

July 30, 2024

Karen Mullins
Conservation Director
Town of Lexington Conservation Department
1625 Massachusetts Avenue
Lexington MA, 02420

Re: Lexington High School

Abbreviated Notice of Resource Area Delineation Submission

SMMA No. 23090

Dear Ms. Mullins,

Please find enclosed a copy of an Abbreviated Notice of Resource Area Delineation (ANRAD) and supporting plans and documents for the Town-owned property at Lexington High School. A copy of the application is also being sent to the DEP Northeast Regional Office.

Enclosures include:

- MassDEP WPA ANRAD Form
- List of Abutters and Notification to Abutters
- USGS Site Locus
- Flood Plain Map of locus
- Nat. Heritage and Endangered Species Map of locus
- Wetland Delineation Report and Field Data Forms, dated 07/25/2024
- Existing Conditions Site Plan, dated 07/30/2024 (full size)

We look forward to the opportunity to present the delineation findings to you at your meeting on August 19th. In the meantime, please contact me with any questions or concerns.

Very truly yours,

SMMA



Erin F. Prestileo, P.E.
Senior Associate | Director of Site Design

cc: MassDEP - Northeast Region (MF)

enclosures: ANRAD Submission Report and Plan

Symmes, Maini & McKee
Associates, Inc.
1000 Massachusetts Avenue
Cambridge, MA 02138
617.547.5400

www.smma.com



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 4A – Abbreviated Notice of Resource Area Delineation

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Lexington

City/Town

A. General Information

1. Project Location (**Note:** electronic filers will click on button for GIS locator):

251 Waltham Street	Lexington	02421
a. Street Address	b. City/Town	c. Zip Code
Latitude and Longitude:	42.4430	-71.2333
Map 49 Lot 90	d. Latitude	e. Longitude
f. Assessors Map/Plat Number	56.54 AC	
g. Parcel /Lot Number		

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



2. Applicant:

Michael	Cronin	
a. First Name	b. Last Name	
Town of Lexington - School Building Committee		
c. Organization		
201 Bedford Street		
d. Mailing Address		
Lexington	MA	02420
e. City/Town	f. State	g. Zip Code
781-274-8698	781-861-2549	
h. Phone Number	i. Fax Number	j. Email Address

3. Property owner (if different from applicant):

Check if more than one owner (attach additional sheet with names and contact information)

a. First Name	b. Last Name	
Town of Lexington		
c. Organization		
1625 Mass Ave		
d. Mailing Address		
Lexington	MA	02420
e. City/Town	f. State	g. Zip Code
781-862-0500		
h. Phone Number	i. Fax Number	j. Email Address

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

4. Representative (if any):

Erin	Prestileo	
a. Contact Person First Name	b. Contact Person Last Name	
SMMA		
c. Organization		
1000 Massachusetts Ave		
d. Mailing Address		
Cambridge	MA	02138
e. City/Town	f. State	g. Zip Code
617-547-5400	eprestileo@smma.com	
h. Phone Number	i. Fax Number	j. Email Address

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

Fee Exempt	Fee Exempt	
a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid

Fees will be
calculated for
online users.

B. Area(s) Delineated

1. Bordering Vegetated Wetland (BVW) 4,547
 a. MassDEP BVW Field Data Form (attached)
2. Check all methods used to delineate the Bordering Vegetated Wetland (BVW) boundary:
 a. Other Methods for Determining the BVW boundary (attach documentation):
 1. 50% or more wetland indicator plants
 2. Saturated/inundated conditions exist
 3. Groundwater indicators
 4. Direct observation
 5. Hydric soil indicators
 6. Credible evidence of conditions prior to disturbance

3. Indicate any other resource area boundaries that are delineated:

ILSF	852
a. Resource Area IVW	b. Linear Feet Delineated 349
c. Resource Area	d. Linear Feet Delineated

C. Additional Information

Applicants must include the following plans with this Abbreviated Notice of Resource Area Delineation. 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. ANRAD (Delineation Plans only)
2. 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.)
3. Plans identifying the boundaries of the Bordering Vegetated Wetlands (BVW) (and/or other resource areas, if applicable).
4. List the titles and final revision dates for all plans and other materials submitted with this Abbreviated Notice of Resource Area Delineation.

D. Fees

The fees for work proposed under each Abbreviated Notice of Resource Area Delineation must be calculated and submitted to the Conservation Commission and the Department (see Instructions and Wetland Fee Transmittal Form).

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 the attached Wetland Fee Transmittal Form) to confirm fee payment:

2. Municipal Check Number	3. Check date
4. State Check Number	5. Check date
6. Payor name on check: First Name	7. Payor name on check: Last Name

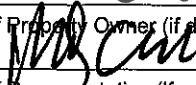
E. Signatures

I certify under the penalties of perjury that the foregoing Abbreviated Notice of Resource Area Delineation 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 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.

I hereby grant permission, to the Agent or member of the Conservation Commission and the Department of Environmental Protection, to enter and inspect the area subject to this Notice at reasonable hours to evaluate the wetland resource boundaries subject to this Notice, and to require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.

I acknowledge that failure to comply with these certification requirements is grounds for the Conservation Commission or the Department to take enforcement action.

1. Signature of Applicant		2. Date	7/30/20204
3. Signature of Property Owner (if different)		4. Date	
5. Signature of Representative (if any)		6. Date	

For Conservation Commission:

Two copies of the completed Abbreviated Notice of Resource Area Delineation (Form 4A), including supporting plans and documents; two copies of the ANRAD Wetland Fee Transmittal Form; and the city/town fee payment must be sent to the Conservation Commission by certified mail or hand delivery.

For MassDEP:

One copy of the completed Abbreviated Notice of Resource Area Delineation (Form 4A), including supporting plans and documents; one copy of the ANRAD Wetland Fee Transmittal Form; and a copy of the state fee payment must be sent to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery. (E-filers may submit these electronically.)

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.



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

ANRAD Wetland Fee Transmittal Form

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

Important:

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



A. Applicant Information

1. Location of Project:

251 Waltham Street	Lexington
a. Street Address	b. City/Town
N/A	
c. Fee amount	d. Check number

2. Applicant:

Michael	Cronin	Town of Lexington - School Building Committee
a. First Name	b. Last Name	c. Company
201 Bedford Street		
d. Mailing Address	MA	02420
Lexington	f. State	g. Zip Code
e. City/Town		
781-274-8698		
h. Phone Number		

3. Property Owner (if different):

Town of Lexington		
a. First Name	b. Last Name	c. Company
1625 Massachusetts Avenue		
d. Mailing Address	MA	02420
Lexington	f. State	g. Zip Code
e. City/Town		
781-862-0500		
h. Phone Number		

B. Fees

The fee is calculated as follows for each Resource Area Delineation included in the ANRAD (check applicable project type). The maximum fee for each ANRAD, regardless of the number of Resource Area Delineations, is \$200 activities associated with a single-family house and \$2,000 for any other activity.

Bordering Vegetated Wetland Delineation Fee:



Online users: check box if fee exempt.

1. <input type="checkbox"/>	single family house project	a. feet of BVW	x \$2.00 =	b. Fee for BVW
2. <input type="checkbox"/>	all other projects	a. feet of BVW	x \$2.00 =	b. Fee for BVW

Other Resource Area (e.g., bank, riverfront area, etc.):

3. <input type="checkbox"/>	single family house project	a. linear feet	x \$2.00 =	b. Fee
4. <input type="checkbox"/>	all other projects	a. linear feet	x \$2.00 =	b. Fee

Total Fee for all Resource Areas: _____

Fee _____

State share of filing fee: _____

5. 1/2 of total fee less \$12.50

City/Town share of filing fee: _____

6. 1/2 of total fee plus \$12.50

C. Submittal Requirements

- a.) Send a copy of this form, with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts, to:

Department of Environmental Protection
Box 4062
Boston, MA 02211

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- b.) **To the Conservation Commission:** Send the Abbreviated Notice of Resource Area Delineation; a **copy** of this form; and the city/town fee payment.
- c.) **To DEP Regional Office:** Send one copy of the Abbreviated Notice of Resource Area Delineation (and any additional documentation required as part of a Simplified Review Buffer Zone Project); a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)

July 30, 2024

(251 Waltham St, Lexington, MA 02421)

ABUTTER NOTIFICATION
TOWN OF LEXINGTON
CONSERVATION COMMISSION

The Conservation Commission will hold a public hearing on Zoom, an online meeting platform, on Monday, August 19, 2024 at 7:00 p.m. in accordance with the provisions of the Mass. Wetlands Protection Act (M.G.L.Ch.131, s. 40) and the Wetland Protection Code of the Town of Lexington (Ch.130). During this hearing, the Commission will review and Abbreviated Notice of Resource Area Delineation (ANRAD) filed by Town of Lexington School Board Committee for confirmation of the following resource area boundaries, seven bordering vegetated wetlands, two isolated vegetated wetlands, and one isolated land subject to flooding, at 251 Waltham St, Lexington, MA 02421, Assessor's Property Map 49, Lot 90, and Assessor's Property Map 41, Lot 120 in Lexington, MA and owned by the Town of Lexington. The ANRAD and plans are available for viewing through Lexington's online permitting system, ViewPoint Cloud, Permit No. CAL-24-116 (Go to <https://lexingtonma.portal.opengov.com/search>) and search by Permit #). Directions on how to access the virtual public hearing are available on the Conservation Commission Agenda posted at least 48 hours prior to the meeting at <https://www.lexingtonma.gov/AgendaCenter>. If this hearing is not closed, it will be continued to a date requested by the applicant without further abutter notification.

On March 29, 2023, Governor Healey signed into law a supplemental budget bill which, among other things, extends the temporary provisions pertaining to the Open Meeting Law to March 31, 2025. Pursuant to Chapter 22 of the Acts of 2023, this meeting of the Lexington Conservation Commission will be conducted via remote participation to the greatest extent possible.

Phil Hamilton, Chairman
Conservation Commission

CAL-24-116This is an Abutters List Certification. To learn more, scan this barcode or visit lexingtonma.viewpointcloud.com/#/records/94414

Certified Abutters List

Location: 251 WALTHAM ST , Lexington**Map/Lot#:** 49 / 90

Other Related Map/Lot number(s): 41/120

Issued to: Logan Finney

This Abutters List Certification meets the requirements of Conservation Commission (Within 100') .

Issued: July 30, 2024**Expires:** January 30, 2025**Town of Lexington, MA**

The source data and the process employed to establish this Abutters List has been certified by the Town of Lexington.



Signed & Certified, Greg Johnson, Chairman of the Board of Assessors

251 Waltham St



Property Information

Property ID 49-90
Location 251 WALTHAM ST
Owner TOWN OF LEXINGTON - HIGH SCHOOL

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

Town of Lexington, MA makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated on a daily basis
Data updated on a daily basis

Print map scale is approximate.
Critical layout or measurement
activities should not be done using
this resource.



Town of Lexington, MA Abutters Report

**100ft. Abutters of Property 49-90
at 251 WALTHAM ST**

Please be aware that the abutters list reflects mailing address for the real estate tax bills as requested by the property owners. Mortgage companies, banks and other financial institutions may be receiving the notification and not the homeowner as required. Please be sure you are complying with notification requirements. Property data updated on a daily basis.

Abutter	Street Address	Account No.	Tax Bill Address
49-23 LEXINGTON HOUSING ASSISTANCE BOARD INC	165 WALTHAM ST	6398	LEXINGTON HOUSING ASSISTANCE BOARD INC 1620 MASSACHUSETTS AVE STE 4 LEXINGTON, MA 02421
40-230 MENDELSON NOAH &	191 WALTHAM ST	5118	MENDELSON NOAH & 191 WALTHAM ST LEXINGTON, MA 02421
40-227 IRWIN BRADLEY C & IRWIN CATHARINE K TRS	209 WALTHAM ST	5115	IRWIN BRADLEY C & IRWIN CATHARINE K TRS 209 WALTHAM ST LEXINGTON, MA 02420
40-223 FERNANDES JOSEPH J &	250 WALTHAM ST	5112	FERNANDES JOSEPH J & 250 WALTHAM ST LEXINGTON, MA 02421
40-224 KAPLAN BENJAMIN H &	235 WALTHAM ST	5113	KAPLAN BENJAMIN H & 235 WALTHAM ST LEXINGTON, MA 02421
49-58 FOREST COURT LLC	5 FOREST CT	6428	FOREST COURT LLC 100 BERTWELL ROAD LEXINGTON, MA 02420
49-100 TIPIRNENI PRAVEEN &	21 PARKER ST	6460	TIPIRNENI PRAVEEN & 21 PARKER ST LEXINGTON, MA 02421
41-13 HEILMAN HANS E &	2 BASKIN RD	5166	HEILMAN HANS E & 2 BASKIN RD LEXINGTON, MA 02421



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40-222 EVERETT CURT D &	248 WALTHAM ST	5111	EVERETT CURT D & 248 WALTHAM ST LEXINGTON, MA 02421
40-225A-1 DE CASTRO TR EDUARDO B & SARETTA TR JULIANA R	225 WALTHAM ST	5154	DE CASTRO TR EDUARDO B & SARETTA TR JULIANA R 225 WALTHAM ST LEXINGTON, MA 02421
49-101 DUAN BAOFU &	19 PARKER ST	6461	DUAN BAOFU & 19 PARKER ST LEXINGTON, MA 02421
49-102B GUAN XUEMEI	17 PARKER ST	6563	GUAN XUEMEI 17 PARKER ST LEXINGTON, MA 02421
41-1 TOWARD INDEPENDENT LIVING & LEARNING INC	267 WALTHAM ST	5158	TOWARD INDEPENDENT LIVING & LEARNING INC 20 EASTBROOK RD SUITE 201 DEDHAM, MA 02026
40-226 BALACHANDER BALA	217 WALTHAM ST	5114	BALACHANDER BALA 217 WALTHAM ST LEXINGTON, MA 02421
40-225B 221-225 WALTHAM ST CONDO MAIN	221-225 WALTHAM ST	102481	221-225 WALTHAM ST CONDO MAIN 221-225 WALTHAM ST LEXINGTON, MA 02420
49-182 TOWN OF LEXINGTON - HASTINGS P	MASSACHUSETTS AVE	6533	TOWN OF LEXINGTON - HASTINGS P 1625 MASS AVE LEXINGTON, MA 02420
49-2A AB HOLDINGS LLC	2013-2027 MASSACHUSETTS AVE	6384	AB HOLDINGS LLC 2027 MASSACHUSETTS AVE LEXINGTON, MA 02421



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49-53 CAVATORTA FRANK B &	8 FOREST ST	6423	CAVATORTA FRANK B & 12 FOREST ST LEXINGTON, MA 02421
49-55 TOWN OF LEXINGTON	MUZZEY ST	6425	TOWN OF LEXINGTON 1625 MASS AVE LEXINGTON, MA 02420
49-184 LEXINGTON HOUSING AUTHORITY	WALTHAM ST	6535	LEXINGTON HOUSING AUTHORITY 1 COUNTRYSIDE VILLAGE LEXINGTON, MA 02420
49-97 BUTCHER JAMES M &	31 PARKER ST	6457	BUTCHER JAMES M & 31 PARKER ST LEXINGTON, MA 02421
40-231 REICHERT VIENNA L &	183 WALTHAM ST	5119	REICHERT VIENNA L & 183 WALTHAM ST LEXINGTON, MA 02421
41-113 ARONSON RUTH R	15 BASKIN RD	5260	ARONSON RUTH R 15 BASKIN RD LEXINGTON, MA 02421
49-89B PERRY RICHARD F & PERRY PATRICIA A TRUST	40 CLARKE ST	6561	PERRY RICHARD F & PERRY PATRICIA A TRUST 40 CLARKE ST LEXINGTON, MA 02421
49-16A LEXINGTON ARTS & CRAFTS SOC	130 WALTHAM ST	6521	LEXINGTON ARTS & CRAFTS SOC 130 WALTHAM ST LEXINGTON, MA 02421
40-228 KIMBALL JAMES III &	201 WALTHAM ST	5116	KIMBALL JAMES III & 201 WALTHAM ST LEXINGTON, MA 02421



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at 251 WALTHAM ST**

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41-119 1 BASKIN ROAD NOMINEE TRUST	1 BASKIN RD	5266	1 BASKIN ROAD NOMINEE TRUST 1 BASKIN RD LEXINGTON, MA 02421
41-110 CHEN KE & REN XIAODAN TRUSTEES	21 BASKIN RD	5257	CHEN KE & REN XIAODAN TRUSTEES 21 BASKIN RD LEXINGTON, MA 02421
41-4 PATEL DIVYAKANT	256 WALTHAM ST	5161	PATEL DIVYAKANT 256 WALTHAM ST LEXINGTON, MA 02421
49-18 PETRONIO JOHN C & HEIDI L TRS	172 WALTHAM ST	6392	PETRONIO JOHN C & HEIDI L TRS 172 WALTHAM ST LEXINGTON, MA 02421
40-225B-2 COLLIS ALAN & COLLIS KRISTY	223 WALTHAM ST	5157	COLLIS ALAN & COLLIS KRISTY 223 WALTHAM ST LEXINGTON, MA 02421
41-118 SPAEPEN FRANS A & MONIQUE S TRS	3 BASKIN RD	5265	SPAEPEN FRANS A & MONIQUE S TRS 3 BASKIN RD LEXINGTON, MA 02421
41-117 DERBY TR REBECCA A & MORTON TR EVAN W	5 BASKIN RD	5264	DERBY TR REBECCA A & MORTON TR EVAN W 5 BASKIN RD LEXINGTON, MA 02421
49-24 SIMKOWITZ PHILIP	2 FOREST ST	6399	SIMKOWITZ PHILIP 2 FOREST ST LEXINGTON, MA 02421
41-112 DIAMANT TRS ASHER & GALIA	17 BASKIN RD	5259	DIAMANT TRS ASHER & GALIA 17 BASKIN RD LEXINGTON, MA 02421



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49-21 INDEPENDENT CHURCH OF THE FREE SPIRIT	177 WALTHAM ST	6396	INDEPENDENT CHURCH OF THE FREE SPIRIT 177 WALTHAM ST LEXINGTON, MA 02421
49-98 SU LONGWEI & WANG ZUOLING	29 PARKER ST	6458	SU LONGWEI & WANG ZUOLING 29 PARKER ST LEXINGTON, MA 02421
41-125A SHASTRI RAJESH	2 BUSHNELL DR	5282	SHASTRI RAJESH 2 BUSHNELL DR LEXINGTON, MA 02421
40-221 MONGIELLO JEAN J & MONGIELLO FRANK P L/E	242 WALTHAM ST	5110	MONGIELLO JEAN J & MONGIELLO FRANK P L/E 242 WALTHAM ST LEXINGTON, MA 02421
49-92 PEARLMAN ERIC A TRUSTEE	47 PARKER ST	6452	PEARLMAN ERIC A TRUSTEE 47 PARKER ST LEXINGTON, MA 02421
41-2 GAMBINO FRANCESCO &	261 WALTHAM ST	5159	GAMBINO FRANCESCO & 261 WALTHAM ST LEXINGTON, MA 02421
41-116 HOLLAND PETER B III & HOLLAND BEATRICE M	7 BASKIN RD	5263	HOLLAND PETER B III & HOLLAND BEATRICE M 7 BASKIN RD LEXINGTON, MA 02421
49-91 PINO JESSICA T	49 PARKER ST	6451	PINO JESSICA T 49 PARKER ST LEXINGTON, MA 02421



