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By Mattie VandenBoom at 1:56 pm, Jun 12, 2024

NOTICE OF INTENT

For



***Saint-Gobain North Campus Demolition and
New Bond Street Proposed Demolition Plans***

***0 Ararat Street, 1 New Bond Street and
12R New Bond Street
Worcester, MA
Worcester County***

Prepared by:

BOHLER
352 Turnpike Road
Southborough, MA 01772
(508) 480-9900 TEL.



John A. Kucich
Massachusetts P.E. Lic. #41530

BOHLER //

June 12, 2024
#MAA220519.00

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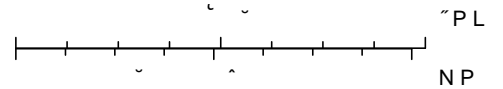
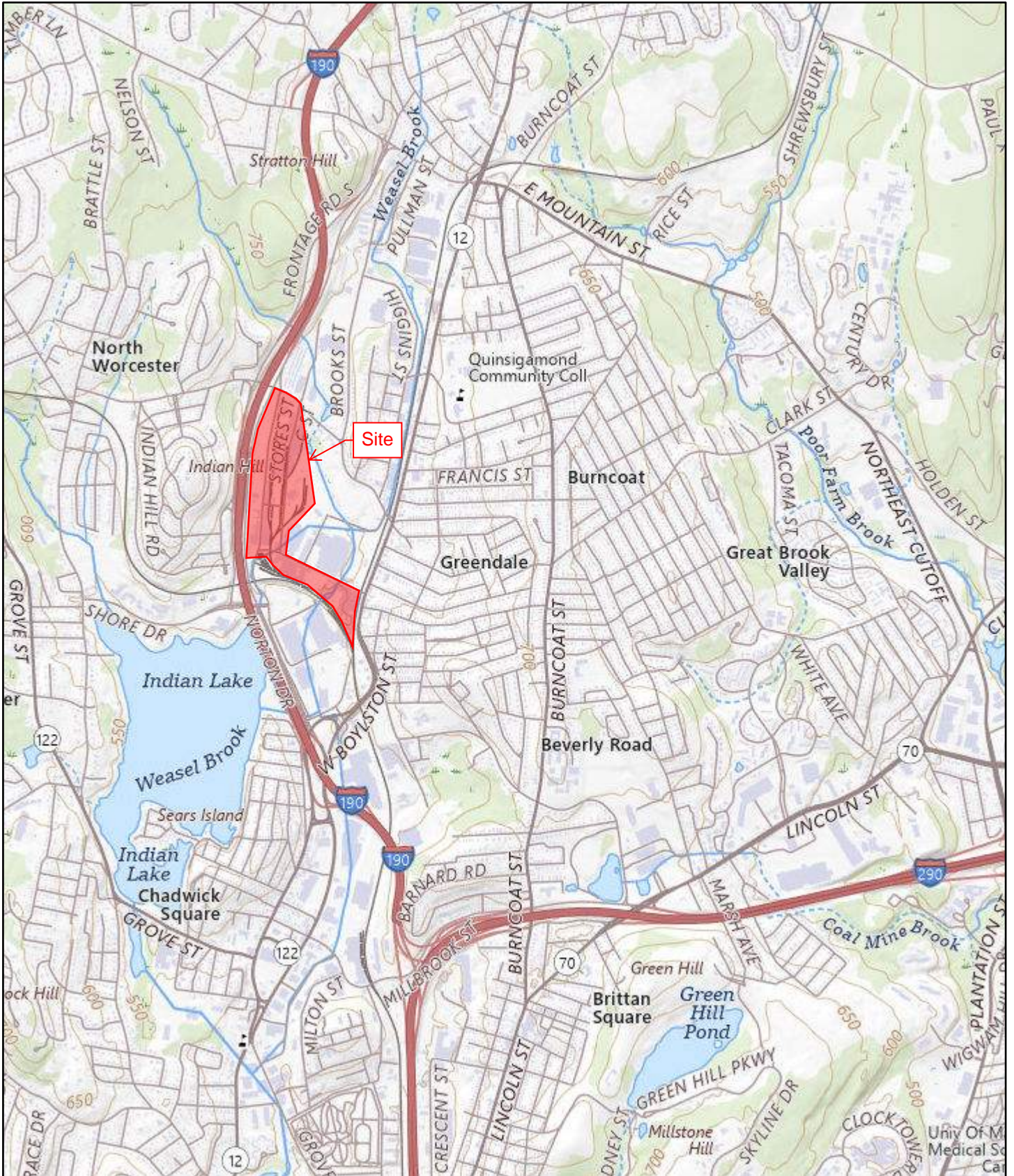
APPENDIX C – SAINT-GOBAIN NORTH CAMPUS DEMOLITION

*Excerpts from Stormwater Water Pollution Prevention Plan
Prepared by BETA Group, Inc.*

APPENDIX D – Excerpts from Resource Area Boundary Delineation

*Prepared by BETA Group, Inc.
Dated March 6, 2020*

USGS LOCUS MAP



86*6 7KH 1DWLRQDO 0DS, 1DWLRQDO %RXQGDLHV
 3URJUDP *HRJUDSKLF 1DPHV ,QIRUPDWLRQ 6\VVWH
 'DWDVHW 1DWLRQDO /DQG &RYHU 'DWDVHW 1DWL
 1DWLRQDO 7UDQVSRUWDWLRQ 'DWDVHW' 86*6 *ORE
 %XUHDX 7,*(5 /LQH GDWD' 86)6 5RDG GDWD' 1DWX

PROJECT DESCRIPTION

1. Introduction

The Notice of Intent contained herein is filed pursuant to M.G.L. Chapter 131, Section 40, the Massachusetts Wetlands Protection Act (WPA) and its implementing regulations 310 CMR 10.00, and the City of Worcester Wetlands Protection Ordinance for proposed activities within the Stormwater Protection Zone. This filing seeks approval to allow select buildings, rail lines and limited utility demolition on the associated properties and to install erosion control measures as required to control sediment transport. As development opportunities are identified on the individual lots, subsequent filings will be submitted to the Commission where applicable for work associated with the future redevelopment work.

The subject parcels are located at 0 Ararat Street, 1 New Bond Street and 12R New Bond Street in the City of Worcester Massachusetts. These properties are further identified on the City of Worcester Assessor's Maps as Map 37-Block 9-Lot 2, Map 37-Block 1-Lot 1 and Map 37-Block 4-Lot 1 respectively. The three parcels contain approximately 61.4 acres of land in total and is fully developed with large industrial buildings, associated utilities, paved areas, and existing railway infrastructure. The properties fall within the General Manufacturing Zoning District (MG-1.0).

The overall demolition plan and future redevelopment project is separated into four (4) quadrants. Quadrants 1 and 2 are comprised of the land associated 0 Ararat Street and 12R New Bond Street. The proposed demolition work associated with these quadrants falls outside of the jurisdictional resource areas and associated buffer zones. These quadrants are included in this filing as they are subject to the City of Worcester Wetlands Protection Ordinance for proposed activities within the Stormwater Protection Zone due to the presence of existing on-site catch basin inlets.

Quadrants 3 and 4 consist of the remaining land on 1 New Bond Street. Existing Bordering Vegetated Wetland (BVW), buffer zones, and Flood Plain Zone AE are located on this parcel as further described in this narrative. A culverted portion and daylighted areas of Weasel Brook divides the property which is a tributary to Indian Lake. A twenty-five foot (25') Riverfront Area associated with the Brook is depicted on the plans. Work within Quadrants 3 and 4 is also subject to the City of Worcester Wetlands Protection Ordinance for proposed activities within the Stormwater Protection Zone due to the presence of existing on-site catch basin inlets.

Proposed demolition activities consist of the removal of select existing buildings, rail lines and limited utility demolition on the subject parcels as shown on the provided plans. The limit of disturbance around the existing buildings is limited to approximately ten feet (10') and existing paved areas are to remain. Existing concrete demolition materials generated from building slabs and footings are intended to be processed onsite and utilized as backfill where appropriate. Disturbed areas are proposed to be covered with a minimum of three (3) inches of topsoil and seeded. Existing utility connections associated with the

demolished buildings will be cut at the limit of building demolition, capped and made watertight.

The existing rail lines, timbers and associated components are also to be removed as part of the demolition work. However, no ground disturbance is anticipated with this part of the project as the existing rail bed gravel base are intended to remain intact. The existing steam, condensate pipe, associated stanchions and concrete bases will also be removed as part of the demolition work. Where appropriate the contractor will backfill disturbed areas with processed concrete and covered with a minimum of three (3) inches of topsoil and seeded.

2. Work with Buffer Zones and Locally Restricted Areas

Wetland Resource Areas

The subject parcels contain areas of BVW. No direct alteration to wetland resource areas is proposed for this project.

Demolition work within Quadrants 1 and 2 falls outside of the BVW area and associated buffer zones. Refer to the latest plans prepared by Beta Group and the property survey for additional information.

Demolition work within Quadrants 3 and 4 is limited to select demolition within previously developed areas and to install erosion control measures within buffer zones.

Weasel Brook Riverfront Area

A culverted portion of Weasel Brook and daylighted portions of this stream divide the property of 1 New Bond Street (Quadrants 3 and 4). A twenty-five foot (25') Riverfront Area (RFA) is depicted on the plans in accordance with C.M.R. 10.58.3.(a).

Demolition work within the Riverfront Area is limited to select demolition in previously developed areas and to install erosion control BMPs within the RFA. No direct alteration to Weasel Brook is proposed for this project.

Flood Plain

The United States FEMA map panel 2502760616E (Dated: July 4, 2011) indicates that a portion of 1 New Bond Street (Quadrants 3 and 4) falls within Zone AE with a determined base flood elevation of 555.0 feet. A letter of map revision (LOMR) was submitted to FEMA by the Applicant in March of 2024 and the Applicant expects to receive feedback by late June 2024. The LOMR revises the base flood elevation to 550.9 feet and pulls a significant amount of the property out of the mapped flood plain. For the purposes of this application, both delineations have been shown on the mapping provided and are clearly identified and labeled.

Work within the flood plain is limited to select demolition within previously disturbed area. Where appropriate the contractor will backfill disturbed areas with processed

concrete and cover with a minimum of three (3) inches of topsoil and seeded. These areas will be graded to be at or below existing elevations on-site.

Anticipated flood plain impact areas have been provided in Table 1 under both the current FEMA mapping and the LOMR currently under review. Reported values on the WPA reflect the current FEMA Map.

Table 1 – Anticipated Flood Plain Impacts

	Base Flood Elevation (FT)	Building Demolition (SF)	Utility Demolition (SF)	Total Disturbance Area (SF)
Current FEMA Map (2011)	555.0	170,861	5,124	175,985
LOMR (March 2024)	550.9	93,925	3,094	97,019

As can be seen in the table, the proposed building demolition/removal work is expected to remove structures from within the flood plain and as-such, the net result will not include filling of the existing (or the creation of proposed) floodplain. Given the LOMR has not been finalized and the final redevelopment plans are unknown, no new flood plain storage areas are proposed as part of the demolition efforts. As potential future development opportunities may be proposed at a future date for these parcel(s), cumulative floodplain storage will be accounted for in the future development considerations to offset the potential loss of storage associated with the existing demolished buildings.

Stormwater Protection Zone

Stormwater runoff from the proposed demolition areas drain into an existing drainage system that captures and conveys stormwater runoff ultimately connecting to the drainage network within the municipal right-of-way.

The existing stormwater components within the existing right-of-ways on the surrounding streets are subject to the protection under the Stormwater Protection Zone. Demolition work within Quadrants 1 through 4 falls within this zone.

3. Stormwater Management

The proposed demolition work falls entirely within previously disturbed and developed impervious areas and maintains existing drainage patterns and components. Impervious areas associated with the existing buildings that are to be demolished will be backfilled with processed concrete and covered with a minimum of three (3) inches of topsoil and seeded. This improvements after demolition are proposed to result in a net decrease in impervious area over the existing condition. As such, this project will result in a net decrease in peak discharge rates.

Existing drainage components and BMPs will be maintained as part of the demolition work. This filing seeks approval to allow select buildings, rail line and utility demolition on the associated properties and install erosion control measures. Future redevelopment on the subject parcels will conform with the Massachusetts Department of Environmental Protection's (MassDEP) current Stormwater Management Standards.

4. Erosion and Sediment Controls

Quadrants 1 and 2

As stated in the Stormwater Pollution Prevention Plan (SWPPP) prepared by BETA Group, Inc (bound separately), erosion controls will consist of staked 12" compost filter tubes supplemented by entrenched silt fencing as needed. All catch basins within the limit of work will be fitted with inlet protection measures prior to commencing work. Erosion controls will remain in place until the Site is stabilized. Please refer to the included information prepared by BETA Group, Inc (bound separately) for additional information.

Quadrants 3 and 4

The Proposed Site Plan Documents (bound separately) include erosion controls, consisting of silt fence with compost sock installed on the upgradient side of the erosion control barrier along the proposed limits of work to prevent migration of sediment into resource areas. In addition, a established construction entrance and catch basin inlet protection is also shown and will be implemented prior to commencing work. A Stormwater Pollution Prevention Plan (SWPPP) under the NPDES General Permit for large construction activities will be developed by the contractor prior to demolition operations.

The erosion and sediment control plan includes the use of both stabilization and structural controls and may include (but not limited to) the following:

- Temporary seeding;
- Permanent seeding;
- Permanent plantings;
- Mulching;
- Geotextiles;
- Protection of trees;
- Preservation of mature vegetation;
- Erosion Control Barrier;
- Check dams;
- Sediment Traps;
- Rip rap;

NOTICE OF INTENT APPLICATION



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Worcester

City/Town

Important:

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



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

A. General Information

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

<u>1 & 12R New Bond Street, 0 Ararat Street</u>	<u>Worcester</u>	<u>01606</u>
a. Street Address	b. City/Town	c. Zip Code
Latitude and Longitude:		
<u>42° 18' 38.46" N</u>	<u>71°48' 19.26" W</u>	
d. Latitude	e. Longitude	
<u>Map 37</u>		
f. Assessors Map/Plat Number		
<u>Block 001 Lot 00001; Block 004 Lot 00001; Block 009 Lot 00002</u>		

2. Applicant:

<u>Jason</u>	<u>Kruckas</u>	
a. First Name	b. Last Name	
<u>Worcester Business Development Corporation</u>		
c. Organization		
<u>89 Shrewsbury Street, Suite 300</u>		
d. Street Address		
<u>Worcester</u>	<u>MA</u>	<u>01604</u>
e. City/Town	f. State	g. Zip Code
<u>508-755-5734</u>	<u>kruckas@worcesterbdc.com</u>	
h. Phone Number	i. Fax Number	j. Email Address

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

<u>Jason</u>	<u>Kruckas</u>	
a. First Name	b. Last Name	
<u>New Garden Park Inc</u>		
c. Organization		
<u>89 Shrewsbury Street</u>		
d. Street Address		
<u>Worcester</u>	<u>MA</u>	<u>01604</u>
e. City/Town	f. State	g. Zip Code
<u>508-755-5734</u>	<u>kruckas@worcesterbdc.com</u>	
h. Phone Number	i. Fax Number	j. Email address

4. Representative (if any):

<u>James</u>	<u>Cranston</u>	
a. First Name	b. Last Name	
<u>Bohler Engineering MA, LLC</u>		
c. Company		
<u>352 Turnpike Road</u>		
d. Street Address		
<u>Southborough</u>	<u>MA</u>	<u>01772</u>
e. City/Town	f. State	g. Zip Code
<u>508-480-9900</u>	<u>jcranston@bohlereng.com</u>	
h. Phone Number	i. Fax Number	j. Email address

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

<u>\$1,575</u>	<u>\$775.00</u>	<u>\$800.00</u>
a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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A. General Information (continued)

6. General Project Description:

Proposed demolition of existing industrial buildings, rail lines and select utilities. Refer to full project narrative for detail.

