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**To:** Alexander Wade, Director of Land Use and Permitting / Town Planner, Town of Boxborough, MA

**From:** John Cruz, Senior Housing and Land Use Planner, MAPC

**Date:** April 28, 2025

**Subject:** Boxborough 3A Compliance: Technical Memo for Buildability on Draft Sites

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## Introduction

The Metropolitan Area Planning Council (MAPC) conducted a light buildability analysis of draft sites for the Town of Boxborough to comply with the MBTA Communities Act. To accomplish this, MAPC used the 3A unit modeling calculator provided by the Executive Office of Housing and Livable Communities (EOHLC), as well as completed a GIS analysis of the sites and parcels to better understand constraints on the sites.

Using the modeling calculator, MAPC input different dimensional standards to see what configurations would have the draft overlay districts comply with the density and number of unit requirements in the regulations published by EOHLC. These dimensional standards can and likely will be modified in the future as a final site is chosen to move forward with and more final touches are required. Changing the allowed building height, amount of required open space, the minimum number of required parking spaces per unit and the density allowed in the bylaw will drastically change the unit and gross density calculations for all draft 3A districts. The numbers in this memo are only one of many possible scenarios that will comply.

This memorandum serves as a summary of the analysis and the resulting key findings.

## Reading the Data

The key findings are broken down by site and contain five or six different sections:

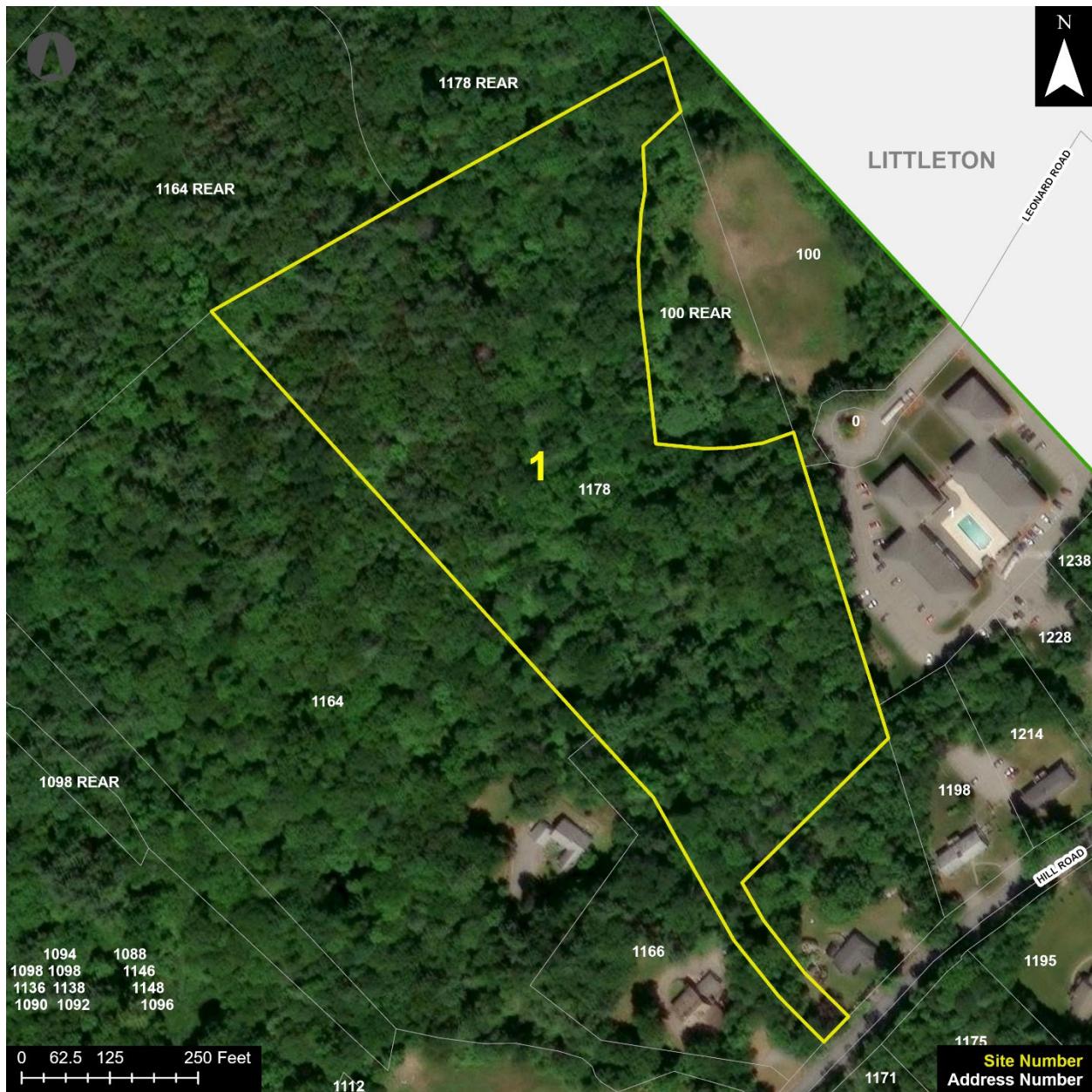
- **A map of the site.** This is a aerial view of the site, showing the site outlined in yellow and the parcels outlined in white. Individual parcels are identified in the narrative by their address number, and this map should be used as a reference to understand that narrative. The maps are not all to the same scale, so please refer to the scale bar in the lower left-hand corner.
- **General Site information** consisting of location narrative as well as some information about the site as a standalone overlay district.
- **Modeled Units Per Parcel Table (optional).** If a draft overlay zoning district site contains more than one parcel, then each parcel is shown with the size of the parcel, as well as the number of modeled units based on the "Modeled Dimensional Requirements Table" below.

