

The Newton Pattern Book was developed in partnership with the City of Newton as part of the 2017 Zoning Redesign initiative.

Newton Pattern Book

2018

To the Newton Community

To Members of the Newton Community,

The City of Newton's Zoning Redesign project is a multi-year effort to update and rewrite Newton's Zoning Ordinance. Zoning is the set of laws governing such things as the size and shape of buildings, how they can be remodeled, and what types of activities can take place in which buildings.

One of the most important steps in this effort has been an in-depth study of the existing buildings and land uses in Newton. We needed to understand with great specificity Newton's physical makeup in order to create rules that respect and respond to Newton's existing patterns of development.

The results of creating this database are presented in this document, Newton's Pattern Book, which shows land use and development patterns at a parcel-by-parcel level. The Pattern Book represents a snapshot in time, the physical form of Newton in late 2016. This Pattern Book, which was created with the help of the Sasaki team, was first released as a draft in 2017. The Pattern Book is not a set of rules or regulations; those will be presented in the first draft of the proposed zoning ordinance in October 2018.

Thank you to all members of the Newton community who read the draft Pattern Book and provided many comments. A data-focused document this extensive indeed benefited from many readers and editors. The public comments we received are published as an appendix to the online version Newton's Pattern Book at www.newtonma.gov/zoningredesign. The planning team read all comments and has included responses to them in the appendix.

I am also grateful for the hard work and critical analysis by Newton's Planning Department during this effort. James Freas and Rachel Nadkarni, in particular helped lead this process and deserve our thanks.

Newton's Pattern Book and the database behind it has been an essential tool in the Zoning Redesign project and will continue to be used as reference as the City develops and reviews draft zoning ordinance language in 2018 and 2019.

Sincerely,

Mayor Ruthanne Fuller

19 October 2018

Contents

1. Introduction to the Pattern Book	6
2. The Development of Newton	18
3. Newton's Patterns	32
<i>Citywide Analysis</i>	36
<i>Character Patterns & Pattern Subsets</i>	76
<i>Context-Based Areas</i>	112
<i>Building Type Inventory</i>	252
4. The Pattern Book Process	262
Appendix A: Glossary of Terms	284

1

Introduction to the Pattern Book

Introduction to the Pattern Book

Purpose of the Pattern Book

Newton is a city that values its rich historical character and overall high quality of life. Over the past three centuries, Newton has developed from a quiet agricultural town consisting primarily of pastureland and small clusters of housing to a modern city of nearly 90,000 residents. Today, the city is a rich tapestry of buildings, institutions, and places simultaneously representing the past, present, and future of Newton—all working in concert to create a high quality, twenty-first century place to live, work, learn, and play.



Masonic Building in Newtonville

Anyone who spends time exploring Newton's various neighborhoods and village centers will come to realize the city comprises a great diversity of development patterns. These patterns reveal themselves in the size, shape, and character of the streets, parcels, and buildings that together compose a neighborhood or village center, and can be understood in the context of their development era, proximity to historical thoroughfares and rail lines, and the planning and design decisions made by the City and other governing entities over the course of generations. As part of the City's 2017 Zoning Redesign initiative, Newton sought to catalog these existing development patterns to best understand the city's context. The resulting analysis is documented in this pattern book. It is the goal of the City to use this pattern book to serve as the foundation of a new zoning ordinance (described in greater detail in the following pages) and to serve as a resource for regulators, property owners, developers, and designers who wish to reimagine and reshape areas of the city with new development or redevelopment efforts.

Pattern books, in the context of planning and development, were historically used to guide design decisions in communities seeking a degree of consistency between existing and future development. In more recent years, planners and designers have repurposed the pattern book concept to work alongside tools like form-based

codes—and zoning more broadly—in service of a new approach to zoning that guides private development in ways that improve the public realm. This new approach is called context-based zoning, and it will serve as the foundation of Newton’s zoning and regulatory framework for years to come. The core concept underlying context-based zoning is that the city we’re planning for is already a place of historic and beloved character. The City must encourage growth and development in order to maintain equality of access, its revered diversity, and the economic vibrancy that keeps Newton humming. At the same time, the attributes that make Newton great today can serve as a model for the future.

To build a zoning ordinance that respects and responds to these attributes, the various patterns that make up Newton must first be understood and cataloged. This pattern book aims to fulfill that objective with a rigorous analysis based

on geographic information system (GIS) data, historical records, regulatory/policy documents, existing conditions measurements, and first-hand interactions with Newtonians who know the city best. Following this information-gathering stage, the Planning Consultant team (Sasaki; Noble, Wickersham, & Heart, LLP; and the City of Newton Department of Planning and Development) began to identify and categorize development patterns across the city. These patterns were grouped, illustrated, and described to detail the underlying conditions that constitute each pattern. This process involved both quantitative and qualitative deliberation to determine which factors were most important in defining patterns, and therefore which factors would be relevant to future designers and property owners who look to the Pattern Book to make decisions with respect to their own development goals.



A home in Newton Centre

Holistic Planning for Newton's Future

In 2007, Newton published a wide-ranging comprehensive plan to describe the city's development through a variety of lenses and chart a course forward for achieving its short- and long-term goals as a community. Many of those goals pertain directly to preserving those attributes of Newton that residents revere while setting clear expectations, processes, and opportunities for new development that contributes to the city's character. Summarized here are some of those aspirations that are most applicable to the work of understanding Newton's development character and planning for the future of the City's land use policies.

Sustainability

Newton is committed to ensuring sustainable growth and development. Sustainability in a development context involves everything from preserving open space to promoting smart growth to encouraging responsible consumption of resources. The comprehensive plan calls for increased focus on energy planning, sustainable practices in building and infrastructure, education programs to promote efficiency of energy and resources, and more strategic efforts to best utilize existing development and developed land.

Community Engagement

The priorities, preferences, and perspectives of the Newton community are vital to its continued high quality of life and for ensuring Newton remains a place by and of the people who call it home. The comprehensive plan acknowledges that goal-setting and planning should be informed foremost by the collective objectives of its residents. The plan says "articulating [clear statements of intentions and goals for the city and its neighborhoods] should critically involve those who live, work, or have other stakes in those places."





Flexibility & Predictability

The comprehensive plan calls for procedural excellence that will streamline the process of implementing projects that contribute to Newton's character. According to the comprehensive plan, "The excellence that is sought in development should be matched with excellence in the conduct and content of review." The plan lists sensitivity to place, a clear decision-making process, early predictability, reasonable time frames, and openness to creativity among its development review process goals.

Ensuring Diversity

Diversity is important to Newton. The comprehensive plan recognizes the contributions of diversity in a number of ways. In addition to calling for greater protection and encouragement of Newton's diverse constituencies, the plan calls for the promotion of the city's rich diversity of places, stating that "Implementing land use, housing, transportation, and other intentions of this plan needs to be done with sensitivity to the variations in places across the city, as well as to how they are related and joined."

Protecting Character

Newton's character is celebrated on a local, regional, and even national stage. No one understands this better than the people who call the city home. The comprehensive plan recognizes the importance of protecting that character and putting forth plans for growth that respect and contribute to it. According to the plan, "Development is to be guided to reflect the character held or sought by existing residential neighborhoods, protecting the qualities of that which exists."

Accommodating Growth

While ensuring deference to existing character is of the utmost importance in a city like Newton, it is also vital to recognize and plan for anticipated growth. As such, the comprehensive plan recommends strategies for doing so responsibly. In addition to identifying several areas throughout the city where concentrated growth is expected and welcomed, the plan states that while protecting character "often but not always means minimizing changes, well-designed change can strengthen existing qualities."

Introduction to the Pattern Book

The Pattern Book & The New Zoning Ordinance

Newton began the process of zoning redesign with the City's 2007 Comprehensive Plan. The plan acknowledges common issues with the existing zoning ordinance and calls for a number of specific changes that would make the code more comprehensible and easier for citizens (and regulators) to use. Additionally, the plan calls for an approach that is focused on respecting existing development patterns to guide growth in place of a code aimed at prescribing a certain character for future development irrespective of the existing city fabric:

“Newton, being a mature community, has a powerful commitment to its existing pattern, and our vision and goals for future land use reflect that. Our intention is to guide change so that it reinforces what we have, building on our assets.”

With a growing consensus on what needs to change, Newton commenced a three-phase zoning reform process in 2011. Phase 1 consisted of a cleanup and reorganization of the existing ordinance—resolving inconsistencies, adding tools for legibility such as use tables and illustrations, and simplifying language where possible. Phase 2 includes an audit of the zoning ordinance to identify areas that are inconsistent with the community's goals, the development of this pattern book to catalog the city's existing development patterns, and a comprehensive redesign of the zoning ordinance to produce development results that are more in keeping with Newton's character and aspirations. Phase 3 involves an extended period of review of the new ordinance in practice,

including a close analysis of the impact on property owners and the zoning review process. An overarching goal is to enact a zoning ordinance that is more comprehensible to regulators and the public, and to be administered in an efficient and predictable way.

This pattern book—one of the primary components of Phase 2—is primarily a retrospective document. It is intended to be a close examination of the patterns that have developed over time to shape the Newton we know today. The importance of this catalog to the future of Newton's zoning is based in an understanding that Newtonians revere the character that has come to define their city's neighborhoods and village centers. It is only fitting, therefore, that policies intended to guide development and ensure consistency with the preferences and priorities of Newtonians be built on a foundation of what already exists. This



Commercial building in Newton Centre

pattern book serves as the primary analysis of the city's built patterns and as the basic framework atop which a new, context-based zoning code will take shape. The intent of the new zoning ordinance is to steer and permit development/redevelopment throughout the city with consideration of the appropriateness of individual proposals for the context in which they're proposed. The Pattern Book is one tool for determining that appropriateness and compatibility. After distilling the complexity of Newton's existing built character and citywide systems into a series of discrete patterns, the planning team will work to create new zoning districts based on what is learned from these patterns, and will establish rules and procedures for new development that respect and respond to the adjacent forms, dimensions, and general characteristics that make up a neighborhood.

Additionally, the Pattern Book is intended to be used as a resource for decision-makers, property owners, developers, and designers who aim to make informed choices on the design, siting, and uses of new development with respect to its compatibility with existing contexts. It is intended to capture the character of Newton's neighborhoods and village centers at a moment in time while recognizing that the city will continue to grow and change. It is recommended that the data and determinations found in this pattern book be updated as regularly as needed to accurately reflect the built condition of Newton and maximize the value of this document in ensuring context-based development/redevelopment. Recommendations for updating/revising this pattern book can be found in chapter four of this document—The Pattern Book Process.



Recoding Newton by Understanding Newton

Zoning for a New Generation

The City of Newton adopted its first zoning code in 1922, only six years after the first comprehensive municipal zoning ordinance in the United States was adopted in New York City. The first ordinance set in place a discrete list of uses and appropriate areas for their application and served the needs of the city for decades. The next major iteration of the ordinance took place in 1940. Another version, implemented in 1953, is the basis for the city's current zoning policy. Between 1953 and 2017, the ordinance was only substantially updated once, in 1987.

Since these red-letter dates in Newton's zoning history, much has changed in terms of real estate economics, best practices in planning and design, the city's demographic and community profile, and Newton's aspirations for the future of the community. As such, it became clear to the Newton City Council that a new zoning ordinance was necessary to meet the challenges and opportunities presented to a new generation of Newton. In 2011, the Newton City Council authorized a three-phase process to organize the existing ordinance for legibility, and then embark on a process of designing and implementing a new zoning ordinance that would be more responsive to the needs of Newton, representative of the city's character and stated goals, and seated in 21st century ideas of best practices in planning and urban design. The result of phase one was a more streamlined and better organized ordinance that set the stage for the development of this pattern book and a redesigned zoning ordinance in phase two.

Zoning Reform Group Themes for Zoning Reform

1. Better organize the ordinance for ease of use
2. Simplify and streamline the permitting and review process
3. Recognize that each village center and commercial corridor is unique
4. Encourage mixed-use residential redevelopment in village centers
5. Create "soft transitions" between village centers and residential neighborhoods
6. Allow moderate, flexible growth on commercial corridors
7. Rationalize and streamline parking regulations
8. Protect neighborhood character and scale
9. Create more diverse housing opportunities
10. Institute a better process for managing change of religious and educational institutions
11. Improve natural resource conservation and sustainability

Newton's Development Context

In addition to goals identifying a strong desire for simplicity and comprehensibility in a new zoning ordinance, the Zoning Reform Group listed several themes for zoning reform that called for the balancing of strategic growth and redevelopment within the city with the community's resonant desire to preserve the unique character, form, scale, and diversity of Newton and its various neighborhoods and village centers. In discussing development in a city like Newton, it is important to understand the many layers of the city that contribute to its overall context. The primary factors that define a city's context are the type, form, scale, and uses of development; the character and scale of streets; the size, orientation, and composition of parcels; the systems of circulation, transit, and open space that traverse the city; and the attributes of a place that contribute to a uniformity in character. The Pattern Book aims to catalog this multi-faceted and multi-layered context by understanding the combinations of factors that are most prevalent within areas and representative of neighborhoods.

The primary function of the Pattern Book is to understand Newton's development as it exists in 2017. While, in several places, the planning team has acknowledged and drawn conclusions from development forms that once existed—but in many cases no longer do—the data represented in these pages constitute a snapshot in time of the city's existing conditions. This retrospective analysis and strategy of context-sensitive recommendations is intended to provide the strongest tool possible for understanding Newton and for drafting a new context-based zoning ordinance.

The Pattern Book Methodology

The Newton Pattern Book is designed to serve many purposes and constituencies. Foremost among these is the value in understanding Newton's development makeup to support the generation of a new context-based zoning ordinance that achieves the goals set out by the Zoning Reform Group. To best accomplish this goal, the Pattern Book process was designed to be data-driven, methodological, and diverse in its approach to the city's various neighborhoods and village centers.

Over the course of the Zoning Redesign project's eighteen month process, the planning team consulted city staff, city leadership, residents of Newton, focus groups with specific expertise in areas of conservation and open space, housing, design, real estate development, public art, business, and other areas while collecting robust datasets from a variety of public and commercial sources including Newton GIS, Mass GIS, U.S. GIS, ESRI, and others. The team also completed several custom analyses to review the most recent data available with a variety of approaches. This strategy provides both confidence in and objectivity to the results presented in this document, as well as different ways of understanding the data at different scales to serve the needs of the many different constituencies throughout Newton who may look to use this document to guide development/redevelopment in the city. In chapter four of this document, the processes and specific methodologies employed in these analyses are described for reference. This is intended to both explain how results were determined and to enable future generations of Newtonians to update these pages with the latest data sets.

Introduction to the Pattern Book

Using the Pattern Book for Development & Redevelopment

Newton's 2007 Comprehensive Plan speaks to the desire of the community to:

“[seek] both excellence in design and sensitivity to the rich individuality of our neighborhoods and village centers.”

While Newton's zoning ordinance and other regulatory and development oversight provisions provide rules to guide development, many of these rules are relatively blunt instruments when it comes to achieving the kind of results that satisfy neighbors and other residents of the community. Often, these rules result in by-right, as well as Special Permit, development that does not achieve results that support the City's broader planning goals.

At the outset of the initiative to compile the Pattern Book, it was the goal of the City and the planning team to develop a comprehensive understanding of the city's existing development patterns before revising the zoning regulations that will control future development.

It is intended that the Pattern Book will function alongside the new zoning ordinance so as to help explain why certain types and scales of development should be located in certain portions of the city and how those development decisions will support the City's broader planning-related goals.



Homes in West Newton Hill



2

The Development
of Newton

The Development of Newton

Newton's Development Timeline (1646 - 2017)

The Newton visible today was built upon the complex interplay of economic shifts, transportation innovations, and ever-changing trends in household lifestyles. Looking back, one can see intentional decisions to lay out roads, housing, and industry in anticipation of these social changes. At other times, one can see reactions to social changes that were already affecting the city. Over the course of history, the City's role in guiding development has also changed substantially.

1646

Reverend John Eliot establishes the "praying town" of Nonantum

Colonization in the area of present day Newton included Reverend John Eliot, who established a planned village settlement for "Praying Indians," Native American Christian converts at present day Newton Corner, and gave the praying town the name "Nonantum." A contemporary of Eliot's, Rev. Jonathan Homer described how houses were built to be equal no matter the wealth or position of the family within the native society, and that along with the planning of housing and infrastructure, the clergy arranged for converts moving into the town to take up a diverse range of farming and industrial roles so that the society could be self-sustained like the colonists' villages.

Pre-Colonial Contact

Mattakeeset and Massachuset Native American people inhabit the area.

Industrial use of the Charles River began in 1688 with a sawmill at the Upper Falls and a gristmill at the Lower Falls in the mid-1690s. From then through the 1820s these areas developed as quintessential self-contained New England villages with residences for workers in the mills and farms, houses of worship, inns for those passing through, and even a store or two all within walking distances.

1688

First mill opens on the Charles River at Upper Falls





1844

Commuter rail services begin



The Boston & Worcester Railroad opened in 1834, and started commuter service in 1844. The trains stopped in Newton Corner, Newtonville, West Newton, and Auburndale and prices were “commuted” for tickets purchased weekly instead of daily. The neighborhoods around each stop saw speculative housing development after the advent of commuter service. Newtonville grew quickly into a “railroad village” with a focal point on the station. Auburndale got its name at this time, and saw three major speculative subdivisions in 1847 alone. During this era, several pocket park streets were developed as planned communities with designs by the picturesque landscape designer Alexander Wadsworth (e.g. Washington Park, Grove Hill Park).



1813

First post office in Newton opens in Newton Lower Falls

1834

First railroad through Newton opens

1840

Given rising land values in Auburndale, the Poor Farm is moved to Waban

1850

Beacon Street is laid out, connecting Newton to the newly filled in Back Bay in Boston

1852

Charles River Railroad opens (future Green Line)

Newton's Development Timeline (1646 - 2017)

1876

First municipal water supply

First municipal water supply was established, pumped from the Charles River at Oak Street upstream from the mills at Upper Falls to the Waban Hill Reservoir. Served Newton Corner with drinking water, replacing individual wells, and for fire protection.

1880

First sewer line built, serving Newton Corner and discharging to the Charles River.

1886

Given rising land values in Waban, the Poor Farm is moved to Oak Hill (near present day Jewish Community Center).

1897

MBTA begins subway system in Boston.

1886

Circuit railroad opens



Newton's history in the 1850s-1890s is closely tied with the development of Back Bay in Boston. The 700 acre bay took almost 40 years to fill, and much of the material to fill it was gravel from Needham that traveled over the Charles River Railroad, passing through what is now the Upper Falls Greenway and MBTA Green Line. With the building of Beacon Street and the growth of the Back Bay neighborhood as Boston's center for arts and culture, the distance to Boston from southern Newton was substantially decreased, making it more attractive as a place to live. It's at this time that the heirs of Joseph Lee subdivided his 165 acre farm into a new suburban community of estates for themselves and others and named it "Chestnut Hill."

As the Charles River Railroad turned from freight to passenger rail in 1886 and connected to form a "circuit" with the Boston & Worcester Railroad on the north side of the city, travel times to Boston were reduced even further, and opened up southern Newton to the average commuter. Newton Highlands, Newton Centre, Waban, and the southern half of Auburndale all experienced both residential and commercial growth during this period.

1940

Newton Zoning Ordinance overhaul to introduce multiple residential and commercial zoning districts and new lot and setback requirements.

Veteran's housing at Oak Hill. Permits are issued free of charge in order to support affordable housing for veterans.

1916

New York City is the first American city to adopt a comprehensive zoning ordinance.

1920

Massachusetts adopts zoning enabling legislation.

1921

Comprehensive Plan focuses on car-oriented transportation planning, including new and wider roads. Trolleys for Green Line and Commuter Rail constructed.

1932

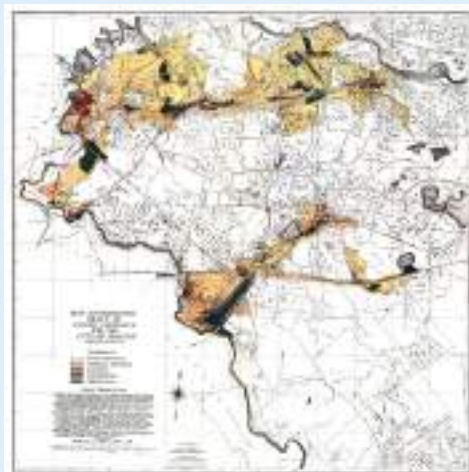
Newton City Hall is constructed. New Deal era policies influence the construction of municipal buildings in Newton.

1929

Great Depression begins, spans a decade.

1922

Newton adopts first zoning ordinance.



John Fox, a zoning and planning consultant from New York City, is hired to assist in the development of Newton's first comprehensive zoning ordinance.

Newton's Development Timeline (1646 - 2017)

1953

Major amendments to Newton Zoning Ordinance to reduce allowed density of residential development.

1954

Newton completes process of becoming part of the Massachusetts Water Resources Authority for water supply and sewer service.

1970's

Chestnut Hill Mall (now The Shops at Chestnut Hill) constructed.

1980's

Mayor Mann's administration closes many neighborhood schools in response to declining enrollment.

1960's

Massachusetts Turnpike constructed, resulting in neighborhood destruction and new air rights development.



1985

Demolition Delay ordinance goes into effect.

1987

Newton revises its zoning ordinance, imposes restrictions on commercial development. Special Permit threshold of 20,000 sq ft. implemented.

2000's

Rapid increase in residential tear-downs and rebuilds. Moratorium proposed (2014).

Today

Newton Pattern Book is created

1992

Chestnut Hill Historic District is created.

Newton Corner buildings built by-right, requiring no special permit.

2007

Great Recession begins.

The Development of Newton

Newton Today

Modern Newton is a successful and desirable city, benefiting from the investments of the past that have gifted it with a rich character while continuing to evolve for the future. Over the last 300-plus years, Newton's relative position has changed. What was once a collection of agricultural areas and mill villages on the outer edges of Boston is now a thriving suburban city in the inner core of the greater Boston region, easily accessible to some of the strongest job centers in the country. Land values have increased accordingly, as has congestion and other indicators of the city's valuable position within the region.

18.2 square miles

5 colleges & universities

90k approximate population

11 rail stops

\$1.1m median single family house price (2016)

62% of Newton's land area is permeable

A direct effect of the city's valuable position in the region is the increasing value of Newton's homes. Single family homes represent 55% of the housing stock and sold for a median value of \$1.1 million in 2016. These prices inevitably lead to the overall reduction in economic diversity of the community as low to middle income households leave the city and are replaced almost exclusively with high income households. Further, the high value of the land pushes developers to maximize the value they can get out of it, effectively mandating very large houses and other large developments, such that the character of Newton's neighborhoods is gradually changing.

New development in the city tends to be either large single family homes or large apartment projects. Notably, the more context appropriate smaller 3 to 6 unit projects or mixed-use projects in Newton village centers have been relatively rare. There was not a single mixed-use project in Newton from 2005 to 2014. The small multi-family and mixed-use projects create opportunities for more affordable housing options that would readily fit into Newton's existing context. As the City prepares for a new comprehensive economic development strategy, it is clear that offering housing choices in mixed-use village center buildings as well as a greater diversity of neighborhood-scaled housing options will be essential for

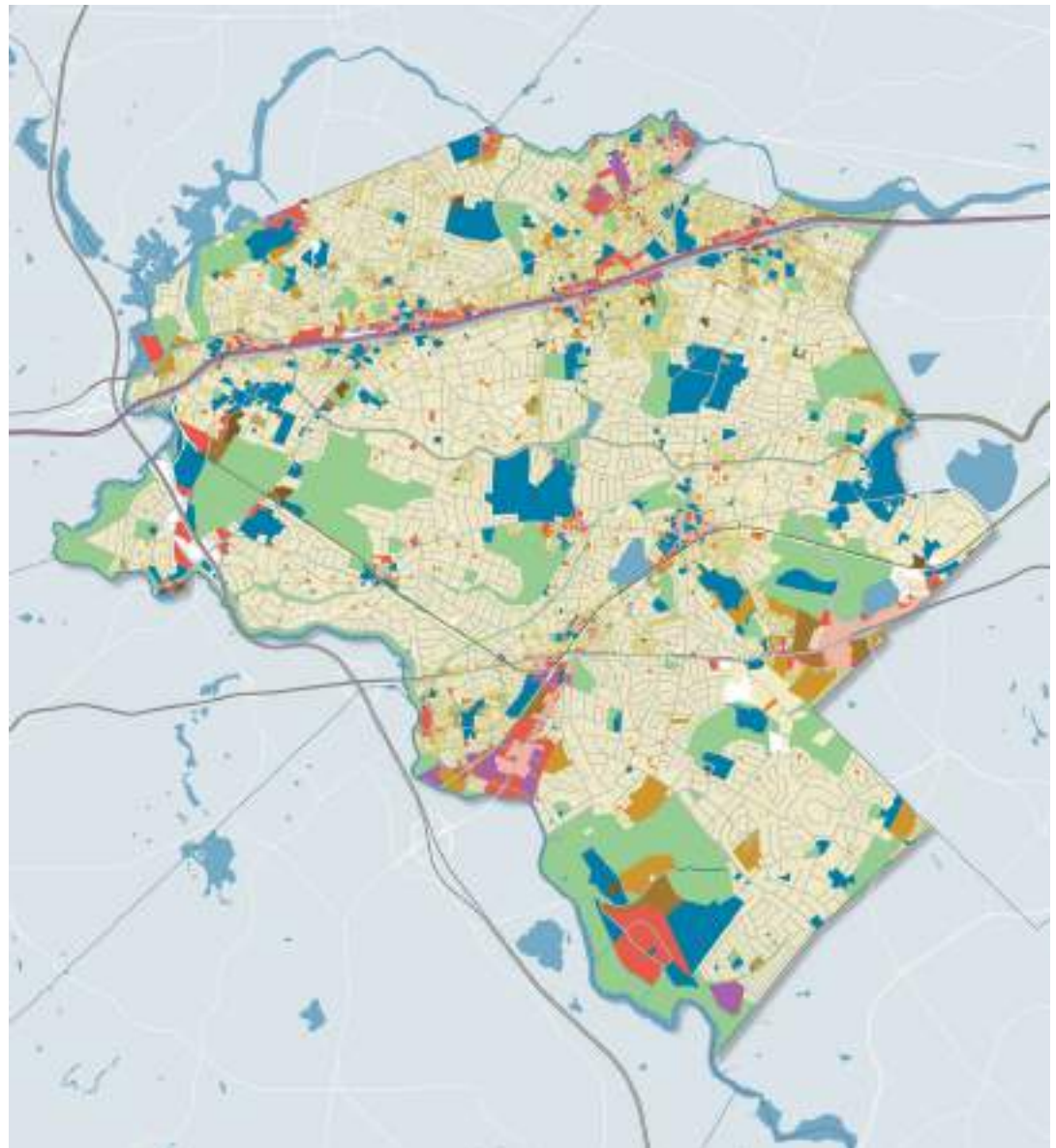
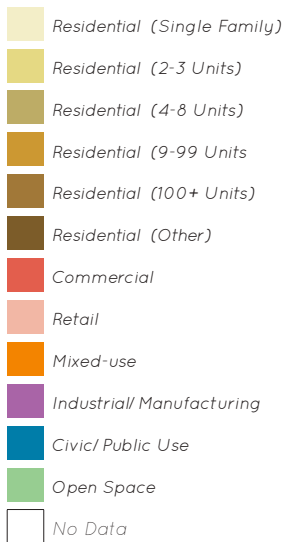
businesses, which need to offer access to the workforce in order to grow and thrive.

Also reflective of Newton's location in the region's inner core is the higher rate of peak hour congestion over what is experienced in more outlying areas of the region. There are far more people moving through Newton on a daily basis than there were historically. Fortunately, increasing numbers of people are choosing alternative commute options over driving alone. Transit, biking, and walking make up 18.7% of commuter trips by residents. Car ownership rates in Newton are also more reflective of the city's walkability and strong transit options with an overall average of 2 cars per household and a few sections of the

city where households have 1 to 1.5 cars on average.

Looking ahead, Newton's challenge is to find ways to diversify housing and transportation choices to address critical issues of income inequality, economic development, and efficient mobility. In addressing these issues, it will also be important for the City to simultaneously consider climate change and sustainability. It is helpful that returning Newton's zoning to reinforcing the historic development patterns, with new development directed to Newton's village centers, is consistent with effective sustainable development strategies in addressing all of these issues.

An abridged land use map of Newton in 2016.



Newton's Zoning History

Government leaders from the City of Newton were among the foremost advocates of the adoption of zoning enabling legislation by the state in 1920 allowing municipalities to create zoning ordinances. In September 1921, the Newton Planning Board issued its first comprehensive plan, which included a clear recommendation for the adoption of a Zoning Ordinance for the city, a draft of which was already the subject of multiple public hearings with the Board of Aldermen and was later adopted in 1922. This early zoning ordinance simply regulated building use and height and was designed to essentially hold commercial (including apartment buildings) and industrial development in its present (at that time) locations, leaving the remainder of the city for residential uses. A separate ordinance regulated front setbacks on certain streets, with the objective of preserving open land that might later be acquired by the City for the purpose of widening streets.

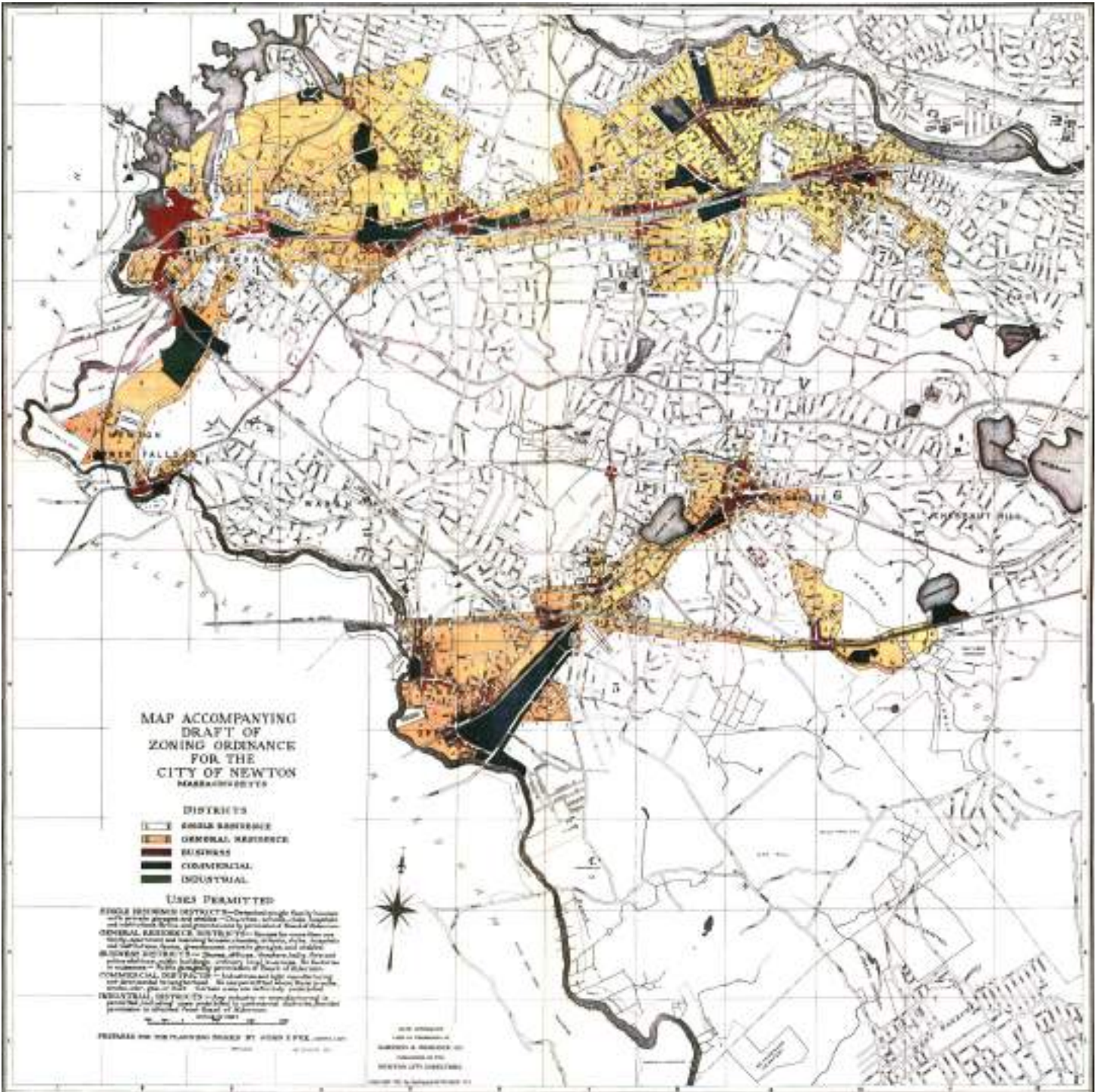
Reading this first plan, it is abundantly clear that a major concern driving the planning effort and interest in zoning was a need to prepare for anticipated population growth. By 1922, the population of the city had doubled since the 1880s and now stood at approximately 46,000. Even with the Great Depression, the population of the city would be nearly 70,000 by 1940, when the City would adopt its first major overhaul of the Zoning Ordinance. This new ordinance introduced more categories of residential and commercial districts, differentiating them by dimensional factors of lot size, frontage and minimum setbacks. This iteration of the zoning ordinance pays more attention to single family residential areas, introducing rules that would limit density.

By 1950, the city population had grown to nearly 82,000, and in 1953 the Board of Aldermen once again adopted a new zoning ordinance, introducing even stricter lot requirements that further reduced the allowed density. Somewhat unique to Newton, the Board did not replace the old standards with the new ones but instead created parallel old lot standards, reflecting the requirements of the 1940 ordinance, and new lot standards that would only apply to newly created lots. One of the on-going challenges of Newton's zoning has been that these lot standards created in the middle of the last century were based on a suburban ideal that simply did not exist over the majority of the then existing city, resulting in widespread non-conformity with the Zoning Ordinance.

“In its infancy, a business district needs close contact with the residence area and usually it can grow to great proportions by gradual marginal absorption of the residence area. Zoning does not attempt to prevent this natural irresistible change which reflects the vitality of a community, but it prevents sudden, undesirable, erratic extensions of the business district”

- 1921 Report of the Planning Board

The next major set of amendments to the Zoning Ordinance came in 1987, at this point a couple decades into a period of declining population for the city. The focus of these amendments was largely on commercial development, including the creation of the Mixed Use 1 and 2 districts on Needham Street. Other controls were also placed on commercial and institutional development citywide that are still impacting economic development in the city today.



Newton's 1922 Zoning Map

Newton's first zoning ordinance took effect in 1922, only six years after the nation's first-ever comprehensive zoning ordinance took effect in New York City in 1916.

“The aim of zoning is not to hinder the development of a community, but to encourage the right kind of buildings in the right place.”

- 1921 Report of the Planning Board

The Development of Newton

Recent Planning Initiatives

Over the last 10-15 years the Newton community has come together with the goal of taking a proactive approach to planning for the city's future. Summarized here are some of the City's recent planning and strategic initiatives. These documents and the processes used to compile them reflect the community's goals for the near- and long-term and identify key strategies for achieving those goals.



A sample spread from the Newton Housing Strategy factbook. The Housing Strategy was designed to analyze Newton's existing housing context while putting forth recommendations for guiding growth, enhancing diversity, and ensuring long-term access to housing throughout Newton.

Newton's Comprehensive Plan

Newton's Comprehensive Plan (2007) tells a story that would likely offer few surprises for Newton residents. By and large, the Newton community expects that development in the city will fit into the city as it exists today - protecting the residential qualities of the city. The plan describes a course of moderate growth, focused in village centers and commercial corridors and carefully curated to respect the existing context of the city. The Plan also recognizes several issues that are cause for concern for the City, among those being a loss in the city's much-valued economic diversity among

its residents, need for tax revenue growth, increasing traffic congestion, and the necessity of protecting environmental and open space resources. The Plan places a great deal of emphasis on the unique sense of place of Newton and methods for protecting that value.

While there is not a clearly defined implementation section to Newton's Comprehensive Plan, the plan does call for new zoning to reinforce the values described above and for more neighborhood or village level planning efforts to articulate more specific visions and action plans for the many unique and valued individual areas of the city.

Housing Strategy

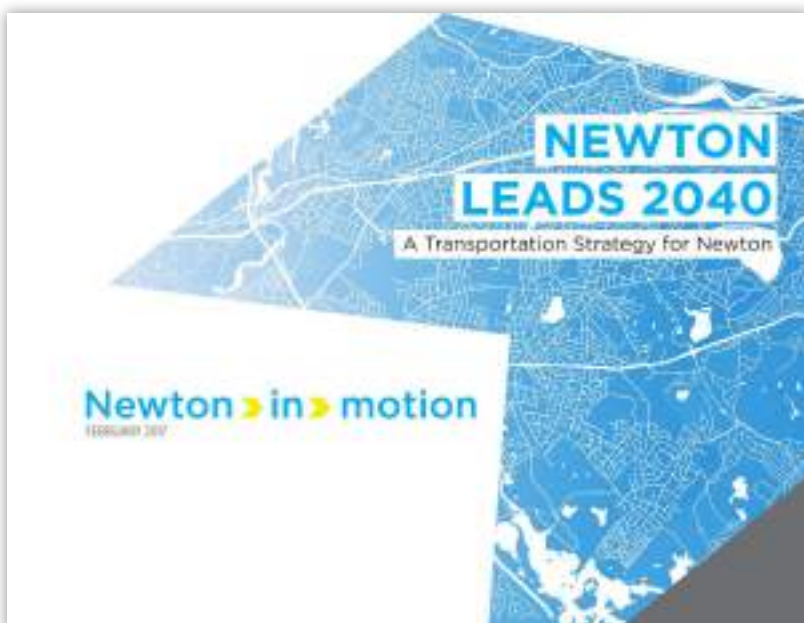
In response to the increasingly high cost of housing in Newton, and the related decline in Newton's economic diversity, Newton created a Housing Strategy in June 2016. The strategy documents the rapidly changing composition of the community and the current nature of the housing stock. A set of ten priority actions were identified; seven of these were for the development of new housing projects, one was targeted at addressing homelessness, and two were regulatory changes broadening the ability to create accessory apartments and improving the inclusionary zoning requirements of the zoning ordinance.

Newton in Motion Transportation Strategy

Newton-in-Motion is a comprehensive guide towards a more equitable, economically and environmentally sustainable multimodal transportation system. This strategy includes a comprehensive data-driven analysis of current travel conditions, as well as a set of recommendations for investing transportation resources to achieve an equitable and safe multimodal system that creates economic growth and provides environmental benefits. The strategy sets a vision that by the year 2040, Newton's transportation system will be **safe, smart, accessible, livable and sustainable**.

Economic Development Strategy

In 2018, the City will be working on an Economic Development Strategy to complement the Housing and Transportation Strategies. The intent of this study is to build on the city's assets, particularly in developing its capacity within the innovation economy, building on the N2 Innovation District, the Charles River Mills District, and MassChallenge's location at the Newton Innovation Center in Newton Corner. Further, this effort will advance the City's Economic Opportunity for All program, which seeks to create opportunities for people of all economic stations to find pathways to success in the city. While the strategy will include big picture development principles, much of the focus will be on actionable ideas, particularly those tied to specific properties and areas of the city. The City strongly believes in regional approaches to economic development activity, and this strategy will reflect that perspective.



The cover of the Newton-in-Motion transportation strategy, completed in 2017.

3

Newton's Patterns

How the Pattern Book is Organized

In preparing the Newton Pattern Book, the planning team reviewed several precedent examples from communities all across the United States to understand how other cities thought about their development history and the patterns that emerged from their neighborhoods and commercial centers. The team also collected and analyzed data from a variety of sources, including local, state, and federal GIS databases, local regulatory and planning documents, aerial photography, community tours, interviews and focus group discussions with local experts, and more.

Patterns in Newton have been analyzed and are represented in the Pattern Book in three ways: **citywide analysis, character patterns and pattern subsets, and context-based areas.**

CITYWIDE



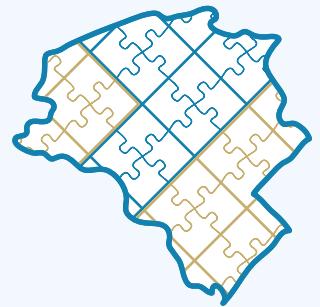
Citywide Analysis

This analysis shows several data sets at the city scale. The maps are intended to convey the composition of Newton and the systems operating citywide through various data lenses. The layers in these maps reveal patterns and allow users to draw conclusions from a citywide perspective.



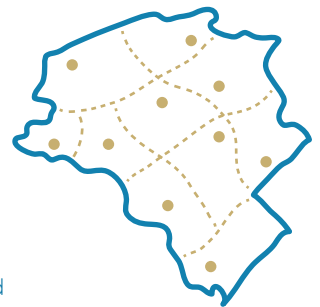
Character Patterns & Pattern Subsets

Development types (squares in the diagram to the right) are broad categories describing the predominant land use and composition of Newton's neighborhoods and centers. Pattern subsets (puzzle pieces in the diagram to the right) are the more specific areas within character patterns that describe the more detailed form, scale, and density of development within each character pattern.



Context-Based Areas

After reviewing the city's data layers and experiencing firsthand the unique mix of styles, densities, development eras, and uses that comprise Newton's neighborhoods and village centers, the planning team broke the city into seventeen "context-based areas" (CBAs). The intent of these areas is to distinguish neighborhoods from one another in order to understand the composition and shared characteristics of development within an area, and of areas relative to each other.

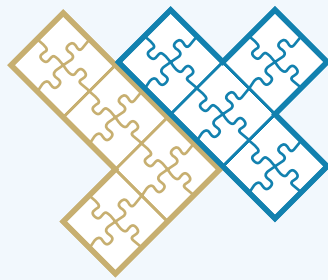


LOCAL



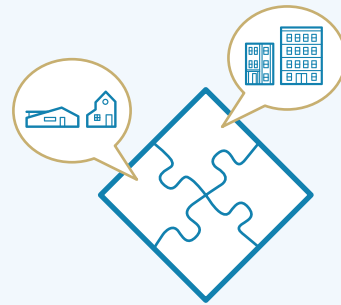
Seeing data sets on the citywide scale is useful for understanding the similarities and differences between Newton's various neighborhoods and centers. To understand these data on a more local scale, they have been broken down by CBA.

Data compiled in the citywide analysis informed the definitions of character patterns and pattern subsets.



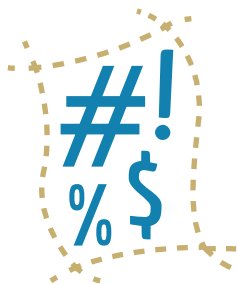
Character Patterns

Character patterns are large, generalized areas describing the predominant use(s) and the development composition of Newton's neighborhoods and centers. The Pattern Book breaks the city into six character patterns: neighborhood, village center, convenience center, campus, recreation & public use, and natural landscape.



Pattern Subsets

Pattern subsets are the more specific and measured patterns comprising each character pattern. Each character pattern contains a menu of detailed subsets describing the scale, form, and density of development as well as the relationship of buildings to each other and to the street.



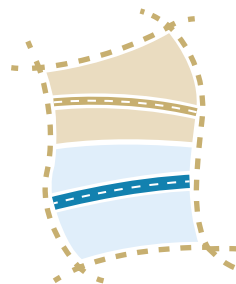
Area Overview

Each CBA is described in terms of its boundaries and development composition.



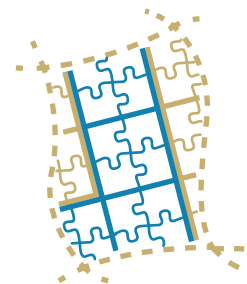
Land Use Analysis

A generalized land use map shows the patterns of development within each CBA. Key development metrics are measured by land use.



Street Type Analysis

Street types are mapped within each CBA and key development metrics are displayed by street type.



Character Patterns & Subsets

Each CBA is broken down and analyzed using the same character patterns and subsets described above.

Citywide Map Series

The first way to approach Newton's pattern book is with an understanding of the specific features of a lot, building, block or neighborhood in the context of the city as a whole. This citywide overview reveals contextual patterns in the city's various neighborhoods and village centers, allows landowners, builders, designers, and regulators to make informed decisions on the growth and redevelopment potential of certain areas, and enables a more concrete understanding of the identified patterns in the next section (character patterns & subsets).

These maps represent the "raw" data used to designate and determine the extent of the character areas in this chapter. Data to inform this map series were collected from a variety of publicly available sources and are updated regularly by municipal and state governments. It is intended that these maps can be updated with a frequency that keeps them relevant as a tool for understanding the contextual framework of new development/redevelopment proposals in Newton. Should a character area outlined in the successive section in this chapter need revision, expansion, or reassignment, this updated map series should prove useful in understanding why and how a change should take place.

City Systems

This collection of maps includes the many systems, networks and natural features that tie Newton's neighborhoods together and connect the city to the surrounding regional context.

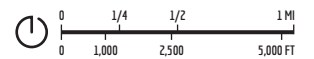
Development Forms

The development forms collection of maps describes Newton's developed properties and their interaction with one another and with the larger neighborhood context. These maps also provide insight into the built composition of Newton's neighborhoods and village centers relative to each other.



Legend

- Open Space/Tax Exempt
- Water
- Buildings
- Parcels
- Streets
- Railroads



Citywide Systems

Development Era



Historic Map of Newton, Circa 1855

The following series of maps describes the historic growth patterns of Newton. Six growth periods are layered on top of a historic map of Newton, circa 1855. The first map, which spans between the years 1686 and 1899, shows structures clustered around the two railway lines that run east-west through the city. In subsequent growth-periods, the land in between the railway lines is developed, until eventually, development spreads to the northern and southern edges of the city.

The bar graphs underneath the individual maps indicate the total percentage of the city's structures (as of 2016) that were built during their respective growth-periods. By 1949, almost 75% of Newton's current building stock was already in existence. Land use data show a trend away from multi-family residences in the 20th century, with an increase in the percentage of single-family and commercial use structures.

*This assessment does not take into account the number of units in multi-family structures



1686-1899
3,946 Structures from era
18% of Structures in 2016

64% Single Family
35% Multi-Family
1.0% Commercial



1900-1924
5,080 Structures from era
40% of Structures in 2016

65% Single Family
33% Multi-Family
2% Commercial



1925-1949
7,346 Structures from era
73% of Structures in 2016

74% Single Family
24% Multi-Family
2% Commercial



1950-1974
4,046 Structures from era
91% of Structures in 2016

76% Single Family
22% Multi-Family
2% Commercial



1975-1999
996 Structures from era
95% of Structures in 2016

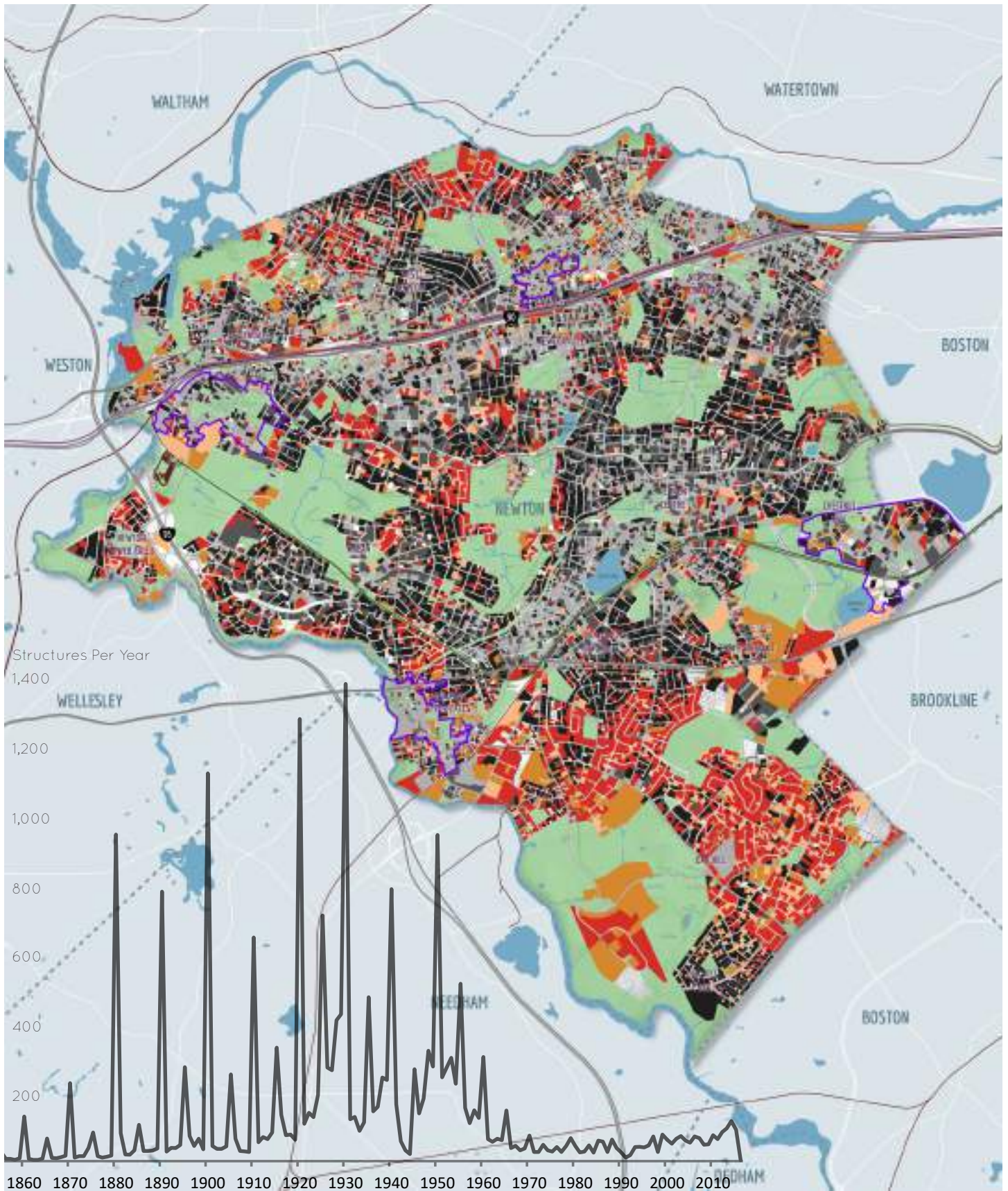
75% Single Family
22% Multi-Family
3% Commercial



2000-2016
1,112 Structures from era
100% of Structures in 2016

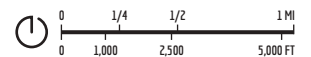
75% Single Family
22% Multi-Family
3% Commercial





Legend

- 1686-1899
- 1900-1924
- 1925-1949
- 1950-1974
- 1975-1999
- 2000-2016
- Historic Districts



87% of Newton's structures were built between 1860 and 1960



Citywide Systems

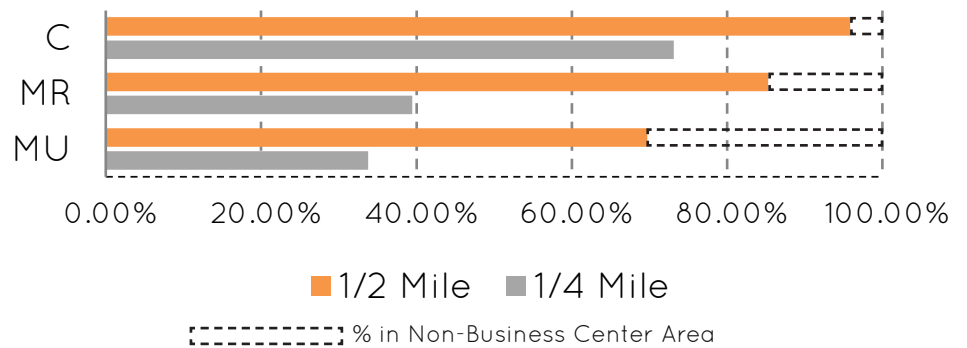
Business Centers

The following series of maps studies the various types of business centers: neighborhood, local, major, and regional, as identified in Newton's 2007 Comprehensive Plan. Each business center is analyzed in terms of the total gross square footage of buildings in the following use categories: multifamily, mixed-use, and commercial/industrial. These uses are typically associated with business centers, and differ in usage from the remainder of Newton, which is primarily single family residential.

The bar graph below shows the percentage of commercial, multi residence, and mixed-use building area that is accounted for in the business centers relative to the total within the entire city.

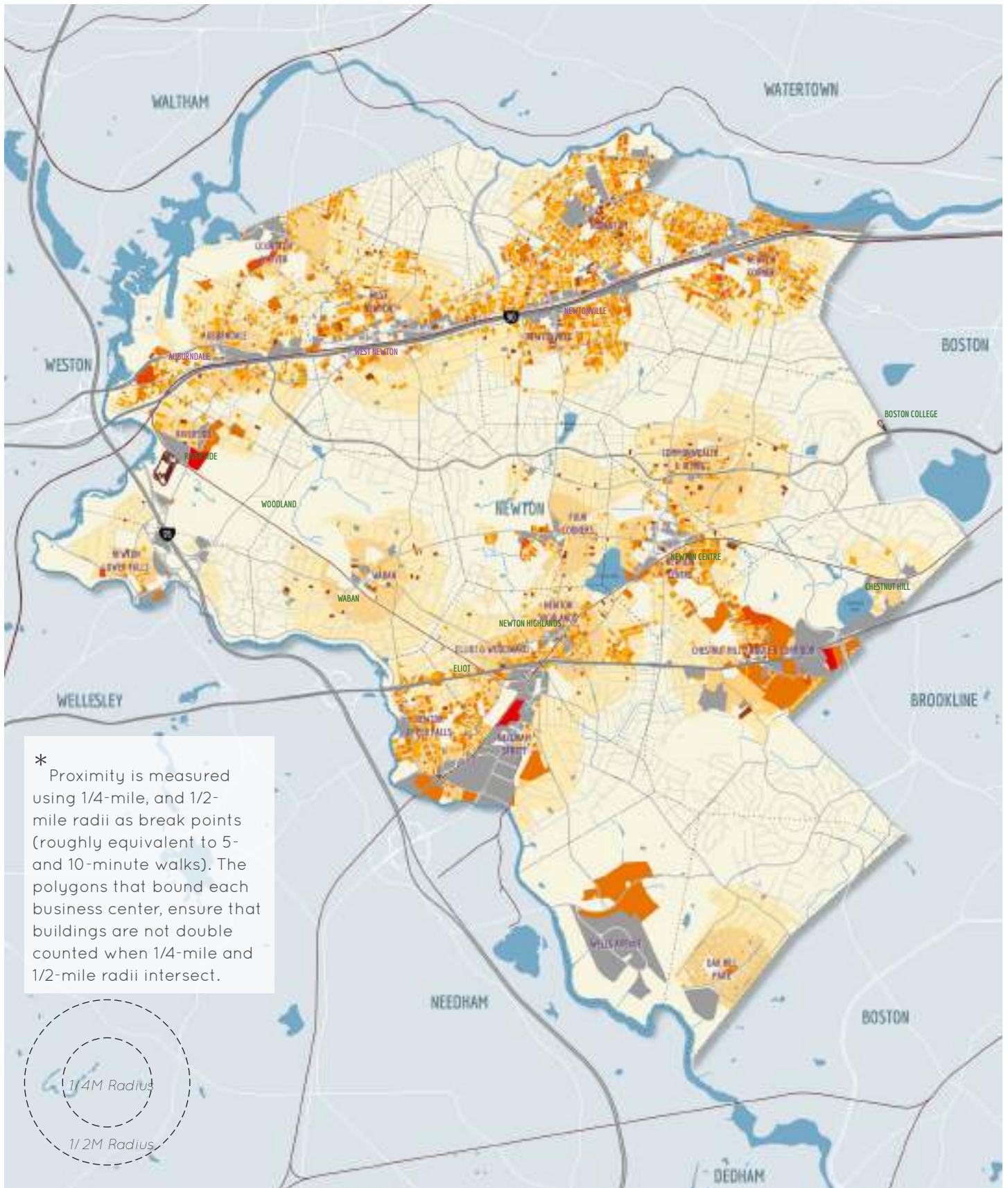


City-Wide



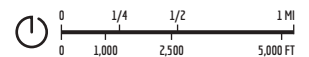
“The vast majority of Newton’s existing commercial, multi-unit residential, and mixed-use development is located within 1/2 mile of an identified business center.”





Legend

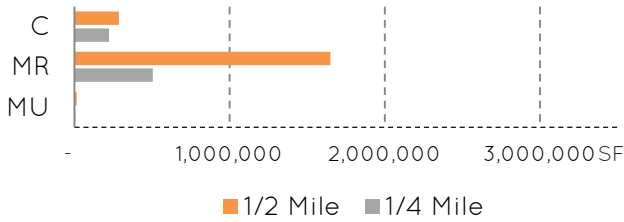
- | | | |
|-----------------------------|--------------------|-----------------------|
| Single Family (1/4M Radius) | Multi Family (<10) | Apartment (100+) |
| Single Family (1/2M Radius) | Mixed Use | Commercial/Industrial |
| Two Family | Apartment (10+) | |



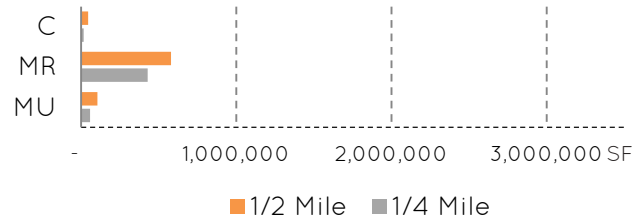
Business Centers

The bar graphs below show the total building area in square feet of commercial/retail (C), multi residence (MR), and mixed-use (MU) buildings within each business center. The orange bars on the top indicate the building area within 1/2 mile (10-minute walk) of a given business center, while the gray bars on the bottom indicate the building area within 1/4 mile (5-minute walk) of a given business center.

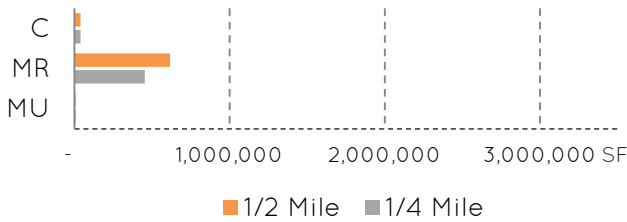
Auburndale



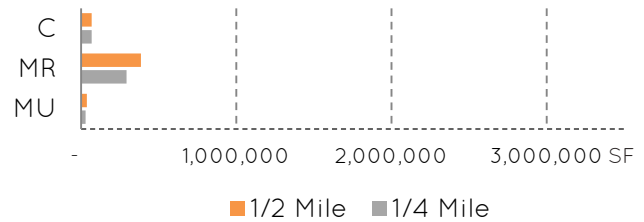
Commonwealth & Irving



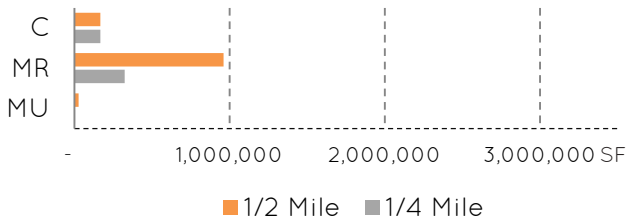
Elliot & Woodward



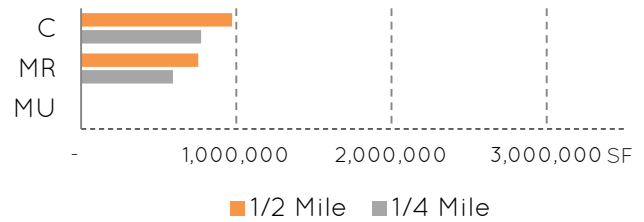
Four Corners



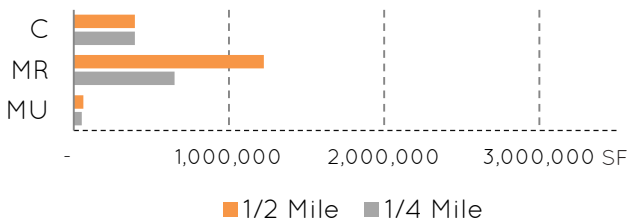
Lexington & River



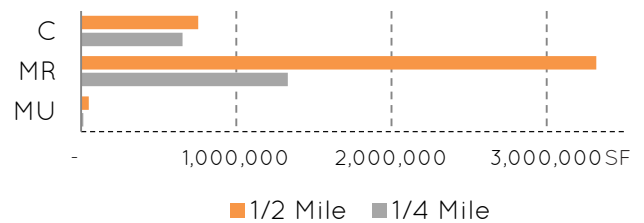
Needham Street



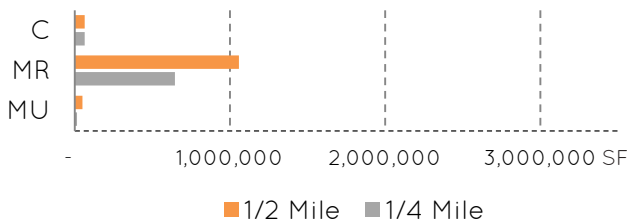
Newton Centre



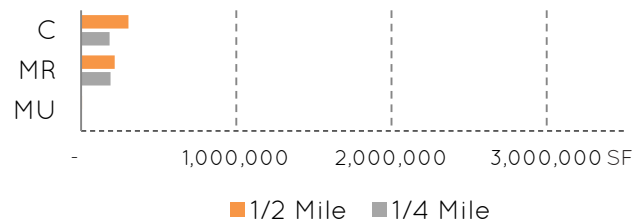
Newton Corner



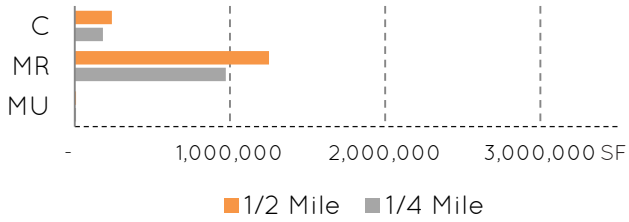
Newton Highlands



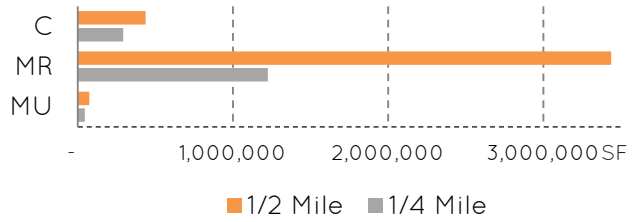
Newton Lower Falls



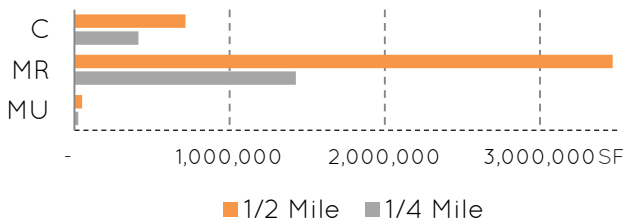
Newton Upper Falls



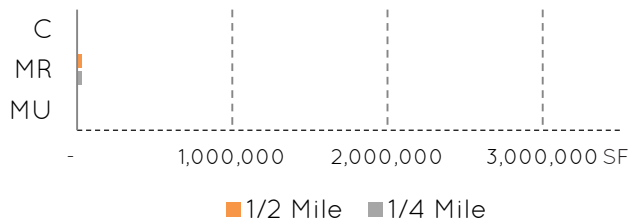
Newtonville



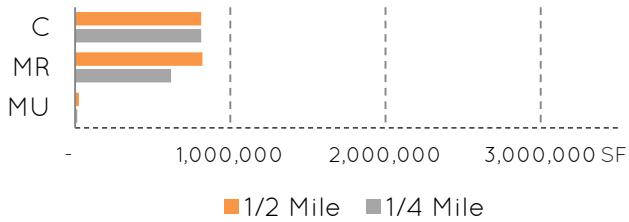
Nonantum



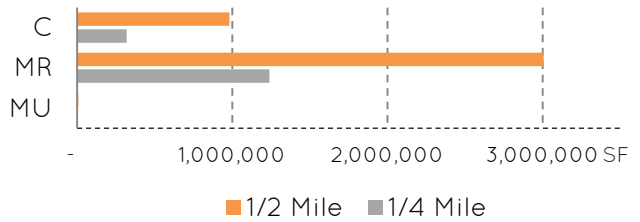
Oak Hill Park



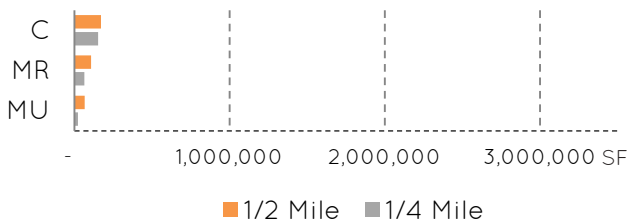
Riverside



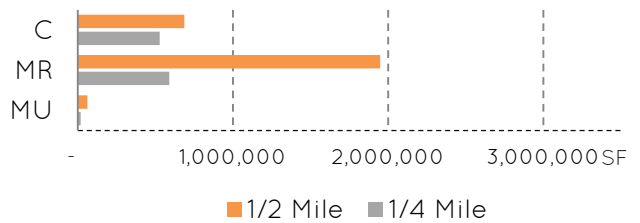
Route 9 Corridor East



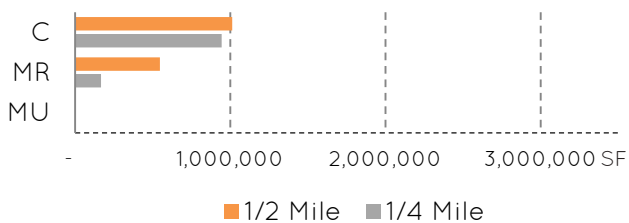
Waban



West Newton



Wells Avenue

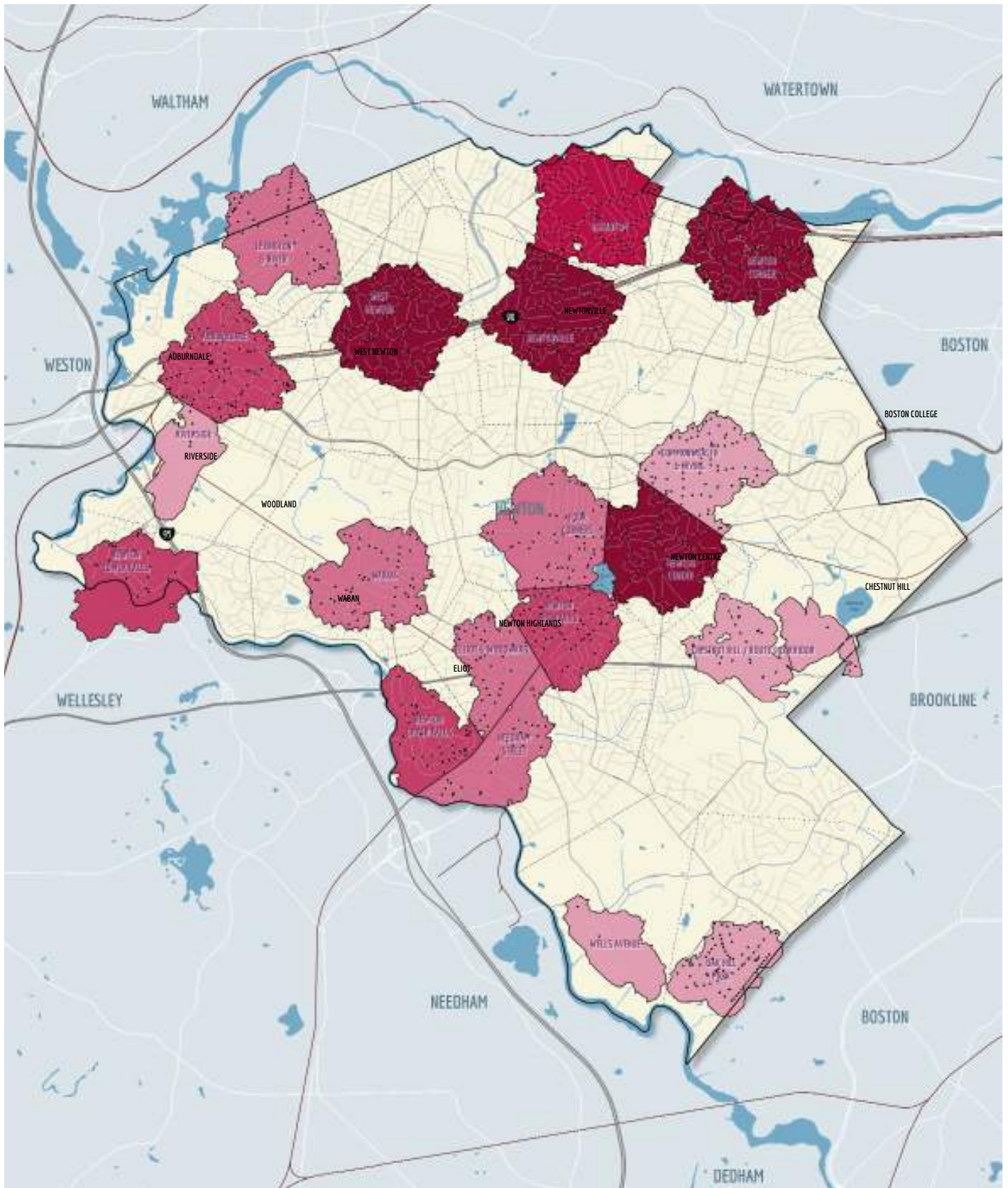


Citywide Systems

Circulation: Walkability

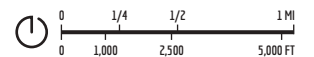
One important factor pertaining to Newton's business centers is the conduciveness to walking. The more ground one can easily cover by walking, the more likely one will walk over driving. Increased pedestrian traffic also has the potential to contribute to the success of commercial establishments such as retail shops or restaurants. This map uses ten-minute walking isochrones (iso meaning equal, and chrone meaning time) to show the relative areas around business centers that can be walked to within ten minutes. Within the isochrones, the number of intersections and total commercial floor area are used to give each business center a relative score for walkability. Some of Newton's business centers are within walking distance from neighboring communities.





Legend

- Limited Walkability
- Low Walkability
- Medium Walkability
- High Walkability
- Excellent Walkability
- Intersections
- 10 Minute Walk Isochrone

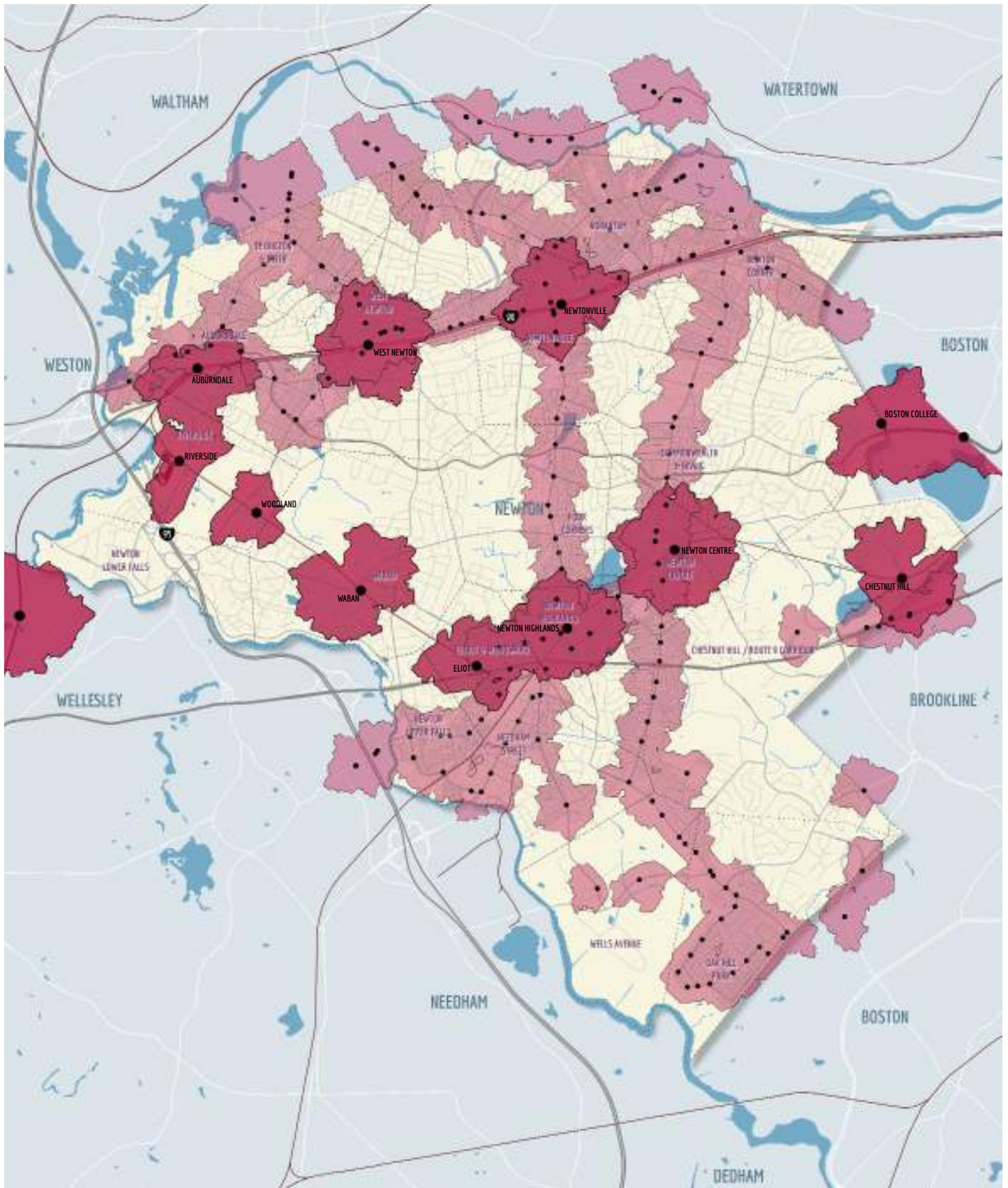


Citywide Systems





Circulation: Transit Access

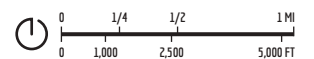
Transit access is another important factor in measuring the accessibility of the city's neighborhoods, and can also help reduce traffic. This map uses five-minute isochrones (walk distance) to bus stops, and ten-minute isochrones (walk distance) to train stations. Areas in Newton with higher numbers of train stations and bus stops are shown in darker shades of magenta. Some areas of the city have access to train stations or bus stops in neighboring communities.





Legend

-  5-Minute Walk Isochrone
-  10-Minute Walk Isochrone
-  Bus Stops
-  Commuter Rail & Subway Stations

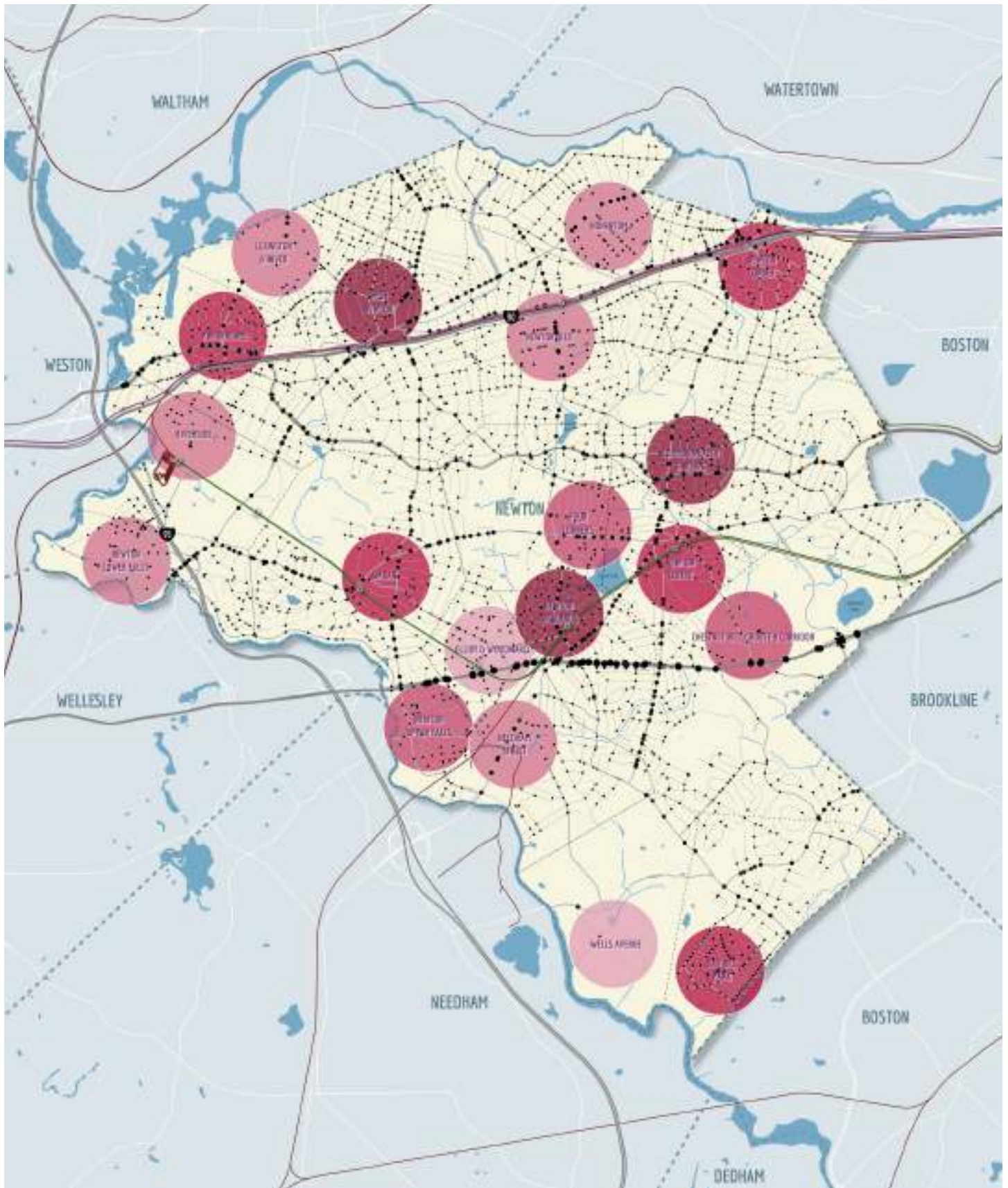


Citywide Systems










Circulation: Automobile Access

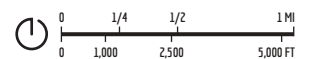
This map uses ten-minute driving isochrones, and the number of major and minor intersections to give each business area a relative score for automobile access. Areas with more major intersections and larger driving isochrones have higher automobile access, and are shown in darker shades of magenta.





Legend

- | | | | | | |
|---|---------------------------|---|--|---|------------------------------|
|  | Limited Automobile Access |  | High Automobile Access |  | Major Arterial Intersections |
|  | Low Automobile Access |  | Excellent Automobile Access |  | Minor Arterial Intersections |
|  | Medium Automobile Access |  | 10-Minute Driving Isochrone
(not shown for clarity) |  | Non-Major Intersections |





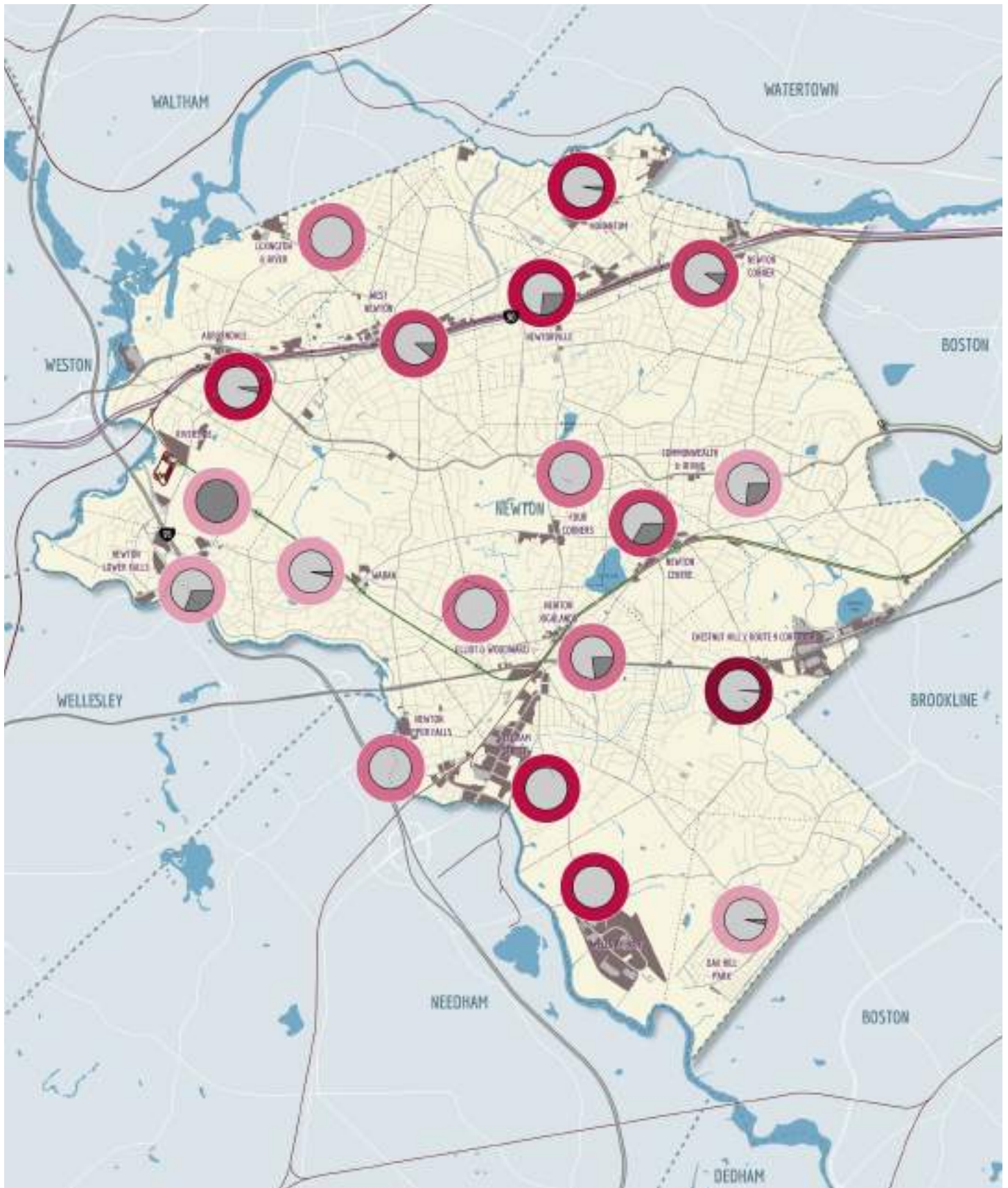
Citywide Systems

Circulation: Parking

An important consideration in understanding the functionality of Newton's business centers is the availability of parking. This map shows the relationship between commercial and industrial property in magenta and parking lots in gray. Each business center has an associated pie chart that shows the proportion of surface lot parking spaces to street parking spaces. In order to expand the supply of parking in business centers, proper parking management strategies are recommended over the creation of additional parking spaces.

