TOWN OF MIDDLETON

MASTER PLAN

2018-2028



Prepared for the Town of Middleton
Prepared by the Metropolitan Area Planning Council (MAPC)

MAPC submits its final draft of the Middleton Master Plan 300 as of February 19, 2019, subject to the revisions that may continue to be made by the Middleton Master Plan Committee.



ACKNOWLEDGMENTS

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Workshop Participants and Community Stakeholders
Special thanks to the workshop and other participants who provided feedback.

Letter from Master Plan Committee



A Letter from the Middleton Master Plan Committee

Fall 2019

Middleton was first incorporated as a Town in 1728 and in the almost 300 years since then, has seen many changes. In 2028, Middleton will celebrate its 300th birthday. As a community, where do we want to be as we approach this milestone? What are the steps we should take to preserve the qualities that make us unique and what are the opportunities available to help us improve our town?

As requested by the Planning Board, the Master Plan Committee is pleased to present the Middleton Master Plan 300 which updates our 1999 Master Plan. This Master Plan provides a strategic framework to guide future physical and economic development within the Town of Middleton over the next 10 years. This plan is based on researched data, meetings and forums with town residents, businesses, developers, town boards, town staff and a town wide survey to solicit feedback The Middleton Master Plan 300's Implementation Plan, which can be easily found at the front of the document, includes tangible steps for the Town to take through 2028 and beyond to help us reach our vision of the future Middleton.

We thank all the residents and town staff that contributed their time and opinions. In particular, Town Planner Katrina O'Leary, who attended meetings, shared information, and spent many hours formatting and organizing this document; as well as Town Administrator Andy Sheehan who faithfully edited when asked and offered his insight when needed.

Respectfully submitted,
The Master Plan Committee

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EXECUTIVE SUMMARY

PLAN ELEMENTS

- Housing
- Economic Development
- Land Use & Zoning
- Natural Resources
- Public Health
- Transportation & Circulations
- Open Space & Recreation
- Public Facilities & Services
- Historic & Cultural Resources

Introduction

THE MASTER PLAN

Middleton300 is the comprehensive master plan completed by the Town of Middleton in 2019 with the support of the Metropolitan Area Planning Council under the direction of the Middleton Master Plan Committee and the Town Planner. The name of the plan reflects the Town's upcoming tri-centennial in 2028. The master plan includes a strategic framework to guide the future physical and economic development within the Town of Middleton over the next 10 years. Middleton300 is an action plan for positive change within the community. It provides:

- A town vision based on community input and priorities;
- Strategies and actions to improve livability, opportunity, and sustainability;
- A land use plan to guide physical development in town;
- An implementation strategy to effectively achieve plan goals; and
- Predictability for residents, businesses, and developers, and elected officials.

Developing a master plan is more than just researching and writing a report. It is an open, public process through which the people of Middleton decide future priorities to guide growth and development over the next decade. It was also an opportunity through which town residents and business owners, and Town boards and committees talked to each other, listened to each other, and brought their visions for the town into alignment to achieve a set of shared goals.

IMPLEMENTING THE PLAN

The purpose of the plan is to prepare for action. The Middleton Master Plan 300 includes a detailed implementation plan setting out the what, how, who, and when for specific actions to achieve the goals of the plan. The Middleton Planning Board will serve as the stewards of the plan, advising town boards, committees, and other stakeholders on implementation as well as monitoring progress.

PUBLIC INPUT

Public input is a critical component of the master planning process. During the course of the Middleton Master Planning process, residents of all ages, business owners, elected and appointed representatives, and others were invited to weigh in on important issues facing our great town. There were many ways citizens participated: responding to the Visioning survey, public forums were held at the Flint Public Library; a project website at Middleton300.mapc.org; social media, interviews with business owners; and Master Plan Committee members engaged residents on the plan.

This input, along with existing conditions findings, Town residents, the Master Plan Committee and Town Planning staff with assistance from MAPC, then developed a set of draft goals, strategies and actions for each master plan element, with an implementation strategy for each.

Meetings with appointed and elected boards of Middleton were held to solicit feedback and guidance. Once approved by the Planning Board, the Master Plan will serve as the guiding planning document for the Town of Middleton over the next 10 years.

YOUR MIDDLETON, YOUR PLAN

In 2028....Middleton is a flourishing community offering residents a high quality of life by taking full advantage of, and emphasizing, its many unique assets – distinctive history, attractive residential neighborhoods, its central location and access to the North Shore and to Boston, a growing business mix, a network of beautiful open space, community supported agriculture, and community pride.

Middleton's rich farming history and its diverse open space, and trails network draw residents and visitors to it. Residential neighborhoods offer a welcoming, safe and enriching environment with a variety of housing options – market rate and affordable – for families, seniors and young adults. Redevelopment in the town center area has created a series of small village centers with shops and residences in a walkable environment attractive to young and old residents alike. Sidewalks, thru streets and bike trails link the residential neighborhoods to school and recreation areas and appropriately scaled mixed use retail, residential and office space attracts much needed business, jobs and increased consumer spending to town.

Middleton's continued participation in state-of-the-art local and regional public education and up-to-date town facilities continue to attract families, but also provide excellent services and recreational options for residents of all ages. Effective Town management, improved transportation connections, and strategic partnerships with our neighboring communities have unlocked community and economic opportunities allowing all to share in the success of Middleton and the surrounding region. Finally, a connected system of well-maintained parks, open spaces, and recreation areas with strong pedestrian and bicycle amenities further contributes to Middleton's high quality of life by improving residents' overall health and making the community among the "greenest" on the North Shore.

EXECUTIVE SUMMARY

STRATEGIES & RECOMMENDATIONS

Based on public input received, MAPC created the following recommendations developed specifically to address the needs and priorities of the community.

SAMPLE RECOMMENDATIONS

Housing

Middleton's open residential neighborhoods and quality school system will continue to be highly desirable to young families in the coming decades; retirees and elders will prefer to age in their communities, creating a large and growing need for affordable and age-friendly housing options.

- *Create opportunities to develop a more diverse housing stock – affordable and market rate - to meet the needs of a changing demographic profile in the town.*
- *Consider encouraging an appropriate mix of both single-family and multi-family units – particularly units that will serve households headed by those who will be 35-54 in 2020.*

Land Use & Zoning

Although the majority of Middleton's land is dedicated to residential use, Middleton contains diversity land uses. Comprised of 14 square miles of land, 68% of Middleton's land area is forested or wetlands. The future fiscal stability of the Town might depend on revenue from new growth, which could be achieved in part through the development of undervalued properties.

- *To address senior living needs, the town should consider adding Skilled Nursing Facilities and Assisted Living Facilities as allowed uses and determine where the facilities should be located.*
- *Include the Town Center/Middleton Square area in the town's next Complete Streets assessment and improvements schedule to improve safety and pedestrian bike access to Middleton uses and amenities.*

Transportation and Circulation

With 56.8 miles of roadways, Middleton faces a variety of transportation challenges, including bicycle and pedestrian safety, vehicle speeds, and parking. No commuter rail, rapid transit or fixed- route bus service within its town limits with no dedicated bike lanes and limited sidewalks found throughout the Town.

- *Develop the Middleton Rail Trail between Danvers and North Andover to serve as a main trail spine through the town that connects the center, schools and open spaces.*
- *Improve accessibility for all users by reconstructing major streets (Maple, East) as complete street.*

Public Facilities

The Town of Middleton strives to provide high quality services but will need to address their outdated and undersized municipal facilities. The Town has made efforts to increase efficiencies in administrative processes.

- *Ensure Middleton's facilities meet community needs by exploring new public safety, senior, and municipal safety facilities.*
- *Secure adequate resources for Middleton's public services, facilities, staff, and equipment as the town grows and enhances its municipal facilities.*
- *Enhance communication and improve transparency of town processes.*
- *Analyze Middleton water system and develop a phased Capital Improvement Program to meet town water and waste water needs in compliance with state regulations and continue to develop and implement the Town Roads program.*

Economic Development

The town will continue to grow at a steady rate with lots of opportunities to attract a larger labor force and support additional retail square footage. Many want to create a signature place in the town to help generate foot traffic for businesses and the Town's overall economic development. The Town's fiscal health will increasingly rely on new growth – especially in commercial.

- *Explore its existing underutilized developable Town- owned parcels to address community and economic develop goals.*
- *Consider rezoning of land from manufacturing to health care related fields which are projected to increase.*

Public Health

Middleton residents are living and enjoying healthier lifestyles than residents in other towns, in part due to the Town's strong Health Department and Board of Health that addresses environmental health and community health issues. The Town has the opportunity to explicitly integrate more health considerations into its planning and development processes to mitigate potential negative health issues and to become a more age friendly community.

- Middleton should continue to promote healthy foods, address environmental hazards, and assess potential health impacts of proposed projects and policies

Open Space and Recreation

Middleton's open space and recreation resources are a reflection of the Town's origins as a farming community with a close relationship with its rivers, streams, and ponds. Several local organizations are actively involved in the stewardship of natural resources and open spaces in the Town that gives opportunities to improve open space maintenance.

- *Expand and improve recreational facilities of the Town.*
- *Manage and promote existing resources and conservation facilities.*
- *Provide for public access to conservation lands and manage resources in accordance with community needs*

Historic and Cultural Resources

Middleton's origin roots from a farming community and much of its historic and cultural heritage is found in open space and conservation land. The town is part of the Essex National Heritage Area with four buildings listed on the National Registry of Historic Places.

- *Enhance efforts to protect and maintain Middleton's historic and cultural resources.*
- *Increase the local capacity to support and fund historical preservation efforts.*
- *Promote Middleton's historic resources to attract visitors to Town and reinforce local pride and amenities*

AT-A-GLANCE EXECUTIVE VISUAL SUMMARY

1 Scenic Preservation overlay

2 Open Space Residential Design Zoning
Allow option for future subdivisions to have same number of single-family dwellings but on smaller lots surrounded by large connected open spaces and trails

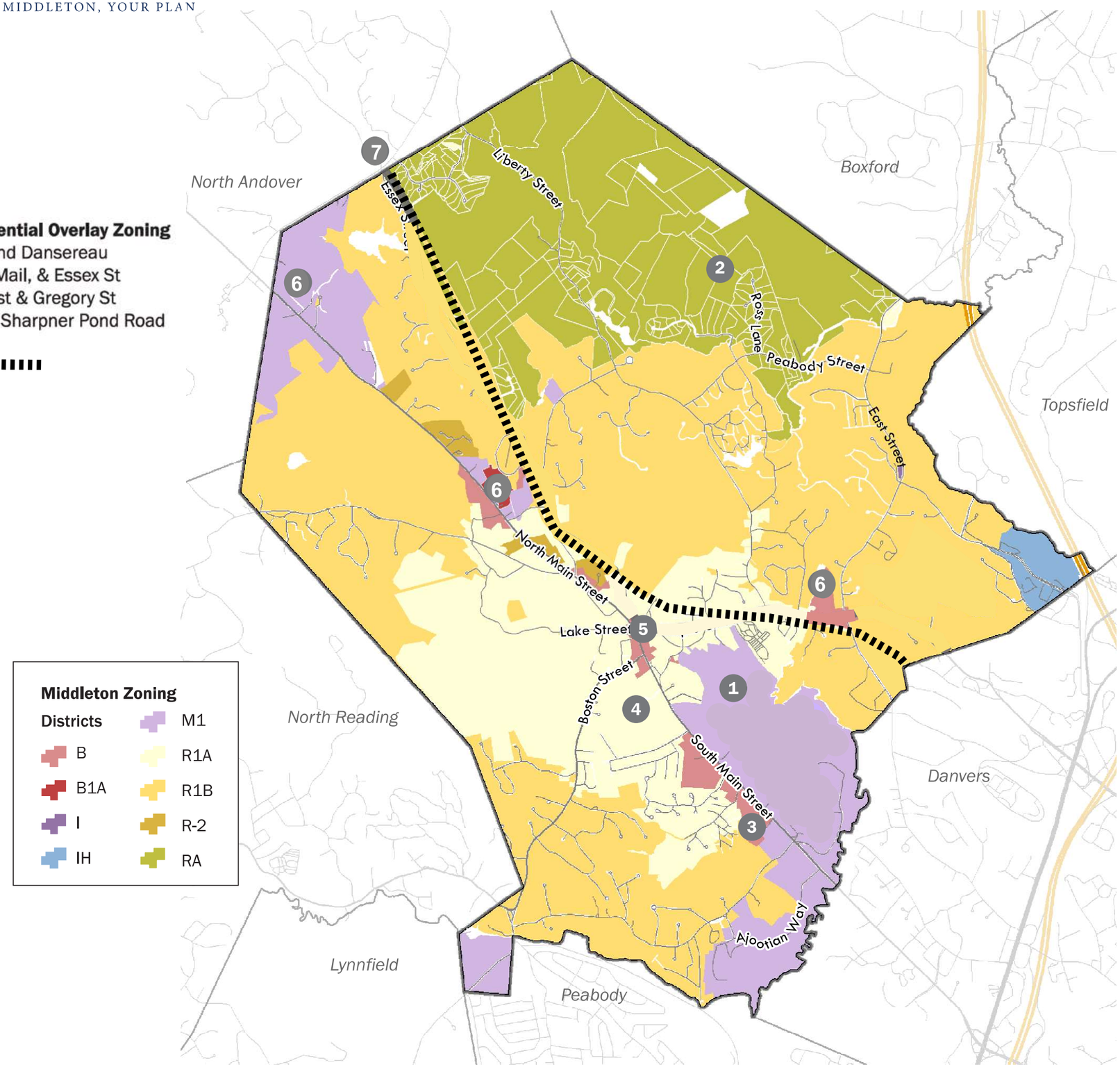
3 Mixed-Use Cluster
Allow housing & office over retail for desired leisure retail shopping - retail follows rooftops

4 Public Facilities
- Potential town purchase for new consolidated police/fire/muni/senior facilities
- Downtown civic anchor
- Indoor/outdoor town center & gathering space

5 Robust Middleton Square
- Allow housing options close to desired leisure retail node
- More residents help support retail
- Safer walkable downtown area

6 Village Residential Overlay Zoning
- Maytum and Dansereau
- Forest, N Mail, & Essex St
- Maple, East & Gregory St
- N. Main & Sharpner Pond Road

7 Rail Trail



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IMPLEMENTATION

The Implementation Chapter is sometimes found at the end of Master Plans because it is the culmination of the entire process. However, because it is the part of the plan that will be utilized by the town to implement the Master Plan's goals and objectives, it has been placed in the front of this Master Plan to make it more accessible.

It will take consistent leadership from the Town Administrator and Board of Selectmen and other Town Boards, Commissions and Committees with the assistance of the Town staff to implement the Plan's recommendations for the period of 2018 to 2028.

It is important to note that planning is a dynamic process and priorities can shift over time. Additionally, the Town's capacity to implement the Plan may shift over time due to changes in staffing, for example. A consistent review process allows for these issues to be acknowledged while keeping each specific recommendation on the table unless a situation dictates that it be reconsidered. A regular evaluation or follow-up procedure will at least indicate how a particular action item was ultimately addressed, or it calls out those that still need attention.

An overarching goal of the plan is to improve internal communications between municipal departments, boards, and committees, as well as externally with residents of the Town. Better communication, transparency, and coordination of activities will go a long way toward implementation of this Master Plan and any other planning efforts undertaken by the Town. Middleton should continue to disseminate information on town processes through all channels of communication including the Town website and should communicate capital improvement plans widely and visibly.

The implementation plan intends to deliver on the promise of the goals and objectives expressed throughout this process, with a program of tangible steps for the Town to take over the next ten years and beyond. There is a high level of activity on these issues, based upon the input received during the planning process.

The table on the next page summarizes the specific recommendations found at the end of each of the plan's elements. The timing for implementing the plan's recommendations are assigned on a short (1-3 years), medium (4-8 years), and long-term (8+ years) basis to assist in determining the timeframe in which each item is to be considered. Some recommendations do not necessarily fall into a short-, medium-, or long-term designation and are noted in each column to reflect that they are ongoing in nature.

It is important to note that when a recommendation falls into a long-term category, it should not imply a lesser degree of importance or a lower priority. Some recommendations simply require time for financing or design, but would still be considered a high priority.

The responsible parties are also listed. If more than one entity could be charged with implementing a particular strategy or recommendation, the "lead agency" is listed first in **bold**.

The following list identifies the acronyms used for responsible parties and potential funding sources in the table:

- 1728 – 1728 Club
- AHT – Affordable Housing Trust
- BC – Building Commissioner
- BOH – Board of Health
- BOS – Board of Selectmen
- BOT - Board of Trade
- BRC- Bylaw Review Committee
- CA - Conservation Agent
- CC – Conservation Commission
- COA – Council on Aging
- CPC – Community Preservation Committee
- CSC- Complete Streets Committee
- CUL- Cultural Council
- DPH - Director of Public Health
- DPW – Department of Public Works
- FD – Fire Department
- HA- Housing Authority
- HC – Historical Commission
- MA - Municipal Assessor
- MPC- Master Plan Committee
- MST- Middleton Stream Team
- PB – Planning Board
- PD – Police Department
- RTC- Rail Trail Committee (MiRTA)
- RC- Recreation Commission
- SC – School Committee
- TA – Town Administrator
- TP – Town Planner
- VA – Veterans Agent
- ZBA- Zoning Board of Appeals
- ZBRC – Zoning Bylaw Review Committee

The responsible parties are also listed. If more than one entity could be charged with implementing a particular strategy or recommendation, the "lead agency" is listed first in **bold.**

Housing

Goal 1: Create opportunities to enhance access to affordable & age-friendly homes and develop a diverse and affordable housing stock to meet the needs of a changing demographic profile in the town.

Objective/Action:	**Parties Responsible**	**Timeframe**	**Funding Source**
Objective: Support the creation of housing units that are affordable to a broad range of incomes, including both rental units and owner units			
Action: Consider creating a housing partnership and or trust as outlined in Housing Production Plan (HPP).	**TP**	Short-term	CPC
Objective: Encourage and maintain a mix of housing types by supporting development that provides for households at all income levels and encourages a diversity of age, households, and ability.			
Action: The Town should coordinate with the Council on Aging and other local senior advocates to help households in need get the support they deserve through local programs or improved living conditions.	**COA,** AHT	Ongoing	HA, CPC
Action: Ensure that at least 10% of new housing is accessible or adaptable to individuals with disabilities and/or include supportive services.	**AHT,** TP	Ongoing	HA, CPC
Action: Explore options for providing housing for veterans.	**VA**	Ongoing	HA, CPC

Goal 2: Review and revise the Zoning Bylaw to remove barriers and create more incentives toward the production of affordable housing.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Objective: Amend the Zoning Bylaw to assist in the creation of new housing units.			
Action: Study Village Mixed Use Zoning to see how Middleton can better encourage mixed-use development around common open space.	**ZBRC**, PB, MPC, TP	Short-term	N/A
Action: Explore use of a Chapter 40R Smart Growth Zoning Overlay.	**ZBRC**, PB, MPC, TP	Medium-term	N/A
Action: Consider use of accessory dwelling units.	**ZBRC**, PB, MPC, TP	Medium-term	N/A
Action: Consider zoning for cottage-style housing, especially for over-55 housing.	**ZBRC**, PB, MPC, TP	Medium-term	N/A
Action: Explore use of Open Residential Design subdivisions with open space and affordable housing incentives.	**ZBRC**, PB, MPC, TP	Medium-term	N/A

Goal 3: Implement housing options made available under the 2019 Middleton Housing Production Plan (HPP) in order to achieve, exceed and maintain the Chapter 40B 10% goal.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Objective: Maintain affordability of units currently on the Subsidized Housing Inventory and expand affordable options.			
Action: Promote HPP publicly and with Town Departments, boards, and committees	**ZBRC**. PB, MPC	Medium-term	N/A
Action: Consider revisions to zoning bylaw to encourage Affordable Housing Development: • Allow accessory dwelling units (ADU)Explore broader range of housing types "as-of-right" rather than special permit • Explore a higher maximum lot coverage and/or reduced minimum lot size for residential zoning districts in close proximity to Town commercial nodes • Encourage rental apartments within retail/mixed-use districts • Pursue suitable Ch. 40R Smart Growth locations • Explore the creation of a potential Town-wide or area-specific Inclusionary Development Policy • Allow "by-right" duplexes within the smaller-lot residential areas adjacent to existing retail nodes • Allow for and/or incentivize clustered residential/open-space subdivisions by providing a density bonus	**ZBRC**, PB, MPC, TP	Medium-term	N/A
Action: Sponsor a design ideas competition to explore redevelopment potential of suitable sites for mixed-use districts	**TP**	Medium-term	N/A
Action: Leverage CPA funds to protect and preserve existing unprotected properties or affordable units at risk of being lost	**TP,** CPC	Short-term	N/A

Economic Development

Goal 1: Build data and organizational capacity to address civic and economic development in targeted areas.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Objective: Work with Town government and local businesses to identify and meet local economic needs.			
Action: Develop a workforce and economic development strategy that looks at zoning, opportunity sites, outreach, and marketing to attract existing regional health care and social assistance employers	**TA**	Short-term	N/A
Action: Inventory existing, under-utilized and developable Town-owned parcels.	**TP,** MA	Short-term	N/A
Action: Consider the sale of existing, under-utilized and developable Town-owned parcels towards the development of a Town Municipal Complex.	**TA**, BOS, MA	Short-term	N/A

Goal 2: Develop a supportive infrastructure to enhance economic development

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Objective: Invest in pedestrian friendly strategies to improve walkability and connect commercial areas.			
Action: Apply for Complete Streets funding to improve pedestrian and bike safety and community character in the Middleton Square area.	**DPW**, TP, CSC	Ongoing	Ch. 90/Complete Streets Program
Action: The Town should encourage pedestrian friendly strategies such as adding new sidewalks and bike paths, through capital planning and revision of Zoning and Planning Board regulations with the end goal of improving walkability and connecting commercial areas.	**DPW,** TP, CSC, PB, ZBA	Ongoing	Ch. 90/Complete Streets Program

Goal 3: Maintain healthy free cash levels, attract and develop additional desired growth, civic engagement, and public services.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Objective: Consider strategies to create a cohesive Town Civic Center and Town Village nodes, including placemaking, design guidelines, and reduce auto dependency.			
Action: Consider flexible zoning in key areas to allow mixed use districts. Key areas include: (a) the intersection of Main, Forest and Essex streets; (b) the Town's center at Middleton Square; (c) the intersection of Gregory, Maple and East streets; (d) the area near North Main Street and Sharpners' Pond Road and (e), some South Main Street MI and B zoned areas.	**ZBRC,** PB, MPC, TP	Short-term	N/A
Action: Invest in sewer infrastructure to support desired retail and compact housing	**TA,** BOS	Medium-term	N/A
Action: Explore use of a Chapter 40R Smart Growth Zoning Overlay.	**ZBRC,** PB, MPC, TP	Medium-term	N/A
Action: Consider allowing additional zoning uses for health care related fields.	**ZBRC,** PB, MPC, TP	Short-term	N/A

Land Use and Zoning

Goal 1: Ensure that the current Zoning Bylaw and any future zoning changes are consistent with and support the goals and objectives stated in the Master Plan.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Objective: Create a Zoning Bylaw that implements the recommendations of the Master Plan.			
Action: Conduct a thorough zoning audit of the bylaw to identify specific recommendations for revisions and updates.	**ZBRC,** PB, MPC, TP, BC	Short-term	Town
Action: Consider undertaking a comprehensive revision and recodification of the Zoning Bylaw.	**ZBRC,**PB, MPC, TP, BC	Short-term	Town
Action: Consider specific revisions to the Zoning Bylaw including: •Update the use regulations to include uses that are currently not included such as mixed-use, Skilled Nursing Facilities, Assisted Living and Congregate Living •. Clarify the current Village Residential R-2 zoning. Language for the R-2 District should state the dimensional requirements for single-family homes, which are an allowed use. •Evaluate the current Business District to see if it still serves the Town's needs and consider revising/adding uses and dimensions; could be considered alternative to adopting Village Mixed Use overlays in certain areas. •The town currently allows Adult Day Care Facilities, but it is not included in the Definitions section of the zoning bylaw and should be added. •Resiliency and Climate Change: Review and update town strategies, policies, zoning and general bylaws for clarity, resiliency and climate change improvements on a five year basis to coincide with the renewal of the town's federally mandated hazard mitigation planning process. •Review/update the Zoning Map to ensure that it is consistent with the Zoning Bylaw.	**ZBRC,**PB, MPC, TP, BC	Short-term	N/A

Goal 2: Encourage the balance between residential, commercial and industrial development to ensure the Town continues to prosper while protecting the character of the community.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Objective: Update the Zoning Bylaw to provide for more flexible zoning techniques.			
Action: Develop and adopt a Town Character Statement	**TA,** BOS	Short-term	N/A
Action: Develop a framework for assessing Town- owned land for potential uses, including resource protection, housing, public facilities, and economic development, or to save for future needs.	**TP,** PB, TA	Short-term	N/A
Action: Develop an Open Space Residential Design (OSRD) bylaw to be used as default subdivision style, without an age restriction.	**ZBRC,** PB, MPC, TP	Short-term	N/A
Action: Investigate suitable locations for a 40 R District, including the current Fire Station site if the Middleton Golf Course purchase is approved.	**TP,** PB		
Action: revise the Zoning Bylaw to include incentivized traditional New England "village-style" mixed-use developments.	**ZBRC,** PB, MPC, TP	Short-term	N/A
To increase housing options, the town should consider allowing Accessory Dwelling Units in all the residential districts without increasing the minimum required lot size of the lot or by adding excessive parking requirements or age requirements.	**ZBRC,** PB, MPC, TP	Short-term	N/A
Green Space Preservation Development District: The Town might wish to consider a Green Preservation Development District that enables development of professional business offices and services in a residential district.	**ZBRC,** PB, MPC, TP	Short-term	N/A
Consider establishing a Scenic Overlay District to preserve open farmland views off South Main Street.	**ZBRC,** PB, MPC, TP	Short-term	N/A
Sprawl Repair and Neighborhood Building- As development conditions change, the Town may wish to explore the possible transition from the type of auto-centric, single-use styles that have guided the town's development over the last 50 years towards a more balanced, mixed-use, walkable style more accommodating towards a wider range of incomes, building types, modes of transportation and civic spaces.	**ZBRC,** PB, MPC, TP	Long-term	N/A

Goal 3: Increase the effectiveness and transparency of Town land use related Boards and Committees.

Action: consider instituting an annual land-use related All-Boards and Committees Workshop to report on on-going projects common to all boards, hold special trainings, invite speakers and reflect on town planning, preservation and development goals	**TP,** PB, CC, ZBA	Ongoing	N/A

Public Health

Goal 1 Sustain and expand access to locally produced and healthy foods in town.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Objective: Middleton should continue to support conditions and behaviors related to healthy foods.			
Action: Support Farmers Market during Spring, Summer, and Fall to encourage use of local and healthy foods.	**TA,** BOS, BOH	Short-term	N/A
Action: Encourage or provide incentives for convenience stores to offer more healthy and nutritious foods like fruits, vegetables, and whole grain foods.	**DPH,** BOH, BOT	Ongoing	Town/MA Dept. of Public Health
Action: Monitor local needs for supplemental nutrition benefits, especially among vulnerable populations including low income households and seniors.	**DPH,** BOH	Short-term	Town/MA Dept. of Public Health

Goal 2: Address Environment Hazards to Reduce Resident Exposure to Substances that Reduce the Quality of Life in Town.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Objective: To maintain the protective features that reduce the risk of exposures, Middleton should monitor factors that pose health risks from environmental contaminants under current conditions and as conditions shift due to climate change.			
Action: Provide informational materials for new and existing residents who live in proximity to roadways with higher traffic volumes (e.g., Route 114).	**DPH**	Ongoing	N/A
Action: Prioritize actions to reduce local single occupant vehicle trips in order to reduce locally-generated motor vehicle trips and related air pollutants.	**TP, PB,** ZBA	Ongoing	N/A
Action: Provide more mobility options for older residents and households with limited access to personal vehicles.	**TA,** BOS, COA	Long-term	Town/MPO/ Regional Transit Authority/MA DOT

Goal 3: Assess Potential Health Impacts of Proposed Projects and Policies

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Objective: Integrate a Health and Equity Lens into Local Decision-Making.			
Action: Encourage use of a health assessment tool, such as the NACCHO Public Health in Land Use Planning & Community Design checklist, in planning and development decision making.	**DPH,** PB, ZBA	Ongoing	N/A
Action: Bring a Health Perspective to the Community Preservation Committee through consultation with the Health Department or Board of Health.	**DPH,** CPC	Ongoing	N/A
Action: Explore use of Racial Equity Impact Assessment in municipal planning and development decision making.	**TP,** PB, BOH, ZBA	Ongoing	N/A

Transportation and Circulation

Goal 1: Invest in infrastructure improvements that prioritize pedestrian safety.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Objective: Improve quality, safety and connectivity of pedestrian infrastructure in key residential areas.			
Action: Reconstruct major streets (Maple, East) as Complete Streets.	**DPW,** TP, TA	Medium-term	Ch. 90, town funds, Complete Streets funds
Action: Reconfigure the Town Center to improve sense of place, walkability, and identity that is currently dominated by a four lane highway.	**DPW,** TP, TA	Medium-term	Ch. 90, town funds, Complete Streets funds
Action: Provide traffic calming measures for River, Forest, Liberty, Peabody, Essex, and School Streets.	**DPW,** TP, TA	Medium-term	Ch. 90, town funds, Complete Streets funds
Action: Develop a traffic calming pilot project on one of the prioritized streets.	**DPW,** TP, TA	Medium-term	Ch. 90, town funds, Complete Streets funds

Goal 2: Improve bicycle and pedestrian accessibility and connectivity.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Objective: Increase alternatives to automobile travel and provide recreational mobility.			
Action: Develop the Middleton Rail Trail between Danvers and North Andover	**RTC,** TP, CA, DPW	Short-term	MassTrails, town funds, CPA funds
Action: Create signed and marked foot trail network branching off the Middleton Rail trail.	**RTC,** TP, CA, DPW	Long-term	MassTrails, town funds, CPA funds, Land & Water Cons. Fund (LWCF)

Goal 3: Expand mass transit and shuttle services options to, from, and within Middleton.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Objective: Create local partnerships to increase alternative transportation options.			
Action: An opportunity could exist for Town officials to partner with its major employers, Transportation Networks Companies, Merrimack Valley TMA, North Shore TMA, MBTA and/ or North Shore Community College in order to expand such "ride sourcing" service to its seniors or other residents.	**TA,** BOT, COA, BOS, TP	Short-term	Employers, town, MA Community Transit Grant Program, Federal Transit Administration grants

Open Space and Recreation

Goal 1: Strategically acquire and protect more open space lands.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Objective: Complement existing open spaces, support conservation, and protect water resources.			
Action: Form a proactive task force to deal effectively with the political and funding issues relating to land acquisition and to provide guidance for this goal and related strategies	**CA,** CC, CPA	Short-term	N/A
Action: Identify a list of properties that should be tracked for acquisition and conservation efforts including properties that may be at risk, properties that are a high priority for conservation, and Chapter 61 properties.	MA, CA		
Action: Initiate and pursue a property acquisition program to create new and broader opportunities for residents to experience a variety of benefits through the use of conservation land.	**CA,** CC, CPA	Ongoing	Local Acquisitions for Natural Diversity (LAND) grant, Land and Water Conservation Fund (LWCF), Conservation Partnership Grant (CPG)
Action: Initiate and pursue other activities to protect open space, conservation land, and water resources, such as through conservation easements, deed restrictions, other formal agreements or instruments such as the current Flexible Development By-Law.	**CA,** CC, TP, MST	Ongoing	N/A

Goal 2: Open space protection and land acquisition should be used to protect drinking water, aquifers, and groundwater recharge areas.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Action: High priority should be given to land acquisitions for open space or conservation that provide the simultaneous benefit of protecting the Town's drinking water.	**CA**, CC, DPW	Ongoing	N/A
Action: Coordinate land acquisition, conservation, and open space activities of the Conservation Commission, the Water Department, the Board of Selectmen, and the Middleton Stream Team with the overarching goal of protecting drinking water.	**TA, CA,** CC, MST, BOS	Ongoing	N/A
Action: Work to advance public education and awareness around drinking water protection. Continue involvement with partners such as the Stream Team to improve the health and access of waterways throughout the Town including the Ipswich River.	**CC, CA**, MST, DPW	Ongoing	Town, IRWA, North Shore Greenscapes Coalition

Goal 3: Provide for public access to conservation lands and manage resources in accordance with community needs.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Action: Promote access points, trails, amenities, maintenance, and management on conservation parcels to encourage public use and promote public support for continued conservation efforts by showcasing the value of the public land.	**CA,** CC	Ongoing	N/A
Action: Develop a comprehensive trail network according to the Middleton Trails Vision.	**RTC, CA,** CC, TP, CPC, DPW	Ongoing	MassTrails, Land and Water Conservation Fund (LWCF), Chapter 90, CPA

Goal 4: Expand and improve recreational facilities of the Town.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Action: As the Town's population continues to grow, study recreational facility use and need patterns to identify new facilities to meet community needs.	**TP,** CPC, RC, CA	**Ongoing**	**N/A**
Action: Continue to seek funding sources for expansion to meet the evolving recreational facility needs of the town and identified management, improvement or maintenance projects for existing recreational facilities.	**TA,** DPW, TP, CA, RC	Ongoing	CPA, Parkland Acquisitions and Renovations (PARC) grant, LWCF, Capital funds

Goal 5: Manage and promote existing resources and conservation facilities.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Action: Partner with volunteers and organizations, agencies, and other individuals to assist in trail development and maintenance to improve public access to conservation lands and to supplement town services in a coordinated manner.	CC, CA	Ongoing	N/A
Action: Update the guide to conservation land and hiking trails as new resources are developed.	**CC,** CA	Ongoing	N/A

Public Facilities and Services

Goal 1: Ensure facilities meet community and departmental needs.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Action: Explore planning and building new public safety, senior and municipal safety facilities at the former Middleton Golf Course location.	**TA,** FD, COA, PD	Short-term	Town bonding and capital funds
Action: Continue to develop and implement 5-year Capital Improvement Plans.	**TA, BOS,** all Town Departments	Ongoing	N/A

Goal 2: Secure adequate resources for Middleton's public services and facilities.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Action: Continue efforts to devote adequate resources and equipment, for all Town Departments, particularly for public safety departments over the next five years.	**BOS,** TA	Ongoing	Town funds, Staffing for Adequate Fire and Emergency Response (SAFER) grants
Action: Engage in grant writing efforts to upgrade municipal departments and defray public costs.	**TA,** all Town Departments	Ongoing	N/A
Action: Continue to devote adequate resources, professional development and curriculum upgrades at Tri-Town and Masconomet Schools to the greatest degree possible	**SC,** TA, BOS	Ongoing	N/A
Action: Where possible, supplement funding for capital projects through grant programs, e.g. MSBA, Green Communities, and Assistance to Firefighters Grant Program.	**BOS,** TA	Ongoing	Grant funds as noted
Action: Explore regionalization opportunities for more efficient public service delivery.	**BOS,** TA	Ongoing	N/A

Goal 3: Ensure Middleton's public infrastructure meets safety and environmental standards.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Action: Analyze Middleton water system and develop a phased Capital Improvement Program to meet town water and waste water needs.	**DPW,** TA, BOS	Short-term	Town capital funds
Action: Continue to develop and implement the Town Roads program.	**DPW,** TA, BOS	Ongoing	Chapter 90

Goal 4: Enhance communication and improve transparency of town processes.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Action: Upgrade public safety communications and efficiency.	**FD, PD,** TA	Short-term	Town capital funds

Historic & Cultural Resources

Goal 1: Enhance efforts to protect and maintain Middleton's historic and cultural resources.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Action: Create, maintain and update inventory list of properties with historical significance and highlight those properties that may be at risk.	**HC**	Short-term	CPA
Action: Form Preservation or Restoration Committees for primary historic building resources, such as the Flint Library or Old Town Hall.	**BOS,** TA, HC	Short-term	CPA
Action: Form a support network for historic home owners to promote awareness of historic homes and connect homeowners to resources	**HC**	Short-term	N/A

Goal 2: Increase the local capacity to support and fund historical preservation efforts

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Action: Proactively identify a roster of potential CPA funded improvements and fund.	**HC,** CPC, CUL	Short-term	CPA
Action: Promote the successes of CPA funded activities.	**CPC,** HC CUL	Ongoing	N/A

Goal 3: Promote Middleton's historic resources to attract visitors to Town and reinforce local pride and amenities.

Objective/Action:	Parties Responsible	Timeframe	Funding Source
Action: Develop a house, farm, cemetery, or architecture by foot and/or bicycle tour to promote Middleton's distinctive character and history. May be promoted as an annual event or self-guided tour, or both.	**CUL,** HC	Short-term	CPA
Action: Hold a Middleton Heritage Day festival to celebrate the town's history, perhaps in conjunction with a harvest festival to celebrate the agricultural heritage.	**CPC,** HC, 1728	Short-term	CPA
Action: Expand the presence of Middleton historic and cultural resources as part of the Essex National Heritage Area.	**CUL,** HC	Medium-term	Essex National Heritage Commission, CPA

MIDDLETON'S VISION FOR 2028

Purpose

Community visioning for a Town master plan like the one the Town of Middleton has undertaken is a process whereby a community evaluates its historic and present-day assets, and imagines how and where it should grow in order to leave a legacy for the next generation. Visioning helps residents and business owners identify overarching priorities for the preservation, enhancement, and growth of different areas, and sets the tone for a wider array of more specific master plan elements and goals.









Vision Statement

The following vision statement is based on input from Middleton residents collected during the Visioning process, and has guided the master planning process.

In 2028, Middleton is a flourishing community offering residents a high quality of life by taking full advantage of, and emphasizing, its many unique assets – distinctive history, attractive residential neighborhoods, its central location and access to the North Shore and to Boston, a growing business mix, a network of beautiful open space, community supported agriculture, and community pride.

Middleton's rich farming history and its diverse open space, and trails network draw residents and visitors to it. Residential neighborhoods offer a welcoming, safe and enriching environment with a variety of housing options – market rate and affordable – for families, seniors and young adults. Redevelopment in the town center area has created a series of small village centers with shops and residences in a walkable environment attractive to young and old residents alike. Sidewalks, thru streets and bike trails link the residential neighborhoods to school and recreation areas and appropriately scaled mixed use retail, residential and office space attracts much needed business, jobs and increased consumer spending to town.

Middleton's continued participation in state-of-the-art local and regional public education and up-to-date town facilities continue to attract families, but also provide excellent services and recreational options for residents of all ages. Effective Town management, improved transportation connections, and strategic partnerships with our neighboring communities have unlocked community and economic opportunities allowing all to share in the success of Middleton and the surrounding region. Finally, a connected system of well-maintained parks, open spaces, and recreation areas with strong pedestrian and bicycle amenities further contributes to Middleton's high quality of life by improving residents' overall health and making the community among the "greenest" on the North Shore.

Through this Master Plan process and other ongoing community endeavors, this vision of Middleton in 2028 is one of an informed, engaged and productive community, with a shared vision and commitment to achieving a prosperous and sustainable future.

SETTING THE STAGE

What is a master plan and why?

Master planning for a community like the one the Town of Middleton has undertaken is a process whereby a community evaluates its historic and present-day assets, and imagines how and where it should grow in order to leave a legacy for the next generation. The vision statement the Town initially developed will help its residents and business owners identify overarching priorities for the preservation, enhancement, and growth of different areas, and sets the tone for a wider array of more specific master plan elements and goals.

Typical comprehensive master plan elements include plan elements such as: open space, historic and cultural resources, economic development, housing, public facilities and services, transportation, land use and zoning, and sustainability including energy and hazard mitigation. More specific goals within these master plan elements can inform decisions on policies, by-laws and zoning regulations, and provide mutual certainty and predictability for residents and businesses alike.

Chapter 41, Section 81D of the General Laws of Massachusetts provides the legal basis for the creation of Master Plans. Under this statute, the following nine elements of a Master Plan are identified:

1. Goals and policies
2. Land use
3. Housing
4. Economic development
5. Natural resources
6. Open space and recreation
7. Services and facilities
8. Transportation and circulation
9. Implementation



When completed it will provide:

- A town vision based on community input and priorities
- Strategies and actions to improve livability, opportunity and sustainability
- A land use plan to guide physical development in town
- An implementation strategy to effectively achieve plan goals
- Predictability for residents, businesses, and developers, and elected officials.

Public Input



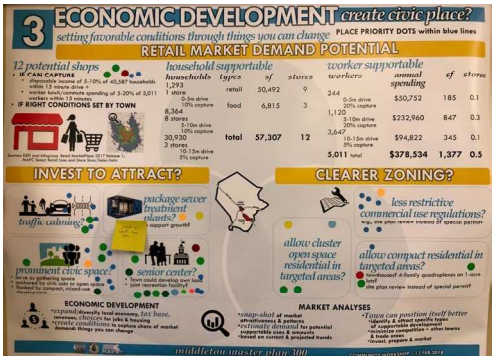
Business Focus Group working session



Examples of workshop visual boards for community feedback



Community Workshop



Examples of workshop visual boards for community feedback

DEMOGRAPHIC OVERVIEW

Middleton by the Numbers

Population
In 2016: 9,514
In 2000: 8,987

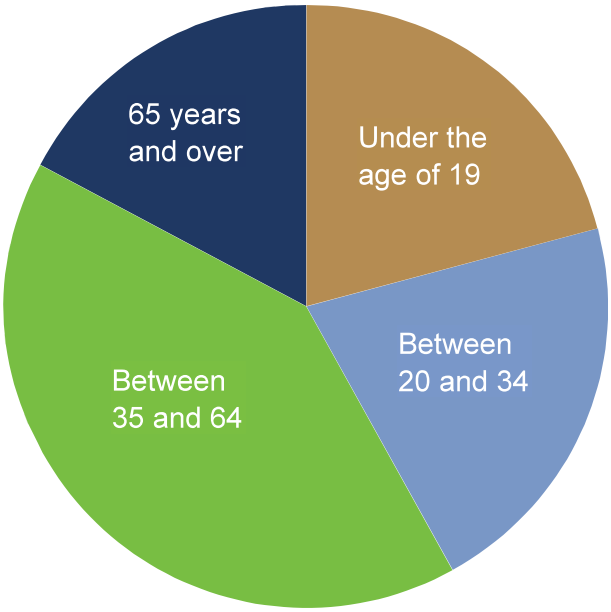
Households
2016
Total number of households 2,853
Average household size: 3.3

- 73% are family households
- 34% have children under 18
- 16% have seniors 65 and over
- 27% are non-family households
- 22% are single-person households

Income
$106,326 median household income
$119,344 median family income

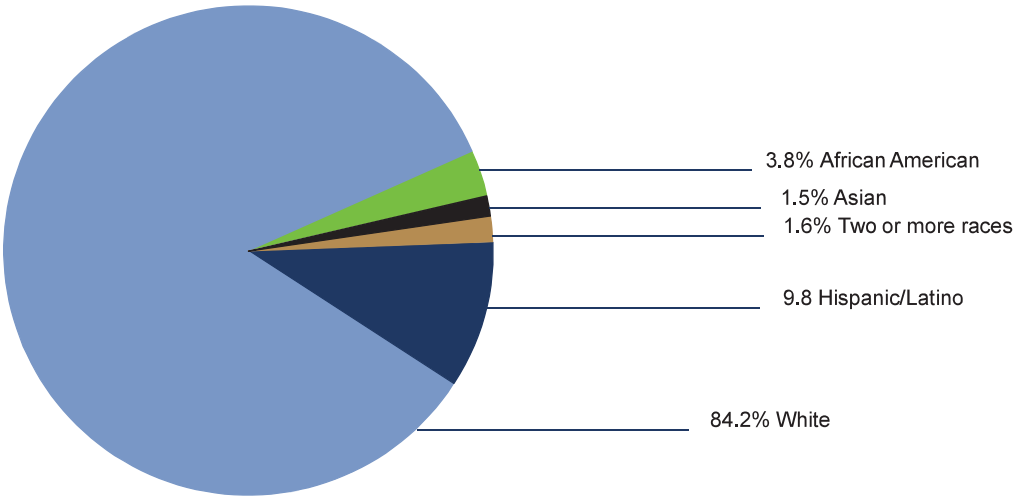
- 52% of households have incomes of more than $100,000
- 21% of households have incomes of below $35,000
- 4.3% of the population are in poverty
- 3.7% of families have incomes below the poverty level

Age Composition
21% under the age of 19
21% between 20 and 34
41% between 35 and 64
17% 65 years and over



Educational Attainment
36% of the population over 25 years old has a bachelor's or advanced degree

Racial/Ethnic Composition



Past Growth?

- Middleton's population has increased from 1990 to 2010 by nearly 83% while Essex County's population grew at an average of 9.8% during the same period.
- The number of households increased from 1990 to 2010 by 37% while there was a more modest 12% growth in both Essex County and Massachusetts.

Future Projections[1]

Middleton's population is:

- Projected to increase by an additional 17% from 2010 to 2030.
- Aging. In 2030, residents 65 and older are expected to make up 27% of the town's population compared to 13% in 1990.