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

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

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

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

2. Limited Project Type

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

8. Property recorded at the Registry of Deeds for:

Worcester

a. County

68470

c. Book

b. Certificate # (if registered land)

122

d. Page Number

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

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

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



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

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input type="checkbox"/> Bank	1. linear feet	2. linear feet
b. <input checked="" type="checkbox"/> Bordering Vegetated Wetland	0 1. square feet	2. square feet
c. <input type="checkbox"/> Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. <input checked="" type="checkbox"/> Bordering Land Subject to Flooding	175,985 1. square feet 0 3. cubic feet of flood storage lost	2. square feet 4. cubic feet replaced
e. <input type="checkbox"/> Isolated Land Subject to Flooding	1. square feet 2. cubic feet of flood storage lost	3. cubic feet replaced
f. <input checked="" type="checkbox"/> Riverfront Area	Weasel Brook (inland) 1. Name of Waterway (if available) - specify coastal or inland	

2. Width of Riverfront Area (check one):

- 25 ft. - Designated Densely Developed Areas only
- 100 ft. - New agricultural projects only
- 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: 30,930
square feet

4. Proposed alteration of the Riverfront Area:

4,255 4,255 0
a. total square feet b. square feet within 100 ft. c. square feet between 100 ft. and 200 ft.

5. Has an alternatives analysis been done and is it attached to this NOI? Yes No

6. Was the lot where the activity is proposed created prior to August 1, 1996? Yes No

3. Coastal Resource Areas: (See 310 CMR 10.25-10.35)

Note: for coastal riverfront areas, please complete **Section B.2.f.** above.



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

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

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

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

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

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

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

5. Project Involves Stream Crossings

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

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

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

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

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

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

Current GIS
Mapping _____

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

- c. Submit Supplemental Information for Endangered Species Review*

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

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

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

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <https://www.mass.gov/endangered-species-act-mesa-regulatory-review>).

Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

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



Massachusetts Department of Environmental Protection
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C. Other Applicable Standards and Requirements (cont'd)

(c) MESA filing fee (fee information available at <https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review>).

Make check payable to “Commonwealth of Massachusetts - NHESP” and **mail to NHESP** at above address

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

(d) Vegetation cover type map of site

(e) Project plans showing Priority & Estimated Habitat boundaries

(f) OR Check One of the Following

1. Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, <https://www.mass.gov/service-details/exemptions-from-review-for-projectsactivities-in-priority-habitat>; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2. Separate MESA review ongoing. a. NHESP Tracking # b. Date submitted to NHESP

3. Separate MESA review completed.
Include copy of NHESP “no Take” determination or valid Conservation & Management Permit with approved plan.

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

a. Not applicable – project is in inland resource area only b. Yes No

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

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

North Shore - Plymouth to New Hampshire border:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: dmf.envreview-south@mass.gov

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: dmf.envreview-north@mass.gov

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

c. Is this an aquaculture project? d. Yes No

If yes, include a copy of the Division of Marine Fisheries Certification Letter (M.G.L. c. 130, § 57).



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

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

D. Additional Information

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

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

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

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

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



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D. Additional Information (cont'd)

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

Proposed Site Plan Documents

a. Plan Title	_____	
Bohler	John Kucich, PE	_____
b. Prepared By	c. Signed and Stamped by	_____
06/11/2024	varies	_____
d. Final Revision Date	e. Scale	_____
f. Additional Plan or Document Title		g. Date

- 5. If there is more than one property owner, please attach a list of these property owners not listed on this form.
- 6. Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.
- 7. Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.
- 8. Attach NOI Wetland Fee Transmittal Form
- 9. Attach Stormwater Report, if needed.

The proposed demolition work falls entirely within previously disturbed and developed impervious areas and maintains existing drainage patterns and components. Impervious areas associated with the demolished existing buildings will be backfilled, covered with topsoil and seeded. This results in a net decrease in impervious area over the existing condition. As such, this project will result in a net decrease in peak discharge rates. This filing seeks approval to allow select buildings, rail line and utility demolition on the associated properties and install erosion control measures. Future redevelopment on the subject parcels will conform with the Massachusetts Department of Environmental Protection's (MassDEP) current Stormwater Management Standards.

E. Fees

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

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

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



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Worcester

City/Town

F. Signatures and Submittal Requirements

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

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

1. Signature of Applicant

June 12, 2024

2. Date

3. Signature of Property Owner (if different)

4. Date

June 12, 2024

5. Signature of Representative (if any)

6. Date

For Conservation Commission:

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

For MassDEP:

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

Other:

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

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

**List of Owners
Notice of Intent (NOI)
Worcester, MA**

0 Ararat Street (*Assessors Map 37, Block 9, Lot 2*)

Deed Book / Page: 68470 / 122

Lot Area: +/- 9.97 acres

Owner Name: New Garden Park

Owner Address: 89 Shrewsbury St
Worcester, MA 01604

Signature of Owner: *Refer to Applicant Signature on WPA Form 3*

1 New Bond Street (*Assessors Map 37, Block 1, Lot 1*)

Deed Book / Page: 68470 / 122

Lot Area: +/- 16.6 acres

Owner Name: New Garden Park

Owner Address: 89 Shrewsbury St
Worcester, MA 01604

Signature of Owner: *Refer to Applicant Signature on WPA Form 3*

12R New Bond Street (*Assessors Map 37, Block 4, Lot 1*)

Deed Book / Page: 68470 / 122

Lot Area: +/- 34.79 acres

Owner Name: New Garden Park

Owner Address: 89 Shrewsbury St
Worcester, MA 01604

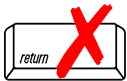
Signature of Owner: *Refer to Applicant Signature on WPA Form 3*

STATEMENT OF FEE CALCULATION



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
NOI 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:

1 & 12R New Bond Street, 0 Ararat Street
 a. Street Address
 Worcester, MA
 b. City/Town
 \$775.00
 d. Fee amount

2. Applicant Mailing Address:

Jason
 a. First Name
 Kruckas
 b. Last Name
 Worcester Business Development Corporation
 c. Organization
 89 Shrewsbury Street, Suite 300
 d. Mailing Address
 Worcester MA 01604
 e. City/Town f. State g. Zip Code
 508-755-5734
 h. Phone Number i. Fax Number
 kruckas@worcesterbdc.com
 j. Email Address

3. Property Owner (if different):

Jason
 a. First Name
 Kruckas
 b. Last Name
 New Garden Park Inc
 c. Organization
 89 Shrewsbury Street, Suite 300
 d. Mailing Address
 Worcester MA 01604
 e. City/Town f. State g. Zip Code
 508-755-5734
 h. Phone Number i. Fax Number
 kruckas@worcesterbdc.com
 j. Email Address

To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).

B. Fees

Fee should be calculated using the following process & worksheet. **Please see Instructions before filling out worksheet.**

Step 1/Type of Activity: Describe each type of activity that will occur in wetland resource area and buffer zone.

Step 2/Number of Activities: Identify the number of each type of activity.

Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

Step 4/Subtotal Activity Fee: Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

Step 5/Total Project Fee: Determine the total project fee by adding the subtotal amounts from Step 4.

Step 6/Fee Payments: To calculate the state share of the fee, divide the total fee in half and subtract \$12.50. To calculate the city/town share of the fee, divide the total fee in half and add \$12.50.



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
NOI Wetland Fee Transmittal Form
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
3a - Site Preparation (demolition)	1	\$1,050	\$1,050
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Step 5/Total Project Fee:			\$1,575 *
Step 6/Fee Payments:			* <i>value includes riverfront multiplier</i>
Total Project Fee:			\$1,575
State share of filing Fee:			a. Total Fee from Step 5 \$775.00
City/Town share of filing Fee:			b. 1/2 Total Fee less \$12.50 \$800.00
			c. 1/2 Total Fee plus \$12.50

C. Submittal Requirements

- a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection
 Box 4062
 Boston, MA 02211

- b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

To MassDEP Regional Office (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)

Statement of Fee Calculation
 City of Worcester Wetlands Protection Ordinance & Regulations

Project: New Bond Street Demolition

Date: June 12, 2024

7.2.3 Fees

Step 1/Type of Activity	Step 2/Number Of Activities	Step 3/Individual Fee	Step 4/Subtotal Activity Fee
CAT 3a - Site Preparation (for development) demolition	1	\$500.00	\$500.00
Admin Fee	1	\$25.00	\$25.00

Step5/Total Project Fee: \$525.00

Payments:

Make Checks Payable to the City of Worcester.

Print Form

APPENDIX A

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study Report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Massachusetts State Plane Mainland Zone (FIPS zone 2001). The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

Base map information shown on this FIRM was derived from digital orthophotography. Base map files were provided in digital format by Massachusetts Geographic Information Systems (MassGIS). Ortho imagery was produced at a scale of 1:5,000. Aerial photography is dated April 2005.

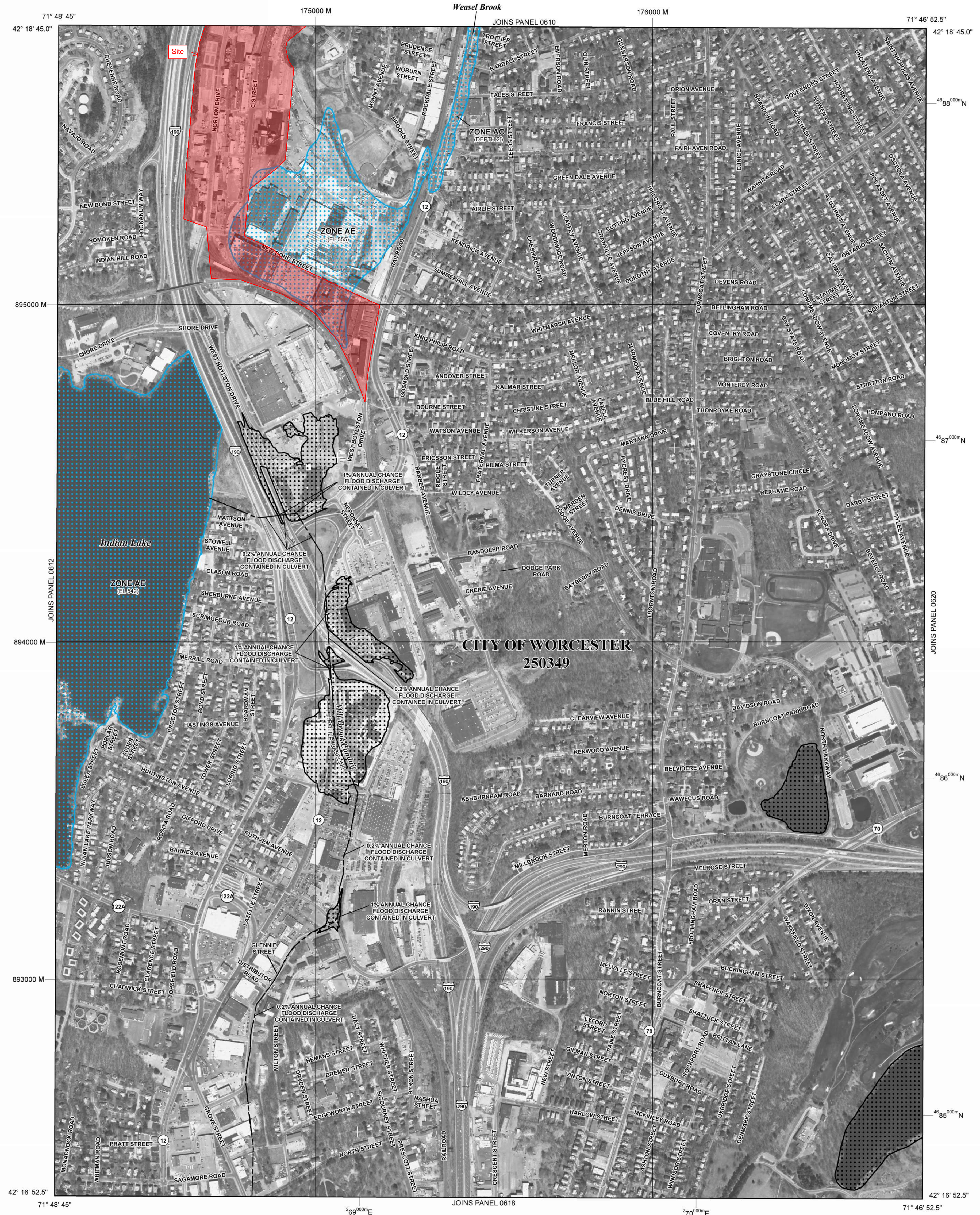
The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at <http://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map**, how to order products, or the National Flood Insurance Program in general, please call the **FEMA Map Information eXchange (FMIX)** at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/business/nfp>.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, VE, and V. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.
ZONE AE Base Flood Elevations determined.
ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently destroyed. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE VE Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE V Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS
ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood.
OTHER AREAS
ZONE D Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
OTHERWISE PROTECTED AREAS (OPAs)
CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
1% Annual Chance Floodplain Boundary
0.2% Annual Chance Floodplain Boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
Base Flood Elevation line and value; elevation in feet* (EL 987)
Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

45° 02' 08", 93° 02' 12"
Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
4989000 M 1000-meter ticks; Massachusetts State Plane Mainland Zone (FIPS Zone 2001), Lambert Conformal Conic projection
4989000 N 1000-meter Universal Transverse Mercator grid values, zone 19N
DX5510 X Bench mark (see explanation in Notes to Users section of this FIRM panel)
M.I.S. River Mile
MAP REPOSITORIES Refer to Map Repositories list on Map Index
EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP July 4, 2011
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.
To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6629.