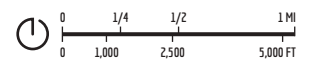
**The data used for this map only includes metered street parking, and does not include non-metered street parking. It also makes assumptions about total spaces per parking lot, using 350sf per space as a baseline.*





Legend

- 25-100 Spaces
 - 100-500 Spaces
 - 500-1,000 Spaces
- 1,000-2,500 Spaces
 - 2,500+ Spaces
 - Lot Spaces/Street Spaces
- Commercial/Industrial
 - Parking Lot



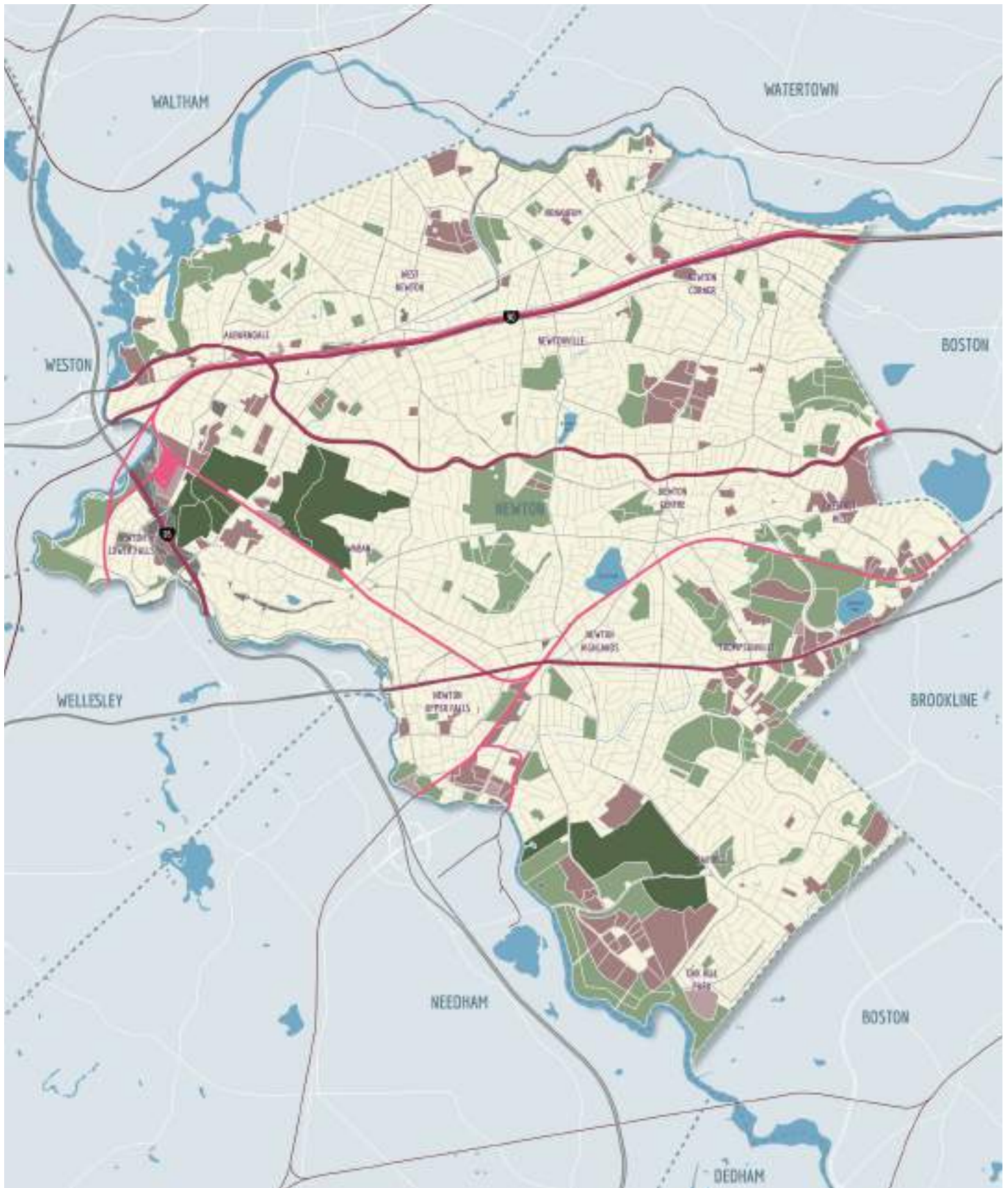
Citywide Systems

Physical Barriers







The highlighted parcels and clusters of parcels are all over 100,000 square feet, and due to their size—and in some cases their land use—represent obstacles to circulation and act as barriers between more contiguous portions of Newton’s street network.

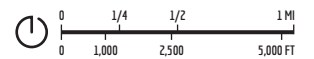
Linear infrastructure such as the I-90, Route 9, Commonwealth Avenue, and railway lines divide the city into horizontal wedges. These wedges are further broken up by large parcels of land comprised primarily of golf courses, campuses, and conservation land.





Legend

- | | | |
|--|--|--|
|  Golf Courses |  Infrastructure/Utility |  Major Roads |
|  Government/Institutional |  Public Misc. |  Rail Corridors |
|  Large Lot Clusters > 100,000sf |  Surface Water | |

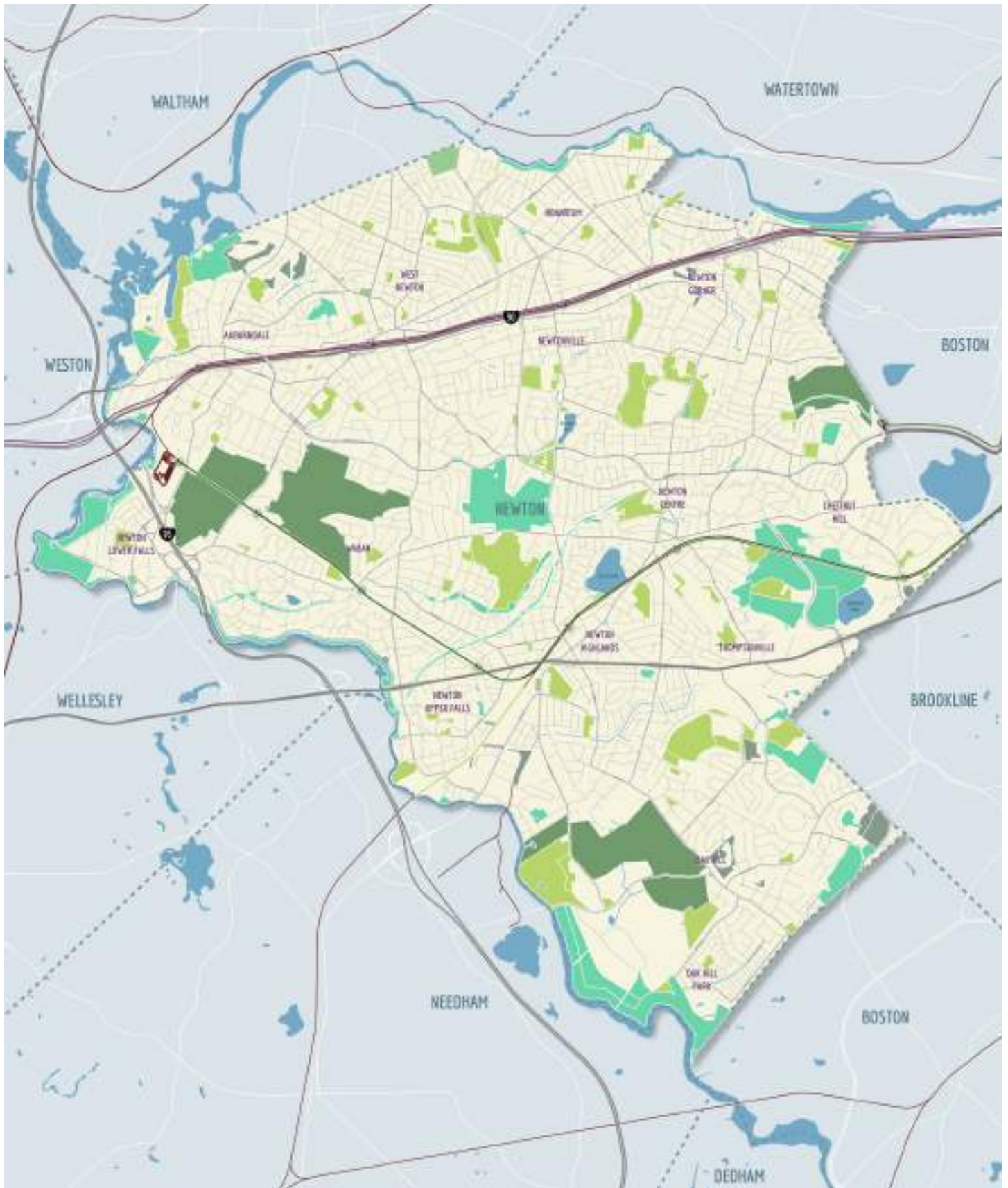


Citywide Systems

Open Space

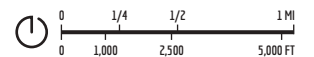
In this map, Newton's various types of open space are shaded in green, with the darkest greens representing golf courses, lighter shades of green representing school yards, public parks, and institutions which are open to the public, and medium greens representing conservation areas and cemeteries.





Legend

- Golf
- Vacant/Private
- Parks/Schools/Institutions
- Conservation/Cemeteries





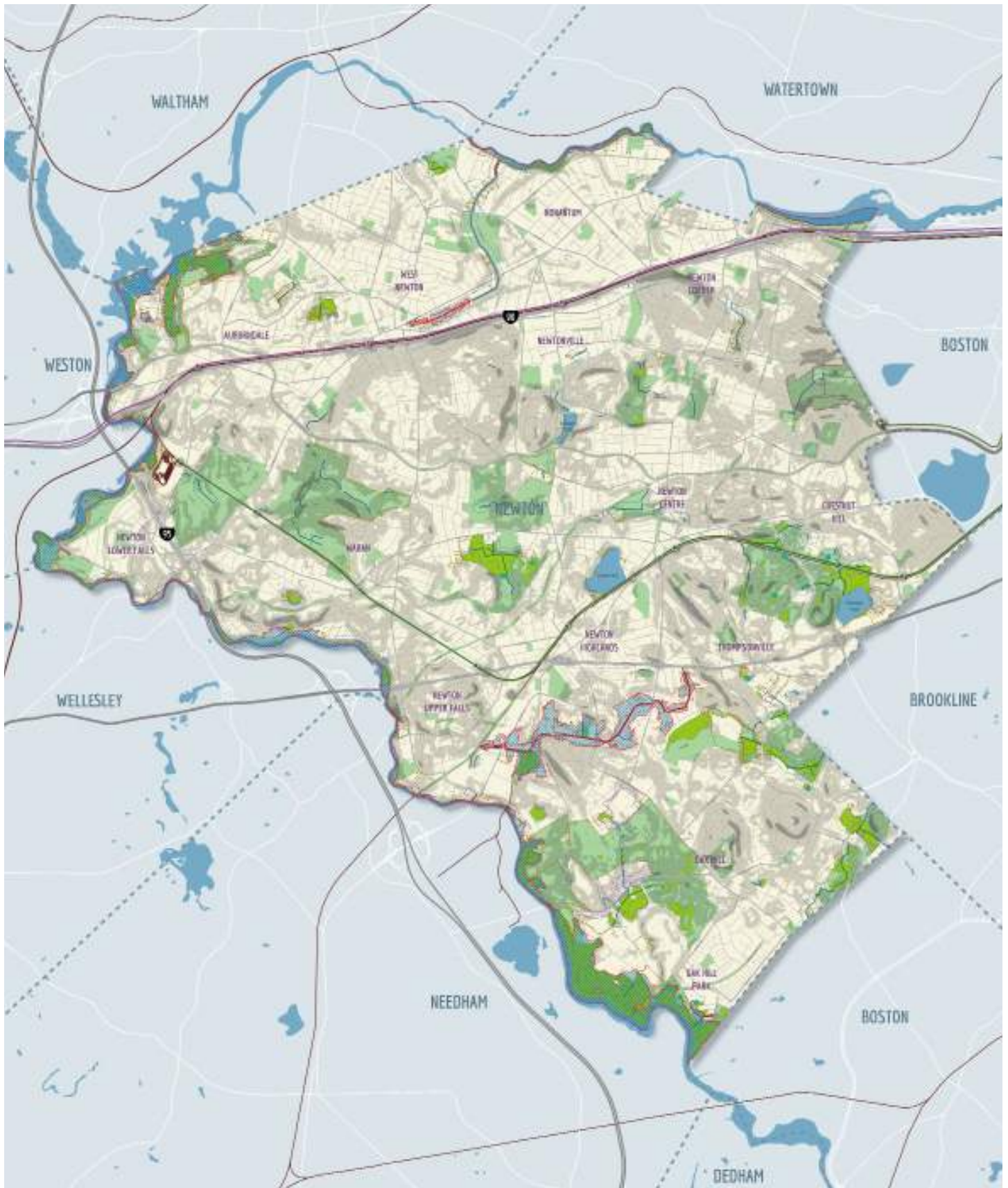
Citywide Systems

Hydrological Features

Newton is situated entirely within the Charles River Watershed. Despite Newton's proximity to the Charles River, there are relatively few areas that are prone to flooding. Due to the dams along the Charles River on the northern edge of the city, Newton is less susceptible to potential storm surge events than other communities in the Boston Metropolitan Area.

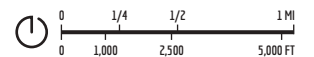
This map shows the relationships between surface water, flood zones, streams, wetlands, large open spaces, and steep slopes. Some of these factors such as steep slopes can contribute to erosion, while others - such as wetlands - are important natural buffers that can absorb and filter large amounts of water.





Legend

- | | | | | | |
|---|---------------------------|---|-----------------|---|---------------------------|
|  | Surface Water |  | Wetlands |  | Open Space |
|  | FEMA Flood Zones |  | Moderate Slopes |  | Wetland Filings |
|  | Riparian Protection Areas |  | Steep Slopes |  | Conservation Restrictions |





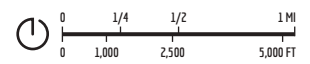
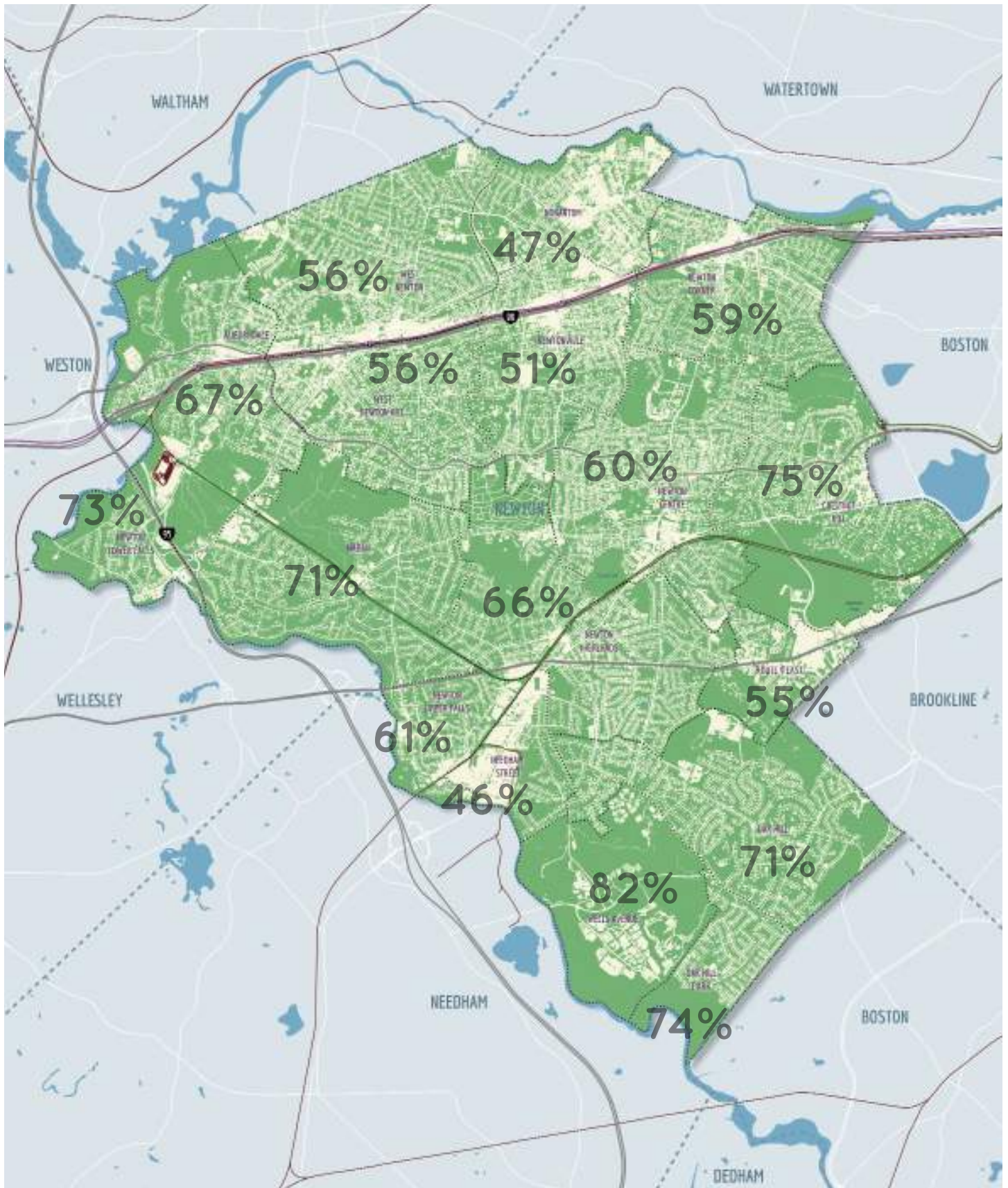
Development Forms

Permeable & Impermeable Surfaces

Permeability impacts groundwater recharge and the ability of surfaces to absorb stormwater and reduce the risk of watershed contamination from chemicals and other pollutants.

In general, Newton has a high proportion of permeable surfaces. However, areas such as Nonantum, Needham Street, and the Route 9 Corridor/The Shops at Chestnut Hill have low permeability due to the large amount of land devoted to surface parking lots and large-footprint commercial structures.





On average, Newton 's land area is **62% permeable**

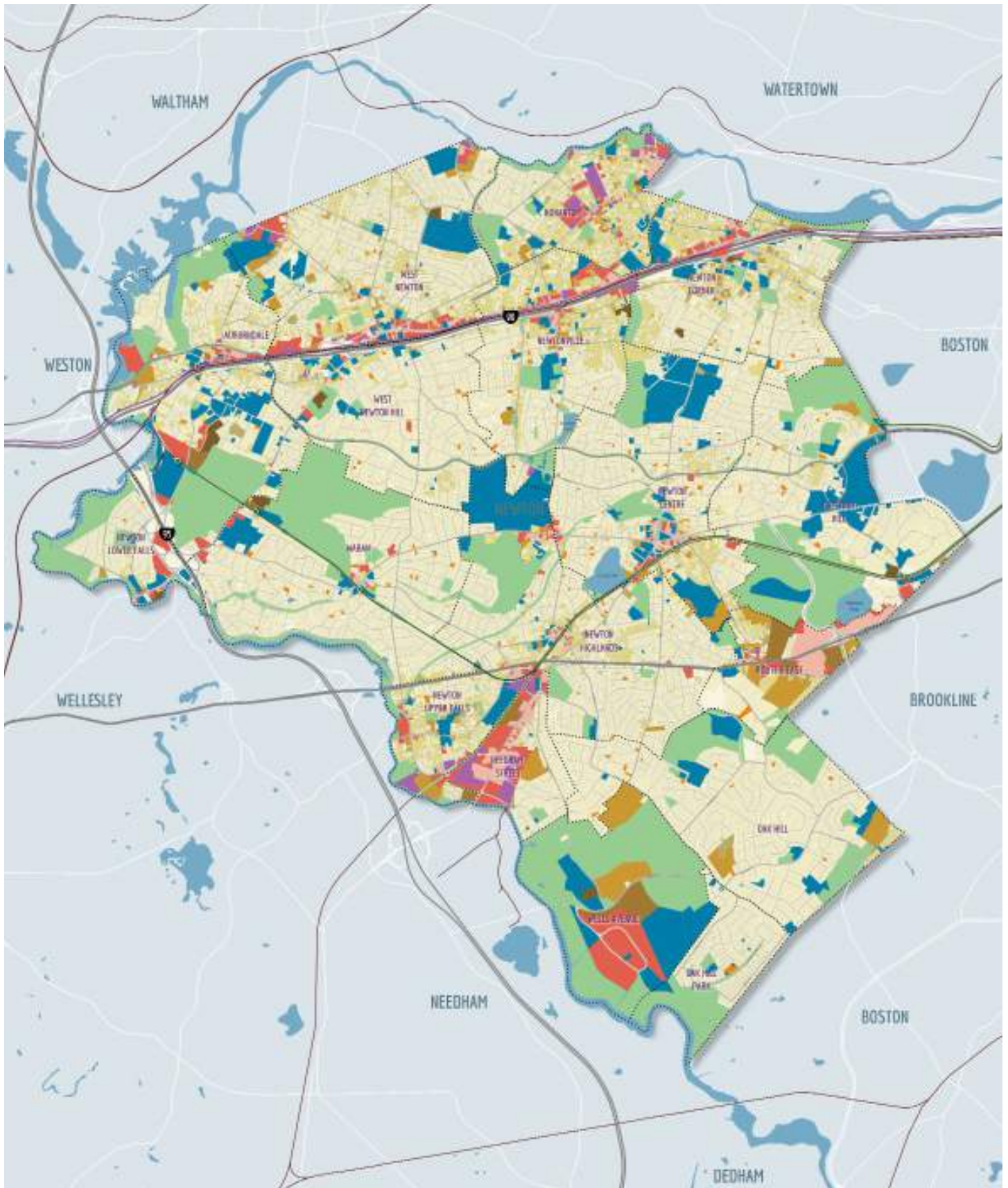
Development Forms

Land Use (2016)

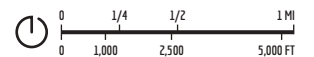
This map depicts the distribution of land uses throughout Newton. As is well understood, Newton is a predominantly residential community (residential parcels are depicted in yellow and brown in the map to the right). Most of the higher-density development, including multifamily residential, commercial, retail, and industrial/manufacturing, are clustered within and around village centers and along major highways and rail lines.

The city is also home to a significant acreage of public and private parkland/ open space, including four golf courses, large expanses of conservation land along the Charles River to the west and south, and many public parks ranging in size from neighborhood to regional in scale.





- | | | |
|---|--|---|
| Residential - Single Family | Residential - Other | Civic/Institutional |
| Residential - (2-3 Units) | Commercial | Open Space |
| Residential - (4-8 Units) | Retail | |
| Residential - (9-99 Units) | Mixed-use | |
| Residential - (100+ Units) | Industrial/Manufacturing | |



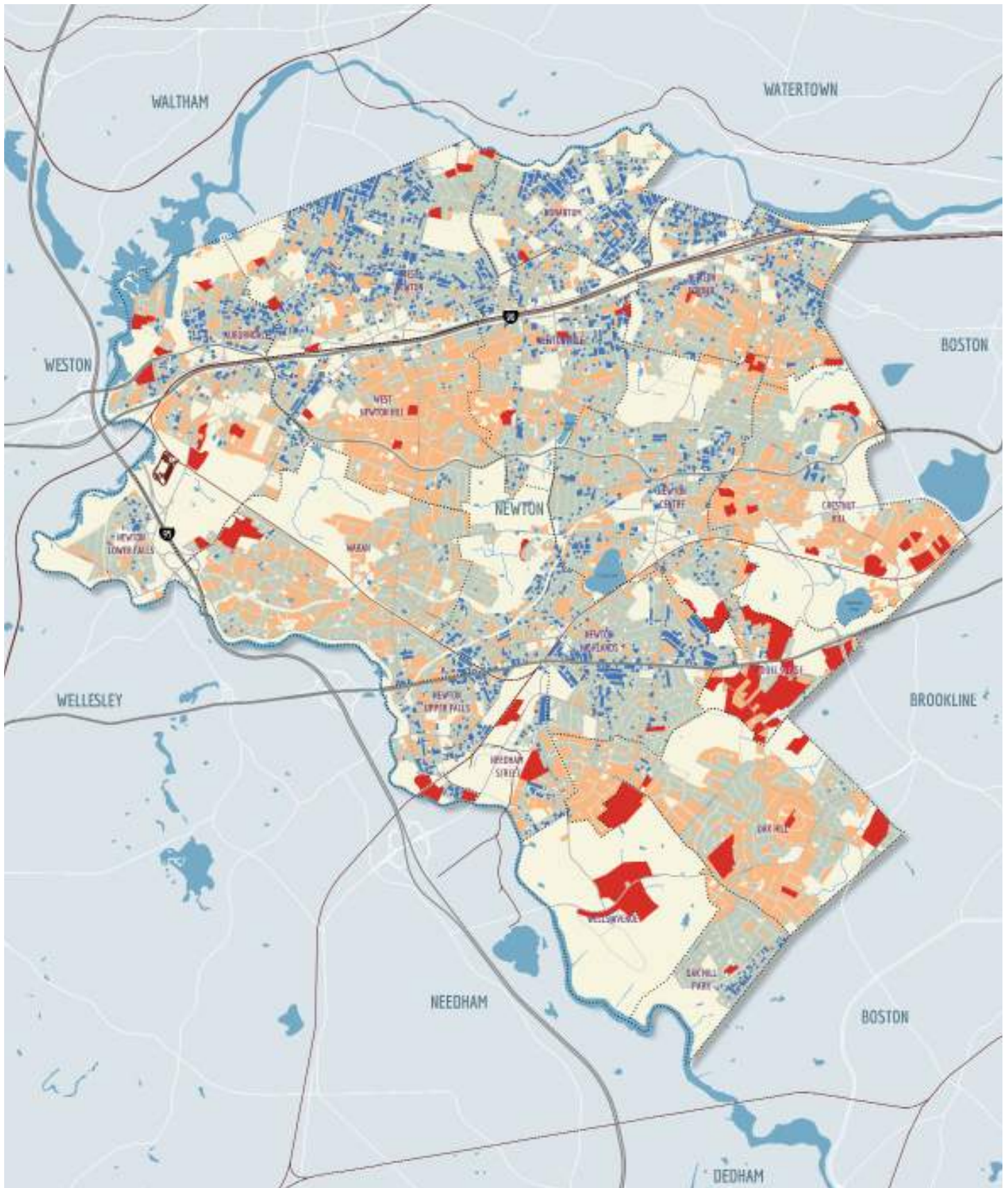
Development Forms

Lot Sizes (Residential)

Newton's development lots vary widely in size depending on the neighborhood, primary use, and development time frame. The map on the right shows residential lots of similar sizes clustered together. This clustering reflects the historical development patterns of the city and the way in which certain neighborhoods were platted with consistent lot sizes. The largest residential lots sizes, indicated in bright red, are typically home to the city's larger multi-residential housing projects, which reflects the City's historic development regulations, especially the lot-area-per-dwelling unit rule.

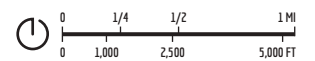
Commercial, retail, industrial, and open space uses often occur on very large lots, and thus are not included in the map on the right. Residential lots account for the vast majority of Newton's development parcels, so the exclusion of non-residential lots in the map on the right helps to provide a more accurate representation of lot size for the majority of Newton's neighborhoods.





Legend

- 950 - 7,000 square feet
 - 7,000 - 15,000 square feet
- 15,000 - 80,000 square feet
 - 80,000 + square feet
- Area Not Included



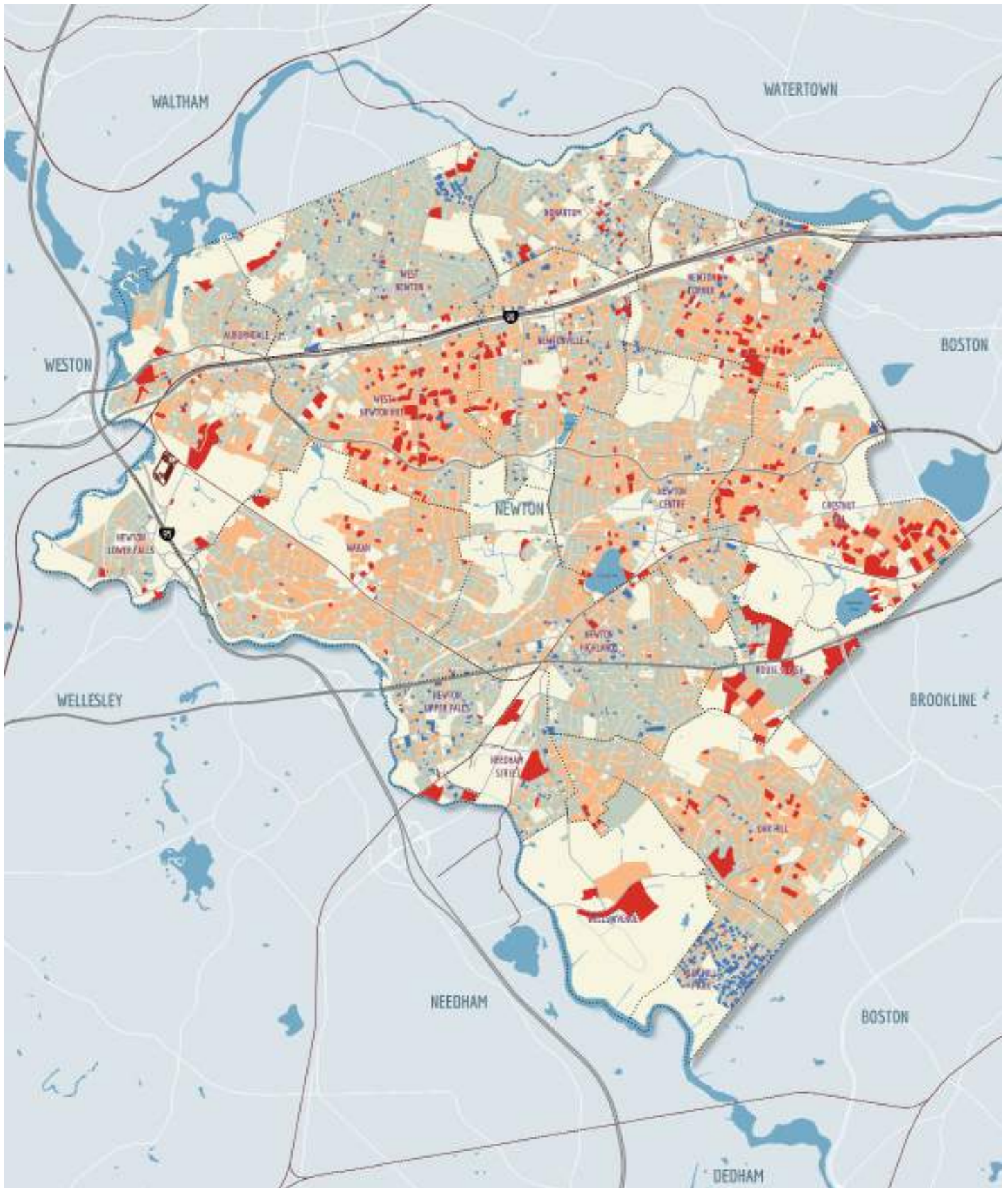
Development Forms

Gross Square Feet (Residential)

As with lot sizes, the gross square footage of development throughout Newton is revealing of the community's development history. A quick look at the map reveals the neighborhoods with the highest concentrations of large GSF development as those consisting of multifamily properties and large estates (represented in orange and red in the map to the right). Neighborhoods with a marked concentration of these large single family developments are West Newton Hill, and Chestnut Hill, though many large units are scattered throughout Oak Hill, Waban, and Newton Highlands as well. Most of the properties consisting of over 10,000 SF north of I-90 are multifamily residences.

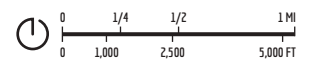
The smaller developments, while scattered all across the city, are noticeably concentrated in the northern and southern thirds of the city, representing earlier construction styles and single family homes built following World War II.





Legend

- 0 - 2,000 square feet
 - 2,000 - 4,500 square feet
- 4,500 - 10,000 square feet
 - 10,000 + square feet
- Area Not Included





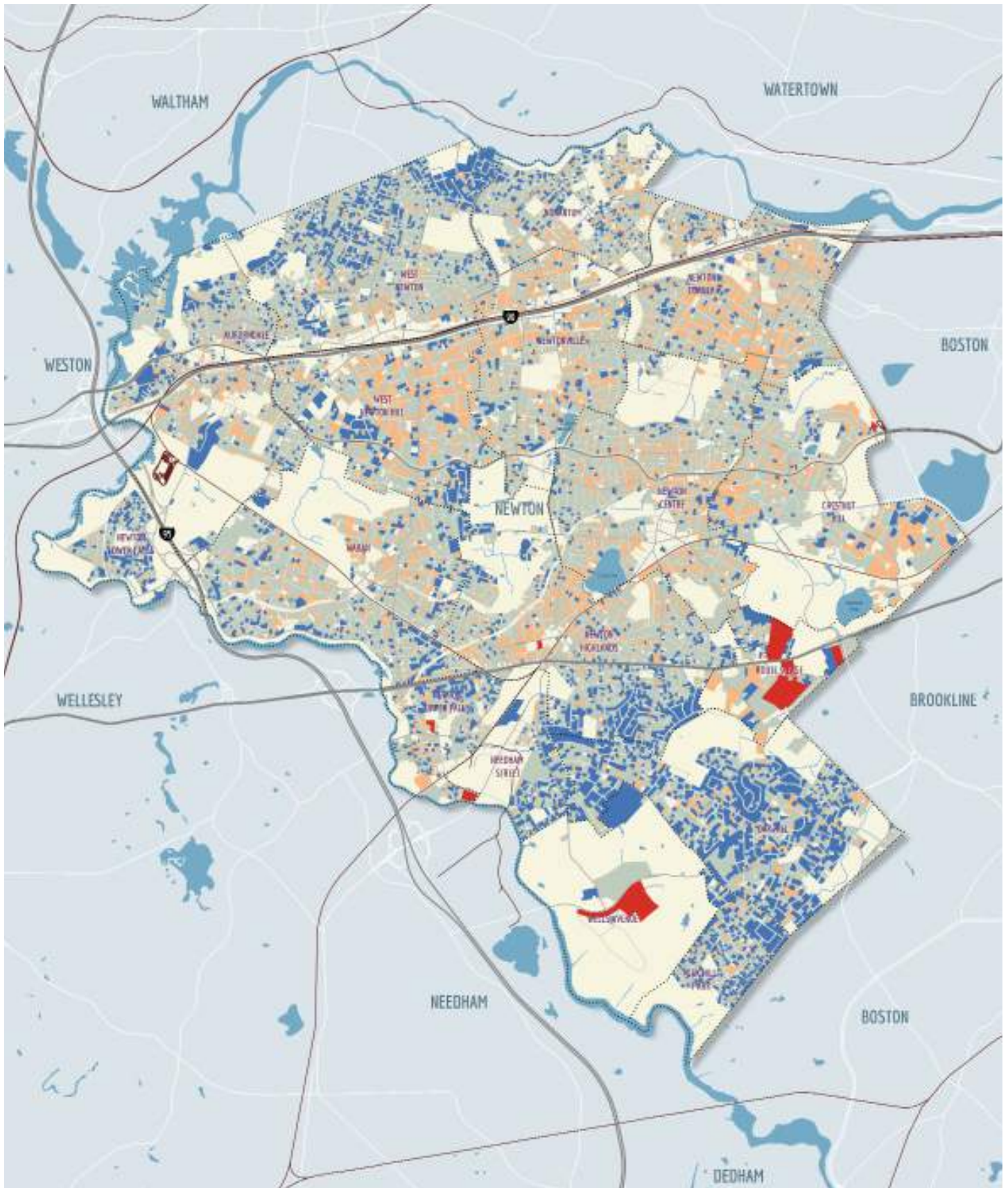
Development Forms

Development Height in Stories (Residential)

Newton's residential development comprises architectural and typological styles representing over three hundred years of history. Each of these styles brings its own suite of characteristics to a neighborhood, including massing, density, articulation, roof style, architectural elements, and height. The vast majority of residential development in the city is single family and small-scale multifamily (2-8 units), which tops out at three stories, but a handful of four story or higher projects can be seen in red in the map to the right.

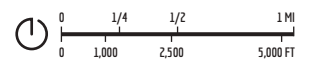
Development era plays a large role in the height of neighborhoods, as it does with lot sizes and gross square footages. The largest concentrations of lower-height properties can be found in the neighborhoods north of I-90 (older) as well as those in the southernmost third of the city (post-war housing).





Legend

- 1 - 1.75 stories
- 2.5 - 3 stories
- Area Not Included
- 2 - 2.25 stories
- 4 + stories



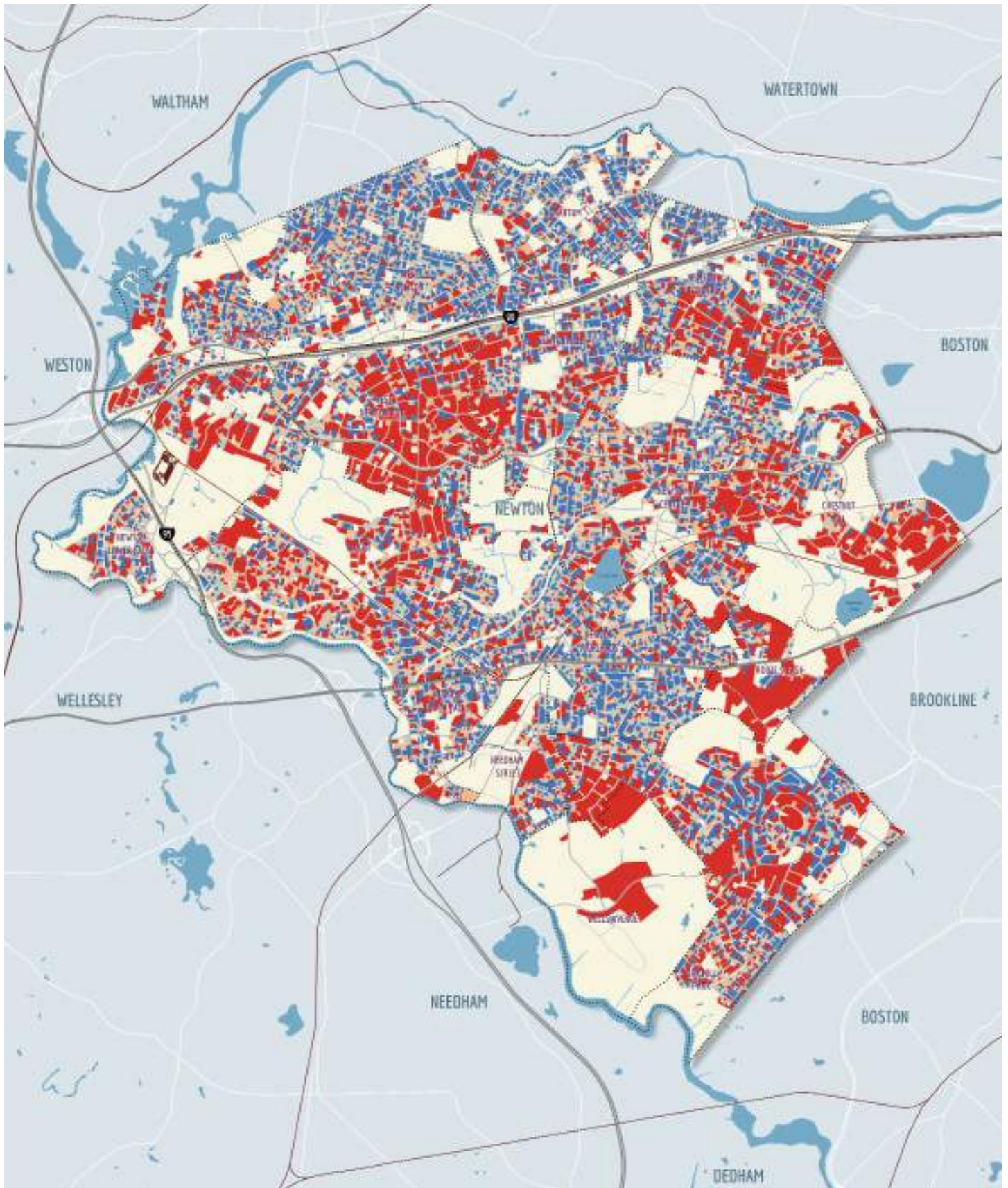
Development Forms

Streetwall

Streetwall is a custom analysis employed to describe the consistency of building frontage on a given street. While every building brings its own characteristics to a neighborhood relative to building height, setback, and facade width, it is valuable to understand the degree to which those factors are consistent within a neighborhood to understand which measurements contribute to an overall pattern.

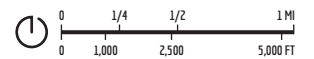
Streetwall is measured using two metrics: frontage ratio and front setback. Frontage ratio is the relationship between building width and lot width, and front setback is the distance between the front lot line and the building facade. A frontage ratio of 40% or more contributes to a more intensive development pattern, as does a front setback distance of 15 feet or less. Parcels shown in blue in the map to the right have a frontage ratio of 40% or higher and a front setback of fifteen feet or less. These conditions represent development patterns that have a more intense street presence, whereas parcels shaded in red have large front setbacks, and low frontage ratios, comprising areas with less street presence and less intensive development patterns.





Legend

- > 40% continuity and setbacks < 15 feet
 - 30% - 40% continuity
- 15% - 30% continuity
 - < 15% continuity and setbacks > 35 feet
- Area Not Included

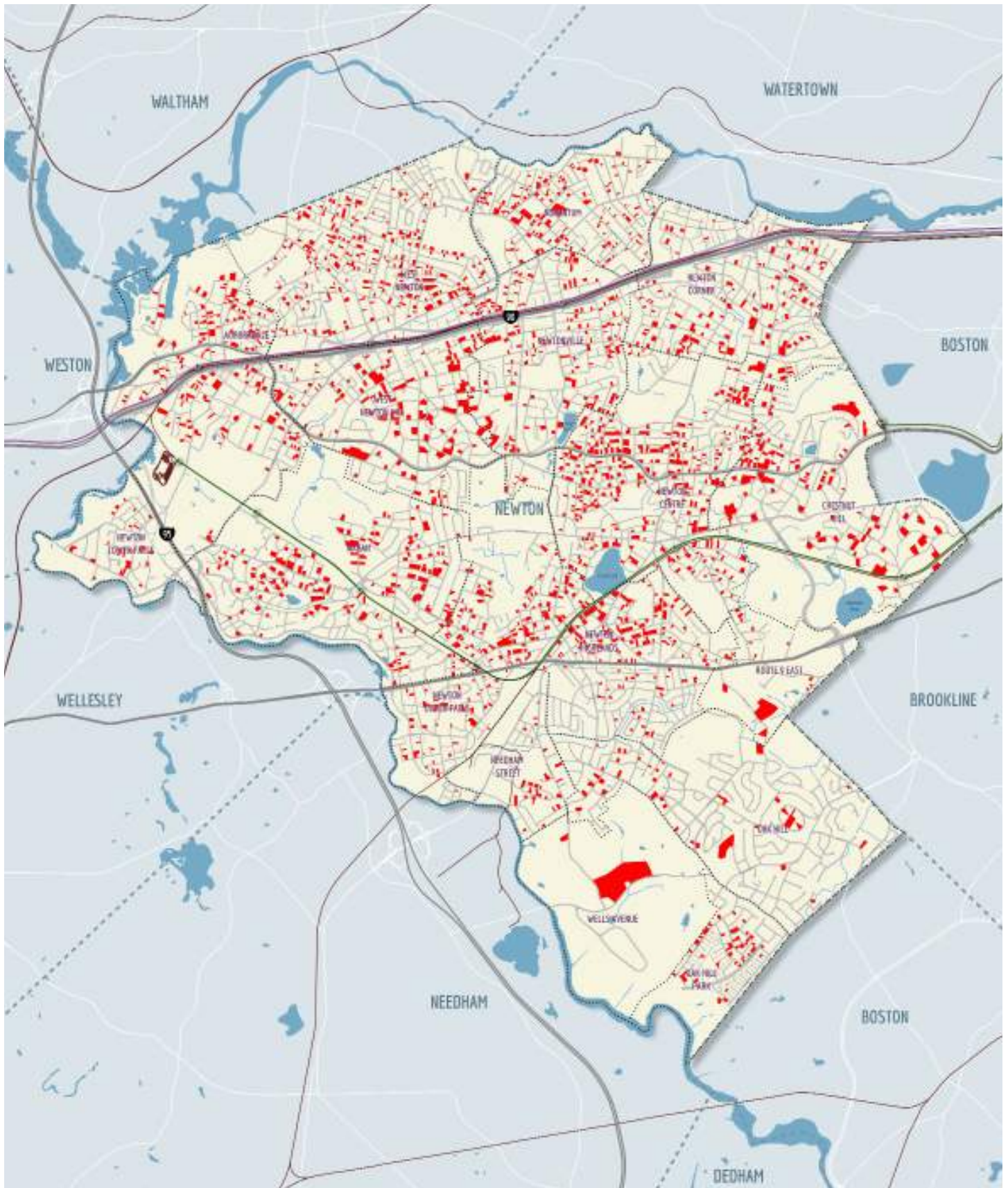


Development Forms

Accessory Structures

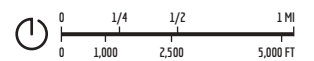
Accessory structures, including standalone garages, carriage houses, and guest houses, can be found throughout Newton. The map to the right shows the relative lack of clustering of these within any particular neighborhood or region of the city. There is, however, a noticeable absence of such structures in some neighborhoods, including Oak Hill, where architectural typologies and the neighborhood's era of development rendered this type of development uncommon.





Legend

■ Parcels with accessory structures

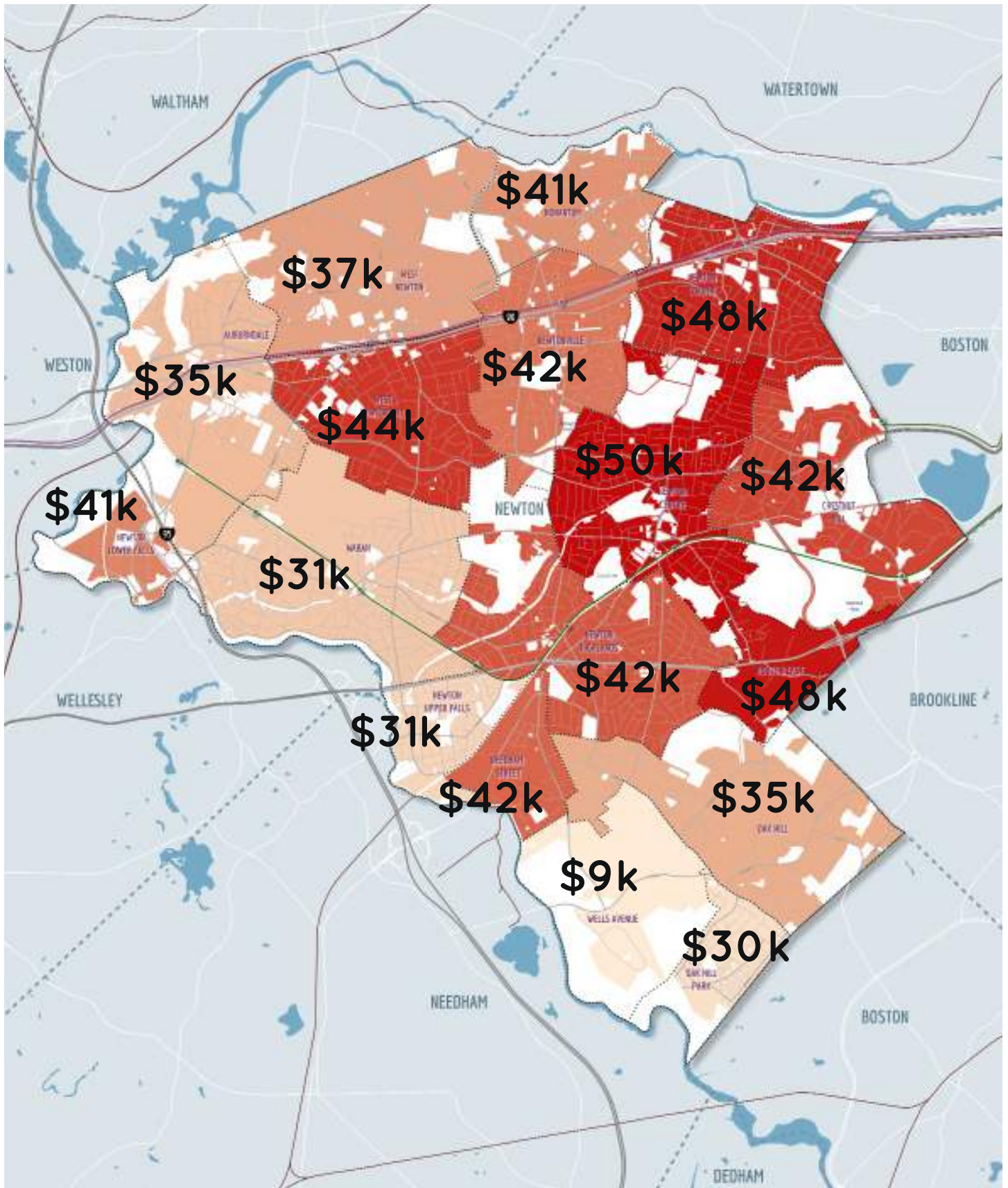


Development Forms

Property Tax Revenue by Acre

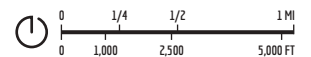
Using the context-based areas as boundaries for analysis, this map shows the average property tax revenue per acre throughout Newton. In general, higher property tax revenues are clustered between I-90 and Route 9, on the eastern side of the city.





Legend

□ Tax Exempt/No Data





Development Forms

Nonconforming Properties

This map shows the number of properties that are currently nonconforming with respect to Newton's current zoning regulations. The criteria below were used to evaluate each parcel, and represent the majority of nonconforming parcels and structures. However, parking requirements, side setbacks, and rear setbacks are not accounted for.

Nonconforming Lot Size

Nonconforming Lot Coverage

Nonconforming Lot Area/Unit

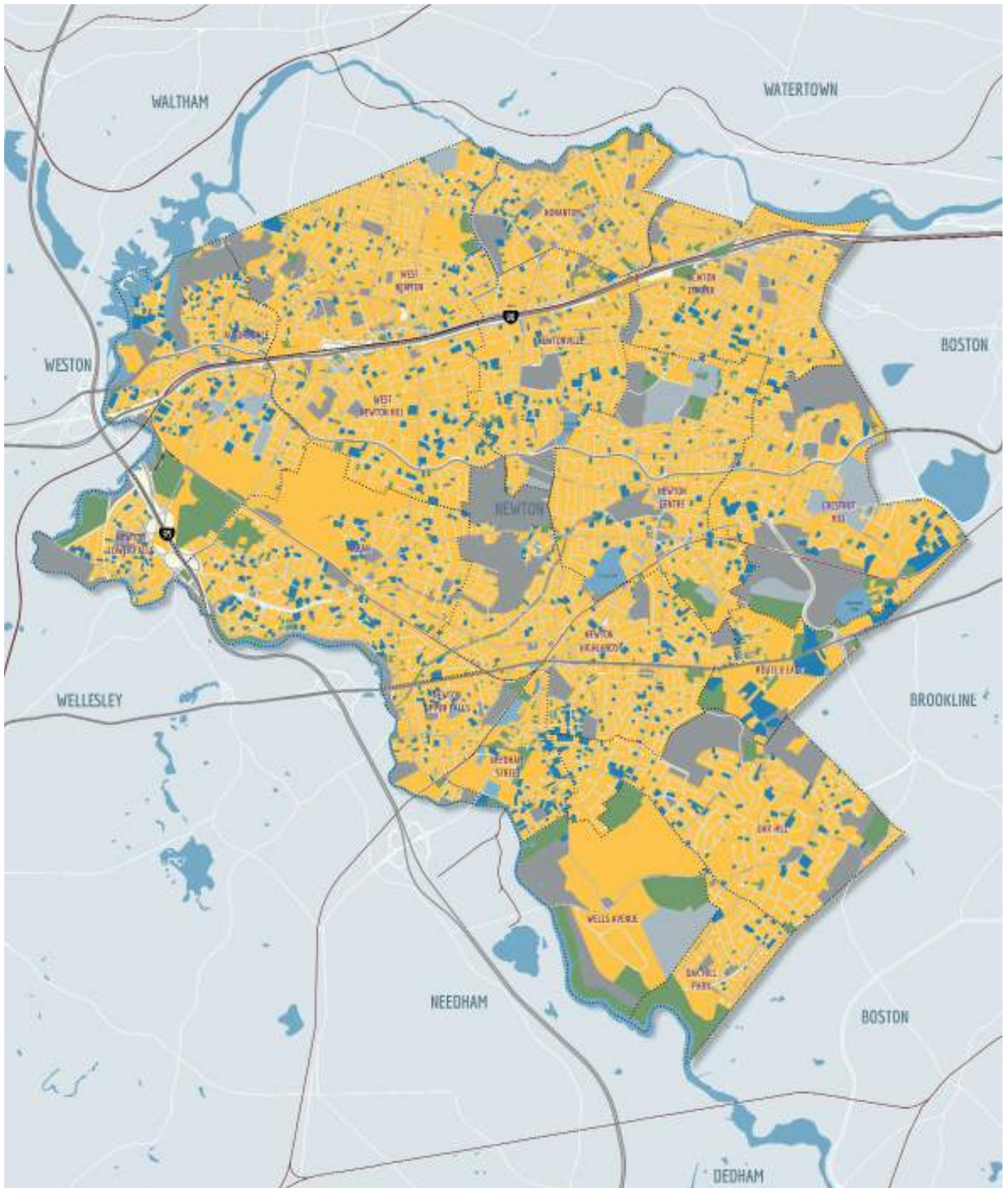
Nonconforming Building Area

Nonconforming Building Height

Nonconforming Building Setback

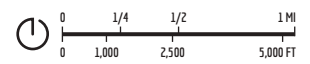
Nonconforming Building Use





Legend

- Non Conforming
- Conforming
- Conforming SP*
*(Special Permit for Use)
- Unbuilt
- State/City Owned
- Educational/Religious



Newton is **87% Non Conforming**

Character Patterns & Pattern Subsets

Character Patterns

After a comprehensive analysis of the many characteristics that together compose Newton's neighborhoods and village centers, the planning team assigned character pattern designations to each area of the city. These character patterns are one of the two primary organizing features of the Pattern Book (the other being context-based areas). Character patterns define the city's area by the aggregated development form and key built and unbuilt characteristics of predominant and secondary uses.

Neighborhood

Newton is today a predominantly residential community. Over the course of more than three centuries of history, the majority of structures within the city have been single family homes. While the neighborhood classification is primarily composed of residential structures, neighborhoods in cities like Newton are almost always dotted with additional uses and building typologies.

Village Center

Newton is understood by locals as a city of villages. These villages follow a conventional arrangement when it comes to the organization of constituent parts, with a relatively dense commercial center serving as the hub of activity for each village and primarily residential, less dense uses growing out from the center. Newton's village centers represent a great diversity of form, development era, density, intensity, and predominant use.

Commercial Cluster

Commercial clusters in Newton, while providing significant economic benefit and commercial/retail activity for the city, generally serve a larger, more regional constituency. These areas typically comprise large commercial zoned areas clustered along or in close proximity to major regional thoroughfares. In Newton's case, the largest of these clusters are located at the edges of the city, serving local employees and shoppers and those from surrounding communities.

Campus

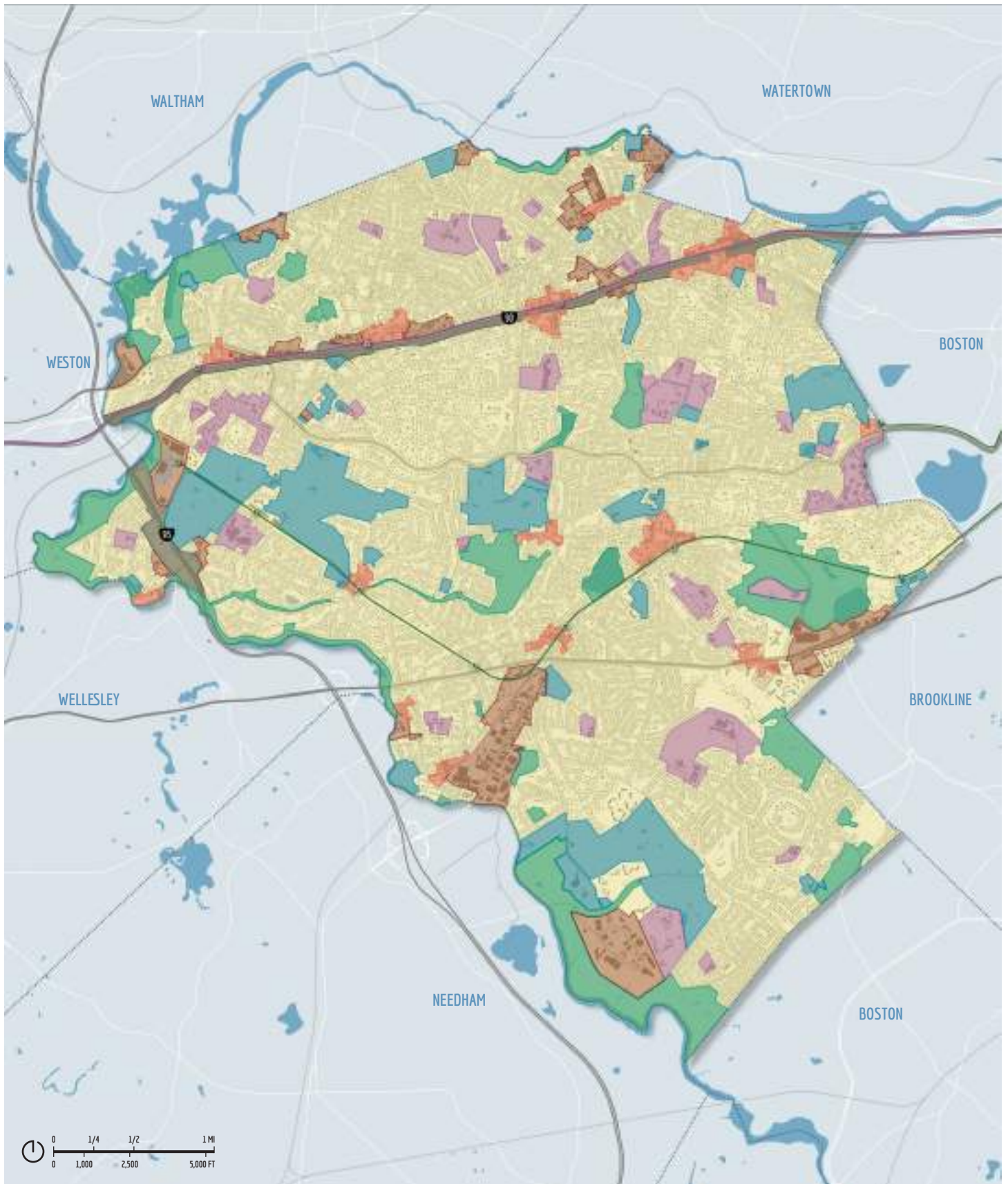
The campus classification refers to civic, religious and institutional uses with substantial assemblages of buildings and/or buildings accompanied by substantial landscaped grounds. In Newton, this classification often describes public school and higher education facilities, religious institutions including houses of worship, and accompanying residential or educational facilities.

Recreation & Public Use

The recreation & public use classification includes both formal and informal public and private outdoor recreation fields and courts, as well as cemeteries. This is primarily an open space classification, though ancillary/support structures are included.

Natural/Landscape

The natural/landscape classification captures all natural and designated lands which are to remain free from development in perpetuity. This includes all lands with conservation easements, forests, waterways/water bodies, wetlands, and any other designated natural/constructed features deemed conserved/preserved by the city of Newton or other administrative entities.



- | | |
|--|---|
| Neighborhood | Campus |
| Village Center | Recreation & Public Use |
| Commercial Cluster | Natural/Landscape |

Character Patterns of Newton

Character Patterns & Pattern Subsets

Pattern Subsets

Pattern Subsets describe the more granular patterns comprising a neighborhood or center, and describe the variations between neighborhoods and blocks. The factors that go into distinguishing one subset from another within a character pattern are those that contribute to the consistency of a streetscape. This is to say, the factors that can be evaluated from the street are determinant over those which only impact the private, off-street realms of a neighborhood or center.

Neighborhood

N-TRAD-S:	Traditional - Small
N-TRAD-M:	Traditional - Medium
N-TRAD-L:	Traditional - Large
N-TRAD-LC:	Traditional - Large Compact
N-MAN:	Manor
N-COM-SF:	Community - Single Family
N-COM-A:	Community - Attached
N-MF-S:	Multifamily - Small
N-MF-L:	Multifamily - Large

Village Center

VC-CC:	Convenience Center
VC-NC:	Neighborhood Center
VC-TC:	Town Center
VC-GC:	Gateway Center

Commercial Cluster

CC-EC:	Employment Cluster
CC-RC:	Retail Cluster
CC-LIC:	Legacy Industrial Cluster

Campus

C-CPS:	Civic/Public School
C-I:	Institutional

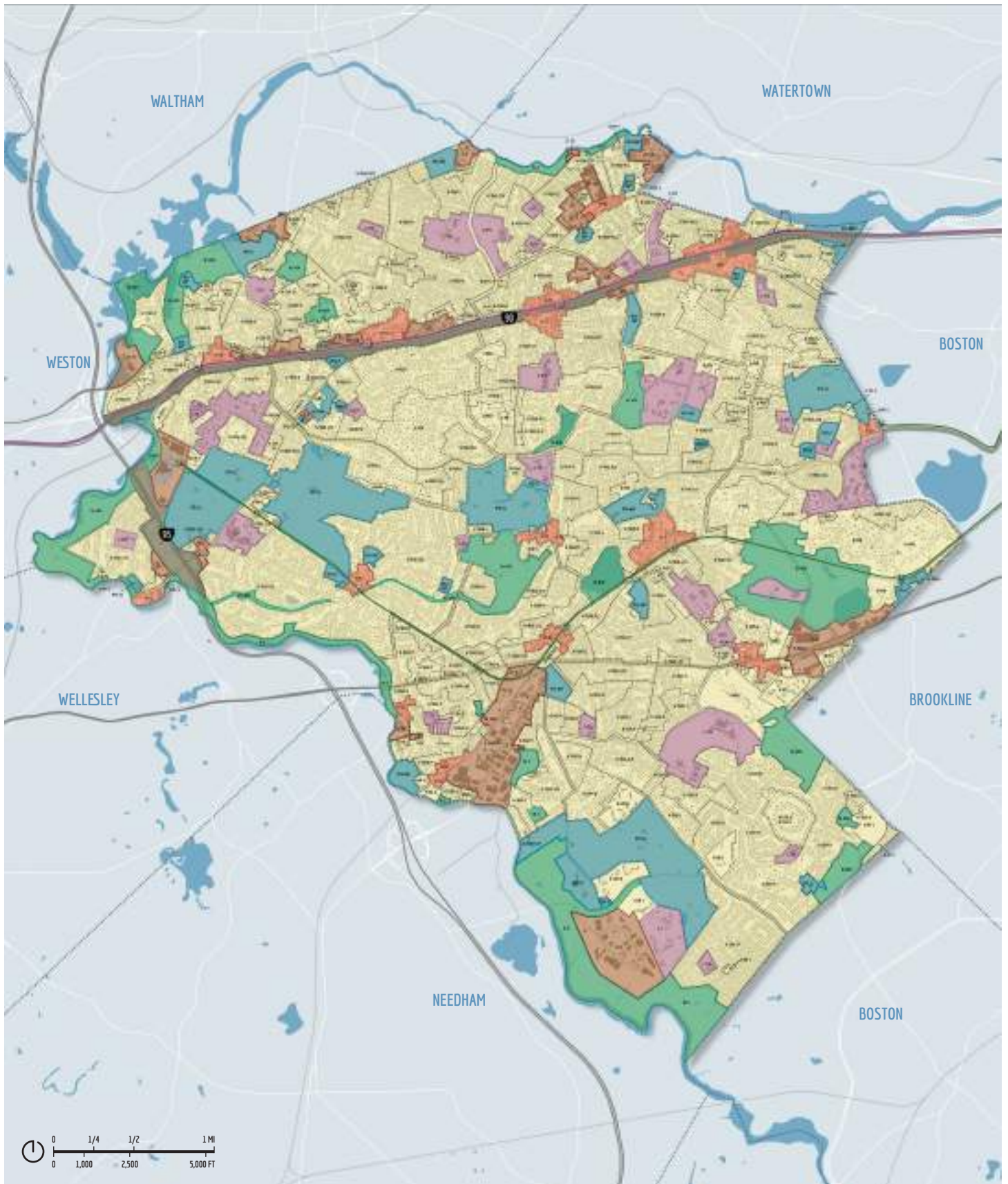
Recreation/ Public Use

RPU-RNP:	Regional/Neighborhood Park
RPU-GC:	Golf Course
RPU-U:	Utility
RPU-CC:	Civic Center
RPU-CBG:	Cemetery/Burial Ground

Natural/ Landscape

NL-E:	Easement
NL-NFW:	Natural Formation/Water
NL-WER:	Wetland/Ecological Resource

These pattern subsets were extrapolated from a randomized sampling of parcels and are intended to describe averages, rather than serve as a comprehensive description of concentrations of specific parcels. They should be understood to be representative of the diversity of Newton's development forms. A detailed map of pattern subsets for each parcel is available on page 79, and similar data compiled on a CBA basis is portrayed on page 123 and beyond.



- | | |
|---|--|
| Neighborhood | Campus |
| Village Center | Recreation & Public Use |
| Commercial Cluster | Natural/Landscape |

Character Patterns & Pattern Subsets of Newton

Character Patterns & Pattern Subsets

Neighborhood

Newton is today a predominantly residential community. Over the course of its three centuries of history, the majority of structures within the city have been single family homes. These homes, when clustered together, form unique neighborhoods comprising approximately 68% of Newton's land area.

While the neighborhood character pattern is primarily composed of residential structures, neighborhoods in cities like Newton are almost always dotted with additional uses and building typologies. It is not at all uncommon for small commercial and retail establishments to become embedded in these areas, in the form of doctors' offices, dental practices, small commercial offices, banks, coffee shops, small grocers, and restaurants. These outliers offer local residents the benefit of convenience and small instances of the vitality that comes with a mix of uses in a neighborhood.

Traditional Neighborhoods

These neighborhoods evolve over time and are typically arranged on grid-like streets with consistent lot widths and sidewalks, and occasionally neighborhood parks.

Community Neighborhoods

These neighborhoods are typically developed over a short period of time by one or a few builders and are represented by an architectural uniformity. Street patterns are often more curvilinear and can be disconnected from the larger urban fabric; feeder streets connect to larger arterials.

Manor Neighborhoods

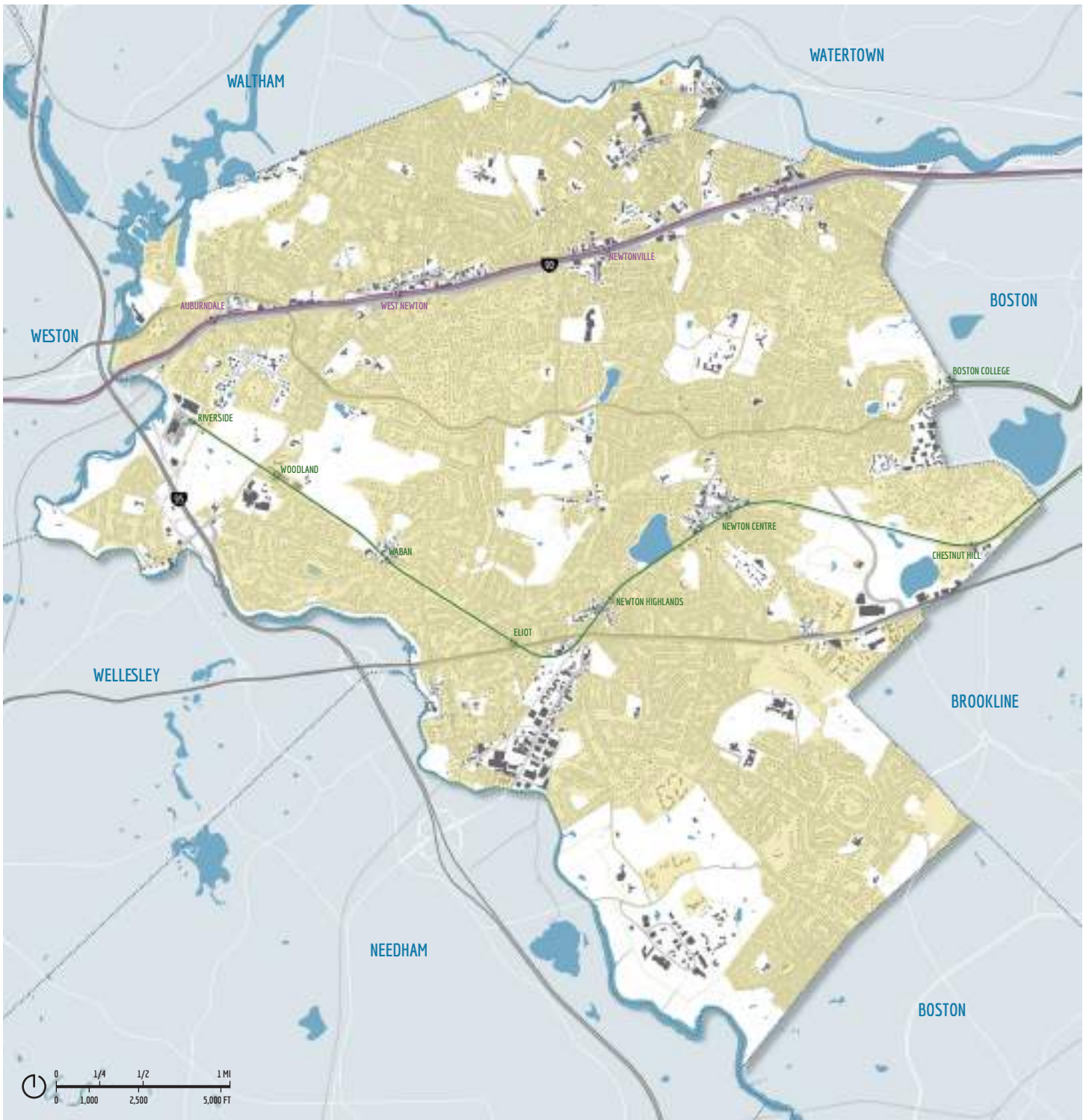
Manor neighborhoods are defined by large houses on large lots with deep and inconsistent setbacks, which can reduce the feeling of walkability through the neighborhood. These neighborhoods are often designed to feel more private than other residential typologies.

Multifamily Neighborhoods

While multifamily structures can exist in any neighborhood pattern, neighborhoods with a multifamily designation typically comprise larger multifamily structures clustered together. These are often found in denser areas of the city or along major transportation routes.

68%

of Newton's total
area is identified as
Neighborhood.



Newton's Neighborhoods

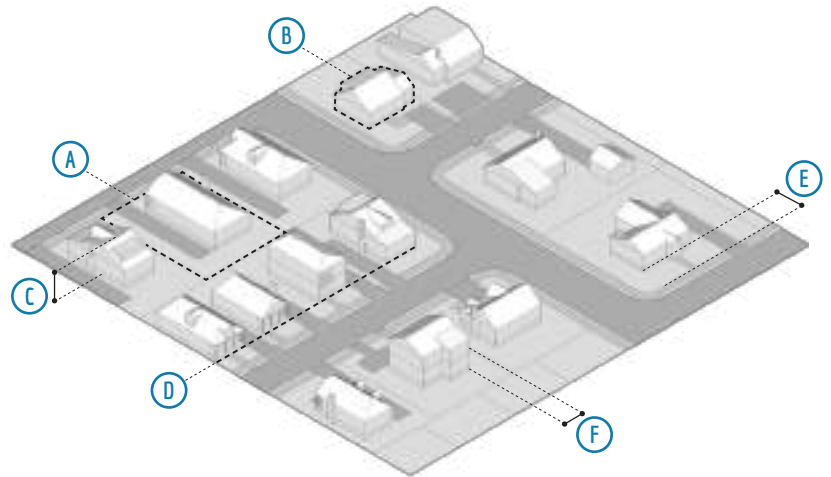
Newton's neighborhoods are mapped above in yellow. As is evident, this character pattern constitutes the majority of this largely residential city. While most of the city's development comes in the form of homes, its various neighborhoods take on a wide variety of characteristics ranging from centuries-old manor style estates to tall residential "towers in the park" as was in vogue in more recent planning history.

These pattern subsets were extrapolated from a randomized sampling of parcels and are intended to describe averages, rather than serve as a comprehensive description of concentrations of specific parcels. They should be understood to be representative of the diversity of Newton's development forms.

Character Patterns & Pattern Subsets

1. Traditional - Small

Small traditional neighborhoods have a grid-like street structure with a relatively high frequency of intersections, creating small, walkable blocks. They are characterized by their small lot size and short, mostly uniform front setbacks, which contribute to a continuous streetwall defining the public realm. These neighborhoods often have contiguous sidewalks on both sides of the street, interrupted for driveway curb cuts that are most typically wide enough for one car.



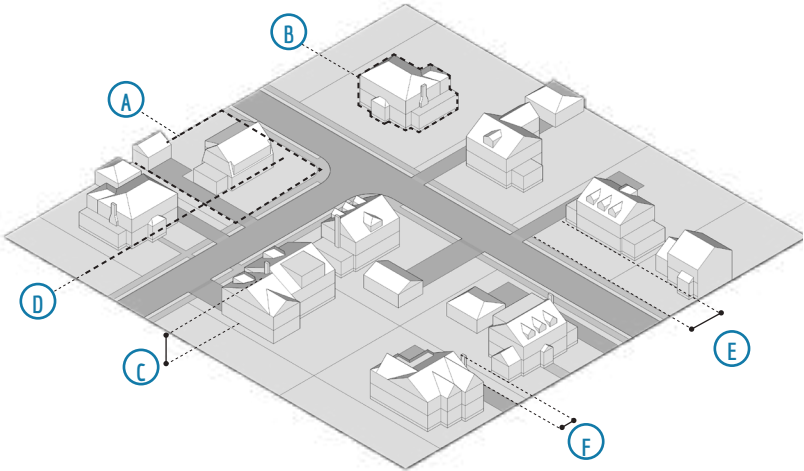
Typical Dimensions

A LOT SIZE	3,500 - 8,500 SF
B DEVELOPMENT SIZE	1,500 - 2,700 SF
C HEIGHT	1.0 - 1.75 stories
D STREETWALL	Continuous
E FRONT SETBACK	20 - 30 FT
F SIDE SETBACK	10 - 20 FT
DEVELOPMENT ERA	Consistent presence
DEVELOPMENT FORM	Buildings are relatively small for Newton. They range from single-story to 1.75 stories, which are as tall as two-story homes but have steeply pitched roofs which limit the habitable space on the second floor. They may be accentuated with window dormers that allow for light, but are not large enough to accommodate significant additional habitable space.



2. Traditional - Medium

Medium traditional neighborhoods have a grid-like street structure with a relatively high frequency of intersections, creating small, walkable blocks. Lot sizes range from 7,500 gross square feet to 15,000 gross square feet, which typically allows for a driveway, backyard, and side yards between structures. Uniform building setbacks, contiguous sidewalks, and limited curb cuts enhance the pedestrian quality of the public realm, though generous front setbacks ranging between 25 and 35 feet separate the public realm from the private homes.



Typical Dimensions

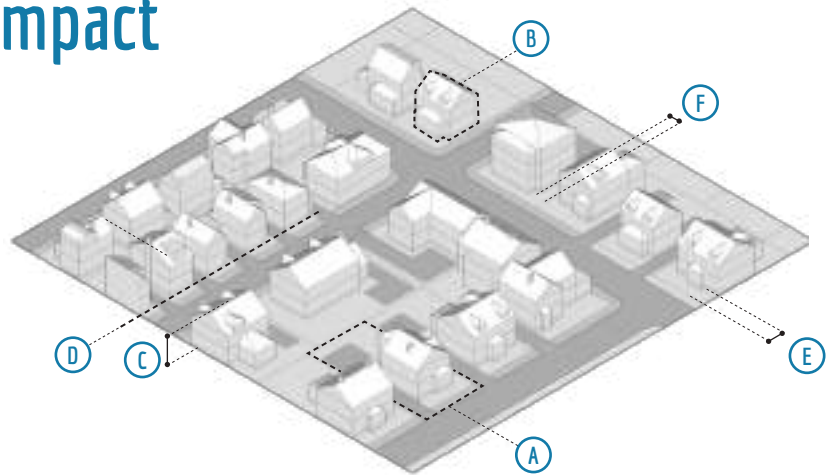
A LOT SIZE	7,500 - 15,000 SF
B DEVELOPMENT SIZE	2,700 - 4,500 SF
C HEIGHT	2.0 - 2.5 stories
D STREETWALL	Continuous
E FRONT SETBACK	25 - 35 FT
F SIDE SETBACK	15 - 25 FT
DEVELOPMENT ERA	Consistent presence
DEVELOPMENT FORM	Most buildings in these neighborhoods are medium-sized single family homes. They range from two stories to 2.25 stories, which are two-story homes with pitched roofs, small dormers, and small attics that may have a limited amount of habitable space. On occasion, an office or a corner store is present in these neighborhoods.



Character Patterns & Pattern Subsets

3. Traditional - Large Compact

Large compact traditional neighborhoods have a grid-like street structure with a relatively high frequency of intersections, creating small, walkable blocks. They have small and medium lot sizes, ranging in size from 1,500 gross square feet to 7,500 gross square feet. This range of lot size often allows for a driveway and side yards large enough to accommodate some landscaping and a pathway around the building, but still have a building width to lot width ratio that contributes to a continuous streetwall. Contiguous sidewalks and small, uniform building setbacks ranging from 10 feet to 30 feet encourage pedestrian activity in the public realm.



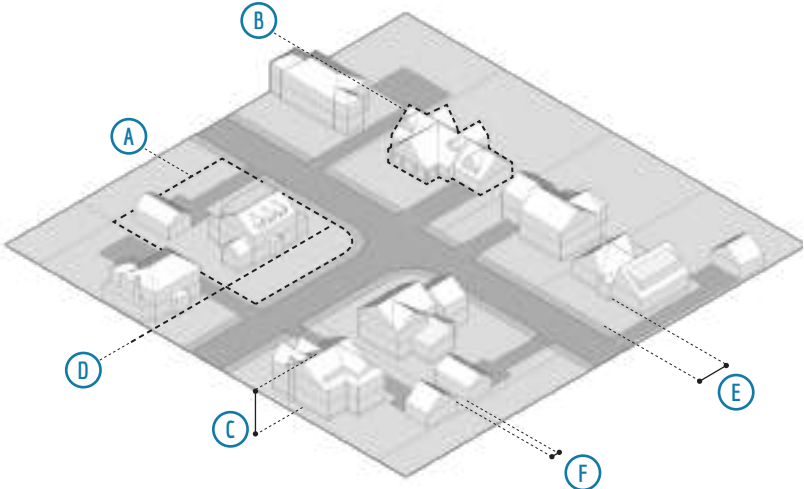
Typical Dimensions

A LOT SIZE	1,500 - 7,500 SF
B DEVELOPMENT SIZE	4,000 - 10,000 SF
C HEIGHT	2.5 - 3.0 stories
D STREETWALL	Continuous
E FRONT SETBACK	10 - 30 FT
F SIDE SETBACK	5 - 15 FT
DEVELOPMENT ERA	1850 - Present
DEVELOPMENT FORM	These buildings range in height from 2.5 stories to 3 stories. A 2.5 story building is as tall as a three-story building, but has a steeply pitched roof, limiting the habitable space on the third floor. It is not uncommon for shed dormers to increase the habitable space on the third floor. These are mostly single family homes, two-family homes, and two-family homes that have been converted into condominiums, though a few offices and corner stores are notably present. This pattern subset is often situated between village centers and neighborhoods, providing a transition across the intensity of uses.



4. Traditional - Large

Large traditional neighborhoods have a grid-like street structure with a high frequency of intersections, creating small, walkable blocks. They have medium lot sizes, ranging in size from 15,000 gross square feet to 25,000 gross square feet. This range of lot size often allows for a driveway and side yards large enough to accommodate some landscaping and a pathway around the building, while maintaining a building width to lot width ratio that contributes to a continuous streetwall. Contiguous sidewalks and uniform building setbacks ranging from 25 feet to 60 feet also enhance the pedestrian character of the public realm.



Typical Dimensions

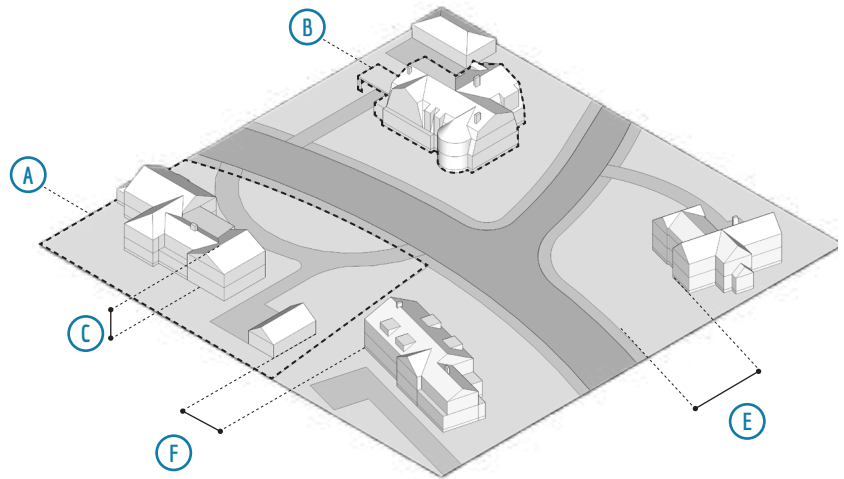
A LOT SIZE	15,000 - 25,000 SF
B DEVELOPMENT SIZE	4,000 - 8,500 SF
C HEIGHT	2.5 - 3.0 stories
D STREETWALL	Continuous
E FRONT SETBACK	25 - 60 FT
F SIDE SETBACK	20 - 40 FT
DEVELOPMENT ERA	1850 - Present
DEVELOPMENT FORM	These buildings range in height from 2.5 stories to 3 stories. A 2.5 story building is as tall as a three-story building, but has a steeply pitched roof, limiting the habitable space on the third floor. It is not uncommon for shed dormers to increase the habitable space on the third floor. These are mostly single family homes, two-family homes, and two-family homes that have been converted into condominiums, though a few offices and corner stores are notably present. This pattern subset is often situated between village centers and neighborhoods, providing a transition across the intensity of uses.



Character Patterns & Pattern Subsets

5. Manor

Manor neighborhoods have curvilinear streets replete with cul-de-sacs and loop roads, as well as a low frequency of intersections. Lot sizes are very large, with large, uneven front setbacks and generous street frontage. These dimensions allow for generous front, side, and backyards, and in many instances the buildings are fully or partially obscured from view from the street. Sidewalks are not always contiguous or present. All of these characteristics create a public realm that is less conducive to pedestrian movement and more appropriate for vehicles. There is complete separation between the public realm and the private realm.



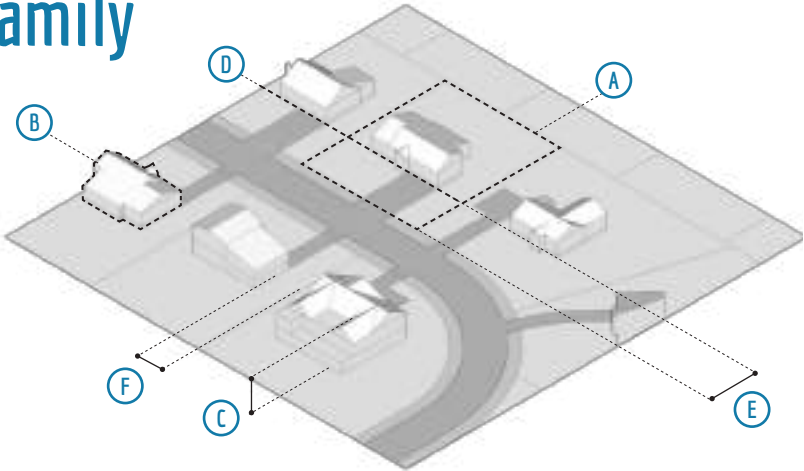
Typical Dimensions

A LOT SIZE	20,000 - 100,000 SF
B DEVELOPMENT SIZE	6,000 - 15,000 SF
C HEIGHT	2.0 - 3.5 stories
D STREETWALL	Discontinuous
E FRONT SETBACK	30+ FT
F SIDE SETBACK	30 - 100 FT
DEVELOPMENT ERA	1850 - Present
DEVELOPMENT FORM	Buildings in manor neighborhoods are predominantly single family homes. They are typically very large in terms of gross square feet, however the large lot sizes do not encourage or necessitate compact development and buildings range in height from 2.0 stories to 3.5 stories.