- **Modeled Dimensional Requirements Table.** This table shows what regulatory dimensions were input into the compliance model to achieve the number of modeled units for both the district and each individual parcel.
- A brief **Constraints Analysis** discussing what constraints may impede development on a site are given in written narrative.
- A **final analysis** written narrative shows what development is likely to occur on the site based on development constraints, parcel shape, and other factors.

## Key Findings

The findings for each site begin on the next page.

# Site #1: 1172 Hill Road



Location: North Side of town near Littleton Border

<b>Size (acres)</b>	11.27
<b>Developable Land (acres)</b>	9.14
<b>Suitability</b>	Moderately High
<b>Modeled Maximum Number of Units Under 3A</b>	140

**Modeled Dimensional Requirements Table:**

Regulation	Value
<b>Building Height (stories)</b>	2
<b>Max Building + Lot Coverage</b>	45%
<b>Minimum Open Space</b>	55%
<b>Setbacks (ft)</b>	20
<b>Minimum Number of Parking Spaces (per unit)</b>	1
<b>Maximum Density (dwelling units per acre)</b>	15

### Constraints analysis

The biggest development impediment on this parcel is that wetlands separate the north / western portion from the south / eastern portion. This could result in two different development clusters on the site, connected via a roadway along the western edge of the parcel, or a developer could choose to develop only the southeastern portion of the parcel. Even though there's a presence of wetlands, the site is not in a flood zone.