MAP SCALE 1" = 500'
250 0 500 1000 FEET
150 0 150 300 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0616E

FIRM
FLOOD INSURANCE RATE MAP
WORCESTER COUNTY,
MASSACHUSETTS
(ALL JURISDICTIONS)

PANEL 616 OF 1075
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:
COMMUNITY NUMBER PANEL SUFFIX
WORCESTER, CITY OF 250349 0616 E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
25027C0616E
EFFECTIVE DATE
JULY 4, 2011
Federal Emergency Management Agency

NOTES TO USERS

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To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **foodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

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Boundaries of the **foodways** were computed at cross sections and interpolated between cross sections. The foodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Massachusetts State Plane Mainland Zone (FIPS zone 2001). The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

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NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

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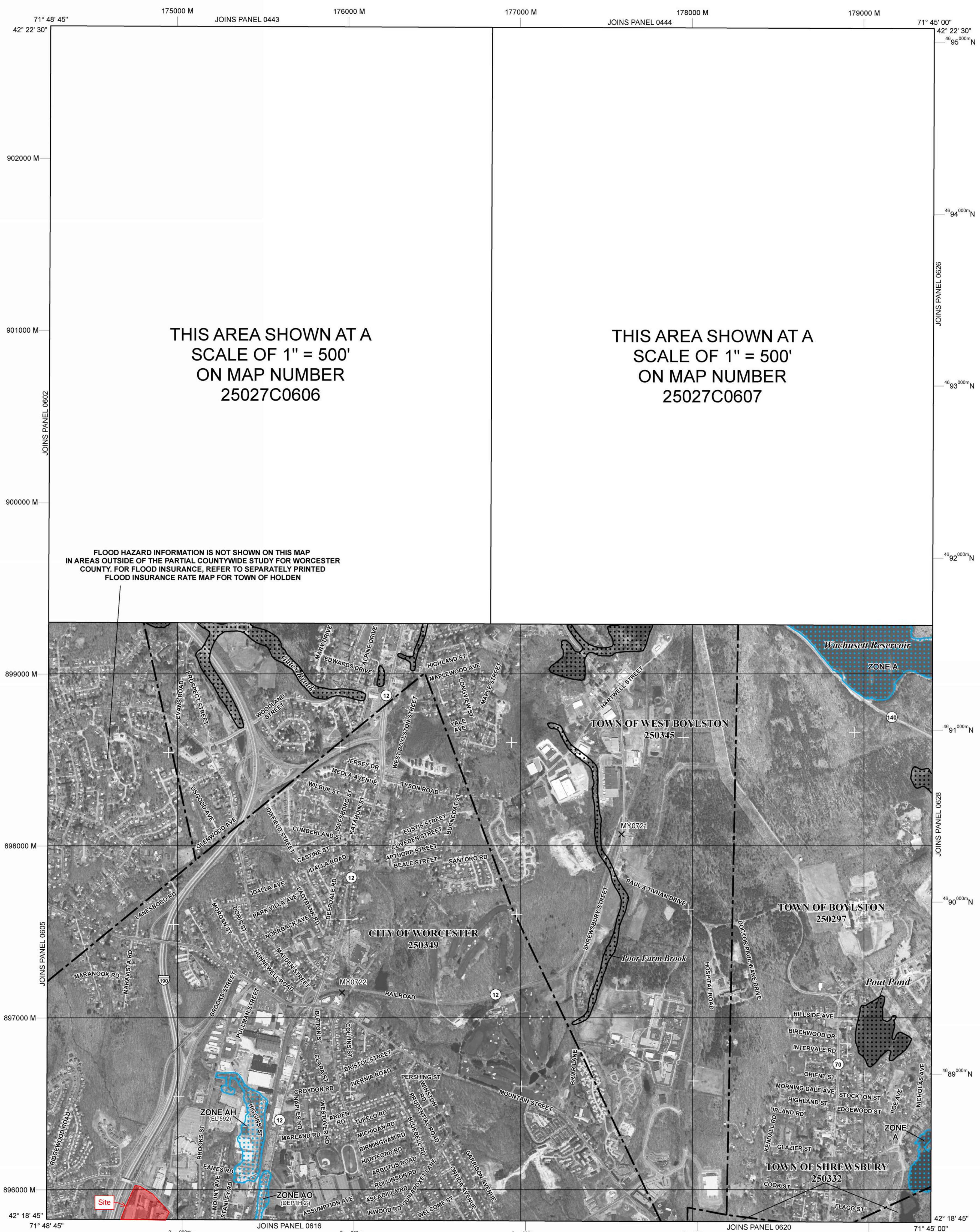
The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

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THIS AREA SHOWN AT A
SCALE OF 1" = 500'
ON MAP NUMBER
25027C0606

THIS AREA SHOWN AT A
SCALE OF 1" = 500'
ON MAP NUMBER
25027C0607

FLOOD HAZARD INFORMATION IS NOT SHOWN ON THIS MAP
IN AREAS OUTSIDE OF THE PARTIAL COUNTYWIDE STUDY FOR WORCESTER
COUNTY. FOR FLOOD INSURANCE, REFER TO SEPARATELY PRINTED
FLOOD INSURANCE RATE MAP FOR TOWN OF HOLDEN

LEGEND

- SPECIAL FLOOD HAZARD AREAS (SFHAS) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD. The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
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- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently derelict. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE
- The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS
- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- OTHER AREAS**
- ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D** Areas in which flood hazards are undetermined, but possible.
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- OTHERWISE PROTECTED AREAS (OPAs)
- CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- Cross section line
- Transect line
- Culvert
- Bridge
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 4989000 M 1000-meter ticks; Massachusetts State Plane Mainland Zone (FIPS Zone 2001), Lambert Conformal Conic projection
- 4989000m N 1000-meter Universal Transverse Mercator grid values, zone 19N
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- River Mile
- MAP REPOSITORIES
Refer to Map Repositories list on Map Index
- EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
July 4, 2011
- EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6629.

MAP SCALE 1" = 1000'

500 0 1000 2000
FEET
300 0 300 600
METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0610E

FIRM
FLOOD INSURANCE RATE MAP
WORCESTER COUNTY,
MASSACHUSETTS
(ALL JURISDICTIONS)

PANEL 610 OF 1075
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

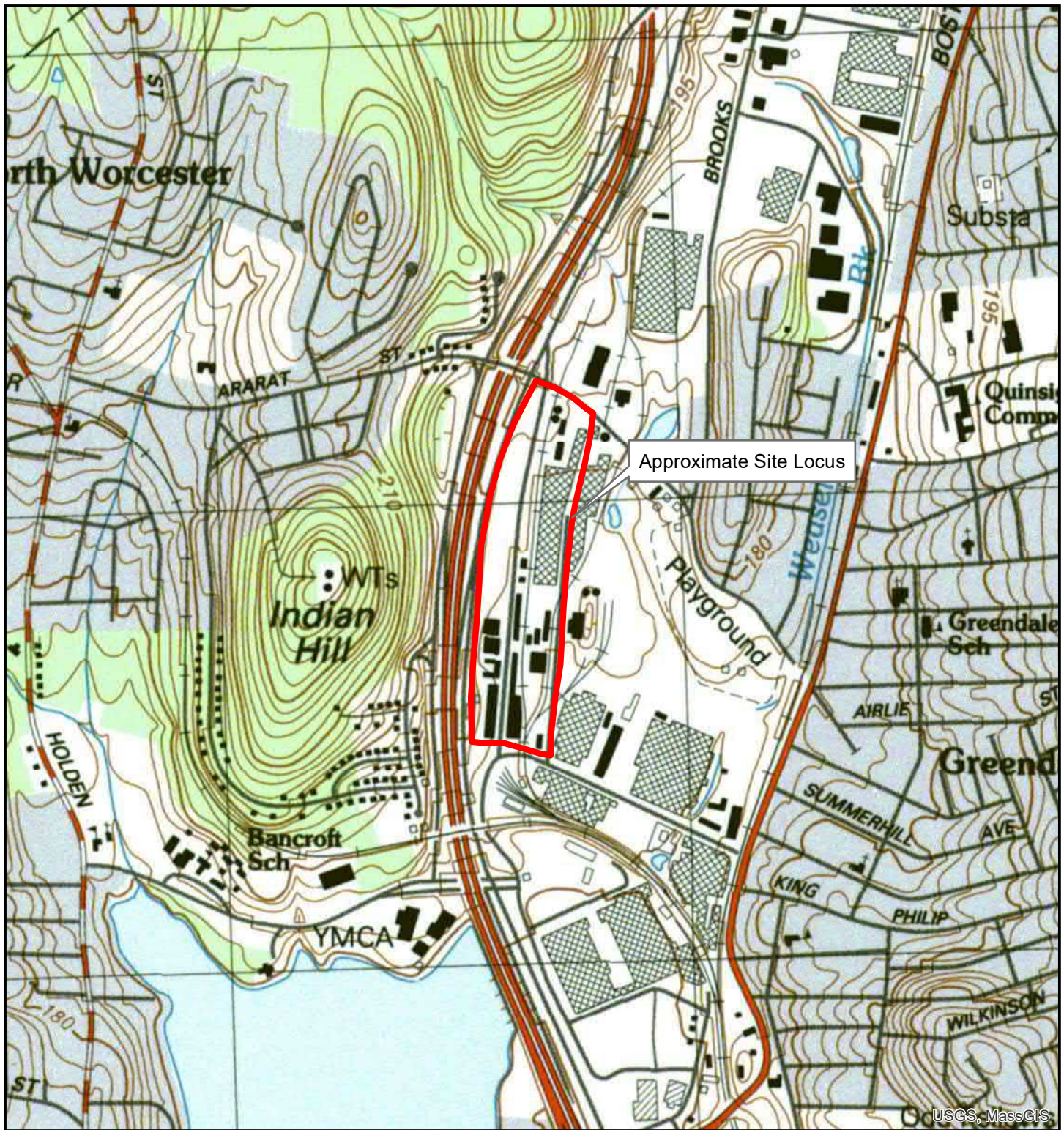
COMMUNITY	NUMBER	PANEL	SUFFIX
BOYLSTON, TOWN OF	250297	0610	E
HOLDEN, TOWN OF	250309	0610	E
SHREWSBURY, TOWN OF	250332	0610	E
WEST BOYLSTON,	250345	0610	E
WORCESTER, CITY OF	250349	0610	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
25027C0610E
EFFECTIVE DATE
JULY 4, 2011
Federal Emergency Management Agency

APPENDIX C

APPENDIX A – Site Maps



USGS, MassGIS



Figure 1
Site Locus
Saint-Gobain SWPPP
Worcester, MA

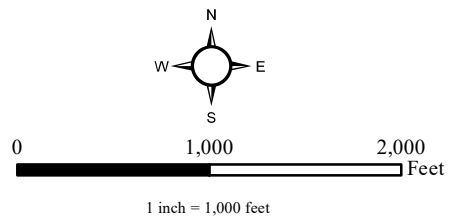
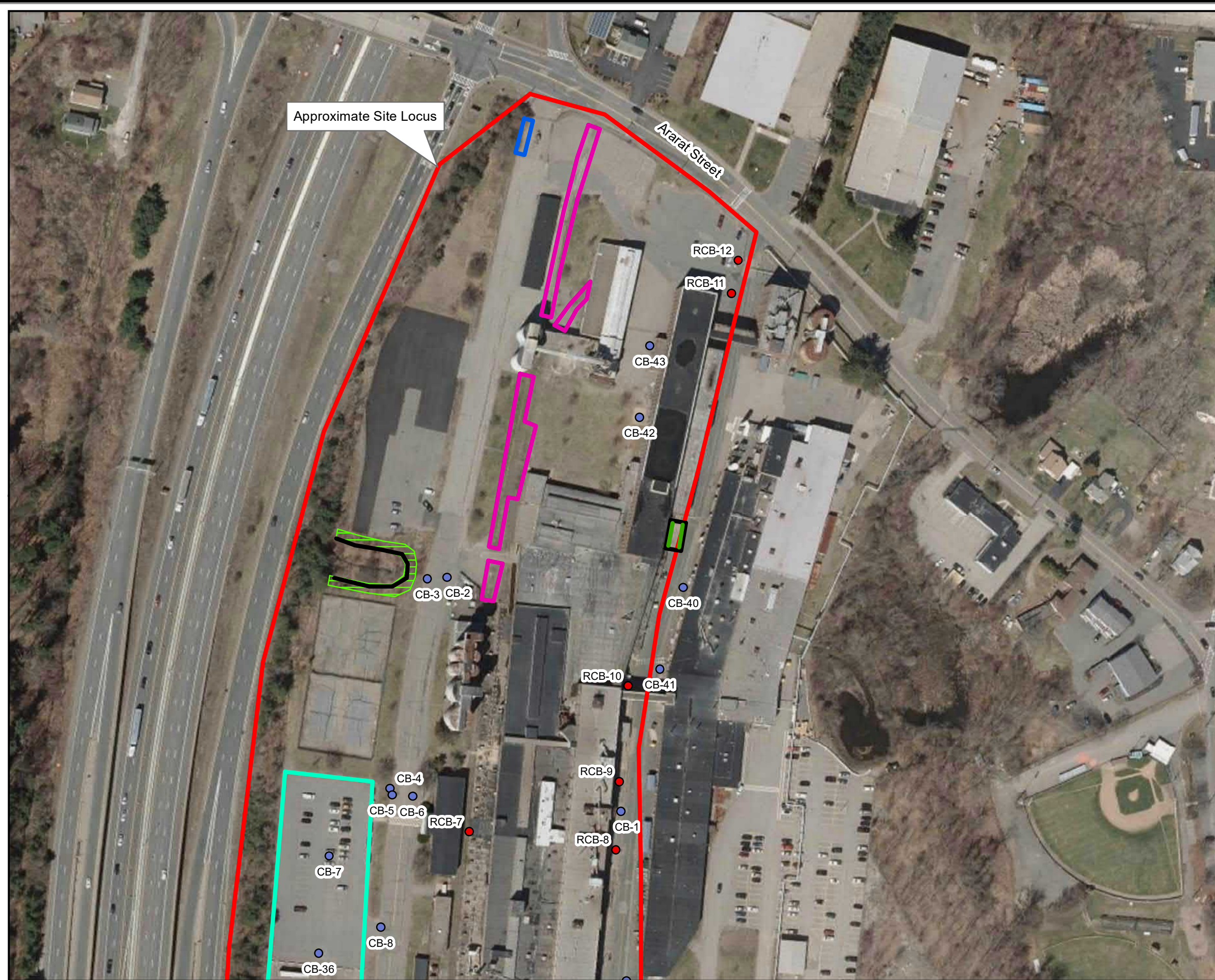
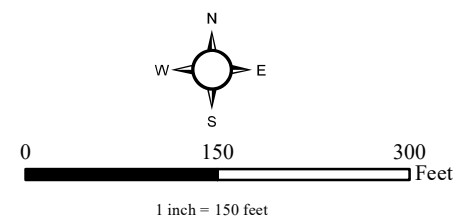


Figure 2a
Site Map
Saint-Gobain SWPPP
Worcester, MA



Site Map Legend

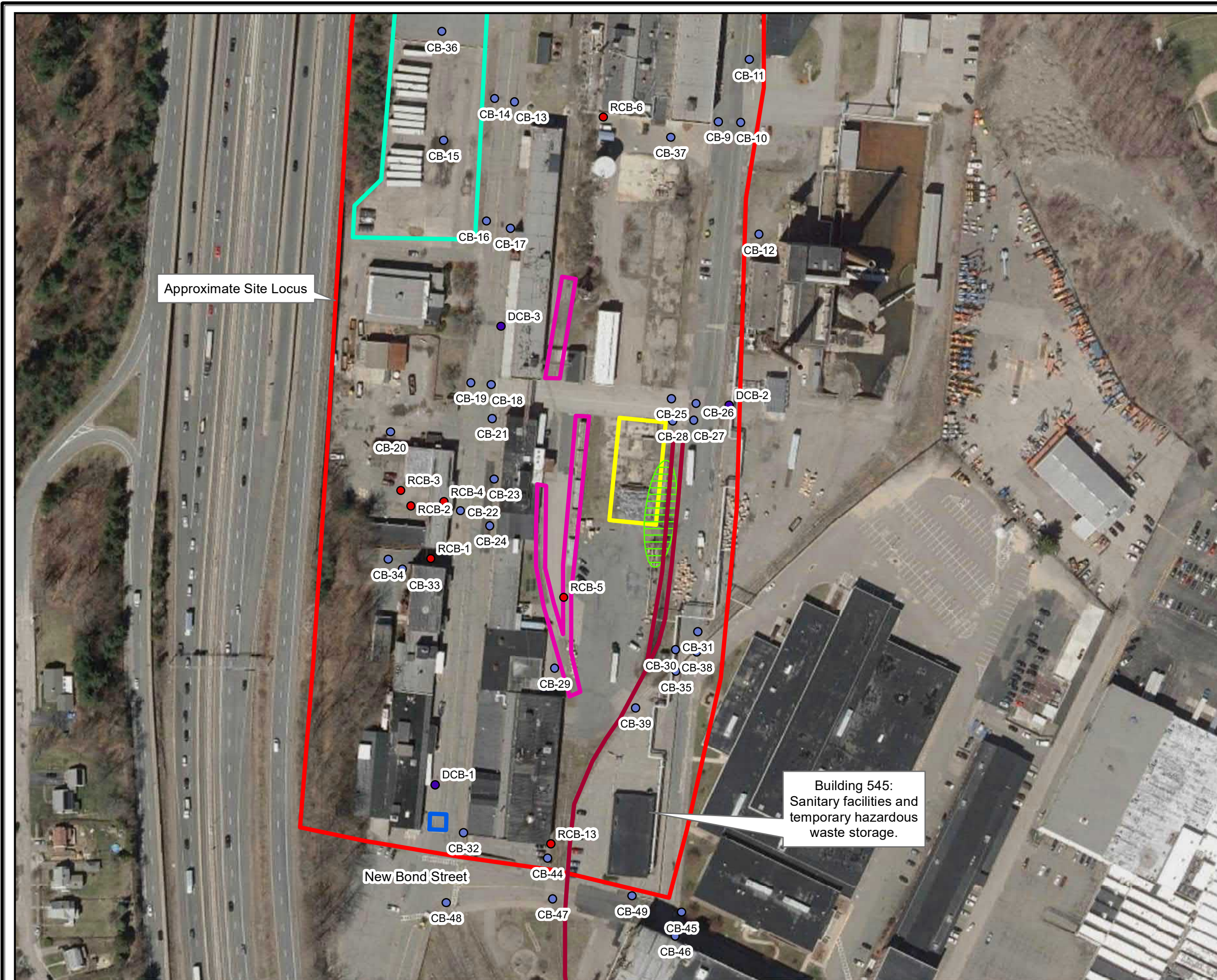
- Catch Basins
- Above Ground Erosion Controls
- Track Rehabilitation
- Equipment Stockpile
- Water Utility Access
- Track Demolition
- Material Stockpile
- Vegetation Removal
- Double Catch Basins
- Round Catch Basins
- Trench Drain



Data Source: MassGIS USGS Color Ortho Imagery (2014), MassDEP Wetlands (1:12000) (2009), NHESP Potential Vernal Pools (2000), NHESP Certified Vernal Pools, NHESP Priority Habitats of Rare Species (2008), NHESP Estimated Habitats of Rare Species (2008), Areas of Critical Environmental Concern (2009), FEMA National Flood Hazard Layer (2014).