1 US Census 2010, and MAPC 2014 MetroBoston Population and Housing Demand Projections, Stronger Region.

HOUSING



In concert with the Middleton Master Planning process, the Town contracted with MAPC to complete a Housing Production Plan (HPP). An HPP is a community's proactive step in planning for and developing affordable housing consistent with Chapter 40B. By adopting an HPP, communities are much more likely to achieve their affordable housing and community planning goals. A HPP also gives communities more control over comprehensive permit applications for a specific period of time. This Master Plan Housing Element represents an abbreviated housing need assessment pending the forthcoming and far more comprehensive Housing Production Plan; which once completed will be incorporated into the Middleton Master Plan by reference.

Key Findings

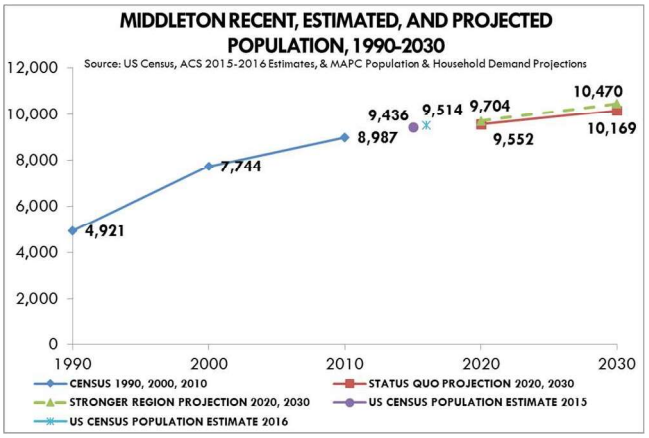
The following section provides a brief assessment of the Town's housing units and projected trends. Understanding trends in the Town's population, household formation, tenure and income will contribute to an understanding of current need and demand in Middleton and thereby help inform future housing production planning.

- Middleton's population is projected to grow at a steady 7% between 2018 and 2030.
- Steady population growth together with declining average household size plays a role in increasing the number of future projected households as well as future demand for additional housing units.
- 72% of the households are comprised of families and most of the non-family households are comprised of people living alone.
- While Middleton's overall and family household incomes are higher than surrounding Essex County, its non-family households are noticeably lower.
- Approximately 75% of the Town's total households are owner-occupied single-family homes.

Housing Assessment

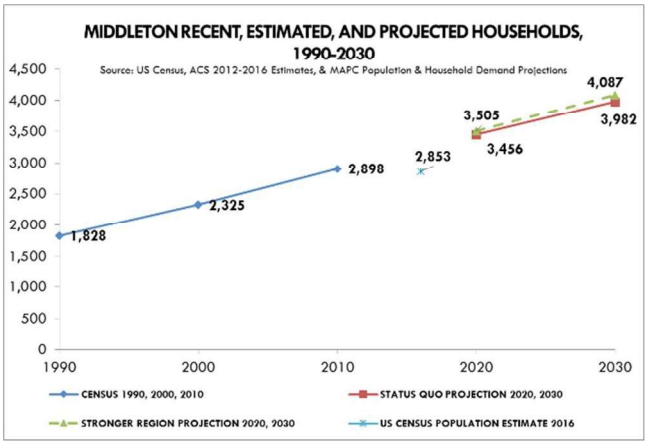
Population

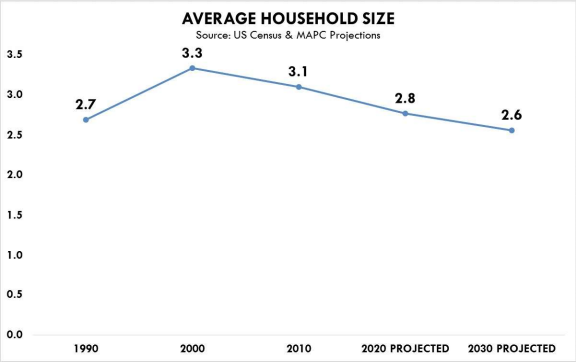
Middleton's population has grown during the last two decades with a 57% increase between 1990-2000, and a lower increase of 16% between 2000-2010; according to US Census Bureau counts. According to Census Bureau's ACS estimates for 2015 and 2016, population growth is estimated at between 5-6% growth from 2010. MAPC regional population projections (which are the State adopted projections for metropolitan Boston) estimate population growth of 7% between 2010-2020, and 7% between 2020 and 2030 (Stronger Region projections).



Projected Households

More than population data, the number and type of households within a community correlate to unit
demand; with each household residing in one dwelling unit, regardless of the number of household members. The number of households have steadily increased by 27% between 1990-2000, and by 25% between
2000-2010. The Census Bureau ACS data for 2016 estimates a slight decline of 2%. MAPC household projections indicate continued steady growth of 17% between 2010-2020, and 14% between 2020-2030. As the next chart will show, the regional, State, and national trend of declining average household size holds true in Middleton as well. Steady population growth together with declining average household size plays a role in increasing the number of future projected households as well as future demand for additional housing units.

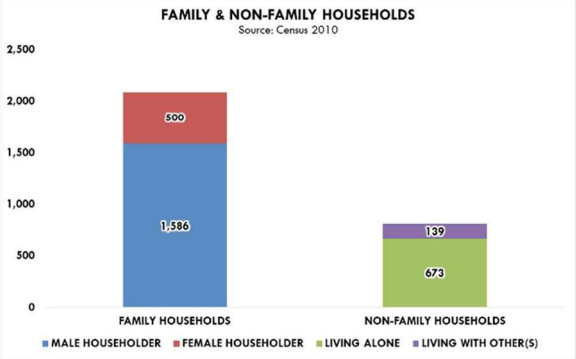




Average Household Size with Projections

When examining averages household size, Middleton experience a 22% increase between 1990-2000, and since then it has declined. Between 2000-2010, it dropped 6% from 3.3 to 3.1 persons per household.

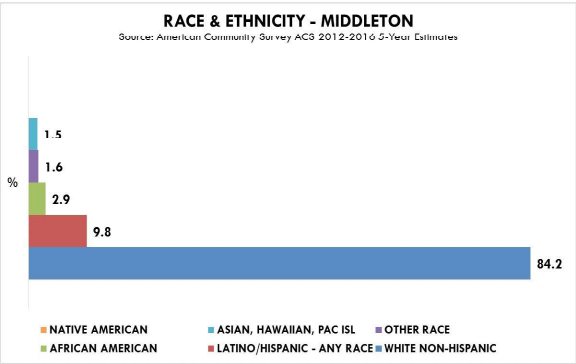
According to projections, average household sizes are to continue regional trends of declining by 11% between 2010-2020 to 2.8, and an 8% decline between 2020-2030 to 2.6.



Family and Non-Family Households

According to best available data on family and nonfamily households, Census 2010 data indicates that of the total 2,898 households for that year an actual Census count was conducted, 72% were family households and 28% were non-family households.

Of the total households, 55% are male-householder family households, 17% are female-householder family households, 23% are one-person households, and 5% are non-family households composed of two or more unrelated individuals.

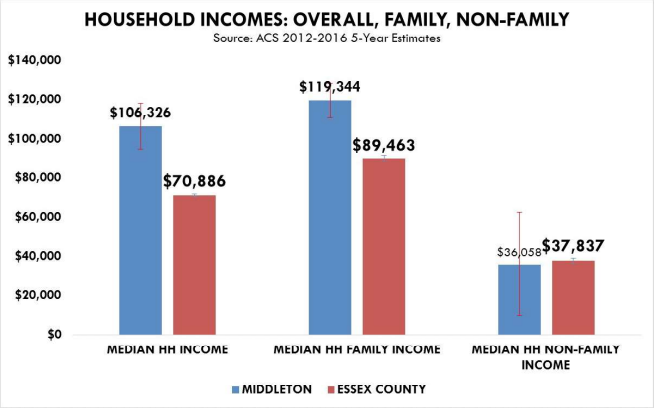


Race and Ethnicity

According to ACS 2016 estimates, 84% of Middleton's population is white, non-Hispanic, 9.8% is Latino/ Hispanic (of any race), almost 3% is African-American, 1.6% is of another race, and 1.5% is Asian-American.

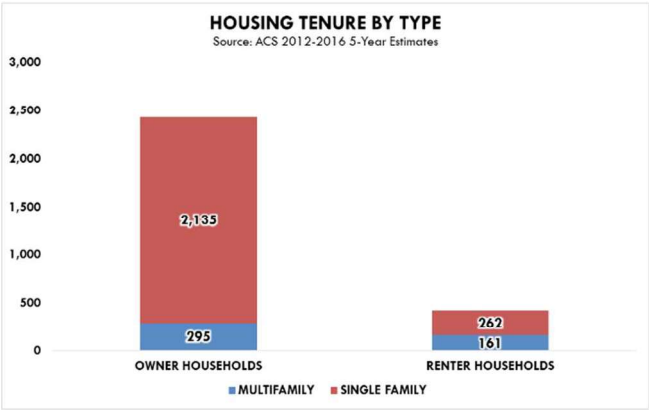
Household Median Income

According to ACS 2016 estimates, Middleton's overall median household income is $106,326, which is higher than that of surrounding Essex County's $70,886. The Town's median family household income of $119,344 is higher than its overall median and of surrounding Essex County. The median non-family household incomes for the Town and Essex County are noticeably lower but due to a very large margin of error for that particular data point, one cannot reliably determine exactly by how much.



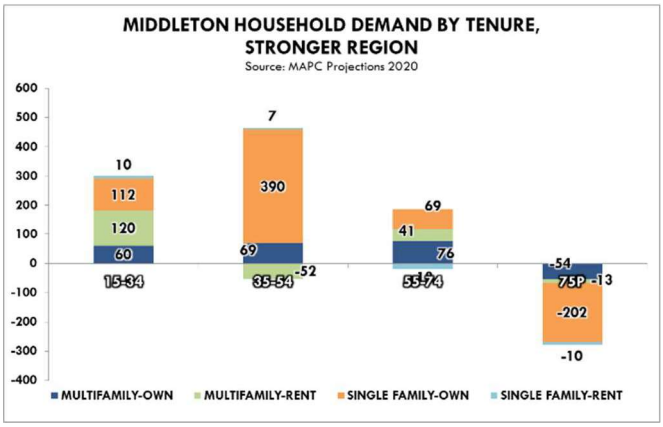
Housing Tenure by Type

In terms of housing tenure, of the Town's estimated 2,853 households (occupied housing units) as of 2016, 85% are owner-occupied households and 15% are renter-occupied households. Most of the households are single-family structures (84%). Approximately 75% of the Town's total households are owner occupied single- family homes, 9% are renter-occupied single family homes, 10% are owner-occupied condominium units, and 6% are renter-occupied apartments or condo units.



Projected Housing Unit Demand

As part of the assessment of existing and future conditions of housing in Middleton, projected housing demand data was examined. The table and chart show how many new housing units might be needed and how many units will be vacated in Middleton between 2010 and 2020, broken down by age cohort. Increases in demand are the result of new households forming due to declining households sizes, people moving into the community, or increasing preference for certain types of housing. Decreases in demand are the result of people moving out the community, mortality, or decreased preference for a given housing unit type.



NET PROJECTED HOUSING UNIT DEMAND IN 2020		
TYPE	TOTAL PROJECTED HOUSING UNITS, 2020 (MIDDLETON, MA)	NET PROJECTED HOUSING UNIT DEMAND, 2020 (MIDDLETON, MA)
Multi-Family-Homeownership	780	151
Multi-Family Rental	510	96
Single-Family Homeownership	2,443	369
Single-Family Rental	52	-11
Total	**3,785**	**605**
Source: MAPC Population and Housing Demand Stronger Region Projections, 2020		

The chart above indicates the net changes in housing demand and households, which is critical to understanding housing production demand. Also important is understanding the big picture; the total number housing of units by type as projected for 2020. Maintenance of the existing housing stock is important in addition to new housing production.

The table and chart show four unit types: multi-family ownership, multi-family rental, single-family ownership, and single-family rental. The projected change in demand by unit type and age cohort is shown. Those aged 15-34 in 2020 will demand housing mainly for single-family ownership and multi-family rental units. Those aged 35-54 in 2020 will overwhelmingly demand single-family ownership units and they will be releasing some multifamily rental units back into the housing supply. Those aged 55-74 in 2020 will be primarily demanding multifamily and single family ownership units. Those aged 75 and over in 2020 will be releasing units of all types back into the market, due to mortality, moving out, or change in status from householder to dependent.



In sum, in 2020 there will be demand for an estimated:

- 151 more multi-family homeownership units and 96 more multi-family rental units, for a net demand of 247 multi-family homes.
- 369 more single-family homeownership units and 11 fewer single family rentals, for a net demand of 358 single-family homes.

The total number of new units demanded will be about 605 units.

As the Town encourages housing production, it could consider encouraging an appropriate mix of both single-family and multi- family units – **particularly units that will serve households in 2020**

Community Housing Feedback

As part of the master planning process, an online survey, focus group and community workshops were conducted in order to obtain feedback from community members on how housing needs to shape Middleton's future growth. Decisions on where and how to accommodate future residential growth can affect not only options for existing and future residents but can also affect decisions on desired leisure retail and interconnected trails, sidewalks and open space. The following summary and recommendations are a synthesis of the feedback obtained from the community.

> **"Residential neighborhoods offer a welcoming, safe and enriching environment with a variety of housing options – market rate and affordable – for families, seniors and young adults.**
> **Redevelopment in the town center area has created a series of small village centers with shops and residences in a walkable environment attractive to young and old residents alike. Sidewalks, thru streets and bike trails link the residential neighborhoods to school and recreation areas and appropriately scaled mixed use retail, residential and office space attracts much needed business, jobs and increased consumer spending to town." - Excerpt from Community Vision Statement**

Key Housing-Related Findings from Community Input

Targeted Growth Areas

- An openness to growth through the rezoning of targeted areas. The best areas for both residential and mixed-use/retail growth are the following:
  - The intersection of Main, Forest and Essex streets;
  - Middleton Square Town Center;
  - The intersection of Gregory, Maple and East streets; and
  - Near North Main Street and Sharpners' Pond Road.
- Respondents were willing to explore how to reduce residential tax burden.

Site Layout Connectivity and Design Standards

- Support for higher design standards for residential developments to add character.

Preferred types and needed Housing options

- Participants expressed support for the five housing typologies below. Among the insights inferred from the visual preference survey, participants expressed more support for:

  (a) exploring additional single-family homes options;
  (b) allowing accessory dwelling units also known as in-law apartments; and
  (c) cluster residential around common open space for "pocket neighborhoods."

- Some anticipate needing non-single-family dwellings in the future.
- Many seniors anticipate needing non-luxury, market-rate housing as well as subsidized housing and assisted living facilities.



Strategies and Recommendations

In addition to the forthcoming housing strategies from the Housing Production Plan, the following are potential strategies and recommendations based on input from the participants of the master plan process.

- Amend existing Town zoning to allow for more compact, residential neighborhoods that incrementally will shorten the distances between properties and in turn make the area as a whole more walkable. Among the potential zoning amendments are the following:
  - Allow for accessory dwelling units also known as in-law apartments to provide flexibility to families and provide more affordable housing options to residents.
  - Allow for and/or incentivize clustered residential/open-space subdivisions by providing a density bonus. These cluster/open-space subdivisions accommodate the same number of units (or potentially more) on smaller lots, clustered in smaller areas in order to create larger common open spaces and trails.
- Consider creating a housing land trust.





ECONOMIC DEVELOPMENT

SNAPSHOT: ECONOMIC DEVELOPMENT

Local Employment

- 2018 employed labor force: 4,387 workers or 46% of total population (9,514)
- Town unemployment rate of 3.7% (168 unemployed) compared to the North Shore Workforce Development Area (WDA) regional MADLWD unemployment rate of 3.6% (alternatively, the MA Division of Local Services reports a 2016 unemployment rate of 2.2%)

Business and Employees

- 539 employers in Middleton
- 5,415 jobs in Middleton (ESRI BAO 2017)
- 5% of businesses and 20% of the employees in public administration
- 14% of businesses and 15% of the employees in retail trade
- 5% of businesses and 12% of the employees in accommodation and food services
- 5% of businesses and 8% of the employees in manufacturing
- 12% of businesses and 7% of the employees in construction
- Average annual wage for Middleton jobs:
  $54,568

General Fund Sources (FY2018)

- 75% from property taxes
- 6% from state local aid
- 11% from local fees/receipts
- 8% from other sources

Expenditures

- In FY2017, education was the biggest expenditure ($20.6M), absorbing 64% of all Town expenses ($32.3M)
- In FY2017, health insurance was the smallest expenditure ($0.7M), comprising of 2.2% of all Town expenses ($32.3M).
- Free cash as a percent of its budget has been declining since 2014 and is currently at 6.1% in 2018. The rule of thumb is for communities to maintain a reserve balance between 5-15%. The Town should strive to keep their Free Cash within this range according to MA DLS and the MA Government Finance Officers Association.

Property Taxes (FY2018)

- 83% of property taxes are paid by residential property owners.
- Average single family tax bill is $8,082 for the year 2018. Based on the 2017 tax bill of
  $7,670, Middleton has the51st highest in the state.
- Total property value per capita is $208

Sources: Massachusetts Executive Office of Labor and Workforce Development (EOLWD), 2016
Massachusetts Division of Local Services (DLS), ACS 2016, MDOR, ESRI Business Analyst 2017

KEY FINDINGS

EXPAND/diversify local economy,
TAX BASE revenues,
CHOICES for jobs & housing

CREATE CONDITIONS
to capture share of market demand: things you can change

Industry Profile

Wages

According to 2016 data from the Massachusetts Division of Local Services (DLS), the average weekly wage for a Middleton job is $1,049, which averages out to a $26-30 hourly wage for a 35-40 hour work week. The average annual wage for Middleton jobs is $54,568. For regional context, the Massachusetts Executive Office of Labor and Workforce Development (EOLWD) also compiles employment and wage statistics[2] for the 18 communities of the North Shore Workforce Development Area (WDA) that Middleton is a part of. According to their May 2017 data survey, which contains median, mean, entry-level and experienced-level salaries for 481 occupational categories.

This places the Town of Middleton's average annual wage of $54,568 marginally higher (0.25%) than that of the North Shore WDA's average annual wage of $54,433.

The following chart are the wages for all aggregated occupations:

Total Employment North Shore WDA	178,690
Median Annual Wage	$40,288
Mean "Average" Annual Wage	$54,433
Entry-Level Annual Wage	$25,378
Experienced Annual Wage	$68,961

Employer Industry	% of Total Middleton Business	% of Total Middleton Employees
Public Administration	5%	20%
Retail Trade	14%	15%
Accommodation & Food Services	5%	12%
Manufacturing	5%	8%

Employers

According to ESRI Business Analyst 2017 data, there are 539 employers in Middleton and 5,415 jobs in Middleton (not necessarily the number of Middleton residents who are employed anywhere). As shown in the following table, public administration employers only represent 5% of the employers but employ a disproportionate 20% of the Town's employees. Similarly, employers in the accommodation and food services industry only represent 5% of the total but employ 12% of the employees in the Town.

2 Source: http://lmi2.detma.org/lmi/lmi_oes_a.asp#3

Middleton's largest employers represent a variety of industry sectors as can be seen in the table below. These sectors include public administration, retail trade, health care and social assistance, educational services, finance and insurance, and accommodation and food services. The establishments with the most employees are the Essex County Sheriff's facility with over 1200, Market Basket with over 250, and Bostik and SAS Institute with both over 100 employees. These top employers cover a range of sectors as well, including public administration, retail, manufacturing, and information services, and arts, entertainment, and recreation.

LARGEST EMPLOYERS IN MIDDLETON		
Company Name	**Address**	**Industry**
Essex County Sheriff's Dept	Manning Rd	Public Administration
Market Basket	S Main St	Retail Trade
Bostik Inc	Boston St	Manufacturing
SAS Institute Inc	Village Rd	Information
Ferncroft Country Club	Village Rd	Arts, Entertainment, and Recreation
Fuller Meadow School	S Main St	Educational Services
Howe Manning School	Central St	Educational Services
Howe-Manning Elementary School	Central St	Educational Services
Main Street Pizza Bar Grille	S Main St	Accommodation and Food Services
Morgan Stanley Wealth Mgmt	Village Rd # 601	Finance and Insurance
Northeast Regional Ambulance	Ajootian Way # D2	Health Care and Social Assistance
Prescription Turf	Rundlett Way	Retail Trade
Salem Metal Fabricators	Lonergan Rd	Manufacturuing
Seven Hills Community Svc	N Main St	Health Care and Social Assistance
Alliance Motor Group	N Main St	Motor Vehicls and Parts Dealers
Ameri Pride Svc	Sylvan St	Personal and Laundry Services
Angelica's Restaurant	S Main St	Accommodation and Food Services
CSL International Inc	Village Rd # 300	Transportation and Warehousing
GTG Inc	Birch Rd	Fabricated Metal Product Manufacturing
Mc Donald's	S Main St	Accommodation and Food Services
TJ Maxx	S Main St # B	Retail Trade

Source: Massachusetts Executive Office of Labor and Workforce Development (EOLWD), and Infogroup 2018

Employment Projections & Opportunity Sectors

Employment & Industry Projections

According to Massachusetts Executive Office of Labor and Workforce Development (EOLWD) data, industry projections for the North Shore Workforce Development Area (WDA[3]) region that Middleton is a part of is expected to grow from 185,069 workers in 2014 to 194,798 workers by 2024. This represents an overall increase of 9,729 workers or 5.3%. The following industries will experience noteworthy changes between 2014 and 2024.

Noteworthy Increases

- 26% or 3,531 additional workers in ambulatory health care services
- 16% or 5,497 additional workers in health care and social assistance

The workforce region that Middleton is a part of will see increased employment opportunities in these two health care related industry sectors. **A workforce and economic development strategy could include the Town creating the right conditions (zoning, opportunity sites, outreach, marketing) to attract existing major regional employers in these sectors who could potentially be looking to relocate or expand.**

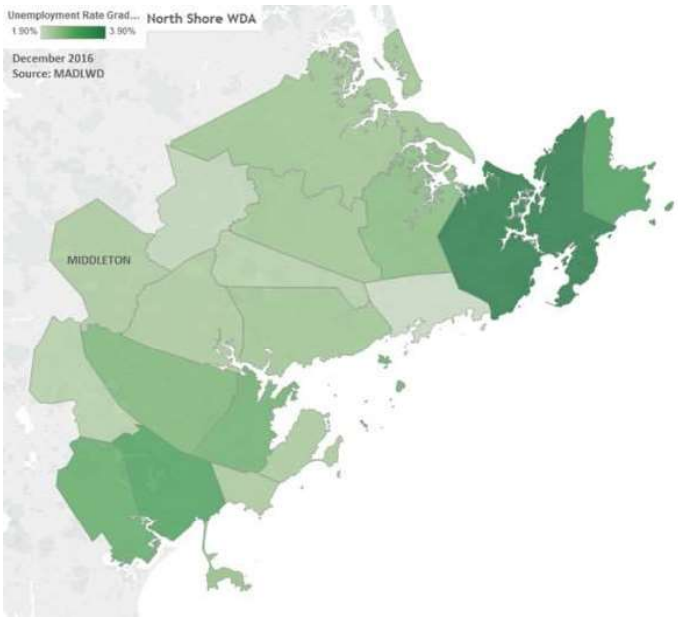
TOP 10 INDUSTRY SECTORS WITH GREATEST PROJECTED INCREASES FOR NORTH SHORE WDA					
NAICS Code	Title	Employment 2014	Employment 2024	Change Level	Change Percent
621000	**Ambulatory Health Care Services**	13,561	17,092	**3,531**	**26.0%**
620000	**Health Care and Social Assistance**	35,308	40,805	**5,497**	**15.6%**
425000	Wholesale Electronic Markets and Agents and Brokers	1,048	1,187	139	13.3%
488000	Support Activities for Transportation	356	397	41	11.5%
624000	Social Assistance	5,651	6,289	638	11.3%
622000	Hospitals	8,560	9,388	828	9.7%
236000	Construction of Buildings	1,550	1,672	122	7.9%
445000	Food and Beverage Stores	6,604	7,073	469	7.1%
721000	Accommodation, including Hotels and Motels	1,271	1,357	86	6.8%
230000	Construction	6,219	6,635	416	6.7%
334000	**Computer and Electronic Product Manufacturing**	2,653	2,264	**-389**	**-14.7%**
423000	Merchant Wholesalers, Durable Goods	1,805	1,621	-184	-10.2%
339000	Miscellaneous Manufacturing	673	617	-56	-8.3%
443000	Electronics and Appliance Stores	709	651	-58	-8.2%
114000	Fishing, Hunting and Trapping	160	147	-13	-8.1%
337000	Furniture and Related Product Manufacturing	183	171	-12	-6.6%
333000	Machinery Manufacturing	2,300	2,183	-117	-5.1%
511000	Publishing Industries (except Internet)	881	839	-42	-4.8%
310000	**Manufacturing**	16,187	15,482	**-705**	**-4.4%**
326000	Plastics and Rubber Products Manufacturing	200	193	-7	-3.5%

Source: Massachusetts Executive Office of Labor and Workforce Development (EOLWD)

Noteworthy Declines

- A 4% decrease or 705 fewer jobs in manufacturing
- A 15% decrease or 389 fewer jobs in the computer and electronic product manufacturing

The workforce region that Middleton is a part of will see decreased employment opportunities in these two manufacturing industry sectors. **A potential strategy the Town could consider could be the rezoning of land from manufacturing to health care related fields which are projected to increase.**



Map of State Workforce Development

Fiscal Conditions

According to Massachusetts Division of Local Services fiscal year 2018 data, 75% of Middleton's general fund came from property taxes, 11% came from local fees/receipts, 6% from state local aid, and 8% from other sources. 83% of its property taxes are paid by residential property owners, and the Town has an average single family tax bill of $7,670 in 2017 and $8,082 in 2018. Most of the Town's expenses went to education (64% of $32.3 million). Health insurance was the smallest expenditure ($0.7M), comprising of 2.2% of all Town expenses ($32.3M). Free cash as a percent of its budget has been declining since 2014 and is currently at 6.1% in 2018. The rule of thumb is for communities to maintain a reserve balance between 5-15%. The Town should strive to keep their Free Cash within this range according to MA DLS and the MA Government Finance Officers Association

Workforce

Labor Force

According to 2018 Massachusetts Executive Office of Labor and Workforce Development (EOLWD) data, the employed labor force in Middleton is comprised of 4,387 workers which represents 46% of the total population of 9,514 (ACS 2016). The Town's unemployment rate of 3.7% (168 unemployed) is comparable to the North Shore Workforce Development Area (WDA) regional unemployment rate of 3.6% (alternatively, the MA Division of Local Services reports a 2016 unemployment rate of 2.2%). Historically, the annual unemployment rate has gone down from 5.3% in 2014 to 3.4% in 2017[4].

Education

Approximately a third (36%) of the population over 25 years old has a bachelor's or advanced degree. Of those, 11% have a master's degree, 3% have a professional degree and 1% have a doctorate. When compared to Essex County, Middleton is comparable with regards to educational attainment.

Community	% Associates	% Bachelor's	% Master's	% Professional	% Doctorate
Middleton	11%	21%	11%	3%	1%
Essex County	8%	23%	11%	2%	1%

Source: 2012-2016 American Community Survey 5-Year Estimates

Resident Occupations

According to Census 2012-2016 American Community Survey 5-Year Estimates, of the civilian employed population 16 years and over of 4,180:

- 46% are in management, business, science and arts occupations;
- 16% are in service occupations (includes health care support occupations);
- 23% are in sales and office occupations;
- 9% are in natural resources, construction, and maintenance occupations; and
- 7% are in production, transportation, and material moving occupations.

It is worth noting that the industry projections section of the master plan indicate that health care related jobs are expected to grow at the regional level between 16-26% or (3,531 to 9,028 additional jobs). This could represent more opportunities for Middleton residents. A subset of the 16% of current residents who are service occupations, are in the health care support occupations.

It is also worth noting that in the same regional industry projections, there is a noteworthy decline in manufacturing jobs, which could potentially affect approximately half of the 7% of current residents who are in the production occupations.

4 Source: Massachusetts Executive Office of Labor and Workforce Development (EOLWD)

Retail Market Demand

Opportunity Gap Analysis

The Middleton Retail Market Demand Opportunity Gap Analysis was conducted as part of the Middleton Master Plan 2017-2028 process. The full analysis is located in Appendix A of the Middleton Master Plan. It was conducted in order to contextualize the master planning analysis and provide guidance to the community for decision making. The retail market analysis was conducted in order to conservatively assess the potential to support additional retail square footage. In order to potentially attract desired leisure retail uses that residents expressed as part of the survey, the Town can take actions to make itself more attractive and competitive so it can capture a part of the market demand from the retail trade areas.

Market Analysis

- **Snap-shot** of market attractiveness & patterns
- **Estimate demand** for potential supportable uses & amounts
- Based on current & projected trends
- **Town can position itself better**
  - Identify & attract specific types of supportable development
  - Minimize competition - others towns & trade areas
  - Invest, prepare & market

On the next page are some of the key findings from the analysis as well as some potential strategies for attracting the desired leisure retail uses that are conductive not only to Town economic development goals but also to socialization and community building.

Key Findings[1]

- **12 potential supportable retail and food establishments** totaling 57,307 square feet within a **retail trade area of 0 to 15 minute drive** from Middleton Square.

- Based on the assumption that **if the Town can create the right conditions and incentives**, and invest in an enhanced public realm and streetscape, it can potentially attract a conservative: (a) 10% of the local 8,364 households, and 5% of the regional 30,930 householders; and (b) 20% of the 1,364 workers within 10 minutes and 5% of the 3,674 workers within a 10-15 drive; to shop in the downtown.

- Of the 12 potential supportable retail establishments, the following are the predominant retail subtypes with the greater probability of being supported: (a) 2 restaurants totaling 4,299-SF, (b) 2 clothing stores totaling 4,190-SF, (c) 1 shoe store totaling 2,297-SF, and (d) 1 grocery store totaling 25,700-SF.

1 (a) ESRI Business Analyst 2017; (b) MAPC Downtown and Mixed-Oriented Retail Uses Selected from ESRI NAICS Codes; (c) 2017 Infogroup, Inc.; (d) ESRI Total Residential Population forecasts for 2017; and (e) MAPC local workers spending assumptions and analysis

Community Feedback

Based on feedback from the online survey, a business focus group, and the workshops, the following are some the economic- and community development feedback received from participants and stakeholders.

Business Climate

Participants indicated that while it was very easy to operate a business in Middleton, it was only somewhat easy for a business to find leasable space and to build new projects.

Ease of Working with Town Officials

With regards to the ease of working with Town officials, participants indicated that it was only somewhat easy to do so. There was consensus on this matter with regards to finding information such as zoning, understanding the zoning regulations, and the ease with which one can obtain licenses and permits.

Leaving a Legacy for Future Generations

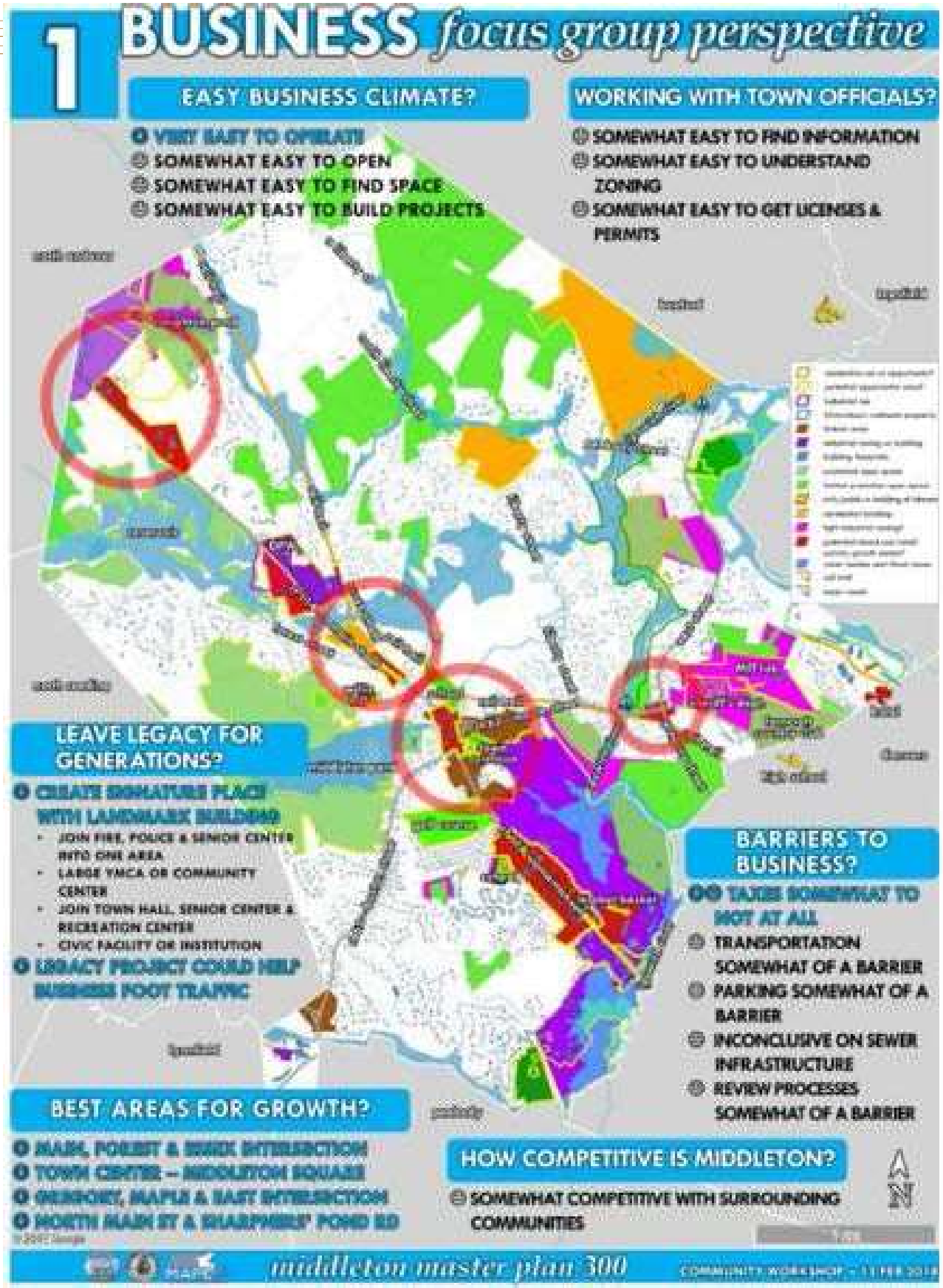
Just as the preservation of existing historic and natural assets is part of the master planning process, participants were asked if there was a legacy project that could be left for the enjoyment of future generations. There was consensus on creating a signature place with a landmark building for communal enjoyment in the distant and not-so-distant future, and for the purpose of helping to generate foot traffic for businesses and the Town's overall economic development.
Among the specific ideas for such a signature place and landmark building are the following:

- A joint fire, police and senior center into either a single building complex, or a joint police and fire station in tandem with a senior center that together frame an outdoor social gathering space.
- A large YMCA or community center.
- A joint Town hall, senior center and recreation center.
- A civic facility or institution.

Barriers to Business

Consensus among participants on whether taxes were a barrier to business ranged from somewhat to not at all. Most participants indicated that the following three issues were somewhat of a barrier to starting or operating a business:

(a) transportation issues such as congestion and lack of transit options;
(b) parking issues; and
(c) permitting review processes. On the matter of whether the lack of sewer infrastructure posed a barrier to opening businesses, responses either were inconclusive or ran the gamut.


1 BUSINESS focus group perspective
EASY BUSINESS CLIMATE?
VERY EASY TO OPERATE
SOMEWHAT EASY TO OPEN
SOMEWHAT EASY TO FIND SPACE
SOMEWHAT EASY TO BUILD PROJECTS
WORKING WITH TOWN OFFICIALS?
SOMEWHAT EASY TO FIND INFORMATION
SOMEWHAT EASY TO UNDERSTAND ZONING
SOMEWHAT EASY TO GET LICENSES & PERMITS
LEAVE LEGACY FOR GENERATIONS?
CREATE SIGNATURE PLACE WITH LANDMARK BUILDING
JOIN FIRE, POLICE & SENIOR CENTER INTO ONE AREA
LARGE YMCA OR COMMUNITY CENTER
JOIN TOWN HALL, SENIOR CENTER & RECREATION CENTER
CIVIC FACILITY OR INSTITUTION
LEGACY PROJECT COULD HELP BUSINESS FOOT TRAFFIC
BARRIERS TO BUSINESS?
TAXES SOMEWHAT TO NOT AT ALL
TRANSPORTATION SOMEWHAT OF A BARRIER
PARKING SOMEWHAT OF A BARRIER
INCONCLUSIVE ON SEWER INFRASTRUCTURE
REVIEW PROCESSES SOMEWHAT OF A BARRIER
BEST AREAS FOR GROWTH?
MAIN, FOREST & BRICK INTERSECTION
TOWN CENTER -- MIDDLETON SQUARE
GEORGE, MAPLE & EAST INTERSECTION
NORTH MAIN ST & SHARPNERS' POND RD
HOW COMPETITIVE IS MIDDLETON?
SOMEWHAT COMPETITIVE WITH SURROUNDING COMMUNITIES
N
middleton master plan 300



Best Areas for Growth & Town Competitiveness

Participants indicated that the **four areas best suited to accommodate more retail/commercial and mixed-use development** were the following areas, which also correspond to ideal residential/ mixed-use areas:

(a) the intersection of Main, Forest and Essex streets;
(b) the Town's center at Middleton Square;
(c) the intersection of Gregory, Maple and East streets; and
(d) the area near North Main Street and Sharpners' Pond Road.

On the subject of the Town's competitiveness with surrounding communities, the consensus was that it was somewhat competitive.

Strategies and Recommendations

- A workforce and economic development strategy could include the Town setting the right conditions (zoning, opportunity sites, outreach, marketing) to attract existing major regional employers in these sectors who could be potentially looking to relocate or expand.

- A potential strategy the Town may consider is the addition of a Healthcare Overlay District to the town's zoning bylaws. This overlay district would be allowed in only those zones most suitable for healthcare uses (Business (B) and/or Light Manufacturing (M-1) zones) and would encourage health care related fields which are projected to increase. Potential uses allowed in this overlay district could be hospitals, medical parks, nursing homes, and/or retirement communities.

- Free cash as a percent of its budget has been declining since 2014 and is currently at 6.1% in 2018. The rule of thumb is for communities to maintain a reserve balance between 5-15%. The Town should strive to keep their Free Cash within this range according to MA DLS and the MA Government Finance Officers Association.

- Among the potential strategies for attracting additional retail are the following:
    - Encouraging "mixed-use" (see below) by using overlay districts. An "overlay" district is a zoning district that is superimposed over one or more existing districts in order to impose additional restrictions, permit additional uses, or implement density bonuses or incentive zoning to achieve community goals. In the case of mixed-use zoning, it is used to allow added uses and to provide incentives to achieve local goals;
    - Leverage the potential Town consolidation of municipal departments on the site of the former Middleton Golf Course on South Main Street as a civic anchor for business investment. A strong town center will encourage retail development nearby.

- Four areas best suited to accommodate more retail/commercial and mixed-use development were the following areas, which also correspond to ideal residential/mixed-use areas: (a) the intersection of Main, Forest and Essex streets; (b) the Town's center at Middleton Square; (c) the intersection of Gregory, Maple and East streets; (d) the area near North Main Street and Sharpners Pond Road and; (e) South Main Street.

"Mixed-use Development" is a type of development strategy for living spaces (housing) that blends residential, commercial, cultural, institutional, or entertainment uses, where those functions are physically and functionally integrated, and that provides pedestrian connections. Studies show a clear connection between walkable environments and the economic viability of a town

- Compact development reduces infrastructure costs
- Increased tax revenue per acre than traditional development
- Reduces suburban sprawl
- Promotes a sense of community
- Encourages pedestrian-friendly design

LAND USE & ZONING

Key Findings

- More than 80% of Middleton's land area is zoned primarily for single family residential development.
- Middleton has over 300 acres of open space and recreation land. Over 500 acres of land are held under Chapter 61 or 61A programs keeping working farmland open in exchange for reduced taxes. The largest open space area is the 83-acre Barrett Reservation owned by the Essex County Greenbelt Association.
- Middleton is substantially built out– approximately 4% of the town's land area remains developable for residential uses and 1% for commercial uses.
  The future fiscal stability of the Town might depend on revenue from new growth, which could be achieved in part through the development of undervalued properties.



Introduction

"Land Use" is a general term used to describe the primary use (or combination of current uses) occurring on a tract of land at a given time, including residential, retail/commercial, office, industrial, open space, transportation, mixed use and more. Land use patterns are influenced by numerous factors including historical development patterns, population and economic growth over time, infrastructure investment, transportation access, natural resources and environmental constraints, and quality of life. Importantly, land use is not permanent – it can and often does change over time. For example, a residential subdivision can be built on former farmland, or a residential condominium can be built on the site of a former hotel.

There are several primary land uses including residential, commercial, industrial, tax-exempt, open space and more. However, each category can be further classified by subtype or combination of uses. For example, residential land use can include single-, two- and multifamily types, and commercial land use can include retail and office. Parcels with multiple uses such as residential and commercial can be classified as mixed-use, whereas tax-exempt properties can be separated into public and religious/institutional.

Land use is different from zoning. This is an important distinction, and should be emphasized. Whereas land use identifies the current use, zoning is the mechanism – or tool – used by municipalities to regulate current and future use of land. It dictates what can be developed on every parcel of land: the allowed uses (there can be multiple allowed), the placement and massing of structures, the amount of open space required, the number of parking spaces, and more. In many cases, land use and zoning are not identical. Some uses are "nonconforming", meaning they existed before land was zoned for a different use(s). While these uses are "grandfathered" in, should the parcel be redeveloped, it must conform to current zoning.

Local zoning bylaws are dictated by a community's preferences in form and location of development. The master planning process provides a community the opportunity to proactively craft a land use policy framework to guide future growth in alignment with the **Middleton Master Plan 300** vision.

Existing Conditions

Historical Context

In many respects, Middleton's connection to the land has provided its identity and been a key element in the town's growth. What is today known as Middleton was originally known as Will's Hill after a Native American who lived near the hill overlooking Middleton Pond. The first European settler, William Nichols, arrived in 1651, followed by Bray Wilkins, his 6 sons and John Gingell in 1659. It became the Town of Middleton in 1728, formed from parts of Salem and included land in Andover, Boxford, Danvers and Topsfield. The name Middleton developed from being the 'town in the middle' between Salem and Andover.

In the beginning, iron ore created by the peat bogs and abundant timber attracted settlers who built mills for iron, grist & timber. Middleton grew along its rivers, particularly the Ipswich River, with an ironworks on Mill Street and later the Boston Blacking Company and eventually, Bostik on Boston Street, an adhesives company. The removal of timber throughout the community created vast areas of open space for agricultural development, particularly vast areas for grazing. Middleton was primarily agricultural up until the mid-1900s. As with many small Essex County towns, Middleton saw the simultaneous growth of railroads and industry in the 1800's. Two railroad lines and three stops gave residents direct access to Boston and helped foster industries that provided materials to the booming shoe industry in eastern Massachusetts cities.

However, Middleton retained its bucolic and rural small town character and by the early 20th century the town had become known as a refuge from the noise and pollution of larger factory towns and cities with small cottages located along the Ipswich River and its ponds. By the mid-1930's, a greatly improved road network had supplanted the railroad and electric trolley networks as Americans embraced the automobile and Middleton began to suburbanize.

Due largely to a lack of sewer infrastructure and a relatively small number of large landowners retaining ownership of their land and keeping it in agriculturally related uses, Middleton grew slowly until the 1990's. The construction of Route 128 and the Federal Highway system in the 1950's ushered in development in the surrounding communities of Danvers, Peabody, Andover and North Reading. State highway Route 114, running north to south, and Route 62, running east/west have become busy shopping and commuter routes. However, from 1990 to 2000, Middleton grew by 57% and became one of the fastest developing communities in Essex County, following that with an additional increase of 13% from 2000 to 2010, and projected to reach an additional 13% beyond that by 2020.[5] Land use patterns of today continue to reflect the town's agricultural roots and even its past reliance on the railroad, even as auto-oriented suburbanization took hold in the Post War period.