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49-104 LEE JAMES CHUNG-LIN	9 PARKER ST	6463	LEE JAMES CHUNG-LIN 9 PARKER ST LEXINGTON, MA 02421
49-52 MENSAH ROBERT D	6 FOREST ST	6422	MENSAH ROBERT D 6 FOREST ST LEXINGTON, MA 02421
41-111 LIANG RONG &	19 BASKIN RD	5258	LIANG RONG & 19 BASKIN RD LEXINGTON, MA 02421
49-105 PENNIMAN JASON D	7 PARKER ST	6464	PENNIMAN JASON D 7 PARKER ST LEXINGTON, MA 02421
49-89C CHEN HUA	42 CLARKE ST	100254	CHEN HUA 42 CLARKE ST LEXINGTON, MA 02421
49-93 KALAI ADAM TAUMAN &	45 PARKER ST	6453	KALAI ADAM TAUMAN & 45 PARKER ST LEXINGTON, MA 02421
50-1A JOSIAH WILLARD HAYDEN REC CENTER	24 LINCOLN ST	6665	JOSIAH WILLARD HAYDEN REC CENTER 24 LINCOLN ST LEXINGTON, MA 02421
41-115 DAVIS MATTHEW DALE &	9 BASKIN RD	5262	DAVIS MATTHEW DALE & 9 BASKIN RD LEXINGTON, MA 02421
49-99 MASTEY ANDREW T	25 PARKER ST	6459	MASTEY ANDREW T 25 PARKER ST LEXINGTON, MA 02421



Town of Lexington, MA Abutters Report

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40-229 PFROMMER MICHAEL T & FRANCESCA S TRS	195 WALTHAM ST	5117	PFROMMER MICHAEL T & FRANCESCA S TRS
49-106 REWEY NATHANIEL &	5 PARKER ST	6465	REWEY NATHANIEL & 5 PARKER ST LEXINGTON, MA 02421
49-96 LEHAR JOSEPH &	33 PARKER ST	6456	LEHAR JOSEPH & 33 PARKER ST LEXINGTON, MA 02421
42-1 TOWN OF LEXINGTON	52 LINCOLN ST	5284	TOWN OF LEXINGTON 1625 MASS AVE LEXINGTON, MA 02420
49-61A KELLEY PETER C J & KELLEY BEVERLY A L/E	28 FOREST ST	6549	KELLEY PETER C J & KELLEY BEVERLY A L/E 24 FOREST ST LEXINGTON, MA 02421
41-3 YIM YI-CHEON &	255 WALTHAM ST	5160	YIM YI-CHEON & 255 WALTHAM ST LEXINGTON, MA 02421
40-225B-1 JO ANN ENGLAND REVOCABLE TRUST	221 WALTHAM ST	5156	JO ANN ENGLAND REVOCABLE TRUST 221 WALTHAM ST LEXINGTON, MA 02421
49-22 BASU PRABAHAN &	173 WALTHAM ST	6397	BASU PRABAHAN & 173 WALTHAM ST LEXINGTON, MA 02421
49-57 CHATEL ROBERT E & CHATEL WENDY H TRS	6 FOREST CT	6427	CHATEL ROBERT E & CHATEL WENDY H TRS P O BOX 87 WOLFEBORO, NH 03894



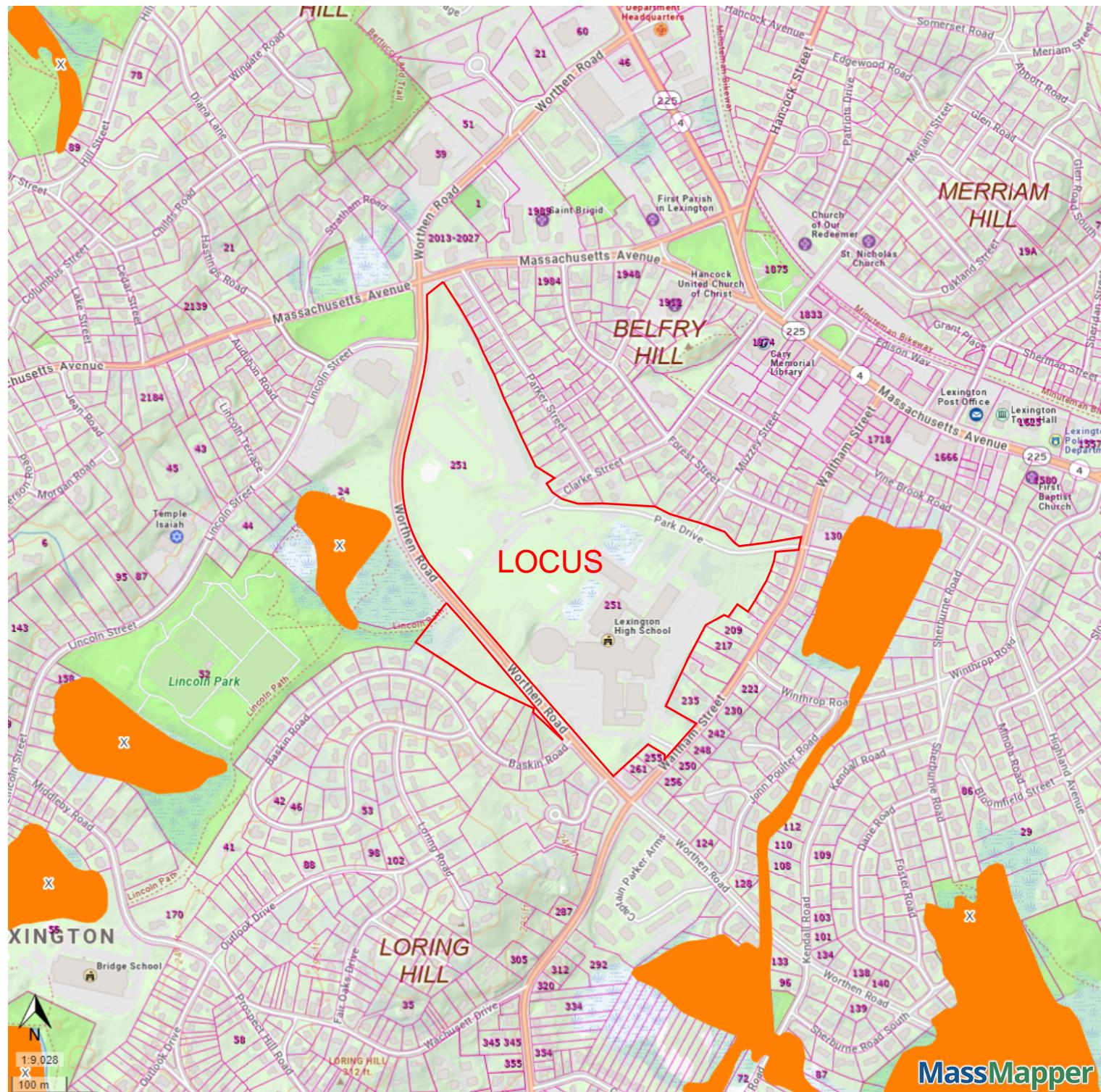
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49-94 PETRASSO RICHARD D & PETRASSO SARA BETH	37 PARKER ST	6454	PETRASSO RICHARD D & PETRASSO SARA BETH 37-39 PARKER ST LEXINGTON, MA 02421
41-114 WILSON, TRS EMERY & SHEILA	11 BASKIN RD	5261	WILSON, TRS EMERY & SHEILA 11 BASKIN RD LEXINGTON, MA 02421
49-103 HARRINGTON THOMAS &	11 PARKER ST	6462	HARRINGTON THOMAS & 11 PARKER ST LEXINGTON, MA 02421
49-54B GLORIKIAN HARRY A TR OF THE HARRY A G	36 MUZZEY ST	100418	GLORIKIAN HARRY A TR OF THE HARRY A G 36 MUZZEY ST LEXINGTON, MA 02421
49-102A BREUNIG KEVIN H &	15 PARKER ST	6562	BREUNIG KEVIN H & 15 PARKER ST LEXINGTON, MA 02421
49-181 WONDOLOWSKI TIMOTHY J &	2030 MASSACHUSETTS AVE	6532	WONDOLOWSKI TIMOTHY J & 2030 MASSACHUSETTS AVE LEXINGTON, MA 02421
41-124 MCAVOY PAUL &	1 BUSHNELL DR	5270	MCAVOY PAUL & 1 BUSHNELL DR LEXINGTON, MA 02421
49-54A GRUBER MICHAEL L &	16 FOREST ST	100417	GRUBER MICHAEL L & 16 FOREST ST LEXINGTON, MA 02421

LHS - Flood Plain Map of Locus



Q3 Flood Zones (from Paper FIRMs, where NFHL Unavailable)

- A
 - AE
 - AE Floodway
 - AH
 - AO
 - D
 - VE
 - Area Not Included
 - X500

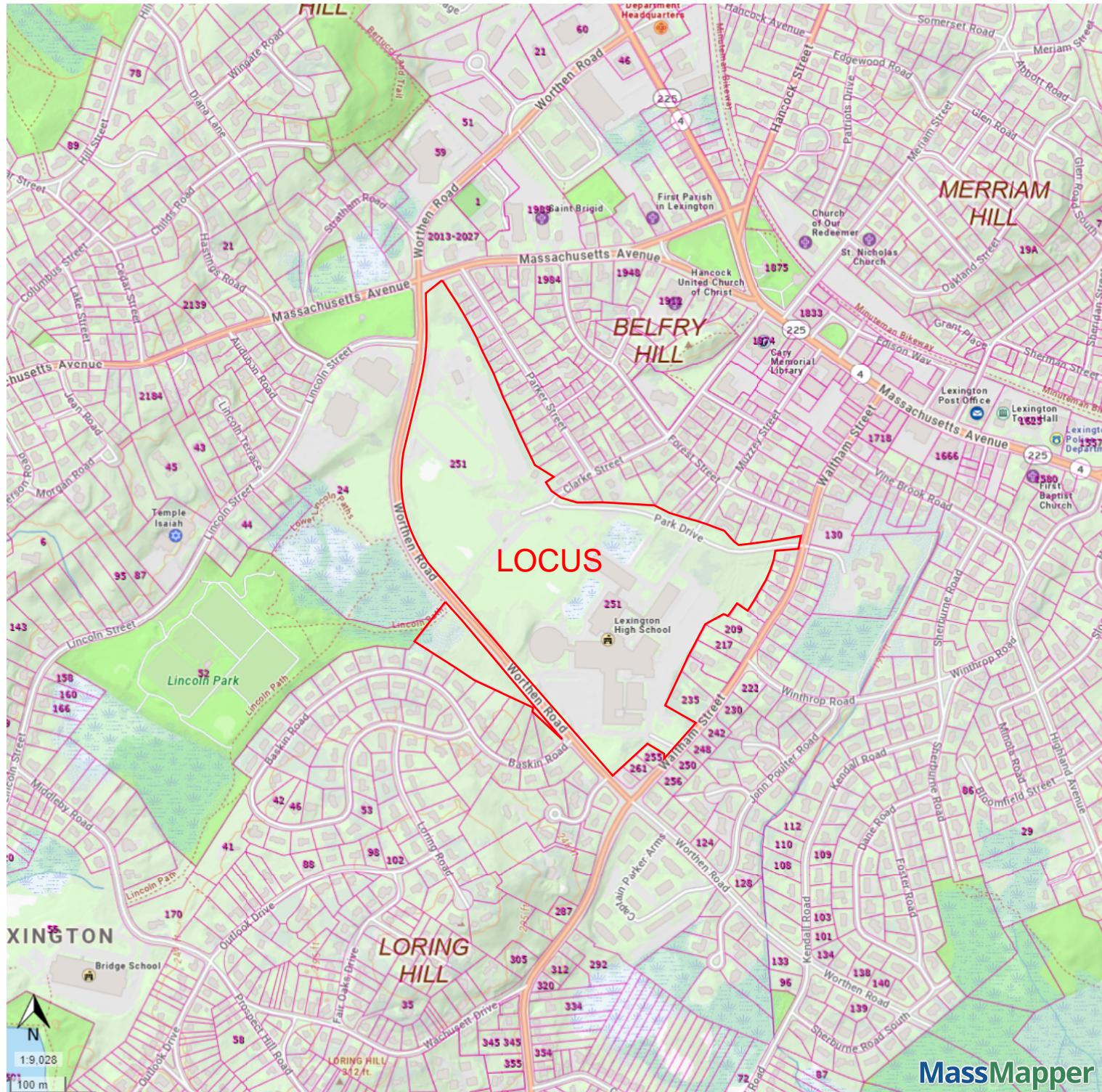
FEMA National Flood Hazard Layer Polygons

- 1% Annual Chance Flood Hazard
 - Regulatory Floodway
 - Area of Undetermined Flood Hazard
 - 0.2% Annual Chance Flood Hazard
 - Area with Reduced Risk Due to Levee
 - Area Not Included

FEMA National Flood Hazard Layer
Property Tax Parcels

07/30/2024

LHS - Nat. Heritage and Endangered Species Map of locus



NHESP Estimated Habitats of Rare Wildlife

NHESP Priority Habitats of Rare Species

BioMap Regional Rare Species

BioMap Local Rare Species

BioMap Core Habitat Components: Rare Species Core

Property Tax Parcels

07/30/2024

Lexington High School Wetland Report

To	Erin Prestileo, Symmes Maini McKee Associates (SMMA)	Page 1 of 7
CC	Lorraine Finnegan (SMMA)	
Subject	Wetland Resource Area Assessments Lexington High School, Lexington, MA	
From	Julia Stearns, Senior Wetland Scientist/Staff Specialist Dennis Lowry, Principal Wetland Ecologist	
Date	July 25, 2024	

Introduction

AECOM wetland scientists conducted wetland delineations and habitat evaluations December 13, and 14, 2023 and July 8, 2024, within the Lexington High School campus parcels at 251 Waltham Street and Worthen Road, in Lexington, Massachusetts. This report describes the identified wetland resource areas Subject to Protection under the Town of Lexington Wetland Protection By-Law (Chapter 130), the Massachusetts Wetlands Protection Act (Act) (M.G.L Chapter 131, Section 40-*the Act or MWPA*), the federal Clean Water Act (33 U.S.C. §1344 et seq (1972)), and the Massachusetts Clean Waters Act (M.G.L. Chapter 21 Section 26-53) that exist on the site and methodology used to delineate their boundaries.

Site Description

The site is located northeast of the Worthen Road and Waltham Street intersection, centrally located in the town of Lexington, MA, (Figure 1 – Site Locus in Appendix A). The assessment area included the approximate 56-acre High School campus and a 3-acre parcel west of Worthen Road. State and local jurisdictional resource areas identified on the site included Bording Vegetated Wetlands (BVW) and Isolated Wetlands.

Pre-Survey Desktop Investigations

Prior to the commencement of the field survey, AECOM performed an in-office desktop review of pertinent background information utilizing the online mapping resources available through the Town of Lexington's interactive GIS map, MassGIS Online Data Viewer, and Natural Resource Conservation Service (NRCS) Web Soil Survey to evaluate the potential presence of wetlands, waterbodies, hydric soils, and Federal Emergency Management Agency (FEMA) flood hazard areas. Results of the in-office review of publicly available and MassGIS data include:

- The site area contains wetland resources, as mapped by the MassDEP Wetland Inventory Program (MassGIS Online Data Viewer) and United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI). Two Emergent/Shallow Marsh and one Forested Wetland were mapped by MassDEP Wetland Inventory Program and NWI while additional wetlands were field identified during the site evaluations.
- The MassGIS Online Data Viewer and the Town of Lexington's interactive GIS map indicated the site was situated within a Zone II Wellhead Protection Area and local Conservation and Recreation areas.
- USDA Natural Resources Conservation Service (NRCS) – Soil Survey identified Udorthents Urban land soil complex underlying the majority of the site, Udorthents Wet substratum underlying the northwestern corner of the campus, and Freetown muck underlying the parcel west of Worthen Road. Udorthents-Urban land complex consists of non-hydric soils typically of excavated and filled land. Udorthents wet substratum consists of glaciofluvial deposits with hydric

Lexington High School Wetland Report

components of Freetown and Swansea soils. Freetown muck is a hydric soil of highly decomposed organic material typically found in depressions, swamps, and marshes. The *Custom Soil Resource Report for Middlesex County, Massachusetts* is provided in Appendix D.

- FEMA (Flood Insurance Rate Map [FIRM] Panel No. 25017C0403E) (6/4/2010) indicated no special flood hazard areas existed on the site.

Wetland Field Survey Methodology

The wetland identification and delineation surveys were performed pursuant to the guidance contained in *Delineating Bordering Vegetated Wetlands under the Massachusetts Wetlands Protection Act Handbook* (MassDEP 1995), and Routine Onsite Determination Method as described in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and applicable *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (Ver. 2.0; U.S. Army Corps of Engineers 2012) and the *Field Indicators for Identifying Hydric Soils in New England, Version 4* (New England Hydric Soils Technical Committee 2018).

Field surveys were performed to identify soil types, topographic and drainage features, and plant associations that would indicate the presence of potential jurisdictional resources. Soil profiles were sampled using a soil auger to determine if any hydric soil indicators were present. The information collected for each soil profile included soil horizons, depth, texture, color, and the presence or absence of redoximorphic features (mottles and other features). Colors of the soil matrix and mottles were identified using Munsell Soil Color Charts.

The indicator status of dominant plant species in each stratum was evaluated in the field to determine whether a hydrophytic plant association was present. Dominant species in both upland and wetland communities were visually estimated and recorded with appropriate radius plots, and the wetland indicator status was noted using the applicable state reference materials. Wetlands were classified during field surveys according to the "Cowardin system", which is a process discussed in *Classification of Wetlands and Deepwater Habitats of the United States* (1979).

Indicators of wetland hydrology were also observed and recorded. Site hydrology was evaluated during field surveys by initially observing whether the soil at the surface was inundated or saturated. If the ground surface was dry, the depth to water table or saturated soil was measured, and the presence or absence of other indicators of wetland hydrology (e.g., surface water, drainage patterns, drift lines, water-stained leaves, etc.) was noted.

The site was reviewed for perennial and intermittent streams based on relevant MWPA definitions, including the definition of stream (310 CMR 10.04), Inland Bank (310 CMR 10.54), Land Under Waterway (310 CMR 10.56) and Riverfront Area (310 CMR 10.58); one culverted stream, a tributary of Vine Brook, was identified underlying the project site as it is conveyed in a 42-inch culvert from Worthen Road to the east along and under Park Drive. This culverted flow of the Vine Brook tributary is then conveyed via culvert to the east of Waltham Street where it joins the main stem of Upper Vine Brook flowing northeast toward Lexington center. AECOM's assessment of jurisdictional resource areas was also supplemented by review of previous survey plans of the site generated over the past 15 years or so and provided to us by SMMA. In addition, our assessments have also considered recent investigations by SMMA regarding site drainage conditions, particularly addressing where hydrologic connections appear to be present and function to tie the site drainage to the Vine Brook tributary culvert. We have included the summary of the drainage investigations provided by SMMA as Appendix E.

During the field investigations, the boundaries of each wetland were demarcated with pink surveyors flagging tape labeled with a unique numeric designation for each point tied to vegetation and spaced at appropriate intervals. The delineated resource boundaries were surveyed by others and plotted

Lexington High School Wetland Report

on site plans and confirmed by AECOM field personnel. The delineated resource boundaries were plotted on aerial imagery and were subsequently reviewed and confirmed by AECOM field personnel and results of the resource area assessments have been included below.

Survey Results

A total of ten (10) freshwater wetlands, including seven (7) Bordering Vegetated Wetlands (BVW) and three (3) isolated vegetated wetlands, were documented and delineated within and adjacent to the project site. A description of each resource area delineated in the field has been provided below and includes identifying the feature's location, classification type, hydrologic indicators, and associated characteristics. US Army Corps of Engineers Wetland Determination Data Forms can be found in Appendix B and site photographs of the delineated wetlands have been included for review in Appendix C.