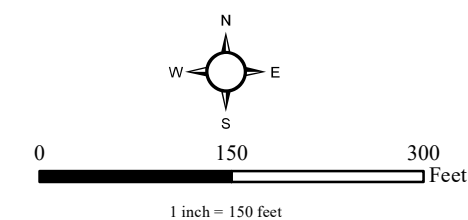


Figure 2b
Site Map
Saint-Gobain SWPPP
Worcester, MA



Site Map Legend

- Catch Basins
- Above Ground Erosion Controls
- Track Rehabilitation
- Equipment Stockpile
- Water Utility Access
- Track Demolition
- Material Stockpile
- Vegetation Removal
- Double Catch Basins
- Round Catch Basins
- Trench Drain



Data Source: MassGIS USGS Color Ortho Imagery (2014), MassDEP Wetlands (1:12000) (2009), NHESP Potential Vernal Pools (2000), NHESP Certified Vernal Pools, NHESP Priority Habitats of Rare Species (2008), NHESP Estimated Habitats of Rare Species (2008), Areas of Critical Environmental Concern (2009), FEMA National Flood Hazard Layer (2014).

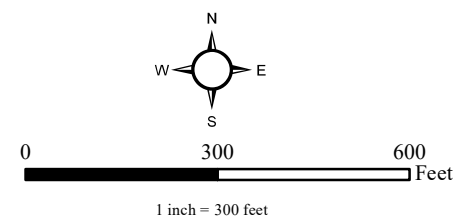


Figure 2c
Site Map
Saint-Gobain SWPPP
Worcester, MA



Site Map Legend

- Catch Basins
- Above Ground Erosion Controls
- Track Rehabilitation
- ▭ Equipment Stockpile
- ▭ Water Utility Access
- ▭ Track Demolition
- ▭ Material Stockpile
- ▭ Vegetation Removal
- Double Catch Basins
- Round Catch Basins
- Trench Drain



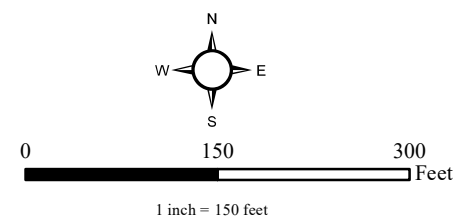
Data Source: MassGIS USGS Color Ortho Imagery (2014), MassDEP Wetlands (1:12000) (2009), NHESP Potential Vernal Pools (2000), NHESP Certified Vernal Pools, NHESP Priority Habitats of Rare Species (2008), NHESP Estimated Habitats of Rare Species (2008), Areas of Critical Environmental Concern (2009), FEMA National Flood Hazard Layer (2014).



Figure 3a
Building Map
Saint-Gobain SWPPP
Worcester, MA



- Building Map Legend**
- Round Catch Basins
 - Double Catch Basins
 - Catch Basins
 - Abatement and Remediation
 - Abatement, Remediation, and Demolition
 - Trench Drain



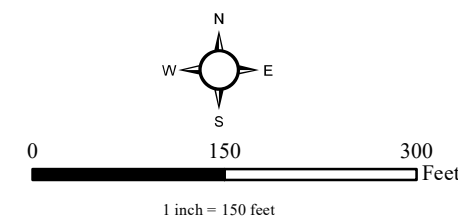
Data Source: MassGIS USGS Color Ortho Imagery (2014), MassDEP Wetlands (1:12000) (2009), NHESP Potential Vernal Pools (2000), NHESP Certified Vernal Pools, NHESP Priority Habitats of Rare Species (2008), NHESP Estimated Habitats of Rare Species (2008), Areas of Critical Environmental Concern (2009), FEMA National Flood Hazard Layer (2014).



Figure 3b
Building Map
Saint-Gobain SWPPP
Worcester, MA



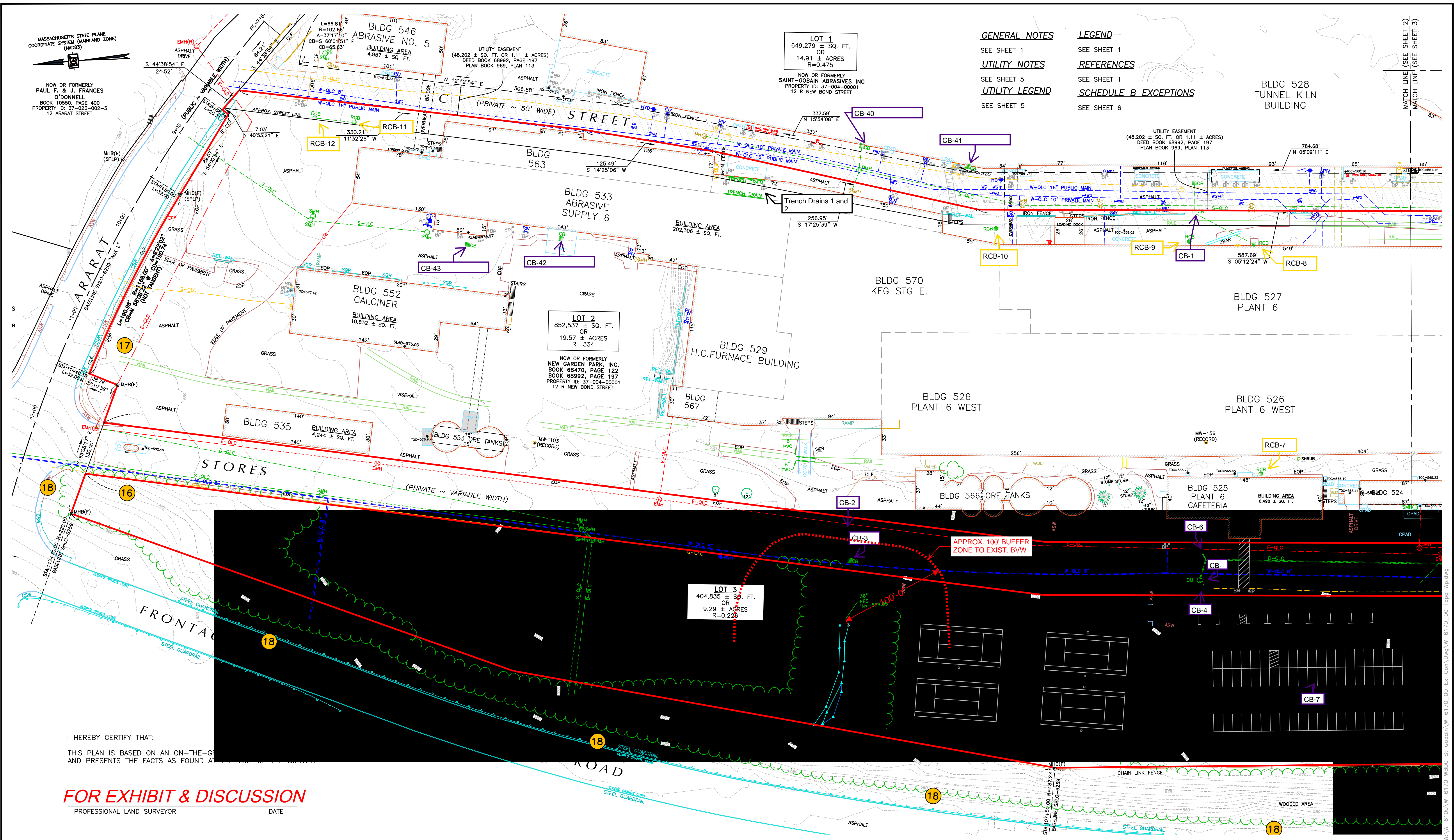
- Building Map Legend**
- Round Catch Basins
 - Double Catch Basins
 - Catch Basins
 - Abatement and Remediation
 - Abatement, Remediation, and Demolition



Data Source: MassGIS USGS Color Ortho Imagery (2014), MassDEP Wetlands (1:12000) (2009), NHESP Potential Vernal Pools (2000), NHESP Certified Vernal Pools, NHESP Priority Habitats of Rare Species (2008), NHESP Estimated Habitats of Rare Species (2008), Areas of Critical Environmental Concern (2009), FEMA National Flood Hazard Layer (2014).



Figure 4a - Plan of Land



GENERAL NOTES
 SEE SHEET 1
UTILITY NOTES
 SEE SHEET 5
UTILITY LEGEND
 SEE SHEET 5

LEGEND
 SEE SHEET 1
REFERENCES
 SEE SHEET 1
SCHEDULE B EXCEPTIONS
 SEE SHEET 6

MASSACHUSETTS STATE PLANE
 COORDINATE SYSTEM (MAINLAND ZONE)
 (NAD83)

NOW OR FORMERLY
 PAUL F. & J. FRANCES
 O'DONNELL
 BOOK 10550, PAGE 400
 PROPERTY ID: 37-023-002-3
 12 ARARAT STREET

LOT 1
 649,279 ± SQ. FT.
 OR
 14.91 ± ACRES
 R=0.475

NOW OR FORMERLY
 SAINT-GOBAIN ABRASIVES INC
 PROPERTY ID: 37-004-00001
 12 R NEW BOND STREET

LOT 2
 852,537 ± SQ. FT.
 OR
 19.57 ± ACRES
 R=.334

NOW OR FORMERLY
 NEW GARDEN PARK, INC.
 BOOK 88470, PAGE 122
 BOOK 68992, PAGE 197
 PROPERTY ID: 37-004-00001
 12 R NEW BOND STREET

LOT 3
 404,835 ± SQ. FT.
 OR
 9.29 ± ACRES
 R=0.226

I HEREBY CERTIFY THAT:
 THIS PLAN IS BASED ON AN ON-THE-GROUND SURVEY AND PRESENTS THE FACTS AS FOUND AT THE TIME OF THE SURVEY.

FOR EXHIBIT & DISCUSSION

PROFESSIONAL LAND SURVEYOR _____ DATE _____

RESEARCH: DEH/JNT	ALTA/NSPS LAND TITLE SURVEY PLAN OF LAND IN WORCESTER, MASSACHUSETTS WORCESTER COUNTY - SOUTH DISTRICT
FIELD: MTG/PJG	
SCALE: 1" = 40'	
© 2023 DGT ASSOCIATES	

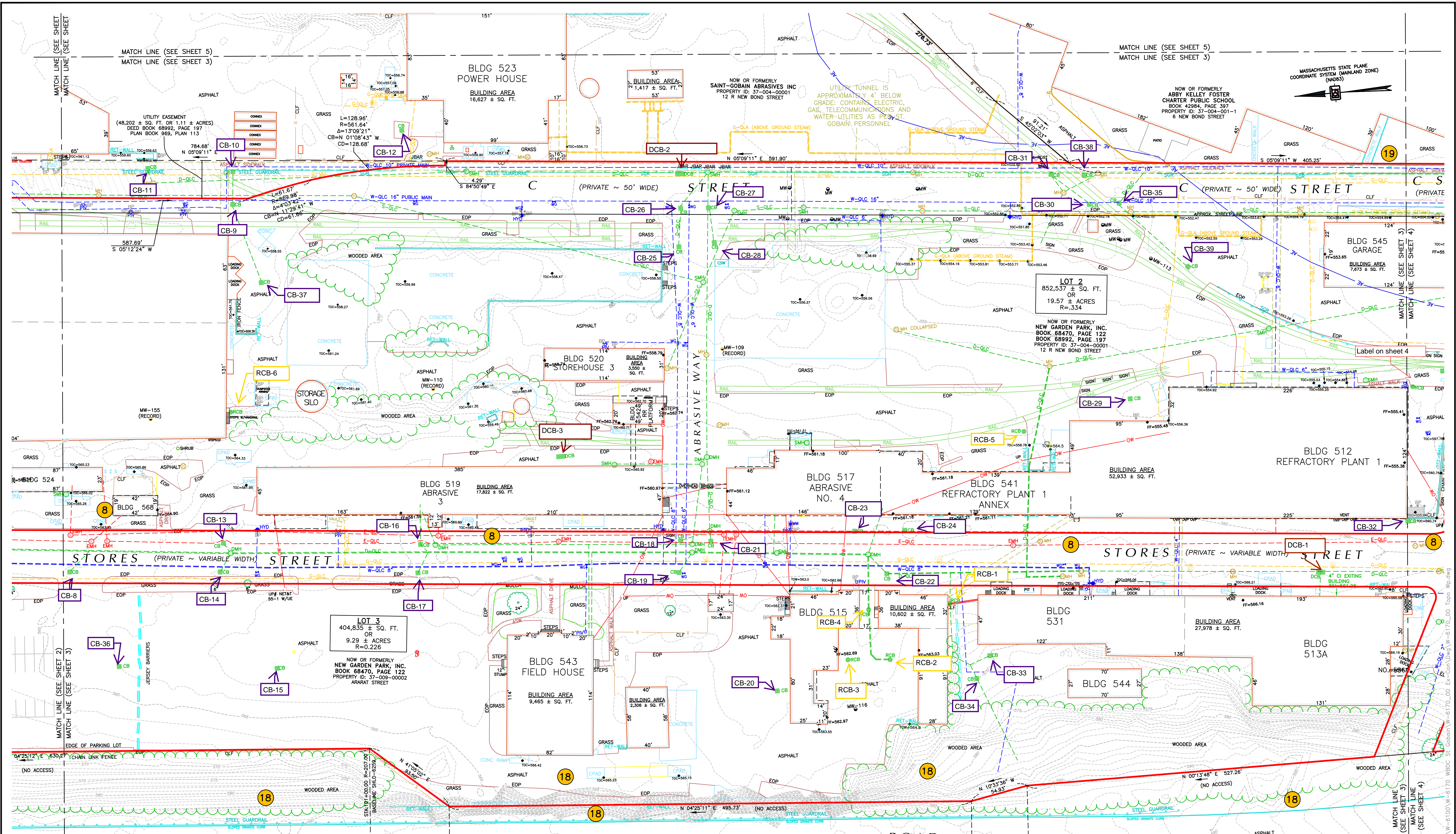
811

SCALE: 1" = 40'