Middleton Land Use

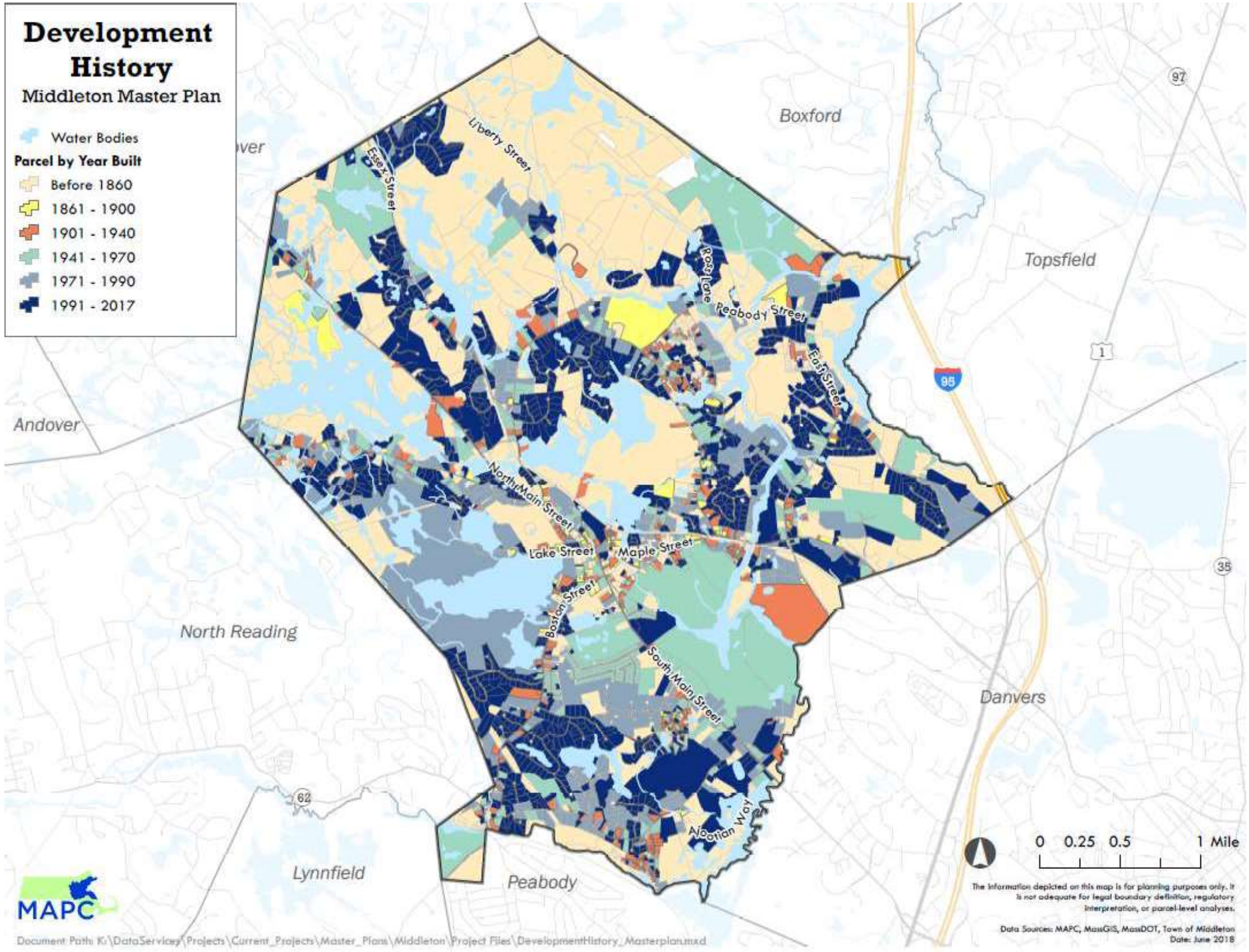
Although primarily a residential community, Middleton contains a diversity of land uses. Comprised of 14 square miles of land, 68% of Middleton's land area is forested or wetlands. Of the land dedicated to residential uses 79 % are classified as low density, while 7% are very low density uses. Multi-family homes comprise 5% of residential uses while about 9% are considered medium density residential. Open space and recreational land makes up about 4% of the town's land use, with 53% of it being permanently protected from development.

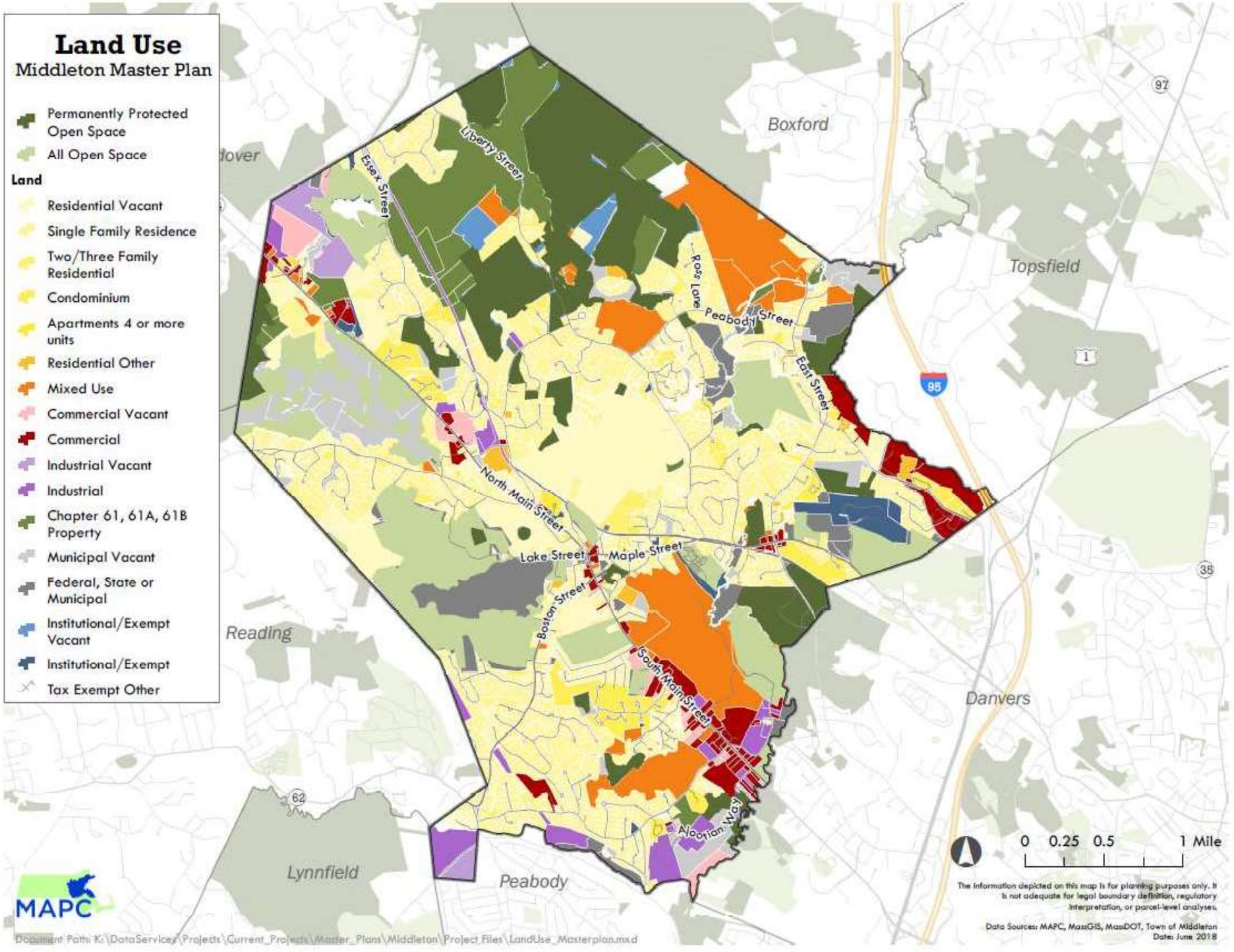
Land use is closely related to municipal property tax valuation and city and towns may apply different tax rates to each use. For example, different tax rates may be applied to residential and commercial properties, whereas some are exempt (e.g. institutional and government owned land), etc. Land use also speaks to the history and fiscal health of a community. Patterns that evolve over time not only form the physical character of the community, they may also point to problematic patterns and decisions (e.g. lack of commercial land, and thus minimal commercial tax revenues. Identifying where land uses should change over time- in this case, the next 10 years- is one of the many benefits of developing a

master plan. The future land use plan contained in the Executive Visual Summary takes into account all of the previous elements of the plan (e.g. housing, economic development, open space, etc. and sets forth a plan for change to achieve the overall plan vision.

The future land use plan answers the two following questions: What areas of town should stay the same or be preserved? What areas of town hold potential for change and growth, and what should that change encompass?

5 Middleton Open Space and Recreation Plan-2013


Development History
Middleton Master Plan
Water Bodies
Parcel by Year Built
Before 1860
1861 - 1900
1901 - 1940
1941 - 1970
1971 - 1990
1991 - 2017
Boxford
Topsfield
Andover
North Reading
Lynnfield
Peabody
Danvers
Essex Street
Liberty Street
Ross Lane
Peabody Street
Elm Street
North Main Street
Lake Street
Maple Street
Boston Street
South Main Street
Abbotian Way
97
95
1
35
62
0 0.25 0.5 1 Mile
MAPC
Document Path: K:\DataServices\Projects\Current_Projects\Master_Plans\Middleton\Project Files\DevelopmentHistory_Masterplan.mxd
The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analyses.
Data Sources: MAPC, MassGIS, MassDOT, Town of Middleton
Date: June 2018


Land Use
Middleton Master Plan
Permanently Protected Open Space
All Open Space
Land
Residential Vacant
Single Family Residence
Two/Three Family Residential
Condominium
Apartments 4 or more units
Residential Other
Mixed Use
Commercial Vacant
Commercial
Industrial Vacant
Industrial
Chapter 61, 61A, 61B Property
Municipal Vacant
Federal, State or Municipal
Institutional/Exempt Vacant
Institutional/Exempt
Tax Exempt Other
Boxford
Topsfield
Reading
Lynnfield
Peabody
Danvers
Liberty Street
Essex Street
Ross Lane
Peabody Street
East Street
North Main Street
Lake Street
Maple Street
Boston Street
South Main Street
Andover Way
97
1
95
35
62
0 0.25 0.5 1 Mile
The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analyses.
Data Sources: MAPC, MassGIS, MassDOT, Town of Middleton
Date: June 2018
MAPC
Document Path: K:\DataServices\Projects\Current_Projects\Master_Plans\Middleton\Project Files\LandUse_Masterplan.mxd

Land Use Descriptions	Land Use-Acres	Percent
Residential		
Single Family Residents	2,432.6	27.7
Condominium	274.8	3.1
Two/Three Family Residential	151.9	1.7
Residential Other	50.0	0.5
Apartments 4 or more units	17.9	0.2
Multiple Use/Primarily Residential	381.2	4.3
Multiple Use/Open Space: SF home with substantial open space	286.6	3.3
	3595	**41**
Industrial		2.4
Industrial	210.4	1.0
Industrial Vacant	90.6	0.05
Industrial Storage	5.9	**3.5**
	306.9	
Tax Exempt		
Tax Exempt Other	1.0	
Federal, State, or Municipal	1,202.2	13.7
Institutional/Exempt	219.8	2.5
Institutional/Exempt Vacant	530.4	6
Municipal Vacant	372.7	4.2
	2,326.1	**26.5**
Commercial		
Multiple Use/ Primarily Commercial	266.6	3
Commercial/Retail	105.0	1.2
Commercial/Office	47.3	0.5
Commercial/Public Service Properties	27.2	0.3
Commercial/Recreational	102.7	1.2
Commercial-Other	34.2	0.4
	583	**6.6**
Recreational	38.6	0.4
Residential Vacant Developable	323.7	3.7
Residential Vacant Potentially Developable	47.2	0.3
Residential Vacant Undevelopable	574.1	6.5
Commercial/Vacant Developable	87.1	1
Commercial/Vacant Potentially Developable	1.6	
Commercial/Vacant Undevelopable	20.4	0.2
Chapter 61, 61A Property	562.0	6.4
Conservation	308.9	3.5
Total	**8,774.8**	**100**

Land Use Types

Residential Uses

Middleton is primarily a residential suburban community. This is reflected in the amount of land dedicated to residential development. Middleton's highest land use is for residential purposes (41%), the majority of which consists of single family homes (31 % of land area.) Higher density residential uses- 2-family, 3-family units, apartment and condominium development and a few multiple use properties- are clustered in a few areas of town, primarily near South and North Main Streets (State Route 114) with developments such as North Meadow Village, Evergreen Estates and Fuller Pond Village. Older two and three-family homes are also found downtown near Middleton Square and between Liberty Street and East Streets with a few located near River and Boston Streets.

Commercial Uses

Just over 6 % of Middleton's land use is used for commercial purposes, including retail and office. As shown in the Land Use Type Map, there are several nodes of commercial activity, primarily along North and South Main Streets, near the town center and Middleton Square, and also around the intersection of East and Gregory Streets. Another commercial area, east of East Street to the Topsfield and Danvers boundaries, is situated close to Route 95 uses and contains the Ferncroft Country Club and Coco Key Water Park.

Middleton's town center, surrounding the area where heavily-traveled Maple Street (SR 62) and Main Street (SR 114) intersect has historical, cultural and scenic significance for the town. It encompasses most of the town's historic district and includes Memorial Hall, the fire station, historic Estey's Tavern and the Lura Woodside Watkins Museum, Middleton Square and the Flint Public Library. It is proximate to the town common and bandstand, the Howe Manning School, Middleton Pond and a former railroad right of way the town is planning to convert to a bike and pedestrian trail connecting to Danvers and North Andover. Although the area serves as Middleton's downtown, many residents indicated during the master planning and visioning process that they worry about car traffic dominating the downtown and would like to see improvements to it as a place to live, gather, eat and shop; they desire more walkability and a stronger sense of Middleton's historic and cultural identity. Just a bit south of the town center at what is now the Middleton Golf Course near the intersection of Boston Street and South Main Street, the town is exploring the idea of creating a new public safety, civic, and senior center facilities development that could also become part of the heart of Middleton if carefully designed to incorporate it into the town center using the town's Complete Street policies.

South Main Street is the commercial heart of Middleton. Beginning at Angelica's Restaurant and moving south past the Middleton Golf Course and the open pasture land across from it, there are businesses on both sides including a floral design shop, funeral home, fireplace/stove shop, carry-out restaurants and the famous Richardson's Dairy and Ice Cream, abutted by the Golf Country driving range. Large and medium size retail and service uses extend on both sides of South Main from Haswell Park south to Lonergan Road, with the western, Business-zoned side containing such businesses as a car wash, physical therapy service, a Walgreens, Circle Furniture, McDonalds, a beauty supply company and a wide range of automotive-related service and repair businesses. The eastern side of South Main Street, zoned primarily for Light Industry, contains a shopping center with large retails uses including a Market Basket, TJ Maxx, Joanne Fabrics and Bob's Store. Also on the east side are an Ace Hardware store, a collision repair center, an assortment of restaurants and sports recreation centers. Access to South Main Street is primarily by car only with little pedestrian or alternative access.

North Main Street contains the other significant commercial area in Middleton. Beginning at DeBush Avenue and running north to the North Andover town line, there is a variety of commercial uses including at water/wastewater management company, a liquor store, two power boat dealerships, an

automobile dealer, a surveying company, a waste management firm, a gymnastics club, laminating company and a metal fabrication and machine shop.

Maple Street (SR Route 62) at Gregory Street serves as the gateway to Middleton and the downtown area from Danvers in the east, first passing the Essex County Sheriff's Department and the Danvers/Middleton Community Garden before reaching roadside businesses such as Dunkin Donuts, Farmer Brown's, Howe's Station Market and a CVS.

Of those who participated in the visioning and master plan process, about 60% indicated they desire less "big box" retail and highway strip plazas with about 50% saying they'd like to see more improvements to existing local businesses, with fewer gas stations and automobile related uses and more restaurants, specialty shops and places to hang out.

Industrial Uses

Industrial uses make up about 4% of land use in Middleton. As with many commercial uses, most industrial uses are found along North and South Main Streets (SR 114) or Boston Street (SR 62) in the south and southwestern parts of town. Examples include a precision machinery company on North Main just south of the Andover line, Bostik adhesive technologies in the southwest corner of Middleton just off Route 62, a paving company near River Street in south Middleton and a couple of machine shops off Birch Road located in back of large commercial uses along South Main Street.

Parks and Open Space (including tax exempt open space)

The Town of Middleton has over 300 acres of open space and recreational land, under both public and private ownership. The 16 recreational and conservation point of interest include parks and recreation areas, ponds, rail trail, camps and canoe/kayak landings along the Ipswich River. The largest tract of public open space is owned by the Essex County Greenbelt.

Tax Exempt (excluding Open Space)

Excluding open space, about 2,326 acres or 26 % of the land area in Middleton is occupied by tax exempt uses, including town, state and federal government, public schools, institutional, religious, charitable, and other exempt uses. A large portion of this land is counted towards the potential Emerson Brook Reservoir watershed area. Among these are Town-owned facilities such as the Howe-Manning School, the Fuller Meadow School and other properties discussed in the Public Facilities and Services element.

Vacant Land (Development Opportunities)

About 15% of all land in Middleton is vacant, or roughly 1,005 acres, (not including protected open space). However, of this land, only 324 acres is listed by the Assessor' Office as potentially developable for residential uses and only 87 acres for commercial purposes. The remaining vacant land is constrained for various reasons such as difficult topography, environmental constraints, or lack of access.

Land Use and New Investment

New revenue growth is required to ensure fiscal stability for the Town. The primary way for Middleton to increase revenues will be through new or increased investment, or growth, in town. Additionally, since the town is largely built out – not including protected open space – growth will be achieved through redevelopment of lower value, or undervalued, properties. As shown in the Land Values map below, land values vary throughout Middleton

Density

In the analysis of overall Middleton land use, and recognizing that the town is currently growth constrained due to a lack of sewage treatment capacity, one of the observations regarding the high percentage of land devoted to both open space and surface parking may reflect a larger pattern of underutilization of land in town. Another planning tool to measure utilization of land is by analyzing the density of buildings on the property. The Floor Area Ratio (FAR) is a calculation that is frequently used to assess density. It is calculated by measuring the total building area on a property, divided by the land area of that property. For example, if a 10,000 square foot (SF) building were placed on a 10,000 SF property, that property would have an FAR of 1. The building area would likely be configured on multiple floors. If the same 10,000 SF property had only a 5,000 SF building, that property would have an FAR of 0.5.

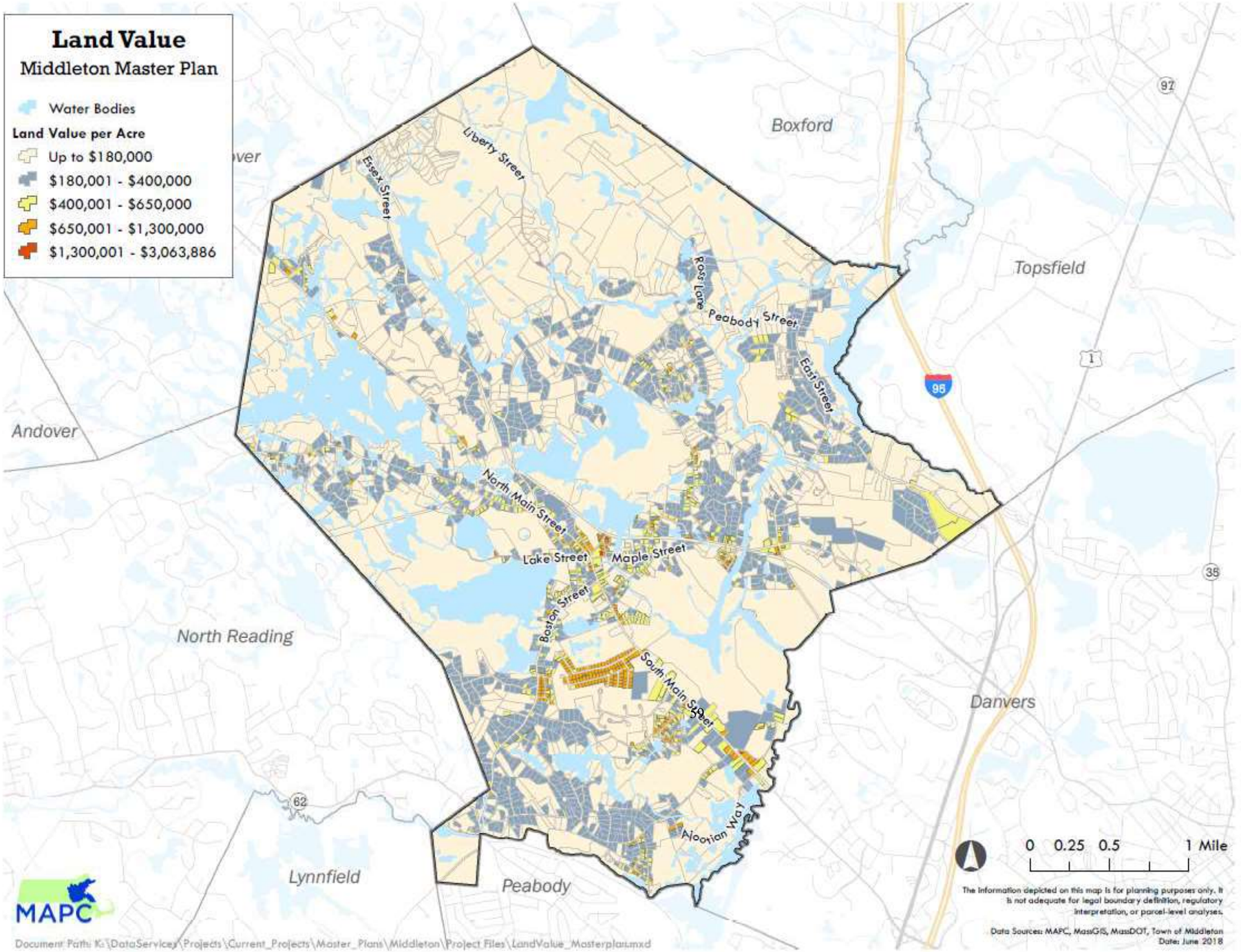
The FAR of each of the properties in the district has been calculated and is depicted in the illustration on the following page. This analysis shows that very few properties in town have a moderate FAR. Most properties in the district have a minimal FAR, ranging from 0 (no buildings) to 0.49 (a building area less than half as large as the property). This analysis confirms that property in the town has the potential to be utilized more efficiently, particularly if current water and sewer constraints can be addressed.

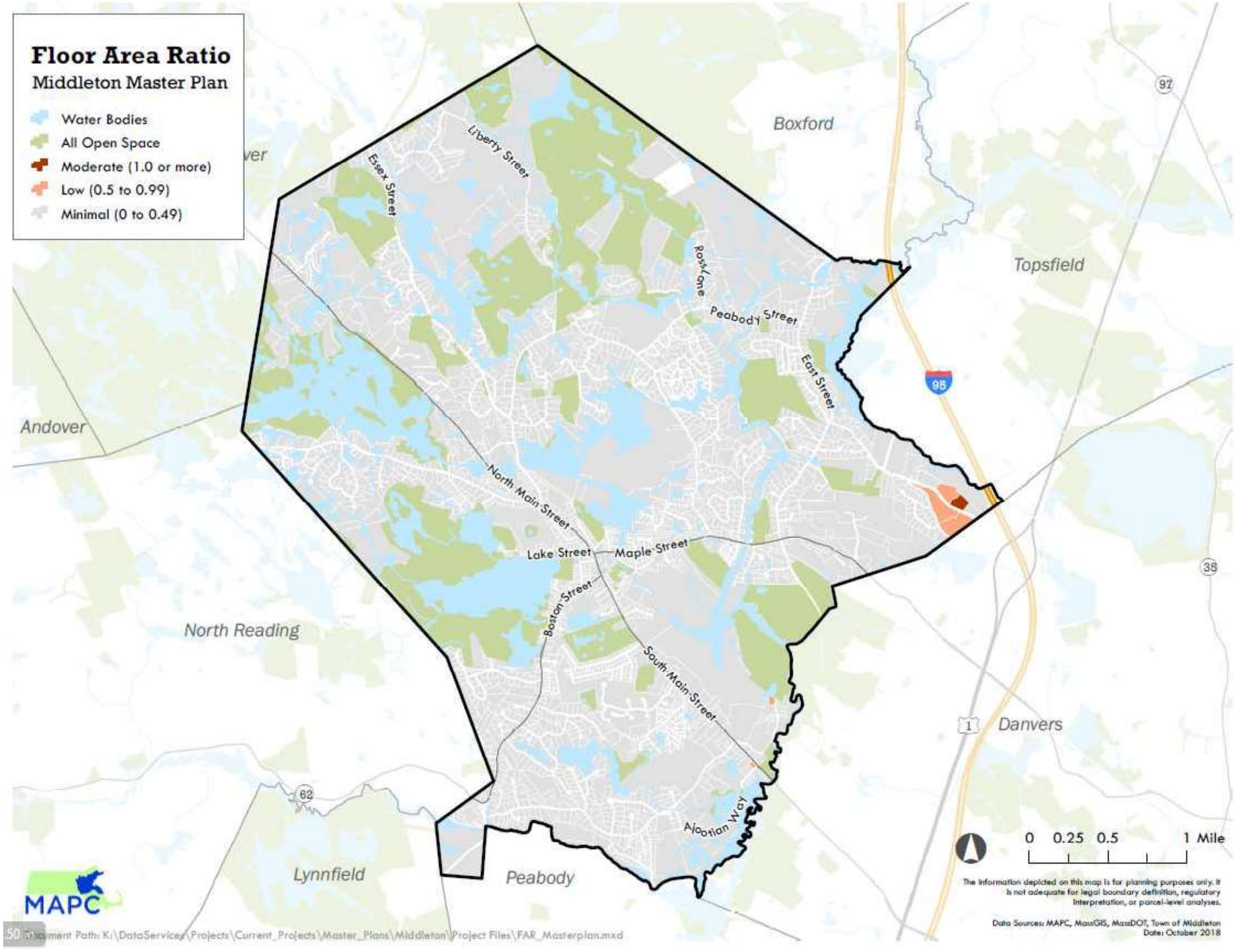
Property Utilization

Lot coverage and building coverage of physical investments are not the only measure of property utilization. A property may support a successful business and therefore be well utilized or a property may have high value through the valuation of property and the real estate investments that have been made.

One way to examine the property utilization from a real estate value perspective is to compare the building value and the land value of a property. Typically, prudent building investments will be of more value than the land they are built upon. In certain circumstances, older building investments may depreciate in value, while land value generally trends upward over time. A comparison of building value and land value is not a perfect measure of property utilization, but it provides another point of comparison for how individual properties and the properties in town are currently used.

Based on the Town of Middleton Assessors data, each property's building value was compared to the land value. If the building value exceeds the land value, the property was labeled as high utilization. If the land value exceeds the building value, the property was labeled as low utilization. If data was unavailable for either of those figures, the property is labeled as incomplete data.


Land Value
Middleton Master Plan
Water Bodies
Land Value per Acre
Up to $180,000
$180,001 - $400,000
$400,001 - $650,000
$650,001 - $1,300,000
$1,300,001 - $3,063,886
Boxford
Topsfield
Andover
North Reading
Lynnfield
Peabody
Danvers
Essex Street
Liberty Street
Ross Lane
Peabody Street
East Street
North Main Street
Lake Street
Maple Street
Boston Street
South Main Street
Ploutian Way
97
95
1
35
62
0 0.25 0.5 1 Mile
The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analyses.
Data Sources: MAPC, MassGIS, MassDOT, Town of Middleton
Date: June 2018
MAPC
Document Path: K:\DataServices\Projects\Current_Projects\Master_Plans\Middleton\Project Files\LandValue_Masterplan.mxd

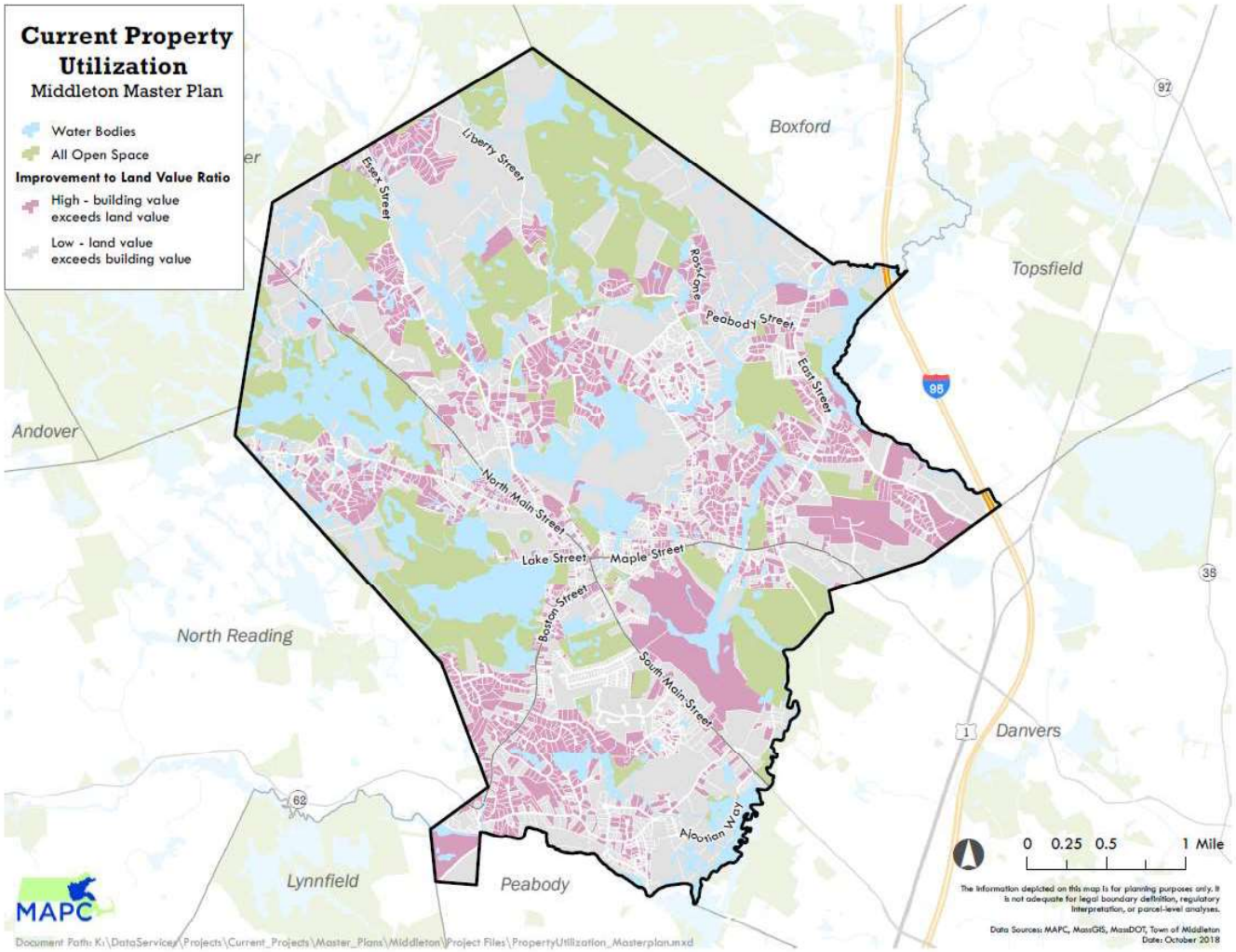

Floor Area Ratio
Middleton Master Plan
Water Bodies
All Open Space
Moderate (1.0 or more)
Low (0.5 to 0.99)
Minimal (0 to 0.49)
Boxford
Topsfield
Andover
North Reading
Lynnfield
Peabody
Danvers
Essex Street
Liberty Street
Rostone
Peabody Street
East Street
North Main Street
Lake Street
Maple Street
Boston Street
South Main Street
Alootian Way
97
95
38
1
62
0 0.25 0.5 1 Mile
The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analyses.
Data Sources: MAPC, MassGIS, MassDOT, Town of Middleton
Date: October 2018
MAPC
Document Path: K:\DataServices\Projects\Current_Projects\Master_Plans\Middleton\Project Files\FAR_Masterplan.mxd

Property Utilization

Lot coverage and building coverage of physical investments are not the only measure of property utilization. A property may support a successful business and therefore be well utilized or a property may have high value through the valuation of property and the real estate investments that have been made.

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Growth Opportunity Areas

Although primarily built out, there are several areas in town that hold potential for redevelopment. These areas tend to be single use, lower density and lower value, and primarily commercial or industrial.

AREA 1

The greatest opportunity for redevelopment is located along North Main Street within the Light Industrial zoned land north of Debush Avenue and within the Business zoned lots along North Main Street from Essex Street north to the beginning of the Watershed Overlay District. Some of the M-1 zoned lots in this area are already being redeveloped.

AREA 2

The greatest opportunity for redevelopment is within the Business zoned area between the Police Station and Essex Street.

AREA 3

Another area that could provide opportunities for redevelopment based on current land value per acre, density analysis and property utilization ratios are the M-1 zoned properties south of River Street, along North Main Street, as well as the Business districts on South Main Street. These are largely stand-alone commercial and industrial uses that are largely auto dependent for access and do not provide other means of access to the residential areas built nearby.

Zoning

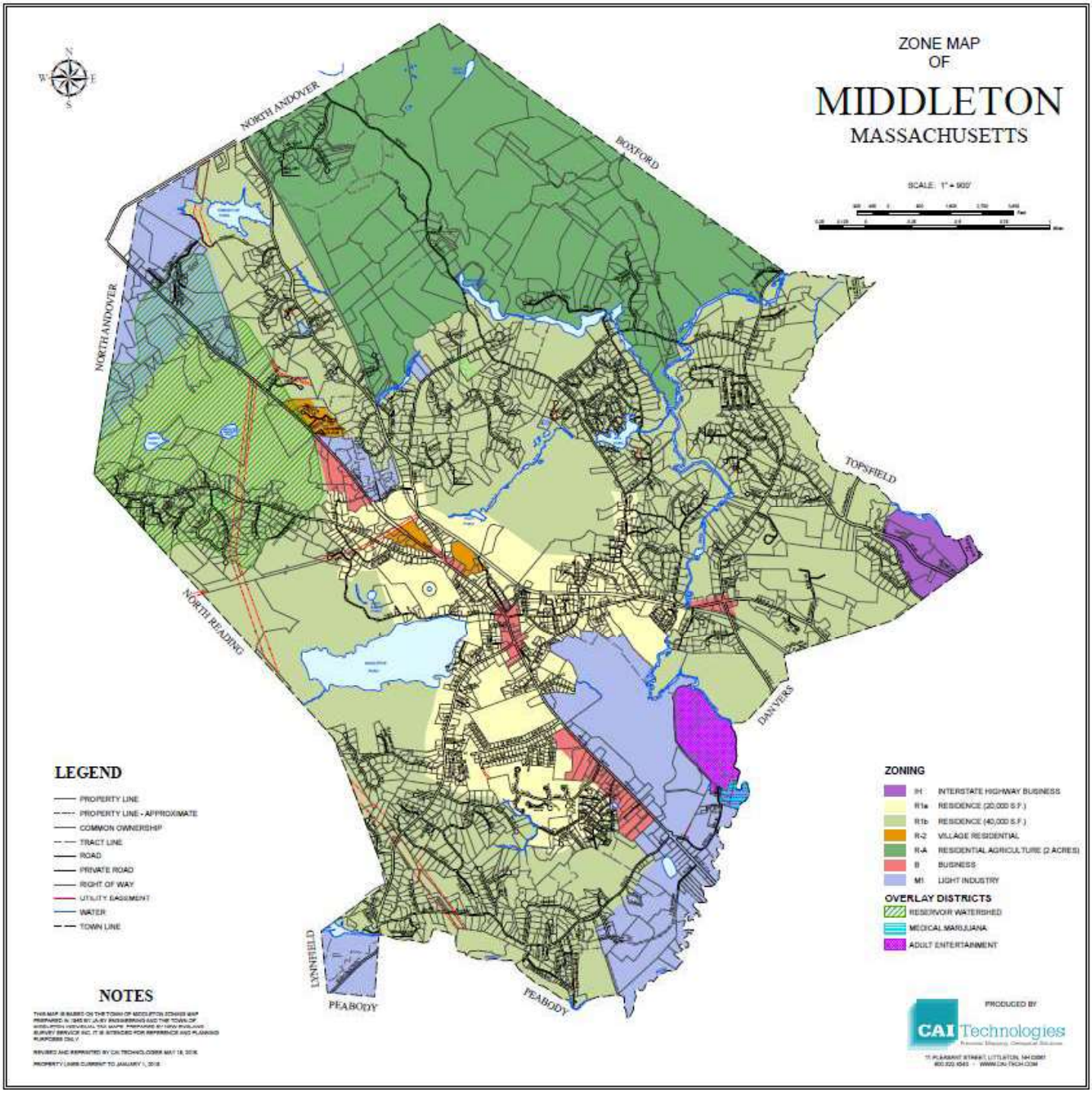
Middleton's current Zoning By-Law was adopted during the May 13, 2008 Town Meeting. Since then, the bylaw has been updated 17 times, most recently in May of 2017. The Zoning By-Law covers the followingtopics:

- Purpose and Authority
- Districts
- Use Regulations
- Dimensional Regulations
- General Regulations
- Special Regulations
  - Wireless Telecommunications
  - Industrial park
  - Approved Street Plan
  - Marijuana establishment temporary moratorium
  - Marijuana not medically prescribed
  - Special Residential Regulations
  - Flexible Development
  - Conversion of single-family dwelling in R-2 District
  - Development schedule
- Special District Regulations
  - Flood Plain Overlay District
  - Watershed Protection Overlay District
  - Institutional Overlay District
  - Adult Entertainment Overlay District
  - Medical Marijuana Overlay District
- Administration and Procedures
- Definitions

The table on the right shows Middleton's zoning area for each, and the Zoning Map shows where

Zoning Districts	Description	Acres	Percent
R-1a	Residential (20,000 sf parcel min)	1,506.4	17.8
R-1b	Residential (40,000 sf parcel min)	3,719.9	43.9
R-A	Residential-Agriculture (2 acre parcel min)	1,821.7	21.5
R-2	Village Residential (100,000 sf parcel min)	39.1	0.5
B	Business	155.9	1.8
IH	Interstate Highway District	54.6	0.6
M-1	Light Industrial District	1,036.8	12.23
	Not classified	14.8	0.8
Total		8,349.2	100

Sources: MassGIS, Middleton GIS, MAPC



Middleton Zoning

Residential Districts R-1a, R-1b, RA

Middleton's residential neighborhoods are not densely developed and are composed largely of single family areas. Approximately 80% of the total zoned residential area is devoted to four districts, the R-1b, R-1a, R-2 (Village Residential) and RA (Residential-Agriculture) zoning districts. The R-1b area's minimum lot size is 40,000 SF and the R-1a's minimum lot size is 20,000 SF. R-2, the Village Residential area, allows single family homes and also allows the conversions of single-family homes to two and multifamily homes by special permit as well as multifamily dwellings by special permit. The minimum lot size, undefined for single-family and two-family in R-2, is 100,000 SF for multifamily uses. The Residential-Agricultural District's minimum lot size is 2 acres. The main uses in the residential districts are primarily single-family housing with the exception of uses of land for agriculture, horticulture and floriculture being allowed by-right on parcels of land of at least 5 acres, as well as the sale of produce, wine and dairy items produced on those lots. Commercial Farms are a special permit use in the RA district with farm stands considered also by special permit in the R-1a and R-1b areas. Most of the R-1a and R-2 districts are found near the intersection of Maple and Main Streets, with the R-1a district extending west towards the boundary with North Reading and south below Boston Street. The R-1a and R-2 areas contain mostly smaller lots with older, often historic housing as well as the town's library, town hall, historical museum and Middleton Pond. The R-1b zoning district is Middleton's largest district at about 43% of land area and covers all residentially zoned land except for the more central R-1a and R-2 districts and the R-A district located in the northern quadrant of the town and encompassing approximately 18% of land area. The maximum height allowed in all residential districts is 35 feet. Walking access within all of the residential areas is quite limited by the lack of sidewalks along many of the town's streets. Currently, only the first mile of Boston Street offers sidewalks, making safe and easy pedestrian access to Middleton Square, the library and Middleton Pond. The pond offers a path around it for both bike and pedestrian use.

Business District (B), Interstate Highway Business District (IH)

Encompassing about 2% of the town's land area, the B Business District is the town's primary commercial district for mostly traditional commercial uses, designed to serve surrounding R-1a and R-1b Residential Districts. Most of the B District is located along South and North Main Streets across from M-I Light Industry Districts. There is a smaller node located along Maple Street at the eastern gateway to Middleton. By-right uses include retail, personal service establishments, trade shops, funeral homes, business and professional offices, banks, medical and dental facilities, fast food and sit-down restaurants. Echoing the town's heritage, agriculture and other crop related uses, along with the sale of products raised on them are allowed Business uses, so long as the land they were grown on is of at least 5 acres. Uses such as drive-through restaurants , boat sales and facilities such as kennels, nursing homes, stables and veterinary hospitals, motels/hotels and private schools all requires a Special Permit from the Zoning Board of Appeals. A few light industrial uses are allowed by-right within lots fronting North and South Main Streets that meet specific setback requirements from South Main Street. Business zoned areas in town cannot be redeveloped for residential uses as no residential uses are allowed in the B District. Business uses require a minimum parcel size of 40,000 SF and the maximum allowable height is 35 feet or 3 stories.

The Interstate Highway Business District (IH) is made up of 54.6 acres of land and occupies less than 1% of the zoned land area in Middleton. Created for uses off of Route 95, Zoning for the IH district allows for business and professional offices, medical/dental facilities, bank uses, hotels/ motels and research facilities by-right while allowing wholesale and warehousing uses, contractors/landscapers yards and telecommunications uses by Special Permit. No residential or retail uses are allowed here but, as with all of Middleton's zoning districts, lots of 5 acres or greater may be devoted to agricultural and crop raising uses, with facilities for the sale of produce from those lots being allowed to be sold as another

allowed use. Residential uses are not included for IH, nor are most of the commercial and industrial uses found in the B and MI districts, including all types of restaurants. Minimum lot size in IH is 160,000 SF and maximum allowed building height is 125 feet.

Light Industrial District M-1

M-1 District zoning can be found along North and South Main Streets and also covers the Bostik property in the southwest corner of Middleton. Making up about 12% of the zoned land area, allowed Light Industrial uses tend to generally mirror those allowed in the B District, with the exceptions being that uses such as industrial parks are allowed by-right while research facilities, and related accessory uses are allowed by Special Permit in M-I and not allowed in Business. Automotive repair and body services, not allowed in B, are other examples of uses considered under Special Permit in M-1; allowed Business uses such as offices, banks and fast food restaurants all require a Special Permit in the Light Industrial areas. The town's allowed industrial uses, including light manufacturing, machine shops and woodworking operations are also by-right M-I uses and not restricted by the South Main Street frontage and locational rules imposed on these same uses within the Business District.

Overlays

Overlay Districts add additional provisions to certain areas in addition to the requirements of the underlying zoning. Overlay Districts in town include the following:

- **Institutional Overlay District:** The purpose of the Institutional Overlay District (IOD) is to show on the Zoning Map those areas which, because of their institutional, public or semipublic purposes, are not intended for business, industry, or the general types of residential developments provided for in other zoning districts. The IOD is intended for public and semipublic uses and for large-scale, designed development of institutions, schools, academies, camps, campgrounds and recreation areas including dwelling units for year-round or seasonal use. Such uses shall be allowed as of right. (Middleton Zoning Bylaw, Section 8.3.1)

- **Watershed Protection Overlay District:** The Watershed Protection District serves to protect the proposed Emerson Brook Reservoir, including all water and natural resources within it such as streams, brooks, rills, marshes, swamps and bogs; to protect and preserve the water table and recharge areas within the watershed and to protect the community from the detrimental use and development of land and waters within the Watershed Protection District.

- **Flood Plain Overlay District:** The purpose of the Flood Plain Overlay District is to restrict residential uses in flood-prone area for health and safety reasons, to protect the water table and water recharge areas within the town, to allow for safe flood water storage by assuring the continuation of the natural flow pattern of water courses, to protect the Town against costs related to unsuitable uses of wetlands, and to conserve environment of the waterside. The district includes all special flood hazard areas within the Town of Middleton designated as Zone A or AE on the Essex County Flood Insurance Rate Map (FIRM) issued by the Federal Emergency Management Agency (FEMA) for the administration of the National Flood Insurance Program.

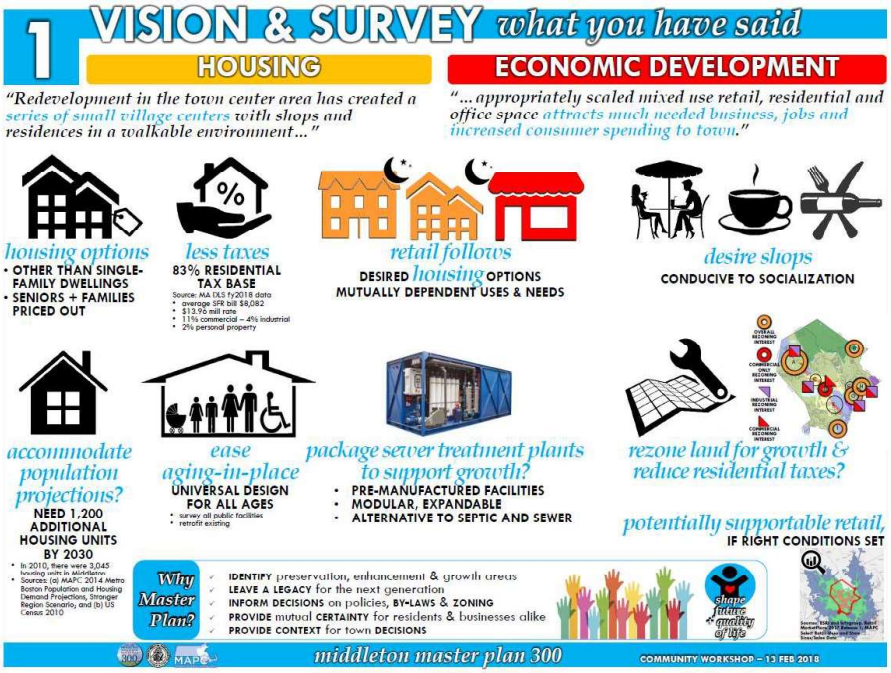
- **Adult Entertainment Overlay District:** It is the purpose of the Adult Entertainment Overlay District to provide a district where adult entertainment services can be provided as well as address and mitigate the secondary effects of the adult entertainment enterprises and sexually oriented businesses. Secondary effects have been shown to include increased crime, adverse impacts on public health, and negative impacts on the business climate of the Town, adverse impacts on the property values of residential and commercial properties, and adverse impacts on the quality of life in the Town.