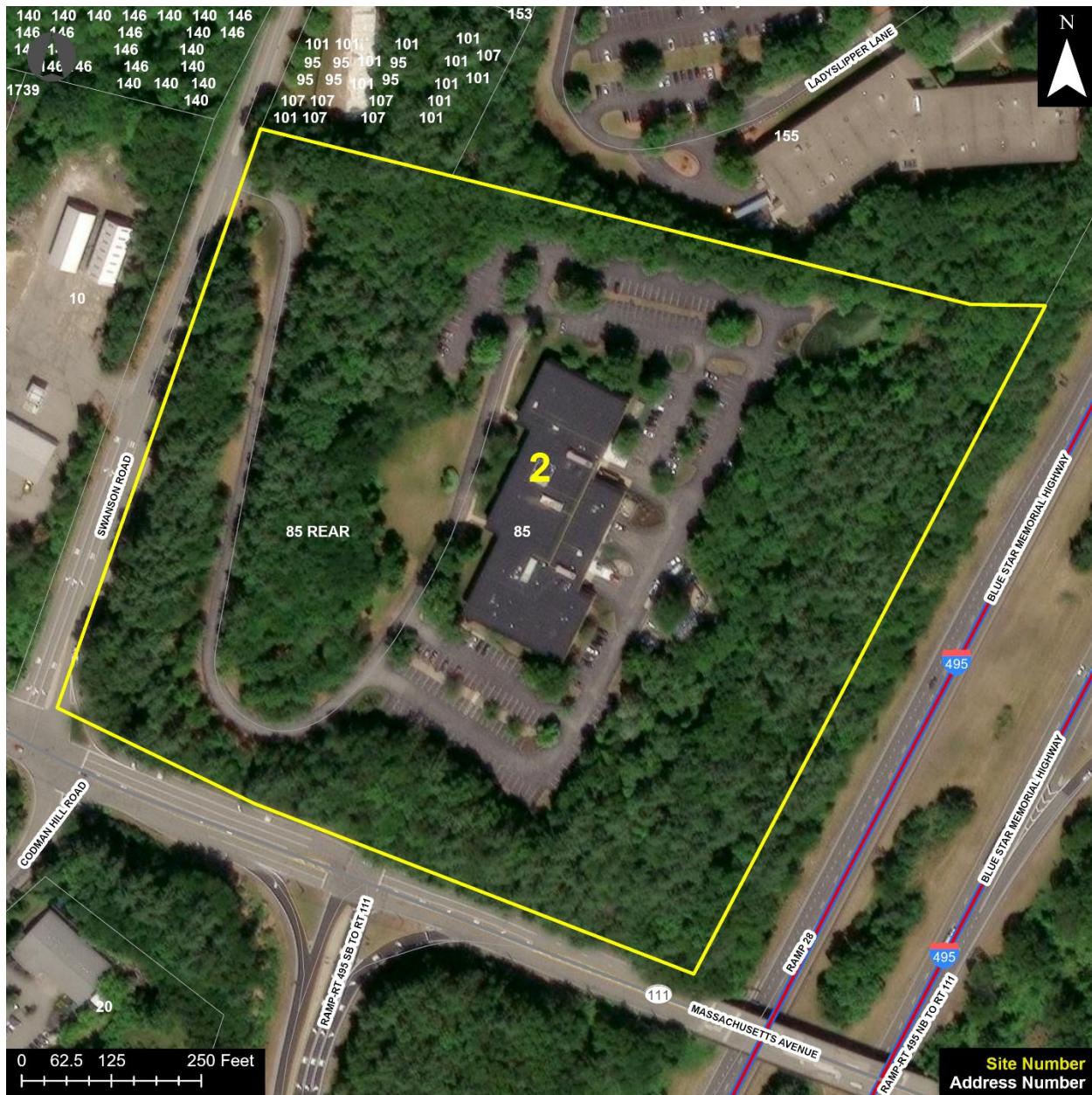
There are mild elevation grade changes on the eastern portion of the parcel that will not be a development impediment.

This parcel is identified as having 100% coverage of a BioMap Core 2 protected species habitat, however it is part of a 290-acre cluster of BioMap Core2 land that covers a substantial portion of northern Boxborough. This would only serve as an impediment if a protected species was found and identified on the site.

### Final Analysis

This currently undeveloped site offers Boxborough a way to fully comply with the 3A requirements with low-rise density of only two stories if the parking requirements are kept to a minimum of one per unit. If the parking requirements were increased, there would need to be an increase in the allowable density, the building height, or the amount of total land + parking coverage. All those changes would cause the maximum potential unit count to increase. It is likely that a developer will take advantage of both portions of developable land that are partially separated by wetlands and will build at least two buildings on the site.

# Site #2: 85 REAR SWANSON ROAD



Location: Northwest Corner of Highway 111 and Interstate 495 Interchange

<b>Size (acres)</b>	22.33
<b>Developable Land (acres)</b>	18.36
<b>Suitability</b>	Very High
<b>Modeled Maximum Number of Units Under 3A</b>	287

**Modeled Dimensional Requirements Table:**

Regulation	Value
<b>Building Height (stories)</b>	2
<b>Max Building + Lot Coverage</b>	60%
<b>Minimum Open Space</b>	40%
<b>Setbacks (ft)</b>	20
<b>Minimum Number of Parking Spaces (per unit)</b>	2
<b>Maximum Density (dwelling units per acre)</b>	15

### Constraints analysis

This site is identified as having a well on it in the northeastern corner of the site. Regulations may dictate that housing is not placed directly on top of it, and it is considered undevelopable land by the state (even though development already exists on the site). This is not expected to be a substantial development impediment.

There are mild elevation grade changes on the parcel that will not be a development impediment.

### Final analysis

This site is home to an office building that includes co-working space and various corporate offices for small businesses. It is adjacent to a light manufacturing facility, a MassDOT Depo, a daycare facility and I495. This site would allow Boxborough to comply with 3A regulations with low-rise development of two stories, with the note that the potential maximum number of modeled units of 287 far surpasses the state's minimum requirement. This is needed to meet the state's gross density requirements. Development on this site could reasonably have a similar plan to what currently exists: a single building surrounded by parking. This is a likely, but not the only possible buildout scenario. Multiple small apartment buildings, two-story clustered detached homes as part of a multi-family development, and two-story townhomes are also potentially attractive options on this site.