6. Community - Single Family

Community neighborhoods primarily differ from traditional neighborhoods in that they were often developed at a single point in time. In form, the layout of the streets and the size of the lots relative to the size of the buildings that sit on them is also different than the more organic character of traditional development. The local street network is characterized by a series of cul-de-sacs that feed into larger arterial roads. Sidewalks and pedestrian pathways are generally present and contiguous. Lot sizes tend toward a medium 7,000 to 15,000 GSF, with moderately-sized uniform front setbacks. Altogether, these characteristics create a neighborhood that feels insular, promoting the sense of community for residents while creating physical and psychological buffers for non-residents.



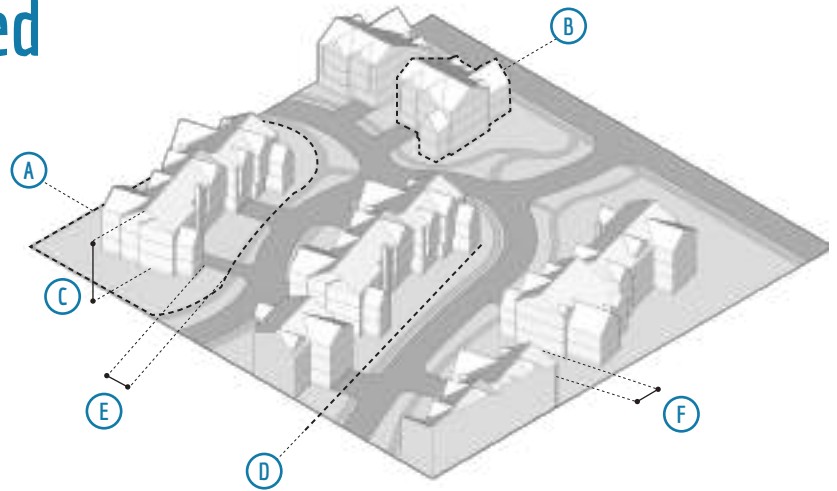
Typical Dimensions

A LOT SIZE	7,000 - 15,000 SF
B DEVELOPMENT SIZE	1,200 - 2,500 SF
C HEIGHT	1.0 - 2.0 stories
D STREETWALL	Continuous
E FRONT SETBACK	25 - 40 FT
F SIDE SETBACK	10 - 20 FT
DEVELOPMENT ERA	1945 -1975
DEVELOPMENT FORM	Buildings in single family community neighborhood patterns are typically small in scale and stature. These homes have less than 2,500 gross square feet, and less than two full stories, though partial second stories can be augmented with small dormers to add light or increase habitable space.



7. Community - Attached

Attached community developments exist to a limited extent across the city. Unlike most other areas of Newton, the attached community typologies were built within a short time frame in the last several decades. They are often separated from the rest of the urban fabric by natural features such as rock formations or wooded buffers, and have an internal street network that connects to the city street grid through one or more arterial roads. Due to the nature of these developments, the architectural and urban design patterns are strict, and unique to each community.



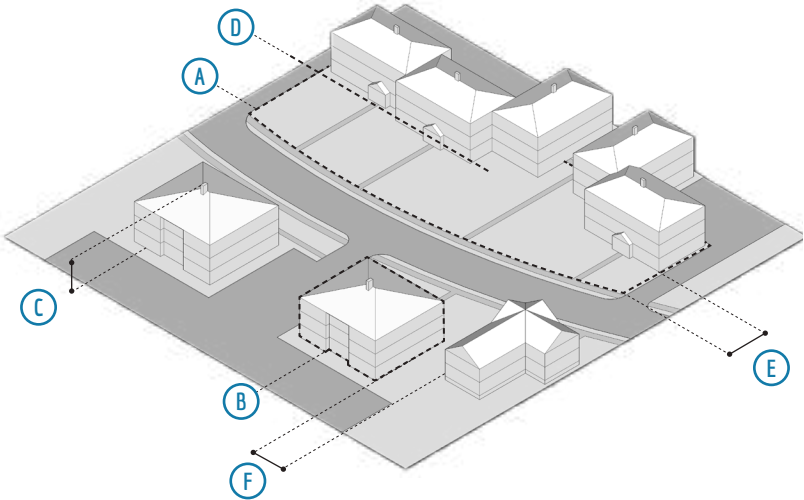
Typical Dimensions

A	LOT SIZE	85,000 - 1,200,000 SF (total)
B	DEVELOPMENT SIZE	5,000 - 30,000 (structure)
C	HEIGHT	2.0 - 3.0 stories
D	STREETWALL	Discontinuous
E	FRONT SETBACK	N/A
F	SIDE SETBACK	Units attached and clustered
	DEVELOPMENT ERA	1970 - 1990
	DEVELOPMENT FORM	Communities of attached homes share similar, if not identical, architectural characteristics. Each individual community has a different material and color palette and unique architectural details.



8. Multifamily - Small

Small multifamily neighborhoods are present in many areas of the city, but are not found in every village. They are often embedded within other neighborhood character patterns, or serve as a transition between the intensity of uses of a village center and neighborhood. These low-rise apartment complexes have large lots that largely conform to the city street grid. Front setbacks for these complexes generally align with the retail, mixed-use, or residential parcels adjacent to them, though internal courtyards can disrupt the streetwall.



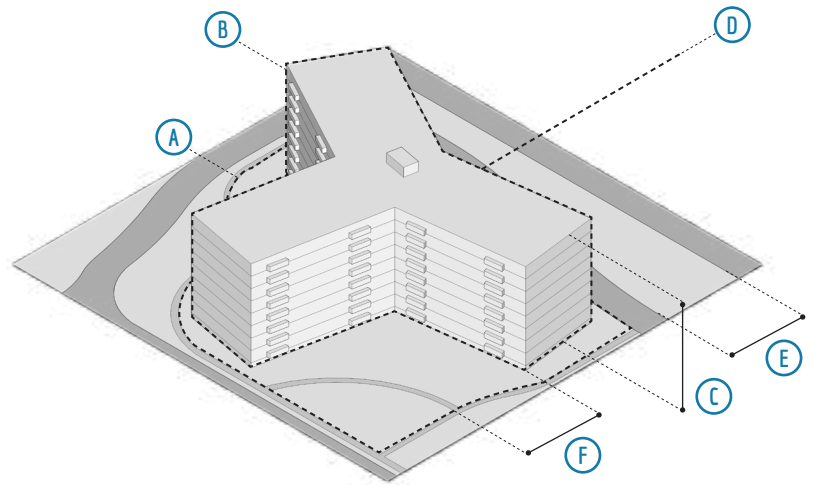
Typical Dimensions

A LOT SIZE	15,000 - 100,000 SF (total)
B DEVELOPMENT SIZE	10,000 - 50,000 SF (structure)
C HEIGHT	2.0 - 4.0 stories
D STREETWALL	Discontinuous
E FRONT SETBACK	15 - 30 FT
F SIDE SETBACK	Varies
DEVELOPMENT ERA	1960 - Present
DEVELOPMENT FORM	Buildings in these neighborhoods range in height from two to four stories. They are quite large in size, ranging from 10,000 GSF to 50,000 GSF. The buildings are typically oriented toward the street, and the large front façade is often broken up by a courtyard, minimizing the visual impact of the massing.



9. Multifamily - Large

Large multifamily developments exist throughout the city, but are not present in every village. They are located on extra-large lots and do not conform to the standard street grid, often relying on an internal network of private roadways. Setbacks vary, but are typically greater than 90 feet. Internal circulation and landscaping separate these buildings from the fabric of the city. The relatively large lot sizes also accommodate significant amounts of landscaped area as well as substantial surface parking lots.



Typical Dimensions

A LOT SIZE	200,000 - 1,000,000 SF (total)
B DEVELOPMENT SIZE	50,000 - 500,000 SF (structure)
C HEIGHT	5.0 - 17.0
D STREETWALL	Discontinuous
E FRONT SETBACK	90+ FT
F SIDE SETBACK	50 - 100 FT
DEVELOPMENT ERA	1955 - Present
DEVELOPMENT FORM	This pattern is primarily characterized by large multifamily complexes/towers. These developments are five or more stories tall, and can be as tall as 17 stories in Newton. This pattern is often referred to as “towers in the park” due to low lot coverage ratios.



PAGE INTENTIONALLY LEFT BLANK

Character Patterns & Pattern Subsets

Village Center

Village centers are Newton's primary mixed-use areas serving as the commercial and retail hearts of the city. These centers often provide an identity for the neighborhoods that encompass them through place-making and practical functions. Though storefronts range in size, they are all generally suited for smaller retail establishments owned by local and regional operators, as was the predominant retail model throughout the period of their development and growth. They are eminently walkable and pedestrian friendly, and serve as places for community members to gather, socialize, and shop. Many are accessible by at least one form of public transit. The different character pattern subsets are largely categorized based on their scale and offerings, as the general architectural and urban design characteristics are similar throughout most of the village centers.

Convenience Center

Convenience centers, like Four Corners, are the smallest of Newton's village centers both in terms of total land area and development square footage. These centers primarily serve a small, local population living in close proximity to the center, largely offering convenience goods and common services.

Neighborhood Center

Neighborhood centers, like Newton Highlands, are traditional urban New England village centers serving a local population and generally comprise convenience goods, general services, coffee and dining options, and some small specialty and commodity retailers.

Town Center

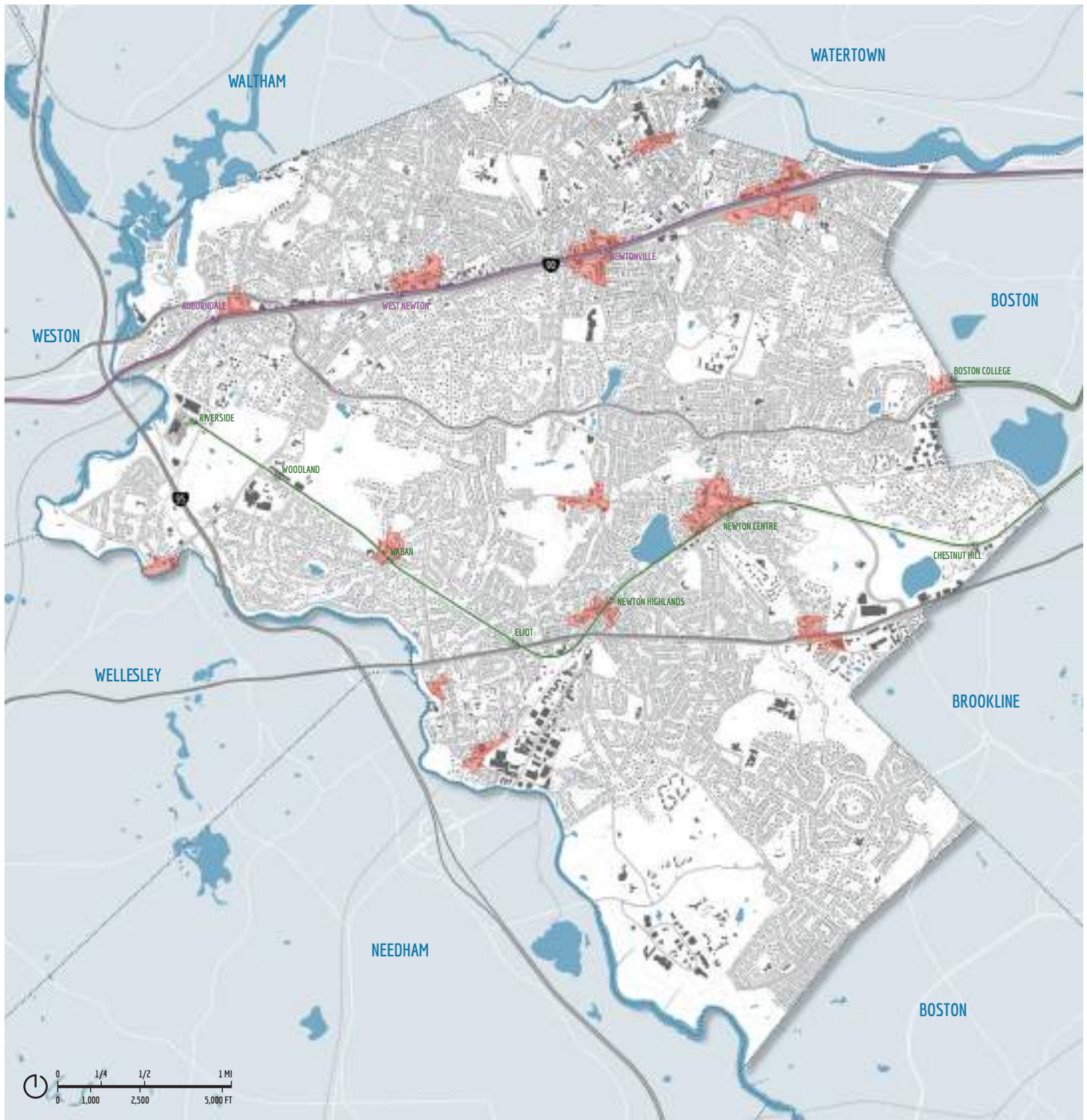
Town centers, like Newton Centre, generally offer the most robust mix of uses, often introducing multifamily housing and institutional uses to an extensive mix of commercial and retail options. These centers serve a citywide, and sometimes regional, population and focus on a greater density of patrons at any given time.

Gateway Center

Newton's primary gateway center is Newton Corner, which is located at the edge of the city, in close proximity to the city's main transportation gateway. This center supports a large commercial footprint and associated retail and dining options.

2%

of Newton's total
area is identified as
Village Center.



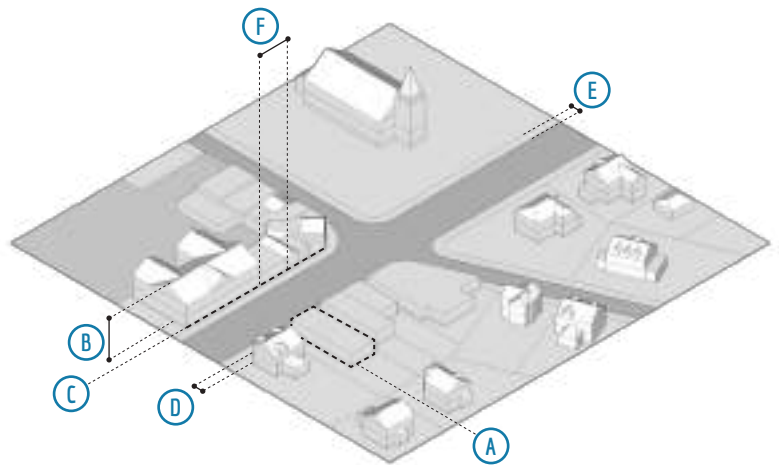
Newton's Village Centers

Newton's village centers can be found throughout the city, though are most often situated alongside transportation infrastructure (namely rail lines). These centers developed over centuries as the primary retail and commercial destinations for the city's neighborhoods and today serve a local and regional population for employment, shopping, dining, entertainment, civic, religious, and a variety of other uses.

These pattern subsets were extrapolated from a randomized sampling of parcels and are intended to describe averages, rather than serve as a comprehensive description of concentrations of specific parcels. They should be understood to be representative of the diversity of Newton's development forms. A detailed map of pattern subsets for each parcel is available on page 79, and similar data compiled on a CBA basis is portrayed starting on page 123.

1. Convenience Center

Convenience Centers are those where the total commercial and retail square footage does not exceed 200,000 square feet. They typically comprise five to 25 storefronts catering to retail establishments supporting daily errands, including one or two banks, a dry-cleaner, small goods, and cafes. Building heights range from one story to three stories. Development often presents a continuous streetwall. Uses are predominantly restricted to retail and commercial offices, though occasionally apartments are found on the second or third story. Sidewalks are approximately ten feet wide on average, suitable for the steady but light pedestrian traffic. Public parking is found on the street, or in rear communal lots.



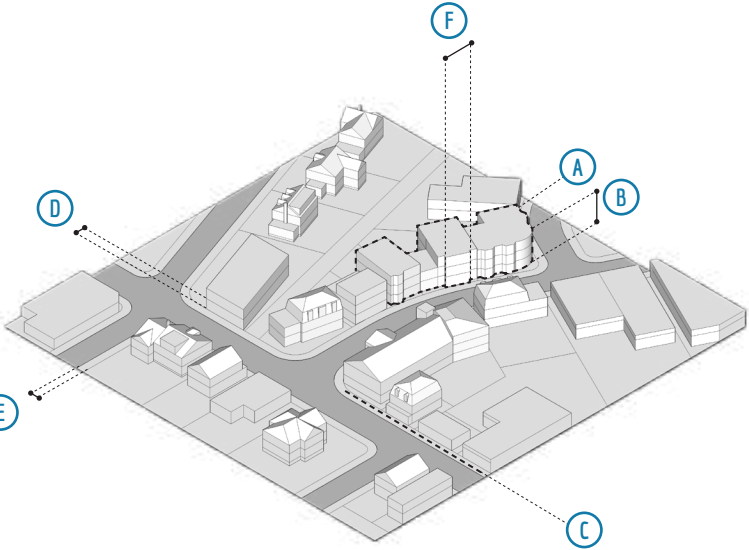
Typical Dimensions

A	RETAIL DEV. SIZE	750 - 2,500 SF
B	HEIGHT	1 - 3 stories
C	STREETWALL	Continuous
D	SETBACK	0 FT
E	SIDEWALK WIDTH	8 -12 FT
	NUMBER OF STORES	10 - 25
F	STOREFRONT WIDTH	20 - 25 FT
	PARKING LOCATION	Street, rear lots



2. Neighborhood Center

Neighborhood Centers generally comprise an average commercial and retail square footage range of 250,000-500,000 square feet, and 20 to 50 storefronts. The retail mix is often suited for convenience and light shopping, including a selection of banks, small goods, salons, boutiques, and restaurants. Building heights range from one story to three stories. Architecturally, these buildings face the street and are well-articulated, representing a diversity of building eras. There is often a continuous streetwall. Uses are predominantly restricted to retail and commercial offices, though apartments can be found on the second or third story. Sidewalks are suitable for the steady, moderate pedestrian traffic. Public parking is found on the street or in communal lots behind buildings.



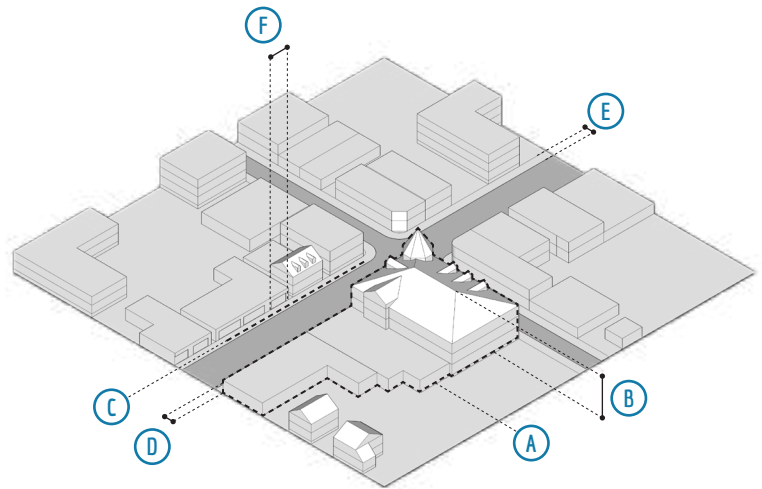
Typical Dimensions

A RETAIL SIZE	750 - 5,000 SF
B HEIGHT	1 - 3 stories
C STREETWALL	Continuous
D SETBACK	0 FT
E SIDEWALK WIDTH	10 - 15 FT
NUMBER OF STORES	25 - 60
F STOREFRONT WIDTH	20 - 25 FT
PARKING LOCATION	Street, rear lots



3. Town Center

Town centers have a total average commercial and retail square footage of up to 1,000,000 square feet, and comprise approximately 50 to 100 storefronts. The retail mix is often suited for convenience, shopping, and dining/entertainment including a selection of banks, small goods, salons, clothing stores, and restaurants. Building heights range from one story to four stories. Architecturally, these buildings face the street and are well-articulated, comprising a core of historic and newer building types. There is often a continuous streetwall. Uses are predominantly restricted to retail and commercial offices, though apartments are found on the non-ground floor levels. Sidewalks are suitable for the steady, moderate pedestrian traffic, but can get crowded during busy times. Public parking is found on the street, or in communal lots.



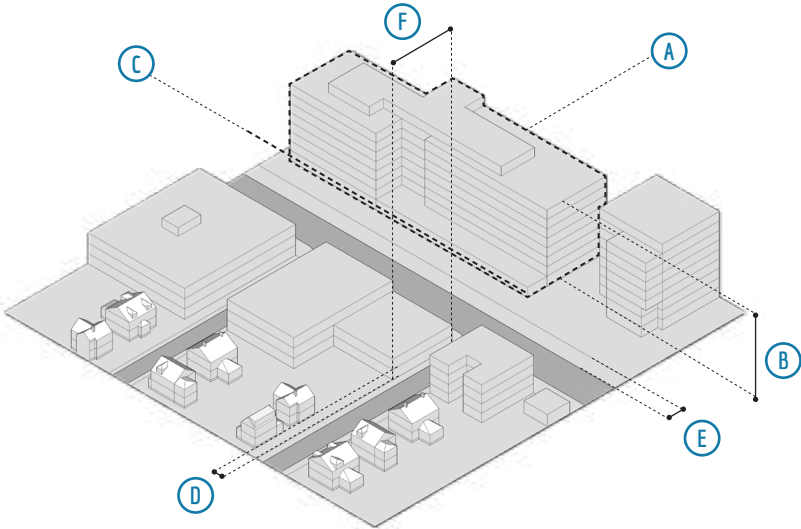
Typical Dimensions

A RETAIL SIZE	750 - 7,500 SF
B HEIGHT	1 - 4 stories
C STREETWALL	Continuous
D SETBACK	0 FT
E SIDEWALK WIDTH	8 - 12 FT
NUMBER OF STORES	30 - 100
F STOREFRONT WIDTH	15 - 75 FT
PARKING LOCATION	Street, rear lots



4. Gateway Center

Gateway centers are village centers with a total average commercial and retail square footage of up to 2,000,000 square feet. The predominant use is commercial, with many offices above the ground floor. The retail mix is located on the ground floor and supports business operations, including banks, dry-cleaners, coffee shops, and restaurants. Building heights range from two stories to nine stories. These buildings face the street and are somewhat articulated, with generally consistent materials. There is often a continuous streetwall. Sidewalks are suitable for the steady, moderate pedestrian traffic, and accommodate commuting and lunch hour rush. Parking is found on the street, in shared lots, and in parking structures. Gateway centers are largely present at major transportation hubs, or at the entrance/exit ramps for interstate highways.



Typical Dimensions

A RETAIL SIZE	2,000 - 15,000 SF
B HEIGHT	1 - 9 stories
C STREETWALL	Continuous
D SETBACK	0 FT
E SIDEWALK WIDTH	12 - 20 FT
NUMBER OF STORES	Approx. 50
F STOREFRONT WIDTH	30 - 130 FT
PARKING LOCATION	Street, rear lots, garage



Character Patterns & Pattern Subsets

Commercial Cluster

In many areas of Newton, large concentrations of land and development square footage are—by virtue of circumstance, regulation, or intention—dominated by one primary commercial use. Whether it is a cluster of office buildings, retail establishments or industrial/manufacturing uses, these areas create a unique development pattern within Newton. Typically, these areas serve a regional population, attracting residents of Newton and the surrounding communities to large employers and retailers. The form of development is often auto-oriented, with close proximity to major vehicular infrastructure, giving primacy to automobile access and parking while considering pedestrian and bicycle access secondarily.

Employment Cluster

Employment clusters typically comprise office parks, service areas, and clusters of unrelated commercial/office uses adjacent to major transportation infrastructure. While these areas may mix a handful of retail establishments and other uses, their predominant use is commercial/office.

Retail Cluster

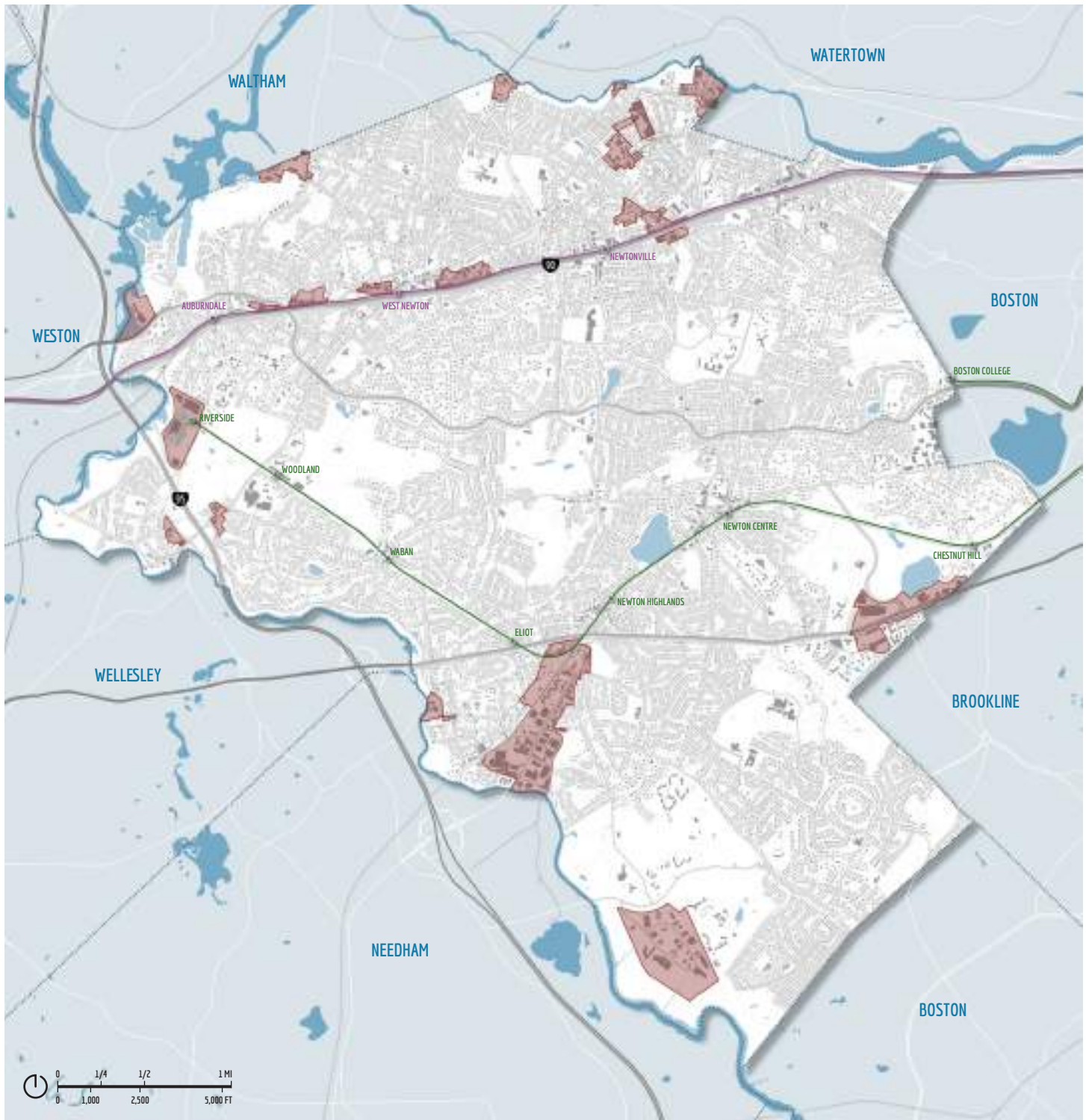
Retail clusters take on a variety of forms, but foremost among them is the shopping mall. This uniquely 20th century development typology takes on a variety of forms in Newton, ranging from indoor suburban shopping mall to strip mall to the more recent pedestrian-oriented type commonly described as a “lifestyle center”.

Legacy Industrial Cluster

Legacy industrial clusters are common in historic cities like Newton that have substantial rail and water access. These areas include some of New England’s earliest manufacturing facilities and include a unique architectural character and site design. In some cases, these clusters still operate as industrial/manufacturing facilities.

5%

of Newton’s total
area is identified as
Commercial Cluster.



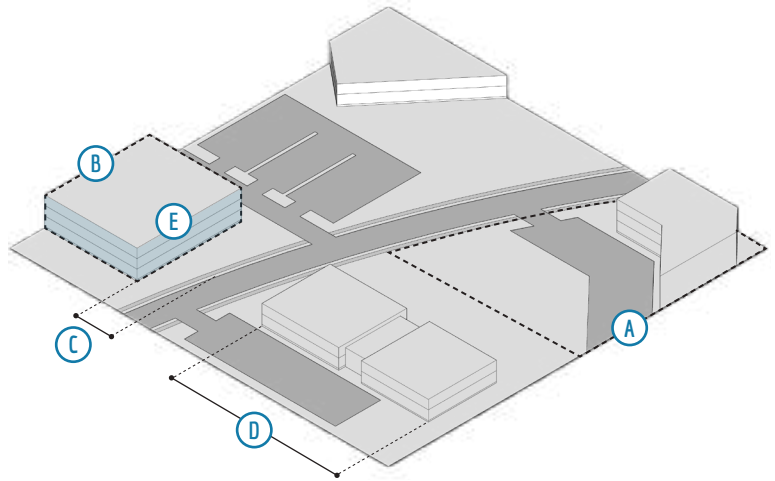
Newton's Commercial Clusters

Similar to village centers, commercial clusters are largely situated along major routes of access, including highways, rail lines, and waterways. Newton's commercial clusters range in development era from the earliest mill facilities to more modern office parks and shopping malls. In some cases, these clusters are in the process of evolving in form and diversifying in use. It is reasonable to expect that some will be more reasonably classified as village centers in the near future.

These pattern subsets were extrapolated from a randomized sampling of parcels and are intended to describe averages, rather than serve as a comprehensive description of concentrations of specific parcels. They should be understood to be representative of the diversity of Newton's development forms. A detailed map of pattern subsets for each parcel is available on page 79, and similar data compiled on a CBA basis is portrayed on page 123 and beyond.

1. Employment Cluster

Employment clusters are areas of concentrated employment uses, typically located in close proximity to major transportation infrastructure such as highways and transit lines and outside village centers. These clusters either developed naturally over time (earlier model) as employers co-located in areas providing enhanced accessibility to employees and vendors, or were planned as office parks (later model) with the intent of attracting large employers in a lower-density typology common to suburban communities across the United States.



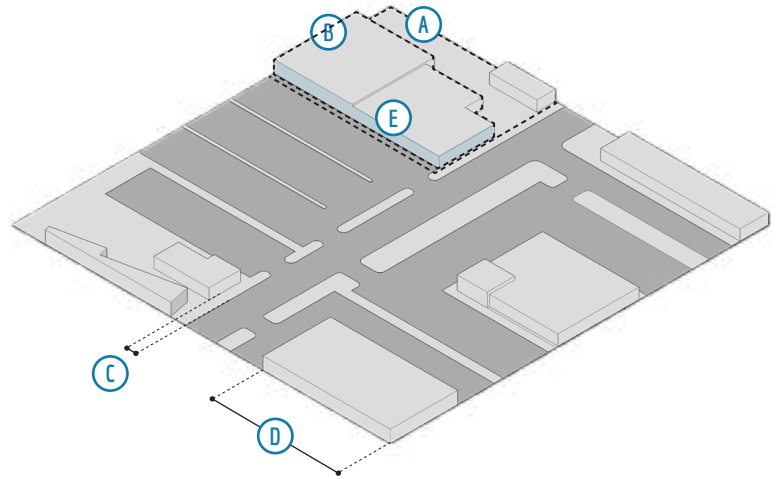
Typical Dimensions

A LOT SIZE	7,000 - 550,000 SF
B DEVELOPMENT SIZE	10,000 - 600,000 GSF (structure)
C FRONT SETBACK	20 - 100 FT
D BUILDING DEPTH	30 - 300 FT
E FENESTRATION DENSITY	Medium to high
PARKING LOCATION	Side/rear surface lots (often with a single row in front)
PRIMARY USE	Commercial office



2. Retail Cluster

Retail clusters are defined by a nearly uniform retail use and are often located at the edges of cities, in close proximity to highway exits/ on-ramps and other major regional arterials. Earlier versions of this development pattern include the suburban shopping mall, while later manifestations mimic the more traditional model of a village center, with parking tucked away behind development and shops that face onto the street. As cities continue to grow and the preferences of residents and shoppers continue to evolve, this typology may further diversify, mixing in new and complementary uses.



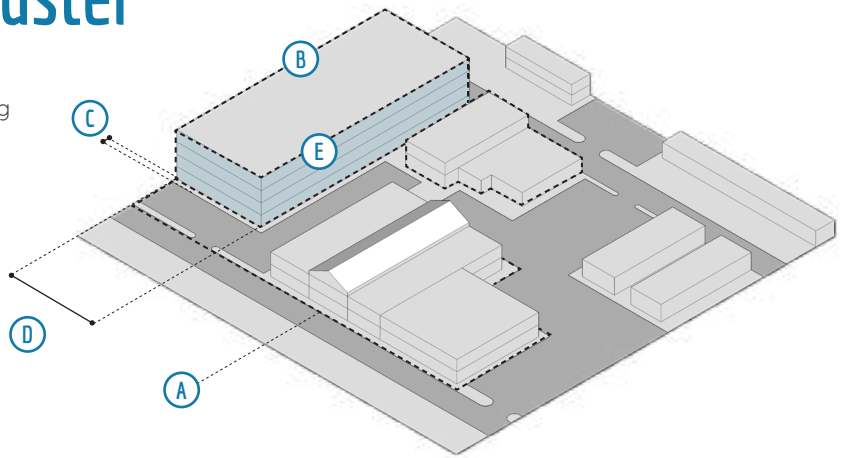
Typical Dimensions

A	LOT SIZE	15,000 - 1,000,000 SF
B	DEVELOPMENT SIZE	35,000 - 500,000 GSF (structure)
C	FRONT SETBACK	150 - 350 FT
D	BUILDING DEPTH	300 - 350 FT
E	FENESTRATION DENSITY	Low (large), medium (small)
	PARKING LOCATION	Front/back surface lots, structured
	PRIMARY USE	Retail



3. Legacy Industrial Cluster

Legacy industrial clusters represent both presently operating industrial and manufacturing facilities as well as clusters of repurposed industrial vestiges. These clusters are typically situated along waterways and freight rail lines and comprise a mix of industrial building types spanning several centuries. In some cases, more modern industrial and manufacturing facilities have been built adjacent to legacy facilities, continuing and expanding this predominant use.



Typical Dimensions

A LOT SIZE	100,000 - 200,000 SF
B DEVELOPMENT SIZE	30,000 - 200,000 GSF (structure)
C FRONT SETBACK	5 - 100 FT
D BUILDING DEPTH	50 - 100 FT
E WINDOW DENSITY	High (old), low (new)
PARKING LOCATION	Front/rear surface lots
PRIMARY USE	Industrial, research and development, warehouse/ storage, distribution



PAGE INTENTIONALLY LEFT BLANK

Character Patterns & Pattern Subsets

Campus

The campus character pattern classifies a unique formal quality of development, rather than the specific uses commonly associated with the word “campus” (namely institutional uses) exclusively. Campuses in Newton are defined as a building (or cluster of buildings having an association with one another) and associated landscapes. While this comprises nearly all the primary, secondary, and post-secondary educational institutions in Newton, it also encapsulates religious, corporate, civic, and special uses. Campuses often operate as self-contained microcosms within the larger city fabric and can be understood, in many cases—both legally and spatially—to use development rules and priorities that are independent of the larger city context.

Civic/ Public School Campus

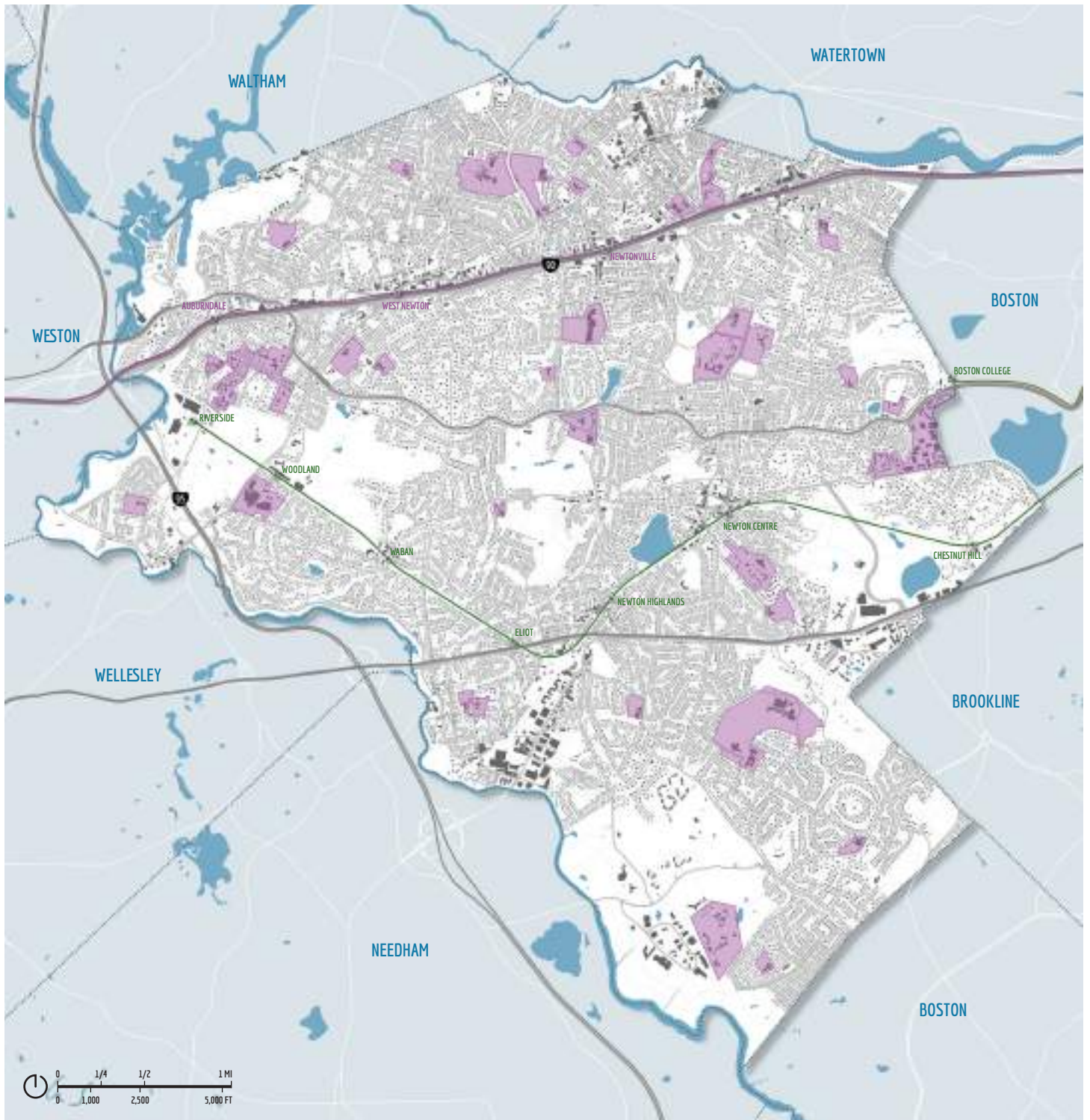
The civic/public school campus designation applies to major civic buildings, primary and secondary schools, and their associated landscapes and recreational fields. These areas are spread throughout the city and generally serve a local population.

Institutional Campus

Newton’s colleges and religious and medical institutions are designated as institutional campuses. These entities often operate autonomously from the city’s larger development patterns, networks, and utility systems and serve a community specific to them.

6%

of Newton’s total
area is identified as
Campus.



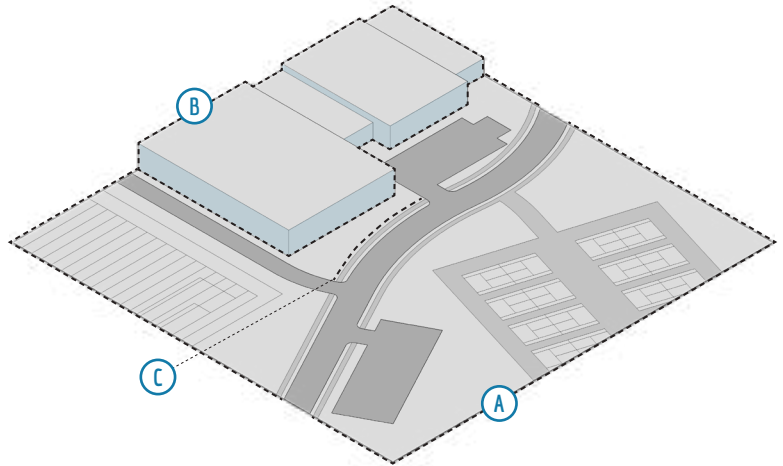
Newton's Campuses

Campuses in Newton are scattered throughout the city with little relationship to major transportation or transit infrastructure. In many cases these campuses were formed as self-sufficient enclaves located some distance from established city centers. This real estate strategy allowed institutions room to grow and incorporate additional land in their early days as needed without significant hindrance or impact on the city's growing neighborhoods and centers.

These pattern subsets were extrapolated from a randomized sampling of parcels and are intended to describe averages, rather than serve as a comprehensive description of concentrations of specific parcels. They should be understood to be representative of the diversity of Newton's development forms. A detailed map of pattern subsets for each parcel is available on page 79, and similar data compiled on a CBA basis is portrayed on page 123 and beyond.

1. Civic/Public School

Civic campuses, including public schools, are often situated within residential neighborhoods. They serve as areas of recreation as well as their intended functional use. Many of the architectural design features are typical of the era in which the building was developed, and largely ignore the contextual architecture.



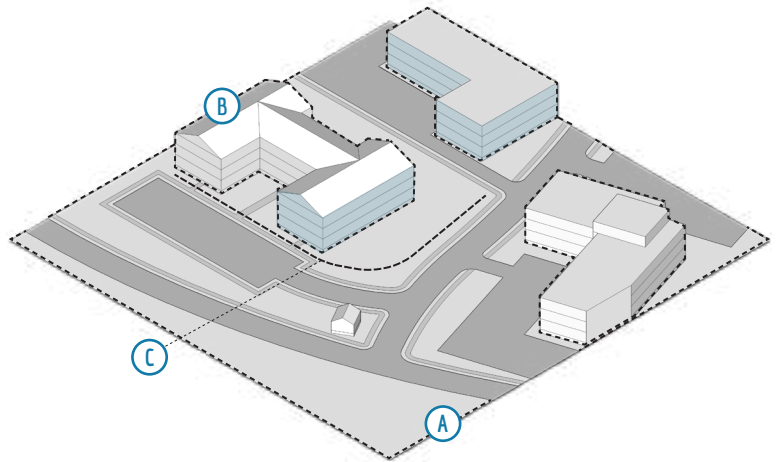
Typical Dimensions

A LOT SIZE	150,000 - 1,200,000 SF
B DEVELOPMENT SIZE	30,000 - 350,000 SF (total)
C STREETWALL	Discontinuous
ASSEMBLAGE	1 -4 structures
PARKING LOCATION	Rear or side surface lots, street



2. Institutional

Institutional campuses are situated along major roads within neighborhoods or near their borders. They can serve as public amenities during certain times of day or year, but can also create barriers within a neighborhood or community when the campus is designed to have limited or no public access.



Typical Dimensions

LOT SIZE	200,000 - 3,500,000 SF
DEVELOPMENT SIZE	100,000 - 2,000,000+ SF (total)
STREETWALL	Discontinuous
ASSEMBLAGE	3 - 35 structures
PARKING LOCATION	Rear and side surface lots, street, structured



Character Patterns & Pattern Subsets

Recreation & Public Use

Recreation and public use lands encompass a wide variety of uses within Newton. Unlike the previous four character patterns, this classification does not primarily describe development form. In many cases, the lands within the recreation and public use category contain little or no development. Instead these properties are those throughout the city that are intentionally designed to support recreation (fields, recreation centers, ball courts, jogging tracks, golf courses, regional and neighborhood parks, etc.) and other public uses such as community gardens and cultural centers. In some cases—but certainly not all—these areas have associated development such as clubhouses, retail shops, meeting spaces, residences, office buildings, etc. included within them.

Regional/ Neighborhood Park

Regional/Neighborhood parks are large, dedicated park spaces usually including significant formal recreation fields and courts. These parks attract and serve a large neighborhood/regional population.

Golf Course

Golf courses, both public and private, consume a significant land area (the largest single-use parcels in Newton). The majority of these lands are the holes/green and consist of large open spaces, but many include associated development including clubhouses and, in some cases, residences.

Utility

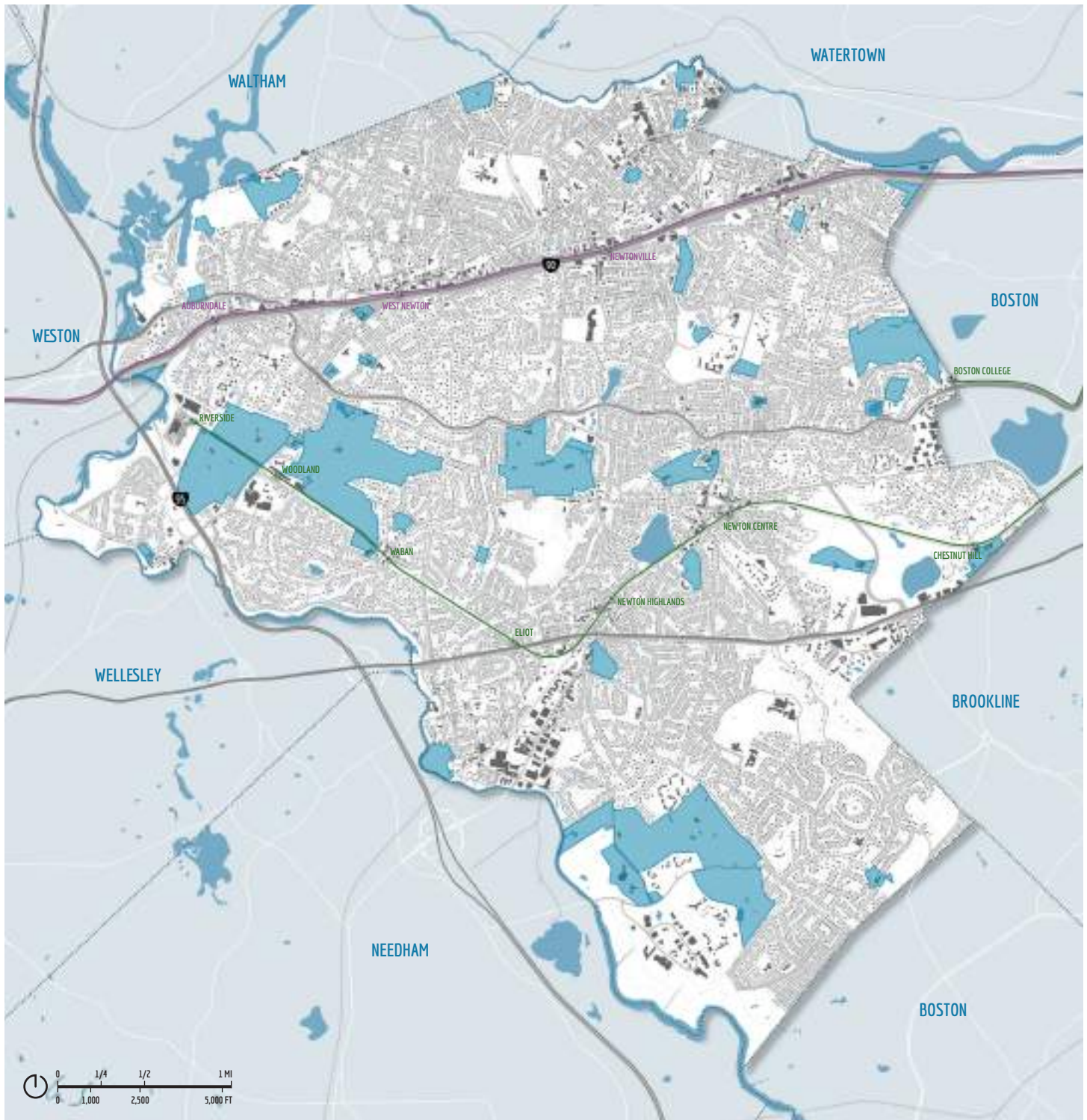
Utility lands include reservoirs, electrical stations, landfills, operating stations and other uses dedicated to public services.

Cemetery/ Burial Ground

Cemeteries and burial grounds, both public and private, are a unique public use and are located throughout the city. These lands range in age from centuries old to modern and generally do not include associated development.

9%

of Newton's total area is
identified as Recreation
& Public Use.



Newton's Recreation & Public Use Areas

The largest share of Newton's recreation and public use lands are golf courses (four in total), but significant formal parkland and other public uses dot the city's neighborhoods. Unlike conservation land, it is possible that some of these lands will one day convert to another use as the economics and preferences of the city's population change.

These pattern subsets were extrapolated from a randomized sampling of parcels and are intended to describe averages, rather than serve as a comprehensive description of concentrations of specific parcels. They should be understood to be representative of the diversity of Newton's development forms. A detailed map of pattern subsets for each parcel is available on page 79, and similar data compiled on a CBA basis is portrayed on page 123 and beyond.

Character Patterns & Pattern Subsets

Natural/Landscape

The natural/landscape designation is reserved for those lands throughout Newton that are today—and will remain in perpetuity—free from development. This includes both lands unsuitable for development (water bodies, wetlands, river banks, etc.) as well as those protected from development through regulation and easements. While many of these lands are commonly used and intended for public use and recreation, they are informal recreation spaces and protected from the kind of intense impact normally associated with neighborhood and regional parks.

Conservation Easement

This designation is reserved largely for lands suitable for development that have been officially dedicated to conservation/preservation.

Natural Formation/Water

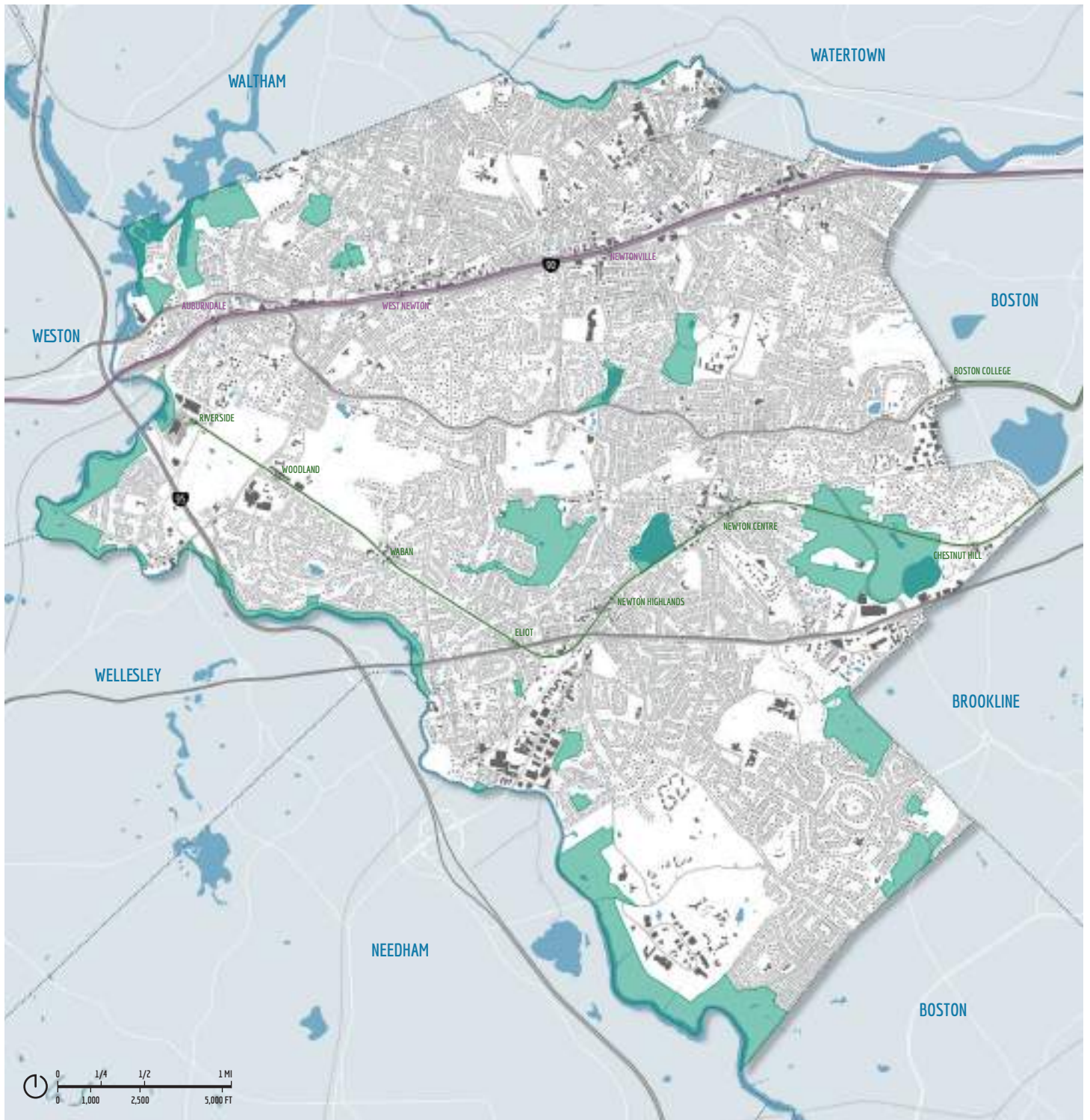
The natural formations and water designation applies to major geological formations as well as natural and man made recreational water landscapes.

Wetland/ Ecological Resource

Wetlands and ecological resources encompass the city's wetlands, flooded areas, forests, and other habitats that contribute to a regional ecological diversity.

9%

**of Newton's total area
is identified as Natural/
Landscape.**



Newton's Natural/Landscape Areas

Newton is home to a variety of cherished landscapes and natural areas protected from development and dedicated to the preservation of ecological diversity and public enjoyment. The natural/landscape areas represented in the map above provide substantial opportunity for residents and visitors to enjoy New England's natural landscapes in close proximity to Newton's cultural, entertainment, and living options.

These pattern subsets were extrapolated from a randomized sampling of parcels and are intended to describe averages, rather than serve as a comprehensive description of concentrations of specific parcels. They should be understood to be representative of the diversity of Newton's development forms. A detailed map of pattern subsets for each parcel is available on page 79, and similar data compiled on a CBA basis is portrayed on page 123 and beyond.

Context-Based Areas

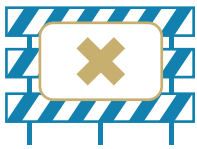
What is a Context-Based Area?

Newton is a city defined by its villages. Whether resulting from historical settlement patterns, transit and transportation decisions made decades ago, or the interventions of mid-twentieth century city planners, Newton's many villages and centers take on a variety of character types and patterns. To best understand the unique character of the city's many areas, it made sense to use these villages to inform a more localized analysis. As there are no official boundaries to Newton's villages (as well as some debate about how many there are), these context-based areas will serve as the basic unit of geographic analysis for the purposes of this pattern book.

How were the Context-Based Areas generated?

These 17 areas are designed to be the building blocks of an in-depth, localized pattern analysis. By analyzing patterns in a more finite geography than the city as a whole, we can understand the differences between areas and compare development dimensions between

neighborhoods. Since these serve only as tools for understanding and comparison, context-based areas should be understood only as units of analysis in the Pattern Book. The following factors generally contributed to the location of the CBA area outlines.



Physical Barriers

Physical barriers include rivers, railways, large open spaces and natural features, and any other permanent features that inhibit movement and connectivity.



Nearest Center

In many of Newton's neighborhoods, one village center defines the area and gives identity to the residential neighborhoods surrounding it.



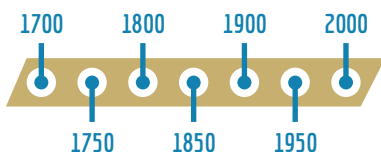
Built & Use Patterns

In some cases, it is easy to identify differences between neighborhoods based on the size, density, and type of development. In other cases, the predominant uses of areas create natural lines of division.



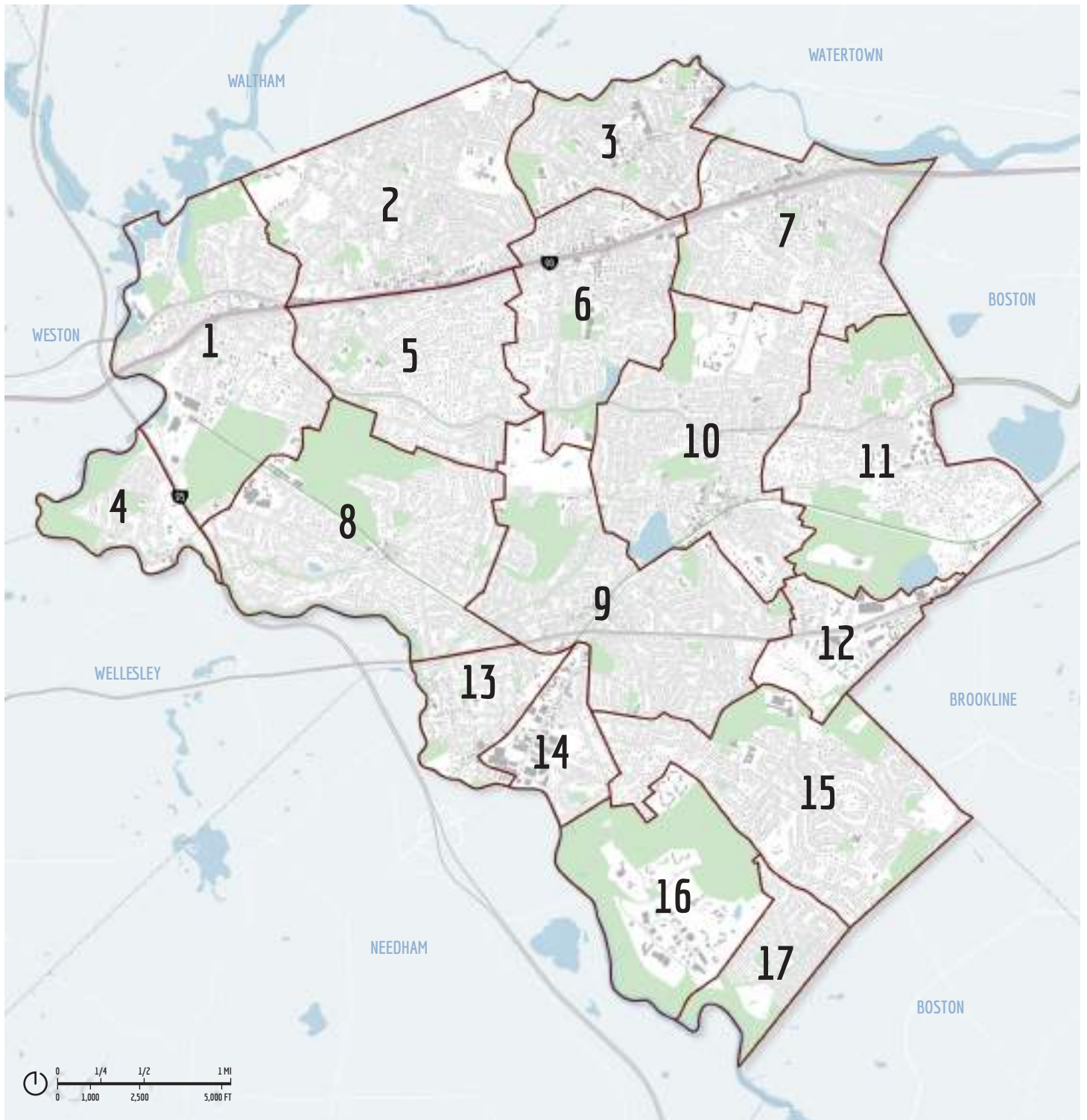
Local Wisdom

Many Newtonians can identify their own villages and neighborhoods. Through close consultation with city staff, residents, and workshop visitors, our analysis considers this local wisdom.



Historical Development

Newton's neighborhoods and villages developed over the course of multiple centuries. By tracking development patterns and key features of development eras, the historical patterns of Newton can serve as significant lines of demarcation between neighborhoods.



Context-Based Areas

The map above shows the 17 context-based areas delineated for the analysis purposes of this pattern book. While, in some cases, these shapes bear a resemblance to the vernacular villages of Newton (as understood by the local population), that popular understanding was only one of the many factors that contributed to their creation. The box to the left explains how the lines fell where you see them here.

Context-Based Areas

Newton's Streets

A city's street network is one of the strongest determinors of development and growth patterns, and the most important component of any successful neighborhood plan. While streets serve a vital role in the organization of and movement through cities, not all streets are created equal or designed to support the same range of uses. As part of the context-based area analysis, development within each area is measured relative to its frontage on one of four different street types: arterial, major collector, minor collector, and local. The intent of this analysis is to understand the influence certain street characteristics have on development, including traffic flow, density, and volume, street width, accommodated means of travel, and pedestrian features.

Arterial Roads

Arterial roads in the Pattern Book comprise two of the road categories from the Newton-in-Motion transportation strategy—major and minor arterials. These roads (identified in red in the map to the right) are some of the most highly-traveled regional thoroughfares in Newton. They are represented by a variety of characteristics, but are commonly among the widest and highest-speed roads in the city and often connect to the larger region's transportation network.

Major & Minor Collector Streets

Major and minor collector streets (represented in green and blue, respectively, in the map to the right) are the secondary connections between arterials. These streets are often more compact and serve a local population.

Local Streets

Local streets are the smallest, slowest, and most fine-grained network of streets within Newton. Most of these streets are striped only for cars, but in some parts of the city they provide access to all means of mobility. Some local streets terminate in a loop, cul-de-sac, or are otherwise partially disconnected on one end from the larger street network.



Street type

- Arterial
- Major Collector
- Minor Collector
- Local

Context-Based Areas

1. Auburndale

Area Overview

The Auburndale area is located in Newton's northwestern-most corner, bordered to the north and west by the Charles River. Conservation land and riverbanks form the northern and western boundaries while one of Newton's four golf courses forms the southern quarter of the CBA. As such, it is home to some of Newton's most significant swaths of open space and permeable surfaces, totaling 67%, of the CBA's total area.

The CBA is also traversed by significant highway infrastructure, with I-90 cutting it in half and I-95 forming its southwestern border. Railway infrastructure includes the Riverside terminus of the MBTA Green Line (D branch) located in the south and the Commuter Rail Framingham/Worcester line running within the I-90 right-of-way. The Auburndale stop provides access to this latter railway. Given its significant open space composition, the Auburndale CBA has an intersection density of 90 intersections per square mile, placing it below the city's average of 112 per square mile.

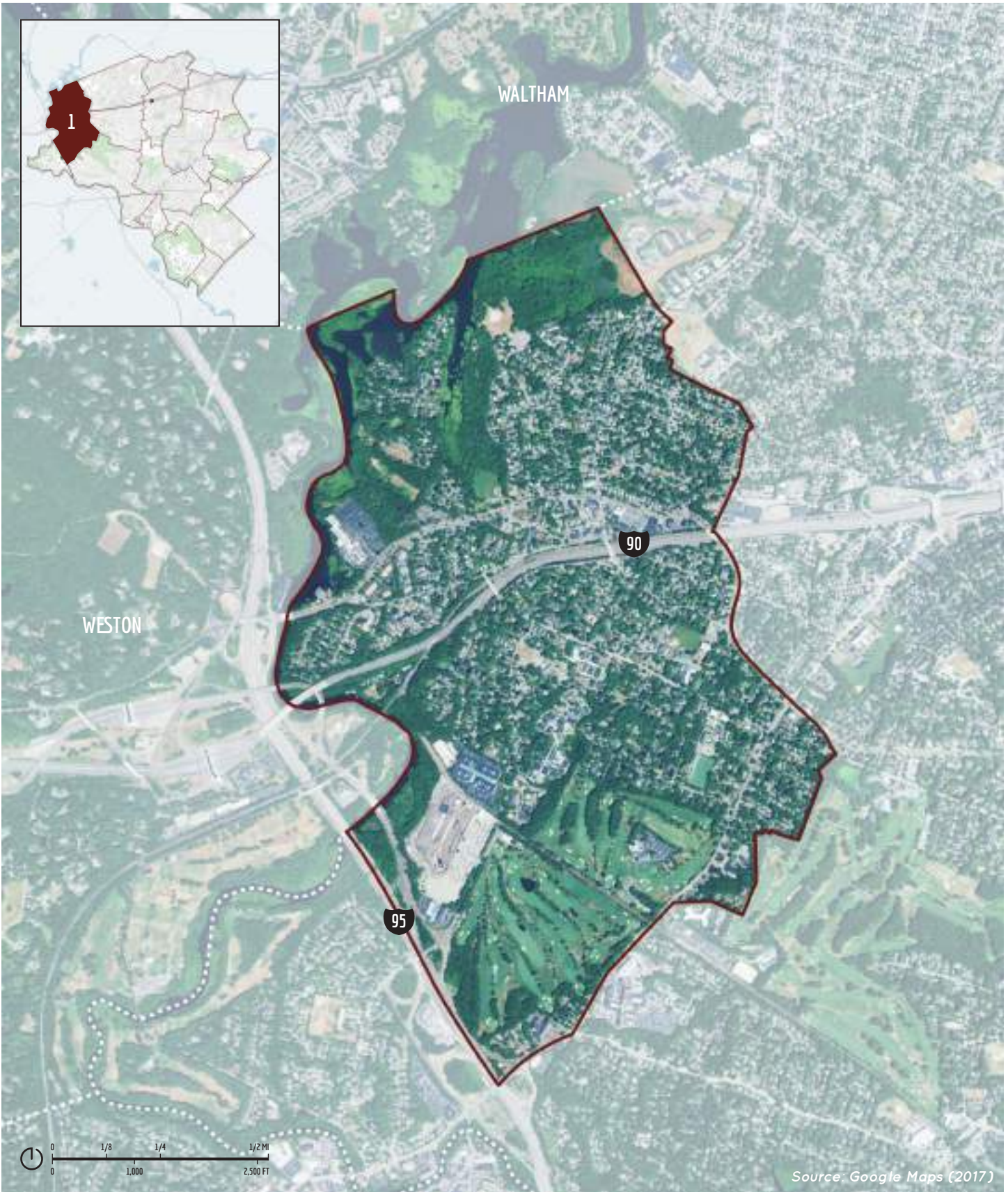
976 total acres

90 intersections per square mile

67% permeable surfaces

\$35k average tax revenue per acre





Aerial photograph of the Auburndale context-based area.

Context-Based Areas

1. Auburndale

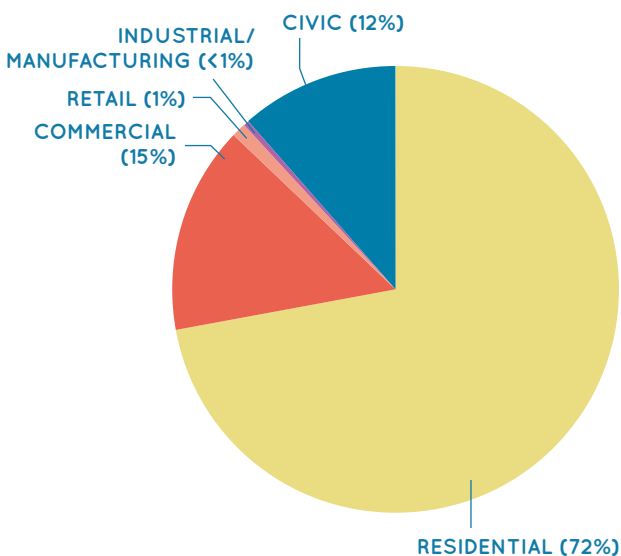
Development Form Metrics by Land Use

The Auburndale CBA, like most of Newton, is primarily a residential area with respect to total developed square footage. The area, however, is also home to one of Newton's five major higher-ed campuses, as well as a fairly substantial commercial footprint compared to several of the city's CBAs. The area contains a larger mix of housing types than

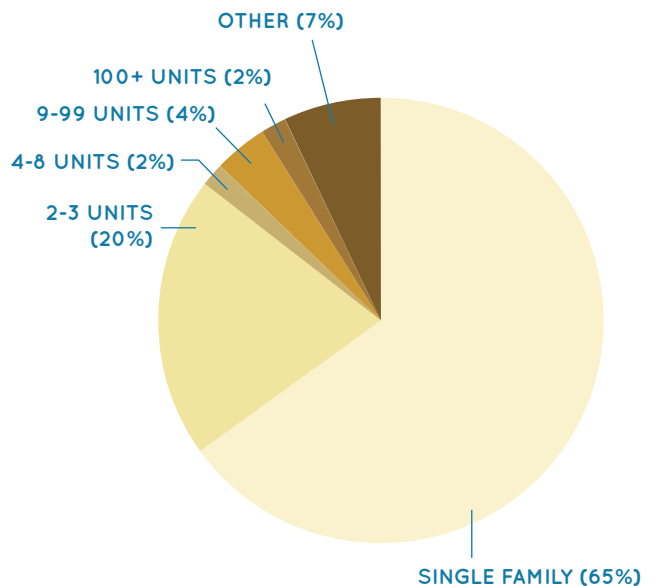
is common throughout Newton, with each of the six major typologies represented, but the predominant typology (by a factor of 2:1) is single family. Given the development time frame and proximity to major commercial areas and infrastructure, development is denser and the parcels are smaller here than in much of the rest of Newton.

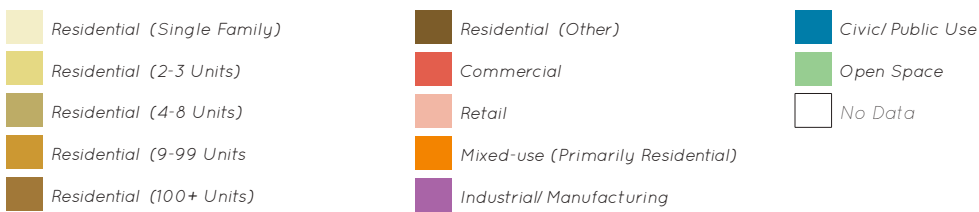
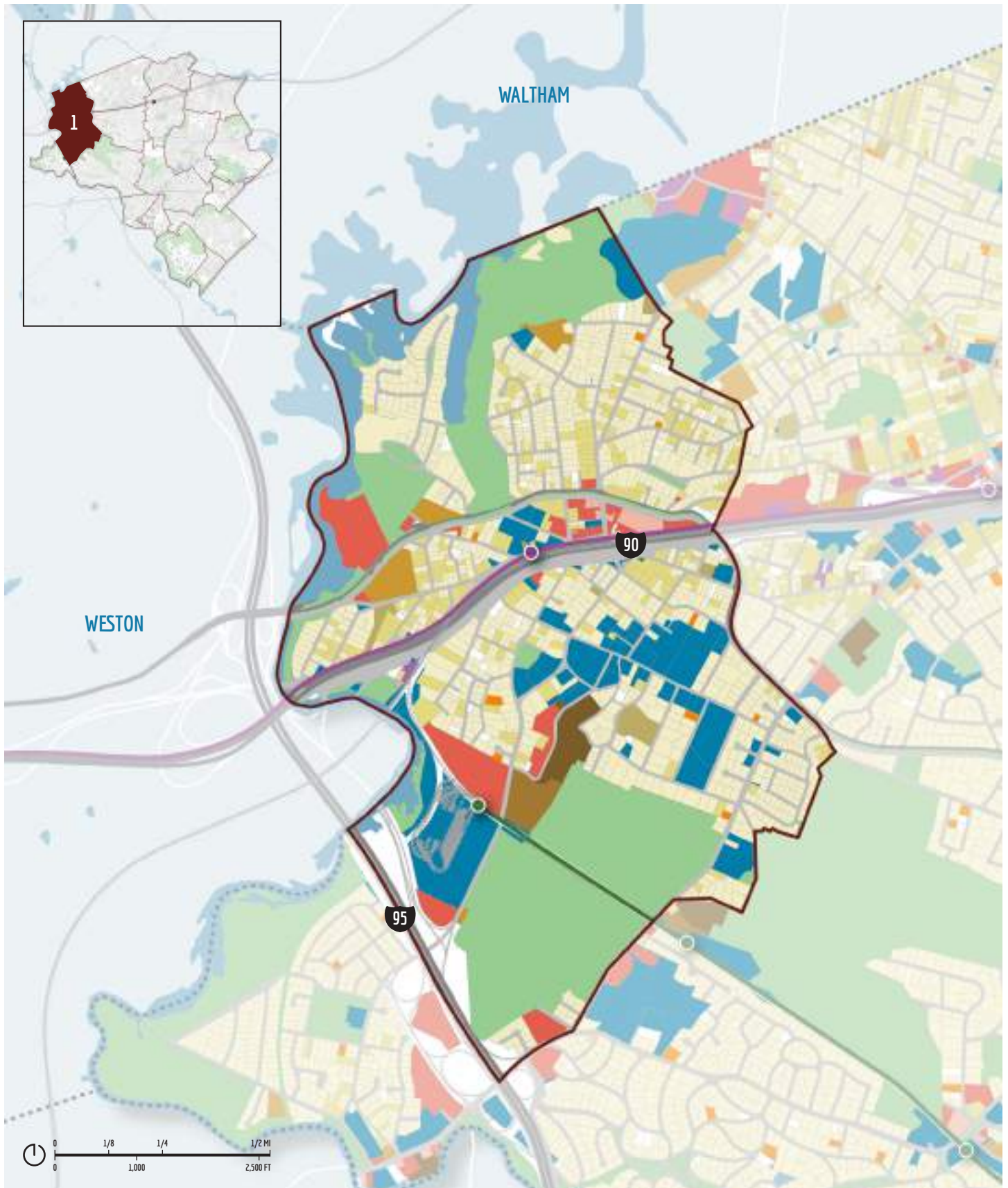
USE CATEGORY	PARCEL COUNT	BUILDING SQ. FOOTAGE (TOTAL)	PARCEL AREA (MED.)	BUILDING SQ. FOOTAGE (MED.)	SETBACK (MED.)	STORIES (MED.)
RESIDENTIAL	1,369	6,348,316 SF	9,020 SF	3,888 SF	26.6'	2.0
SINGLE FAMILY	1,027	4,104,768 SF	9,130 SF	3,743 SF	27.7'	2.0
2-3 UNITS	257	1,295,372 SF	9,064 SF	4,758 SF	24.6'	2.0
4-8 UNITS	8	103,785 SF	18,006 SF	9,089 SF	28.1'	---
9-99 UNITS	5	233,998 SF	109,938 SF	54,192 SF	30.8'	---
100+ UNITS	1	117,132 SF	306,917 SF	117,132 SF	40.8'	---
OTHER	2	446,727 SF	186,793 SF	223,364 SF	10.2'	---
COMMERCIAL	41	1,418,589 SF	15,011 SF	5,194 SF	8.3'	---
RETAIL	6	91,599 SF	8,711 SF	9,893 SF	---	---
MIXED-USE	---	---	---	---	---	---
INDUST./MANUF.	1	19,362 SF	25,026 SF	19,362 SF	---	---
CIVIC/INSTIT.	111	996,382 SF	16,355 SF	---	---	---

Total Development Square Footage by Land Use



Total Residential Development Square Footage by Building Type





Context-Based Areas

1. Auburndale

Development Form Metrics by Street Type

The street network in the Auburndale CBA is complicated by the presence of the Charles River, I-90 and I-95. While vestiges of a traditional street network are present within the area's core, streets largely terminate onto frontage roads, creating significant separation between the north and the south of the area and between Newton and its neighboring cities. Beyond the highways, the area is traversed mostly

by arterial roads connecting to the major thoroughfares and local streets serving the residential neighborhoods and commercial areas. Most of the area's retail and commercial activity is concentrated along Commonwealth Avenue directly to the north of I-90, though substantial office facilities are also located in the southern half of the CBA, close to the on-ramp and exits of I-95 and the Riverside MBTA station.

USE CATEGORY	ARTERIAL ROAD				MAJOR COLLECTOR STREET				MINOR COLLECTOR STREET				LOCAL STREET			
	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.
RESIDENTIAL	4,174	9,837	2.0	27.9'	4,708	13,987	2.0	33.8'	4,306	9,890	2.0	26.6'	3,758	8,765	2.0	26.4'
SINGLE FAMILY	3,904	9,946	2.0	29.3'	4,690	14,512	2.0	41.6'	3,996	9,945	2.0	28.0'	3,650	8,828	2.0	27.0'
2-3 UNITS	4,794	8,527	2.0	24.7'	4,776	13,469	2.0	29.8'	5,135	9,139	2.0	23.0'	4,658	8,980	2.0	24.8'
4-8 UNITS	31,737	32,293	---	83.7'	5,717	11,511	---	14.3'	10,426	17,486	---	28.1'	7,597	84,429	---	101.7'
9-99 UNITS	55,172	109,938	---	30.8'	---	---	---	---	---	---	---	---	47,317	117,441	---	64.7'
100+ UNITS	117,132	306,917	---	40.8'	---	---	---	---	---	---	---	---	---	---	---	---
OTHER	---	---	---	---	---	---	---	---	---	---	---	---	223,364	186,793	---	10.2'
COMMERCIAL	3,200	45,473	---	1.2'	---	---	---	---	8,736	5,335	---	0'	---	17,590	---	---
RETAIL	9,893	8,711	---	0'	---	---	---	---	---	---	---	---	---	---	---	---
MIXED-USE	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
INDUST./MANUF.	---	---	---	---	---	---	---	---	---	---	---	---	19,362	25,026	---	---
CIVIC/INSTIT.	3,996	20,083	---	4.1'	5,764	21,178	---	23.8'	---	20,271	2.0	30.0'	---	12,525	---	---

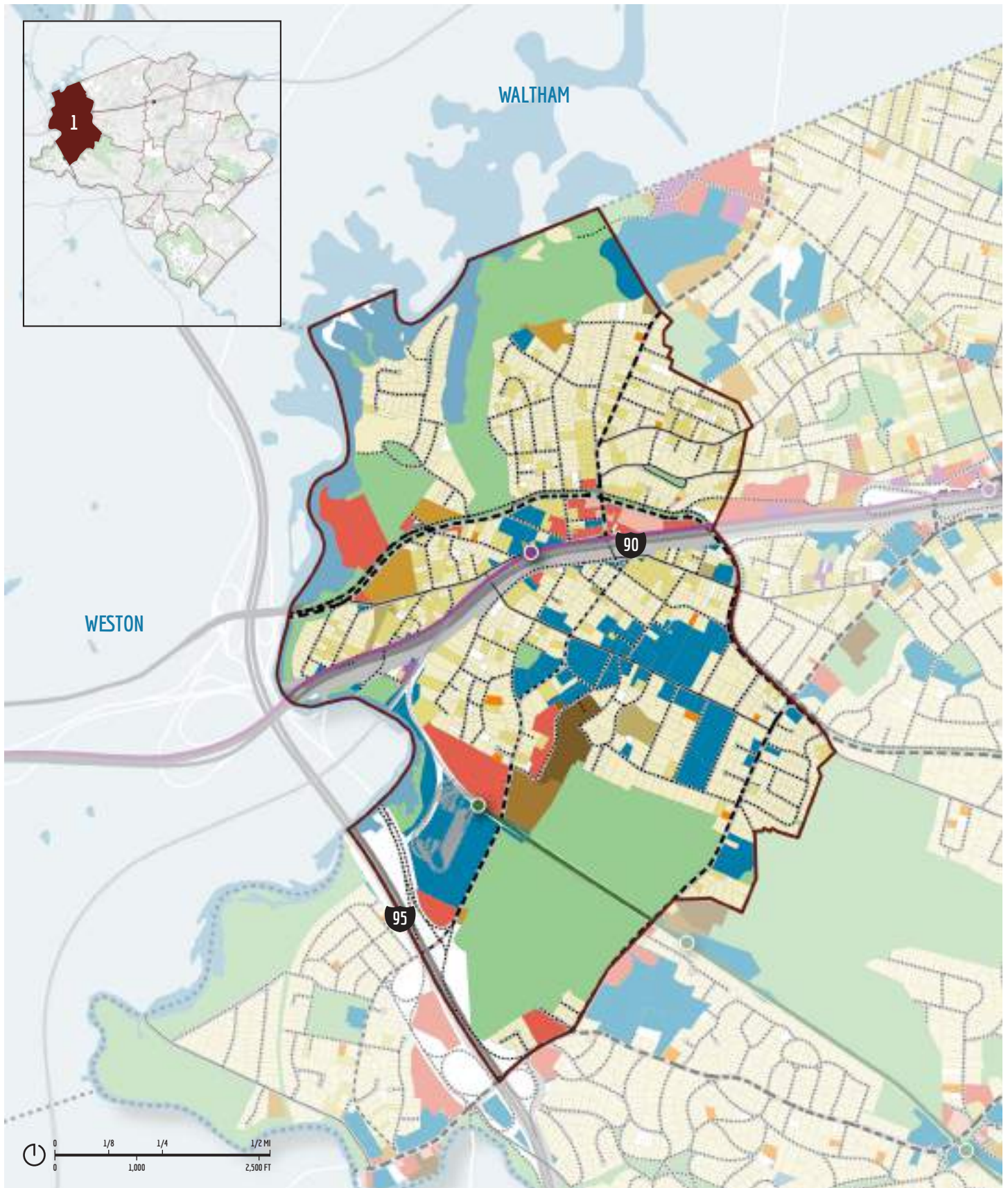
*GSF and parcel area median values measured in square feet.



Washington Street in Auburndale (2016)



Auburn Street in Auburndale (1938)



- Residential (Single Family)
- Residential (2-3 Units)
- Residential (4-8 Units)
- Residential (9-99 Units)
- Residential (100+ Units)

- Residential (Other)
- Commercial
- Retail
- Mixed-use (Primarily Residential)
- Industrial/ Manufacturing

- Civic/ Public Use
- Open Space
- No Data

- Street type**
- Arterial
 - Major Collector
 - Minor Collector
 - Local

Context-Based Areas

1. Auburndale

Character Patterns & Pattern Subsets

The Auburndale CBA is home to all six of the character patterns used to describe development form in this pattern book. While nearly three-quarters of the development square footage in the area is residential, only approximately half of the land area is designated within the neighborhood character pattern. Residential development within this area

is diverse, but largely consists of traditional development, with smaller instances of community and multifamily clusters scattered throughout. This CBA also encompasses one of Newton's four golf courses and substantial open spaces along the Charles River, giving this CBA a disproportionate share of open spaces compared to the rest of Newton.

Village Center

The Auburndale village center is small in area and square footage, offering some local and chain dining, banking, convenience, and general service uses, as well as multifamily residential buildings mixed in. The overall scale is small, featuring largely one- and two-story buildings, and the form is traditional, with retail establishments fronting directly onto sidewalks and parking located behind development.

Commercial Cluster

Auburndale is home to two small employment clusters (one in the north and another in the south) housing office buildings, and one large employment cluster encompassing the Riverside MBTA station. In addition to existing large office buildings on site, this area includes the MBTA rail yard (slated for redevelopment), and a hotel.

