK MEAN ANNUAL HIGH WATER FLAG	O B3		
WETLAND FLAG BY LEC ENVIRONMENTAL	O LEC-1		
ISOLATED VEGETATED WETLANDS	IW		





PLAN LEGEND

(NOT ALL FEATURES CONTAINED IN THIS LEGEND APPEAR ON THE PLAN)

EXISTING	PROPOSED
GAS VALVE	PROPOSED NEW BUILDING ON EXISTING FOUNDATION
HYDRANT	PROPOSED CANTILEVERED BUILDING ADDITION
CATCH BASIN	PROPOSED PERVIOUS PAVERS
DRAIN MANHOLE	PROPOSED RIVERFRONT RESTORATION AND ENHANCEMENT AREA
SEWER MANHOLE	PROPOSED COMPOST SOCK
UTILITY POLE	PROPOSED WATER LINE
CONCRETE CURB	PROPOSED HELICAL PILES
RECORD PLAN (REC)	PROPOSED DOWNSPOUT
SEWER LINE	PROPOSED FINISHED FLOOR ELEVATION
WATER LINE	
DRAIN LINE	
ELECTRICAL CONDUIT	
GAS LINE	
PROPERTY LINE	
ABUTTING PROPERTY LINE	
CHAIN LINK FENCE	
STOCKADE FENCE	
CONTOUR	
25' NATURALLY VEGETATED BUFFER ZONE	
BANK MEAN ANNUAL HIGH WATER FLAG	
WETLAND FLAG BY LEC ENVIRONMENTAL	
ISOLATED VEGETATED WETLANDS	

- ### NOTES
- THE PURPOSE OF THIS PLAN IS TO SHOW THE RELATIVE LOCATION AND DIMENSION OF THE PROPOSED BUILDING AS WELL AS SITE FEATURES TO BE CONSTRUCTED ON SITE. THE DIMENSIONS OF THE PROPOSED BUILDING ARE BASED UPON PLANS PREPARED BY MARYANN THOMPSON ARCHITECTS ENTITLED "NEWTON ZERO ENERGY HOUSE BASEMENT PLAN" AND "FIRST FLOOR PLAN" DATED 9/29/2021
 - EXISTING UTILITIES SHOWN HEREON HAVE BEEN COMPILED FROM RECORD PLANS PROVIDED BY THE CITY OF NEWTON.
 - EXISTING CONDITIONS DEPICTED ON THIS PLAN ARE BASED UPON A PLAN PREPARED BY RJ O'CONNELL & ASSOCIATES, INC. ENTITLED "EXISTING CONDITIONS SURVEY, 100 BOULDER ROAD, NEWTON, MASSACHUSETTS" DATED 10/18/2021.
 - THE VERTICAL DATUM IS CITY OF NEWTON BASE.
 - THE LOCATION AND ELEVATIONS OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE APPROXIMATE ONLY. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE LOCATION OF UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, GOVERNING PERMITTING AUTHORITY AND "DIG SAFE" AT 1-888-344-7233 AT LEAST SEVENTY-TWO (72) HOURS (EXCLUDING WEEKENDS AND HOLIDAYS) PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATIONS OF UTILITIES. IF ANY DISCREPANCIES OR CONFLICTS ARE DISCOVERED, THE ENGINEER SHALL BE CONTACTED AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS

ONSITE IMPERVIOUS AREA

DESCRIPTION	EXISTING (SF)	PROPOSED (SF)
BUILDING	1,412 ±	1,934±
DECK(S) AND ASSOC. STAIRS	285 ±	80± (a)
FRONT PORCH, FRONT STOOP, AND FRONT STAIRS	31 ±	137±
DRIVEWAY	778 ±	0 (b)
WALKWAYS	173 ±	0 (c)
PATIOS	0	0 (d)
TOTAL	2,679 ±	2,151±

- PROPOSED DECK IS TO BE CONSTRUCTED OVER A BED OF CRUSHED STONE AND SHALL BE CONSIDERED PERVIOUS
- PROPOSED DRIVEWAY TO BE CONSTRUCTED OF PERVIOUS PAVERS
- PROPOSED WALKWAYS TO BE CONSTRUCTED OF PERVIOUS PAVERS
- PROPOSED PATIO IS TO BE CONSTRUCTED OUT OF PERVIOUS PAVERS

100-YEAR FLOODPLAIN

DESCRIPTION	ELEVATION
PER FEMA (NAVD88)	113.7±
PER CITY OF NEWTON BASE	120.2±



Existing Volumes

Elevation	Existing Volumes			Cumulative
	Area Sq. Ft.	Avg. Sq. Ft.	Volume Cu. Ft.	
115	3,104		0	
116	5,298	4,201	4,201	4,201
117	7,712	6,505	6,505	10,706
118	9,020	8,366	8,366	19,072
119	10,829	9,924	9,924	28,996
120	11,627	11,228	11,228	40,224
120.2	11,642	11,635	2,327	42,551
SUM			42,551	

Proposed Volumes

Elevation	Proposed Volumes			Cumulative
	Area Sq. Ft.	Avg. Sq. Ft.	Volume Cu. Ft.	
115	3,104		0	
116	5,303	4,204	4,204	4,204
117	7,978	6,641	6,641	10,845
118	9,026	8,502	8,502	19,347
119	11,490	10,258	10,258	29,605
120	11,648	11,569	11,569	41,174
120.2	11,648	11,648	2,330	43,504
SUM			43,504	

Cumulative Volumes

Elevation	Cumulative Volumes	
	Fill Volume of New Structures (CF)	Increase in Flood Storage On-Site (CF)
<115	0.0	0.0
115-116	-0.2	2.8
116-117	-2.2	133.8
117-118	-50.1	85.9
118-119	-51.7	282.3
119-120	-52.7	288.3
120-120.2	-1.5	1.5
SUM	-158	795

NOTE:
ENTIRE SITE IS LOCATED WITHIN THE 100-YEAR FLOODPLAIN

NO.	DATE	REVISION

PREPARED BY:
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CARMEN M. BARNES
100 BOULDER ROAD
NEWTON CENTRE, MA 02459

PROJECT NAME:
100 BOULDER ROAD
NEWTON, MA

SEAL:

DESIGNED BY: CMM
DRAWN BY: CMM
REVIEWED BY: BWT
SCALE: 1" = 10'
DATE: 11/01/2021
DRAWING NAME:

GRADING, DRAINAGE AND UTILITY PLAN

DRAWING NUMBER:
C-1
PROJECT NUMBER:
20150
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