  Medical Marijuana Overlay District: The purpose of the Medical Marijuana Medical Overlay District is to provide for the placement of Registered Marijuana Dispensaries (RMDs), in accordance with the Humanitarian Medical Use of Marijuana Act, G.L. c. 94C, App. § 1-1, et seq., in locations suitable for lawful medical marijuana facilities and to minimize adverse impacts of RMDs on adjacent properties, residential neighborhoods, historic districts, schools, playgrounds and other locations where minors congregate by regulating the siting, design, placement, security, and removal of RMDs.

Community Land Use Feedback

As part of the master planning process, an online survey, focus group and community workshops were conducted in order to obtain feedback from community members on land use and related housing needs and how to shape Middleton's future growth. Below list samples of what you've told us.

KEY LAND USE-RELATED COMMENTS FROM MIDDLETON RESIDENTS AT THE MASTER PLAN OPEN HOUSE- FEBRUARY, 2018



- Zone smaller lots for smaller homes"
- "Senior Center to keep the elderly in town"
- "More retail and restaurant space"
- People are the foundation of community. The type of and location of housing development is crucial to bringing the right type of residents to Middleton. I would love to see mixed-use community center pop-up creating a live- work-eat feeling. I also fully support developing a senior center combined with recreational park. "Middleton has an opportunity to make growth occur in a responsible way that benefits all residents, poor and wealthy, young and old. We need to update our sprawl – including zoning and building practices, and protect the town's finances, let's embrace families, multigenerational living, and people of different SES (social-economic status)."
- "Less restrictive zoning restrictions and usage zoning, which would bring in more money for the town"
- "A small town community that cares for ill neighbors and takes care of the natural resources in our town." (Open space, conservation, etc.)
- Limiting development (industrial and residential)
- More conservation land, more trails (highlight natural resource)
- Limiting destruction of land for simple economic gains
- Sidewalks, trails, single family homes"

Strategies and Recommendations

Preserve Town Character and Long Range Planning: The town should draft a Town Character Statement - the Middleton TCS would be designed to describe the distinctive qualities and characteristics of Middleton from the perspective of the residents. It is a non-regulatory guidance document that identifies and discusses the many common and unique features of the town. Design guidelines and recommendations for various land uses found throughout Middleton are presented and discussed within the TCS.

The goal of the TCS is to preserve the distinct historic character of Middleton as well as protect the diverse community and environmental resources that define the town. The TCS is intended as a resource for developers, community members, and town officials. The recommendations and guidelines are aimed at encouraging responsible development by promoting both aesthetic and functional ideas for design.

Increase Town Boards/Committees Communication and Efficiency: The town should consider instituting an annual All-boards and Committees Workshop to report on on-going projects common to all boards, hold special trainings, invite speakers and reflect on town planning, preservation and development goals.

Develop a framework for assessing Town-owned land for potential uses, including resource protection, housing, public facilities, and economic development, or to save for future needs. Land uses should be informed by the land's physical attributes including existing use and conditions, resources, location, surrounding uses, access, available utilities and other attributes. A land assessment framework would identify policies and procedures for assessing Town-owned land prior to making a decision on how land should be used. It would outline attributes to be assessed, a ranking procedure and public communication and engagement recommendations.

Resiliency and Climate Change: Review and update town strategies, policies, statement zoning and general bylaws for clarity, resiliency and climate change improvements on a five year basis to coincide with the renewal of the town's federally mandated hazard mitigation planning process.

Open Space Residential: To conserve open space, save water, preserve the character of the town, and use the land more efficiently Middleton should consider requiring Open Space Residential Design as the default development style the town expects for new subdivisions or the redevelopment of an existing subdivision, however unlikely. The Flexible Development section of the bylaw does offer this as an option but does not require its use. One approach to this could be for the 2-acre RA District in which any development of greater than 6 or more dwellings or 4 or more acres would submit a cluster proposal, and if they choose, a conventional plan. Base cluster density would be equal to conventional density, but bonuses for additional open space or increased affordable units could yield as much as two times base density. Conventional development would still requires 2-acre lots but bonuses would return density to close to near 1-acre density.

Adult Day Care Use: The town currently allows Adult Day Care Facilities, but it is not included in the Definitions section of the zoning bylaw and should be added.

Skilled Nursing Facilities Use: To address senior living needs, the town should consider adding Skilled Nursing Facilities and Assisted Living Facilities as allowed uses and determine where the facilities should be located.

Village Mixed Use Overlay District: Consider adding Village Mixed-Use Overlay Districts over the Middleton Square Business District, the East Street/Gregory Streets Business District and the Main/Forest and Essex Street Business District with accompanying design guidelines and regulations based on the Town Character Statement. A mixed-use style development overlay district including office uses might also be appropriate for parts of the South Main Street B and MI Districts as well.

Neighborhood Business District: As an alternative to adding Village Mixed-Use Overlay Districts, the town could evaluate its Business District zoning and determine if it still serve the town's needs. A new Neighborhood Business District with smaller required lots, frontage and yard setbacks with smaller retail, service, restaurant and residential uses could help the town build small neighborhood centers in areas deemed appropriate by the town. Accompanying design guidelines and regulations based on the Town Character Statement would ensure that new development matched town character.

Green Space Preservation Development District: The town might wish to consider, in addition to traditional village overlay districts, a green preservation development district that enables development of professional business offices and services in a residential district, subject to requirements for a minimum of 50% open space, minimum 100-foot naturally vegetated buffer to all streets and abutting lots, minimum 250-foot setback of structures from frontage street, maximum 30% impervious cover. Square footage of commercial space is set at 3000 square feet times the number of building lots that could be built on the site, plus a potential bonus for additional open space above the 50% required, but with a maximum FAR of 1. Septic system may be located in preserved open space area. The Town of Ipswich uses such a district.

Middleton Square: Include the Town Center/Middleton Square area in the town's next Complete Streets assessment and improvements schedule to improve safety and pedestrian bike access to Middleton uses and amenities such as Memorial Hall and Flint Library, the Watkins Museum and the Mt. Vernon Conservation Area.

Scenic Overlay District: Consider establishing a Scenic Overlay District to preserve open farmland views off South Main Street. Middleton's open space and farming heritage is a key element of the town's character. The town should determine whether it wishes to preserve current views enjoyed from South Main Street and explore establishing a Scenic Corridor Overlay with minimum setbacks from Route 114 in which large trees are to remain and additional landscaping and screening is established if new structures are to be visible from Route 114. Topsfield uses this successfully on certain sections of Route 1.

Sprawl Repair and Neighborhood Building: As development conditions change, the town may wish to explore the possible transition from the type of auto-centric, single-use styles that have guided the town's development over the last 50 years towards a more balanced, mixed-use,

walkable style more accommodating towards a wider range of incomes, building types, modes of transportation and civic spaces. Themes to investigate include the following:

- Future flexibility of uses within existing structures: current large lot single-family zoning and uses trend towards more uses and less commuting: live/work areas, assisted living or multifamily instead and big-box retail shifts towards office space, civic, uses, etc.
- More efficient use of existing uses and connectivity, retrofitting dangerous thoroughfares so they are safer for walking and bicycling;
- Creating neighborhood connections among residential areas shops, workplaces and schools, using grid streets instead of cul-de sacs; pedestrian network of connected pathways, trails and sidewalks.

PUBLIC HEALTH

This is a brief summary of the key highlights of the 33-page Public Health Impact Assessment. The full 33-page Assessment is included under Appendix C.

Key Findings

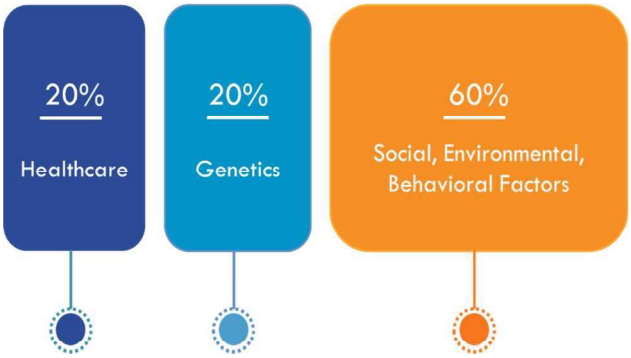
Health starts long before illness – it begins in our homes, schools, and workplaces. Given the connection between our neighborhoods and environment and health, the following section provides a brief assessment of the Town's health status and conditions, and identifies strategies to sustain healthy living and outcomes among residents, from childhood to later in life. Highlights of the assessment and strategies are:

- Middleton is served by strong Health Department and Board of Health that addresses environmental health and community health issues
- Residents of Middleton generally enjoy healthier outcomes and engage in healthy behaviors more than residents of other towns in the Commonwealth.
- Health issues that could pose potential risks include premature mortality, substance use disorder, mental health challenges from younger residents, an elevated cancer rate, and an aging population.
- The town has the opportunity to explicitly integrate more health considerations into its planning and development processes in order to reduce the risk of injury, increase daily physical activity and health eating, and become a more age friendly community.

Public Health Relationship to Planning and the Built Environment

Evidence continues to show that how we plan and build communities affects the health and wellness of residents. Although these figures are not exact, collective research focused on the history of the causes of disease suggests that roughly 60% of our health is determined by social, environmental, and behavioral factors shaped by the context in which we live (Figure 2).[6]

Figure 2. Factors responsible for population health



6 McGinnis, J. M., Williams-Russo, P., & Knickman, J. R. (2002). The case for more active policy attention to health

TRANSPORTATION & CIRCULATION



Snapshot: Transportation & Circulation

Roads

- 56.8 miles of roadways
- Major regional arteries include Routes 114 and 62
- Indirect exit access to Interstate 95 highway via Boxford and Danvers

Public Transit

- No commuter rail, rapid transit or fixed-route bus service within its town limits
- ADA- eligible residents have access to on-demand ride-sharing paratransit service

Bicycle and Pedestrian Amenities

- There are no dedicated bike lanes.
- Limited sidewalks are found throughout Town
- Pedestrian safety is a concern

Introduction

The transportation and circulation element of the master plan provides an overview of existing conditions and future plans for the ability of residents and business owners to get around the Town. The purpose of the element is to provide information on how the Town can invest in a variety of transportation options to address recreational and quality of life needs, as well as help support its retail main street businesses through a "destination" type bike/pedestrian rail trail that can also attract weekend visitors and passerby.

Existing Conditions[31]

Middleton is located approximately 19 miles north of Boston. It lies immediately west of Interstate 95 highway and has indirect exit access via Boxford and Danvers. The town's two major arterial roads are Route 114 and Route 62, which merge for a brief 0.2 mile segment. Route 114 was the old Essex Turnpike and spans from Lawrence to the northwest and to Marblehead to the southeast. Route 62 traverses a greater extent of the State going from the west in Worcester County in an easterly direction toward the northern suburbs of Boston, and ending in Beverly. Overall, Middleton has 56.89 miles of roads[32], 10,002 registered vehicles[33], and as explained below, no public transit.

31 Source: MAPC 2017 plan -http://www.townofmiddleton.org/314/Bicycle-Pedestrian-Network-Master-Plan
32 Source: Massachusetts Division of Local Services (DLS) 2013 data
33 Source: Massachusetts Division of Local Services (DLS) 2014 data



From a broad-brush development/transportation standpoint, Middleton can be described as having three major areas. It has an automobile-oriented commercial area along South Main Street (Route 114). Secondly, it has mainly single family neighborhoods throughout. And lastly, it has undeveloped (including protected) land mainly on the western and northern borders.

Most major streets throughout Middleton do not have sidewalks with the exceptions of South Main, Maple, and Boston streets. Newer subdivisions do have sidewalks on at least one side of the street. There are currently no dedicated bicycle facilities within Middleton. The former rail line bed does experience some degree of active trail use but it has not been paved nor formalized. The ownership of the rail bed is split between National Grid (north of Essex Street) and the Middleton Electric Light Department (south of Essex Street).

Public / Mass Transit

The Town of Middleton does not have any commuter rail, rapid transit or fixed-route bus service within its town limits. There are two MBTA commuter rail lines to west and south (the Haverhill/Reading and Newburyport/ Rockport lines) that provide access to Boston's North Station. In terms of fixed-route bus service, the Town falls outside the service area of the Merrimack Valley Regional Transit Authority (MVRTA), which provides service between the neighboring communities of North Andover, Andover, Lawrence, Methuen, Haverhill, Merrimac, Amesbury, Newburyport, and Salisbury. As is explained below in greater detail, the Town does have access to very limited shared- ride paratransit bus service for pre-qualified ADA customers who need to get to nearby destinations and/or to the nearest transit stations.

Paratransit Services

Middleton is located within the service area of the MBTA's RIDE door-to-door, shared-ride paratransit service. The RIDE is available to eligible, pre-approved customers with Americans with Disabilities Act (ADA) needs. Paratransit under the ADA is intended to provide a safety net for people who would otherwise not enjoy independent mobility. The service area includes 58 towns and cities in greater Boston including Middleton. To access the service, Middleton resident must apply and be approved by The RIDE Eligibility Center (TREC). More information is available at the following URL: https://mbta.com/accessibility/the-ride.

The MBTA also operates a pilot program that offers on-demand paratransit service through Uber and Lyft. Through this pilot program, RIDE customers can book subsidized rides from their smartphones.

Partnerships with Transportation Network Companies (TNC) or Mobility Service Providers (MSP)[34]

Transportation network companies (TNC) also known as mobility service providers (MSPs) are companies that are part of the "shared economy" of collaborative consumption. TNCs provide "ride sourcing" services that pairs riders using smartphone apps with drivers who use their own personal vehicles under agreements with the TNC.

34 Sources: http://www.mapc.org/wp-content/uploads/2017/10/NSPC-Mobility-Study-Full-Report-Final-May201.pdf http://www.masscommute.com/what-is-a-tmatmo/ http://www.northshore.edu/shuttle/ http://www.northshore.edu/uber/ http://www.mass.gov/governor/press-office/press-releases/fy2017/governor-t-launch-ride-pilot-program-with-uber-lyft.html

Pedestrian & Bicycle Facilities

Complete Streets

The Town has passed a "Complete Streets" policy in November 2014. The adopted Complete Streets policy allows transportation planners and engineers to redesign the roadway for safe access for all users, regardless of age, ability, or mode of transportation. Since its adoption, the Town commissioned a bicycle and pedestrian study in 2017 in order to assist with its implementation. Below, are its key recommendations and action steps.



Example of Complete Streets - Photo courtesy of Smart Growth America

Bicycle and Pedestrian Network Priority Plan

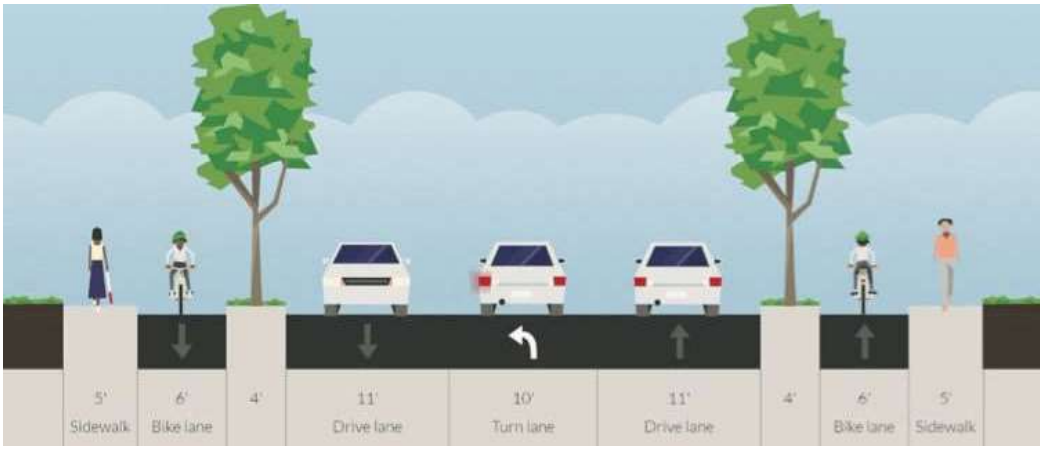
The Town's recently completed 2017 Bicycle and Pedestrian Network Priority Plan[35] makes five sets of recommendations for improving circulation and recreational mobility. Among them are the following key recommendations that the Town should consider for implementation for the benefit of its residents, visitors and business owners.

- **Reconfigure the Town's streets and roads** to improve sense of place and walkability.
  - Protected bike lanes and sidewalks separated from the roadway
  - Reconfigured intersections that are either converted to roundabouts or signal coordination and efficiency changes.
- Develop the **Middleton Rail Trail** between Danvers and North Andover to serve as a main trail spine through the town that connects the center, schools and open spaces.
- Plan and develop the **Independence Greenway Extension** through Middleton to Lynnfield
- **Reconstruct major streets** (Maple, East) as complete streets with shared paths and sidewalks. Construct sidewalks on segments of Boston and Gregory streets.
- **Traffic calming** for River, Forest, Liberty, Peabody, Essex, and School streets. Implement a pilot project.
- Create signed and marked **foot trail network branching off the rail trail** and Middleton Pond similar to the Lexington and Wellesley trails.

35 Source: MAPC 2017 plan - http://www.townofmiddleton.org/314/Bicycle-Pedestrian-Network-Master-Plan

Participants who took the Middleton 300 Master Plan survey (see Appendix) and attended the workshops expressed a desire for safer and more pleasant walking and biking options - citing a need for public transit options, the desire for socially-conducive retail options, frustration with traffic congestion, and concerns over pedestrian safety. The implementation of these recommendations, particularly the Rail Trail, sidewalks, and interconnected foot trail network could be pivotal in improving quality of life for residents and potentially creating favorable retail investment opportunities.

More information on potential funding sources for some of these recommendations can be found at DHCD's Massachusetts Downtown Initiative[36] (MDI) which offers a range of services and assistance to communities seeking help on how to revitalize their town centers.



Main Street - Potential future cross-section - Excerpt from 2017 Bicycle and Pedestrian Network Priority Plan

Transportation Planning

The Long-Range Transportation Plan (LRTP) titled "Charting Progress to 2040" by the Boston Region Metropolitan Planning Organization (MPO) assesses needs within the North Shore Task Force (NSTF) subregion that includes the Town of Middleton. In May 2019, the MPO endorsed the Massachusetts Department of Transportation's (MassDOT) funding and programming of the Route 62 (Maple Street) bridge replacement over the Ipswich River[37] as part of the FFY2020-2024 Transportation Improvement Program (TIP)[38]. This federally funded TIP project (MassDOT project number 608522) is slated for funding and programming in fiscal year 2024 with construction beginning in summer 2024. The project is in the preliminary design phase and has an estimated federal participating construction cost of $4 million[39] and a contract cost of $3.6 million.

TIP projects include bicycle paths, bridges, roadways, sidewalks, and other transit investments. The Town can work to better utilize the Federal Funds available through the TIP by actively participating in the annual TIP process.

36 The Town can apply at http://www.mass.gov/hed/community/funding/massachusetts-downtown-initiative-mdi.html
37 Source: https://hwy.massdot.state.ma.us/ProjectInfo/Main.asp?ACTION=ViewProject&PROJECT_NO=608522
For more information, contact Project Manager Joseph Pavao Jr.
38 Source: http://www.ctps.org/data/images/Pages/lrtp-dev/Needs%20Outreach%20Materials/NSTF%202017%20Booklet.pdf
39 Source: The same MassDOT URL source also provides a more detailed breakdown of the estimates: (a) Federal Cost: $3,146,752, (b) State Cost: $786,688, and (c) Total Cost: $3,933,440

Recommendations

- An opportunity could exist for some expansion of the MBTA's paratransit service.
- Reconfigure the Town Center to improve sense of place, walkability, and identity that is currently dominated by a 4 lane highway.
- Develop the Middleton Rail Trail between Danvers and North Andover to serve as a main trail spine through the town that connects the center, schools and open spaces.
- Reconstruct major streets (Maple, East) as complete streets
- Create signed and marked foot trail network branching off the rail trail.
- An opportunity could exist for Town officials to partner with its major employers, Transportation Network Companies, the MBTA and/or NSCC in order to expand such "ride sourcing" services to its seniors or other residents.


TRAFFIC CALMING AND BIKE/PED SAFETY


LACK OF PUBLIC TRANSIT



COMPLETE THE RAIL TRAIL

OPEN SPACE & RECREATION

SNAPSHOT

Highlighted Features/ Natural Amenities

- The Ipswich River, Boston Brook
- Middleton Pond, Andover Meadow Pond, Knight Pond, Mill Pond, Creighton Pond,
  Emerson Bog
- Thunder Bridge Beach
- Bay Circuit Trail – A short segment of this existing 230 mile trail circling Boston passes through the northern end of Middleton

Highlighted Active Recreation Areas

- Henry Tragert Common
- Bay Circuit Trail
- Middleton Golf Course
- Rubchinuk Park
- Essex Sports Center
- Essex Technical High School Baseball Field
- Ferncroft Country Club
- Howe-Manning School & Fuller Meadow playing fields
- Danvers Fish and Game Club (Bixby Avenue)
- Middleton-Danvers Community Garden
- Natsue Way Soccerfields

Highlighted Conservation Areas (including passive recreation amenities)

- Boys & Girls Club of Lynn (west of Essex Street at Creighton Pond)
- Boxford State Forest (north of North Liberty Street at the Boxford Town Line)
- Emerson Bog at Knight Pond (between N Main Street and Forest Street)
- Essex County Greenbelt Association (east of North Liberty Street)
- Town property around Aunt Betts Pond
- New England Forestry Foundation (east of North Liberty Street)
- Rolling Meadow Farm Conservation Area (south of South Main Street)
- Farmer Browns (north of Maple Street and east of the Ipswich River)
- Oakdale Cemetery (south of Maple Street)
- Hocter Park (Fuller Pond Road)
- Essex County Greenbelt (Barett, Brookfield, Nichols Putnam, and Sanford Reservations and Klosowski Woodlands north of N Main Street)
- Riverview Park (south of River Street)
- Pike Messenger Conservation Park (south of Locust Street)
- Johns Meadow Conservation Area (east of East Street)
- Harold Parker State Forest
- Squash Field Conservation Area (Peabody Street)
- Wolcott Island (south of Ipswich River east of East Street)

Key Findings

- Middleton's open space and recreation resources are a reflection of the Town's heritage as a farming community with a close relationship with the rivers, streams and ponds
- The rural and farming community character are highly valued by town residents
- Improved maintenance of open space and recreation resources is needed
- Expansion of open space and recreation resources with the addition of new multi-use paths, new conservation areas, and new amenities is needed

Existing Conditions

In 2013, Middleton completed its Open Space and Recreation Plan. This Master Plan element relies on the recent documentation recorded in this plan and integrates its findings.

Introduction

The Town of Middleton covers an area of approximately 14 square miles. The Town is situated within the Ipswich River Watershed. The Ipswich River flows roughly 45 miles from its headwaters in the towns of Burlington, Billerica, and Wilmington, through Reading, North Reading, Lynnfield, Peabody, Danvers, Middleton, Topsfield, Boxford, Wenham and Hamilton, and to its mouth in Ipswich, where it empties into the Plum Island Sound and Ipswich Bay. The farming origins of Middleton and its early development patterns and growth patterns today have been closely linked to the Ipswich River and other bodies of water in the town, such as Middleton Pond.

Residents of Middleton remain proud of three key natural features – open space, rural character, and clean water. The town's open spaces include conservation land, agricultural land, and recreation facilities that are growing into a network of connected town-wide amenities. These open spaces contribute to the rural character and sense of community. Clean water and the protection of clean water have been a source of pride and focused conservation efforts by the town. The Town and its people have worked hard over many years to protect and build up these key features. Today, most of Middleton's land is forest and wetland area. Over half of all undeveloped open space in
Middleton is permanently protected from most types of development. As the community continues to evolve, there should be an effort to ensure that all of the residents have the ability to enjoy the benefits from these elements which are essential components for the vitality of the community.

Natural Resources



The current natural resources, topography, geology, and composition of soils are the result of glacial ice sheet movement over the preceding 8,000 to 10,000 years. The terrain left behind by retreating ice sheets was briefly barren and devoid of vegetation and topsoil. It has since been forested, deforested, and reforested. As glacial deposits blocked the flow of water, many poorly drained areas became swamps and bogs. Roughly one fourth of the land area of Middleton falls under the category of wetlands. These wet areas are part of the Ipswich River watershed and the tributaries to the River. About nine miles of the Ipswich River meander within the borders of the Town of Middleton. About 13 miles of named streams find their way to the river within the town.

Topography, Geology, and Soils

The Town of Middleton lies within the New England Seaboard Lowland, a relatively smooth coastal strip of land with some hills. Middleton's average topographical range is between 140 and 230 feet above mean sea level. The southern and eastern areas of Middleton range in elevation from 50 feet or less in valleys to 200 feet or more at several hills. The highest point in town is Will's Hill, located near the Town Center. The northern and western areas of Middleton are mostly flat with few major hills and elevations that average about 100 feet or less.

Bedrock deposits in Middleton are characterized by igneous density throughout the town. Andover granite is the most common formation present. Small distributions of Salem gabbro – diorite (diorite and gabbro – diorite) are found in eastern portions of town. Soils in Middleton represent a mixture of types formed in glacial till, outwash, organic deposits, recent alluvium, and disturbances through urban development. As with much of Northern Massachusetts, the Town of Middleton contains a range of soil types. Generally, the five major soil associations in Middleton are Merrimack-Hinckley-Urban land association; Paxton-Montauk-Urban, Canton-Woodbridge-Freetown association, Chatfield-Hollis-Rock outcrop association, and Freetown-Fluvaquents association. Many variations within these soil types will be found, each area with its own vertical profile and percolation characteristics.

Water Resources

The town is located entirely within the Ipswich River Watershed in Essex County. The Ipswich River flows roughly 45 miles from its headwaters in the towns of Burlington, Billerica, and Burlington, then flows through thirteen communities to its mouth in Ipswich where it empties into the Plum Island Sound and Ipswich Bay. Major drainage in Middleton is through the Ipswich River which flows near the entire eastern and southern town boundaries, roughly parallel with East Street and River Street. Boston River, a tributary of the Ipswich River, provides drainage in the northern portion of town. Major drainage is also present throughout extensive freshwater wetlands in most of the town. Named streams in Middleton include Punchard's Brook, Middleton Brook, Emerson Brook, Boston Brook, and Nichols Brook.

Impoundments along the Ipswich River tributaries have created ponds throughout Middleton. The large area of open water in town is the Middleton Pond. Smaller ponds include Creighton Pond, Prichard's Pond, and Mill Pond.
Several ponds are a mix of open water and vegetation and include Emerson and Andover Pond Meadow (Pout Pond). Middleton Pond is the source of drinking water for parts of Middleton and neighboring Danvers. Since 1875 Danvers has owned Middleton's water rights and has operated and administered the Town's water system for which Middleton Pond is a reservoir. To the north of the Pond is Emerson Bog which recharges the Pond. It is also administered by Danvers. More recently, Danvers built a water treatment plant beside the Middleton Pond. During times of drought or high-usage, Danvers and Middleton purchase water from Beverly to permit the Middleton Pond system to recharge.

In 1972 the Massachusetts Wetlands Protection Act was enacted. Town Conservation Commissions were formed to locally administer this act to protect swamps, bogs, wet meadows, ponds, lakes, stream, and rivers. In Middleton this meant that about 2,400 acres, a quarter of the Town, became protected. The Rivers Protection Act was passed in 1996 to provide additional protections to lands located within 200 feet on either side of Middleton's perennial streams and Ipswich River.



Ipswich Watershed

Vegetation

The original forest growth in Middleton and Essex County in general, consisted of a mixed growth of white pine, oak, chestnut, poplar, maple, birch, and some other hardwoods and conifers. However, secondary growth patterns characterize most of the town today, represented by second growth oak and chestnut in uplands as well as scrub oak and pine. Birch, cedar, juniper and white pine are also present.

One of the most notable public trees in Middleton is known as the Curtis Oak. It is a white oak located on the southern side of Peabody Street. The tree is estimated to be about 400 years old. The Town does not have a designated tree warden. Maintenance, removal, and planting of trees on Town property is performed by the Middleton Department of Public Works. There are no local bylaws related to shade trees or tree protection.

Wildlife

Wildlife found in Middleton includes species often found in more suburban environments including squirrels, skunks, chipmunks, raccoons, fox species, and more. It is not uncommon to see partridges, whitetail deer, wood ducks, painted turtles, hawks, and turkey. In recent years, mink, coyote, red fox, and fisher cats have been observed. Many of these species are often attracted to area with human concentrations, as they are attracted to food waste. Beavers and beaver dams are found along the perennial streams and Ipswich River.

The Middleton Open Space and Recreation Plan identifies monitoring for deer impacts on protected parcels as a proactive strategy that should be incorporated into the Town's management plans for open spaces. Similarly, the substantial increase in beaver activity should be monitored in the Town.

A high voltage electric utility right-of-way cuts a 5.4 mile corridor through Middleton that is 200 feet wide and broken only by four roads in the Town. For wildlife, such as deer, hunting hawks, and foraging song birds, this corridor creates a relatively uninterrupted connector of natural wildlife habitats in town.

Endangered Species

The Natural Heritage & Endangered Species Program (NHESP) maintains a list of all documented MA Endangered Species Act (MESA) listed species observations in the Commonwealth by town. Rare animal species currently known in Middleton area associated with wetlands and nearby upland habitat.

One endangered species in the northern part of Middleton is the Blanding's Turtle (Emydoidea blandingi). It inhabits a mix of seasonal pools, marshes, shrub swamps, forest and uplands and has been observed in Middleton as recently as 2013. Its MESA status is threatened. Another reptile, the Wood Turtle (Glyptemys insculpta) was observed in 2012 and is listed as special concern. An amphibian of special concern, the Blue-spotted Salamander (Ambystoma laterale) was last observed in 2011. Finally, two MESA listed birds were observed in 2007. The Vesper Sparrow (Pooecetes gramineus) is listed as threatened. It is a grassland bird whose habitats often include taller woody vegetation mixed with grassland. The Least Bittern (Ixobrychus exilis) is a bird listed as endangered. It nests in cattail marshes mixed with open water along the Nichols Brook near the Ipswich River.

Environmental Challenges

General categories of environmental challenges include hazardous waste sites, landfills, erosion, periodic flooding, sedimentation, development impact, ground and surface water pollution, forestry, and environmental equity. As documented by the 2013 Middleton Open Space and Recreation Plan, the environmental challenges in Middleton are focused primarily on flooding and development impacts with other secondary concerns including landfill monitoring and erosion control. A number of areas in Middleton are subject to fairly regular flooding. Over the past two decades, flooding has caused street closures in the lower parts of Peabody Street, East Street and Thunder Bridge, South Main Street, Lonergan Road and Logbridge Road areas. On average, 100-year flood elevations have been exceeded about every 10 years.

Housing development, characterized mostly by large homes on one acre lots, have disrupted and isolated natural habitats for wildlife. Private septic systems and wells place pressure on natural water systems, wetlands, and floodplains. Increased development also places additional pressure on the Town's water resources. Middleton passed an outdoor watering restriction bylaw in 2005 to help restore Ipswich River seasonal water levels. Increased development also increases the potential for point and non-point sources of water pollution.

Two of the seven landfills in Middleton, the Town Landfill and Rubchinuk Landfill, are continuing to be monitored for about the next two decades. Erosion control, particularly during construction activities, will continue to be regulated, monitored, and minimized.

Scenic Landscapes

Middleton is a town of varied and scenic landscapes. As has been described, the Ipswich River is a defining natural feature of the Town's scenic landscape. The river wanders through a great marsh which stretches for miles in either direction from the river. The river, its named tributaries, and surrounding named streams, tie together roughly 2,400 acres of wetlands. In addition to the river watershed, Middleton is a forested municipality. More so than any time since the time before the last glacier and the arrival of the Native Americans, the trees have returned to Middleton after being mostly cleared for agriculture and logging. Today, the forests are characterized predominantly by oaks on the uplands with white pines, white ash, hickory, cherry and other hardwood species. At lowlands, red maples dominate with elm, black ash, swamp white oak, and American white cedar. The Middleton landscape also includes acres of pasture with fields that are pastured, hayed, and a few still cultivated. The drumlins of Flint Hill and Will's Hill, rocky ledge, patchwork of wetlands, ponds, and uplands, are all evidence of the glacier shaped scenic landscape.



Open Space

Middleton has a number of parcels that provide benefits for conservation, open space, and contribute to the character of the Town. Provisions of Massachusetts General Law Chapter 61 offer real estate tax benefits for the preservation of land as Forest Land (Chapter 61), Agricultural Land (Chapter 61A), or Open Space or Recreational Land (Chapter 61B). All three of these Chapter 61 classifications are used for variety of parcels in Middleton. Other conservation lands include non-profit parcels that are protected, publicly-owned parcels that are protected, municipal conservation land, former Essex County Conservation Land protected by Article 97, and protected watershed property.

Public Open Space and Parks



Conservation Land

The **Town of Middleton** owns several Municipal Conservation parcels throughout the town which offer limited conservation protections and are publicly accessible properties. Middleton residents, as evident in Vision Plan and Community Survey, advocate for the Town's purchase of more open space to expand the number of protected land, forest, and open fields to preserve it for future generations.

The **Massachusetts Department of Conservation and Recreation (DCR)** manages several protected state forests at least partially within the borders of Middleton including the Boxford State Forest and the Harold Parker State Forest. These parcels are protected in perpetuity and publicly accessible.

The **Division of Capital Asset Management** owned several former Essex County Conservation Land parcels. These parcels did not have long term conservation guarantees if owned by the Division of Capital Asset Management, but remained publicly accessible. These parcels were deeded to the Town of Middleton in 2017, but may still be shown in the Assessor's database as owned by the Commonwealth and Division of Capital Asset Management. Conservation status would be protected under ownership by the Town.

The **Essex County Greenbelt** is a nonprofit with conservation land across Essex County and in the Town of Middleton. These parcels are protected in perpetuity and publicly accessible.

The **New England Forestry Foundation** properties include conservation parcels dedicated to the preservation of forests that allow sustainable forestry. These parcels are protected in perpetuity and publicly accessible.

The **New England Society for the Preservation of Antiquities (Historic New England)** is dedicated the preservation of historic sites. These parcels are publicly accessible and include a parcel on East Street between Ohlson Way and Norma Way and a parcel on Mount Vernon Street at the Fuller Cemetery.

The T**own of Danvers Water Department** owns several Watershed Lands surrounding Middleton Pond which offer limited conservation protections and are not publicly accessible properties.



Public Open Space & Parks

Henry Tragert Town Common is to the rear of Town Hall on South Main Street and includes open fields, forested area, Middleton Brook, a gazebo, playground and soccer field. At the 2015 Town Meeting, $100,000 of improvements were approved for the TownCommon including expanding the parking, constructing a war memorial with flag pole, installing benches, picnic tables, a drinking fountain, improved landscaping, and a winter sledding hill. The amenities at the Common will soon connect to the Town Center via walkways that Cumberland Farms has built for that purpose.

Middleton Pond is an important feature of Middleton's town center. The pond is not available for water recreation, but the surrounding perimeter path is popular with walkers and bikers. The Town of Danvers manages the pond's large watershed land and maintains open access.

The **Howe-Manning School** facilities include a playground, basketball court, ball field, and buffer zone to bordering vegetated wetlands.

The **Fuller Meadow School** facilities include a playground and two ball fields

Rubchinuk Park has helped to respond to the increased need for recreation facilities by providing playing fields and areas for both children and adults.

Pike Messenger Conservation Park is a 35 acre area purchased by Middleton in 2003. It is a conservation area with trails.

Creighton Pond Camp is a pond side camp located at 210 Essex Street with over 150 acres of woodland, 2 athletic fields, volleyball court, basketball court, hiking trails, Olympic sized outdoor swimming pool, picnic and playground areas, arts and crafts gazebo, bath houses and large recreation lodge. A seasonal day camp program is operated by the Boys and Girls Club of Lynn.

The **Natsue Way Recreation Area** provides open playing field areas and has helped to respond to increased need for recreation facilities for both children and adults. At the 2017 Special Fall Town Meeting, Middleton Town Meeting voters rejected a plan that would have enhanced the 35-acre parcel by adding a walking trail, improved soccer fields, a basketball court, tennis courts, a new baseball field and other amenities. The proposed improvements were estimated at a cost of $3.89 million.

The **Middleton Rail Trail** is a planned 5.2 mile Rails to Trails pedestrian and bike paved trail way along the utility and rail right of way. Implementation of the rail trail has been advocated locally by the Middleton Rails to Trails Committee, Middleton Stream Team, the Middleton Council on Aging, and Middleton Conservation Commission.

Canoe and Kayak Landing Areas have been developed by the Stream Team with most including parking, picnic areas, and stone steps to allow easy and gentle entry into the water with a kayak or canoe. Going down the river from the center of town these areas include the Farnsworth Landing at South Main Street, the Log Bridge Landing at Logbridge Road, the Mortalo Landing at Maple Street, the Peabody Street Landing at Peabody Street, the Thunder Bridge Landing and Swimming Hole at East Street.

Open Space Management

Several local organizations are actively involved in the stewardship of natural resources and open spaces in the Town of Middleton. These groups, partnerships, and committees represent the network of environmental advocates in the community today and the capacity to care for and advocate for the natural environments and qualities that make Middleton unique.

The **Middleton Park and Recreation Department** and **Middleton Recreation Commission** prides itself on maintaining, improving, and expanding facilities and programs for all residents to use and enjoy. The department seeks cooperation and a feeling of "joint ownership" with the sports groups, leagues, and organizations that jointly use the fields and recreational resources.

The **Middleton Conservation Commission** is proactive in encouraging new development to preserve adequate setbacks to wetlands, preservation of wetlands, and preservation of open space with Conservation Restrictions, and retaining Riverfront Area along the Ipswich River in its natural condition.

The **Ipswich River Watershed Association (IRWA)** is a group of citizens, scientists, businesses, and municipal managers concerned about the health of the Ipswich River and its watershed.

The **Parker-Ipswich-Essex River Restoration** Partnership is a regional network of organizations, governmental agencies and individuals all working to promote healthy rivers and ecosystems in the coastal rivers of northeastern Massachusetts. The Partnership was formed to increase communication, coordination and collaboration between those involved in restoration, preservation and management of the watersheds.

The **Middleton Stream Team** was founded in 1998. The Stream Team has had a positive impact on the accessibility of the Ipswich River, other water resources, and natural lands throughout Middleton. The Stream Team meets regularly to improve the health and access of waterways throughout the Town including the Ipswich River. Activities include creating walking paths along the Ipswich River, and new public access points. The Stream Team is sponsored by the Ipswich River Watershed Association.

The **Middleton Rail Trail Advisory Committee** was created by Town Meeting vote in 2012 and charged with the task of building out the rail corridor into a functional firm surface trail.

The **Middleton Garden Club** was formed in 1980 by a group of committed Middleton residents whose purpose was to promote gardening, encourage civic planting, present quality information on all aspects of gardening, protect the environment, native trees, and plants, and promote the spirit of friendship. The Middleton Garden Club meets once or twice a month and welcomes anyone with interest. The Middleton Garden Club partners with the garden clubs of Boxford and Topsfield and refer to themselves collectively as the Tri-town Garden Clubs. The Middleton Garden Club provides seasonal plantings for the Flint Public Library grounds, the Old Town Hall, Memorial Hall, and the Fire and Police stations.

Resources

The **Community Preservation Act (CPA)** is a tool that Massachusetts cities and towns can adopt that allows municipalities to create local Community Preservation Funds that can be used for open space protection, historic protection, affordable housing, and outdoor recreation. The funding is raised through a surcharge on real property taxes, which can then be supplemented by funds from a statewide Community Preservation Trust Fund. The voters of Middleton adopted the Community Preservation Act (CPA) with a 1% surcharge at Town Meeting in May 2004 and at the ballot on November 2, 2004. The Community Preservation Committee (CPC) was authorized by the Annual Town Meeting in May 2004 with the Town Moderator as the appointing authority. The CPA requires that at least 10% of each year's funds be spent or reserved for open space, historic preservation, and affordable housing. CPA funds that are not expended in one year may be carried over to subsequent years.
The Middleton **Community Preservation Committee (CPC)** is primarily a source of funding, rather than an initiator of projects. Town Boards, Departments, and citizens may bring proposals for funding to the CPC. The CPC will give favorable consideration to those proposals that best meet the guidelines and goals that have been articulated. While the CPC does not have the power to appropriate funds for particular projects, Town Meeting may use CPA funds only with the recommendation of the CPC.

The following **goals** were adopted by the Community Preservation Committee on March 26, 2018.

Goals in open space include:

1. Preserve Middleton's small town image,
2. Protect valuable water resources and unique wildlife habitat areas,
3. Increase and connect existing protected areas, and
4. Protect large tracts of undeveloped land.

Goals in recreation include:

1. Provide for better recreational utilization of currently town owned land and facilities, and
2. Decentralize appropriate activities to neighborhood locations.

Goals for Historic Preservation include:

1. Preservation and enhancement of municipally owned properties of historical, archeological, architectural or cultural significance,
2. Acquisition of threatened properties of particular historical, archeological, architectural, or cultural significance,
3. Encouraging the private sector to preserve assets of historical, archeological, architectural or cultural significance, and
4. Cataloguing resources of historical, archeological, architectural or cultural significance.

Goals for Affordable Housing include:

1. Meet local housing needs along the full range of incomes, while promoting diversity and stability of individuals and families in Middleton,
2. Ensure that new affordable housing is harmonious with the community and its neighborhood, and
3. Leverage other public and private resources to the greatest extent possible.

The following selection **criteria** were adopted by the Community Preservation Committee on March 26, 2018:

1. Consistency with Master Plan, Open Space and Recreation Plan and other planning documents that have or will receive wide community scrutiny and input,
2. Preservation of currently owned Town assets,
3. Affordability and provision for cost/funding that is compatible with the Town's financial plan,
4. Preservation of a resource or opportunity that would otherwise be lost,
5. Feasibility,
6. Involvement of multiple CPA purposes,
7. Involvement of multiple sources of funding, and
8. Compliance with Middleton Zoning By-laws.

In addition to CPA funding, the Conservation Commission has discussed use of property tax dollars for acquisition of open space in the future. The focus would be on the protection of ground water quality related to drinking water and surface water protection for the land that surrounds wells in addition to land known as water recharge areas. This type of activity would be strategic and targeted acquisition that would require approval and authorization by the Town.

Public Input

Middleton residents were invited to participate in a visioning survey that was available online from November 2016 through January 2017. The survey was designed with input from the Master Plan Committee and the Town Planner to capture critical input from respondents. The responses from this survey combined with feedback received at meetings and community forums has informed a Master Plan Vision statement that frames the recommendations for all topics covered by the Master Plan.

The vision statement highlights the importance of open space & recreation resources in the Town by identifying its "network of beautiful open space" and "community supported agriculture" among its many unique assets. The vision statement adds that "Middleton's rich farming history and its diverse open space, and trails network draw residents and visitors to it." The vision statement references open space connections through "sidewalks … and bike trails link the residential neighborhoods to school and recreation areas." The open space and recreation resources are referenced as a means to "continue to attract families, but also to provide excellent services and recreational options for residents of all ages." Finally, the vision statement defines "a connected system of well-maintained parks, open spaces, and recreation areas with strong pedestrian and bicycle amenities further contributes to Middleton's high quality of life by improving residents' overall health and making the community among the "greenest" on the North Shore."

The online community survey was completed by 385 people responding to a range of questions regarding the community facilities and town services. Survey participants revealed which facilities and issues they felt needed some or a great deal of improvement in Middleton. Recreational amenities, such as parks, trails, and fields were the number one response for what needs a great deal of improvement with 78% of the respondents identifying this need. The need for varied transportation options, like automobiles, bicycling, and walking was the second most frequently identified need with 69% of the respondents identifying it.

Survey participants were also asked specifically about an increase in taxes or fees to support the permanent preservation of open space in Town. Of the survey respondents, 67% supported or strongly supported tax or fee increases in order to achieve this. Only 13% opposed or strongly opposed this idea. Another well supported idea in the survey was aggressively pursuing acquisition of conservation easements for the development of a trail and path network with 72% of the survey respondents' support.

Recommendations

Goal 1: Strategically acquire and protect more open space lands to complement existing open spaces, support conservation, and protect water resources.

Strategy 1.1 Form a proactive task force to deal effectively with the political and funding issues relating to land acquisition and to provide guidance for this goal and related strategies. This task force may work with the Board of Selectmen, Finance Committee, and Capital Improvements Committee to develop support for appropriations for land acquisition funding, and work with developers and land owners to acquire gifts, easements, or restrictions for conservation purposes.

Strategy 1.2 Identify a list of properties that should be tracked for acquisition and conservation efforts including properties that may be at risk, properties that are a high priority for conservation, and Chapter 61 properties.

Strategy 1.3 Initiate and pursue a property acquisition program to create new and broader opportunities for residents to experience a variety of benefits through the use of conservation land. Key areas for land acquisition are land adjacent to the Town's primary rivers and brooks, particularly adjacent to the Ipswich River and Boston Brook, locations where existing open space or conservation parcels can be added to and expanded, and locations of where acquisition would advance development of a trail and path network.