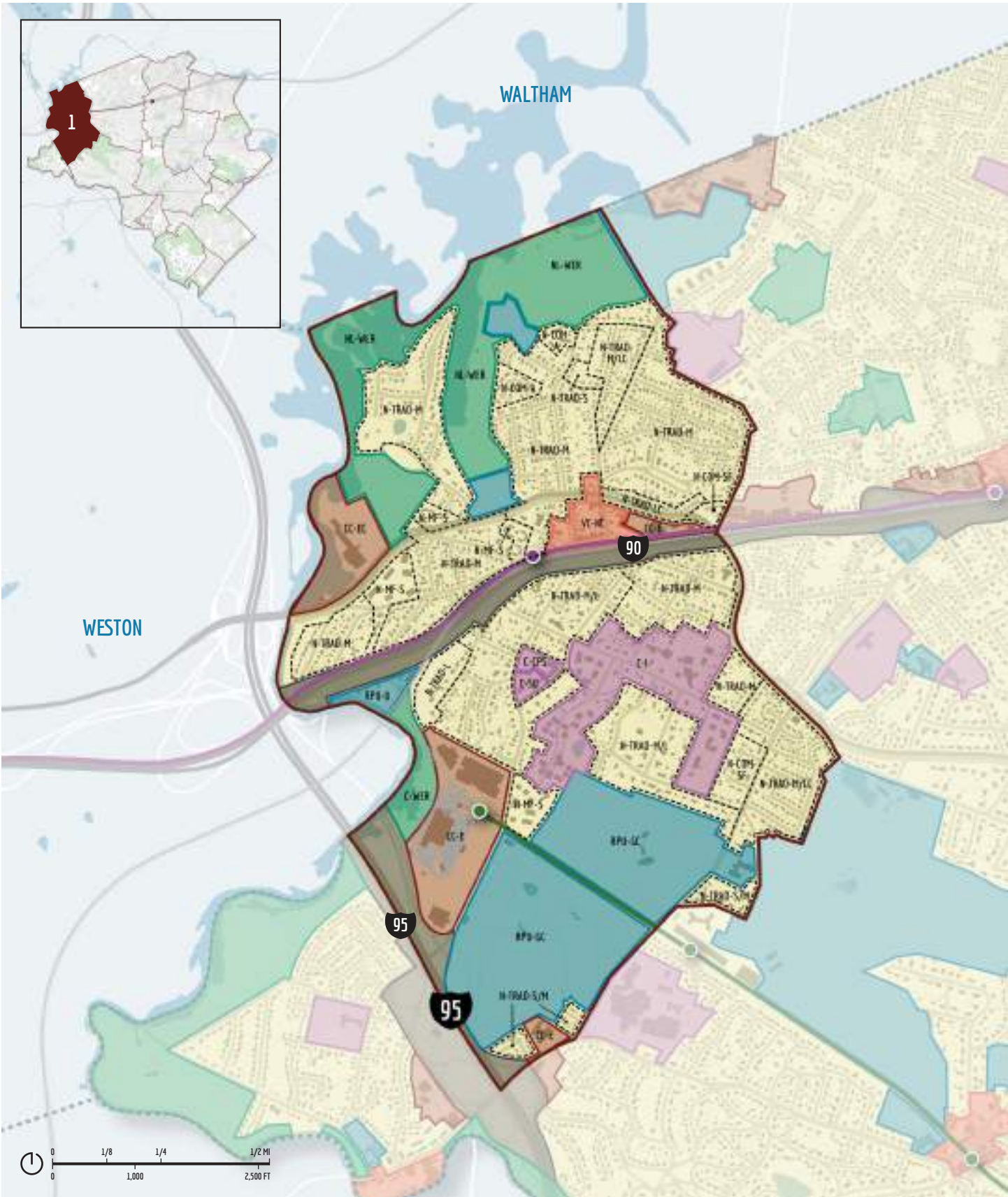
Campus

The Auburndale CBA contains the campus of Lasell College. This area includes aspects of a traditional campus, but is for the most part interwoven with, and contributing to, the residential neighborhood. In addition to Lasell, the Auburndale CBA contains a special use campus to the north along the river, containing a hotel and its associated landscape.

Neighborhood

Auburndale's neighborhoods range in size and density depending on their location within the CBA and their proximity to other uses. Neighborhoods in the north tend to be traditional and small/medium, with the exception of some properties near the village center north of I-90. Neighborhoods in the south tend to be medium/large nearer to the college and golf course.





- Neighborhood
- Village Center
- Commercial Cluster
- Campus
- Recreation & Public Use
- Natural/Landscape

Context-Based Areas

2. West Newton

Area Overview

The West Newton Area is one of the most diverse collections of neighborhoods and centers in all of Newton. Representing a wide range of uses and building types, and spanning multiple centuries of development, the area has changed significantly over time and represents pieces of many eras and character patterns.

West Newton contains some of the city's most dense and walkable neighborhoods. West Newton's intersection density of 171 intersections per square mile far outpaces the city's average of 112 per square mile. The area contains relatively little acreage of permeable surfaces, which comprise 56% of the area's 939 acres. This makes West Newton one of the most urban areas of Newton in terms of permeability.

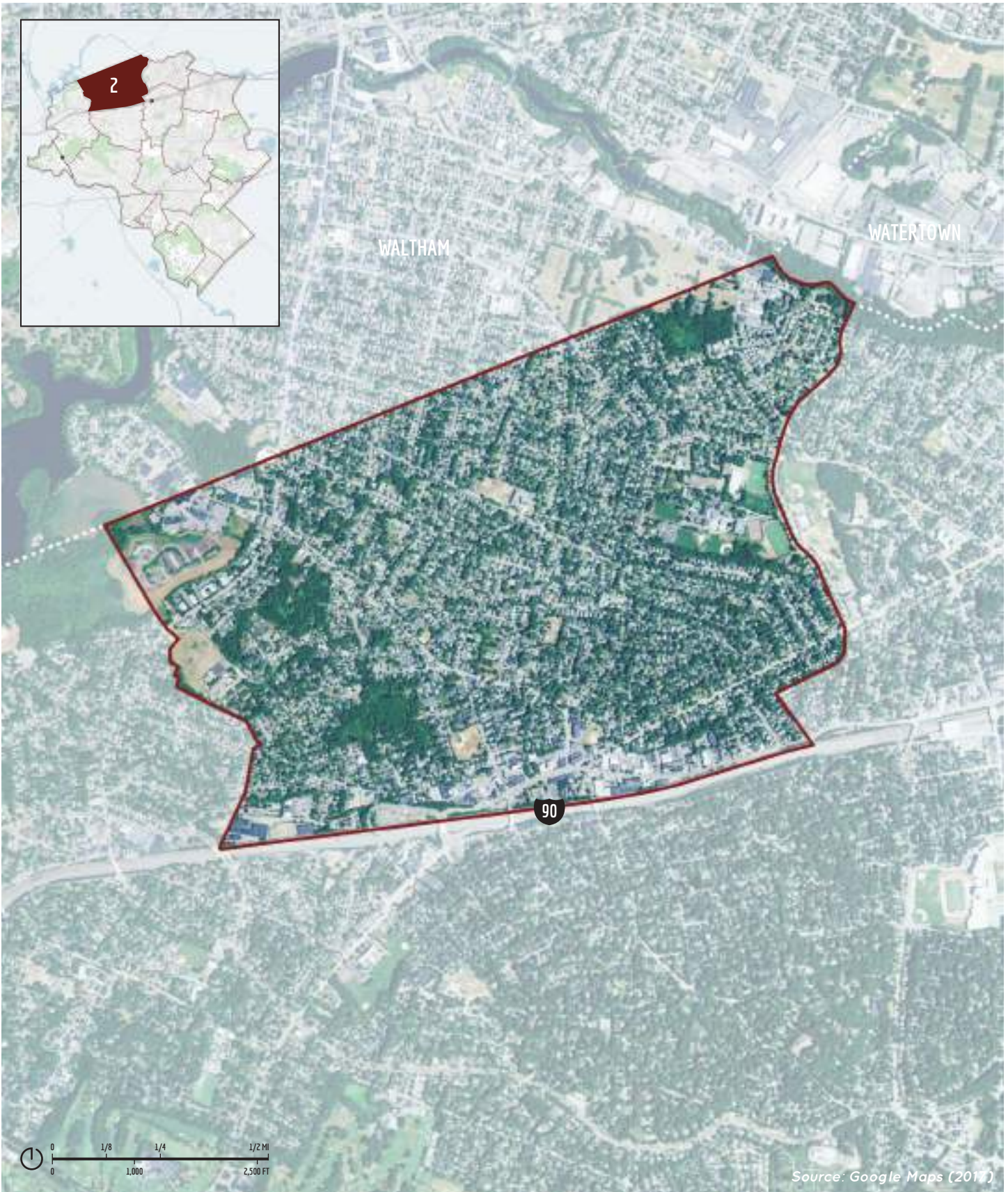


939 total acres

171 intersections per square mile

56% permeable surfaces

\$37k average tax revenue per acre



Aerial photograph of the West Newton context-based area.

Context-Based Areas

2. West Newton

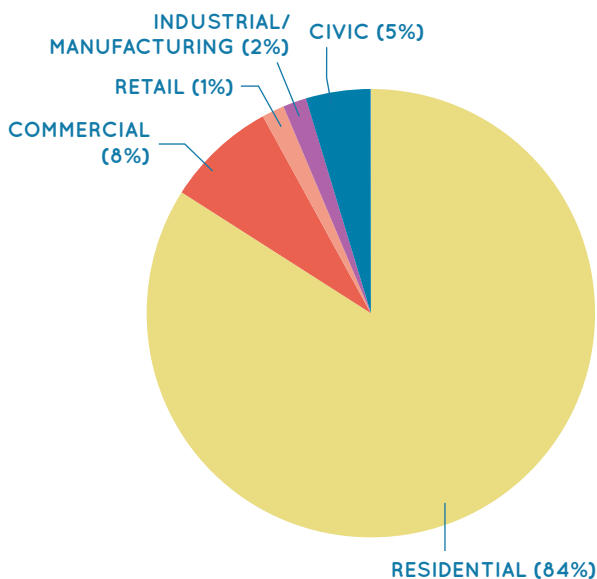
Development Form Metrics by Land Use

The West Newton area is framed by the Newton municipal boundary to the north, I-90 to the south, the Burr Elementary school to the west, and Albermarle Road to the east. This area is one of Newton’s most diverse with respect to land uses and residential typologies. The area is home to the West Newton village center, which comprises a

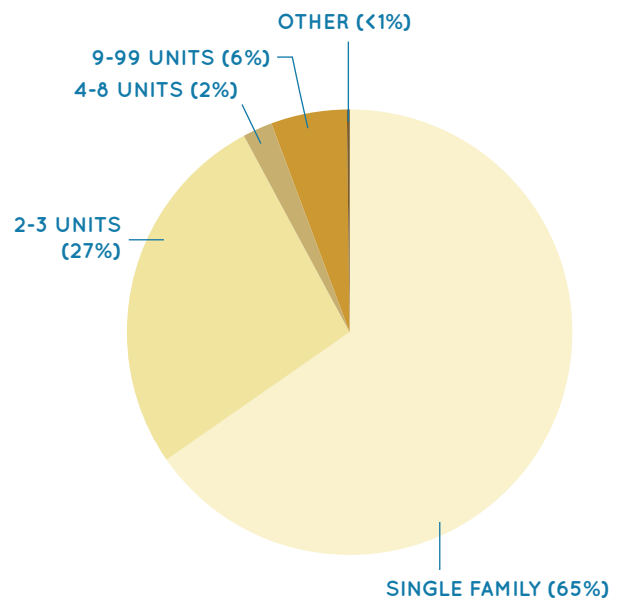
variety of commercial, retail, and industrial/manufacturing uses strung along I-90. The greatest concentration of multifamily residential products can be found in this area. As West Newton was one of the earlier areas of the city to develop, buildings and development lots tend to be smaller than those found in other parts of the city.

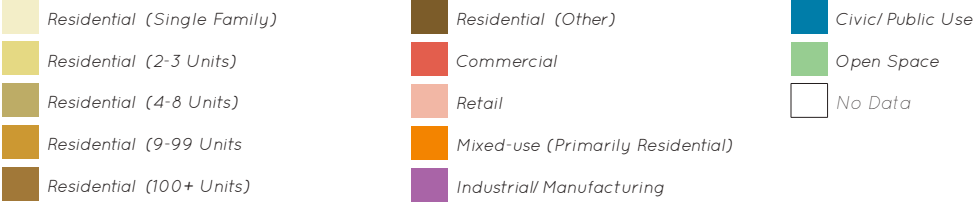
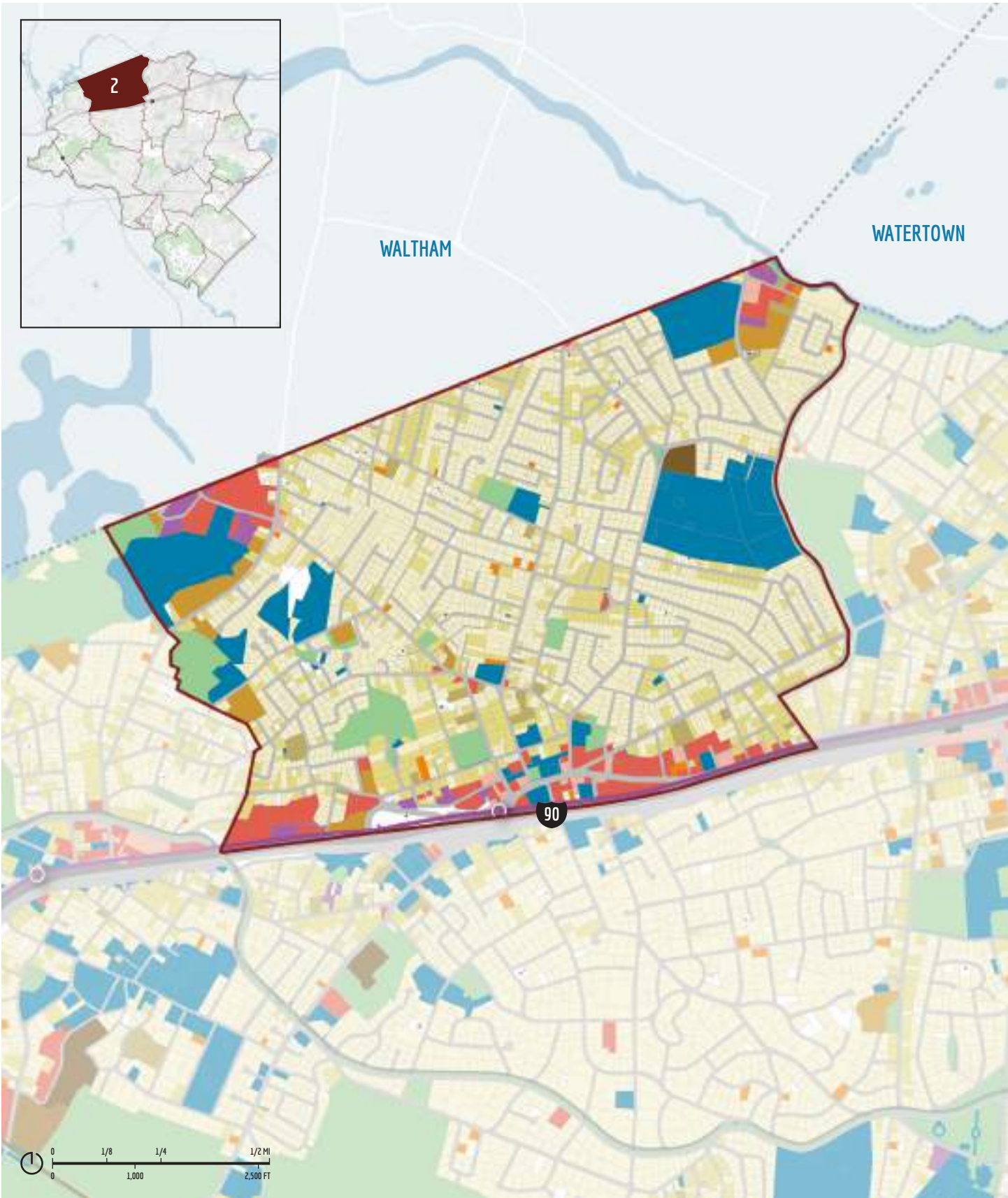
USE CATEGORY	PARCEL COUNT	BUILDING SQ. FOOTAGE (TOTAL)	PARCEL AREA (MED.)	BUILDING SQ. FOOTAGE (MED.)	SETBACK (MED.)	STORIES (MED.)
RESIDENTIAL	2,824	10,282,170 SF	7,400 SF	3,200 SF	23.4'	2.0
SINGLE FAMILY	2,044	6,665,019 SF	7,500 SF	3,015 SF	24.3'	2.0
2-3 UNITS	600	2,735,617 SF	7,274 SF	4,230 SF	20.4'	2.0
4-8 UNITS	21	218,146 SF	17,088 SF	9,081 SF	12.8'	---
9-99 UNITS	17	563,096 SF	45,725 SF	24,570 SF	26.7'	---
100+ UNITS	0	0	---	---	---	---
OTHER	1	20,174 SF	124,845 SF	20,174 SF	---	2.0
COMMERCIAL	96	976,440 SF	10,680 SF	5,396 SF	5.1'	---
RETAIL	21	198,172 SF	9,224 SF	7,750 SF	0'	---
MIXED-USE	0	0	---	---	---	---
INDUST./MANUF.	13	206,822 SF	26,404 SF	13,976 SF	10.3'	---
CIVIC/INSTIT.	78	571,602 SF	11,511 SF	---	---	---

Total Development Square Footage by Land Use



Total Residential Development Square Footage by Building Type





Context-Based Areas

2. West Newton

Development Form Metrics by Street Type

The West Newton area includes at least one of each major street type—arterial, major collector, minor collector, and local. As is the case with many of Newton’s village centers, the West Newton village center developed at the confluence of several major roadways, including Washington Street, Watertown Street, and Waltham Street. As is typical, the greatest development density is clustered within this

village center, with most of the lower density residential development distributed along minor collector and local streets to the north of the West Newton village center. As shown in the table below, dimensional patterns can be seen with respect to the various uses and building types that have built up along each street type within this area.

USE CATEGORY	ARTERIAL ROAD				MAJOR COLLECTOR STREET				MINOR COLLECTOR STREET				LOCAL STREET			
	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.
RESIDENTIAL	3,800	8,437	2.0	24.6'	3,118	6,983	2.0	19.1'	3,324	7,929	2.0	21.3'	3,144	7,300	2.0	23.7'
SINGLE FAMILY	3,389	8,303	2.0	25.0'	2,685	6,200	2.0	21.5'	3,001	7,883	2.0	22.4'	2,994	7,437	2.0	24.4'
2-3 UNITS	4,611	8,835	2.0	24.0'	3,926	7,982	2.0	17.2'	4,243	8,518	2.0	20.1'	4,200	7,026	2.0	20.3'
4-8 UNITS	7,876	18,363	---	47.0'	12,092	17,088	---	11.1'	13,248	21,398	---	10.4'	7,056	13,290	---	21.7'
9-99 UNITS	21,120	42,377	---	22.4'	25,653	21,472	---	45.7'	43,092	77,478	---	25.9'	25,610	57,035	---	35.0'
100+ UNITS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OTHER	20,174	124,845	2.0	0'	---	---	---	---	---	---	---	---	---	---	---	---
COMMERCIAL	---	---	---	---	5,327	7,176	---	2.8'	4,984	13,617	---	6.1'	5,786	14,289	---	4.8'
RETAIL	6,372	8,910	---	0'	---	---	---	---	6,578	21,140	---	6.9'	22,296	13,000	---	6.1'
MIXED-USE	---	---	---	---	---	---	---	---	12,478	31,668	---	17.0'	19,131	26,327	---	13.0'
INDUST./MANUF.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CIVIC/INSTIT.	3,480	21,154	---	22.1'	---	70,560	---	---	---	163,837	---	0'	---	9,040	---	---

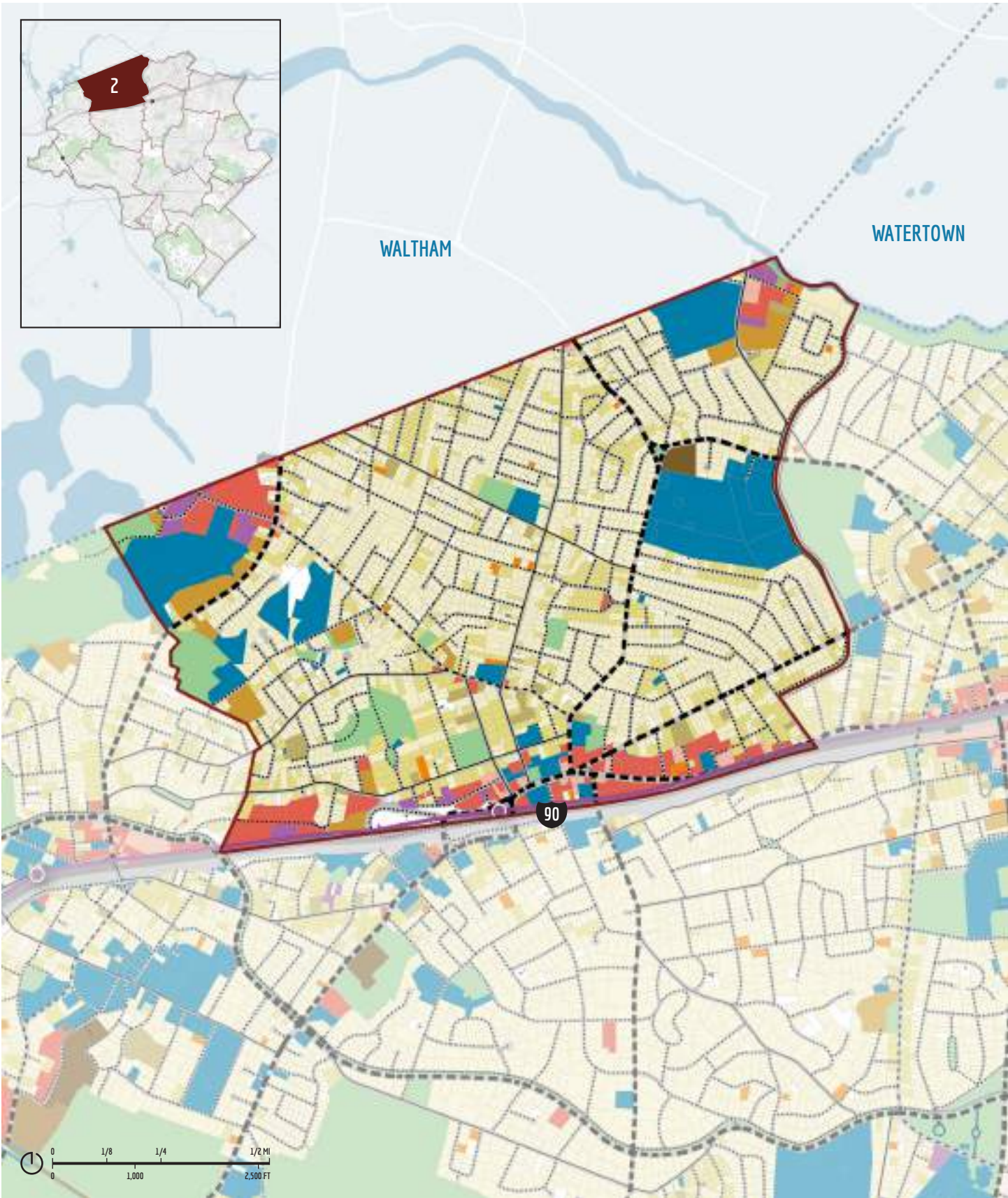
*GSF and parcel area median values measured in square feet.



Washington Street in West Newton (2016)



Washington Street in West Newton (1920's)



- Residential (Single Family)
- Residential (2-3 Units)
- Residential (4-8 Units)
- Residential (9-99 Units)
- Residential (100+ Units)

- Residential (Other)
- Commercial
- Retail
- Mixed-use (Primarily Residential)
- Industrial/ Manufacturing

- Civic/ Public Use
- Open Space
- No Data

- Street type**
- Arterial
 - Major Collector
 - Minor Collector
 - Local

Context-Based Areas

2. West Newton

Character Patterns & Pattern Subsets

With close proximity to both Waltham and Watertown to the north, the West Newton neighborhoods and centers include a diversity of residential building types and character patterns identified in this pattern book. The area includes a pedestrian-scale street network with consistent, walkable sidewalks and a mix of small and large development blocks.

Residential properties are tightly packed within this area's neighborhoods, with average side setbacks as small as ten feet in several places. The main commercial area is the linear West Newton village center situated along I-90.

Village Center

The West Newton Area's only village center is the West Newton village center, located in the south, along I-90. This center is moderately sized relative to Newton's other village centers, with a substantial mix of 19th and 20th century buildings and styles and a dense, highly-walkable urban form.

Commercial Cluster

West Newton is home to two employment commercial clusters (on either side of the West Newton village center) and two commercial centers to the north, abutting Waltham. The employment clusters strung along Washington Street primarily house uses such as offices, a grocery store, automotive service shops, and other larger-scale commercial/retail operations. The legacy industrial cluster in the north comprises offices, small manufacturers, storage facilities, a music studio, and small retail spaces.

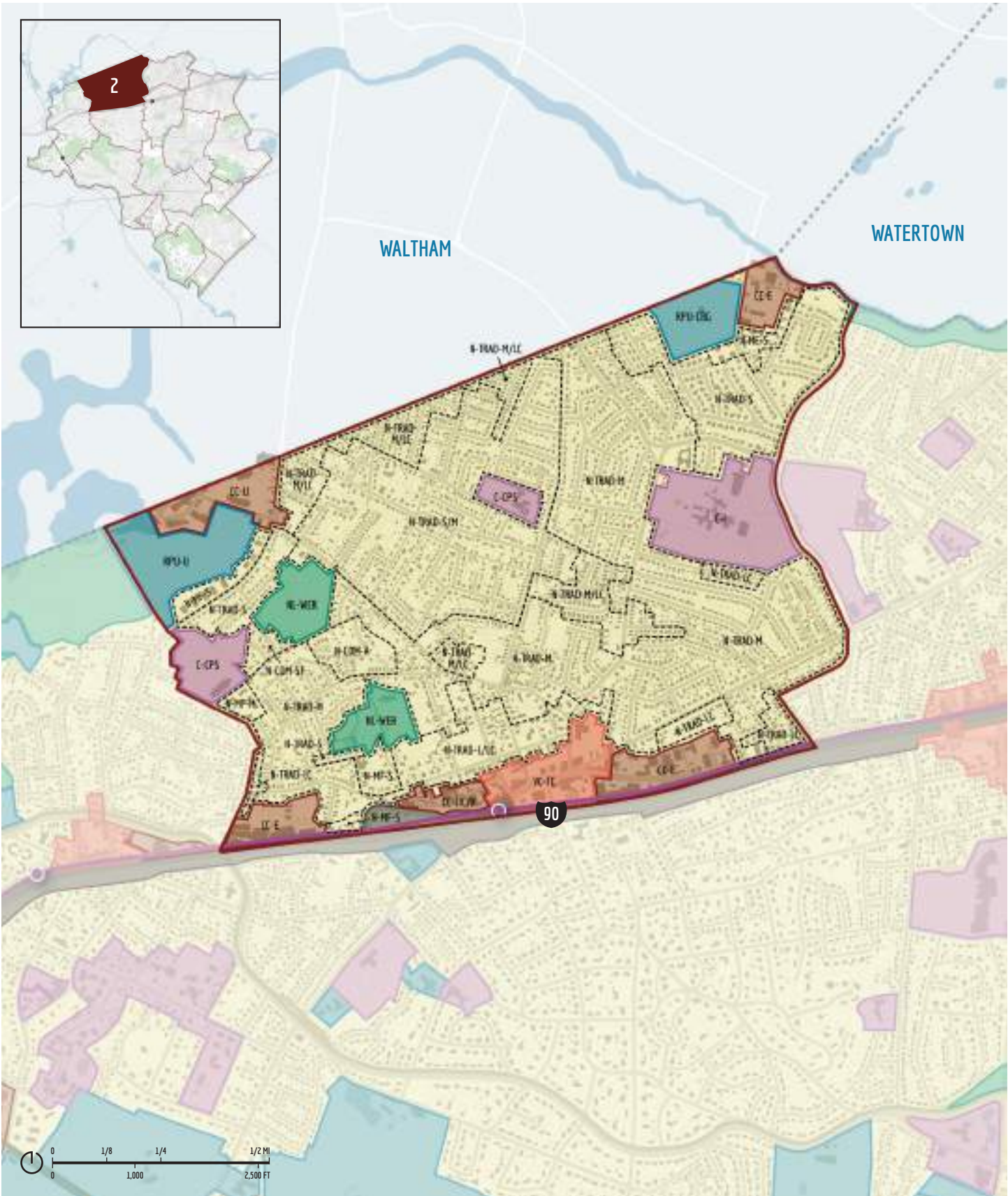
Campus

The West Newton Area contains three campus character patterns including the Fessenden School. This private 41-acre primary school comprises academic and recreation facilities as well as playgrounds, outdoor sports fields and courts, and large landscaped open space. The other two represent public schools.

Neighborhood

The neighborhoods of West Newton developed in the city's early years in common patterns and in response to the introduction of rail service to the area. The neighborhood patterns predominantly include traditional subsets, featuring mainly one-, two-, and three-family residential properties on small lots. Larger residential properties and denser building types are primarily clustered near the village and regional centers.





- Neighborhood
- Village Center
- Commercial Cluster
- Campus

- Recreation & Public Use
- Natural/Landscape

Context-Based Areas

3. Nonantum

Area Overview

The Nonantum CBA is among the most diverse in Newton with respect to land use, character pattern, and residential building type. The area is bounded to the north by the Charles River, to the west by Albemarle Road, to the south by Newtonville and I-90, and to the east by Watertown and Newton Corner. Nonantum contains some of Newton's oldest neighborhoods, which are reflected in its dense, grid-like street network, represented by an intersection density of 164 intersections per square mile—a full 52 per square mile more than the city average.

The area contains relatively little public open space and is densely developed, resulting in the lowest percentage of permeable surface area (47%) in the city.

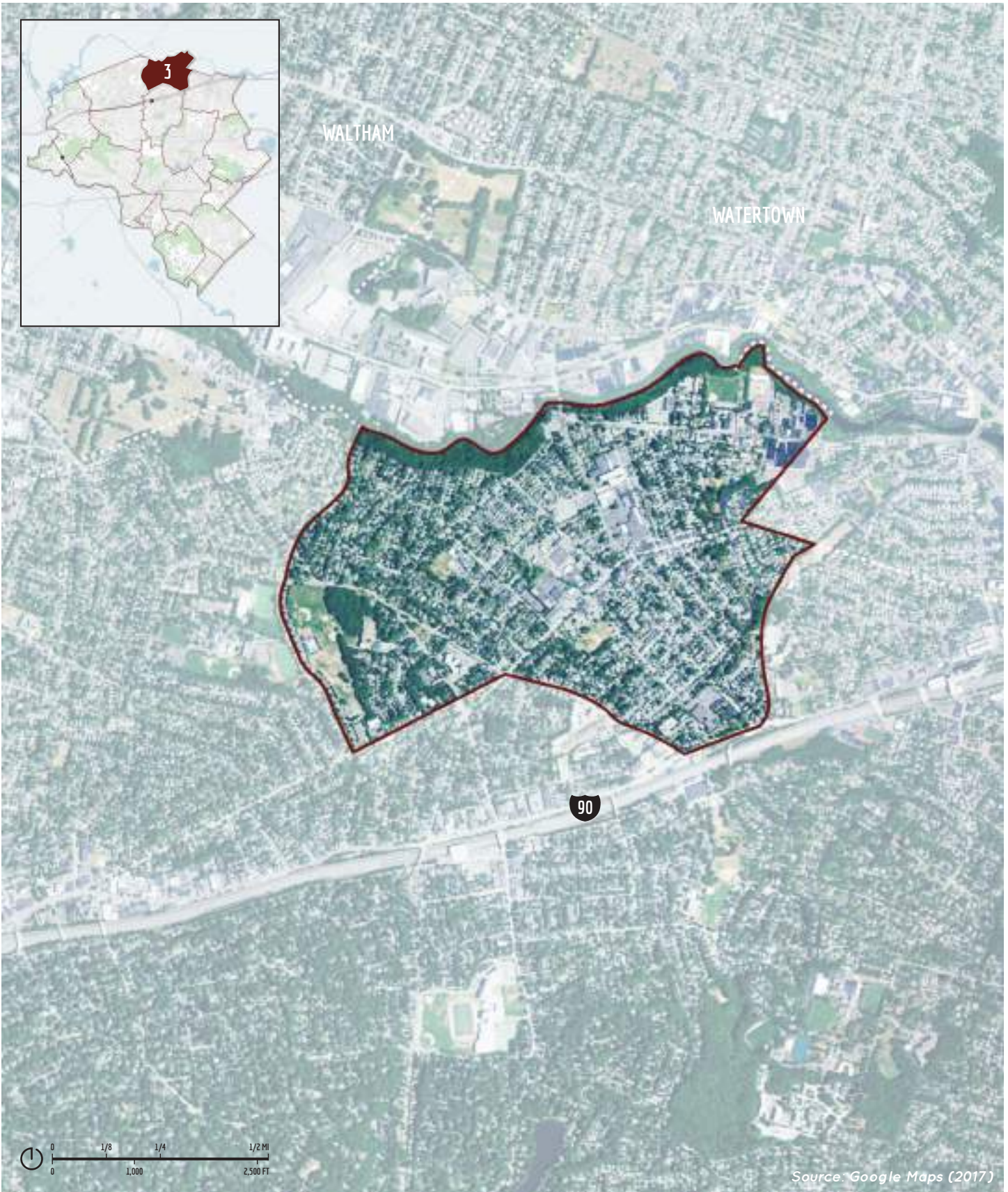


489 total acres

164 intersections per square mile

47% permeable surfaces

\$41k average tax revenue per acre



Aerial photograph of the Nonantum context-based area.

Context-Based Areas

3. Nonantum

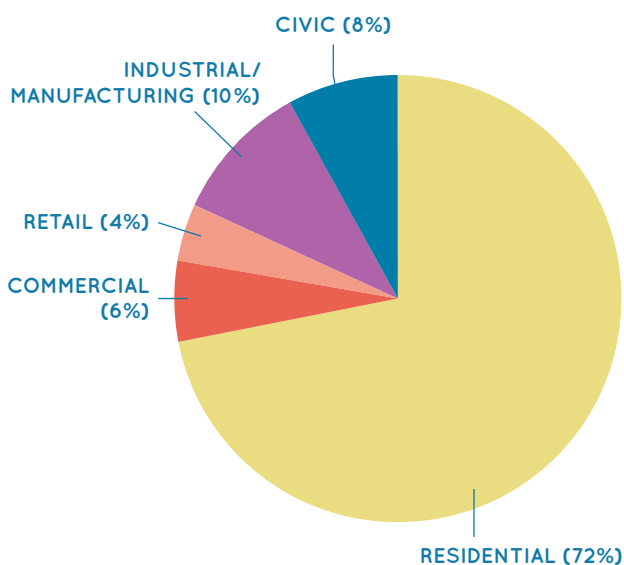
Development Form Metrics by Land Use

While 72% of Nonantum’s development area is residential, there is a significant quantity of development and land area that operates as commercial, retail, industrial/manufacturing, and civic uses. These include both historical facilities taking advantage of the neighborhood’s close proximity to the river, as well as modern office, retail, and

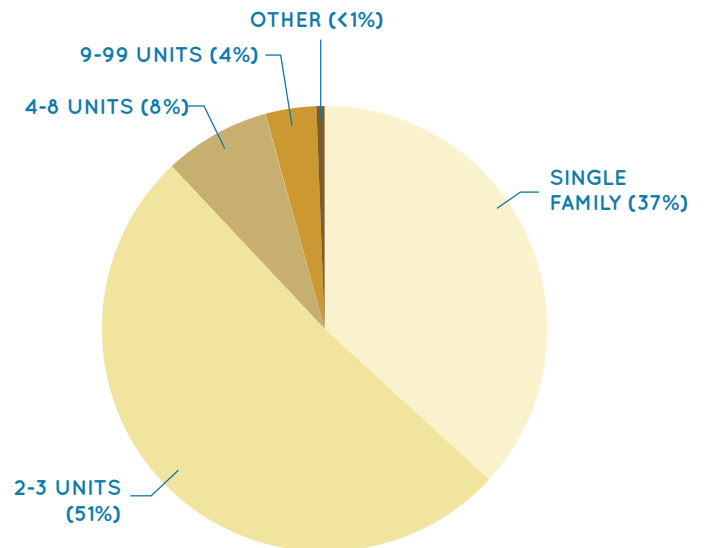
service operations taking advantage of the area’s routes in and out of the city. The residential mix in Nonantum is among the most diverse in the city, with the majority (by square footage) being 2-3 units, and nearly two-thirds being multifamily of one kind or another.

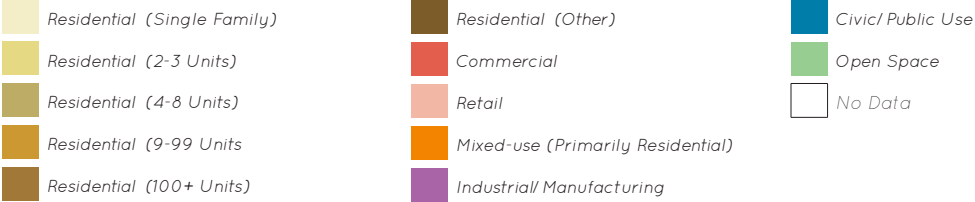
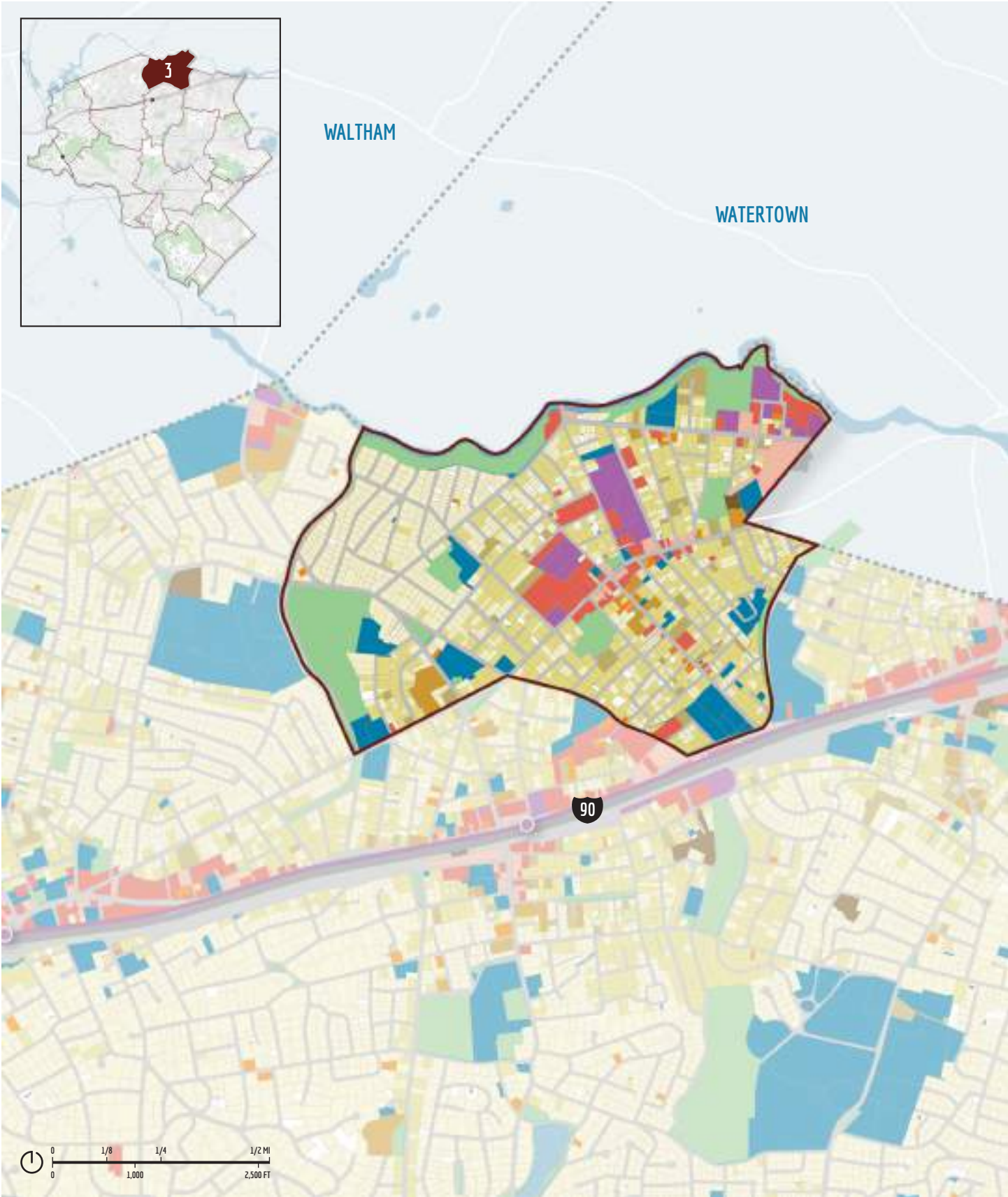
USE CATEGORY	PARCEL COUNT	BUILDING SQ. FOOTAGE (TOTAL)	PARCEL AREA (MED.)	BUILDING SQ. FOOTAGE (MED.)	SETBACK (MED.)	STORIES (MED.)
RESIDENTIAL	1,436	5,714,977 SF	6,573 SF	3,572 SF	18.2'	2.0
SINGLE FAMILY	689	2,147,983 SF	6,242 SF	2,958 SF	21.4'	2.0
2-3 FAMILY	635	2,985,983 SF	6,710 SF	4,456 SF	16.1'	2.0
4-8 UNITS	41	366,540 SF	8,398 SF	7,200 SF	16.4'	---
9-99 UNITS	9	195,014 SF	24,024 SF	20,019 SF	27.5'	---
100+ UNITS	0	0 SF	---	---	---	---
OTHER	1	34,284 SF	30,500 SF	34,284 SF	0'	3.0
COMMERCIAL	80	708,823 SF	8,375 SF	4,637 SF	5.3'	---
RETAIL	16	330,302 SF	8,951 SF	5,151 SF	3.7'	---
MIXED-USE	0	0	---	---	---	---
INDUST./MANUF.	14	762,569 SF	41,525 SF	28,832 SF	14.2'	---
CIVIC/INSTIT.	54	643,542 SF	24,009 SF	---	---	---

Total Development Square Footage by Land Use



Total Residential Development Square Footage by Building Type





Context-Based Areas

3. Nonantum

Development Form Metrics by Street Type

Nonantum contains each of the four primary street types detailed in this analysis, organized in a tight grid with a degree of connectivity and regularity that is uncommon in many other neighborhoods in Newton. The primary street traversing the area is Watertown Street, from which most of the neighborhood's retail, commercial, and industrial/manufacturing uses radiate out. Most of the density within

Nonantum is also concentrated along or in close proximity to this street. Other major roadways include Albermarle Road, California Street, Crafts Street, and Washington Street. Local Streets are typically narrow with development fronting onto the street with no or minimal front setbacks and small side setbacks between properties.

USE CATEGORY	ARTERIAL ROAD				MAJOR COLLECTOR STREET				MINOR COLLECTOR STREET				LOCAL STREET			
	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.
RESIDENTIAL	4,518	9,869	2.0	28.6'	3,928	7,200	2.0	20.3'	3,932	6,000	2.0	17.1'	3,424	6,311	2.0	17.4'
SINGLE FAMILY	3,732	10,157	2.0	31.0'	3,055	6,906	2.0	20.5'	3,010	5,305	2.0	17.2'	2,919	6,134	2.0	21.4'
2-3 UNITS	4,704	9,002	2.0	25.8'	4,821	7,495	2.0	21.2'	4,510	6,437	2.0	16.8'	4,356	6,569	2.0	15.1'
4-8 UNITS	6,565	15,095	---	19.5'	7,200	8,294	---	18.1'	19,805	10,136	---	17.1'	7,644	8,000	---	15.5'
9-99 UNITS	28,926	75,188	---	30.0'	16,150	16,548	---	10.0'	20,019	24,024	---	34.1'	11,957	11,300	---	12.6'
100+ UNITS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OTHER	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COMMERCIAL	---	---	---	---	5,040	9,192	---	17.9'	3,231	8,883	---	4.3'	962	7,838	---	1.8'
RETAIL	5,151	9,669	---	0.9'	5,567	8,595	---	7.7'	---	---	---	---	1,260	2,805	---	0'
MIXED-USE	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
INDUST./MANUF.	---	---	---	---	18,700	22,281	---	9.1'	30,938	86,783	---	11.6'	51,648	116,588	---	18.5'
CIVIC/INSTIT.	7,894	38,027	---	6.9'	---	101,350	---	0'	3,304	12,230	---	---	---	9,153	---	4.7'

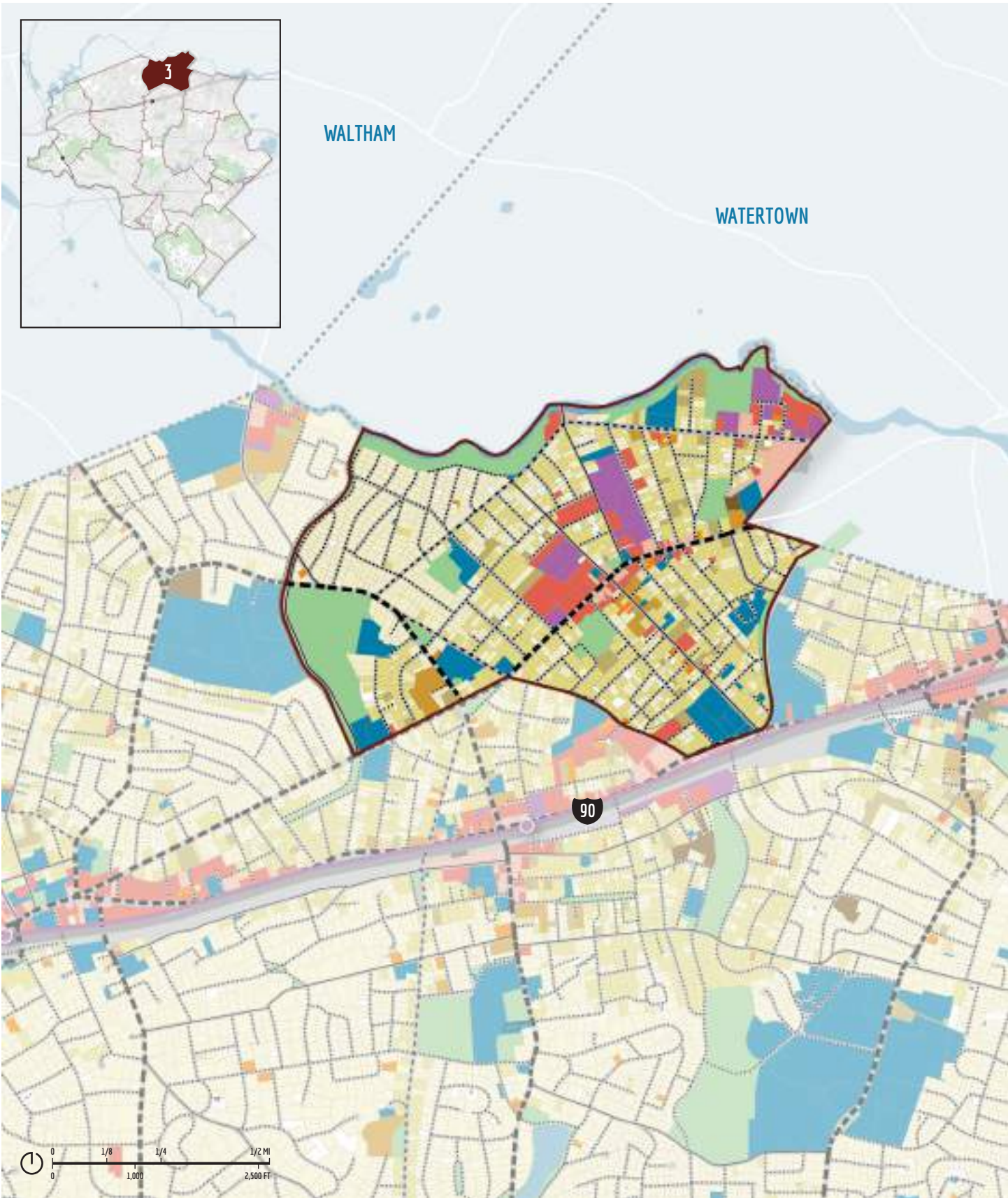
*GSF and parcel area median values measured in square feet.



Watertown Street in Nonantum (2016)



Nonantum Square (early 1900's)



- Residential (Single Family)
- Residential (2-3 Units)
- Residential (4-8 Units)
- Residential (9-99 Units)
- Residential (100+ Units)

- Residential (Other)
- Commercial
- Retail
- Mixed-use (Primarily Residential)
- Industrial/ Manufacturing

- Civic/ Public Use
- Open Space
- No Data

- Street type**
- Arterial
 - Major Collector
 - Minor Collector
 - Local

Context-Based Areas

3. Nonantum

Character Patterns & Pattern Subsets

Nonantum consists predominantly of the neighborhood character pattern, by land area, with each of the other types represented to a lesser extent. This CBA is distinct from most of Newton in terms of its composition. For the most part, the neighborhood character pattern comprises multifamily properties in the form of medium and large-

compact traditional development. The small village center along Watertown Street contains many densely packed shops and general service establishments, and in some cases offer residential units or office on upper floors. The commercial clusters in Nonantum all take the form of legacy industrial clusters, with many housing modern uses.

Village Center

The Nonantum village center is diverse in its offerings and dense in form. In some areas, buildings front directly onto the sidewalk without setback, while in other cases there is a small supply of parking between the street and buildings. The shops here are mainly local establishments offering ethnic goods, prepared food, and service-oriented uses. The buildings here are taller than is the case across other village centers in Newton, with many buildings along Watertown Street offering residential and commercial space two or three stories above retail shops.



Commercial Cluster

Nonantum is known for its industrial and manufacturing history and development forms. Several areas just outside the village center and along the river were historically home to industrial uses, and in some cases, these uses continue to operate. In others, these historical uses have been supplemented or replaced with modern auto-service and other industrial uses.

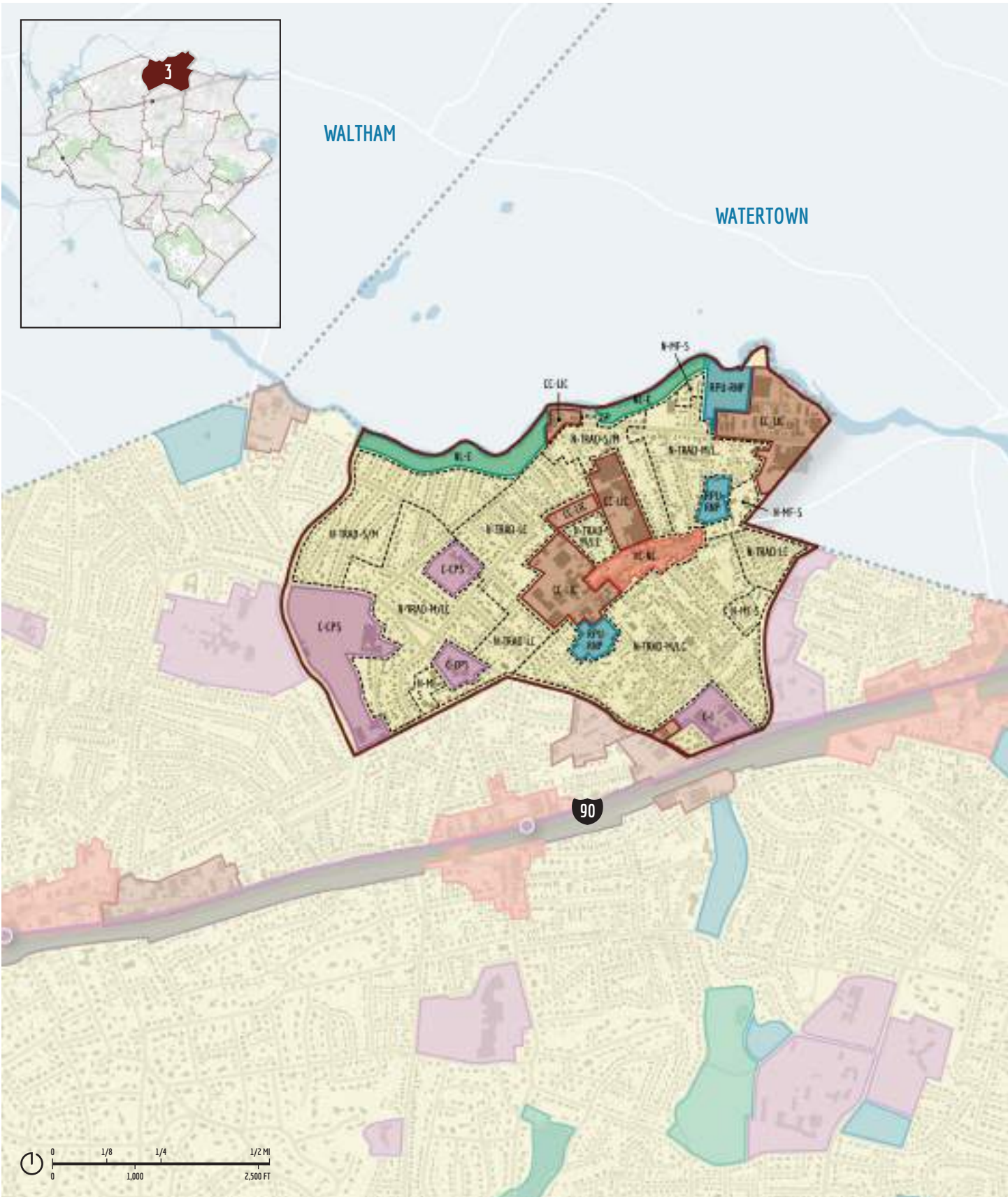
Campus

Nonantum contains several campus patterns, including the F.A. Day Middle School and associated Albermarle recreation area to the west, and three other smaller clusters of educational buildings and associated grounds.

Neighborhood

The neighborhoods in Nonantum are among the most dense in all of Newton. In many cases there are minimal setbacks for compact residential properties, and along most of the streets in the area's core, residential properties are set close together on small lots. The predominant neighborhood patterns are traditional medium and large-compact, with smaller multifamily developments scattered around and some small traditional development closer to West Newton.





- Neighborhood
- Village Center
- Commercial Cluster
- Campus
- Recreation & Public Use
- Natural/Landscape

Context-Based Areas

4. Newton Lower Falls

Area Overview

The Newton Lower Falls CBA is among the smallest geographically to be analyzed in this pattern book. The area is naturally bounded on three sides by the Charles River and to the east by I-95. Given the presence of the park system along the Charles River and the open space associated with the highway, development area is limited within this CBA.

Despite these physical constraints, development within Newton Lower Falls largely reflects the overall character of the city at large, with an intersection density of 107 intersections per square mile (just a handful shy of the city average), and a high permeable surface percentage of 73%.

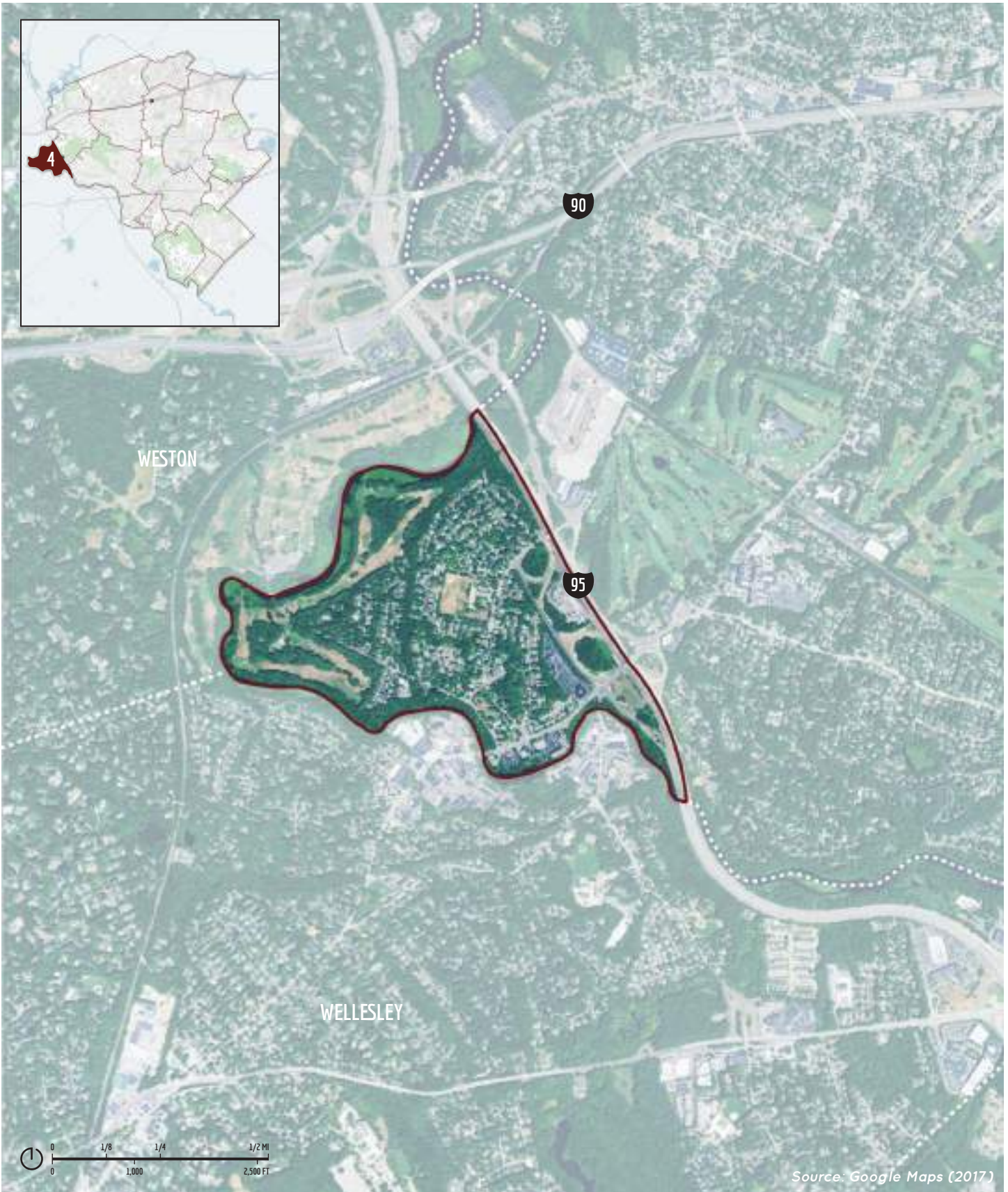
278 total acres

107 intersections per square mile

73% permeable surfaces

\$41k average tax revenue per acre





Aerial photograph of the Lower Falls context-based area.

Context-Based Areas

4. Newton Lower Falls

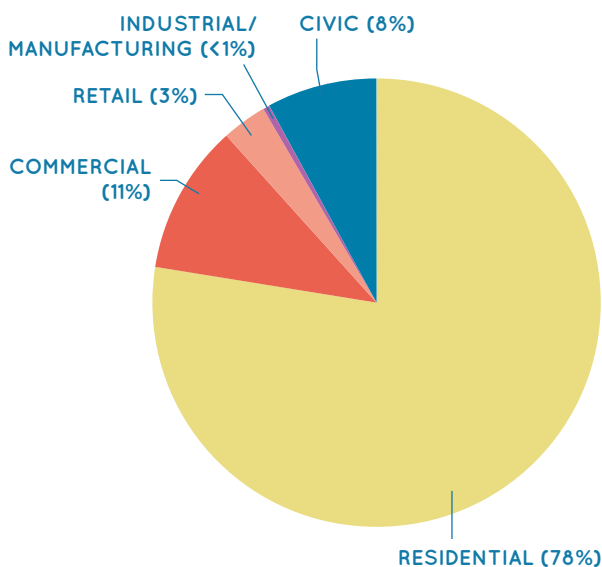
Development Form Metrics by Land Use

Newton Lower Falls is fully built-out with the exception of the conservation parkland along the Charles River and dedicated open space associated with I-95. The area largely reflects the rest of Newton with its residential predominance, but also contains a small village center, commercial areas, and a community center. The residential

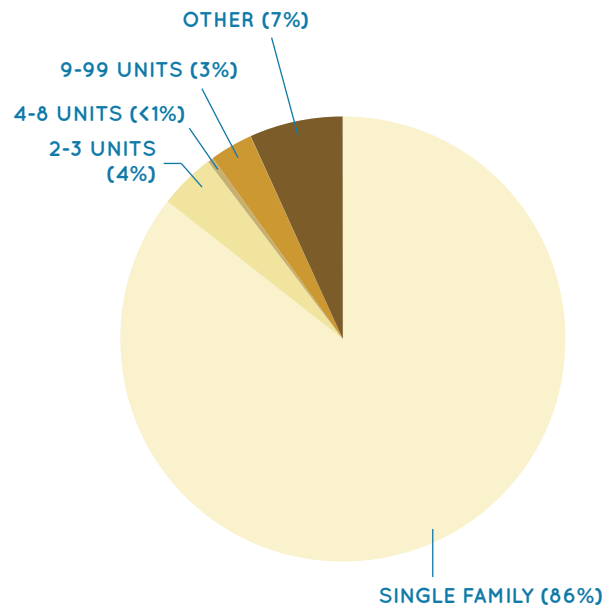
product mix is dominated by single family units, with 86% of the total residential square footage being classified as such. The remaining 14% consists primarily of attached single family products, and small-scale multifamily projects.

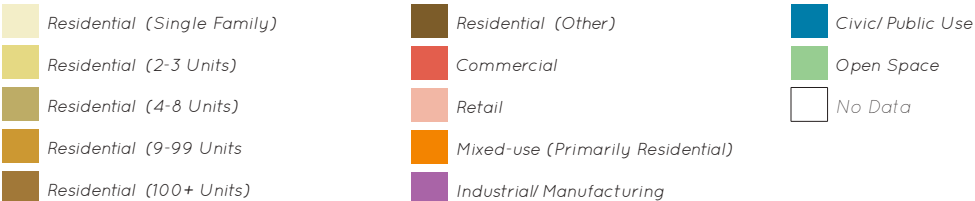
USE CATEGORY	PARCEL COUNT	BUILDING SQ. FOOTAGE (TOTAL)	PARCEL AREA (MED.)	BUILDING SQ. FOOTAGE (MED.)	SETBACK (MED.)	STORIES (MED.)
RESIDENTIAL	347	1,388,065 SF	10,000 SF	3,355 SF	28.6'	2.0
SINGLE FAMILY	319	1,167,072 SF	10,000 SF	3,344 SF	28.8'	2.0
2-3 UNITS	13	73,629 SF	12,309 SF	4,954 SF	24.5'	2.0
4-8 UNITS	0	0 SF	---	---	---	---
9-99 UNITS	2	40,835 SF	39,144 SF	20,418 SF	37.8'	---
100+ UNITS	0	0 SF	---	---	---	---
OTHER	1	92,654 SF	73,589 SF	92,654 SF	5.2'	---
COMMERCIAL	9	190,396 SF	43,695 SF	8,222 SF	12.0'	---
RETAIL	3	49,395 SF	10,015 SF	13,320 SF	3.8'	---
MIXED-USE	0	0 SF	---	---	---	---
INDUST./MANUF.	0	0 SF	---	---	---	---
CIVIC/INSTIT.	28	147,184 SF	12,354 SF	---	---	---

Total Development Square Footage by Land Use



Total Residential Development Square Footage by Building Type





Context-Based Areas

4. Newton Lower Falls

Development Form Metrics by Street Type

Newton Lower Falls is one of the most poorly connected areas of the city with only six roads in and out of the CBA and only three connecting it directly to the rest of Newton. The primary arterial to and from Newton Lower Falls is Washington Street to the south, though Grove Street serves as a primary connector as well. The village center to the south of the CBA is located on both sides of Washington

Street, while several office/commercial buildings are located in close proximity to the I-95 on-ramps and exits along Quinobequin Road to the east. The CBA's residential properties are all concentrated along local roads with the exception of the units fronting Grove Street and the multifamily properties within and adjacent to the village center on Washington Street.

USE CATEGORY	ARTERIAL ROAD				MAJOR COLLECTOR STREET				MINOR COLLECTOR STREET				LOCAL STREET			
	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.
RESIDENTIAL	15,229	28,277	---	15.3'	3,365	9,885	2.0	26.1'	4,086	11,900	2.0	33.6'	3,319	9,914	2.0	28.9'
SINGLE FAMILY	---	---	---	---	3,365	10,000	2.0	26.6'	4,044	11,900	2.0	32.4'	3,319	9,914	2.0	29.0'
2-3 UNITS	---	---	---	---	4,954	10,706	2.0	24.0'	5,108	12,309	2.0	37.1'	4,690	15,630	1.5	22.0'
4-8 UNITS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9-99 UNITS	15,229	23,277	---	15.3'	---	---	---	---	25,606	55,010	---	60.4'	---	---	---	---
100+ UNITS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OTHER	92,654	75,589	---	5.2'	---	---	---	---	---	---	---	---	---	---	---	---
COMMERCIAL	6,260	13,161	---	6.5'	---	---	---	---	---	---	---	---	23,788	106,654	---	174.2'
RETAIL	13,320	10,015	---	3.8'	---	---	---	---	---	---	---	---	---	---	---	---
MIXED-USE	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
INDUST./MANUF.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CIVIC/INSTIT.	---	10,041	---	---	11,002	62,200	---	---	---	11,300	---	---	---	4,833	---	---

*GSF and parcel area median values measured in square feet.



Along the Charles River in Lower Falls (2016)



Newton Lower Falls (pre-1868)



- Residential (Single Family)
- Residential (2-3 Units)
- Residential (4-8 Units)
- Residential (9-99 Units)
- Residential (100+ Units)

- Residential (Other)
- Commercial
- Retail
- Mixed-use (Primarily Residential)
- Industrial/ Manufacturing

- Civic/ Public Use
- Open Space
- No Data

- Street type**
- Arterial
 - Major Collector
 - Minor Collector
 - Local

Context-Based Areas

4. Newton Lower Falls

Character Patterns & Pattern Subsets

Newton Lower Falls primarily consists of the neighborhood and natural/landscape character patterns, though each of the other types is represented once within the CBA. The large landscape areas along the river are parkland protected from development, and provide informal recreational uses to residents of the area. A small convenience village center

to the south and a few office/commercial buildings along the highway comprise the totality of this area's commercial square footage, and religious, cemetery, and community center and preschool uses round out the recreation and public use and campus character patterns.

Village Center

The Newton Lower Falls village center comprises primarily large buildings separated by associated parking lots. The buildings contain a handful of retail shops, commercial offices, and multifamily residential buildings along the river.

Commercial Cluster

The small commercial cluster in Newton Lower Falls consists of three moderately-sized office buildings situated alongside I-95 and separated by a large parking lot.

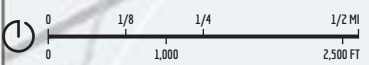
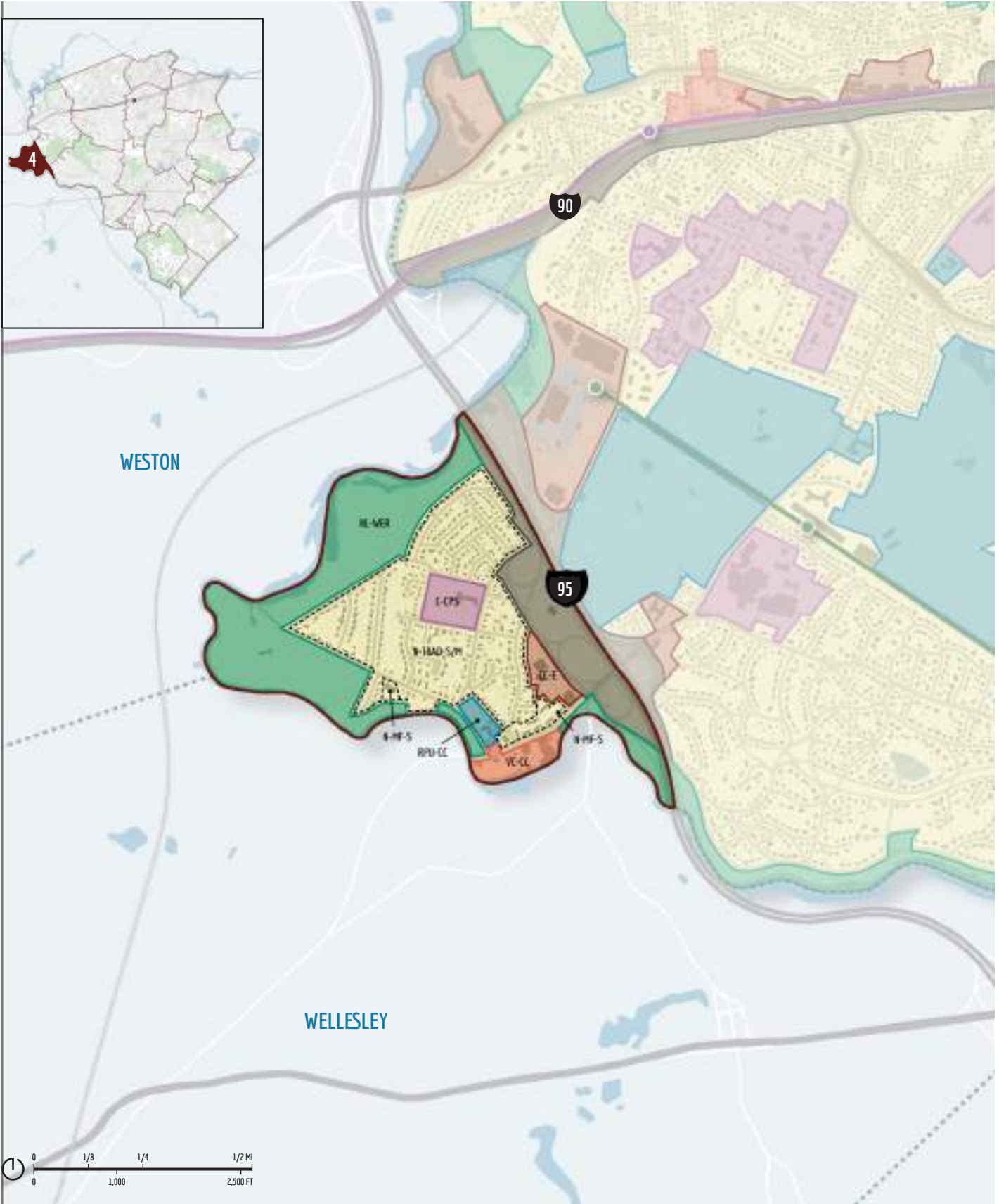
Campus

The Lower Falls Community Center and Preschool and associated fields constitute the only campus character pattern in this CBA.

Neighborhood

The neighborhood character pattern in Newton Lower Falls is consistently small and medium traditional throughout the area with the exception of small multifamily developments to the south.





- Neighborhood
- Village Center
- Commercial Cluster
- Campus
- Recreation & Public Use
- Natural/Landscape

Context-Based Areas

5. West Newton Hill

Area Overview

The West Newton Hill CBA is a distinctly residential area in north-central Newton. The area is bounded to the north by I-90, to the east by Newtonville, to the south by the Brae Burn Country Club golf course, and to the west by Auburndale. The area is well-connected to the rest of Newton with several major thoroughfares crossing through or outside the CBA and several bridges crossing I-90, connecting West Newton Hill to the northern quarter of the city. The area is marginally denser than the city average with respect to connectivity, with a rate of 129 intersection per square mile—or 17 more intersection per square mile than the city average. The area has little publicly-accessible open space, resulting in a low percentage of permeable open space—56%.

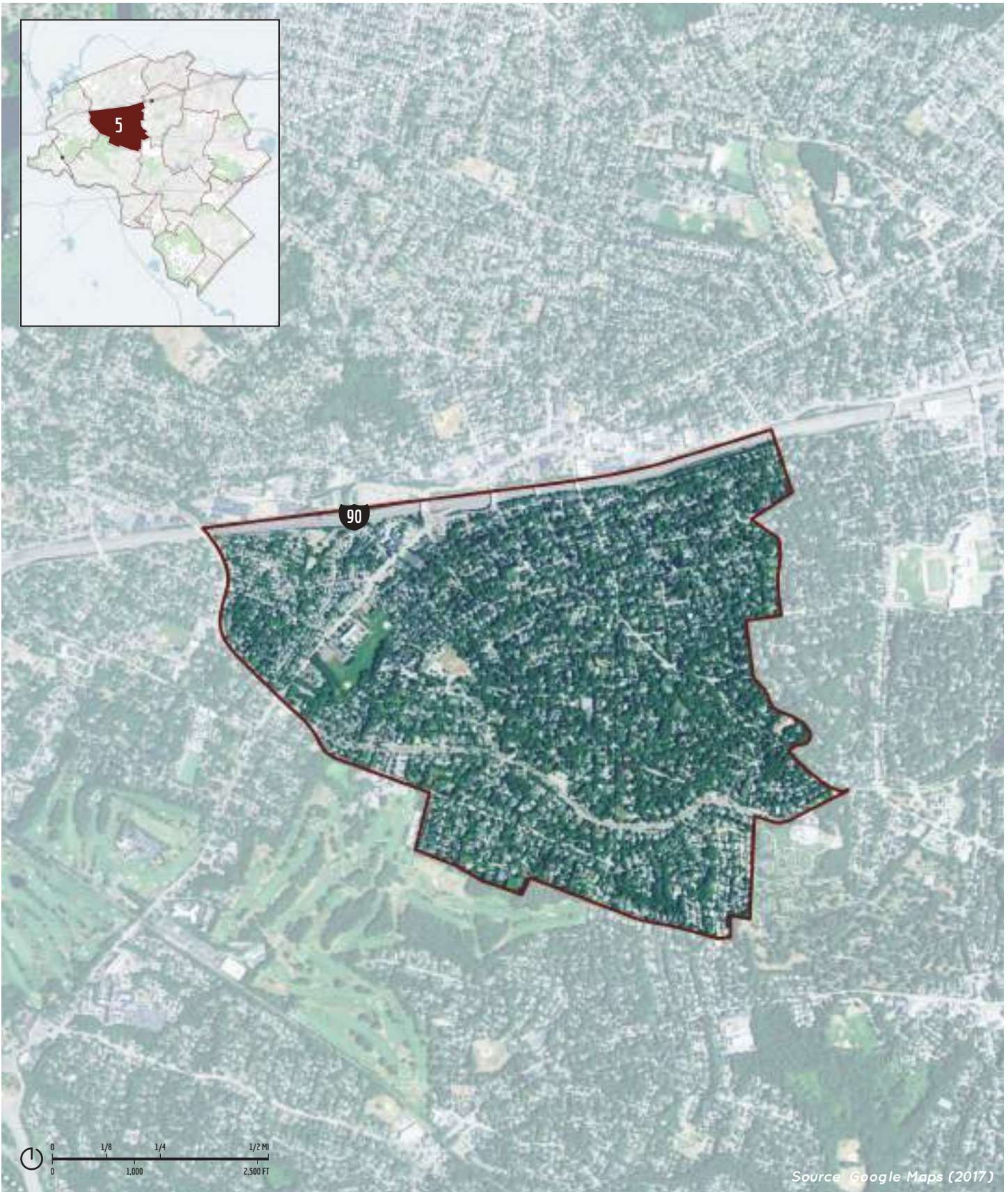
668 total acres

129 intersections per square mile

56% permeable surfaces

\$44k average tax revenue per acre





Aerial photograph of the West Newton Hill context-based area.

Context-Based Areas

5. West Newton Hill

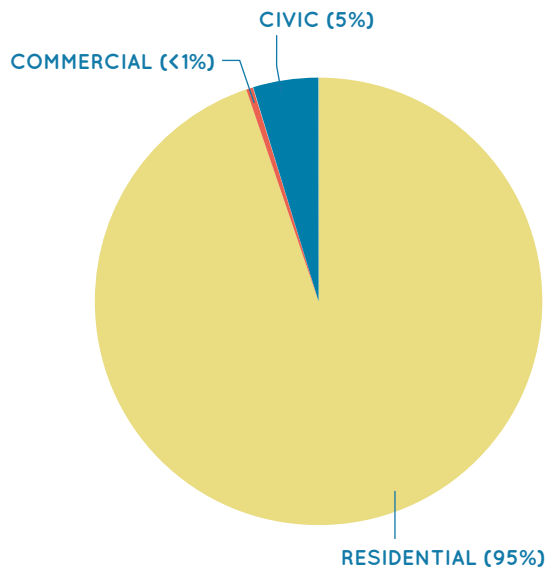
Development Form Metrics by Land Use

West Newton Hill is overwhelmingly residential in land use and development square footage. The area has no village center or commercial area, and a full 95% of its development square footage is residential. While there is some diversity in housing, the vast majority of the units and residential square footage is single family (88%). The remainder of the

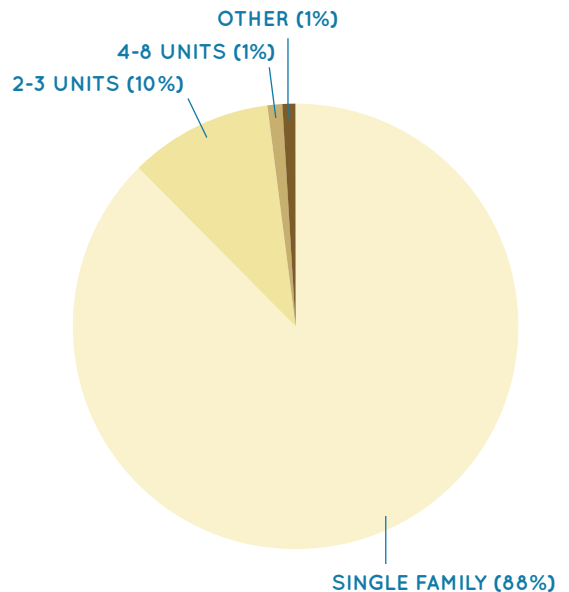
units and residential square footage take the form of small-scale multifamily buildings, ranging in size from two to eight units, and are largely concentrated in the north, along I-90, and in a small cluster to the south of Commonwealth Avenue. The majority of the uses that are not residential are civic uses scattered throughout the area.

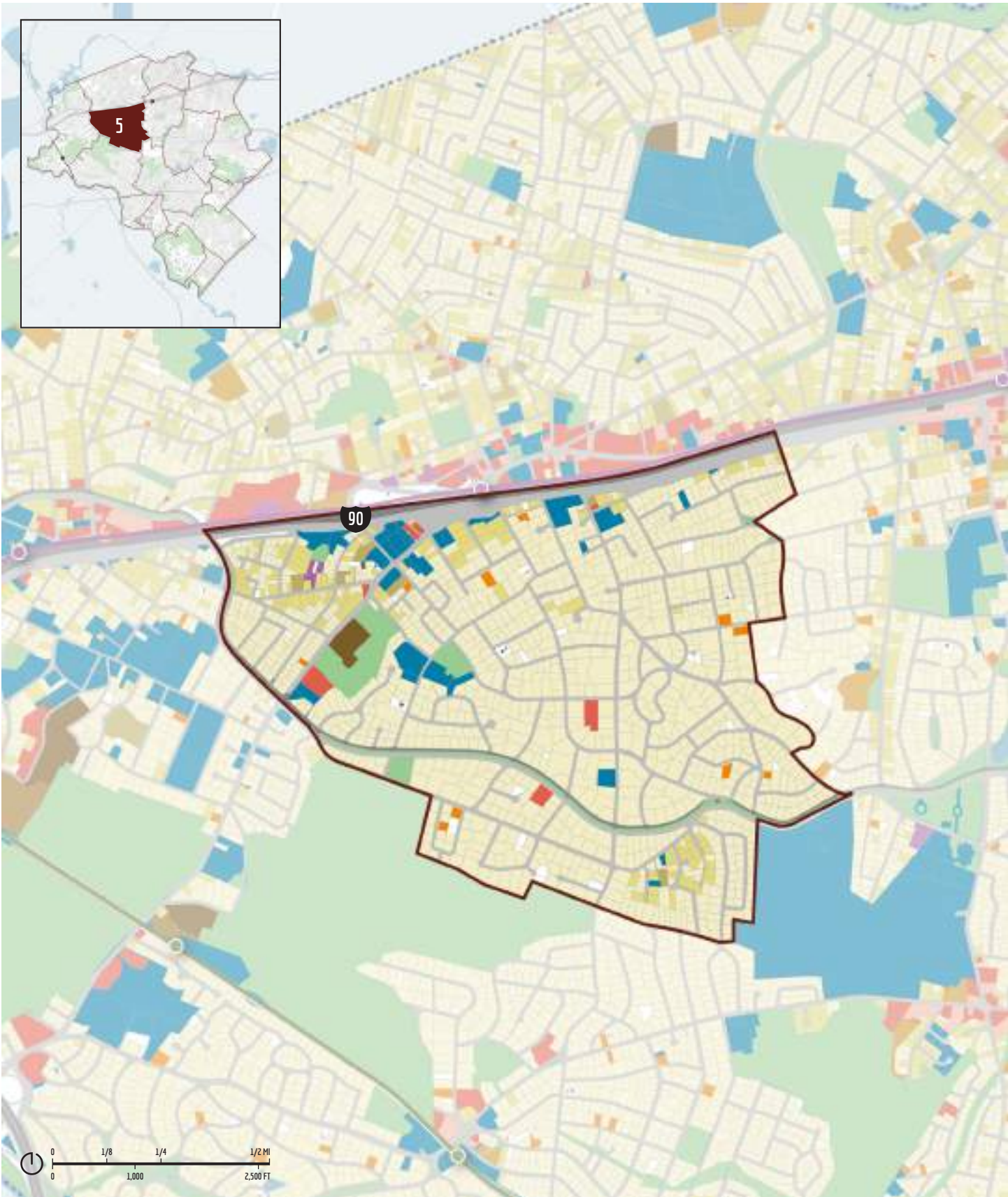
USE CATEGORY	PARCEL COUNT	BUILDING SQ. FOOTAGE (TOTAL)	PARCEL AREA (MED.)	BUILDING SQ. FOOTAGE (MED.)	SETBACK (MED.)	STORIES (MED.)
RESIDENTIAL	1,338	7,651,979 SF	12,755 SF	5,250 SF	31.7'	2.0
SINGLE FAMILY	1,135	6,653,132 SF	13,946 SF	5,379 SF	33.0'	2.0
2-3 UNITS	144	787,082 SF	8,456 SF	4,757 SF	26.2'	2.0
4-8 UNITS	5	58,159 SF	29,000 SF	10,860 SF	31.4'	---
9-99 UNITS	0	0 SF	---	---	---	---
100+ UNITS	0	0 SF	---	---	---	---
OTHER	1	71,908 SF	162,479 SF	71,908 SF	107.5'	---
COMMERCIAL	7	59,601 SF	14,830 SF	4,578 SF	20.8'	---
RETAIL	0	0 SF	---	---	---	---
MIXED-USE	3	0 SF	---	---	---	---
INDUST./MANUF.	0	0 SF	11,570 SF	---	---	---
CIVIC/INSTIT.	33	371,791 SF	20,500 SF	3,194 SF	12.8'	---

Total Development Square Footage by Land Use



Total Residential Development Square Footage by Building Type





- Residential (Single Family)
- Residential (2-3 Units)
- Residential (4-8 Units)
- Residential (9-99 Units)
- Residential (100+ Units)

- Residential (Other)
- Commercial
- Retail
- Mixed-use (Primarily Residential)
- Industrial/ Manufacturing

- Civic/ Public Use
- Open Space
- No Data

Context-Based Areas

5. West Newton Hill

Development Form Metrics by Street Type

West Newton Hill is well-connected to the larger Newton city fabric. In addition to three major arterials running through the area (Commonwealth Avenue, Washington Street, and Chestnut Street), the collector and local street grid is of moderate density and nearly fully connected. Additionally, several vehicular and pedestrian bridges connect West Newton Hill across I-90 to the West Newton

village center and the neighborhoods to the north. Most of the denser residential products within this area, the few commercial uses located here, and the plurality of civic uses are concentrated along Washington Street to the northwest of the area. This area is also served by the West Newton Commuter Rail stop to the north of the CBA.