## **Site #3: 278 – 381 Coleman Hill Road**



Location: Southwest Corner of Town, West of 495 bordering the town of Harvard.

<b>Size (acres)</b>	23.28
<b>Developable Land (acres)</b>	22.83
<b>Suitability</b>	Very High
<b>Modeled Maximum Number of Units Under 3A</b>	347

**Modeled Units (maximum under the regulations) Per Parcel:**

Address	Size (Acres)	Modeled Units
278 Codman Hill Road	9.6	145
317 Codman Hill Road	2.6	39
365 Codman Hill Road	4.5	69
369 Codman Hill Road	3.0	46
381 Codman Hill Road	3.3	48

**Modeled Dimensional Requirements Table:**

Regulation	Value
<b>Building Height (stories)</b>	2
<b>Max Building + Lot Coverage</b>	60%
<b>Minimum Open Space</b>	40%
<b>Setbacks (ft)</b>	20
<b>Minimum Number of Parking Spaces (per unit)</b>	2
<b>Maximum Density (dwelling units per acre)</b>	15

**Constraints analysis**

The site is home to rapidly increasing grade change. This is a potential reason as to why most of the development on these parcels is limited to the eastern portions of the parcels, near the frontage and roadway. A development pro-forma may be able to support building homes along that slope, but it expected to be a substantial development constraint.

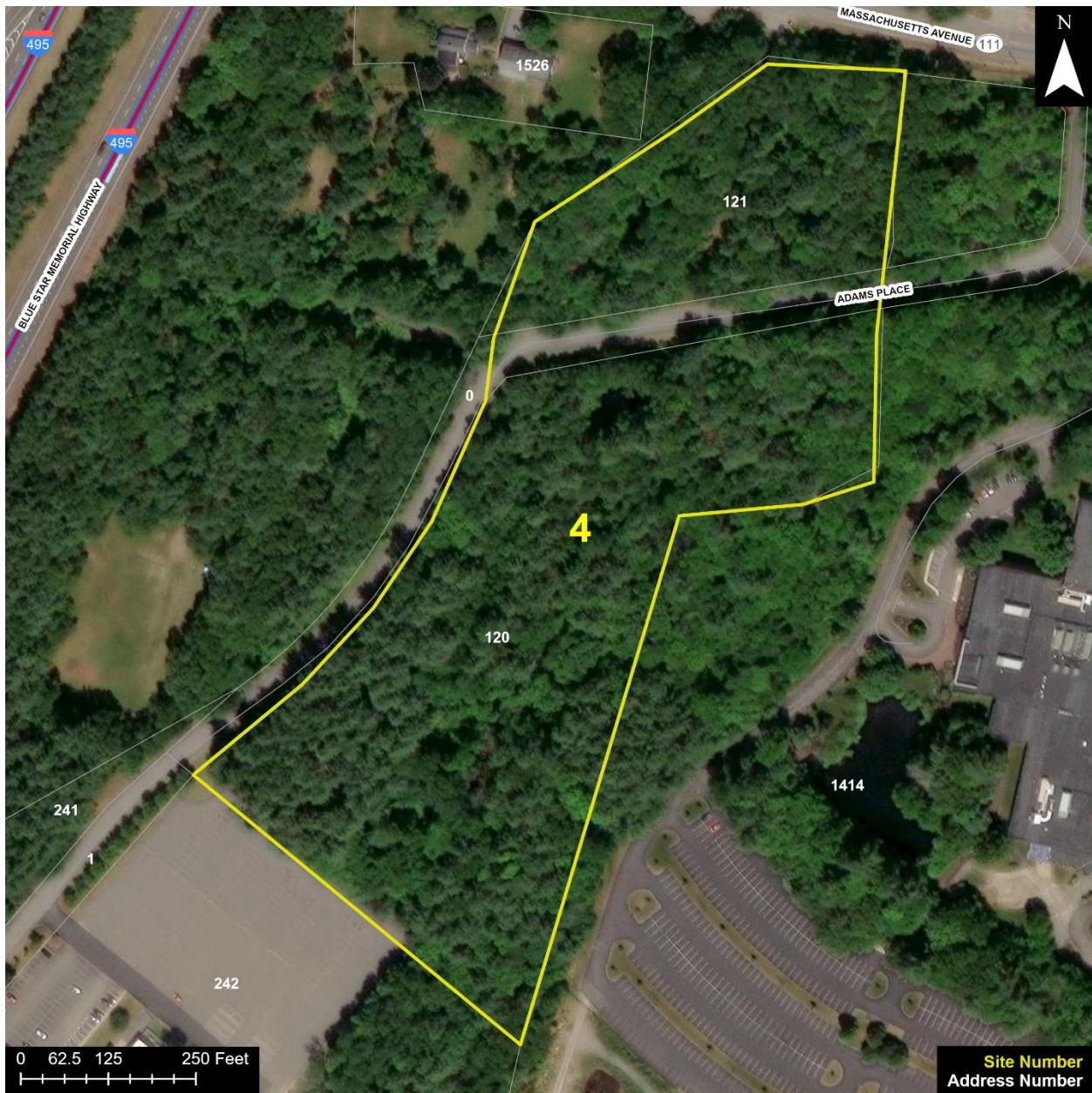
All parcels except for 278 are identified as having at least 80% coverage of a BioMap Core 2 protected species habitat, however it is part of a 67-acre cluster of BioMap Core2 land that covers a substantial portion of southwest Boxborough. There are wetlands and floodplains as part of this 67-acre Core2 land cluster that are not part of this site, and those areas may have no biodiversity than previously developed parcels. This would only serve as an impediment if a protected species was found and identified on the site.