Jurisdictional Wetland Resource Areas – Massachusetts Wetlands Protection Act

Bordering Vegetated Wetlands (310 CMR 10.55)

According to 310 CMR 10.55(2), Bordering Vegetated Wetlands (BVWs) are freshwater wetlands which border on creeks, rivers, streams, ponds, or lakes are areas where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants. The boundary of a BVW is the line within which 50% or more of the vegetation community consists of wetland indicator plants and saturated or inundated conditions exist. The Act establishes a 100-foot buffer zone that extends horizontally outward from the boundary of a BVW.

AECOM identified and delineated seven BVWs within the project site, including Wetlands W1 through W5 and Wetlands W7 and W8. The wetlands were determined to be contiguous with and hydrologically connected to the culverted perennial stream which is tributary to Vine Brook. As noted above, the culverted Vine Brook tributary flows east and southeast through a 42-inch reinforced concrete pipe (RCP) starting in Lincoln Park, west of Worthen Road, and continues under the campus ballfields and along the east side of Park Drive.

Wetland W1

Wetland W1 is a shallow marsh located southeast of the campus ballfields and northeast of the Lexington Debate Institute building, in the eastern portion of the site. The wetland receives stormwater flow from catch basins along the campus driveway to the south. The wetland flows north and appears to be connected to the culverted stream via the campus stormwater drainage system located at the north end of the wetland. The boundary between the marsh and uplands was demarcated in the field with pink surveyor's tape, labeled W1-100 through W1-121. Dominant vegetation observed throughout the marsh included red maple (*Acer rubrum*), silver maple (*Acer saccharinum*), willow (*Salix* sp.), winterberry (*Ilex verticillata*), silky dogwood (*Cornus amomum*), elderberry (*Sambucus nigra*), sensitive fern (*Onoclea sensibilis*), jewelweed (*Impatiens capensis*), soft rush (*Juncus effusus*), and tussock sedge (*Carex stricta*). Hydric soil observed within the wetland was characterized as a thick black organic muck overlaying a depleted sandy mineral soil. Documented hydrologic indicators included saturated conditions, areas of standing water, and water-stained leaves.

Wetland W2

Wetland W2 is a forested/scrub-shrub marsh located southwest of Park Drive and southeast of Wetland W1. The wetland is bounded by campus roadways to the northwest and southeast, an upland berm to the southwest, and Park Drive to the northeast. Wetland W2 was demarcated in the field with pink surveyor's tape, labeled W2-100 through W2-112. The marsh is contiguous with and hydrologically connected to the culverted stream via an outlet located at the wetland's northeast corner. Dominant vegetation documented within the wetland included red maple, American elm

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(*Ulmus americana*), highbush blueberry (*Vaccinium corymbosum*), silky dogwood, elderberry, bishop's goutweed (*Aegopodium podagraria*), and soft rush. Hydric soil documented throughout the wetland was characterized as thick dark organic histosol overlaying peat. Hydrologic indicators observed during the site review included saturated conditions, water-stained leaves, and standing water.

Wetland W3

Wetland W3 is an emergent marsh located southwest of Wetland W2 and bounded by campus roadways to the northwest, west and south, and an upland berm separating the wetland from Wetland W2 to the northeast. This marsh was dominated by broadleaf cattail (*Typha latifolia*). Other vegetation observed within the wetland included purple loosestrife (*Lythrum salicaria*), silky dogwood, elderberry, winterberry and red maple. During high water conditions the marsh appears to flow to the culverted stream through the site's stormwater drainage system; in AECOM's experience, this hydrologic connection is sufficient to classify this wetland as "bordering" (i.e., a BVW). The wetland boundary was demarcated in the field with pink surveyor's tape, labeled W3-100 through W3-111. Hydric soils were documented in the BVW, and hydrologic indicators included saturated conditions and standing water.

Wetland W4

Wetland W4 is a wooded swamp located at the northeast corner of the campus parcel and is contiguous with and hydrologically connected to the adjacent culverted stream via the stormwater drainage system. During highwater conditions the wetland receives flood flow from adjacent roads and campus parking lots. The wetland boundary was demarcated in the field with pink surveyor's tape, labeled W4-100 through W4-141. Wetland W4 is bounded by a campus road to the northwest, campus parking lot to the southwest, Park Drive to the northeast and residential properties to the southeast. Dominant vegetation observed within the wetland included red maple, American elm, yellow birch (*Betula alleghaniensis*), silky dogwood, elderberry, winterberry, Japanese knotweed (*Polygonum cuspidatum*), soft rush, tussock sedge, bishop's goutweed, sensitive fern, jewelweed, and tearthumb (*Polygonum sagittatum*). Hydric soil documented throughout the wetland was characterized as thick dark organic histosol overlaying peat. Hydrologic indicators observed during the site review included saturated conditions, water-stained leaves, and areas of standing water.

Wetland W5

Wetland W5 is a wooded swamp located at the northwest corner of the project Parcel B, west of Worthen Road. Wetland W5 is a large wetland system situated along the south side of the Lincoln Path. Only that portion of the wetland within Parcel B was delineated and demarcated in the field with pink surveyor's tape, labeled W5-100 through W5-125. The portion of the wetland on the adjacent property was not delineated or demarcated in the field. The delineated portion of the wetland was dominated by red maple, American elm, green ash (*Fraxinus pennsylvanica*), swamp white oak (*Quercus bicolor*) and English ivy (*Hedera helix*). The wetland appears to discharge groundwater as well as receive overland flow from the surrounding forest and Worthen Road to the northeast. It appears to be hydrologically connected to wetland further north along Worthen Road which is then connected to the Vine Brook culvert. Hydric soils were observed within the wetland and other hydrologic indicators included saturated conditions, water-stained leaves, and standing water.

Wetland W7

Wetland W7 is an emergent marsh located within the school's ball fields, adjacent to the batting cage and west of Crumb Football Field. The wetland receives overland flow and appears to provide an area of groundwater discharge. The boundary was demarcated in the field with pink surveyor's tape, labeled W7-100 through W7-115. The wetland is hydrologically connected to other site wetlands during high water via a drainage catch basin located at its southwestern corner, adjacent to flag W7-101. The wetland was dominated by broadleaf cattail. Other commonly occurring vegetation observed within the wetland included purple loosestrife, soft-stemmed bulrush (*Schoenoplectus tabernaemontani*), tearthumb, common wintercress (*Barbarea vulgaris*), and purple stem aster

Lexington High School Wetland Report

(*Sympyotrichum puniceum*). Hydrologic indicators included standing water and water-stained leaves.

Wetland W8

Wetland W8 is a forested wetland located southwest of Wetland W7 and southwest of the campus ballfields along the east side of Worthen Road. The wetland receives and retains overland flow from the surrounding field. The boundary of the wetland was demarcated in the field with pink surveyor's tape, labeled W8-100 through W8-107. Dominant vegetation observed within the wetland included grey birch (*Betula populifolia*), red oak (*Quercus rubra*), green ash, common buckthorn (*Frangula alnus*), jewelweed, tearthumb, soft rush, sedges (*Carex* sp.), and goldenrods (*Solidago* sp.). Hydric soil documented within the wetland was characterized as an organic histosol. Hydrologic indicators observed in the wetland included water-stained leaves and saturated conditions. Wetland 8 appears connected hydrologically to the culverted system that Wetland 7 drains into via a catchbasin at the northern end.

Isolated Land Subject to Flooding (ILSF: 310 CMR 10.57)**Central Basin**

As noted above, three of the areas supporting freshwater wetlands on the site are considered by AECOM to be hydrologically isolated based on examination of site drainage conditions. Two of these isolated wetlands, Wetlands 6 and 9, are very small and do not appear to contain sufficient storage characteristics (i.e., $\frac{1}{4}$ acre-foot at least 6 inches deep once per year) to be classified as ILSF; these are described below as isolated freshwater wetlands subject only to the Lexington Wetland Protection Bylaw. Formal ILSF determinations were not conducted by AECOM, since all isolated freshwater wetlands are already protected resource areas under the Bylaw. The third isolated freshwater wetland on the site, hereafter referred to as the Central Basin, is situated between the field house, Science and Math Buildings, and south of the football/baseball field complex. Covering approximately one acre in area, with water in places at least two feet in depth, the Central Basin clearly has sufficient storage capacity to meet the ILSF criteria cited above, although the groundwater contribution to the observed flooded portion of this basin complicates this assessment. For the purposes of this assessment, the Central Basin is presumed to satisfy the hydrologic criteria as ILSF.

In addition to AECOM's observations in the field regarding the hydrologic conditions associated with the Central Basin, we have reviewed the investigations conducted by SMMA to assess the drainage connections in the area of the Central Basin (and overall on the campus). Based upon our review of the collective information available, it is our opinion that the Central Basin is hydrologically isolated from a regulatory perspective and does not constitute a "bordering" condition. In particular, the finding by SMMA that the 12" RCP in the north-northwest corner of the Central Basin is "capped" roughly 40 feet north of the basin, eliminates the capacity of this basin to drain into the site's drainage system and into the culverted Vine Brook tributary system. Accordingly, it is our opinion that the Central Basin is appropriately classified as an ILSF under the MWPA, and is classified as an isolated freshwater wetland under the Lexington Wetland Protection Bylaw.

AECOM has reviewed aerial photographs of the Central Basin going back to the 1960's, and note that it has a long history of various land use activities and conditions. In particular, it appears to have been excavated in the early 2000's, and from that point on it has supported more marsh conditions (both deep and shallow marsh), suggesting that drainage since that time may have been curtailed, perhaps with the intent of the basin being more of a retention pond for surrounding runoff. Based on site surveys, there do not appear to be any point sources of drainage conveyed into the Central Basin, and the actual surface watershed of contributing runoff is relatively small.

Jurisdictional Wetland Resource Areas – Town of Lexington Wetland Protection Bylaw

The Town of Lexington Wetland Protection bylaw (Chapter 130) maintains the same wetland resource area definitions as provided in the Act. Chapter 130-8 of the bylaw defines “protected resource areas as set forth in M.G.L. Chapter 131, Section 40 and its regulations at 310 CMR 10.04.” In addition to those resources defined in the Act, the bylaw further protects freshwater wetland resource areas whether or not they border surface waters (Chapter 130-8.C.(1)). In addition to the freshwater wetland BVWs listed above, the following isolated wetlands were identified and delineated on the site as freshwater wetland resource areas in accordance with Chapter 130 of the bylaw.

Wetland W6

Wetland W6, a small, isolated wetland, southwest of Wetland W5, is located within the northwest portion of Parcel B, on the west side of Worthen Road. The wetland receives and retains overland flow from areas to the west. The boundary of the wetland was demarcated in the field with pink surveyor’s tape, labeled W6-100 through W6-103. The wetland was dominated by red maple and swamp white oak. Hydric soils were observed within the wetland and hydrologic indicators included saturation, standing water, and water-stained leaves.

Wetland W9

Wetland W9 is an isolated forested wetland located at the southern parcel boundary and west of the Waltham Street campus entrance. The wetland receives and retains stormwater flow from adjacent campus roads. The boundary of the wetland was demarcated in the field with pink surveyor’s tape, labeled W9-100 through W9-107. The wetland was dominated by silver maple, American elm, red maple, and English ivy. Hydric soil within the wetland was characterized as a dark organic histosol and hydrologic indicators included saturated soil conditions and water-stained leaves.

Jurisdictional Wetland Resource Areas – Federal Clean Water Act (Section 404)

Wetlands W1 through W5 are considered “Waters of the United States,” as is the culverted stream that extends across the site, and these are therefore subject to the federal Clean Water Act, 33 U.S.C. §1251 et seq (1972). The boundary to “Waters of the United States” is the Vegetated Wetlands Boundary, or, in the absence of Vegetated Wetlands, is the Ordinary High-Water Mark (OHWM) for non-tidal rivers and streams, as specified at 33 CFR §328.4. Vegetated wetlands are defined as “those areas that are inundated with or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” The wetland boundaries previously described in this memo were delineated in accordance with this definition. The US Army Corps of Engineers’ *Vegetated Wetland Boundary Delineation Field Data Sheets* are attached documenting AECOM’s observed evidence of hydrology, soil profile, and hydrophytic vegetation. Work conducted below the boundary of Vegetated Wetlands is Subject to Jurisdiction under Section 404 of the Clean Water Act.

Jurisdictional Wetland Resource Areas – Massachusetts Clean Water Act (Section 401)

The limit of jurisdiction under the Massachusetts Clean Water Act (Section 401), as specified in 314 CMR 9.00, is the limit of Section 404 jurisdiction under the federal Clean Water Act. Exceedances of the jurisdictional threshold under 314 CMR 9.00 require filing for a Water Quality Certification under Section 401.

Summary

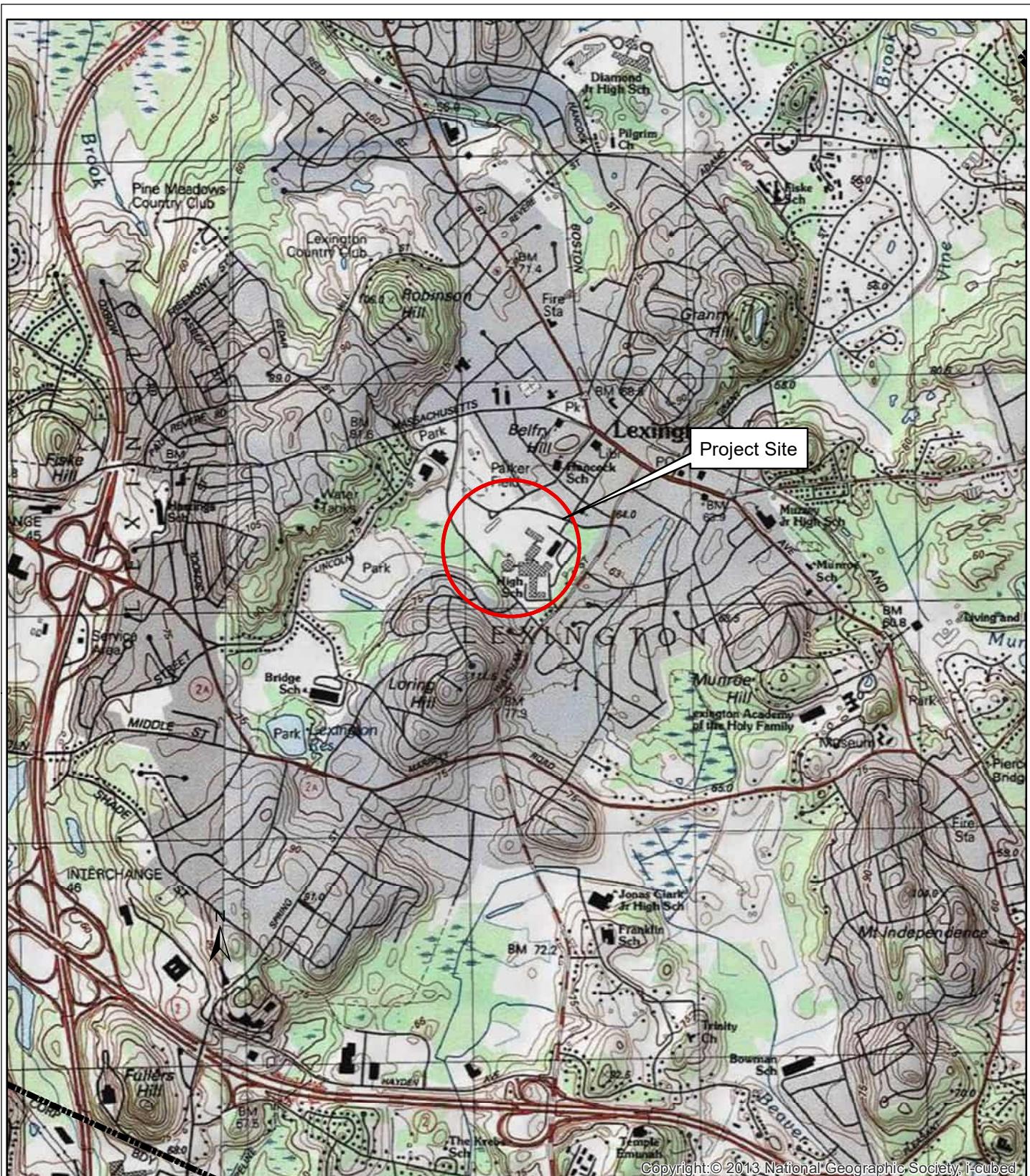
AECOM identified areas Subject to Protection and/or Jurisdiction under the Lexington Wetland Protection Bylaw, Massachusetts Wetlands Protection Act, the federal Clean Water Act, and the Massachusetts Clean Waters Act on or within 100 feet of the site.

References:

- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. United States Fish and Wildlife Service Biological Report 79/31. Washington, D.C.
- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1*. U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- Massachusetts Department of Environmental Protection. 1995. *Delineating Bordering Vegetated Wetlands under the Wetlands Protection Act, A Handbook*. Division of Wetlands and Waterways, Boston, MA.
- Massachusetts Geographical Information Systems Interactive, MassMapper an interactive on-line map for Massachusetts; [MassMapper](#)
- New England Hydric Soils Technical Committee. 2018 Version 4, *Field Indicators for Identifying Hydric Soils in New England*. New England Interstate Water Pollution Control Commission, Lowell, MA.
- Town of Lexington Wetland Protection Bylaw, Chapter 130 Hingham Wetland Regulations. revised 2023. Hingham, MA.
- U.S. Army Corps of Engineers. 2011. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, C. V. Noble, and J. F. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

Appendix A

Figures



USGS Topographic Map



1 inch = 2,000 feet

Site Locus

Lexington High School
251 Waltham Street
Lexington, MA

SCALE	DATE	PROJECT NO.
1:24,000	12/2023	60721944

AECOM

FIGURE NUMBER

1

Appendix B

US Army Corps of Engineers Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lexington High School City/County: Lexington, MA Sampling Date: 12/14/2023
 Applicant/Owner: Town of Lexington State: MA Sampling Point: W1
 Investigator(s): Julia Stearns Section, Township, Range: Lexington
 Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): _____
 Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 42.445252 Long: -71.232255 Datum: WGS84
 Soil Map Unit Name: Udorthents-Urban land complex NWI classification: PEM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.) _____

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>W1</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators</u> (minimum of one is required; check all that apply) <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Surface Water (A1)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Water-Stained Leaves (B9)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> High Water Table (A2)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Aquatic Fauna (B13)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Saturation (A3)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Marl Deposits (B15)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Water Marks (B1)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Sediment Deposits (B2)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Drift Deposits (B3)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Presence of Reduced Iron (C4)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Algal Mat or Crust (B4)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Iron Deposits (B5)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Thin Muck Surface (C7)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</u> </td> <td style="width: 50%; 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Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W1

<u>Tree Stratum</u> (Plot size: <u>30'</u>)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																																
1. <i>Acer rubrum</i>	<u>50</u>	<u>Yes</u>	<u>FAC</u>																																	
2.																																				
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4.																																				
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<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Prevalence Index worksheet: <table border="0"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td><u>20</u></td> <td>x 1 =</td> <td><u>20</u></td> </tr> <tr> <td>FACW species</td> <td><u>60</u></td> <td>x 2 =</td> <td><u>120</u></td> </tr> <tr> <td>FAC species</td> <td><u>60</u></td> <td>x 3 =</td> <td><u>180</u></td> </tr> <tr> <td>FACU species</td> <td><u>0</u></td> <td>x 4 =</td> <td><u>0</u></td> </tr> <tr> <td>UPL species</td> <td><u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>140</u></td> <td>(A)</td> <td><u>320</u></td> <td>(B)</td> </tr> <tr> <td colspan="4">Prevalence Index = B/A = <u>2.29</u></td> </tr> </tbody> </table>		Total % Cover of:	Multiply by:	OBL species	<u>20</u>	x 1 =	<u>20</u>	FACW species	<u>60</u>	x 2 =	<u>120</u>	FAC species	<u>60</u>	x 3 =	<u>180</u>	FACU species	<u>0</u>	x 4 =	<u>0</u>	UPL species	<u>0</u>	x 5 =	<u>0</u>	Column Totals:	<u>140</u>	(A)	<u>320</u>	(B)	Prevalence Index = B/A = <u>2.29</u>			
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<u>Herb Stratum</u> (Plot size: <u>5'</u>)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> X 2 - Dominance Test is >50% <input checked="" type="checkbox"/> X 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																																
1. <i>Onoclea sensibilis</i>	<u>30</u>	<u>Yes</u>	<u>FACW</u>																																	
2. <i>Juncus effusus</i>	<u>20</u>	<u>Yes</u>	<u>OBL</u>																																	
3. <i>Solidago rugosa</i>	<u>10</u>	<u>No</u>	<u>FAC</u>																																	
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<u>Woody Vine Stratum</u> (Plot size: <u> '</u>)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																																
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Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histicosol (A1)
 - X Histic Epipedon (A2)
 - X Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)
 - X Thick Dark Surface (A12)
 - X Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7)

- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
 - Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
 - High Chroma Sands (S11) (**LRR K, L**)
 - Loamy Mucky Mineral (F1) (**LRR K, L**)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
 - Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
 - Coast Prairie Redox (A16) (**LRR K, L, R**)
 - 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
 - Polyvalue Below Surface (S8) (**LRR K, L**)
 - Thin Dark Surface (S9) (**LRR K, L**)
 - Iron-Manganese Masses (F12) (**LRR K, L, R**)
 - Piedmont Floodplain Soils (F19) (**MLRA 149B**)
 - Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
 - Red Parent Material (F21)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lexington High School City/County: Lexington, MA Sampling Date: 12/14/2023
 Applicant/Owner: Town of Lexington State: MA Sampling Point: W2
 Investigator(s): Julia Stearns Section, Township, Range: Lexington
 Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): _____
 Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 42.445039 Long: -71.231788 Datum: WGS84
 Soil Map Unit Name: Udorthents-Urban land complex NWI classification: PFO
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.) _____

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>W2-Wet Plot</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators</u> (minimum of one is required; check all that apply) <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;"> <u>Surface Water (A1)</u> </td> <td style="width: 50%; padding: 2px;"> <input checked="" type="checkbox"/> <u>Water-Stained Leaves (B9)</u> </td> </tr> <tr> <td><u>X High Water Table (A2)</u></td> <td><input type="checkbox"/> <u>Aquatic Fauna (B13)</u></td> </tr> <tr> <td><u>X Saturation (A3)</u></td> <td><input type="checkbox"/> <u>Marl Deposits (B15)</u></td> </tr> <tr> <td><u>X Water Marks (B1)</u></td> <td><input type="checkbox"/> <u>Hydrogen Sulfide Odor (C1)</u></td> </tr> <tr> <td><u>Sediment Deposits (B2)</u></td> <td><input type="checkbox"/> <u>Oxidized Rhizospheres on Living Roots (C3)</u></td> </tr> <tr> <td><u>Drift Deposits (B3)</u></td> <td><input type="checkbox"/> <u>Presence of Reduced Iron (C4)</u></td> </tr> <tr> <td><u>Algal Mat or Crust (B4)</u></td> <td><input type="checkbox"/> <u>Recent Iron Reduction in Tilled Soils (C6)</u></td> </tr> <tr> <td><u>Iron Deposits (B5)</u></td> <td><input type="checkbox"/> <u>Thin Muck Surface (C7)</u></td> </tr> <tr> <td><u>Inundation Visible on Aerial Imagery (B7)</u></td> <td><input type="checkbox"/> <u>Other (Explain in Remarks)</u></td> </tr> <tr> <td><u>Sparsely Vegetated Concave Surface (B8)</u></td> <td></td> </tr> </table>		<u>Surface Water (A1)</u>	<input checked="" type="checkbox"/> <u>Water-Stained Leaves (B9)</u>	<u>X High Water Table (A2)</u>	<input type="checkbox"/> <u>Aquatic Fauna (B13)</u>	<u>X Saturation (A3)</u>	<input type="checkbox"/> <u>Marl Deposits (B15)</u>	<u>X Water Marks (B1)</u>	<input type="checkbox"/> <u>Hydrogen Sulfide Odor (C1)</u>	<u>Sediment Deposits (B2)</u>	<input type="checkbox"/> <u>Oxidized Rhizospheres on Living Roots (C3)</u>	<u>Drift Deposits (B3)</u>	<input type="checkbox"/> <u>Presence of Reduced Iron (C4)</u>	<u>Algal Mat or Crust (B4)</u>	<input type="checkbox"/> <u>Recent Iron Reduction in Tilled Soils (C6)</u>	<u>Iron Deposits (B5)</u>	<input type="checkbox"/> <u>Thin Muck Surface (C7)</u>	<u>Inundation Visible on Aerial Imagery (B7)</u>	<input type="checkbox"/> <u>Other (Explain in Remarks)</u>	<u>Sparsely Vegetated Concave Surface (B8)</u>		<u>Secondary Indicators</u> (minimum of two required) <table style="width: 100%; border-collapse: collapse;"> <tr> <td><input type="checkbox"/> <u>Surface Soil Cracks (B6)</u></td> </tr> <tr> <td><input checked="" type="checkbox"/> <u>Drainage Patterns (B10)</u></td> </tr> <tr> <td><input type="checkbox"/> <u>Moss Trim Lines (B16)</u></td> </tr> <tr> <td><input type="checkbox"/> <u>Dry-Season Water Table (C2)</u></td> </tr> <tr> <td><input type="checkbox"/> <u>Crayfish Burrows (C8)</u></td> </tr> <tr> <td><input type="checkbox"/> <u>Saturation Visible on Aerial Imagery (C9)</u></td> </tr> <tr> <td><input type="checkbox"/> <u>Stunted or Stressed Plants (D1)</u></td> </tr> <tr> <td><input type="checkbox"/> <u>Geomorphic Position (D2)</u></td> </tr> <tr> <td><input type="checkbox"/> <u>Shallow Aquitard (D3)</u></td> </tr> <tr> <td><input type="checkbox"/> <u>Microtopographic Relief (D4)</u></td> </tr> <tr> <td><input type="checkbox"/> <u>FAC-Neutral Test (D5)</u></td> </tr> </table>	<input type="checkbox"/> <u>Surface Soil Cracks (B6)</u>	<input checked="" type="checkbox"/> <u>Drainage Patterns (B10)</u>	<input type="checkbox"/> <u>Moss Trim Lines (B16)</u>	<input type="checkbox"/> <u>Dry-Season Water Table (C2)</u>	<input type="checkbox"/> <u>Crayfish Burrows (C8)</u>	<input type="checkbox"/> <u>Saturation Visible on Aerial Imagery (C9)</u>	<input type="checkbox"/> <u>Stunted or Stressed Plants (D1)</u>	<input type="checkbox"/> <u>Geomorphic Position (D2)</u>	<input type="checkbox"/> <u>Shallow Aquitard (D3)</u>	<input type="checkbox"/> <u>Microtopographic Relief (D4)</u>	<input type="checkbox"/> <u>FAC-Neutral Test (D5)</u>
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Remarks:	
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VEGETATION – Use scientific names of plants.

 Sampling Point: W2

<u>Tree Stratum</u> (Plot size: <u>30'</u>)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>
1. <i>Acer rubrum</i>	20	Yes	FAC
2. <i>Quercus rubra</i>	10	No	FACU
3. <i>Acer saccharinum</i>	40	Yes	FACW
4. <i>Ulmus americana</i>	30	Yes	FACW
5.			
6.			
7.			
	100	=Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>)			
1. <i>Ilex verticillata</i>	15	Yes	FACW
2. <i>Lonicera</i>	20	Yes	N/A
3. <i>Cornus amomum</i>	30	Yes	FACW
4.			
5.			
6.			
7.			
	65	=Total Cover	
<u>Herb Stratum</u> (Plot size: <u>5'</u>)			
1. <i>Alliaria petiolata</i>	2	No	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	2	=Total Cover	
<u>Woody Vine Stratum</u> (Plot size: <u> </u>)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

 Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

 Total Number of Dominant Species Across All Strata: 6 (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:
OBL species	0	x 1 = 0
FACW species	115	x 2 = 230
FAC species	20	x 3 = 60
FACU species	12	x 4 = 48
UPL species	0	x 5 = 0
Column Totals:	147 (A)	338 (B)
Prevalence Index = B/A =		2.30

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
 X 2 - Dominance Test is >50%
 X 3 - Prevalence Index is $\leq 3.0^1$
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histicosol (A1)
 - X Histic Epipedon (A2)
 - X Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)
 - X Thick Dark Surface (A12)
 - Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7)

- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
 - Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
 - High Chroma Sands (S11) (**LRR K, L**)
 - Loamy Mucky Mineral (F1) (**LRR K, L**)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
 - Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
 - Coast Prairie Redox (A16) (**LRR K, L, R**)
 - 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
 - Polyvalue Below Surface (S8) (**LRR K, L**)
 - Thin Dark Surface (S9) (**LRR K, L**)
 - Iron-Manganese Masses (F12) (**LRR K, L, R**)
 - Piedmont Floodplain Soils (F19) (**MLRA 149B**)
 - Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
 - Red Parent Material (F21)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lexington High School City/County: Lexington, MA Sampling Date: 12/14/2023
 Applicant/Owner: Town of Lexington State: MA Sampling Point: W2
 Investigator(s): Julia Stearns Section, Township, Range: Lexington
 Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): convex Slope (%): _____
 Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 42.444619 Long: -71.232303 Datum: WGS84
 Soil Map Unit Name: Udorthents-Urban land complex NWI classification: PEM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>W2-UP Plot</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>		Secondary Indicators (minimum of two required)	
<u>Surface Water (A1)</u>	<u>Water-Stained Leaves (B9)</u>	<u>Surface Soil Cracks (B6)</u>	
<u>High Water Table (A2)</u>	<u>Aquatic Fauna (B13)</u>	<u>Drainage Patterns (B10)</u>	
<u>Saturation (A3)</u>	<u>Marl Deposits (B15)</u>	<u>Moss Trim Lines (B16)</u>	
<u>Water Marks (B1)</u>	<u>Hydrogen Sulfide Odor (C1)</u>	<u>Dry-Season Water Table (C2)</u>	
<u>Sediment Deposits (B2)</u>	<u>Oxidized Rhizospheres on Living Roots (C3)</u>	<u>Crayfish Burrows (C8)</u>	
<u>Drift Deposits (B3)</u>	<u>Presence of Reduced Iron (C4)</u>	<u>Saturation Visible on Aerial Imagery (C9)</u>	
<u>Algal Mat or Crust (B4)</u>	<u>Recent Iron Reduction in Tilled Soils (C6)</u>	<u>Stunted or Stressed Plants (D1)</u>	
<u>Iron Deposits (B5)</u>	<u>Thin Muck Surface (C7)</u>	<u>Geomorphic Position (D2)</u>	
<u>Inundation Visible on Aerial Imagery (B7)</u>	<u>Other (Explain in Remarks)</u>	<u>Shallow Aquitard (D3)</u>	
<u>Sparsely Vegetated Concave Surface (B8)</u>		<u>Microtopographic Relief (D4)</u>	
			<u>FAC-Neutral Test (D5)</u>
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W2

<u>Tree Stratum</u> (Plot size: <u>30'</u>)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
				<u>=Total Cover</u>	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>)					
1. <u><i>Rubus allegheniensis</i></u>	<u>100</u>	<u>Yes</u>	<u>FACU</u>		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
				<u>=Total Cover</u>	
<u>Herb Stratum</u> (Plot size: <u>5'</u>)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
				<u>=Total Cover</u>	
<u>Woody Vine Stratum</u> (Plot size: <u> </u>)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
				<u>=Total Cover</u>	
Dominance Test worksheet:					
Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)					
Total Number of Dominant Species Across All Strata: <u>1</u> (B)					
Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)					
Prevalence Index worksheet:					
<u>Total % Cover of:</u>		<u>Multiply by:</u>			
OBL species	<u>0</u>	<u>x 1 = 0</u>			
FACW species	<u>0</u>	<u>x 2 = 0</u>			
FAC species	<u>0</u>	<u>x 3 = 0</u>			
FACU species	<u>100</u>	<u>x 4 = 400</u>			
UPL species	<u>0</u>	<u>x 5 = 0</u>			
Column Totals:	<u>100</u>	(A)	<u>400</u>	(B)	
Prevalence Index = B/A = <u>4.00</u>					
Hydrophytic Vegetation Indicators:					
1 - Rapid Test for Hydrophytic Vegetation					
2 - Dominance Test is >50%					
3 - Prevalence Index is $\leq 3.0^1$					
4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)					
Problematic Hydrophytic Vegetation ¹ (Explain)					
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
Definitions of Vegetation Strata:					
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.					
Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.					
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.					
Woody vines – All woody vines greater than 3.28 ft in height.					
Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>					

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
 - Histic Epipedon (A2)
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)
 - Thick Dark Surface (A12)
 - Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7)

- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
 - Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
 - High Chroma Sands (S11) (**LRR K, L**)
 - Loamy Mucky Mineral (F1) (**LRR K, L**)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
 - Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
 - Coast Prairie Redox (A16) (**LRR K, L, R**)
 - 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
 - Polyvalue Below Surface (S8) (**LRR K, L**)
 - Thin Dark Surface (S9) (**LRR K, L**)
 - Iron-Manganese Masses (F12) (**LRR K, L, R**)
 - Piedmont Floodplain Soils (F19) (**MLRA 149B**)
 - Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
 - Red Parent Material (F21)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes No X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lexington High School City/County: Lexington, MA Sampling Date: 12/14/2023
 Applicant/Owner: Town of Lexington State: MA Sampling Point: W3
 Investigator(s): Julia Stearns Section, Township, Range: Lexington
 Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): _____
 Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 42.444756 Long: -71.232190 Datum: WGS84
 Soil Map Unit Name: Udorthents-Urban land complex NWI classification: PFO
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.) _____

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>W1</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators</u> (minimum of one is required; check all that apply) <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Surface Water (A1)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Water-Stained Leaves (B9)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> High Water Table (A2)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Aquatic Fauna (B13)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Saturation (A3)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Marl Deposits (B15)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Water Marks (B1)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Sediment Deposits (B2)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Drift Deposits (B3)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Presence of Reduced Iron (C4)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Algal Mat or Crust (B4)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Iron Deposits (B5)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Thin Muck Surface (C7)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Other (Explain in Remarks)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</u> </td> <td style="width: 50%; padding: 2px;"></td> </tr> </table>		<u><input type="checkbox"/> Surface Water (A1)</u>	<u><input type="checkbox"/> Water-Stained Leaves (B9)</u>	<u><input type="checkbox"/> High Water Table (A2)</u>	<u><input type="checkbox"/> Aquatic Fauna (B13)</u>	<u><input type="checkbox"/> Saturation (A3)</u>	<u><input type="checkbox"/> Marl Deposits (B15)</u>	<u><input type="checkbox"/> Water Marks (B1)</u>	<u><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</u>	<u><input type="checkbox"/> Sediment Deposits (B2)</u>	<u><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</u>	<u><input type="checkbox"/> Drift Deposits (B3)</u>	<u><input type="checkbox"/> Presence of Reduced Iron (C4)</u>	<u><input type="checkbox"/> Algal Mat or Crust (B4)</u>	<u><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</u>	<u><input type="checkbox"/> Iron Deposits (B5)</u>	<u><input type="checkbox"/> Thin Muck Surface (C7)</u>	<u><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</u>	<u><input type="checkbox"/> Other (Explain in Remarks)</u>	<u><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</u>		<u>Secondary Indicators</u> (minimum of two required) <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Surface Soil Cracks (B6)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Drainage Patterns (B10)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Moss Trim Lines (B16)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Dry-Season Water Table (C2)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Crayfish Burrows (C8)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Stunted or Stressed Plants (D1)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Geomorphic Position (D2)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Shallow Aquitard (D3)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Microtopographic Relief (D4)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> FAC-Neutral Test (D5)</u> </td> <td style="width: 50%; padding: 2px;"></td> </tr> </table>	<u><input type="checkbox"/> Surface Soil Cracks (B6)</u>	<u><input type="checkbox"/> Drainage Patterns (B10)</u>	<u><input type="checkbox"/> Moss Trim Lines (B16)</u>	<u><input type="checkbox"/> Dry-Season Water Table (C2)</u>	<u><input type="checkbox"/> Crayfish Burrows (C8)</u>	<u><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</u>	<u><input type="checkbox"/> Stunted or Stressed Plants (D1)</u>	<u><input type="checkbox"/> Geomorphic Position (D2)</u>	<u><input type="checkbox"/> Shallow Aquitard (D3)</u>	<u><input type="checkbox"/> Microtopographic Relief (D4)</u>	<u><input type="checkbox"/> FAC-Neutral Test (D5)</u>	
<u><input type="checkbox"/> Surface Water (A1)</u>	<u><input type="checkbox"/> Water-Stained Leaves (B9)</u>																																	
<u><input type="checkbox"/> High Water Table (A2)</u>	<u><input type="checkbox"/> Aquatic Fauna (B13)</u>																																	
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<u><input type="checkbox"/> FAC-Neutral Test (D5)</u>																																		

Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>6"</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): to surface (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W3

<u>Tree Stratum</u> (Plot size: <u>30'</u>)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
=Total Cover			
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>)			
1. <u><i>Rubus allegheniensis</i></u>	<u>7</u>	<u>Yes</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
=Total Cover			
<u>Herb Stratum</u> (Plot size: <u>5'</u>)			
1. <u><i>Typha angustifolia</i></u>	<u>80</u>	<u>Yes</u>	<u>OBL</u>
2. <u><i>Lythrum salicaria</i></u>	<u>5</u>	<u>No</u>	<u>OBL</u>
3. <u><i>Solidago rugosa</i></u>	<u>5</u>	<u>No</u>	<u>FAC</u>
4. <u><i>Sphagnum</i></u>	<u>80</u>	<u>Yes</u>	<u>OBL</u>
5. <u><i>Polygonum sagittatum</i></u>	<u>80</u>	<u>Yes</u>	<u>OBL</u>
6. <u><i>Barbarea vulgaris</i></u>	<u>2</u>	<u>No</u>	<u>FAC</u>
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
=Total Cover			
<u>Woody Vine Stratum</u> (Plot size: <u> </u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
=Total Cover			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

	<u>Total % Cover of:</u>	<u>Multiply by:</u>
OBL species	<u>245</u>	<u>x 1 =</u> <u>245</u>
FACW species	<u>0</u>	<u>x 2 =</u> <u>0</u>
FAC species	<u>7</u>	<u>x 3 =</u> <u>21</u>
FACU species	<u>7</u>	<u>x 4 =</u> <u>28</u>
UPL species	<u>0</u>	<u>x 5 =</u> <u>0</u>
Column Totals:	<u>259</u>	(A) <u>294</u> (B)
Prevalence Index = B/A =		<u>1.14</u>

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is $\leq 3.0^1$
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
 - Histic Epipedon (A2)
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)
 - X Thick Dark Surface (A12)
 - Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7)

- X Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
 - Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
 - High Chroma Sands (S11) (**LRR K, L**)
 - Loamy Mucky Mineral (F1) (**LRR K, L**)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
 - Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
 - Coast Prairie Redox (A16) (**LRR K, L, R**)
 - 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
 - Polyvalue Below Surface (S8) (**LRR K, L**)
 - Thin Dark Surface (S9) (**LRR K, L**)
 - Iron-Manganese Masses (F12) (**LRR K, L, R**)
 - Piedmont Floodplain Soils (F19) (**MLRA 149B**)
 - Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
 - Red Parent Material (F21)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lexington High School City/County: Lexington, MA Sampling Date: 12/14/2023
 Applicant/Owner: Town of Lexington State: MA Sampling Point: W4
 Investigator(s): Julia Stearns Section, Township, Range: Lexington
 Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): _____
 Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 42.443865 Long: -71.230587 Datum: WGS84
 Soil Map Unit Name: Udorthents-Urban land complex NWI classification: PFO
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.) _____