PREPARED FOR: NEW GARDEN PARK, INC. 89 SHREWSBURY STREET, SUITE 300 WORCESTER, MA 01604	CALCULATIONS: DEH DRAFTING: JNT/ECD CHECK: AJL PROJ. MANAGER A. JOHN LLOYD, PLS
---	--

PREPARED BY: DGT Associates Surveying & Engineering Worcester • Framingham • Boston 255 Park Avenue, Worcester, MA 01609 508-762-9470 www.DGTassociates.com	DATE: 10-APR-2023 PROJECT NO.: W-6170.00 CRD FILE: W-6170_00.Srv+Wp SHEET 2 OF 7
---	---

Figure 4b - Plan of Land



RESEARCH: DEH/JNT
 FIELD: MTG/PJG
 SCALE: 1" = 40'
 © 2023 DGT ASSOCIATES

**ALTA/NSPS LAND TITLE SURVEY
 PLAN OF LAND
 IN
 WORCESTER, MASSACHUSETTS
 WORCESTER COUNTY - SOUTH DISTRICT**

CALL DIG SAFE BEFORE YOU DIG

811

SCALE: 1" = 40'

40 0 20 40 80 160

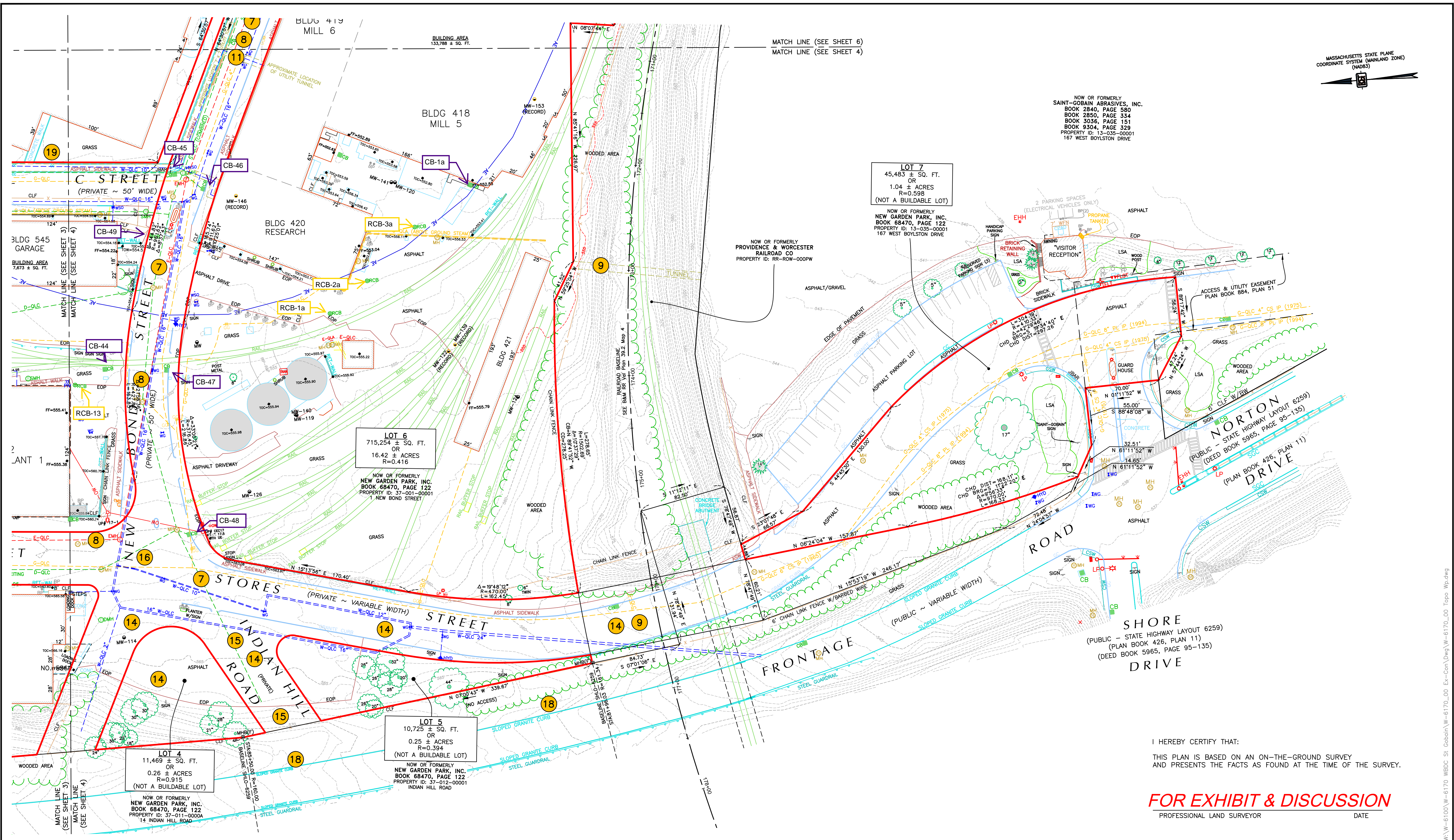
PREPARED FOR:
**NEW GARDEN PARK, INC.
 89 SHREWSBURY STREET, SUITE 300
 WORCESTER, MA 01604**

RESEARCH: DEH/JNT
 DRAFTING: JNT/ECD
 CHECK: AJL
 PROJ. MANAGER: A. JOHN LLOYD, PLS

PREPARED BY:
**DGT Associates
 Surveying &
 Engineering**
 Worcester • Framingham • Boston
 255 Park Avenue, Worcester, MA 01609
 508-762-9470 www.DGTassociates.com

DATE: 10-APR-2023
 PROJECT NO.: W-6170.00
 CRD FILE: W-6170_00_Srv+WP
 SHEET 3 OF 6

Figure 4c - Plan of Land



I HEREBY CERTIFY THAT:
THIS PLAN IS BASED ON AN ON-THE-GROUND SURVEY
AND PRESENTS THE FACTS AS FOUND AT THE TIME OF THE SURVEY.

FOR EXHIBIT & DISCUSSION

PROFESSIONAL LAND SURVEYOR DATE

RESEARCH: DEH/JNT	ALTA/NSPS LAND TITLE SURVEY PLAN OF LAND IN WORCESTER, MASSACHUSETTS WORCESTER COUNTY - SOUTH DISTRICT
FIELD: MTG/PJG	
SCALE: 1" = 40'	
© 2023 DGT ASSOCIATES	

CALL DIG-SAFE BEFORE YOU DIG

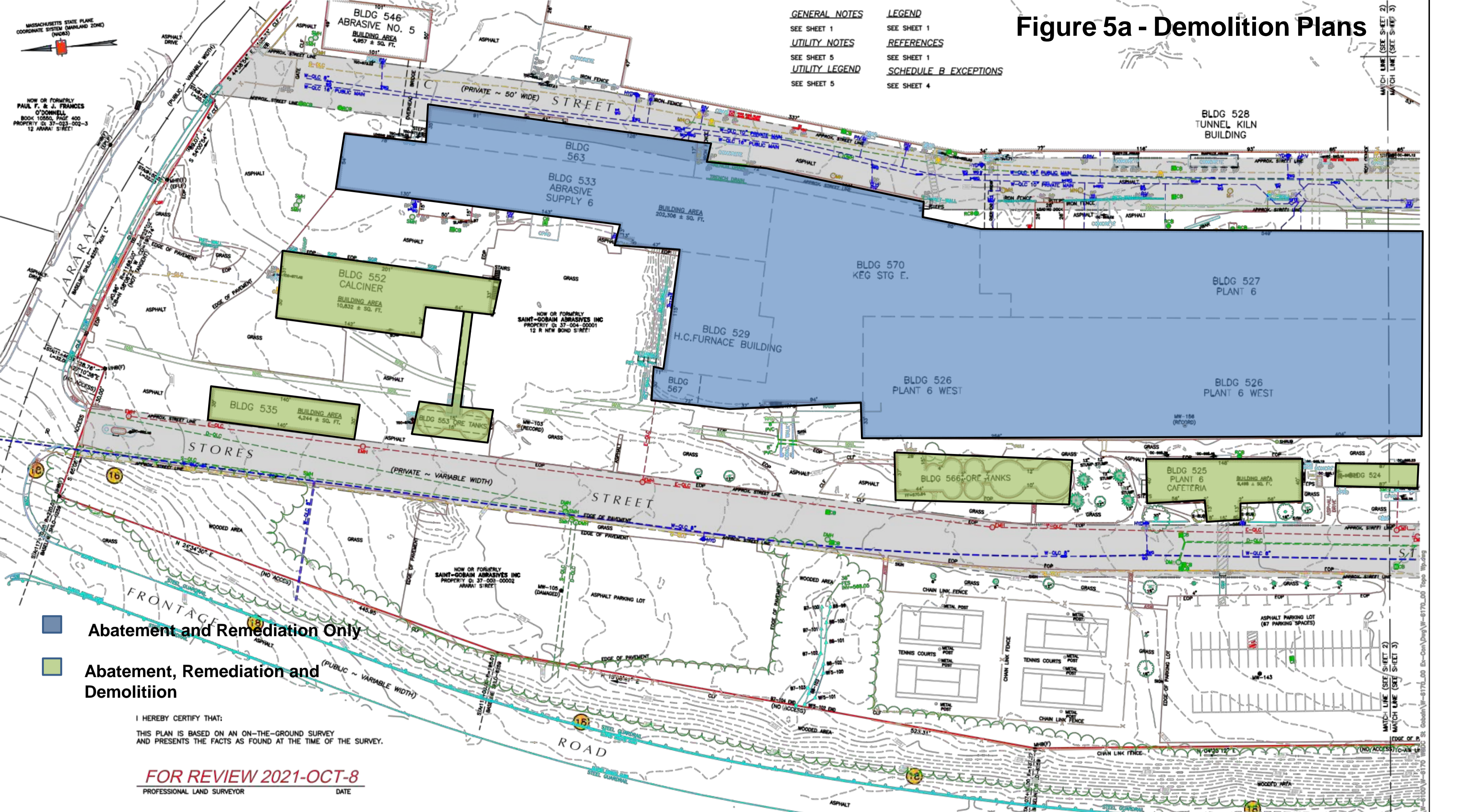
SCALE: 1" = 40'

PREPARED FOR: NEW GARDEN PARK, INC. 89 SHREWSBURY STREET, SUITE 300 WORCESTER, MA 01604	CALCULATIONS: DEH DRAFTING: JNT/ECD CHECK: AJL PROJ. MANAGER A. JOHN LLOYD, PLS	PREPARED BY: DGT Associates Surveying & Engineering Worcester • Framingham • Boston 255 Park Avenue, Worcester, MA 01609 508-762-9470 www.DGTassociates.com	DATE: 10-APR-2023 PROJECT NO.: W-6170.00 CRD FILE: W-6170_00.Srv+Wp SHEET 4 OF 7
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Figure 5a - Demolition Plans

GENERAL NOTES
 SEE SHEET 1
UTILITY NOTES
 SEE SHEET 5
UTILITY LEGEND
 SEE SHEET 5

LEGEND
 SEE SHEET 1
REFERENCES
 SEE SHEET 1
SCHEDULE B EXCEPTIONS
 SEE SHEET 4



MASSACHUSETTS STATE PLANE COORDINATE SYSTEM (MAINLAND ZONE) (NAD83)

NOW OR FORMERLY PAUL F. & J. FRANCES O'DONNELL BOOK 10550, PAGE 400 PROPERTY D: 37-023-002-3 12 ARARAY STREET

MATCH LINE (SEE SHEET 2)
 MATCH LINE (SEE SHEET 3)

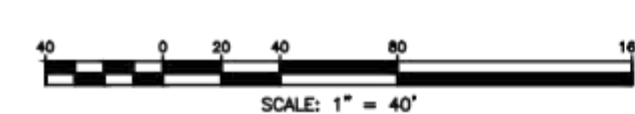
Abatement and Remediation Only

Abatement, Remediation and Demolition

I HEREBY CERTIFY THAT:
 THIS PLAN IS BASED ON AN ON-THE-GROUND SURVEY AND PRESENTS THE FACTS AS FOUND AT THE TIME OF THE SURVEY.

FOR REVIEW 2021-OCT-8
 PROFESSIONAL LAND SURVEYOR DATE

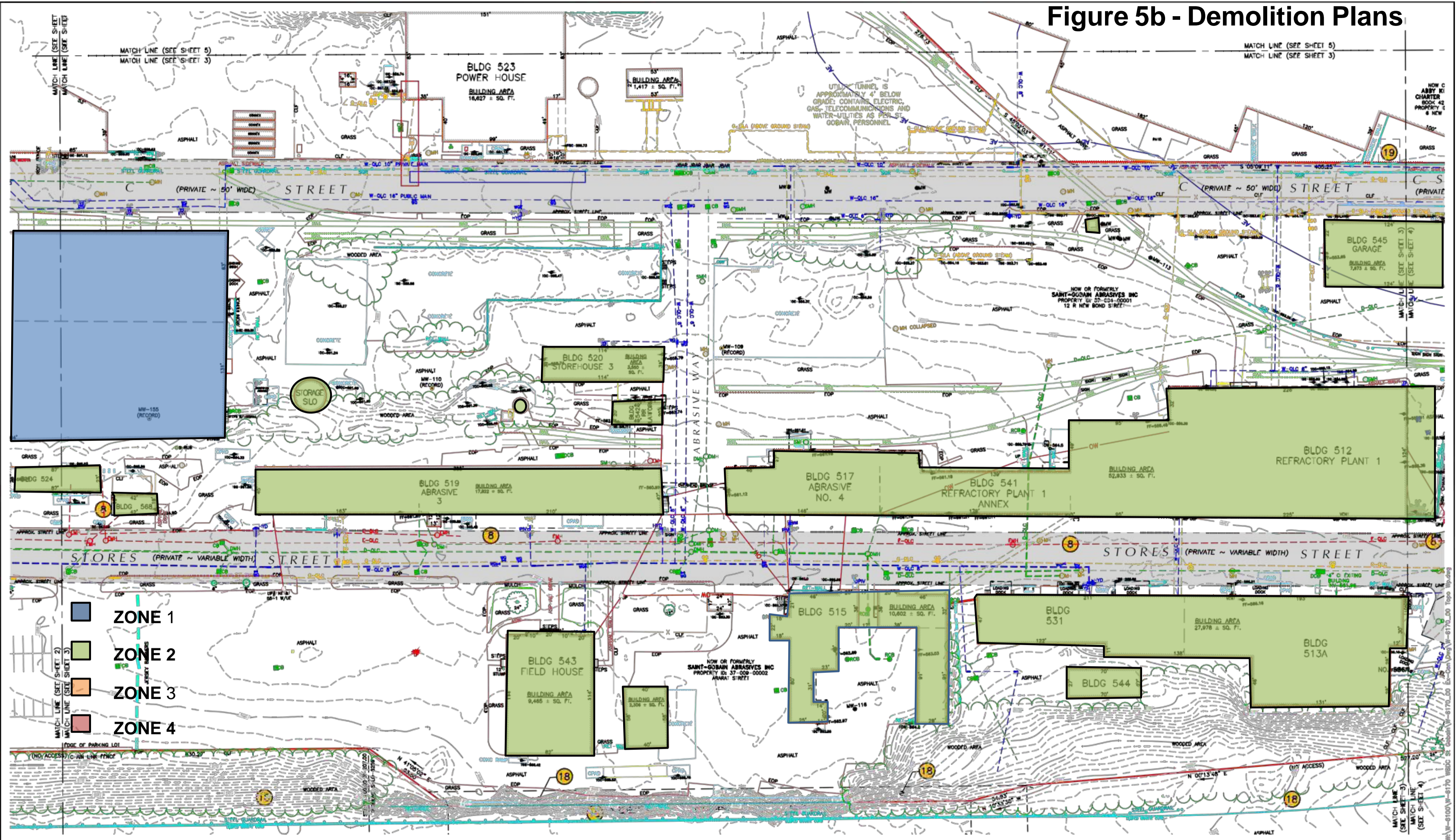
RESEARCH:
 FIELD:
 SCALE: \$ / \$ 16P6 / \$ 1 , / (6859 (< P / \$ 1 OF / \$ 1 , 1 : 05C(6 (5 0\$66\$C+86(6 : 05C(6 (5 CO81 < 608 + , 6 5,C