Strategy 1.4 Initiate and pursue other activities to protect open space, conservation land, and water resources, such as through conservation easements, deed restrictions, other formal agreements or instruments such as the current Flexible Development By-Law. Update these tools to match current needs and promote their use in order to protect open space and conservation land.

Goal 2: Open space protection and land acquisition should be used to protect drinking water, aquifers, and groundwater recharge areas.

Strategy 2.1 High priority should be given to land acquisitions for open space or conservation that provide the simultaneous benefit of protecting the Town's drinking water. The importance of protecting the public drinking water supply is widely accepted. The Greenbelt, Middleton Pond area, and Ipswich River area, are examples of water resource areas that could benefit from synergistic acquisition activity. In an era of fiscal constraints, it is important to layer and combine open space, conservation, and water protection related acquisitions and activity.
Strategy 2.2 Coordinate land acquisition, conservation, and open space activities of the Conservation Commission, the Water Department, the Board of Selectmen, and the Middleton Stream Team with the overarching goal of protecting drinking water.

Strategy 2.3 Work to advance public education and awareness around drinking water protection. Continue involvement with partners such as the Stream Team to improve the health and access of waterways throughout the Town including the Ipswich River. Public education and awareness activities include creating walking paths along the Ipswich River, new public access points, or other connections between the public, open space and water resources, and drinking water resources.

Goal 3: Provide for public access to conservation lands and manage resources in accordance with community needs.

Strategy 3.1 Promote access points, trails, amenities, maintenance, and management on conservation parcels to encourage public use and promote public support for continued conservation efforts by showcasing the value of the public land.

Strategy 3.2 Develop a comprehensive trail network according to the Middleton Trails Vision developing the Middleton Rail Trail as a main trail spine through the Town, the Independence Greenway Extension and Bay Circuit Trail to extend the network, and other trail connections that would form a network connecting the Middleton Pond, the Ipswich River, watershed lands, private parcels with conservation restrictions or easements, power transmission corridors, and other conservation lands (town, DCR, and ECGA). Model networks include Wellesley Trails and Across Lexington town-wide trail systems.

Goal 4: Expand and improve recreational facilities of the Town

Strategy 4.1 Continue to seek funding sources for expansion to meet the evolving recreational facility needs of the town and identified management, improvement or maintenance projects for existing recreational facilities.

Strategy 4.2 As the Town's population continues to grow, study recreational facility use and need patterns to identify new facilities to meet community needs including future facility considerations such as a potential community swimming pool, expansion of rail trail corridor, a skating pond, additional soccer fields, ball parks, basketball courts, tennis courts, and satellite neighborhood playgrounds.

Goal 5: Manage and promote existing resources and conservation facilities

Strategy 5.1 Partner with volunteers and organizations, agencies, and other individuals to assist in trail development and maintenance to improve public access to conservation lands and to supplement town services in a coordinated manner.

Strategy 5.2 Update the guide to conservation land and hiking trails as new resources are developed. Hiking trails and cross-country ski trails exist on many conservation parcels in the Town. Develop a signed and marked foot trail network throughout the town branching off the rail trail and Middleton Pond. Follow models developed by Across Lexington and Wellesley Trails.

Strategy 5.3 Establish management guidelines for conservation lands. For existing conservation areas and any new acquisitions, the issues of trail development, larger trail system connections, and management should be a part of the review process and considerations for the future of the property, prior to final purchase. A trail maintenance committee could be formed to assist in these efforts.

PUBLIC FACILITIES & SERVICES

Introduction

This chapter includes information about Town administration, services that keep the Town running including Public Works, Police, and Fire, properties owned by the Town of Middleton or the Middleton Public School District, and strategies for how the town can maintain and improve its public services and facilities.

Existing Conditions

Town Administration

Town Charter and Bylaws

The current Middleton Town Charter dates to 1974 and was most recently amended at Town Meeting in 2018. It details the process for Town Meeting, election of Town officials, and procedures for appointments to town boards and committees, outlines the powers of the Board of Selectmen, Town Administrator, Board of Assessors, Board of Health, and Library Trustees, and states the Town's and School District's legislative, financial, and fiscal procedures. The Town website also includes links to the Town's General Bylaws, Zoning Bylaw, and Subdivision Rules and Regulations.

Town Departments

In July 2018, the Town had the following departments. Most departments operate out of the Memorial Hall at 48 South Main Street. Conservation, Health, Inspectional, Public Works, and Town Planner are located at 195 North Main Street. The Fire Department is at 4 Lake Street and the Police Deparment is located at 65 North Main Street. The Library is at 1 South Main Street and the Food Pantry and Council on Aging are at 38 Maple Street. Middleton Electric is located at 197 North Main Street.

- Animal Control
- Cable
- Conservation
- Assessors
- Council on Aging
- Finance & Accounting
- Fire Department
- Flint Public Library
- Food Pantry
- Health Department
- Inspectional Services
- Police Department
- Public Works
- Recreation Department
- Schools: Howe-Manning, Fuller Meadow, Masconomet
- Middleton Electric Light Department
- Town Administrator
- Town Assessor
- Town Clerk
- Town Planner
- Treasurer/Collector
- Veteran's Services

Town Boards and Committees

The Board of Selectmen in Middleton consists of five elected members each with three-year terms. The Board of Selectmen is the chief policy making agency for the town and is responsible for appointing the Town Administrator. The Town Moderator is the presiding officer at Town Meeting, Special Town Meeting, and any other meetings that need officiating.

In addition to the Board of Selectmen and Town Moderator, there are numerous additional boards, commissions, and committees that have advisory and decision-making roles for the Town of Middleton. Most town board, commission, and committee members are appointed to their positions, though a few are elected. Some of these groups meet at least monthly, others meet on an as-needed basis. Some are convened for a temporary purpose and may be dissolved once the committee's objectives have been met. Some of the committees are all volunteer while others have ex-officio Town Staff representatives and/or a Board of Selectmen Liaison. The following list is based on the town boards, commissions, and committees listed on the Town website in September 2018.

Elected Committees and Positions:

- Board of Assessors
- Board of Health
- Board of Selectmen
- Constable
- Electric Light Commissioners
- Housing Authority – 4 elected members, 1 state appointed, 1 Selectmen Liaison
- Planning Board
- School Committee
- Town Clerk
- Town Moderator
- Trustees of the Public Library

Appointed and Other Committees:

- Board of Registrars of Voters – appointed by Selectmen
- Board of Health-appointed by Selectmen
- Bylaw Review Committee
- Capital Planning Committee
- Community Preservation Committee
- Complete Streets Commission
- Conservation Commission – appointed by Selectmen
- Constable – appointed by Selectmen
- Creighton Center Steering Committee
- Cultural Council-Commission, 3 by Selectmen
- Finance Committee – appointed by Town Moderator

- Historical Commission- appointed by Selectmen
- Housing Authority
- Industrial and Commercial Design Review Committee
- Masco Regional School Committee
- Master Plan Committee
- Memorial Day Committee
- Municipal Tax Relief Committee
- Open Space & Recreation Plan Committee
- Personnel Board – appointed by the Selectmen
- Rails to Trails Committee
- Recreation Commission – appointed by Selectmen
- Scholarship Committee
- Water Advisory Committee
- Zoning Board of Appeals

Largest Town Departments: Public Works, Police, Fire, and Library

An overview of the four largest Town Departments, in terms of number of personnel, is provided here.

Department of Public Works

On the Town Website, the Department of Public Works' mission is summarized as follows: "The mission of the Middleton Department of Public Works is to construct, maintain, preserve, and protect the infrastructure resources of the Town in the most cost efficient and professional manner without sacrificing quality. To provide guidance and support to the citizens of Middleton regarding the development and protection of property; design, construction, and maintenance of roadways, traffic, drainage systems, trees, water distribution, cemeteries, parks, and solid waste disposal, in order to maximize safety, benefit, and convenience to the public."

The Public Works facility is located at 195 North Main Street. The Department employs approximately 12 full-time employees and 8 part-time workers. DPW administration oversees five divisions and is responsible for responding to Middleton resident and property owner needs.

The five divisions include:
- Water Division;
- Trash and Recycling;
- Parks and Recreation;
- Highway Division;
- Cemetery Division.



Middleton DPW Department at 197 North Main Street- Credit: Google

Most Middleton residents get their water from municipal sources, with some maintaining private wells. Though the town gets its water largely from the Middleton Pond Reservoir, the Danvers Water Department is responsible for the treatment and supply of drinking water to both Middleton and Danvers. The system utilizes three reservoirs in addition to wells. Two of those reservoirs, Middleton Pond and Emerson Brook, are in Middleton. The third, Swan Pond, is in North Reading. The Middleton Water Division is responsible for the water quality while it's being distributed to users in Middleton. The Water Division, with approximately 1,385 residential connections and 141 commercial and institutional connections, also maintains the 36 miles of water lines and 398 fire hydrants located in the town. The town, as part of the Danvers water system continues to explore ways to expand its water supply options. Recent studies by Danvers have looked at the relative costs of increasing storage capacity in Middleton Pond, connecting into the Massachusetts Water Resource Authority (MWRA) system and exploring possible new well sites within the North Coastal watershed as the Ipswich River basin continues to be stressed during summer peak use periods and could become more vulnerable as climate change progresses.

Weston and Sampson recently completed a hydraulic study for the Lakeview Avenue neighborhood and the town has hired a contractor to construct the water and drainage improvements there. Upcoming projects for the Water Division include working with a consultant to analyze the town's water system and help prioritize projects for Middleton's overall capital improvements plan.

The Trash and Recycling Division runs the Middleton Transfer Station on Natsue Way. The town allows for the disposal of non-commercial trash to Middleton residents and offers electronics recycling and mandatory recycling for brush, glass, paper, plastics, metals, batteries and several other recyclable materials. With the price for recyclables declining over the last few years, the old $100 annual transfer station sticker fee did not keep up with solid waste disposal costs, covering only about 40% of the land the DPW requested an additional $20,000 in its budget for FY '19 to help make up the difference. The town also recently raised its trash disposal annual sticker fee to $125 for Middleton residents.

The Parks and Recreation Division partially maintains the Thunder Bridge, Log Bridge Road, Peabody Street, and Farnsworth Landings on the Ipswich River. Additionally, they fully maintain Fuller Meadow recreational area, Howe- Manning Park, Rubchinuk Park, Emily Maher Park and the Henry Tragert Town Common. Recent projects included improvements to the Rubchinuk Park parking area and landscaping in 2018. Staff also began a new program to clean up stormwater control areas within subdivisions and also installed an infiltration drainage system at Thunder Bridge Beach.

Implementing a new Town Roads Program over the last several years, the town has progressed beyond the reclamation phase in managing its roads, making significant paving improvements to East Street, Peabody Street and River Street. The Town Roads Programs is now shifting more towards milling and repaving projects throughout town although some reclamation work still remains for some streets. The DPW is incorporating pavement management into its GIS mapping layers to help build an existing conditions database and incorporate this information into its capital planning process. The Highway Division also anticipates adding new sidewalks to several streets over the next few years and is beginning to incorporate Complete Street updates.

DPW equipment is generally up-to-date, and needed facilities upgrades are part of the capital planning process. The Department is currently incorporating GIS infrastructure layers into its mapping system and this information will become available to the public. It also anticipates continuing to improve its website and social media availability. Budgeted repairs and maintenance to the DPW facility over the next few years include a new roof, salt shed repairs and updating the first floor HVAC systems.

In the coming years, the DPW Director expects a few staff retirements. There is a great deal of institutional knowledge within the department, and training new staff to ensure that this institutional knowledge is transferred prior to retirements or other transitions will be important.

Police, Fire, and Emergency Management

Police Department

The mission of the Police Department is as follows: "The Middleton Police Department is dedicated to excellence as a top notch public safety agency. We are committed to establishing an environment in which members of the Police Department thrive. We seek to be a catalyst for positive change through persistent, personalized, and cost effect use of public safety resources. By embracing the values of excellence, innovation, and integrity we remain committed to maintaining the public trust."[1]



Police Department at 51 North Main Street- Credit: Quincy Patriot Ledger

As of 2018, the Police Department employs about 15 FTE staff, which breaks down as: 1 Police Chief, 4 Sergeants, 10 Patrol Officers, and 2 civilian employees. There are also a dozen reserve staff who are available on an as-needed basis.

According to the Police Chief, the most significant challenges facing the Department are the need for a new police facility and the need to add additional staff to the department. The current police building is old, built in 1952 it was purchased from the town of Danvers in the 1970's for $1 and moved to its current site in Middleton on North Main Street. The Chief feels there is space to add a new facility in back of its current building and feels that a stand-alone police department, not a combined public safety facility is more effective in serving the community as police and fire scheduling regimes do not match up well. The town has begun a program to add new police and fire personnel over the next five years and a detective joined the force for the first time in 2018. The Chief would like to get to a full-time police force of 18, allowing four officers for every shift and feels that adding a Captain's position would allow the department to function more effectively by adding a buffering position between the Chief and Patrol Officers.[2]

The Police Department has achieved significant accomplishments during the twelve years he has served as Chief. All equipment-including weapons, communications and communications- have been either upgraded or are in the process of being upgraded. The department is getting new police cruisers- three in 2018 and four in 2019, with two of the new 2018 cruisers being paid from the capital budget and one from the operating budget. Middleton uses the regional dispatch center and it is currently updating its computers and software systems, which generally have a five year. The Police Department is strongly oriented to the community as officers regularly attend community events and interact with town residents. The department helps to sponsor Special Olympics within Middleton and works with schools to provide a School Resource Office and to staff the Drug Abuse Resistance Education (DARE) program.[3]

1 Middleton Police Department web page
2 Conversation with Chief Digianvittorio, 9/25/18
3 Conversation with Chief Digianvittorio, 9/25/18

Generally, the Police Chief feels that the Police Department functions well. The town has a relatively low crime rate. The Police are focused often on quality of life issues, such as managing traffic flow and being responsive and proactive to keep the crime rate low.



Fire Department at 4 Lake Street- Credit: Town of Middleton

Fire Department

As of 2018, the Fire Department at 4 Lake Street employs a mix of 37 full-time and part time staff. Personnel "participate in a variety of functions and duties including fire suppression, Emergency Medical Services (both advanced and basic), hazardous materials mitigation, disaster response, 911 dispatching (fire, police, EMS), public education and community service."[4]

Aging facilities, adding sufficient staff and keeping equipment up to date are the greatest challenges currently facing the department according to the Fire Chief. The town has begun a program to add one full-time firefighter (and one police officer) every year over the next five years in an effort to help alleviate hiring part-time personnel. In addition to firefighters, the Chief noted that the department needs administrative support staff as he is the only administrator and does not have a clerk to assist with reporting and grant writing. While the front line engine and ambulance are up to date, the other equipment is aging and in need of replacement. The department would like to hold off on adding a new ladder truck until a new fire station is built, as the current ladder truck is 20 years old. The Chief feels that the governmental systems in Middleton function well; communication is good between departments and is not overly bureaucratic.

The Chief is proud of having been able to update department equipment. During his tenure, the department has been successful in obtaining grants that have paid for updated breathing apparatus, gear washer and dryer, and filling station for breathing air bottles.

Future capital equipment needs noted for the Fire Department over the next fiscal year included the following items:[5]

- Self-Contained Breathing Apparatus (SCBA) Replacement
- Multi-gas meter replacement
- Cardiac monitor and defibrillator replacement
- Upgrades to portable radio and communications systems
- Repairs to Ladder One Truck
- Replacement of Engine One

4 Town of Middleton Fire Department web page
5 FY 19 Town of Middleton Proposed Capital Budget, pg. 219

Library: Flint Public Library

The Public Library is located at 1 South Main Street. The Library's mission is: "The mission of the Flint is to inform, enrich, and empower every person in the community by creating and promoting easy access to a vast array of ideas and information, and by supporting an informed citizenry, lifelong learning and love of reading. The Flint Public Library is interested in providing free and equal access to information in a variety of formats, in utilizing the new technology, in furnishing environments and resources that respect the diversity of cultures, and in supporting and defending the principles of intellectual freedom, the Library Bill of Rights, and the Freedom to Read Statement."



Flint Public Library- Credit: Town of Middleton

The Flint Library employs a mix of full and part-time positions including a Director, an Assistant Director, a Circulation Head, a Children's Librarian, a Program Coordinator, a Young Adult Librarian, a Tech/Video Librarian, two Pages and three Custodians.
The library is very popular and has seen an 18% increase in circulation and a 47% increase in visitors since FY '08. Over 5,000 Middleton residents hold library cards and in the past year hosted over 400 programs of cultural, recreational or educational subjects.[6]

The facility has meeting spaces, computers for public use, hosts a variety of community programs, and of course a collection of books and media.

In 2006, the library underwent a large expansion, renovation and restoration project which tripled the usable space in the library. On the ground level there is a Children's Room and a large meeting room. The Teen Area and Adult Stacks are on the upper level as well as staff offices and a processing area. The original area of the building is now the Computer Area, and holds the Reference books, Large Print books, audio books and paperbacks. The renovation included the restoration of the three stained glass windows which are a source of pride to the town, and admired for their vibrant colors and artistic beauty. Due to careful planning, and attention to detail, the original area of the library retained much of its historic charm. The library has been on the National Register of Historic Places since 2002.[7]

6 Proposed FY '19 Middleton Town Budget, pg. 198
7 Flint Library website-history

The greatest challenge facing the library at this time, according to the Library Director is the lack of parking for when the library runs its programs. The library often gets more than 100 or 200 people for its larger programs and has only 54 parking spaces. This is compounded by the fact that the parking lot has two egresses and is used as a cut-through to busy Main Street/Route 114 which fronts the library. Significant achievements include large increases in users and programs over the last several years, a successful Tri-Town Community Reading Program involving three area libraries and schools, new programs for kids and adults, the digitization of the Tri-Town Transcript from 1962 – 1992, the transition to a new library automation program called Symphony and the completion of a Long Range Strategic Plan.

The library is overseen by an elected Board of Trustees who serve three-year terms and oversee policy decisions. A Library Friends Group helps to fund programs, pay for museum passes, help with landscaping and underwrite the library newsletter and other projects not covered by its operating budget.

The Library does address facility maintenance needs through the local capital improvement process and with assistance from other state funding. Planned improvements include building system upgrades in FY '20 and carpeting and computer upgrades in FY '21.[8]

Schools

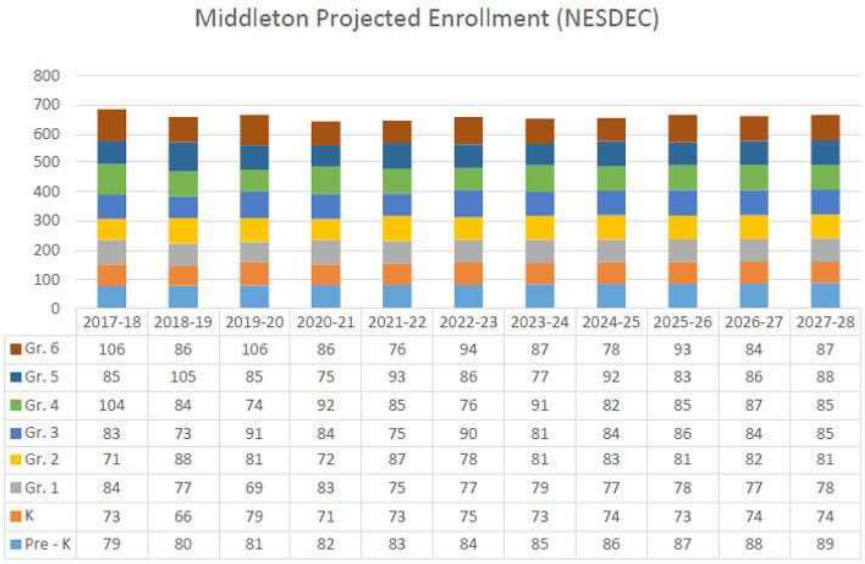
Middleton Public Schools

Masconomet Regional School district serves the towns of Boxford, Middleton and Topsfield, for Middle and High Schools, known informally as the Tri-Town area. Masconomet Regional High School and Masconomet Regional Middle School are located in the same complex at 20 Endicott Road in Boxford, Massachusetts. The Middle School has an enrollment of 655 students in Grades 7-8 for the current school year and the High School, Grades 9-12, has 1,143 students.[9]

The town has two elementary schools, part of the Tri-Town District along with Topsfield and Boxford, with the Fuller Meadow School (PK to Grade 2) and the Howe- Manning School (Grade 3 to Grade 6). For the 2018-2019 school year, the Fuller Meadow School was projected to have 231 in Grades K-2, along with 80 pre-school students. For Grades 3 to 6 at the Howe Manning School, enrollment was projected to be 348 students.[10]

8 FY '19 Proposed Capital Town Budget pg. 369
9 MA Dept. of Elementary and Secondary Education

Enrollments for elementary schools in town are projected to trend slightly downward from 2017 to 2028 as shown below.[11]



	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Gr. 6	106	86	106	86	76	94	87	78	93	84	87
Gr. 5	85	105	85	75	93	86	77	92	83	86	88
Gr. 4	104	84	74	92	85	76	91	82	85	87	85
Gr. 3	83	73	91	84	75	90	81	84	86	84	85
Gr. 2	71	88	81	72	87	78	81	83	81	82	81
Gr. 1	84	77	69	83	75	77	79	77	78	77	78
K	73	66	79	71	73	75	73	74	73	74	74
Pre - K	79	80	81	82	83	84	85	86	87	88	89

Masconomet generally boasts a high graduation rate; in 2014 the 4-year graduation rate was 98%. Many high school graduates in Middleton have post-secondary education plans; in 2016-2017, about 83% of high school graduates in Middleton reported plans to attend a 4-year private or public college, about 5% reported plans to attend a 2-year private or public college, and 12 % or had other/unknown plans. Masconomet employed 128.9 teachers in 2017- 2018 with a student/teacher ratio of 14.0 to 1, as compared with a statewide ratio of 13.0 to 1.[12] The Middle and High Schools have experienced a decline in enrollment from the 2014-15 school year to the 2017-18 school year of approximately 181 students and has undertaken slight reductions of classroom teacher FTE in its budgeting as well as reallocating staff to core classes that had been oversubscribed and a reduction of undersubscribed elective classes.[13]

The Howe-Manning School was built originally in 1937 under the aegis of President Roosevelt's Works Progress Administration. Named for Middleton teachers Alice Manning and Nellie Howe, the school was torn down in 2011 and replaced with the current building. The Fuller Meadow School was constructed in 1964, with additional space added in both 1997 and 2006. The Masconomet Middle and High School was built in 1959. The town's first school, the Centre School was originally built in 1808 and rebuilt in 1837. The school became Memorial Hall and is presently the site of many Town offices.[14]

11 Proposed FY '19 Middleton Town Budget, pg. 84
12 MA Dept. of Elementary and Secondary Education
13 FY '19 Proposed Capital Town Budget pg. 16
14 Wicked Local Boxford: History: Middleton schools, past and present-9/3/2014

The two elementary school buildings and Masconomet School are in various states of repair. In addition to curriculum updating, the older Fuller Meadow School will be expanding its wireless coverage for FY '19 with longer term capital needs (through FY '27) that include upgrading or replacing school bathrooms, school flooring, replacing the parking lot, roofing repairs, kitchen equipment, boiler, HVAC and emergency generator. The newer Howe-Manning School will also be adding wireless coverage as part of its shorter term capital planning and also looking to upgrade its current technology infrastructure (servers, switches and wireless access points) and its end-user technology in addition to curriculum upgrades, floor maintenance equipment replacement and building security upgrades over the next five years. To better address student wellness needs, the Masconomet Middle and High School will be moving to a later morning starting time beginning in the 2019-20 school year and the school would like to add a full time Health Director's position. The school would also like to add a full-time Human Resources Director and implementation of a health services modes as well as a Licensed Facility Equipment Mechanic to help lessen the cost of contract labor to address aging plumbing and HVAC systems at Masconomet.

Essex North Shore Agricultural and Technical School

Middleton residents are part of the district for Essex North Shore Agricultural and Technical School, located at Hathorne in Danvers. Essex Technical High School is a public regional technical and agricultural high school and serves seventeen communities in the North Shore. The school has four technical academies with no more than 360 students each: Technology and Services, Life and Natural Sciences, Animal and Plant Science, and Construction and Technology.

North Shore Education Consortium

Middleton is a member of the North Shore Education Consortium (NEC). NEC was founded in 1975 and its mission is "to support member districts by offering high quality, cost-effective school programs, consultation, professional development, support services and resources." The consortium aims "to ensure that districts can provide successful learning experiences for all students, including those with complex or low-incidence special needs."

Town and School District Owned Buildings

Middleton has several Town-owned and School- District owned properties

Including the following:

- Creighton Pond Camp- 210 Essex Street
- Council on Aging-38 Maple Street
- Flint Public Library- 1 South Main Street
- Fuller Meadow Elementary School, 143 South Main Street
- Howe-Manning Elementary School, 26 Central Street
- Memorial Hall-48 South Main Street
- Middleton Housing Authority- Orchard Circle
- Middleton Department of Public Works-195 North Main Street
- Middleton Fire Department- 4 Lake Street
- Middleton Municipal Electric Department-197 North Main Street
- Middleton Police Department-51 North Main Street



Middleton Council on Aging- Credit: Town of Middleton

In 2017, the town commissioned a study to assess selected public facilities and their sites. The study included an assessment of the existing assets, the initial programing of each space, the functional needs for each facility and an evaluation of the existing buildings against their space and operational needs.

The study used a long-term, 50 year window to consider Middleton's future public facility needs. The Fire Station, Police Station, Council on Aging and Town Hall buildings were the focus of the study as the Department of Public Works and Library facilities were felt not to need significant improvements for the foreseeable future.



Middleton Golf Course-Parcel 184

Following up on the 2017 Facilities Plan Option D (see summary table next page), the town approved $3.8 million at the November 19, 2018 town meeting to purchase the former Middleton Golf Course, a 23 acre parcel located on South Main Street (Route 114).

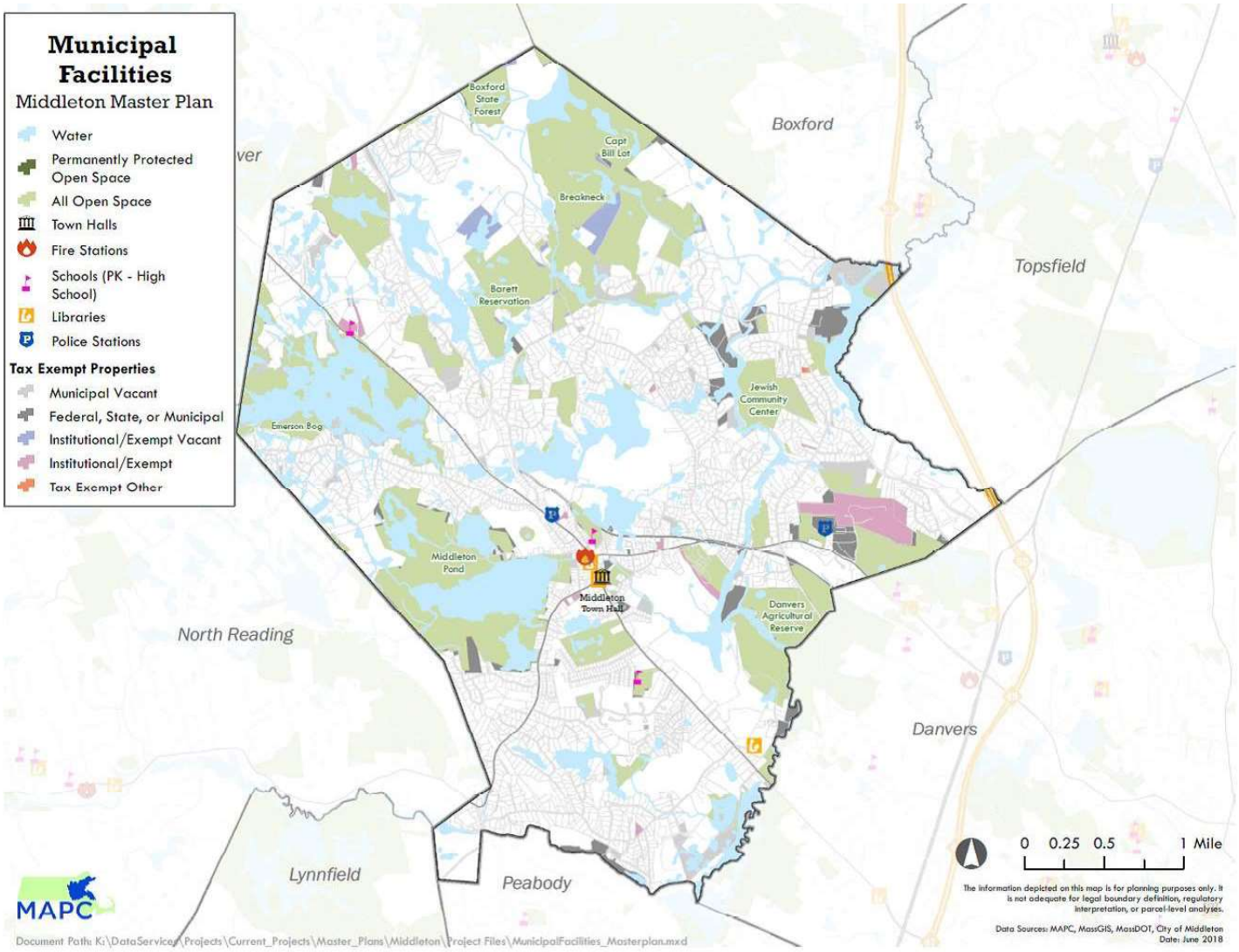
Residents also approved $250,000 to commission a master plan on how to best design and build out the site in phases as a town center, starting with a new fire station. The town has already hired a consultant to plan, design and build out the parcel to address the need for a new fire station, senior/community center, police station and town hall, in that order according to priority. As noted in the Facilities Plan, implementing Option D on such a large parcel will allow the town to construct the new facilities it needs without the challenges of phasing or sequencing the use of other existing facilities, allow for future expansion, allow for cost savings through shared design, build and infrastructure efficiency and possibly allow for the inclusion of other town needs. [15] After municipal facility needs are met, the town will explore how to best re-purpose the existing Middleton Fire Station parcel at 4 Lake Street next to the Library, the current Senior Center at Old Town Hall, 38 Maple Street and Memorial Hall; both Old Town Hall and Memorial Hall are significant historical assets located within the downtown area.

15 2017 Middleton Facilities Study, Gienapp Design, pg. 41.

Public Facilities Study

The following table summarizes the 2017 Middleton Facilities Study:

Site: Priority Rank and Reason	Evaluation of Existing Facility	Planning Options	Recommended 2017 Facilities Plan Option/Reason
1-Fire Station: Building is highly deficient; public safety concerns.	Existing site is too small to allow for construction of new station and current building is of marginal use as part of an expanded facility or renovation.	A: Acquire two-acre site for construction of new Fire Station; choose from multiple options of renovation and new construction for other sites.	**Recommendation 4D:** Purchase at least a six acre site and construct new Town Center Complex with new Fire, Police, Town Hall and COA. Since all four facilities require new building or full renovation, construction costs for a new Town Complex is similar. Town Complex can be built in phases as needed and can share common facilities such as parking and meeting areas, and site improvements.
2- Town Hall: Lack of access and program space, structural problems.	Building is too small to house town departments in one facility. Site is big enough to expand existing building but more costly to renovate existing facility.	B: Purchase two sites, or one combined larger site, for construction of a new Fire Station and a new Town Hall. Build new Police Station at Town Hall site; renovate Old Town Hall for COA needs.	
3-Police Station: falls short of modern standards but modular additions keep it workable in short term.	Current building and modular add-ons are not good candidates for renovation. Site is of marginal size for a new facility.	C: Purchase two sites or one larger site for new Fire and Police Stations or Public Safety Complex on one large site. Renovate Town Hall and COA on existing sites.	
4-Old Town Hall/ Council on Aging: Building limits programming and lacks adequate parking.	The existing building is too small to accommodate long term space needs and has barriers to program areas; small site limits parking and building expansion.	D: Purchase at least a six acre site and construct new Town Complex with new Fire, Police, Town Hall and COA.	



Community Public Facilities Feedback

As part of the master planning process, an online survey, the 2017 Vision Plan, focus group and community workshops were conducted in order to obtain feedback from community members on Middleton's public facility's needs.

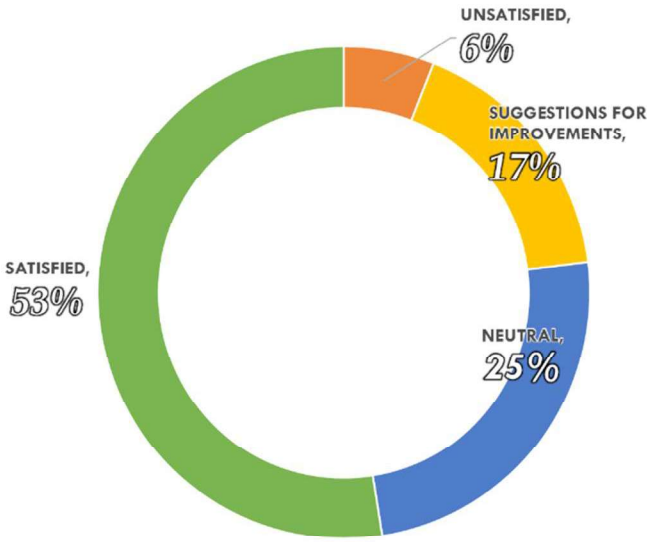
Here is a summary of what you told us:

- Many community facilities don't need improvement.
- There is support for better recreation, bike and pedestrian options and Senior Center.

satisfied with municipal services?

Survey participants were asked whether they were satisfied with municipal services.

A simple majority of 53% of participants were either satisfied or very satisfied. Approximately 25% of participants were neutral on the matter and only 6% were unsatisfied or very unsatisfied. Online survey participants were asked to rate how much improvement was need on a variety of community facilities and quality of life issues in their community. There was a high level of consensus on four community facilities that according to participants needed minimal to no improvement. The Flint Library (91%), the Howe-Manning School (94%), the Fuller Meadow School (62%), and the Public Works Building (66%) need either minimal or no improvement.



Participants also revealed which facilities need some or a great deal of improvement:

- the Senior Center building (62%),
- the Fire Station building (57%),
- Memorial Hall (57%).

Vision Plan Comments:

- "We have by far the best Fire dept. and EMT services available, great library, schools. Improve services available to our youths and seniors."
- "Town needs to look at extending water mains and re paving existing roads, even private ones; Gates Road is a private road, but the end of it is accepted by the town (but not the beginning some how). The town should take over and improve over time all private roads, residents pay the same in taxes if the road is private or public (accepted by the town), why should we receive less services? They also need to look into extending the water mains, many area of the town are not protected by fire hydrants or have access to public drinking water."
- "I would also support tax increases to improve the municipal offices (DPW/Health, MPD & MFD). I would strongly support any land acquisitions that would allow MPD and/or MFD to be combined into one building and redevelop the existing parcels."

KEY PUBLIC FACILITY COMMENTS FROM MIDDLETON RESIDENTS AT THE MASTER PLAN OPEN HOUSE - FEBRUARY 2018

- "PD/FS/CH complex needed in center of town."
- "An improved fire, police building(s) to accommodate town's growing size. The municipal buildings are in dire need of enhancements to support the growing town. Also, common downtown space for congregation accommodating events such as Winter Festival would be ideal and to further create a community space bringing neighbors together.
- "Senior Center is needed to keep the elderly in town."
- "I (also) fully support developing a senior center combined with recreational park."

Strategies and Recommendations

Ensure Middleton's facilities meet community needs.

- Continue with the municipal uses plan for the former Middleton Golf Course.
- Continue to develop and implement 5-year Capital Improvement Plans.

Secure adequate resources for Middleton's public services and facilities.

- Continue efforts to add staff and replace equipment, for all Town Departments, particularly for public safety departments over the next five years.
- Engage in grant writing efforts to upgrade municipal departments and defray public costs.
- Continue to add staff, professional development and curriculum upgrades at Tri-Town and Masconomet Schools to the greatest degree possible.
- Where possible, supplement funding for capital projects through grant programs, e.g. MSBA, Green Communities, and Assistance to Firefighters Grant Program.
- Explore regionalization opportunities for more efficient public service delivery.

Ensure Middleton's public infrastructure meets safety and environmental standards.

- Analyze Middleton water system and develop a phased Capital Improvement Program to meet town water and waste water needs.
- Continue to develop and implement the Town Roads program.

Enhance communication and improve transparency of town processes.

- Upgrade public safety communications and efficiency

HISTORIC & CULTURAL RESOURCES

Snapshot

Early History

- Original inhabitants were the Agawam and Naumkeag Native American tribes
- English settlers arrived in 1651
- First settled and grew as a farming community on the Ipswich River
- Vital ironworks industry during the eighteenth century
- Developed as a summer destination and transitioned to a year-round residential community

Selection of Sites of Historical or Cultural Significance

- Town Hall (Memorial Hall)
- Old Town Hall
- Tramp House
- Flint Public Library
- Middleton Congregational Church
- Great Oak on Peabody Street (400 years old, national landmark)
- Richardson Farms
- Heritage Landscapes (farms, ponds, rivers)

Historic Preservation and Cultural Organizations

- Historical Commission
- Middleton Historical Society
- Essex National Heritage Commission
- Cultural Council
- Middleton Garden Club
- Community Preservation Committee

Preservation Resources

- Massachusetts Historical Commission
- National Trust for Historic Preservation
- Demolition Delay Bylaw (adopted by Special Town Meeting in 2002)

Key Findings

- Middleton's heritage is influenced by its origins as a farming community; much of its historic and cultural heritage is found in open space and conservation land.
- The Massachusetts Resource Information System (MACRIS) lists 40 cultural resources in Middleton including South Main Street and Lake Street – "Will's Hill" as districts of local significance.
- The Middleton Historical Society owns and manages the Lura Woodside Watkins Museum.
- Middleton is part of the Essex National Heritage Area.
- Four buildings are listed on the National Registry of Historic Places

Introduction

This summary of existing conditions for Historic and Cultural Resources offers a brief summary of the origin, evolution, and highlights of Middleton history and culture in order to frame the discussion of historic and cultural resources in the town and provide a context for the recommendations intended to strengthen the care of historic and cultural resources. The following resources provided a more in depth history of Middleton and offer a detailed history of the town:

- Middleton Historical Society, Middleton in the Twentieth Century, 1998 (Digitized by the internet archive in 2014)
- MHC Reconnaissance Survey Town Report, Middleton, Report Date: 1986
- Kelley, Rita. The Stones Speak: Bits and Pieces of Middleton's History – Focused on Its Cemeteries, 1979
- Watkins, Lura Woodside. Middleton, Massachusetts: A Cultural History. Essex Institute, 1970

Existing Conditions

Middleton's origin, evolution, economy, and population through its history.

History of Inhabitants

Prior to European settlement, the land that is presently Middleton was inhabited by the Agawam and Naumkeag Native American tribes. Middleton was on the western edge of the lands of the Agawam tribe and the eastern edge of the lands of the Naumkeag tribe. The land provided both communal agricultural, fishing and hunting areas for the tribes. The populations of the tribes in the area of Middleton were steeply declining due to disease at the time the first European settlers arrived. Masconomet, the sagamore or chief of the Agawam tribe, played an important role in befriending settlers of the area. At the time of the arrival of the first European settlers in 1651, only a few Native Americans were living in the Will's Hill area of Middleton and a small village near Middleton Pond.

The growth of European settlement in Middleton grew from 1651 to 1659 with the addition of several families within the present limits of the Town. The early European residents were of English descent and Congregational faith. Among the first of these new residents was an English settler, William Nichols. The town was originally settled as a farming community with the benefits of fertile soil and irrigation along the Ipswich River. The first European land grant in the area was the 1639 Bellingham Grant. The settlement expanded as a small farming community with Bray Wilkins, who purchased six hundred acres from Governor Bellingham and settled near Middleton Pond. By 1695, David Richardson moved to Middleton near what is now Fuller Pond Village and his descendants still own a dairy farm he started in Middleton. The ice cream became very popular and the dairy farm and ice cream business continues to this day.

The initial settlement pattern of the town included dispersed farmsteads. Early residents worshiped and attended civil matters in Salem Village (now part of Danvers). Middleton's first meeting house was built in 1726 at or near the site of the present Congregational Church. In 1728, the town was incorporated from adjoining portions of the land from the towns of Salem, Salem Village (now Danvers), Boxford and Andover. Prior to incorporation, the Town land was mostly part of Salem. The name of Middleton is a historic reference to its location relative to two important early settlements of Salem and Andover.

Starting in the 1800's through the early 1900's, Middleton was a popular summer resort with cottages overlooking Middleton Pond and the Ipswich River. At that time, the town was a seasonal destination for residents of Boston, Lawrence, Lowell, Salem and Lynn. The permanent population of Middleton has grown slowly and steadily since that time. Until recently the Town had not seen major increases in population, even during suburban population increases such as the years following World War II. Middleton stayed a small town with many of the summer camps and cottages converted to permanent homes over the years. Suburban housing development was initiated in the 1950's and 1960's with a substantial increase in the 1980's. This trend has continued today with Middleton experiencing one of the fastest population growth rates in the Commonwealth.

Middleton is in the Topsfield, Boxford, and Middleton tri-town area that share the Masconomet Regional High School and Middle School.

History of Industry

As highlighted, agriculture was the primary industry of the Town when first settled and continues to be a prominent part of the landscape of the Town and local economy today. Grains were the main focus of agriculture with corn as the chief crop. Leading up to the 1700's several mills were developed in Middleton including a saw mill and grist mill.

During the 1700's, Middleton also developed an ironworks industry located in the area of present day Mill and Liberty Streets. The ironworks, or bloomery, was operated for thirty years. In this same period of time, blacksmiths and weavers were present in Middleton. In the 1800's the local industries also included a paper mill that was located beside the Ipswich River near the location of the present day Bostik property. In the early half of the 1900's, ice cutting was

a local economic activity that occurred in at least four locations in Middleton. In the 1850's shoe production factories were built in Middleton, with about 6 factories at the peak of activity.

In 1848, the Salem/Lawrence railway was introduced to Middleton. In 1850, the Salem/Lowell Railroad was introduced. Both railways gave Middleton direct access to Boston with three rail stations located in town. The Howe Station was located at the intersection of Maple and Gregory Streets. The South Middleton Station was located alongside the Ipswich River at the junction of the Boston River and Russell Street. The Middleton Square Station was located in the square with a turntable. The railroads brought commuters and visitors and facilitated the use of Middleton as a favorite summer time resort destination. The last train departed Middleton in 1935 as the road network and number of automobiles increased and replaced the need for rail service.

The location of the paper mill would continue to have an important role in the history of local industry. The Bostik company was founded as the Boston Blacking Company in 1892 in Chelsea. It moved to Middleton in 1928 and was renamed B.B. Chemical Company in the 1950's and renamed Bostik in the 1970's. Today, Bostik is a world leading adhesive and sealant manufacturer located in Middleton. Since 1969, Middleton has also been home to the Bates Research and Engineering Center which is an MIT owned facility located on over 79 acres with multi-purpose laboratories for nuclear science. The Middleton Golf Course was planned and constructed in 1965 and operated continuously since then as a public, daily fee golf course.

Historic and Cultural Sites and Districts

The most frequently referenced historic and cultural aspect of Middleton's character are its **natural and scenic landscapes**. The Ipswich River meanders through the town and offers scenic sites and river views which vary with the surrounding setting of marsh, swamp, and woods. Miles of major tributaries of the Ipswich also add to the scenic landscapes with Punchard's Brook, Middleton Brook, Emerson Brook, Boston Brook, and Nichols Brook. Preserved natural vistas continue to reflect the agricultural heritage of the town with gently rolling hills and grazing pastures. The Town also includes notable drumlins such as Flint Hill, Will's Hill, and Bare Hill. The Curtis Oak is a notable public tree in Middleton. It is a White Oak located on Peabody Street with an estimated age of over 400 years.

Middleton has numerous historic resources listed with the Massachusetts Cultural Resources Inventory System (MACRIS). Many of the historic resources are historic town-owned municipal facilities including the Town Hall, Old Town Hall, Tramp House, and Flint Public Library. Originally built in 1837 as a school house, the historic **Town Hall** structure of **Memorial Hall** at 48 South Main Street is presently used as the Town Hall and Offices. The **Old Town Hall** at 38 Maple Street was originally built in 1849, but is presently used by the Council on Aging as the Town's Senior Center. At the rear of the Old Town Hall site is a small brick building that was built about 30 years after the Old Town Hall. According to the historic marker plaque on the building "In the decades following the Civil War, thousands of itinerant men, 'tramps,' followed the railroads to points north in search of work. By the 1870's, the problem of coping with the increasing numbers of tramps prompted the town to purchase a plot of land from A.A. Averill for $25, and to contract with George B. Flint to build a lock-up or 'Tramp House' for $355. The Tramp House was completed in 1878, and was used to temporarily shelter these homeless men. In the early 20th century, as the tramp problem diminished, the **Tramp House** was utilized as a jail and briefly as the Police Station." The present **Flint Public Library** at 1 South Main Street was built in 1891. The library contains many of the books from the first library in the town, one of the earlies social libraries in the Commonwealth that was founded in 1772. The present library building has been preserved and improved with a 2006 expansion and restoration.