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>W1</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators</u> (minimum of one is required; check all that apply) <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Surface Water (A1)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Water-Stained Leaves (B9)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> High Water Table (A2)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Aquatic Fauna (B13)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Saturation (A3)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Marl Deposits (B15)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Water Marks (B1)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</u> </td> </tr> <tr> <td style="width: 50%; 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Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>4"</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>to surface</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W4

<u>Tree Stratum</u> (Plot size: <u>30'</u>)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																																
1. <u>Acer rubrum</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>																																	
2. _____	_____	_____	_____																																	
3. _____	_____	_____	_____																																	
4. _____	_____	_____	_____																																	
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6. _____	_____	_____	_____																																	
7. _____	_____	_____	_____																																	
<u>30</u> =Total Cover																																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Prevalence Index worksheet: <table border="0"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td><u>0</u></td> <td>x 1 =</td> <td><u>0</u></td> </tr> <tr> <td>FACW species</td> <td><u>80</u></td> <td>x 2 =</td> <td><u>160</u></td> </tr> <tr> <td>FAC species</td> <td><u>72</u></td> <td>x 3 =</td> <td><u>216</u></td> </tr> <tr> <td>FACU species</td> <td><u>0</u></td> <td>x 4 =</td> <td><u>0</u></td> </tr> <tr> <td>UPL species</td> <td><u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>152</u></td> <td>(A)</td> <td><u>376</u></td> <td>(B)</td> </tr> <tr> <td colspan="4">Prevalence Index = B/A = <u>2.47</u></td> </tr> </tbody> </table>		Total % Cover of:	Multiply by:	OBL species	<u>0</u>	x 1 =	<u>0</u>	FACW species	<u>80</u>	x 2 =	<u>160</u>	FAC species	<u>72</u>	x 3 =	<u>216</u>	FACU species	<u>0</u>	x 4 =	<u>0</u>	UPL species	<u>0</u>	x 5 =	<u>0</u>	Column Totals:	<u>152</u>	(A)	<u>376</u>	(B)	Prevalence Index = B/A = <u>2.47</u>			
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7. _____	_____	_____	_____																																	
<u>7</u> =Total Cover																																				
<u>Herb Stratum</u> (Plot size: <u>5'</u>)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> X 2 - Dominance Test is >50% <input checked="" type="checkbox"/> X 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																																
1. <u>Impatiens capensis</u>	<u>80</u>	<u>Yes</u>	<u>FACW</u>																																	
2. <u>Solidago rugosa</u>	<u>20</u>	<u>No</u>	<u>FAC</u>																																	
3. <u>Aegopodium podagraria</u>	<u>15</u>	<u>No</u>	<u>FAC</u>																																	
4. _____	_____	_____	_____																																	
5. _____	_____	_____	_____																																	
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10. _____	_____	_____	_____																																	
11. _____	_____	_____	_____																																	
12. _____	_____	_____	_____																																	
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Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histsol (A1)
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 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
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 - Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lexington High School City/County: Lexington, MA Sampling Date: 12/14/2023
 Applicant/Owner: Town of Lexington State: MA Sampling Point: W7
 Investigator(s): Julia Stearns Section, Township, Range: Lexington
 Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): _____
 Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 42.443974 Long: -71.235060 Datum: WGS84
 Soil Map Unit Name: Udorthents-Urban land complex NWI classification: PFO
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.) _____

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>W1</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators</u> (minimum of one is required; check all that apply) <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Surface Water (A1)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Water-Stained Leaves (B9)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> High Water Table (A2)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Aquatic Fauna (B13)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Saturation (A3)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Marl Deposits (B15)</u> </td> </tr> <tr> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Water Marks (B1)</u> </td> <td style="width: 50%; padding: 2px;"> <u><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</u> </td> </tr> <tr> <td style="width: 50%; 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<u><input type="checkbox"/> FAC-Neutral Test (D5)</u>																																		

Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>10"</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): to surface (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W7

<u>Tree Stratum</u> (Plot size: <u>30'</u>)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Dominance Test worksheet:			
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)			
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)			
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)			
4. _____	_____	_____	_____				
5. _____	_____	_____	_____				
6. _____	_____	_____	_____				
7. _____	_____	_____	_____				
				=Total Cover			
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>)					Prevalence Index worksheet:		
1. _____	_____	_____	_____	Total % Cover of: <u>185</u> Multiply by: <u>x 1 = 185</u>			
2. _____	_____	_____	_____	FACW species <u>0</u> <u>x 2 = 0</u>			
3. _____	_____	_____	_____	FAC species <u>0</u> <u>x 3 = 0</u>			
4. _____	_____	_____	_____	FACU species <u>0</u> <u>x 4 = 0</u>			
5. _____	_____	_____	_____	UPL species <u>0</u> <u>x 5 = 0</u>			
6. _____	_____	_____	_____	Column Totals: <u>185</u> (A) <u>185</u> (B)			
7. _____	_____	_____	_____	Prevalence Index = B/A = <u>1.00</u>			
<u>Herb Stratum</u> (Plot size: <u>5'</u>)					Hydrophytic Vegetation Indicators:		
1. <i>Scirpus atrovirens</i> <u>80</u>	<u>Yes</u>	<u>OBL</u>	1 - Rapid Test for Hydrophytic Vegetation				
2. <i>Polygonum sagittatum</i> <u>90</u>	<u>Yes</u>	<u>OBL</u>	X 2 - Dominance Test is >50%				
3. <i>Sympyotrichum puniceum</i> <u>15</u>	<u>No</u>	<u>OBL</u>	X 3 - Prevalence Index is $\leq 3.0^1$				
4. _____	_____	_____	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)				
5. _____	_____	_____	_____ Problematic Hydrophytic Vegetation ¹ (Explain)				
6. _____	_____	_____	_____				
7. _____	_____	_____	_____				
8. _____	_____	_____	_____				
9. _____	_____	_____	_____				
10. _____	_____	_____	_____				
11. _____	_____	_____	_____				
12. _____	_____	_____	_____				
				=Total Cover <u>185</u>			
<u>Woody Vine Stratum</u> (Plot size: <u> </u>)					Definitions of Vegetation Strata:		
1. _____	_____	_____	_____	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
2. _____	_____	_____	_____	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.			
3. _____	_____	_____	_____	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
4. _____	_____	_____	_____	Woody vines – All woody vines greater than 3.28 ft in height.			
				Hydrophytic Vegetation Present?		Yes <u> X </u> No <u> </u>	

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
 - Histic Epipedon (A2)
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)
 - Thick Dark Surface (A12)
 - Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - X Dark Surface (S7)

- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
 - Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
 - High Chroma Sands (S11) (**LRR K, L**)
 - Loamy Mucky Mineral (F1) (**LRR K, L**)
 - Loamy Gleyed Matrix (F2)
 - X Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
 - Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
 - Coast Prairie Redox (A16) (**LRR K, L, R**)
 - 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
 - Polyvalue Below Surface (S8) (**LRR K, L**)
 - Thin Dark Surface (S9) (**LRR K, L**)
 - Iron-Manganese Masses (F12) (**LRR K, L, R**)
 - Piedmont Floodplain Soils (F19) (**MLRA 149B**)
 - Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
 - Red Parent Material (F21)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes No

Remarks:

Appendix C

Representative Site Photographs

Client Name: Symmes Maini & McKee Associates, Inc.		Site Location: Lexington, MA	Project No. 60721944
Photo No. 1	Date: December 13, 2023	Photo No. 2	Date: December 13, 2023
Description: Wetland W1, located northeast of the Lexington Debate Institute building and south of the baseball field, view from north to south.		Description: Wetland W2, located southeast of Wetland W1 and southwest of Park Drive, view south to north, along the western wetland/upland boundary.	
			
Photo No. 3	Date: December 13, 2023	Photo No. 4	Date: December 13, 2023
Description: Wetland W3, located northeast of the Lexington Debate Institute building and southwest of Wetland W1, view north to south.		Description: Wetland W4, located northeast of the faculty parking lot, view north to south, from the campus road.	
			

Client Name: Symmes Maini & McKee Associates, Inc.		Site Location: Lexington, MA		Project No. 60721944
Photo No. 5		Date: December 14, 2023	Photo No. 6	Date: December 13, 2023
Description: Wetland W5, located west of Worthen Road, view west to east, south of the Lincoln Path.			Description: Adjacent wetland located west of Worthen Road and north of Wetland W5, view west to east.	
				

Photo No. 7	Date: December 14, 2023	Photo No. 8	Date: December 13, 2023
Description: Wetland W6, located southwest of Wetland W5, view from south to north.		Description: Wetland W7, located west Crumb Football Field and east of the soccer field, view south to north.	
			

Client Name: Symmes Maini & McKee Associates, Inc.	Site Location: Lexington, MA	Project No. 60721944
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Photo No. 9	Date: December 13, 2023	Photo No. 10	Date: December 14, 2023
Description: Wetland W9, located at the southwest corner of the parcel, west of the campus entrance from Waltham Street, view east to west.		Description: Typical soil profile observed in Wetlands W1, W2, W3 and W4: Black organic muck overlaying peat.	
			

Photo No. 11	Date: December 13, 2023	Photo No. 12	Date: December 14, 2023
Description: Wetland W2 soil profile: dark organic muck overlaying peat.		Description: Wetland W4 soil profile: dark organic muck overlaying peat.	
			

Client Name: Symmes Maini & McKee Associates, Inc.	Site Location: Lexington, MA	Project No. 60721944
Photo No. 13	Date: July 8, 2024	Photo No. 14
Description: Central Basin area, with science building to the right.		Description: Central basin edge
		

Photo No. 15	Date: July 8, 2024	Photo No. 16	Date: July 8, 2024
Description: Central Basin, looking interior at flooded pool.		Description: Central Basin, buried outlet	
			

Appendix D

USDA Natural Resources Conservation Service (NRCS) – Soil Survey Report



United States
Department of
Agriculture

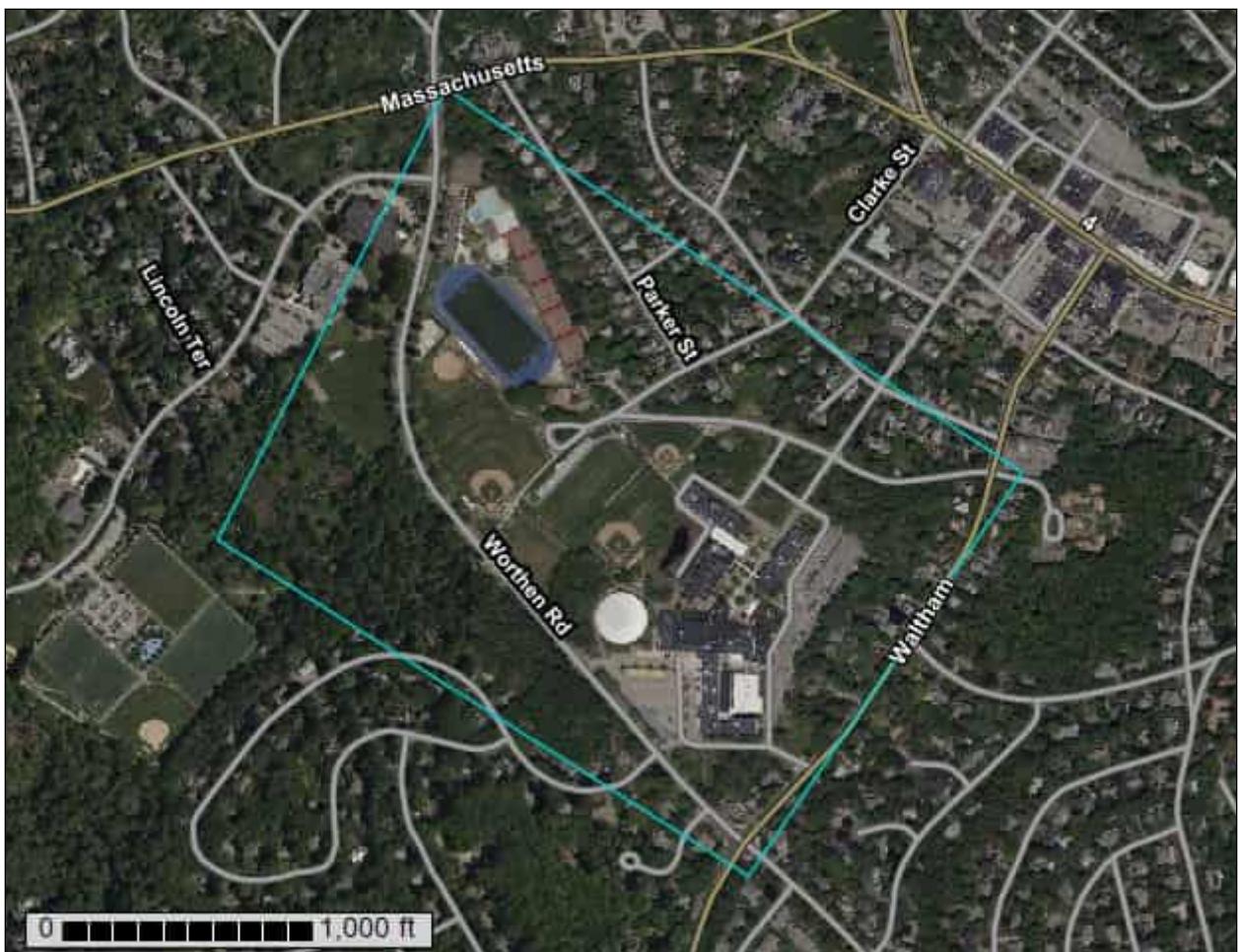


Natural
Resources
Conservation
Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Middlesex County, Massachusetts

Lexington HS



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units).

Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

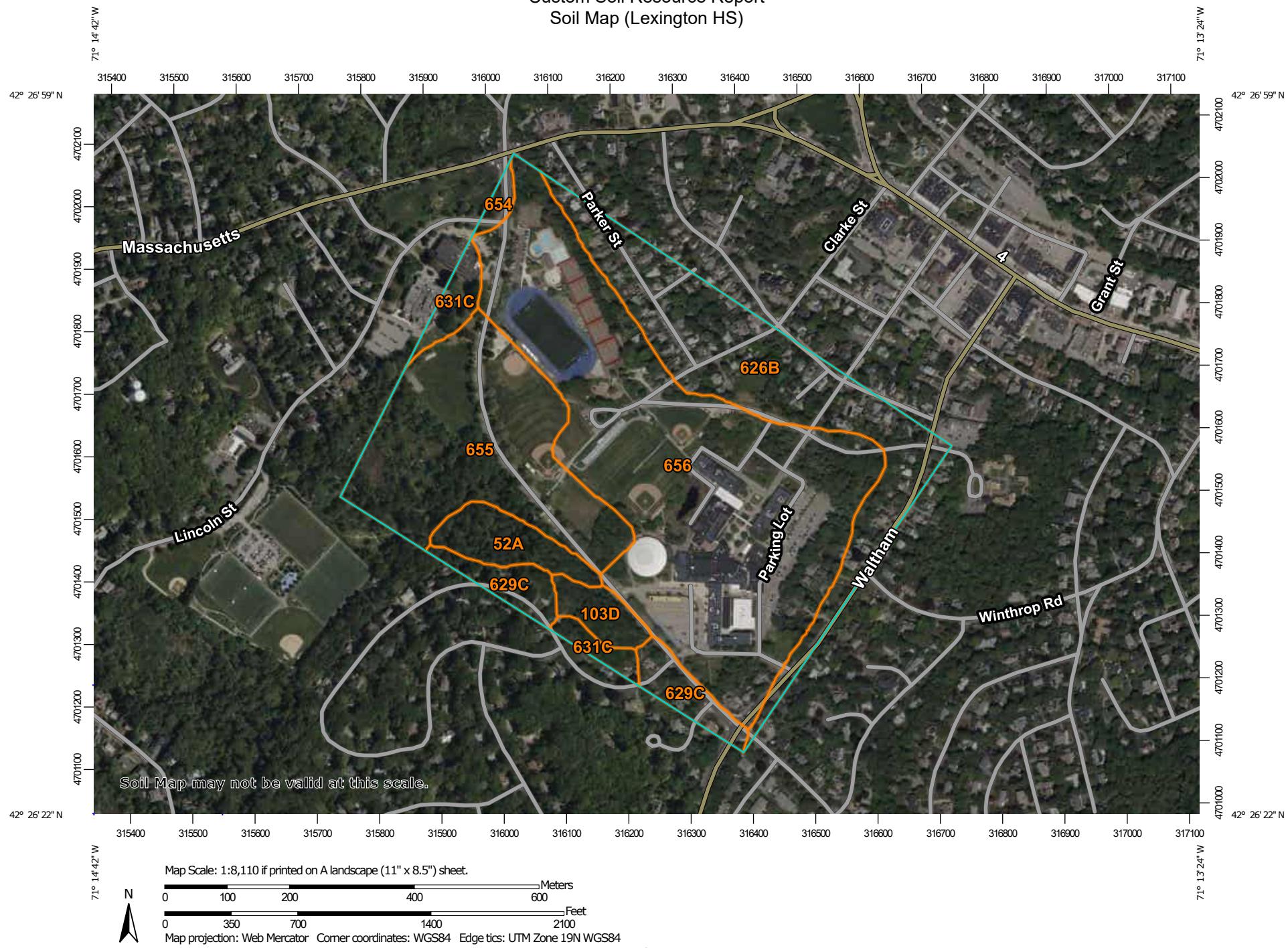
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

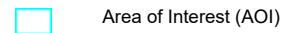
The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (Lexington HS)



MAP LEGEND

Area of Interest (AOI)



Area of Interest (AOI)

Soils



Soil Map Unit Polygons



Soil Map Unit Lines



Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot

Spoil Area



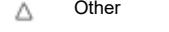
Spoil Area

Stony Spot



Stony Spot

Very Stony Spot



Very Stony Spot

Wet Spot



Wet Spot

Other



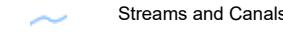
Other

Special Line Features



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



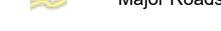
Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Middlesex County, Massachusetts

Survey Area Data: Version 23, Sep 12, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 22, 2022—Jun 5, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (Lexington HS)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
52A	Freetown muck, 0 to 1 percent slopes	4.2	3.5%
103D	Charlton-Hollis-Rock outcrop complex, 15 to 25 percent slopes	2.5	2.1%
626B	Merrimac-Urban land complex, 0 to 8 percent slopes	23.6	19.6%
629C	Canton-Charlton-Urban land complex, 3 to 15 percent slopes	5.5	4.6%
631C	Charlton-Urban land-Hollis complex, 3 to 15 percent slopes, rocky	3.3	2.8%
654	Udorthents, loamy	0.8	0.7%
655	Udorthents, wet substratum	24.0	19.9%
656	Udorthents-Urban land complex	56.3	46.8%
Totals for Area of Interest		120.4	100.0%

Map Unit Descriptions (Lexington HS)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas

are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Middlesex County, Massachusetts

52A—Freetown muck, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2t2q9

Elevation: 0 to 1,110 feet

Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Freetown and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Freetown

Setting

Landform: Depressions, depressions, swamps, kettles, marshes, bogs

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread, dip

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Highly decomposed organic material

Typical profile

Oe - 0 to 2 inches: mucky peat

Oa - 2 to 79 inches: muck

Properties and qualities

Slope: 0 to 1 percent

Surface area covered with cobbles, stones or boulders: 0.0 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
(0.14 to 14.17 in/hr)

Depth to water table: About 0 to 6 inches

Frequency of flooding: Rare

Frequency of ponding: Frequent

Available water supply, 0 to 60 inches: Very high (about 19.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: B/D