**Final analysis**

These parcels are largely undeveloped, wooded space that borders the Town of Harvard to the West. Two of the five parcels have improvements, with one being a recycling center. Across the street is a multifamily, multi-building apartment complex, a solar equipment supplier and a door supplier.

Due to the development constraints related to the sloping grade that exists in all parcels, on site 3, the number of units developed would likely be substantially less than is modeled. Likely development would potentially mirror the existing development on the site: long, low-rise two-story buildings with a parking lot in the front (and potentially rear) of them. Boxborough could comply with 3A by only utilizing parcel 278.

## Site #4: 120-121 Adams Place



Location: Southwest part of town, southeast area of the i495 and 111 intersection.

<b>Size (acres)</b>	13.36
<b>Developable Land (acres)</b>	9.32
<b>Suitability</b>	Very High
<b>Modeled Maximum Number of Units Under 3A</b>	160

**Modeled Units (maximum under the regulations) Per Parcel:**

Address	Size (Acres)	Modeled Units
120 Adams Place	9.47	111
121 Adams Place	3.25	49

**Modeled Dimensional Requirements Table:**

Regulation	Value
Building Height (stories)	2
Max Building + Lot Coverage	70%
Minimum Open Space	30%
Setbacks (ft)	20
Minimum Number of Parking Spaces (per unit)	2
Maximum Density (dwelling units per acre)	15

**Constraints analysis**

This site has two constraints of note. The first is the presence of wetlands and other undevelopable land, and the second is the identified presence of a well. Both constraints primarily impact parcel 121. These constraints are not clustered on the parcels.

**Final analysis**

These are two undeveloped parcels listed as "potentially developable commercial land". 120 is adjacent to Route 111 and 121 is adjacent to a 65-acre parcel home to a biotech company called Vibalogics. This site could satisfy Boxborough's 3A requirements or be used in conjunction with another site, either as a whole or just with parcel 120 if the dimensional requirements were modified.

A reduction in the number of parking requirements, maximum allowed density, or stories would allow parcel 120 to comply without the addition of parcel 121. Parcel 121 wouldn't be appropriate since it is smaller than 5 acres and would likely need to be at least 5 stories high with a parking reduction to comply with 3A.

The development constraints on parcel 121 would force the developer to build away from road frontage, and primarily along the western portion of the parcel. A series of smaller apartment buildings connected by roadways is a likely development scenario under site 4.

# Site #5: 984-1120 Mass. Ave + 30 Sara's Way



Location: Along highway 111, central part of town.

<b>Size (acres)</b>	20.334
<b>Developable Land (acres)</b>	17.454
<b>Suitability</b>	Very High
<b>Modeled Maximum Number of Units Under 3A</b>	262

### Modeled Units (maximum under the regulations) Per Parcel:

Address	Size (Acres)	Modeled Units
984 Massachusetts Avenue	1.015	18
996 Massachusetts Avenue	1.955	35
1034 Massachusetts Avenue	1.094	20
1082 Massachusetts Avenue	0.912	6
1120 Massachusetts Avenue	10.455	157
38 Sara's Way	1.463	26

Parcel 1102 is missing from the EOHLC parcel dataset, and the statewide parcel dataset. If there is a desire to move forward investigating this site in more detail, additional analysis will be needed and potentially a conversation with EOHLC. Based on this, understand that the modeled units will be higher once that parcel is included.