Other historic structures in Middleton are not town-owned, but filled a critical role in the evolution of the town as religious anchors, civic institutions, and gathering places. The first such structure was the **Middleton Congregational Church**. The present building was constructed in 1859, and the original church was organized in 1729 when the farming community of Middleton first became a town, Town founders needed a church that was nearby and were granted permission to form a new parish. The original church meetinghouse was used for all town meetings, as well as for worship. The original building was demolished after dissension among church members caused a majority to withdraw from the congregation in the 1830's. The current building was rebuilt at the site of the first meetinghouse. On Middleton Square, the **Estey Tavern** has played an important role as a central gathering place and local center of hospitality. Historically, the tavern was used as a stopover for travelers and horses between Andover and Salem, which was an all day trip at the time of its building in 1753. The tavern operated continuously until 1892. The Saint Agnes Catholic Church was built more recently with its dedication in 1948.

In addition to the public and civic historic structures in Middleton, the town has an exceptional number of **historic homes from the 18th century** that remain in the town with many of them still connected to the families and narratives of the origins of the Town. The following historic homes are listed in chronological order with the oldest homes first and includes the original family name, date of construction, and street address in Middleton: Lieutenant Thomas Fuller House (1684) at 6 Old South Main Street, Thomas Putnam House (1697) at 37 Gregory Street, Bray Wilkins House (1701) at 111 Mill Street Extension, Deacon Edward Putnam Jr. House (1705) at 9 Gregory Street, Joseph Fuller House (1714), Doctor Joseph and Abigail Bradstreet House (1714) at 22 Maple Street, Colonel
Benjamin Peabody House (1714) at 54 East Street, Edward Putnam House (1714) on East Street, Jacob Fuller House (1714) on South Main Street, Joseph Fuller House (1714) at 161 Essex Street, Timothy Perkins House (1715) at 7 Meadowlark Farm Lane, Ebenezer Stiles House (1715) at 238 Essex Street, Peabody-Wilkins House (1740) on East Street, Flint House (1746) on Boston Street, Captain Andrew Fuller House (1750) at 47 King Street, Philip Knight House (1753) on 20 East Street, John Curtis Farmhouse (1760) at 44 Peabody Street, Andrew Perkins House (1770) at 134 Maple Street, Lieutenant John Flint House (1782) at 5 Elm Street, and Joseph Symonds House (1792) on Thomas Road.

Several additional **historic homes remain from the 19th century** in Middleton including the Oliver White House and Shoe Shop (1825) at 41 Maple Street, Ann Fuller House (1844) at 15 Lake Street, William Perkins House (1846) at 33 Maple Street, and Murray House (1872) at 92 Forest Street.

A historic district of homes is not feasible as the homes are not located close to one another. In 1990, the following four buildings in Middleton were accepted into the National Registry of Historic Places: Lieutenant Thomas Fuller House (1684) at Old South Main Street, Joseph Fuller House (1714) at Essex Street, Deacon Edward Putnam Jr. (1705) at Gregory Street, and Estey Tavern (1753)

In addition to the historic building resources, the town has **historic family cemeteries** which offer a window into the origins, history, and evolution of the town. Private cemeteries were used for burial of family members as public cemeteries were not present in Middleton. Historic cemetery locations include the Samuel Symonds Cemetery where early settlers were buried. The old Fuller Family Burying Ground off Wennerberg Road contains some of the oldest remains of the town's history including Middleton's first minister. The Merriam Family Cemetery adjacent to Town Hall on South Main Street includes members of the Merriam family including Francis Merriam who was a part of shoe production in Middleton in the 1850's. The Oakdale Cemetery and Richardson Family Cemetery in Haswell Park include deceased members of the Richardson family. The Flint Burying Ground was a family cemetery for the Flint Family located on Boston Street. Additional historic family cemeteries include the Ingalls Burying Ground,and the Peabody Family Cemetery on East Street, among others throughout the town. The Elliot cemetery is located on Mill Street.

The Middleton Historical Society at 9 Pleasant Street operates the **Lura Woodside Watkins Museum**. Lura Woodside Watkins was a historian, research scholar, and author of "Middleton – a Cultural History". She was an innovative scholar, studying 18th and 19th century artifacts. Historic New England objects she had collected are on view at the Smithsonian's National Museum of American History in Washington DC. Objects include dolls, toys, a small child's furniture, stoneware, and examples of her publications.

Historic and Cultural Preservation Organizations

Several local organizations are focused on the preservation and promotion of Middleton's historic and cultural assets. These Town boards, committees, and other organizations represent the network of preservation stewards in the community today and the capacity to care for and advocate for the places and qualities that make Middleton unique.

The **Middleton Historical Commission** is an official board of the town consisting of five members. The historical commission administers the Town's demolition delay bylaw. The first meeting of the commission was held in 1976. The Commission is responsible for the identification, evaluation, and protection of all historical, archaeological and cultural resources. The Commission has identified and documented the buildings, cemeteries, and sites of historical significance in Middleton including four buildings on the National Register for Historic Places and wooden plaques to date and identified over 30 other historic buildings and sites.

The **Middleton Historical Society** is a nonprofit that preserves, researches, and communicates the cultural and political history of the Town. The Society owns and manages the Lura Woodside Watkins Museum, offers lectures and cultural events for the community and maintains an extensive collection of 18th, 19th and 20th century artifacts. The organization was founded in 1954 by Lura Woodside Watkins and Bertha Woodward.

The Essex National Heritage Area is managed by the **Essex National Heritage Commission**, a nonprofit organization with a mission to "preserve and enhance the historic, cultural and natural resources of Essex County." The thousands of historic, cultural, and natural places in the County were crucial in shaping the nation and led to this region's designation as a National Heritage Area by an act of Congress in 1996. The Commission has a number of initiatives to support local resources and maintain visitor information on their website. The Essex National Heritage Area hosts
2.7 million visitors annually from 30 countries. The area includes 500 square miles of northeastern Massachusetts with 9,968 sites listed on the National Register of Historic Places, 33 National Historic Landmarks, 86 historical sites and museums, 400 farms, 9 State Parks, and 2 National Park Service Units.

The Mass Cultural Council is a state agency that provides support for Local Cultural Councils including allocating funds for arts grants and providing an online arts toolkit. The **Middleton Cultural Council** is the local cultural council that administers funding for local arts projects. The Cultural Council is an official Town Committee consisting of a group of six residents appointed by the Board of Selectmen. It presents public programs that promote the arts, humanities, and interpretive sciences in Middleton. In the 2018 Fiscal Year the Middleton Cultural Council was allocated $4,500 and has funded five local projects in the arts and humanities with grants ranging from $500 to
$2,400.

The **Middleton Garden Club** was formed in 1980 by a group of committed Middleton residents whose purpose was to promote gardening, encourage civic planting, present quality information on all aspects of gardening, protect the environment, native trees, and plants, and promote the spirit of friendship. The Middleton Garden Club meets once or twice a month and welcomes anyone with interest. The Middleton Garden Club partners with the garden clubs of Boxford and Topsfield and refer to themselves collectively as the Tri-town Garden Clubs. The Middleton Garden Club provides seasonal plantings for the Flint Library grounds, the Old Town Hall, Memorial Hall, and the Fire and Police stations.

The **Friends of the Flint** are a group of Flint Public Library patrons who sponsor and support projects that extend beyond the ordinary scope of the library budget. The Friends fund educational and cultural programs for all ages and promote awareness of the library in our community. The Friends are a membership organization that depends on individual and business friends to support programming efforts. The group meets on a monthly basis and is led by five officers.

The **Essex County Greenbelt**, the **New England Forestry Foundation**, and the N**ew England Society for the Preservation of Antiquities** are non-profit organizations dedicated to the preservation of open space, forests, and historical sites. Each organization has a presence in Essex County and the Town of Middleton.

Tools and Resources

Local and regional organizations have a number of tools and resources available, both from public and private sources, that can help catalogue the Middleton's historic and cultural assets, help to raise awareness, advance preservation, and fund restoration and improvements.

Middleton's **demolition delay bylaw** is one strategy currently used to encourage preservation of historic town assets. A Special Town Meeting adopted The Demolition Delay Bylaw in October of 2002. Chapter 124 defines the intent and purpose of the Bylaw is to preserve and protect significant buildings and structures within the Town of Middleton that are outside local historic districts. The delay offers a six-month period of time to develop preservation solutions for properties threatened with demolition. This period of time can also be used to document historic or important architectural resources before they are lost from Middleton's cultural landscape. However, like similar ordinances in other communities, the bylaw does not ensure that a structure will not be demolished. Additional protections, such as preservation restrictions on individual properties or additional research to raise awareness of properties with historic value could assist in demolition prevention efforts.

The state agency charged with identifying, evaluating, and protecting "important historical and archaeological assets of the Commonwealth" is the **Massachusetts Historical Commission (MHC)**. MHC offers municipalities planning assistance, technical services, and grants. The Preservation Planning Division of MHC works with Local Historical Commissions and Local Historic Districts to evaluate local nominations for the National Register of Historic Places and oversees the State Register of Historic Places. The National Register of Historic Places gives national recognition to local sites. Additionally, the State Register of Historic Places includes all National Register of Historic Places listings, properties within local historic districts, local, state, and national landmarks, and properties with a Massachusetts General Law Chapter 184 Section 31-33 preservation restriction. National Register and State Register listings do not, on their own ensure preservation, but can help to raise awareness of historic value and open up funding opportunities for acquisition and rehabilitation of historic properties. The MHC Grants Division offers the Survey and Planning Grant Program and the Massachusetts Preservation Projects Fund.

MHC conducts research and maintains a historic resource database, the Massachusetts Cultural Resource Information System (MACRIS). MACRIS includes information about areas, buildings, burial grounds, objects, and structures with historical significance throughout the Commonwealth. All of the resources listed in this document have been recorded in the MACRIS database. As part of their research efforts, MHC produces Reconnaissance Survey Town Reports. It produced such a report for Middleton in 1986. The survey was designed to introduce the historical development of each of the Commonwealth's municipalities.

The **National Trust for Historic Preservation** is a private, nonprofit organization dedicated to saving America's historic places. Numerous resources for historic preservation are detailed on its website.

The **Secretary of the Interior publishes Standards for the Treatment of Historic Properties** which are available online and offer best practices and guidance for the preservation of historic properties. Under the National Historic Preservation Act (NHPA) the Secretary of the Interior is responsible for establishing professional standards and for providing guidance on the preservation of the nation's historic properties. The standards apply to all grants-in-aid projects assisted through the Historic Preservation Fund and are intended to be applied to a wide variety of resource types, including buildings, sites, structures, objects, and districts. The Standards address four treatments: preservation, rehabilitation, restoration, and reconstruction. The standards are regulatory for projects receiving historic preservation grant fund assistance and other federally assisted projects. Otherwise, the standards are intended to provide general guidance for work on any historic structure.

The **Community Preservation Act (CPA)** is a tool that Massachusetts cities and towns can adopt that allows municipalities to create local Community Preservation Funds that can be used for open space protection, historic protection, affordable housing, and outdoor recreation. The funding is raised through a surcharge on real property taxes, which can then be supplemented by funds from a statewide Community Preservation Trust Fund. The voters of Middleton adopted the Community Preservation Act (CPA) with a 1% surcharge at Town Meeting in May 2004 and at the ballot on November 2, 2004. The Community Preservation Committee (CPC) was authorized by the Annual Town Meeting in May 2004 with the Town Moderator as the appointing authority. The CPA requires that at least 10% of each year's funds be spent or reserved for open space, historic preservation, and affordable housing. CPA funds that are not expended in one year may be carried over to subsequent years.

The Middleton **Community Preservation Committee (CPC)** is primarily a source of funding, rather than an initiator of projects. Town Boards, Departments, and citizens may bring proposals for funding to the CPC. The CPC will give favorable consideration to those proposals that best meet the guidelines and goals that have been articulated. While the CPC does not have the power to appropriate funds for particular projects, Town Meeting may use CPA funds only with the recommendation of the CPC.

The following goals were adopted by the Community Preservation Committee on March 26, 2018. Goals in open space include:

1. Preserve Middleton's small town image,
2. Protect valuable water resources and unique wildlife habitat areas,
3. Increase and connect existing protected areas, and
4. Protect large tracts of undeveloped land.

Goals in recreation include:

1. Provide for better recreational utilization of currently town owned land and facilities, and
2. Decentralize appropriate activities to neighborhood locations.

Goals for Historic Preservation include:

1. Preservation and enhancement of municipally owned properties of historical, archeological, architectural or cultural significance,
2. Acquisition of threatened properties of particular historical, archeological, architectural, or cultural significance,
3. Encouraging the private sector to preserve assets of historical, archeological, architectural or cultural significance, and
4. Cataloguing resources of historical, archeological, architectural or cultural significance.

Goals for Affordable Housing include:

1. Meet local housing needs along the full range of incomes, while promoting diversity and stability of individuals and families in Middleton,
2. Ensure that new affordable housing is harmonious with the community and its neighborhood, and
3. Leverage other public and private resources to the greatest extent possible.

The following selection criteria were adopted by the Community Preservation Committee on March 26, 2018:

1. Consistency with Master Plan, Open Space and Recreation Plan and other planning documents that have or will receive wide community scrutiny and input,
2. Preservation of currently owned Town assets,
3. Affordability and provision for cost/funding that is compatible with the Town's financial plan,
4. Preservation of a resource or opportunity that would otherwise be lost,
5. Feasibility,
6. Involvement of multiple CPA purposes,
7. Involvement of multiple sources of funding, and
8. Compliance with Middleton Zoning By-laws

Public Input

Middleton residents were invited to participate in a visioning survey that was available online from November 2016 through January 2017. The survey was designed with input from the Master Plan Committee and the Town Planner to capture critical input from respondents. The responses from this survey combined with feedback received at meetings and community forums has informed a Master Plan Vision statement that frames the recommendations for all topics covered by the Master Plan.

The vision statement highlights the importance of historic and cultural resources in the Town by identifying its "distinctive history" and its "rich farming history." In the online survey several historic resources were identified as facilities in need of some or a great deal of repair. They included the Senior Center building (former Town Hall) mentioned by 62% of the respondents, the Fire Station building mentioned by 57% of the respondents, and Memorial Hall (Town Hall) mentioned by 57% of the respondents.

Residents were also asked to identify what they think would most improve the quality of life in Middleton, the quotes below represent several of the responses that were directly relevant to Historic and Cultural resources, including:

- I would like to see the Old Town Hall preserved.
- Anything that would keep the integrity and history of the Town intact. Events for both children and adults.
- Middleton is a rich historical area. I would like to see that history displayed in Middleton Village.

Recommendations

Goal 1: Enhance efforts to protect and maintain Middleton's historic and cultural resources.

Strategy 1.1 Create, maintain and update inventory list of properties with historical significance and highlight those properties that may be at risk.

Strategy 1.2 Form Preservation or Restoration Committee's for primary historic building resources, such as the Flint Library or Old Town Hall

Strategy 1.3 Form a support network for historic home owners to promote awareness of historic homes and connect homeowners to resources

Goal 2: Increase the local capacity to support and fund historical preservation efforts.

Strategy 2.1 Proactively identify a roster of potential CPA funded improvements and fund projects annually.

Strategy 2.2 Promote the successes of CPA funded activities, if needs outpace funding, then seek an increase in the annual percent of CPA rates.

Goal 3: Promote Middleton's historic resources to attract visitors to Town and reinforce local pride and amenities

Strategy 3.1 Develop a house, farm, cemetery, or architecture by foot and/or bicycle tour to promote Middleton's distinctive character and history. May be promoted as an annual event or self-guided tour, or both.

Strategy 3.2 Hold a Middleton Heritage Day festival to celebrate the town's history, perhaps in conjunction with a harvest festival to celebrate the agricultural heritage.

Strategy 3.3 Expand the presence of Middleton historic and cultural resources as part of the Essex National Heritage Area.

APPENDIX A

RETAIL MARKET ANALYSIS MIDDLETON MASTER PLAN

RETAIL MARKET ANALYSIS

The following retail market analysis for the Town of Middleton, Massachusetts (see Figure 2 for Town context) is comprised of five components that were examined in order to conservatively assess the potential to support additional retail square footage. The first component is the establishment of local and regional trade areas with reasonable walking and driving distances for the households within them.

The second component is a retail opportunity gap analysis that examines the "gap" or difference between actual retail sales figures and estimated spending of households on a variety of different types of retail goods and food establishments (both inside and outside of the trade area).

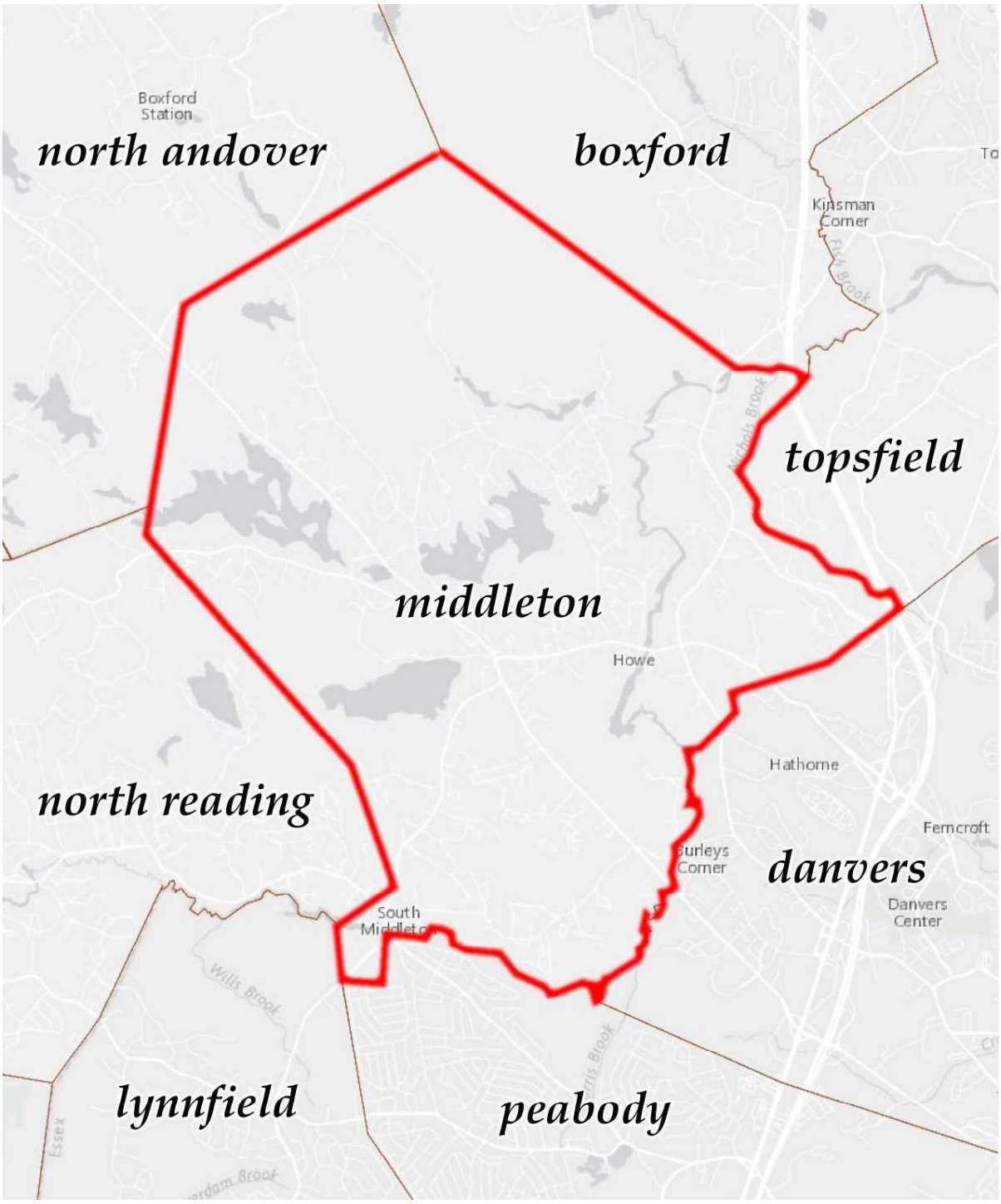
The third component is the determination and application of reasonable assumptions related to: (a) the amount of market demand the study area can conservatively be expected to "capture" from the larger trade areas; and (b) the conversion of those "gap" or "leakage" retail sales figures into square feet using assumptions for sales per square foot and typical retail floorplate sizes by retail subtypes.

The fourth component is a conservative estimate of the amount of spending that local workers can be assumed to do during commutes and lunch hours, and the number of establishments that these workers can support. Collectively, these first four components provide a snapshot in time of market demand for specific types of retail establishments with the greatest potential for success, and the approximate amount of square footage and number of establishments that the Town, chamber of commerce, and brokers could reasonably expect if they employ appropriate strategies to capture that market potential.

The fifth component is an inventory of the existing retail establishments within the study area and an assessment of how they compare to the typical mix of stores found in many downtown, mixed-use, walkable commercial districts.

Improving any of the square's shortcomings can make it more attractive and competitive so it can capture a part of the market demand from the retail trade areas.

Figure 1. Context Map of Middleton Boundary and Surrounding Communities



A. TRADE AREAS

In order to estimate the amount of additional retail that the Town of Middleton can support, it is important to first identify a trade area. The trade area is the geographic area from which a retail establishment generates sales. There are many factors to consider when determining a primary trade area including the distance and time that people may be willing to travel in order to reach a destination, any physical or geographic barriers as well as regional competition. For the Town of Middleton, the primary local trade area would include households within a ten minute drive from the central intersection of South/North Main (Route 114), Lake, and Central streets. This primary local trade area is highlighted in the green color in Figure 3 (next page) and represents a 10-minute drive from the downtown.

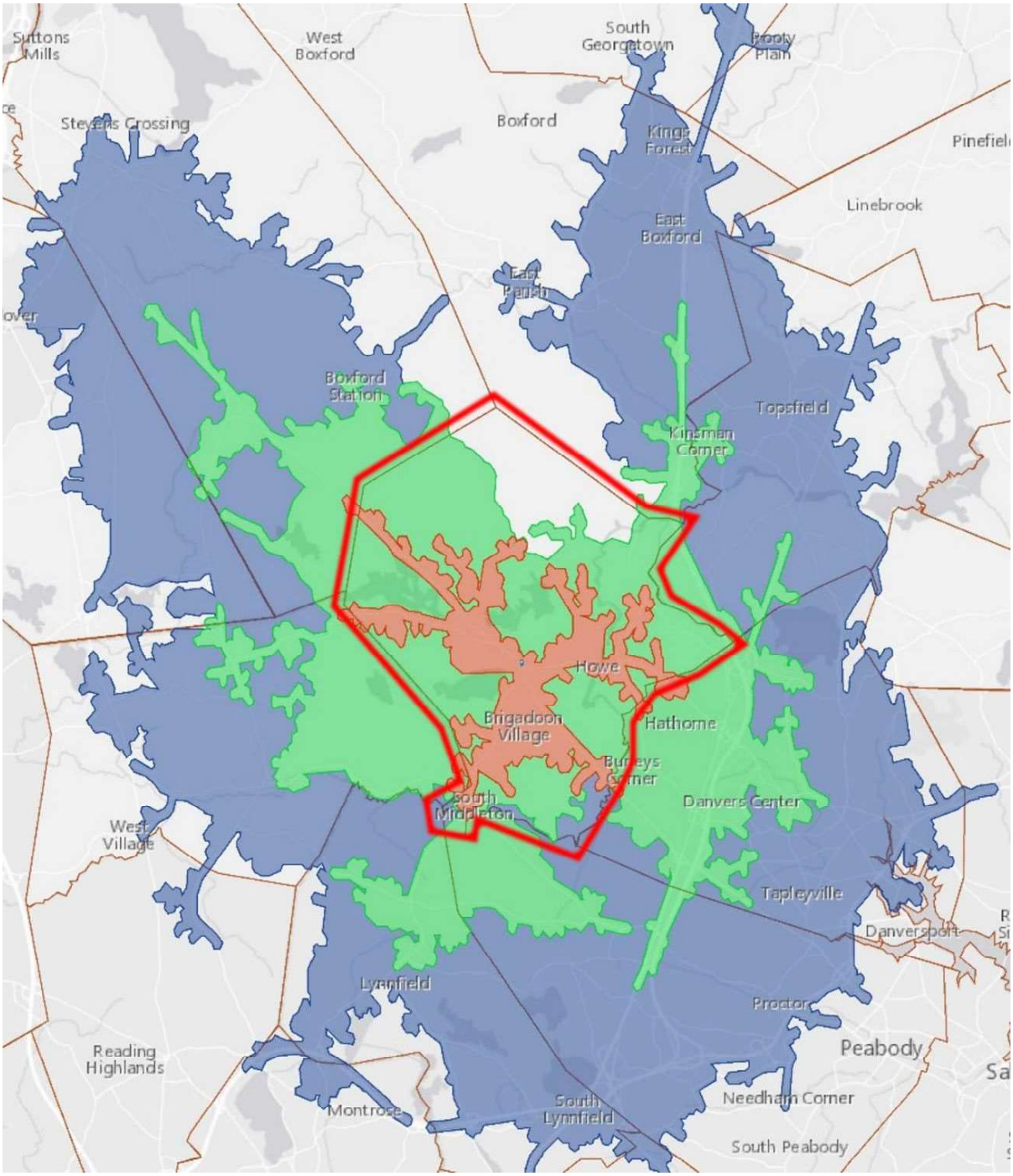
The primary local retail trade area largely contains the main roadways in the Town and extends as far south as Lynnfield, as far north as Boxford and North Andover, as far west as North Andover, and as far east as the Danvers Center. It is reasonable to assume that people who live within a 10-minute drive would be willing to travel the distance in order to attain goods and services within close proximity of the downtown Middleton.

There are 5,026 people in 1,293 households living within a 0-5 minute drive (hyper-local trade area in pink in Figure 3) of the downtown, and an additional 23,131 people in 8,364 households living within a 5-10 minute drive. These population figures represent about 53% of and 2.5 times the population[1] of Middleton, respectively. In order to determine if there are additional opportunities on top of those within the primary local trade area, MAPC staff also examined a secondary regional trade area of a 15 minute drive time. It is reasonable to assume that some people within a secondary regional trade area will be willing to travel a greater distance if there is a real destination, or popular restaurant or cluster of restaurants in a given place.

The secondary trade area is highlighted in blue in Figure 4 represents an additional 10-15-minute drive time toward the downtown Middleton's central intersection at South/North Main (Route 114), Lake, and Central streets. It includes the primary market, and extends as far south as the Lynnfield/Lynn/ Saugus border, as far north as Georgetown, as far east as the Danvers/Beverly border, and as far west as Andover. The secondary trade area's regional draw is important to the success of restaurants. There are an additional 82,588 people living in 30,930 households within an additional 10-15-minute drive toward downtown Middleton. The assumption regarding regional competition is that if there is market demand for development and the Town positions itself to create optimal local conditions within targeted areas of Middleton, the Town should be able to draw in businesses and customers from the region. If downtown Middleton is able to draw customers from farther away, the Town could support additional retail.

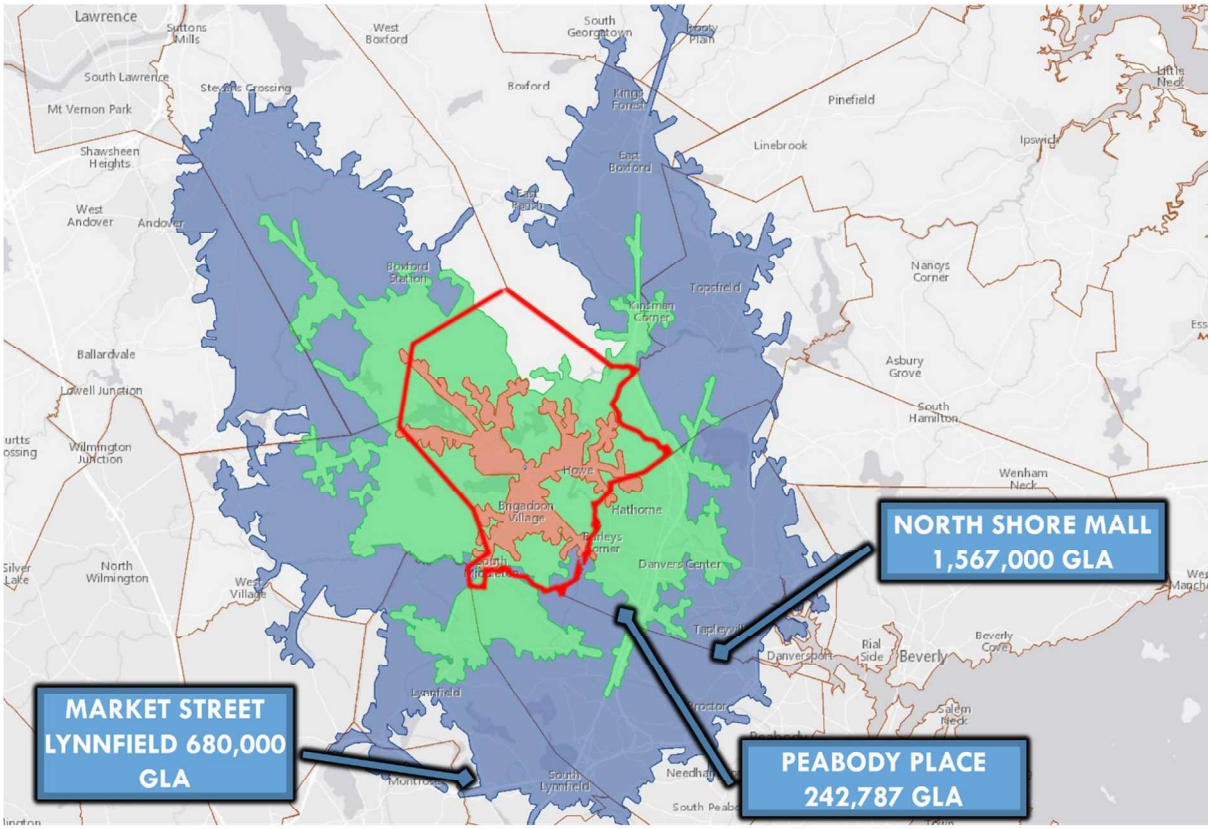
1 According to 2011-2015 American Community Survey 5-Year Estimates data, the population of the Town of Middleton is 9,436 residents.

Figure 3 Hyper-Local, Primary Local, and Secondary Regional Retail Market Trade Areas with Middleton Boundary in Red



As shown in Figure 4 there are approximately three major retail shopping centers within the 15-minute drive from downtown Middleton that will be direct competitors, including the North Shore Mall, Market Street Lynnfield, and Peabody Place. According to ESRI Business Analyst and Directory of Major Malls, Inc. data, these three shopping centers have approximately 2,489,787 gross feet of leasable area. This will be a limiting factor that will influence how much retail the market in Middleton will be able to support.

Figure 4 Regional Retail Trade Area Competition: Major Shopping Centers within Trade Area



B. RETAIL OPPORTUNITY GAP ANALYSIS

MAPC staff analyzed ESRI Business Analyst data within the defined trade areas in order to conduct a retail gap analysis. A retail opportunity gap analysis examines the "gap" or difference between actual retail sales figures and estimated spending of households on a variety of different types of retail goods and food establishments (both inside and outside of a retail trade area). If the demand exceeds the supply, there is "leakage," meaning that residents must travel outside the area to purchase those goods. In such cases, there is an opportunity to capture some of this spending within the market area to support new retail investment. When there is greater supply than demand, there is a "surplus", meaning consumers from outside the market area are coming in to purchase these goods and services. In such cases, there is limited or no opportunity for additional retail development.

Thus, the retail gap analysis provides a snapshot of potential opportunities for retailers to locate within an area. In addition to the gap analysis based on how much potential retail square footage can be supported by households, MAPC conducted an analysis for how much could be supported by local workers. Table 1 is a summary of the retail opportunity gap analysis by industry group for the primary local and secondary regional trade areas (see Figure 3). The dollar figures in parentheses and red are negative numbers indicate that there is a surplus of retail sales within the trade area (and that there is no untapped disposable income to be had). In other words, there is a significant amount of dollars being spent inside the trade area within that industry group, with many customers being drawn in from outside the trade area. It can be viewed as measure of success for the existing businesses within that particular industry group but also as a challenge for prospective businesses to set up shop and compete for customers. Figures in green are positive numbers that indicate a retail gap or "leakage" of missed opportunity to outside of the trade area and represent potential opportunities for more retail within the area.

Table 1 indicates that overall, the 9,657 households within the primary trade area (hyper-local and local) that are within a 10-minute drive can potentially support 12 retail establishments including 3 food and drink establishments. This was based on a conservative 10% capture rate assumption relative to the retail gap dollar amount in sales potential for a number of MAPC-designated "downtown and mixed- use oriented retail" NAICS uses with clothing, shoes stores and restaurants having the greatest potential ($8.4M, $4.1M, and $12.9M, respectively). The opportunities within the hyper-local 5-minute drive trade area were more limited (represented by the figures in red parentheses in the table) due to the lesser amount of households (1,293) to support businesses.

There are additional opportunities when considering the secondary/regional trade areas. Within this additional 10-15-minute drive trade area, the downtown and mixed-use oriented retail uses with the greatest potential for supporting approximately three additional establishments including a grocery store (with $149M in retail sales gap dollars in addition to $18M in the local trade area). As a point of clarification, due to the variation in the average sales per square foot and typical store floorplate sizes by type of retail establishment, higher sales figures do not necessarily translate into a supportable establishment if that retail business requires a bigger store floorplate or has to make higher sales per square foot in order to pay a lease.

The secondary regional trade area is particularly important to the success of potential restaurants which oftentimes draw on expanded trade areas. Restaurants do not only depend on spending from the households located within its trade area but also on customers who drive to or through the study area as well as local office workers during lunch and commute hours.

In addition to examining and converting sales dollars using conservative assumptions into potential supportable retail square footage, it is worth mentioning some of the consumer spending habits. These habits can offer insight into what types of retail might be successful in Middleton. Based on available data from ESRI and Infogroup (see Table 1), there seems to be minor differences between the hyper- local, local and regional retail trade areas with regards to median disposable income, median household incomes, and median age. The main difference is that the 1,293 households within a 5-minute drive of the hyper-local market have a larger average household size of 3.3 versus 2.6 in the local and regional trade areas. This may be indicative of families with children. According to ESRI's Tapestry demographics data, in terms of consumer spending habits, the hyper-local and local trade areas comprised mainly of ESRI Tapestry "Savvy Suburbanite" and "Pleasantville" households. The "Savvy Suburbanites" tend to be informed shoppers who seek out personal care services, prefer natural or organic products, are physically fit, and invest heavily in sports gear and exercise equipment. The "Pleasantville" households are not cost- conscious, prefer classic and timeless fashion, and seek out social activities such as museums and rock concerts. In addition to the opportunities for specific types of potential retail establishments identified by the aforementioned retail sales gap figures, the ESRI Tapestry consumer spending habits listed below can potentially offer existing and prospective businesses, zoning regulatory bodies, and the local Chamber of Commerce, insight and a strategy for permitting and attracting specific types of retail establishments.

Table 1. Household Spending Habits

ERSI Tapestry Demographics on Household Spending Habits

Source: ESRI, and INFOGROUP

	PRIMARY HYPER-LOCAL 0-5 MINUTE DRIVE	PRIMARY LOCAL 5-10 MINUTE DRIVE	SECONDARY REGIONAL 10-15 MINUTE DRIVE
Median Disposable Income	$72,312	$73,623	$69,716
Median Household Income	$102,423	$103,423	$98,708
Average Household Size	3.3	2.6	2.6
Median Age	43.1	45.1	46.0
ESRI Tapestry Household Spending Habits[1]	**48%** or 640 households "**Savvy Suburbanites**" - Segment 1D • **Informed shoppers** that do their research prior to purchasing and focus on quality. • There is extensive use of housekeeping and **personal care services.** • Foodies: They like to cook and prefer **natural or organic products.** • Physically fit, residents actively pursue a number of sports, from skiing to golf, and **invest heavily in sports gear and exercise equipment.** **24%** or 315 households "**Pleasantville**" – Segment 2B • **Not cost-conscious**, these consumers willing to spend more for quality and brands they like. • Prefer **fashion that is classic and timeless** as opposed to trendy. • Enjoy outdoor gardening, going to the beach, **visiting theme parks, frequenting museums, and attending rock concerts.** **17%** or 222 households "**Golden Years**" – Segment 9B • They **use professional services** to maintain their homes inside and out and minimize their chores. • Leisure time is spent on sports (tennis, golf, boating, and fishing) or simple exercise like **walking.** • Active social lives include travel, especially abroad, plus **going to concerts and museums.**	**30%** or 2,470 households "**Savvy Suburbanites**" - 2B Segment 1D • **Informed shoppers** that and do their research prior to purchasing and focus on quality. • There is extensive use of to housekeeping and **personal parks,** **care services.** • Foodies: They like to cook and prefer **natural or organic products.** • Physically fit, residents actively "**Savvy Suburbanites**" - pursue a number of sports, Segment 1D from skiing to golf, and **invest heavily in sports gear and** focus **exercise equipment.** **20%** or 1,687 households "**Pleasantville**" – Segment 2B • **Not cost-conscious,** these consumers willing to spend pursue more for quality and brands skiing to they like. **gear** • Prefer **fashion that is classic equipment. and timeless** as opposed to trendy. • Enjoy outdoor gardening, going to the beach, **visiting** picture- **theme parks, frequenting** continually **museums, and attending Home Depot rock concerts.** **17%** or 1,430 households "**In Style**" – Segment 5B • Attentive to price, they use busy coupons, especially **mobile** They work **coupons.** • Prefer **organic foods.** • Actively support the arts, **also theater, concerts,** and **regularly.** museums.	**20%** or 6,094 households "**Pleasantville**" - Segment • **Not cost-conscious**, these consumers willing to spend more for quality brands they like. • Prefer **fashion that is classic and timeless** as opposed to trendy. • Enjoy outdoor gardening, going the beach, **visiting theme** **frequenting museums, and attending rock concerts.** **17%** or 5,327 households "**Savvy Suburbanites**" - Segment 1D • **Informed shoppers** that do their research prior to purchasing and on quality. • There is extensive use of housekeeping and **personal care services.** • Foodies: They like to cook and prefer **natural or organic products.** • Physically fit, residents actively a number of sports, from golf, and **invest heavily in sports** **and exercise** **9%** or 2,861 households "**Professional Pride**" – Segment 1B • Residents take pride in their perfect homes, which they upgrade. They **shop at and Bed Bath & Beyond** to tackle the smaller home improvement and remodeling tasks but contract out the larger projects. • Consumers find time in their schedules for themselves. out in their home gyms, owning at least a treadmill, an elliptical, or weightlifting equipment. **They visit the salon and spa**

1 Consumer preferences are estimated from data by GfK MRI.

Table 2. Retail Opportunity Gap Analysis with Conversion of Sales Dollars Using Assumptions into Total Potential Retail Square Footage – Household Supportabl

TOTAL POTENTIAL RETAIL SQUARE FOOTAGE - HOUSEHOLD SUPPORTABLE - Sources: (a) ESRI and Infogroup; Retail MarketPlace 2017 Release; and (b) MAPC Select Retail Uses and Store Size/Sales Data

–MAPC Downtown and Mixed-Oriented Retail Uses Selected from ESRI NAICS Codes	NAICS	PRIMARY TRADE AREA - HYPER-LOCAL 0-5 MINUTE DRIVE *5,026 people in 1,293 households with median disposable income of $72,312*				PRIMARY TRADE AREA - LOCAL 5-10 MINUTE DRIVE *(this is NOT cumulative of the hyper-local subarea) 23,131 people in 8,364 households with median disposable income of $73,623*				SECONDARY REGIONAL TRADE AREA - 10-15 MINUTE DRIVE *(this is NOT cumulative) (important for restaurants - regional draw) 82,588 people in 30,930 households with median disposable income of $69,716*			
		Retail Gap Sales Dollars	Supportable Square Feet	Capture Rate 10%	Number of Stores	Retail Gap Sales Dollars	Supportable Square Feet	Capture Rate 10%	Number of Stores	Retail Gap Sales Dollars	Supportable Square Feet	Capture Rate 5%	Number of Stores
Furniture & Home Furnishings Stores													
Furniture	4421	($887,784)		0	0.0	$4,307,391	19,144	1,914	0.5	$1,558,026	6,925	346	0.1
Home Furnishings	4422	($30,549)		0	0.0	($5,410,314)		0	0.0	$923,699	4,618	231	0.1
Electronics & Appliance Stores	**443**	$2,855,466	12,691	1,269	0.2	$5,816,066	25,849	2,585	0.5	($7,439,400)		0	0.0
Building Materials, Garden Equip. & Supply													
Bldg material & Supply Dealers	4441	$1,156,439	7,710	771	0.1	($42,192,810)		0	0.0	$3,625,868	24,172	1,209	0.1
Lawn & Garden Equip & Supply Stores	4442	$305,682	1,652	165	0.0	($190,090)		0	0.0	$1,688,102	9,125	456	0.1
Food & Beverage Stores													
Grocery	4451	($31,195,629)		0	0.0	$17,942,576	49,840	4,984	0.2	$149,155,964	414,322	20,716	0.8
Specialty Food Stores	4452	$479,088	1,331	133	0.1	($6,728,580)		0	0.0	($3,605,477)		0	0.0
Beer Wine and Liquor	4453	($716,150)		0	0.0	($5,134,640)		0	0.0	($10,543,098)		0	0.0
Health and Personal Care	**446,4461**	($16,315,587)		0	0.0	($1,309,569)		0	0.0	($19,674,546)		0	0.0
Clothing & Clothing Accessories													
Clothing	4481	($4,854,640)		0	0.0	$8,379,592	41,898	4,190	2.1	($156,037,288)		0	0.0
Shoe	4482	$592,552	3,292	329	0.2	$3,541,640	19,676	1,968	1.0	($10,005,706)		0	0.0
Jewelry , Luggage and Leather Goods	4483	$573,565	1,289	129	0.1	$4,684,543	10,527	1,053	0.5	($4,960,823)		0	0.0
Sporting Goods, Hobby, Book and Music Stores													
Sporting Goods, Hobby, Musical Instrument	4511	($2,376,056)		0	0.0	$5,782,779	30,436	3,044	0.6	($4,885,468)		0	0.0
Book, Periodical and Music Stores	4512	$313,505	2,162	216	0.1	$2,094,629	14,446	1,445	0.4	($3,058,772)		0	0.0
Miscellaneous Store Retailers													
Florists	4531	$133,805	637	64	0.0	$1,154,008		0	0.0	$2,734,879	13,023	651	0.4
Office Supplies	4532	($268,121)		0	0.0	($570,393)		0	0.0	$3,036,008	21,686	1,084	0.3
Used Merchandise	4533	$45,659	304	30	0.0	$246,988	1,647	165	0.1	$2,927,736	19,518	976	0.5
Other	4539	$739,636	3,698	370	0.2	$1,545,358		0	0.0	($9,128,517)		0	0.0
Food Services & Drinking Places													
Special Food Services	7223	$280,787	1,003	100	0.0	$1,392,130	4,972	497	0.2	$5,828,587	20,816	1,041	0.3
Drinking Places - Alcoholic Beverages	7224	$417,169	1,159	116	0.1	$2,741,731	7,616	762	0.4	($2,150,477)		0	0.0
Restaurants/Other Eating Places	**7225**	($1,649,459)		0	0.0	$12,896,741	42,989	4,299	2.1	($36,314,144)		0	0.0
			Supportable Retail SF	Capture Rate 10%	Number of Stores		Supportable Square Feet	Capture Rate 10%	Number of Stores		Supportable Square Feet	Capture Rate 5%	Number of Stores
SUB-TOTALS *by non-cumulative trade area bands/rings*		*subtotal retail*	34,766	3,477	0.9		213,462	21,346	5.8		513,390	25,669	2.5
		subtotal food	2,162	216	0.1		55,577	5,558	2.7		20,816	1,041	0.3
		subtotal food & retail	36,928	3,693	1.0		269,039	26,904	8.5		534,206	26,710	2.8

TOTAL - POTENTIAL RETAIL SQUARE FOOTAGE - HOUSEHOLD SUPPORTABLE	Supportable Retail SF	Number of Stores
retail	50,492	9
food	6,815	3
food & retail	57,307	12

Of the 12 potential supportable retail establishments, the following are the predominant retail subtypes with the greater probability of being supported (if the Town can create the right conditions/incentives) by untapped spending dollars: (a) 2 restaurants totaling 4,299-SF, (b) 2 clothing stores totaling 4,190-SF, (c) 1 shoe store totaling 2,297-SF, and (d) 1 grocery store totaling 25,700-SF.

POTENTIAL RETAIL SQUARE FOOTAGE: HOUSEHOLD-SUPPORTABLE

MAPC staff uses a conservative capture rate to analyze the retail gap and understand the potential for additional establishments. This capture rate acknowledges that any single retail district will never be able to re-capture the full amount of retail leakage. Competition from regional shopping areas such as Peabody Place, the North Shore Mall, and the MarketStreet in Lynnfield (shown in Figure 4), and online shopping will always draw business away from the study area. When analyzing the market potential within the primary trade area, MAPC uses a 10% capture rate. When looking at market potential within the secondary trade area, MAPC uses a lower 5% capture rate. Using this methodology, the market within a fifteen minute drive time of the study area could likely support the industries detailed in Table 3.