Ecological site: F144AY043MA - Acidic Organic Wetlands

Hydric soil rating: Yes

Minor Components

Whitman

Percent of map unit: 5 percent

Landform: Drainageways, depressions

Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Scarboro

Percent of map unit: 5 percent
Landform: Drainageways, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Swansea

Percent of map unit: 5 percent
Landform: Bogs, swamps, marshes, depressions, depressions, kettles
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

103D—Charlton-Hollis-Rock outcrop complex, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 98yf
Elevation: 0 to 1,560 feet
Mean annual precipitation: 45 to 54 inches
Mean annual air temperature: 43 to 54 degrees F
Frost-free period: 110 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Charlton and similar soils: 50 percent
Hollis and similar soils: 25 percent
Rock outcrop: 15 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Charlton

Setting

Landform: Drumlins, ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Convex
Across-slope shape: Convex

Parent material: Friable loamy eolian deposits over friable loamy basal till derived from granite and gneiss

Typical profile

H1 - 0 to 5 inches: fine sandy loam

H2 - 5 to 22 inches: sandy loam

H3 - 22 to 65 inches: gravelly sandy loam

Properties and qualities

Slope: 15 to 25 percent

Surface area covered with cobbles, stones or boulders: 9.0 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: A

Ecological site: F144AY034CT - Well Drained Till Uplands

Hydric soil rating: No

Description of Hollis

Setting

Landform: Ridges, hills

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Friable, shallow loamy basal till over granite and gneiss

Typical profile

H1 - 0 to 2 inches: fine sandy loam

H2 - 2 to 14 inches: fine sandy loam

H3 - 14 to 18 inches: unweathered bedrock

Properties and qualities

Slope: 15 to 25 percent

Surface area covered with cobbles, stones or boulders: 9.0 percent

Depth to restrictive feature: 8 to 20 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: D

Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Ledges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Head slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Granite and gneiss

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 0 inches to lithic bedrock

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s

Minor Components

Canton

Percent of map unit: 2 percent
Landform: Hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Head slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Narragansett

Percent of map unit: 2 percent
Landform: Hills, ridges
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Woodbridge

Percent of map unit: 2 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit, shoulder, toeslope
Landform position (three-dimensional): Head slope, nose slope, base slope
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Unnamed

Percent of map unit: 2 percent

Montauk

Percent of map unit: 2 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Head slope, nose slope

Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

626B—Merrimac-Urban land complex, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tyr9
Elevation: 0 to 820 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Merrimac and similar soils: 45 percent
Urban land: 40 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Outwash plains, outwash terraces, moraines, eskers, kames
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Crest, side slope, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

Typical profile

Ap - 0 to 10 inches: fine sandy loam
Bw1 - 10 to 22 inches: fine sandy loam
Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand
2C - 26 to 65 inches: stratified gravel to very gravelly sand

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline (0.0 to 1.4 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Description of Urban Land

Typical profile

M - 0 to 10 inches: cemented material

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: 0 inches to manufactured layer
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Windsor

Percent of map unit: 5 percent
Landform: Outwash terraces, dunes, outwash plains, deltas
Landform position (three-dimensional): Tread, riser
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Sudbury

Percent of map unit: 5 percent
Landform: Deltas, terraces, outwash plains
Landform position (two-dimensional): Foothslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Hinckley

Percent of map unit: 5 percent
Landform: Deltas, kames, eskers, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Head slope, nose slope, crest, side slope, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear

Hydric soil rating: No

629C—Canton-Charlton-Urban land complex, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9959

Elevation: 0 to 1,000 feet

Mean annual precipitation: 32 to 54 inches

Mean annual air temperature: 43 to 54 degrees F

Frost-free period: 110 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Canton and similar soils: 40 percent

Charlton and similar soils: 30 percent

Urban land: 25 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canton

Setting

Landform: Hills

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Side slope, base slope

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Friable loamy eolian deposits over friable sandy basal till derived from granite and gneiss

Typical profile

H1 - 0 to 8 inches: fine sandy loam

H2 - 8 to 21 inches: fine sandy loam

H3 - 21 to 65 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 15 percent

Depth to restrictive feature: 18 to 30 inches to strongly contrasting textural stratification

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: A
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Charlton

Setting

Landform: Ground moraines, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Friable loamy eolian deposits over friable loamy basal till derived from granite and gneiss

Typical profile

H1 - 0 to 5 inches: fine sandy loam
H2 - 5 to 22 inches: sandy loam
H3 - 22 to 65 inches: gravelly sandy loam

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Urban Land

Setting

Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Excavated and filled land

Minor Components

Montauk

Percent of map unit: 2 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Head slope, nose slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Scituate

Percent of map unit: 2 percent

Landform: Hillslopes, depressions

Landform position (two-dimensional): Summit, toeslope

Landform position (three-dimensional): Head slope, base slope

Down-slope shape: Linear

Across-slope shape: Concave

Hydric soil rating: No

Udorthents, loamy

Percent of map unit: 1 percent

Hydric soil rating: No

631C—Charlton-Urban land-Hollis complex, 3 to 15 percent slopes, rocky

Map Unit Setting

National map unit symbol: vr1g

Elevation: 0 to 1,000 feet

Mean annual precipitation: 32 to 54 inches

Mean annual air temperature: 43 to 54 degrees F

Frost-free period: 110 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Charlton and similar soils: 45 percent

Urban land: 35 percent

Hollis and similar soils: 10 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Charlton

Setting

Landform: Ground moraines, drumlins

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Friable loamy eolian deposits over friable loamy basal till derived from granite and gneiss

Typical profile

H1 - 0 to 5 inches: fine sandy loam

H2 - 5 to 22 inches: sandy loam

H3 - 22 to 65 inches: gravelly sandy loam

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Urban Land

Setting

Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Excavated and filled land

Description of Hollis

Setting

Landform: Hillslopes, ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Friable, shallow loamy basal till over granite and gneiss

Typical profile

H1 - 0 to 2 inches: fine sandy loam
H2 - 2 to 14 inches: fine sandy loam
H3 - 14 to 18 inches: unweathered bedrock

Properties and qualities

Slope: 3 to 15 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 8 to 20 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Minor Components

Canton

Percent of map unit: 4 percent
Landform: Hills
Landform position (two-dimensional): Backslope, toeslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Rock outcrop

Percent of map unit: 2 percent
Landform: Ledges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Head slope
Down-slope shape: Concave
Across-slope shape: Concave

Udorthents, loamy

Percent of map unit: 2 percent
Hydric soil rating: No

Scituate

Percent of map unit: 1 percent
Landform: Hillslopes, depressions
Landform position (two-dimensional): Summit, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Montauk

Percent of map unit: 1 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Head slope, nose slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

654—Udorthents, loamy

Map Unit Setting

National map unit symbol: vr1l

Elevation: 0 to 3,000 feet
Mean annual precipitation: 32 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 110 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, loamy, and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Loamy

Setting

Parent material: Loamy alluvium and/or sandy glaciofluvial deposits and/or loamy glaciolacustrine deposits and/or loamy marine deposits and/or loamy basal till and/or loamy lodgment till

Properties and qualities

Depth to restrictive feature: More than 80 inches
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Minor Components

Udorthents, sandy

Percent of map unit: 10 percent
Hydric soil rating: No

Udorthents, wet substratum

Percent of map unit: 5 percent
Hydric soil rating: Yes

Urban land

Percent of map unit: 5 percent
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear

655—Udorthents, wet substratum

Map Unit Setting

National map unit symbol: vr1n
Elevation: 0 to 3,000 feet
Mean annual precipitation: 32 to 54 inches
Mean annual air temperature: 43 to 54 degrees F
Frost-free period: 110 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, wet substratum, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Wet Substratum

Setting

Parent material: Loamy alluvium and/or sandy glaciofluvial deposits and/or loamy glaciolacustrine deposits and/or loamy marine deposits and/or loamy basal till and/or loamy lodgment till

Properties and qualities

Slope: 0 to 8 percent

Depth to restrictive feature: More than 80 inches

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Minor Components

Urban land

Percent of map unit: 8 percent

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Linear

Freetown

Percent of map unit: 4 percent

Landform: Depressions, bogs

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: Yes

Swansea

Percent of map unit: 3 percent

Landform: Depressions, bogs

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: Yes

656—Udorthents-Urban land complex

Map Unit Setting

National map unit symbol: 995k

Elevation: 0 to 3,000 feet
Mean annual precipitation: 32 to 54 inches
Mean annual air temperature: 43 to 54 degrees F
Frost-free period: 110 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents and similar soils: 45 percent
Urban land: 35 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents

Setting

Parent material: Loamy alluvium and/or sandy glaciofluvial deposits and/or loamy glaciolacustrine deposits and/or loamy marine deposits and/or loamy basal till and/or loamy lodgment till

Properties and qualities

Slope: 0 to 15 percent

Depth to restrictive feature: More than 80 inches

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Description of Urban Land

Setting

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Excavated and filled land

Minor Components

Canton

Percent of map unit: 10 percent

Landform: Hills

Landform position (two-dimensional): Backslope, toeslope

Landform position (three-dimensional): Side slope, base slope

Down-slope shape: Linear

Across-slope shape: Convex

Hydric soil rating: No

Paxton

Percent of map unit: 5 percent

Landform: Hillslopes

Landform position (two-dimensional): Summit, backslope

Landform position (three-dimensional): Head slope, side slope

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Merrimac

Percent of map unit: 5 percent

Custom Soil Resource Report

Landform: Terraces, plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Tread, rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

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- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

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United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Appendix E

SMMA Drainage Memo

Memorandum

To: AECOM
From: L. Finney
Project: Lexington High School

Date: 7/29/2024
Project No.: 23090

Throughout the spring and early summer of 2024, a series of site visits were conducted by SMMA and BSC Group to investigate and document the drainage features around the site of the Lexington High School property. These visits aimed to uncover and understand existing drainage infrastructure. The key findings and actions taken each visit are detailed in the following paragraphs.

April 29, 2024: Mark Levine and Logan Finney of SMMA visited the site to explore existing drainage features around the Central Basin, Wetland 7, and Wetland 8. Karen Mullins, the Conservation Director for the Town of Lexington, was present during the visit. During this visit, Karen pointed out a previously undocumented 12" RCP pipe near the northwestern corner of the Central Basin. A 4" corrugated pipe was also found in the southwestern corner of the Central Basin. SMMA captured photos and took measurements of these pipes. SMMA then found a catch basin grate in the south corner of the practice field, near Wetland 8. This grate was covered in vegetation and had Marafi fabric underlying the bottom. SMMA was unable to open this grate at the time.

May 24, 2024: Logan Finney of SMMA met with a representative of BSC Group to further examine the two pipes at the Central Basin. During this visit, BSC Group presented Logan with an Order of Conditions (OOC) from a previously completed project (DEP File Number 201-439, BL-397) by Carol R. Johnson Associates, Inc. This project included a Request for Determination of Applicability (RDA) dated January 14, 1998, that referenced two plans, X2 and X3, which were missing from the document. These plans possibly indicate that the Central Basin was purely a stormwater feature and not a resource area. After this visit, Logan Finney went to the Town of Lexington Conservation Commission office to look for additional plans associated with DEP File # 201-439, BL-397. These plans were unable to be located.

June 12, 2024: Logan Finney of SMMA met with representatives of BSC Group and Roto-Rooter to camera the drains around the Central Basin. Roto-Rooter scoped four pipes on this day: the 4" corrugated pipe in the southwestern corner of the Central Basin, the 12" RCP pipe in the northwestern corner of the basin, a 12" HDPE pipe that runs along the baseball field just northwest of the basin, and the 24" HDPE pipe under the driveway and parking area just north of the basin. The 4" corrugated pipe was found to be crushed approximately 12' from the end of the pipe. The camera hit refusal within the 12" RCP pipe approximately 40' from the end of the pipe, but the reason for the refusal could not be determined. The camera hit refusal within the 12" HDPE pipe approximately 12' from the end of the pipe due to an animal carcass blocking the pipe. The camera was only able to be pushed approximately 10' from the end of the 24" pipe, likely due to the tight access angle.

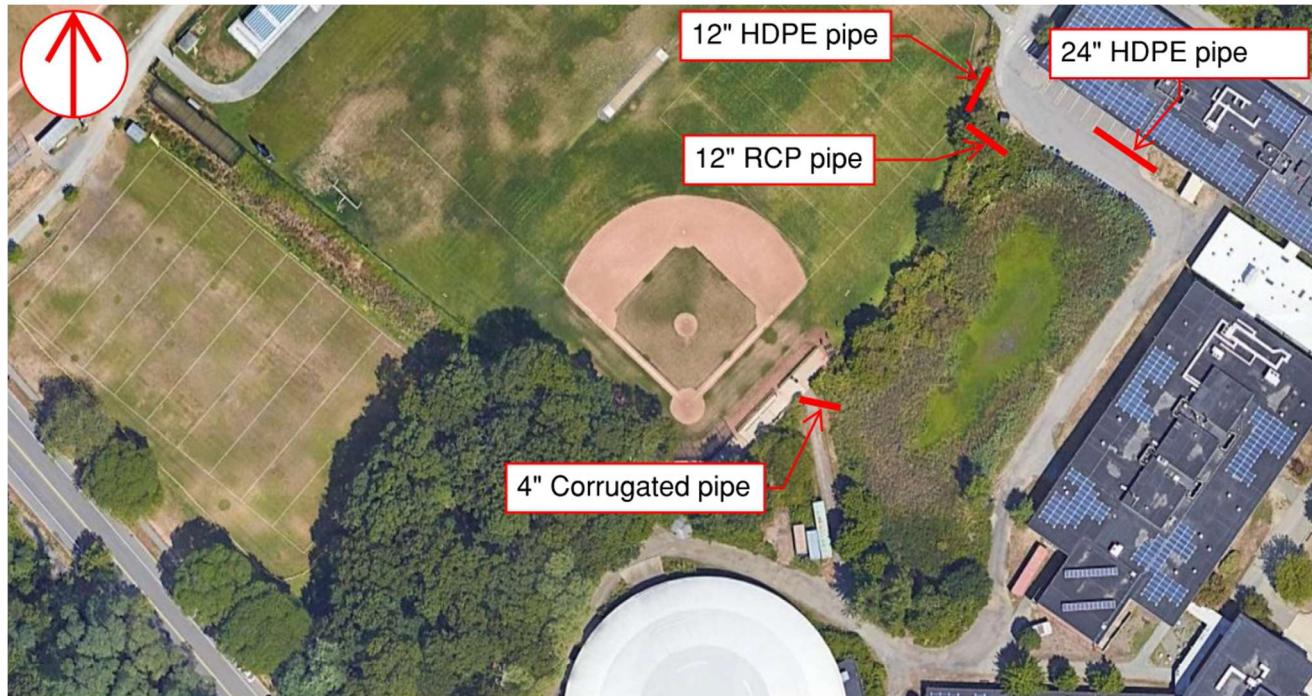


Figure 1 - Pipe explorations performed on June 12, 2024

June 19, 2024: Logan Finney of SMMA met with a representative of BSC Group to further explore the pipes around the Central Basin. BSC Group utilized a remote-controlled car with a camera and flashlight to revisit the pipes that were scoped on June 12th. It was found that the 12" RCP pipe in the northwestern corner of the Central Basin was capped approximately 40' from the end of the pipe, which aligns with where refusal was met with Roto-Rooter. Photos and videos were captured during this exploration.

June 27, 2024: Logan Finney of SMMA met with a representative of BSC Group to examine the drainage around the practice field, Wetland 7, and Wetland 8. An attempt was made to open the catch basin near wetland 8, but the grate was clogged with sediment and foliage, and was too difficult to open. It was determined that additional equipment would be needed to lift the grate.

June 28, 2024: Logan Finney of SMMA met with representatives of BSC Group and Roto-Rooter to scope the drains around the practice field, Wetland 7, and Wetland 8. Roto-Rooter scoped two drains on this day: a 4" corrugated pipe from the area drain at the southeastern end of Wetland 7 and a 12" HDPE pipe that runs behind the baseball dugout along the fence line. It was determined that the 4" corrugated pipe runs from the area drain at Wetland 7 into the 12" HDPE pipe, which then discharges into the catch basin near the fence on the southwestern end zone of the football field. The catch basin grate found on April 29th was also opened on this day. The structure was found to be filled with gravel and contained the end cap of the 4" corrugated pipe that runs along the southeast side of the practice field.

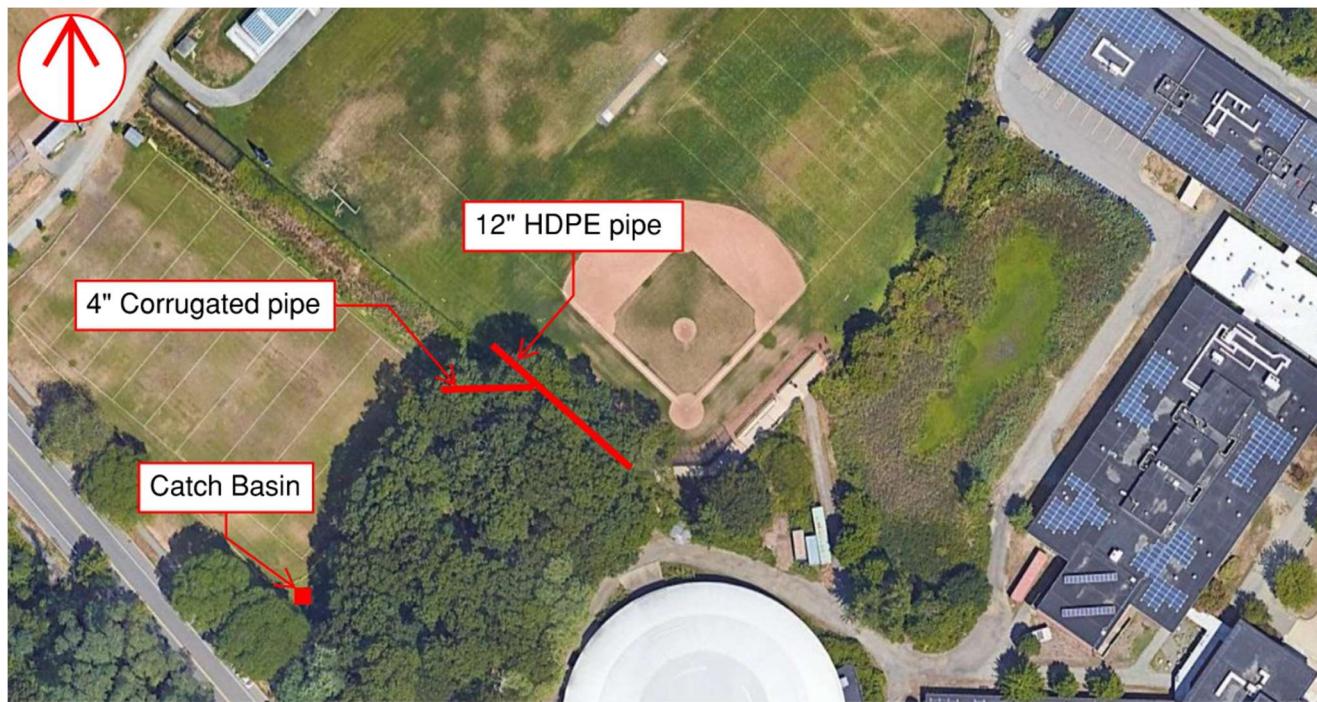


Figure 2 - Pipe explorations performed on June 28, 2024

PHOTOGRAPHS



Figure 3 - Catch Basin near Wetland 8

To: AECOM
Date: **Error! Reference source not found.**



Figure 4 - 4" Corrugated pipe in southwest corner of Central Basin

To: AECOM
Date: Error! Reference source not found.



Figure 5 - 4" Corrugated pipe in southwest corner of Central Basin crushed approximately 12' from exposed end

To: AECOM
Date: Error! Reference source not found.