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CALCULATIONS:	PREPARED BY:	DATE:
DRAFTING:	 DGT Associates Surveying & Engineering Worcester • Framingham • Boston	PROJECT NO.:
CHECK:		CRD FILE:
PROJ. MANAGER:		SHEET:

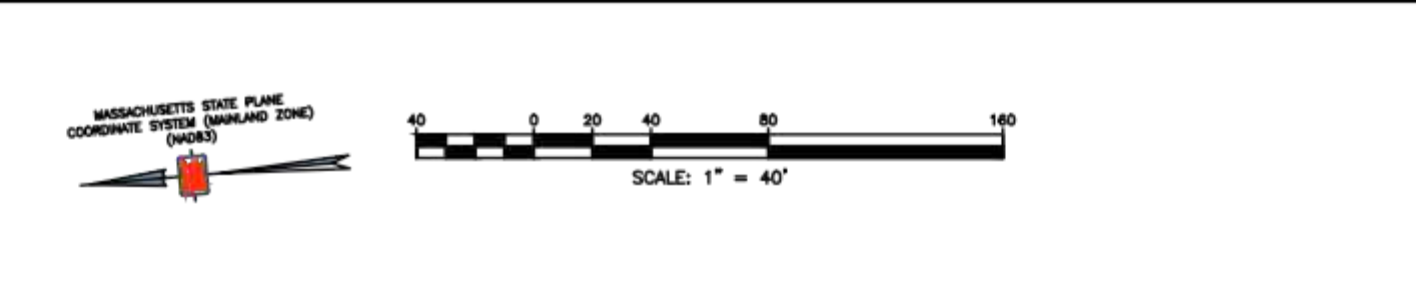
Figure 5b - Demolition Plans



- ZONE 1
- ZONE 2
- ZONE 3
- ZONE 4

RESEARCH: DEH/JNT
 FIELD: MTG/PJG
 SCALE: 1" = 40'
 © 2021 DGT ASSOCIATES

**ALT/NSPS LAND TITLE SURVEY
 PLAN OF LAND
 IN
 WORCESTER, MASSACHUSETTS
 WORCESTER COUNTY - SOUTH DISTRICT**



SAINT-GOBAIN ABRASIVES, INC.

PREPARED FOR:
 NEW GARDEN PARK, INC.
 89 SHREWSBURY STREET, SUITE 300
 WORCESTER, MA 01604

CALCULATIONS: DEH
 DRAFTING: JNT/ECD
 CHECK: AJL
 PROJ. MANAGER: A. JOHN LLOYD, PLS

PREPARED BY:

DGT Associates
 Surveying & Engineering
 Worcester • Framingham • Boston
 255 Park Avenue, Worcester, MA 01609
 508-762-9470 www.DGTAssociates.com

DATE: 8-OCT-2021
 PROJECT NO.: W-6170.00
 CRD FILE: W-6170_00 Sn-Wp
 SHEET 3 OF 6

Figure 6
Historic Resources Map
Saint-Gobain
Worcester, Massachusetts



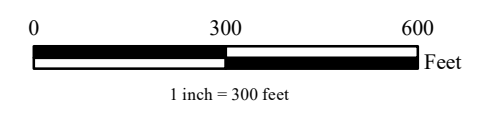
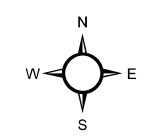
Legend

- Nat'l Register of Historic Places
- Inventoried Area

LEGEND

- NRHP

Approximate Project Locus

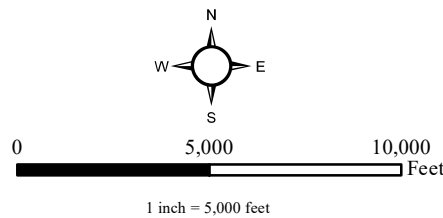


Data Source: MassGIS Orthophoto (2013/2014); MassGIS Data: MHC Historic Inventory





Figure 7
Discharge Location Map
Saint-Gobain SWPPP
Worcester, MA



APPENDIX D



**Resource Area Boundary Delineation
Saint Gobain – New Bond Street & Stores Street
Map 37, Parcels-IDs 01-001, 04-001, and 09-002
Worcester, Massachusetts**

March 6, 2020

On January 24, 2020 and March 4, 2020, BETA Group, Inc. (BETA) identified and delineated resource area boundaries on and within 100 feet of a portion of the Saint Gobain campus located off New Bond Street and Stores Street in Worcester, Massachusetts. This report describes resource areas Subject to Protection under the Massachusetts Wetlands Protection Act (M.G.L. Chapter 131 Section 40 - *the Act*), the federal Clean Water Act (33 U.S.C. §1251 et seq (1972)), the Massachusetts Clean Waters Act (MGL Chapter 21 Section 26-53) and the City of Worcester’s Wetland Protection Ordinance (Part I, Chapter 6) that exist on and within 100 feet of the Site and methodologies used to delineate their boundaries.

Site Description

The Site consists of three (3) parcels, referenced by the Worcester Assessor’s Office as Map 37, Parcel-IDs 1-1, 4-1, and 9-2, located off New Bond Street and Stores Street, totaling approximately 61 acres of land. The parcels are part of the Saint Gobain campus and are improved by several large warehouses and factory buildings, paved parking lots, roadways, and railroads (Figure 1 – Site Locus Map).

The Site’s topography is relatively flat with only minor elevation changes along the eastern and southeastern portions of the site near the wetland features. The Site is bound by Interstate 190 to the west, Route 12 (West Boylston Street) to the east, a railroad (owned by the Providence & Worcester Railroad Company) to the south, and residential, commercial, and recreational development to the north/northeast (Figure 2 – Environmental Resources Map). The Abby Kelley Foster Charter Public School is also located along New Bond Street immediately to the north of Map-Parcel-ID 37-1-1.

According to the USDA Natural Resources Conservation Service – Soil Survey, mapped soils on the Site and in the vicinity of the Site are classified as Udorthents and Urban land. Our field work generally confirmed the soil types within the Site. The *Custom Soil Resource Report for Worcester County, Northeastern Part, Massachusetts* is attached.

State jurisdictional resource areas identified on the Site include Bank (to intermittent and perennial streams), Bordering Vegetated Wetlands (BVW), Land Under Water (LUW), Bordering Land Subject to Flooding (BLSF), and 25-foot Riverfront Area (RA) as measured from the MAHW to perennial stream. The MassGIS database was used as the initial step in identifying critical areas on or within proximity of the Site that would be examined more closely if construction activities are proposed. The table below describes selected environmentally critical categories as determined through MassGIS.

Table 1: Selected MassGIS Environmental Data Layers

Mapped Resource On or Within Proximity to Site	Yes	No
Area of Critical Environmental Concern		✓
NHESP Certified Vernal Pool		✓
NHESP Potential Vernal Pool		✓
NHESP Established Habitat of Rare Wildlife		✓
NHESP Priority Habitat of Rare Species		✓
Outstanding Resource Waters		✓
FEMA Flood Zones	✓	
Surface Water Protection Area		✓
Interim Wellhead Protection Area		✓
Zone II Wellhead Protection Area		✓

Source: MassGIS

Jurisdictional Wetland Resource Areas – Massachusetts Wetlands Protection Act

A Site inspection was conducted by BETA’s Wetland Scientists on January 24, 2020 to identify and delineate the boundary of existing resource areas on the Site and in the immediate vicinity of the Site. Resource area boundaries were identified and delineated in accordance with methods developed by the Massachusetts Department of Environmental Protection’s *Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act*, dated 1995, as well as definitions set forth in the Wetland Regulations, 310 CMR 10.00. Several areas Subject to Protection under the Act exist on the site and are described below.

Bank (to intermittent stream) – 310 CMR 10.54

According to 310 CMR 10.54(2), the definition of a Bank is the portion of the land surface which normally abuts and confines a water body, occurring between a water body and a vegetated bordering wetland and adjacent floodplain, or, in the absence of these, occurring between a water body and an upland. The upper boundary of a Bank is the first observable break in the slope or the mean annual flood level, whichever is lower.

BETA identified the resource Bank to two (2) un-named intermittent streams located onsite. The Banks to the identified intermittent streams, located on the Site, were delineated in the field with blue flagging. “Stream-Stats” analyses were completed for all streams flowing onsite to determine whether they could meet the definition of perennial under the Act at 310 CMR 10.58(2)(1). Based on this this analysis, neither stream has the requisite watershed size or flow rate at the 99% flow duration to be considered a perennial stream. (See attached).

Table 2: Bank to Intermittent Stream Boundary Description

Flag Series	Location	Description / Notes
<i>B1-100 Series B1-95 to B1-107</i>	Near the northeastern corner of the study area	The western Bank of this un-named intermittent stream was flagged as Bank Series <i>B1-100</i> . The six- to eight-foot wide channel, with a sandy/rocky substrate, flows southerly under Ararat Street onto the Site. Observed water within the channel ranged from one inch to two feet deep on January 24, 2020. The Banks of the stream are generally vegetated with multiflora rose (<i>Rosa multiflora</i>) and Japanese barberry (<i>Berberis thunbergii</i>), both of which are considered an invasive species



Flag Series	Location	Description / Notes
		Downstream of this stream segment, it becomes perennial. The perennial segment of the stream was delineated as the B1-200 series (See Table 3).
<p><i>B7 and B8 Series</i> <i>B7-100 to B7-104</i> And <i>B8-99 to B8-104</i></p>	<p>Along the western Site limits, between the tennis courts and parking lot</p>	<p>The northern (<i>B7 Series</i>) and southern (<i>B8 Series</i>) Banks of this un-named intermittent stream convey water easterly from the I-190 right-of-way within a three to four-foot wide channel, having a sandy/rocky substrate. The WF5 BVW borders this drainage channel, making it Subject to Jurisdiction under the Act. Observed water within the channel ranged from two to six inches deep. The Banks of the stream are generally vegetated with speckled alder (<i>Alnus incana</i>) and elderberry (<i>Sambucus canadensis</i>).</p> <p>This stream flows into the <i>B1 Series</i> Stream immediately upstream of the point where the stream becomes perennial.</p>

Bank (to perennial stream) – 310 CMR 10.54

BETA identified the resource Bank to two (2) perennial streams, Weasel Brook and an un-named perennial stream. Perennial streams are natural flowing bodies of water that flow throughout the year and are afforded additional Protections under the Rivers Protection Act (see Riverfront Area discussion below). The Banks of the perennial streams were delineated in the field with blue flagging.

Table 3: Bank to Perennial Stream Boundary Description

Flag Series	Waterway Name	Description / Notes
<p><i>B1-200 Series</i> <i>B1-200 to B1-209</i> And <i>B2 Series</i> <i>B2-100 to B2-107</i></p>	<p>Un-named</p>	<p>The western Bank/Mean Annual High Water of this un-named perennial stream was flagged as Bank Series <i>B1-200</i>. This stream is offsite, however, the 100-foot Buffer Zone and Riverfront Area as measured from the MAHW may extend onto the Site. This stream is the same stream as the <i>B1-100 Series</i>, however, the <i>B1-200</i> series portion of the stream was flagged from the point where the stream becomes perennial (see Streamstats report attached).</p> <p>This stream becomes perennial at the point where the <i>B7/B8 Stream</i> discharges into the <i>B1</i> stream. Observed water within the channel ranged from two to three feet deep on January 24, 2020. The Banks of the stream are vegetated by the same species as the <i>B1-100 Series</i>.</p> <p>The B2 flag series delineates a wide section of the <i>B1 Series</i> perennial stream where although ponded¹, likely exhibits riverine flow characteristics. Resource areas protected for both waterways and water bodies include Bank and LUW. No outlet of this area was observed but could exist below the water’s surface.</p>

¹ This ponded area is too small to meet the regulatory definition of a pond under 310 CMR 10.04 (the area is approximately 6,000 square feet, therefore it is less than 10,000 square feet).



Flag Series	Waterway Name	Description / Notes
		<p>The Bank of the ponded area is vegetated with multiflora rose, broad-leaved cattail (<i>Typha latifolia</i>), and poison ivy (<i>Toxicodendron radicans</i>). Water within the ponded area was frozen on 1/24/2020 so it is unclear how deep the water was during the delineation.</p>
<p><i>B3 through B6 Series</i> <i>B3-100 to B3-112</i> <i>B4-100 to B4-115</i> <i>B5-100 to B5-105</i> & <i>B6-100 to B1-106</i></p>	<p>Weasel Brook</p>	<p>The Banks of the primary thread of Weasel Brook, a perennial stream/river, were delineated as the <i>B3 Series</i> (northern Bank) and <i>B4 Series</i> (southern Bank), and a branch of the river was delineated as the <i>B5 Series</i> (southern Bank) and <i>B6 Series</i> (northern Bank). Upstream and downstream of the delineated area, Weasel Brook flows within culverts greater than 200 feet in length².</p> <p>The Banks of both the <i>B3/B4</i> and <i>B5/B6 Series</i> streams are generally vegetated with broad-leaved cattail, a native species, and Japanese knotweed (<i>Fallopia japonica</i>), an invasive species..</p> <p>The streambed of the primary thread of Weasel Brook consisted of silt / sediment and the water within the 15- to 20-foot wide channel was approximately four feet deep on 1/24/2020.</p> <p>The five to ten-foot branch of Weasel Brook had a sandy/rocky substrate and the water within the channel was approximately six-inches to a foot deep.</p>

Bordering Vegetated Wetlands – 310 CMR 10.55

According to 310 CMR 10.55(2), the definition of BVW are freshwater wetlands which border on creeks, rivers, streams, ponds and lakes and are areas where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants. The boundary of BVW is the line within which 50% or more of the vegetation community consists of wetland indicator plants and saturated or inundated conditions exist. BETA identified six (6) areas of BVW on and in proximity of the Site as described below.

Table 4: BVW Boundary Description

Flag Series	Location	Description / Notes
<p><i>WF1 Series</i> <i>WF1-100</i> and <i>WF2 Series</i> <i>WF2-100 to WF2-106</i></p>	<p>Located along the western Banks of the <i>B1 Series</i> stream</p>	<p>The <i>WF1</i> and <i>WF2 Series</i> wetlands border the western Banks of the <i>B1 Series</i> stream. These BVWs are forested wetlands primarily vegetated by American elm (<i>Ulmus americana</i>) and red maple (<i>Acer rubrum</i>) in the canopy and silky dogwood (<i>Cornus amomum</i>) in the shrub layer. Both wetland boundaries were established based on evidence of hydrology (staining and saturation), presence of hydrophytic vegetation, and a defined topographic change.</p>

² 310 CMR 10.58(2)(a)3 – “When a river runs through a culvert more than 200 feet in length, the Riverfront Area stops at a perpendicular line at the upstream end of the culvert and resumes at the downstream end.”