Table 3. Retail Market Potential Estimate – Household Supportable

POTENTIAL SUPPORTABLE RETAIL SQUARE FOOTAGE & PREDOMINANT SUBTYPES		
Retail Trade Area	**Total Average # of Establishments (cumulative)**	
Primary Hyper-Local Trade Area • 0-5 Minute Drive Time • 1,293 households • 10% capture rate	1 store	
Primary Local Trade Area • 5-10 Minute Additional Drive Time • 8,364 households • 10% capture rate	8 stores	
Secondary Regional Trade Area • 10-15-Minute Additional Drive Time • 30,930 households • 5% capture rate	3 stores	
Total	12 stores 57,307 sf	
Predominant Subtypes	4,299 sf	2 restaurants
	4,190 sf	2 clothing stores
	2,297 sf	1 shoe store
	25,700 sf	1 grocery store

Source: ESRI Business Analyst, and MAPC

It is important to note that the data below is not a prediction for what will occur in downtown Middleton, rather it is an opportunity or estimate of retail space that could be supported based on the retail gap analysis figure, average sales per square foot of different store types, average store sizes in downtown areas, and an estimated spending capture within each trade area.

The **primary/hyper-local trade area** which covers the area within a 0-5-minute drive can potentially support almost 3,700-SF of retail use or approximately 1 storefront. The **primary-local trade area** which covers an additional 5-10-minute drive can potentially support more opportunities due to the larger number of households within it. This area can potentially support an additional 26,900-SF of retail or approximately 8 additional storefronts. Lastly, the market within the **secondary/regional trade area** could support additional regional opportunities within an additional 10-15-minute drive if the Town can overcome local challenges such as increased sewer capacity to support high-water uses such as restaurants, and create a safe walkable environment conducive to leisure and shopping. Overcoming this and other

obstacles can help downtown Middleton attract regional businesses. The households within this additional 10-15-minute drive could potentially support an additional 26,700-SF of retail or approximately 3 additional retail establishments.

In total, the entire 15-minute drive from the center of Middleton could potentially support a cumulative total of 57,300-SF of retail including up to 12 stores. Of the 12 potential supportable retail establishments, the following are the predominant retail subtypes with the greater probability of being supported (if the Town can create the right conditions/incentives) by untapped spending dollars: (a) 2 restaurants totaling 4,299-SF, (b) 2 clothing stores totaling 4,190-SF, (c) 1 shoe store totaling 2,297-SF, and (d) 1 grocery store totaling 25,700-SF.

When considering a strategy for attracting new retail establishments to a particular area, the Town and chamber of commerce should consider factors such as:

- Availability and quality of the retail space
- Size of the spaces available
- Location of the space- is this a place where many people are passing by?
- Foot traffic
- Rents and terms
- Parking- is it available nearby or within a short walk?
- Product or service price points
- Marketing
- Business plan and acumen
- Infrastructure capacity, zoning and regulatory obstacles
- Permitting and inspection processes

Although the potential exists for more retail, based on support from the numbers from the secondary trade area, the amount captured may be less, dependent on the above factors.

C. POTENTIAL RETAIL SQUARE FOOTAGE: WORKER-SUPPORTABLE

In addition to examining the potential supportable retail within the trade areas based on residential demand, MAPC used ESRI Business Analyst information to determine the potential for local workers to support retail during their lunch hour, and commutes to and from work[1]. As shown in Table 4, there are 244 workers employed within a 0-5-minute drive, an additional 1,120 within a 6-10-minute drive,
and an additional 3,647 workers within an 11-to-15-minute drive for a total of 5,011 workers. These are the number of workers that are assumed could be captured by the trade areas to support additional retail square footage given optimal conditions for attracting new business development and attracting customers to a pleasant environment. Given closer proximity, the assumption for the primary local and hyper-local trade areas was a higher capture rate of 20% for these 1,364 workers, and a lower 5% capture rate of the additional 3,647 workers within an additional 11-15-minute drive that forms the limit of the secondary regional worker trade area. Assuming these workers would respectively spend a conservative $20 and
$10 a week on food and convenience, it was estimated that only half of a typical small food/convenience store totaling 1,377-SF could be supported by workers. This figure is in addition to the 12 potential retail establishments shown in Table 3 that could be supported by residential demand.

Table 4. Worker Supported Retail Square Footage

WORKER SUPPORTED RETAIL	Local Worker Spending		Potential Supportable Retail	
	Number of Workers	Annual Spending (estimated)	Square Footage Retail	Number of Supportable Stores
Primary Hyper-Local Trade Area • 0.5 Minute Drive Time • 20% capture rate	244	$50,752	185	0.1
Primary Local Trade Area • 6-10 Minute Additional Drive Time • 20% capture rate	1,120	$232,960	847	0.3
Secondary Regional Trade Area • 11-15 Minute Additional Drive Time • 5% capture rate	3,647	$94,822	354	0.1
Totals	**5,011**	**$378,534**	**1,377**	**0.5**

Sources: (a) 2017 Infogroup, Inc., and Esri Total Residential Population forecasts for 2017; and
(b) MAPC local workers spending assumptions

1 According to the International Council of Shopping Center's (ICSC) June 2012 report by Joel Groover, titled "New Retail Frontier: Lunchtime Shoppers", local office workers spend approximately $100 dollars a week on food and convenience during the work week (during commutes to and from the office, or during the day, i.e., lunch.

Assumptions:

- 20% worker capture within primary trade area. $20/week spending per employee, primarily on food and convenience.
- 5% worker capture within secondary trade area. $10/week spending per employee primarily on food and convenience.
- Average sales per square foot for food and convenience of $275, and average store size of 2,500-SF

D. EXISTING RETAIL INVENTORY

In order to assess the current retail environment in the study area, MAPC analyzed retail inventory InfoGroup data from ESRI Business Analyst Online to understand the current mix of businesses in Middleton. According to InfoGroup and ESRI Business Analyst 2017 data, the Town of Middleton has 539 businesses and 5,415 employees. For the purposes of the retail market demand analysis, MAPC classifies the NAICS codes that ESRI BAO employs into retail uses that are more downtown and mixed- use oriented. The goal is to promote uses that are more conducive to promoting leisure and walkability, are associated with quintessential New England town centers, and lend themselves to compact smart growth development that is less auto-oriented.

According to the table (see Table 5), almost half (48% or 260) of Middleton's businesses are in retail, and employ approximately 38% or 2,082 people. MAPC compares the typical percentage range of retail
types found in downtown and mixed use areas with that of the Town of Middleton in order to understand which uses are under- or over-represented. The five retail subtypes are shoppers goods, convenience goods, food service, personal services, and professional services. Middleton overall seems overrepresented with professional services having 33% of its total businesses in this category while the typical downtown mix is 10%. The Town seems to have significantly less businesses in the other four categories:

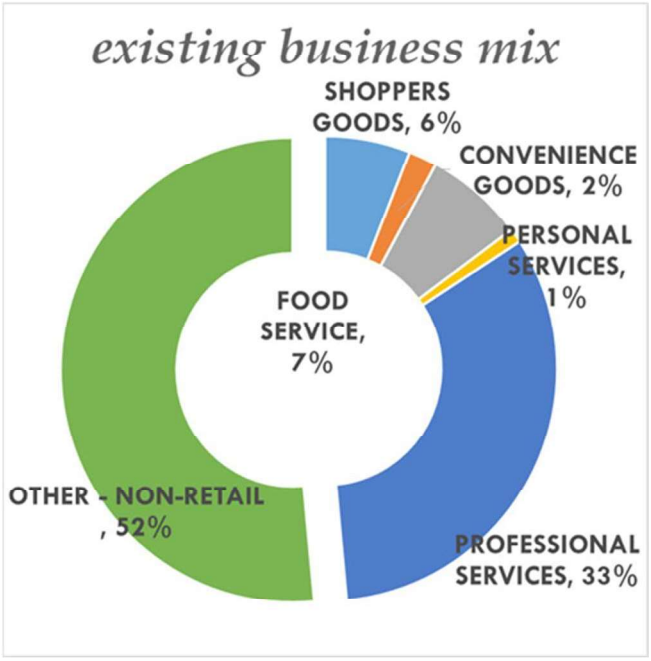
- with 6% shoppers goods businesses compared to 30-40% of a typical downtown area,
- 2% convenience goods shops versus the typical 20-30%,
- 7% food service establishments versus the typical 10-20%, and
- 1% personal services versus the typical 10-20%.

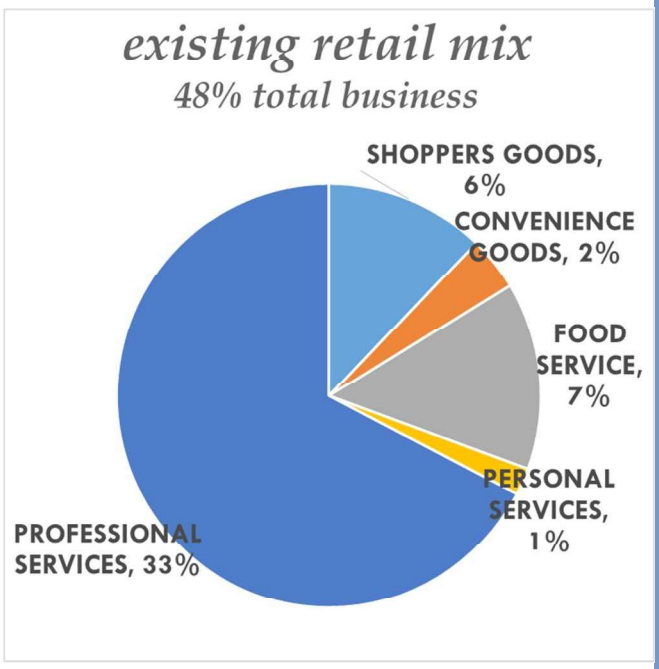
With regards to the number of workers its business employ, it is worth noting that food service establishments in Middleton represent only 7% of the Town total but employ 12% of its workers, and that professional service businesses represent 33% of the Town total but employ 20% of its workers.

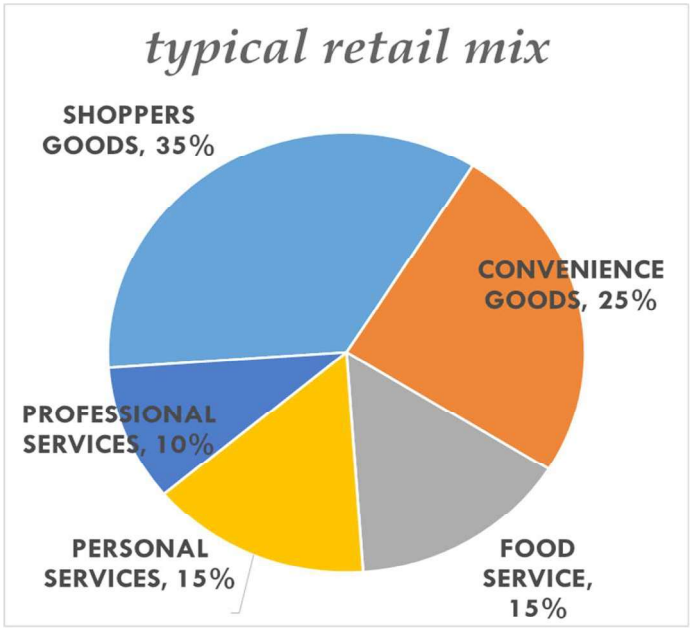
Table 5. Summary of Study Area Retail Inventory and Other Business Types

Existing Retail Inventory in Middleton by NAICS Codes and MAPC Downtown/Mixed-use Retail Types					
Retail - MAPC Downtown & Mixed-Use Oriented Industry Groups	**Businesses**		**Typical Downtown Business Mix**	**Employees**	
	Number	**Percent**	**Percent**	**Number**	**Percent**
Retail	**260**	**48%**		**2,082**	**39%**
Shoppers Goods	**31**	**6%**	**30-40%**	**234**	**4%**
Furniture & Home Furnishings Stores	10	2%		36	1%
Electronics & Appliance Stores	2	0%		20	0%
Bldg Material & Garden Equipment & Supplies Dealers	7	1%		50	1%
Clothing & Clothing Accessories Stores	6	1%		74	1%
Sport Goods, Hobby, Book, & Music Stores	6	1%		54	1%
Convenience Goods	**11**	**2%**	**20-30%**	**34**	**1%**
Miscellaneous Store Retailers	11	2%		34	1%
Food Service	**38**	**7%**	**10-20%**	**648**	**12%**
Food & Beverage Stores	11	2%		349	6%
Food Services & Drinking Places	27	5%		299	6%
Personal Services	**4**	**1%**	**10-20%**	**107**	**2%**
Health & Personal Care Stores	4	1%		107	2%
Professional Services	**176**	**33%**	**10%**	**1,059**	**20%**
Information	14	3%		213	4%
Finance & Insurance	22	4%		236	4%
Real Estate, Rental & Leasing	29	5%		139	3%
Professional, Scientific & Tech Services	45	8%		223	4%
Other Services	66	12%		248	5%
Other - Non-Retail	**279**	**52%**		**3,333**	**62%**

Table 6. Business Summary for the Town of Middleton







POTENTIAL STRATEGIES to attract additional retail

A. FLEXIBLE ZONING IN KEY AREAS TO ALLOW MIXED USE DISTRICTS

A better mix of retail, personal and professional service uses should be a goal of the Town's economic development strategy for the study area, and would help create a thriving business district. As part of an overall economic development strategy for the study area, the Town could build upon its two stronger business categories of restaurants and professional services. To do so, it will need a mixed-used strategy to support additional growth by increasing its residential base as well as creating a more pedestrian- friendly environment that might allow local workers the opportunity to walk to adjacent restaurants and convenience stores.

Given the limited amount of potential supportable retail, and the fact that retail uses thrive in close proximity to each other, and to other uses such as residential and office space, it is recommended that mixed-use zoning districts be created in targeted areas in order to create a compact retail/activity node. As part of the zoning strategy, front yard and side yard setbacks should be examined in order to reduce the distance between the buildings and front doors of retail establishments and developments, in order to encourage walking from one development to the next.

B. INVESTMENT IN SEWER INFRASTRUCTURE TO SUPPORT DESIRED RETAIL

Any future investment in enhancing sewer infrastructure could unlock the potential for more development. Currently, individual septic systems for business and residences limit what and how much can be built in the short term. Individual developments within the Town presently rely on their own private septic systems to treat their wastewater. Septic systems can treat a maximum of 10,780 daily gallons of wastewater, and this limits the amount of potential development to about 50 daily gallons
for 1,000 square feet of retail and 220 daily gallons for a two-bedroom dwelling unit. In particular, reliance on septic limits the type and amount of development, especially for restaurants and residential developments, which generate more wastewater that needs to be treated. Reliance on septic systems not only limits the redevelopment potential in Middleton but also the likelihood for mixed-use developments that are compact and could potentially encourage an attractive, walkable environment. According to
the survey conducted as part of the visioning for the Middleton Master Plan 2017-2028, many of the desired uses the Town wants for the study area, fare better when in close proximity to each other since the uses reinforce each other. Retail depends in part on residents in nearby homes and office workers. Office developers seek out "amenity rich" locations for their workers to be able to make convenient commute- time and lunch-hour purchases.

Development on septic is more likely to happen as single-use, smaller-scale, low-rise projects that oftentimes dot the streetscape in the form of linear strip mall developments. The separation of these developments from each other creates longer, unwalkable distances. The capacity limitation of 10,780 daily gallons makes it unlikely to achieve enough development of uses that rely on each other to be in close proximity. Ideally, these uses would be housed on the ground floors and upper stories of the same buildings for more efficient use of the land. When this pattern of compact development is replicated on adjacent parcels on both sides of a streetscape, the cumulative effect could be the creation of something akin to a traditional New England village center or main street business district or node.

C. LEVERAGE POTENTIAL TOWN CONSOLIDATION OF MUNICIPAL DEPARTMENTS AS A CIVIC ANCHOR FOR BUSINESS INVESTMENT

The Town of Middleton could further bolster pedestrian activity of its existing downtown area or other retail nodes by relocating and consolidating some of the offices of its municipal government departments into a single location. Such a public investment would bring additional employees and customers to support nearby businesses, and potentially attract investment from prospective businesses.

APPENDIX B

Visual Aid of Civic Anchor for Business Investment

Among the potential **strategies for attracting additional retail** listed in the Economic Development Element of this Master Plan and the associated Retail Market Demand Opportunity Gap Analysis, is the following strategy, which is also illustrated below with visual aids.

- Leverage potential Town consolidation of municipal departments as a civic anchor for business investment.

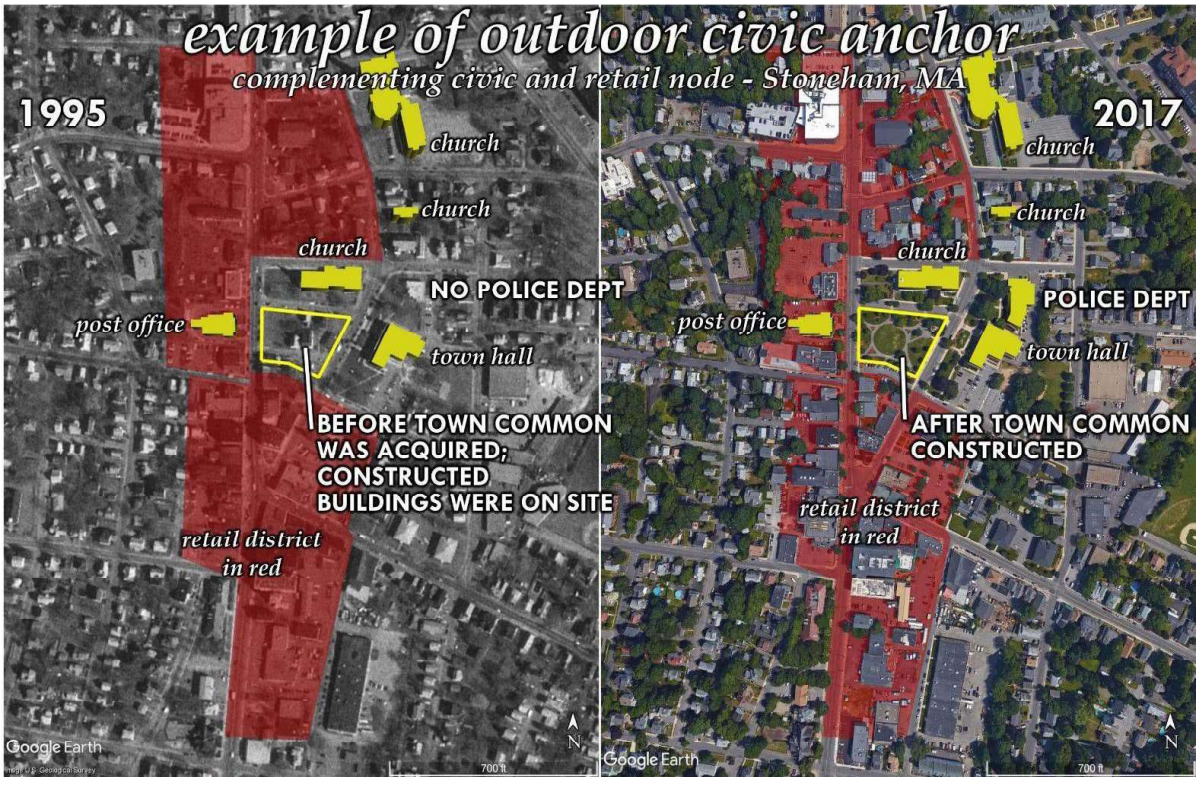


Aerial view of the Town of Norwood's Town Common flanked by civic and retail uses within comfortable walking distances

Indoor/Outdoor Civic Anchors

- The creation of an indoor/outdoor civic anchor can help towns achieve a variety benefits by joining **retail, civic and outdoor functions at a single location**.
- The consolidation of Town facilities/departments that are located in different parts of Town into a single Town/community center **benefits residents and property owners who need to visit such facilities.**

- The creation of an **adjacent, outdoor gathering space** that is **highly visible** from the street/ roadway can: (a) strengthen **sense of place** and Town character; (b) provide coincidental **recreational opportunities**; (c) **attract passersby** to community events; (d) and c**reate new frontages to attract investment** to and development of adjacent/nearby privately-owned properties, which can benefit from the **foot traffic** of consolidated Town center and open space, as well potentially **higher land values** due to adjacency to protected open space.
- Town can **explore ways to jointly create** modestly-sized but well-amenitized squares/parks and consolidated civic facilities through either: (a) the development of ideally located Town-owned land;
  (b) a land swap of Town-owned land and geographically-separated Town facilities; (c) the sale of Town-owned land in order to purchase a centrally-located site near existing retail uses; and/or (d) incentivize through zoning bonus heights/FARs, the creation of a mixed-use retail development with a well-sited publicly-accessible plaza and an indoor, publicly-accessible community gathering space (this option however would not include the consolidation of publicly-owned Town departments/ facilities).



APPENDIX C

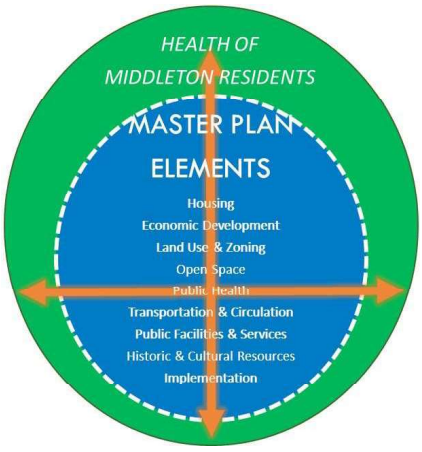
PUBLIC HEALTH

Key Findings

Health starts long before illness – it begins in homes, schools, and jobs. Given this connection, the following section provides a brief assessment of the Town's health status and conditions, and identifies strategies to sustain healthy living and outcomes among residents, from childhood to later in life.
Highlights of the assessment and strategies are:

- Middleton is served by strong Health Department and Board of Health that addresses environmental health and community health issues
- Residents of Middleton generally enjoy healthier outcomes and engage in healthy behaviors more than residents of other towns in the Commonwealth.
- Health issues that could pose potential risks include premature mortality, substance use disorder, mental health challenges from younger residents, an elevated cancer rate, and an aging population.
- The town has the opportunity to explicitly integrate more health considerations into its planning and development processes in order to reduce the risk of injury, increase daily physical activity and health eating, and become a more age friendly community.

Figure 1. Public Health Element: Independent and Integrated



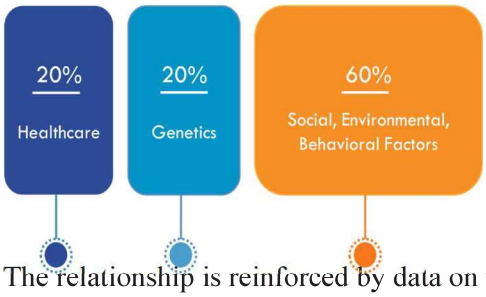
Purpose

The purpose of the Public Health element is to: understand current health conditions and behaviors, assess risks and opportunities presented by built, natural and social environments; and propose how to achieve healthier outcomes through community design strategies and services. The element also considers how certain populations in town may experience disproportionate impact due to factors such as geography, ethnicity, income, age, or other characteristics.

The Public Health element also links to other elements of the Master Plan (Figure 1). It presents new data or different perspectives on how current conditions in other elements, such as those addressing housing, mobility, and open space and recreation, can contribute to healthier outcomes for residents. Furthermore, the Public Health element provides evidence-based and –informed strategies that should inform policies, projects, and decisions regarding implementation of the Master Plan. And lastly, the element integrates the perspective of local public health by including the Health Department in the planning process and future decisions around community change.

Public Health Relationship to Planning and the Built Environment

Figure 2. Factors responsible for population health



More and more evidence shows that how we plan and build communities affects the health and wellness of residents. Although these figures are not exact, collective research focused on the history of the causes of disease suggests that roughly 60% of our health is determined by social, environmental, and behavioral factors shaped by the context in which we live (Figure 2).[1]

The relationship is reinforced by data on the health issues and leading causes of death in the United States. The country is experiencing increasing levels of chronic diseases like obesity and diabetes and more and more people are dying from preventable diseases like heart disease, strokes, and lower respiratory diseases.[2] Yet, it is known that these issues are preventable because they are the result of behaviors, choices, and influences dictated predominantly by a community's surrounding environment.

Understanding the connection is important: it provides impetus for developing communities that provide more opportunities for healthy living. Planning plays a key role in engaging community members in developing a vision for the future, setting the conditions for what and where changes will occur, and ultimately creating places which protect and promote health.

Policy, Systems, and Environmental Changes

Public health has often defaulted to trying to intervene with or treat the individual. Approaches that addressed the individual, like personalized walking programs or diets, have had, and continue to have, beneficial effects. Individuals are provide with a guide to healthier choices that they may not have thought of or experienced. While this approach has had effects, it has not been enough to reduce the increase in chronic disease at a community or population level; it also has tended to require significant resources, like those needed to keep or expand programs.

1 McGinnis, J. M., Williams-Russo, P., & Knickman, J. R. (2002). The case for more active policy attention to health promotion. Health Affairs, 21(2), 78-93.
2 U.S. Centers for Disease Control and Prevention, Deaths: Final Data for 2013, Table 10

More recently, public health has begun to adopt a policies, systems, and environmental (PSE) change framework as a parallel intervention (Figure X).

Figure 3



Source: Adapted from The National Association of County and City Health Officials definition of PSE Changes

Community Health System

Health Department and Board of Health

Middleton is served by its Health Department. The department's mission is to improve public health through promoting an individual's well-being, preventing disease, and protection of an individual's health within the community.

The health department assists the town in meeting public health regulatory requirements and works with the Board of Health to support the 10 essential functions of public health:

1. Monitor health status to identify community health problems.
2. Diagnose and investigate health problems and health hazards in the community.
3. Inform, educate, and empower people about health issues.
4. Mobilize community partnerships to identify and solve health problems.
5. Develop policies and plans that support individual and community health efforts.
6. Enforce laws and regulations that protect health and ensure safety.
7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable.
8. Assure a competent public health and personal healthcare workforce.
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
10. Research for new insights and innovative solutions to health problems.

Middleton in Motion

Middleton in Motion is a public health effort by the Middleton Health Department to promote physical activity and healthier lifestyles and opportunities within the community[i]. The effort is modeled after the Massachusetts Department of Public Health's (MDPH) Mass in Motion (MiM) initiative.

Middleton in Motion seeks to make policy, systems, and environmental changes and advance programs that integrate healthier options into everyday living for all residents, regardless of age, income, or background.

Work to date has include:

- The use of social media to connect Middleton Residents through physical activities and healthier lifestyle events (i.e. hiking events, canoe trips, nature walks, etc.)
- Creation of the Hiking for Health &History in Middleton booklet that provide residents with hiking trails and canoe trips that can be used to get exercise while exploring the history of the town.
- Promotion of a Complete Streets policy and implementation program for the town.

Board of Health

The Middleton Board of Health Local oversees the town's responsibilities related to state statutes and regulations for the protection of public health, disease control, promotion of sanitary living conditions, and the protection of the environment from damage and pollution. The board is comprised of five members and are staffed by the town's Health Department.

Healthcare Access

The Town of Middleton is located within the primary or secondary service area of two hospitals. These are:

- Lawrence General Hospital, which is a private, non-profit community hospital that serves the Merrimack Valley and southern New Hampshire. The hospital is clinically affiliated with Beth Israel Deaconess Medical Center and Floating Hospital for Children at Tufts Medical Center.[ii]
- Beverly Hospital, which is a private, non-profit community hospital that serves the North Shore and Cape Ann. It has two locations (Beverly and Gloucester) and is part of the Lahey Health System, Inc.[iii]

Town residents report a preference for receiving care from numerous medical and health care providers[3]. They include the two hospitals above as well as Massachusetts General Hospital (Danvers), Lahey Medical Center (Peabody), and North Shore Medical Center (Salem)[iv].

There are no community health centers or related satellite.

Public Health Organizations and Coalitions

Middleton is part of Community Health Network Area (CHNA) 11 along with four other municipalities (Andover, Lawrence, Methuen, and North Andover) . CHNAs were established by the MDPH in 1992 and 27 networks were created to cover all of the cities and towns of Commonwealth.

3 Draft results from 2016 Town of Middleton Community Health Needs Survey

The purpose of the CHNAs were to:

- Eliminate racial and ethnic health disparities and their social determinants
- Promoting wellness in the home, workplace, school, and community
- Preventing and managing chronic disease

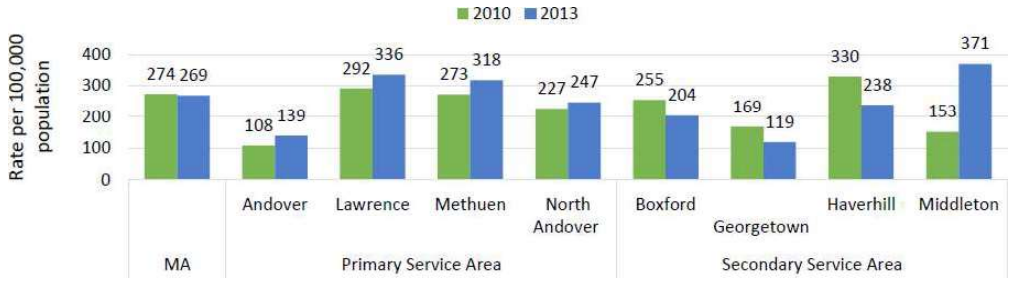
Community Health Profile/Existing Conditions

Health data can reveal what health issues are currently being experienced by Middleton residents and provide a look into how health issues might change in the future. Data particular to hospital and emergency room visits reveal acute issues that are affecting residents. Health behavior and risk data provides the glimpse into what health issues might persist, which might arise, and which may fall away.

Two limitations to note are that health data typically lags by one to several years and for areas with small populations, data may be limited due to low numbers and privacy restrictions. So, the health information cited below and in the following sections, while sometimes several years old, represents some the most up to date publicly-available data for Middleton.

Middleton was one of the assessed municipalities that reports the highest premature mortality rates and that its rate was above the state's as of 2013.[4]

Figure 4. Premature Mortality Rate per 100,000 Population



Source: LGH and GLFHC CHNA, 2016[5]. Data source: Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluations, Massachusetts Deaths. Note: Premature Mortality Rate is defined as deaths that occur before the age of 75 years per 100,000, age-adjusted to the 2010 U.S. standard population under 75 years of age

4 Note: Confidence intervals were not include in data so at this time the identified differences cannot be statistically distinguished.

5 Lawrence General Hospital & Greater Lawrence Family Health Center Community Health Needs Assessment2016

Understanding health data

Due to the way that health data are collected, all data for Middleton are estimates generated based on larger collections of data, from sources including the Massachusetts Department of Public Health (MDPH) and the Center for Health Information and Analysis (CHIA). Here is how the numbers for each type of data are generated:

- **Hospitalizations.** These data are based on the place of residence listed on hospital discharge forms. Hospitalizations are age adjusted rates of hospital discharges per 10,000 people or per 100,000 people. The reason data are age adjusted is that older people
  are typically more susceptible to illnesses than those who are younger, and therefore populations with greater proportions of older residents may look artificially less healthy than others. These data are therefore "adjusted" for age to ensure that populations with differing age distributions can be meaningfully compared to each other.
- **Disease prevalence and Health Behavior**. These data are statistical estimates calculated by MDPH based on the Behavioral Risk Factor Surveillance System Survey. In order to provide data for more Massachusetts communities, MDPH includes town level estimates that may be based on relatively few respondents or have standard errors that are larger than average. The confidence interval for some of these communities is therefore wider than the normal limits set by MDPH. Therefore, the estimate for this town should be interpreted with caution.
- **Youth Data.** All data on Middleton youth are based on the Youth Risk Behavior Survey, administered to middle and high school students every other year by The Coalition, a program of Tri-Town Council.
- Aging Population Data. All data for populations over 60 are derived from the Massachusetts Health Aging Collaborative Community Profiles. More information on the methodology can be found here.

How to interpret the numbers

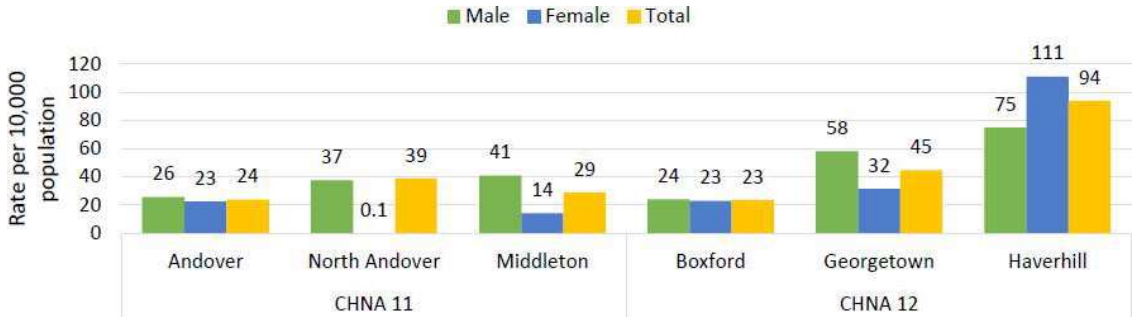
All quantitative health data presented is based on estimates and should therefore be interpreted as such. These data, as is true for any qualitative data included in this report, should be used to guide and prioritize recommendations and Town decisions.

Health Indicators

Chronic diseases like cardiovascular disease, asthma, and cancers are among some of the most important contributors to wellbeing and premature mortality in the United States[6]. Each also has research identifying external and behavioral factors – factors affected by built, social, and natural environments – as potential contributors to the presence of these diseases in communities.

Asthma is a condition where a person's airway become inflamed and constricted, making it difficult to breathe. The development of asthma is complex, resulting from an interaction among a person's genetics, social situations and environmental exposures such as tobacco smoke, allergens, and air pollution (including emissions from vehicles). Middleton's residents experience have emergency department visits, on the whole, than residents of nearby municipalities and have a lower rate than the state (74 per 10,000 population).

Figure 5. Age Adjusted Rates of Emergency Department Visits Rate per 10,000 Population

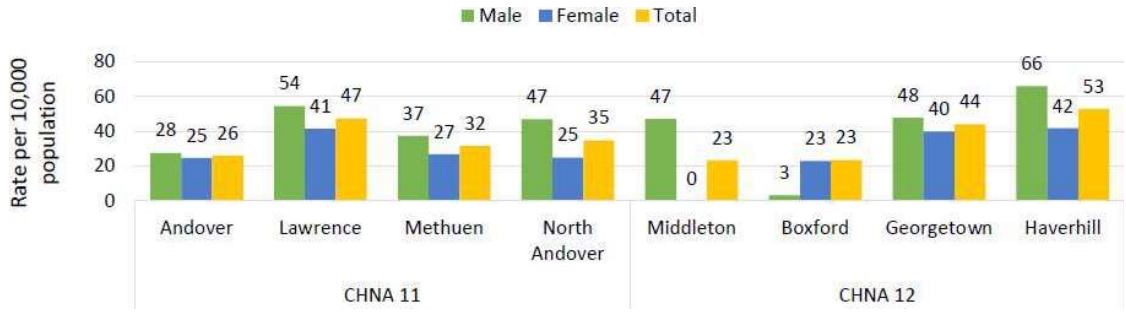


Source: LGH and GLFHC CHNA, 2016[7]. Data source: Massachusetts Center for Health Information and Analysis (CHIA). Data for Methuen unavailable

heart disease and stroke are two of the leading cause of death in the US[8]. In addition, many who experience cardiovascular-related diseases can experience lower quality of life and take on significant additional costs to manage or treat their conditions. Residents of Middleton have a lower rate of heart attacks and stroke hospitalizations than many of their surrounding municipalities and the state (31 per 10,000).

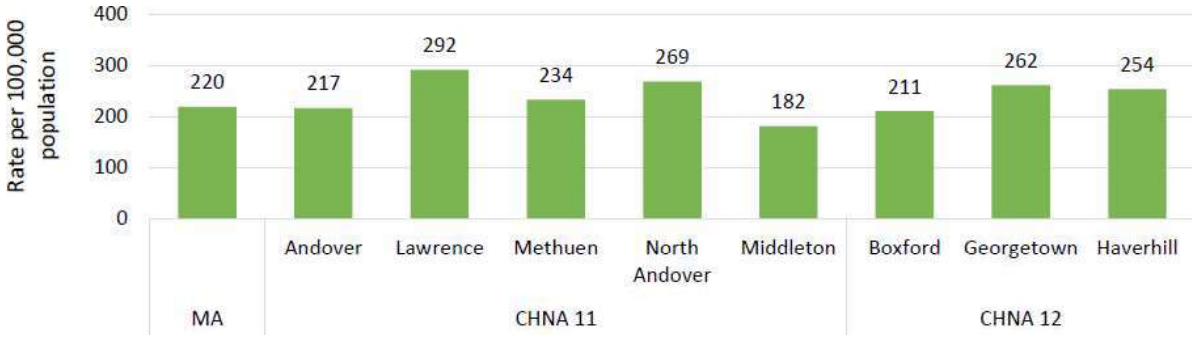
6 Danaei, Goodarz, et al. "The preventable causes of death in the United States: comparative risk assessment of dietary, lifestyle, and metabolic risk factors." PLoS Med 6.4 (2009): e1000058.
7 Lawrence General Hospital & Greater Lawrence Family Health Center Community Health Needs Assessment2016
8 Centers for Disease Control and Prevention, National Center for Health Statistics Mortality in the United States, 2016. https://www.cdc.gov/nchs/products/databriefs/db293.htm

Figure 6. Rate of Heart Attack Hospitalization per 10,000 Population



Source: LGH and GLFHC CHNA, 2016[9]. Data source: Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluations, Massachusetts Deaths

Figure 7. Age Adjusted Rate of Stroke Hospitalization per 100,000 Population

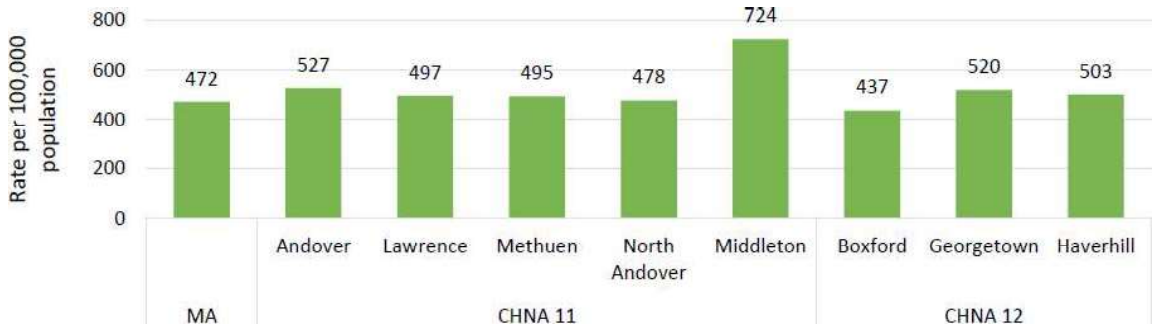


Source: LGH and GLFHC CHNA, 2016[10]. Data source: Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluations, Massachusetts Death

The second leading cause of death in the US is cancer. While cancer can come in various forms, many can be prevented by addressing behavioral factors (e.g., smoking) and environmental exposures (e.g., pollution). Middleton appears to experience a higher rate of cancer-related deaths than nearby cities and towns as well as the state (472 per 100,000).

9 Lawrence General Hospital & Greater Lawrence Family Health Center Community Health Needs Assessment 2016
10 Lawrence General Hospital & Greater Lawrence Family Health Center Community Health Needs Assessment 2016

Figure 8. All-Site Cancer Death Rate per 100,000 Population Community

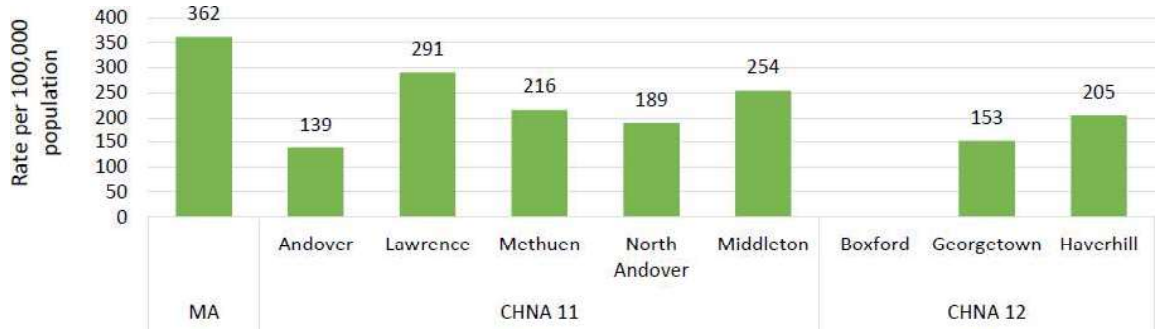


Source: LGH and GLFHC CHNA, 2016[11]. Data source: Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluations, Massachusetts Deaths

Substance use disorder affects Massachusetts and has affected the state's cities and towns through increases in overdoses and deaths. Nationally, deaths attributable to substance use, opioid use in particular, has been indicated as a contributor to decreasing life expectancy rates. Middleton has a higher rate of substance abuse hospitalizations than most of its neighboring municipalities but its rate is lower than the state's.

Middleton has had 11 deaths reported due unintentional opioid overdose during the period 2013-2017[12]. By comparison, the cities of Lawrence and Haverhill have had 143 and 138 deaths reported over the same period, respectively.

Figure 9: Rate of Substance Abuse Hospitalization per 100,000 Population



Source: LGH and GLFHC CHNA, 2016[13]. Data source: Massachusetts Department of Public Health. Note: Boxford rate suppressed for patient confidentiality

11 Lawrence General Hospital & Greater Lawrence Family Health Center Community Health Needs Assessment 2016
12 Source: Massachusetts Department of Public Health, Number of Opioid1-Related Overdose Deaths, All Intents by City/Town 2013-2017. Note: This report tracks all opioid-related overdoses due to difficulties in reporting heroin-associated overdoses separately. Many deaths related to heroin are not specifically coded as such due to the fast metabolism of heroin into morphine.
13 Lawrence General Hospital & Greater Lawrence Family Health Center Community Health Needs Assessment 2016

Health over the Lifespan: Age Specific Health

Data specific to youth and older adults are included here. The purpose is to provide a spotlight on populations that are more susceptible to changes that can either promote or provide lifelong health and wellness.

Health Indicators: Youth

Childhood and youth are critical periods for physical and mental development and a time when external factors such as significant personal or social events (e.g., housing instability, trauma) or exposure to pollutants can adversely affect development. Similarly, engagement in prosocial and healthy behaviors can serve as protective factors that improve health outcomes and prevent illnesses. Many municipalities use youth surveys to gather information from you about their health and their experiences growing up in healthy environments. Middleton is part of the Masconomet Regional Schools which conducts such surveys.

The Tri-Town Council conducts the Youth Risk Behavior Survey (YRBS) for the middle and high schools and has conducted it every two years since 2010. The surveys collect student self-report responses to questions about behaviors, substance use, weight and physical activity, and mental health, among other information. A summary of results are presented below for the 2016 surveys and results are compared to previous survey results (e.g., 2014), which would represent responses from previous classes of youth.

Highlights of Middle School 2016 YRBS (7th and 8th grades)[14]

- Less than 10% of youth reported lifetime or current substance use (alcohol, cigarettes, marijuana, prescriptions, or inhalant). Percentages of reported substance use by MASCO Middle School students in 2016 were below state percentages.
- One in 10 students reported stress was a problem always and nearly 25% reported it was a problem often. The reported proportions were higher in 2016 than 2014.
- More students reported in 2016 signs of clinical depression[15] (approx. 14% vs 9%) at some point and having hurt themselves (approx. 5% vs 3%) than in 2014.
- Nearly 75% of youth reported they had an adult to confide in and 50% or more appeared to feel valued based on their responses to several questions. However, lower percentages than in the 2014 survey reported feeling like their peers or adults in the Tri-Town community cared about them as person (54%).
- More than 8 in 10 respondents reported engagement in sports, extra-curricular activities or community service, which was a higher percentage than those reporting involvement in after- school activity in 2014

14 Tri-Town Council, Masconomet Middle School 2016 Youth Risk Behavior Survey Results. March 2017.
15 Defined as "feeling sad or hopeless almost every day for two weeks or more in a row."

- Approximately 20% of respondents reported seeing themselves as overweight, which is similar percentage to the previous survey. By comparison, about one in three reported trying to lose weight, which was a higher the 31% reported in 2014. Most cited exercise or calorie reduction as their weight loss methods.
- Mostly all youth responded that they had been physically active for at least 20 minutes for one day over the past week, which is similar to the percentage from 2014.
- More than 80% of youth reported eating fruits or vegetables at least 4 times in the past week.