USE CATEGORY	ARTERIAL ROAD				MAJOR COLLECTOR STREET				MINOR COLLECTOR STREET				LOCAL STREET			
	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.
RESIDENTIAL	5,296	14,378	2.0	39.8'	---	---	---	---	5,531	14,168	2.0	31.8'	5,218	12,575	2.0	31.0'
SINGLE FAMILY	5,714	15,706	2.0	42.3'	---	---	---	---	5,757	15,417	2.0	37.1	5,304	12,935	2.0	31.9'
2-3 UNITS	4,521	7,536	2.0	27.8'	---	---	---	---	4,474	8,860	2.0	24.7	5,030	8,324	2.0	25.9'
4-8 UNITS	7,204	10,420	---	12.3'	---	---	---	---	13,460	25,091	---	32.3	12,018	32,011	---	33.7'
9-99 UNITS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
100+ UNITS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OTHER	71,908	162,479	---	107.5'	---	---	---	---	---	---	---	---	---	---	---	---
COMMERCIAL	---	---	---	---	---	---	---	---	---	---	---	---	12,287	58,584	---	159.5'
RETAIL	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MIXED-USE	---	---	---	---	---	---	---	---	---	17,443	---	---	---	---	---	---
INDUST./MANUF.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CIVIC/INSTIT.	7,708	36,357	---	20.1'	---	---	---	---	2,132	5,747	1.0	11.3'	2,931	17,558	---	6.4'

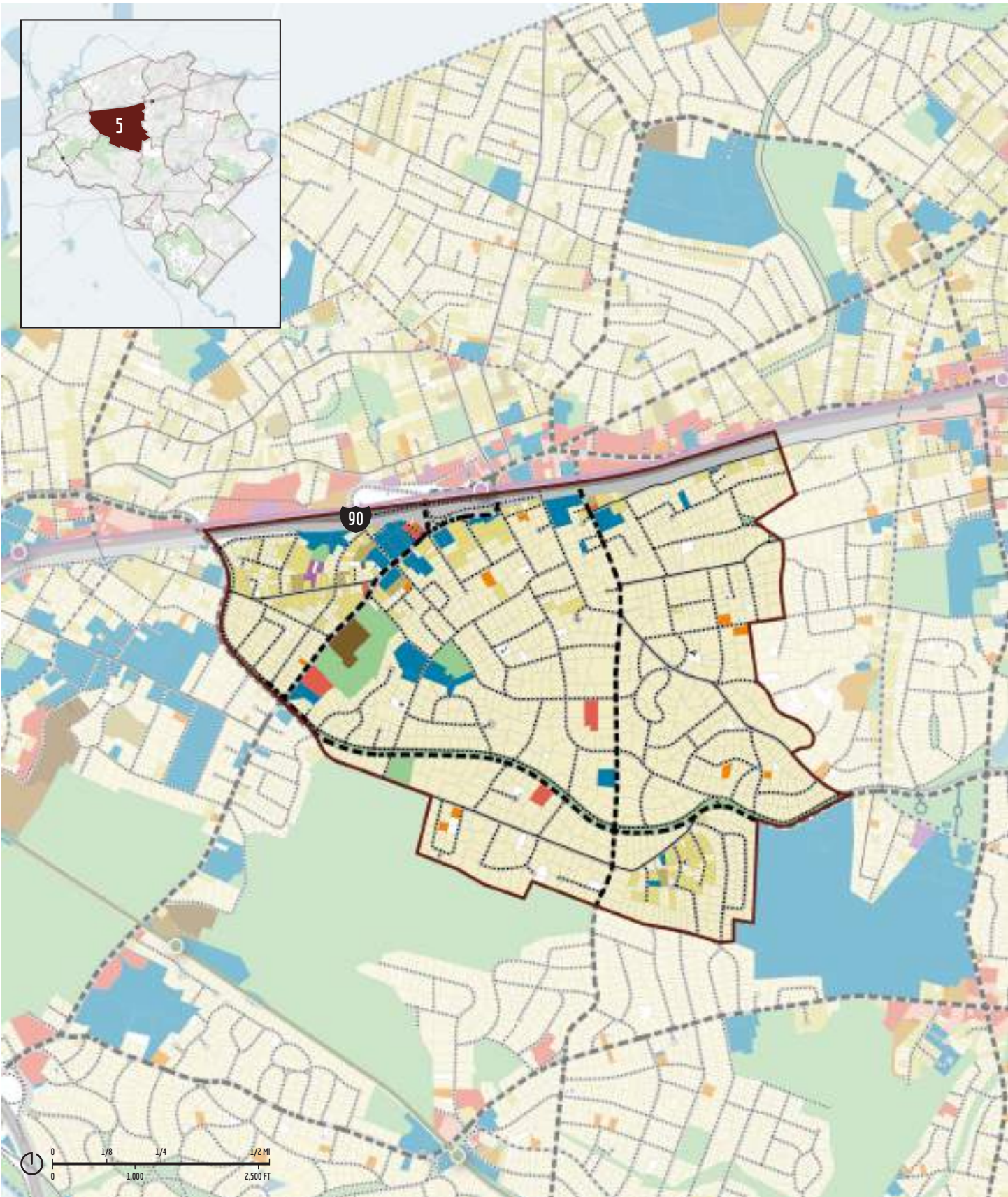
*GSF and parcel area median values measured in square feet.



Houses in West Newton Hill (2016)



Chestnut St. at Austin St. (1902)



- Residential (Single Family)
- Residential (2-3 Units)
- Residential (4-8 Units)
- Residential (9-99 Units)
- Residential (100+ Units)

- Residential (Other)
- Commercial
- Retail
- Mixed-use (Primarily Residential)
- Industrial/ Manufacturing

- Civic/ Public Use
- Open Space
- No Data

- Street type**
- Arterial
 - Major Collector
 - Minor Collector
 - Local

Context-Based Areas

5. West Newton Hill

Character Patterns & Pattern Subsets

West Newton Hill is almost entirely residential in development, with over 95% of the total land area being classified within the neighborhood character pattern. For the most part, this consists of larger homes on large lots, though there are smatterings of small- and medium-sized residential developments located around the edges of the

CBA. While the area has no village centers, commercial clusters, or significant natural/landscape character patterns, there are several campus, recreation, and public use types located in the west, along Washington Street.

Village Center

While there is no village center located within the West Newton Hill CBA, the area is located directly south of (and across the highway from) the West Newton village center, which is classified as a town center pattern subset. West Newton is one of the larger, more regionally significant village centers in terms of scale of service.

Campus

Campus character patterns within West Newton Hill include a public school and a former public school that has been converted to apartment-style housing located in the west of the CBA.

Neighborhood

West Newton Hill contains some of the largest single family residential properties in Newton, both in terms of development square footage and parcel size. In addition to a large area in the center of the CBA designated as the manor pattern subset, several areas in the north and south consist of large and medium-large single family properties. These older, stately homes were constructed around the turn of the last century, and most new construction in the area mimics or exceeds the scale of these original homes. In the westernmost part of the CBA, several areas consist of properties with smaller overall development areas and smaller lots. These properties are concentrated along and in the vicinity of Washington Street.



Context-Based Areas

6. Newtonville

Area Overview

The Newtonville CBA is located in north-central Newton, straddling I-90. The area is situated between the Nonantum CBA to the north, Newton Corner and Newton Center to the east and south, and West Newton to the west. It consists of a diversity of street network types, including a regularized, orthogonal grid in the north, throughout and around the village center, and a more suburban and curvy network in the south as the land use becomes predominantly residential.

Overall, the area is among the most compact in Newton as measured by intersection density, with an average of 156 intersections per square mile, as compared to the city average of 112. Only 51% of surfaces in the CBA are permeable, and thus the area is also among the most dense in terms of development.

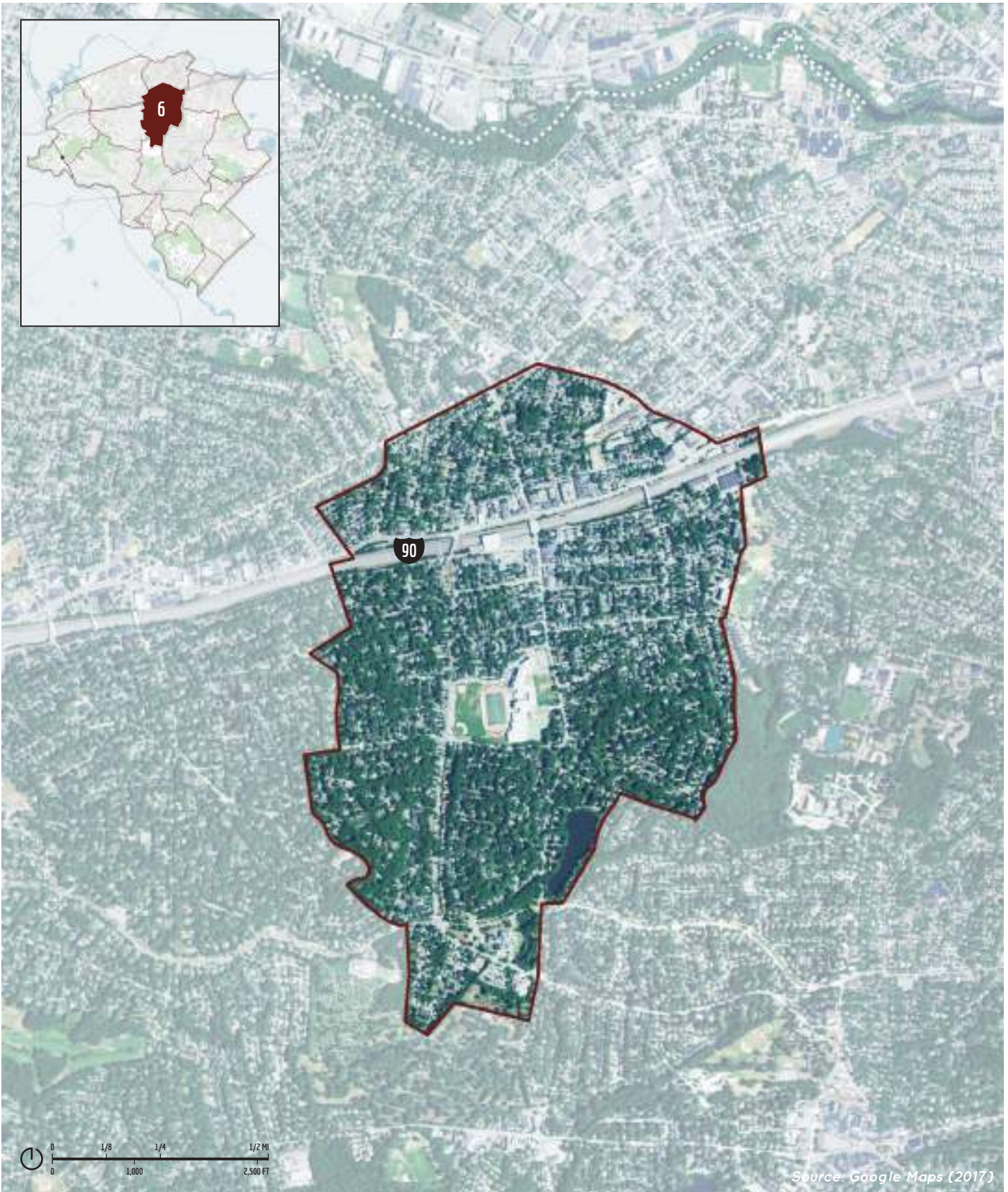
677 total acres

156 intersections per square mile

51% permeable surfaces

\$42k average tax revenue per acre





Aerial photograph of the Newtonville context-based area.

Context-Based Areas

6. Newtonville

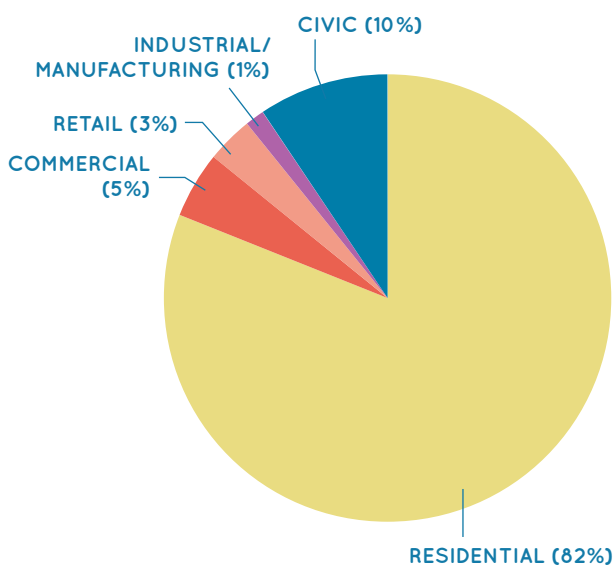
Development Form Metrics by Land Use

While the Newtonville CBA consists mainly of residential development (82% of the area's total development), there are several distinct compositions located throughout the area. The southern half of the CBA represents almost all of the area's single family housing, which constitutes 57% of the developed land area of the Newtonville CBA. the

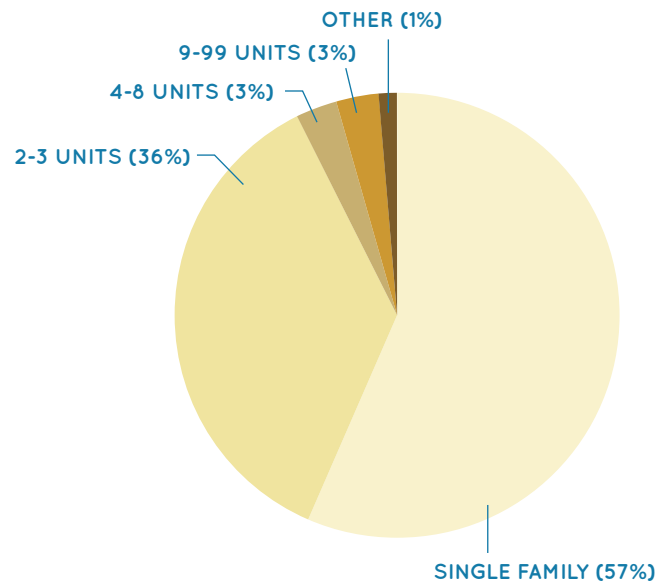
northern half, located just outside the Newtonville village center and straddling I-90, is almost entirely commercial, retail, and multifamily units. Most of these multifamily units are small in scale, and 39% of all residential properties consist of two to eight units.

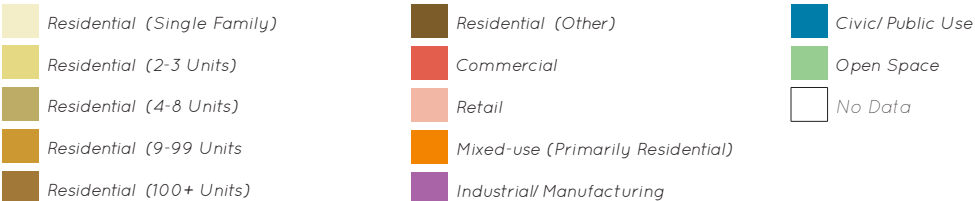
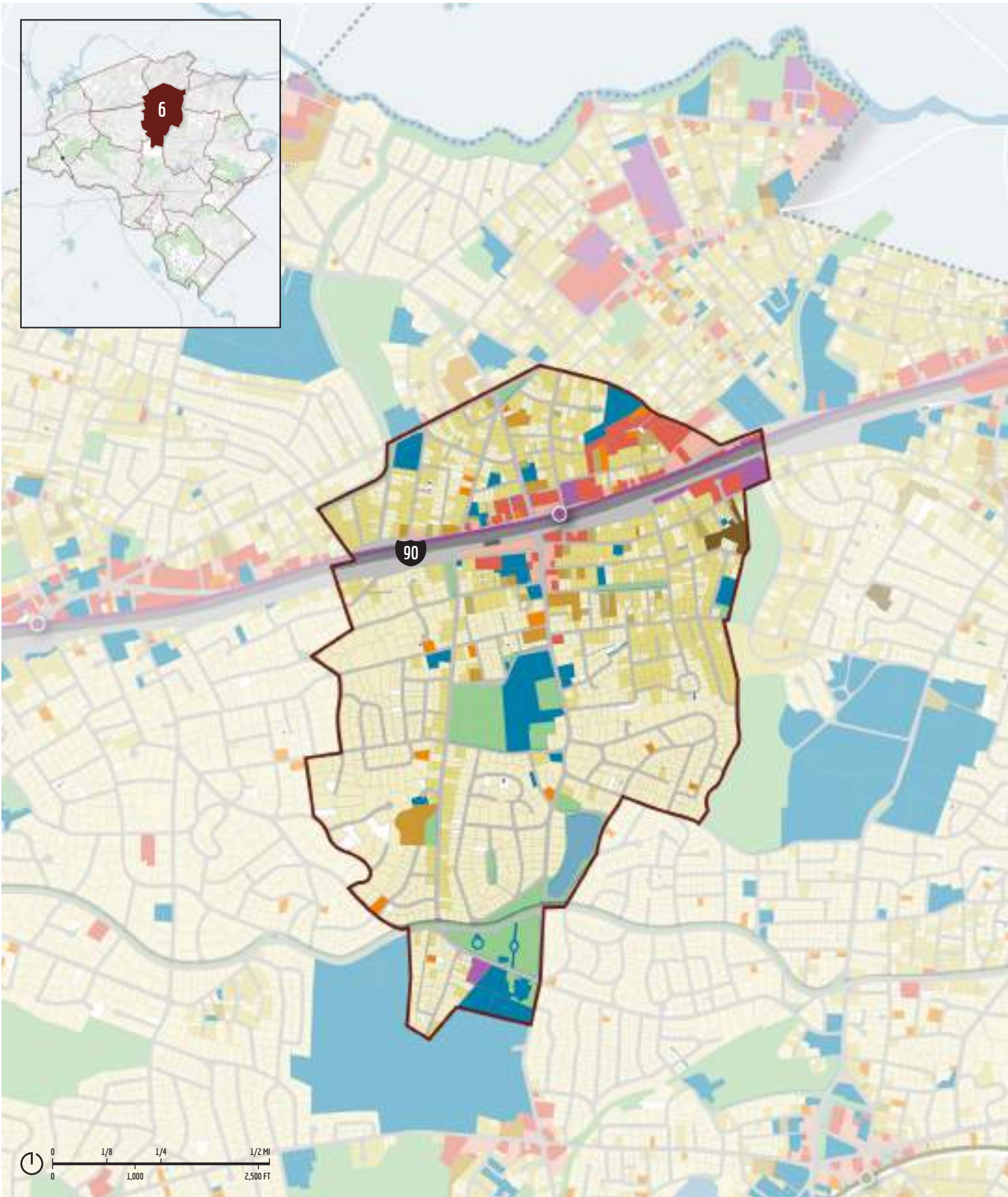
USE CATEGORY	PARCEL COUNT	BUILDING SQ. FOOTAGE (TOTAL)	PARCEL AREA (MED.)	BUILDING SQ. FOOTAGE (MED.)	SETBACK (MED.)	STORIES (MED.)
RESIDENTIAL	1,645	8,117,566 SF	8,912 SF	4,521 SF	25.4'	2.0
SINGLE FAMILY	986	4,588,092 SF	9,742 SF	4,262 SF	27.8'	2.0
2-3 UNITS	546	2,857,106 SF	8,168 SF	4,944 SF	22.5'	2.0
4-8 UNITS	20	207,069 SF	10,374 SF	7,423 SF	20.4'	---
9-99 UNITS	14	250,240 SF	19,413 SF	14,989 SF	19.1'	---
100+ UNITS	0	0 SF	---	---	---	---
OTHER	1	107,650 SF	143,513 SF	107,650 SF	146.0'	---
COMMERCIAL	64	478,940 SF	8,857 SF	3,054 SF	0.3'	---
RETAIL	24	336,666 SF	7,938 SF	8,831 SF	1.9'	---
MIXED-USE	0	0 SF	---	---	---	---
INDUST./MANUF.	6	139,399 SF	40,306 SF	8,008 SF	12.1'	---
CIVIC/INSTIT.	41	942,295 SF	27,712 SF	682 SF	---	---

Total Development Square Footage by Land Use



Total Residential Development Square Footage by Building Type





Context-Based Areas

6. Newtonville

Development Form Metrics by Street Type

Newtonville is served by some of the most highly-trafficked streets in all of Newton. Watertown Street to the north, Washington Street just north of I-90, and Commonwealth Avenue to the south connect this area and the rest of Newton to many of the city's neighboring cities and towns. Newtonville is served by one of Newton's three major north-

south arterials—Walnut Street—connecting the area north of I-90 and south of Route 9. The network of collector and local streets is tightly knit in the northern part of the CBA, where older settlements took shape, and far looser and more suburban in character in the south.

USE CATEGORY	ARTERIAL ROAD				MAJOR COLLECTOR STREET				29.9' MINOR COLLECTOR STREET				LOCAL STREET			
	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.
RESIDENTIAL	5,675	10,965	2.0	25.9'	4,766	8,623	2.0	25.7'	4,576	9,701	2.0	25.8'	4,395	8,731	2.0	25.2'
SINGLE FAMILY	5,652	12,983	2.0	36.6'	3,506	8,265	2.0	25.8'	4,125	9,886	2.0	25.5'	4,226	9,650	2.0	28.0'
2-3 UNITS	5,440	8,639	2.0	18.1'	5,400	9,120	2.0	25.7'	4,951	8,606	2.0	27.7'	4,836	7,819	2.0	22.0'
4-8 UNITS	7,504	11,507	---	26.5'	7,040	9,460	---	22.4'	7,342	12,121	---	19.9'	8,312	8,678	---	18.9'
9-99 UNITS	24,620	31,821	---	23.6'	34,852	168,302	---	---	---	3,350	---	---	11,099	15,490	---	19.1'
100+ UNITS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OTHER	---	---	---	---	---	---	---	---	107,650	143,513	---	146.0'	---	---	---	---
COMMERCIAL	---	---	---	---	---	16,617	---	---	11,010	13,720	---	12.1'	---	6,240	---	---
RETAIL	9,381	9,137	---	---	41,981	47,406	---	4.6'	8,978	5,695	---	2.3'	2,650	2,599	---	---
MIXED-USE	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
INDUST./MANUF.	---	---	---	---	---	57,512	---	12.2'	13,627	78,297	---	13.1'	8,984	15,414	---	8.6
CIVIC/INSTIT.	6,408	32,223	---	---	4,030	36,283	---	2.7'	8,666	74,536	---	29.9'	---	17,664	---	---

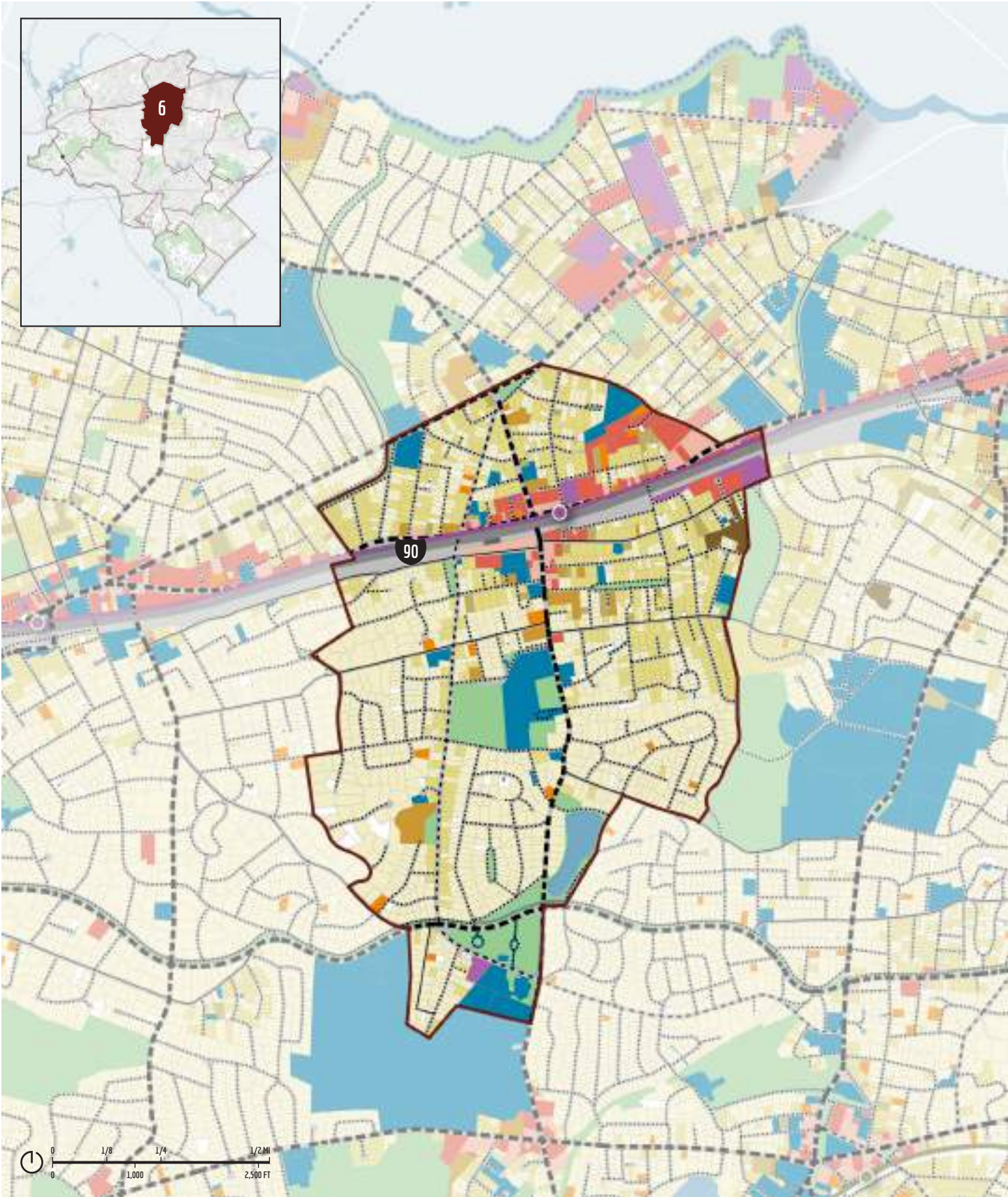
*GSF and parcel area median values measured in square feet.



Newtonville Village Center (2016)



Newtonville Square (1910)



- Residential (Single Family)
- Residential (2-3 Units)
- Residential (4-8 Units)
- Residential (9-99 Units)
- Residential (100+ Units)

- Residential (Other)
- Commercial
- Retail
- Mixed-use (Primarily Residential)
- Industrial/ Manufacturing

- Civic/ Public Use
- Open Space
- No Data

- Street type**
- Arterial
 - Major Collector
 - Minor Collector
 - Local

Context-Based Areas

6. Newtonville

Character Patterns & Pattern Subsets

The Newtonville CBA is primarily residential in character, with a range of neighborhood character patterns spreading through the northern and southern sections of the area. The Newtonville CBA is also home to one of Newton's largest village centers, straddling I-90 and Washington Street in

the north, as well as commercial clusters strung along Crafts Street and Washington Street in the northeastern corner of the CBA. The area has multiple civic campus character patterns, including Newton North High School, City Hall, and other civic facilities.

Village Center

The Newtonville village center is among the largest in Newton, spanning over a quarter-mile from north to south and from east to west. The center is designated as the town center pattern subset, with a wide range of commercial and retail uses, multifamily properties interspersed within, and several new development projects moving forward on infill sites. The center includes a grocery store, local specialty shops, cafe and dining options, and general service uses that attract a regional population to the area.

Commercial Cluster

The three commercial clusters in the Newtonville CBA are employment, retail, and legacy industrial in character, consisting of a fairly large concentration of offices, service-oriented and bulk retailers, and working industrial yards along Crafts Street in the northeast corner of the CBA.

Campus

The campus character pattern within Newtonville consists of two civic/public school pattern subsets, including Newton North High School, and a cluster of municipal facilities to the south including City Hall and the public library.

Neighborhood

Newtonville's neighborhoods are almost universally traditional in pattern, ranging in size from medium and large-compact in the north and northeast—the older parts of the CBA—to mainly medium and large in pattern in the south. There are two pockets of manor patterns on the western edge of the CBA, adjacent to other manor patterns in the West Newton Hill CBA to the west.



Context-Based Areas

7. Newton Corner

Area Overview

Newton Corner is the northeastern-most CBA in Newton. The area consists of some of Newton's oldest and most dense neighborhoods and commercial areas and is defined and discussed largely in consideration of the substantial division caused by I-90's route through the village center. The area is bound to the north by the Charles River and the town of Watertown. The east is defined by Newton's eastern border, the south by the village of Chestnut Hill, and the west by the villages of Newtonville below I-90 and Nonantum above it.

Development within the Newton Corner CBA is among the most dense in the city, with an average of 190 intersections per square mile. Fifty-nine percent of the land area in the CBA is permeable, among the lowest percentages in the city.

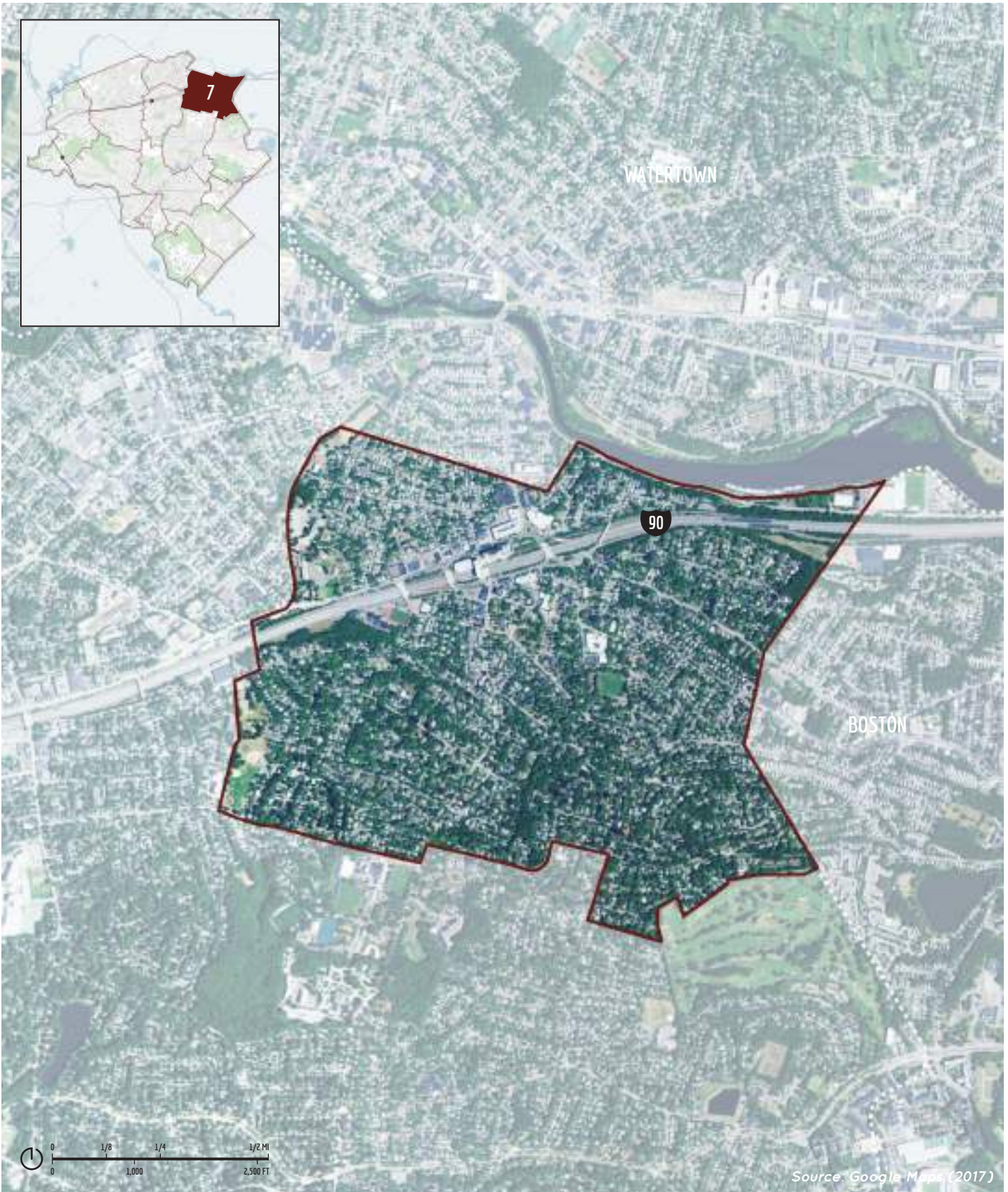
728 total acres

190 intersections per square mile

59% permeable surfaces

\$47k average tax revenue per acre





Aerial photograph of the Newton Corner context-based area.

Context-Based Areas

7. Newton Corner

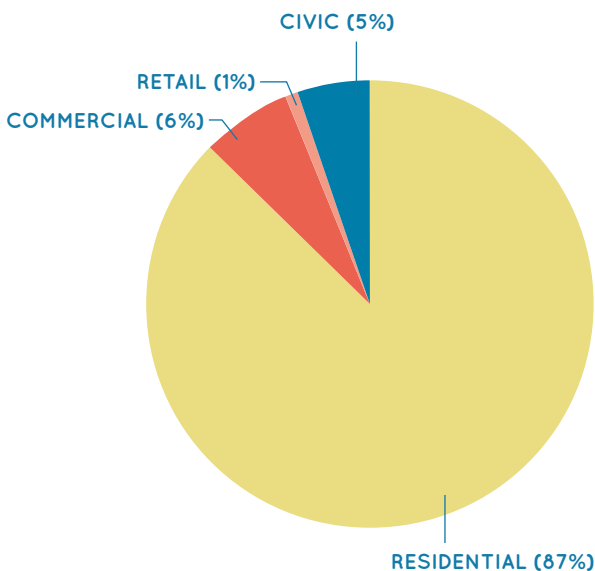
Development Form Metrics by Land Use

Despite hosting one of Newton's largest and most dense village centers, Newton Corner is largely a residential CBA, with approximately 87% of the total development square footage consisting of residential properties. Of that 87%, a larger portion than is common in Newton is multifamily (45% of all residential square footage), which is mostly concentrated within and around the village center

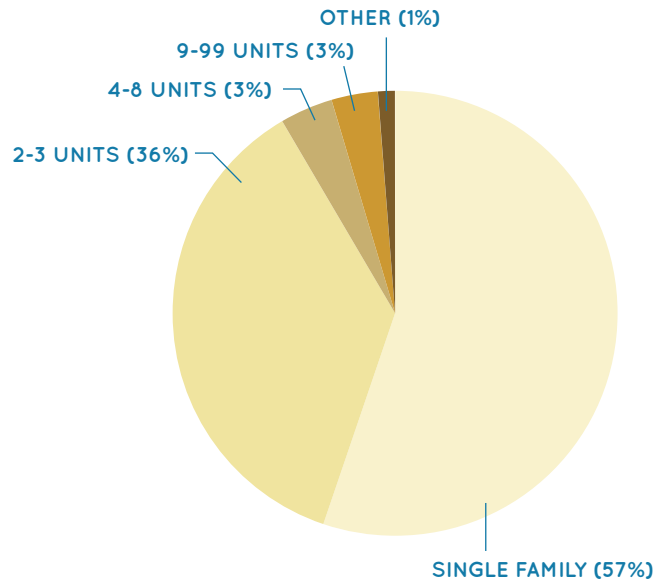
in the north of the CBA. The remaining 55% of residential square footage is single family and is concentrated in the northeastern-most corner and the southern half of the CBA. As a result of greater prevalence of multifamily units in this area, the median development sizes are larger than is common throughout the city.

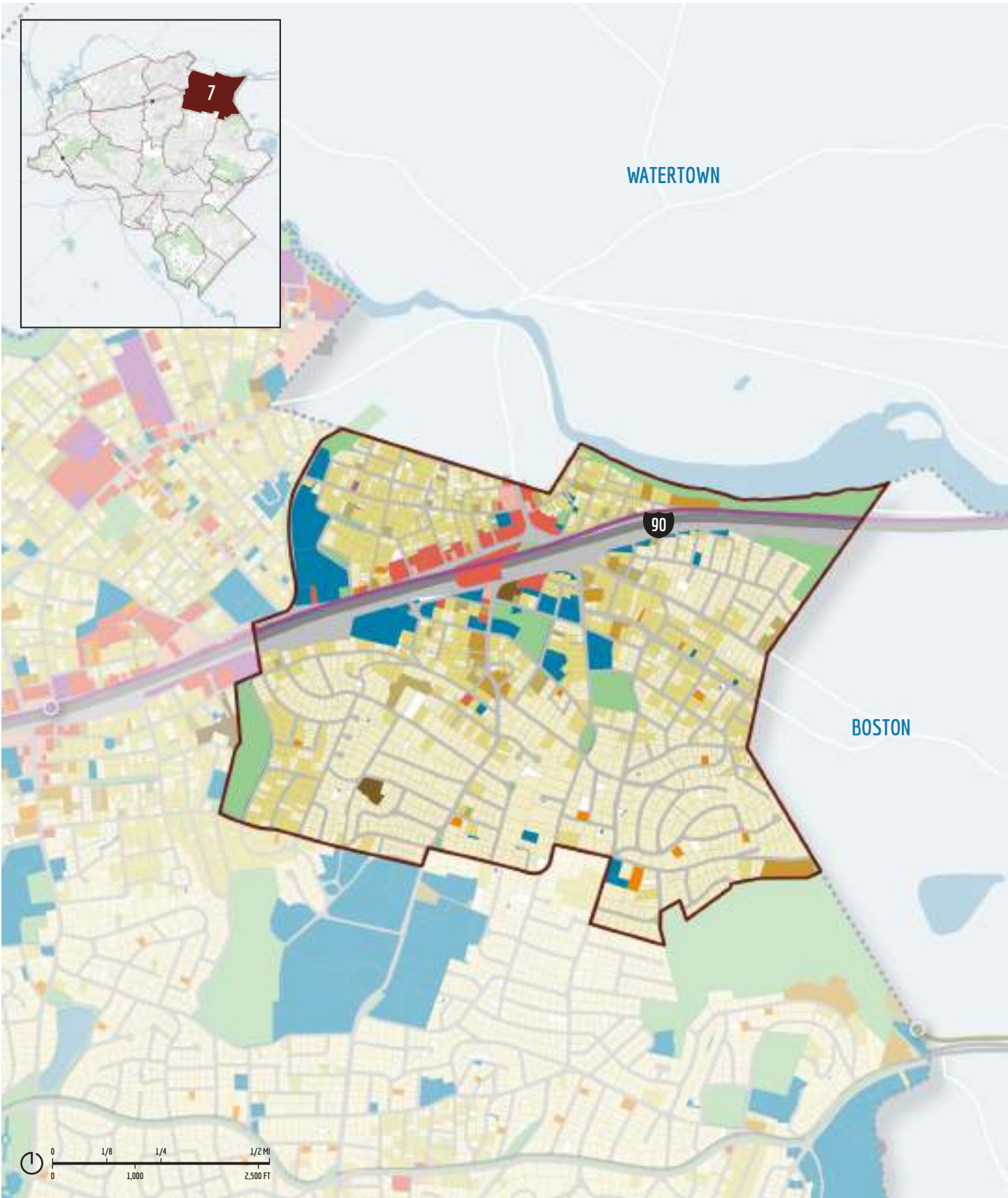
USE CATEGORY	PARCEL COUNT	BUILDING SQ. FOOTAGE (TOTAL)	PARCEL AREA (MED.)	BUILDING SQ. FOOTAGE (MED.)	SETBACK (MED.)	STORIES (MED.)
RESIDENTIAL	1,907	9,713,496 SF	8,374 SF	4,636 SF	25.3'	2.0
SINGLE FAMILY	1,115	5,440,200 SF	9,218 SF	4,386 SF	28.7'	2.0
2-3 UNITS	668	3,499,264 SF	7,130 SF	4,954 SF	21.3'	2.0
4-8 UNITS	35	296,566 SF	9,308 SF	6,597 SF	16.9'	---
9-99 UNITS	16	303,016 SF	18,763 SF	17,235 SF	17.6'	---
100+ UNITS	0	0 SF	---	---	---	---
OTHER	2	121,651 SF	69,417 SF	60,826 SF	56.1'	1.5
COMMERCIAL	36	756,372 SF	7,656 SF	2,156 SF	0'	---
RETAIL	7	104,141 SF	8,447 SF	14,110 SF	0.3'	---
MIXED-USE	0	0 SF	---	---	---	---
INDUST./MANUF.	1	4,080 SF	8,549 SF	4,080 SF	30.1'	---
CIVIC/INSTIT.	73	616,811 SF	10,000 SF	---	0'	---














Total Development Square Footage by Land Use



Total Residential Development Square Footage by Building Type





- | | | |
|--|---|--|
|  Residential (Single Family) |  Residential (Other) |  Civic/Public Use |
|  Residential (2-3 Units) |  Commercial |  Open Space |
|  Residential (4-8 Units) |  Retail |  No Data |
|  Residential (9-99 Units) |  Mixed-use (Primarily Residential) | |
|  Residential (100+ Units) |  Industrial/ Manufacturing | |

Context-Based Areas

7. Newton Corner

Development Form Metrics by Street Type

As is the case with several CBAs consisting of old and new patterns of development, the street network takes on different characteristics depending on where within the area they are located. In the northernmost sections of the area, the street grid is regular and rectilinear, while as one moves south, the grid becomes more curvilinear in character and looser in composition, taking on more of the

character of Newton's 20th century neighborhoods. The area is served by the major thoroughfares of Washington Street north of I-90 and Centre Street as a north-south axis, with the interruption of a traffic circle spanning I-90. Most of the area's multifamily properties are located along the older rectilinear street grid to the north, while the single family properties are situated along the southern streets.

USE CATEGORY	ARTERIAL ROAD				MAJOR COLLECTOR STREET				MINOR COLLECTOR STREET				LOCAL STREET			
	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.
RESIDENTIAL	5,209	8,525	2.0	20.2'	4,852	7,877	2.0	26.1'	4,904	9,899	2.0	25.7'	4,552	8,300	2.0	25.5'
SINGLE FAMILY	4,728	9,907	2.0	29.4'	4,636	10,176	2.0	30.7'	4,432	10,140	2.0	29.2'	4,307	8,992	2.0	28.4'
2-3 UNITS	5,053	5,912	2.0	14.3'	4,889	6,600	2.0	23.2'	5,278	8,645	2.0	22.5'	4,876	7,042	2.0	21.0'
4-8 UNITS	13,662	14,523	---	8.6'	7,102	18,251	---	29.1'	6,349	8,200	---	13.1'	6,830	8,994	---	19.2'
9-99 UNITS	14,934	13,910	---	13.6'	18,167	25,704	---	27.5'	21,377	77,096	---	27.2'	---	---	---	---
100+ UNITS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OTHER	106,688	51,243	---	47.7'	---	---	---	---	---	---	---	---	14,963	87,591	---	64.5'
COMMERCIAL	---	---	---	---	---	---	---	---	2,985	9,397	---	33.7'	12,892	7,500	---	---
RETAIL	14,110	8,447	---	0.3'	---	---	---	---	---	---	---	---	---	---	---	---
MIXED-USE	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
INDUST./MANUF.	---	---	---	---	---	---	---	---	4,080	8,549	---	30.1'	---	---	---	---
CIVIC/INSTIT.	---	24,480	---	---	5,415	25,497	1.0	42.9'	808	31,430	---	4.2'	116,152	5,018	---	---

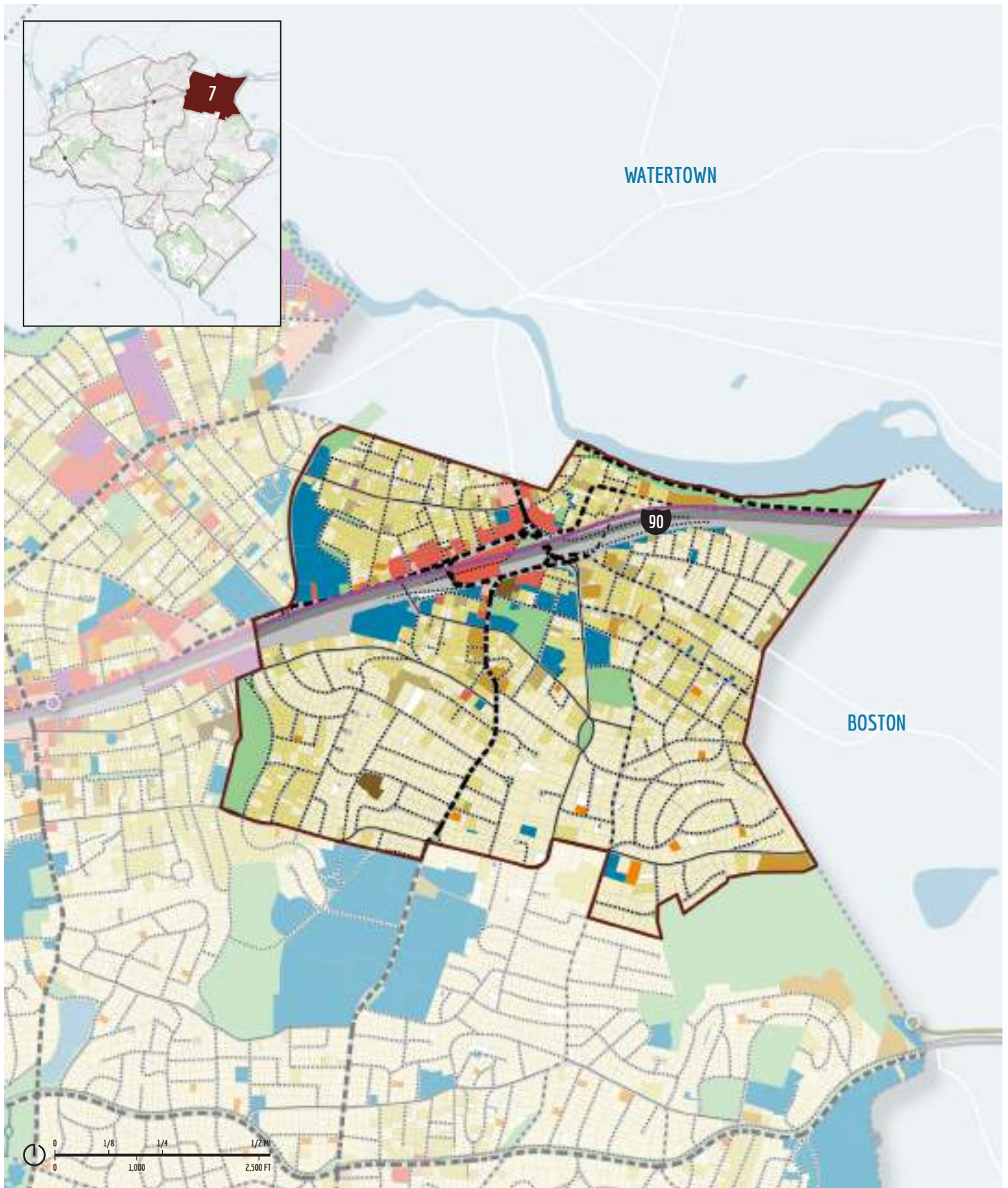
*GSF and parcel area median values measured in square feet.



Centre Street in Newton Corner (2016)



Newton Corner (1890s)



- Residential (Single Family)
- Residential (2-3 Units)
- Residential (4-8 Units)
- Residential (9-99 Units)
- Residential (100+ Units)

- Residential (Other)
- Commercial
- Retail
- Mixed-use (Primarily Residential)
- Industrial/ Manufacturing

- Civic/ Public Use
- Open Space
- No Data

- Street type**
- Arterial
 - Major Collector
 - Minor Collector
 - Local

Context-Based Areas

7. Newton Corner

Character Patterns & Pattern Subsets

The Newton Corner CBA consists of one large village center, a handful of small campuses, recreation, and public use character patterns, and large swaths of residential development. The village center is one of two in Newton to straddle I-90, with most commercial and retail development concentrated in the north and smaller uses fading into the

residential neighborhoods in the south. The residential uses range substantially in size and form depending largely on development era and proximity to the village center.

Village Center

Newton Corner is Newton's only village center classified as a gateway village. This designation results from the situation of the center at one of Newton's primary gateways, namely the on-ramp and exits to and from I-90. The designation also acknowledges the resulting scale and intensity of development concentrated within the center. Situated above and beside I-90 are some of Newton's tallest developments. In addition to these large commercial and hospitality developments, there is a substantial clustering of retail establishments primarily focused around dining. Uses in the gateway village include a variety of residential building types in addition to educational and religious institutions.

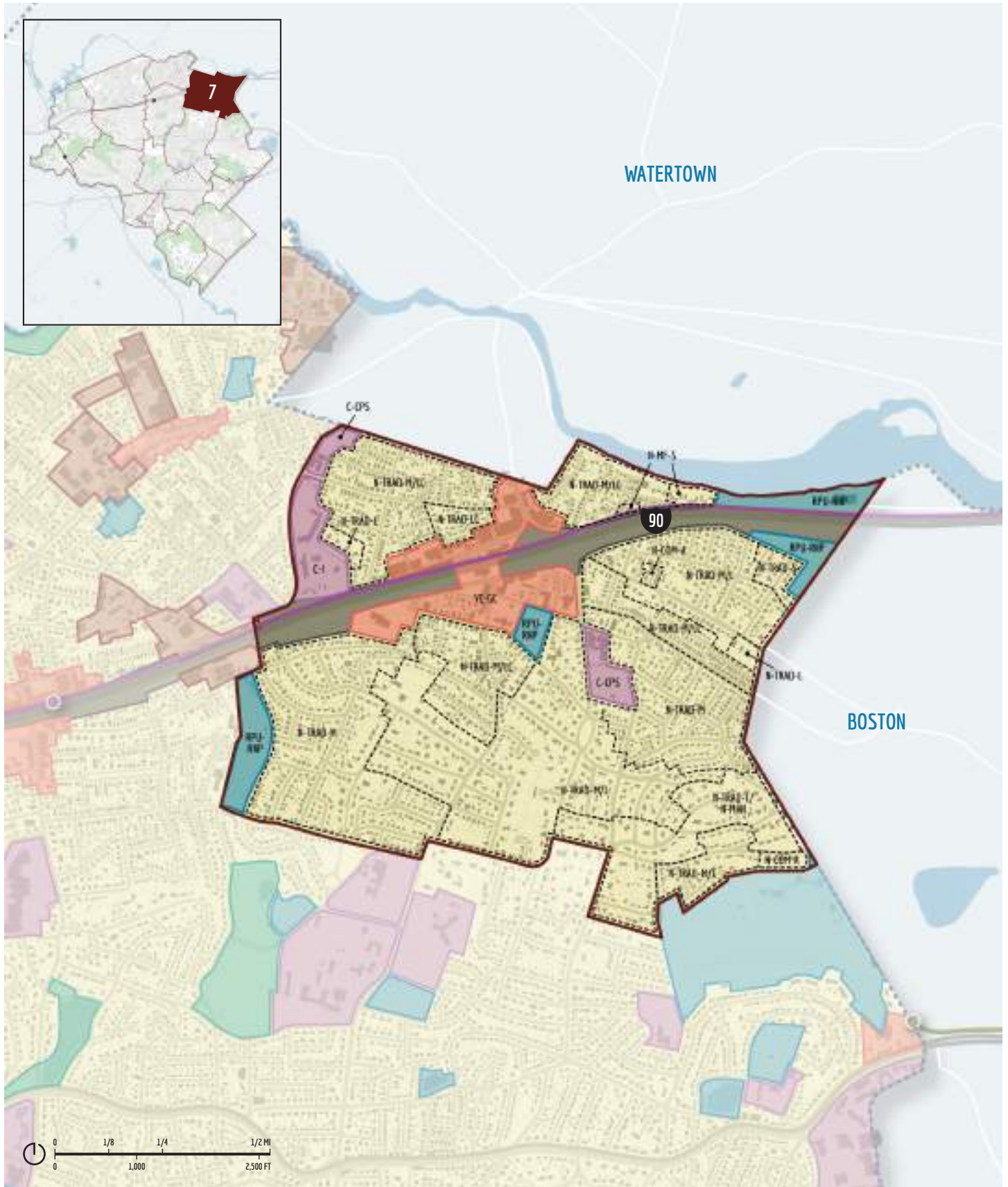
Campus

Newton Corner is home to two campus character patterns—a middle school in the center and a private primary school in the northwest.

Neighborhood

Residential properties in the Newton Corner neighborhoods run quite large compared to the city's averages. While these are almost universally traditional in pattern (concentrations of medium and large-compact development in the north and medium and large patterns in the south), there are pockets of multifamily in the northeast.





Context-Based Areas

8. Waban

Area Overview

The Waban CBA is predominantly residential and nearly uniform in character. The CBA is bounded to the north by West Newton Hill, to the east by Newton Highlands, to the south by Newton Upper Falls, and to the west by I-95 and Auburndale. The area has a small village center in the geographic center, a hospital in the west and one of Newton's four golf courses in the north.

Waban is fairly characteristic of Newton's more suburban areas in composition and density. The area has an intersection per square mile density of 116, just a few intersections above the city's average. The area is also fairly lush with open space and permeable surfaces owing to the golf course and large residential lots. At 75%, the percentage of permeable surfaces in the area is among the highest in the city.

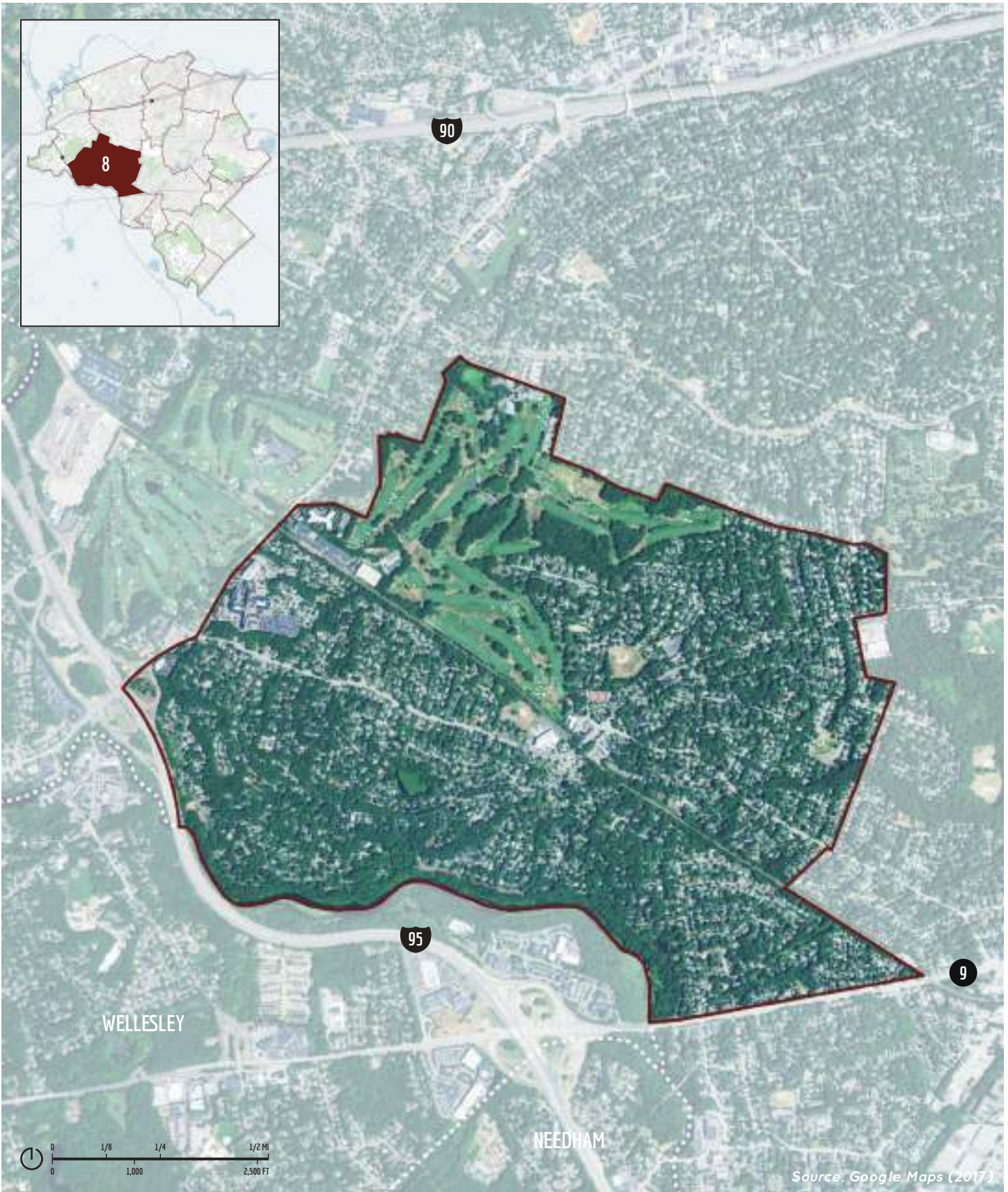
962 total acres

116 intersections per square mile

75% permeable surfaces

\$32k average tax revenue per acre





Aerial photograph of the Waban context-based area.

Context-Based Areas

8. Waban

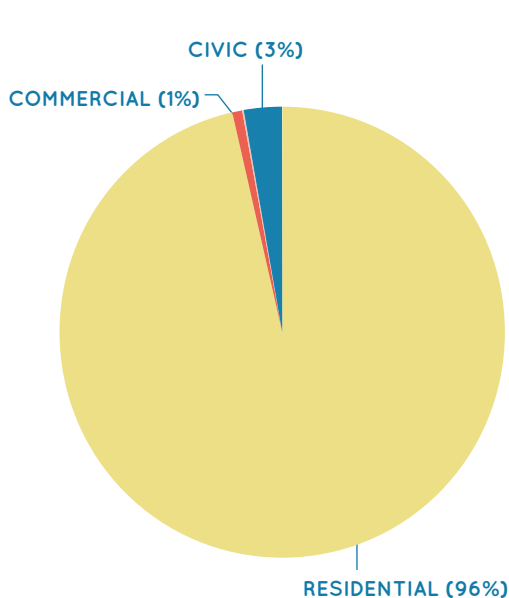
Development Form Metrics by Land Use

With the exception of a small village center, the golf course to the north, and the Newton-Wellesley Hospital on the western edge of the CBA, Waban is an almost entirely residential neighborhood. The area is characteristic of this middle stretch of Newton, with a fairly uniform residential product makeup (single family homes) making up 96% of

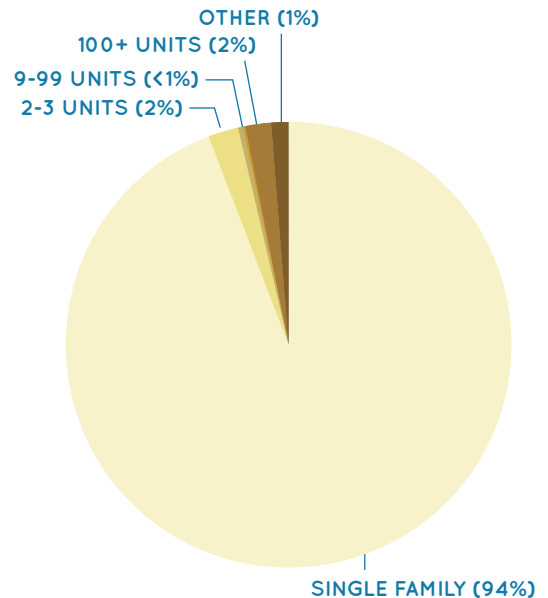
the land area. The few multifamily units, comprising a total of 4% of the total residential square footage, are concentrated in the northwest of the CBA, located next to the hospital and in close proximity to the MBTA's Woodland station. Waban is unique in that it has two MBTA stations and relatively little accompanying density adjacent to them.

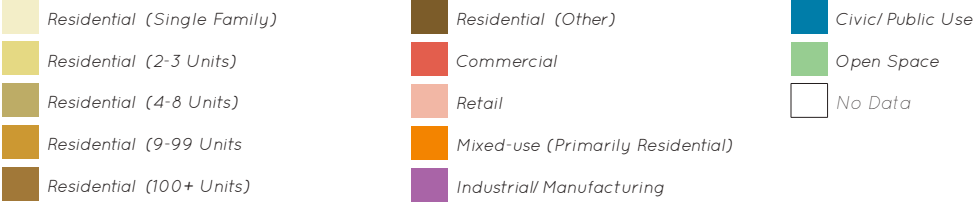
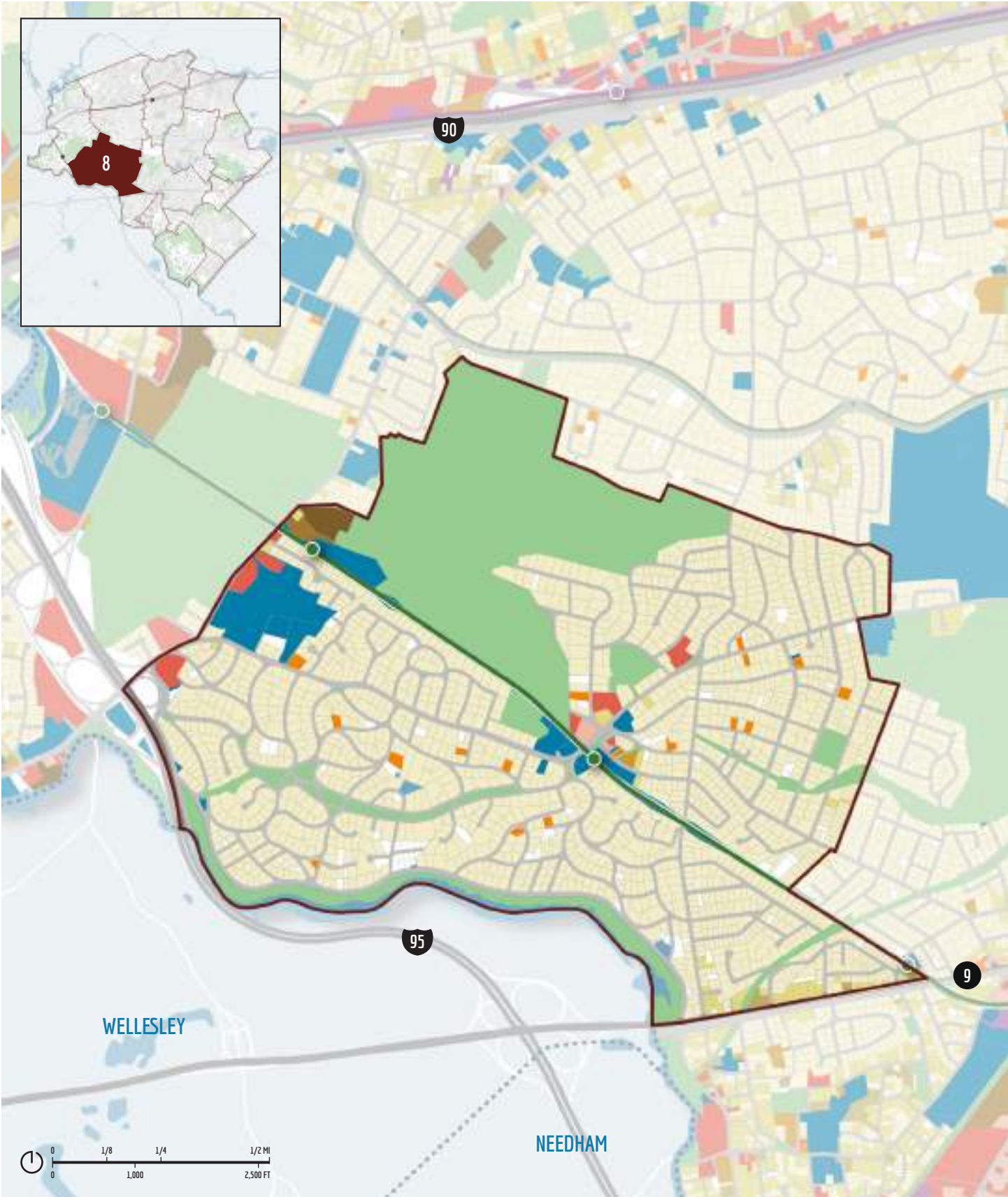
USE CATEGORY	PARCEL COUNT	BUILDING SQ. FOOTAGE (TOTAL)	PARCEL AREA (MED.)	BUILDING SQ. FOOTAGE (MED.)	SETBACK (MED.)	STORIES (MED.)
RESIDENTIAL	1,873	9,000,615 SF	12,109 SF	4,498 SF	30.7'	2.0
SINGLE FAMILY	1,709	8,385,29 SF	12,286 SF	4,607 SF	31.0'	2.0
2-3 UNITS	39	194,939 SF	9,699 SF	4,663 SF	27.9'	2.0
4-8 UNITS	2	30,657 SF	29,960 SF	15,329 SF	34.2'	---
9-99 UNITS	1	16,038 SF	29,060 SF	16,038 SF	15.8'	---
100+ UNITS	1	164,969 SF	76,907 SF	164,969 SF	217.4'	---
OTHER	1	112,878 SF	167,207 SF	112,878 SF	131.6'	---
COMMERCIAL	14	407,547 SF	54,889 SF	8,364 SF	4.5'	---
RETAIL	2	48,248 SF	31,307 SF	24,124 SF	0'	---
MIXED-USE	0	0 SF	---	---	---	---
INDUST./MANUF.	0	0 SF	---	---	---	---
CIVIC/INSTIT.	54	778,452 SF	20,531 SF	0 SF	0'	---

Total Development Square Footage by Land Use



Total Residential Development Square Footage by Building Type





Context-Based Areas

8. Waban

Development Form Metrics by Street Type

Waban is mostly composed of local residential streets with a nearly uniformly curvilinear and suburban network south of the Green Line and a slightly more regular and grid-like network to the north. The area has access to three arterial roads, two of which—Beacon and Chestnut Streets—cross through the area, and one of which—Washington Street—forms the westernmost boundary to the area. The Waban

village center sits at the nexus of Beacon Street and the Green Line, where the Waban station is situated. The area is well-connected to the rest of Newton's neighborhoods by arterials, some collectors and many local roads, including a riverside drive (Quinobequin Road) between residential properties and a protected open space.

USE CATEGORY	ARTERIAL ROAD				MAJOR COLLECTOR STREET				MINOR COLLECTOR STREET				LOCAL STREET			
	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.
RESIDENTIAL	4,800	11,955	2.0	34.6'	4,674	12,162	2.0	31.0'	3,846	10,820	2.0	30.0'	4,490	12,218	2.0	30.7'
SINGLE FAMILY	4,817	12,150	2.0	33.3'	4,790	12,162	2.0	31.6'	4,160	11,364	2.0	30.8'	4,598	12,405	2.0	30.9'
2-3 UNITS	4,733	9,489	2.0	25.8'	5,684	17,645	2.0	38.1	---	---	---	---	3,878	9,540	2.0	29.3'
4-8 UNITS	15,239	29,960	---	34.2'	---	---	---	---	---	---	---	---	---	---	---	---
9-99 UNITS	---	---	---	---	---	---	---	---	---	---	---	---	16,038	29,060	---	15.8'
100+ UNITS	164,969	76,907	---	217.4'	---	---	---	---	---	---	---	---	---	---	---	---
OTHER	112,878	167,207	---	131.6'	---	---	---	---	---	---	---	---	---	---	---	---
COMMERCIAL	22,661	88,016	---	26.8'	---	---	---	---	18,800	2.27M	---	513.6'	13,244	24,302	---	---
RETAIL	39,510	54,198	---	---	---	---	---	---	---	---	---	---	8,738	8,416	---	---
MIXED-USE	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
INDUST./MANUF.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CIVIC/INSTIT.	0	16,486	---	---	---	---	---	---	---	35,600	---	---	---	23,027	---	---

*GSF and parcel area median values measured in square feet.



A home in Waban (2016)



School in Waban (1900)



- Residential (Single Family)
- Residential (2-3 Units)
- Residential (4-8 Units)
- Residential (9-99 Units)
- Residential (100+ Units)

- Residential (Other)
- Commercial
- Retail
- Mixed-use (Primarily Residential)
- Industrial/ Manufacturing

- Civic/ Public Use
- Open Space
- No Data

- Street type**
- Arterial
 - Major Collector
 - Minor Collector
 - Local

Context-Based Areas

8. Waban

Character Patterns & Pattern Subsets

Waban is predominantly a residential CBA with the exception of a major institutional campus in the west, one of the city's four golf courses in the north, a small village center in the center, and a linear open space in the south of the CBA along the Charles River, which forms the southern boundary of the CBA and the boundary between

Newton and neighboring Wellesley. The overall character of the area is famously suburban with long, winding drives between residential areas.

Village Center

Waban village center is among the smallest in the city of Newton. The center is designated a convenience village as it caters to a local population, offering mostly convenience shopping, local eateries, and general service uses. With the exception of a single historic property, the village center is entirely single story and commercial/retail in use.

Commercial Cluster

Waban is home to one parcel designated as an employment commercial cluster, located in the far western edge of the CBA. This office building, along with another across the street in the Auburndale CBA form a small commercial development off the I-95 exit.

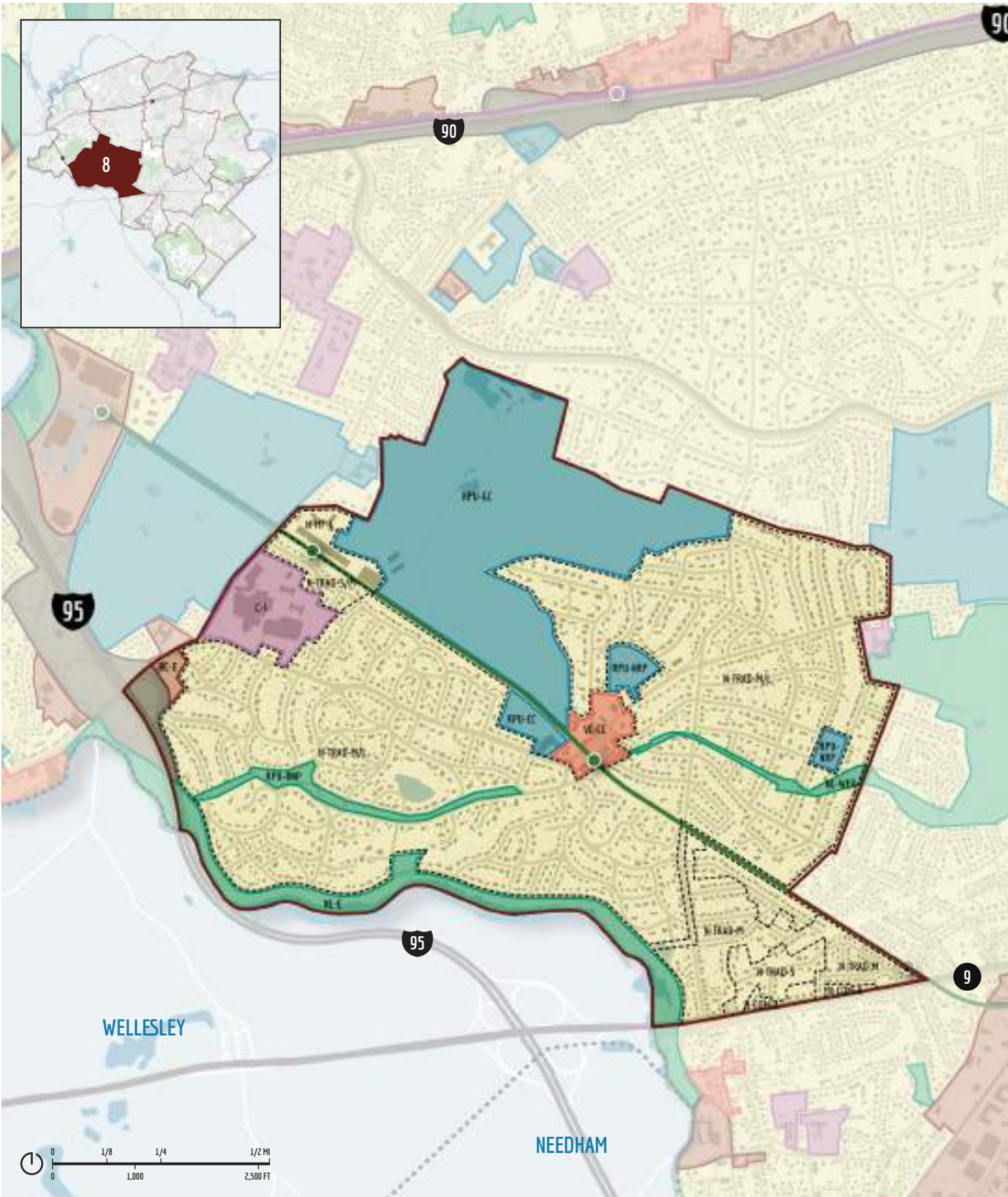
Campus

Waban is home to one institutional campus character pattern—the Newton-Wellesley Hospital along the western boundary of the CBA. The campus serves a regional population.

Neighborhood

Waban's neighborhoods are among the most uniform of any CBA in Newton. With the exception of a small cluster of smaller single family units and a large multifamily housing development in the northwest corner of the CBA (adjacent to the Woodland MBTA station), the entire Waban CBA consists of an intermingled mix of medium- and large-scale traditional residential pattern subsets.





- Neighborhood
- Village Center
- Commercial Cluster
- Campus
- Recreation & Public Use
- Natural/Landscape

Context-Based Areas

9. Newton Highlands

Area Overview

The Newton Highlands CBA centers on the historic Newton Highlands village center at the intersection of Lincoln and Walnut Streets. The area is bow tie-shaped, with its boundaries determined primarily by the proximity of neighborhoods to the Newton Highlands village center and the boundaries of surrounding CBAs. The area is urban in form, with a higher than average intersection density and many large homes on small lots.

The area is bisected along the east-west Route 9 corridor and diagonally from the northeast to southwest (through the bow tie) by the MBTA Green Line (D line branch). Despite its urban form in most areas, the Newton Highlands CBA has significant open space with a large regional park and cemetery in the north and several smaller parks in the south contributing to a percentage of permeable surface area of 66%.

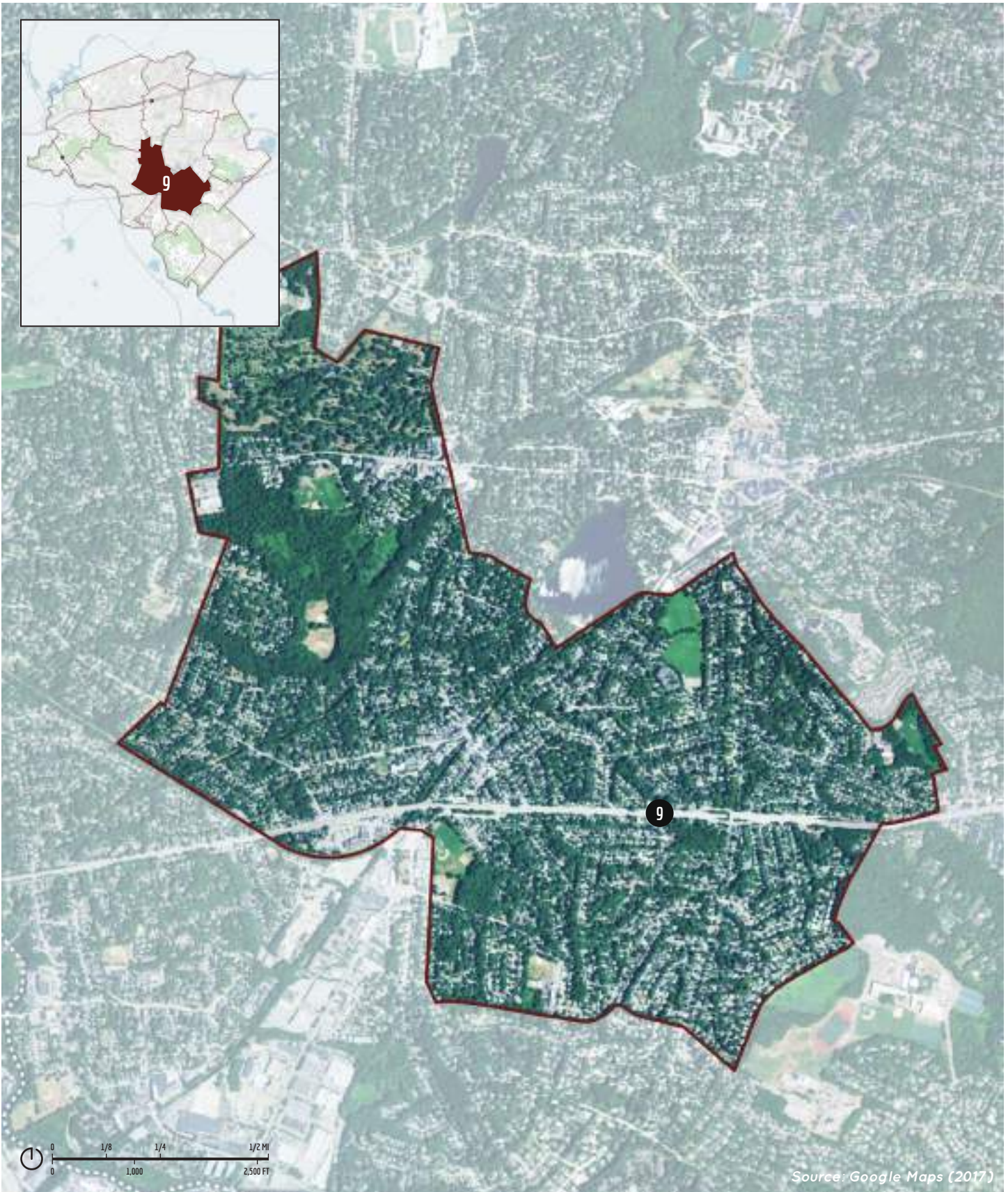
1,053 total acres

151 intersections per square mile

66% permeable surfaces

\$42k average tax revenue per acre





Aerial photograph of the Newton Highlands context-based area.

Context-Based Areas

9. Newton Highlands

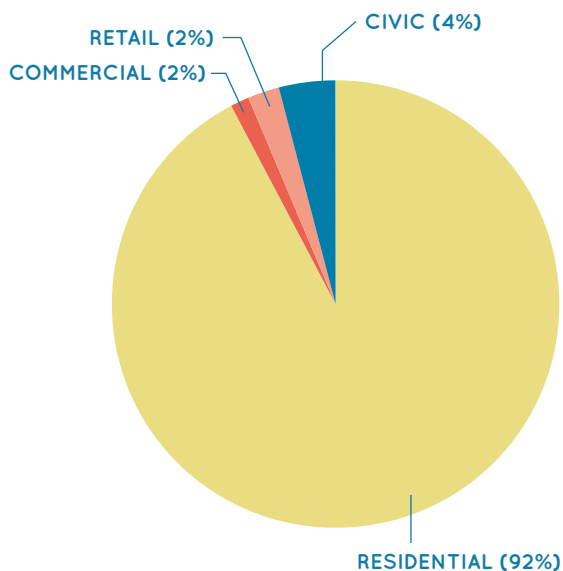
Development Form Metrics by Land Use

Newton Highlands is one of the most predominantly residential areas in the city, with 92% of developed square footage taking the form of residential property. The remaining square footage is divided between commercial, retail, industrial/manufacturing, and civic uses, with the majority of it being civic (mostly public schools). The

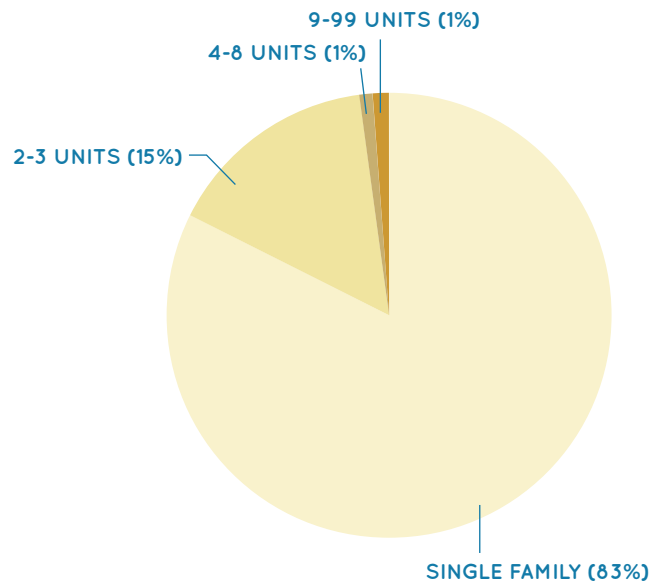
majority of residential parcels have single family unit on them (84%), with a sizable share of two and three family unit buildings (12%) concentrated within and around the village center. The village center includes a mix of commercial, retail, housing and civic uses.

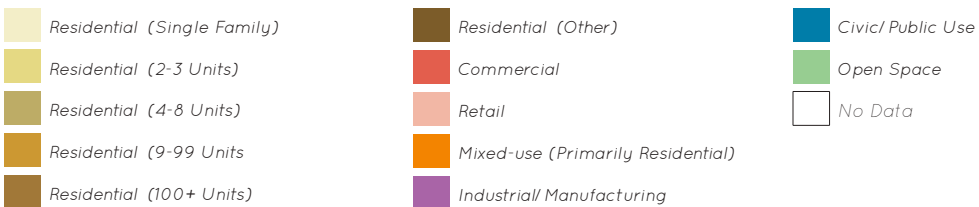
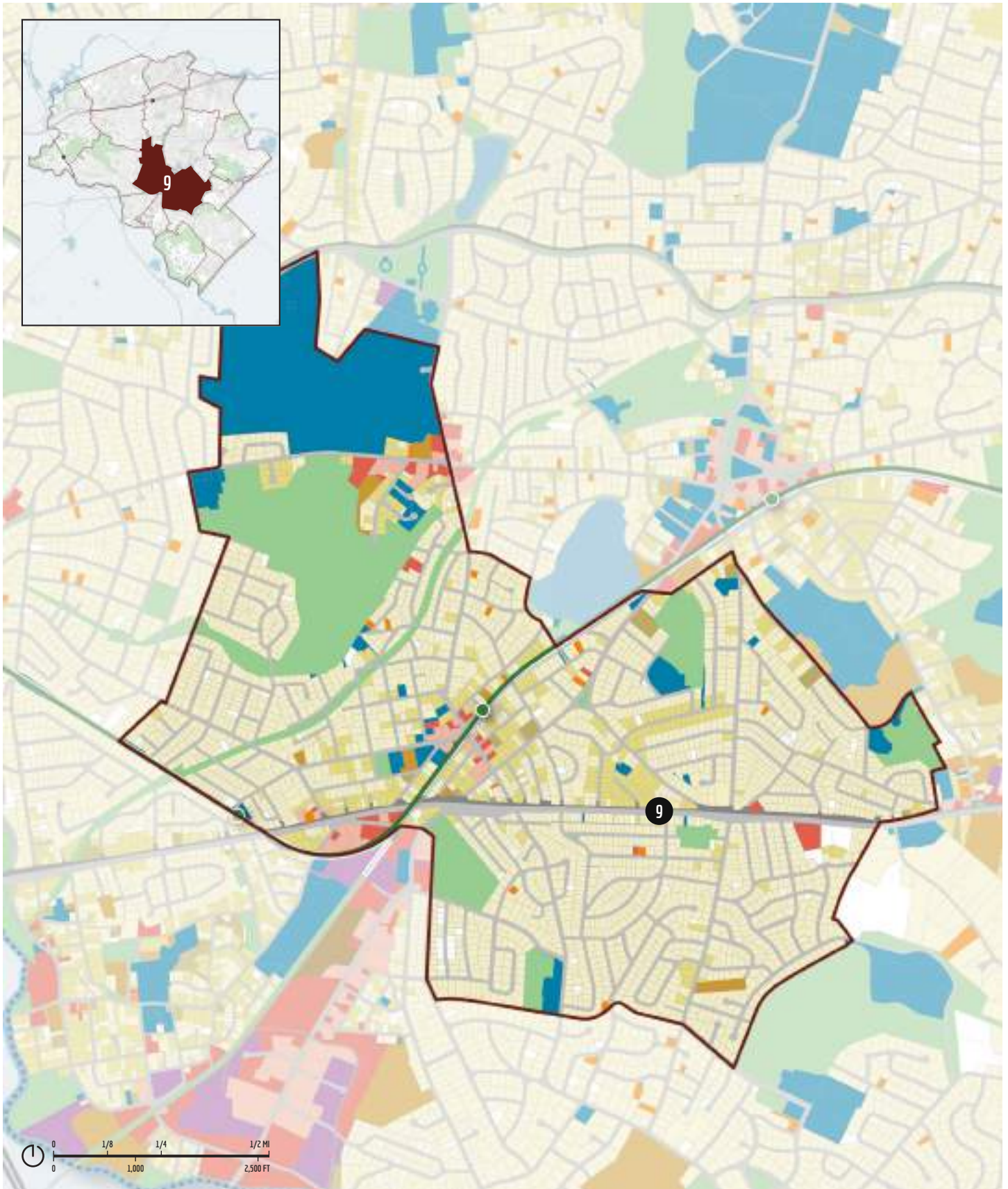
USE CATEGORY	PARCEL COUNT	BUILDING SQ. FOOTAGE (TOTAL)	PARCEL AREA (MED.)	BUILDING SQ. FOOTAGE (MED.)	SETBACK (MED.)	STORIES (MED.)
RESIDENTIAL	2,743	10,752,240 SF	8,400 SF	3,701 SF	26.4'	2.0
SINGLE FAMILY	2,299	8,867,671 SF	8,400 SF	3,642 SF	26.7'	2.0
2-3 UNITS	325	1,646,536 SF	8,854 SF	4,791 SF	25.5'	2.0
4-8 UNITS	10	87,779 SF	17,703 SF	7,194 SF	16.9'	---
9-99 UNITS	7	78,670 SF	47,097 SF	2,040 SF	57.3'	---
100+ UNITS	0	0 SF	---	---	---	---
OTHER	0	0 SF	---	---	---	---
COMMERCIAL	36	156,575 SF	9,326 SF	3,391 SF	6.0'	---
RETAIL	29	267,517 SF	10,921 SF	7,226 SF	3.3'	---
MIXED-USE	0	0 SF	---	---	---	---
INDUST./MANUF.	0	0 SF	---	---	---	---
CIVIC/INSTIT.	92	474,957 SF	11,742 SF	---	---	---

Total Development Square Footage by Land Use



Total Residential Development Square Footage by Building Type





Context-Based Areas

9. Newton Highlands

Development Form Metrics by Street Type

Given its location in the geographic center of the city, the Newton Highlands CBA is very well connected to surrounding neighborhoods and the larger metropolitan region. The major arterial running through the Highlands is Route 9, traversing the area from east to west just south of the village center. In addition to this major regional arterial, Newton Highlands has four major collector streets running

through its neighborhoods—Beacon Street to the north, Walnut Street running north-south, Centre Street traversing diagonally from northeast to southwest, and Parker Street running perpendicular to Route 9 in the east. The local street network is urban in form to the north and west of the village center, and takes on a more suburban character in the neighborhoods south of Route 9.