### Modeled Dimensional Requirements Table:

Regulation	Value
<b>Building Height (stories)</b>	2
<b>Max Building + Lot Coverage</b>	70%
<b>Minimum Open Space</b>	30%
<b>Setbacks (ft)</b>	20
<b>Minimum Number of Parking Spaces (per unit)</b>	2
<b>Maximum Density (dwelling units per acre)</b>	18

### Constraints analysis

This site has mild grade change slopes that are not expected to severely impact development.

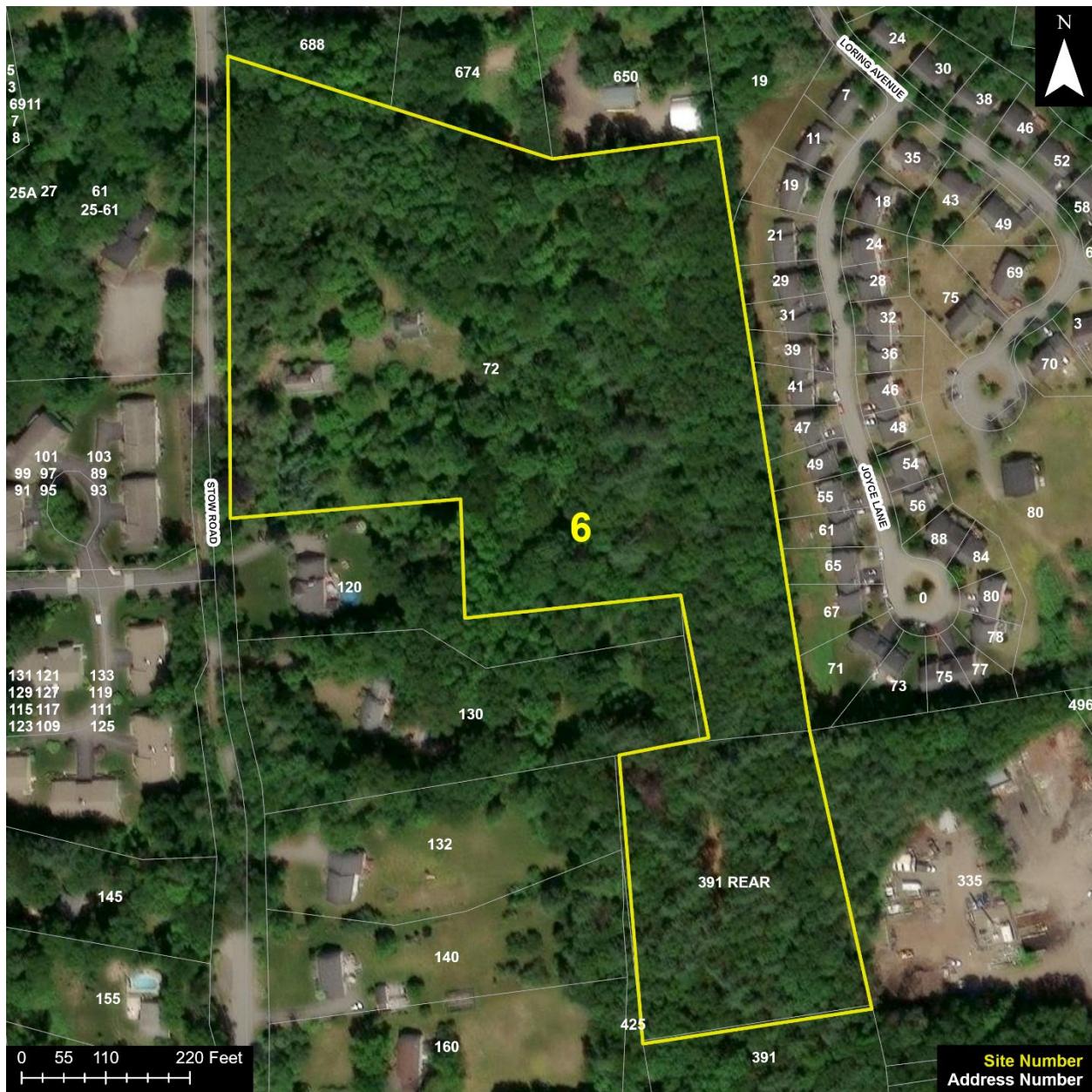
The site is home to wetlands that impact parcels 1082, 1102, and 1120; with 1082 being the most impacted as the wetlands cover close to half of the parcel. The portion of 1120 that is impacted is the rear of the parcel, which is also partially (but just barely) inside of a "X-zone Floodplain", with a 0.2% annual chance of a flood.