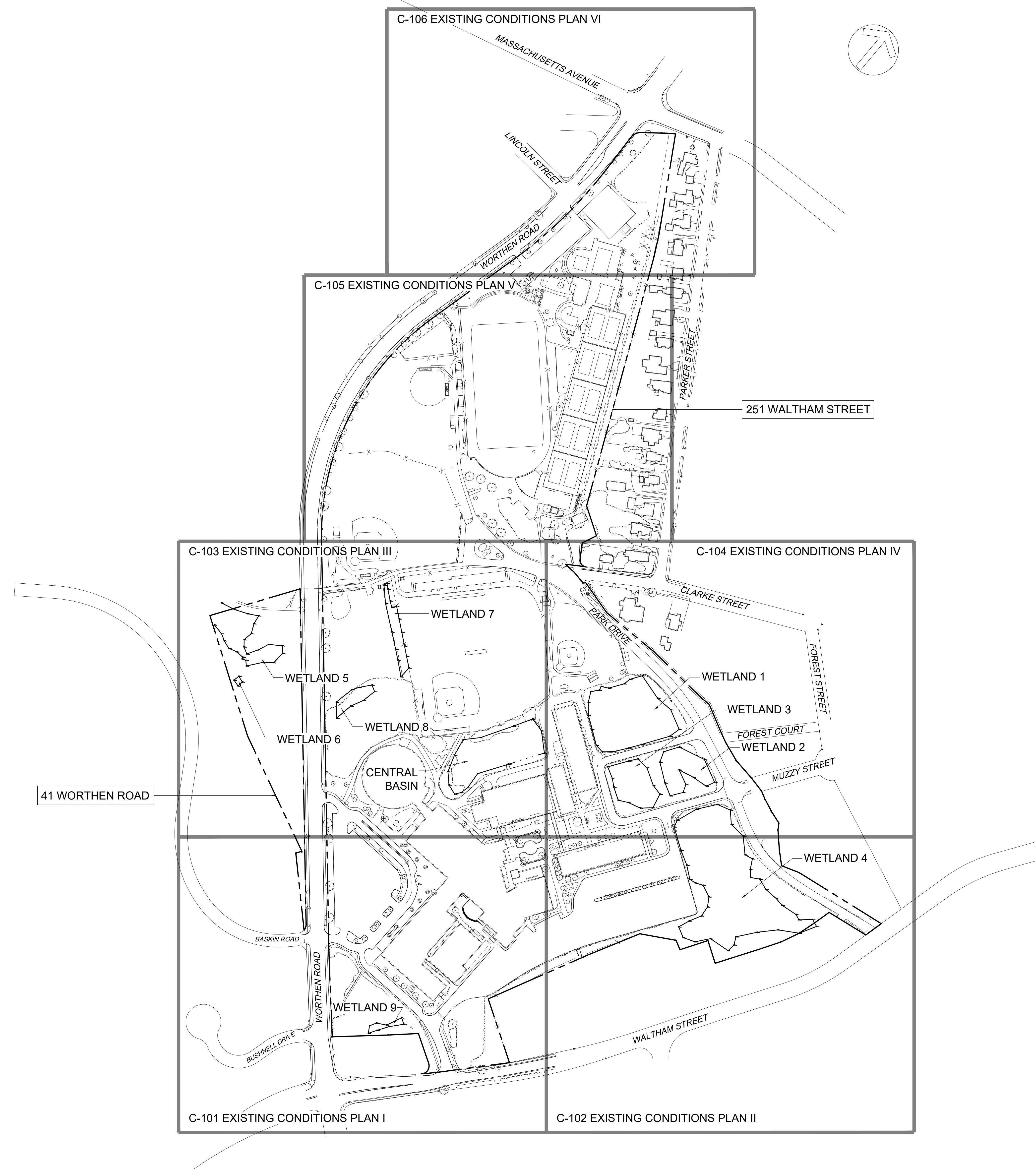


Figure 6 - 12" RCP pipe in northwest corner of Central Basin

To: AECOM
Date: **Error! Reference source not found.**



Figure 7 - 12" RCP pipe in northwest corner of Central Basin capped approximately 40' from exposed end



LEXINGTON HIGH SCHOOL

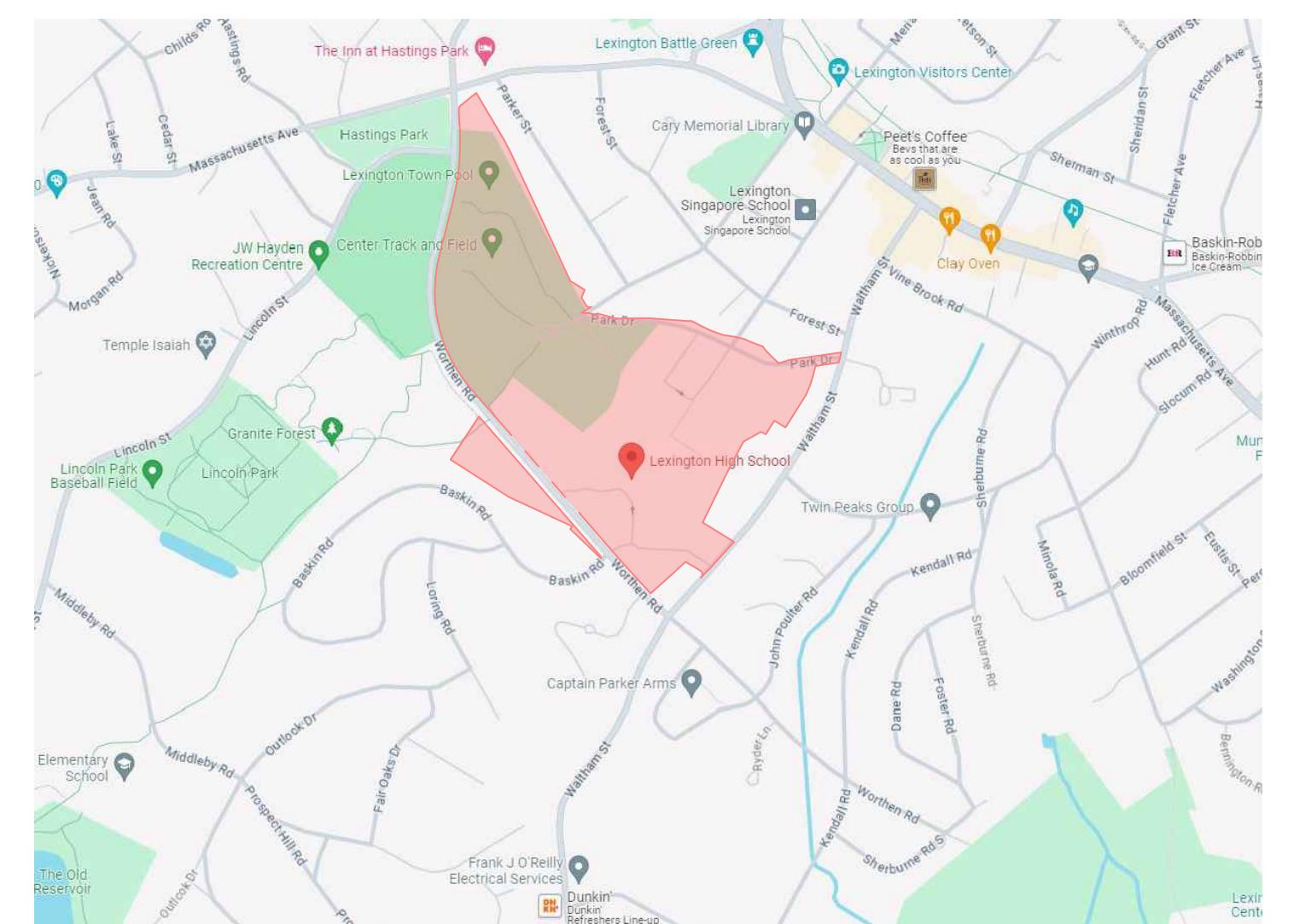
251 Waltham St, Lexington, MA 02421

ANRAD SUBMISSION

07/30/2024

SHEET	DRAWING NAME
C-101	EXISTING CONDITIONS PLAN I
C-101	EXISTING CONDITIONS PLAN II
C-103	EXISTING CONDITIONS PLAN III
C-104	EXISTING CONDITIONS PLAN IV
C-105	EXISTING CONDITIONS PLAN V
C-106	EXISTING CONDITIONS PLAN VI

LOCUS PLAN



Cambridge | Providence

SMMA



LEXINGTON HIGH SCHOOL
251 WALTHAM ST.
LEXINGTON, MA 02421

7/30/2024 ANRAD SUBMISSION
MARK DATE: DESCRIPTION:
ISSUE LOG

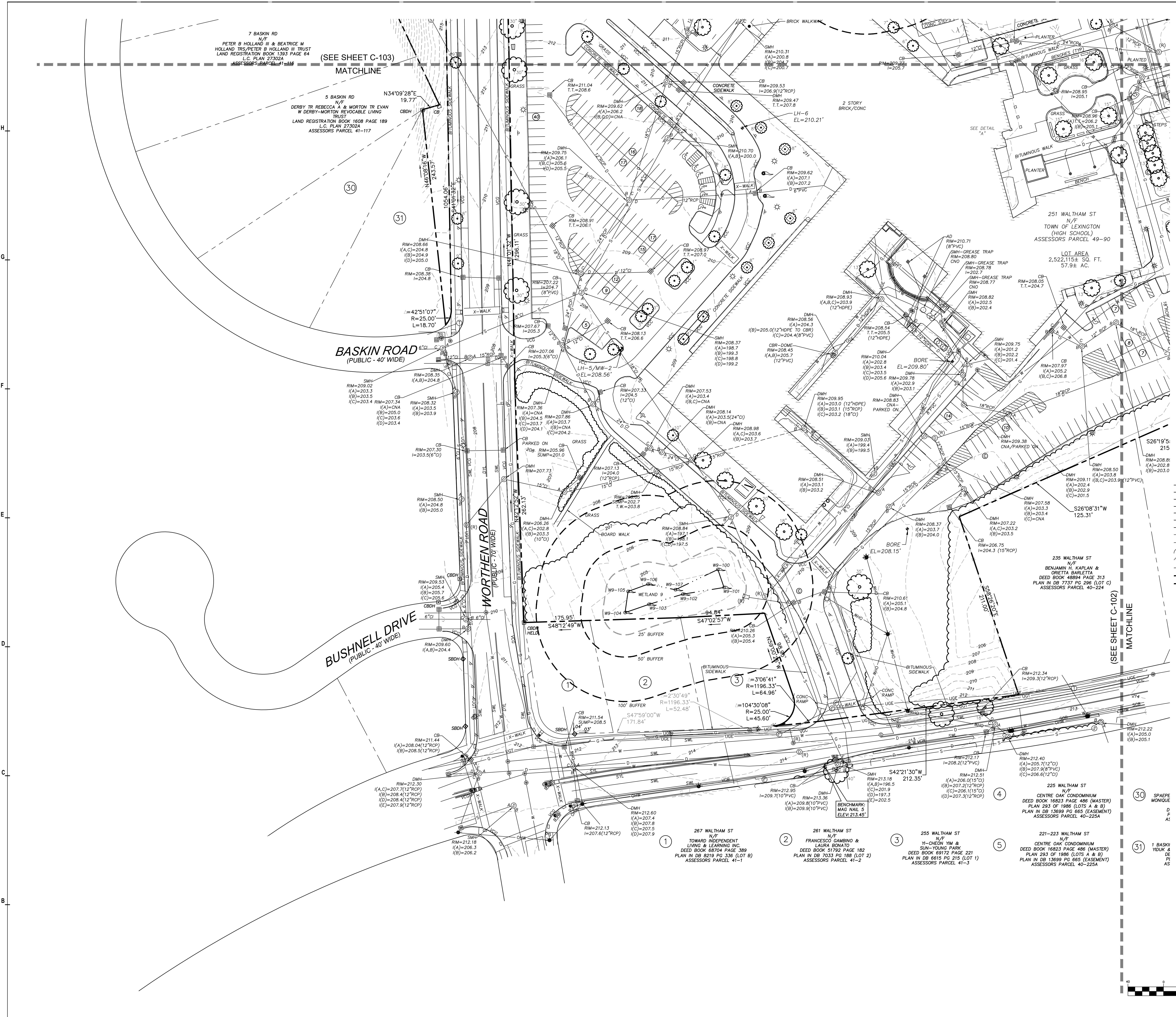


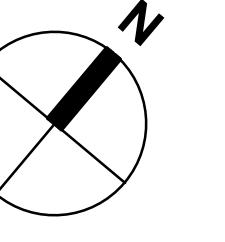
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SCALE 1" = 40'
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CHECK BY EPP
PROJ.ARCH.ENGR. LBF
PROJ.MRG.
JOB NO. 23090.00
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**EXISTING
CONDITIONS
PLAN I**

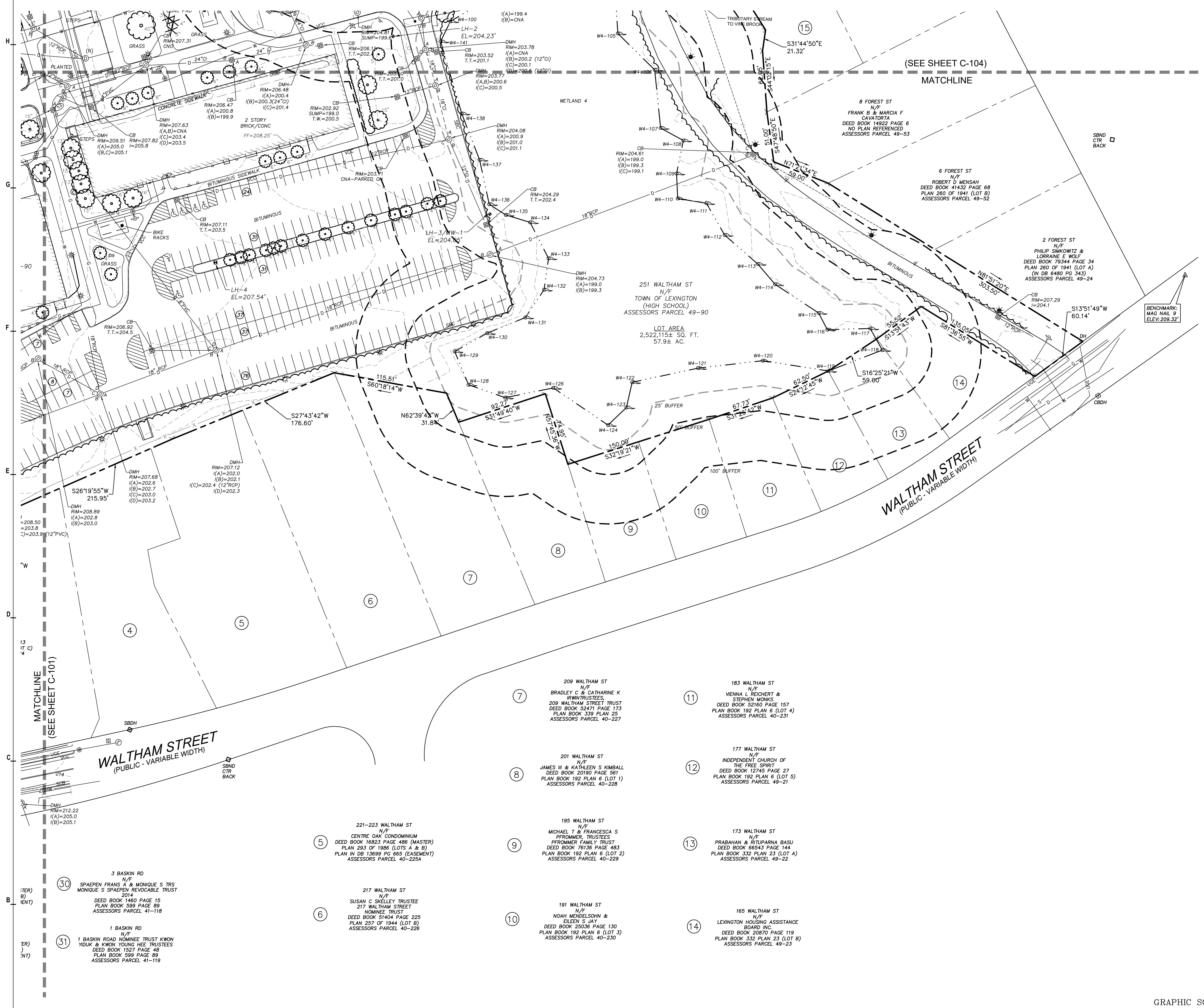
C-101





NOTES

I. REFER TO SHEET C-101 FOR NOTES AND LEGEND



LEXINGTON HIGH SCHOOL

251 WALTHAM ST,
LEXINGTON, MA 02421

7/30/2024	ANRAD SUBMISSION
WORK: DATE:	DESCRIPTION:
DUE LOG	
CLOUDED CHANGE	

A circular registration seal for a professional engineer. The outer ring contains the text "COMMONWEALTH OF MASSACHUSETTS" at the top and "REGISTERED PROFESSIONAL ENGINEER" at the bottom, both in a serif font. The inner circle contains "ERIN F. PRESTILEO" at the top, "CIVIL" in the middle, and "No. 50224" at the bottom, all in a serif font.