USE CATEGORY	ARTERIAL ROAD				MAJOR COLLECTOR STREET				MINOR COLLECTOR STREET				LOCAL STREET			
	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.
RESIDENTIAL	3,778	8,959	2.0	27.5'	4,296	10,119	2.0	25.7'	2,944	6,527	2.0	26.8'	3,705	8,323	2.0	26.3'
SINGLE FAMILY	3,550	8,976	2.0	28.9'	4,242	10,187	2.0	26.7'	2,903	6,522	2.0	26.8'	3,663	8,303	2.0	26.5'
2-3 UNITS	4,779	8,951	2.0	25.3'	4,783	7,868	2.0	20.2'	6,082	13,222	2.0	33.5'	4,716	8,704	2.0	25.7'
4-8 UNITS	4,755	25,255	---	26.6'	---	---	---	---	9,853	21,780	---	16.9'	6,856	10,888	---	12.3'
9-99 UNITS	11,428	69,687	---	66.7'	16,571	33,509	---	67.3'	---	---	---	---	1,916	17,145	---	35.5'
100+ UNITS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OTHER	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COMMERCIAL	3,567	9,505	---	3.7'	4,367	3,878	---	2.8'	---	---	---	---	1,572	12,323	---	7.2'
RETAIL	6,480	10,921	---	3.3'	13,943	12,142	---	2.7'	---	---	---	---	---	---	---	---
MIXED-USE	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
INDUST./MANUF.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CIVIC/INSTIT.	---	36,166	---	3.7'	7,529	32,892	---	1.8'	---	---	---	---	---	10,295	---	---

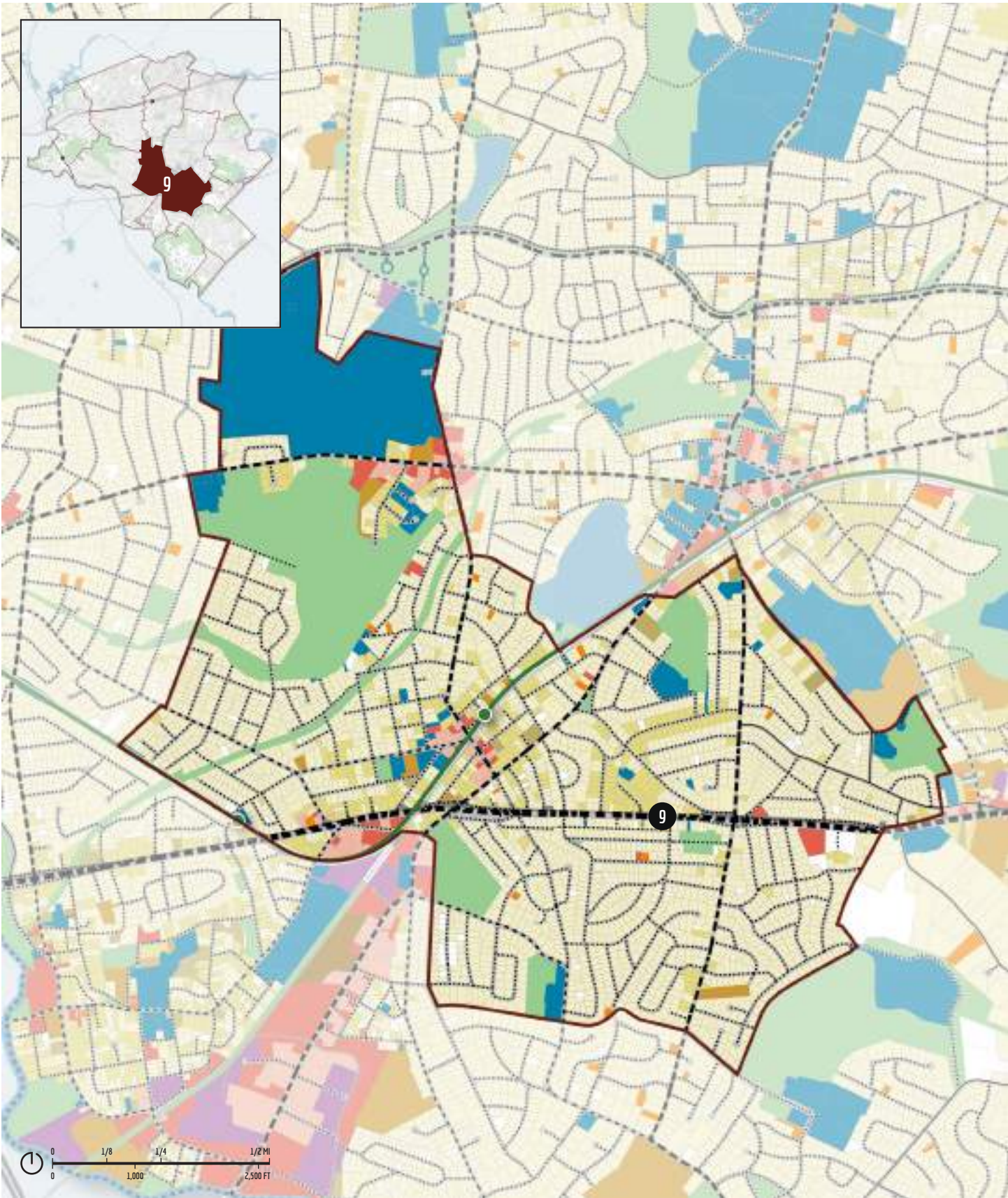
*GSF and parcel area median values measured in square feet.



Lincoln Street in Newton Highlands (2016)



Newton Highlands Village Center (1890's)



- Residential (Single Family)
- Residential (2-3 Units)
- Residential (4-8 Units)
- Residential (9-99 Units)
- Residential (100+ Units)

- Residential (Other)
- Commercial
- Retail
- Mixed-use (Primarily Residential)
- Industrial/ Manufacturing

- Civic/ Public Use
- Open Space
- No Data

- Street type**
- Arterial
 - Major Collector
 - Minor Collector
 - Local

Context-Based Areas

9. Newton Highlands

Character Patterns & Pattern Subsets

The Newton Highlands CBA represents much of the diversity that can be found in Newton. With a historic village center at the heart of the area, patterns of residential development radiating out from the center display a clear transect pattern, with higher density housing consolidated within and just outside the village center and lower density housing on the

outskirts of the center. The CBA is also home to two MBTA Green Line stops—Newton Highlands and Eliot—making this area one of Newton’s most well-served by regional transit. The area is also situated between two of the city’s busiest mixed-use areas—Newton Centre and Needham Street.

Village Center

The Newton Highlands CBA contains two village centers. The Newton Highlands village center, designated a neighborhood center, is densely developed and provides a substantial mix of local and regional shops, eateries, general service uses, markets, civic uses, and office/residential space in upper stories above retail shops. A smaller convenience village in the north at the intersection of Walnut and Beacon Streets, commonly referred to as “Four Corners,” is also regarded as a village center. This smaller village center contains mainly convenience retail such as a grocery store, a drug store, banks, service stations, fast food, and service offices. This smaller center also integrates higher density housing within and around the retail district.

Commercial Cluster

South of Route 9 and north of the bend in the Green Line railway there is a small pocket of side-of-the-road retail oriented towards drivers. This area includes a drug store, fast food options, and largely automobile-oriented service stations.

Campus

The Newton Highlands CBA contains three public school campuses distributed along the peripheries of the CBA.

Neighborhood

Neighborhoods within the Newton Highlands CBA vary greatly in scale and density depending on their location. In areas close to the village center, residential properties tend to have large homes on compact lots in keeping with older development patterns, while neighborhoods closer to Waban (to the west) and Oak Hill (to the south) are more suburban in style, with a looser, more curvilinear street grid and small-medium houses on larger lots.



Context-Based Areas

10. Newton Centre

Area Overview

The Newton Centre CBA is located in east-central Newton between the neighborhoods of Newton Corner to the north, Chestnut Hill to the east, Newton Highlands to the south and west, and Newtonville to the northwest. The area is home to a variety of land uses and development forms ranging from an urban village center and dense residential transition zones to more suburban residential development on the outskirts and campus typologies in the north.

The area is dense relative to the rest of Newton as measured by intersection density, with 161 intersections per square mile as compared to the 112 for Newton as a whole. The area is also home to several major public open spaces, including Crystal Lake, the Newton Centre Playground, and Edmands Park, all of which contribute to the area's total permeable surfaces percentage of 60%.

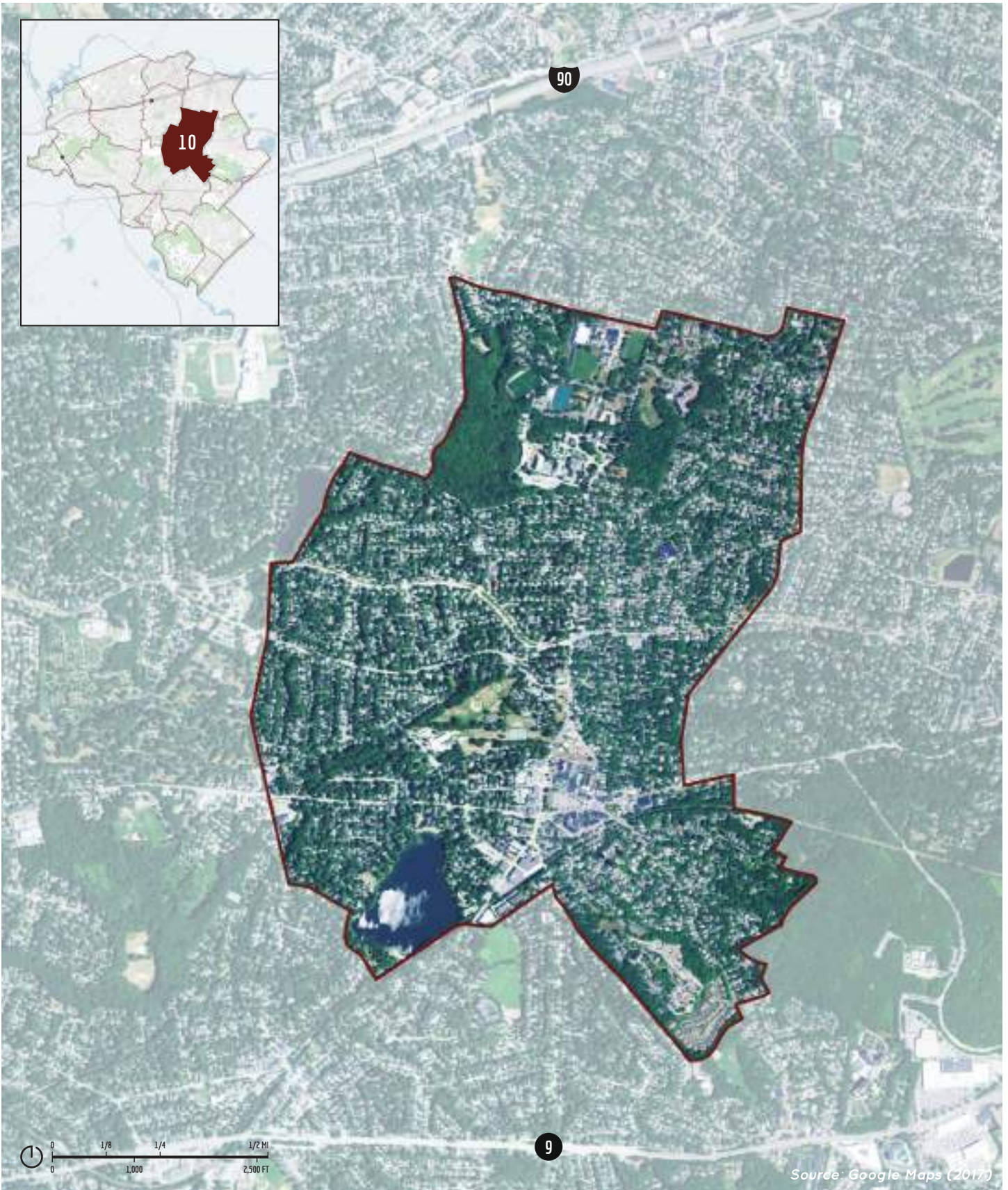
986 total acres

161 intersections per square mile

60% permeable surfaces

\$50k average tax revenue per acre





Aerial photograph of the Newton Centre context-based area.

Context-Based Areas

10. Newton Centre

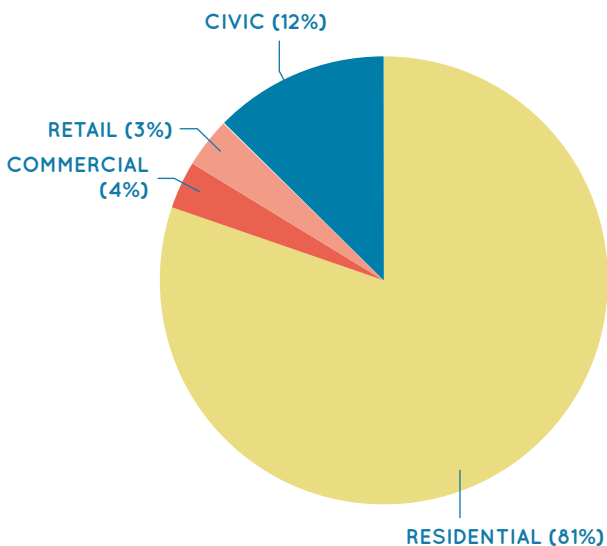
Development Form Metrics by Land Use

Newton Centre is predominantly a residential and institutional area, with 81% of the total development area comprising residential property and 13% being institutional. The remaining 6% is commercial and retail development, nearly all of which is concentrated within the Newton Centre village center in the south of the CBA. The residential mix is

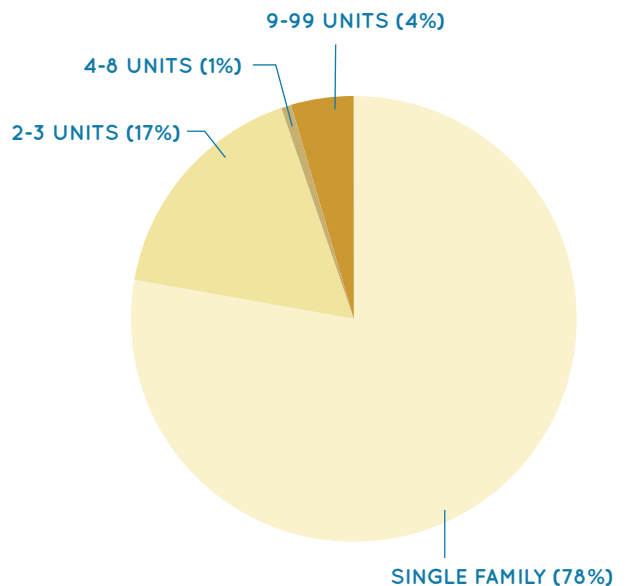
fairly representative of the rest of Newton, with 78% of the total residential square footage comprising single family properties, 17% comprising two and three unit buildings and five percent comprising four to 99 unit buildings. Newton Centre is also home to large institutional campuses in the north and south of the CBA.

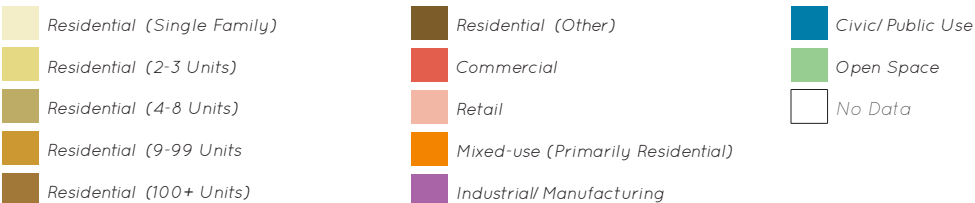
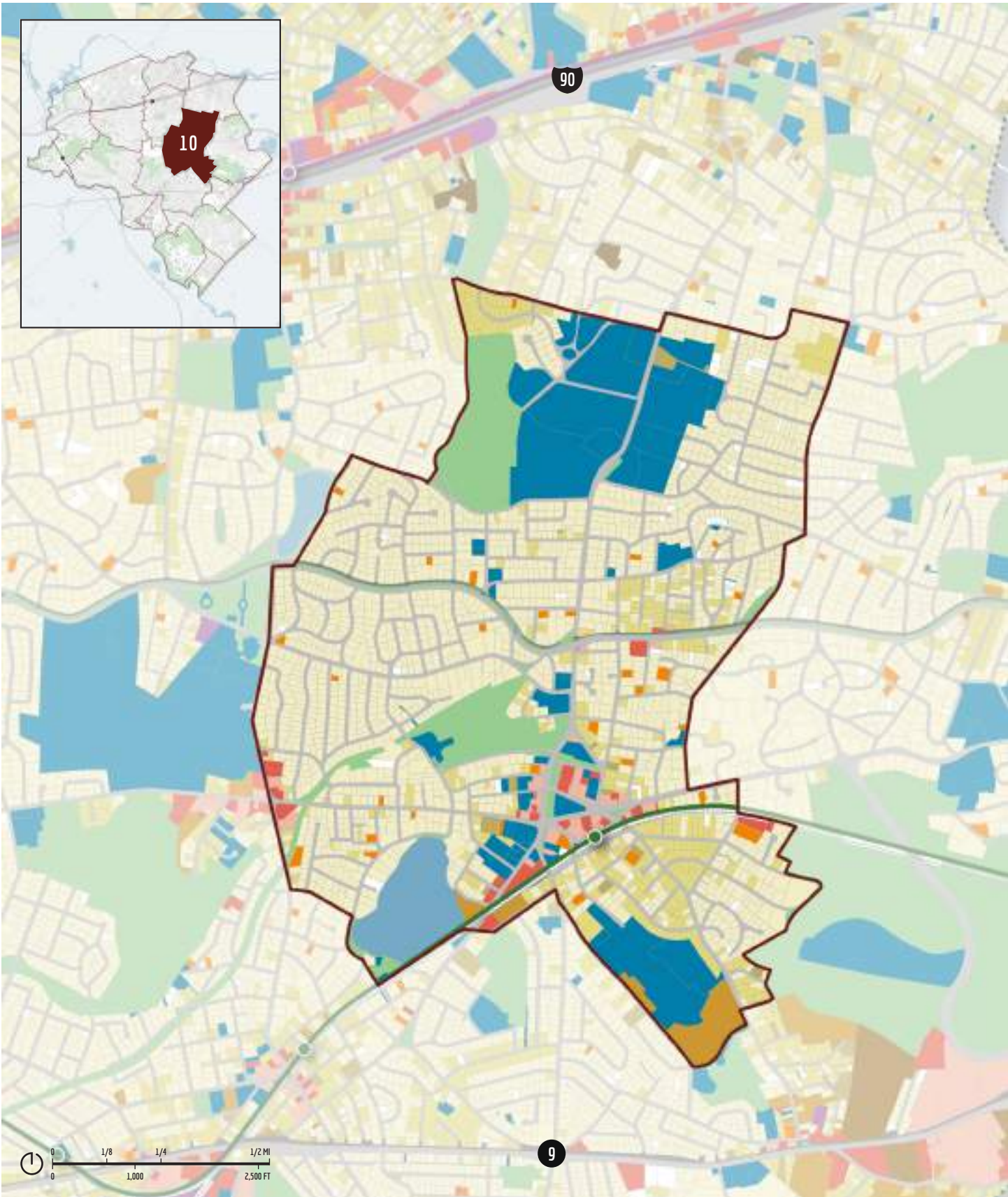
USE CATEGORY	PARCEL COUNT	BUILDING SQ. FOOTAGE (TOTAL)	PARCEL AREA (MED.)	BUILDING SQ. FOOTAGE (MED.)	SETBACK (MED.)	STORIES (MED.)
RESIDENTIAL	2,228	10,888,808 SF	9,251 SF	4,410 SF	27.4'	2.0
SINGLE FAMILY	1,781	8,396,647 SF	9,485 SF	4,382 SF	27.8'	2.0
2-3 UNITS	356	1,824,334 SF	7,868 SF	4,721 SF	25.3'	2.0
4-8 UNITS	10	77,371 SF	16,209 SF	7,394 SF	38.7'	---
9-99 UNITS	4	491,456 SF	53,068 SF	25,264 SF	55.7'	---
100+ UNITS	0	0 SF	---	---	---	---
OTHER	0	0 SF	---	---	---	---
COMMERCIAL	35	462,041 SF	10,579 SF	4,860 SF	8.8'	---
RETAIL	37	451,109 SF	8,735 SF	9,845 SF	0.8'	---
MIXED-USE	1	0 SF	51,770 SF	---	---	---
INDUST./MANUF.	0	0 SF	---	---	---	---
CIVIC/INSTIT.	97	1,626,681 SF	21,579 SF	---	---	---

Total Development Square Footage by Land Use



Total Residential Development Square Footage by Building Type





Context-Based Areas

10. Newton Centre

Development Form Metrics by Street Type

Newton Centre hosts a great diversity of street types and is home to some of the busiest intersections in the city. There are two major arterial convergences - the intersection of Centre Street and Commonwealth Avenue and the intersection of Centre Street and Beacon Street - which forms the heart of the Newton Centre village center. These arterials stretch out from Newton Centre in all the

cardinal directions, providing ample access to the area from Newton's other neighborhoods and surrounding cities. The street layout in this part of the city is largely urban in character, consisting of a tight, regular network of local and collector streets providing ample connectivity and choice for routes to traverse the area.

USE CATEGORY	ARTERIAL ROAD				MAJOR COLLECTOR STREET				MINOR COLLECTOR STREET				LOCAL STREET			
	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.
RESIDENTIAL	5,034	10,550	2.0	29.0'	4,653	9,288	2.0	27.6'	4,357	9,370	2.0	30.1'	4,334	9,106	2.0	27.1'
SINGLE FAMILY	4,980	10,976	2.0	30.1'	4,680	9,280	2.0	27.9'	4,484	10,000	2.0	30.3'	4,295	9,252	2.0	27.5'
2-3 UNITS	5,034	8,323	2.0	24.4'	4,660	9,298	2.0	27.0'	4,262	7,465	2.0	28.8'	4,727	7,770	2.0	24.1'
4-8 UNITS	9,761	50,614	---	86.8'	---	---	---	---	---	---	---	---	7,141	13,364	---	28.3'
9-99 UNITS	24,057	71,710	---	102.3'	440,929	552,226	---	91.0'	---	---	---	---	13,235	33,914	---	10.2'
100+ UNITS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OTHER	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COMMERCIAL	8,803	10,579	---	17.1'	9,072	10,037	---	8.5'	---	---	---	---	3,045	6,895	---	0.7'
RETAIL	10,544	8,909	---	0.8'	16,129	13,380	---	0.7'	---	---	---	---	5,734	6,046	---	0.4'
MIXED-USE	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
INDUST./MANUF.	---	---	---	---	---	---	---	---	---	---	---	---	---	51,770	---	---
CIVIC/INSTIT.	---	24,970	---	---	---	22,454	---	---	---	26,300	---	---	---	15,056	---	---

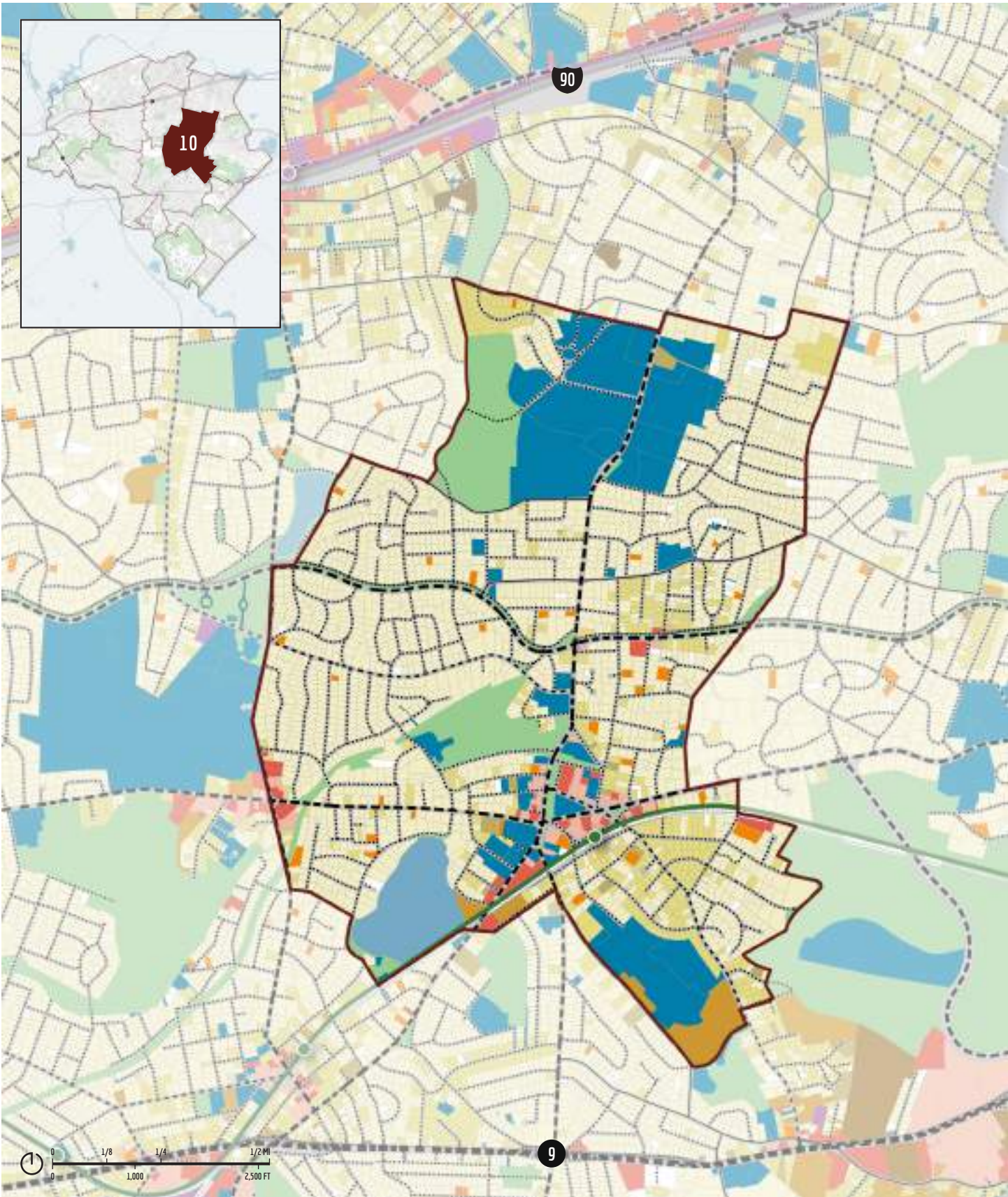
*GSF and parcel area median values measured in square feet.



Shops in Newton Centre (2016)



Newton Centre (1900)



- Residential (Single Family)
- Residential (2-3 Units)
- Residential (4-8 Units)
- Residential (9-99 Units)
- Residential (100+ Units)

- Residential (Other)
- Commercial
- Retail
- Mixed-use (Primarily Residential)
- Industrial/ Manufacturing

- Civic/ Public Use
- Open Space
- No Data

- Street type**
- Arterial
 - Major Collector
 - Minor Collector
 - Local

Context-Based Areas

10. Newton Centre

Character Patterns & Pattern Subsets

Newton Centre contains a substantial mix of traditional development forms, campuses, and open/recreational spaces. The area is known citywide as a primary retail and commercial destination and offers a housing diversity that is reflective of the city at large, including significant traditionally developed neighborhoods, small pockets

of larger manor style development, and instances of multifamily and community-style units. The area is home to one of the MBTA Green Line stops servicing Newton (the Newton Centre station) as well as several institutional campuses in the north and south of the CBA.

Village Center

Newton Centre is one of Newton's largest and most vibrant village centers. Due to its substantial mix of uses, density and development area it has been labeled with the town center pattern subset designation. Uses within the village center include numerous local and national dining options, cafes, several service and retail uses, civic uses, multifamily residential properties, and office space. For the most part, commercial and retail development fronts onto the street directly with little or no front setback and parking is concentrated in public parking lots and private lots behind development.

Campus

Newton Centre has a high concentration of the campus character pattern, with Boston College's law campus, Newton Country Day School, Mt. Alvernia High School, and The Carroll Center for the blind clustered together in the north of the CBA and the former Andover Newton Theological School campus situated between Cypress Street and Langley Road in the south.

Neighborhood

Newton Centre's neighborhoods are largely traditional in development form with sizes ranging from medium to large throughout all neighborhoods. In the north, adjacent to Newton Corner and Chestnut Hill there are pockets of the manor typology, while pockets of multifamily and attached community-style development can be found at the far southern edges of the area. Generally speaking, some of the most dense development can be found within and just outside the village center and MBTA station.



Context-Based Areas

11. Chestnut Hill

Area Overview

The Chestnut Hill CBA is unique in its composition, with a significant amount of open space, half of the Boston College main campus, and almost exclusively suburban style residential development. The area is Newton's easternmost neighborhood, forming the border between Newton and Boston to the northeast and Brookline to the southeast. It is bordered on the north by Newton Corner, on the west by Newton Centre, and to the south by the Route 9 East CBA.

The area is among the least dense in all of Newton as a result of its suburban character and the two large swaths of open space (the Webster conservation area and the golf course to the north). The overall density as measured by intersections per square mile is far below the city's average of 112, at 74. By measure of permeable land, the area is also among Newton's least dense, with 75% of land being permeable.

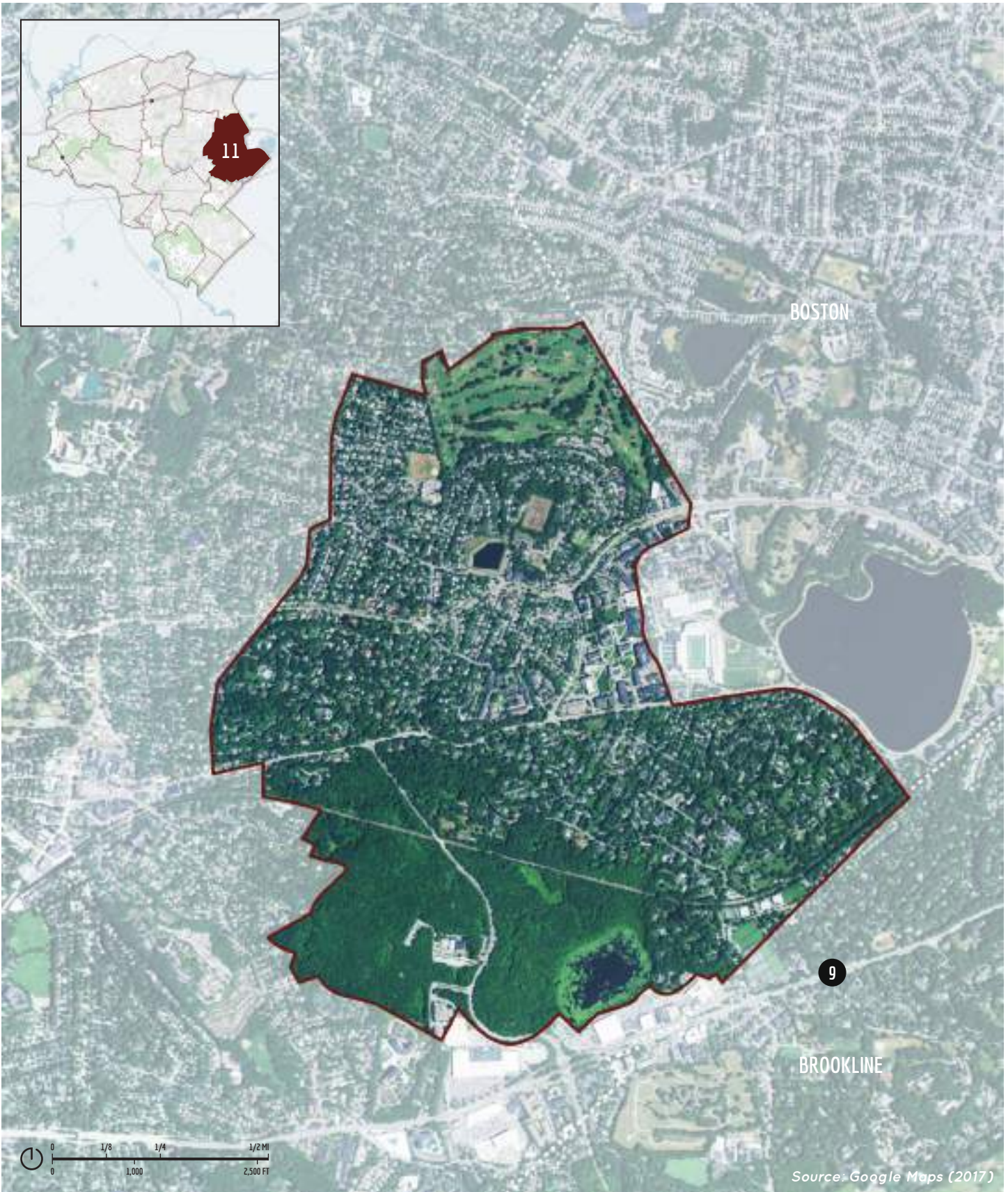
990 total acres

74 intersections per square mile

75% permeable surfaces

\$42k average tax revenue per acre





Aerial photograph of the Chestnut Hill context-based area.

Context-Based Areas

11. Chestnut Hill

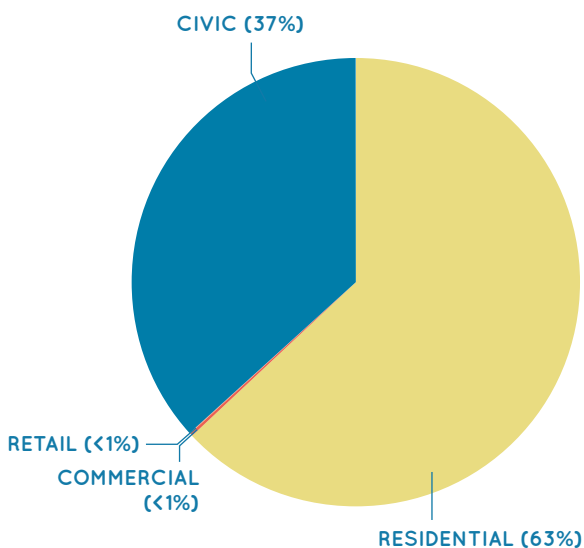
Development Form Metrics by Land Use

Chestnut Hill is a CBA composed nearly entirely of residential and civic/institutional development (63% and 37% respectively, as a measure of total developed square footage). The large institutional footprint is a result of the presence of Boston College's main campus on the eastern edge of the area. The area is also home to significant public

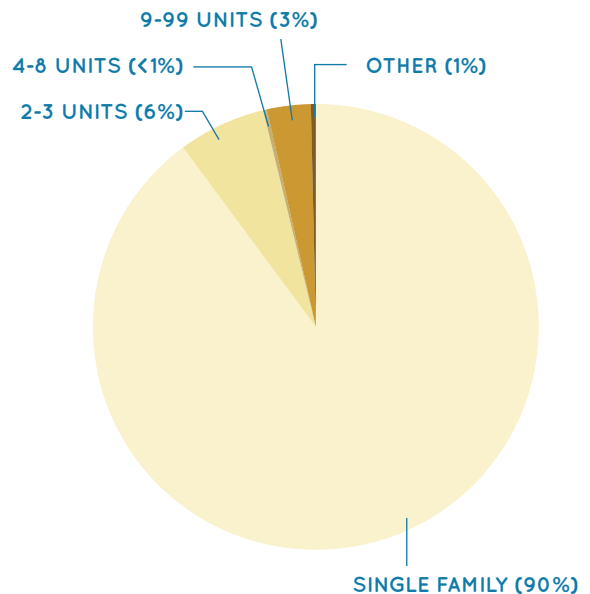
open and recreational spaces, with a large conservation area in the south and one of Newton's four golf courses in the north. With the exception of small pockets of multifamily residential development, the area is predominantly single family, comprising 90% of the total residential square footage within the CBA.

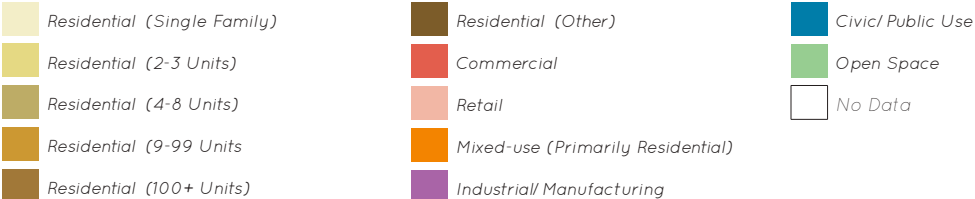
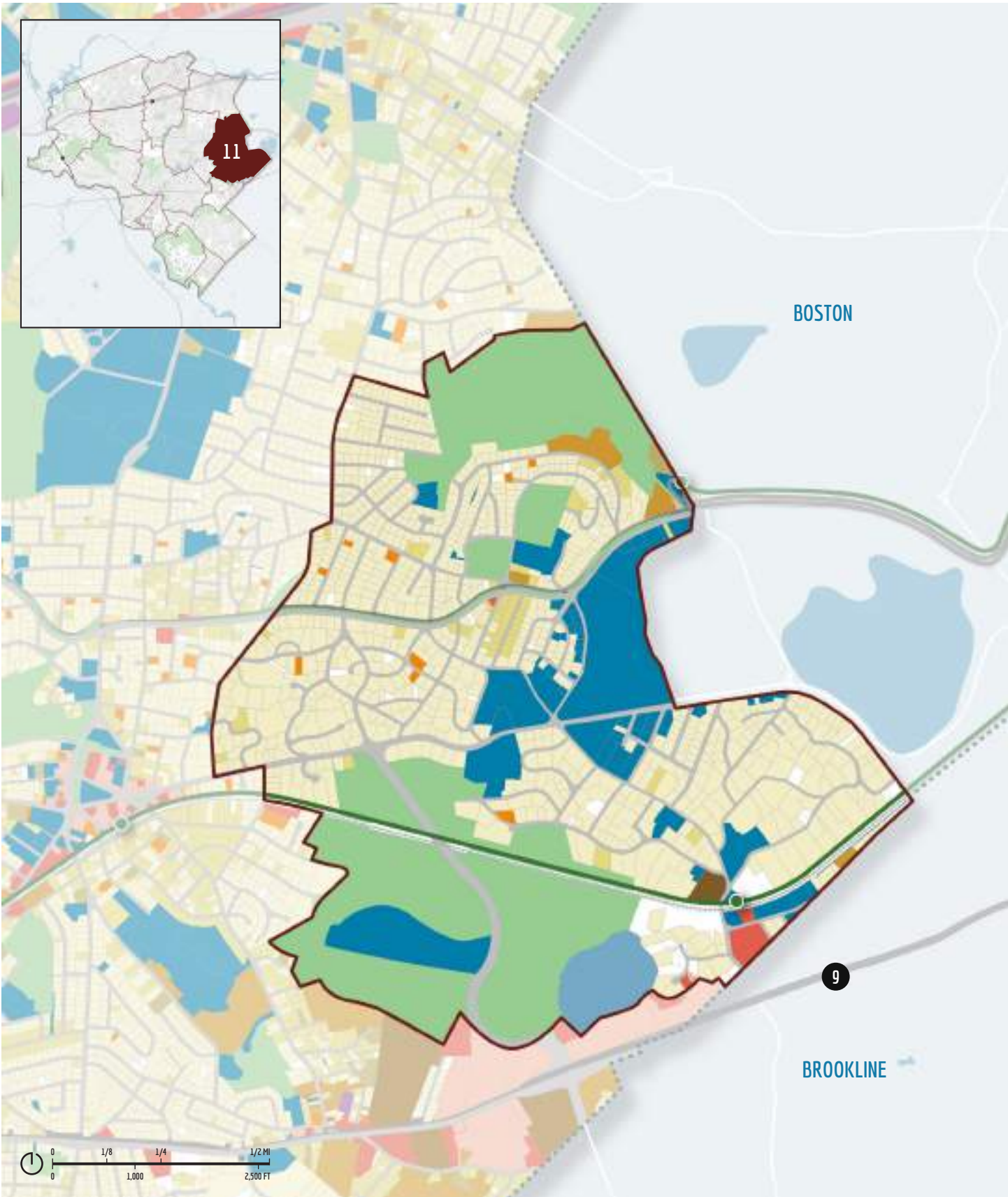
USE CATEGORY	PARCEL COUNT	BUILDING SQ. FOOTAGE (TOTAL)	PARCEL AREA (MED.)	BUILDING SQ. FOOTAGE (MED.)	SETBACK (MED.)	-STORIES (MED.)
RESIDENTIAL	1,042	6,253,704 SF	12,055 SF	5,420 SF	29.4'	2.0
SINGLE FAMILY	915	5,636,076 SF	12,500 SF	5,522 SF	30.0'	2.0
2-3 UNITS	64	397,771 SF	8,687 SF	5,621 SF	24.8'	2.0
4-8 UNITS	1	18,016 SF	69,407 SF	18,016 SF	---	---
9-99 UNITS	8	198,114 SF	18,355 SF	23,390 SF	13.6'	---
100+ UNITS	0	0 SF	---	---	---	---
OTHER	1	22,351 SF	145,150 SF	22,351 SF	158.5'	2.75
COMMERCIAL	5	39,415 SF	27,813 SF	3,576 SF	11.9'	---
RETAIL	1	5,964 SF	7,471 SF	5,964 SF	1.3'	---
MIXED-USE	0	0 SF	---	---	---	---
INDUST./MANUF.	0	0 SF	---	---	---	---
CIVIC/INSTIT.	108	3,635,679 SF	22,704 SF	3,194 SF	17.8'	---

Total Development Square Footage by Land Use



Total Residential Development Square Footage by Building Type





Context-Based Areas

11. Chestnut Hill

Development Form Metrics by Street Type

Chestnut Hill serves as a primary gateway between Boston and Newton. Two regional arterials, Beacon Street and Commonwealth Avenue, link the area along an east-west axis, connecting Chestnut Hill to Newton's other neighborhoods and surrounding cities. While development throughout the CBA is suburban in character, residential areas north of Commonwealth Avenue maintain a traditional

regularized street grid with orthogonal intersections and straight streets. Residential areas south of Commonwealth Avenue have more characteristically suburban network with winding streets, cul-de-sacs, and irregular development lots. The area is also connected to the larger region with two MBTA Green Line stops (Chestnut Hill station to the south and Boston College station to the north).

USE CATEGORY	ARTERIAL ROAD				MAJOR COLLECTOR STREET				MINOR COLLECTOR STREET				LOCAL STREET			
	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.
RESIDENTIAL	5,474	14,300	2.0	37.6'	6,625	17,170	2.0	31.5'	5,340	10,969	2.0	32.6'	5,341	11,179	2.0	28.8'
SINGLE FAMILY	5,421	16,105	2.0	37.9'	6,761	17,246	2.0	31.5'	5,328	10,938	2.0	31.9'	5,429	11,578	2.0	29.5'
2-3 UNITS	6,744	11,293	2.0	30.8'	8,645	15,000	2.0	50.6'	6,830	11,918	2.0	35.9'	5,174	7,704	2.0	24.4'
4-8 UNITS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9-99 UNITS	---	---	---	---	---	---	---	---	---	---	---	---	20,800	16,371	---	14.0'
100+ UNITS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OTHER	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COMMERCIAL	---	---	---	---	18,556	167,165	---	40.4'	---	---	---	---	3,576	27,813	---	1.5'
RETAIL	---	---	---	---	---	---	---	---	---	---	---	---	5,964	7,471	---	1.3'
MIXED-USE	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
INDUST./MANUF.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CIVIC/INSTIT.	7,695	38,886	---	33.9'	18,967	55,710	---	45.9'	---	292,002	---	---	1,560	11,413	---	19.0'

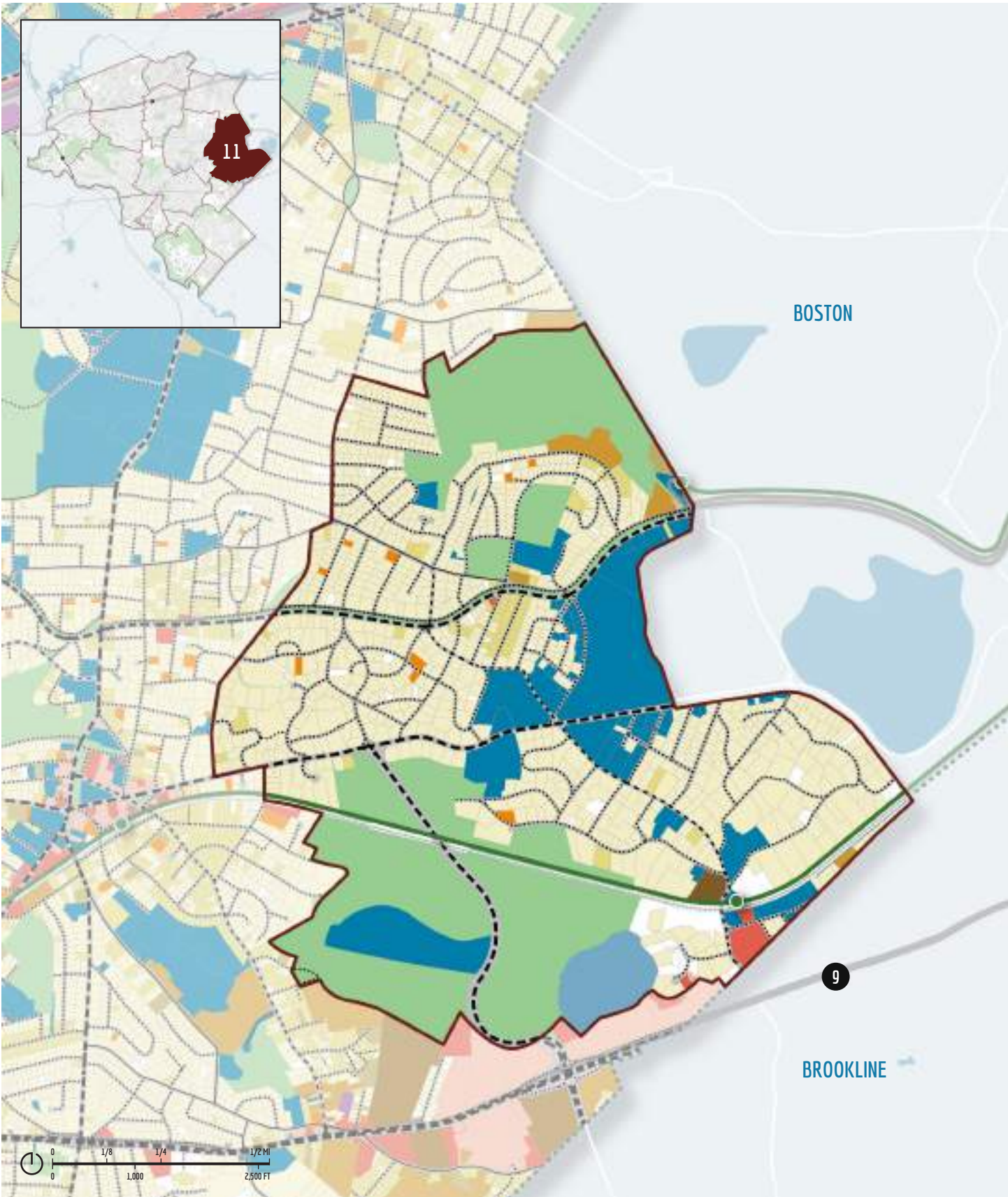
*GSF and parcel area median values measured in square feet.



A residential street in Chestnut Hill (2016)



Farmland in present-day Chestnut Hill (1875)



- Residential (Single Family)
- Residential (2-3 Units)
- Residential (4-8 Units)
- Residential (9-99 Units)
- Residential (100+ Units)

- Residential (Other)
- Commercial
- Retail
- Mixed-use (Primarily Residential)
- Industrial/ Manufacturing

- Civic/ Public Use
- Open Space
- No Data

- Street type**
- Arterial
 - Major Collector
 - Minor Collector
 - Local

Context-Based Areas

11. Chestnut Hill

Character Patterns & Pattern Subsets

With the exception of institutional uses and one small village center, Chestnut Hill's development is entirely residential. The area's residential neighborhoods range in size and scale, though nearly all of the residential development skews towards the larger end of Newton's housing stock spectrum. With the exception of some smaller development

in the north, all the residential development is of the large traditional and manor pattern subsets. One of the area's most significant features is the 240-acre conservation area located in the southwestern corner of the CBA. This is among Newton's most substantial un-programmed public open spaces.

Village Center

Chestnut Hill contains one small area to the north of Boston College along Commonwealth Avenue that could be considered a convenience village center. The area is home to several small dining and fast food establishments, some office space, a convenience store, and some multifamily development that mostly serves college students. This is also the site of the MBTA Green Line's (B branch) western terminus.

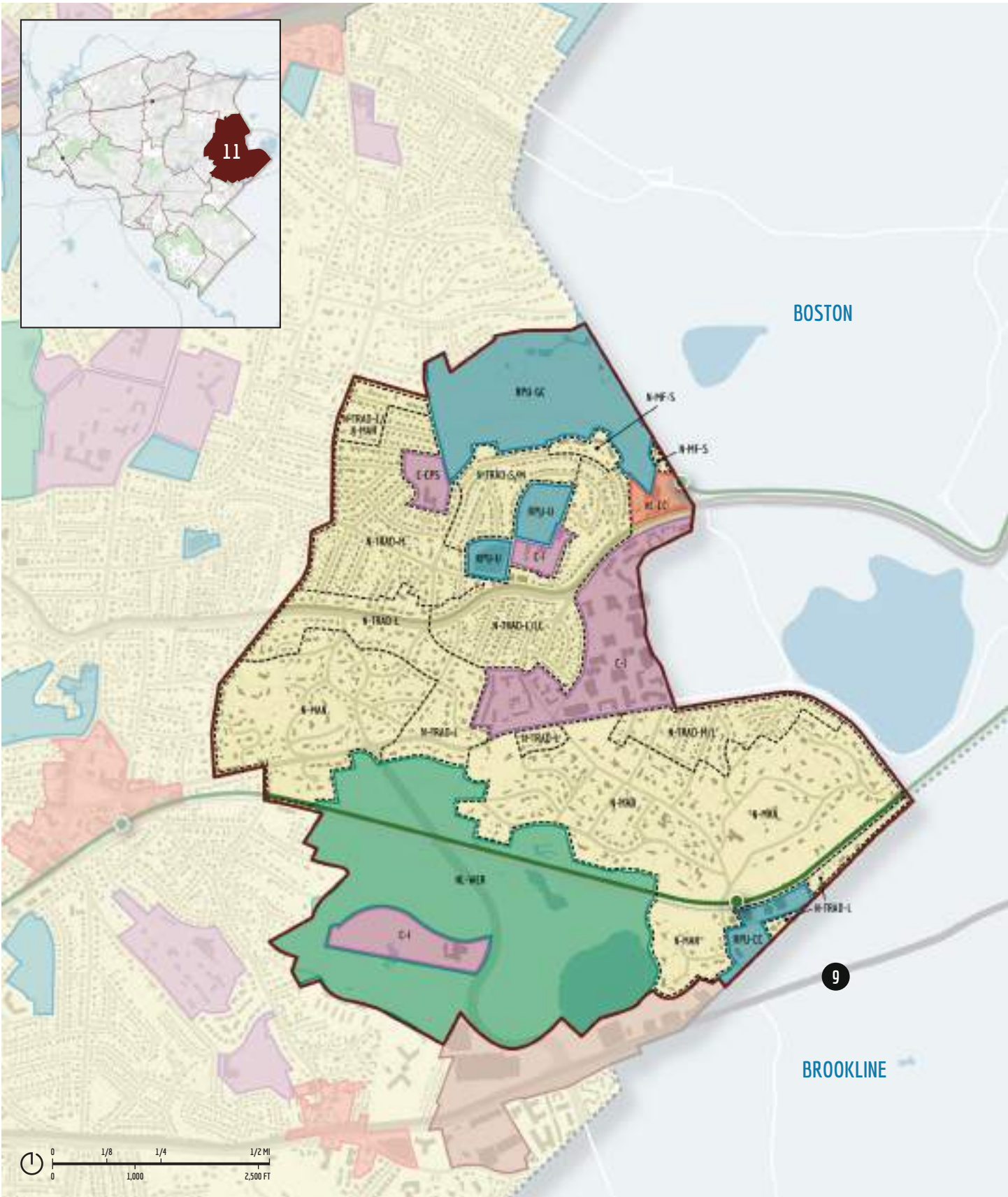
Campus

The Chestnut Hill CBA is home to half of Boston College's main campus and associated residential campuses (the other half is sited in Boston's Brighton neighborhood to the east of the Newton border). In addition to this large and dense higher education campus, the area also hosts a public school to the north and a private academy to the northwest of the Boston College campus.

Neighborhood

With the exception of some small/medium traditional residential development constructed adjacent to the Newton Commonwealth Golf Course in the northernmost portion of the CBA and a few small pockets of small multifamily development, all of the residential development in Chestnut Hill is categorized as large traditional or manor pattern subsets. This collection of large homes on large lots is one of the most numerous in the city and creates a distinctly suburban scale for the neighborhood.





- Neighborhood
- Village Center
- Commercial Cluster
- Campus
- Recreation & Public Use
- Natural/Landscape

Context-Based Areas

12. Route 9 East

Area Overview

The Route 9 East CBA includes a wide variety of land uses and development forms in a relatively small land area. Ranging from manor estates to high-density apartment buildings to a suburban shopping mall, this area of Newton is unlike any other area of the city. The southern boundary of this CBA is the Brookline town line, and the CBA is bounded on the north by the Chestnut Hill CBA, to the west by the Newton Highlands CBA, and to the southwest by the Oak Hill CBA.

Given its large residential and commercial parcels, the Route 9 East CBA has one of the lowest densities as measured by intersections per square mile of any other in the city (32). While the area has relatively extensive undeveloped lands on single family residential parcels to the west, the east is largely built out at a high density, bringing the area's percentage of permeable surfaces to an average rate of 55%.

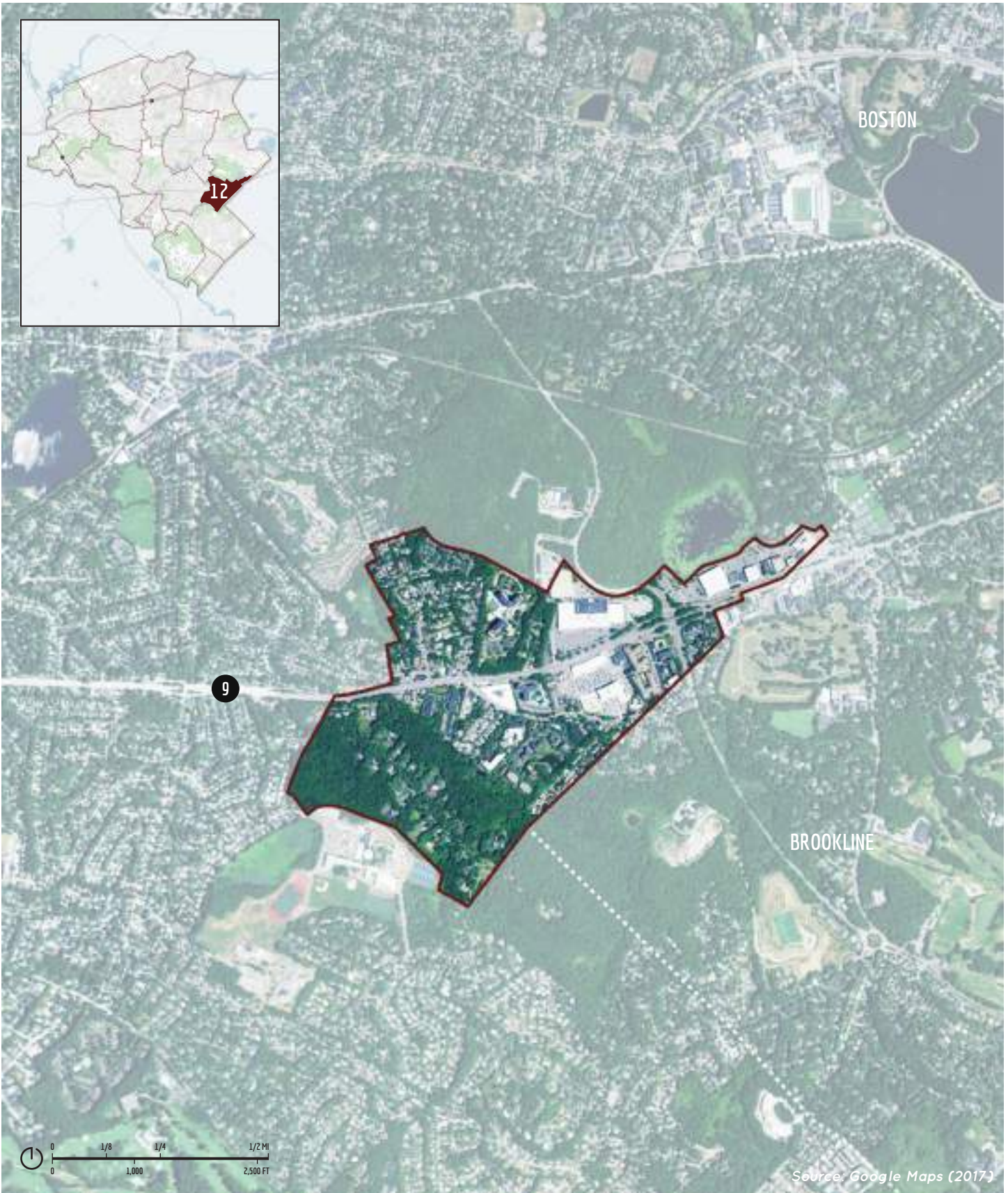
299 total acres

32 intersections per square mile

55% permeable surfaces

\$48k average tax revenue per acre





Aerial photograph of the Route 9 East context-based area.

Context-Based Areas

12. Route 9 East

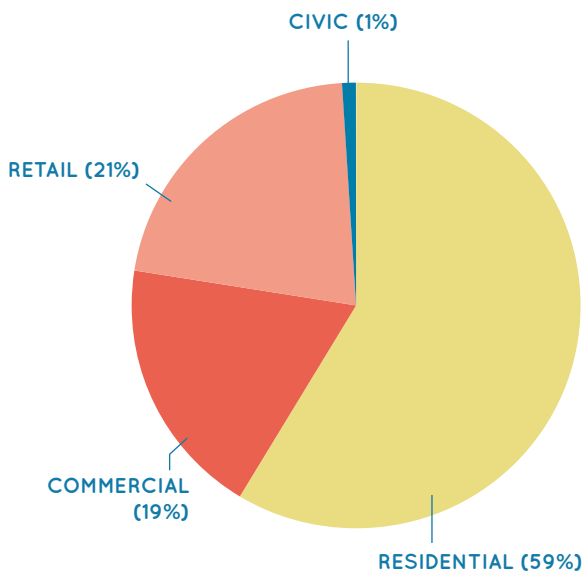
Development Form Metrics by Land Use

The Route 9 East CBA is largely defined by a broad mix of residential typologies and by the retail developments along Route 9. Given the intensity of the The Shops at Chestnut Hill and The Street at Chestnut Hill (The Street) developments, this area has the highest concentration of retail square footage of any area of the city, at 22% of total development square footage. The area also has a higher-than-normal

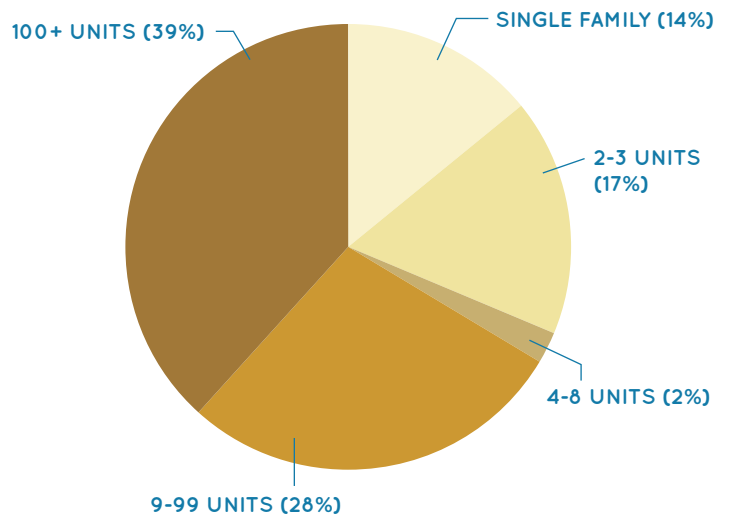
percentage of commercial square footage, which can be attributed to several office developments along Route 9. In addition to general land use diversity, this area also has the largest variety of residential typologies, with 67% of all residential square footage comprising developments of nine or more units, and nearly 40% of all residential square footage belonging to projects of 100+ units.

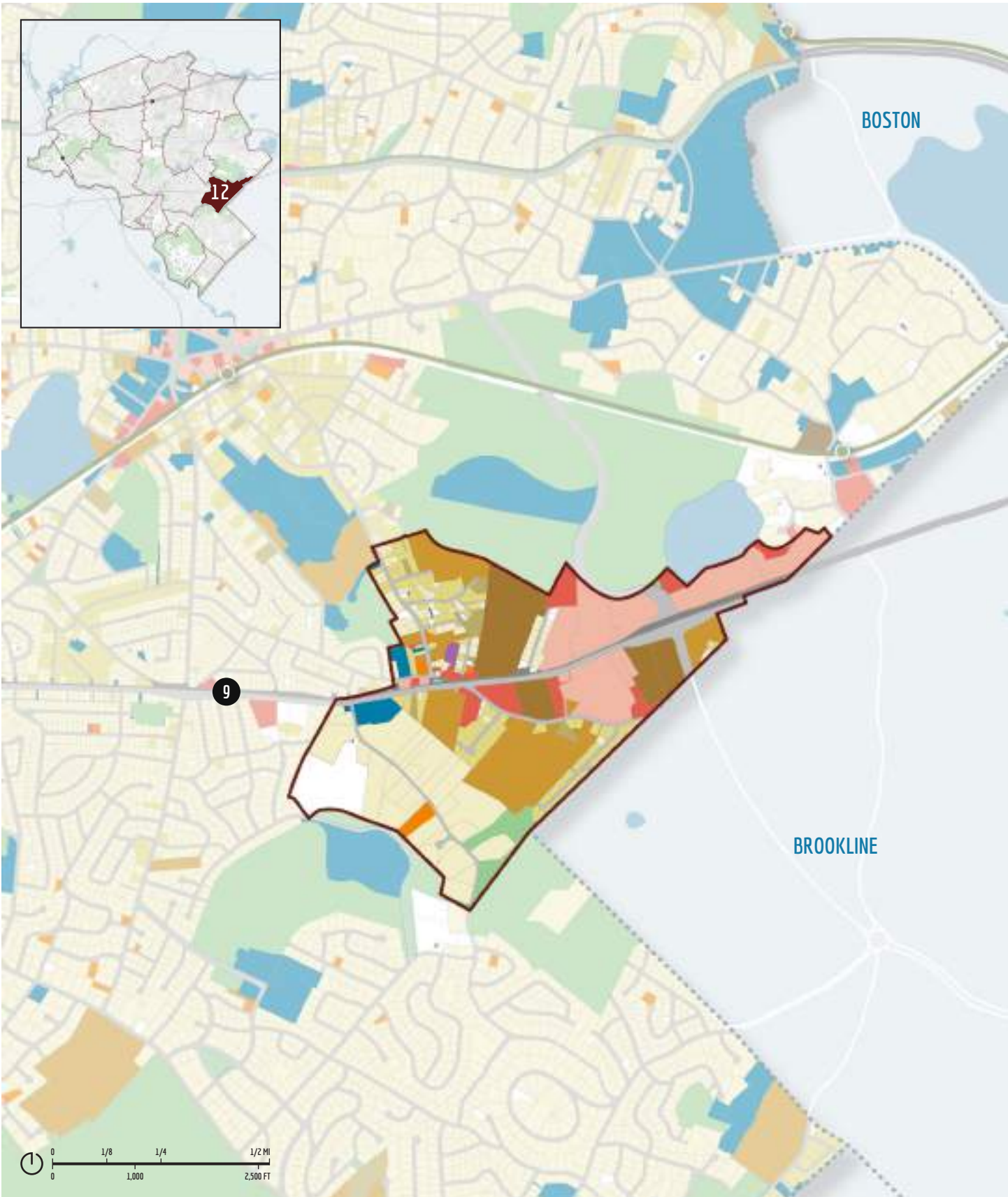
USE CATEGORY	PARCEL COUNT	BUILDING SQ. FOOTAGE (TOTAL)	PARCEL AREA (MED.)	BUILDING SQ. FOOTAGE (MED.)	SETBACK (MED.)	STORIES (MED.)
RESIDENTIAL	243	3,048,044 SF	10,005 SF	4,817 SF	25.8'	1.75
SINGLE FAMILY	89	427,886 SF	8,568 SF	3,231 SF	27.0'	2.0
2-3 UNITS	108	521,809 SF	10,057 SF	4,814 SF	25.0'	2.0
4-8 UNITS	7	69,463 SF	30,000 SF	11,776 SF	34.8'	---
9-99 UNITS	14	851,842 SF	60,090 SF	31,688 SF	85.4'	---
100+ UNITS	4	1,161,209 SF	198,633 SF	252,182 SF	81.9'	---
OTHER	0	0 SF	---	---	---	---
COMMERCIAL	18	980,539 SF	8,464 SF	3,148 SF	1.7'	---
RETAIL	11	1,116,735 SF	45,240 SF	14,898 SF	34.5'	---
MIXED-USE	1	0 SF	---	---	---	---
INDUST./MANUF.	1	0 SF	38,139 SF	---	---	---
CIVIC/INSTIT.	11	52,008 SF	4,887 SF	---	---	---














Total Development Square Footage by Land Use



Total Residential Development Square Footage by Building Type





- | | | |
|--|---|--|
|  Residential (Single Family) |  Residential (Other) |  Civic/Public Use |
|  Residential (2-3 Units) |  Commercial |  Open Space |
|  Residential (4-8 Units) |  Retail |  No Data |
|  Residential (9-99 Units) |  Mixed-use (Primarily Residential) | |
|  Residential (100+ Units) |  Industrial/Manufacturing | |

Context-Based Areas

12. Route 9 East

Development Form Metrics by Street Type

Route 9 East is divided in half by Route 9. This primary regional arterial serves as a gateway to Newton from the east and has attracted a substantial clustering of retail and commercial uses, foremost among them The Shops at Chestnut Hill. In addition to this major thoroughfare, the area is also served by the Hammond Pond Parkway coming in from Chestnut Hill to the north and connecting through

to Brookline just south of Route 9 East. The remainder of the streets in this area consist of three collector streets traversing from north to south through the residential neighborhoods and a series of disconnected local roads serving the residential developments clustered to the north and south of Route 9.

USE CATEGORY	ARTERIAL ROAD				MAJOR COLLECTOR STREET				MINOR COLLECTOR STREET				LOCAL STREET			
	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.
RESIDENTIAL	5,054	23,829	---	14.4'	3,592	10,320	2.0	19.2'	6,629	36,713	2.0	45.6'	3,966	8,500	1.5	24.6'
SINGLE FAMILY	2,740	5,869	2.0	6.5'	3,048	9,150	2.0	26.4'	7,161	51,544	2.0	71.3'	2,940	7,507	1.5	24.6'
2-3 UNITS	5,054	13,746	---	14.4'	4,325	10,232	2.0	19.0'	5,248	10,070	2.0	29.9'	4,799	10,004	2.0	25.0'
4-8 UNITS	3,866	23,829	---	8.0'	---	---	---	---	13,893	31,483	---	92.3'	11,776	30,000	---	34.8'
9-99 UNITS	45,935	114,321	---	43.0'	19,420	17,442	---	19.4'	107,284	192,268	---	102.9'	129,924	358,428	---	231.1'
100+ UNITS	252,182	198,633	---	81.9'	---	---	---	---	---	---	---	---	---	---	---	---
OTHER	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COMMERCIAL	6,755	8,152	---	4.0'	1,252	6,735	---	0.6'	20,754	29,086	---	28.8'	264,843	139,173	---	79.3'
RETAIL	14,332	42,952	---	22.5'	---	---	---	---	---	---	---	---	200,729	259,005	---	34.5'
MIXED-USE	---	21,523	---	---	---	---	---	---	---	---	---	---	---	---	---	---
INDUST./MANUF.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CIVIC/INSTIT.	---	4,887	---	33.7'	2,621	6,080	3.0	4.0'	15,132	128,929	---	40.6'	---	---	---	---

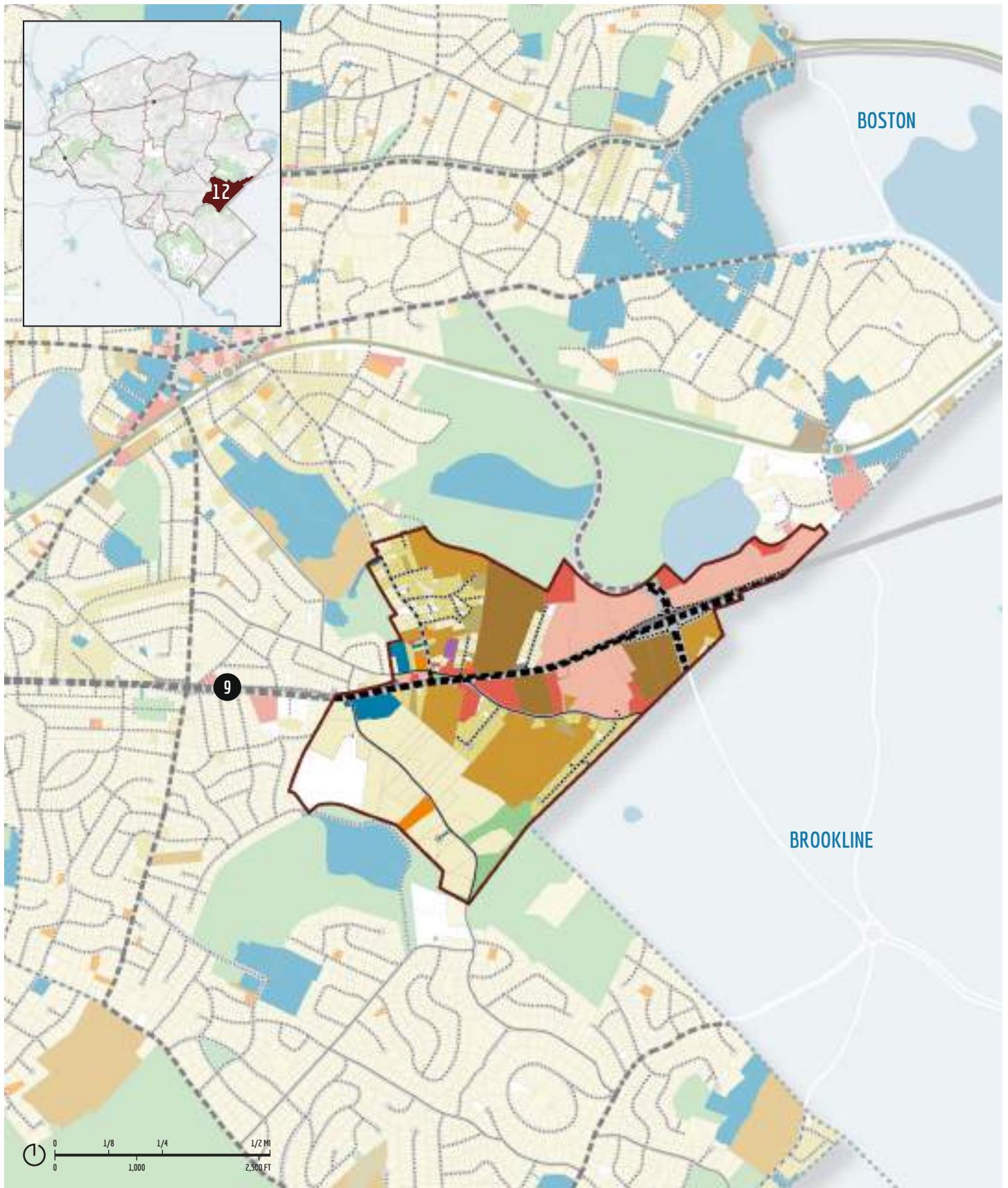
*GSF and parcel area median values measured in square feet.



Shops on Langley Road



Apartment building on Route 9 East



Context-Based Areas

12. Route 9 East

Character Patterns & Pattern Subsets

The most significant features of the Route 9 East CBA are the massive retail developments along Route 9 and the similarly massive multifamily residential developments tucked behind them. The Shops at Chestnut Hill and The Street developments, constructed in the mid-20th century and early 21st century, respectively, serve as major regional retail centers, and apartment buildings of the scale present

in this CBA are uncommon across the rest of Newton. In addition to these larger footprint uses, the CBA consists of an uncommon mix of small-scale multifamily residential developments to the north of Route 9, a string of large-lot single family residential development along Dudley Road, and a small convenience village center at the intersection of Route 9 and Langley Road.

Village Center

Route 9 East contains one convenience village center at the intersection of Route 9 and Langley Road. This village center (unlike the retail developments to the east) primarily serves a local population and consists of small local shops, eateries, general service uses, offices, auto-service stations and some multifamily development. Retail development is almost uniformly single story while residential and office development are as high as three and four stories.

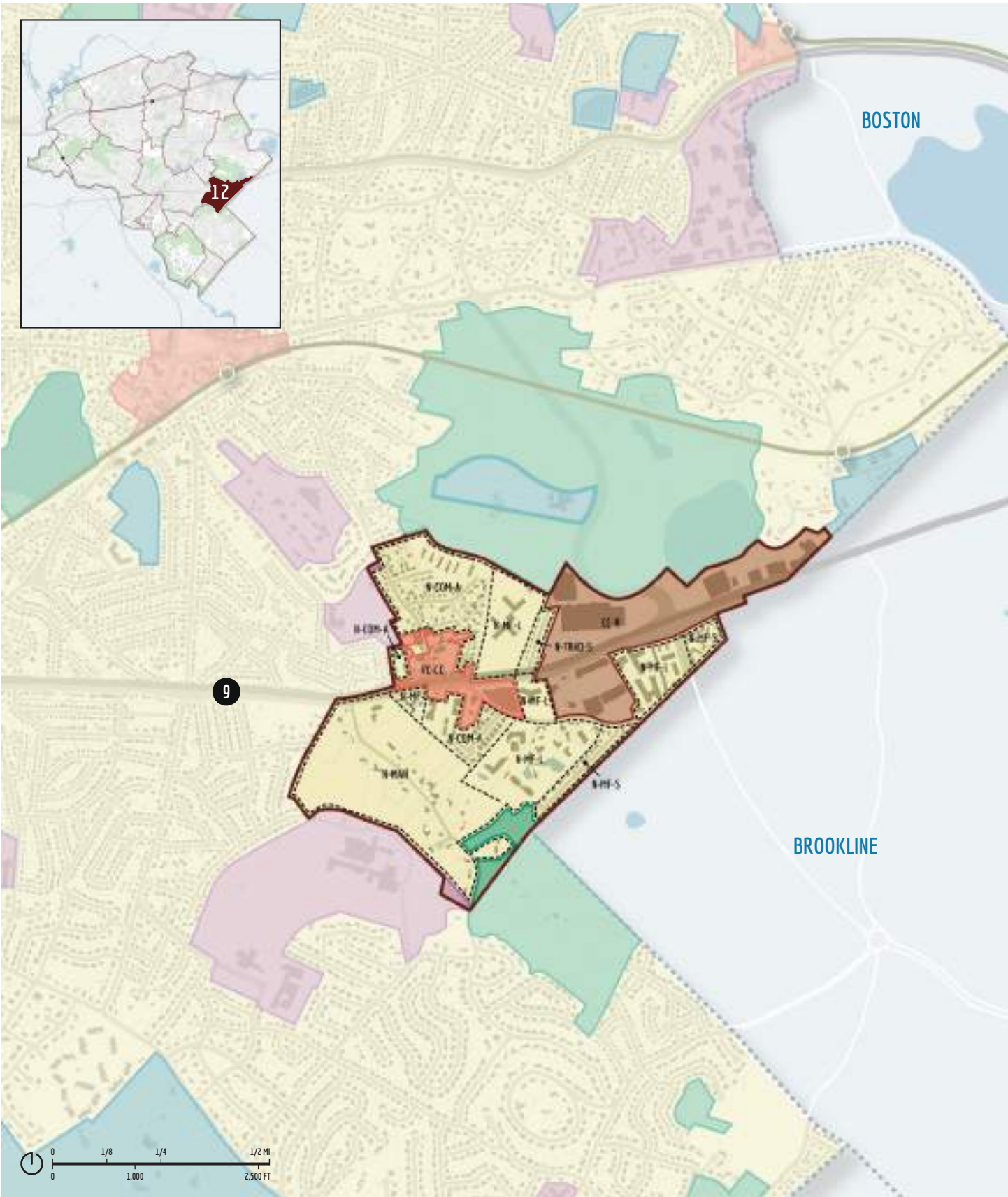
Commercial Cluster

Route 9 East is home to one of Newton's two largest retail commercial clusters (the other being Needham Street in CBA 14). There are three main typologies present in this commercial cluster. The first, and oldest, is The Shops at Chestnut Hill located north of Route 9 and west of the Hammond Pond Parkway. It presents as a large suburban-style mall with adjoining parking lots and a parking structure. The second is the The Street development to the east of The Shops at Chestnut Hill. This development is a more modern retail typology, commonly referred to as a lifestyle center, taking the form of an urban street and prioritizing the pedestrian experience over the automobile (parking is concentrated in the back of the development). The third is a strip mall-style development containing a grocery store and other shops with a central parking lot.

Neighborhood

The various neighborhood character patterns in the Route 9 East CBA take on a wide variety of forms. Large multifamily apartment and condominium complexes straddle Route 9, while smaller multifamily structures occupy the areas north of the village center along Langley Road, and large-lot single family developments of the manor subset line Dudley Road to the south.





- Neighborhood
- Recreation & Public Use
- Village Center
- Natural/Landscape
- Commercial Cluster
- Campus

Context-Based Areas

13. Newton Upper Falls

Area Overview

The Newton Upper Falls CBA is one of the areas in Newton with a rich industrial past due to its adjacency to the Charles River and the early presence of freight rail lines. The area is bounded on the north by the Waban and Newton Highlands CBAs, to the east and south by the Needham Street corridor, to the west by the Charles River, which also serves as the border between Newton and Needham/Wellesley. The area maintains aspects of its industrial past near the river and is largely residential everywhere else.

This small CBA is moderately dense with residential and other uses and contributes a unique mix of architectural typologies to Newton. As measured by intersection density, the area's development is more dense than the city's average, with 160 intersections per square mile (48 more intersections per square mile than the average). The area is also dense by measure of the percentage of permeable surfaces, with approximately 64% of the total surface area counted as permeable.

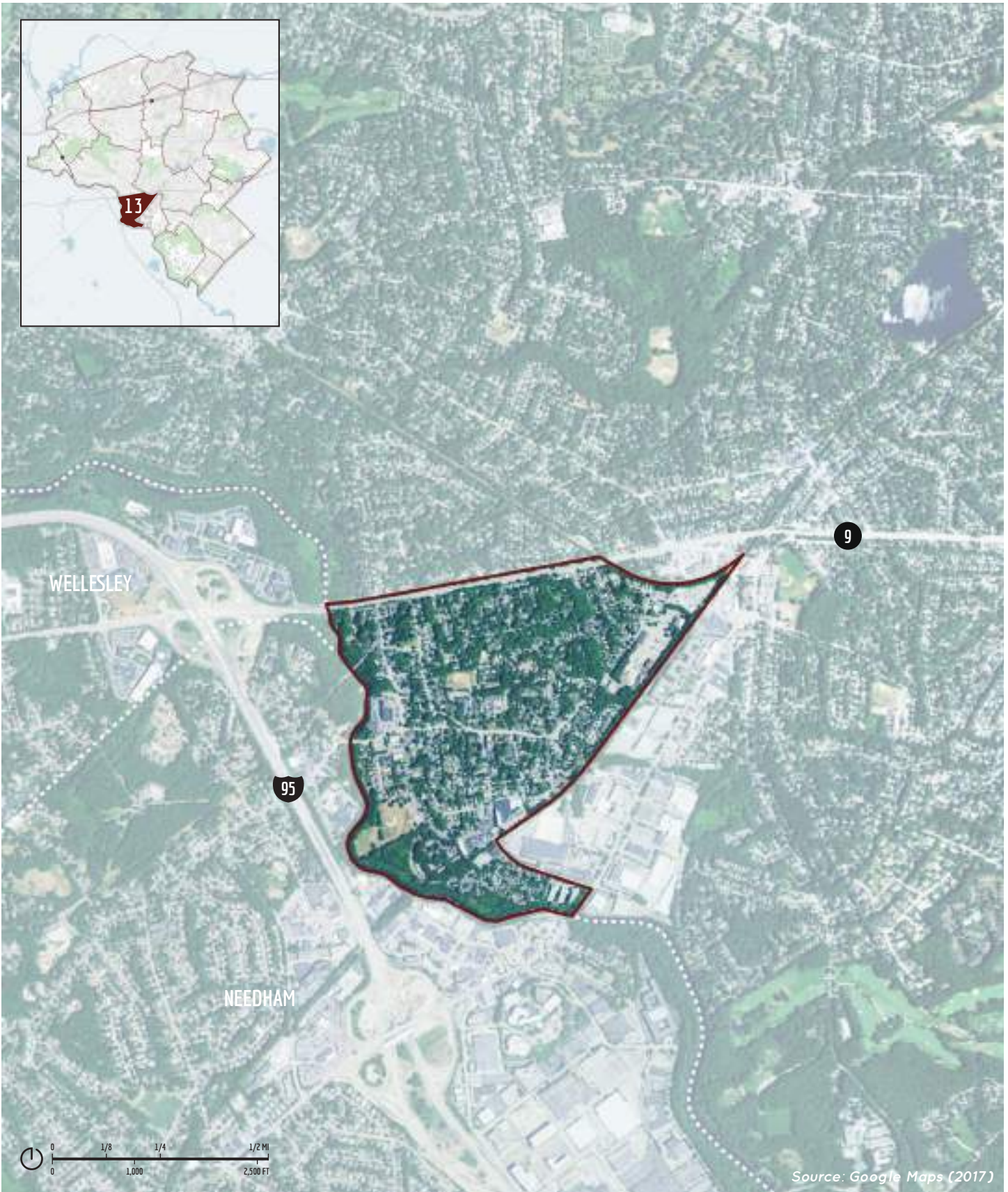
350 total acres

160 intersections per square mile

64% permeable surfaces

\$31k average tax revenue per acre





Aerial photograph of the Upper Falls context-based area.