Flag Series	Location	Description / Notes
		The upland areas adjacent to the <i>WF1</i> and <i>WF2 Series</i> BVW were vegetated with staghorn sumac (<i>Rhus typhina</i>), multiflora rose, and red oak (<i>Quercus rubra</i>).
<p><i>WF3 Series</i> <i>WF3-100 to WF3-105</i> And <i>WF4 Series</i> <i>WF4-100 to BF4-102</i></p>	<p>Located along the northern and southern Banks of Weasel Brook</p>	<p>The <i>WF3</i> and <i>WF4 Series</i> wetlands border the exterior Banks of Weasel Brook. These BVWs are emergent aquatic wetlands. These wetland boundaries were established based on evidence of hydrology (staining and saturation), presence of hydrophytic vegetation primarily consisting of broad-leaved cattail, and a defined change in topography.</p> <p>An area of upland, vegetated with Japanese knotweed and staghorn sumac, is present within the <i>WF3</i> BVW. This upland area was flagged to be excluded from the wetland as UP1 through Up 3. See attached field sketch.</p>
<p><i>Wetland island between the B3 and B6 Series Banks</i></p>	<p>Located between the <i>B3</i> and <i>B6 Series</i> Banks of Weasel Brook</p>	<p>The BVW is located between the interior Banks of Weasel Brook. The BVW can be characterized as an emergent aquatic wetland. This area was confirmed as a wetland based on evidence of hydrology (staining, saturation, and inundation on aerials) and presence of hydrophytic vegetation primarily consisting of broad-leaved cattail.</p>
<p><i>WF5 Series</i> <i>WF5-100 to WF5-102</i></p>	<p>Located along the southern Bank of the <i>B7/B8 Series</i> intermittent stream</p>	<p>The <i>WF5 Series scrub shrub</i> wetland border the southern Bank of the <i>B7/B8 Series</i> stream. This BVW is primarily vegetated by speckled alder and silky dogwood in the shrub layer and sensitive fern (<i>Onoclea sensibilis</i>) in the herbaceous layer. Both wetland boundaries were established based on evidence of hydrology (staining and saturation), presence of hydrophytic vegetation, and a defined topographic change.</p> <p>The upland areas adjacent to this wetland are vegetated with staghorn sumac, multiflora rose, red oak, white pine (<i>Pinus strobus</i>), Norway maple (<i>Acer plantanoides</i>), paper birch (<i>Betula papyrifera</i>) and oriental bittersweet (<i>Celastrus orbiculatus</i>).</p>

Land Under Water – 310 CMR 10.56

According to 310 CMR 10.56(2), the definition of LUW is the land beneath any creek, river, stream, pond or lake and may be composed of organic muck or peat, fine sediments, rocks or bedrock. LUW exists between the Bank boundaries below the mean annual low water level of the perennial and intermittent streams onsite. The boundary of LUW is the mean annual low water level. This boundary is not delineated in the field.

Bordering Land Subject to Flooding– 310 CMR 10.57

According to the FEMA Flood Insurance Rate Map (FIRM) Numbers 25027C0616E (June 4, 2011), portions of the Site are located within FEMA Flood Zone AE, with a base flood elevation (BFE) of 555 Feet (Figure 3). Work conducted below the BFE is Subject to Jurisdiction under the Act.



Riverfront Area – 310 CMR 10.58

According to its definition at 310 CMR 10.58(3), the boundary of RA is the area of land between a River's mean annual high-water (MAHW) line measured horizontally outward from the River and a parallel line located 25 feet away³. A River is any natural flowing body of water that empties to any ocean, lake, pond, or other River flowing throughout the year and is either shown as perennial on the current United States Geological Survey or more recent map provided by the Department, or has a watershed size of at least 0.50 square miles and a predicted flow rate greater than or equal to 0.01 cubic feet per second at the 99% flow duration using the USGS Stream Stats Method.

The *B1-200 Series* portion of the *B1 Series* and Weasel Brook are perennial streams (River), as defined under the Act, with an associated 200-foot RA from the MAHW boundary. The RA should be measured 25 feet horizontally from the MAHW boundary as described below:

- *B1-200 Series*: The MAHW boundary of this stream is coincident with the Bank boundary.
- *Weasel Brook*: The MAHW boundary of Weasel Brook is the boundary of vegetated wetlands (*WF3 and WF4 Series*) except where there are no flagged wetlands along the Bank. In those locations, the MAHW is coincident with the Bank boundary.

Because Weasel Brook flows onto and off the Site via a culvert greater than 200 feet in length, the Riverfront Area associated with this river starts at a perpendicular line to the MAHW where the stream

Jurisdictional Wetland Resource Areas – City of Worcester

City of Worcester's Wetlands Protection Ordinance protects "any storm drain, catch basin, or other storm drain system component discharging into any lake, pond, river, stream or wetland," as well as extends jurisdiction to 100 feet from these structures.

According to Section 3(c) of the Ordinance, "any project to be serviced by a combined sewer system which is placed under jurisdiction of the Conservation Commission by its location within 100 feet of any storm drain, catch basin, or other storm drain system component discharging into any lake, pond, river, stream or wetland" shall not require a permit. The discharge points of the catch-basins located on or within 100-feet of the Site would need to be determined to consider the catch-basin Areas NOT Subject to Protection under the Ordinance.

The local Ordinance also protects all wetlands, including isolated freshwater wetlands, however, no isolated freshwater wetlands were identified onsite.

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

The pond, wetlands, and streams (perennial and intermittent) located on the Site are "Waters of the United States," and 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.

According to 33 CFR §328.3(c)(4), Vegetated Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under

³ In accordance with 310 CMR 10.58(2)(a)3.1., perennial streams in the City of Worcester have a 25-foot RA.

March 6, 2020

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normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” The wetland boundaries previously described in this report were delineated in accordance with this definition. The OHWM, as defined at 33 CFR §328.3(c)(6), is not delineated in the field at this time. Work conducted below the boundary of Vegetated Wetlands or OHWM is Subject to Jurisdiction under Section 404 of the Clean Water Act.

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

The limit of jurisdiction under Massachusetts Clean Waters 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.

Findings and Recommendations

BETA has identified areas Subject to Protection and/or Jurisdiction under the Massachusetts Wetlands Protection Act, the federal Clean Water Act, the Massachusetts Clean Waters Act, and the Worcester Wetlands Protection Ordinance located on or within 100 feet of the Site and has delineated the boundaries of Bank and BVW that exist on the Site. In order to definitively determine the extent of Conservation Commission jurisdiction, Army Corps of Engineers jurisdiction, and MassDEP jurisdiction, the boundary flags would need to be located and depicted on a to-scale plan of the Site.

We appreciate the opportunity to provide you with expert wetland services. If you have any questions or need further assistance, please do not hesitate to call us.

Sincerely,
BETA Group, Inc.

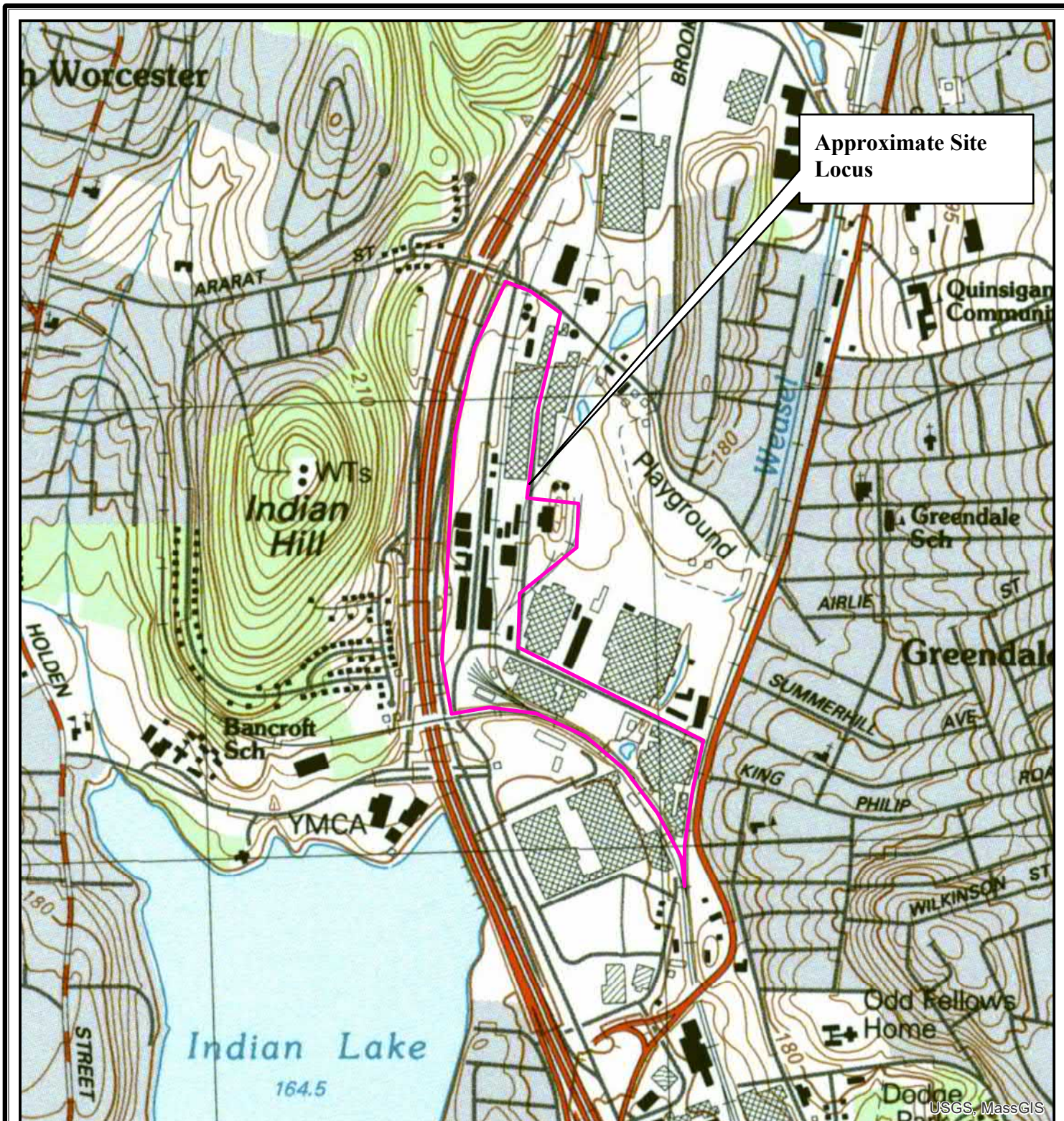


Laura Krause
Project Scientist



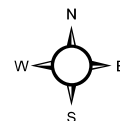
Marta J. Nover
Vice President

Attachments: Figure 1 - Site Locus
Figure 2 - Environmental Resources Map
Figure 3 - FEMA FIRMette
Photographic Documentation
Custom Soil Report for Worcester County, Massachusetts, Northeastern Part
Stream-Stats Reports for Onsite Streams
Delineation Sketch



IMPROVING COMMUNITIES TOGETHER

Figure 1
Site Locus
Saint Gobain
New Bond Street & Stores Street
Worcester, MA

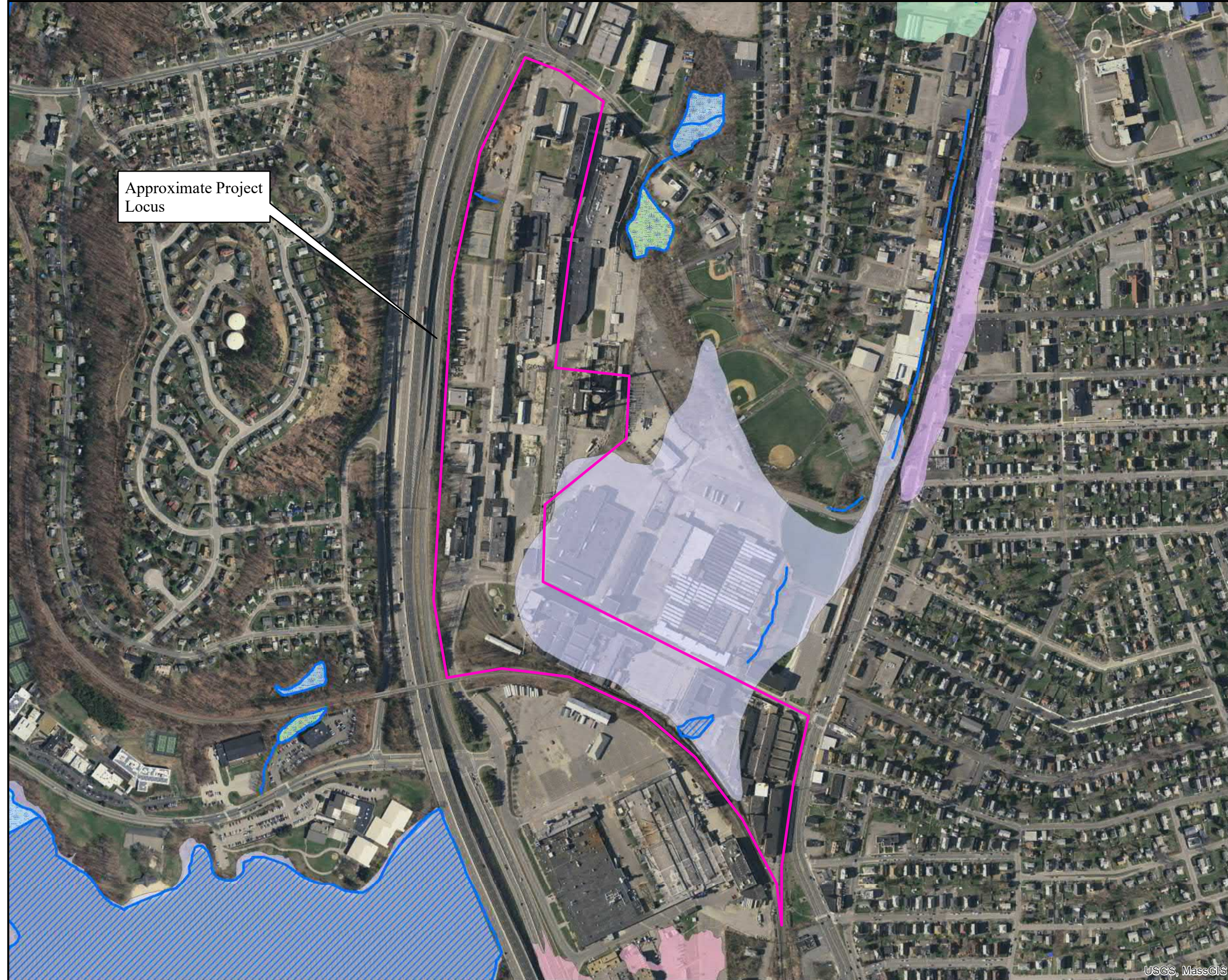


0 1,000 2,000 Feet

1 inch = 1,000 feet

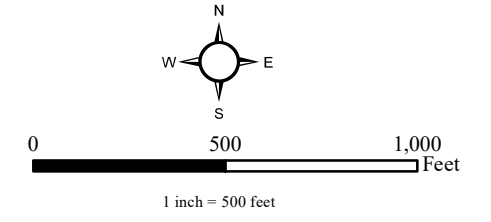
Data Source: MassGIS USGS Color Ortho Imagery (2009)

Figure 3
Environmental Resources Map
Saint Gobain
New Bond Street & Stores Street
Worcester, MA



Approximate Project Locus

- Environmental Resources Legend**
- MassDEP Hydrologic Feature
 - Marsh/Bog
 - Wooded marsh
 - Open Water
 - Area of Critical Environmental Concern (ACEC)
 - ZONE A
 - ZONE B
 - ZONE C
 - MassDEP Zone II
 - Mass DEP IWPA
 - Outstanding Resource Waters
 - NHESP Potential Vernal Pool
 - NHESP Certified Vernal Pool
 - NHESP Estimated Habitat of Rare Wildlife
 - NHESP Priority Habitat of Rare Species
- Flood Zone Type**
- A
 - AE
 - AH
 - AO
 - AREA NOT INCLUDED
 - D
 - No DFIRM – Paper FIRMs in Effect
 - VE
 - X