### Final analysis

These six parcels are along Massachusetts Ave (111), two of which are vacant, two have residential homes, and the others are a warehouse and an office building. Only 1120 Mass Ave is a parcel large enough to be a 3A district on its own at 10.45 acres, all others are less than 2 acres in size. That means that this is a district that could comply with 3A on its own, as is, or with some parcels removed. Smaller parcels could also be combined to make a valid 3A district.

There are no constraints that would impact the type of development that would occur on this site. Multiple types of multifamily could reasonably be accommodated. This includes, but is not limited to, a large or a series of larger low-rise apartment buildings, clusters of small to medium-sized low-rise buildings, and townhouses.

# Site #6: 72 Stow Road



Location: Near the corner of highway 111 and Stow Road, central part of town.

<b>Size (acres)</b>	11.997
<b>Developable Land (acres)</b>	11.83
<b>Suitability</b>	Likely Very High
<b>Modeled Maximum Number of Units Under 3A</b>	180

**Modeled Units (maximum under the regulations) Per Parcel:**

Address	Size (Acres)	Modeled Units
72 Stow Road	92.63	144
391 Rear Burroughs Road	2.40	36

**Modeled Dimensional Requirements Table:**

Regulation	Value
Building Height (stories)	2
Max Building + Lot Coverage	80%
Minimum Open Space	20%
Setbacks (ft)	20
Minimum Number of Parking Spaces (per unit)	1
Maximum Density (dwelling units per acre)	15

**Constraints analysis**

There are mild elevation grade changes on the parcel that will not be a development impediment. There are no other development constraints aside from the need to demolish existing structures.

**Final analysis**

This site is comprised of two wooded, largely undeveloped parcels. It is a block south of highway 111 and near the center of town.

Since this site is owned by the town, EOHLC would need to see a commitment to developing the parcel and issuing a development RFP for them to approve this 3A district. That is a larger impediment than anything physically on the site.

The size and shape of the site, combined with the lack of development constraints, means that any multifamily development is a realistic possibility on this site. The opportunity for the town to greatly control development is if a development RFP was issued stating what type of development would be a proposal that would receive consideration to move forward.

Multiple medium – large, low-rise two-story buildings surrounded by parking are the likely development scenario for site number 6.

# Site #7: 144, 235, and 240 Summer Road



Location: Southeast portion of town, bordering the Town of Acton

<b>Size (acres)</b>	16.6
<b>Developable Land (acres)</b>	14.24
<b>Suitability</b>	Range of Low to Very High
<b>Modeled Maximum Number of Units Under 3A</b>	224

**Modeled Units (maximum under the regulations) Per Parcel:**

Address	Size (Acres)	Modeled Units
144 Summer Road	7.6	98
235 Summer Road	7.59	114
240 Summer Road	1.12	12

**Modeled Dimensional Requirements Table:**

Regulation	Value
<b>Building Height (stories)</b>	2
<b>Max Building + Lot Coverage</b>	65%
<b>Minimum Open Space</b>	35%
<b>Setbacks (ft)</b>	20
<b>Minimum Number of Parking Spaces (per unit)</b>	2
<b>Maximum Density (dwelling units per acre)</b>	15