Context-Based Areas

13. Newton Upper Falls

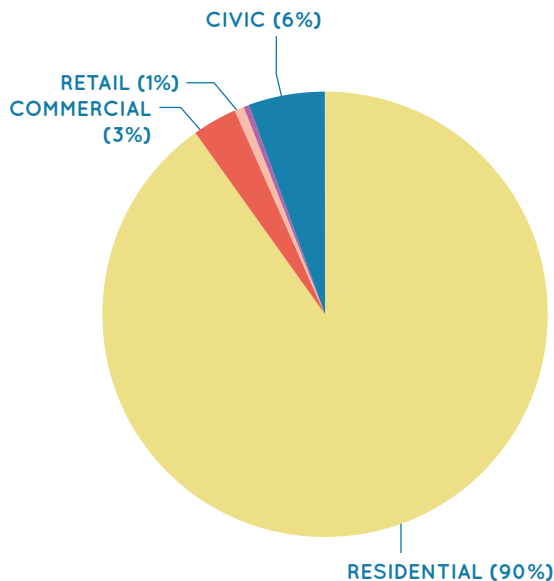
Development Form Metrics by Land Use

The Newton Upper Falls CBA has a rich mix of land uses, largely concentrated in the southern half of the area, while the north comprises predominantly single family and small-scale multifamily residential development. The overall development mix includes 83% residential, 6% civic/institutional, 4% industrial/manufacturing, and 7%

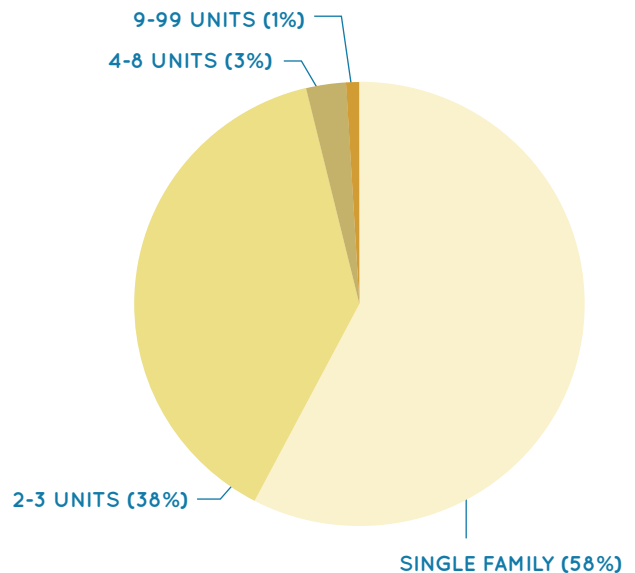
commercial and retail as measured by total development square footage. The residential product mix is fairly diverse relative to the rest of the city, with only 54% of the total residential square footage comprising single family units, 35% being two and three family homes, and the remaining 11% consisting of developments with four to 99 units.

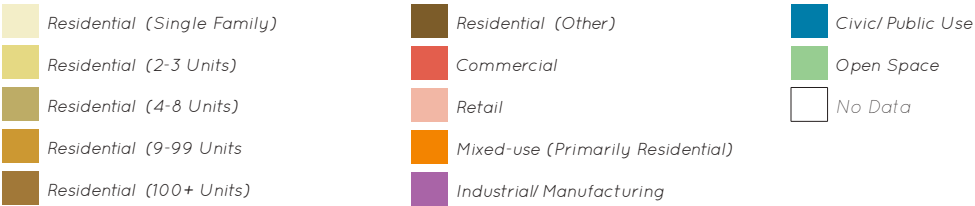
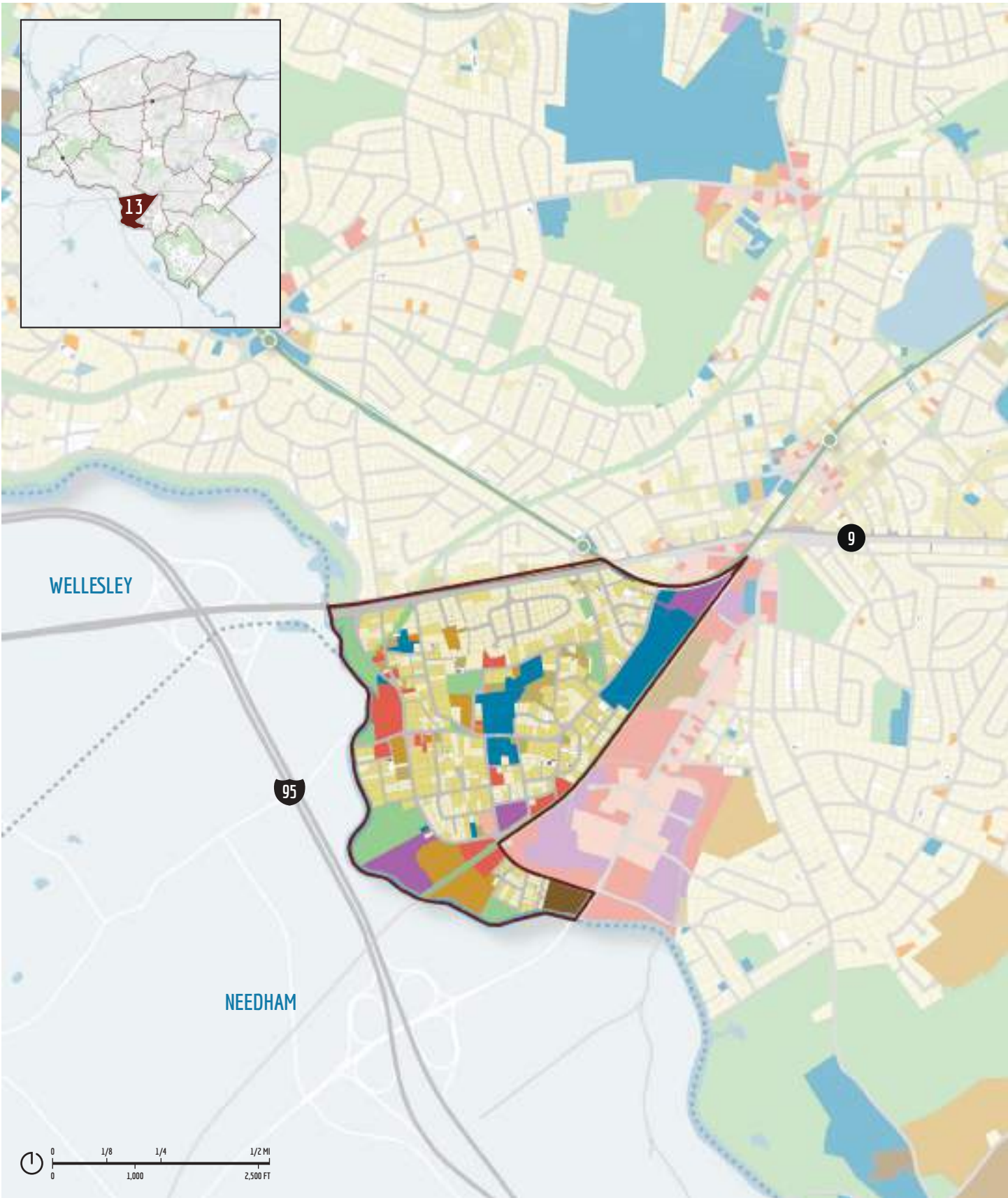
USE CATEGORY	PARCEL COUNT	BUILDING SQ. FOOTAGE (TOTAL)	PARCEL AREA (MED.)	BUILDING SQ. FOOTAGE (MED.)	SETBACK (MED.)	STORIES (MED.)
RESIDENTIAL	666	2,668,553 SF	7,285 SF	3,263 SF	18.0'	2.0
SINGLE FAMILY	364	1,082,743 SF	6,750 SF	2,833 SF	20.1'	2.0
2-3 UNITS	243	1,151,224 SF	9,050 SF	4,447 SF	16.5'	2.0
4-8 UNITS	18	165,119 SF	10,940 SF	6,033 SF	17.8'	---
9-99 UNITS	6	260,758 SF	65,057 SF	45,216 SF	39.1'	---
100+ UNITS	---	---	---	---	---	---
OTHER	---	---	---	---	---	---
COMMERCIAL	24	385,658 SF	11,543 SF	2,279 SF	2.8'	---
RETAIL	5	37,819 SF	11,000 SF	6,000 SF	5.0'	---
MIXED-USE	3	181,134 SF	---	---	---	---
INDUST./MANUF.	0	0 SF	---	6,208 SF	13.7'	---
CIVIC/INSTIT.	41	254,581 SF	17,100 SF	---	---	---

Total Development Square Footage by Land Use



Total Residential Development Square Footage by Building Type





Context-Based Areas

13. Newton Upper Falls

Development Form Metrics by Street Type

Access to and from the Newton Upper Falls CBA is fairly limited due to the natural and infrastructural constraints that define its borders. To the north, the neighborhood is cut off from Waban and Newton Highlands by the MBTA Green Line right-of-way. To the east, Upper Falls is separated physically and in terms of access from the Needham Street corridor by a freight rail right-of way, and

the area is physically separated from the neighboring town of Needham by the Charles River. A total of nine roadway connections connect the Newton Upper Falls CBA to its surrounding towns and neighborhoods. One such roadway is the major regional arterial, Route 9. Collector and local streets present within the area are densely connected, though erratically organized, lacking any formal structure.

USE CATEGORY	ARTERIAL ROAD				MAJOR COLLECTOR STREET				MINOR COLLECTOR STREET				LOCAL STREET			
	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.
RESIDENTIAL	3,284	7,902	1.75	18.5'	3,918	7,691	1.75	17.9'	---	---	---	---	3,183	7,213	2.0	17.9'
SINGLE FAMILY	2,912	6,750	1.75	19.6'	2,498	5,091	1.75	16.7'	---	---	---	---	2,842	7,031	2.0	20.4'
2-3 UNITS	5,761	13,537	2.0	13.7'	4,478	10,090	2.0	22.6'	---	---	---	---	4,347	8,100	2.0	16.0'
4-8 UNITS	---	---	---	---	5,248	10,798	---	13.2'	---	---	---	---	15,220	29,147	---	43.9'
9-99 UNITS	---	---	---	---	52,658	128,765	---	126.8'	---	---	---	---	20,826	48,349	---	---
100+ UNITS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OTHER	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COMMERCIAL	147,760	148,104	62.8'	---	2,757	11,044	---	---	---	---	---	---	1,800	20,000	---	5.6'
RETAIL	---	---	---	---	5,798	7,373	---	4.8'	---	---	---	---	17,138	22,955	---	5.0'
MIXED-USE	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	13.7'
INDUST./MANUF.	---	---	---	---	3,104	221,000	---	122.5'	---	---	---	---	174,926	93,480	---	---
CIVIC/INSTIT.	---	4,620	---	---	---	27,015	---	---	---	103,083	---	---	---	9,560	---	---

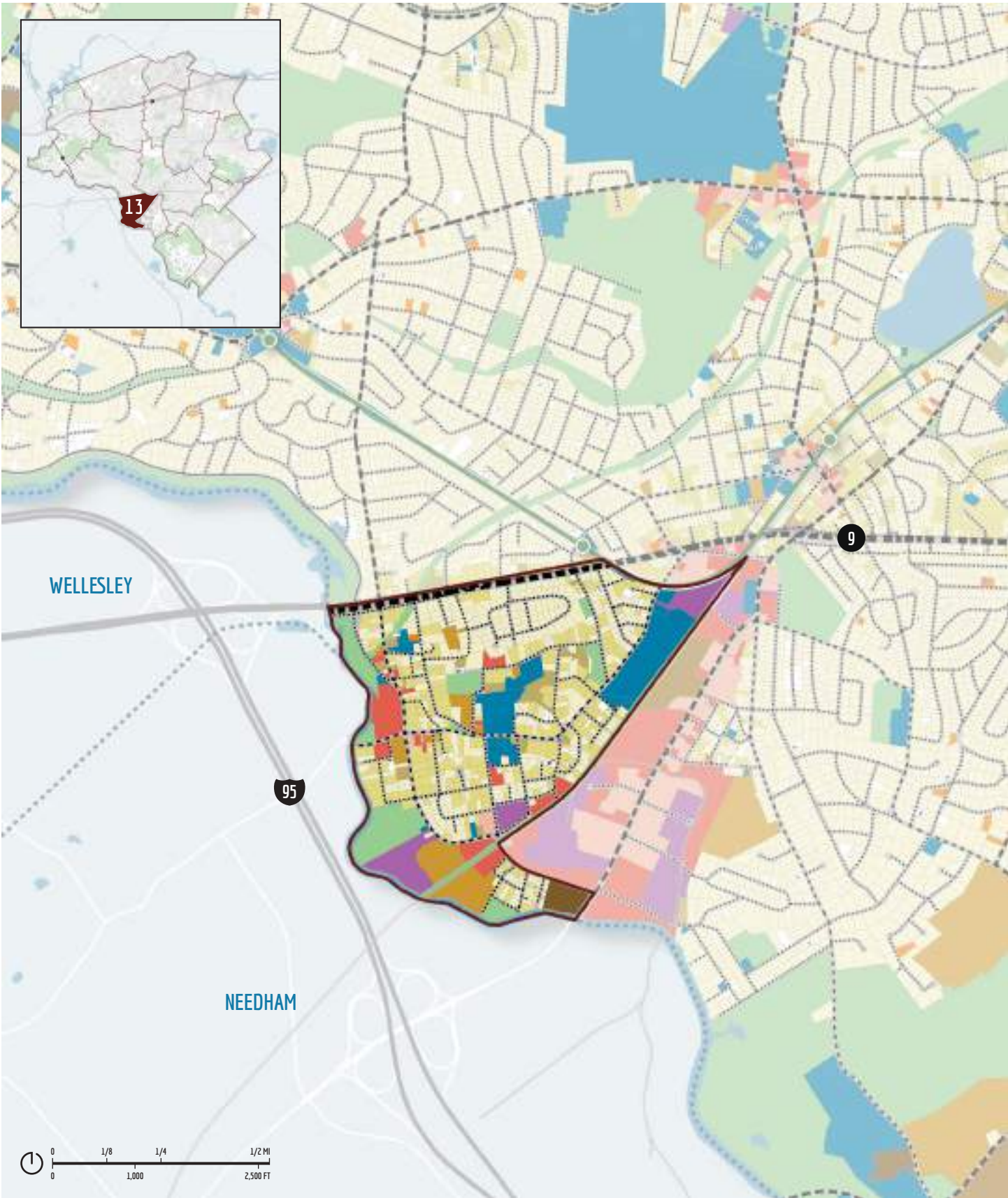
*GSF and parcel area median values measured in square feet.



Retail buildings in Upper Falls (2016)



Mill Buildings in Upper Falls (1895)



- Residential (Single Family)
- Residential (2-3 Units)
- Residential (4-8 Units)
- Residential (9-99 Units)
- Residential (100+ Units)

- Residential (Other)
- Commercial
- Retail
- Mixed-use (Primarily Residential)
- Industrial/ Manufacturing

- Civic/ Public Use
- Open Space
- No Data

- Street type**
- Arterial
 - Major Collector
 - Minor Collector
 - Local

Context-Based Areas

13. Newton Upper Falls

Character Patterns & Pattern Subsets

The Newton Upper Falls CBA has a fine-grained set of land use and development patterns within its roughly 300-acre boundary. The predominant land use is residential—as is the case with Newton generally—but it also includes village center, commercial cluster, campus, recreation and public use, and natural/landscape patterns as well. Throughout

the area, pattern subsets are small assemblages of similar building types and uses, none of which define large areas of consistent patterns. Commercial uses are largely clustered on the east and south sides along the Needham Street corridor and to the west along the river, while residential and public uses are located to the north and west.

Village Center

The two village center character patterns in Newton Upper Falls consist of small clusters of local retail and dining establishments catering to a neighborhood population.

Commercial Cluster

In keeping with the fine-grained patterns present in this CBA, the three commercial clusters present in the area are small in size. These consist of two legacy industrial centers. One is located along the Charles River and has a distinctly industrial layout, currently used for retail, offices, and warehouses. The second is located along the freight rail right-of-way, across from the Needham Street corridor in the far eastern edge of the area. The third commercial cluster is a small strip of local retail, mainly consisting of restaurants.

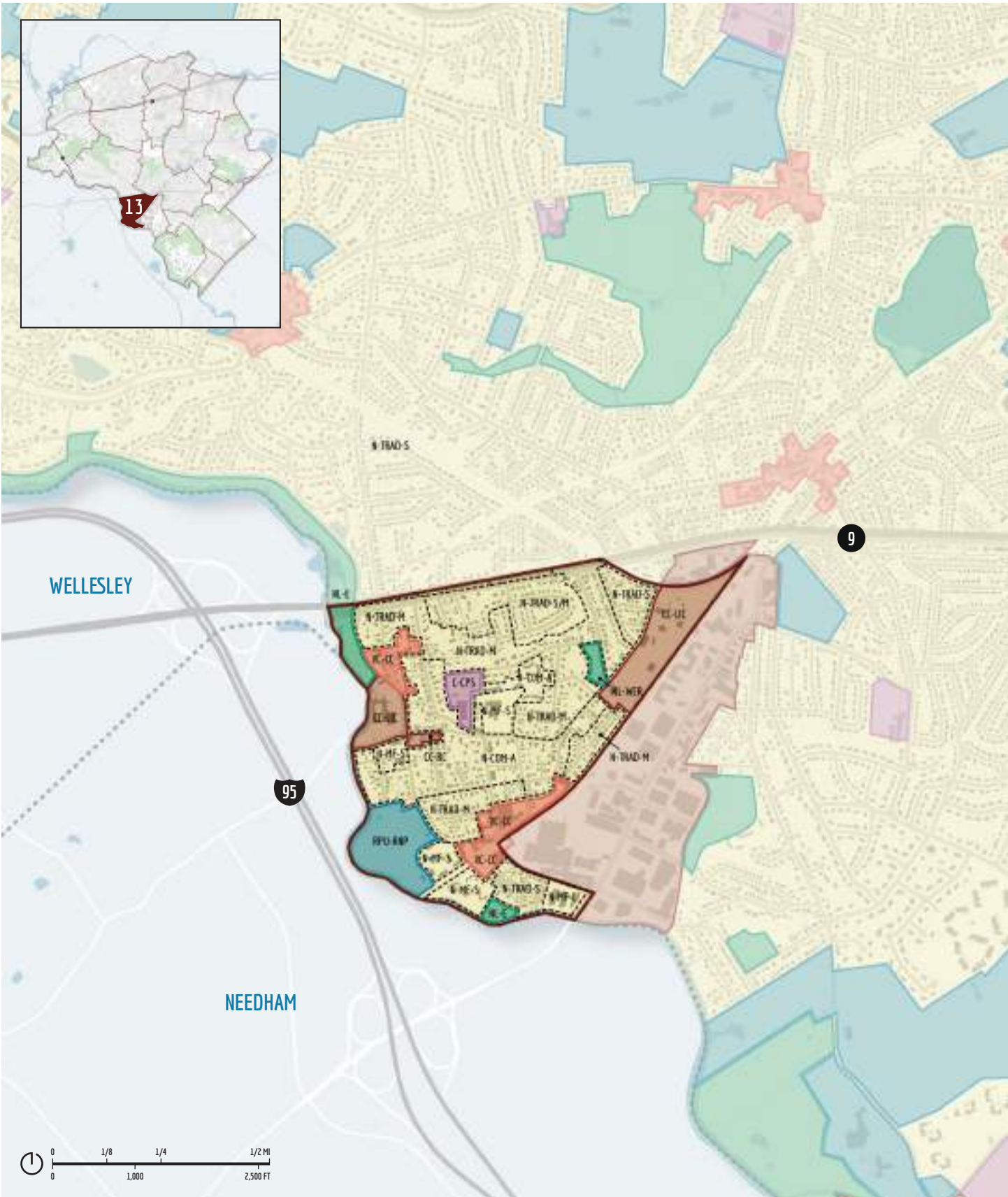
Campus

There is one campus character pattern, Upper Falls Nursery School and associated recreation lands, located in the center of the CBA.

Neighborhood

Neighborhood pattern subsets in the Upper Falls CBA vary widely across the entire area. The majority of the housing stock is traditional in development form, ranging in size from small to medium, though there are pockets of small multifamily and community-style patterns located throughout the neighborhood character pattern as well. Given that Upper Falls is one of the older villages of Newton, the street patterns are irregular and inconsistent across the area and do not lend themselves to regularized development patterns over time.





- Neighborhood
- Village Center
- Commercial Cluster
- Campus
- Recreation & Public Use
- Natural/ Landscape

Context-Based Areas

14. Needham Street

Area Overview

The Needham Street CBA consists primarily of the Needham Street retail corridor to the west and a residential neighborhood to the east. The area is bounded on the east by the Newton Highlands and Oak Hill CBAs, to the south by the Wells Avenue CBA and the Charles River, and to the west by a former freight rail right-of-way. The largely commercial area was formerly a major industrial cluster, but has since transitioned to a predominantly retail district. It continues to evolve to become more mixed-use and will likely transition fully to a village center in the near future.

Owing to the area's large parcels and lack of connectivity on three sides, it does not score high on density as measured by intersections per square mile, falling short of the city average by 14 intersections per square mile. Given the area's abundance of parking, it scores relatively low on permeable surfaces with only 48% of the total land area being permeable—the second lowest percentage in the city.

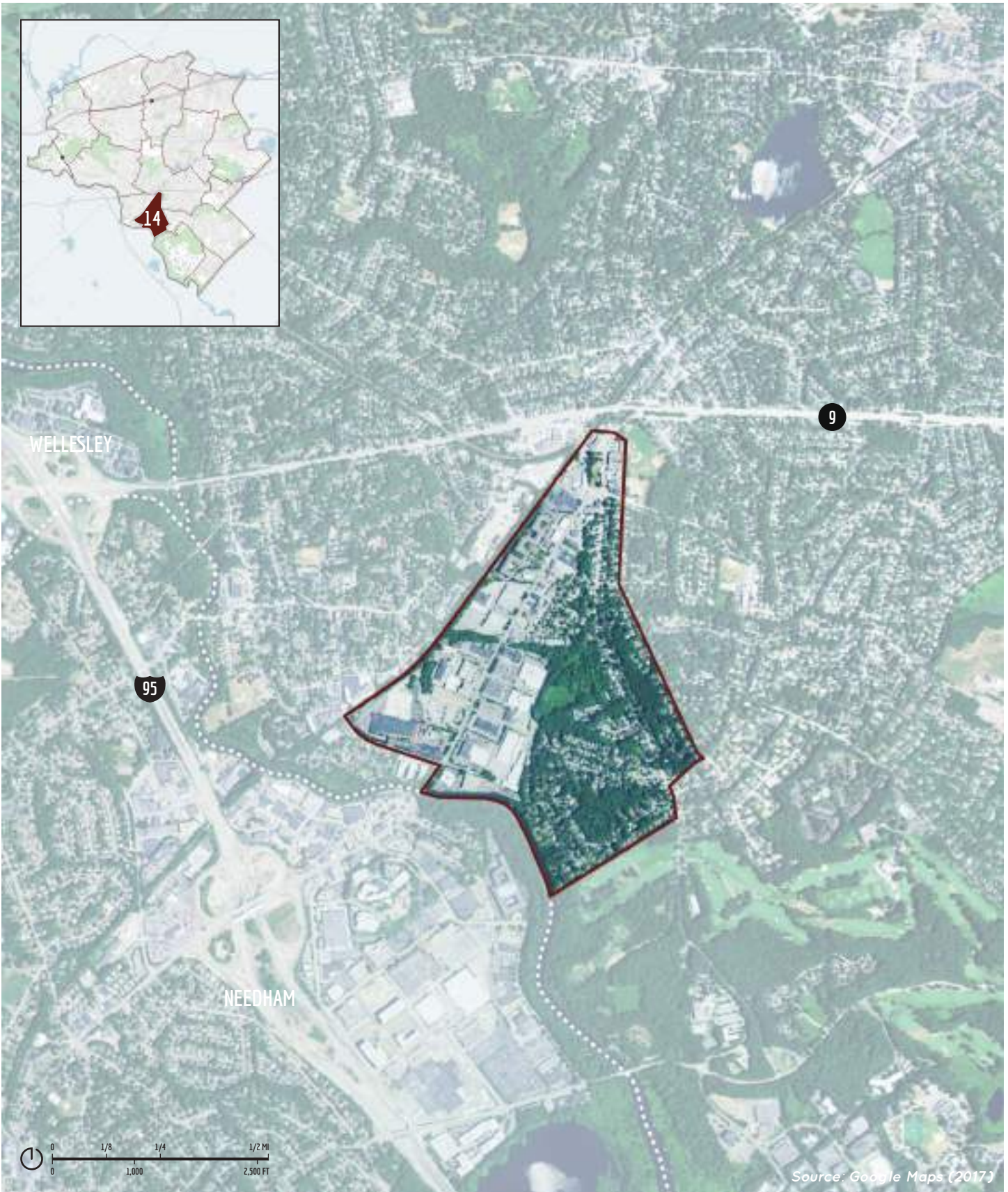
284 total acres

98 intersections per square mile

48% permeable surfaces

\$42k average tax revenue per acre





Aerial photograph of the Needham Street context-based area.

Context-Based Areas

14. Needham Street

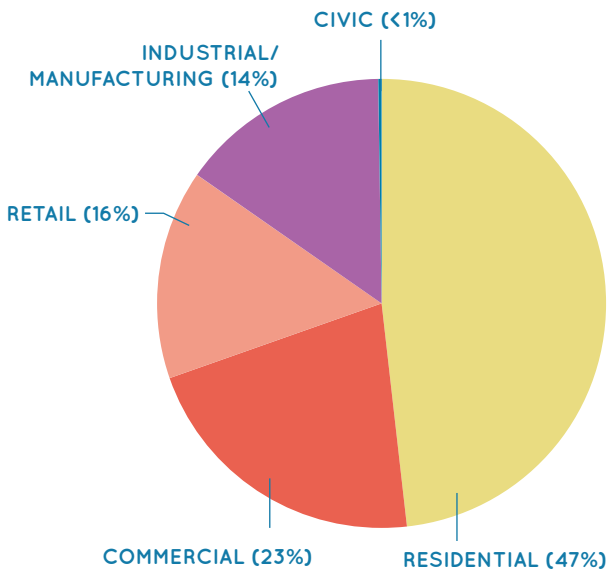
Development Form Metrics by Land Use

The Needham Street area contains one of Newton’s two major regional retail destinations—commonly referred to as the Needham Street corridor. This large, formerly industrial strip of real estate contains a wide variety of retail, commercial, industrial/manufacturing, and increasingly residential uses. While it is in the process of transitioning

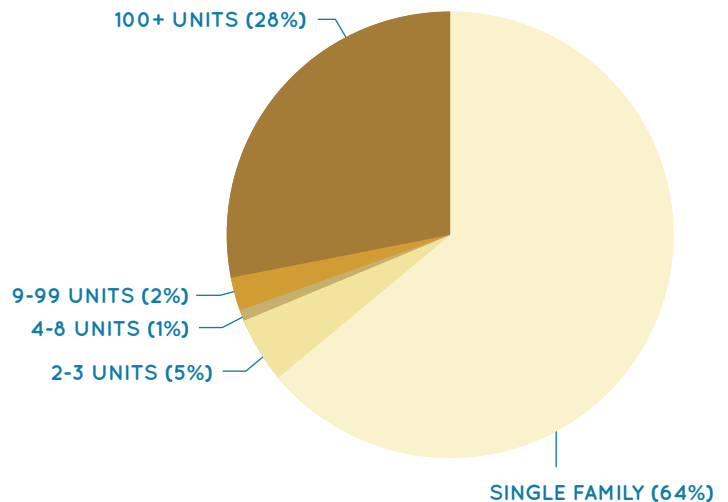
into a fully-integrated pedestrian-scale village center, today it is largely a commercial district and is patronized as such. This area of Newton has one of the largest concentrations of large-scale multifamily units, with a full quarter of all residential square footage belonging to residential projects with more than 100 units.

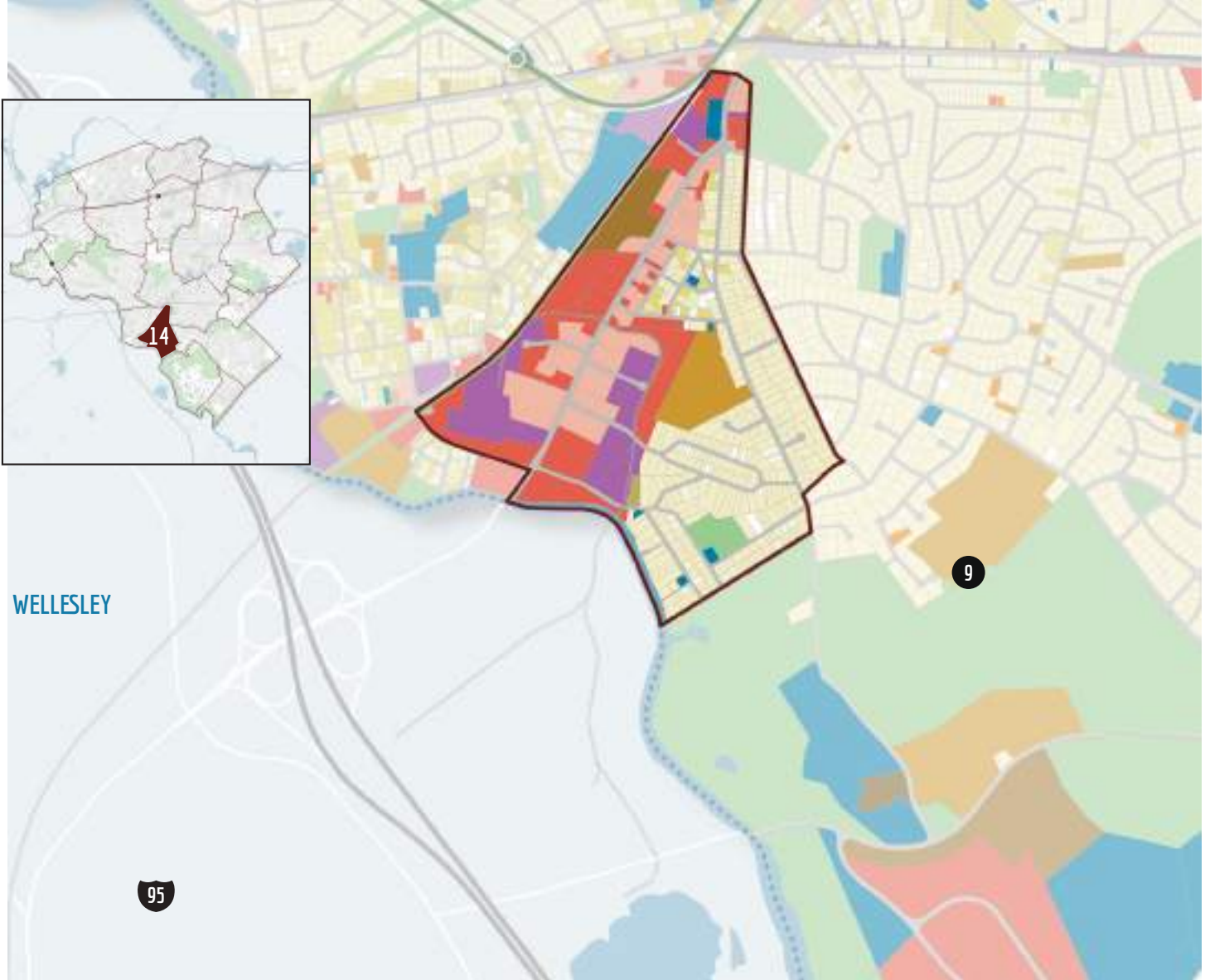
USE CATEGORY	PARCEL COUNT	BUILDING SQ. FOOTAGE (TOTAL)	PARCEL AREA (MED.)	BUILDING SQ. FOOTAGE (MED.)	SETBACK (MED.)	STORIES (MED.)
RESIDENTIAL	364	1,725,225 SF	8,351 SF	3,044 SF	25.9'	1.75
SINGLE FAMILY	312	1,103,673 SF	9,008 SF	3,075 SF	26.5'	1.75
2-3 UNITS	17	82,086 SF	9,800 SF	4,366 SF	17.8'	2.0
4-8 UNITS	1	13,662 SF	35,393 SF	13,662 SF	---	---
9-99 UNITS	1	41,269 SF	540,134 SF	58,991 SF	90.8'	---
100+ UNITS	1	484,435 SF	339,768 SF	484,435 SF	126.0'	---
OTHER	---	---	---	---	---	---
COMMERCIAL	45	824,949 SF	18,548 SF	---	---	---
RETAIL	38	604,779 SF	19,175 SF	8,593 SF	10.8'	---
MIXED-USE	---	---	---	---	---	---
INDUST./MANUF.	9	503,985 SF	99,717 SF	31,071 SF	45.8'	---
CIVIC/INSTIT.	11	9,408 SF	10,800 SF	---	---	---

Total Development Square Footage by Land Use

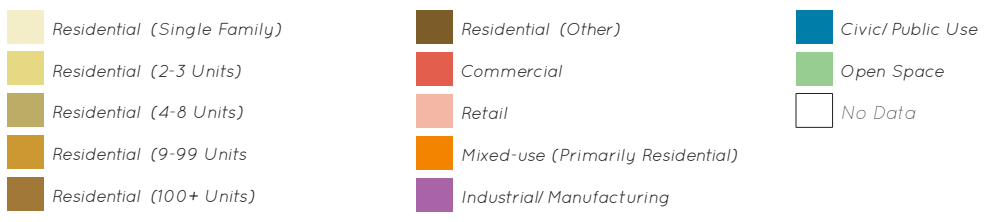
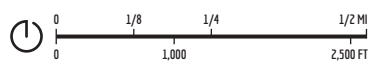


Total Residential Development Square Footage by Building Type





NEEDHAM



Context-Based Areas

14. Needham Street

Development Form Metrics by Street Type

The primary access route to, through, and from the Needham Street CBA is Needham Street itself. On the residential side of the area, the main thoroughfare is Winchester Street, which connects southward to Nahanton Street and northward to Centre Street—one of Newton’s primary north-south

arterials. Nearly all the streets within this area, aside from the aforementioned, are local streets providing access to residential and commercial parcels within the area. Similar to the profile of the neighboring Upper Falls CBA, the street grid here is irregular and often disconnected.

USE CATEGORY	ARTERIAL ROAD				MAJOR COLLECTOR STREET				MINOR COLLECTOR STREET				LOCAL STREET			
	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.
RESIDENTIAL	244,717	172,547	1.0	66.2'	3,131	9,264	1.75	26.8'	---	---	---	---	3,113	8,000	1.75	26.3'
SINGLE FAMILY	---	---	---	---	3,131	9,798	2.0	26.8'	---	---	---	---	3,194	8,488	1.75	27.2'
2-3 UNITS	4,999	5,325	2.0	6.5'	4,784	9,800	2.0	33.3'	---	---	---	---	4,366	10,000	2.0	25.7'
4-8 UNITS	---	---	---	---	---	---	---	---	---	---	---	---	13,662	35,393	---	244.7'
9-99 UNITS	---	---	---	---	41,369	540,134	---	49.2'	---	---	---	---	---	---	---	---
100+ UNITS	484,435	339,768	---	126.0'	---	---	---	---	---	---	---	---	---	---	---	---
OTHER	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COMMERCIAL	---	20,918	---	0'	4,713	5,474	---	5.6'	---	---	---	---	---	8,414	---	---
RETAIL	8,593	19,205	---	11.1'	---	4,796	---	0'	---	---	---	---	12,732	20,000	---	9.0'
MIXED-USE	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
INDUST./MANUF.	9,592	12,222	---	18.2'	---	---	---	---	---	---	---	---	31,071	99,717	---	46.8'
CIVIC/INSTIT.	---	60,018	---	---	---	---	---	---	---	---	---	---	---	9,890	---	---

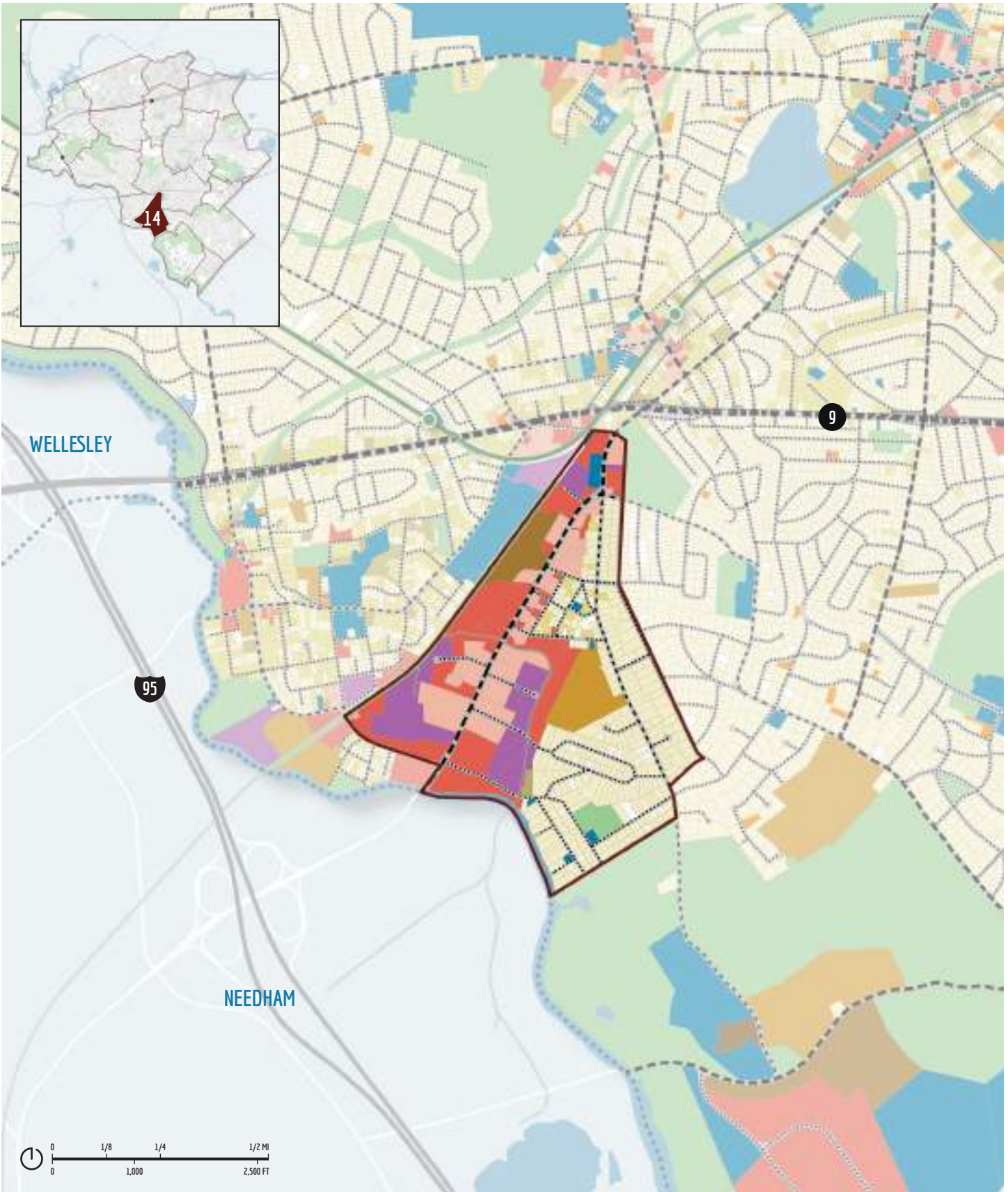
*GSF and parcel area median values measured in square feet.



A converted mill building on Needham Street



A sketch of the Needham Street industrial area (1897)

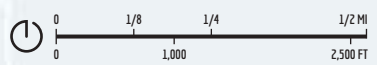


- Residential (Single Family)
- Residential (2-3 Units)
- Residential (4-8 Units)
- Residential (9-99 Units)
- Residential (100+ Units)

- Residential (Other)
- Commercial
- Retail
- Mixed-use (Primarily Residential)
- Industrial/ Manufacturing

- Civic/ Public Use
- Open Space
- No Data

- Street type**
- Arterial
 - Major Collector
 - Minor Collector
 - Local



Context-Based Areas

14. Needham Street

Character Patterns & Pattern Subsets

The Needham Street CBA is composed of one large commercial retail cluster and several smaller residential patterns and public open spaces. The Needham Street retail corridor is experiencing a tremendous degree of attention and investment as it transitions from a post-industrial area to a full-fledged mixed-use center within the city. The

area originally developed as an industrial/manufacturing hub due to its close proximity to the Charles River and a regional freight rail line. Today, it is one of Newton's only underdeveloped areas ripe for large-scale redevelopment. The neighborhood components of this CBA are relatively modest, but also seeing significant change as of late.

Village Center

The Needham Street CBA contains only a portion of a village center that is more accurately based in the neighboring Upper Falls CBA. The convenience village consists of small, local retail and eateries and some office facilities.

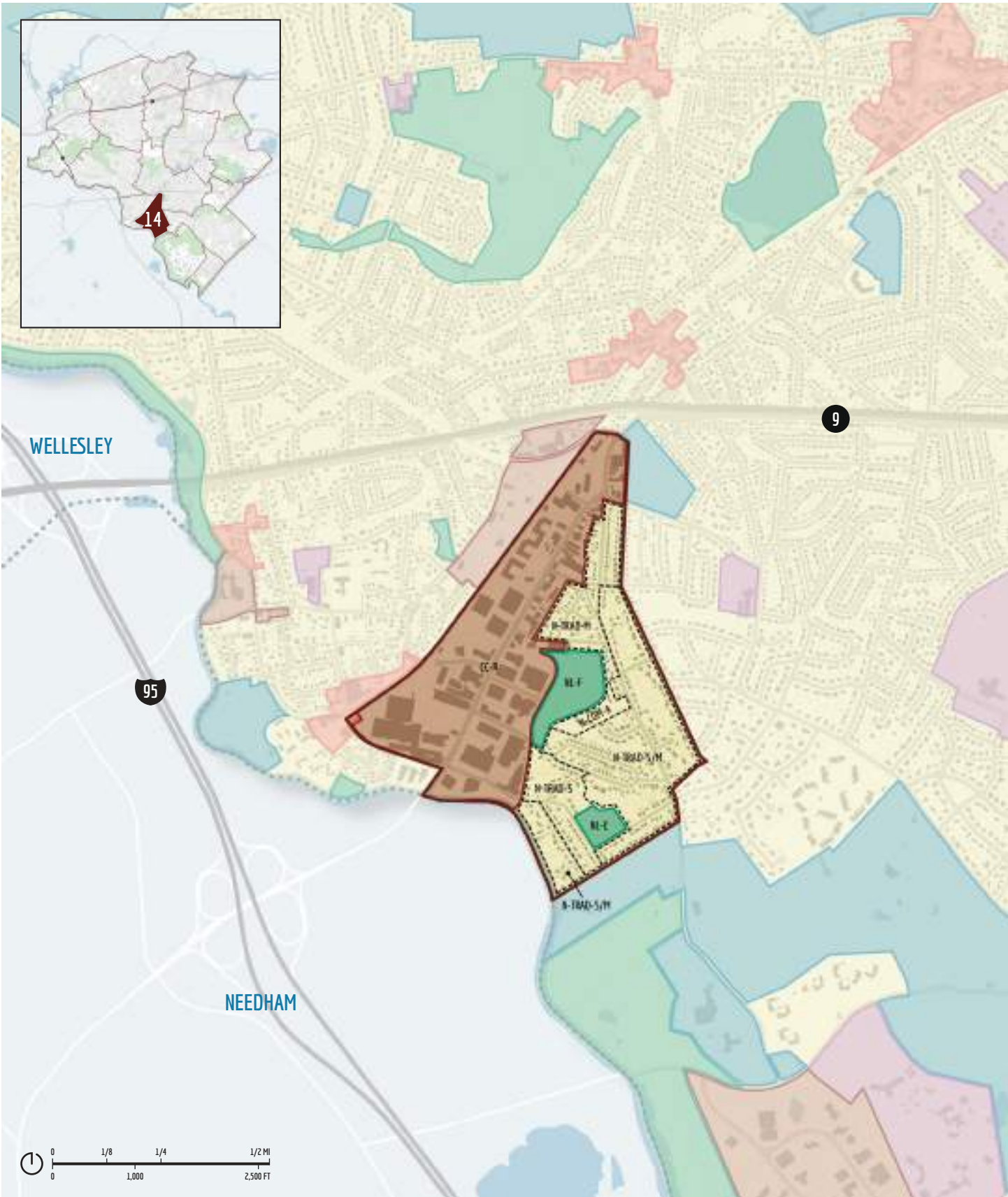
Commercial Cluster

The Needham Street CBA is home to Newton's largest commercial cluster, the Needham Street corridor. This corridor, while redeveloping quickly and diversifying its range of uses, is primarily an auto-oriented retail corridor, offering a range of retail typologies, from small coffee shops and convenience retail to large, big box and wholesale sellers. New developments populating the area promise to expedite its transition into a village center by focusing on pedestrian-oriented design and raising the quality of development introduced to the area.

Neighborhood

There are two neighborhood areas within the Needham Street CBA. The first is a small cluster of multifamily and small traditional development located between the Needham Street corridor and the Charles River. The second area, east of the Needham Street corridor, consists of largely traditional development patterns ranging in size from small to medium. In many cases, residential properties are transitioning from small/medium homes to larger homes within the existing parcel layout.





- Neighborhood
- Village Center
- Commercial Cluster
- Campus
- Recreation & Public Use
- Natural/ Landscape

Context-Based Areas

15. Oak Hill

Area Overview

The Oak Hill CBA is one of the areas of Newton to have been developed most recently. Originally farmland, this large area was converted to residential subdivisions in the early and mid-20th century. The boundaries of the CBA consist of Newton South High School to the north, the Newton Highlands CBA to the south, the Newton city boundary to the southeast, the Charles River Country Club to the southwest, and the Needham Street CBA to the west.

The area also has a high percentage of permeable lands (71%) due to large residential parcels and significant open spaces in the eastern and southern portions of the area.



956 total acres

101 intersections per square mile

71% permeable surfaces

\$35k average tax revenue per acre



Aerial photograph of the Oak Hill context-based area.

Context-Based Areas

15. Oak Hill

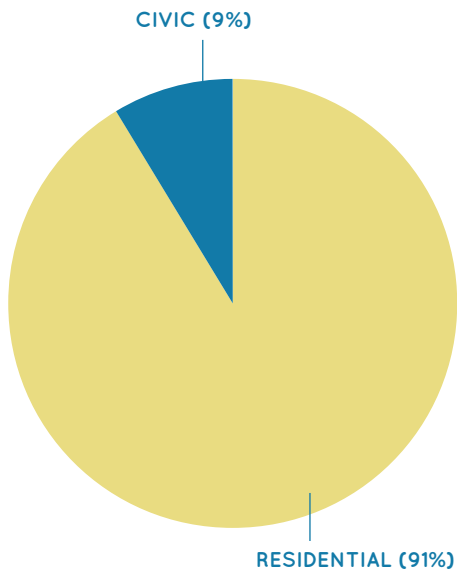
Development Form Metrics by Land Use

The Oak Hill CBA is among the most uniform areas of the city in terms of both land use and development form. The area is 91% percent residential as measured by development square footage, with the remaining 9% comprising only civic uses. The residential development mix included in that 91% is also fairly uniform, with 98% of all residential square footage consisting of single family units. The remaining 2%

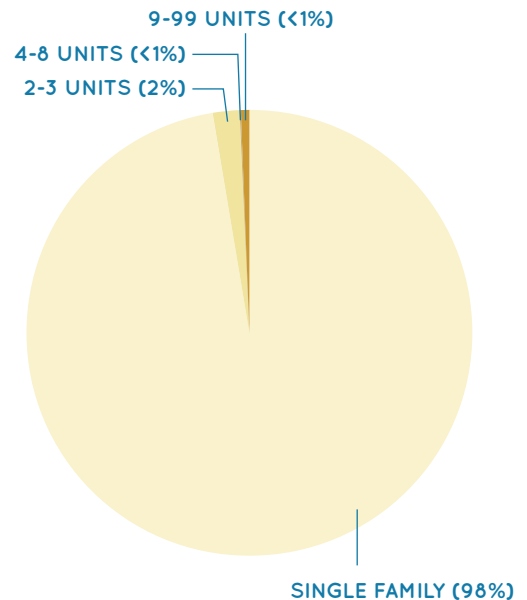
is divided between roughly 1% two and three family housing developments and 1% split between two large multifamily developments. The civic land uses comprising the 9% of non-residential development are scattered across the area, and large public open spaces are situated on the northeast and southeast boundaries of the CBA.

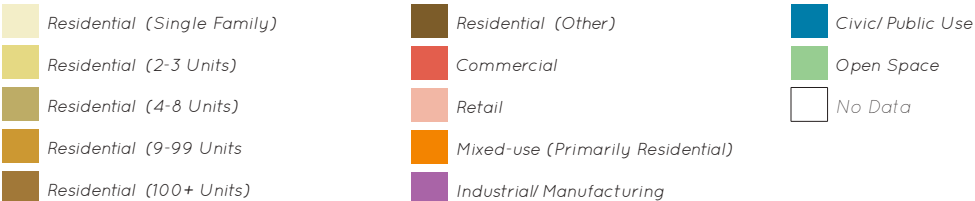
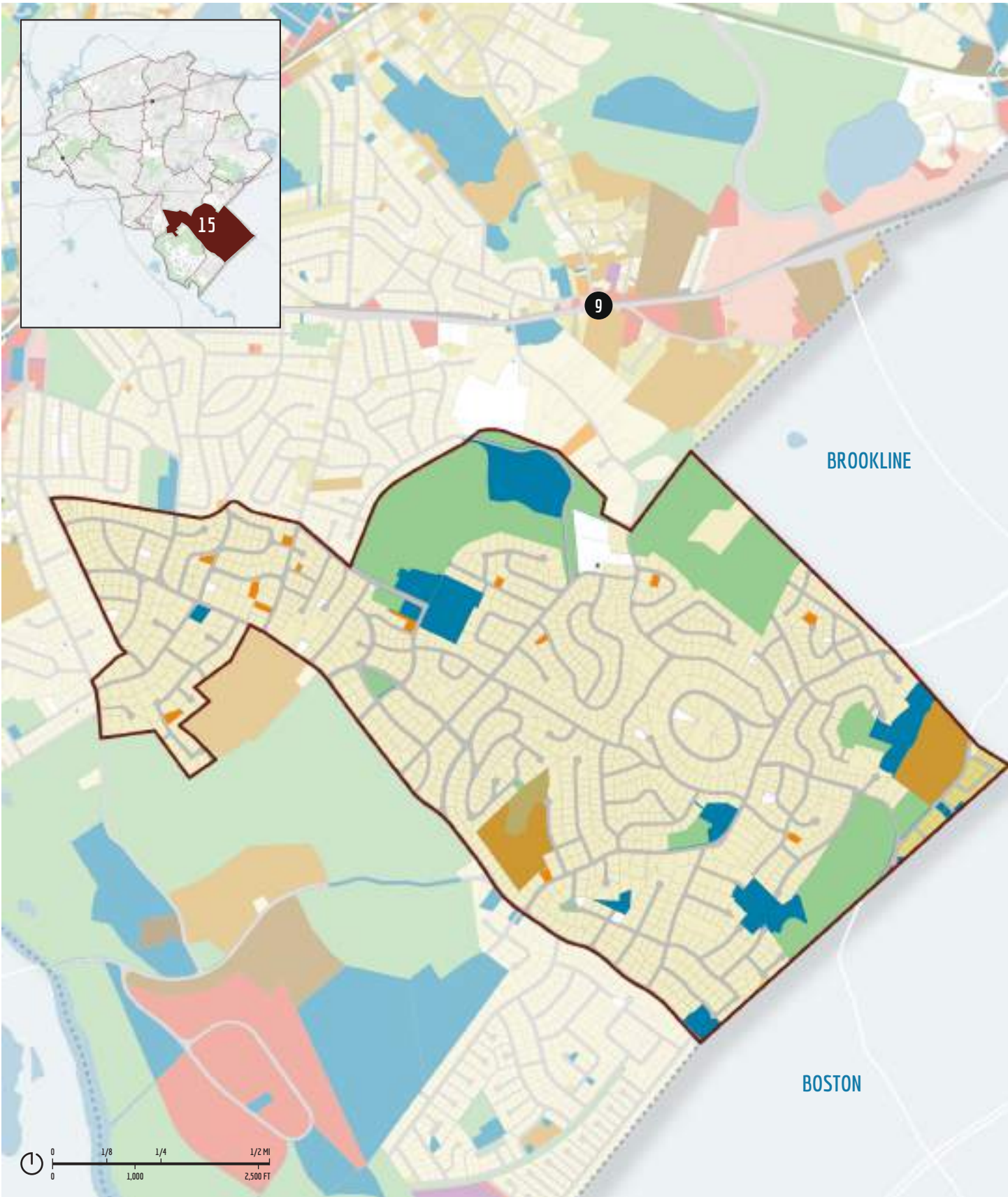
USE CATEGORY	PARCEL COUNT	BUILDING SQ. FOOTAGE (TOTAL)	PARCEL AREA (MED.)	BUILDING SQ. FOOTAGE (MED.)	SETBACK (MED.)	STORIES (MED.)
RESIDENTIAL	1,680	8,392,021 SF	13,678 SF	4,646 SF	32.1'	1.0
SINGLE FAMILY	1,595	8,107,541 SF	13,840 SF	4,680 SF	32.3'	1.5
2-3 UNITS	32	160,253 SF	10,072 SF	5,212 SF	31.7'	---
4-8 UNITS	1	9,837 SF	217,965 SF	9,837 SF	22.9'	---
9-99 UNITS	2	30,179 SF	582,015 SF	15,090 SF	113.8'	2.0
100+ UNITS	0	0 SF	---	---	---	---
OTHER	0	0 SF	---	---	---	---
COMMERCIAL	1	0 SF	8,505 SF	---	---	---
RETAIL	0	0 SF	---	---	---	---
MIXED-USE	0	0 SF	---	---	---	---
INDUST./MANUF.	0	0 SF	---	---	---	---
CIVIC/INSTIT.	34	798,191 SF	112,815 SF	---	---	---

Total Development Square Footage by Land Use



Total Residential Development Square Footage by Building Type





Context-Based Areas

15. Oak Hill

Development Form Metrics by Street Type

The Oak Hill CBA is served primarily by a network of suburban-style, winding local streets. The area has two major arterial roadways running through it, and a third that forms its southwestern boundary. The first traversing the area is Parker Street, which terminates at Dedham Street in the western portion of the CBA. The second is Brookline

Street, which traverses the area's southern half, connecting the city to Brookline to the east. Many of the local streets do not connect to the larger city network to the north. These connections are also hindered by the large institutional and open space uses that form the CBA's northern boundary.

USE CATEGORY	ARTERIAL ROAD				MAJOR COLLECTOR STREET				MINOR COLLECTOR STREET				LOCAL STREET			
	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.
RESIDENTIAL	4,959	13,068	2.0	34.6'	4,674	12,162	2.0	31.0'	4,087	10,770	2.0	30.4'	4,720	12,609	2.0	31.0'
SINGLE FAMILY	4,998	13,265	2.0	34.8'	4,790	12,162	2.0	31.6'	4,198	11,508	2.0	31.4'	4,841	12,748	2.0	31.3'
2-3 UNITS	5,838	11,749	2.0	46.8'	5,684	17,645	1.0	38.1'	---	---	---	---	5,212	10,219	---	21.3'
4-8 UNITS	---	---	---	---	---	---	---	---	---	---	---	---	9,837	217,965	---	---
9-99 UNITS	---	---	---	---	---	640,847	4.0	---	---	---	---	---	30,179	523,183	---	15.8'
100+ UNITS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OTHER	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COMMERCIAL	---	---	---	---	---	8,505	---	---	---	---	---	---	---	---	---	---
RETAIL	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MIXED-USE	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
INDUST./MANUF.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CIVIC/INSTIT.	41,820	172,893	---	44.2'	---	---	---	---	3,720	760,018	---	59.8'	---	86,500	---	---

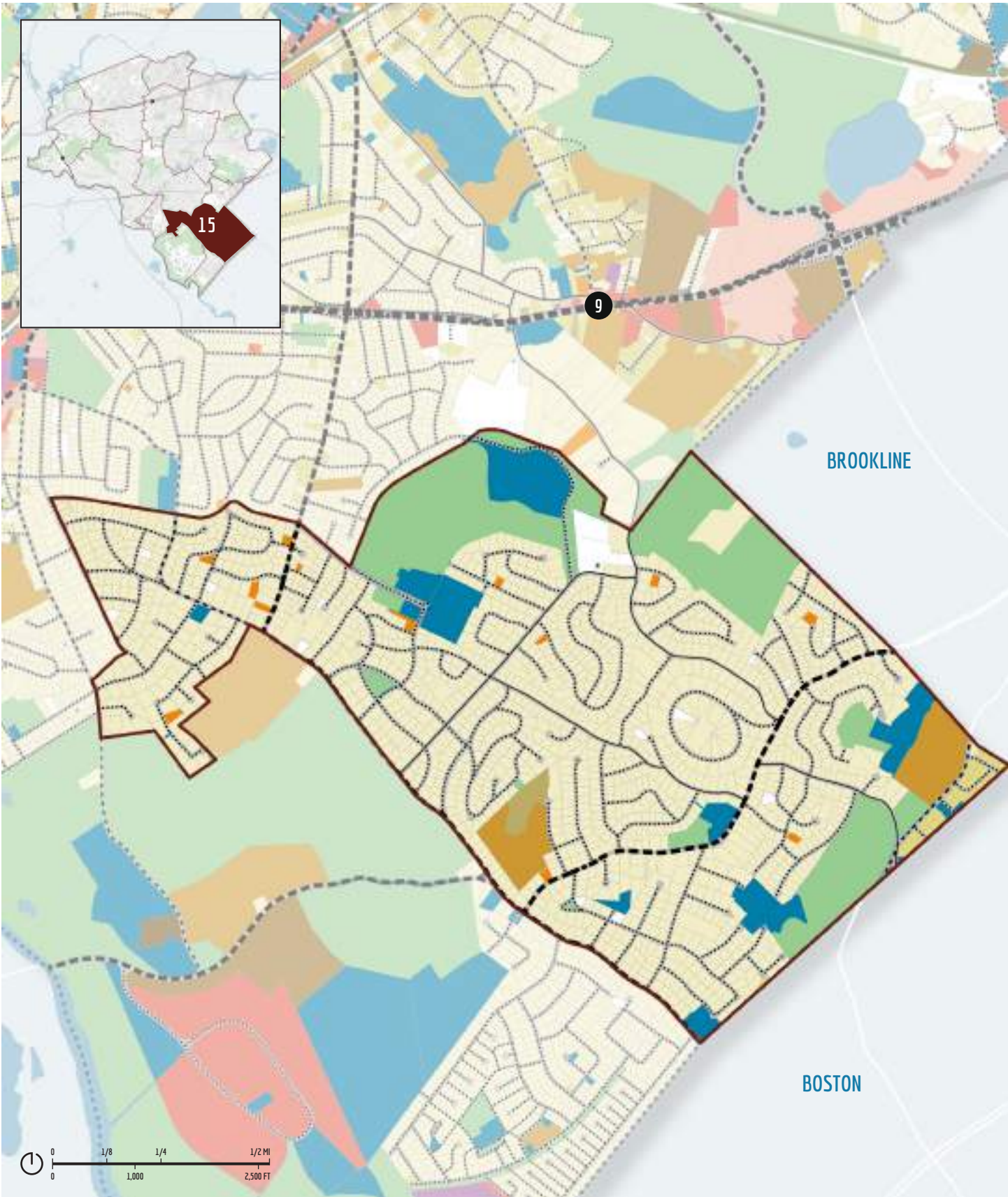
*GSF and parcel area median values measured in square feet.



Mid-century single family houses in Oak Hill (2016)



Aerial photo of Oak Hill village in the early 20th century



- Residential (Single Family)
- Residential (2-3 Units)
- Residential (4-8 Units)
- Residential (9-99 Units)
- Residential (100+ Units)

- Residential (Other)
- Commercial
- Retail
- Mixed-use (Primarily Residential)
- Industrial/ Manufacturing

- Civic/ Public Use
- Open Space
- No Data

- Street type**
- Arterial
 - Major Collector
 - Minor Collector
 - Local

Context-Based Areas

15. Oak Hill

Character Patterns & Pattern Subsets

As can be expected with an area as uniform in land use as Oak Hill, the CBA's character pattern mix is also largely unvaried. The majority of the area consists of neighborhood pattern subsets with the only exceptions being civic/institutional campus spaces, natural/landscape areas, and formal recreation and public use areas. The two campuses

are public schools. The residential development patterns are largely consistent with mid-20th century subdivision planning, including houses ranging in size from small to medium on medium-sized lots.

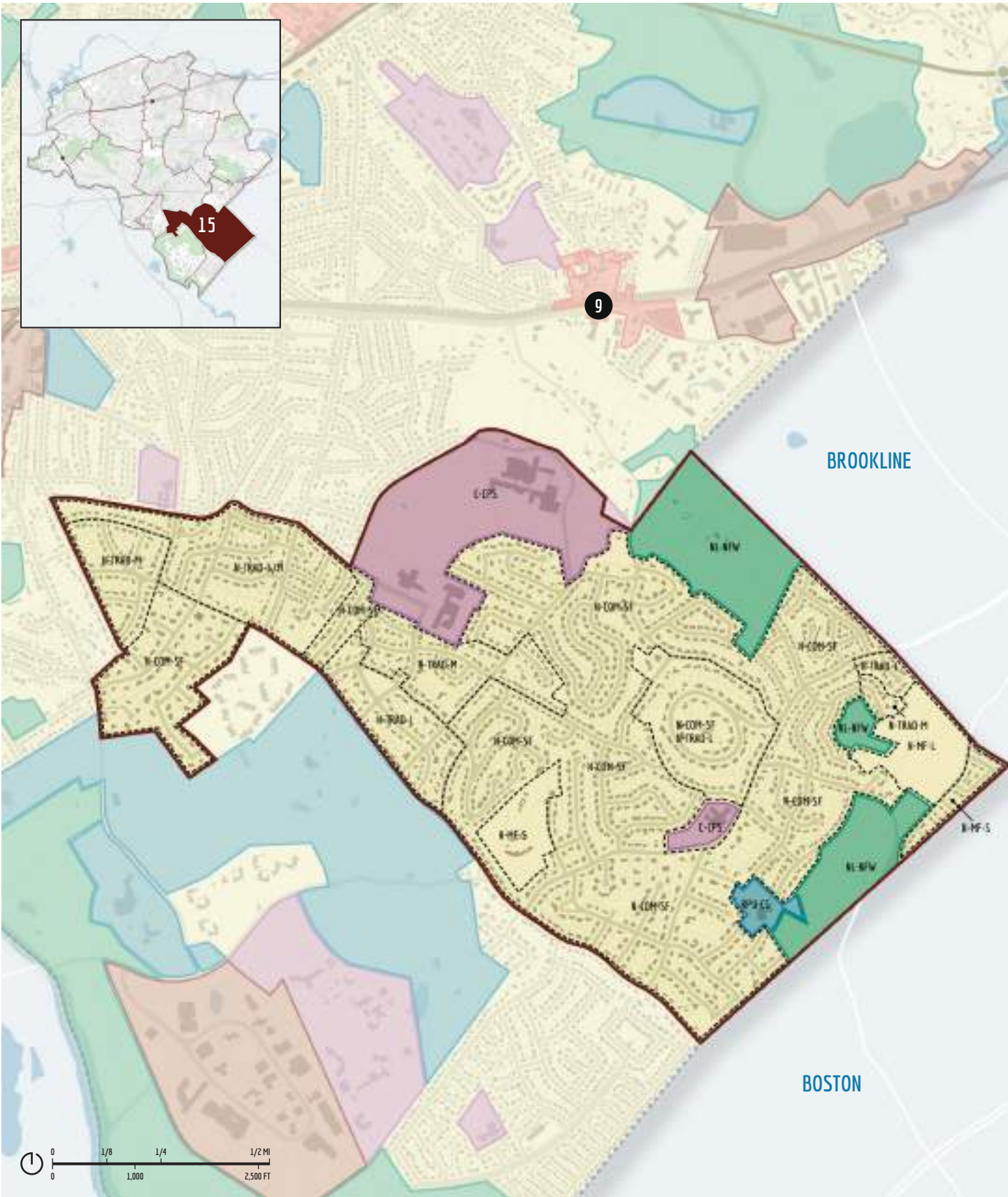
Campus

The two campus character pattern designations located within the Oak Hill CBA consist of three public schools, an elementary, middle, and high school.

Neighborhood

Oak Hill's neighborhoods represent a classic suburban subdivision pattern common in communities that underwent wholesale development of large undeveloped or underdeveloped swaths of land in the early and middle 20th century. These neighborhoods consist of winding, curvilinear streets, often terminating in cul-de-sacs, medium-sized lots, and small/medium sized houses developed with consistent design standards, front setbacks, articulation, and features. Much of Oak Hill still represents this uniformity, though many of the neighborhood's original community-style housing supply is being turned over and redeveloped into significantly larger single family homes, creating variation from the original development pattern.





- Neighborhood
- Village Center
- Commercial Cluster
- Campus
- Recreation & Public Use
- Natural/Landscape

Context-Based Areas

16. Wells Avenue

Area Overview

The Wells Avenue CBA consists of a mix of large-footprint users of various kinds. Included within the area's 688 acres are two major attached community-style residential developments, one of Newton's four golf courses, a community center, a traditional mid-century office park, a college campus, and a large continuous open space situated between development and the Charles River. The area's boundaries are determined by residential development within Oak Hill to the north and east, the Oak Hill Park subdivision to the southeast, the Charles River to the west, and the Needham Street CBA to the northwest.

The area has Newton's least dense street network, with only five intersections per square mile, which is less than one-twentieth of the city's average. Due to the presence of the golf course and large western conservation area, the Wells Avenue CBA is 82% permeable, making it the least built-out of all of Newton's neighborhoods.

688 total acres

5 intersections per square mile

82% permeable surfaces

\$10k average tax revenue per acre





Aerial photograph of the Wells Avenue context-based area.

Context-Based Areas

16. Wells Avenue

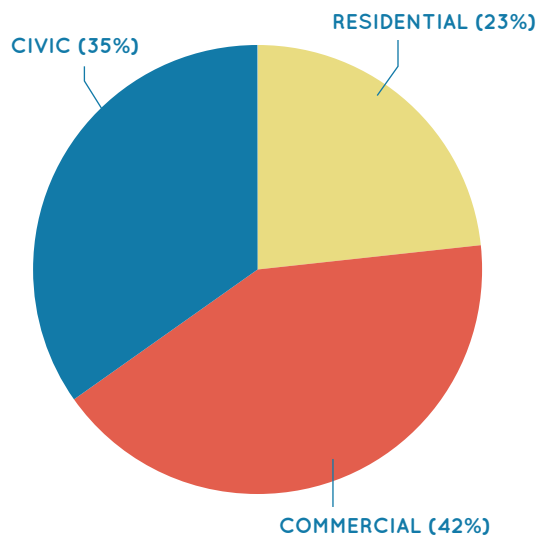
Development Form Metrics by Land Use

Owing to the fact that the parcels in the Wells Avenue CBA are so large, the land use breakdown is fairly straightforward. In terms of total area, the CBA is divided nearly in half between development and undeveloped land (including the golf course). With respect to development, the commercial uses (the Wells Avenue office park) account for 42% of the

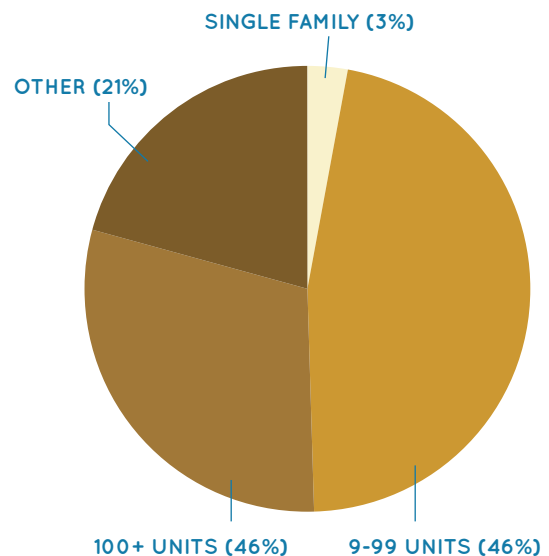
total developed square footage in the CBA. Other significant properties include the Mount Ida campus, the Jewish Community Center, and the Newton Community Farm. The residential uses are nearly all attached community-style, developed in the latter half of the 20th century.

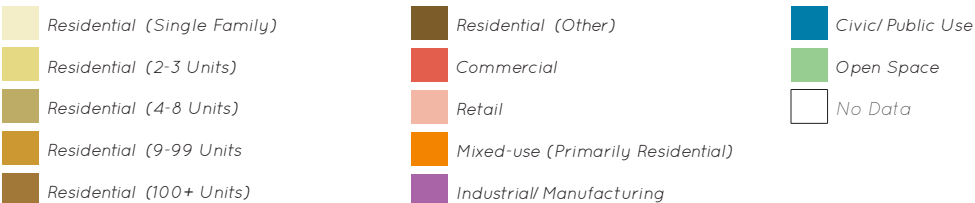
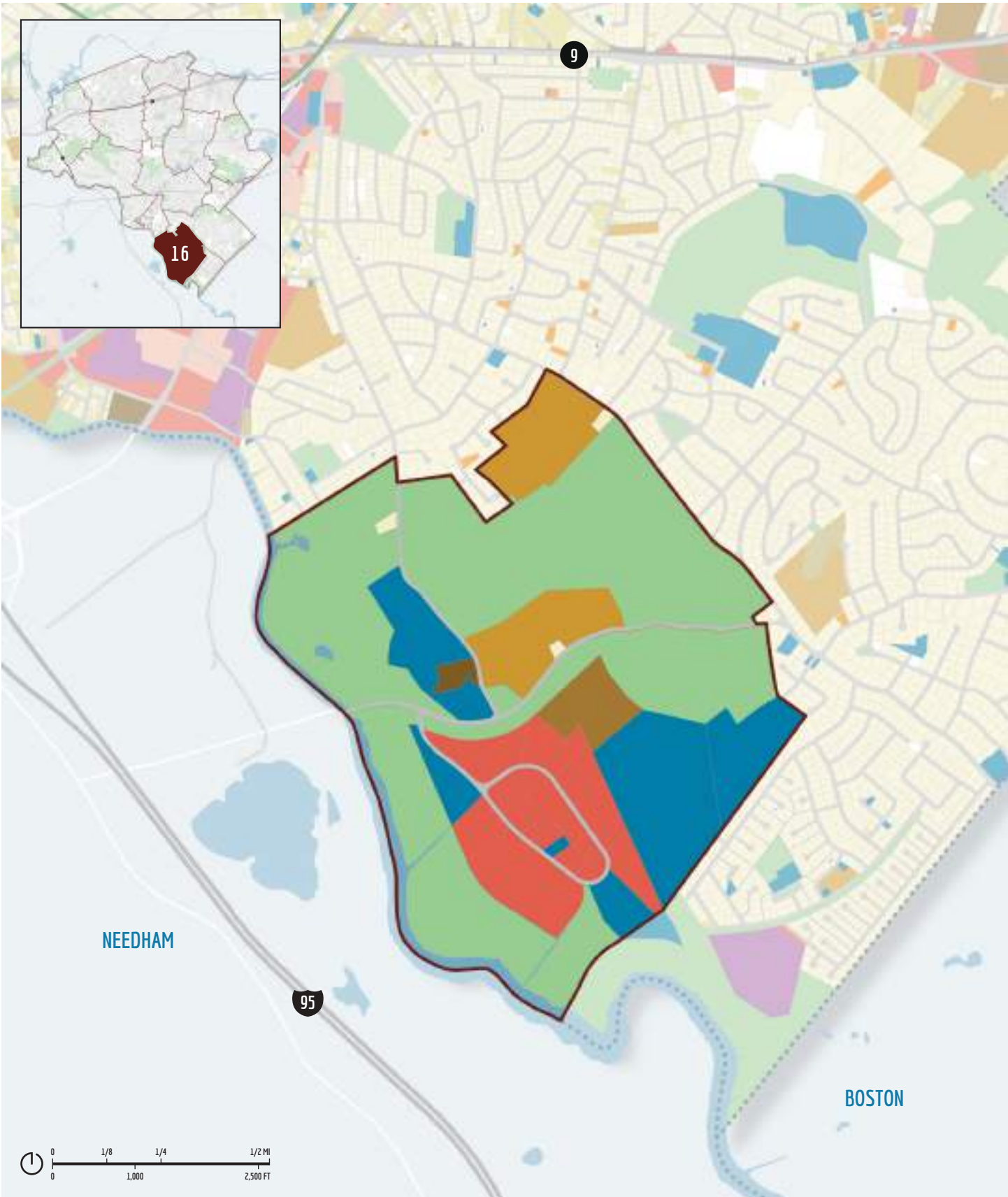
USE CATEGORY	PARCEL COUNT	BUILDING SQ. FOOTAGE (TOTAL)	PARCEL AREA (MED.)	BUILDING SQ. FOOTAGE (MED.)	SETBACK (MED.)	STORIES (MED.)
RESIDENTIAL	7	561,400 SF	153,629 SF	6,665 SF	59.4'	---
SINGLE FAMILY	3	16,370 SF	38,056 SF	5,360 SF	59.4'	2.0
2-3 UNITS	0	0 SF	---	---	---	---
4-8 UNITS	0	0 SF	---	---	---	---
9-99 UNITS	2	261,717 SF	1,247,473 SF	130,859 SF	141.1'	---
100+ UNITS	1	166,951 SF	1,251,043 SF	166,951 SF	0.0'	---
OTHER	1	116,362 SF	153,629 SF	116,362 SF	256.4'	---
COMMERCIAL	24	1,011,416 SF	130,680 SF	28,156 SF	54.9'	---
RETAIL	0	0 SF	---	---	---	---
MIXED-USE	0	0 SF	---	---	---	---
INDUST./MANUF.	0	0 SF	---	---	---	---
CIVIC/INSTIT.	12	839,493 SF	986,727 SF	7,266 SF	67.1'	---

Total Development Square Footage by Land Use



Total Residential Development Square Footage by Building Type





Context-Based Areas

16. Wells Avenue

Development Form Metrics by Street Type

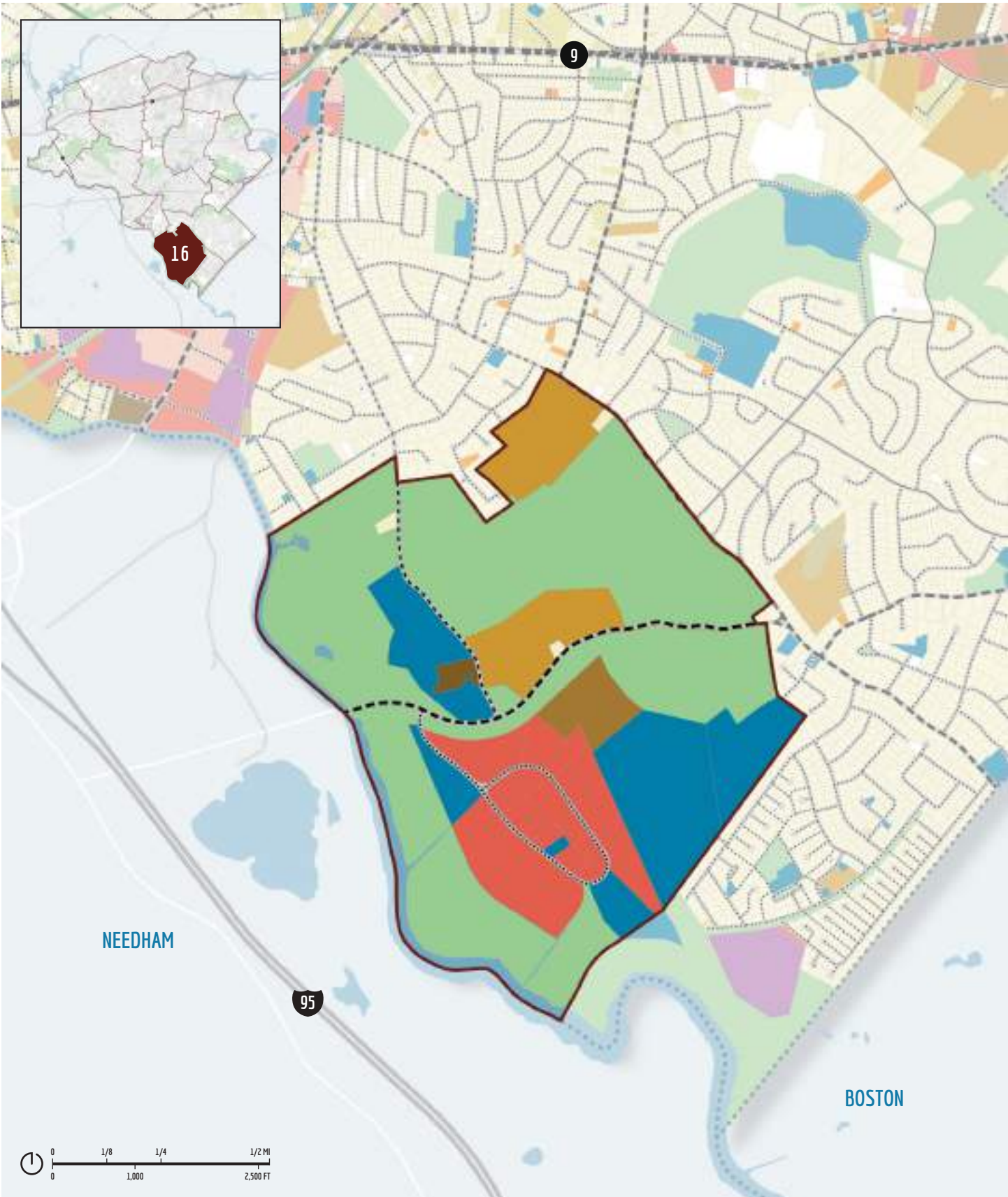
The Wells Avenue CBA contains very few public roads connecting between its components and to the larger city context. The three main streets include Dedham Street forming the area's northeastern boundary, Nahanton Street traversing east-west through the middle of the area and connecting Newton to Needham over the Charles River, and Winchester Street, connecting the area to the

neighborhoods to the north and the Needham Street corridor. The remaining streets include the Wells Avenue loop and private streets serving the residential communities and the Mount Ida campus.

USE CATEGORY	ARTERIAL ROAD				MAJOR COLLECTOR STREET				MINOR COLLECTOR STREET				LOCAL STREET			
	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.
RESIDENTIAL	6,665	1.24 M	---	20.5'	60,354	98,595	1.0	157.9'	---	---	---	---	---	---	---	---
SINGLE FAMILY	6,013	31,540	1.0	84.4'	4,345	43,560	2.0	59.4'	---	---	---	---	---	---	---	---
2-3 UNITS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4-8 UNITS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9-99 UNITS	130,859	1.25 M	---	141.1'	---	---	---	---	---	---	---	---	---	---	---	---
100+ UNITS	166,951	1.25 M	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OTHER	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COMMERCIAL	---	---	---	---	---	997,610	---	---	---	---	---	---	28,588	130,680	---	58.4'
RETAIL	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MIXED-USE	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
INDUST./MANUF.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CIVIC/INSTIT.	4,697	1.28 M	---	71.1'	5,224	1.10 M	---	---	---	---	---	---	10,282	328,442	---	77.3'

*GSF and parcel area median values measured in square feet.





- Residential (Single Family)
- Residential (2-3 Units)
- Residential (4-8 Units)
- Residential (9-99 Units)
- Residential (100+ Units)

- Residential (Other)
- Commercial
- Retail
- Mixed-use (Primarily Residential)
- Industrial/Manufacturing

- Civic/Public Use
- Open Space
- No Data

- Street type**
- Arterial
 - Major Collector
 - Minor Collector
 - Local



Context-Based Areas

16. Wells Avenue

Character Patterns & Pattern Subsets

The Wells Avenue CBA consists of five of the six character patterns organized into large blocks. These include one large commercial cluster, two community-style neighborhoods, one institutional campus, and large swaths of open space and recreation lands encompassing the Charles River conservation area to the west and the

Charles River Country Club golf course to the north. Smaller recreation and public use areas include a community farm and a community center off Nahanton Street.

Commercial Cluster

The single commercial development within the Wells Avenue CBA is the Wells Avenue office park located south of Nahanton Street. This traditional mid-century office park includes large commercial parcels developed as mini corporate campuses for a wide variety of corporate users. Facilities were developed in a common suburban development form over the course of several decades and offer each user substantial open space and surface parking in close proximity to their office facilities.

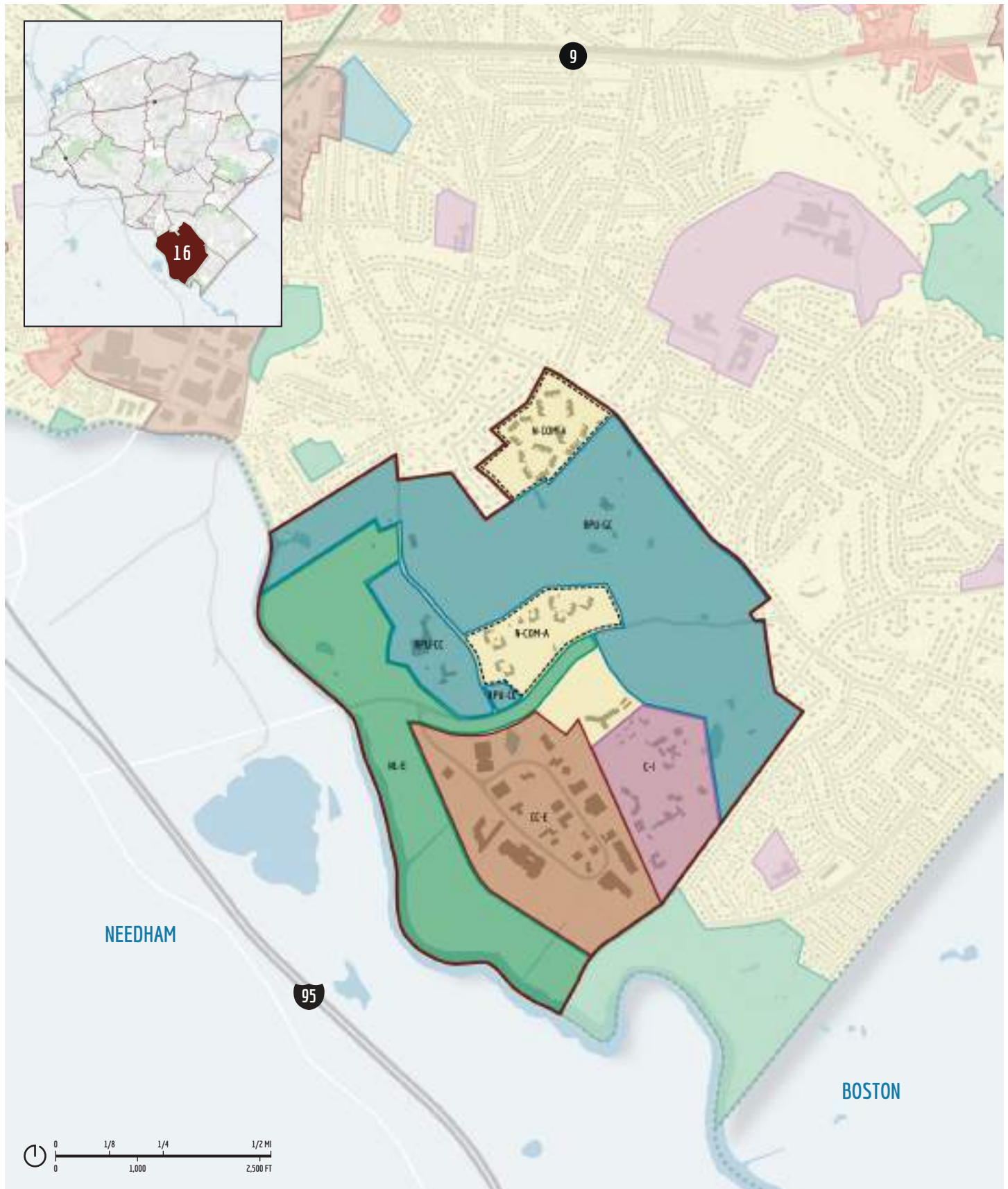
Campus

The one campus user within the Wells Avenue CBA is Mount Ida. This small campus sits to the south of Nahanton Street and east of the Wells Avenue office park. It is organized in a fairly typical higher education campus format.