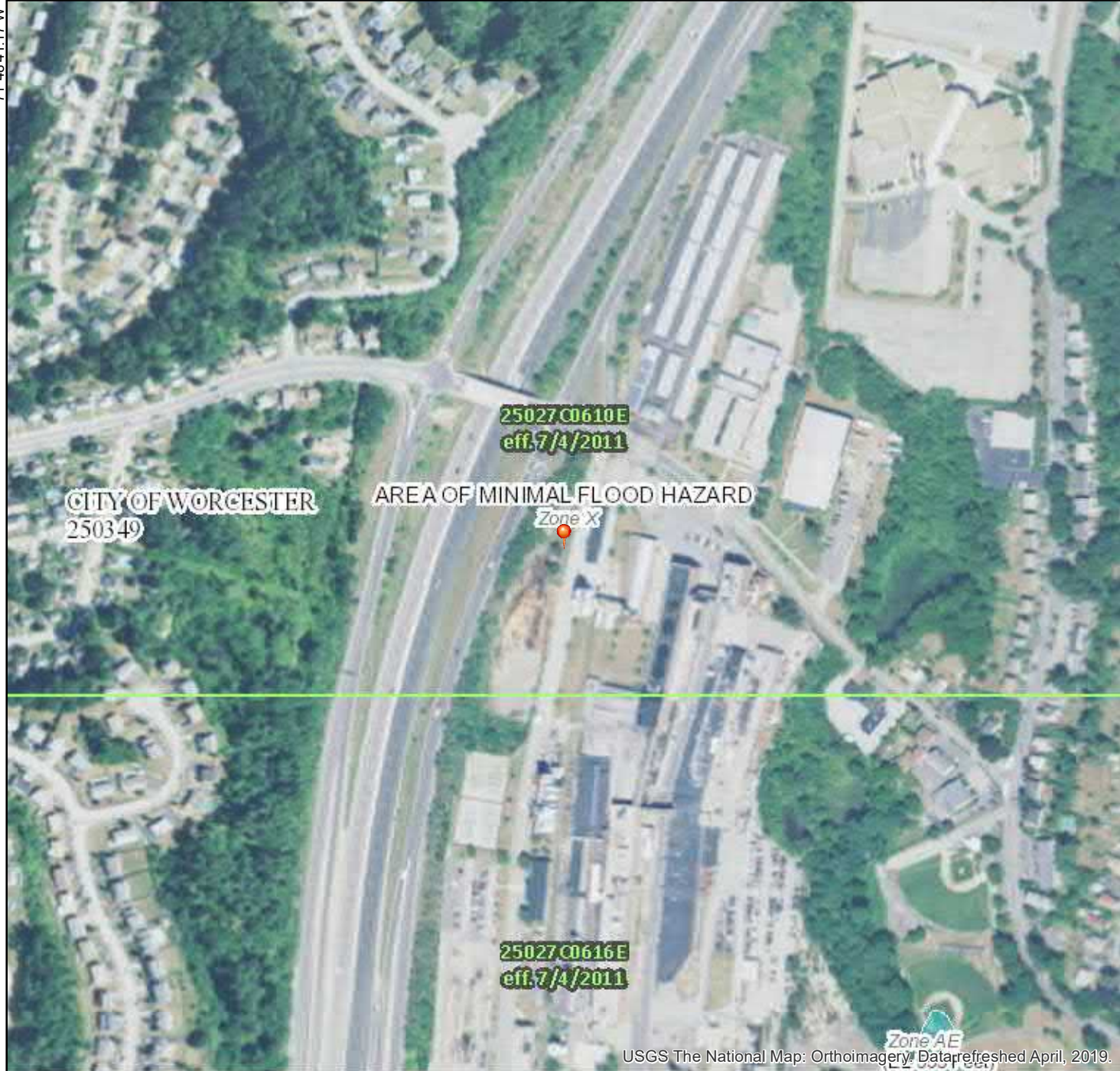
Data Source: MassGIS USGS Color Ortho Imagery (2014), MassDEP Wetlands (1:12000) (2009), NHESP Potential Vernal Pools (2000), NHESP Certified Vernal Pools, NHESP Priority Habitats of Rare Species (2008), NHESP Estimated Habitats of Rare Species (2008), Areas of Critical Environmental Concern (2009), FEMA National Flood Hazard Layer (2014), MassDEP Drinking Water Protection Areas



National Flood Hazard Layer FIRMette



42°19'2.31"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
MAP PANELS		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped



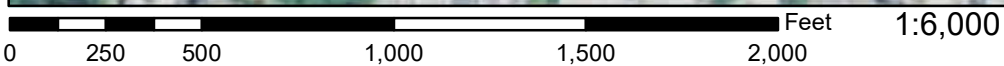
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/2/2020 at 5:22:08 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

USGS The National Map: Orthoimagery Data refreshed April, 2019.



42°18'35.70"N

71°48'3.72"W



National Flood Hazard Layer FIRMette



42°18'37.45"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, V, A99	With BFE or Depth Zone AE, AO, AH, VE, AR
	Regulatory Floodway	

		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D

OTHER AREAS OF FLOOD HAZARD

		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D

OTHER AREAS

		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature

		Digital Data Available
		No Digital Data Available
		Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

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This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

71°48'35.06"W

71°47'57.61"W

Photo 1



View of the B1-100 Series intermittent stream —facing northeast

Photo 2



View of the B1-200 Series stream after the stream becomes perennial—facing northwest

PHOTOGRAPHIC DOCUMENTATION
Saint Gobain—New Bond Street and Stores Street
Worcester, Massachusetts
Photographs Documented January 24, 2020

Photo 3



View of the water quality of the B1-200 Series perennial stream—facing northeast

Photo 4



View of the B2 Series Bank of a ponded area of a perennial stream —facing northwest

PHOTOGRAPHIC DOCUMENTATION
Saint Gobain—New Bond Street and Stores Street
Worcester, Massachusetts
Photographs Documented January 24, 2020

Photo 5



View of the primary thread of Weasel Brook (B3/B4 Series)—facing southwest

Photo 6



Another view of the primary thread of Weasel Brook (B3/B4 Series)—facing east

PHOTOGRAPHIC DOCUMENTATION
Saint Gobain—New Bond Street and Stores Street
Worcester, Massachusetts
Photographs Documented January 24, 2020

Photo 7



View of the branched thread of Weasel Brook (B5/B6 Series)—facing east

Photo 8



View of the B7/B8 Series intermittent stream—facing northwest

PHOTOGRAPHIC DOCUMENTATION
Saint Gobain—New Bond Street and Stores Street
Worcester, Massachusetts
Photographs Documented January 24, 2020

Photo 9



View of the WF1 Series BVW bordering the B1-100 series intermittent stream—facing south

Photo 10



View of the WF2 Series BVW bordering the B1-200 and B2 Series stream segments—facing southwest

PHOTOGRAPHIC DOCUMENTATION
Saint Gobain—New Bond Street and Stores Street
Worcester, Massachusetts
Photographs Documented January 24, 2020

Photo 11



View of the WF3 Series BVW —facing west

Photo 12



View of the WF4 Series BVW —facing east

PHOTOGRAPHIC DOCUMENTATION
Saint Gobain—New Bond Street and Stores Street
Worcester, Massachusetts
Photographs Documented January 24, 2020

Photo 13



View of the wetland island between the B3 and B6 series Banks —facing east

Photo 14

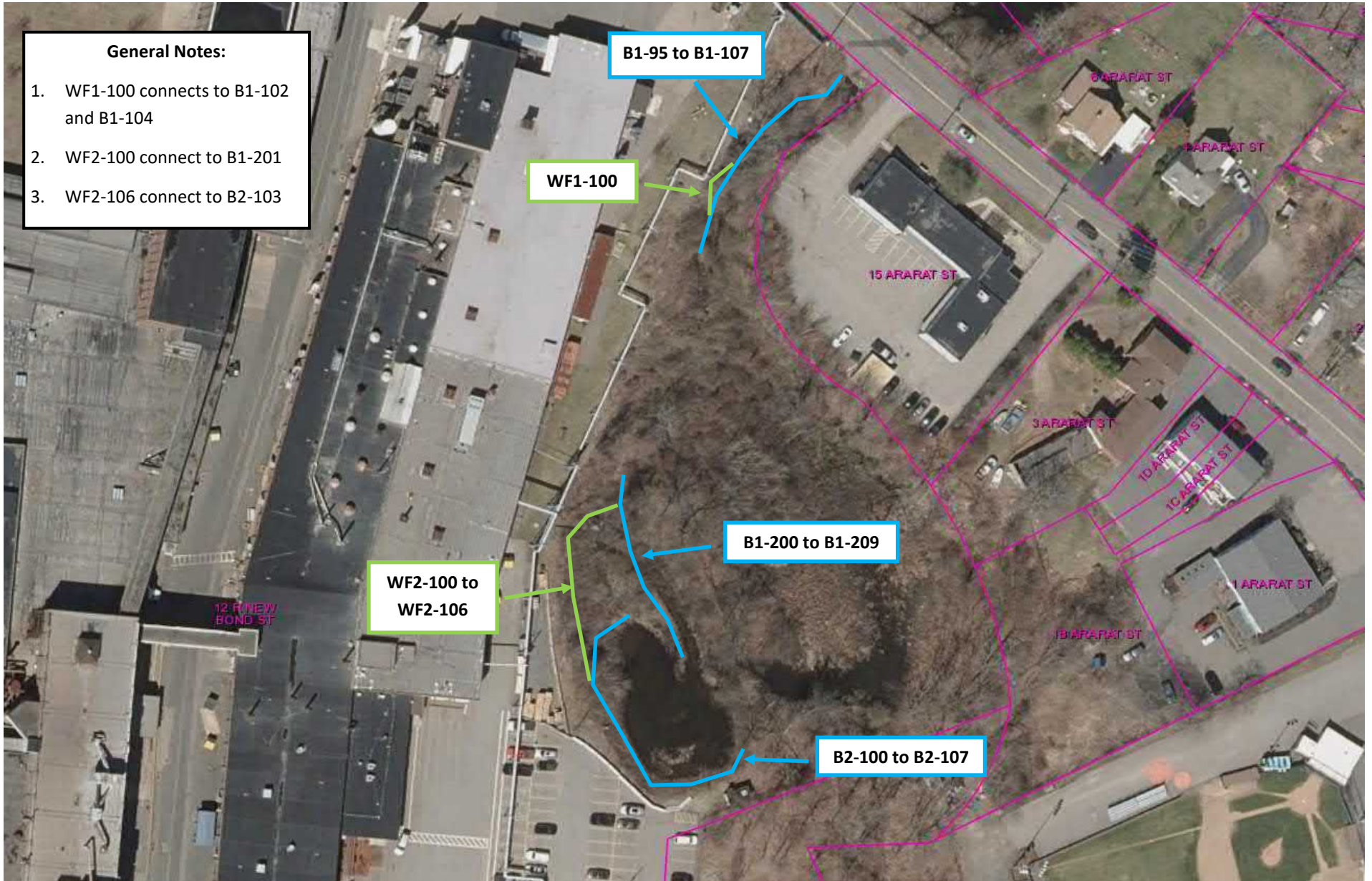


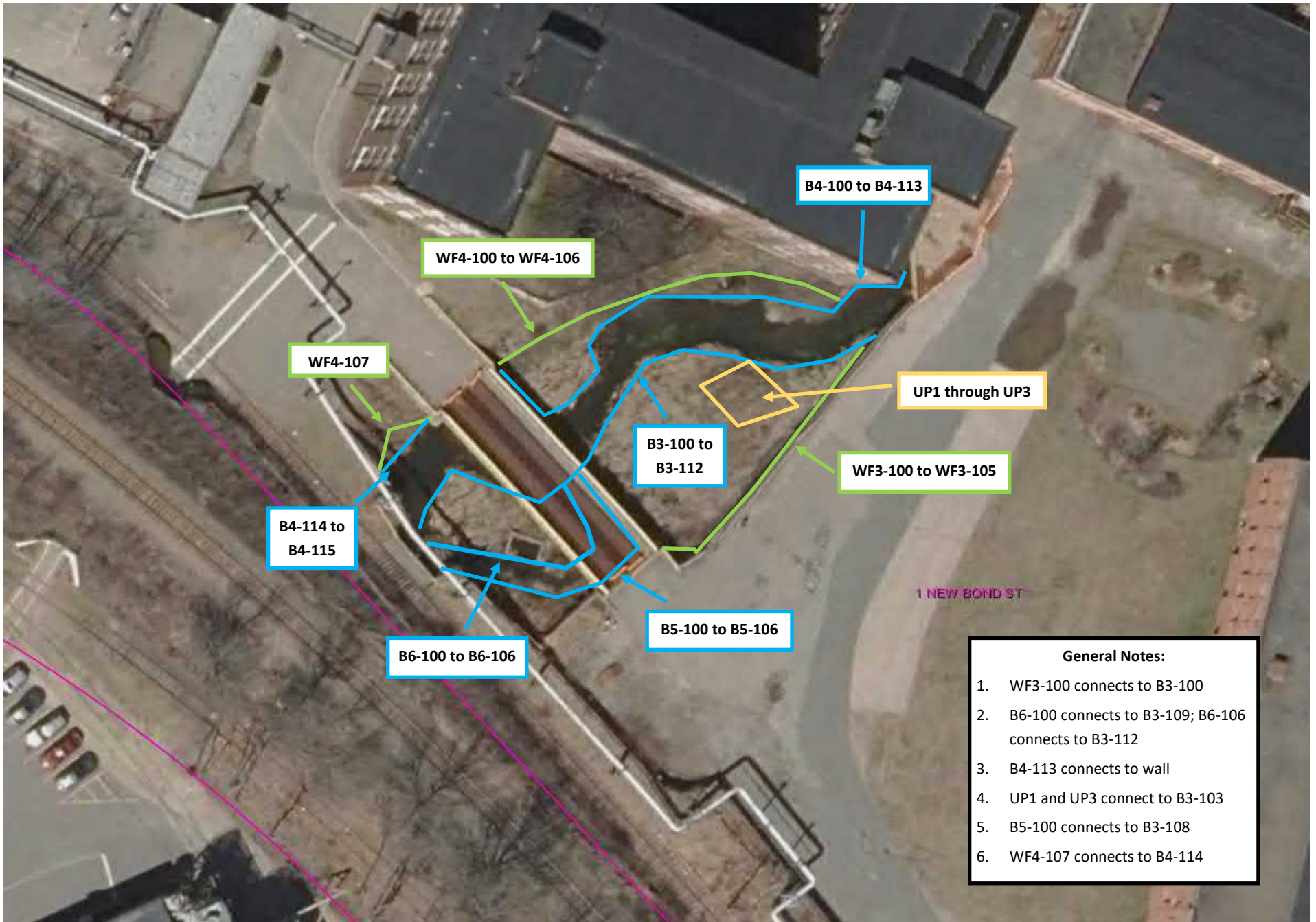
View of the WF5 Series BVW bordering the B7/B8 intermittent stream —facing west

PHOTOGRAPHIC DOCUMENTATION
Saint Gobain—New Bond Street and Stores Street
Worcester, Massachusetts
Photographs Documented January 24, 2020

General Notes:

1. WF1-100 connects to B1-102 and B1-104
2. WF2-100 connect to B1-201
3. WF2-106 connect to B2-103







General Notes:
1. WF5-100 connects to B8-102

WF5-100 to
WF5-102

B7-100 to
B7-104

B8-99 to
B8-104