**Constraints analysis**

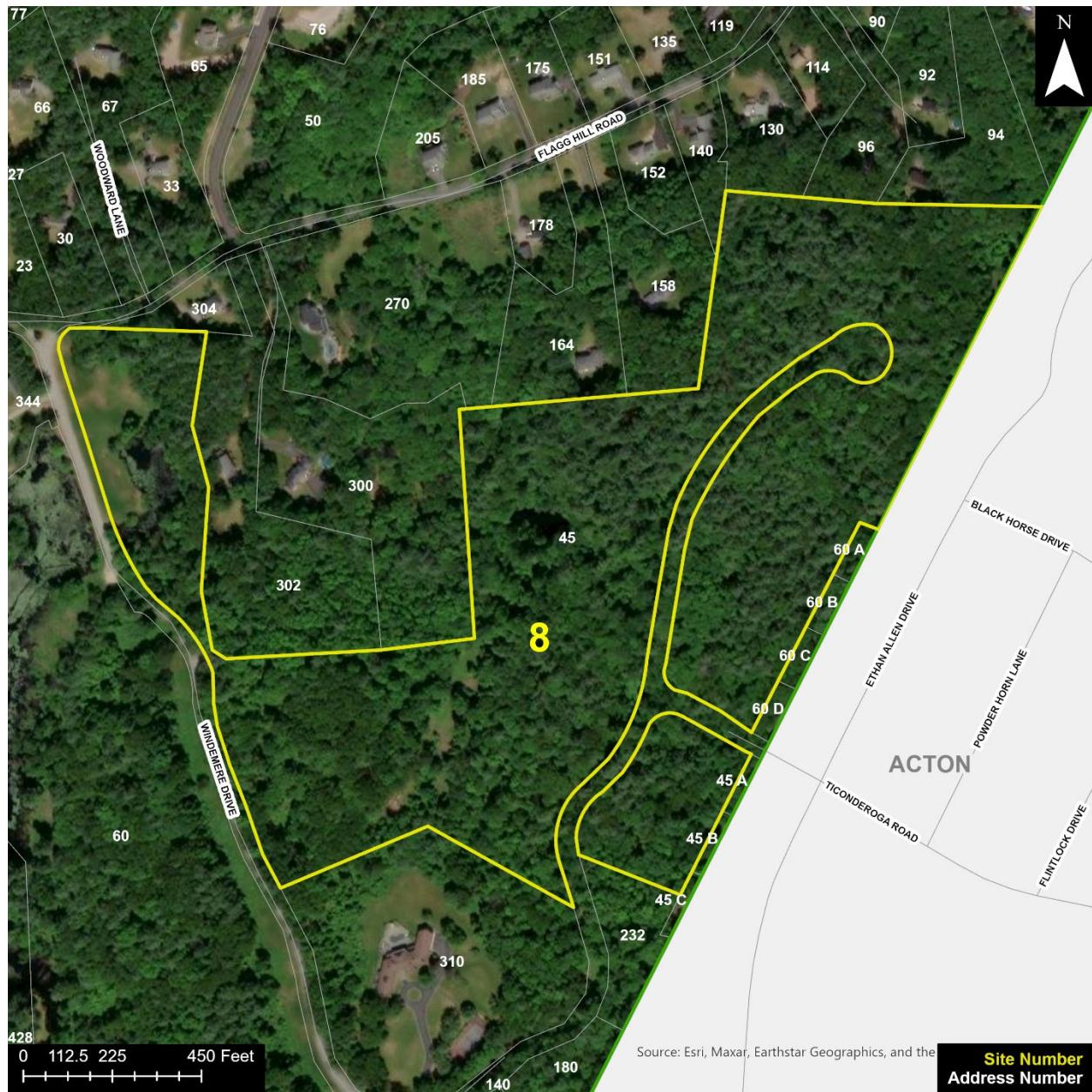
There are mild elevation grade changes on parcel 235 which will not be an impediment to development. Parcel 144 is partially covered by a floodplain with a 1% annual chance of flooding, primarily affecting the northeast corner of the parcel. This parcel falls under chapter 61B, but is not officially classified as permanent open space, and is listed as privately owned by "Ruth L Landry, Trustee".

**Final analysis**

These three parcels contain recreational land under chapter 61, a warehouse, and a single-family home. 144 Summer may be available for development, but it is very likely to remain undeveloped for the foreseeable future regardless of any zoning changes. It is likely that this parcel will need to be eliminated from this overlay district.

Regardless of if any parcels are eliminated from an overlay district with site number 7, there are not substantial development impediments that would limit what multifamily development could occur on the site. The most likely scenario would be the redevelopment of parcel 235, utilizing the existing driveway ingress/egress and parking lot without the developer needing to remove any wooded areas. A single multifamily building surrounded by parking is likely.

# Site #8: 45 Windemere Road



This site was determined to be 100% comprised of protected, undevelopable land.

It is not suitable for development under 3A and no additional analysis was done on the site.

## **Next Steps**

For the next steps, my understanding is that there will be site visits to each individual site for the committee to make visual observations on the site and see what additional information can be obtained. These visual observations will guide the committee's decision on which site and ultimately lead to a zoning bylaw and map that will be taken to Town Meeting in the fall of 2025 for voter approval.

Once a draft site has been selected to move forward, MAPC will work with the Town of Boxborough to determine final regulations.