Neighborhood

There are three neighborhood pattern subsets within the Wells Avenue CBA. Two are secluded attached residential developments built in the latter half of the 20th-century, while the third is a condominium tower on a large lot. These residential development types have large open spaces separating residents and the general public.





- Neighborhood
- Village Center
- Commercial Cluster
- Campus
- Recreation & Public Use
- Natural/Landscape

Context-Based Areas

17. Oak Hill Park

Area Overview

The Oak Hill Park CBA encompasses a master-planned suburban neighborhood developed in the years after WWII as part of a national trend to develop housing for middle class families, many of which were welcoming back soldiers from the war. The area was subdivided from farmland and developed in a partnership between local government and a private developer. The area is bounded by Oak Hill to the northeast, the Newton city boundary to the southeast, the Charles River to the southwest, and the Wells Avenue CBA to the northwest.

The area is fairly representative of the rest of the city in terms of street network density, with 130 intersections per square mile. The area also has a fairly high percentage of permeable surface area owing to the large conservation area in the southwest and the medium residential lots typical of the era.

274 total acres

130 intersections per square mile

74% permeable surfaces

\$30k average tax revenue per acre





Aerial photograph of the Oak Hill Park context-based area.

Context-Based Areas

17. Oak Hill Park

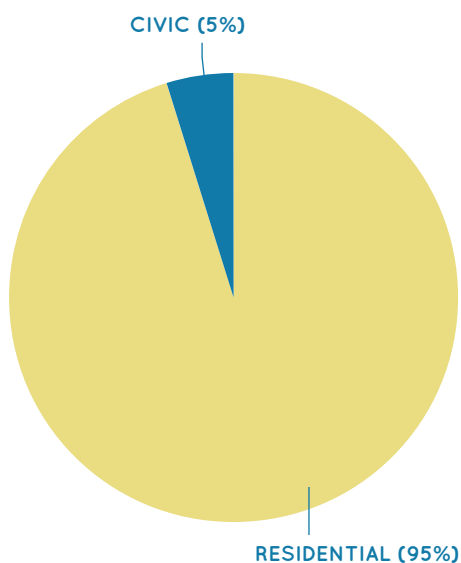
Development Form Metrics by Land Use

With the exception of a few small commercial uses and open space, the Oak Hill Park CBA is an entirely residential community. As originally built, the neighborhood is overwhelmingly single family in development form, with multi-family units comprising only 2% of the overall residential square footage. The area is known for having more modestly-sized single family housing, making it

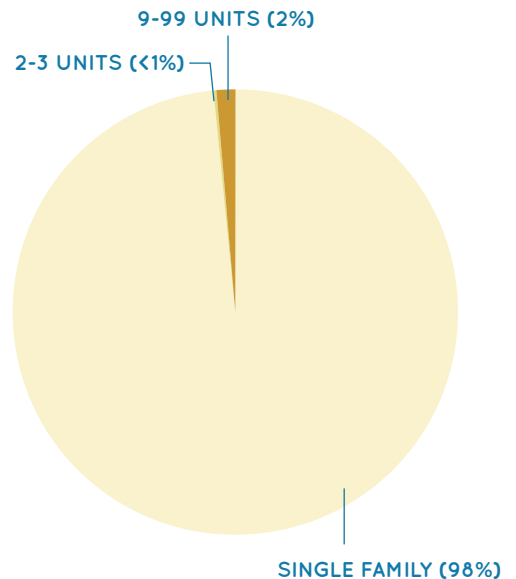
among the most affordable of properties in Newton, but development pressure and real estate values are enabling the transition of many properties from small/medium houses to large houses. These redevelopments have already begun to fundamentally change the pattern and character of these neighborhoods.

USE CATEGORY	PARCEL COUNT	BUILDING SQ. FOOTAGE (TOTAL)	PARCEL AREA (MED.)	BUILDING SQ. FOOTAGE (MED.)	SETBACK (MED.)	STORIES (MED.)
RESIDENTIAL	585	1,854,406 SF	10,094 SF	2,640 SF	30.2'	1.0
SINGLE FAMILY	577	1,824,271 SF	10,100 SF	2,648 SF	30.3'	1.5
2-3 UNITS	2	3,995 SF	9,029 SF	1,998 SF	26.4'	1.5
4-8 UNITS	0	0 SF	---	---	---	---
9-99 UNITS	1	25,100 SF	85,777 SF	25,100 SF	10.4'	---
100+ UNITS	0	0 SF	---	---	---	---
OTHER	0	0 SF	---	---	---	---
COMMERCIAL	1	0 SF	24,270 SF	---	---	---
RETAIL	0	0 SF	---	---	---	---
MIXED-USE	0	0 SF	---	---	---	---
INDUST./MANUF.	1	1,084 SF	776,760 SF	1,084 SF	19.1'	---
CIVIC/INSTIT.	13	94,161 SF	94,161 SF	1,198 SF	28.2'	---














Total Development Square Footage by Land Use



Total Residential Development Square Footage by Building Type





- | | | |
|--|---|---|
|  Residential (Single Family) |  Residential (Other) |  Civic/ Public Use |
|  Residential (2-3 Units) |  Commercial |  Open Space |
|  Residential (4-8 Units) |  Retail |  No Data |
|  Residential (9-99 Units) |  Mixed-use (Primarily Residential) | |
|  Residential (100+ Units) |  Industrial/ Manufacturing | |

Context-Based Areas

17. Oak Hill Park

Development Form Metrics by Street Type

With the exception of the arterial road, Dedham Street, forming the northeastern boundary of the Oak Hill Park CBA, the area consists entirely of local streets serving neighborhood residents. As the neighborhood is bounded by open space and large users on three sides, the only entries and exits are accessed via three streets intersecting

with Dedham Street to the northeast of the development. The local streets within the development consist of a tight grid mixed with residential cul-de-sacs. The neighborhood is unique from the rest of Newton as many homes (particularly on the cul-de-sacs) front onto a series of integrated pedestrian paths instead of the street.

USE CATEGORY	ARTERIAL ROAD				MAJOR COLLECTOR STREET				MINOR COLLECTOR STREET				LOCAL STREET			
	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.	GSF MED.*	PARCEL AREA MED.*	STORIES MED.	SETBACK MED.
RESIDENTIAL	3,472	14,023	2.0	31.3'	---	---	---	---	---	---	---	---	2,504	10,061	1.0	30.2'
SINGLE FAMILY	3,472	14,023	2.0	31.3'	---	---	---	---	---	---	---	---	2,541	10,073	1.0	30.2'
2-3 UNITS	---	---	---	---	---	---	---	---	---	---	---	---	1,998	9,029	1.5	26.4'
4-8 UNITS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9-99 UNITS	---	---	---	---	---	---	---	---	---	---	---	---	25,100	85,777	---	10.4'
100+ UNITS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OTHER	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COMMERCIAL	---	---	---	---	---	---	---	---	---	---	---	---	---	24,270	---	---
RETAIL	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MIXED-USE	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
INDUST./MANUF.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CIVIC/INSTIT.	---	7,050	---	---	---	---	---	---	---	---	---	---	1,558	12,527	1.0	33.6'

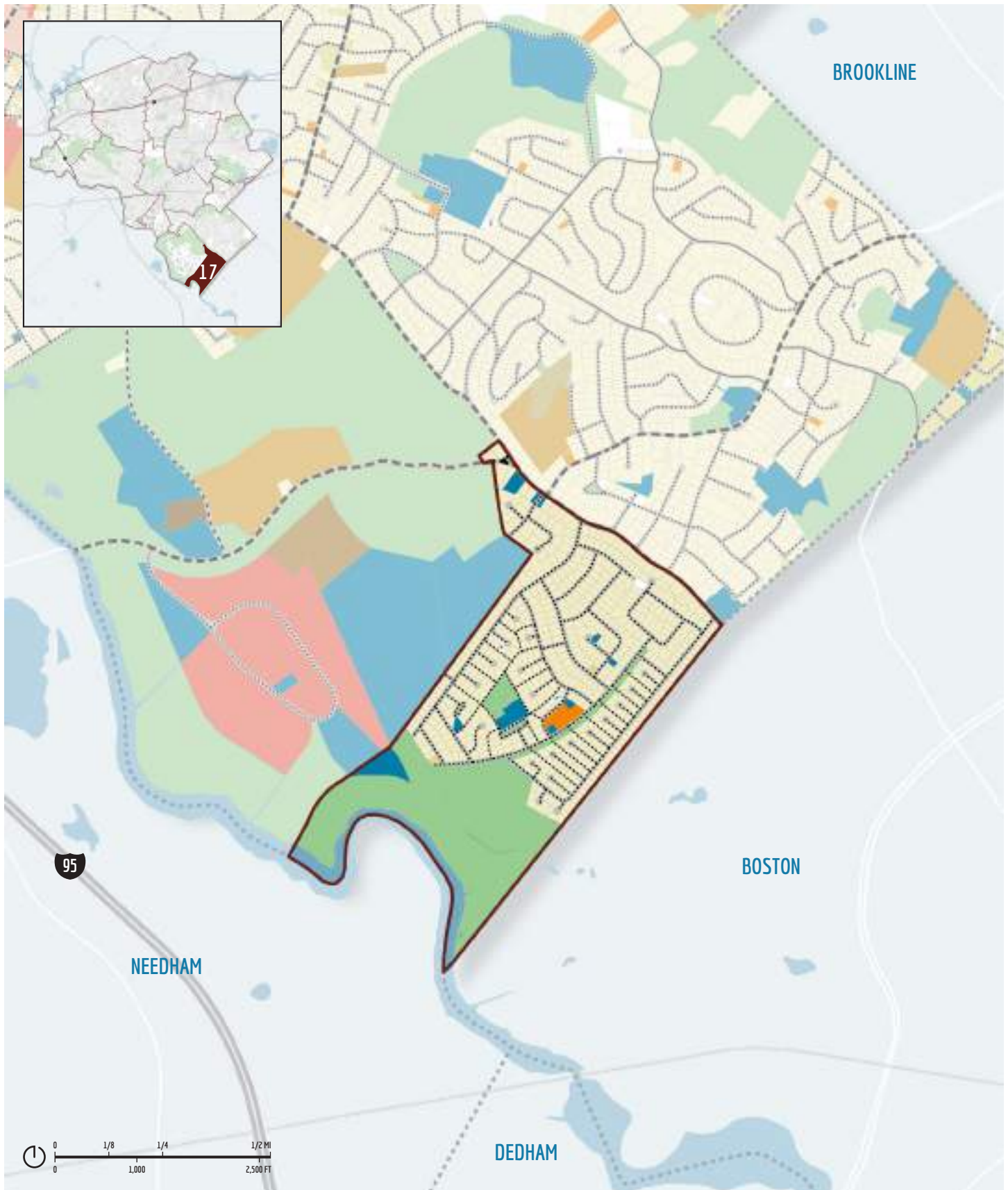
*GSF and parcel area median values measured in square feet.



Typical Oak Hill Park residential street (2016)



Aerial view of Oak Hill Park subdivision (1950's)



- Residential (Single Family)
- Residential (2-3 Units)
- Residential (4-8 Units)
- Residential (9-99 Units)
- Residential (100+ Units)

- Residential (Other)
- Commercial
- Retail
- Mixed-use (Primarily Residential)
- Industrial/ Manufacturing

- Civic/ Public Use
- Open Space
- No Data

- Street type**
- Arterial
 - Major Collector
 - Minor Collector
 - Local

Context-Based Areas

17. Oak Hill Park

Character Patterns & Pattern Subsets

The Oak Hill Park CBA consists of two character patterns: a single family community-style neighborhood and a large open conservation space along the river.

Neighborhood

Development within the Oak Hill Park CBA consists of a single large subdivision created in the middle of the 20th century in the mold of planned suburbs that were very popular across the nation at the time. The idea was to create safe and affordable housing for middle class families, many of whom were headed by returning soldiers from World War II. The typology is unique to the southern third of Newton, and consists primarily of single and two-story single family houses on small and medium-sized lots with small yards. More recently, as development pressure and real estate values increase, many of these original post-war structures have been torn down and replaced with larger and more modern single family homes in an attempt to meet more modern living demands and capitalize on long-term real estate values.

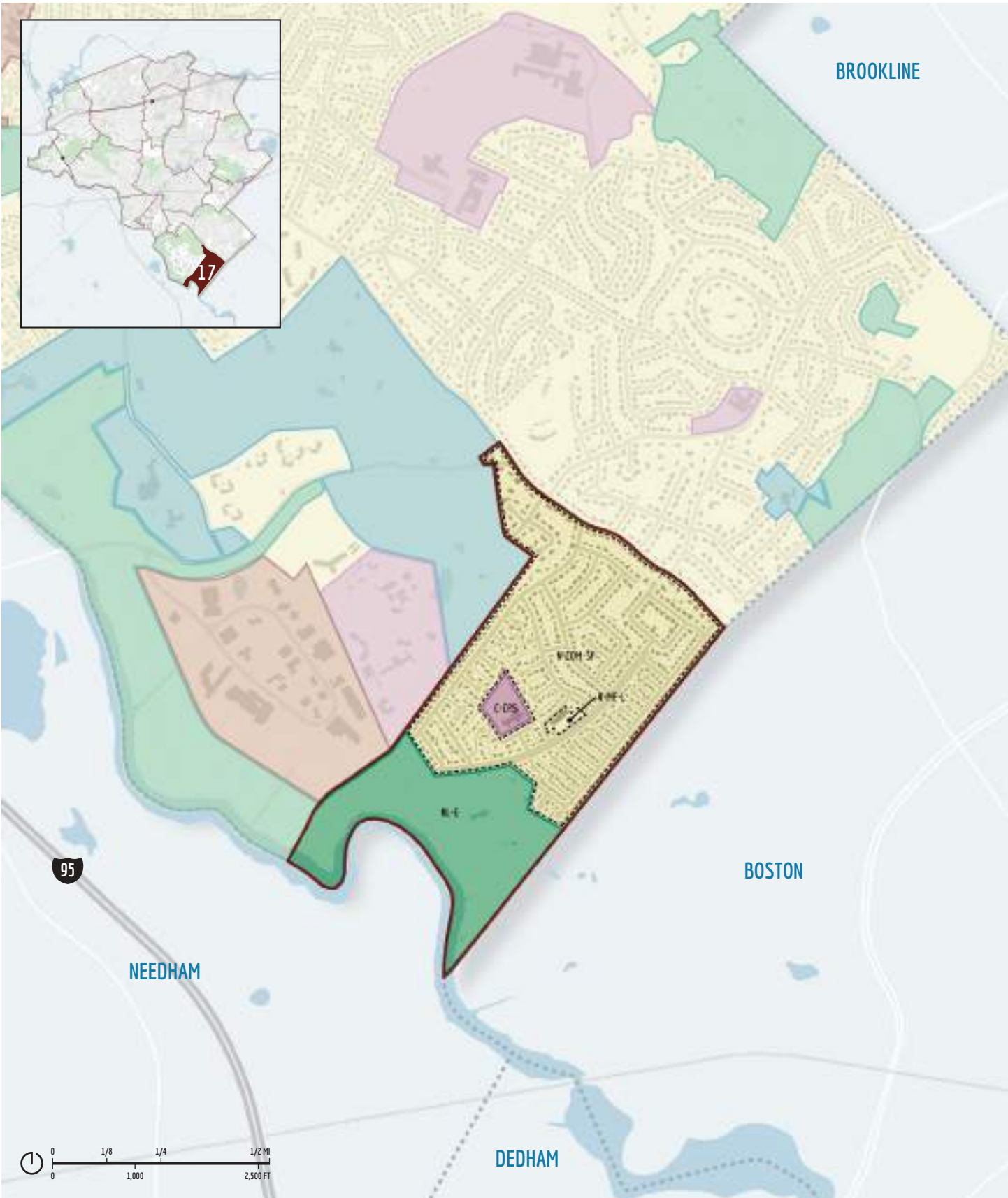
Campus

The Campus pattern in the Oak Hill Park CBA consists of the Solomon Schechter Day School and its grounds.

Natural Landscape

The Natural Landscape pattern in this CBA includes a portion of the Charles River Reservation, a state-owned protected natural landscape that connects to Millennium Park in West Roxbury. Also included in this pattern is a radio tower property that consists mainly of open landscape.





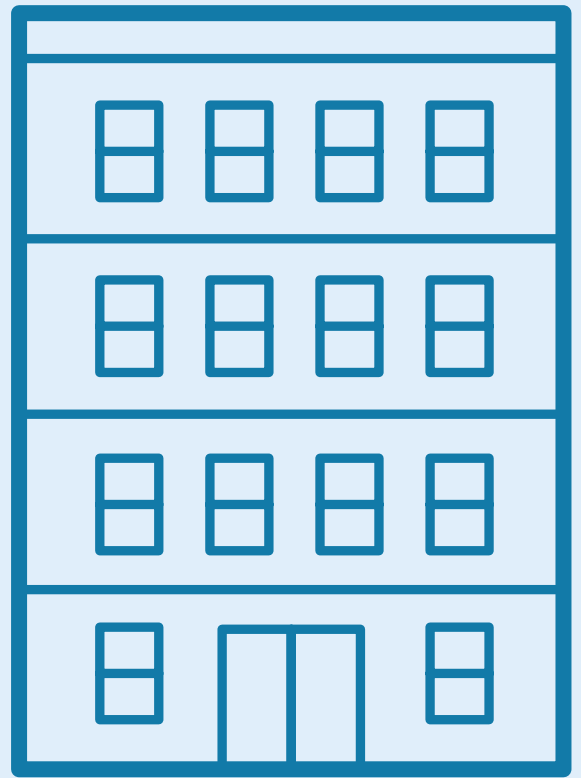
- Neighborhood
- Village Center
- Commercial Cluster
- Campus
- Recreation & Public Use
- Natural/Landscape

Newton's Building Types

Baked into Newton's pattern subsets is a great diversity of privately developed and owned building types, ranging from small cottage-style single family houses to office towers. This building type inventory describes some of the key characteristics of each primary building type, including general dimensions, architectural styles, and common building elements and articulations. This section is organized into "cards" by predominant land uses (e.g. residential, commercial, retail, industrial/manufacturing) and is intended to evolve as new types are discovered or introduced into the urban fabric of Newton.

While this inventory comprises the majority of Newton's development, it may not fully represent every development form present throughout the city.





Residential Building Types

Single Family

Small Traditional - 1 level



GSF: 1,000 - 2,500
Lot Size: 7,000 - 20,000
Front Setback: 25' - 35'
Lot Coverage: 15% - 35%
Common Features:

- bar/L-shape
- low-slung hip/gable roof
- no garage/one-car integrated garage

Single Family

Small Traditional - 1.5 level



GSF: 1,500 - 2,500
Lot Size: 5,000 - 10,000
Front Setback: 25' - 35'
Lot Coverage: 15% - 25%
Common Features:

- driveway parking
- dormers

Single Family

Medium Traditional - 2 level, regular



GSF: 1,500 - 2,500
Lot Size: 5,000 - 10,000
Front Setback: 15' - 35'
Lot Coverage: 10% - 30%
Common Features:

- driveway/accessory structure parking

Single Family

Medium Traditional - 2/2.5 level, long



GSF: 2,000 - 3,500
Lot Size: 5,000 - 7,500
Front Setback: 15' - 30'
Lot Coverage: 25% - 50%
Common Features:

- driveway/accessory structure parking

Single Family

Medium Traditional - 2/2.5 level, wide



GSF: 2,000 - 4,000
Lot Size: 7,000 - 12,500
Front Setback: 25' - 35'
Lot Coverage: 10% - 25%
Common Features:

- driveway/accessory structure parking

Duplex/Three-Family

Large Traditional - 2-3 level, wide



GSF: 3,000 - 6,000
Lot Size: 5,000 - 12,500
Front Setback: 25' - 35'
Lot Coverage: 10% - 25%
Common Features:

- driveway/accessory structure parking

Duplex/Three-Family

Large Traditional - 2-3 level, long



GSF: 2,500 - 4,500
Lot Size: 5,000 - 10,000
Front Setback: 15' - 30'
Lot Coverage: 20% - 50%

Common Features:

- driveway/accessory structure parking

Single Family

Manor - Historic



GSF: 3,000 - 5,000
Lot Size: 15,000 - 25,000
Front Setback: 25' - 60'
Lot Coverage: <15%

Common Features:

- porte cochere/accessory structure parking

Single Family

Manor - Contemporary



GSF: 4,000 - 10,000
Lot Size: 15,000 - 75,000
Front Setback: varies widely
Lot Coverage: <15%

Common Features:

- integrated garage/accessory structure parking

Multifamily

Single Family Extended - 2-3 level



GSF: 5,000 - 15,000
Lot Size: 7,500 - 15,000
Front Setback: 15' - 30'
Lot Coverage: 25% - 50%

Common Features:

- additional units typically take the form of townhouses

Three Family

Triple Decker/Stacked- 3 level



GSF: 4,000 - 6,000
Lot Size: 7,000 - 10,000
Front Setback: 8' - 15'
Lot Coverage: 20% - 50%

Common Features:

- driveway parking alongside building
- front porches on each level

Multifamily

Townhouse/Attached- 2-3 level



GSF: 6,000 - 25,000
Lot Size: varies
Front Setback: 25' - 35'
Lot Coverage: 5% - 20%

Common Features:

- parking concentrated in on-site lots/integrated garages
- articulated aggregation

Residential Building Types

Multifamily Small (4-8 Units)



GSF: 6,000 - 20,000
Lot Size: 6,500 - 15,000
Front Setback: 0' - 25'
Lot Coverage: 25% - 75%

Common Features:

- parking in driveway, small lot, or street

Multifamily Medium (9-50 Units)



GSF: 20,000 - 100,000
Lot Size: 7,000 - 125,000
Front Setback: 0' - 20'
Lot Coverage: 25% - 75%

Common Features:

- courtyard buildings
- parking concentrated on lots on site

Multifamily Large (50-150 Units)



GSF: 100,000 - 200,000
Lot Size: 30,000 - 200,000
Front Setback: 15' - 100'
Lot Coverage: 5% - 15%

Common Features:

- large landscaped areas on site
- parking concentrated on lots on site
- resident amenities on site

Multifamily Extra Large (150+ Units)



GSF: 200,000+
Lot Size: 250,000 - 750,000
Front Setback: 30' - 100+'
Lot Coverage: <5% - 20%

Common Features:

- on site surface/garage parking
- large on-site landscape areas

Single Family/Duplex/ Three-Family Residential-Retail



GSF: 3,000 - 5,000
Lot Size: 10,000 - 15,000
Front Setback: 0' - 10'
Lot Coverage: 10% - 50%

Common Features:

- small surface parking on site

Commercial Building Types

Small Office Building Street-Fronting



GSF: 1,000 - 10,000
Lot Size: 7,000 - 15,000
Front Setback: 0'
Lot Coverage: 30' - 50'
Common Features:

- retail on the ground floor
- on site surface parking

Medium Office Building Street-Fronting



GSF: 10,000 - 100,000
Lot Size: 15,000 - 60,000
Front Setback: 0'
Lot Coverage: 50% - 80%
Common Features:

- retail on the ground floor
- on/off-site garage parking

Large Office Building Street-Fronting



GSF: 100,000+
Lot Size: 60,000 - 100,000
Front Setback: 0'
Lot Coverage: 50% - 80%
Common Features:

- retail on the ground floor
- on-site garage parking

Small Office Building Auto-Oriented



GSF: 20,000 - 75,000
Lot Size: 75,000 - 150,000
Front Setback: 35' - 120'
Lot Coverage: 15% - 30%
Common Features:

- on-site surface parking
- large landscaped buffers
- single tenant

Medium Office Building Auto-Oriented



GSF: 75,000 - 150,000
Lot Size: 75,000 - 200,000
Front Setback: 50' - 200'
Lot Coverage: 5% - 25%
Common Features:

- on-site surface/garage parking
- large landscaped buffers
- single/multi-tenant

Large Office Building Auto-Oriented



GSF: 150,000+
Lot Size: 200,000 - 500,000
Front Setback: 50' - 150'
Lot Coverage: 5% - 50%
Common Features:

- on-site surface/garage parking
- large landscaped buffers
- multi-tenant

Retail/Mixed-use Building Types

Small Standalone Shop

Street-Fronting



- GSF:** 1,500 - 5,000
Lot Size: 6,000 - 15,000
Front Setback: 0'
Lot Coverage: 20% - 35%
Common Features:
- on-site surface parking
 - single tenant

Small Standalone Shop

Auto-Oriented



- GSF:** 1,500 - 8,000
Lot Size: 7,000 - 20,000
Front Setback: 45' - 60'
Lot Coverage: 10% - 25%
Common Features:
- on-site surface parking
 - single tenant

Retail Strip

Street-Fronting



- GSF:** 6,000 - 20,000
Lot Size: 15,000 - 50,000 (collective)
Front Setback: 0'
Lot Coverage: 20% - 50%
Common Features:
- street/on-site surface parking
 - multi-tenant

Retail Mixed-Use

Street-Fronting



- GSF:** 6,000 - 40,000
Lot Size: 10,000 - 50,000
Front Setback: 0'
Lot Coverage: 50% - 75%
Common Features:
- street parking
 - multi-tenant, ground level retail, upper level office or residential
 - primarily commercial

Retail Mixed-Use

Street-Fronting



- GSF:** 10,000 - 30,000
Lot Size: 15,000 - 50,000
Front Setback: 0' - 50'
Lot Coverage: 35% - 65%
Common Features:
- street and on-site surface parking
 - multi-tenant, small ground level retail, upper level residential
 - primarily residential

Retail Mixed-Use

Street-Fronting



- GSF:** 3,000 - 10,000
Lot Size: 10,000 - 20,000
Front Setback: 0'
Lot Coverage: 50% - 75%
Common Features:
- street and on-site surface parking
 - multi-tenant, small ground level retail, upper level residential
 - primarily residential

Retail Strip

Auto-Oriented



GSF: 10,000 - 40,000
Lot Size: 75,000 - 300,000
Front Setback: 35' - 100'
Lot Coverage: 20% - 35%
Common Features:

- street/on-site surface parking
- multi-tenant

Medium Standalone Shop

Street-Fronting



GSF: 5,000 - 20,000
Lot Size: 15,000 - 50,000
Front Setback: 0'
Lot Coverage: 30% - 50%
Common Features:

- street/on-site surface parking
- single tenant

Medium Standalone Shop

Auto-Oriented



GSF: 8,000 - 30,000
Lot Size: 20,000 - 75,000
Front Setback: 10' - 75'
Lot Coverage: 25% - 50%
Common Features:

- street/on-site surface parking
- single tenant

Large Standalone

Auto-Oriented



GSF: 30,000 - 100,000
Lot Size: 75,000 - 200,000
Front Setback: 60' - 75'
Lot Coverage: 10% - 30%
Common Features:

- on-site surface parking
- single tenant

Shopping Mall

Auto-Oriented



GSF: 150,000 - 500,000
Lot Size: 150,000 - 1,000,000
Front Setback: 45' - 300'
Lot Coverage: 25' - 75'
Common Features:

- on-site surface/garage parking
- multi-tenant

Industrial/Manufacturing Building Types

Automotive/Service Station

Small



GSF: 1,500 - 2,500
Lot Size: 12,500 - 20,000
Front Setback: 30' - 50'
Lot Coverage: 20% - 50%

- Common Features:**
- On-site convenience store
 - On-site surface parking

Automotive/Service Station

Large



GSF: 2,500 - 5,000
Lot Size: 15,000 - 30,000
Front Setback: 0' - 40'
Lot Coverage: 10% - 25%

- Common Features:**
- Large outdoor hardscape area
 - On-site surface parking

Legacy Industrial Facility

Small



GSF: 25,000 - 150,000
Lot Size: 100,000 - 200,000
Front Setback: varies
Lot Coverage: 10% - 20%

- Common Features:**
- On-site surface parking
 - Facilities located close to rail/river
 - Largely converted to modern uses (retail, commercial, etc.)

Legacy Industrial Facility

Large



GSF: 150,000 - 300,000
Lot Size: 100,000 - 300,000
Front Setback: 0' - 25'
Lot Coverage: 25% - 60%

- Common Features:**
- High density clustering of facilities
 - On-site surface parking
 - Multi-story industrial facilities
 - Largely converted to modern uses (retail, commercial, etc.)

Industrial/Manufacturing

Small



GSF: 5,000 - 20,000
Lot Size: 10,000 - 25,000
Front Setback: 30' - 100+'
Lot Coverage: 25% - 75%

- Common Features:**
- Often aggregated in industrial yards with similar facilities
 - On-site surface parking

Industrial/Manufacturing

Medium



GSF: 20,000 - 50,000
Lot Size: 25,000 - 125,000
Front Setback: 25' - 75'
Lot Coverage: 25% - 50%

- Common Features:**
- On-site surface parking

Industrial/Manufacturing

Large



- GSF:** 50,000 - 100,000
Lot Size: 125,000 - 250,000
Front Setback: 0' - 100+'
Lot Coverage: 30% - 75%
Common Features:
- On-site surface parking
 - Multiple facilities

Warehouse/Distribution

Small



- GSF:** 10,000 - 25,000
Lot Size: 15,000 - 50,000
Front Setback: 10' - 100+'
Lot Coverage: 20% - 50%
Common Features:
- On-site surface parking

Warehouse/Distribution

Large



- GSF:** 25,000 - 100,000
Lot Size: 50,000 - 200,000
Front Setback: 50' - 100+'
Lot Coverage: 25% - 75%
Common Features:
- On-site surface parking

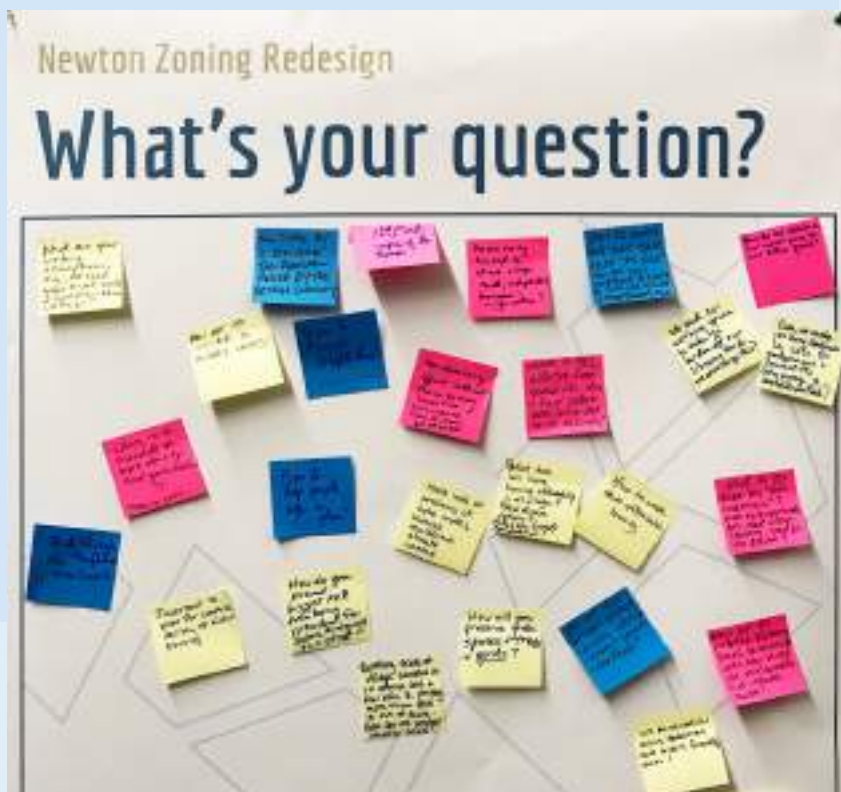
4

The Pattern Book Process

The Pattern Book Process

Community Engagement

The Newton Pattern Book was developed over the course of eighteen months in 2016 and 2017. Critical to any planning process of this scope and importance is the active participation of the community members. The planning team has worked with the City to set up a robust, multi-platform public engagement process. The following pages describe the different events and strategies that were deployed during the Pattern Book development process and summarize recurring themes in feedback received.



A question board offered participants a chance to ask broad-ranging questions about zoning at the project kickoff event in October 2016.

At the outset of the Zoning Redesign project, the planning team assembled a comprehensive public engagement plan to outline the objectives, methods, platforms, and key milestones for large public events. The goal of the public engagement plan and of the larger zoning redesign effort is to design and implement a multi-faceted engagement campaign offering opportunities to interact with, and contribute to, the project through a variety of media. The aim of the planning team was to make this effort as inclusive, accessible, and interactive as possible.

With a topic as complex, detailed, and multi-dimensional as zoning reform, it is important to design a comprehensive outreach and engagement campaign that serves to inform the public of the issues at hand and collect their perspectives and priorities for the future of their city. By offering space for the public to discuss the issues inherent to zoning with the planning team and asking participants specific questions about their goals for Newton, we were able to generate hundreds of responses and contributions from a broad cross-section of Newton's population, creating a meaningful dialogue that informed our recommendations.



James Freas, Deputy Director of Planning and Development, presents to the Newton community at the project kick-off open house in October 2016

Kickoff Open House

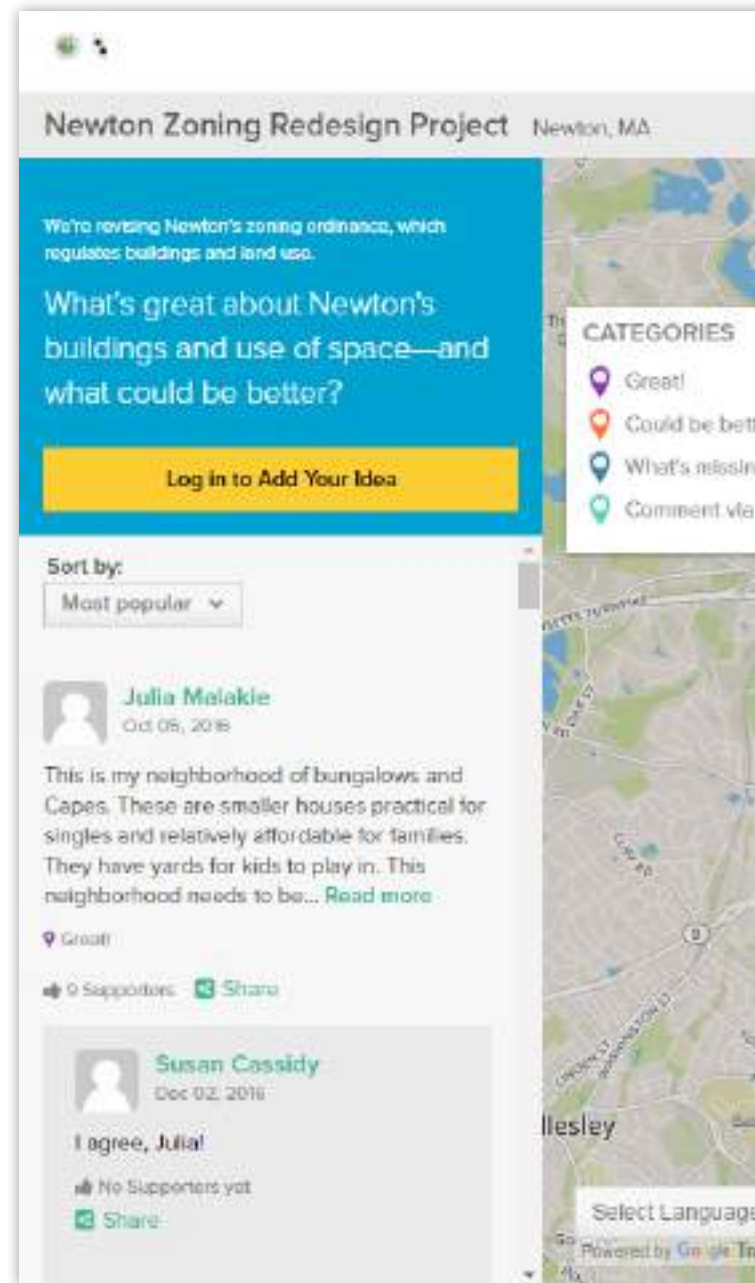
On October 5th, 2016, the planning team organized and facilitated a public open house to formally kick off the 18-month long Zoning Redesign initiative. The open house began with a brief presentation from city officials and the consultant team walking attendees through the project components and the work that led up to Zoning Redesign. Throughout the rest of the evening, participants were invited to visit three stations explaining major components of the Zoning Redesign effort, including “Zoning 101” (explaining the existing ordinance and zoning more generally), “coUrbanize and Community Engagement” (introducing participants to the coUrbanize platform and signing them up for accounts), and “The Pattern Book and Context-Based Zoning” (introducing participants to the Pattern Book exercise and explaining the key ideas inherent to context-based zoning).



Participants review materials at one of the kickoff open house topic stations.

CoUrbanize Online Engagement Platform

A core component of the Newton Zoning Redesign public engagement campaign was an interactive online platform (coUrbanize) that supported multiple goals at once. First, the planning team sought a consistent platform through which project news, updates, engagement opportunity announcements, and files could be released and made accessible to the community throughout the duration of the project. Second, the site served as a platform for direct engagement for those who could not attend workshops and other events, felt more comfortable contributing online, or who wanted to maintain their engagement before and after major public events. And third, the team wanted to create an online community where ideas could be readily shared and responded to between Newton's residents and the planning team.

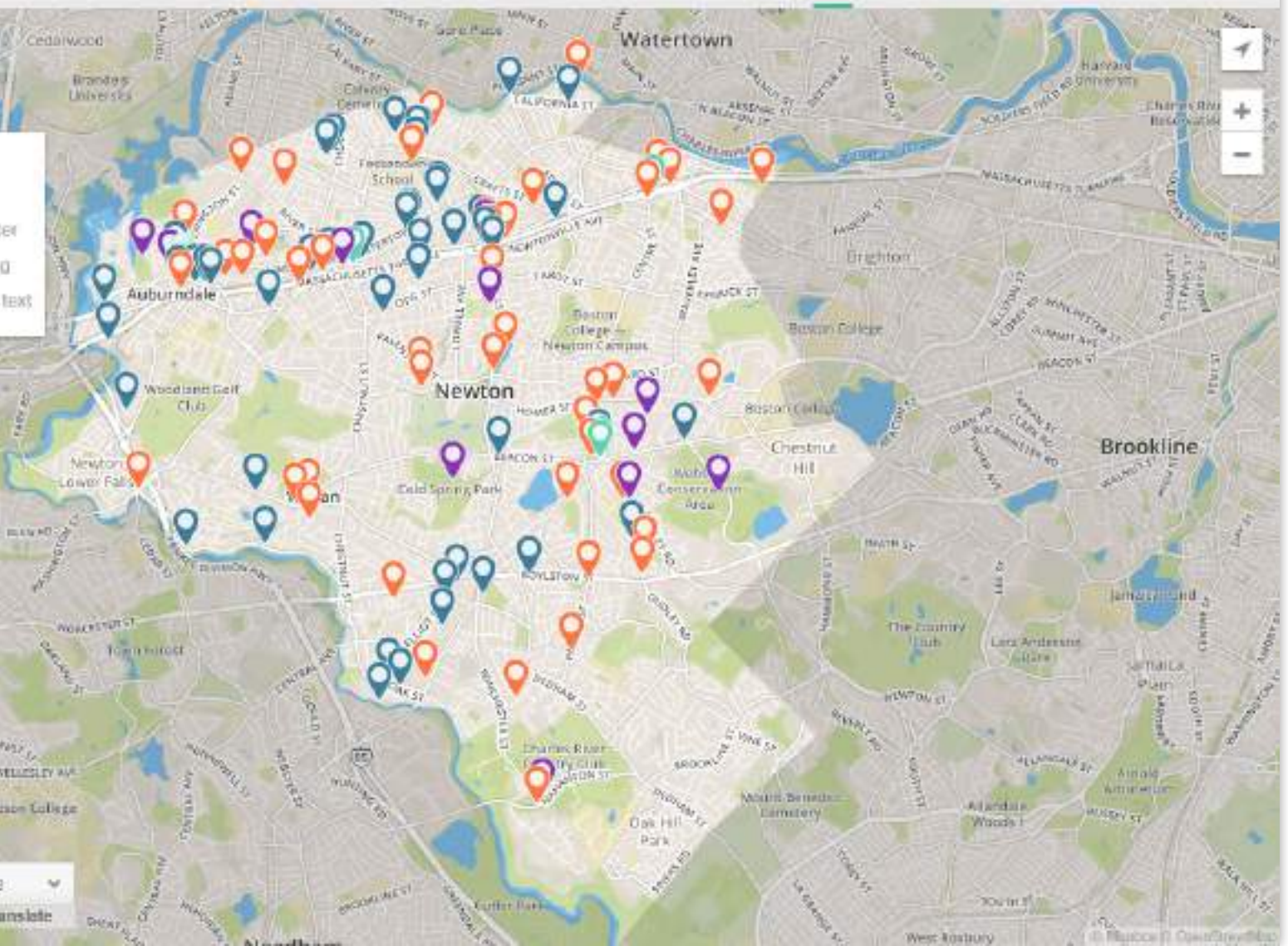


The coUrbanize Map

The coUrbanize map is the primary tool for interaction on the platform. The map asks participants to drop a pin on the map to discuss areas of the city that are great, could be better, or have missing attributes.

Info Tab

Any good planning project works to keep its participants and stakeholders informed. To make this process as easy and comprehensive as possible, the planning team has posted all the necessary context and background information for the Zoning Redesign initiative in this tab.



Updates & Timeline

The Zoning Redesign initiative is evolving every week as the planning team assembles more information and makes progress on the project goals. These two tabs can be used to review regularly posted project updates and understand the working project timeline.

Comments

The comments section gives users an opportunity to post general thoughts, questions, and ideas for review by the planning team and discussion among the Newton community. This area of the coUrbanize platform is designed to foster discussion and generate new ideas for the project.

CoUrbanize Online Engagement Platform

We're revising Newton's zoning ordinance, which regulates buildings and land use.

What's great about Newton's buildings and use of space—and what could be better?

[Log in to Add Your Idea](#)

[See all replies](#)

Pamela Smith
Nov 22, 2016

Keep single family housing zoning and add more green space. Support local business - meaning to NOT develop big box stores nearby.

Great!

5 Supporters Share

City of Newton
Nov 29, 2016

Hi Pamela, Thanks for your comment! We agree - local businesses are so valuable in Newton. An updated zoning ordinance aims to support the evolving needs of small businesses in Newton. We hope you can make it to the Pattern Book Open House this weekend (Dec 3 & 4, 2016) so we can continue the conversation.

No Supporters yet Share

What's great about Newton? What could be better?

Zoning is fundamentally an exercise in rule-making to encourage the kind of development the community wants to see more of and discourage the kind of development that may not be appropriate for the city. With this in mind, the planning team asked Newtonians to identify the areas of the city that they believe are working well and to help us understand which areas could use improvement.

Tell us where and what.

With the coUrbanize mapping tool, community members were able to identify one of three kinds of areas on a citywide map (great, could be better, what's missing) and give a description of their thinking.

Keep the conversation going.

Once comments were posted to the site, they were available for other community members to support, respond to, and share on social media. This encourages ongoing dialogue and the kind of idea-sharing that drives communities towards consensus solutions.

Hear from the planning team.

In some cases, comments and questions posted to the coUrbanize site would yield a response from the planning team. This kind of interaction was designed to let participants know we were reading each and every comment posted to the site and to direct community members to the information they needed to fully understand the Zoning Redesign initiative.

coUrbanize Explore Projects How It Works LOG IN

Newton Zoning Redesign Project Newton, MA MAP INFO UPDATES TIMELINE COMMENTS

Update #14

Do you want to preview the draft Pattern Book?

Check out the draft Pattern Book's initial pages. See some of our work in progress, initial maps, and analysis of Newton's development patterns. *This presentation was given to the Zoning and Planning Committee (ZAP) on March 13 by Sasaki Associates.*

Get Project Updates

Want to stay in the loop? Subscribe to email updates about the project here.

[Follow this project](#)

3. Village-based Areas - Development Types & Pattern Subsets

WORK IN PROGRESS!

2. West Newton Area

We will be back at ZAP on Wednesday April 12 to show the full draft Pattern Book.

Posted on Mar 27, 2017

[Share](#)

Update #13

Have an idea on the go? Text us!

We've just launched an exciting new way to get your feedback on the Newton Zoning Redesign Project! Look for 15 different signs like these posted around town showing numbers to text with ideas about how we use land and buildings. The questions contain a little bit of local trivia, too!

Staying Engaged with coUrbanize

Among the goals for a public engagement campaign to run parallel with the production of the Pattern Book and the draft zoning ordinance was the establishment of a universally accessible platform that would be updated with the latest products for public consumption and the most up-to-date information on future engagement opportunities. With coUrbanize, members of the Newton community could log on to engage at their leisure as well as sign up for regular notifications when new material was available.

Newton's Kickoff Questions

As part of the October 2016 Zoning Redesign kickoff open house, the planning team constructed a questions board to allow participants the chance to post questions about zoning and the Zoning Redesign process on sticky notes. The planning team read each question, consolidated overlapping concepts, and then drafted responses, which were then posted to the project engagement website, coUrbanize. Those questions and answers have been republished here.

What are the working assumptions for the zoning reform process?

On October 5th, 2016 we kicked off Newton's Comprehensive Zoning Reform – Phase 2 initiative, or “Zoning Redesign”. This is the second step in a long process designed to adapt Newton's zoning ordinance to better respond to the city's existing built character and the goals identified in the 2007 comprehensive plan. Building on the work recently completed in Phase 1 of zoning reform, the Planning Consultant team and the City of Newton worked closely to draft a set of goals for the Phase 2 process. These goals are the foundation of the project and will steer production

of the Pattern Book, the draft zoning ordinance, and decision-making over the next 12 months. In addition to these goals, the planning team will be working closely with local stakeholders through a diverse and multi-phase community engagement campaign designed to offer many unique opportunities for residents and those who care deeply about the future of Newton to help inform this process. While the new zoning ordinance will replace the current ordinance, the process and products of this initiative are designed to reflect the best of Newton's existing development and to embody the goals the community has agreed upon for their future.

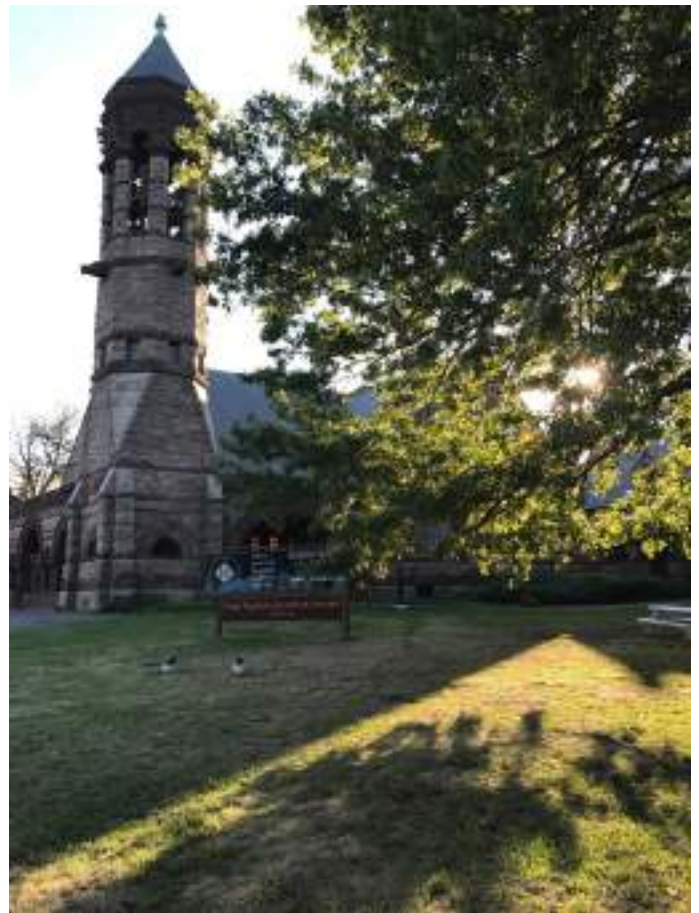


How will the new zoning ordinance be implemented? What will the review/permitting process look like for development, redevelopment, and enhancement of private property within Newton?

The planning team (the Planning Consultant team & the City of Newton) will work to assemble a draft of a new zoning ordinance. This process will include regular consultation with City leaders, community stakeholders, planning department staff, the City's legal team, elected officials, and others. The draft ordinance will address scenarios allowing by-right and special permit development/redevelopment within each of the new zoning districts and will make recommendations for the review and approval of permit applications. Once a final draft of the proposed ordinance is delivered to the City, the City Council will commence a review and deliberate on final changes before approving the new ordinance. The City Council is the ultimate authority on the new ordinance's language and provisions and will set a timeline for approval and a date by which the new ordinance will take effect once approved. After the new ordinance has been adopted by the City, the approved procedural framework for reviewing and granting permits will take effect.

How will feedback, comments, and questions from the community be incorporated into the products of the zoning reform process?

The Zoning Redesign initiative is designed to involve the Newton community in every aspect of the recommendation process. This is accomplished with a robust community engagement strategy involving public presentations, workshops, and open houses, as well as interactive online engagement opportunities through our coUrbanize platform. The planning team designed



these outreach strategies to allow community members to provide both general thoughts and comments on the process as well as specific ideas for targeted reforms. After each workshop/open house and throughout the online engagement campaigns, the planning team will work hard to review and synthesize all public feedback and incorporate the perspectives and opinions of all who engage in the process into both the Pattern Book and the new zoning ordinance. Ideas that represent the unique experience, priorities, preferences, and knowledge of Newton will be joined with best practices in planning, urban design, and zoning policy to ensure that the new ordinance is uniquely Newton's.

How can the zoning ordinance help to balance greater density and preservation in future development/ redevelopment?

Newton is undoubtedly growing. A confluence of market, demographic, and economic trends are making Newton a more appealing place than ever to live, work, raise a family, and grow old. The Newton community and leadership are now tasked with simultaneously accommodating this growth and preserving the beloved character that has made Newton the special place that it is. A zoning ordinance is one of the foremost tools in the regulatory toolbox for striking this balance. With a zoning ordinance that clearly identifies areas most appropriate for growth and areas where the current development scale and form should be preserved, the City can set its own priorities and provide a roadmap for developers and property owners who wish to build in Newton. With a context-based zoning ordinance, new rules and guidelines are established based on the existing city's development patterns and in close adherence to best practices in planning and design. By transitioning to a context-based zoning ordinance, the Newton community can help ensure that the unique character of each neighborhood and village center is respected and enhanced while accommodating new development/ redevelopment.

How can the zoning ordinance help to preserve/enhance accessibility to housing for the elderly so they can age in place?

Zoning is a useful tool for guiding the form and scale of development/redevelopment projects within the city. While it can certainly mandate that new construction, reconstruction, and building additions include accessibility features in the site design and building form, most of the accessibility

features found in architecture are guided by building codes and provisions established by the federal Americans with Disabilities Act. That being said, there are many features - such as wide sidewalks, accessible entries, and obstacle-free sight lines and paths to structures and public roads/sidewalks - that can contribute to better accessibility within new development. Additionally, a zoning ordinance that prioritizes or favors development typologies considered highly accessible can make a meaningful impact on the experience of those who live and work in them.

How will the Pattern Book help to ensure that future development/ redevelopment within Newton is in scale and in character with the city's existing development?

The Pattern Book, once completed, will be a catalog of development types and patterns within Newton. It will be specific to the unique character and scale of each of the city's neighborhoods and will serve as a guide for Newtonians to make data-driven decisions about how and where specific building types and land uses can help meet the city's planning goals and shape its future.

Through the Zoning Redesign's robust community engagement campaign, members of the Newton community will have a chance to provide input and feedback on the boundaries of new zoning districts and the building types that are permitted within them, which together form the primary rules and regulations for new development.



How can zoning be used to attract and retain new businesses in Newton?

A simplified zoning ordinance could go a long way towards making Newton more friendly and desirable to new businesses looking to set up shop in the Boston region. With a more flexible ordinance that better accommodates the rapidly changing needs of 21st century businesses, startups, entrepreneurs, and established businesses, Newton could have village centers and commercial corridors with low barriers to entry and a more business-friendly environment than can be found elsewhere in the Boston region.

How was the Pattern Book created?

The process to create the Pattern Book began with several conferences with local officials and stakeholders, community walking tours, research, documentation, evaluation of properties and building forms, and extensive dialogue with residents about Newton's character and aspirations. This initial round of fact-finding and analysis was followed by a comprehensive series of data-driven analytical procedures, which pulled and merged information from the City's GIS and Assessing databases. Following the analysis stage

and the launch of the public process involved in the development of the Pattern Book, the planning team synthesized information to identify built patterns of development around the city and organized those patterns into new draft zoning districts that better reflect the existing built character of the city.

How was the Pattern Book used to inform the new zoning ordinance and how will it be used to guide new development/redevelopment within Newton?

The Pattern Book serves as the foundational document for the new zoning ordinance, and represents the existing built character of the city. The new zoning, which is "context-based," differs from a traditional zoning ordinance in that it looks to the city's existing development patterns (as described in the Pattern Book) for guidance on how to steer new development. The Pattern Book can also be used as a reference document moving forward, to help Newtonians make decisions about various use-based or dimensional regulations for specific neighborhoods.



How can a new zoning ordinance address issues of housing affordability and tear-downs?

We understand the strong opinions and feelings Newton residents are conveying when it comes to tear-downs in their neighborhoods. While no regulation can strictly forbid this kind of redevelopment, a new zoning ordinance can aim to limit the impact of this type of project on a street or neighborhood and prevent redevelopment efforts from fundamentally changing the character of an area. By establishing form-based rules that reflect the existing and desired character of redevelopment and new development, a new

zoning ordinance can potentially change the economic incentives that lead to tear-downs in certain neighborhoods.

Housing affordability is a serious and complex issue in Newton. As Newton continues to attract new residents and families hoping to take advantage of the city's great schools, close proximity to Boston, and unique, historic character, housing prices for both rental and ownership properties will continue to rise. While this is a sign of a booming economy, it can leave many existing and prospective residents priced-out of the community. In many cases, property owners and developers max-out Newton's current zoning regulations, creating over-sized single family homes that are inaccessible to the average family.

By designing a zoning ordinance that is more in line with and specific to the various neighborhoods of Newton, the city can help ensure that any new development/redevelopment efforts help preserve the scale and character of neighborhoods—particularly in areas of the city that have historically been more affordable. Additionally, a revised zoning ordinance can provide greater access to and clarity around strategies for making existing properties more affordable for residents, including accessory apartments and strategic upzoning that can—for example—transition single-family residential parcels to small-scale multi-family units. Other regulatory instruments such as relaxed parking requirements, the introduction of mixed-use typologies, and certain homeowner incentives can help offset costs and contribute to a more affordable Newton.

How can a new zoning ordinance help preserve open space and vegetation in Newton?

The goal of zoning is to set in place rules that can be easily understood and followed by landowners and developers to help provide predictability in a city's future development and to ensure

new development/redevelopment adheres to a community's goals and ambitions. For communities like Newton, open space, parkland, conservation land, landscape vegetation, and treescapes are core to the city's identity and play a big role in the livability and future vitality of the city's neighborhoods. A context-based zoning ordinance will aim to protect the city's existing landscapes and ensure that new development enhances the urban landscape with the addition of new vegetation and parkland that emulates the form, patterns, and rich character of today's Newton. The proposed zoning ordinance will set guidelines for the quantity and accessibility of new public open spaces and parkland associated with new development to ensure that it is thoughtfully considered in all qualifying projects as the city continues to grow and evolve.

How can a new zoning ordinance help address traffic issues while protecting and enhancing Newton's pedestrian and bicycle infrastructure?

Traffic issues, understandably, are a major concern among those who live and work in Newton. A successful zoning ordinance is one that carefully considers the impact new development will have on existing traffic patterns and helps developers and landowners determine the best strategies for meeting their parking needs while minimizing the negative effects of added traffic flows. A big part of this effort involves intelligently developing properties to take advantage of the different preferences, constituencies, and adjacencies within Newton in ways that lessen automobile traffic on city streets and enhance pedestrian, bicycle, and transit mobility. For many years now, it has been observed that there are certain segments of the population who, when given the option, will choose alternative means of transportation over regular automobile use and ownership. A 21st century zoning ordinance can provide enough flexibility

to developers to ensure we capitalize on this preference set while easing transportation burdens citywide. Additionally, a redesigned ordinance can rethink parking requirements and standards for our new age and set in place parking requirements that better reflect actual usage patterns. By thinking beyond automobiles and parking, a redesigned zoning ordinance can better reflect the desires of residents who want more pedestrian and bicycle infrastructure while enhancing the vitality and connectivity of the city.

How much of Newton's existing development is considered conforming and non-conforming with the existing zoning ordinance? How is this measured?

It is well known that much of Newton's existing development is considered "non-conforming" with respect to the existing zoning ordinance. A non-conforming property is one that does not fully subscribe to the rules of the zoning district to which it belongs. A parcel could vary slightly or drastically from the zoning district rules and would be counted among the non-conforming. The planning team used the data collected for the Pattern Book to develop a formula that checks each of the city's 24,203 parcels against the primary buildings on each parcel and the various zoning rules that would apply to each building. This study found that approximately 87% of the city is non-conforming. A map of this study can be viewed in chapter three of the Pattern Book.

How can the zoning ordinance allow for enough flexibility to accommodate the rapidly changing needs of businesses?

Over the last several decades, we've seen rapid changes in the ways that businesses are created, operate, and bring products to market within our cities. In order to accommodate the changing needs of these 21st century enterprises while capitalizing on the benefits they bring to our cities, a zoning ordinance should provide businesses with the flexibility they need to start up, change, and grow. A context-based zoning ordinance aims to guide the form of development while remaining unbiased with regard to uses that are contextually appropriate.

This approach allows the ordinance to adapt and evolve with the changing needs of business while ensuring new development is in keeping with the community's preferences and priorities.

What is the role of new mixed-use development in the growth and evolution of Newton?

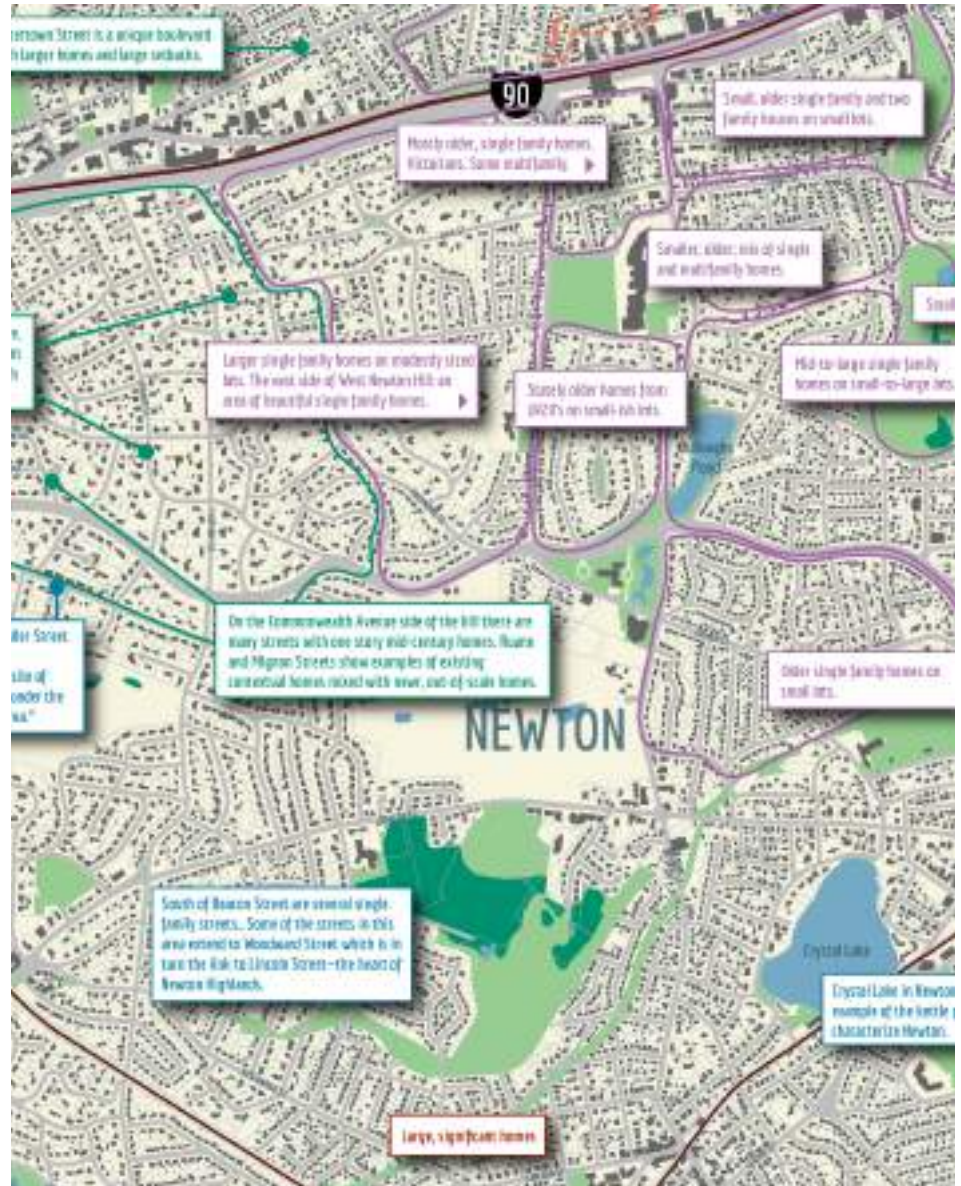
Mixed-use neighborhoods are good for the health and diversity of a city. In Newton, this kind of development can help the City achieve several of its goals simultaneously. New mixed-development allows for a higher density neighborhood comprising many different uses including residential, commercial, retail, institutional, and open space. Creating neighborhoods with this mix of uses provides residents and workers within Newton with more options for shopping, dining, working, and leisure, thus keeping more dollars within Newton. Additionally, mixed-use development allows for a broader array of transportation modes between homes, jobs, and entertainment options, thereby easing the burden

on roads and tackling traffic/congestion. There are a number of areas within Newton that have already seen great success with mixed-use development and several more areas that have been deemed appropriate for new mixed-use growth, including the city's village centers and commercial corridors. A new zoning ordinance will set in place guidelines for these areas so they can best take advantage of the benefits of mixed-use development while keeping with the city's celebrated character.

City Council Comments

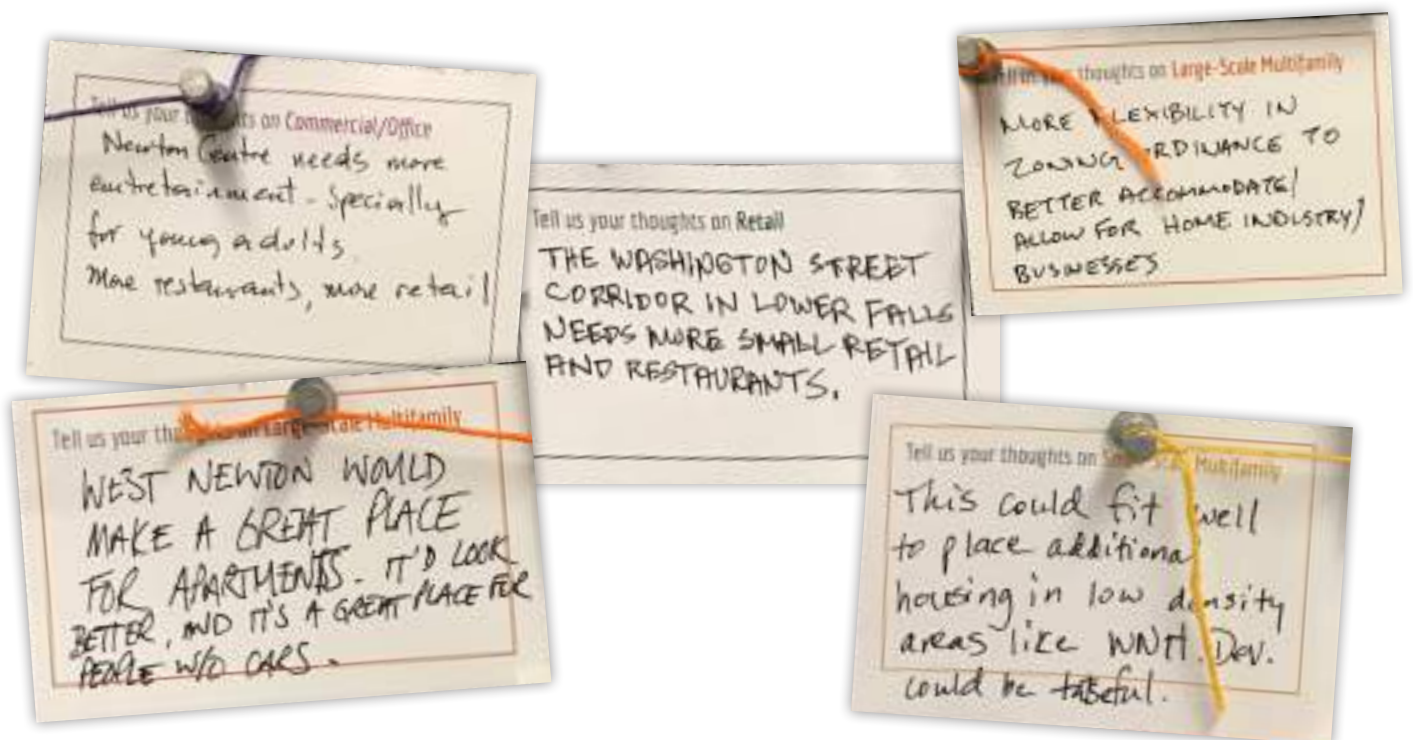
At the outset of the planning team’s work to catalog and analyze Newton’s development patterns, we asked the members of the Newton City Council to describe the characteristics of the neighborhoods they represent and to illustrate these points with specific on-the-ground examples. The planning team then consolidated the comments onto a citywide map. In some cases, councilors identified buildings they understood to be representative of the neighborhood’s character, while in other cases they described the key characteristics and pattern elements of entire blocks, streets, or neighborhoods within their wards.

Newton’s City Councilors outlined the key physical attributes of the neighborhoods within their wards. The map to the right shows the nature of these comments and perspectives. A citywide map capturing all the councilor comments is included in Appendix B.

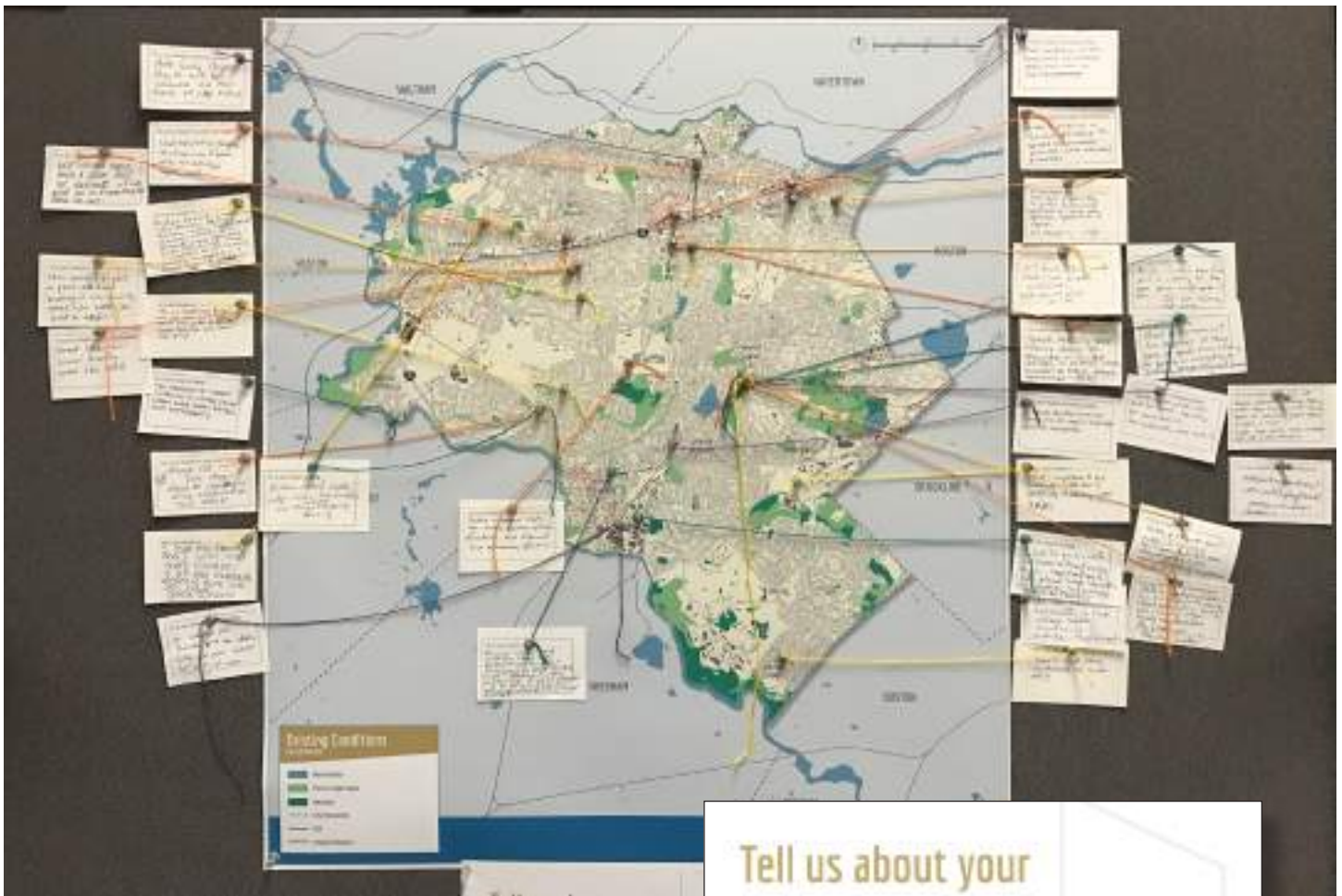


Reflections on Newton's Development

At the outset of the planning team's work to develop the Pattern Book, we hosted an open house at the Newton Innovation Center over the course of two weekend days. The goals of the event included teaching the public about the zoning reform process; describing models for and the intended benefit of a Pattern Book cataloging the city's development forms; fielding questions about the Pattern Book and larger zoning reform process; and encouraging contributions from the public regarding their thoughts, preferences, and priorities with respect to zoning, development in Newton, and the future of the city's neighborhoods and commercial centers. One exercise designed to capture these contributions was a typology mapping activity where participants were introduced to several building classifications across the city and asked to reflect on their own experiences with these typologies within their own neighborhoods. The intent of the exercise was to learn what residents liked, did not like, and what they felt contributed to the overall character of their neighborhoods. Some comments and key themes from this exercise are highlighted here.



These are samples of the many comments received as part of the typology mapping exercise at the December 2016 Pattern Book open house.



Mapping Newton's Typologies

Participants in this exercise were asked to think about the development typologies present in their own neighborhoods and share their thoughts on the characteristics and appropriateness of what they identified. The presentation of the cards and string on the map shows the geographic diversity of participants. The many colors present show the variety of built typologies that interested participants.

Tell us about your experience with Newton's typologies.

Using the color-coded typology cards, push-pins, and colored string, tell us your thoughts about the existing development patterns and building typologies in Newton's neighborhoods.

1. Pick a typology card that resonates with your experience in Newton. Write your thoughts on the card.
2. Pin the card to the board and place another pin in the neighborhood you're referring to.
3. Tie them together with the appropriate colored string.

Instructions:

1. Pick a typology card that resonates with your experience in Newton. Write your thoughts on the card.
2. Pin the card to the board and place another pin in the neighborhood you're referring to.
3. Tie them together with the appropriate colored string.

The Pattern Book Process

Preserve, Enhance, Transform

Another exercise offered at the December 2016 Pattern Book open house gave participants a chance to identify areas of the city they understood to be appropriate for one of three broad approaches: preservation, enhancement, and transformation. Here the planning team encouraged participants to take a look ahead to the city's future and make determinations on which areas of the city contributed a rich historic character that should be maintained in its current form over time (preservation), which areas were working well but could benefit from strategic growth and investment (enhancement), and where growth and redevelopment can and should responsibly occur over the next several decades (transformation).

Preservation

One of the most common themes in the feedback gathered from the community is that people in Newton like where they live. This sentiment includes neighborhoods with specific characteristics as well as the city as a whole. Many residents in neighborhoods with smaller houses express concern over redevelopment that increases the average house size considerably, changing the character of the neighborhood. Similarly, residents in neighborhoods with larger homes expressed a desire to preserve their neighborhoods as single family communities. Unsurprisingly, people like where they chose to live.

stars can be found throughout the city, most typically in areas with large, under-utilized or post-industrial parcels. There was also a clustering of these stars in some parking lots within and around the city's major village centers. With a few exceptions, the city's smaller village centers and largely residential neighborhoods were not designated as priorities for transformation.

Enhancement

Throughout the Pattern Book process, there has been enthusiastic community support for enhancement of community spaces. Improvements to parks, landscaped areas, reservations, and the public realm in the village centers were frequently requested.

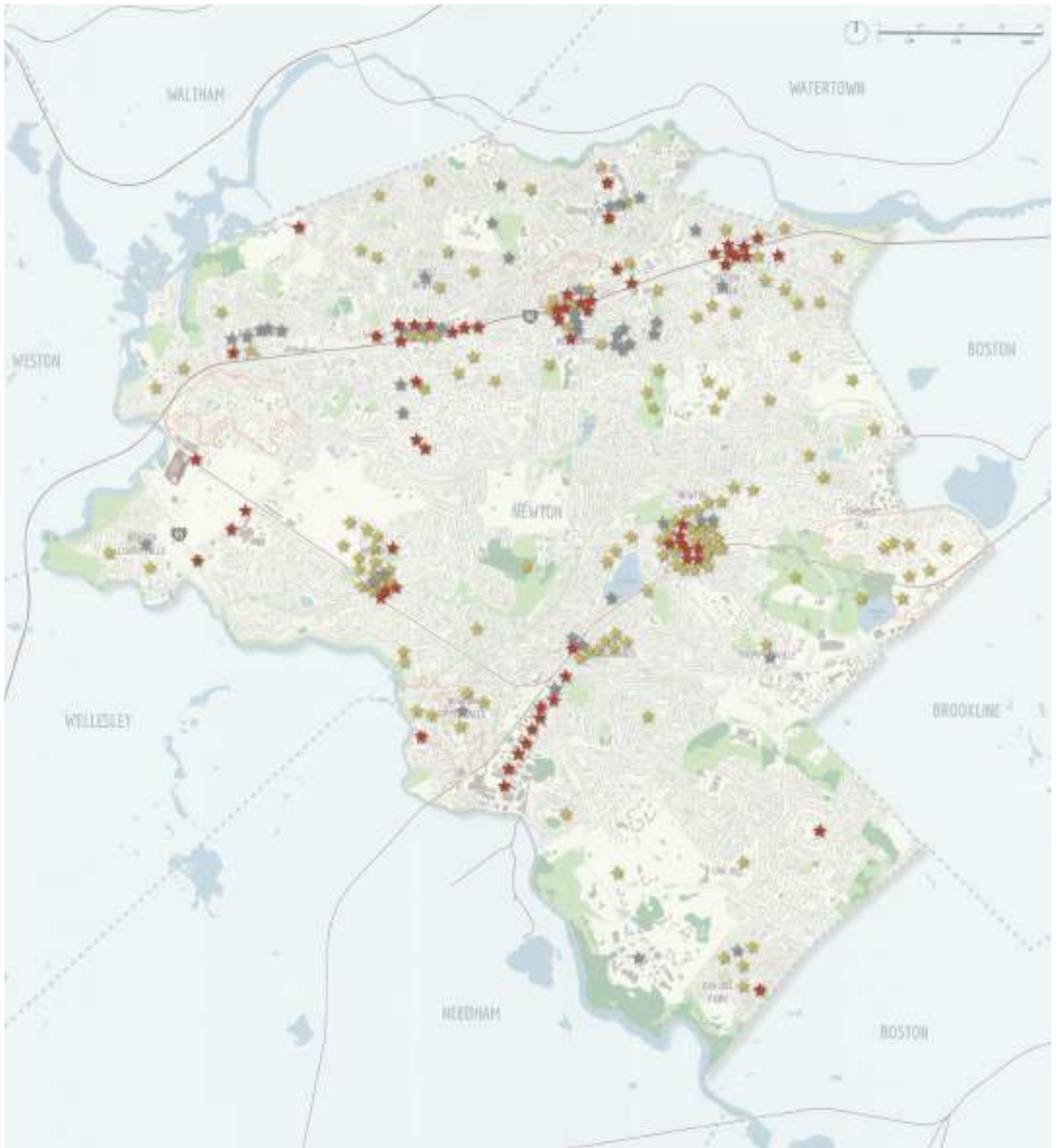
Most divergent opinions centered around the enhancement of residential neighborhoods. Some community members advocated for increased density, particularly near transportation or retail centers, citing a desire for inclusivity, diversity, and vibrancy. Not all respondents considered these recommendations enhancements and voiced opposition.




Transformation

General agreement was reached on areas that could use transformation. These included the Needham Street corridor and the Washington Street corridor. Other red



Open house participants contribute their thoughts on appropriate areas for preservation, enhancement, and transformation, respectively.



-  Areas identified as appropriate for preservation
-  Areas identified as appropriate for enhancement
-  Areas identified as appropriate for transformation

The Pattern Book Process

Engagement Activities

Pop-Up Planning Department

On September 25, 2016 and October 4, 2016, City staff conducted “pop-up planning department” sessions at the Newtonville Village Day, Upper Falls Village Day, and the Cold Spring Park Farmer’s Market. Community members were invited to ask questions, post photographs to Instagram using the hashtag #NewtonPatternBook, and chalk draw the neighborhood.



Walking Tour

On November 11, 2016 a handful of community members joined the Planning Department and the Planning Consultant team for a public walking tour around Newton Centre. Participants were able to see firsthand how the team is collecting data and hear about the Pattern Book methodology.



Historic Newton

As part of our Pattern Book open house, we asked attendees to reflect on photos of Newton's past in the context of the city's current and future development. In many cases, the city's past development better reflects current best practices in planning and urban design than does existing development. For example, 100 years ago village centers were taller and denser than modern commercial centers, resulting in a more responsible use of land and better pedestrian conditions.



Question Campaign

In an effort to further contextualize and make more accessible the public engagement campaign for the Zoning Redesign project, the planning team distributed signs throughout the city's neighborhoods inviting community members to text message responses to questions specific to one or more zoning issues. The responses then get added to the coUrbanize map online for the rest of the community to see, discuss, and respond to.



Assembling the Pattern Book

The objective of assembling a pattern book is to build a comprehensive catalog of Newton's existing (and to some extent, past) development patterns. Given that the task involved analyzing existing and past development patterns and that the city is ever-changing as new development and redevelopment efforts are always underway, the Pattern Book should be understood to catalog Newton at a moment in time. Using a diverse and robust array of information services from public and private sources, the planning team was able to assemble a data-driven document with the intent that its figures and analyses could be updated in the future as new and different data become available. This would allow the Pattern Book to stay updated and exist as a "living" tool for the City and public at large to use in guiding new development and redevelopment for generations to come. To best facilitate this process of updating data and revising the Pattern Book, the planning team has recorded the methodologies and processes underlying the Pattern Book's pages in this chapter. While this may not be a fully comprehensive guide for reproducing every metric included in the Pattern Book, we believe it will provide any practicing planner or city planning official with the tools they will need to get started.

Methodology

The data used throughout the Pattern Book primarily come from the City of Newton's Assessor's database of parcels and building data. These two sources were joined in GIS by common ID to provide a complete database of all relevant parcel and building dimensional parameters. A meticulous process was undertaken to ensure that parcels with multiple units but differing IDs were accurately accounted for.

Context-Based Areas (CBAs) were the primary unit of analysis. More details about CBAs and how they were generated are outlined on page 114. Metrics for the CBAs are aggregates of parcel and building level data within each boundary. All parcels were assigned to their corresponding CBA using the "select by location" operation in GIS based on whether its centroid fell within the CBA boundary.

The data tables associated with the GIS files were brought into Microsoft Excel, where data calculations were then extracted for each CBA, featured in the tables in Chapter 3. Similarly, parcels adjacent to roads were assigned road classifications. If a parcel was bordered by two different road classifications, the higher class was given priority.

Character Patterns were created to define the physical components of the city. Within Newton, all of the parcels can be identified as belonging to one of the Character Patterns: Neighborhood, Village Center, Commercial Cluster, Campus, Recreation and Public Use, and Natural/Landscape. These patterns were largely informed by parcel land use and density.

Pattern Subsets were created to provide an additional level of classification beyond the Character Pattern. Pattern Subsets identify the distinguishing features of different areas of a Character Pattern, and define the typical physical parameters that make each subset distinct. Several factors contribute to the uniformity of a Pattern Subset: building height, front setback, side setbacks, and to a degree, overall building size and lot size.

During the Pattern Book process, several guided and self-guided tours around the city demonstrated that the uniformity within certain areas is as apparent as the diversity between areas within the city as a whole. Repeating patterns of uniformity became the basis for the Pattern Subsets. The typical dimension ranges for each Pattern Subset were extrapolated from a randomized sampling of parcels and are intended to describe averages, rather than serve as a comprehensive description of concentrations of specific parcels. They should be understood to be representative of the diversity of Newton's development forms.

Appendix: **A**

Glossary of Terms

Pattern Book Glossary of Terms

Accessory Structure

A structure located on the same lot with the main building, detached or attached, and is subordinate and customarily incidental to the use of the main building. (A Planners Dictionary, American Planning Association)

Arterial Road

Arterial roads provide cross-city travel or regional connectivity providing connections to highways that extend beyond the Boston area. (Newton In Motion, 2017)

Character Pattern

Broad categories that describe the predominant land use components of the city. (prepared by Sasaki Associates for Newton Pattern Book)

Collector Street

Collector Streets serve a critical role in the roadway network by gathering traffic from Local Roads and funneling them to the Arterial network. Within the context of functional classification, Collectors are broken down into two categories: Major Collectors and Minor Collectors. (Federal Highway Administration, Highway Functional Classifications)

Context-Based Area

An imaginary boundary that distinguishes different areas of the city based on composition and development character, informed by neighborhoods, village centers, densities, development eras, and development styles. (prepared by Sasaki Associates for Newton Pattern Book)

Easement

Authorization by a property owner for the use by another, and for a specified

purpose, of a designated part of his or her property. (A Planners Dictionary, American Planning Association)

Floor Area Ratio

The gross floor area of all buildings on the lot divided by the total lot area. (City of Newton Zoning Code 2015)

Geographic Information Systems (GIS)

A computer system used to visualize, query, analyze, and map information that is spatial in nature. (A Planners Dictionary, American Planning Association)

Land Use

The occupation or use of land or water area for any human activity or any purpose. (A Planners Dictionary, American Planning Association)

Local Road

Local Roads are not intended for use in long distance travel, except at the origin or destination end of the trip, due to their provision of direct access to abutting land. They are often designed to discourage through traffic and are classified by default after Arterial and Collector Streets have been identified. (Federal Highway Administration, Highway Functional Classifications)

Nonconforming Property

A building or parcel which does not conform in whole or in part to the use or construction regulations of the district in which the building or parcel is located. (City of Newton Zoning Code 2015)

Open Space

An expanse of undeveloped or landscaped land, often tax exempt, that serves as a significant environmental, agricultural, public health, and/or recreational asset for the city's residents. (prepared by City of Newton staff for Newton Pattern Book)

Pattern Book

A comprehensive documentation of the city's existing development patterns. It describes the siting, massing, articulation, and—in some cases—the design of development within the city. (prepared by Sasaki Associates for Newton Pattern Book)

Pattern Subset

Areas within a character pattern that more specifically describe detailed form, scale, and density of development. (prepared by Sasaki Associates for Newton Pattern Book)

Setback

The minimum/maximum distance by which any building or structure must be separated from a street right-of-way or lot line. (A Planners Dictionary, American Planning Association)

Streetwall

Streetwall is a custom analysis employed to describe the consistency of building facades on any given street. Streetwall percentage is the ratio of the building width to the parcel width (also called frontage). Higher percentages indicate to a more urban form of development, while lower percentages indicate a more suburban form of development from the perspective of someone on the street. (prepared by Sasaki Associates for Newton Pattern Book)

Zoning

The division of a city by legislative regulations into areas, or zones, which specify allowable uses for real property and size restrictions for buildings within these areas. Also, a program that implements policies of the general plan. (A Planners Dictionary, American Planning Association)