1" 1" 1" 1"

SALE _____

AWN BY _____

ECK BY _____

OJ.ARCH./ENGR. _____

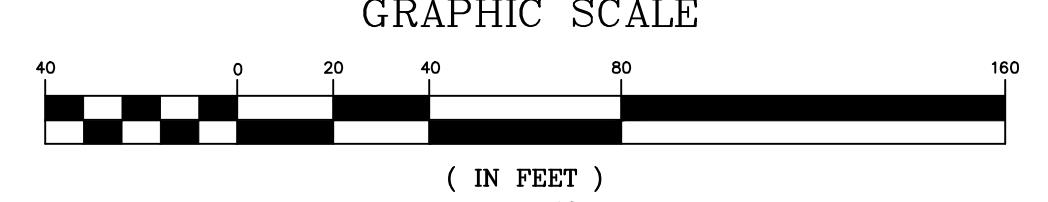
OJ. MRG. _____

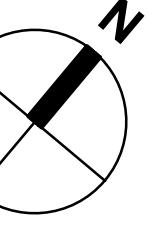
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EXISTING CONDITIONS PLAN II

C-102





NOTES

1. REFER TO SHEET C-101 FOR NOTES AND LEGEND



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251 WALTHAM ST.
LEXINGTON, MA 02421

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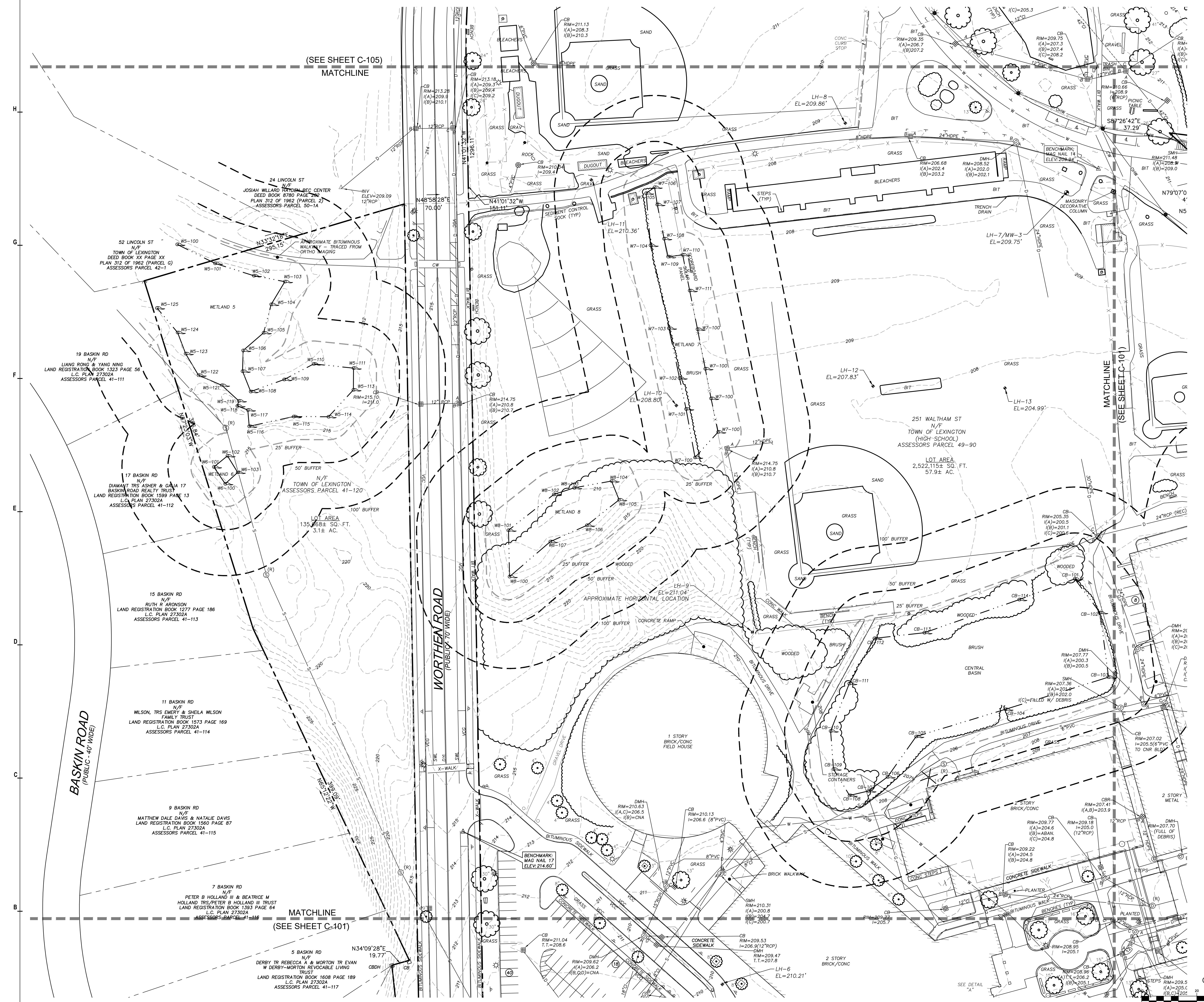
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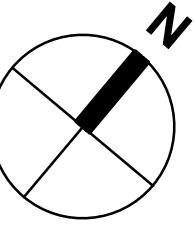
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**EXISTING
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PLAN III**

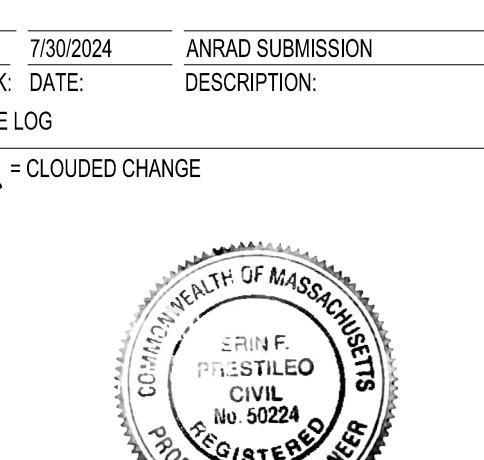
C-103

(SEE SHEET C-105)
MATCHLINE





LEXINGTON HIGH SCHOOL
251 WALTHAM ST.
LEXINGTON, MA 02421



Chris Pinto

7/30/2024 ANRAD SUBMISSION
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ISSUE LOG
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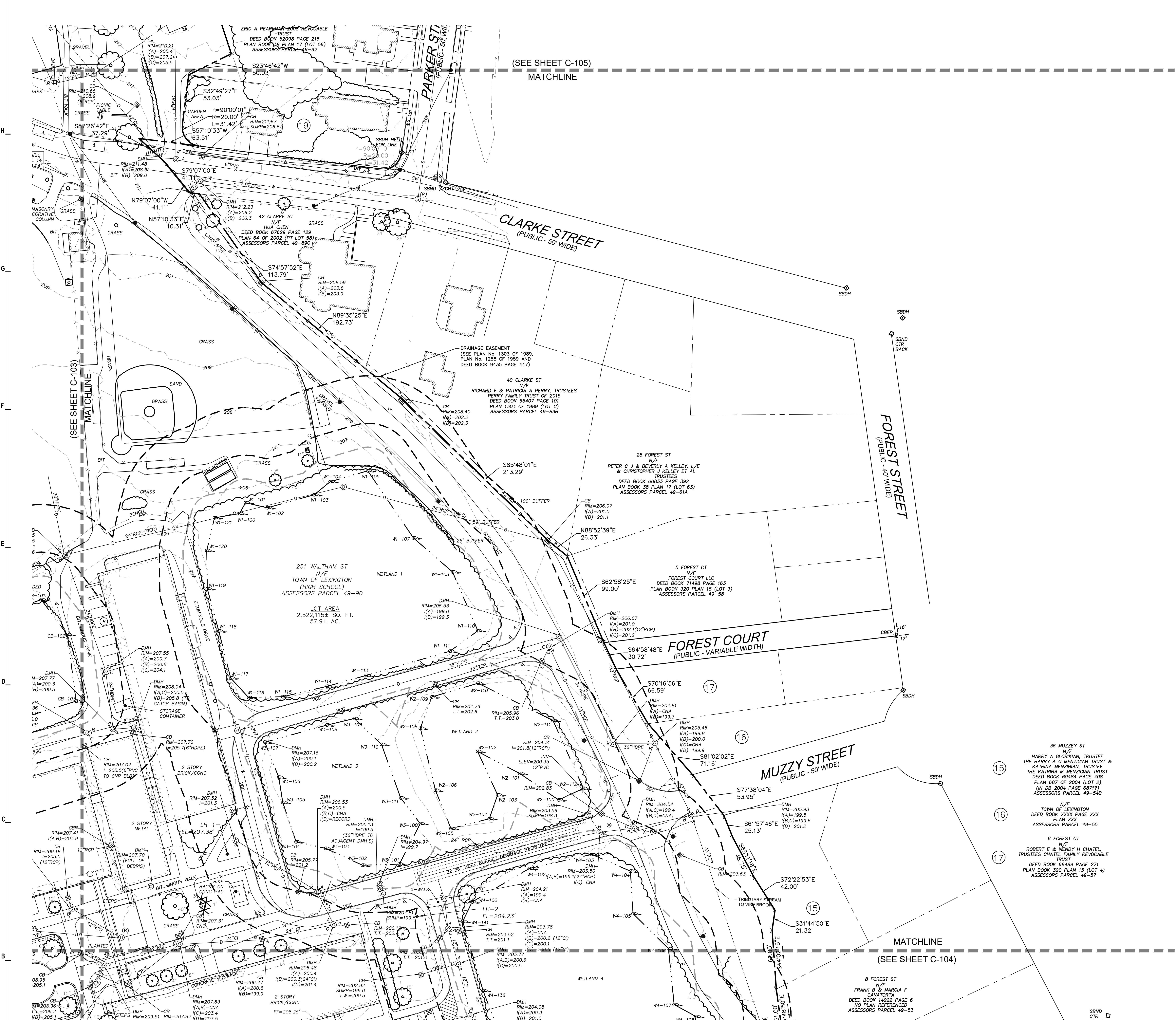
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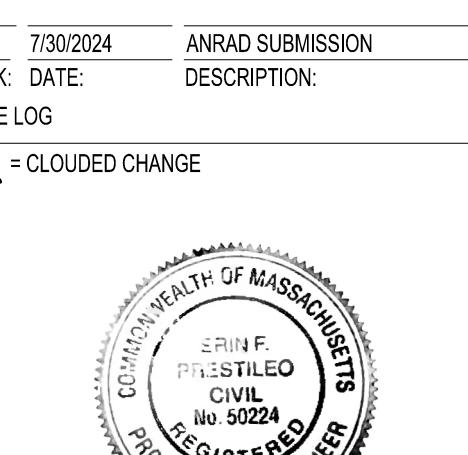
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EXISTING CONDITIONS PLAN IV





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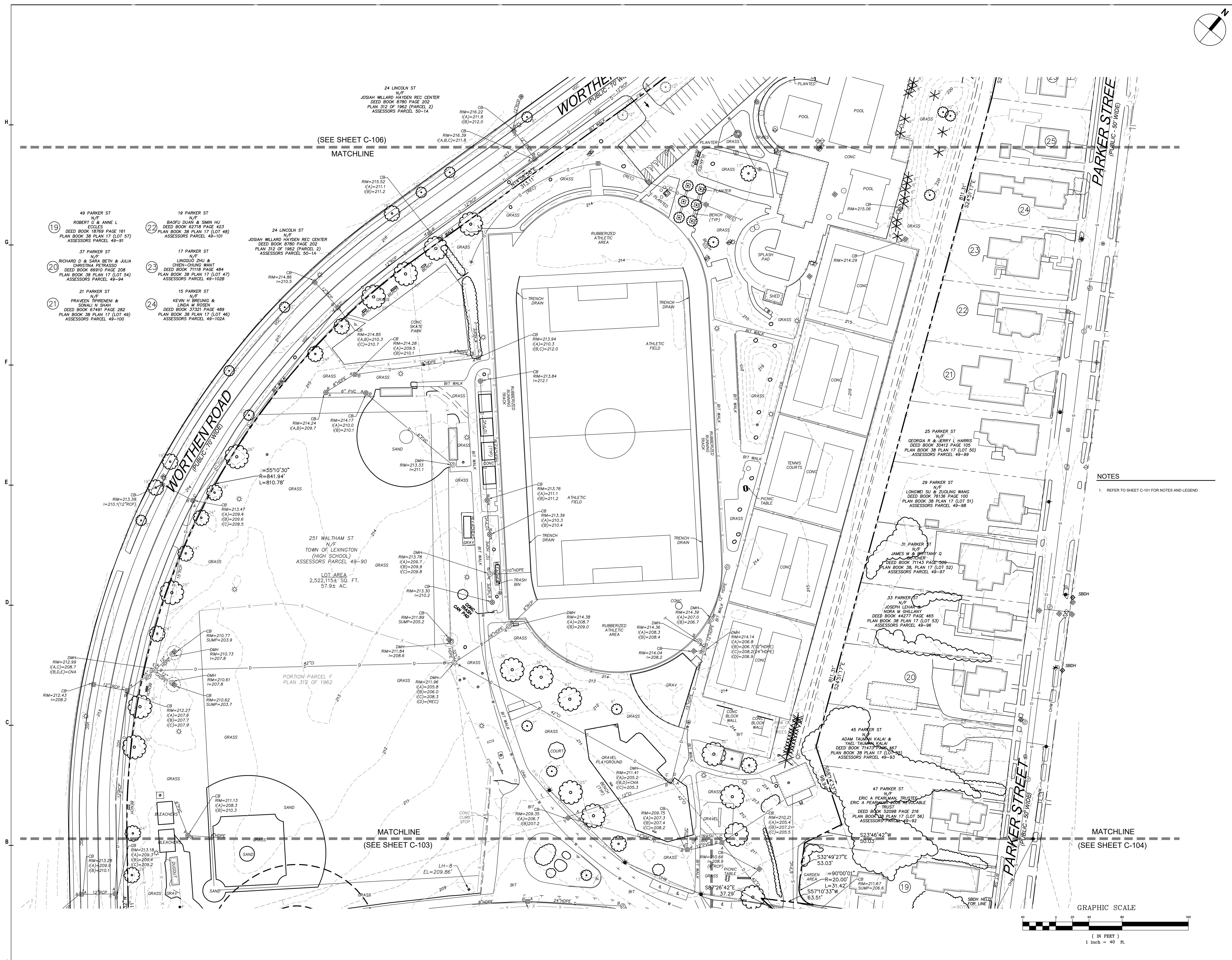


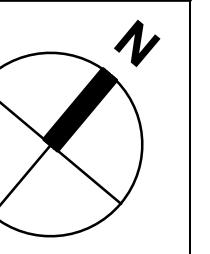
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EXISTING
CONDITIONS
PLAN V

C-105





OTES

REFER TO SHEET C-101 FOR NOTES AND LEGEND



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251 WALTHAM ST,
EXINGTON, MA 02421

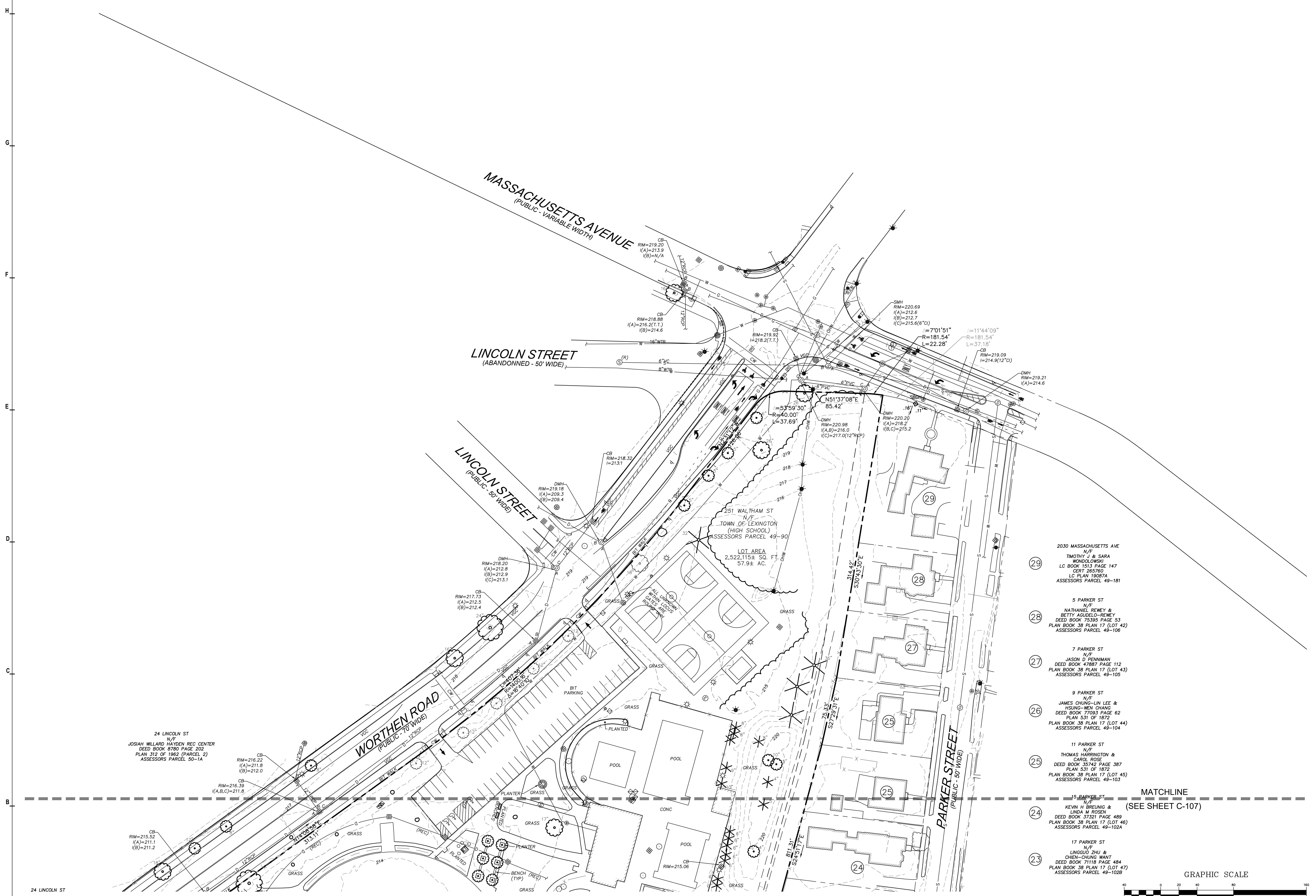
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EXISTING CONDITIONS PLAN VI

C-106



LEGAL NOTICE CHARGE AUTHORIZATION

DATE: 07/30/2024

TO: LOCALiQ New England/Gannett/USA Today Network
LEGAL NOTICE DEPARTMENT

I hereby authorize LOCALiQ New England/Gannett/USA Today Network
to bill me* directly for the legal notice published in the Lexington Minuteman and
on Wickedlocal.com on _____ X _____ for a public meeting with the
Lexington Conservation Commission on _____ X _____ for property at
251 Waltham Street, Lexington, MA 02420.

SIGNATURE: Logan Finney

Please print where to send bill:

Name: Accounting

Business or Organization, if any: SMMA

Street Address**: 1000 Massachusetts Avenue

City/Town: Cambridge

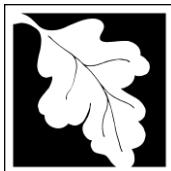
State: MA Zip Code: 02138

Day-time Telephone Number: 617-547-5400

Email Address: lfinney@smma.com; eprestileo@smma.com

*Applicants will be emailed a proof of legal ad and be required to provide Credit Card
payment over the phone. Commercial applicants and/or those with existing accounts will
be invoiced.

**Address cannot be a PO Box.



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

ANRAD Wetland Fee Transmittal Form

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

Important:

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



A. Applicant Information

1. Location of Project:

251 Waltham Street	Lexington
a. Street Address	b. City/Town
c. Fee amount	d. Check number

2. Applicant:

Michael	Cronin	Town of Lexington - School Building Committee
a. First Name	b. Last Name	
201 Bedford Street		
d. Mailing Address		
Lexington	MA	02420
e. City/Town	f. State	g. Zip Code
781-274-8698		
h. Phone Number		

3. Property Owner (if different):

a. First Name	b. Last Name	Town of Lexington
1625 Mass Ave		c. Company
d. Mailing Address		
Lexington	MA	02420
e. City/Town	f. State	g. Zip Code
781-862-0500		
h. Phone Number		

B. Fees

The fee is calculated as follows for each Resource Area Delineation included in the ANRAD (check applicable project type). The maximum fee for each ANRAD, regardless of the number of Resource Area Delineations, is \$200 for activities associated with a single-family house and \$2,000 for any other activity.

Bordering Vegetated Wetland Delineation Fee:

Online users: check box if fee exempt.

1. <input type="checkbox"/>	single family house project	a. feet of BVW	x \$2.00 =	b. Fee for BVW
2. <input type="checkbox"/>	all other projects	a. feet of BVW	x \$2.00 =	b. Fee for BVW

Other Resource Area (e.g., bank, riverfront area, etc.):

3. <input type="checkbox"/>	single family house project	a. linear feet	x \$2.00 =	b. Fee
4. <input type="checkbox"/>	all other projects	a. linear feet	x \$2.00 =	b. Fee

Total fee for all Resource Areas:

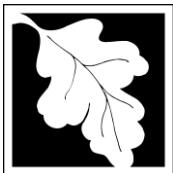
Fee

State share of filing fee:

5. 1/2 of total fee **less** \$12.50

City/Town share of filing fee:

6. 1/2 of total fee **plus** \$12.50



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

ANRAD Wetland Fee Transmittal Form

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

C. Submittal Requirements

- a.) Send a copy of this form, with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts, to:

Department of Environmental Protection
Box 4062
Boston, MA 02211

- b.) **To the Conservation Commission:** Send the Abbreviated Notice of Resource Area Delineation; a **copy** of this form; and the city/town fee payment.
- c.) **To DEP Regional Office:** Send one copy of the Abbreviated Notice of Resource Area Delineation (and any additional documentation required as part of a Simplified Review Buffer Zone Project); a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)