Highlights of High School 2016 YRBS (9th through 12th grade)[16]

- Masconomet High School students report lower percentages of substance use than the state and since 2014 the percentage reporting substance use has declined across most categories with the most notable being cigarettes and prescription drugs.
- Approximately 20% of respondents reported always experiencing stress which was similar to the reported proportion in 2014. The most common cited sources of stress were: school work, self- expectations, getting into college, and parental expectations. The percentage who reported talking with friends, talking with parents, and using exercise or yoga to manage stress were all higher in 2016 than in 2014.
- Approximately 15% of high students indicated that they experienced signs of clinical depression at some point during the past year. Just under 10% reported seriously considered suicide and nearly 2% attempted suicide – both percentages were lower than in 2014.
- About 1 in 10 engaged in self-harm – significantly lower than in 2014 (9.2% vs 13.4%).
- Seventy-five percent of youth reported having at least one adult at school they could talk with and less than 5% reported that they had no one outside of school to confide in.
- Seventy-five percent of respondents reported that they did community service work, an increase from 2014.
- Approximately 25% of students reported that they saw themselves as overweight and 40% reported that they were trying to lose weight, with the majority citing exercise and nutrition as their method.
- Ninety percent of students reported that they engaged in aerobic exercise in the past 7 days
- Approximately 25% of students reported eating fruits or vegetables at least 4 times in the past week.

16 Tri-Town Council, Masconomet High School 2016 Youth Risk Behavior Survey Results. March 2017.

Table 16

Health Metric	Middleton	State	Performance
WELLNESS and PREVENTION			
% any physical activity within last month	77.10%	72.40%	No difference
% injured in a fall within last 3 months	2.90%	5.10%	No difference
% with self-reported fair or poor health status	18.10%	20.70%	No difference
% with 15+ physically unhealthy days last month	15.10%	14.00%	No difference
NUTRITION/DIET			
% with 5 or more servings of fruit or vegetables per day	27.40%	24.90%	No difference
% obese	16.80%	22.60%	No difference
% high cholesterol	75.30%	73.60%	No difference
% current smokers	8.30%	9.10%	No difference
% excessive drinking	11.10%	9.20%	No difference
MENTAL HEALTH			
% with 15+ days poor mental health last month	4.10%	6.70%	No difference
% satisfied with life	97.70%	95.80%	Better
% receiving adequate emotional support	82.60%	80.70%	No difference
% ever diagnosed with depression	27.80%	28.60%	No difference
CHRONIC DISEASE			
% with diabetes	26.70%	32.10%	Better
% with stroke	11.00%	12.60%	No difference
% with chronic obstructive pulmonary disease	19.90%	23.30%	Better
% with asthma	11.10%	11.80%	No difference
% with hypertension	74.20%	77.50%	Better
SUMMARY CHRONIC DISEASE MEASURES			
% with 4+ chronic conditions	58.00%	61.5%	No difference
% with 0 chronic conditions	7.20%	7.8%	No difference
LIVING WITH DISABILITY			
% disabled for a year or more	26.50%	31.00%	No difference
SAFETY			
# of motor vehicle fatalities involving adult age 60+/ town	0	484	---
# of motor vehicle fatalities involving adult age 60+/county	47	484	---

Health Indicators: Older Adults

Massachusetts is set to experience growth in the number of residents who are 65 years old and older. The growth in the number of older residents will challenge how infrastructure is built, what services are offered, and how and where these residents interact with the rest of the community.

The older population in Middleton is projected to grow at a rate faster than the town overall during the next couple decades. The number of residents ages 65 and over in Middleton are estimated to increase by more than 135% over the 2010 population and could account for more than quarter of the town's overall population by 2030.

The Massachusetts Healthy Aging Collaborative has developed municipal profiles for cities and towns that show the health of older residents. This dataset provides detail for a population that may or may not reflect general health trends for the town. Data for Middleton is presented on Table 16.[17]

These data show that on nearly each measure the older population in Middleton is line with or better off than the state's performance. While Middleton's older residents appear better in a relative sense, the percentages themselves provide useful information to consider. For example, the data indicate that older residents are receiving emotional support, mostly satisfied with life, and have healthy behaviors that
include physical activity and eat fruits and vegetables daily. In contrast, the data convey that more than a quarter of the older adult population has dealt with depression and has a disability and that over half live with multiple chronic health conditions.

These are starting points for the town. In addition to accommodating aging residents, many of the changes cited above also support the concept of an 8 80 community. This concept holds that if we design a place that is great for an 8 year old and for an 80 year old, then it will be a place that is great for the entire community . So while the changes might seem specific to older residents, they reinforce many of the opportunities cited in the earlier sections of the Public Health element.

Healthy Community Design Assessment

Food: access to healthy affordable foods

Research suggests that access to healthy and nutritious foods in neighborhoods may play a critical role in residents' diets[vii]. The choices that residents have and make regarding their diet are associated with risks for chronic diseases, such as Type 2 diabetes, hypertension, and overweight and obesity[viii].

17 Interpretations about whether or not the Town is performing better, worse, or no differently than the state average are based on statistical significance. Statistical significance in this case was derived by the Massachusetts Healthy Aging Collaborative and is based on 95% confidence intervals. For specific information on how these were calculated, please visit: https://mahealthyagingcollaborative.org/data-report/explore-the-profiles/data-sources-and-methods/#data

Most research related to food access has focused on supermarkets, which provide offer a greater variety of healthy foods that are generally higher quality and more affordable when compared to smaller food stores. Although some discrepancy exists in the literature, poor supermarket access has been linked to increased rates of poor health outcomes such as diabetes, cardiovascular disease, and obesity when compared to neighborhoods that have supermarkets[ix].

Current Conditions

Middleton residents do better than the state when it comes daily consumption of fruits and vegetables. Middleton residents report have higher average prevalence of eating 5 or fruits or vegetables daily than the state, which has tended to average around 20%[18].

The town has one full service grocery store, Market Basket. The store is located on Route 114 in the southeastern portion of the town. There are two specialty food outlets as well in Middleton: Eva's Farm and Farmer Brown's. Eva's is a meat market (e.g., chicken, pork, beef) offering organic and locally- sourced foods as well as a community supported agriculture option and educational programming.
Farmer Brown's is a farm stand that offer fresh produce and meats and poultry. Both are located in the southeastern portion of town, with Eva's Farm located nearby to Market Basket.

There are approximately 10 convenience stores in Middleton, with two being CVS and Walgreen's pharmacies. No information was found to indicate any of the convenience stores have healthy food promotional activities.

Very few Middleton households have Supplemental Nutrition Assistance Program benefits. According to available data, only less than 1% of town households have had SNAP benefits in the past 12 months.

It was noted through the stakeholder conversation that Middleton had a Farmers Market in recent years. However, the market ceased operations in 2015.

Assessment

Middleton does better on most measures related to healthy food behavior and access when compared to the state. Residents have access to a full service grocery store, specialty stores offering more healthy foods, and on average they eat more fruits and vegetables than those across the state.

There does seem to availability of food outlets that tend to carry less healthy foods. There are a larger number of convenience stores and there is no indication that healthy food promotion is occurring in the stores.

18 Massachusetts Department of Public Health. 2017 Massachusetts State Health Assessment. October 2017.

While food access likely helps residents meet their need, the healthier eating also likely is associated with Middleton's having a higher household median income than the state ($105,646 and $67,846, respectively). It may also suggest why there is a low percentage of households requiring food assistance.

Housing: Affordable Housing, Healthy Housing

Housing has effects on health through multiple pathways. The primary pathways are

- Stability and affordability
- Quality and design
- Location

Housing cost burden can force families in unstable housing situations. Choosing between housing payments and other expenses, is linked to cutbacks on basic essentials such as food, medical care, and utilities as well as increased stress, a well-established cause of detrimental biochemical changes to the brain and body that decrease resilience, age people more rapidly, and decrease resistance to disease. Children in unstable housing are also at risk of malnutrition and developmental delays that can have lifelong health consequences.

Housing that is not clean, safe, adequately maintained, ventilated, or free from pests and contaminants, such as mold, lead, and carbon monoxide, is an important contributor to rates of injury, asthma symptoms, cancer, neurotoxicity, cardiovascular disease, depression, and poor mental health. Poor housing quality is also the strongest predictor of emotional and behavioral problems in low income children, mediated primarily by parental stress. Lack of universal design may lead to injury amongst the elderly in addition to preventing aging in place.[x]

The location of housing is critical as well. Housing that offers access to public transportation, green space, quality schools, good jobs, healthy foods, and medical care can help reduce the incidence and/or severity of chronic disease, injury, respiratory disease, poor mental health, and even mortality.[xi]

More specifically, research has attempted to understand the housing within the context of the built environment and its connection to active transportation. For the most part, Households in neighborhoods that have higher population densities, access to destinations, more grid-like street patterns, and access to high quality bicycle and pedestrian infrastructure are positively associated with physical activity.[xii]

Existing Conditions

Middleton is primarily a town of owner-occupied, single-family homes. Approximately 85% of homes are owner-occupied and a little more than 20% of housing is either two- or multi-family properties.

The percentage of renter households is lower than the state or the region while the ownership rate is similar to that of the region and the state.

Table 2 - Source: Housing MA, American Community Survey 2010-2014

Attribute	Middleton	MAPC Region	Massachusetts
% Owner occupied households that are cost burdened	30.17	32	31
Margin of error	*7.16*	*4.319*	*5*
% Owner occupied households that are severely cost burdened	15.02	12	12
Margin of error	*5.73*	*3.033*	*4*
% Renter occupied households that are cost burdened	37.8	47	47
Margin of error	*21.76*	*10*	*18*
% Renter occupied households that are severely cost burdened	18.45	23	23
Margin of error	*20.01*	*8.296*	*18*
% Elderly Family households that are cost burdened	29.1139	28	25
Margin of error	*27.3617*	*16*	*57*

Housing affordability can be measured several ways. For health considerations, affordability is characterized according to: housing cost burden and the percent of housing units listed on the Massachusetts Subsidized Housing Inventory (SHI)[xiii]. A more in-depth explanation of housing is provided in the Housing element of the Master Plan.

In Middleton, 32% and 16% of households are cost burdened and severely cost burdened, respectively, compared to 29% and 14% of households statewide (Table X)[xiv]. Looking at tenure (i.e., owner- occupied or renter-occupied), In Middleton, 38% of renters are cost burdened, versus 30% of owners. Statewide, 47% of renter and 31% of owners are cost burdened, respectively. The town does not currently meet its Chapter 40B requirement to provide a minimum of 10% of housing units as affordable. As of 2014, the 5% of the town's housing stock was deed-restricted affordable units. This level is in line with average across the state but below the average for the MAPC region (approximately 7%).

Environment: Environmental Quality and Green Space

Exposure to environmental contamination can have numerous health effects depending on the specifics of the pollutants and levels of exposure experienced by people. A brownfield is defined by the CDC as "abandoned or underused portions of land occupied by vacant businesses or closed military structures, located in formerly industrial or urban areas"[xv]. While there is no formal definition of the term "brownfields" in Massachusetts, brownfields are typically abandoned or for sale or lease and have been used for commercial or industrial purposes. Brownfields may have been reported to the Massachusetts
Department of Environmental Protection (MassDEP) because contamination has been found or they may not have been assessed due to fear of unknown contamination conditions[xvi].

Health impacts due to brownfields and contaminated sites include:

- Safety due to abandoned structures, open foundations, other infrastructure or equipment that may be compromised due to lack of maintenance, vandalism or deterioration, controlled substance contaminated sites (i.e., methamphetamine labs) and abandoned mine sites;
- Social and economic concerns due to blight, crime, reduced social capital, reductions in the local government tax base and private property values that may reduce social services; and,
- Environmental issues due to biological, physical, and chemical site contamination, groundwater impacts, surface runoff or migration of contaminants as well as wastes dumped on site[xvii].

Exposure to air pollution can have effects on human as can land based environmental contamination. There is an extensive body of literature linking vehicular air pollution to mortality and hospitalizations due to asthma exacerbation, chronic lung disease, heart attacks, ischemic heart disease, and major cardiovascular disease[xviii]. The Environmental Protection Agency (EPA) identifies 6 criteria air pollutants that have important human health impacts: Ozone (O3), carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO2), sulfur dioxide (SO2), and lead (Pb). Four of these air pollutants most closely linked to vehicular traffic pollution.

Name	Location	Status
ADHESIVES MANUFACTURER	SCHOOL ST	TIER1D
RESIDENCE	1 KENNEY ROAD	TIERII
MUZZY WASIL REALTY TRUST	328 NORTH MAIN ST	TIERII
MUZICHUK GARAGE INC	295 NORTH MAIN ST	TIERII
RESIDENTIAL	272 NORTH MAIN STREET	TIERII
ESSEX COUNTY JAIL	20 MANNING AVENUE	TIERII

Concentrations of traffic-related air pollution can be particularly high in areas with heavy congestion or high volumes of vehicle traffic. In these locations, nearby uses like schools or homes and those who walk or bicycle along can be directly affected by short- and long-term the pollution. Although identifying the source of the emissions, the presence of the higher traffic volumes and congestion can serve as guide. Research suggests that exposure concerns are relevant to those traveling or living within 500 feet of corridors that have traffic volumes exceeding 30,000 vehicles per day.

Existing Conditions

The town was scanned for the existence of reported potential brownfield sites. Review for these sites was based on the most recent 21E sites[19] list made available by the MassDEP . Six sites were identified from the list, including two residential properties. Five of the sites are classified as open sites and the sixth dates does not include information about the sites status.

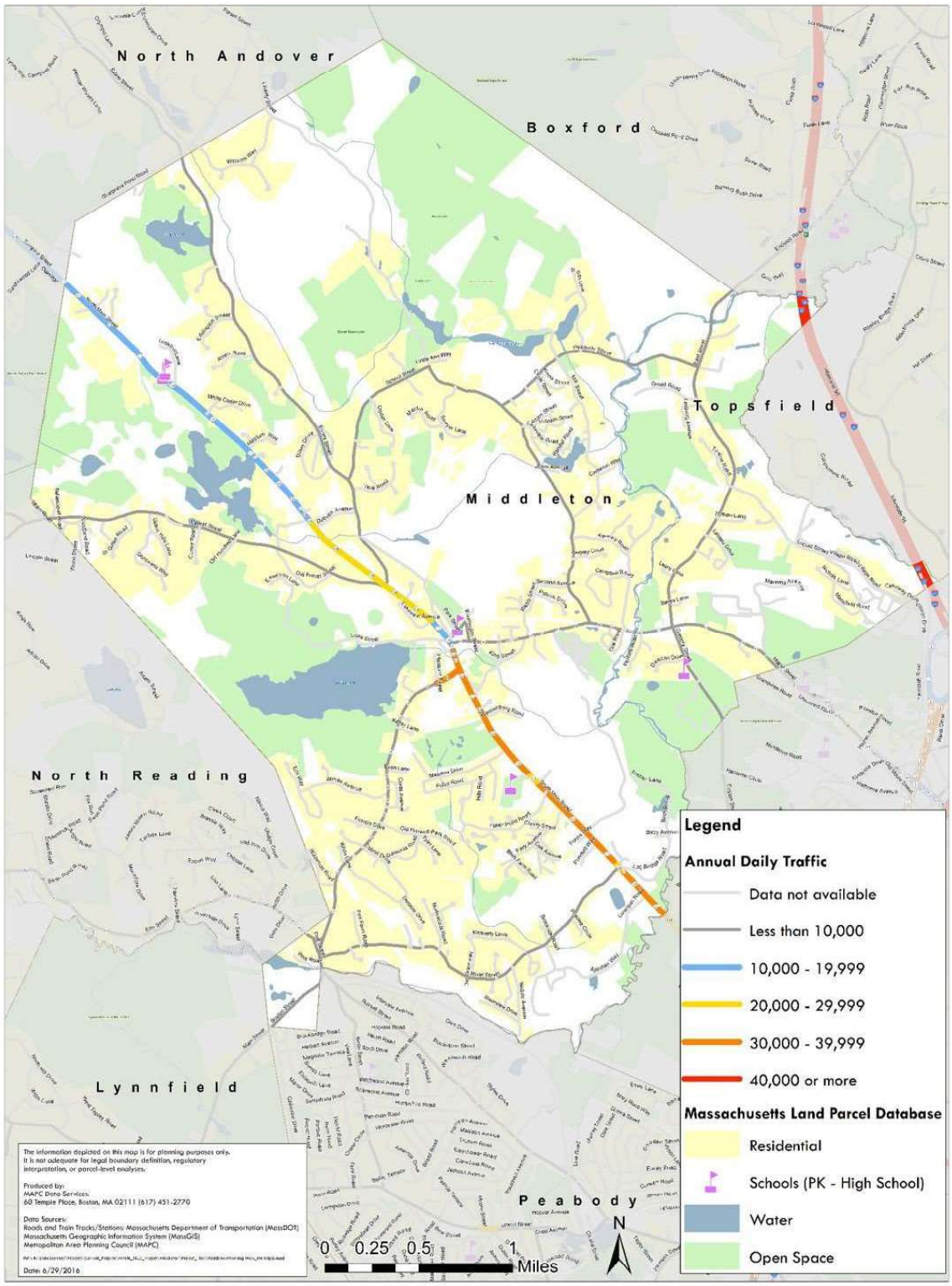
The roadway network in Middleton was ranked according to their average annual daily traffic (AADT) volumes to determine if residential locations or schools in the town have the potential for greater traffic air pollution exposure[20],[21].

19 Massachusetts General Law, Chapter 21E, the state Superfund law which was originally enacted in 1983, created the waste site cleanup program, which is managed by MassDEP. Contaminated properties regulated under this law are often called "21E sites."

20 ADT describes the average number of vehicles traveling on roadway in either direction in 24-hour period. It is typically based on estimates based on continuous counts

21 ADT data from the MassDOT roadway data layer is a derived value. The value is derived from actual counts or an estimate: http://www.massdot.state.ma.us/Portals/17/docs/RoadInventory/RoadInvDictionary.pdf

Figure 10. Map of Roadway Traffic Volumes in Middleton



Route 114 is estimated to have the highest traffic volumes in Middleton. ADT's are estimated to range from 10,000 – 39,999 vehicles per day (with the exception of small segments of I-95). The volume estimates increase moving north to south through the town, with the segment of Route 114 south of Route 62 having volume estimates between 30,000 – 39,999 vehicles per day. Residence and a couple of schools are located along this corridor. The Fuller Meadow School (grades kindergarten through 1st) and the Howe Manning School (grades 3rd through 6th) are within 1000' of the corridor. Residential land uses are located primarily on the west side of the corridor. Most of the residential properties are set back from the corridor but there are properties located where the local streets meet Route 114.

Middleton residents face few threats related to environmental quality. There is only one transportation corridor in the town that has the potential for increased exposure to traffic related air pollution. Uses along the corridor do include schools so there is the greater possibility of exposure and impacts on respiratory issues. Residences along the corridor are set back and likely do not face the some possibility of exposure.

The review of 21E sites revealed potential sites of environmental contamination. These sites have the potential for negatively impacting health, although further research is required to determine the extent of this potential. Their presence and location should be noted as the redevelopment and construction activities occur around them.

The health data for Middleton suggests that environmental contaminants do not present current health risks.

Access and Exposure to Green Space

Access to parks, open space, and greenery may protect against poor mental health outcomes by encouraging more socializing and thus fostering greater social support and encouraging more socializing, particularly among women. In general, studies have found that more exposure to greenness or access
to green spaces was associated with reduced risk of stress, depressive symptoms, clinical anxiety and depression prevalence, and mood disorder treatment in adults .

Parks and recreational spaces present opportunities for physical activity. Creating and enhancing access to the places has been found to be effective in getting people to exercise more. Greater levels of exercise in the spaces has been linked to improvements in aerobic capacity, energy expenditure, and use of leisure time for physical activity[xxi].

Trees and other vegetation remove air pollutants and promote cleaner and more breathable air. By providing shade on streets and buildings, trees also mitigate heat islands, UV exposure and skin cancer risk[xxii]-[xxiii] Finally, trees in particular have been linked to positive social behavior[xxiv], and even to reductions in crime.[xxv]

Existing Conditions

A measure of access to open space is that average amount of open space per capita. It measures how many acres of open space there are per person in a specific geography[22]. Based on the 2010 population and recent land use data, the town has a score of 1.79 acres per capita. This score is lower than MAPC subregion in which the town is located (North Shore Task Force subregion score 2.04) but it is higher than the MAPC region as a whole (1.52).

Exposure to green space can occur through and at publicly-accessible lands. It can also happen through contact and experience with vegetation like trees and shrubs that a resident experiences throughout a community. One measure for vegetative coverage is Normalized Difference Vegetation Index (NDVI). This measure is calculated from satellite imagery that identifies visible and near-infrared light reflected by vegetation.[xxvi]

The NVDI values are expressed between -1.0 to +1.0 with a higher positive value indicated the presence of more green vegetation. The Town of Middleton has a mean NVDI value of 0.56 (min/max
= -0.31/0.74). The mean for the town is slightly higher than the value across the MAPC region (0.51). The town's value indicates that the town as a whole has higher levels of exposure to green vegetation.

Safety from Traffic

Well-lit and well-maintained walkable spaces with good visibility and access to shops, parks, and other amenities have been shown to reduce rates of crime and fear of crime . While fear of crime is more prevalent than actual victimization, fear can heighten feelings of anxiety and may constrain some people's social and physical activities as they attempt to avoid certain places or situations that they perceive to
be unsafe[xxviii]. In particular, areas that feature alcohol outlets (e.g. bars or liquor stores), check cashing services, vacant properties, and alleys with poor natural surveillance are associated with higher crime[xxix].

Motor vehicle crashes are one of the leading causes of death among younger populations in the US (i.e., those between 16 – 25 years old), and account for more than 32,000 deaths and 2.3 million nonfatal injuries annually. Motor vehicle crashes impact pedestrians and bicyclists as well as motorists. In 2014, 726 cyclists and 4,884 pedestrians were killed in traffic crashes in the United States; an additional 115,000 where walkers and bicyclists were also injured in motor vehicle crashes[xxx]. The impact of crashes with pedestrians and bicyclists has more potential to lead to severe injury or fatality. As an example, a pedestrian hit at 35 mph is nearly three times more likely to die than one hit at 25 mph[xxxi].

In addition to actual safety risk, the perception of how safe the transportation system has effects on people's behaviors. Studies that consider traffic and perceptions of safety generally agree that pedestrians and bicyclists have negative perceptions of traffic and that real and/or perceived danger and discomfort in traffic discourages walking and bicycling. [xxxii] Safety concerns appear to be strongest in children, the elderly, and women. [xxxiii]

22 The score is calculated by averaging the open space per capita of all 250m grids within a specific geographic extent. The average only takes into account grids where the population was greater than 0 in 2010.

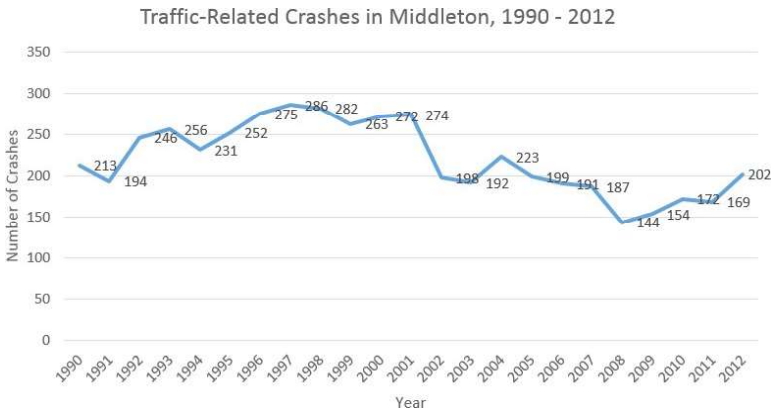
Geographic Location	Violent Crime Rate per 100,000 population[23]	Property Crime Rate per 100,000 population[24]
Massachusetts	428.4	2,258.70
Middleton, MA	110.6	1,106.00
Andover, MA	41.9	925.1
Haverhill, MA	591	2,385.30
Lawrence, MA	994.2	3,228.70
Methuen, MA	183	2,082.30
North Andover, MA	31.6	1,184.90
Boxford, MA	12.5	349.4
Georgetown, MA	97.2	728.8
Tewksbury, MA	274.6	1,987.10

Source: Lawrence General Hospital, 2013 Community Health Needs Assessment, Federal Bureau of Investigation (2011), Uniform Crime Reports, Offenses Known to Law Enforcement, by State, by City, 2011

Existing Conditions

Two indicators that measure public safety in relation to public health are crime data and traffic-related crashes. Crime data, specifically violent crimes, describes directly how individuals or group are affected by damaging interpersonal interactions such as burglary, assault, and murder. Traffic-related crash data captures what types of collisions are occurring, who they are affecting (motorist, bicyclist, pedestrian), and the severity of injuries resulting from the crashes.

Table 3. Crime Rates 2011[23] [24]



The Town of Middleton has a violent crime rate and property crime rate that is well below that of the state (Table X).

The town's violent crime rate (110.6 per 100,000) is an approximately a quarter of the state's rate (428.6 per 100,000) and when compared to nearby municipalities, it has the fifth lowest. The property crime rate (1,106.0 per 100,000) is roughly of the state's (2,258.7 per 100,000) and the fourth lowest in comparison to nearby cities and towns.

23 Violent crime includes: murder and non-negligent manslaughter; forcible rape; robbery; and aggravated assault
24 Property crime includes: burglary; larceny-theft; motor vehicle theft; and arson

Table 11. Crash Severity and Counts from 2001 - 2014

Crash Severity	Count
Fatal injury	3
Non-fatal injury	485
Property damage only (none injured)	156
Not Reported	1399
Unknown	32

Source: MassDOT Crash Data

The annual number of traffic-related crashes in Middleton have been mostly declining over the past two decades.
On average, there have been 220 crashes reported annually. However, from 1992 to 2001, the annual number of crashes average around 263. Since 2002, the number of crashes has declined and for the ten year period
of 2002-2012, the annual number of crashes has average closer to 184.

It is important to look at the type and severity of crashes as well as who has been involved in the crash. More detailed crash data was available for the years 2001-2014 so this data was explored to understand characteristics of this 15-year period . Of these crashes, more than two thirds were property-damage only crashes, meaning vehicles or other property in the crashes were affected but no one was injured. There were three fatal crashes and 485 injury crashes over the period, which resulted in 2 deaths and 400 injuries according to reporting data.

The Massachusetts Department of Transportation produces an annual listing of top crash locations in the state. The ranking is based on a combination of how often crashes are occurring in a particular
place or location and the severity of the crashes . Based on the latest ranking (which uses 2002 - 2013 crash data)[xxxv], no locations fall within the town. The same is true for the top 10 pedestrian and bicycle crash clusters, none of which are located in Middleton.

Assessment

Middleton does not face significant public safety risks to their health to the extent that others in the state do. The town enjoys lower crime rates than the state and nearby municipalities. There have been few reported traffic fatalities and the number of crashes in town appears to be declining.
While actual crime and traffic-related crashes may be relative low, perceptions of safety can also have impacts. For example, a 2011 public policy document notes that by discouraging active transportation, perceived danger from traffic may produce a feedback loop in which fewer people participate in active transportation, which increases motor vehicle volumes and in turn creates roads that are perceived as increasingly unsafe[xxxvi]. An effect like this could be inferred from the town's recent community health survey in which respondents identified pedestrian safety as a top health concern. Likewise, discussions with municipal stakeholders highlighted that walking along the roads in Middleton is perceived to be unsafe. Reasons cited include lack of sidewalks, gaps in sidewalk network, and vehicle speeds along roadways.

Active Transportation

Table 6

Commute Mode	% Using Commute Mode
Commuters who drive alone to work	94.2
Commuters who carpool to work	5.8
Commuters who take public transit to work	1.3
Commuters who take a taxi to work	0.0
Commuters who take a motorcycle to work	0.0
Commuters who bicycle to work	0.3
Commuters who walk to work	0.5
Commuters who take other means of transportation to work	0.0
Individuals who work from home	6.3

Source: ACS 2010-2014

The health benefits of physical activity have been well documented, yet less than half (49%) of all adults meet the Surgeon General's recommended 30 minutes of moderate intensity physical activity on most days of the week; only a fifth meet (20%) meet he guidelines for both aerobic physical and muscle-strengthening activity[xxxvii]. A recent study estimates that physical inactivity causes 6% of the global burden of disease from coronary heart disease, 7% of type 2 diabetes, 10% of breast cancer, 10% of colon cancer, 9% of premature mortality[xxxviii]. If inactivity were decreased by 10% to 25%, between 533,000 and 1.3 million deaths could be prevented every year.

Table 7. Sample Walk Scores for Middleton

Address	Score
4 South Main St	39 (Car Dependent)
323 North Main Street	26 (Car Dependent)
229 Maple St	46 (Car Dependent)
30 Log Bridge Rd	42 (Car Dependent)
120 East St	5 (Car Dependent)
Market Basket (South Main Street)	36 (Car Dependent)

Source: https://www.walkscore.com/

Evidence suggests that good infrastructure (sidewalks, bike lanes etc.) and public transportation access leads to increases in walking and biking for transportation purposes, and therefore plays an important role in increasing population level physical activity . A very robust body of literature links physical activity to a panoply of health benefits . Furthermore recent evidence suggests that while active transit may expose users to air pollution on the road, the positive benefits of physical activity outweigh the negative impacts of increased air pollution exposure.[xli]

Compared to the National walking average of 6 minutes per day, public transit users spend a median of 19 daily minutes walking[xlii]. Estimates show that an individual walks an additional 8.3 minutes per day when they switch from driving to transit[xliii].

Existing Conditions

Levels of active transportation among Middleton residents can be estimated using a mixture of transportation, programmatic, and health data. Based on the most recent ACS, less than 1% of Middleton residents either bike or walk to work and slightly more than 1% use transit for commuting. By contrast, more than 90% of residents drive alone to work.

Research shows that there are several measures of transportation network that are correlated with higher levels of active transportation, particularly walking. Two of these are access to destinations and intersection density. Walk Score provides nationally-available, neighborhood-level data on distance to destinations and the potential to reach these destinations by through walking trips[25]. The score is based on a ranking of locations are (scale of 0-100) based on their distance to a variety of destinations,

25 Walk Score: https://www.walkscore.com/

including grocery stores, parks, and retail. Walk Scores for Middleton tend to fall in the 25-49 range, which Walk Score classifies as car dependent. This means a car is likely needed for most errands.

Intersection density has been associated with the amount of walking occurring in neighborhoods. More intersections per square mile correlates with more connected streets and smaller block sizes, which both accommodate pedestrian trips. Middleton's intersection density falls mostly within the lowest quintile for the state, usually having less than 18 intersections per square mile. The southwest portion of the town has a slightly higher density with between 19-47 intersections per square mile. By comparison, towns to the southwest and southeast of Middleton, like Peabody, Danvers, and Wakefield, have areas of that exceed 50 or 100 intersections per square mile.

There were no on-road bicycle facilities identified in Middleton. The town's OSRP identifies that there is an off-road path around Middleton Pond that is used for bicycling. There may be similar opportunities in other parks or off-road spaces in town. Middleton is along the planned route of the Essex Railroad Rail Trail. The trail, which is proposed as an off-road shared-use path, has been opened in Danvers and would extend to the south into Peabody and to the north into Lawrence.
Middleton in Motion and interested residents have developed an active trails program for the town (aka, Pike's Hikes). Those involved have mapping various trails throughout the town. They have produced a map of these trails which are available in hard copy and online. The trails group work has also had worked to inform local decision making by requesting that trail connections are support as new developments occur.

In the past three years, the Middleton Walk and Bicycle Alliance has formed. The group is working toward the goal of making Middleton a bicycle and pedestrian friendly community . The alliance, in collaboration with town departments, helped move forward a Complete Streets policy for Middleton, which was adopted as a resolution by the Board of Selectmen in 2014. Since that time, the town has added walking facilities to a new recreation plan, submitted their policy in pursuit of the Massachusetts Department of Transportation (MassDOT) Complete Streets funding, and received a grant to support implementation via the state's Community Compact program[xlv].

Middleton performs better than the state on levels of physical activity (which averages above 50% for those who report exercising 150 minutes/week) despite estimates of low levels of active transportation. Sources of physical activity may be happening more through leisure time activities and programs in the town, such as sports leagues. Additionally, Middleton has a municipal and resident-led trail mapping and walking program (Pike's Hikes). This program could be contributing to higher levels of leisure time physical activity. Trails development in the town could also be serving as way to increase intersections from the perspective of creating additional off-road links to and from sidewalks.

It should be noted here that respondent the town's community survey ranked physical activity as one of the top 10 health issues in town. So, while levels of physical activity may in the town higher than the state's, there is still a perception that it is an issue. This perception could be addressed through both education and changes that support more active transportation.

Social Cohesion

Social cohesion, which describes the extent of connectedness and solidarity of a community, and social support are associated with positive health outcomes. Communities with greater levels of social
cohesion—often characterized by high levels of trust and respect, participation in community activities and public affairs, and increased participation in community groups—have better health outcomes than those with low levels[xlvi]. This is true on an individual level as well. Those with rich social environments— who have more friends and social interactions, hold a greater level of trust in their neighbors, and are part of a more tightly knit community—have access to a greater network of social resources which in turn help them stay healthier[xlvii]. These social resources can manifest as emotional support in difficult times, material support such as a ride to work when the family car breaks down, or simply through health-promoting information shared amongst neighbors. Access to social support such as this is associated with protective health effects including improved mental health outcomes, reduced stress, better cardiovascular health, better immune system functioning and more[xlviii].

Existing Conditions

Social cohesion can be difficult to measure. To do so means quantifying some its elements such as measures like neighborhood trust and civic engagement. For the Public Health element, the following measures are presented: voter registration, voting rates, participation CPA, and geographic mobility.

Voting has been used to characterize social cohesion since it can represent ties and engagement with the community. Using 2010 Census data and Elections and Voting data from the Secretary of the Commonwealth, more than three-quarters of voting-eligible residents (78%) were registered. This is higher than the state percentage of registered votes (66%) from the same period[xlix]. Among those registered to vote, 66% participated in the mid-term elections.

Participation in local elections, which occur in May, offer a perspective on civic participation that is typically outside of state and national elections. In 2010, the voter participation rate was 4%[l]. Since that time, the participation rate has been increasing with the last two local elections having turnouts around 20%.

Table 5

Annual Town Election		
	% of Town Residents Voting	Month of Election
2011	4%	May
2012	3%	May
2013	9%	May
2014	8%	May
2015	22%	May
2016	19%	May

Source: Town of Middleton Voting and Elections

The Community Preservation Act (CPA) allows cities and towns to create a local fund to preserve open space and historic sites, create affordable housing, and develop outdoor recreational facilities[li]. Toaccept the CPA, a municipality must either have the approval of the legislative body of the city or town and the electorate, or have approval via a local ballot question petition. The Town of Middleton adopted the
CPA in 2004 (via Town Meeting and ballot initiative) and it permits a 1% surcharge on annual real estate taxes. The town's Community Preservation Committee, who oversees the CPA for the town, has as its goals: Open Space, Recreation, Historic Preservation, and Affordable Housing. The Committee also uses selection criteria, one of which is consistency with the town's Master Plan.

Geographic mobility of residents can serve as proxy measure for turnover or instability in a community. Communities with higher rates of year over year turnover may not allow residents to form and build on social ties, lessening the potential for social cohesion. The ACS estimates for Middleton indicate a majority of residents are remaining in their homes over time. Over two separate five-year periods, most
town residents have reported on average that they are in the same house that they were the previous year (ACS 2005-2009: 88%; 2010-2014: 89%[26]).[lii] These percentages are higher than the MAPC region (85- 86%) and the state (86%/87%).

26 ACS 2005-2009: 88%, margin of error +/- 5.3%; 2010-2014: 89%, margin of error +/- 4.4%

Public Health and Climate Change

Overview

The changing climate will affect health of individuals, families, and communities. The projected changes, such as higher temperatures and extreme weather, will exacerbate existing health conditions, such as asthma and cardiovascular disease. New health issues will also emerge as vectors and water borne diseases are facilitated by the warmer and wetter conditions. While
our physical places will be vulnerable so will be the health of people that define, live, work and gather in these places. The following section describes in more detail these potential impact and their relevance to the Town of Middleton.

Extreme Weather and Flooding

Middleton, like the rest of Massachusetts, is expected to incur more turbulent weather,[27] especially those weather events that bring precipitation. Extreme weather events cause disturbances in people's lives and the systems that they rely on. This is particularly true when it comes to human health and welfare.

More frequent storm events are projected to mean precipitation events that occur more frequently and with greater volumes. Flooding will be a result of these storms. Flooding can be expected to disrupt transportation systems and potentially isolate people in their homes. The breakdown in these connections has consequences such as individuals not being able to get to medical care, meet basic daily needs like shopping for food and water, and being exposed to water-borne pollutants. Older adults, people with disabilities, and those with acute health needs like those requiring dialysis are at particularly high risk when these disruptions occur.

Often extreme storms are accompanied by disruptions in electrical systems. When this occurs, heating, air conditioning, and ventilation systems can be put at risk if there are not backup power systems. As result, residents may face difficulties in maintain indoor temperatures.
Longer term impacts of reduced air circulation in combination with increased moisture can lead to more indoor mold and contaminants[liii]. Those who suffer from respiratory issues like asthma face challenges during these situations and others become susceptible to developing similar health issues.

Extreme Heat

Extreme heat is the leading weather-related cause of death in the United States[liv]. Prolonged exposure to high temperatures can cause heat-related illnesses, such as heat cramps, heat

27 Extreme heat can be considered an aspect of extreme weather. For this purposes of this document, extreme heat is treated separately due some of its specific effects on health.

syncope, heat exhaustion, heat stroke, and death. Heat exhaustion is the most common heat- related illness and if untreated, it may progress to heat stroke[lv]. Additionally, heat is expected to contribute to the exacerbation of chronic health conditions[lvi]. In particular, hyperthermia— elevated body temperature due to failed thermo-regulation can be caused by heat stroke — is a contributing factor to cardiovascular, metabolic, and other causes of death.[lvii]

Extreme heat has the potential to contribute to greater levels of ground level air pollution and allergens. Heat helps form by chemical reactions between NOx and volatile organic compounds (VOCs) in the presence of sunlight. Breathing ozone can irritate the respiratory system, reduce lung function and heighten sensitivity to allergens[lviii]. Likewise, increased temperatures in
the presence of higher concentrations of CO2 has been linked to earlier blooming of flowers (shrubs and trees), which in turn affects the timing, distribution, and composition of pollen and other allergens[lix].

Those at particularly high risk of adverse health effects from extreme heat exposure are older adults, children, those living alone, those with chronic illnesses, urban residents, minorities, people of low income, people with less education, and people without access to
air conditioning[lx],[lxi]. In addition, people with chronic mental disorders or pre-existing medical conditions (e.g., cardiovascular disease, obesity, diabetes, neurologic or psychiatric disease), and those participating in outdoor manual labor or sports in hot weather also are at increased risk for heat-related illness[lxii],[lxiii].

Vector Borne Diseases

With climate change, the public will likely be subject to greater exposure to disease vectors, such as Eastern equine encephalitis (Triple E), West Nile virus, St. Louis encephalitis virus and Lyme disease. Massachusetts is predicted to have a general trend of warmer temperatures, which may lead to higher mosquito and tick numbers and greater activity. This may prolong transmission seasons for all vector-borne diseases, extending the risk of transmission outside of the traditional late spring through early fall timeframe.
Populations More At Risk

Climate change will impact all populations in a variety of ways, but these impacts will not be felt equally by all and not only according to pre-existing health conditions. Because of this, the following section provides information on populations that might be more vulnerable due to their social, environmental, or economic conditions. In Middleton, these vulnerable populations include low-income residents, younger and older populations, those living alone, and those who may speak languages other than English.

Community Feedback

Community Health Survey

The Town of Middleton asked residents about their health behaviors and perceptions of public health in the town. Highlights from the survey include:

- 56% of respondents report exercising 3 or more times per week for at least 30 minutes; 18% report not exercising
- 64% of respondents report never smoking; 4% report smoking daily

Additionally, based on the survey, the top 10 public health concerns cited most by respondents are identified below. The top concerns are based on the most frequently cited by individuals are part of their top 5 concerns in the town.

1. Tick-borne illnesses
2. Exercise/Physical activity
3. Mosquito-borne illnesses
4. Cancer
5. Water supply or wells
6. Overweight/obesity
7. Drug or alcohol abuse
8. Emergency preparedness
9. Pedestrian safety
10. Septic systems

Strategies and Recommendations

Current conditions suggest that the Town of Middleton's residents, overall, experiences physical, social, and mental health outcomes that are equal or better than those of the Commonwealth. The town's economic, housing, and environmental conditions support these beneficial outcomes and represent conditions that are supportive of wellness. Although residents in the town generally enjoy better health, there are actions that Middleton can to prevent future threats to health of residents and help all in the town enjoy greater wellbeing.

We propose the following six strategies, with supportive actions, as a way to enhance the overall positive impacts associated with policies and projects that will result from enactment of the Master Plan and, where needed, mitigate potential negative health issues that exist or that could occur from implementation of the plan.

Frame for recommendations

Intervention and Prevention

Core activities of local public health are and will continue to be: enforce protective and regulatory measures that protect the health, safety, and welfare of residents. Activities such as food inspections and enforcement of sanitary codes are essential, and must be supported as local public health provides a critical, but often invisible, role in providing health protective measures that are the foundation of a prosperous and thriving community.

For this plan element, activities that involve local public health in cooperation with other municipal departments and private partners are also required. Broadly, these activities fall into two categories: intervention and prevention. Interventions are programs or actions implemented in response to an immediate issue such as helping those who are injured and those who need emergency care for diabetes or substance misuse. Interventions often take the form of providing direct care and instituting programs. Prevention, on the other hand, is action that seeks to reduce or eliminate the conditions that lead to poor health outcome. Prevention can include the provision of care, but it is more effective when it uses a Policy, Systems, and Environmental (PSE) strategies (see Figure 3 in Section I). These strategies focus on the root causes of poor health outcome. For example, rather than just providing care to children who are experiencing asthma, a PSE strategy would move to eliminate the conditions that may lead to a child having asthma as well as the triggers (e.g., pests, mold) that trigger asthmatic events.

The health element of the plan includes intervention- and prevention-related recommendations.

Strategy 1: Sustain and expand access to locally produced and healthy foods in town.

Middleton does better on most measures related to healthy food behavior and access when compared to the state. Residents have access to a full service grocery store, specialty stores offering more healthy foods, and on average they eat more fruits and vegetables than those across the state. Going forward, Middleton should continue to support conditions and behaviors related to healthy foods. In particular, the town should consider taking action or monitoring the following:

- Support Farmers Market during Spring, Summer, and Fall to encourage use of local and healthy foods.
- Encourage or provide incentives for convenience stores to offer more healthy and nutritious foods like fruits, vegetables, and whole grain foods.
- Monitor local needs for supplemental nutrition benefits, especially among vulnerable populations including low income households and seniors.

Strategy 2: Enhance access to affordable and age friendly homes.

The town has progress to make on achieving its responsibility for accommodating affordable homes. It also will face an increase in older adult households that could change the demand the types of homes in Middleton, particularly among those who would like to age in the community. Given its challenge of meeting its requirement and the change age demographics, Middleton should increase support for factors that increase accessibility and affordability to homes. In particular, the town should consider taking action or monitoring the following:

- Offer incentives to encourage more flexible development projects, such as those that allow for smaller lots and multi-family developments.
- Monitor changes in housing cost burdens among owners and renters.
- Prepare for changing housing needs of aging population by planning for age friendly homes that are accessible and that reflect limited mobility options.

Strategy 3: Prioritize active transportation (walking, biking, and transit use) and open space access to promote physical activity and exposure to outdoor natural environments.

Middleton residents benefit from higher level of access to open spaces and exposure to greenness. However, accessing many of these outdoor spaces requires use of vehicle or travel along thoroughfares that are not perceived as safe. The town can address these barriers by taking the following actions:

- Integration or preservation of green space and vegetation as part of new residential and commercial developments.
- Install measures that address traffic safety for bicycle and pedestrian travel.
- Implement traffic calming measures in residential neighborhoods and commercial districts.

- Review development and transportation projects for their support of Complete Streets infrastructure.
- Support the development of the Middleton Rail to Trails project.

Strategy 4: Addresses Environment Hazards to Reduce Resident Exposure to Substances that Reduce the Quality of Life in Town.

Middleton residents face few threats related to environmental quality. To maintain the protective features that reduce the risk of exposures, Middleton should monitor factors that pose health risks from environmental contaminants under current conditions and as conditions shift due to climate change. In particular, the town should consider taking the following actions:

- Monitor traffic volumes along transportation corridors with ADTs above 10,000 and specifically monitor changes in traffic volumes along Route 114 south of Route 62.
- Provide informational materials for new and existing residents who live in proximity to roadways with higher traffic volumes (e.g., Route 114).
- Review air quality in the vicinity of the schools to determine if mitigating actions (e.g., additional vegetative buffers, air filtration, etc.) may be applicable.
- Prioritize actions that to reduce local single occupant vehicle trips in order to reduce locally- generated motor vehicle trips and related air pollutants.
- Provide more mobility options for older residents and households with limited access to personal vehicles in order to enhance transportation safety, connect with local destinations and maintain community connections.

Strategy 5: Assess Potential Health Impacts of Proposed Projects and Policies by Integrating a Health and Equity Lens into Local Decision-Making.

The town will face additional growth and development pressures. It can be helpful to anticipate public health impacts as part of these pressures similar to assessing other impacts (e.g., housing, public finances). Going forward, Middleton town should consider taking the following actions to help integrate public health into other municipal practices:

- Use a health assessment tool, such as the NACCHO Public Health in Land Use Planning & Community Design checklist, in planning and development decision making.
- Bring Health Perspective the Community Preservation Committee through consultation with the Health Department or Board of Health.
- Explore use of Racial Equity Impact Assessment in municipal planning and development decision making.

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